**Request for Proposal
for
A New Line of Business Solution**

West Virginia Consolidated Public Retirement Board

RFP CPR12026

APPENDIX D

Procurement Specifications and Deliverables

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF FIGURES

1   GENERAL REQUIREMENTS

Appendix D articulates the functional, technical, and other highly desired requirements of WVCPRB in the new integrated pension administration solution. The objective of this document is to elicit a response from vendors for the implementation of the new solution.

2   SCOPE OF WORK

2.1   QUALIFICATIONS AND REQUIREMENTS

The qualifications outlined below are those WVCPRB desires in the successful vendor and project manager.

2.1.1   *Vendor Qualifications*

All references in this RFP to the "vendor" should be construed to encompass both the vendor (prime contractor) and all subcontractors and infer the single source of responsibility as the vendor (prime contractor).

The vendor/prime contractor should be able to cite recent experience in which the vendor successfully implemented a new, integrated pension administration system for a multi-employer, public employee retirement system. Of the projects cited, at least one should be complete, i.e., in the warranty period or later. The retirement system should have the following characteristics:

- At least 50 employers
- At least 75,000 members and annuitants combined
- Multiple defined benefit plans.

The vendor should include as part of Section I-2.2.1 Client References of its Technical Proposal the projects it is using to satisfy the desired requirements described above. For each project listed, there should be a corresponding Exhibit 16 Vendor Client Reference Form. The vendor is reminded that WVCPRB, at its discretion, may call and/or visit any referenced vendor client as part of the proposal evaluation process.

2.1.2   *Project Manager Qualifications*

WVCPRB desires that the vendor's proposed Project Manager have at least three (3) years of experience in project management within the last six (6) years. Preferably, that experience includes two (2) years of work similar in scope to that outlined in Appendix D of this RFP with a public retirement system providing a defined benefit plan, having at least 50 employers, and having a membership of at least 75,000 members and annuitants.

As part of Section I-2.4 (Vendor Staffing) of their Technical Proposal, the vendor should include a completed Form 1, Exhibit 16 Vendor Client Reference Form (Appendix E) for any project being used to satisfy the desired requirements for the project manager as described above that is not already included in Section I-2.2.1.

2.2   PROJECT SCOPE AND BACKGROUND

2.2.1   *Nature of Desired Solution*

WVCPRB is about to embark on a major project initiative with the aim of implementing a new pension administration solution. The objective of this RFP is to solicit proposals from public retirement system implementation vendors for a new, integrated pension administration solution. Specifically, WVCPRB desires vendors to propose a solution consisting of the implementation of a fully integrated, best-practices-based retirement system (understanding that such system will require customization) to meet the requirements of WVCPRB. WVCPRB envisions the contract to be awarded as a result of this solicitation to consist of the following solution components:

- **Hardware:** The annotated (specifications, speed, etc.) list of hardware components required to support the LOB solution, including multiple environments

- **Commodity Software:** The annotated list of commercially available software required to implement and support the LOB solution, required to achieve technical requirements in support of the business requirements (e.g., Relational Database Management System (RDBMS), operating systems, monitoring tools, development tools), including multiple environments

- **Line of Business (LOB) Software:** Proprietary software supplied by the vendor which includes:
  o The business application which is the foundation for the LOB solution
  o Any other proprietary, vendor-supplied software required to implement or support the LOB solution (e.g., tools for testing, development, and/or conversion).

- **Integrated Software:** Additional "best of breed" software that is integrated with the LOB solution and required to achieve WVCPRB's **business** requirements. An example of integrated software might include a package that is used for workflow, that is typically integrated into the vendor's LOB application through means of an API

- **Documentation**

- **Testing**

- **Implementation**

- **Integration**

- **Training**

- **Warranty**

- **Support**

This RFP articulates WVCPRB's functional, technical, and other highly desired requirements in the new integrated pension administration solution. The objective of this RFP is to elicit a response from vendors for the implementation of the new solution.

The RFP also specifies the common format of vendor responses and the time frame to enable WVCPRB to evaluate the vendor solutions and to make its choice. In addition, the RFP briefly explains the selection process.

The new pension administration solution will support WVCPRB's activities for performing its duties as West Virginia's state and local employees' pension administration provider. The high level functionality WVCPRB desires to be provided by the new solution includes the following:

- Core LOB functions, which include the applications that permit WVCPRB to perform all of its operations, e.g.: perform wage and contribution reporting, generate benefit estimates, issue refunds, calculate the cost of purchased service credit, process retirements, implement pension Annuity Payroll, withhold and report taxes (including preparation and filing of 1099Rs), and produce annual benefit statements

- Support for the execution of all processes required in accordance with applicable legislation, regulations, policies, etc. that are in effect on the date of contract execution

- Browser-based access to the solution for customers, users, and WVCPRB managers to facilitate ease of application system deployment and maintenance

- Internet-based, self-service functionality to improve access to WVCPRB by customers, and other appropriate stakeholders

- Integration of imaging, correspondence management and workflow management, collectively also known as Enterprise Content Management or ECM, with the LOB solution – to include both "tight" workflow (i.e., enabling a transaction / function as part of a defined workflow path), as well as the ability to perform a transaction / function "directly" (i.e., "outside" of the defined workflow path)

- Provision of such Business Process Management capabilities as process monitoring and metrics, both of which are used to respond to status queries as well as to improve overall business process efficiency/performance

- Conversion and/or conversion coordination for porting of existing WVCPRB data and images (as necessary) to the new solution and bridging of data as necessary based on a phased implementation

- Enablement of all required interfaces with other entities, including but not limited to those listed in RFP Sections 4.2.5.6 Other Sub-Systems and 4.2.5.1.7 System Interfaces.

- Ad hoc reporting capabilities

- Help functionality feature available to assist stakeholders through business process tasks/workflows, etc.

- Audit indicator capabilities such that a member's account can be identified as to whether it has been audited, through what date and by whom

- Access security to all parts of the LOB solution at the atomic level, including security management

- Thorough testing and quality assurance of the entire solution

- A warranty on software and services that starts with the rollout of the first functional capability and concludes 12 months after the rollout of the final capability

- Implementation of all WVCPRB-authorized optional deliverables as listed in Appendix D, Section 2.14.

WVCPRB also desires that the vendor be responsible for:

- Providing WVCPRB-specific manuals and documentation for system users (including employers), administrators, and developers; in addition to all baseline functionality, WVCPRB anticipates all such documentation to reflect the customized, as-built status of the solution; WVCPRB will consider standard documentation reflecting only the vendor's un-customized base solution as unacceptable.

- Providing training for system users (including employers), administrators, and developers (but not members, retirees or beneficiaries) – not only in application navigation and the use of screens and windows, but also in the use of the new solution to perform all of their various job functions, processes, and sub-processes in the new environment

- Providing configuration and configuration management for the pension administration software

- Providing any and all necessary software customizations to meet business and functionality requirements

- Providing full implementation of the new solution (including as-built documentation of system configurations and customizations)

- Providing ongoing application software support for the new pension administration solution during the implementation, during the warranty period, and during any subsequent post-warranty support period as is defined in Appendix D, Section 2.13.2

- Providing project management services for the implementation effort

2.2.2 *Single Source of Responsibility*

WVCPRB desires a single prime contractor to be responsible for the successful delivery of all contracted deliverables and services, including subcontractors' efforts. Preferably, companies should not be proposed as subcontractors by multiple vendors.

The single exception to this restriction is the case in which a vendor is already contractually committed to providing WVCPRB with support for a third party application, specifically Documentum ApplicationXtender or MS Dynamics. This exception is not meant as an endorsement of the services of that support vendor;

rather it is a recognition that no LOB vendor should obtain a competitive advantage by entering into an exclusive services contract with a vendor who is already under contract with WVCPRB. Those vendors are identified in RFP Sections 4.2.5.3 and 4.2.5.4, respectively.

2.2.2.1 Prime Contractor

WVCPRB is seeking a single source for all activities relating to the new pension administration solution implementation. WVCPRB will grant the vendor (prime contractor) the right to subcontract a portion of the work but WVCPRB desires the prime contractor to retain sole responsibility for the successful delivery of all contracted deliverables. It is desirous that the vendor (prime contractor) be designated in the proposal, and include a clear and complete explanation regarding any use of subcontractors. All references in this RFP to the contractor, vendor, bidder, or successful vendor, bidder, etc. should be construed to encompass both the vendor (prime contractor) and all subcontractors and infer the single source of support as the vendor (prime contractor).

2.2.2.2 Sub-Contractors

If the use of subcontractors is planned, WVCPRB would like the proposal to specifically identify the tasks that each subcontractor is slated to perform. WVCPRB anticipates all subcontractor staff in key positions can meet the same qualifications for experience specified for the prime contractor. Resumes should be included for these key subcontractor staff. <u>The proposal should also include **sample** copies of any agreements to be executed between the prime contractor and any subcontractors in the event of contract award. All subcontracting agreements should be signed at the time of contract award, and executed copies provided to WVCPRB for review prior to the execution of a contract with the prime contractor. Proprietary or confidential information may be redacted in the copies provided to WVCPRB. Prior to contract execution, WVCPRB reserves the right to reject any subcontractor or the specific agreement between contractor and subcontractor.</u>

All vendors should list in their proposals the complete names and addresses of all subcontractors and the type and percentage of work they are anticipated to be providing. Proposals should include a signed, written statement from any proposed subcontractors verifying their commitment to perform the services indicated to be completed by them.

Substitution of any proposed subcontractor is allowed only after prior written permission is received from the WVCPRB Project Manager.

Although WVCPRB would prefer to execute a single contract with the prime contractor, the agency recognizes that (multiple) third party sources are likely to be utilized to provide hardware maintenance and commercial (commodity) software products and related licenses. WVCPRB is willing to execute contracts with third party sources for hardware maintenance and commercially available software licenses. However, WVCPRB requests that the vendor commit in its proposal, that should any third party provider go out of business or otherwise become unable to fulfill its contractual obligations to WVCPRB with respect to this procurement, then the vendor (prime contractor) should provide delivery of the same or equivalent products and services at the contractually agreed upon price.

2.3 PROJECT TIMETABLE – MAJOR DELIVERABLES

It is highly desirous that Vendors provide a detailed listing of deliverables to be produced for the project with estimated completion dates. This section consists of a list of what WVCPRB considers to be the fundamental set of high-level deliverables required for the project. The due dates for this fundamental set of deliverables fall into two categories: those with delivery dates contingent on the contract start date or the start date of the phase or work unit and those with delivery dates dependent on the proposed structure of the project plan.

Table 1 below lists those deliverables with delivery dates predicated on the contract start date or start of a phase or work unit. WVCPRB desires that these deliverables as well as all the others listed in this section all appear in the vendor's Detailed Project Work Plan, some of them (e.g., 19 – Phase Roll-Out Plan) multiple times since they are Implementation Phase-related. Ultimately, all of the plans indicated herein (and elsewhere in this RFP) are to be developed by the vendor and reviewed and approved by WVCPRB.

Table 1 Delivery Due Dates for Major Deliverables

NBR	DELIVERABLE	DAYS POST PROJECT START DATE	DAYS PRIOR TO START OF PHASE OR WORK UNIT
1	Detailed Phase I (Ninety-Day) Work Plan	0	
2	Detailed Project Work Plan	90	
3	Concept of Operations Document	90	
4	Development Methodology Overview	90	
5	Installation/Configuration of Hardware	120	
6	Installation/Configuration of Software	120	
7	Statements of Work		30
8	Risk Management Reporting Methodology	90	
9a	WVCPRB's Original Requirements Traceability Matrix (RTM)	90	
9b	Vendor Update of RTM	120	
16	Change Control Plan with defined approval process	120	
17	Problem Incident Reporting Methodology	120	
18	System Security Plan	120	
19	Phase Rollout Plan		45

WVCPRB considers it crucial for the delivery dates as specified in Table 1 to be adopted by the vendor and incorporated into the larger set of deliverables detailed in the vendor's proposal.

The following section further identifies the fundamental set of high-level deliverables required of the project. The list includes deliverables identified above (i.e., those with dates predicated on project start date or task or work unit start date) as well as deliverables due on a schedule dictated by the project plan developed by the vendor:

1. DETAILED PHASE I (NINETY-DAY) WORK PLAN

WVCPRB desires the vendor to provide a complete, detailed plan covering all activities to be undertaken during the first ninety days of the project (Phase I) at the time of contract signing. This plan forms the basis for the next deliverable, the Detailed Project Work Plan, but also provides WVCPRB with information about what is happening during the first two months of the project (Phase 1 – see Appendix D, Section 2.6.1.8 Phasing the Project), when personnel will have to be available for consultation, for document review, etc. The plan should include all deliverables due before or at the end of Phase 1, complete with start dates, completion dates, hours to complete, dependencies, vendor and WVCPRB

resources assigned (responsibilities) and project milestones. WVCPRB intends to review the work plan at the weekly meetings between WVCPRB and the vendor.

2. DETAILED PROJECT WORK PLAN

It is desired that the vendor provide a complete, detailed plan of all activities required to meet all of the project requirements including: system design; development (to meet custom requirements); user, administrator and developer training; testing; conversion; and post-installation warranty. Building on the initial Ninety-Day Work Plan, WVCPRB considers it essential that the plan include all project deliverables, all detailed tasks with start dates, completion dates, hours to complete, dependencies, vendor and WVCPRB resources assigned and project milestones. Given that WVCPRB desires a phased approach to the project, it is anticipated the work plan should reflect the phasing of the project as described in Appendix D, Section 2.6.1.8 Phasing the Project. WVCPRB prefers this plan be established and maintained by the vendor throughout the life of the project using Microsoft Project. WVCPRB intends to review the plan at weekly meetings between WVCPRB and the vendor. WVCPRB desires the detailed plan be presented to WVCPRB within the time period indicated in Table 1, and be updated whenever any changes are made to the plan but no less frequently than quarterly.

3. CONCEPT OF OPERATIONS DOCUMENT

WVCPRB considers it critical for the vendor to provide a top-level Concept of Operations (COO) document, described in detail in Appendix D, Section 2.6.2.1. The COO should describe in user-oriented English (without technical terms) how the new solution will operate from the user's perspective. The COO is envisioned to explain what the users should expect in terms of the new system's functionality and graphical user interface – e.g., screens, processes, calculations, and workflow.

4. DEVELOPMENT METHODOLOGY OVERVIEW – END USER DOCUMENT

WVCPRB desires the vendor to provide a top-level Development Methodology Overview – End User (DMO) document, described in detail in Appendix D, Section 2.6.2.2. The DMO should describe, at a high level, how the system will be defined, designed, tested, and deployed, i.e., the vendor's development life cycle for the project – aimed at end-users.

5. INSTALLATION AND CONFIGURATION OF PROPOSED HARDWARE ON SITE

WVCPRB considers it critical for the vendor to ensure that all hardware specified for the solution be suitably installed and configured no later than the time period indicated in Table 1. See Section 2.5.5 of this Appendix for detailed requirements in this regard.

6. INSTALLATION AND CONFIGURATION OF PROPOSED COMMODITY SOFTWARE ON SITE

WVCPRB considers it critical for the vendor to suitably install and configure all commodity software specified for the solution on the specified hardware, within the time period indicated in Table 1. This includes not only operating system and database management software and various software tools, but also all required commodity software associated with integrated imaging and workflow management capabilities.

7. STATEMENTS OF WORK (SOWS)

It is highly desired that all work to be done under the contract to be awarded be covered by written Statements of Work (SOW), prepared by the vendor and authorized by WVCPRB. The SOWs should define reasonably sized components of work, and be submitted prior to the start of the tasks or activities identified in the SOW, as indicated in Table 1. Refer to Section 2.6.3.2 for additional requirements relating to SOWs. Vendors should acknowledge and agree that SOWs in no way diminish responses to the requirements as articulated in their RFP submission. **The SOW respresents an articulation of responsibilities and deliverables for WVCPRB and the vendor. Addenda should be used to**

document changes to the SOWs (if any – the goal of one or more SOWs per phase is to make them sufficiently small to avoid the need for changes).

8. COMPLETION OF RISK MANAGEMENT REPORTING METHODOLOGY

Within the time period indicated in Table 1, WVCPRB desires the bidder to deliver a detailed Risk Management Reporting Methodology for use throughout the project in reporting risks identified during the course of the project. See Section 2.6.3.10 for details.

9. UPDATED REQUIREMENTS TRACEABILITY MATRIX

WVCPRB will develop and provide to the vendor the Requirements Traceability Matrix within the time period indicated in Table 1. WVCPRB desires that the vendor update and return it to WVCPRB, also within the time period indicated in Table 1. Refer to Appendix D, Section 2.6.3.1 on the Requirements Traceability Matrix for additional information.

10. DETAILED REQUIREMENTS DEFINITION

Prior to the installation, design, and construction of each major phase, WVCPRB desires a detailed requirements definition document be submitted by the vendor to WVCPRB for review and approval. This document is intended to describe, for each phase, the requirements to be met by the particular phase. When all of the phases are viewed *in toto*, ALL requirements defined in the RFP will have been defined at a detailed level. See Section 2.6.1.4.

11. COMPLETION OF DETAILED SYSTEM DESIGN SPECIFICATION

WVCPRB considers it critical that the Detailed System Design Specification include all components of the system. It is envisioned to include use cases, use case models, site map(s), data element dictionary, logical data models, physical data model, deployment diagrams, activity diagrams, integration build plans, design packages, design models, interface design models, process flowcharts where appropriate, and supplementary specification documents. WVCPRB desires that the method of implementing security in each application element also be defined in this specification. WVCPRB considers it important for the vendor to conduct walkthroughs of the Detailed System Design with appropriate members of WVCPRB's project team and provide demonstrations to enhance WVCPRB's understanding and to facilitate review and approval by WVCPRB.

12. COMPLETION OF DATA CONVERSION AND MIGRATION PLAN(S)

WVCPRB considers the provision of a Data Conversion and Migration Plan as essential to the project. WVCPRB desires that the plan include a detailed description of the conversion methodology and process, a description of the process for keeping new and old systems synchronized, a description of any parallel processing supported, and a description of the quality assurance process to assure that all records have been converted correctly and fully. WVCPRB anticipates the need for multiple Data Conversion and Migration Plans, corresponding to the project phases.

13. INSTALLATION OF AND CONFIGURATION OF LINE-OF-BUSINESS APPLICATION

WVCPRB prefers that the vendor deliver, install, and configure the line-of-business (LOB) application software on the proposed hardware in a phased approach.

14. COMPLETION OF DATA BRIDGING PLAN(S)

A detailed plan for bridging data between the legacy system and the new solution during the period when both systems will be in use is considered by WVCPRB as an essential deliverable on the part of the vendor. WVCPRB anticipates the need for multiple Data Bridging Plans, corresponding to the project phases.

15. COMPLETION OF TEST PLANS

WVCPRB considers it critical that the vendor accept responsibility for the development of all test plans <u>for the entire system to be implemented</u> at WVCPRB, not just for the customizations implemented specifically for WVCPRB. This includes all unit tests, system tests, and User Acceptance Tests. It is highly desired that the vendor design and develop test scenarios, test variants, test cases, test data, and expected test results for each phase of the rollout. WVCPRB anticipates the performance of test plans and related activities in all phases.

16. COMPLETION OF CHANGE CONTROL METHODOLOGY

Within the time period indicated in Table 1, WVCPRB desires that the vendor deliver a detailed Change Control Methodology for use throughout the project. See Section 2.6.3.7 for details.

17. COMPLETION OF PROBLEM INCIDENT REPORTING METHODOLOGY

Within the time period indicated in Table 1, WVCPRB desires that the vendor deliver a detailed Problem Incident Reporting Methodology for use throughout the project in reporting production problems as well as problems identified during testing activities. See Section 2.6.3.9 for details.

18. COMPLETION OF SYSTEM SECURITY PLAN

Within the time period indicated in Table 1, WVCPRB desires that the vendor deliver a completed System Security Plan that provides an overview of **all** of the security requirements associated with the pension application throughout its life cycle. The plan is anticipated to describe the processes and controls that are necessary to protect the application from loss, misuse, or unauthorized access to or modification of information as well as the protection of data, etc., during the life of the project.

19. COMPLETION OF ROLLOUT PLAN

It is desirous that a detailed rollout plan for each functional cutover phase be provided by the vendor for review and approval by WVCPRB within the time period indicated in Table 1. It will be necessary for the plan to detail tasks, responsibility, duration, deliverables, and "ownership" among all project stakeholders (i.e., WVCPRB, the vendor, and all involved third parties). The plan is to provide a detail of week-by-week, day-by-day, and in some cases hour-by-hour activities.

20. COMPLETION OF TRAINING PLAN AND TRAINING MATERIALS

WVCPRB considers training as one of the keys critical to the success of the new solution. In that regard, WVCPRB highly desires that a detailed training plan for each rollout phase be delivered, specifying the group to be trained, the subjects to be covered, and a schedule for all training sessions. Included in the training plan should be training for WVCPRB staff in the use of the Change Control Methodology and the Problem Incident Reporting Methodology. WVCPRB desires the training materials be developed and delivered to WVCPRB for review prior to the start of actual training activities. This deliverable includes not only training in the use of screens and windows, pull-down menus, radio buttons, data entry, and the like, but also training in all of the functions, processes, and sub-processes that users will need to accomplish their role-specific work duties. WVCPRB desires that training must address WVCPRB users as well as employers (the latter in train-the-trainers mode); in addition, within WVCPRB, training should be aimed at two different cohorts – users involved in User Acceptance Testing (UAT) and the general user population.

21. COMPLETION OF MODIFICATIONS TO LINE-OF-BUSINESS (LOB) APPLICATION

WVCPRB desires that the vendor implement modifications to the LOB application software to satisfy the specific functional requirements of WVCPRB.

22. INTEGRATION WITH EXISTING FINANCIAL CAPABILITIES

It is desirous that the application be seamlessly integrated with WVCPRB's existing financial system, Microsoft Dynamics. For additional information on this existing financial system capabilities refer to RFP Section 4.2.5.3 Financial Management Sub System.

23. INTEGRATION WITH EXISTING IMAGING CAPABILITIES

WVCPRB also desires that the application be seamlessly integrated with WVCPRB's existing imaging capabilities (or a commercially available replacement imaging system recommended by the vendor). In addition, those imaging processes and indexing schemes may have to be changed to fully support the needs of the new solution. For additional information on ApplicationXtender from Documentum as it is currently used in WVCPRB, refer to RFP Section 4.2.5.4 Enterprise Content Management (ECM) Sub-System.

24. DELIVERY OF SEPARATE DEVELOPMENT, TEST, TRAINING, QA, AND QUERY ENVIRONMENT

WVCPRB considers it critical that the vendor implement a separate processing environment for development, test, training, QA, and query purposes. WVCPRB desires the vendor to replicate the LOB application and database in this second environment, including any additional configuration activities that may be necessary. Refer to Section 2.5.2 for details.

25. COMPLETION OF TRAINING

WVCPRB considers it essential for the vendor to provide phased training for managers, users (including a train the trainer approach for employers), administrators and development personnel based on the training plan and training materials delivered earlier in the project (see #20 above). This training may be a combination of standard courses and customized, implementation-specific training.

26. DELIVERY OF DOCUMENTATION

WVCPRB highly desires that the vendor deliver a complete set of systems and user documentation of the 'as-built' version of the system, specific to and approved by WVCPRB. User documentation should address not only the use of screens and windows, pull-down menus, radio buttons, data entry, and the like, but also all of the functions, processes, and sub-processes that users will use to accomplish their role-specific work duties, i.e., the Work Process Manual and on-line help facility discussed in Section 2.9.1.3.

27. COMPLETION OF UNIT TESTING BY THE VENDOR

Certification that the vendor's staff members have successfully completed all unit tests should be delivered to WVCPRB prior to the vendor commencing it's version of unit acceptance testing activities, i.e., Vendor Acceptance Test. WVCPRB desires that unit testing be performed for each functional cutover phase of the project. Refer to Section 2.11 for details.

28. COMPLETION OF VENDOR ACCEPTANCE TEST PER PHASE

WVCPRB views the Vendor Acceptance Test as a demonstration of the successful testing and operation of the system by the vendor, ensuring that the new solution is functioning and processing data correctly and ready for WVCPRB User Acceptance Testing. Tests to be performed by the vendor herein include end-to-end application testing, stress tests, volume tests, and performance tests to assure that the solution meets performance requirements under expected user loads, backup and recovery testing and installation testing. WVCPRB desires that VAT be performed for each functional cutover phase of the project. As part of VAT, the vendor should provide a written statement, signed by both the vendor's project manager and the vendor's test director (an individual separate and apart from the development staff charged with only test and quality assurance responsibility) that all tests have been completed satisfactorily (at least 97%) and that the system is ready for User Acceptance Testing. The final output of

VAT should be both hardcopy and electronic test materials including, but not limited to: test plans, test scripts, expected test results, and tangible proof that test results were produced and compared to expected test results. The earliest UAT may commence is two weeks after **all** VAT material has been provided to WVCPRB. Refer to Section 2.11.2 for details.

29. COMMENCEMENT OF USER ACCEPTANCE TEST (UAT) PER PHASE

User Acceptance Test is anticipated to commence after the vendor has certified the completion of vendor acceptance testing and readiness for UAT (including having 97 percent of major processes perform without major errors). Users will perform the testing utilizing test scripts developed and provided by the vendor. All issues will be documented according to a formalized issue tracking process. UAT not be deemed complete until 99 percent of major processes within WVCPRB can be performed without errors or issues.

30. ACCEPTANCE OF THE SYSTEM BY USERS PER PHASE

After successful completion of the UAT, the system should be turned over to the users for production use.

31. COMPLETION OF THE CONVERSION PROCESS PER PHASE

Completion and verification of the conversion of all retirement system data in accordance with the Data Conversion Plan referenced in #13 above.

32. SOURCE CODE

As specified in Section 2.5.6.1, WVCPRB desires the vendor to deliver into an escrow account on WVCPRB's behalf, the line-of-business (LOB) application source code as customized to meet WVCPRB-specific functional requirements, upon the delivery of the system for use in each phase and no less frequently than every quarter thereafter.

33. WEEKLY STATUS REPORTS AND MEETINGS

WVCPRB highly desires the vendor to deliver weekly written project status reports and facilitate weekly status meetings throughout the life of the project.

34. MONTHLY STEERING COMMITTEE MEETINGS

WVCPRB desires that the vendor assist the WVCPRB Project Manager in the preparation for and subsequent attendance at monthly Executive and Steering Committee meetings throughout the life of the project.

35. LOB APPLICATION SOFTWARE LICENSE

It is desirous that the vendor deliver to WVCPRB a license for the use of the line-of-business (LOB) application software and all requisite support, development, third party, and additional software necessary to use and maintain the LOB application.

36. WARRANTY

WVCPRB desires that the vendor provide a warranty for the LOB application effective from the time of the first rollout through 12 months after final acceptance by WVCPRB of the last rollout.

Depending on the options selected and authorized by WVCPRB, additional deliverables may be required.

Vendors are encouraged to identify additional project deliverables, as applicable, beyond the fundamental set identified above.

Vendors are advised that the project deliverables discussed above are **not** related to payment points. Deliverables – termed herein "contractual deliverables" – that, upon their **written acceptance** by WVCPRB, trigger vendor payments have been established by WVCPRB. There are 12 such contractual deliverables. For each, WVCPRB has established the percentage of the total project cost that is to be allocated to it (please refer to RFP Section 4.8 Invoices, Progress Payments, & Retainage).

2.4 FUNCTIONAL REQUIREMENTS

The following sections provide detailed information on the business and technical functional requirements that should be satisfied by the new system. The information is divided into the 35 functional business areas that WVCPRB supports. The vendor is to provide:

- Existing functionality (the "as is state" defined in RFP Section 4.2.6 Current As Is Business Functionality that **WVCPRB envisions** to be reproduced, albeit with a greater degree of automation and integration, imaging enabled, with improved business processes and workflow, with improved data accuracy, and with an improved degree of user and customer satisfaction)

- Functionality to support the execution of all processes required in accordance with enabling legislation, Board policies, etc. that are in effect on the day of contract execution

- New functionality (the "to be state" defined in the following sections) that WVCPRB envisions can be developed with a high degree of automation, integration, and improved business processes and workflow. We note in particular that we have not indicated that every process must be done automatically. However, we anticipate significant automation of rote processes in the new solution – and desire the vendor to assist in determining which processes need not be done automatically.

If at the time of contract award, requirements gathering, or detailed design, an agreement is made between the vendor and WVCPRB not to implement any current functionality, that agreement should be documented thoroughly and signed by both parties.

Any and all functions inherent to manual calculations and standalone spreadsheets in the "as is" environment are to be automated and seamlessly integrated in the new system. In this context, integrated means the system does the calculation, and not that the spreadsheet is loaded with data and then manually executed by a user and the resulting data re-entered into the LOB system.

2.4.1 *Defining the Current Environment*

Further, WVCPRB's environment is governed by a myriad of rules, regulations, "standard" operating procedures, and long-standing practices (both formal and informal, documented and undocumented). Developing a full set of all of the rules, regulations, procedures, and practices that need to be accommodated in the new solution is a critical, integral part of the project – and the key to its eventual success. Vendors should factor into their proposals, in terms of manpower, cost, and schedule, their responsibility to completely:

- Explore and define all such rules, regulations, procedures, and practices – both those that currently exist and those to be added in the new environment

- Develop pertinent specifications

- Implement those capabilities.

In preparing their responses to this RFP, vendors are cautioned to budget sufficient manpower to decompose this information to a level of detail sufficient to obtain sign-off from WVCPRB staff during the initial phases of the implementation.

Among other factors, vendors' responses will be evaluated on the basis of their commitment to this portion of the effort, as evidenced by their work plan for addressing this issue and the funds, manpower, time allotment, and quality of vendor staff proposed to be dedicated to it.

Because this issue is critical, vendors are requested to **affirm in writing, both in their proposals and in the accompanying cover letter,** their understanding of this responsibility. In developing the requirements definition of the new system, WVCPRB desires the selected vendor to involve WVCPRB staff members in many requirements and design "workshop" sessions. This involvement of staff members is understood by WVCPRB as essential to preparing correct, comprehensive requirements definitions and systems designs. Yet the time required of WVCPRB staff for this level of participation may inhibit the day-to-day business of WVCPRB. Therefore, WVCPRB requires that staff participation in the requirements definition process be as efficient as possible.

To this end, WVCPRB desires that any written materials supplied by the vendor for use in requirements and design meetings with WVCPRB staff be targeted specifically to WVCPRB. WVCPRB recognizes that the vendor may utilize materials prepared for other retirement system customers to "bootstrap" the design definition effort. However, such materials should be purged of any specifics (including but not limited to name references, forms, and calculation routines) that relate to another of the vendor's customers. Ideally, these materials should be tailored to WVCPRB's specific business practices from the time they are first exposed to WVCPRB staff members. At the least, they should be neutral, that is, they should not contain any overly specific references to specific practices of other retirement systems so as to avoid any confusion or wasted effort during the requirements definition and design sessions with WVCPRB staff.

If at the time of contract award, requirements gathering, or detailed design, an agreement is made between the vendor and WVCPRB not to implement any current functionality, that agreement should be documented thoroughly and signed by both parties.

Any and all functions inherent to manual calculations and standalone spreadsheets in the "as is" environment are to be automated and seamlessly integrated in the new system. In this context, integrated means the system does the calculation, and not that the spreadsheet is loaded with data and then manually executed by a user and the resulting data re-entered into the LOB system.

2.4.2 *Additional Requirements for the New Line of Business Solution*

There are a number of principles based upon which the requirements in subsequent sections were based. At a very high level, those principles include:

- The public interface of WVCPRB will be a combination of members of the operational staff using automated tools and access to knowledge far beyond that available to them today and web-based self-service capabilities that provide all the tools required to allow members, retirees, beneficiaries, and employers to answer their own questions and initiate their own processing

- WVCPRB envisions the scanning of all incoming documents and the subsequent distribution and management of all work that results from such documents (as well as requests made by phone, web, etc.), to be managed by a tightly embedded workflow engine

- As much data entry as is possible should be done by those outside of WVCPRB staff, e.g., members will be encouraged to use web-based self-service as much as possible, and employers (assisted by tools provided within the new LOB) will be held responsible for ensuring their periodic reports are complete and correct before they are posted

- WVCPRB envisions all security within the system to be managed on a role-based model. In the discussion below all references to user and authorized staff are intended to refer to those members of the WVCPRB staff who are authorized to perform the indicated function

- One of WVCPRB's requirements of the selected vendor is that they assist WVCPRB in converting from use of a member Social Security Number (SSN) to a unique member identifier, in both internal (e.g., imaging record primary ID) and external (use of SSN to uniquely identify a member on correspondence and forms). It is critical that the SSN be retained for use in financial reporting to the IRS, etc., but WVCPRB highly desires each member also be assigned a unique member ID. In the tables that follow, the use of SSN as an identifier is for example purposes only, and when used as a unique identifier, should be understood as such.

2.4.3 *Specific Information about this Portion of the RFP*

The matrices in the following subsections list the many detailed business function capabilities that the proposed integrated retirement system solution should provide.

The vendor's response should include a completely filled-in (a checkmark in one of the last three columns) matrix for each functional area in order to be considered for evaluation.

The column headings in the "To-Be" matrices are:

1. **Requirement ID** – an internal indicator of the specific requirement

2. **Description** – a detailed description of the requirement

3. **Highly Desire –** checked by WVCPRB if this is a highly desired requirement.

4. **Desire –** checked by WVCPRB if this is a desired requirement

5. **Exposed via Web** – checked by WVCPRB to indicate that functionality should be exposed (under appropriate security) to member / retiree / employer as appropriate. In some instances as noted, it is envisioned that certain functionality be exposed via web for the use of WVCPRB staff and management.

6. **Compliant** – checked by the vendor to indicate functionality included in the base product with no customization required. (Configuration of tabular parameters by user administrator or business analyst is acceptable herein.)

7. **Customize** – checked by the vendor to indicate functionality **not** included in the base product but to be provided to WVCPRB by a customization to the base product.[1]

8. **Non-compliant** – checked by the vendor to indicate functionality is not currently included and will not be provided by customization. The vendor is warned that failure to respond in the affirmative to a highly desired requirement will greatly impact the scoring of the vendor's response.

To ensure that WVCPRB's selection of a vendor is adjudicated by the merits of the proposed solutions, one of the responses in columns 6-8 should be provided for each listed capability in the "To Be" matrices. Vendors are to check the appropriate columns in the matrix to indicate their response.

WVCPRB believes that the table-oriented approach used below for presentation of functional requirements is an appropriate method for succinct description of the requirements and for the vendor's response. However, the approach does not provide WVCPRB with a "feel" for how the functionality is provided. Therefore, even in those sections where no specific request is made for expansion on the requirements, in addition to completing the table, as appropriate, the vendor is requested to also provide a narrative description of the functionality provided in each specified functional area.

In an effort to make clear to the vendor the hundreds of functional requirements that WVCPRB has developed within this RFP, they are sub-divided in the sections that follow into three specific areas:

● Primary Business Functions, e.g., Employer Reporting

● Supporting Business Functions, i.e., those which are cross-functional areas such as Correspondence

● Technology-Based Business Functions, e.g., Imaging

Where applicable, the detailed functional requirements have been further divided into:

● Input

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[1] Note that should the vendor propose that any required capabilities be provided through customization of the base product, the vendor is also required to describe how subsequent releases of the base product will incorporate those customizations – or otherwise ensure that WVCPRB loses no functionality when they upgrade.

- Process
- Output
- Control
- Metrics.

WVCPRB has a vision of a the new pension system rich in browser-based and web-enabled self-service functionality, providing ease of use not only to WVCPRB users, but also to members, retirees, beneficiaries, and employers. Specific implementation and/or policy decisions as to which web-enabled self-service features should be "turned-on" and "when" are to be discussed and agreed upon (typically by the vendor and WVCPRB project managers) throughout the course of the implementation project. As a result, WVCPRB desires the ability to support the timing of the initiation of the web-enablement of required functionality to be easily administered by a system administrator and not an IT specialist.

Vendors should take note that WVCPRB desires that **web-enabled functionality** – whether applicable to WVCPRB users or members or retirees or beneficiaries or employers –be available on a near 24 X 7 basis (see Section 2.5.8.1.2). If some level of "downtime" is essential for system / Web-site maintenance and support, then the downtime period should be no greater than four (contiguous) hours per week on a pre-established schedule (e.g., every Sunday morning between 2:00 AM and 6:00 AM). Vendors should explicitly state their agreement to meet this critical performance requirement in their technical proposals.

2.4.4 *Desired "To Be" Major Business Functionality*

The specific business functional requirements in this section are broken down into the following categories corresponding to the RFP sub-sections which follow:

1. **Activity Tracking** – This group of requirements encapsulates both system standards and business functions. The group includes the monitoring of incoming and outgoing communications (e.g., telephone, email, correspondence) between the retirement system and the members, retirees, beneficiaries, employers, and third-parties. It also includes report requirements for these activities. In addition, some of these requirements address formulation of data for the customer service efforts, including those which would tightly integrate with telephone-based customer relation functions

2. **Annuity Payroll and Other Payments** – This group of requirements includes setting up a payment for an annuity, a refund, a withdrawal, a loan, payment of a third-party (deductions for vendors and employers), etc. It includes all maintenance of the payment schedules, deductions, integration with the general ledger and all regular and ad-hoc reporting for payments

3. **Beneficiary Maintenance** – Includes the requirements for inputting a member's nomination of a beneficiary, changing that beneficiary's data, and maintenance of the survivor annuitant record after they have been placed on the annuity payroll

4. **Benefit Estimates** – Requirements pertaining to the ability to perform estimates of retirement benefits (both by agency staff and by the member through the use of self-service tools)

5. **Benefit Processing and Calculations** – Requirements pertaining to the complete member pension application process and any pertinent retirement calculations

6. **Death** – These requirements include the functions required to record the death of members and beneficiaries, and to process a death benefit on behalf of the beneficiary of a member who was either actively working or are retired and receiving a benefit. These also address the management of any associated receivables based on the timing of a death notification

7. **Defined Contributions** – WVCPRB provides pass-through services for members of the Teachers' Defined Contribution plan. The requirements in this section pertain solely to the management of information associated with the TDC members

8. **Disability** – Requirements for the submission of the disability applications, reviewing, tracking medical board actions, and placing an approved member on disability. This group also includes the

actions of performing the Disability calculations, placing a disability recipient on annuity payroll and the annual statement of compensation processing

9. **Employer Reporting** – This is a broad area including the setup of new employers and tracking employer demographic updates. The requirements also include the filing of employer wage and contribution reports and their reconciliation. Appropriate employer self-service processing is also included

10. **Enrollment** – This includes the enrollment of new members into the system. It includes such topics as enrollment waivers and changes to current member enrollment and employment information. These requirements include both paper application processing and employer- and web-based enrollment

11. **Funds Management** – These are the LOB solution's financial management requirements. The typical audience for these requirements is the Accounting / Finance department. The group includes the requirements for money transfers between plans, funds transferred to and from the WV Investment Management Board (WVIMB), integration with the General Ledger, and balancing and reconciliation of funds and plans. This area also includes the management of cash receipts, auditor reporting, and banking

12. **Hearing Administration and Appeals** – An important part of the management of applications for Disability Retirement is the management of member appeals. We have chosen to separate the administration of hearings and appeals from the rest of the Disability requirements described above

13. **Loans Management** – These requirements are used for those systems that allow members to take loans out against their member account. It includes all of the requirements for calculating a loan, determining eligibility, delinquent and deemed loan processing, loan offsets, and collection and posting of loan payments from employers or directly from members.

14. **Member/Pensioner/Employer Maintenance** – Includes the requirements for keeping a member or retiree's census, demographic, banking, and account information up to date

15. **Member/Employer Education** – These requirements include the registration of members/employers for both group education sessions and individual counseling sessions. This also includes reporting and recording of sessions in which members/employers participated

16. **Member Statement** – These requirements include the execution of the annual member and/or retiree statement of account as well as the contents of the statement

17. **Multiple Service** – These requirements are applicable for systems that allow service credit in a sister agency or one with a reciprocal agreement to be used toward retirement. As an example; a teacher retiring from the teacher retirement system may be allowed to utilize credit from previous state service for retirement eligibility in TRS

18. **Power of Attorney** – The ability to add the various types of power of attorney and grant the attorneys the appropriate rights. This also includes requirements for guardianship

19. **Purchase of Service** – This group of requirements is for the entire service purchase process including the cost estimate process, creation of the purchase agreement including principal and interest, crediting the member's account and setting up the receivable and readjusting the receivable amount based on payment history

20. **QDRO, Less Than Honorable Service (LTHS), and Court Orders** – All requirements used for identifying the alternate payee and establishing the appropriate benefit distribution for Qualified Domestic Relations Orders, and other court orders. Also to identify members whose contribution account is restricted due to a potential LTHS claim.

21. **Refunds** – This group of requirements includes the ability to identify periods of service eligible for a refund and the associated contributions and interest for that period. The group includes the member refund application process and creation of the refund payment transaction and associated tax

reporting. This also includes the ability to reverse a refund transaction, or allow the member to buy the service back

22. **Return to Work** – These requirements allow the ability to track a retiree's return to work and the identification of whether this class of service results in termination or reduction of benefit or is allowed

23. **Tax Reporting** – The majority of these requirements are related to the generation of the 1099-R, but this group also includes requirements for identifying taxable and non-taxable contributions (safe harbor), and other reporting and remittances to the IRS

24. **Telephone-Based Customer Relations** – These requirements integrate with a number of the customer service related requirements that fall under Activity Tracking. The requirements in this area focus particularly on integration with telephony, and the capturing of data related to telephone calls

25. **Third Party** – These requirements are for withholding tracking, withholding of premium deductions, and remittance of those premiums to third parties (typically healthcare providers, unions, etc.)

2.4.4.1   General Discussion

WVCPRB believes that the table-oriented approach used below for presentation of functional requirements is an appropriate method for succinct description of the requirements and for the vendor's response. However, the approach does not provide WVCPRB with a "feel" for how the functionality is provided. Therefore, vendor should, in addition to completing the table, provide a narrative description of the functionality provided in each specified functional area. That narrative should provide a succinct presentation of the benefits to WVCPRB of the approach taken by the vendor in providing the features they do.

2.4.4.2   Activity Tracking

The following section outlines functionality required to maintain the various contacts associated with members, retirees and other entities to be maintained in the LOB solution.

Table 2: Functional Requirements for Activity Tracking

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	INPUT						
1.	Ability to capture (automatically user-id, user name, date and time stamped) all contacts and inquiries, including comment, status, routing, requestor, caller, relationship, etc. (via e-mail, correspondence, telephone calls, counseling sessions, personal contact)		●				
2.	Ability to capture a form request (form requested, date requested, date mailed, the requestor, the recipient, and who fulfills the request)		●				
3.	Ability to capture activity / contact with customers by providing users with standard codes as well as the ability to input free form text	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
4.	Ability to capture in the activity tracking log all information that was historically provided / sent to the member and when, and by whom		●				
5.	Ability to capture a request for income verification from a third party		●				
6.	Ability to capture, at the individual member level, the preferred means of communication (e.g., mail, telephone, e-mail, fax, relay telephone, Braille, etc.)		●				
PROCESS							
7.	Ability to schedule appointments through an automatic rotation based on the date of the appointment and who is scheduled to work that day for that activity.		●				
8.	Ability to integrate activity tracking log capabilities with the line-of-business system, not requiring duplicate input of data or separate action and / or access modes		●				
9.	Ability for users to tie documents, images, spreadsheets, and similar or related items to any activity tracking log entry		●				
10.	Ability to access any activity tracking log entry by SSN, member identifier, name, date of birth, phone number, or other lookup fields	●					
11.	Ability to automatically link calendar activities to contacts		●				
12.	Ability to automatically pass the document code / document name of imaged documents from the imaging system to the line-of-business system and update the activity tracking log contained in the line-of-business system	●					
13.	Ability to automatically update the activity tracking database for life events, including but not limited to beneficiary designation, request for retirement benefit estimate, retirement application, disability application, termination of employment, refund requests, service credit purchases, death of member, retiree, or beneficiary, etc.		●				
14.	Ability to display all activity tracking transactions dates and times		●				
15.	Ability to display comments / notes attached to a member's account	●					
16.	Ability to display the status (not-started, in-process, pending more information, completed, etc.) of all workflow processes		●				
17.	Ability to easily access all pertinent information on any stakeholder (member, retiree, beneficiary, third party payee, other retirement system, etc.) when a contact occurs	●					
18.	Ability to initiate workflow processes both automatically (via the imaging of documents) and manually based on the receipt of a phone-call, walk-in, fax, e-mail, etc.		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
19.	Ability to produce forms / correspondence online; consolidate multiple documents for the same person and print in a single print job, add image copy to member folder; and update activity tracking log	●					
20.	Ability to provide the same activity tracking features applicable to organizations (employers, banks, 3rd parties, etc.) as those that are applicable to people (members, beneficiaries, etc.)		●				
21.	Ability to provide densely packed customer service screens (inquiry only) that contain as much summary information as possible for given functional areas (death, refund, pension Annuity Payroll, disability, beneficiary, etc.) and the ability to drill-down for detailed information if so desired by the user	●					
22.	Ability to provide densely populated customer service summary screens containing as much important user information as feasible and to scroll through entire member's account to see all pertinent information at a glance rather than searching numerous screens and programs in a piece-meal fashion	●					
23.	Ability to scroll through activity log chronologically (oldest first, newest first) and to sort by category of contact		●				
24.	Ability to track on the member level when a mass mailing was sent and how it was sent to each member (e.g., USPS, email, email link)		●				
25.	Ability to update activity tracking information to reflect the most recent transaction or information provided to the customer via the system (i.e., change in beneficiary, retirement estimate, etc.) or as a result of a communication between WVCPRB and the customer – phone, voicemail, e-mail, mail, fax, or in person	●					
	OUTPUT						
26.	Ability to generate a chronological report of the activity log		●				
27.	Ability to generate a report listing all activity tracking entries for a contact		●				
28.	Ability to print any activity tracking view exactly as it appears on the user's screen		●				
29.	Ability to provide managers with an end of day appointment change report for review		●				
	CONTROL						
30.	Ability to limit access for certain activities such as being able to modify or delete an appointment	●					
	METRICS						

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
31.	Ability to generate reports based on telephone call statistics (type of call, type of caller, forecasting)	●					
32.	Ability to generate reports for telephone statistics (type of call, type of caller, forecasting)	●					
33.	Ability to determine the Efficiency of Response to Customer Requests – A report of the volume of requests, the number of days required to fulfill a customer's request for a form/information, and the number of customer requests that are currently outstanding and by how many days.		●				
34.	Ability to determine the Effectiveness of Response to Customer Requests – A report to measure whether or not the customer had to call in and make a subsequent request(s) for the same information in a relatively short period of time.		●				

2.4.4.3 Annuity Payroll and Other Payments

The section outlines requirements related to the monthly processing of benefit annuity payroll and other payments that WVCPRB may have occasion to make. WVCPRB's goal is to maximize its use of electronic payment capabilities and requires that the vendor provide a narrative of its experience in this area. In addition, throughout the description of requirements below, the vendor should note that references to "checks" should be understood to include "Electronic Funds Transfers" and other means of providing payments to payment recipients. In other words, WVCPRB desires that the proposed solution be able to create and process disbursements (including pension annuity payroll, and other disbursements currently generated by WVCPRB) in both electronic (EFT) and paper format.

For those pensioners that do not have access to a bank account, WVCPRB would like the ability to deposit their pension annuity payroll disbursements into an individual "debit account" for those pensioners who choose to participate in such a program. WVCPRB's requirements for this new program include: secure deposit and withdrawal of funds, ease of use by the pensioner, and minimal administrative overhead to WVCPRB staff. WVCPRB is open to third-party administration of such a program. In its proposal, the vendor should discuss how it has successfully implemented "debit accounts" for other retirement systems, or, alternatively, discuss the key concepts and risks that should be addressed for its proposed solution. This "debit account" program may or may not eventually be used for new retirees who do not provide bank information for traditional EFT deposits.

All references to cost-of-living adjustments (COLAs) should be understood to include escalations and other such adjustments.

Table 3: Functional Requirements for Annuity Payroll and Other Payments

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture "bulk" changes in bank routing numbers (supporting bank mergers) for direct deposit of retiree payments and updates (e.g. update all payee records with new routing number)	●					
2.	Ability to capture an unattended process total amount, individual check amount, and allocation of an amount into employer portion and employee portion		●				
3.	Ability to capture all types of stop payments (retirements, refunds, direct rollover, vendor payments, etc.) including the date of stop payment and a reason for the stop payment	●					
4.	Ability to capture changes in individual and bank routing numbers for direct deposit of retiree payments	●					
5.	Ability to capture check / payment statuses, including cancellation status at the check level, the account level and the person level since some individuals receive multiple checks for numerous reasons	●					
6.	Ability to interface with State Treasurer's Office in order to capture disbursement status (check cashed, not cashed, retained, and deposited, etc.)		●				
7.	Ability to capture information from checks that were returned to WVCPRB but not deposited and initiate workflow process for investigation and corrective action		●				
8.	Ability to capture response from member relating to outstanding check that has not been cashed		●				
9.	Ability to capture and maintain separate disbursement addresses for refunds, death benefits 1099Rs, and annuity	●					
10.	Ability to capture and update direct deposit information	●					
11.	Ability to capture and update key financial institution information	●					
12.	Ability to make one time payments, such as refunds, death benefits, loan distributions, or withdrawals by direct deposit	●					
13.	Ability to capture, update, and validate bank routing numbers and cross match with financial institution name and address	●					
14.	Ability to enter one or more messages (to be determined conditionally) to be printed on a check stub or ACH advice for all or a subset of disbursements	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
15.	Ability to automatically designate a qualified retiree, regardless of the plan under which they retire, as a Public Safety Officer (PSO) and add the PSO election form to the retirement packet.	●					
16.	Upon receipt of election as a PSO, enter into the system the special PSO insurance deduction under federal tax regulations and the (up to three) carrier(s) that they have selected.	●					
17.	Member request for income verification	●					
	PROCESS						
18.	Ability to automatically generate (aggregated, if appropriate) payments (with explanation of payment and recovery amounts) to providers based on deduction and plan issues (i.e., state co-payments, state subsidies, etc.)	●					
19.	Ability to automatically produce a Monthly Annuity Payroll Summary Report for reconciling a given month's benefit annuity payroll to that of the preceding month prior to printing the actual checks (by reflecting the net effect of all new benefits, benefit adjustments, benefit reinstatements, and benefit deletion transactions that were posted during the annuity payroll period against the prior period annuity payroll) the report is to also indicate the expected number of checks to be produced (i.e., number produced in the previous pay period, plus number of new retirements, plus number of reinstated retirees, minus number of retirees suspended / terminated); separate detail reports are to be available on demand as backup to the Summary Report – including: New Retiree Detail, Monthly Benefit Adjustment Detail, Reinstated Retiree Detail, and Retirees Suspended / Terminated Detail	●					
20.	Ability to automatically produce at the conclusion of every check run a report of the number of checks printed, the total amount of all checks printed, and a separate report of the number of and total payments by direct deposit (ACH), in total with subtotals of each by fund	●					
21.	Ability to generate separate electronic files with all necessary payment data for each check run and to transmit it to the State Auditor's Office (SAO). It is necessary that separate files be generated for ACH and paper checks.	●					
22.	Ability to generate an automatic summary entry for each annuity payroll run to the G/L	●					
23.	Ability to ensure that for each check successfully changed to "void" status, a corresponding automatic entry is made to the general ledger	●					
24.	Ability to ensure that only users with appropriate permissions are able to access and update the check print file	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
25.	Ability to ensure that the aggregate amount of all checks printed agrees with the aggregate amount of checks included in the print file	●					
26.	Ability to produce (and save indefinitely) an accurate check register file, identified as a 'trial' or 'final' run, such that all amounts and check numbers can be reconciled with the actual checks produced	●					
27.	Ability to process returned benefit checks and update member's account accordingly	●					
28.	Ability to accommodate an automatic check reconciliation process (as opposed to a manual paper reconciliation process) for multiple checking accounts – with all accounts being handled in the same manner		●				
29.	Ability to display cash disbursement information necessary to permit user to complete bank reconciliation processes		●				
30.	Ability to identify the type of payment made to a vendor or member (i.e., system-generated check, manual check, or wire transfer)	●					
31.	Ability to match stop payment requests to the STO with payments made that have not yet cleared	●					
32.	Ability to request a stop payment and reissue of check by the STO and generate appropriate correspondence to the recipient	●					
33.	Ability to process a response from the member relating to uncashed check and trigger workflow for WVCPRB user to request that the STO re-issue a new check and send that transaction to the STO to generate the actual check	●					
34.	Ability to process ACH rejects via electronic notification from STO	●					
35.	Ability to process manual payment transactions (on a very special case-by-case basis with the highest of security / audit levels) for situations dictating the need for an immediate disbursement	●					
36.	Ability to record and report the number of consecutive ACH rejects for each annuitant		●				
37.	Ability to support the creation of one-time special checks	●					
38.	Ability to support the following types of check payment types: original, replacement, re-issue, re-sent, etc.	●					
39.	Ability to support the setup and creation of recurring payments (pension annuity payroll)	●					
40.	Ability to support the transfer of direct deposit information to SAO for running annuity payroll	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
41.	Ability to switch a member from ACH to paper-check payment when an ACH transaction fails and to automatically generate workflow to request new or corrected direct deposit information	●					
42.	Ability to tie various addresses and bank routing information to the check (not necessarily just the member) for those cases where a person wants his/her checks / payments to go to different places / accounts	●					
43.	Ability to track each step of the stop payment process, including that it was sent to STO / bank for investigation and the results of that investigation		●				
44.	Ability to update files when replacement check or photocopy is issued		●				
45.	Ability to track income verifications, i.e., member / company / agency requesting income verification, including date received and date information was returned for both active and retired members	●					
46.	Ability to automatically fax the income verification to a specified telephone number at the retirees request		●	●			
47.	Ability to automatically generate (and transmit) income verifications on a periodic schedule of 1 to 12 months		●	●			
48.	Ability to send income verification to an alternate address at the retirees request		●	●			
49.	Ability for user to maintain the COLA percentage at the plan level	●					
50.	Ability to accommodate QDRO payments (fixed amount or fixed percentage of benefit) and related COLA processing	●					
51.	Ability to allocate tax and non-taxable portions between a member and the QDRO recipient	●					
52.	Ability to accommodate the addition of one-time special subsidies that the Legislature may choose to award	●					
53.	Ability to add survivors to annuity payroll for either recurring payments or one-time payments	●					
54.	Ability to apply COLA to an annuity payroll transaction when applicable	●					
55.	Ability to apply deduction to either gross or net pay.	●					
56.	Ability to apply the new pension benefit automatically depending on various laws or options chosen (disability or joint coverage) and applicable life events (e.g., death, benefit reversion, attainment of age 65, etc.)	●					
57.	Ability to assess a recurring warrant or check charge for those members electing to receive their benefit by check rather than direct deposit or EFT with the ability to waive the fee for selected members		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
58.	Ability to automatically adjust a monthly benefit payment amount to recover overpayments until the debt is satisfied	●					
59.	Ability to automatically generate a retirees' first benefit check for multiple months or fractions thereof	●					
60.	Ability to automatically determine each retirees COLA increases based on each plan's requirements	●					
61.	Ability to determine, retroactive annuity due to COLA increase for review and approval by user	●					
62.	Ability to redistribute pension amounts to beneficiaries upon qualifying event, e.g., remaining dependent children when one of the dependent children reaches age 18 for review and approval by user	●					
63.	Ability to automatically generate appropriate actions and correspondence based on change in status of dependent children beneficiaries		●				
64.	Ability to automatically update annuity payroll system with new (adjusted) benefit information (gross annuity, taxable, Federal Withholding Tax (FWT), etc.)	●					
65.	Ability to calculate and apply COLA adjustment based on legislation	●					
66.	Ability to allocate COLA between retiree and QDRO recipient	●					
67.	Ability to calculate and issue retroactive payments to a member who has been suspended from annuity payroll for a period of time	●					
68.	Ability to calculate federal and state withholding tax (based on a fixed dollar amount and current tax tables) and update the taxable amount	●					
69.	Ability to calculate tax levies or support payments and apply/update attachments (percentages or fixed dollar amount)	●					
70.	Ability to control the addition and deletion of individuals from annuity payroll with status codes and status effective dates	●					
71.	Ability to correct invalid non-financial (e.g., SSN) annuity payroll data by manual entry	●					
72.	Ability to create and update selected data including gross check amount, federal and state withholding tax, and other types of deductions	●					
73.	Ability to create and/or update a detail annuity payroll record	●					
74.	Ability to create deduction-ending dates that automatically suspend deductions when applicable and generate a notification correspondence	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
75.	Ability to create annuity payroll ending dates and automatically remove the account from annuity payroll and optionally reinstate when applicable (e.g., termination of benefit upon age of majority)	●					
76.	Ability to cross reference account information (e.g., member, beneficiary, alternate payee, survivor annuitant, etc.) and display the associated account	●					
77.	Ability to determine eligible annuitants for existing and future COLAs	●					
78.	Ability to display all detailed benefit payment information (current/historical) for each electronic transfer/direct deposit or "paper" check initiated (e.g., check number, payment type, gross payment amount, net payment amount, deduction amounts, check address used, etc.)	●					
79.	Ability to generate multiple payments per payee in a single annuity payroll run as part of the SAO file.	●					
80.	Ability to include all deductions on check stub – current period and year to date	●		●			
81.	Ability to issue one-time payments	●					
82.	Ability to maintain a flag to indicate payees that want the annual COLA increase "applied" or "rejected" and automatically update the withholding		●				
83.	Ability to maintain a historical file of annuity payroll exceptions		●				
84.	Ability to maintain more than one benefit account for a payee, (e.g., annuitant, beneficiary, etc.)	●					
85.	Ability to maintain annuity payroll status types and codes	●					
86.	Ability to maintain yearly gross check amount, taxable amount, deductions, excludable amounts, ratios, and recovered amounts for 1099R reporting	●					
87.	Ability to make a payment payable to a third party (e.g., a guardian) on behalf of a payee	●					
88.	Ability to perform manual COLA calculations with appropriate management approval for cases where there are exceptions that could not be updated by the system	●					
89.	Ability to perform annuity payroll "production run" after successful validation	●					
90.	Ability to perform annuity payroll "trial run" to validate annuity payroll data prior to the generation of the annuity payroll tapes/checks and annuity payroll reconciliation reports	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
91.	Ability to place a "hold" on a benefit payment check and release when applicable including a reminder to the user and their supervisor if benefits have been on hold for more than a specified period without further action	●					
92.	Ability to process special deductions to financial institutions and provide for reconciliation and payments to the appropriate institution	●					
93.	Ability to provide adequate annuity payroll controls to ensure accurate information is sent to SAO	●					
94.	Ability to provide an online Web utility for WVCPRB members (annuitants) to update/maintain their federal and state withholding tax amount, multiple check addresses, and other pertinent information	●		●			
95.	Ability to automatically re-execute annuity payroll edits once a correction has been made in response to an exception/error or a new record is created	●					
96.	Ability to reissue a direct rollover amount to a different financial institution		●				
97.	Ability to retain both the rates used in calculating the COLAs for past years as well as the actual COLA increases applied to individuals' benefit amounts	●					
98.	Ability to retain history of check addresses, the member's address, and their survivor's addresses, with effective dates 'attached' to all historical addresses	●					
99.	Ability to reuse prior month deductions for third parties in cases where current month deductions have not been received	●					
100.	Ability to send an automatic notification to the accounting department when annuity payroll is run to alert them to remit tax withholding amounts to tax authorities		●				
101.	Ability to send the annuity payroll file to an outside agency (SAO) for printing of checks	●					
102.	Ability to set up, process and transfer a disability retirement to a regular (service) retirement if member no longer qualifies for disability and is eligible for regular (service) retirement	●					
103.	Ability for uniformed services retiree to transfer from a non-duty related disability retirement status to a duty related disability retirement status	●					
104.	Ability to store and display the before check amount, the COLA increase, the COLA percentage, and check amount after application of the COLA (including all applicable deductions).		●				
105.	Ability to support both one-time and recurring deductions	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
106.	Ability to support Joint and Survivor Annuity payments and provide detailed tracking of this annuity, with the ability to transfer the annuity to the survivor after eligibility validation and certification of death of the retiree	●					
107.	Ability to support multiple check addresses, each in effect for a portion of a year (e.g., "snowbirds") and ability to distribute address changes to related parties as necessary	●					
108.	Ability to automatically recalculate tax withholdings upon change of gross payment unless retiree has specified a fixed withholding amount	●					
109.	Ability to automatically update supplemental pay amounts when the retirees' gross payment amount changes		●				
110.	Ability to support negative, zero, and positive account balances but generate only positive payment amounts and create appropriate warnings/error messages when zero or less than zero	●					
111.	Ability to support the entry of federal and state tax withholding for a future date and implement the change with the benefit annuity payroll corresponding to the date		●				
112.	Ability to support void, forgery, and stop pay situations, and generate replacement checks where applicable	●					
113.	Ability to suspend and reactivate a member's annuity payroll record	●					
114.	Ability to test a direct deposit disbursement via pre-note capability through an interface with the SAO	●					
115.	Ability to track individual annuity payroll deductions (e.g., member name, name of entity, address, amount paid, date of payment, check number, etc.)	●					
116.	Ability to track receipt of notification of change in marital status or death of survivor annuitant or divorce		●				
117.	Ability to update COLA processing should a benefit recipient become eligible after the normal COLA unattended execution, for all or a subset of members	●					
118.	Ability to update related fields (transfer amount, gross, taxable, survivor check, etc.) after recalculating the COLA	●					
119.	Ability to withhold (or credit) healthcare and dental premiums and other third party deductions from a benefit payment	●					
120.	Ability to validate entry of a new financial institution's bank routing number by using the ABA 'check digit' calculation (the 9th digit in the routing number)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
121.	Ability to execute a annuity payroll run during the day or evening without interfering with business operations	●					
122.	Ability to calculate distribution to mandated payee(s) from pensioners receiving periodic payments, to initiate distributions, calculate withholding, and to make retroactive distributions		●				
123.	Ability to adjust distribution to mandated payee(s) when pension is adjusted or because of subsequent court action and to recover overpayments or make retroactive distributions		●				
124.	Ability to terminate distribution to mandated payee(s) because of pension termination or subsequent court action and to recover overpayments or make retroactive distributions		●				
125.	Ability to see a history of all beneficiaries (primary and secondary) for retirees	●					
OUTPUT							
126.	Ability to automatically generate correspondence to the member explaining that he/she has received a specific number (as specified in the plan setup) of consecutive outstanding checks that have not been cashed or if a check is outstanding for more than 60 days		●				
127.	Ability to generate correspondence notifying annuitant of a reissued payment and reason		●				
128.	Ability to generate separate monthly benefit and refund reports identifying the monthly journal entries posted to GL and a summary of all benefit annuity payrolls, taxes, and adjustments	●					
129.	Ability to automatically generate correspondence notifying member of adjustment to monthly check or when there is a change in the amount	●					
130.	Ability to combine correspondence about check change with COLA correspondence		●				
131.	Ability to generate a "Check Change correspondence" when a benefit annuity payroll amount is adjusted/changed (combining multiple adjustments into a single correspondence), including variable paragraphs based on nature of the adjustment	●					
132.	Ability to generate comprehensive reports listing all changes that took effect since previous report or since previous month's pension annuity payroll (additions, deletions, modifications, old amount vs. new amount, changes in tax withholding, name changes, etc.)	●					
133.	Ability to generate correspondence of explanation to the retiree every time there is a change in the benefit amount	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
134.	Ability to generate an additional information correspondence to the member, beneficiary, survivor annuitant, financial institution, etc.		●				
135.	Ability to generate Report of all annuity payroll payments	●					
136.	Ability to generate Deduction Register Report	●					
137.	Ability to generate Direct Deposit electronic file to the STO	●					
138.	Ability to generate exception reports after the COLA adjustments, etc., have been applied	●					
139.	Ability to generate Monthly Benefit Adjustment Detail Report		●				
140.	Ability to generate New Retirees Detail Report	●					
141.	Ability to generate Pension Exception Report	●					
142.	Ability to generate Reinstated Retirees Detail Report	●					
143.	Ability to generate Retirees Suspended/Closed Detail Report	●					
144.	Ability to generate various acknowledgement correspondence for name, address, W4P, and direct deposit changes		●				
145.	Ability to generate various correspondence to the member (annuitant) regarding attachments, garnishments, IRS payoff amounts for tax levies, end of benefit date, etc.	●					
146.	Ability to generate various annuity payroll control reports	●					
147.	Ability to process year end annuity payroll reporting for fiscal and/or calendar year	●					
148.	Ability to produce a standard COLA correspondence to all recipients, accommodating both automated or ad hoc generated correspondence		●				
149.	Ability to provide a report identifying all demographic changes made to retirees accounts for a user defined period	●					
150.	Ability to provide an automated process for entry of information relating to "manual" and "one-time" checks, including the following safeguard: Only users with appropriate roles and permissions are authorized to enter "manual" and "one-time" check information	●					
151.	Ability to reproduce EFT disbursements	●					
152.	Ability to send check file to the SAO	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
153.	Ability to generate and automatically transmit (or interface as appropriate, e.g., Public Employees Insurance Agency - PEIA) the following reports: • Report of Child Advocate Office withholdings for a specified annuity payroll including AP number, Support Amount, Case Number, Arrear amount, Case Name and Payer Name • Retirement statistics Monthly & Quarterly Reports by plan for all plans • Benefit Disbursement Unit random sample of annuity payroll changes report • Report of insurance withholdings for retirees from a specified employer (currently Cabell County Clerk) • Report of retirees who were previously removed from annuity payroll; and have now returned to the active annuity payroll with reason for the original removal • Report of deaths removed on a given annuity payroll • Report of Direct Deposits	●					
154.	Ability to produce correspondence to payee listing specific COLA(s) information and change in gross check, change in net check, FWT, etc.	●					
	CONTROL						
155.	Ability to create and maintain exception types and codes	●					
156.	Ability to produce various reconciliation reports used to reconcile the COLA increase, escalations, etc., and ensure that the overall pension annuity payroll is balanced before any disbursements are issued	●					
157.	Ability to recalculate unattended process totals after an annuity payroll exception/error is corrected or if records are created or deleted; new summaries should be displayed for the corresponding annuity payroll process	●					
158.	Ability to support a reconciliation process for all annuity payroll transactions against WVCPRB accounting system (to be performed after annuity payroll validation)	●					
159.	Ability to support a reconciliation process for all annuity payroll transactions at the time of pension annuity payroll execution	●					

2.4.4.4 Beneficiary Maintenance

The following sections present functional requirements associated with members and their beneficiaries and the data maintained for them.

Table 4: Functional Requirements for Beneficiary Maintenance

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to encrypt any information WVCPRB deems appropriate (including system security and role-related information)	●					
2.	Ability to establish and set up Web-based application screens able to browse back to a screen after going to a new screen	●					
3.	Ability to prohibit staff members from updating records with their own information (by Social Security number, name, etc.). Such updates are to be permitted by any customers entering through an authorizing interface	●					
4.	Ability to provide adequate audit trails of system updates, including appropriate change controls requiring management approval of any software modifications or changes prior to implementation	●					
5.	Ability to ensure that all transactions (including view-only access) have a user ID and transaction date associated with them	●					
6.	Ability to provide applicable levels of internal controls and appropriate segregation of duties, including for example, the ability to approve any activity's results as well as any correspondence to be sent or printed	●					
7.	Ability to unset an audited (verified) account flag if data within the audited period changes.	●					
8.	Ability to ensure there sufficient management controls are in place to ensure that a user cannot delete a plan or tier, even if empty of members. (This is because even empty plans have historical data associated with them; their deletion makes impossible the reconstruction of historical data from when the now-empty plan contained active members.) However, the empty plan is to have a flag that prohibits the assignment of new members unless the plan is reactivated	●					
	PROCESS						
9.	Ability to accept beneficiary information without Social Security number and assign unique identifier upon initial setup (members may choose beneficiaries who reside outside the United States and therefore have no SSN)		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
10.	Ability to ensure (possibly through workflow) that if a minor is added as a primary beneficiary that a guardian is also established (this could also be accomplished through data validation based on the DOB field and current date)		●				
11.	Ability to name and set up a Primary, Secondary, Guardian, Trust, Estate, Charity, etc. as a beneficiary as well as establish the percentages, payment priority, etc.	●					
12.	Ability to support bi-directional links between member(s), retirees and beneficiary(ies) so that end-user can search on a beneficiary's SSN and/or unique ID and locate the original member's account	●					
13.	Ability to cross reference member, beneficiary, alternate payee, survivor annuitant Social Security number's showing relationship, etc.	●					
14.	Ability to determine whether the retiree is allowed to change beneficiary based on the retirement option chosen or restrictions placed on account (Court Orders)	●					
15.	Ability to display current member address information and be able to update that information when processing a beneficiary change form	●					
16.	Ability to enclose a "Nomination of Beneficiary" correspondence explaining what corrections are needed and include a pre-filled new form with the correct information and what missing/incorrect information is still needed		●				
17.	Ability to follow up on flagged beneficiary changes that are pending		●				
18.	Ability to automatically generate correspondence to members who have not elected a beneficiary sending them a pre-filled Beneficiary Change form to be completed and returned		●				
19.	Ability to generate various acknowledgement correspondence (beneficiaries, estate and trust)		●				
20.	Ability to identify individual withdrawals	●					
21.	Ability to maintain an indicator that a beneficiary change has been initiated but not completed		●				
22.	Ability to perform an edit to ensure that a secondary beneficiary cannot also be a primary beneficiary and vice versa	●					
23.	Ability to perform an edit to ensure that if a minor is added as a primary beneficiary, then a guardian is also established		●				
24.	Ability to perform edit to determine that a member did not name self as a beneficiary.	●					
25.	Ability for end-user to review and update beneficiary data on file	●					
26.	Ability to capture and track date of birth of beneficiary	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
27.	Ability to capture and track Social Security number of beneficiary	●					
28.	Ability to ensure that all designation rules are followed,,, e.g., member cannot name self, primary beneficiary cannot be contingent beneficiary	●					
29.	Ability to change status of beneficiary to that of payee (while retaining information that individual is the beneficiary of another member)	●					
30.	Ability to maintain and process appropriately Survivor's Benefit payment information	●					
	OUTPUT						
31.	Ability to enclose a nomination of beneficiary correspondence explaining what corrections are needed		●				
32.	Report of aging of pending beneficiary changes – A report could list the number of pending changes, the type of change anticipated (name, DOB, SSN, etc.)		●				
33.	Report of members missing beneficiary designations		●				
34.	Report of beneficiaries missing key data (full name, SSN, DOB,)		●				
	CONTROL						
35.	Ability to perform an edit to ensure that if a minor is added as a primary beneficiary, then a guardian is also established		●				
36.	Ability to perform edit to determine that a member did not name self as a beneficiary.	●					
37.	Ability to perform an edit to ensure that a secondary beneficiary cannot be added unless a primary beneficiary has already been added	●					
38.	Ability to indicate as part of the member data that a Trust Agreement exists as part of the member record and the characteristics of the trust		●				
39.	Ability to ensure the same SSN/Unique Identifier cannot be used for more than one person. (e.g. SSN 111111111 can be used only once)		●				
40.	Ability to create a table of SSN/Unique Identifiers includes the demographic data about the individual.		●				
41.	Ability to ensure that no beneficiary may be added to a member or annuitant's record without a SSN or unique identifier.		●				
42.	Ability to have the data entry of the SSN/Identifier automatically trigger the population of the fields of the record with the corresponding data from the SSN table.		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	METRICS						
43.	Time spent resolving pending beneficiary changes. (In part, a measure of staff efficiency)		●				
44.	Types of beneficiary designation errors. A measurement such as this could identify a flaw in a form that could be corrected.		●				
45.	Number by types of changes made.		●				

2.4.4.5 Benefit Estimates

In many respects, the functionality sought in the following section is comparable to that in Section 2.4.4.6 Benefit Processing and Calculations, below. However, in this section more of the functionality should be made available to members as a self-service capability via the Web than they might have in the Benefits Processing and Calculation section. WVCPRB has flagged as "Exposed via Web" those requirements it wants to make available to members. Lack of a flag in that column for a specific requirement does not necessarily eliminate that functionality from being exposed. Whether it should or can be may be determined during the requirements definition phase with the successful vendor. The vendor's response should include a narrative description of vendor's experience in what has "worked" and what has not in their experience with other systems.

Table 5: Functional Requirements for Benefit Estimates

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture a benefit estimate request whether received by mail, e-mail, phone, fax, hand delivery, or Web	●					
	PROCESS						
2.	Ability to provide "what-if" analysis capability by allowing user of the estimating tool to adjust benefit estimate parameters and view new calculation results	●		●			
3.	Ability to provide a Web-based benefit estimate calculator to assist members with estimating their pension amount	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
4.	Ability for staff to generate and capture to the member record) benefit estimates off-site via the Web and deliver via print, email, etc.	●		●			
5.	Ability for staff to modify or delete estimates that have not been printed or distributed (applicable only to those estimates that the staff member has created)		●				
6.	Ability to archive, recall, and display estimates in both a summary and detailed view		●				
7.	Ability to calculate actual value/accrued benefit of member's account as of divorce date based upon married dates of service while determining when the member would be eligible for unreduced benefit and at what amount		●				
8.	Ability to calculate benefit estimate for all applicable retirement types (service, disability, multiple plans, early, vested, etc.) and all applicable retirement options including future employer plan elections or legislative mandates	●		●			
9.	Ability to calculate contributions, interest and service through member's projected date of retirement based on the member's employment status (using different period-specific growth rates applicable to salary and Cost of Living Allowance (COLA) within the same estimate scenario) and calculate benefit estimates accordingly		●	●			
10.	Ability to calculate multiple estimates for a member with the estimator, having to enter only those fields that are changed on each iteration and possibly display the results side-by-side for comparison purposes	●		●			
11.	Ability to determine thresholds such as the member's earliest, 20-year service, etc., retirement date based on the retirement eligibility rules		●	●			
12.	Ability to display multiple benefit estimates for side-by-side comparison analysis		●	●			
13.	Ability to estimate benefits payable to beneficiaries under various plan options	●		●			
14.	Ability to identify and flag frequent callers who repeatedly request estimates		●				
15.	Ability to identify special conditions within a member's account (outstanding purchase of service, active account, inactive account, vested, previously retired, judge, law enforcement, etc.) as it relates to performing the benefit estimate	●		●			
16.	Ability to include COLA projections in benefit estimates, including variable COLA rates over the estimate timeframe		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
17.	Ability to perform all Final Average Salary computations for all WVCPRB supported retirement systems, retirement types and retirement options	●		●			
18.	Ability to pre-populate the estimate calculation with real-time data and store as the basis for subsequent benefits estimates	●		●			
19.	Ability to provide a standardized on-line form for a member to initiate an estimate request via the Web	●		●			
20.	Ability to provide a user interface to accommodate benefit estimate parameter entry, viewing of calculation results, overriding of system-supplied information, and conducting estimate "what-if" analysis		●	●			
21.	Ability to recognize dollars paid out by WVCPRB due to one or more WVCPRB-specific lawsuits, legislation, or other special rules.		●				
22.	Ability to reflect Court Ordered-reductions, estimated federal and state taxes, health insurance and other deductions in benefit estimates, yielding a "net" benefit estimate		●	●			
23.	Ability to review current data in member's account (both in summary and in detail) prior to performing an estimate	●		●			
24.	Ability to save the parameters and results of the generated estimate directly from the end-user's workstation and send document image to member's file	●					
25.	Ability to support IRS 415 limitations in generating benefit estimates	●		●			
26.	Ability to uniquely identify each benefit estimate that is generated by automatically assigning a benefit estimate number, staff initials, date, and time produced	●					
27.	Ability to use historical and projected COLA rates in calculating benefit estimates for inactive vested members		●	●			
28.	Ability to use deceased member's beneficiary information on file when performing an estimate and to over-ride / change for calculation purposes if needed		●				
29.	Ability to view any images associated with a specific benefit estimate.	●					
30.	Ability to include service available (and its cost) for purchase or for buy back in the estimate.		●				
31.	Ability to "clean-up" / delete (only with managers approval) any bad or erroneous estimates that a user wants to delete (applicable only to those estimates that the user has created)	●		●			
32.	Ability to have both standard and customized comment fields on the benefit estimate	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
33.	Ability to provide a WEB-based benefit estimate calculator (using the same engine as that used by all other benefit estimates done within the LOB) to assist members with estimating their pension amount – using "real" production data and various combinations of other user-supplied (and so identified) data	●		●			
34.	Ability to generate, whenever a member requests an estimate and does not have beneficiary data included in the member's record, advise the member as such and include in the print output a pre-filled beneficiary designation form for the member to submit to CPRB.	●		●			
35.	Ability to estimate distribution to mandated payee(s) (70½, alternate payees, etc.) and include in estimate calculation		●				
	OUTPUT						
36.	Ability to provide an online web utility for WVCPRB members to calculate / estimate the effects of various federal and state withholding amounts		●	●			
37.	Ability to generate benefit estimate results in a standardized correspondence format	●		●			
38.	Ability to generate (in standardized correspondence format) displayed / printed benefit estimate for all applicable retirement types (service, disability, multiple plans, early, vested, etc.) and all applicable retirement options	●		●			
	METRICS						
39.	Ability to quantify hits and/or determine the most/least popular tool(s) used		●				
40.	Ability to print estimates in both a summary and detailed view		●	●			
41.	Ability to use a standardized correspondence format to display benefit estimate results	●		●			
42.	The ability to generate retirement estimates in mass by entering the list or accepting a file (or input from another process) of name, SSN or other client identifier and generate estimates including all related correspondence.		●				
	CONTROL						
43.	Ability to capture both standard and customized comment fields for inclusion on the benefit estimate		●				

2.4.4.6 Benefit Processing and Calculations

The vendor should note that a number of requirements provided below are checked as "Exposed via Web." Requirements under "Benefit Processing and Calculations" typically are oriented toward WVCPRB staff and management and not external parties. However, some requirements below (e.g., those that deal with initiating a workflow request for a benefit calculation, as well as others) are flagged as being "Exposed via Web." A more extensive list of Web-enabled requirements in this area is provided in Section 2.4.4.5 Benefit Estimates

Table 6: Functional Requirements for Benefit Processing and Calculations

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture retirement application information (option selection, tax withholding, beneficiary, survivor annuitant, etc.)	●		●			
2.	Ability to record, track, and display the receipt of the benefit application	●		●			
3.	Ability to adjust audit percentages (or other criteria such as ID of staff member, employer report accuracy data, staff accuracy, etc.) for the application of audits without IT intervention		●				
	PROCESS						
4.	Ability to remove (in cases of retiree suspending pension and restoring to membership) retiree from Annuity Payroll and calculate amount of funds (benefits paid to date) to be returned to WVCPRB and display results and current payment status via portal	●					
5.	Ability for employers, via Web application, to enter termination dates, unpaid leave dates, last year of service, etc.	●		●			
6.	Ability for user to override benefit estimate parameters	●					
7.	Ability to age accounts / transactions to automatically generate follow-up correspondence since last activity (e.g.: after a configurable period of time, 30 days, 60 days, etc.)		●				
8.	Ability to automatically calculate gross annuity, disbursements, transfer amount and federal and state taxes according to business rules and laws and to update payroll and tax files as indicated by benefit calculations	●					
9.	Ability to configure the system to include business rules that are to automatically determine retirement special legislation "windows of eligibility" and apply to benefit calculations accordingly		●				
10.	Ability to automatically pre-fill user defined member information on all benefit calculation forms that are printed by WVCPRB staff and for those printed via the member over the web	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
11.	Ability to automatically record receipt of benefits returned and update member's account	●					
12.	Ability to automatically invoice member for benefits overpayments		●				
13.	Ability to automatically run the interest posting job prior to processing a benefit calculation so that the benefit calculation is correct and up-to-date, but without actually updating the member account balance	●					
14.	Ability to calculate and apply the IRS 415 limitations to the benefit calculation	●					
15.	Ability to calculate and distribute two different annuities for two different periods of employment.	●					
16.	Ability to automatically calculate Final Average Salary in accordance with plan provisions, including all types of allowable service and including breaks in service	●		●			
17.	Ability to calculate retirement benefit using the service "buckets" (e.g., classes of service) defined in the WVCPRB member system	●		●			
18.	Ability to calculate the benefit for "hybrid" members and to automatically determine and use the appropriate final average salary when doing so.		●				
19.	Ability to closeout a member account for any trailing monies (contributions and interest) that may have been received after the initial or finalized benefit calculation and set up payment accordingly	●					
20.	Ability to create a benefit calculation for members who have service with multiple employers or plans within the same system and for split calculations (transfers and restorations), with the ability to view each calculation as well as the combined calculation	●		●			
21.	Ability to create an estimate for the Level Income Option incorporating information provided by the Social Security Administration regarding the member's projected Social Security benefit at age 62 and using level income factors based on individual's age at retirement from covered service	●		●			
22.	Ability to create appropriate tax records upon processing benefit calculation	●					
23.	Ability to define and enhance benefit calculation logic / specifications including changes due to legislation for calculating a final average salary, final contributions, final interest, final service, etc.	●		●			
24.	Ability to determine eligibility for all types of retirement (early, normal, disability, vested, death in service, accidental death, etc.) including calculation of comparison estimates	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
25.	Ability to determine if member's 'intent to change' terms of retirement (e.g., date, option selections) was filed with WVCPRB within established timeframes		●				
26.	Ability to determine, extract, and display what portion of the member's total benefit is funded by the member's and employer's contribution, respectively	●					
27.	Ability to flag or delete incomplete benefit calculation information transactions when member rescinds retirement prior to retirement date or after intent to change process	●					
28.	Ability to follow up on flagged beneficiary, address, EFT changes that are pending		●				
29.	Ability to handle and apply both fiscal year end (June) and calendar year end (December) closing as it relates to benefit calculation and payroll	●					
30.	Ability to handle retroactive payments and disburse them in the same media as the normal pension payment	●					
31.	Ability to identify when the final salary, contribution, and service information have been reported by the employer		●	●			
32.	Ability to maintain at the participant and the summary level an excess benefit file in correspondence with IRS 415 (b) and (c) rules	●					
33.	Actuarial factors for administration are to be loaded in a table, with a separate table for each option for each plan. With update capability limited to designated high level users	●					
34.	Ability to perform benefit calculations under all applicable options (e.g.: Straight Life, 100% J&S, 50% J&S, 66 2/3% J&S, 10 Year Certain, True Joint & Survivor, Level Income) and the variable/customized options that WVCPRB supports using the appropriate factors. Calculations are to ensure that ages for retirees and beneficiaries are calculated correctly based upon calculation procedures adopted by the WVCPRB.	●					
35.	Ability to perform benefit calculations for early retirement options for all plans as applicable using the appropriate factors	●					
36.	Ability to perform retirement benefit calculations for all retirement systems in accordance with plan provisions	●					
37.	Ability to provide a checklist detailing which retirement application documents have been sent, received, and/or which are still outstanding	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
38.	Ability to provide direct access to a member's detailed account information from a benefit calculation screen(s) for viewing and research purposes, with the additional ability to print this information	●		●			
39.	Ability to provide reason and reason code for any overpayments (drop down box/free form) so that users can explain situations without other users having to review the detailed transactions	●					
40.	Ability to support existing special member contribution classes (Law Enforcement, Appellate Court Judges, Elected Officials, Temporary Legislative Employees)	●					
41.	Ability to perform a revised benefit calculation based on newly received information after having released the record for payment but before issuing 1st pension check (e.g., option changes received before retirement date)	●					
42.	Ability to update member demographic data with new information (name change, address, etc.) during benefit calculation process or direct to different work queue if necessary (SSN changes)	●		●			
43.	Ability to verify / cross-reference the termination date provided on the retirement application against the termination date transmitted from the employer, and if a discrepancy exists, notify WVCPRB end-user		●				
44.	Ability, in case of underpayment, to issue supplemental "catch-up" payment	●					
45.	Ability, in the case of overpayment, to request repayment by member in lump sum, or to determine and apply temporary reduction in benefit necessary to recoup the overpayment within user-defined number of months	●					
46.	Ability to add a new individual to pension annuity payroll and transfer information to an "auditor" via workflow for an approval step; only after the approval process, officially place the individual on annuity payroll	●					
47.	Ability to automatically determine and apply actuarial reduction and loan offset reduction to monthly benefit	●					
48.	Ability to calculate new monthly benefit under all options based on the appropriate factors	●					
49.	Ability to determine and capture the prior service allowance of a monthly benefit	●					
50.	Ability to compare an estimated benefit amount versus a final benefit amount automatically without the user having to re-enter or re-calculate this information		●				
51.	Ability to determine date of conversion from disability to service retirement and capture both dates of retirement	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
52.	Ability to determine, calculate and apply exclusion ratio/excludable amount if the adjustment is a result of additional contributions received	●					
53.	Ability to provide an online Web utility for WVCPRB retirees to calculate/estimate the effects of various federal and state withholding tax amounts		●	●			
54.	Ability to provide an online Web utility for WVCPRB retirees to view/print benefit summary information	●		●			
55.	Ability to automatically recalculate a benefit amount based on a change in personal data	●					
56.	Ability to re-calculate and post interest to members' accounts for a user defined period at a plan, contribution group, department or member level	●					
57.	Ability to recognize a change to the member's account and trigger a post-retirement adjustment workflow with the ability (if WVCPRB desires) to have the system perform the re-calculation of benefits and the comparison of benefit amounts	●					
58.	Ability to setup, process and transfer a benefit wherein the member qualifies for and elects to switch type of disability	●					
59.	Ability to transfer the collection of an overpayment deduction from a disability account when converted to a regular retirement and vice-versa	●					
60.	Ability to update benefit amounts and issue a supplemental payment to "catch up"	●					
61.	Ability to automatically calculate the Social Security Offset as required by the Retirement Social Security Law	●					
62.	Ability to calculate actual distribution to mandated payee(s) and initiate distributions with initial pension payment	●					
63.	Ability to fully automate the calculation of restoration benefits	●					
64.	Ability to fully, automatically recalculate a benefit using all the appropriate information, regardless of the "state" of the member/retiree	●					
65.	Ability to capture audit results and statistics and generate appropriate feedback and reports	●					
66.	Ability to calculate and store for appropriate use in future benefit calculations benefit information associated with date of retirement and choice of various retirement options	●					
67.	Ability to calculate the amount of funds to be returned by a financial institution in order to recoup the overpaid rollover / direct deposit amount	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
68.	Ability to ensure under certain circumstances that certain retirements from multiple plans do not exceed a sum total of 105% of highest earnings from either employer	●					
69.	Ability to capture reasons for inaccuracies or incompleteness on the retirement application and / or other related documents		●				
70.	Ability to enter audit messages explaining what changes / corrections need to be made by a WVCPRB user when auditor returns work after completion of audit pass		●				
71.	Ability to notify auditors of various case specifics / special situations prior to their auditing work / accounts		●				
72.	Ability to return record for changes if verification unsuccessful	●					
OUTPUT							
73.	Ability to generate a member "Recomputation correspondence" detailing the under or over payment of benefits and the steps that are to be taken to either recoup the overpayment or provide a "catch-up" payment to offset the underpayment		●				
74.	Ability to generate an employer form 7-14 days prior to retirement to verify the number of hours worked, the member's gross wages, and the contributions for the last month of employment		●				
75.	Ability to generate correspondence to member acknowledging receipt of payment for any overpayment or other receivable due		●				
76.	Ability to produce a "Return Funds" correspondence to a financial institution to recoup the overpaid rollover / direct deposit amount		●				
77.	Ability to produce system generated correspondence informing new retirees of their benefit		●				
78.	Ability to support the generation of retirement application kits containing a cover correspondence and all necessary forms appropriate to the member's situation (retirement application, rollover, beneficiary nomination, etc.)		●				
79.	Ability to generate correspondence notifying the member of options available in the event of an adjustment		●				
80.	Ability to generate correspondence to accompany 1st check for new retirees	●					
81.	Ability to generate correspondence to the retiree explaining the disposition of accounts receivables against his/her disability account when converted to another disability or regular (service) retirement		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
82.	Ability to generate correspondence requesting additional documentation (death certificate, divorce decree, marriage certificate, proof of date of birth of new survivor annuitant)		●				
83.	Ability to create appropriate tax records upon processing benefit calculation	●					
84.	Ability of manager to monitor flagged and outstanding items.	●					
	CONTROL						
85.	Ability for certain designated high level users to create, update and maintain retirement age and factor tables (dollar annuity value, early retirement factor, option factors, joint-and-survivor factor, etc.)	●					
86.	Ability to release record for payment only after benefit calculation is verified / audited	●					
87.	Ability to route all types of benefit calculations to an audit pass in accordance with WVCPRB business rules and operational procedures	●					
88.	Ability to validate all record changes against existing business rules	●					
89.	Ability to identify if a refund application or disability retirement application has also been filed and if so trigger appropriate workflow	●					
	METRICS						
90.	Ability to (track information and) generate report identifying number of retirement calculation requests received, dates received, date completed, and by whom		●				
91.	Ability to create a final Calculation Performance Timeline including, but not limited to, the following: 1. Retirement Counseling - Date and Staff ID. 2. Retirement Application - Date submitted. 3. Verification of employee submitted information - Date and Staff ID. 4. Additional Information letter to EE – Date and Staff ID. 5. Request to ER for final report for EE – Date and Staff ID. 6. ER final report – Date submitted. 7. Final Calculation Assignment – Date assigned and to whom. 8. Final Calculation Review – Date submitted for supervisor review, and to whom. 9. Final Calculation Corrections – Date returned to staff for calculation corrections. 10. Final Calculation Secondary Review – Date corrected calculation was returned for review.		●				

2.4.4.7 Death

A few select requirements are identified here as being "Exposed via Web." Generally, requirements in this area are applicable only to WVCPRB staff and management and not external parties. WVCPRB's goal is to maintain the personal contact that is most appropriate in the processing associated with death benefits.

Table 7: Functional Requirements for Death

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture information from contested death benefit correspondence (e.g., name of person contesting death benefit, reason contesting, WVCPRB response, etc.); automatically notify (with ability to override) the designated beneficiaries; with conditional routing occurring based on correspondence between WVCPRB and the person contesting the death benefit		●				
2.	Ability to capture information related to a death notification (e.g., date received, date of death, contact person(s) name, address, and phone number, relationship to deceased member, death certificate received indicator, etc.)	●					
3.	Ability to create and maintain a record for a person who is not a member of one of the plans administered by WVCPRB	●					
4.	Ability to update beneficiary information after the member/retiree's death	●					
5.	Ability to manage receipt and subsequent processing of electronic notices of member, retiree, annuitant, or beneficiary death from various entities, e.g., Social Security Death Index, DHHR vital statistics cross match	●					
	PROCESS						
6.	Ability to confirm with the member that their pre-retirement beneficiary has died and provide them with the opportunity to name a new beneficiary.		●				
7.	Ability to confirm with the retiree that their beneficiary (non-spouse) has died, and provide them the opportunity to name a new beneficiary.		●				
8.	Ability to, in the event of the death of a spouse-beneficiary, to advise the retiree of their capacity to revise their retirement option. [5-10-24]		●				
9.	Ability to add a beneficiary or other customer payee to monthly benefit annuity payroll using a specific $ amount or percentage	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
10.	Ability to calculate (or override the calculated amount of) the death benefit (estimated and finalized) for all payment types and store not only the estimated benefit payment calculation information but also the final calculation results, preserving the detailed calculation for future reference. If an override is performed, the transaction should be accompanied by an audit trail including the reason for the override	●					
11.	Ability to create a survivor annuitant payroll record immediately upon notification of a member/retiree's death where appropriate		●				
12.	Ability to cross-reference a survivor annuitant added to annuity payroll and the associated deceased member (e.g., both member and spouse were in the retirement system)	●					
13.	Ability to determine direct rollover eligibility for the beneficiary		●				
14.	Ability to determine all information about the member/retiree/ beneficiary when notified of death	●					
15.	Ability to display a check or EFT summary and/or check or EFT detail pertaining to each death benefit payment	●					
16.	Ability to display appropriate beneficiary information for all members or retirees(e.g., last named beneficiaries/survivor annuitant on file, associated percentages, identification of multiple beneficiaries, beneficiary's/survivor annuitant's relationship to member, etc.)	●					
17.	Ability to identify if the deceased member had a previous retirement/frozen annuity and process in accordance with plan provisions	●					
18.	Ability to identify if the deceased member previously retired, received a retirement benefit, and then returned to service, and process in accordance with plan provisions	●					
19.	Ability to identify the benefit payment type (i.e., survivor annuity or pension account balance refund) established at the time of member retirement to route the death benefit work request to the appropriate queue	●					
20.	Ability to identify where there are multiple payees (e.g., beneficiary, next-of-kin, survivor annuitant, etc.) and process separately, tracking the information WVCPRB is waiting for from each beneficiary, and authorizing payment to those who have returned all necessary information while holding payment to payees whose information remains incomplete	●					
21.	Ability to process death benefits according to specific "death in service" plan provisions	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
22.	Ability to process multiple payments to multiple financial institutions in one transaction		●				
23.	Ability to process separate death benefits, possibly according to different processing rules, in cases where the deceased was receiving more than one monthly benefit check or belonged to more than one system	●					
24.	Ability to provide a Web utility for employers to electronically report the information currently reported on a Notification of Death form (e.g., deceased member's name, date of death, unreported salary and wages, employer name, employer number, etc.)		●	●			
25.	Ability to automatically re-calculate the death benefit and perform appropriate communication when new information is received	●					
26.	Ability to re-calculate the distribution of the death benefit in the event a beneficiary pre-deceases the member or a beneficiary waives the benefit	●					
27.	Ability to receive notification of death in various ways (e.g., Notification of Death form, phone, correspondence, returned check, Web utility, etc.), standardize the content, and trigger a workflow request	●		●			
28.	Ability to reverse a death entered in error; reinstate a annuity payroll record removed in error without interrupting monthly payments or pay the benefit payments that were missed prior to the reversal (i.e., "catch up")	●					
29.	Ability to standardize the content, information, and format on a notification of death whether received through a standard WVCPRB form, phone call, or Web utility	●		●			
30.	Ability to store a summary transaction of the death events ("dead", payment made, payment amount, payee for each, etc.) based on detailed account transactions	●					
31.	Ability to support the handling of member death payments where there are multiple payments to be issued	●					
32.	Ability to suspend any specific process and generate a work request to Death Process for processing	●					
33.	Ability to track accounts/folders as they are routed from processor to reviewer and back including the ability to capture reviewers notes and the responses to the reviewers comments	●					
34.	Ability to trigger automatic reminder to user and the appropriate manager if the Estimated Death Benefit correspondence is not sent out within five days of the date of death notification		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
35.	Ability to automatically update the tax files when a reimbursement amount (for benefits paid after date of death) is deducted from a death benefit	●					
36.	Ability to provide automated processes to ensure that the total paid to all beneficiaries is equivalent to the total calculated death benefit, less any member overpayments or amounts due.	●					
37.	Ability to calculate purchase of military service credit in accordance with WV statutes	●					
38.	Ability to capture and display the accounts receivable and payable balances of the deceased as of the date of death	●					
39.	Ability to automatically process beneficiary payment changes due to retroactive adjustments to a deceased pensioner's account,		●				
Output							
40.	Ability to automatically create a system-generated payment correspondence and corresponding notification to other interested parties		●				
41.	Ability to determine that benefit checks for the months subsequent to death were not returned and if so, generate correspondence requesting reimbursement; alternatively, deduct the amount of benefits paid after death from the death benefit		●				
42.	Ability to generate a "check stub" for each death benefit payment regardless of payment type	●		●			
43.	Ability to generate an acknowledgement correspondence when a death notification (and other documents) is received and contact person information is available		●				
44.	Ability to generate an death benefit overpayment correspondence when applicable		●				
45.	Ability to generate an Estimated Death Benefit / Death in Service correspondence to include the estimated death benefit amount, beneficiary/survivor annuitant information, and what is needed to process the benefit payment; include appropriate forms based on situation (e.g., rollover form, annuity election form, etc.)		●				
46.	Ability to recognize if contact person information was entered at the time of notification, and if not, automatically generate correspondence to the beneficiary and/or the estate of the deceased requesting contact person information		●				
47.	Ability to send correspondence and/or payments to addresses other than those on permanent file, including sending copies of correspondence to multiple recipients (and keep records of same)	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	CONTROL						
48.	Ability to prevent an account from being processed after the DOD is keyed for the member until the final service and contributions are posted.		●				
49.	Ability to automatically stop checks issued after the month of death	●					
50.	After the service and contributions are posted for a deceased member, the available benefit payment types should be determined based on the respective plan provisions.		●				
51.	For the death of a retired member, based on the parameters of the annuitant's record (e.g. option, total benefits paid to-date, etc.), the payment type should be determined automatically by the system.		●				
52.	Ability to "freeze" account in the event of a contested death benefit	●					
53.	Ability to automatically stop/hold monthly retirement benefit payment if date of death precedes payment date, and record the stop/hold on the account level so that staff processing the account are aware of the stop/hold	●					
54.	Ability to automatically cross match SSNs match with the SSA or DHHR death databases, a workflow is created for appropriate action.	●					
55.	Ability for a joint and survivor annuity, when a DOD is keyed in the original retiree record, a beneficiary annuitant record is automatically created from the data in the retiree's record and is placed into the workflow process.	●					
56.	Ability to identify if a refund application, disability retirement application, or retirement application was filed prior to the member's death, and if so, trigger appropriate workflow (and set the item as high priority)	●					
57.	Ability to track returned benefit checks (in the case of a death); checks are to be returned if issued after the month of death	●					

2.4.4.8 Defined Contribution

As part of the Teachers' Defined Contribution Retirement System (TDC) Plan, WVCPRB provides pass-through services of contributions to the TDC Plan's Third Party Administrator (TPA). In this context, WVCPRB wants to provide some level of record keeping and integration. This section outlines requirements for defined contributions.

Table 8: Functional Requirements for Defined Contribution

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	INPUT						
1.	Ability to record defined contributions (DC) reported by employers by employee	●		●			
2.	Ability to record enrollment information (hire date, eligibility date, date of termination, re-hire date, demographic data, DC eligibility end-date, beneficiaries, leave of absence, missed contributions, disability, death, QDRO, LTHS, RMD, etc.)	●		●			
	PROCESS						
3.	Ability to maintain detailed transaction record of employee and employer contributions and whether contributions were pre-tax or after tax	●		●			
4.	Ability to validate that employers are reporting DC contributions for employees who are enrolled in the TDC plan; and likewise reporting Defined Benefit (DB) contributions for members enrolled in the Teachers' Retirement system DB plan	●		●			
5.	Ability to determine daily contributions received by the TDC plan so appropriate funds can be transferred to third party administrator	●		●			
6.	Ability to track service credit for all participants of the TDC plan	●		●			
7.	Ability to track member status (active, inactive, withdrawn, deceased, disability, retired, etc.)	●		●			
8.	Ability to determine eligibility based on employer, non-classified status, previous participation in the TDC plan, election made within window, etc.	●					
9.	Ability to interface all financial transactions into the General Ledger in Great Plains (GL)	●		●			
10.	Ability to post additional contributions and add purchased service credit in compliance with USERRA and legislation	●		●			
11.	Ability to allow service credit for vesting purposes after contributions have been withdrawn and member returns	●		●			
	OUTPUT						
12.	Ability to create daily detailed contribution file for third party administrator	●		●			
13.	Ability to create a variance report based on the previously reported salary and service		●				
14.	Ability to generate electronic payments to third party administrator	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
15.	Ability to create detailed file of DB transfers for third party administrator and generate appropriate correspondence to (third party administrator), the employer, and the employee regarding their election to transfer		●				
16.	Ability to create file of various demographic data for third party administrator	●		●			
17.	Ability to generate appropriate correspondence when a DC participant terminates their employment		●				
18.	Ability to send census data to actuary about Defined Contribution plan	●					

2.4.4.9 Disability

The section outlines requirements for disability tracking and processing. Note that in several instances, these requirements dovetail with those under Section 2.4.4.13 Hearing Administration and Appeals, and that the processes are often tightly linked.

Table 9: Functional Requirements for Disability

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture a denial, disapproval, deferral, or approval from the board decision or decisions such as withdrawn, etc., of benefits type and denial type code for the case	●					
2.	Ability to capture and track benefit adjustment amounts and dates and justifications associated with the adjustment	●					
3.	Ability to capture and track status, change in status, date of change in status for each step in the review	●					
4.	Ability to capture information from application for disability retirement, including application type(s), medical conditions, job titles, geographic location		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
5.	Ability to record receipt of application for disability retirement, physician's medical report, earnings statement, marital status form, appeals, and other disability related documents, etc.	●					
6.	Ability to capture from external entities (e.g., State Tax Dept.) data that affects the disability process, and use it appropriately in the processing of the disability	●					
	PROCESS						
7.	Ability for physicians, employers, etc., to submit disability information remotely from their office via a Web utility		●	●			
8.	Ability for user to "manually" and securely (i.e., outside of workflow) adjust disability benefit amount and generate correspondence of explanation to retiree	●					
9.	Ability for user to "manually" (i.e., outside of workflow) suspend disability benefit check and generate correspondence of explanation to retiree	●					
10.	Ability for user to reinstate suspension of disability benefits due to non-receipt of annual earnings statement by due date	●					
11.	Ability for user to reinstate suspension of disability benefits due to non-receipt of disability reevaluation form by due date	●					
12.	Ability for user to reinstate suspension of student survivor benefits due to non-receipt of student status form by due date	●					
13.	Ability for user to reinstate suspension of survivor benefits due to non-receipt of marital status form by due date	●					
14.	Ability to add disability and/or appeal decision codes		●				
15.	Ability to add new disability review status type and code	●					
16.	Ability to automatically produce correspondence notifying the member of excess earnings, the amount of the benefit reduction or termination, and options for how to pay / reimburse WVCPRB for any overpayment (alternatively, Ability to recoup any overpayment due to excess earnings via a temporary reduction in monthly disability benefit amount, spread over a user-defined number of months)		●				
17.	Ability to automatically record the result (approved, denied, tabled, pending, withdrawn, etc.) of the disability and/or appeal		●				
18.	Ability for user to suspend disability benefits if annual earnings statement form is not received by due date	●					
19.	Ability for user to suspend disability benefits if disability reevaluation form is not received by due date	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
20.	Ability for user to suspend student survivor benefits if student status form is not received by due date	●					
21.	Ability for user to suspend survivor benefits due to non-receipt of marital status form by due date	●					
22.	Ability to automatically transfer member from disability retirement to regular retirement upon retiree attaining an age certain in accordance with plan provisions	●					
23.	Ability to forward a work request item to the disability processing activity to reinstate disability benefits if a disability and/or appeal is approved		●				
24.	Ability to generate disability-related annuity payroll adjustments	●					
25.	Ability to handle all tax related implications with respect to disability payments, overpayments and reimbursements	●					
26.	Ability to hold disbursements of funds until the earnings affidavit is returned and verified	●					
27.	Ability to identify all payments made to disability retirees	●					
28.	Ability to identify disability retirees by disability review status type	●					
29.	Ability to identify members, other applicants or employers who have not responded to WVCPRB request for additional medical information	●					
30.	Ability to maintain tracking system to record pertinent information for all disability applications received; with ability to be able to search under all fields	●					
31.	Ability to provide a single disability summary screen, possibly with multiple tabs, containing all information desired by WVCPRB users		●				
32.	Ability to provide detailed marital status tracking to ensure that eligible spouse survivors receive payments through, but not beyond, their eligibility period in accordance with plan provisions		●				
33.	Ability to provide detailed student eligibility tracking to ensure that dependent student survivors receive payments through, but not beyond, their eligibility period in accordance with plan provisions	●					
34.	Ability to restrict various sensitive information	●					
35.	Ability to retain paper form for the disability cases with the option to image the information and make it available in electronic form for review by staff and physicians	●					
36.	Ability to reverse benefit reduction (because of error) and automatically compute and generate "catch-up" payment	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
37.	Ability to reverse suspension of benefits (either because of error or because of late receipt of form [e.g., marital status, student status, annual earnings statement] confirming continuing eligibility) and ability to compute and generate "catch-up" payment	●					
38.	Ability to cross-reference for disability retiree and suspend the retiree's benefit(s) in the event the retiree returns to work for a WVCPRB employer.	●					
39.	Ability to track allowable earnings and compare with disability annuitant's earnings per annual earnings statement; and, if the member's earnings are greater than allowable earnings, notify user.	●					
40.	Ability to capture the actuarial reduction specifically for disability annuitants	●					
41.	Ability to validate that member meets the disability eligibility requirements (service, age, etc.)	●					
42.	Ability to ensure that disability benefit calculations take into account final contributions and include any cost of living adjustments (COLA), that occur during the period from the effective disability date to the date that the pension is determined	●					
43.	Ability to maintain a zip code and specialty-oriented directory of approved physicians for automated assignment of physician for examinations based on proximity and specialty		●				
44.	Ability to maintain records of previously accomplished examinations done by approved physicians, including electronic storage of contracts		●				
45.	Ability to respond to results of a hearing and take appropriate further actions, e.g., reopening application, calculating benefit. Alternatively, the ability to create a single workflow that encompasses all of the life cycle of the application(s)	●					
46.	Ability to apply electronic signatures to decision memos and board decisions (instead of actually printing and physically signing the documents as is done today)		●				
47.	Ability to create a process that manages the disability-related records (e.g., medical, employer)	●					
48.	Ability to automate the process used in "return to work" from a disability retirement	●					
49.	Ability to generate disability benefits due as a result of type of disability awarded, e.g., partial vs. full, duty vs. non-duty.	●					
50.	Ability for system to compute disability recalculations with ½ service for disability period prior to the reversion date	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	OUTPUT						
51.	Ability to generate a report of all payments made to disability retirees		●				
52.	Ability to generate a report of all disability retirees by disability review status type		●				
53.	Ability to generate a report to identify members, other applicants or employers who have not responded to WVCPRB request for additional medical information		●				
54.	Ability to automatically generate a report identifying disability applications/cases to be presented to the disability review committee	●					
55.	Ability to automatically generate and automatically send follow-up correspondence regarding non-receipt of student status form a certain number of days after the form was sent (include copy of student status form)		●				
56.	Ability to automatically generate disability reevaluation form, with cover correspondence stating due date for return, to disability annuitants based on plan requirements	●					
57.	Ability to automatically generate follow-up correspondence regarding non-receipt of disability reevaluation form a certain number of days after the form was sent (include copy of disability reevaluation form)	●					
58.	Ability to automatically generate follow-up correspondence if annual earnings statement form has not been received 30 days after the form was sent (include copy of earnings statement form)	●					
59.	Ability to automatically generate correspondence to disability annuitants explaining reason for annuity payroll adjustments	●					
60.	Ability to automatically generate marital status form, and a cover correspondence stating the due date, to spouse survivors requesting certification of marital status 2 months prior to review date		●				
61.	Ability to automatically generate student status form, and a cover correspondence stating due date, to full-time student survivors requesting certification of full-time student status 2 months prior to review date		●				
62.	Ability to gather information from the system in order to generate a summary "Appeal Fact Sheet" for an appeal write-up (name, Social Security number, date of birth, employment history, retirement information and payment history, if applicable)		●				
63.	Ability to generate a report listing history of application: type, date received, date presented to review committee, decision (grant, deny, tabled-need flag, etc.), date presented to Board of Trustees, etc.		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
64.	Ability to generate an application for disability retirement form	●					
65.	Ability to generate annual earnings statement form, with cover correspondence stating due date for return, to all applicable disability annuitants under a certain number of years of age	●					
66.	Ability to generate correspondence explaining "catch-up" payments	●					
67.	Ability to generate correspondence to member and employer either denying, disapproving or approving disability, including effective date retirement (and any other information) as applicable	●					
68.	Ability to generate correspondence to member either denying or granting request for appeal	●					
69.	Ability to generate correspondence to retiree regarding choice of disability or service retirement showing calculation figures and other information to assist with the decision	●					
70.	Ability to capture data related to post retirement employment and provide information to the disability pensioner		●				
71.	Ability to produce various disability denial correspondence including alternatives	●					
72.	Ability, if disability claim is denied and member is eligible for regular retirement, to generate appropriate correspondence to member to notify of eligibility		●				
73.	Ability to provide correspondence and estimates to the member to inform him/her of the comparison between service and disability benefits	●					
	CONTROL						
74.	Ability to validate that member is not on pension annuity payroll nor is in the process of applying for retirement when filing for a disability claim	●					
75.	Ability to determine if a member has ever applied for a disability retirement	●					
76.	Ability to determine if a member has applied for a disability hearing, the status of that application, and the result(s) of the hearing(s)	●					
77.	Ability to calculate, based on a Last Day of Work entered into the system, whether the member has met the time requirements of having been unable to work.	●					
78.	Ability to notify staff of the need for review in the event a disability retiree returns to work with an employer participating in a plan administered by CPRB,.	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	METRICS						
79.	Ability to generate a timeline of the disability process and each step within the process		●				
80.	Ability to capture the cost (including independent medical examination, cost of medical records, and medical boards) of each application		●				
81.	Ability, for all application types, to count and report on the various decision types, application types, etc., etc.	●					
82.	Ability to capture the data to quickly respond to FOIA requests about characteristics of disability applications, disability applicants, doctors, etc.	●					

2.4.4.10 Employer Reporting

WVCPRB requires that the employer reporting capability implemented in the new solution have extensive opportunity for user interaction with respect to employer personnel involved in the reporting process and the information they provide and process. WVCPRB's objective is to have employers report the necessary data, have them respond to validation errors as they occur, clean or correct the data as necessary, and queue the information for posting.

WVCPRB requires that the Web-based employer reporting implemented in the new solution have extensive opportunity for user interaction with respect to employer personnel involved in the reporting process and the information they provide and process. WVCPRB greatly desires that t**he proposed solution has the ability to capture, store and retrieve from participating employers all service and salary information for members and non-members.**

To the extent that any requirement below is not checked as "Exposed via Web" and such functionality accommodates or addresses the general prospects for employer interaction, such requirements should be included in the scope of functionality made available to employers through the Internet.

As can be seen in Exhibit 13 to this RFP (Appendix E), there is a broad range in workforce size among WVCPRB's employer community. Because of that, WVCPRB doubts that a single style of interface will suffice in providing the most customer-friendly employer reporting capability. In their response to this section of the RFP, the vendor should describe the flexible approach taken by their proposed employer reporting solution and explain how it meets the needs of both very small and very large employers.

Note that throughout the requirements outlined below, references to Wage and Contribution reports should be taken to mean the periodic (typically bi-weekly, semi-monthly, or monthly) reports submitted by WVCPRB's employers. In that context, note also that Contributions include member contributions and any withholding of loan repayments, service purchases, etc., that the employer may have done on WVCPRB's behalf. Note as well that the term "service," or "service credit" wherever it appears, should be interpreted to mean the period of time (e.g., hours, days, weeks) the member worked during the reporting period covered by the Employer Report.

In meeting the requirements below, the vendor is encouraged to use to the extent possible the web-based employer reporting system that WVCPRB has recently developed. That system is described in detail in RFP Section 4.2.5.2.

Table 10: Functional Requirements for Employer Reporting

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to accept electronic payments (via both push – ACH and pull – automatic withdrawal) from employers	●		●			
2.	Ability to accept various secure forms of media (disk, paper, tape, file transfer, CD-ROM, Web, etc.) containing member data submitted by employers	●		●			
3.	Ability to capture a member's hire date or termination date from employer reports	●		●			
4.	Ability to capture a new employer's plan history (i.e., in previous retirement system) and make it available on-line		●	●			
5.	Ability to capture staff and/or employer comments or notes regarding employer-related information (e.g., delinquencies, transactions) as part of data file	●					
6.	Ability to capture comments or notes regarding specific employer delinquencies	●					
7.	Ability to capture employer demographic information, including the WVCPRB-assigned employer number, employer name, multiple contacts, multiple addresses, multiple e-mail addresses, and other pertinent information	●		●			
8.	Ability to capture historical rates and factors with effective dates so that retroactive calculations use the appropriate figures	●					
9.	Ability to capture user-defined parameters for calculating employer penalties and interest charges relating to late reports / remittances	●					
10.	Ability to capture user-defined rules to validate employer data	●		●			
11.	Ability to capture user-maintainable parameters to control service credit allocation based on hours worked	●		●			
12.	Ability to capture user-maintained tables for employer and employee contribution rates, each rate having a corresponding effective date	●		●			
13.	Ability to capture, track, and generate appropriate workflow for changes in member personnel status codes (Hire Date, Re-Hire, Leave Without Pay, Terminate, Suspension, etc.) from employer reports (as well as "manual" user input); should include capture and tracking of status code start / end dates	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
14.	Ability to provide several industry-standard methods of submitting member data by employers, such as FTP and the Web, as well as conventional unattended processing of delivered media	●		●			
15.	Ability to capture employer demographic information and updates, including multiple contacts, multiple addresses, multiple e-mail addresses, and other pertinent information through the employer web self-service functions.	●		●			
16.	Ability to assign WVCPRB –created identification codes and pay-period dates to each component of compensation as reported in an employer's report, (e.g., Base Salary might be Code 1001, Overtime Code 1002, Loan Payment 1003, Arrears Payment 1004, …)		●	●			
17.	Ability to capture information (e.g., questions asked, answers provided) from employer seminars and to share that information with others		●	●			
18.	Ability to communicate with employers through various ECM mechanisms (email, portal, hardcopy, etc.)	●		●			
19.	Ability to capture employer requests for plan information, costs, participation, forms		●	●			
20.	Ability to flag as suspended employers and/or individual members (employees) who are not in compliance with WVCPRB regulations	●		●			
21.	Ability to automatically accept information from "Local Government" organization and trigger workflow process as a result		●	●			
22.	Ability for authorized user to input and maintain plan-specific data, such as billing rates, inflation factors, etc.	●		●			
23.	Ability to permit both participating and non-participating employers to electronically submit employee demographic and other data related to the calculation of participation and plan upgrade costs		●	●			
24.	Ability to accept data and non-service related fees according to LOB rules	●		●			
	PROCESS						
25.	Ability to automatically check employer entry and termination dates against employee service records to insure that service credited is within the participation period of the employer		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
26.	Ability to post (when there are individual records with errors) all the validated member records and suspend those member records containing errors and generate a report and save for later repair; OR ability to capture changeable threshold parameters based on the number of errors encountered; X records with errors prevents posting of the entire report; Y prevents only erroneous records from posting; the parameter should be user (not programmer) maintained	●					
27.	Ability to accommodate employer-reported data adjustments to prior periods as well as information for the current period; adjustments should be "post-able" at either the agency level or the employee level, whichever is appropriate for the type of adjustment being submitted		●	●			
28.	Ability to accommodate multiple employment status codes (full-time salary, full-time hourly, part-time salary, part-time hourly, part-time per diem, etc.) for a member employed by one employer or multiple employers	●		●			
29.	Ability to accommodate those cases where the employer reports adjustments for specific individuals over an extended period of time (example: John Doe should have been reported with $50 contributions and not $40 for the past 24 months; thus $10 is to continue to be reported as an adjustment over the next 24 months)	●		●			
30.	Ability to accommodate variances resulting from a member's working simultaneously for multiple employers (e.g., handling reported hours vs. reported days, part-time vs. full-time)	●		●			
31.	Ability to allow employers, on-line or via Web application, to enter termination dates, unpaid leave dates, last year of service, etc.	●		●			
32.	Ability to apply cash receipts or disbursements to outstanding employer and member receivables and payables in an automatic manner	●		●			
33.	Ability to apply deduction so identified in the wage and contribution report against predefined purchase of service balances	●		●			
34.	Ability to assign an "effective" period(s) to employer submitted data	●		●			
35.	Ability to automatically calculate the contribution that is due from the employer by contribution type and by plan type and provide a summary of amounts due by each type identified	●		●			
36.	Ability to automatically create appropriate general ledger transactions for employer payment receipts (e.g., monthly remittance of contributions) and disbursements (e.g., credits of employer overpayments).		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
37.	Ability to automatically scan employer reporting disks, CD's, etc. for viruses prior to processing the report	●					
38.	Ability to automatically trigger appropriate workflow if an employer reported adjustment is received for someone who has terminated/refunded (to address any overpayment / underpayment of refund)	●					
39.	Ability to calculate and track both penalties and interest applicable to both late reports and late remittances from employer	●		●			
40.	Ability to classify employer data errors according to their severity (with posting of data permitted for less severe conditions, but posting suspended for critical errors)		●	●			
41.	Ability to confirm that employer remittance was received within a certain number of days of reporting period end date	●		●			
42.	Ability to correct all employer-reported data by manual entry, providing an audit trail of all such corrections	●		●			
43.	Ability to create and delete individual records within the employer data file subject to WVCPRB internal management controls, and limited to specific users	●		●			
44.	Ability to create appropriate general ledger debit and credit memos for differences and corrections in employer reports		●	●			
45.	Ability to display any adjustment made in employee's salary, contributions, and service and display those adjustments at both the summary level and the detailed transaction level	●		●			
46.	Ability to electronically interface with multiple banks and accounts containing daily information for employer remittance lockbox deposits or ACH deposits	●		●			
47.	Ability to flag and investigate members with improper withholdings or suspect wages and service credit	●		●			
48.	Ability to automatically communicate information (such as delinquent reporting) to employers via e-mail or Web	●		●			
49.	Ability to issue credit/refund to employer that reports employer and/or employee contributions paid for a non-qualifying employee	●		●			
50.	Ability to maintain the data relationship between the employer and member	●		●			
51.	Ability to maintain year-to-date balances of salary and total employer and employee contributions for each employer	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
52.	Ability to merge employers, combining data from old employers into the new employer, but retaining the ability to query on historical data from the old employer		●				
53.	Ability to process employer submitted information (salary, contributions, and service) with various reporting frequencies	●		●			
54.	Ability to provide a real-time processing, validation, and error reporting of employer reports including real-time summary, reconciliation, and out-of balance notifications of any data file received from an employer, including data file totals and number of detail records	●		●			
55.	Ability to provide an edit for concurrent time (i.e., an employee contributing in two places), which may be allowable if the member is enrolled in two different plans, and prompt the user to check further into the circumstances	●		●			
56.	Ability to provide appropriate validations to ensure that reported service is consistent with reported salary, and that both are properly posted to the member's account	●		●			
57.	Ability to provide front-end validation that only one period of wages and contributions is being reported or ability to accept employer report covering multiple periods	●		●			
58.	Ability to provide front-end validations on SSNs, agency numbers, duplicate names, blank fields, negative numbers, dates, etc.	●		●			
59.	Ability to provide front-end validations to determine whether reporting dates have already been posted on a member level, and if so, alert user to investigate	●		●			
60.	Ability to provide fully Web-enabled employer "self-service" in submitting data, receiving feedback on the validity of that data, and making needed corrections with near 24x7 availability	●		●			
61.	Ability to reconcile the total amount of member contributions and employer portions plus any adjustments to the total remittance made by the employer	●		●			
62.	Ability to re-execute data validations and re-calculate data file totals after a correction is made or records have been created or deleted, subject to WVCPRB internal management controls	●		●			
63.	Ability to retrieve and review prior wage and contribution reports as reported by the employer including the means and media by which it was reported	●		●			
64.	Ability to reverse the processing of wage and contribution reports that were submitted by an employer in error	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
65.	Ability to split employers, appropriately allocating / segregating employee data between the two new employers, but retaining the ability to query on all historical data from the "original" (pre-split) employer	●					
66.	Ability to support a fully defined and structured reporting format regardless of the method / media of delivery	●		●			
67.	Ability to support and track all pertinent dates relating to employer wage and contribution reports: date submitted, date validated, date accepted by WVCPRB, date processed/posted and date paid	●		●			
68.	Ability to support controlled future dating of submitted / posted data	●		●			
69.	Ability to support the lowest level of detail in the member account based on various employer reporting frequencies, e.g., bi-weekly, semi-monthly, and monthly	●		●			
70.	Ability to support the processing of multiple employer reporting transactions for a given person in a given time period to handle standard pay, overtime, extra-curricular, etc.	●		●			
71.	Ability to tie portions of contributions posted to the system to a payroll period ending date and update employee salary history for the appropriate month and year, e.g., coaching stipend payment from June of 2006, overtime payment for October 2009, normal salary for July 2011	●		●			
72.	Ability to track received, processed and unprocessed employer data files	●		●			
73.	Ability to validate and post service credit if member salary and contributions are reported	●		●			
74.	Ability to validate reported data against tables of employer and employee contribution rates based on matching the payroll ending date with the effective date of the contribution rate	●		●			
75.	Ability to calculate multiple types of service credit (e.g., qualifying service, member service) using various service-crediting rules, based on the reported service-related data	●					
76.	Ability to recognize that an employee is enrolled with WVCPRB before accepting member wage and/or contribution data from that employer, while retaining the ability to identify new members (and automatically trigger appropriate workflow) when first reported by an employer	●		●			
77.	Ability to provide a crosswalk that maps the old and new employer name and number; in the case of merged employers or split employers		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
78.	Ability to support the real-time posting of valid employer wage and contribution data to the member's account by the employer without intervention by WVCPRB personnel		●	●			
79.	Ability to provide employer self-service capabilities that allows updates to member contribution and wage related data		●	●			
80.	Ability to allow member enrollment by the employer via employer self-service either through submission of initial wage and contribution data or through a separate employer self-service member enrollment process.	●		●			
81.	Ability to include the submission of updated member demographic data through the web wage and contribution filing process and under control of applicable business rules, be used to automatically update member demographic information previously submitted (e.g., address, phone number)	●		●			
82.	The ability to provide employer reporting web self-service features to support both the smallest employer and the largest (e.g. data file upload and validation, on-line data entry, and pre-population of reports based on previous month submission, etc.)	●		●			
83.	The ability for employers to access the forms library via the web and prefill fields when logged into the secure site.	●		●			
84.	Ability to include an on-line "employer community" facility to permit employers to communicate with / ask questions of / provide answers to each other.		●	●			
85.	Ability to include a wage and contribution file format consistent with WVCPRB defined specifications	●		●			
86.	Ability to, based on pay-period date associated with a specific component of an employee compensation, assign the monies to a specific (often historical) timeframe and credit the member accordingly	●		●			
87.	Ability to identify deficiencies on a timely basis (monthly?) in employer wage and contribution reporting	●					
88.	Ability to accept and retain reported wage and demographic data for all persons on the employer's payroll	●		●			
89.	Ability to accept and retain data and non-service related fees according to Business rules	●		●			
90.	Ability to calculate and apply delinquent interest and have override of same	●		●			
91.	Ability to augment the demographic information contained in the current employer record to include all appropriate financial data, e.g., amounts paid, amounts outstanding, interest adjustments	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
92.	Ability to automatically add new employers and plans to the system and to change the plans associated with new and existing employers (including the ability to bound the plan entry dates)	●		●			
93.	Ability to automatically calculate the cost (to an employer) of a new plan (upon request) and if adopted, to update the employer record (and any applicable employee records), create appropriate amortization information, invoice and affidavit		●				
94.	Ability to automatically retrieve plan data, employer data, member data, etc.,	●					
95.	Ability to capture and retain signature card information for multiple authorized users per employer.		●				
	OUTPUT						
96.	Ability to automatically generate notices of penalties and interest based upon reporting data and automatically notify employer	●					
97.	Ability to generate a report of penalties and interest billed for management use	●					
98.	Ability to limit the editing of user defined rates, rules and parameters within the disability process to designated high level users and maintain an audit trail of all changes	●					
99.	Ability to automatically generate correspondence to the employer if a contribution report is received but payment us not received within the required timeframe	●					
100.	Ability to automatically generate, automatically send, and capture as part of the employer record, credit/refund to employer that reports employer and/or employee contributions paid for a non-qualifying employee	●					
101.	Ability to automatically generate a report identifying the employer reports received, employer reports not received, dates when employer reports were received, amounts received and any $ differences due; automatically notify one or more contacts within an the agency that the report is available and can be viewed on-line	●		●			
102.	Ability to automatically generate penalty and/or interest correspondence / invoices to employers based on late report / late remittance		●	●			
103.	Ability to generate correspondence to employer and employee regarding any adjustment made by WVCPRB staff to salary, contributions, and service	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
104.	Ability to generate a report of the status of receivables for employee and employer contributions on demand, available to both staff and to employers		●	●			
105.	Ability to generate a report presenting summaries of exceptions (unprocessed entries) for each employer that need to be corrected, including the ability to re-generate the report after corrections have been made	●		●			
106.	Ability to generate an employer statement showing unpaid monthly charges identified by both prior and current periods, as well as any cash receipt not applied		●	●			
107.	Ability to generate an invoice to the employer for employee and employer contributions on demand as well as on a fixed schedule;		●	●			
108.	Ability to generate correspondence / e-mails / faxes to employers notifying them of corrections they need to make on their next month's report		●				
109.	Ability to print a report of all members being reported who have no enrollment application on file	●		●			
110.	Ability to produce a report that lists employers who are delinquent in the payment of employee and employer contributions, including an aging of delinquencies	●		●			
111.	Ability to produce a turn-around document reflecting the employer's information reported to WVCPRB showing current salary, contributions, and change balances in the order in which the employer submitted the information		●	●			
112.	Ability to produce monthly Discrepancy Report comparing a member's current monthly salary with the preceding month's and identify, by employer, members whose: (1) salary is >10 percent higher than, or less than half of, previous month salary; (2) salary is reported as zero, (3) OTHER, etc.		●	●			
113.	Ability to provide an on-line report of member's account history by agency by date range		●	●			
114.	Ability to accept positive or negative adjustment transactions received on an employer's wage and contribution report	●		●			
115.	Ability to automatically generate a dunning notice to any employer who has not submitted the appropriate wage and contribution report based on the employer's reporting schedule		●	●			
116.	Ability to produce employer salary listing (based on a static "As of 12/31 or 6/30" representation of the employee salaries) and prior year adjustment reports.		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
117.	Ability to produce the appropriate system based GL journal entries related to the employer invoice payment.	●					
118.	Ability to automatically create a financial statement for each employer in response to employer request and based on employer-supplied date range		●	●			
119.	Ability to correspond with employer to inform them of over- and underpayments of employer bills	●		●			
120.	Ability to query and report on those employers and members who are in suspended status	●					
	CONTROL						
121.	Ability to mathematically validate individual EE contribution amounts, corresponding ER contribution amount, credits, and total due from employer.	●					
122.	Ability to match employer report to employer remittances and alert employer to mis-matches	●		●			
123.	Ability to notify user whenever employer reporting information is received for a person who has applied for retirement, received an initial benefit, or has had a final calculation of benefit performed	●					
124.	Ability to prevent invalid or duplicate data from posting to the member's account	●					
125.	Ability to compare a member's current month salary and hours (as adjusted) to preceding months and identifying, by employer, instances where the information submitted violates WVCPRB business rules (e.g., salary exceeds an acceptable parameter; no salary reported; no hours reported but required for plan, etc.) and communicate that to employer	●		●			
126.	Ability to provide an audit trail of any adjustments in salary, contributions, or service made to a member's account, including the ability to detail a member's salary, contributions, and service by employer throughout the system and the member's history	●		●			
127.	Ability to maintain a payment schedule unique to each employer that can be used to automatically generate follow-up notices to delinquent employers, create reports, etc., and ability to accept other unscheduled payments		●	●			
128.	Ability to validate employer payments against employer billing	●		●			
	METRICS						
129.	Ability to capture statistics about employer error and warning rates, to analyze trends and to share with employers	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
130.	Ability to capture statistics about employer reports received, error rates, reports processed and unprocessed employer data files	●					

2.4.4.11 Enrollment

WVCPRB requires that functionality be in place that allows employers to enroll members via a Web portal or through the normal wage and contribution reporting process. Subsequent to enrollment, maintenance of the member's demographic information is the responsibility of both the employer (as related to updated information submitted through the wage and contribution reporting process) and the members through their applicable portals. WVCPRB understands that such joint responsibility for changes can sometimes result in "dueling addresses," i.e., multiple changes from one address to another and back again. The vendor should describe in their response how, in the vendor's experience, such multiple changes are managed or even prevented, e.g., through a flag or timing mechanism or through process refinement.

Table 11: Functional Requirements for Enrollment

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture information provided on a waiver form or Web utility PERS elected officials/Troopers)	●		●			
2.	Ability to capture the enrollment of new employees as a result of having been reported on the employer's Wage and contribution report, distinguishing them from those reported who are not (and are not to become) members as well as those returning to service, returning from a furlough, or returning from a leave of absence	●		●			
3.	Ability to communicate all invalid entries in "real-time" and edit / validate "real-time" corrections	●		●			
4.	Ability to use a single point of entry regardless of whether it is a new member enrollment or an existing account	●		●			
5.	Ability to enroll new members as a consequence of their being reported by an employer and distinguish between those who are potential members and those who are not and to initiate appropriate follow-up processing	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
6.	Ability to permit new employee to be enrolled via the employer's web-portal without having to wait for the first employer wage and contribution report	●		●			
	PROCESS						
7.	Ability to flag an enrollment record if enrollment information is received for an individual currently receiving a monthly pension benefit or if the individual previously waived membership	●		●			
8.	Ability for the employer and/or WVCPRB staff to create, update, and display enrollment information (i.e., member demographics and employment information) provided from an enrollment form, Web utility, or various other media (e.g., tape, diskette, CD, etc.)	●		●			
9.	Ability to assign and continue to use an established employee ID number for members	●		●			
10.	Ability to assign / associate / validate members to their appropriate retirement plan, corresponding contribution rate, coverage, and class based on eligibility rules	●		●			
11.	Ability to automatically set up a Web account for a new member and therefore provide access to his/her account and / or files via the Web through use of an ID and PIN numbers upon successful member enrollment	●		●			
12.	Ability to create, revise, maintain, inquire and display enrollment information (address, phone, employment information, etc.) with effective dates	●		●			
13.	Ability to manually enroll a member outside of the control of workflow and of automatic enrollment through wage and contribution reporting process	●					
14.	Ability to provide an online Web utility that "walks" employers, employees, or WVCPRB staff through an eligibility questionnaire so that membership eligibility can be verified, as well as the ability to track the usage of that feature (e.g., who, when, how often, etc.)	●		●			
15.	Ability to store and retrieve an incomplete enrollment, automatically generate correspondence to the member and or employer to request the additional information needed, and update the record once the additional information is received from either the member or employer	●		●			
16.	Ability to review enrollment information captured through various media (e.g., tape, diskette, CD, Web, etc.) prior to the data being committed to the database	●		●			
17.	Ability to store and retrieve an incomplete enrollment	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
18.	Ability to support different enrollment rules pertaining to different time periods	●		●			
19.	Ability to track those individuals that are enrolled in multiple plans administered by CPRB	●		●			
20.	Ability to update member demographic information while processing an enrollment	●		●			
21.	Ability to validate against enrollment eligibility requirements	●		●			
22.	Ability to validate against membership waiver eligibility requirements	●		●			
23.	Ability to track information regarding the member's classification or job group within the plan	●		●			
	OUTPUT						
24.	Ability to distribute enrollment-related forms (welcome correspondence, enrollment application, beneficiary nomination, etc.) initiated via request by workflow or Web	●		●			
25.	Ability to generate a membership waiver Acknowledgement correspondence	●		●			
26.	Ability to generate a pre-filled eligibility questionnaire to an employee or an employer and track the distribution, turn-around, and processing of that form		●				
27.	Ability to generate a pre-filled membership application and track the distribution, turn-around, and processing of that form		●				
28.	Ability to generate a pre-filled membership waiver eligibility form and track the distribution, turn-around, and processing of that form		●				
29.	Ability to generate correspondence for the approval or denial of membership eligibility with distribution to both the employee and employer	●		●			
30.	Ability to generate the (preferably electronic) enrollment welcome packet (e.g., pre-filled cover / welcome correspondence, member handbook, enrollment application form, return to service form, beneficiary nomination form, previously refunded service form, etc.) and personalize/customize the contents of the packet based on member status		●	●			
31.	Ability to generate a report of all members without an enrollment application on file, or with an incomplete enrollment for on file, – and perform appropriate automatic follow-up	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
32.	Ability to produce a report of all employees for whom wages and contributions are reported by the employer but no enrollment information has been received with a specified time period and automatically generate a pre-filled membership application for each such employee	●		●			
33.	Ability to produce error reports to be distributed through various media (e.g., paper, email, FTP, CD, etc.), if the enrollment information is captured through media other than an enrollment form or Web utility (e.g., tape, CD, etc.)	●		●			
34.	Ability to produce statistical, demographic, and error information on all the different types of media (e.g., paper, Web, tape, CD, etc.)	●		●			
	CONTROL						
35.	Ability to ensure that the same unique identification number, either SSN or other ID, is not being used by more than one individual.	●					
36.	Ability to identify and report through a workflow process that a member is earning salary, contributions, and service under more than one employer for the same period of time	●					
37.	Ability to ensure that non-eligible employee are not allowed membership into the plans based upon eligibility rules	●					
38.	Ability to identify duplicate names with the same or similar SSN and/or date of birth for staff intervention/validation then automatically generate correspondence to the member requesting verification of SSN and/or date of birth and suspend the account until verification is received	●		●			
39.	Ability to identify duplicate SSN and flag them for staff intervention/validation	●					
	METRICS						
40.	Ability to validate incoming data formats from employer and other WVCPRB affiliates (e.g. numeric, field size, physical file attributes, etc.)	●		●			
41.	Ability to generate statistics related to eligibility questionnaires sent to an employee or an employer and the distribution, turn-around, and processing of those forms	●					
42.	Ability to generate statistics related to the pre-filled membership application and to the distribution, turn-around, and processing of that form	●					

2.4.4.12 Funds Management

The following section presents requirements associated with the management of accounting activity generated by the proposed solution. WVCPRB highly desires that the proposed solution be able to process receipts of money (both by check and electronic transmission).

Table 12: Functional Requirements for Funds Management

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture for each employer and to post out-of-sequence wage and contribution cash receipts	●					
2.	Ability to capture both member and employer cash receipts data at the plan level, with the ability to roll-up as necessary while maintaining separate G/L entries for each revenue type and employer	●					
3.	Ability to capture fees contributed to the plans, track within the LOB, and to post in summary form to the G/L	●					
4.	Ability to capture loan repayments made to the plans and to post appropriately to the plans	●					
5.	Ability to assess, track within the LOB, and post to the G/L, employer delinquency fees based upon preset rules established for each plan	●					
6.	Ability to capture cash receipt information and remittance type, whether via ACH, wire transfer, lock-box, check, etc. while maintaining the data necessary to post in summary form to the G/L by employer and revenue type. See Appendix E, Exhibit 7 for WVCPRB's current Chart of Accounts	●					
7.	Ability to capture employer remittance cash receipt date (defaulted to today's date), pay period end date, and report end date	●					
8.	Ability to capture employer remittance type as either check or ACH including check number or transaction number as appropriate	●					
9.	Ability to capture payment frequency for each employer so that the system can track all reporting dates (not just the last reporting date) to ensure that a pay-period has not been missed	●					
10.	Ability to import a file from the bank to state treasurer's office containing recent transactions and balances including all deposits regardless of method (e.g., teller, ACH, wire transfer) as well as check status (e.g., cleared, suspended, open)	●					
11.	Ability for authorized staff to capture and maintain interest rate tables (i.e., purchase of service, member account interest, etc.)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
12.	Ability to receive and process automatically a report (WVCPRB - defined period: e.g., daily, but bank-defined format) communicating the bank's payment-related issues, including stop payments		●				
13.	Ability to receive and process automatically a report from the bank of a "paid file" (a list of the checks presented for payment)	●					
14.	Ability to accept multiple ACH payments from multiple accounts from the same employer	●					
	PROCESS						
15.	Ability to ensure that at all times WVCPRB's manual and computerized records, subsidiary ledgers, control ledger, and reconciled bank balance are in agreement	●					
16.	Ability to create daily batches of unposted transactions in summary form in the G/L by plan and transaction type, allowing accounting personnel to review the batches before they are posted.	●					
17.	Ability to provide a listing of all automatic computer generated entries against the general ledger, such that a WVCPRB staff member can successfully identify the source of every automated general ledger entry	●					
18.	Ability to maintain accounts receivable for all excess earnings situations	●					
19.	Ability to default the cash receipt transaction date to today's date (to eliminate need for user entry in most cases)		●				
20.	Ability to define new transaction types at the user-level via a table driven parameter and ensure that they are appropriately applied throughout the application and GL. Ability to accommodate an account number of up to 24 digits within the table.	●					
21.	Ability to adhere to Governmental Accounting Standards Board (GASB) statements and Generally Accepted Accounting Principles (GAAP)	●					
22.	Ability to adjust an account to correct out-of-balance conditions including a reason code and an explanation of historical transactions	●					
23.	Ability to automatically match funds received to the correct employee or employer account	●					
24.	Ability to automatically initiate alternate workflow process after predetermined number of consecutive EFT or ACH rejects	●					
25.	Ability to capture and maintain contribution rates by retirement system	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
26.	Ability to detect employer overpayments and underpayments and process accordingly carrying a positive / negative balance on the employer's account	●					
27.	Ability to record that a check received from a member who has insufficient funds and take corrective business actions		●				
28.	Ability to distinguish cash versus non-cash financial transactions (i.e., interest, miscellaneous credits to member's account, etc.)	●					
29.	Ability to distribute incoming funds to more than one receivable record for the same member if appropriate		●				
30.	Ability to interface with WVCPRB accounting package to export transaction detail to the GL in sufficient detail such that all deductions are accommodated (i.e., pension benefits "gross to net")	●					
31.	Ability to generate a transaction to STO to re-try a failed ACH transaction		●				
32.	Ability to identify those customers that are eligible for account interest posting, automatically calculate, and apply interest accordingly (e.g., monthly, annually)	●					
33.	Ability to initiate a cash receipt investigation process if incoming funds are received and a receivable does not exist		●				
34.	Ability for authorized staff to interface to the existing chart of accounts with sufficient flexibility to maintain that interface should the chart of accounts change and to allow for the parameterized creation of new systems, funds, plans, etc.	●					
35.	Ability to maintain a history of purged accounts	●					
36.	Ability to match cash receipt information relating to incoming funds with corresponding receivable records	●					
37.	Ability to post out-of-sequence wage and contribution cash receipts so as not to delay posting of subsequent months due to errors (e.g., "problem" months)	●					
38.	Ability to process accounts receivable, cash receipts, accounts payable, cash payments and transfer transactions and pass them to the GL system according to the GL system's chart of accounts and by user defined timeframes	●					
39.	Ability to process collected GL postings daily	●					
40.	Ability to process cash receipts resulting from the reversal of a disbursement	●					
41.	Ability to process receipts (checks, etc.) from both organizations and individuals	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
42.	Ability to provide a defined and structured matrix mapping line-of-business transactions to their corresponding GL transactions and the appropriate accounts	●					
43.	Ability to provide a detailed history of all transactions processed	●					
44.	Ability to provide direct integration of the line-of-business system to the general ledger system without the need for any interim programmatic or manual reformatting process	●					
45.	Ability to provide fully automated bank account reconciliation functionality, including provision of user-friendly error reports and indication of out-of-balance conditions at a detailed level (i.e., at a sufficiently detailed level so that the user does not need to research where, within a "rolled-up number", a discrepancy exists)	●					
46.	Ability to provide seamless integration with WVCPRB's existing accounting software	●					
47.	Ability to query on financial transactions based on SSN, payment types (including personal checks), check number, Employee Name, Employer name, dollar amount, etc.	●					
48.	Ability to recognize and track overpayments, regardless of type, and establish a corresponding receivable		●				
49.	Ability to reconcile the remittances of employer cash receipts with reported amounts	●					
50.	Ability to support a defined date format and ensure the consistent synchronization of various dates (business date, transaction date, effective date, etc.) between the LOB and GL systems	●					
51.	Ability to support all WVCPRB systems / plans and all of their accounting funds, journals, chart of accounts, general ledger (GL) transactions, etc.	●					
52.	Ability to support the processing / posting of a collection of GL transactions	●					
53.	Ability to support the existing Treasury / bank rules, procedures, codes in use, etc.	●					
54.	Ability to suspend interest accrual for members who are not vested and have been inactive for a certain number of years	●					
55.	Ability to automatically increment the receipt batch number each day	●					
56.	Ability to calculate and post interest to members' accounts on a monthly or annual basis based on plan provisions	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
57.	Ability to change compounding frequency (e.g. daily, monthly, quarterly, annually, etc.); interest compounding frequency should be table driven and authorized user updateable		●				
58.	Ability to identify all receipts that have been received but not yet posted and include in the appropriate reconciliation reports	●					
59.	Ability to prevent the system from unintentionally exporting the same transactions to the accounting system more than once while not precluding the operator from exporting the data again to replace a corrupted export file	●					
60.	Ability to track transactions exported to the accounting system back to the source transaction(s) through an extract date, a batch number, or other relevant identifier.	●					
61.	Ability to adjust and reverse any/all transactions generating appropriate audit trail information being generated	●					
62.	Ability to know the effective date and posted date of each transaction and generate exportable reports that include both dates	●					
63.	Ability to post transactions to the appropriate company (plan) in the General Ledger. (See RFP Table 3 for a list of current plans.)	●					
	OUTPUT						
64.	Ability to extract statistical data to analyze or project trends	●					
65.	Ability to extract various data in order to produce ad hoc reports as needed	●					
66.	Ability to automatically generate appropriate delinquency fee correspondence for receivables	●					
67.	Ability to automatically generate appropriate collection correspondence for payables and/or receivables and for positive or negative balances on an employer accounts	●					
68.	Ability to generate a Fund Transfer Reconciliation, i.e., a listing of any funds that may have been transferred from one account to another	●					
69.	Ability to generate a GL Mapping Report, i.e., a report / matrix listing the line-of-business transactions and their corresponding GL transaction	●					
70.	Ability to maintain and generate data and information per WVCPRB specifications that can be used to produce the CAFR report	●					
71.	Ability to generate an insufficient funds correspondence to member	●					
72.	Ability to generate correspondence and/or e-mails to members notifying them of stop payment	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
73.	Ability to generate report at the end of each business day relating to the collection and disbursement of funds	●					
74.	Ability to generate report of employer overpayments and underpayments, both daily and on an as-requested basis	●					
75.	Ability to maintain and provide various information that when extracted can be used to produce the CAFR report	●					
76.	Ability to produce a report (user-defined period: e.g., daily) notifying the Treasury of ACH-related concerns/issues, including any stop payments that need to be authorized		●				
77.	Ability to produce various reconciliation reports with enough detail to accurately reconcile the payments made and cash received	●					
78.	Ability to provide a monthly or annual report of the projected total benefit payments for the next month or year for each plan, including withdrawals, death benefits, disability benefits, and monthly retirement payments		●				
79.	Ability to provide adequate reconciliation reports to help end-users verify the transactions processed, including daily, weekly, monthly and fiscal year reconciliations	●					
80.	Ability to provide on demand a report of the total contributions received that have not been posted to pension system accounts	●					
81.	Ability to track employer account balances and generate reports of the amount of cash receipts remitted by employer over time		●				
82.	Ability to provide an export process to the WVCPRB accounting package to produce a data file in a format compatible with the accounting system and is not to require any manual alteration of the file (e.g., opening the file in Excel and changing values therein)	●					
83.	Ability to administer a user-defined frequency for the export process to the accounting system (i.e., daily, weekly, monthly, etc.)	●					
84.	Ability to produce a check register report that is exportable to MS Excel		●				
85.	Ability to split a remittance among multiple methods of payment (ACH, EFT, checks, etc.) including multiple instances of each	●					
	CONTROL						
86.	Ability to ensure that once a refund has been issued, the member's account is inactive and no more transactions can be automatically posted to the account, but that a flag for follow-up action is created.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
87.	Ability to ensure that, if one of WVCPRB business areas enters a cash receipt, then another WVCPRB business area cannot enter the same cash receipt	●					
88.	Ability to provide various controls to ensure accuracy, as an example: ensure that money already entered for a given entity, for a specific time period cannot be re-entered, etc.	●					
89.	Ability to provide various reconciliation controls to ensure that last month's fund balance plus any activity during the month equals this month's fund balance	●					
90.	Ability to prevent or make impossible issuing a refund to a member or employer that is in excess of their current account balance.	●					
91.	Ability to ensure that no zero or negative checks are issued	●					
	METRICS						
92.	Ability to generate statistics related to the measurement of processing of checks received through the mail and the time from receipt to deposit, including those that are not deposited within the required 24 hours of receipt.		●				

2.4.4.13 Hearing Administration and Appeals

The section outlines requirements for the administration of hearings and appeals.

In addition, WVCPRB is interested in capturing certain data and providing search capabilities to facilitate the Shepardizing process. The vendor's response should include a narrative description of experience in providing such capabilities for that purpose.

Table 13: Functional Requirements for Hearing and Appeals

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture a member's request for an appeal	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
2.	Ability to capture one or more hearing types and associated hearing-related issues	●					
3.	Ability to capture hearing documents, decision, etc.	●					
4.	Ability to capture a predefined identifier to categorize the appeal issue	●					
5.	Ability to capture WV Code reference(s) used as basis of WVCPRB position	●					
6.	Ability to capture case law cited in Hearing Officer's decision.	●					
	PROCESS						
7.	Ability to add appeal type codes	●					
8.	Ability to add appeal issue category descriptions	●					
9.	Ability to add denial of benefits type codes	●					
10.	Ability to close appeal after appeal process is completed	●					
11.	Ability to mass (and singularly) produce / print all pertinent imaged documents (and an appropriate cover letter) and forward to staff to review and edit into the appeals package		●				
12.	Ability to track a member's request for an appeal	●					
13.	Ability to trigger an alert to Hearing Admin from Disabilities when a denial is issued by CPRB staff		●				
14.	Ability to support more than one primary applicant	●					
15.	Ability to support applicant, counsel and potentially employer receiving information about appeal e.g. hearing date, recommended decision	●					
16.	Ability to interactively maintain a calendaring schedule as part of the LOB for live or video hearing	●					
17.	Ability to provide an interactive means of sharing and updating information (e.g., medical and other records; correspondence; scheduling calendar, dates of availability, hearing dates, locations; etc.) with external entities and other parties involved in hearings, given the appropriate security, via the Web		●	●			
18.	Ability to add hearing issues and types	●					
19.	Ability to allow new evidence to suspend an appeal	●					
20.	Ability to search finalized decisions based on an appeal issue to identify a pool of possibly comparable appeals	●					
21.	Ability to access LexisNexis through hyperlink of case law citation for Shepardizing purposes	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	OUTPUT						
22.	Ability to generate "fact sheet" based on the system's history of disability events relating to a particular member to be used for appeal presentation / litigation	●					
23.	Ability to generate reports indicating various statuses within the hearing process		●				
24.	Ability to generate an appeal Acknowledgement correspondence and necessary follow-up correspondence to member and/or counsel	●					
25.	Ability to generate correspondence and Final Order to member and/or counsel either denying appeal or approving appeal and reinstating benefits	●					
26.	Ability to generate correspondence to hearing applicants and parties to a hearing requesting various additional information, then automatically following up on the request as necessary		●				
27.	Ability to generate ad hoc reports on all hearings (open, closed, pending, …) and all data associated with any of those hearings, e.g., status, hearing officer, location, hearing type, issue category, outcome	●					
28.	Ability to provide public access to hearing officer decisions		●				
	CONTROL						
29.	Ability to rotate the scheduling of hearing officers automatically (meaning that preference cannot be given to one hearing officer over another based on the type of case or the parties involved in the appeal).	●					
30.	Ability to provide (e.g., via secure portal access, CD) all appropriate parties to a hearing with electronic access to all pertinent documents data, etc.		●	●			
	METRICS						
31.	Ability to produce timelines, both individually and collectively, and on a summary basis.		●				

2.4.4.14 Loans Management

The section outlines requirements related to loans and their management in the proposed LOB solution.

Table 14: Functional Requirements for Loans

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to pre-populate loan applications based upon the members demographic information stored in the LOB application	●		●			
2.	Ability to update a member's demographic information during the application process		●				
3.	Ability for members to access loan applications via the Internet and to complete an application if eligible.	●		●			
4.	Ability to provide members on the loan website to calculate estimated loan payments, encompassing both 12-month and 10-month repayment terms based upon information provided by the member.	●		●			
5.	Ability to automatically review eligibility of member to receive loan based upon the current business rules	●		●			
6.	Ability to automatically populate all loan documents – Promissory Notes, Amortization Schedule, Cover Letter with instructions, etc.	●					
7.	Ability to use a simplified process for converting loans from the input area to servicing.	●					
	PROCESS						
8.	Ability to approve applications that have been completed via the Internet if appropriate and if all information is available	●					
9.	Ability to maintain eligibility criteria and current interest rates in a central location to be updated by an administrator with appropriate authorization	●					
10.	Ability to add new types of loans with different eligibility and interest rate assumptions (business rules)	●					
11.	Ability to automatically determine whether employer is a 10- or 12-month employer, establish amortization schedule for member based upon the employer payroll schedule, and assign appropriate payment schedule to the member	●					
12.	Ability to create amortization tables based upon a monthly repayment schedule on the last day of each. All schedules should be automatically populated with the borrower's names, interest rate, term of loan, and account number on them.	●					
13.	Ability to accommodate automatic payroll deductions from members	●					
14.	Ability to automatically post summary loans receivable entries to the accounting system with the ability to access the detail information as necessary	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
15.	Ability to account for the discrete components of any loan including but not limited to principal, interest, and to pass summary information (with the ability to access detailed information) to the accounting system.	●					
16.	Ability to handle various interest rates and changes in interest rates during the life of the loan	●					
17.	Ability to automatically post loans receivable on a daily basis and to pass summary data to the accounting system	●					
18.	Ability to prevent back-dating of entries without special permission. e.g., if 1/16/07 is already posted, loan staff should not be able to post 1/12/07 without special permission.	●					
19.	Ability to calculate amount of loan that customer is eligible for, in accordance with WV state statute (e.g., lesser of 50% of contributions or $8,000)	●					
20.	Ability to restrict loans based on established criteria (e.g. existing loan in default, outstanding loan balance, etc.)	●					
21.	Ability to calculate taxability of loan amount in accordance with IRS regulations, for deemed loans and loan offsets		●				
22.	Ability to accommodate and maintain various repayment schedules and repayment terms (e.g., 5 years, > 5 for military service or authorized leave of absence extensions, etc.)	●					
23.	Ability to lower interest rate for a member on military leave for a defined period within the loan tern	●					
24.	Ability to limit leave of absences per loan term		●				
25.	Ability to automatically calculate and recalculate repayment schedules for various repayment terms (e.g., extension for military, early payoff, etc.)		●				
26.	Ability to process lump-sum payments and personal payments	●					
27.	Ability to support plan loan offsets (reduction in benefit or payment) that may occur only upon withdrawal, retirement or death (IRS regulations currently prohibit in-service offset distributions to active employees)	●					
28.	Ability to automatically interface loan offset information to accounting system, members contribution account, and loan payment schedule		●				
29.	Ability to calculate and post the change in a members taxable and nontaxable contributions for a loan offset involving a previously deemed loan		●				
30.	Ability to issue more than one loan per year to qualified loan recipients		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
31.	Ability to automatically identify any members not making payments and inform them of all ramifications of non-repayment of amounts due		●				
32.	Ability to automatically apply changes in customer status (e.g., active military duty) to all appropriate processes		●				
33.	Ability to automatically allocate all incoming payments among multiple loan principal and interest charges	●					
34.	Ability to accept payment by credit card (for loans and other types of payments) in accordance with IRS regulations		●				
35.	Ability to automatically recalculate loan payment amounts or terms when a payment is missed and to communicate the change to the member and/or the employer	●					
36.	Ability to automatically and appropriately respond to changes in status of a loan (e.g., leave, retirement, delinquency, deemed)	●					
37.	Ability to make general notations on the loan accounts and to add to or modify those notations as needed with both the prior notations and the revised notations being retained as part of the encounter notes in the member record (with appropriate filtering keywords such as Loans)	●					
	OUTPUT						
38.	Ability to produce pertinent correspondence based upon the condition of the account including but not limited to: • Overdue letters • Change in payments • Agency notification letters requesting payroll deductions • Default (missed payment) letters • Deemed distribution notification letters • Annual collection letters • Leave of absence letters • Military service letters • Personal payment letter • Promissory note cover letter • Offset letter • Refund Letter • Payoff Letter • Payoff early warning letter to employer	●					
39.	Ability to produce loan applications, and completed loan documents for personal loans only and only for TRS and DSRS members hired prior to July 1, 2005	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
40.	Ability to produce amortization schedules showing the total loan amount, the interest rate, and payment schedule and grouped monthly.	●					
41.	Ability to produce amortization schedules similar to the above requirement but also showing all payments to date.		●				
42.	Ability to print payment coupons for members with loans whose status changes from active to inactive to help CPRB identify the appropriate posting of the payment.		●				
43.	Ability to produce report showing the discrete components of all transactions to date on any loan including but not limited to principal, interest, and adjustments, etc.,	●					
44.	Ability to support direct deposit of loan proceeds		●				
45.	Ability to automatically adjust all deminimus loan balances (typically as a result of "last" payment)		●				
46.	Ability to support role-based adjustments on the loan accounts and to make detailed notations as to the reason for the adjustments	●					
47.	Ability to generate customized reports from loan system data	●					
48.	Ability to inquire on the status of member loans via secure website at least the following Information about the loan: • Current balance of loan • Status of loan (current, in default, deemed) with an explanation of each • Amount and date of last payment posted against the loan • Monthly payment amount • Loan Date • Scheduled pay-off date based on original amortization schedule		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
49.	Ability to generate scheduled reports as follows with all reports including loan counts, amounts, and totals of each: Reports printed on demand: • Missed payment report • Report of payments due by employer • Detailed report of all transactions for a selected loan Monthly reports: • Report of payments by county for the month • Report of loan balances by county • Report of loan balances by member • Deminimus balance report • Detailed report of all transactions for each loan that has paid out during the month with a page break between each loan Quarterly reports: • Missed payment Report • Deemed loan report Annual Reports • Report of loan balances outstanding by employee and by type	●					
	CONTROL						
50.	Ability to centrally maintain interest rates by plan for use in determining loan payments	●					
51.	Ability to centrally maintain age limitations applicable to loan applications such as less than 8 years old and older than 70.		●				
52.	Ability to maintain minimum employment standards associated with specific loan types.	●					
53.	Ability to centrally maintain the limitations on the number of loans that can be granted in a fiscal year by type of loan as well as the dollar value of each loan and all combined loans.		●				
54.	Ability to flag loans processing in process if a retirement application or disability application is received or stop loan process if employment terminated and alert WVCPRB users	●					
55.	Ability to determine eligibility based on plan membership (TRS or DSRS, DOR cutoff, etc.)	●					
56.	Ability to determine eligibility based on date of employment and current employment status.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
57.	Ability to ensure that a member with an active loan cannot retire without either paying off the loan or taking an actuarial adjustment to their annuity.	●					
58.	Ability to ensure that a member may have no more than one loan of each type outstanding at one time.	●					
59.	Ability to generate a management report, detail or summary, of the "role-based" adjustments made to the loan accounts	●					
	METRICS						
60.	Ability to generate a timeline of the amount of time it took to complete each step of the loan process both in detail and in summary		●				
61.	Ability to provide the number of loan applications processed each day, each week, the number processed per user based upon staff ID, etc., by type of application		●				
62.	Ability to identify the number of delinquencies occurring by month and the length of the delinquency		●				
63.	Ability to identify the number of deemed loans occurring by quarter and the length of the delinquency		●				
64.	Ability to provide the number of loans approved, disapproved, in process for the month, year to date, compared to last year – by loan type, member status, and totals	●					

2.4.4.15 Member / Pensioner / Employer Maintenance

The section outlines requirements for member / pensioner / employer maintenance.

Table 15: Functional Requirements for Member / Pensioner / Employer Maintenance

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to properly capture the consequence of a member's transfer from one participating employer to another	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
2.	Ability to capture customer-submitted address changes through the Web site; for members and pensioners such changes should be placed in a suspense file and workflow should direct the approval of each change to a WVCPRB employee before the change is posted to the system	●		●			
3.	Ability to allow a member to change only the data fields approved by WVCPRB (the fields to be determined at a later time) using a Web utility	●		●			
4.	Ability to capture and maintain marital status information (single, married, widowed, and divorced)	●		●			
5.	Ability to capture comments/attach notes to a member's account	●		●			
6.	Ability to capture, revise, track, display, and print members' information including but not limited to the following: name, address, Social Security number, date of birth, employment date, employment details, membership class (Tiers, vesting, etc.), etc.	●		●			
7.	Ability to input death notifications into a member's account so that the information is instantly available to staff working on different levels of the account processes	●		●			
8.	Ability to automatically prompt member to complete necessary change of address or change of name form when CPRB learns of the necessity for such a change (possibly through the receipt of a change on another form)		●				
9.	Ability to capture, maintain, track and utilize within the member record at least four addresses specific to legally mandated items, e.g., 1099R, Annual Statement – distinct from the general address(es) maintained in the member record		●	●			
10.	Ability to capture data from the member record.	●					
11.	Ability to capture needed data from the annuitant record.	●					
12.	Ability to capture needed data from the employer record.	●					
13.	Ability to capture needed data from the SSA Death Report	●					
14.	Ability to capture needed data from the DHHR Death Report	●					
	PROCESS						
15.	Ability to (in the case in which a member is both a retiree and a beneficiary), "tie" together information so that users can view all the benefits an individual is receiving	●		●			
16.	Ability to access member accounts with a single entry screen	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
17.	Ability to accommodate data with a status of "pending" (also maintaining its status as "pending" in workflow) for those cases where a document comes in before the document that should have arrived first to initiate the process		●	●			
18.	Ability to cross reference members personal ID to SSN	●					
19.	Ability to adjust deminimus amounts	●					
20.	Ability to automatically notify member by correspondence at career / retirement milestones (disability, vesting, early, normal retirement, death in service, etc.)		●	●			
21.	Ability to automatically transfer all account information from the wrong Social Security number to the corrected Social Security number	●		●			
22.	Ability to determine if the requested change (name, sex, etc.) requires legal documentation and, if so, automatically send correspondence requesting the documentation		●	●			
23.	Ability to display the member account in both a summary and detailed view	●		●			
24.	Ability to enable and enforce a standard format for making notes of communications with members and actions on their accounts and store electronically	●					
25.	Ability to flag an account with the status of "waiving of a benefit" if elected by the member or beneficiary through the refund process		●	●			
26.	Ability to generate a member detailed service credit break-down correspondence and provide this information via Web access for members	●		●			
27.	Ability to identify vesting eligibility based on member's termination date, service and age and to automatically generate correspondence to the member notifying them of their vested status by system and plan		●	●			
28.	Ability to maintain a history of positions (job titles) held by a member (employee)		●	●			
29.	Ability to manually separate multiple accounts where information is misapplied (e.g., two members under one SSN) without requiring IT intervention	●					
30.	Ability to provide a mechanism to view and/or download contribution, service credit and salary / earnings totals and details for a retirement system by user defined time periods (e.g. fiscal year, calendar year, and transaction year)	●		●			
31.	Ability to retain a history of all changes to member data	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
32.	Ability to reverse member account transactions	●					
33.	Ability to stop adding interest to a member's account once the member has retired, terminated (non-vested) or died	●					
34.	Ability to support all of the various service credit "buckets" that WVCPRB supports based on the retirement system and classifications of membership / job positions	●					
35.	Ability to track all tax-deferred payments for the purchase of service (taxable contributions, rollover, etc.)	●		●			
36.	Ability to track and flag member accounts with pending and approved court orders and enforce/process them appropriately	●		●			
37.	Ability upon transferring account information from the wrong Social Security number to the correct Social Security number, to send correspondence to the member with a copy to the employer(s), and produce a new Membership Statement for the member (that can subsequently be generated on demand)	●		●			
38.	Ability to enable the merging of two accounts. Transaction histories as well as master file data should be merged during this process	●		●			
39.	Ability to indicate as part of the member record that the SSN is a dummy or otherwise erroneous	●					
40.	Ability to track and validate the current employment status of certain members who are no longer reported to WVCPRB, but whose memberships are in a protected, discontinued status as long as they remain in such positions, including those now covered by TIAA-CREF or other plans	●					
41.	Ability to automatically inform members of pending mandatory retirement dates	●		●			
42.	Ability to identify and automatically notify members required to take mandatory distribution	●		●			
43.	Ability to automatically calculate, credit and display year to date interest on member account balances	●		●			
44.	Ability to automatically recover from any previously (and/or erroneously) applied transaction to a member's account (including the resulting application of interest, etc.) complete with audit tracking and GL entries as appropriate. Recovery should result in the correct disposition of all member accounts in question, e.g., the complete "rebuilding" of two member accounts when it is determined that a service credit and contribution were erroneously applied to the wrong member and should be automatically backed out of one member account and applied to a second	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	OUTPUT						
45.	Ability to calculate and provide information about the potential, pending, or actual retirement benefit to external entities as authorized by member / pensioner / beneficiary or required by legal process	●					
46.	Ability to generate, as needed, and mail a bar-coded Data Change Notice which the member may choose to modify and return by mail for staff processing	●					
47.	Ability to interface/support exchange of information with third party sources (e.g., Social Security Administration, Accurint, State Department of Health, etc.) that provide death information	●		●			
48.	Ability to generate and display a member's employment history information on a single report (e.g., salary, contributions, service, payroll period, employer, system, group, etc.)	●		●			
	CONTROL						
49.	Ability to determine whether changed information was verified, especially for those cases where this information is changed back and forth multiple times (as examples: SSN, date of birth), including supporting documentation	●					
50.	Ability to identify accounts with non-zero balance after withdrawal of contributions and notify an end-user of a possible "Additional Refund" (or recovery of funds) to be processed	●		●			
51.	Ability to review a former member's account, when a request is received from another state to verify membership in the WVCPRB system; if any out of balances are detected, adjust service if necessary and pay refund (or request recovery if over refunded) of any remaining contributions before verifying service credit to the requestor	●					
52.	Ability to initiate workflow (or other notification) to the imaging system when two accounts are merged or when an account is split so that an imaging administrator can appropriately merge /split the member's information	●					
53.	Ability to systematically audit certain changes to a member record prior to applying the change	●					
54.	Ability to maintain an audit trail of all changes to a member's account including who initiated the change and the reason for the change	●					

2.4.4.16 Member/Employer Education

The section outlines requirements for member and employer education. Through the listed requirements, WVCPRB's intent is to provide a highly flexible set of tools that can be tailored to fit a broad variety of

educational needs. Throughout the requirements below we refer variously to members and employers. In fact, all of them are WVCPRB's customers and the requirements pertain to all of WVCPRB's customers. Furthermore, while the requirements refer most often to seminars, other vehicles for delivery of educational material also pertain; thus the word "seminar" also includes counseling sessions, occasional one-on-one meetings, etc. Finally, the vendor should understand that the educational material to be delivered to the varied community through various types of meetings includes multiple types of material varying from canned overhead presentations, through customized presentations, to material that has been gathered that is specific to one demographic or to one counselee.

Table 16: Functional Requirements for Member/Employer Education

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture information from counseling sessions, such as questions asked, answers provided, information entered, forms / correspondence generated, etc.		●				
2.	Ability, when member is using a web-based utility to enroll in specific seminars, to accept/reject the enrollment request based on specific criteria, e.g., within 2 years of retirement, etc.	●		●			
3.	Ability to capture attendee names, questions asked and answers provided from customer seminars and to share that information with others in the WVCPRB community		●				
4.	Ability to capture and subsequently use survey (of members, employers, etc.) information to produce and deliver appropriately customized education information/material		●	●			
5.	Ability to automatically capture employer (self-)identified education-related needs (on a demand-driven basis) and when a threshold quantity has been attained, automatically initiate scheduling of a specific seminar through a workflow process		●	●			
	PROCESS						
6.	Ability for retirees or members to self-register via the Web for classes, counseling sessions or other services	●		●			
7.	Ability for customers to interface with the system via telephony, IVR, Web access, etc. to sign-up for counseling sessions (based on counselor/resource availability), directions, etc.	●		●			
8.	Ability to schedule counseling appointments based on counselor availability	●		●			
9.	Ability to determine whether a member has attended one of several education seminar types within the past (specified number of) years.		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
10.	Ability to build a roster of those members due benefit estimates as a result of enrolling in a retirement seminar – and subsequently generate the appropriate benefit estimates for each scheduled seminar		●	●			
11.	Ability to optimize scheduling of customer education sessions based on a variety of customer demographic data such as zip-code, age, previously attended seminars, etc., to include the scheduling of resources, inviting of potential attendees, management of attendee lists, generation of attendee-specific information packets, etc.		●	●			
12.	Ability to provide on-line enrollment with automated real-time confirmation of seminar and seat availability and to automatically manage and promote from a wait list once the initial allotment of seats is full, etc.		●	●			
	OUTPUT						
13.	Ability to generate a counseling schedule, assign people to those counseling sessions (or employer seminars and/or meetings), and generate various listings, etc. as needed	●					
14.	Ability to generate a listing of counseling appointments based on various parameters (by day, week, month, etc.; by an individual counselor or all counselors, etc.)	●					
15.	Ability to automatically generate an "Appointment Reminder" correspondence informing the member about an upcoming counseling session	●		●			
16.	Ability to (based on understanding of individual member needs) automatically push pre-emptive life milestone educational material to customers based on system-created trigger lists (e.g., vesting, within 5 or 10 years of retirement, employer rate information, etc.)		●	●			
	CONTROL						
17.	Ability to evaluate customer history and demographic information to control / limit / encourage their attendance at specific educational events		●	●			
18.	Ability to automatically rotate counselors for appointments		●				
	METRICS						
19.	Ability to summarize and categorize survey results (this includes Optical Mark Reader – OMR capability for capturing results from paper forms as well as tallying results from electronic surveys)		●	●			
20.	Ability to measure the success of an educational effort through capabilities such as post-event (paper or electronic) surveys		●	●			

2.4.4.17 Member Statement

WVCPRB highly desires that the production of an annual statement or statement of account should eventually be made available to members through their secure login to the web. The presentation and scope of content included in the report may vary depending on selections the member makes in preparation for running the report.

Table 17: Functional Requirements for Member Statement

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture a Membership Statement distribution indicator so that a member can instruct WVCPRB as to how the statement should be delivered (mail, e-mail, DO NOT DELIVER, etc.)		●	●			
2.	Ability to highly parameterize the layout and design of the Membership Statement so that annual changes to the annual statement can be implemented without extensive coding and testing.	●					
3.	Ability to automatically access and incorporate data existing in the member record	●					
	PROCESS						
4.	Ability to export, according to a WVCPRB-defined file format, data required to populate an active member statement or benefit statement	●		●			
5.	Ability to allow the annual Membership Statement to be generated in either booklet form or 8.5 by 11 presentation		●	●			
6.	Ability to calculate and display a disability benefit estimate on the Membership Statement if WVCPRB desires		●	●			
7.	Ability to display SISTER PLAN salary, contributions, interest and service if a member has information transferred from SISTER PLAN in his/her WVCPRB account		●	●			
8.	Ability to display the lowest level of detail of account transactions and date (e.g., bi-weekly, semi-monthly) on Membership Statements, as well as identification of the type of transaction		●	●			
9.	Ability to display the most recent / current employer number(s) and employer name(s) on Membership Statement	●		●			
10.	Ability to extract and provide on the member's Membership Statement the appropriate information / paragraphs pertaining to member's benefit depending on the member's account information		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
11.	Ability to extract and provide retirement estimate information on the Membership Statement for those members that are eligible for a retirement benefit based on various levels of qualifications (e.g., if the member is within 5 years of normal retirement the Membership Statement should provide both an early and normal retirement benefit estimate)		●	●			
12.	Ability to extract the desired information to be sent to a third party generating the Membership Statements		●				
13.	Ability to generate a *"Revised"* Membership Statement for those members that are affected by an adjustment	●		●			
14.	Ability to generate a new statement for the member when a unique identifier or SSN problem has been corrected	●		●			
15.	Ability to generate Membership Statement automatically during the recipient's birthday month		●	●			
16.	Ability to handle a new format for the Membership Statement should WVCPRB elect to change / modify the format	●		●			
17.	Ability to identify if a member is withdrawn, retired, or deceased, etc., and, if so, optionally bypass production of the Membership Statement	●					
18.	Ability to identify members eligible to receive a Membership Statement	●		●			
19.	Ability to identify/store/display why an estimate was not included on the Membership Statement		●	●			
20.	Ability to print messages on Membership Statement based upon specified parameters being fulfilled	●		●			
21.	Ability to produce Membership Statements on pre-printed stock or blank pages	●		●			
22.	Ability to provide for beneficiary information to be displayed on Membership Statements	●		●			
23.	Ability to provide for earliest retirement date and various retirement option amounts to be displayed on Membership Statements		●	●			
24.	Ability to provide service credit total and a break-out of service credit by type (Military, Accrued, etc.), and employer on Membership Statements	●		●			
25.	Ability to re-run the Membership Statement job run for a specific retirement system, employer, members within an employer, or a specific member	●					
26.	Ability to send one consolidated Membership Statement to members who are covered by more than one retirement system		●	●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
27.	Ability to sort Membership Statements per the Membership Statement distribution indicator	●					
28.	Ability to store and display on the Membership Statement various purchase of service contributions with the status of "not to be withdrawn" to inform member that upon retirement these monies cannot be withdrawn		●	●			
29.	Ability to support the fields desired on the Membership Statement and to allocate space for this information in the file layout	●		●			
30.	Ability for those electing e-mail delivery to automate the e-mailing of the statements		●	●			
31.	Ability to include both summary and detail retiree-related information such as deductions and other tax-related information, health insurance withholding, etc., in the Retiree Annual Statement		●	●			
	OUTPUT						
32.	Ability to display and print duplicate Membership Statements by the member or staff from a Web utility	●		●			
33.	Ability to display online and print historic Membership Statement information "identical" in both content and format to the original	●		●			
34.	Ability to extract and provide all appropriate Membership Statement data in the format prescribed by WVCPRB with statement content (e.g., plan description, text, benefit estimates, etc.) driven by membership characteristics	●		●			
35.	Ability to print a duplicate Membership Statement on demand	●		●			
36.	Ability to provide *Employer Annual Statements* to the Employers detailing their reported data (service, contribution, and interest) by employee and in total		●	●			
37.	Ability to provide employers with a summary, sub-totals, etc. of Membership Statement information		●	●			
38.	Ability to provide a "real-time" annual statement (available interactively through the portal) for member and pensioner		●	●			
39.	Ability to provide a "point-in-time" annual statement (available through the customer's chosen correspondence channel)	●		●			
40.	Ability to indicate on the Membership Statement the existence of any outstanding PoAs, Guardianships or trust designations		●	●			
41.	Ability to include the existence of a loan or QDRO on the Membership Statement	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	CONTROL						
42.	Ability to provide control report of all members who did not receive Membership Statements and reason for each member		●				
43.	Ability to provide various management reports: that provide various statistics about the total number of accounts, number of statements generated, number unable to be generated, number un-deliverable, total occurrences of missing information by type, etc.	●					

2.4.4.18 Multiple Service in Same or Multiple Plans

The section outlines requirements related to service in multiple plans.

Table 18: Functional Requirements for Multiple Service in Same or Multiple Plans

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture information from application to determine multiple service in same and/or multiple plans	●					
2.	Ability, when a member applies for multiple service at WVCPRB, to capture certification of eligibility from all applicable plans	●					
3.	Ability, when a member applies for multiple service at WVCPRB, to capture request for certification of eligibility from all applicable plans	●					
	PROCESS						
4.	Ability to override multiple service or re-employment in any system after retirement (is to be customized to WVCPRB)	●					
5.	Ability to transfer service credits, monies, or other data between systems	●		●			
6.	Ability to determine eligibility for multiple service within a single plan or multiple plans administered by WVCPRB	●					
7.	Ability to determine if member had a break in service	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
8.	Ability to determine if member is full-time or part-time	●		●			
9.	Ability to determine if member previously elected multiple service	●					
10.	Ability to determine if member previously retired from another CPRB retirement plan	●		●			
11.	Ability to include information about service and benefits for SISTER PLANS on member annual statement, for those members who so qualify		●	●			
12.	Ability to provide indication of multiple service processes completed within member account (i.e., a check list, which is updated throughout the process), including the ability to adjust for overlapping and concurrent service	●		●			
13.	Ability to track status of transfer request for members that apply for transfer to sister plan – taking into consideration the multiple service rules	●					
14.	Ability to track the date the welcome correspondence / enrollment packet was sent to the member and the address to which it was sent, establishing a deadline; including ability to retrieve all previously sent welcome correspondence and relevant information		●	●			
15.	Ability to prepare reports and support the necessary accounting structure to transfer detail and funds to a new plan if members are leaving the system entirely	●		●			
16.	Ability to automatically generate documentation of the full set of options that a member has available		●	●			
OUTPUT							
17.	Ability to create defined data extracts between WVCPRB and administered plans relating to multiple service	●					
18.	Ability to automatically generate "need more information" correspondence to those members who indicated prior reciprocal system service as part of member enrollment and/or the reciprocal system	●		●			
19.	Ability to generate new welcome correspondence / enrollment packet and establish a deadline for its return		●	●			
20.	Ability to generate purchase of service cost for member who was refunded previously from same or SISTER PLAN and establish deadline for completion of purchase	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
21.	Ability, if member previously retired from one CPRB administered retirement plan, to generate correspondence to member and the other CPRB administered plan, explaining options in accordance with the provisions of each plan	●		●			
22.	Ability, when a member applies for multiple service at WVCPRB, to generate a certification request that is sent to SISTER PLAN to confirm eligibility for multiple service	●					
23.	Ability, when a member applies for multiple service from multiple CRPB administered retirement plans, to generate correspondence denying or granting request for each retirement plan	●		●			
	CONTROL						
24.	Ability to capture basic member information as it relates to multiple service eligibility when the person is not a "Member" of one or the other systems	●					
25.	Ability to ensure that overlapping multiple service does NOT result in granting more than one year of service credit for each year worked by member	●					

2.4.4.19 Power of Attorney

This section outlines requirements related to an approved Power of Attorney, Guardian, Trustee, Conservator, or other person legally authorized to act on the behalf of, or in the interest of, another person. (Within the section, the term "POA" or "Power of Attorney" should be construed as meaning any authorized representative.)   For some requirements in this section, Exposed Via Web refers to transmission of information by WVCPRB through e-mail transmission or a notification at member account logon.

Table 19: Functional Requirements for Power of Attorney

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability for user to enter the appropriate agent, guardian, or trustee information upon approval (e.g., designated or court appointed agent(s) name and address, whether agent "acts" alone or together with another agent, agent "powers", durable, non-durable, specific, general, etc.) (Note that, depending on the characteristics of the agreement, it may prohibit the agent's naming him/herself as beneficiary or survivor annuitant of the member's retirement plan.)	●		●			
2.	Ability to capture and act upon a specific time duration (date from and date to) noted in a power of attorney form, guardian certificate, or trust certificate or authorization for release		●	●			
3.	Ability to capture and track the status of a power of attorney form, guardian certificate, Authorization for Release (AFR) or trust certificate (e.g., pending, approved, rejected, legal review, revoked, etc.)		●				
4.	Ability to capture, update, and display submittal of power of attorney form, AFR, guardian certificate, and trust certificate	●		●			
	PROCESS						
5.	Ability to suspend the transaction until the designation request has been approved (when a document designating power of attorney, guardianship, or trusteeship has been received but not yet approved)		●				
6.	Ability to suspend the transaction if there is no corresponding record in the system of an approved power of attorney, guardianship, or trusteeship for the requester (when a request/document, e.g., application for refund, is submitted by a person representing him/herself as power of attorney, guardian, or trustee)		●				
7.	Ability for WVCPRB to approve/reject a power of attorney form, guardian certificate, or trust certificate; approval or rejection also triggers workflow to route the work request to the next appropriate step		●				
8.	Ability to accommodate multiple power of attorney designations; all approved power of attorney designations are to remain in effect until they are revoked by the member		●	●			
9.	Ability to automatically change the power of attorney, guardian, or AFR trustee status from "approved" to "revoked" or "expired" when the specified duration has been exhausted	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
10.	Ability to automatically generate an approval (or disapproval - with reason) correspondence to both the member and designated agent(s) when a power of attorney, guardianship, or trusteeship record has been updated with a status of approved/disapproved. Such an action is to also lift the suspension on any transactions previously suspended while awaiting approval/disapproval		●	●			
11.	Ability to generate a disapproval correspondence to both the member and designated agent(s) when a power of attorney, guardianship, or trusteeship record has been updated with a status of disapproved; correspondence is to include enclosed prefilled WVCPRB power of attorney / guardian / trustee form		●	●			
12.	Ability to generate correspondence indicating that a transaction cannot be processed based on an agent's (power of attorney, guardian, trustee) approved powers		●	●			
13.	Ability to generate correspondence to the member alerting him/her when an approved power of attorney is on file and the member submits another power of attorney form, advising the member of the current POA status		●	●			
14.	Ability to generate a response (correspondence) to a person seeking to designate him/herself as power of attorney, guardian, or trustee explaining that the transaction cannot be processed until the request is made by either the member or a court of competent jurisdiction and approved by WVCPRB		●	●			
15.	Ability to generate a response (correspondence) to a person submitting requests/documents (e.g., application for refund) and representing him/herself as power of attorney, guardian, or trustee, explaining that the transaction cannot be processed until the designation of power of attorney, guardian, or trustee is requested by either the member or a court of competent jurisdiction and approved by WVCPRB		●	●			
16.	Ability to reactivate pending transactions that were suspended for lack of approved power of attorney, guardianship or trusteeship once the record's status has been updated of approved		●				
17.	Ability to view current and historic power of attorney information		●	●			
CONTROL							
18.	Ability to ensure that all correspondence is sent to an appointed guardian after the guardian certificate has been reviewed/approved by WVCPRB legal staff (Exposed Via Web as status viewable by WVCPRB staff)	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
19.	Ability to restrict transactions against an account which has an appointed / approved guardian (i.e., the member may no longer conduct business on his/her own behalf except in certain limited circumstances, for example, a change to member demographic data supported by "valid proof" documentation) and notify WVCPRB staff, if applicable, throughout all processes (including the submission of a power of attorney form or trust certificate) that a court appointed guardian has been reviewed/approved by WVCPRB legal staff or that one is pending legal review – and that all account transactions are to be initiated by the court appointed guardian as indicated on the guardian certificate	●					
20.	Ability to process a transaction based on the agent's approved powers (e.g., if agent is required to "act" in conjunction with another agent, signatures from both are required prior to processing transaction)		●				
21.	Ability to indicate as part of the member data that one or more Power of Attorney(s) exists as part of the member record and the characteristics of each POA		●	●			
22.	Ability to indicate as part of the member data that a Guardianship exists as part of the member record and the characteristics of the guardianship		●	●			
23.	Ability to ensure that all correspondence is sent to the appropriate individual(s) after the Power of Attorney has been reviewed/approved by WVCPRB legal staff	●					

2.4.4.20 Purchase of Service

The following section outlines requirements for members purchasing various types of creditable service. For some of the requirements, while the ability described should not be Exposed Via the Web, the results of processing should be exposed as the account status update.

Table 20: Functional Requirements for Purchase of Service

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture tax status, a transaction date, effective date, and amount remitted for each purchase of service (at level of detail required by WVCPRB, applying it to the specific purchase) payment received from member, employer, or financial institution	●		●			
2.	Ability to capture from the employer or the member a request for purchase of service information (for all types of service purchases) via a purchase of service application form or letter	●		●			
3.	Ability to capture from the employer, member, or WVCPRB staff a request for a purchase of service estimate or update to a previous estimate (for all types of service purchases) through a Web utility	●		●			
	PROCESS						
4.	Ability to post purchased service credit to member's account based on the purchase of service process	●		●			
5.	The ability to block a returning employee from purchasing prior service that was determined to be Less Than Honorable.		●				
6.	Ability for WVCPRB to cancel purchase if payment is overdue by more than a configurable number of days; reverse all service credit purchases that were posted prior to cancellation; set up account payable to return all payments made by member and employer prior to cancellation	●					
7.	Ability for members and/or employers to make payments directly via an electronic payment (Web based, ACH), or lockbox transfer		●	●			
8.	Ability to "pend" purchase of service payments (from both employer and member) until the purchase has been completed, then post the full amount of service credit purchased to the member's account (alternatively, permit posting of partial purchases)		●	●			
9.	Ability to automatically accept incoming rollover payments from financial institutions/retirement plan (including validation of the financial institution) toward a member's purchase of service receivable		●	●			
10.	Ability to accommodate a member's election to rescind a purchase of service agreement and reverse all service credit purchases that were posted prior to the decision to rescind	●		●			
11.	Ability to accommodate multiple purchases of the same "type" and track the employer associated with each	●		●			
12.	Ability to allow a retiree to purchase additional service up to a certain number of days after the date of retirement		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
13.	Ability to allow for various member payment methods, including a lump sum payment, rollover, EFT, installment payments, and payroll deductions	●		●			
14.	Ability to apply interest to an already established Purchase Agreement / Cost Sheet / Invoice (receivable) if a late-payment is made	●		●			
15.	Ability to automatically recalculate (and generate updated cost correspondence) an already established Purchase Agreement / Cost Sheet / Invoice (receivable) if there was an interruption in payments	●		●			
16.	Ability to apply the appropriate service credit amount (in the appropriate service credit "buckets") to a member's account based on the purchase of service agreement and payments received	●		●			
17.	Ability to automatically create, update, and maintain a history of each purchase of service receivable record (e.g., amount of service, type of service, cost of service, payments received, tax status, and "Investment in Contract", etc.) for a member and/or employer purchase of service agreement	●		●			
18.	Ability to calculate amount of service credit member is eligible to purchase for each type of service credit purchase	●		●			
19.	Ability to compute a comparison of the member's future retirement benefit with and without an eligible service credit purchase		●	●			
20.	Ability to automatically detect overdue payments		●	●			
21.	Ability to determine member's eligibility to purchase service for each type of service credit purchase	●		●			
22.	Ability to determine the cost (member and employer share if applicable) and payment plan(s) for the various types of service credit purchases: • Formerly refunded service with WVCPRB • Retroactive Service Credit • Multiple Service • Out of State • Military service • Workers' Compensation • Parochial • Legislative • Employer Error • School Association Service • Other	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
23.	Ability to generate pre-filled purchase of service applications and track the distribution, turn-around, and processing of each form		●	●			
24.	Ability to grant service credit with no cost up to the limit applicable to the plan	●		●			
25.	Ability to handle legislation, business rules, prior period adjustments, etc. related to those types of service credit adjustments that have no cost associated with them (military, workers compensation, Legislative, etc.)	●		●			
26.	Ability to include an automatic calculation of recovery time (when it would be to the member's benefit to make the purchase, e.g., fifteen years post retirement) when calculating a cost to purchase and benefit estimate.		●	●			
27.	Ability to maintain a history of individual purchase records for each purchase applied for at the level of detail desired by WVCPRB	●		●			
28.	Ability to maintain a scheduled employer installment payment (of amounts withheld from member's payroll checks) process as part of the employer's regular (wage and contribution) reporting schedule		●	●			
29.	Ability to maintain a table of purchase of service types with an associated code including the ability to add a new type when legislation warrants it	●					
30.	Ability to automatically calculate all rates, factors, and tables associated with each type of service credit purchase (e.g., employer rate, member rate, interest rates, etc.)	●					
31.	Ability to maintain in member account a detailed history of all refunds such that, when the member elects to purchase service corresponding with a historical refund, the cost of the purchase can be calculated automatically and, when payment is received, the account can be re-built automatically (to avoid users having to manually re-build the account)		●	●			
32.	Ability to maintain the eligibility requirement rules and associated calculation for each type of service credit purchase	●					
33.	Ability to provide the employer, member, or WVCPRB staff a calculator to determine a purchase of service estimate / update (for all types of service purchases) through a Web utility		●	●			
34.	Ability to recalculate a purchase based on receipt of additional information and generate a revised Service Purchase Agreement / Cost Sheet / Invoice	●		●			
35.	Ability to recalculate the remaining balance due when an overdue payment arrives	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
36.	Ability to route the account for audit and/or review prior to issuing a Service Purchase Agreement / Cost Sheet / Invoice	●					
37.	Ability to support receipt of payment via employer payroll withholding	●		●			
38.	Ability to track and maintain the tax status (i.e., before tax or after tax) of all service credit purchase payments	●		●			
39.	Ability to update member demographic information while processing a purchase of service application	●		●			
40.	Ability to annuitize past service purchases after the date of retirement		●	●			
41.	Ability to maintain service purchase credit within the system in situations in which there is no associated WVCPRB employer, e.g., military service	●		●			
42.	Ability to identify, trigger and send projected stop notices for all service purchase types to insure that they are stopped in timely fashion, thus avoiding additional, unnecessary deductions and subsequent refunds are not necessary		●	●			
OUTPUT							
43.	Ability for the system to extract certain purchase of service information so that the actuary can review and determine the cost of purchase for those cases that should be handled / calculated in this manner	●					
44.	Ability to automatically generate correspondence requesting additional information relating to an incomplete purchase of service record and include the appropriate application highlighting the areas that need to be completed or corrected		●	●			
45.	Ability to automatically generate reimbursement (with correspondence of explanation) to the employer, member, or financial institution for an overpaid, erroneous, or member-rescinded purchase of service agreement (with appropriate, automated tax handling)		●	●			
46.	Ability to generate a denial correspondence if member is ineligible to purchase service credit		●	●			
47.	Ability to generate a Service Purchase Agreement / Cost Sheet / Invoice (turn-around document) for the member which provides the cost (member) of the purchase, choice of payment plans, terms and conditions for each payment plan, the amount of service, and a comparison of the member's future retirement benefit with and without the purchase	●		●			
48.	Ability to generate a Service Purchase Agreement / Cost Sheet / Invoice (turn-around document) for the employer (if applicable) which provides the employer's share of the cost of the member's purchase and the terms and conditions (are to be paid in a lump sum)	●		●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
49.	Ability to generate an updated statement (revised Purchase Agreement / Cost Sheet / Invoice) for the member or employer when an overdue payment arrives		●	●			
50.	Ability to automatically generate delinquency correspondence (i.e., 90 days, 120 days, etc.) to both the employer and the member when agreed upon payments are not made by either the employer or the member (including when member switches employers)		●	●			
51.	Ability to generate correspondence informing member and employer of WVCPRB's decision to cancel the purchase due to overdue payments, including intent to reverse service credit purchase posted prior to cancellation and intent to return all payments made to date		●	●			
52.	Ability to generate bar-coded payment coupons to accompany installment purchase of purchase of service payments sent by member		●	●			
53.	Ability to produce correspondence to acknowledge completion of a purchase of service		●	●			
54.	Ability to produce correspondence to acknowledge receipt of each application		●	●			
55.	Ability to provide member with acknowledgement that employer has made a payment (possibly only to those who have opted for electronic communications)		●	●			
56.	Ability to allow member to check outstanding payment balance via web portal		●	●			
CONTROL							
57.	Ability to create an un-remitted contribution report so that WVCPRB knows what money is still owed on all outstanding service purchases		●				
58.	Ability to provide the employer and/or WVCPRB staff with the capability to extract purchase of service reports through a Web utility (e.g., report listing all satisfied/outstanding purchase of service agreements, report listing any outstanding purchase of service receivable against the employer, etc.)	●					
METRICS							
59.	Ability to report how many Service Credit Purchase Agreements were requested, processed, paid for in a lump-sum payment or are continuing to be paid, etc.		●				

2.4.4.21 Qualified Domestic Relations Order (QDRO) and Court Orders

The section outlines requirements for processing court orders such as Domestic Relations Orders, support orders, IRS and bankruptcy liens, and other court orders or similar documents. One important note for the vendor: WVCPRB envisions the proposed solution should be constructed such that any calculation or result potentially affected by any one (or more) existing court orders automatically include the impact of the court order in the calculation. Depending on the staff member or user to determine that an order exists and applies to a specific calculation has the potential to introduce human error (by omission) and is therefore not acceptable. In some instances, Exposed Via Web pertains to the ability to view the updated account status by WVCPRB staff

Table 21: Functional Requirements for QDROs

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to enter, display, and amend as necessary, as part of the member record court order-related information and characteristics (for one or more court orders)	●					
2.	Ability, upon receipt and acceptance of amended QDRO, to override previously accepted QDRO	●		●			
	PROCESS						
3.	Ability to link retiree accounts to all related mandated payees, split payments and vice versa	●		●			
4.	Ability to make appropriate benefit adjustments as necessary based on the rules associated with QDRO or Final Order	●		●			
5.	Ability to monitor split benefit payment amounts	●		●			
6.	Ability to record and support instances where multiple, legitimate QDROs are placed against a member's account	●		●			
7.	Ability to automatically start and/or stop payments when certain conditions are met	●		●			
8.	Ability to support the appropriate allocation of a benefit to multiple alternate payees as defined by multiple QDROs	●		●			
9.	Ability to enter and maintain non-member payee (individuals, entities, etc.) demographic and monetary-related information	●		●			
10.	Ability to alert user when a QDRO is being processed or is in place for the member or alternate payee	●		●			
	OUTPUT						
11.	Ability to generate appropriate correspondence outlining the rights of individuals with respect to one or more court orders in place on a member's account		●	●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
12.	Ability to generate report(s) of and monitor split benefit payments for reconciliation purposes	●					
13.	Ability to produce ad hoc reports that respond with information requested by court order or other authorized party	●					
	CONTROL						
14.	Ability to alert user when a court order is being processed or is in place for the member or mandated payee and "cross-reference" to another member's account (e.g., spouse also within the retirement system)		●	●			

2.4.4.22 Refunds

The section outlines requirements for withdrawal of member contributions prior to retirement. With regard to Requirements 5 through 36, 39 through 50, and 52 through 55, "Exposed Via Web" refers to the ability for WVCPRB staff to view the updated status of the account.

Table 22: Functional Requirements for Refunds

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture direct rollover related information (e.g., percentage or specific amount to be rolled, financial institution information, account number, plan types, etc.)		●	●			
2.	Ability to capture refund related information (e.g., last day worked, termination date, un-reported salary, un-reported contributions, comments, etc.) from refund documents	●		●			
3.	Ability to capture the employer number and/or employer name associated with each refund application received		●	●			
4.	Ability to capture withholding waiver information as part of the application or by reaching out to the refundee for that information		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	PROCESS						
5.	Ability to automatically accommodate retroactive interest posting for those cases in which a refund / withdrawal should not have been taken and is reversed (including tax consequences)	●		●			
6.	Ability to "split" the amount to be refunded between the member, one or more financial institutions, or another third party in a single transaction	●		●			
7.	Ability to assign to a refund: cancellation status, status date, and reason as a transaction in the member's account		●	●			
8.	Ability to automatically initiate a refund for members who are not vested at RMD age		●	●			
9.	Ability to automatically calculate and apply or back out interest (i.e., interest is updated to date of termination or date of payment)		●	●			
10.	Ability to automatically calculate the amount to be refunded	●		●			
11.	Ability to confirm that a member has an application for enrollment / membership on file, prior to processing a refund request		●	●			
12.	Ability to confirm the member was an employee of the employer associated with the refund application submitted		●	●			
13.	Ability to correct/reverse a refund transaction already posted against a member's account	●		●			
14.	Ability to determine direct rollover eligibility and minimum distribution amount	●		●			
15.	Ability to determine retirement eligibility of member requesting a refund and automatically generate appropriate follow-up correspondence, following up with appropriate selected processing		●	●			
16.	Ability to determine whether member is immediately eligible for retirement benefits prior to issuing refund;	●					
17.	Ability to display a check summary and/or a check detail pertaining to each refund payment		●	●			
18.	Ability to display the member's current employer(s) information (e.g., employer name, employer number, etc.)		●	●			
19.	Ability to ensure that salary for refunded periods are not included in Final Average Salary calculations	●					
20.	Ability to ensure that the refund date is more than a configurable number of days (user-specified) from the date of re-employment		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
21.	Ability to identify and appropriately resolve a termination date discrepancy between the refund application and employer reporting (e.g., the termination date supplied through employer reporting might supersede the refund application resulting in an overpayment correspondence or an additional refund payment)		●				
22.	Ability to inform user that member is active with more than one employer, so user can verify that multiple employer forms have been received		●	●			
23.	Ability to make refund payments through various methods (i.e., paper checks, direct deposit, electronic transfer)	●		●			
24.	Ability to notify members of refund status via IVR, call center, portal, etc.		●	●			
25.	Ability to, at the time of refund, update the member's account and the employer account if applicable with a refund transaction that includes the amount of contributions, taxes, and service refunded or corrected as appropriate, applying the correction to the proper period	●		●			
26.	Ability to recalculate a refund based on receipt of additional information and re-verify payment options (direct rollover versus direct payment)	●		●			
27.	Ability to refund both regular contributions and purchase of service contributions, creating appropriate tax records, reducing service credit according to the amount refunded, and voiding any outstanding purchases of service	●		●			
28.	Ability to release refund for payment	●		●			
29.	Ability to retain original withdrawal/rollover distribution when original transaction is adjusted/corrected.		●	●			
30.	Ability to retrieve previously identified financial institution information (e.g., name, federal identification number, routing information, etc.) to avoid re-keying common information		●	●			
31.	Ability to route the account for audit and/or review prior to issuing refund check	●					
32.	Ability to support and track deferred vs. non-deferred contributions in refund processing	●		●			
33.	Ability to automatically support Court Ordered processing where there are multiple payments to be issued	●		●			
34.	Ability to suspend the payment of a refund until the final salary and service information is received from the employer; then automatically (re)calculate refund and release for payment		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
35.	Ability to track termination date, last wage and contribution reporting date, refund request date, refund-processed date, check date, etc.	●		●			
36.	Ability to track the distribution, turn-around, and processing of multiple refund application; suspend payment of a refund until employer forms are received for all employers and termination information has been submitted by each employer		●	●			
37.	Ability to update member demographic information while processing a refund application or direct rollover form	●		●			
38.	Ability to track the distribution, turn-around, and processing of multiple direct rollover forms (i.e., if member requests payment to be distributed to multiple financial institutions); confirm the member has completed a Rollover Form for each financial institution		●	●			
39.	Ability to identify and reimburse §415 overpayments	●		●			
40.	Ability to generate multiple refunds of the same type to the same individual (e.g., for different time periods)	●		●			
41.	Ability to automatically rebuild a member account (when the account was erroneously terminated – or as a result of member "change of mind")	●		●			
42.	Ability to perform an automatic write-off amounts less than a configurable dollar amount		●	●			
43.	Ability to automatically create all necessary refund-related GL entries	●					
44.	Ability to automatically adjust loan offsets as well as any other amounts due to WVCPRB from refund amount	●		●			
OUTPUT							
45.	Ability to automatically produce correspondence to a member who is requesting return of excess contributions showing the calculation of the value of the amount to be returned (principal, interest, taxability, etc.)		●				
46.	Ability to automatically generate an additional information correspondence from an incomplete refund record and include the appropriate application (e.g., refund application, direct rollover application, etc.) highlighting the areas that need to be completed or corrected		●	●			
47.	Ability to create a system generated refund payment correspondence	●		●			
48.	Ability to generate 1099s for those individuals who received a refund	●		●			
49.	Ability to generate a "check stub" for each refund payment		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
50.	Ability to generate a retirement eligibility correspondence to the member who is requesting a refund, if applicable, and assign appropriate status (e.g., pending, cancelled, etc.) to the refund request		●	●			
51.	Ability to generate all refund-related documents (and track their distribution, turn-around, and processing): • Refund Application • Rollover Form • Waiver of Retirement Benefit Form • General Refund Correspondence	●		●			
52.	Ability to generate an overpayment correspondence where applicable		●	●			
53.	Ability to periodically generate a file/report of those individuals who received a refund during that period for child support agency		●				
54.	Ability to produce an Acknowledgement correspondence to acknowledge receipt of each form; if multiple forms are received, one Acknowledgement correspondence would be produced listing the multiple forms received		●	●			
CONTROL							
55.	Ability to automatically suspend a refund from being processed if a new enrollment form is received for the member	●		●			
56.	Ability to confirm that there is no legal-hold on member's account before issuing a refund	●					
57.	Ability to determine status of application for withdrawal while in process.	●		●			
58.	Ability to generate a "non-zero balance" report (i.e., negative/positive) after a refund has been processed and trigger additional refund processing if necessary	●					
59.	Ability to receive notification of an additional refund if earlier refund did not zero account	●					
METRICS							
60.	Ability to provide statistical, managerial, and demographic data for various reporting purposes, such as number of refunds generated in total, by fund, by employer, by job classification	●					

2.4.4.23 Return to Work

The following section outlines requirements associated with retirees who elect to return to work.

Table 23: Functional Requirements for Return to Work

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture and retain/manage the status and other information of the post-retirement employment, including information from reciprocal systems	●					
	PROCESS						
2.	The ability to identify a retiree who has returned to a covered service position, who retired under a special incentive provision which prohibited such employment.		●				
3.	Ability to calculate new benefit for retiree who returns to work, stops working and returns to benefit role.	●					
4.	Ability to re-enroll pensioner to membership and update all appropriate records	●		●			
5.	Ability to track those retirees working under provisions that permit reemployment without restoration to membership status	●					
6.	Ability to track income of pensioners and suspend or reduce benefit when limit is exceeded		●	●			
7.	Ability to automatically reinstate suspended or reduced benefits and withholding and appropriately adjust COLA (in other words, make the account whole, if applicable) at end of mandated and/or recovery period – as appropriate	●					
8.	Ability to compute earnings limitations	●		●			
9.	Ability to fully automate the collection, calculation and communication of the Post Retirement Employment process		●	●			
	OUTPUT						
10.	Ability to generate correspondence to retired member returning to work to request repayment of retirement benefits previously paid		●	●			
11.	Ability to generate correspondence to member confirming return to work		●	●			
12.	Ability to automatically generate correspondence informing pensioner returning to work of applicable law, alternatives and possible effects of decisions		●	●			
13.	Ability to automatically inform new employer of pensioner's decision		●	●			
14.	Ability to track income of pensioners and warn of possible benefit suspension when limit is near		●	●			

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
15.	Ability to inform members, pensioners, and potential employers of applicable law, alternatives and possible effects of decisions prior to a reemployment decision		●	●			
16.	Ability to generate correspondence of earnings limitations, employment validation, etc.		●	●			
17.	Ability to automatically generate correspondence to employers asking for supplemental employment information		●	●			
	CONTROL						
18.	Ability to apply system, plan, and/or group-specific standards and conditions in event of return to work	●					
19.	Ability to automatically inform users when a retiree decides to "return to work" (re-enrolls) and provide retirement information (for each group / plan / system from which member retired) to ensure that the member adheres to the "return to work" requirements	●					
20.	Ability to create and maintain a receivable for retirement benefits that need to be returned upon re-employment and/or upon exceeding the legal limitations	●					
21.	Ability to determine, for a member, if a prior retirement exists and what the status of that retirement is at the time of re-employment or return to work	●					
22.	Ability to notify reciprocal system staff when a retired member of a reciprocal system begins to accrue benefits associated with the other system	●					
23.	Ability to track those retirees working under the "critical shortage" rule or other such legislation that creates a special case, e.g., teachers	●					

2.4.4.24 Tax Reporting

This section outlines requirements for tax reporting. WVCPRB greatly desires that the proposed solution be able to calculate, create, and transmit all tax information to the IRS.

Table 24: Functional Requirements for Tax Reporting

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture a payee's single or multiple requested tax withholding changes effective on specified future date(s)	●					
2.	Ability to capture alternate address for mailing of Form 1099-R, without changing the recipient's permanent address	●					
3.	Ability to capture amount, start-date, and end-date associated with a tax levy for a member's benefit	●					
4.	Ability to withhold a specified amount per pay period until a release is received from the IRS	●					
5.	Ability to capture, maintain, and apply federal and state tax table information with both retroactive and future effective dating	●					
6.	Ability to capture returned / re-deposited annuity payroll checks (either the originally issued check or a personal check submitted as repayment for the original check) and adjust 1099R amounts as appropriate		●				
7.	Ability to permit pensioners or beneficiaries to change their withholding via IVR and website as well as paper forms	●					
	PROCESS						
8.	Ability to monitor the usage / depletion of a member's account balance which is recouped through an exclusion ratio using IRS simplified (or other) method	●					
9.	Ability to automatically generate (in the event that a revised or corrected Form 1099-R is issued) a tax information correspondence to the member providing details of the correction	●					
10.	Ability for user having appropriate 'role' (i.e., "auditor") to make corrections to Form 1099-R information on-line		●				
11.	Ability to accommodate both the "General Rule" and "Simplified General Rule" taxation methods	●					
12.	Ability to accommodate Safe Harbor calculations		●				
13.	Ability to accommodate tax levies, etc.	●					
14.	Ability to accommodate the waiving of tax withholding	●					
15.	Ability to assign distribution codes according to IRS regulations	●					
16.	Ability to automatically adjust the tax liability (FWT and state withholding tax) when an adjustment is made to a payee's benefit amount	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
17.	Ability to calculate and apply check deduction attributable to a tax levy	●					
18.	Ability to correctly calculate and withhold taxes based on federal and state tax tables	●					
19.	Ability to comply with IRS regulations and reporting requirements, including content, format and timing of file transmissions	●					
20.	Ability to correctly calculate and accumulate those amounts required by Form 1099-R	●					
21.	Ability to create, maintain, monitor, and control tax withholding for IRS and state tax authority reporting, including facilitating and tracking the transfer of FWT payments to the IRS and state withholding tax to state tax authority	●					
22.	Ability to deduct, store and report taxes by payment type (loan, refund, beneficiaries, etc.) and fund and plan	●					
23.	Ability to edit IRS Form 945 (*Annual Return of Withheld Federal Income Tax*) and corresponding state tax authority form to accommodate corrections spanning multiple calendar years.	●					
24.	Ability to generate, retain and export (to Excel, Access, etc.) both initial and subsequent correction 1099-R files for the IRS and state tax authority containing all required information, and to reconcile these files against the data source and the accounting package	●					
25.	Ability to generate a completed IRS Form 945 for each retirement plan (*Annual Return of Withheld Federal Income Tax*) and all other Federal and corresponding state tax authority forms, e.g., IRS Form 712	●					
26.	Ability to generate a detailed breakdown (Benefit Verification Form) of all transactions that were included in any given Form 1099-R when a member questions the information; this breakdown should be available to both WVCPRB staff and to the member via the Web	●		●			
27.	Ability to generate a file of annual 1099R information and corresponding 1099R, 940 and 941 forms to the State (quarterly) and IRS	●					
28.	Ability to generate a tax withholding file for the IRS and state tax authority	●					
29.	Ability to generate an accurate facsimile of any given Form 1099-R via the Web	●		●			
30.	Ability to generate, retain and export (to Excel, Access, etc.) corrected Form 1099-Rs, reflecting changes made after the information has been sent to the IRS and state tax authority in accordance with IRS and state tax authority regulations	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
31.	Ability to generate and retain revised Form 1099-Rs issued between the original run and the date the information was sent to the IRS and state tax authority	●					
32.	Ability to generate, retain, and reprint the original Form 1099-Rs	●					
33.	Ability to generate and send reprints of Form 1099-Rs to an alternate Form 1099-R address	●					
34.	Ability to generate Federal Tax Withholding Report	●					
35.	Ability to generate individual Form 1099-Rs on an "as-needed" basis	●					
36.	Ability to generate individual Form 1099-Rs through the scheduling of an unattended process for mass production of all Form 1099-Rs, or a subset of Form 1099-Rs based on various selection criteria, as required by WVCPRB	●					
37.	Ability to generate multiple Form 1099-Rs to a single payee	●		●			
38.	Ability to generate Recalculated Federal Income Tax Deductions Report and corresponding state income tax deductions report	●					
39.	Ability to query, generate, and export reports on all types of tax information: such as by Social Security number, year, distribution code, payment type, etc.	●					
40.	Ability to generate State Tax Withholding Report	●					
41.	Ability to handle all tax related information from all processes in which payments are issued, returned or adjusted and create corresponding journal entries	●					
42.	Ability to identify and correctly calculate the tax consequences of both tax-deferred and non tax-deferred transactions	●					
43.	Ability to identify returned / re-deposited annuity payroll checks (either the originally issued check or a personal check submitted as repayment for the original check) and automatically correct the tax records associated with the returned / re-deposited check	●					
44.	Ability to implement a payee's tax withholding changes entered against a future date at the appropriate time		●	●			
45.	Ability to maintain each member's pre-tax dollars, rolled-over funds, and recovered contributions	●					
46.	Ability to maintain one master tax file for creating, updating and deleting all types of tax payments and corresponding information according to IRS and state tax authority regulations	●					
47.	Ability to pass tax transactions, at user defined timeframes, to the general ledger	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
48.	Ability to process adjustments made to prior tax years and issue corrected Form 1099-Rs as appropriate	●					
49.	Ability to process taxes for federal and state withholding for retirees with an out-of-country addresses	●					
50.	Ability to produce IRS tax publication explanation for inclusion in the envelope with the 1099R	●					
51.	Ability to produce a CPRB insert (with year to year variations) to be included with the 1099R with answers to common questions in addition to the IRS explanations	●		●			
52.	Ability to produce reprints of Form 1099-Rs	●		●			
53.	Ability to view and reprint at least five prior years of 1099Rs with the ability to reflect changes in prior year 1099R layouts		●	●			
54.	Ability to view on a screen and print a summary by calendar year of gross pay, total of each deduction, and net pay (similar to the YTD column on many paycheck stubs) for the current year and five prior years.	●		●			
55.	Ability to "expand" or "drill down into" a selected item total on the above screen and view the individual entries that make up the item total, e.g., PEIA withholdings.		●	●			
56.	Ability to provide a tax withholding "scratch pad" functionality so that users / members can interactively examine the tax implications of various tax withholding scenarios	●					
57.	Ability to query on all types of tax information (distribution code, year, taxable vs. non-taxable, gross, net, etc.)		●				
58.	Ability to report 1099-R summary information to the IRS and state tax authority as required	●					
59.	Ability to report corrected 1099-R summary information to the IRS and state tax authority as required	●					
60.	Ability to retain and display / print (auto-populating where appropriate) multiple versions of IRS forms according to tax year	●					
61.	Ability to reconcile, **by account and fund**, the aggregate amount withheld from all benefit payments (including "manual" and "one-of" checks) issued during a pay period against the amount calculated to be submitted to tax authorities	●					
62.	Ability to determine federal and state taxability, reportability, and withholding requirements of all retirement system distributions and other (noncash) taxable events (e.g. defaulted loans, arrears payments)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
63.	Ability to identify distribution options and tax consequences/choices for each customer for multiple business processes	●					
64.	Ability to provide sufficient flexibility to accommodate future changes to tax laws (Internal Revenue Code, regulations, private letter rulings, etc.), for example, taxable & nontaxable distributions, eligibility to rollover, minimum rollover amount, withholding rates, electronic notification, etc.	●					
65.	Ability to, in the case of pensioners who receive a benefit but do not receive 1099s (benefit is tax-exempt), capture and display data that would appear on 1099 if one were created (i.e., facilitate income verification process)		●				
66.	Ability to automate 1099-R original or reprint requests through portal (without intervention from tax unit) and generate report	●		●			
67.	Ability to automate Investment in Contract (IIC) adjustments associated with loan transactions (e.g. removing a loan default requires correcting IIC transactions)	●					
68.	Ability to add, change, delete 1099-R records and automatically generate necessary correspondence with appropriate audit trail	●					
69.	Ability to automate calculation daily federal tax liability payable to IRS or other tax authorities by account and by system	●					
70.	Ability to ensure no negative amounts appear in any federal or state tax fields	●					
71.	Ability to automate address updates of 1099-R records		●				
72.	Ability to identify distributions subject to additional penalty based on age	●					
73.	Ability to recover taxes for checks returned and re-deposited	●					
74.	Ability to ensure that tax recoveries for a given annuity payroll run do not exceed the total taxes withheld on that annuity payroll	●					
75.	Ability for the system to automatically identify all customer-related transactions with taxable implications so that all 1099-Rs for the current and prior years are properly corrected / generated	●					
OUTPUT							
76.	Ability to capture and support member's preferred distribution method (e.g., email, fax, print) for Form 1099-Rs in accordance with IRS regulations	●					
77.	Ability to produce an appropriate 1099 for any disbursement or other transaction that has an applicable tax consequence.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
78.	Ability to report the excluded amount (investment in contract amount excluded per calendar year) to tax reporting system to be included on the 1099R	●					
79.	Ability to automate all tax correspondence (including PSO letters)	●					
	CONTROL						
80.	Ability to track who made a tax adjustment and when and why that tax adjustment was made	●					

2.4.4.25 Telephone-Based Customer Relations

The following section outlines functionality requirements of WVCPRB's staff providing telephone-based customer relation services.

Table 25: Functional Requirements for Telephonic Customer Relations

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability for member of staff taking a call to retrieve member record, including Line-of-business (LOB) data, notes of previous calls, imaged documents, etc., quickly	●					
2.	Ability for Computer Telephone Interface integration to accept member unique identifier from member while in queue so that LOB screen is "primed" with member data when agent actually takes call		●				
3.	Ability for call center agent to retrieve appropriate information from the LOB on-line help knowledge repository while caller is on the phone	●					
4.	Ability for sampling of calls on-line (or touch-tone) polling of member satisfaction following a call		●				
	PROCESS						
5.	Ability for agent to check status of all pending member requests from a simple query	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
6.	Ability for agent to quickly retrieve all portions of a member record once call is activated at agent's PC	●					
7.	Ability to email substance of a received call to a specific member of staff for them to follow-up on call	●					
8.	Ability to provide conversion of notes from current member database into new Line-of-business system to ensure continued access to notes in new system	●					
9.	Ability to create work item and submit to a business unit for those customer queries that cannot be answered directly	●					
10.	Ability to create an escalation work item to a call center supervisor in the situation when an escalation fails		●				
11.	Ability to augment metrics gathered by above systems with other metrics gathered (e.g., call resolution, calls transferred), and to produce (on demand and for specific periods) integrated reports indexed by multiple indices		●				
12.	Ability to provide agents ready access to single comprehensive list of forms, handbooks, etc., to provide immediate fulfillment based on requested means of communication of member requests (including pre-population of fields, etc.)		●				
13.	Ability for supervisors to monitor calls of staff members taking calls through use of the service observe feature in the current phone system coupled with the ability to simultaneously view the staff member's screen(s) while monitoring the call		●				
	OUTPUT						
14.	Ability to integrate recorded .wav files into the member records for a period certain (see Section 2.5.5.4)		●				
15.	Ability to manage (delete individually or by range of dates, manually and automatically) recorded calls that need no longer be stored		●				
16.	Ability to capture text of all in-bound and out-bound e-mails into notes section of member record	●					
17.	Ability to capture typed encounter notes within member record following every phone call using interface that makes extensive use of drop downs, mnemonics, etc.	●					
	CONTROL						
18.	Ability to track all ACD calls (e.g., transfers), regardless of source, in order to subsequently support individual performance evaluation		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	METRICS						
19.	Ability to count and categorize calls, emails and all other incoming requests for information, action, assistance, etc., by topic (e.g., MAS, 1099s, RAS, loans, service credit, etc.), by type of caller, and produce appropriate reports showing disposition, success rate, forecasting, etc.		●				

2.4.4.26 Third Party

This section outlines requirements related to third party payees. These withholdings are made as a courtesy to our members and retirees and for various components of state government, such as PEIA and Child Support and Enforcement. We envision a subsystem that is used by third parties to submit data files for the withholding of health insurance deductions. Also the subsystem should allow WVCPRB members/retirees to authorize deductions for credit unions, union dues, etc...

Table 26: Functional Requirements for Third Party

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture, maintain, and delete third party demographic information as well as modify third party plan parameters based upon effective dates	●					
2.	Ability to capture and store premium amounts	●					
3.	Ability to capture life insurance enrollment information including but not limited to date of birth, coverage amounts, beneficiaries, etc.	●					
4.	Ability to capture, store and maintain codes and premiums for alternative benefits, e.g., dental, vision, PSO premiums	●					
5.	Ability to capture, store and maintain healthcare related codes, premiums, etc.	●					
6.	Ability to capture, store and maintain life insurance related codes, premiums, etc.	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
7.	Ability to import data in a desired format received electronically from third parties; a dynamic data import feature that can be used to help facilitate this process (setup, use and maintenance) would be preferred	●					
8.	Ability to add and remove third parties and change their demographic information	●					
9.	Ability to permit WVCPRB overrides of third party submissions to ensure eventual acceptance of the submission	●					
10.	Ability to permit third party to easily perform across-the-board rate changes, e.g., increase union dues from $1 to $2 per month		●				
11.	Ability to withhold a retiree's deductions for insurance coverage through different providers (health with one provider, life with another, etc.)	●					
12.	Ability (role based) to make manual premium adjustments to individual retiree accounts	●					
13.	Ability to update premiums withheld for retirees with a tape or data file from the state insurance agency (PEIA) and from other carriers (see RFP Section 4.2.5.1.7 System Interfaces)	●					
14.	Ability to update records for mass rate changes, life insurance age update, etc.		●				
15.	Ability to enter and maintain participant enrollments that are effective dated		●				
16.	Ability to capture (and delete) coverage providers as well as modify plan parameters of providers based upon effective dates	●					
PROCESS							
17.	Ability to store and apply third party credits and deductions and update coverage based on changes and "life events"	●					
18.	Ability to validate and apply reasonableness checks specific to WVCPRB pensioners to each third party deduction request as part of their submission		●				
19.	Ability to permit WVCPRB to automatically adjust third party-specified deductions in the case of a terminated or suspended pensioner	●					
20.	Ability to update premium deductions from a retiree's pension check automatically based on PEIA file, to notify insurance carrier and retiree if pension check is not large enough to deduct new premium amount, and to provide sufficient audit trail and appropriate correspondence.	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
21.	Ability to generate control totals of amounts withheld both before and after an update of withholding from a tape or data file to allow for reconciliation of withheld amounts	●					
22.	Ability to interface all premium withholdings with G/L	●					
23.	Ability to automatically generate payments to providers as part of the annuity payroll check processing	●					
24.	Ability to support automated (at least of the store and forward of a file) interfaces to/from multiple insurance providers based on effective dates and provide/receive the necessary data (e.g., SSN, name, premiums withheld, etc.)	●					
25.	Ability to assess the "What if?" impact of premium changes across the systems	●					
26.	Ability to calculate and display the impact on net annuity payments of changes in premium amounts	●		●			
27.	Ability to deduct insurance premiums from any payment transaction (not just the monthly annuity payroll)	●					
28.	Ability to automatically determine if the retiree's monthly annuity has sufficient funds to cover the monthly insurance premium and generate notification for those retirees who do not have sufficient funds	●					
29.	Ability to easily accommodate system-wide changes in insurance carriers that affect multiple members	●					
30.	Ability to provide a detailed, searchable, sortable accounting of all insurance based transactions, i.e., annuity payroll, refunds, etc. for any specified time frame	●					
31.	Ability to view insurance detail and summary reports generated from annuity payroll	●					
OUTPUT							
32.	Ability to extract data in a desired format and then transmit it electronically to third parties; a dynamic data extract feature that can be used to help facilitate this process (setup, use and maintenance) would be preferred	●					
33.	Ability to transmit payment to third parties by ACH as part of the direct deposit file	●					
34.	Ability to provide interface of withholdings from retirees whose premium is being deducted from their pension checks to PEIA, Mountaineer Flexible Benefits and other carriers.	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
35.	Ability to send PEIA a file of those retirees that were on their premium file but for which we did not withhold and the reason for not withholding (return to work, death, insufficient funds to withhold, other cancellations)	●					
36.	Ability to generate an automated annual correspondence to PSO retirees notifying them of the amount of pretax insurance deductions from their annuity payments	●					
	CONTROL						
37.	Ability to provide sufficient information to reconcile monthly statements	●					
38.	Ability to assign a unique identifier to each third party and to use that identifier in all interactions with the third party	●					

2.4.5 *Desired "To Be" Supporting Business Functionality*

The specific business functional requirements in this section are general in nature, being applicable across more than one of the business areas for which business requirements are defined in the previous section. The requirements for the supporting functionality are divided into categories corresponding to the RFP sub-sections which follow. They are:

1. **Audit and Security** – This group of requirements addresses the underlying audit (e.g. tracking of data updates, implementing a segregation of duties, flagging and identifying audited records) and security (e.g. passwords, encryption, screen level, field level) functions of the entire application. Typical reviewers of these requirements are agency management, the internal auditor, and those responsible for security

2. **General** – These requirements are generic in nature and apply to either the technical core of the system (e.g. parameter, table driven system, on-line help, ODBC compliance) or functions/rules within the application required in many if not all of the business process (e.g., support pre-filled forms, provide mailing labels, automatically capture and store all outgoing correspondence for access through the member folder)

3. **Reporting** – This category includes both general reporting requirements (e.g. add a watermark to all reports, ability to export to Excel, print, save, or view only, provide a parameter driven reporting tool) and requirements for certain standard reports/queries (e.g. member and employer reports by status, staff performance reports, quantity of reports to be written by vendor)

4. **Statistical Reporting** – Statistical reporting differs from general reporting in that it's reporting requirements are over time, providing a trend analysis capability that typically is satisfied using a data warehouse. While WVCPRB seeks a solution that meets the stated functional requirements (OLAP), there is no specific requirement for a data warehouse.

2.4.5.1 General Discussion

WVCPRB believes that the table-oriented approach used below for presentation of functional requirements is an appropriate method for succinct description of the requirements and for the vendor's response. However, the approach does not provide WVCPRB with a "feel" for how the functionality is provided. Therefore, vendor should, in addition to completing the table, provide a narrative description of the functionality provided in each specified functional area.

2.4.5.2 Audit and Security

The term "audit" can mean multiple things. Within the general functional requirements being required of the new system, WVCPRB desires that additions, changes, and modifications be traceable by username, date, etc. An "audit," in an additional context, refers to the process whereby WVCPRB staff reviews a member's account (e.g., wage, service, and contribution history) and make adjustments (particularly to converted data) to pay period dates, compensation, service, and contributions so that the LOB application can correctly calculate service credit, refunds, transfers, and Final Average Salary (FAS). Alternatively, an "audit" can also mean checking or auditing another WVCPRB staff member's work for accuracy and completeness. The objective of employing an audit indicator is to avoid any redundant audit activities on the part of WVCPRB staff. Vendors should understand and be able to differentiate these functional requirements.

The requirements in the table below relate to both audit (as discussed above) requirements and those related to security in the new LOB solution.

Table 27: Functional Requirements for Audit and Security

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture an audit (review) transaction on all WVCPRB specified transactions	●					
2.	Ability to capture designation of user (staff, members, retirees, etc.) capabilities / security levels (e.g., add, change, inquiry, delete)	●					
3.	Ability to capture user permissions to determine how far back in time a user can post a transaction; only certain users should be able to post to a closed month	●					
4.	Ability to capture and display comments (e.g., transaction level, account folder level, etc.) and the ability to restrict comment updates to the users or supervisors who created the comment	●					
5.	Ability to log all activity, associating an ID, name and date/time with each log entry	●					
6.	Ability for appropriate staff to create, modify, delete and administer users through a standard interface	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	PROCESS						
7.	Ability for reviewer, if any errors / irregularities are detected, to correct the problem him/herself or to send the transaction back to the originator for re-work (at the reviewer's discretion) and to record their actions as part of the transaction audit trail	●					
8.	Ability for the system to adhere to WVCPRB standards with regard to user-id and password administration, frequency of changing passwords, etc.	●					
9.	Ability for the system to keep track of a user's last access date/time by user-id	●					
10.	Ability for the system to monitor the number of successful and unsuccessful access attempts and to create audit trails showing these events	●					
11.	Ability for the system to retain both before and after images of changes	●					
12.	Ability for the system to set up, maintain and monitor roles and responsibility for system management, usage, and maintenance	●					
13.	Ability for the system to support data classification levels (e.g., secret, confidential, private, restricted, public, unclassified, etc.)		●				
14.	Ability for Web-based applications to be secured based on industry standards and WVCPRB encryption policies / procedures	●					
15.	Ability to adhere to WVCPRB security policies, bulletins, standards, procedures, etc.	●					
16.	Ability to assign access to a user for a pre-defined period of time for that role		●				
17.	Ability to assign appropriate priority levels / dates for review of work / audit	●					
18.	Ability to audit member accounts randomly without a triggering event or flag and record the fact the account was audited, the date it was audited, and the time period/transactions audited, and by whom (internal auditor, external auditors, etc.).	●					
19.	Ability to prevent all processes (including unattended ones) from terminating abnormally when encountering a "locked" member account and automatically generate a report of all unattended processes that encountered a locked account, that identifies the account against which the update was attempted and the source of the data	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
20.	Ability to capture the event (and generate a report) when an unattended process attempts to update a locked account, indicating the account was not updated due to the lock, the date the lock was effective, and the user-id of the person who locked the account	●					
21.	Ability to ensure data security measures are employed to prevent unauthorized access of data and/or changes to it	●					
22.	Ability to ensure that a locked account remains locked until the same user-id that locked it unlocks it; the only exception being that the System Administrator should have the authority to unlock any locked account	●					
23.	Ability to ensure that all locked accounts are "stamped" with the date, time, and user-id of the person who locked and unlocked it	●					
24.	Ability to ensure that for all transactions in which a user changes the status of a check to "void", the transaction is reviewed and approved by a different user having appropriate system permissions before it is committed to the database	●					
25.	Ability to ensure that in the event an unattended process attempts to update a locked account, the process does not terminate abnormally for that reason	●					
26.	Ability to ensure that no audit trail data can be deleted	●					
27.	Ability to ensure that security profiles are protected from unauthorized access	●					
28.	Ability to extract audit log information for display and reporting purposes and ability to filter selected data from audit log files to generate meaningful and useful security reports	●					
29.	Ability for the audit trail to track changes made to the data regardless of the means by which the change was made – i.e., LOB solutions, employer or member Web site, etc.	●					
30.	Ability to generate audit report(s) identifying all people, processes, dates, and/or times involved in changing member and employer data	●					
31.	Ability to lock an account (in the event of stolen identity, divorce, child support, court order, etc.) and record the reason why it is locked, the user id of the user who locked (and later unlocked) it and the date/time on which it was locked	●					
32.	Ability setup, maintain and monitor web access and to log an external user off the system after a user-definable period of inactivity (example: 10 minute timeout) as specified by WVCPRB	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
33.	Ability to maintain a historical record of user-ids issued, including the identity of the person associated with the user-id and the timeframe during which the user-id is/was valid	●					
34.	Ability to maintain an audit trail of all access to data which indicates all user access and specifies the nature and date of that data access	●					
35.	Ability to maintain electronic audit trails sufficient to trace all transactions from original source of entry into the system, through all system processing, to the results produced by the system AND to trace all transactions from the final results produced by the system, through all system processing, back to the original source of entry into the system; these audit trails should be protected from modification and deletion	●					
36.	Ability to produce an audit trail report of all program code changes (date, time, version, change that was made, workstations, and author)	●					
37.	Ability to produce certain security reports on a regular basis (e.g., violations, access to sensitive files, etc.)	●					
38.	Ability to prompt a person with a "challenge phrase" after a user-definable number of unsuccessful log-on attempts	●					
39.	Ability to provide a security report listing users, their roles and security access, etc.	●					
40.	Ability to provide a single integrated user logon into all applications regardless of the number of sub-systems that are being connected (imaging, workflow, etc.) in accordance with WVCPRB standards		●				
41.	Ability to provide access rules and role assignment which restrict departmental employees from performing incompatible functions or functions beyond their responsibility	●					
42.	Ability to provide an "account locking" capability such that an appropriately authorized user can lock a benefit recipient's account from ANY update, either online or via an unattended process; if a user attempts to modify data in a locked account, display a message indicating the account is locked, by which user-id, and as of what date	●					
43.	Ability to provide an automated means of processing a previously locked account after the lock is removed such that "suspended" data (including document-initiated workflows) do not have to be re-entered; provide a capability for users to remove such data that was locked at any time prior to update		●				
44.	Ability to provide appropriate security surrounding electronic, digital and digitized signatures	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
45.	Ability to provide data audit trails such that WVCPRB can quickly identify to the lowest level of detail the composition of all totals, subtotals, and grand totals displayed or reported by the pension solution	●					
46.	Ability to provide encryption required for secret, confidential, private, or restricted information that may be stored in a non-secure location or transmitted over open networks, such as the Web	●					
47.	Ability to provide formatted audit reports that show (for user-selected user ids, date-range, and/or members [selected by last name, social security number, or other unique identifier]) all changes made to member records, including before and after images; an "all" members option should be included	●					
48.	Ability to provide special screens for sensitive data so users are aware of confidentiality (e.g., disability screens)		●				
49.	Ability to provide standard interfaces to maintain security permissions and reporting	●					
50.	Ability to provide the same locking capability applicable to images, as well as electronic data, such that new document images cannot be added to a locked account nor can existing document images be deleted from a locked account OR Ability to add new document images to the folder of a member whose account is locked but prevent deletion of images from the folder of a member whose account is locked	●					
51.	Ability to provide unique user identification and automatic log-off	●					
52.	Ability to provide various levels of security and adhere to existing security structures, including network security, application security, development environment security, and Web-access security – with procedures for support and maintenance for each	●					
53.	Ability to at least restrict access to system by user identification and passwords	●					
54.	Ability to retain passwords already used by a user and prevent their re-use	●					
55.	Ability to run ad hoc reports of audit trail history by transaction type, transaction date, input date or any of the fields related to the audit trail records	●					
56.	Ability to send a transaction to a reviewer for audit	●					
57.	Ability to support a business-process security structure, a transaction based security structure and a window level security structure, possibly at the retirement fund level	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
58.	Ability to support personal identification numbers (PINs) for security purposes	●					
59.	Ability to track all transactions posted to a closed month, including the user-id making the change and the date of the transaction	●					
60.	Ability to track sign-on access from another computer by user-id	●					
61.	Ability to track all updates that are made to data validation and edit checks	●					
62.	Ability to provide at least the following controls: data access, menu access, screen access, screen function access, transaction access, transaction approval access, workstation location access, workstation time restriction	●					
63.	Ability for the system to adhere to the Health Insurance Portability and Accountability Act (HIPAA)	●					
64.	Ability for internal auditors to audit account transactions	●					
65.	Ability to display, query and print the history of all changes	●					
66.	Ability to restrict the ability to "unlock" a locked member account to the user who established the lock or the system administrator.	●					
67.	Ability to automatically apply transactions that could not be applied to a locked account once the account is unlocked.	●					
68.	Ability to see that a member account is "locked" and why at the time that it is accessed	●					
69.	Ability to provide customers as well as internal users with password and user id recovery	●					
70.	Ability to require authentication and support multiple possible means of authentication such as PIN, password, finger-print and/or retinal-scan capability	●					
71.	Ability to keep historical records of user access rights	●					
72.	Ability to allow staff the use of same user ID throughout their WVCPRB career	●					
73.	Ability to perform timely recertification reports of internal and external users, and roles		●				
	OUTPUT						
74.	Ability, at the time an audit function is invoked for a particular account, to display on the screen, the date range(s) for which audits have already been conducted and by whom – i.e., "Account has been audited for mm/dd/yyyy through mm/dd/yyyy." Multiple audit periods should be so accommodated.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
75.	Ability to create and schedule audit/security reports based on but not limited to user role	●					
76.	Ability to perform ad hoc queries against audit logs and data	●					
	CONTROL						
77.	Ability to encrypt any information WVCPRB deems appropriate (including system security and role-related information)	●					
78.	Ability to encrypt all system security and role related information	●					
79.	Ability to establish and set up Web-based application screens as either, the ability to browse back to a screen after going to a new screen, or as the ability to cause the screen to time-out / life span of zero screen, i.e., prevent navigating back to a screen)	●					
80.	Ability to prohibit staff members from updating records with their own information (by Social Security number, name, etc.). Such updates should be permitted by any customers entering through an authorizing interface	●					
81.	Ability to provide adequate audit trails of system updates, including appropriate change controls requiring management approval of any software modifications or changes prior to implementation	●					
82.	Ability to ensure that all transactions (including view-only access) have a user ID and transaction date associated with them	●					
83.	Ability to provide applicable levels of internal controls and appropriate segregation of duties, including for example, the ability to approve any activity's results as well as any correspondence to be sent or printed	●					
84.	Ability to unset an audited (verified) account flag if data within the audited period changes.	●					
85.	Ability to ensure there are sufficient management controls in place to ensure that a user cannot delete a plan, even if empty of members. (This is because even empty plans have historical data associated with them; their deletion makes impossible the reconstruction of historical data from when the now-empty plan contained active members.) However, the empty plan should have a flag that prohibits the assignment of new members unless the plan is reactivated	●					
86.	Ability to modify or roll back transactions in the LOB should be role-based and an audit log maintained of any such activity	●					
87.	Ability to provide role-based access to data in order to run ad hoc queries against that data	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
88.	Ability to monitor and report on all internal and external users' (including developers' and system administrators') access rights individually or en masse	●					

2.4.5.3   General

The following section presents requirements that span functional areas. In particular, the vendor is reminded that WVCPRB desires the proposed solution to allow for overrides/corrections/reversals of system-calculated (or otherwise provided) results.

Table 28: Functional Requirements for General

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	INPUT						
1.	Ability to record receipt of all process-specific forms received throughout any process (for example, in the death process, death certificate, next-of-kin affidavit, annuity election form, tax forms, rollover form, etc.) and ability to capture pertinent information from each document/form and to automatically generate correspondence to the sender acknowledging receipt	●		●			
2.	Ability to capture and accept digital signatures that conform to federal and state statutes	●		●			
3.	Ability to capture manual notes at a variety of levels within the database structure including (but not limited to) member and workflow work items, and to provide adequate security as defined by WVCPRB.	●					
4.	Ability to support the import of data from other external Open Database Connectivity (ODBC) compliant sources		●				
5.	Ability to add, update, delete international as well as domestic addresses	●		●			
6.	Ability to capture, maintain, inquire, and print the following address types for a member: multiple e-mail addresses, multiple mailing addresses, bank address, electronic transfer address (routing	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	number), power-of-attorney address, physician address, hospital address, attorney address, POA address, guardian address, temporary addresses, beneficiary address, and alternate contact address, etc. that are date sensitive; dates for each address can be participant defined and updated; require entry of at least one postal address						
7.	Ability to perform and communicate "real-time" validations and the return of entry errors on ALL user and external customer interfaces and the revalidation of "real-time" corrections	●		●			
8.	Ability to initiate, based on an incoming image, the account creation or enrollment process for any entity (member, beneficiary, employer, other, etc.) that does not already exist. Also, ensure all images are automatically indexed/reindexed to the new entity's ID.		●	●			
9.	Ability to validate addresses in real time via a web-service		●	●			
10.	Ability to capture and maintain valid data values by field and specify date effective and date no longer effective	●		●			
11.	Ability to validate input using only effective field values	●					
12.	Ability to automatically acknowledge receipt (but not necessarily acceptance/approval) of a member (or other party) submitted document upon scanning		●	●			
13.	Ability to automatically acknowledge acceptance (form is correct, information complete, etc.) of a received document in process (if appropriate) in the context of a particular business process		●	●			
14.	Ability to support adequate field lengths in all database fields	●		●			
	PROCESS						
15.	Ability to provide remote / Web access to the line-of-business system for any out-of-office work including counseling sessions, seminars, workshops, etc.	●		●			
16.	Ability for the reviewer to assign a reason for the return of the account/folder (i.e., error, inquiry, or additional information required)	●					
17.	Ability to automatically identify those accounts/processes where no response was received from a follow-up correspondence after a WVCPRB defined time period and provide appropriate follow-up / notification	●		●			
18.	Ability to route work for audit / review prior to release for action; if "errors" are found, route the account/folder to the original processor and (after correction) from the original processor to the original reviewer	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
19.	Ability to track the distribution, turn-around, and processing of each document used in any processing	●					
20.	Ability to add benefit adjustment reason type and code	●					
21.	Ability to accept and process submitted requests received through a Web utility	●		●			
22.	Ability to accommodate parameters that vary among plans, employers, etc.	●					
23.	Ability to add a new plan to the system, to modify an existing plan (Including versioning of the plan), and to freeze an existing plan so that no one can become a member	●					
24.	Ability to allow for varying data structures (i.e., not forcing a single "name" structure or "address" structure) based upon the business need for that information and the type of correspondence to be generated	●					
25.	Ability to allow members / affiliates to access their account data via the Web	●		●			
26.	Ability to automatically notify appropriate users that the specified "wait" period has been exceeded for a response from a user, employer, etc.		●				
27.	Ability to calculate the member's "age" within the system for various purposes;	●					
28.	Ability to close existing plans to new members, to later reopen them, and to capture and apply the dates of the open and closed periods	●					
29.	Ability to comply with all applicable external rules and regulations (e.g., WVCPRB, WVOT, HIPAA, IRS, US Postal Service, etc.) that are defined for a period of 24 months after contract signing	●					
30.	Ability to comply with all applicable federal and state tax laws and statutes	●					
31.	Ability to control result of locking an account – e.g., allow the addition of images to the folder of a member whose account is locked while not allowing data changes or deletion of images; alternatively, prohibit addition / deletion of images and data changes to a locked account		●	●			
32.	Ability to create queries using standard English language requests.	●		●			
33.	Ability to enter data into the system and set its status to "pending" (also keep its status of "pending" in workflow) for those cases where a document comes in before the document that should have arrived first to initiate the process	●					
34.	Ability to have and maintain (add, edit and delete) table driven parameter values with date sensitive and versioning capability along	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	with the ability to maintain pre-defined value lists such as cities, employer codes, table-values (i.e. tax tables, service credit factors, interest rates, etc.) that are more complex than simple list-values, etc.; the system should be table driven to the greatest extent possible; therefore, it is preferred that tables which contain lists of valid values be maintained by a single common interface						
35.	Ability to maintain holiday, annuity payroll, closing calendars for processes	●					
36.	Ability to maintain those table-values (i.e. tax tables, service credit factors, interest rates, etc.) that are more complex than simple list-values via a standard user-interface	●					
37.	Ability to match entered data with database values without regard to case – i.e., a system that is NOT case-sensitive	●		●			
38.	Ability to navigate through screens based on standard Windows and/or Browser based navigation	●		●			
39.	Ability to navigate through screens using Hot Keys and retain the key identifier (e.g., Social Security number) throughout	●		●			
40.	Ability to pre-populate city and state by first entering the ZIP code and allow for overriding of the city and state, without consequently altering the ZIP code, when necessary	●					
41.	Ability to prevent the entry of duplicate transactions, when appropriate	●					
42.	Ability to process business transactions and display information in a concise and consolidated manner so as to avoid end-users from having to access numerous screens in order to accomplish their business task	●					
43.	Ability to provide a "mass" data entry capability that which permits users to execute a large number of "like" transactions in a "short-cut" fashion, i.e., mass change (e.g., COLA, interest) based on query	●					
44.	Ability to provide a common error handling mechanism, including error correction, recovery processing, and related quality control procedures and processes		●				
45.	Ability to perform queries without negatively impacting production environment performance	●					
46.	Ability to provide data quality determination and analysis	●					
47.	Ability to query and print the history of all changes, showing before and after values, as well as when the change was made and by whom	●					
48.	Ability to reopen closed plans	●					
49.	Ability to restore archived data or specific members or groups of	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	members, and/or based on distinct time periods						
50.	Ability to size and adjust all screens and have their settings saved at the workstation level so end-users can display/position screens based on business needs		●				
51.	Ability to store, retrieve, and print all parameters used, calculations performed, and corresponding results for all calculations	●					
52.	Ability to subtotal member history by different time frames (e.g., month, quarter, years, rolling time frames, etc.)	●		●			
53.	Ability to support foreign addresses	●		●			
54.	Ability to track, archive, and manage phone calls as electronic correspondence		●				
55.	Ability to support name in at least five distinct components – title, first, middle, last and suffix	●		●			
56.	Ability to support various error level severities (warning, fatal, etc.)	●					
57.	Ability to support various types of transaction and status codes throughout the system	●					
58.	Ability to tie the data to the system's ad hoc query and reporting functions	●					
59.	Ability to use soundexing, partial field values and/or wild cards for lookups in key fields	●					
60.	Ability to maintain a historical list of employer location code conversion / consolidation	●					
61.	Ability to accommodate (store and apply) future changes (e.g., name change, address change, tax withholdings, direct deposit information, etc.), all with effective dates, as well as search on historic values.	●					
62.	Ability to edit/validate incoming data formats from employer and other WVCPRB affiliates (e.g. numeric, field size, physical file attributes, etc.)	●					
63.	Ability to identify and track the status of all people/entities in the database (vested, active, inactive, inactive vested, retired, beneficiary, surviving beneficiary, etc.)	●					
64.	Ability to search on Social Security number, unique ID, employee registration number, or name, etc. with the additional capability to use wild card characters	●					
65.	Ability to sort addresses for mass mailings by various values including last name, first name, member ID, elements of address, retirement system, employer, etc.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
66.	Ability to do advanced searches using any field within the database such as date of birth, retirement date, name, city, street address, and with combinations of these fields	●					
67.	Ability to systematically change Social Security offset rate table and wage base table set by the Federal Social Security Administration using an on-line program (this is necessary to calculate Joint Coverage members' contributions after they reach the Social Security maximum salary)	●					
68.	Ability to, upon adding a new plan, link it to every module and database that requires information for record keeping, general accounting, and correspondence tracking.	●					
69.	Ability to transfer members between plans both on an individual basis (i.e., one member at a time) and en masse (i.e., the user may specify that all or some existing members of a given plan, or all or some employees working for a particular employer, are to be transferred to another existing plan)	●					
70.	Ability to enable transfers of service credit or money for an individual or an employer between two plans or retirement systems, etc.	●					
71.	Ability to retrieve (using a single query) all archived correspondence (and all imaged records if imaging has been integrated) that meet a single query. That is, the user should not have to make one query to retrieve archived member correspondence and a second to retrieve archived images	●					
72.	Ability to associate a member with the possibility of having multiple plans available based on different criteria	●					
73.	Ability to provide business area-specific, generally accessible calendaring capability, managing resources, availability, etc., and generating appropriate triggers/reminders	●					
74.	Ability to support searches that are and are not case-sensitive	●					
75.	Ability to maintain any query capability given updates to the LOB schema definitions	●					
76.	Ability to provide query capability without negatively impacting production environment performance	●					
77.	Ability to use one interface for all ad hoc query and reporting functions thus minimizing training and maintenance costs	●					
78.	Ability to include the same data edits, validations, and error handling for data entered through the "Mass update" facility as if the transactions were entered one at a time.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	OUTPUT						
79.	Ability to "age" death benefit accounts for the purpose of automatically generating follow-up correspondence, i.e., a "simple" cover correspondence explaining that a prior correspondence was sent (mm/dd/yyyy) and that WVCPRB is still waiting for a response with a copy of the original correspondence attached		●	●			
80.	Ability to generate an additional information correspondence (automatically where possible) indicating the need for further information needed to process a payment, a benefit, an application, etc.; include appropriate forms to be sent with the correspondence		●	●			
81.	Ability to generate various prefilled (e.g., member, survivor annuitant, and/or beneficiary information) documents	●		●			
82.	Ability to automatically generate and send follow-up correspondence regarding non-receipt of information a configurable number of days after the form or request was sent (include copy of the original form) and the due date		●	●			
83.	Ability to generate acknowledgement of receipt of any of several applications along with any necessary follow-up correspondence to member		●	●			
84.	Ability to display basic member information on all applicable application screens and have the information displayed in various text cases and styles as required	●		●			
85.	Ability to display monetary amounts in whole dollars or dollars and cents-and the flexibility to perform rounding and reduce the amount if desired	●		●			
86.	Ability to provide online, context-sensitive error and help messages/screens	●		●			
87.	Ability to support screen prints for all windows	●		●			
88.	Ability to reprint/resend any correspondence on an as needed individual basis in any available format (e.g., paper, email, fax)	●		●			
89.	Ability to provide context specific "help text" at the screen element, field, or control level of the application in the form of a "tip," as well as text that offers assistance to the user in answering "What do I do here?" Text should be accessible by hovering over or right-clicking on the element (must be Americans with Disabilities Act [ADA] - compliant).		●	●			
90.	Ability to navigate from field, element, or control level help with a single click to the broader, screen or process level help.		●	●			
91.	Ability to support on-line process help tutorials and the provision		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	thereof						
92.	Ability to provide tools and methods for maintaining version control of on-line help.		●	●			
93.	Ability to support WVCPRB updates, additions, and deletions to all forms of on-line help, including the context-sensitive form and the on-line tutorials. Provide the capability for WVCPRB to augment the actual text or video with links to the relevant rules and policies in relationship to the context – and to change or update those links as necessary.	●		●			
94.	The ability to include on-line help and an area for frequently asked questions (FAQ) on employer and member web self-service screens and processes.		●	●			
95.	Ability to store all captured correspondence in immutable format (300 dpi, TIFF 6.0 or locked PDF or ...) so that it cannot later be altered in any way	●		●			
96.	Ability to provide services to those who are disabled	●		●			
	CONTROL						
97.	Ability to enforce edits on addresses based on postal regulations and have those edits prompt users to follow the standard prior to successful update; also if a user enters a zip code, the system should pre-fill the corresponding city and state (and allow overwriting of same without validation against the ZIP code); the system should ensure synchronization so if a user enters (St., Street, street or st.) the system should convert it to a single standardized format	●		●			
98.	Ability to provide end-to-end performance monitoring and control	●					
99.	Ability to capture, maintain, inquire and display multiple transactions (address, employment information, etc.) of the same type with effective dates	●		●			
100.	Ability to support multiple phone numbers that are date and time sensitive; dates and/or times for each number can be participant defined and updated	●		●			
101.	Ability to create wizards that guide the user/customer through the completion of any screen or process	●		●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
102.	Ability to identify and reverse any customer-related operation or set of operations that resulted in a disbursement when the recipient of the disbursement refuses the transaction, e.g., does not cash the check, does not accept the deposit. This includes, for example, the ability to reverse a loan transaction for which WVCPRB did not already receive and process employer-withheld repayments of the loan if the member decides to return the check uncashed. It is desired that the automatic reversal also include the creation of an appropriate audit trail and generation of all appropriate correspondence and notifications to impacted customers	●		●			

2.4.5.4 Reporting

In addition to responding to the specific requirements in the table below, as an Attachment to their technical proposals, vendors should provide samples of reports such as those presented in Figure 1, Figure 2, and Figure 3, on the following pages; the vendor should provide a description of how the data is collected, correlated, manipulated, stored, and presented. In addition, the vendor should provide any other standard reports that would support this functionality.

Note that, in accordance with Section 2.5.2, WVCPRB greatly desires that the vendor provide separate production, ad hoc query, training, and testing environments. The ad hoc reporting capability should be such that reports created under it can be run against any of these database environments with little or no modification to the underlying report. For example, a report initially developed to identify members with characteristics appropriate to a test case should be capable of being run against the training (or production) database without cycling through the report and changing each data source or field name.

A final requirement with respect to the ad hoc reporting capability pertains to testing. WVCPRB desires Ad Hoc reporting be made available to users (and the users trained on its use), prior to the start of User Acceptance Testing on any phase of the implementation.

Figure 1 Sample Production Performance Metrics

PRODUCTION METRICS						
	Current Period	Same Period Last Year	% Change	Year-to-Date	Year-to-Date Last Year	% Change
Completed Activities						
Service Retirements						
Disability Retirements						
Service Credit Purchases						

PRODUCTION METRICS							
Adjustments							
Membership applications							
Refunds							
Member Inquiries							
Reprint Member Annual Statements							
Reprint 1099s							
Totals							
Backlog							
Number of Service Retirements							
Number of Disability Cases							
Number of Service Credit Purchases							
Number of Adjustments							
Number of Membership Applications							
Number of Refunds							
Number of Member Inquiries							
Reprint Member Annual Statements							
Reprint 1099s							
Totals							
Statistics							
New Members							
Death Claims							
Total Membership							
Miscellaneous							
W&C Reports Completed							
W&C Reports in Process							
Other							

Figure 2   Sample Efficiency Performance Metrics

EFFICIENCY METRICS			
	# IN QUEUE AT START OF PERIOD	**# IN QUEUE AT END OF PERIOD**	**# COMPLETED THIS PERIOD**
Service Retirements			
Disability Retirements			
Service Credit Purchases			
Adjustments			
Membership applications			
Refunds			
Member Inquiries			
Reprint Member Annual Statements			
Reprint 1099s			
Totals			

WORKFLOW METRICS			
	TARGET CYCLE TIMES	**ACTUAL CYCLE TIMES**	
		MINIMUM	**MAXIMUM**	**AVERAGE**
Service Retirements				
Disability Retirements				
Service Credit Purchases				
Adjustments				
Membership applications				
Refunds				
Member Inquiries				
Reprint Member Annual Statements				
Reprint 1099s				

USER METRICS			
	TARGET CYCLE TIMES	**ACTUAL CYCLE TIMES**	
		MINIMUM	**MAXIMUM**	**AVERAGE**
Service Retirements				
Disability Retirements				
Service Credit Purchases				
Adjustments				
Membership applications				
Refunds				
Member Inquiries				
Reprint Member Annual Statements				

	Reprint 1099s				

Figure 3 Sample Accuracy Metrics

ACCURACY METRICS				
	# COMPLETED THIS PERIOD	# COMPLETED IN ONE PASS	# REQUIRING REWORK	% CORRECT IN SINGLE PASS
Service Retirements				
Disability Retirements				
Service Credit Purchases				
Adjustments				
Membership applications				
Refunds				
Member Inquiries				
Reprint Member Annual Statements				
Reprint 1099s				

Table 29: Functional Requirements for Reporting

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to run queries seeking various demographic "slices" of the WVCPRB population, e.g., "All members within two years of possible retirement,", "All members who have become members within the past five years.," etc., so they may be issued invitations to seminars	●					
2.	Ability to query system for data and results for a point in time, e.g., as of 12/31/2003 or during Fiscal Year 2006	●					
3.	Ability to provide employers and other authorized third parties with the ability to query against all (and only) the data on their past and current employees that they have supplied		●				
	PROCESS						
4.	Ability to extract accurate actuarial information, especially for those individuals that span multiple plans	●					
5.	Ability for the reporting capabilities to have the same accessibility (hours of operation / access) as the LOB application	●					
6.	Ability for the reporting tool (if applicable) to support unlimited WVCPRB user licensing	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
7.	Ability to access a user-friendly report writer for creating custom reports with graphics, headers, footers, totals, subtotals, sorting, and statistics	●					
8.	Ability for any authorized user to add new reports to the report menu for easy access	●					
9.	Ability to direct printing of reports/forms/correspondence to selected printers with an established default setting	●					
10.	Ability to include watermarks and detailed heading information on all reports, including version/release number, the date of the last modification of the software that generates the report, the name of the program that generates the report, a unique name for the report, and the date of the running of the report	●					
11.	Ability to print customer defined watermarks on various types of outputted correspondence		●				
12.	Ability to print the requesting user's user-id on all reports	●					
13.	Ability to print and queue for printing to existing and future industry standard WVCPRB printers	●					
14.	Ability to provide a development or query "Library" outside of the normal line-of-business application where users can share queries, information, etc.		●				
15.	Ability to provide a graphic, drag-and-drop report design environment		●				
16.	Ability to provide a report generation strategy / tool capable of integrating additional data from any other accessible relational data sources into a single report		●				
17.	Ability to provide various online support features ("wizard", help system, etc.) that take a user step-by-step through a report "building" process	●					
18.	Ability to query on all system data (business relevant, transaction history, log files, etc.) depending on security profiles	●					
19.	Ability to queue reports for printing destination		●				
20.	Ability to save all queries written for future use		●				
21.	Ability to select and block-out (redact) any portion of a record for display/printing and identify areas omitted from displayed/printed copy		●				
22.	Ability to select and display/print specific records from a listing of records matching the search criteria		●				
23.	Ability to support ad-hoc reporting, where custom reports can be created for single use or saved for continued use	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
24.	Ability to support dynamic content that incorporates drill-down, charts and graphs	●					
25.	Ability to support industry standard multi-dimensional Online Analytical Processing (OLAP) data source extraction, transmission, formatting as it relates to reporting		●				
26.	Ability to support viewing/printing by allowing the user to determine the length of the report prior to viewing/printing (e.g., number of pages)		●				
27.	Ability to support report sorting, filtering, and summary report output and save format for future use		●				
28.	Ability to support the creation of reports using relational criteria and logical operators (e.g., less than, greater than, equal to or less than, wild cards, Boolean operators, and combinations of each), including searches against message text and key indexed fields	●					
29.	Ability to support the development of parameter driven reports, where the report variables and format are programmatically controlled and certain values are selected (or required) by the user at the time the report is generated	●					
30.	Ability to support the integration of reports with existing applications using industry accepted programming and scripting languages such as: JavaScript, VBScript, COM, XML		●				
31.	Ability to support the use of various font formatting (font type, font style, font size, etc.)		●				
32.	Ability to support the viewing of reports that result in large volumes of data by: • Providing a warning of the number of records found • Prompting the user to continue/refine/alter the query • Displaying a single page of data at a time • Etc.	●					
33.	Ability to terminate a query or report while in process	●					
34.	Ability to track accounts/folders returned from review due to error, inquiry, or need for additional information for staff performance		●				
35.	Ability to view requested reports on the screen prior to printing report, i.e., print preview	●					
36.	Ability to provide an ad hoc query tool in a fourth generation language (4GL), suitable for use by both end users and analysts and programmers to respond quickly to "one time" requirements		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
37.	Ability to enable the end-user to use data sets (flat files) as input for functions in the ad-hoc query tool including but not limited to match/merge, sorting and reporting, both on "foreign" data sets by themselves and in conjunction with data from the retirement database.		●				
38.	Ability to use the following selection criteria from within the Ad-hoc query and reporting tool: • Most dates • Service records • Employment records • Employer and employee contribution and salary information • Retirement plan • ZIP codes • Personal data including name, SSN or WVCPRB identifier, age, date of birth, length of service, date of first service in each plan, date of entry into each plan, total or date specific creditable service in each plan • Beneficiary information • Court orders (e.g., QDROs, tax levies, garnishments) • Date of retirement in each plan • Periods of retirement and re-employment • All types of financial and monetary data • System date / time stamps for transactions • Membership date • Death date • Group • Payroll number • Status code • Employer • Plan • Retirement option		●				
39.	Ability to support the creation of reports using industry standard SQL		●				
40.	Ability to build sort keys and specifying sort sequences on any data items or fields used for selection criteria in the ad hoc query tool.	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	OUTPUT						
41.	Ability to produce a series of standard reports, on a periodic basis and/or on demand, all of which support "drilling down" to various levels of detail in at least the following areas: • Deaths - Number of deceased active and retiree / beneficiaries during the user selected reporting period • Terminations - Number of members receiving refunds and forfeitures of refunded service during the user specified reporting period • Average Salary - Calculation of the average salary increase for employees continuously employed during the user specified period • Reconciliation of Demographics - Reconciliation of the current membership population by employer with the membership population from the prior period • Retirements - The number of retirements by type, that occurred during the user selected reporting period • Employees Eligible for Retirement - Number of active members who are eligible for retirement as of the report date • Ages at Retirement - Distribution of retirees according to age classifications at retirement • New Members - Number of new members added during the user selected reporting period • Retirement Benefit Computations - Number of estimates and/or final computations performed during the user selected reporting period • Disability Retirements - Number and type of disability retirements during the user selected reporting period • Purchase of Service - Number of purchases and their costs by type during the user selected reporting period	●					
42.	Ability to generate, at least 150 defined and to-be defined reports, 120 defined and to-be defined forms, and 150 defined and to-be defined correspondence (for purposes of calculation, one report, form, WVCPRB considers correspondence that can be used for various plans as one report, form, correspondence)	●					
43.	Ability to produce a series of standard reports (as indicated in Appendix E, Exhibit 10 Standard Reports), on a periodic basis and/or on demand, all of which support "drilling down" to various levels of detail in the following areas	●					
44.	Ability to export report information to off-the-shelf spreadsheet programs (e.g., Excel, Lotus, as appropriate) or in an ASCII or HTML format	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
45.	Ability to list, generate, track and report against various types of errors made by various entities that interact with WVCPRB (employers, members, staff, etc.)		●				
46.	Ability to provide a report of counts of active members, inactive members/vestees, and annuitants (including survivor annuitants) for any given date		●				
47.	Ability to send output from a report to: printer, file, screen, portal, spreadsheet, word document and e-mail	●					
48.	Ability to save the results of a query for further (later) use	●					
49.	Ability to generate correspondence to members as a result of their appearance on a report		●				
	CONTROL						
50.	Ability to provide a facility to prevent or limit queries which may cause significant system degradation or unreasonable volumes of output.	●					
51.	Ability to restrict the amount of space or number of reports each user is allowed to use for saving queries, query results, etc.		●				
52.	Ability to limit use of the ad hoc and standard query capability to authorized users		●				
53.	Ability to limit access to stored query results		●				
54.	Ability to limit query access to data to authorized users	●					
	METRICS						
55.	Ability to provide up to 3 performance reports for each functional area, showing in both tabular and chart form the following information: Elsewhere performance reports have been identified for several functional areas. • Current Month • Year to date • Last year - this month • Last year - year to date		●				
56.	Ability to track and report on staff performance (e.g., quantity and quality) individually and as a group on a daily, weekly, monthly, fiscal year, and calendar year basis		●				
57.	Ability to store the data to perform performance metric reporting (for appropriate periods of time, e.g., year to date, period to date, comparison to previous periods, comparison to previous year to date) and the ability for a user administrator to purge data (such as a query result, NOT LOB data) and the ability to restore such purged data	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
58.	Ability to present Performance Metric data in graphical form (showing trends) allowing management to see trends/issues and respond by taking proactive steps to manage agency workload		●				
59.	Ability to store data (such as those shown in Figures 3 and 4 in this Section) used for Performance Metrics for subsequent manipulation and reporting by a knowledgeable user by means of an ad hoc query or report generator.		●				
60.	Ability to produce at least (but not limited to) the following Performance Metrics: • Production metrics – backlog • Efficiency metrics – work queues • Workflow metrics – actual cycle times vs. target cycle times • User metrics – actual cycle times vs. target cycle times • Accuracy Metrics – providing a comparison of the quantity of work done correctly the first time vs. that which has to be re-worked for some reason.		●				
61.	Ability to provide performance reports information for the entire organization, at the division level, and at the individual user level.		●				

2.4.5.5 Statistical Reporting

It is desired that the new system include a full, robust statistical analysis and reporting system which is capable of assisting with trend analysis. Since WVCPRB is requiring fully redundant environments (see Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments), the vendor may consider how these environment(s) may be used to support statistical reporting requirements.

Below is a list of basic information that WVCPRB desires to be available and maintained in the new system. It is anticipated that each item on the list is to be available in a standard report to be produced by the new system. If the vendor has knowledge of additional reports that have been valued at other retirement systems, the vendor should suggest them in its response to this section. WVCPRB desires that the contents of the required statistical reports also be available in flat-file (comma-delimited and/or text) format for import into MS Excel or for use by WVCPRB's actuary. For all such report and extract capabilities, the reporting level (all WVCPRB employers combined, or a particular reporting entity or plan, or all of them) and the time periods of interest should be user-defined.

● **Members Eligible to Retire –** Report the number of actively contributing members eligible to retire as of a certain date who meet various age and service credit requirements broken down by plan and, if necessary, by reporting unit

● **Retired Reemployed Members** – Statistical data regarding members having both active and retired accounts (e.g., they have retired, returned to work and are contributing to a new account) broken down by plan. Common statistics requested include count, average service credit at retirement, final

average salary at retirement, average benefits on their retired account, and whether or not they are utilizing retiree healthcare benefits. Users should also be able to query the last fiscal year salary and check to see if the member returned to the same agency

- **Retirement Statistics** – Compile by plan and sort and compile by fiscal or calendar year: number of retirees, average benefit payment, average service credit at retirement, composition of service credit (e.g., earned, sick leave credit), final average salary at retirement, average age at retirement, and average system payment towards health insurance. This type of data is useful in preparing presentations and is often requested by legislators and staffers for understanding the effect of specific bills such as an ad hoc retiree COLA

- **Active Member Statistics** – Compile by plan: number of members actively contributing to the system, average service credit, average amount of service credit purchased by type, and average age

- **Deaths** – Maintain records of deceased active members and retirees/beneficiaries and produce such a report. Basic information should include the age at death and date of death. This information is intended to assist in determining if the mortality tables currently being used are realistic

- **Terminations** – Maintain records of members that receive refunds of their contributions, the amount, as well as applicable dates. It should also produce such a report, including forfeited or refunded service credit

- **Average pay** – Calculate and report the average pay increase for members continuously employed. It should be able to sort this information by employer. It should compare average pay increases against past years' increases

- **Reconciliation of Demographics** – Reconcile the current membership population by employer. For example, the system should be able to take the prior fiscal year number of members and reconcile it to the current number of members. The reconciliation should show which members terminated, retired, died, or became inactive. This reconciliation should be detailed (i.e., include name and SSN / WVCPRB identifier) so a report can be produced and forwarded to employing units for verification

- **Retirements** – Maintain records of the number and type of retirements that occur in a fiscal year or ad hoc period by employer unit, including date the individual was added to retirement payroll and date of retirement – and produce such reports. Also, the system should track when the member was paid his/her estimated benefit and when the benefit was finalized (time elapsed)

- **Number of employees eligible for retirement** – This information should be available for reporting on a standard and an ad hoc basis

- **Ages at Retirement** – Record the age at which a member retires as well as the member's employer unit at the time of retirement and produce reports of this information

- **New Members** – Maintain and report the count of new members enrolled for any designated period by employing entity

- **Retirement Benefit Computations (Finals and Estimates)** – Report the number of finals and estimates which were completed for a user-specified period

- **Disability Retirements** – Report the count of applications filed for the various types of disability retirement and the period when the application was filed.

In support of the statistical reporting requirements, WVCPRB desires the vendor to propose to provide the following:

- The appropriate user-friendly tools for executing ad hoc queries and reports against both the production and development, test, training, QA, and query system databases described in Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments

- Development of suitable documentation (both technical and end user documentation) providing a Data Model View / Understanding of the database for end-users

- Training of both technical staff (3 persons) and end-users (6 persons) in how to use the documentation and query tools to locate, extract, manipulate, and report the desired data. Although it is acceptable for such training to be provided by a third party, WVCPRB desires that the training program not be generic in nature

Table 30: Functional Requirements for Statistical Reporting

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	OUTPUT						
1.	Ability to use the appropriate user-friendly tools for executing ad hoc queries and reports against both the production and development, test, training, QA, and query system databases described in Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments	●					
2.	Ability to report the number of actively contributing members eligible to retire as of a certain date who meet various age and service credit requirements broken down by plan and, if necessary, by reporting unit	●					
3.	Ability to report statistical data regarding members having both active and retired accounts (e.g., they have retired, returned to work and are contributing to a new account) broken down by plan. Common statistics requested include count, average service credit at retirement, final average salary at retirement, average benefits on their retired account, and whether or not they are utilizing retiree healthcare benefits. Users should also be able to query the last fiscal year salary and check to see if the member returned to the same agency	●					
4.	Ability to compile by plan and sort and compile by fiscal or calendar year: number of retirees, average benefit payment, average service credit at retirement, composition of service credit (e.g., earned, sick leave credit), final average salary at retirement, average age at retirement, and average system payment towards health insurance. This type of data is useful in preparing presentations and is often requested by legislators and staffers for understanding the effect of specific bills such as an ad hoc retiree COLA	●					
5.	Ability to compile by plan: number of members actively contributing to the system, average service credit, average amount of service credit purchased by type, and average age	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
6.	Ability to maintain records of deceased active members and retirees/beneficiaries and produce such a report. It should record the age at death and date of death at the least. This information is intended to assist in determining if the mortality tables currently being used are realistic	●					
7.	Ability to maintain records of members that receive refunds of their contributions, the amount, as well as applicable dates. It should also produce such a report, including forfeited or refunded service credit	●					
8.	Ability to calculate and report the average pay increase for members continuously employed. It should be able to sort this information by employer. It should compare average pay increases against past years' increases	●					
9.	Ability to reconcile the current membership population by employer. For example, the system should be able to take the prior fiscal year number of members and reconcile it to the current number of members. The reconciliation should show which members terminated, retired, died, or became inactive. This reconciliation should be detailed (i.e., include name and SSN / WVCPRB identifier) so a report can be produced and forwarded to employing units for verification	●					
10.	Ability to maintain records of the number and type of retirements that occur in a fiscal year or ad hoc period by employer unit, including date the individual was added to retirement annuity payroll and date of retirement – and produce such reports	●					
11.	Ability to report the number of employees eligible for retirement on a standard and an ad hoc basis	●					
12.	Ability to record the age at which a member retires as well as the member's employer unit at the time of retirement and produce reports of this information	●					
13.	Ability to maintain and report the count of new members enrolled for any designated period by employing entity	●					
14.	Ability to report the number of finals and estimates which were completed for a user-specified period	●					
15.	Ability to report the count of applications filed for the various types of disability retirement and the period when the application was filed	●					

2.4.6 *Desired "To Be" Technical Functionality – Introduction*

The matrices in the following subsections list the many detailed capabilities required of technical enabling functions integrated into the proposed retirement system solution. The specific areas covered by this set of requirements include the areas described below:

1. **Business Process Management/Workflow** – These requirements are for electronic workflow application tools including routing rules, workflow and routing management reporting, automated workflow steps and actions as well as requirements for integration with imaging and the LOB.

2. **Contact Management** – WVCPRB considers the objective of these requirements to provide users with easy (single query) access to all pertinent information about a customer (e.g., member, retiree, beneficiary, employer) when a contact occurs, as well as the ability to update the contact information to reflect the most recent transaction or information provided to the customer via the system (e.g., change in beneficiary, retirement estimate) or as a result of a communication between WVCPRB and the customer – typically by phone, email, or fax (and, far less frequently, in person). Such requirements would also include the ability to see the history of previous contacts and communications

3. **Enterprise Content Management (ECM)** – WVCPRB has chosen to collect under the single ECM heading all of the technologies which are to be used in the management of electronic content (including some Correspondence Management) that are not found in the traditional definition of ECM:

   a. **Correspondence Management** – Requirements associated with the automatic generation, capture, and management of all correspondence that results from interaction with the new solution

   b. **Imaging** – Requirements for an imaging system including requirements for scanning, image capture, indexing (both manual and barcode), system standards, and induction. This also includes the requirements for viewing images, annotating and manipulating. The technical standards for an imaging system (file standards, data storage, and retrieval) are included

   c. **Paper and Electronic Forms (eForms) and the Web** – Requirements covering the use (and the user interface in particular) of the internet to provide interaction between WVCPRB customers and WVCPRB

   d. **Print on Demand** – Requirements for the on-demand (as opposed to pre-printing, storage and distribution of multiple copies) of brochures, handbooks, etc., typically customized to the specific needs of the person requesting the printing, e.g., pre-population of member name and SSN fields if a member is making a print request, but not if an employer is making it.

2.4.6.1 Business Process Management / Workflow

WVCPRB believes that electronic workflow is a powerful enabling tool to assist in the automation and management of our work processes. However, WVCPRB also feels that workflow is the kind of tool that works most effectively when subordinate to the actual processing of work. That is, WVCPRB desires that the tool to deliver work to a staff member for processing, possibly provide guidance in what that processing should be, and route the completed work correctly – all without intruding in the actual processing. (For example, requiring that the user navigate away from the screen containing work in progress in order to indicate work status or obtain information on what action to take subsequently, only to subsequently navigate back to the screen containing the work in progress is **absolutely unacceptable**.) In its proposal, the vendor should describe how workflow management software manages automated document processing, as well as other content, and <u>integrates</u> it throughout the solution.

Although WVCPRB requires various processes to be workflow-enabled, the ability to access these processes / functionalities outside of the workflow system should also exist. WVCPRB desires users to have access to this information and these processes not only when they are "within" the workflow sub-system, but also on a non-workflow (i.e., ad hoc) basis. The system should be

sufficiently flexible to ensure that users can perform their work regardless of the technical state of the workflow sub-system, i.e., such work should be able to be initiated either via workflow processes or via a non-workflow process – on an ad hoc basis. For example, a Call Center agent should be able to easily execute a change of member or retiree address without first initiating a change of address work item and sending that work item to themselves in order to execute the change. However, WVCPRB desires that all audit trail and roll-back capabilities track such manually initiated work as well as work accomplished "within" the workflow system.

The vendor's proposed workflow management capabilities should accommodate the requirements outlined in the table below:

Table 31: Functional Requirements for BPM/Workflow

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability for the system to trigger various workflow processes based upon the initial value or a change in value of a field in the associated member account	●					
2.	Ability to automatically assign and prioritize a work item based on business processing logic such that the processing of that work item takes precedence over other work items within a work process; the default priority of all work items are to be the same and work items of the same priority are to be processed on a first-in / first-out basis	●					
3.	Ability to utilize electronic forms (eForms) to initiate workflow. The same sequencing is to be used across scanned, imported, or electronically initiated workflows to allow either FIFO or FILO processing of work items.	●		●			
4.	The ability to create work-items both manually (e.g., as the result of a phone call with the member) and automatically (e.g., through receipt of a specific scanned document type – in the bar code).	●					
5.	Ability for a user to sort and select new work by multiple criteria such as first-in, first out, alphabetically, or priority of work item		●				
6.	Ability for an authorized user to manually override the default system assigned priority as well as the priority of an individual work item within a business process without the involvement of IT	●					
7.	The ability to use information such as work item attributes, previous "case" history, individual processor skills, etc., to make work assignments of newly received work		●				
8.	Ability, upon receipt of any incoming document, electronic form, fax, phone call, or other event that might trigger the need for access to the contents of a member folder, to suspend the processing until the paper-based member folder has been scanned – if that scanning has not yet occurred – and then initiate the necessary processing		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	Process						
9.	Ability to track all member and employer related events as defined by WVCPRB business areas	●					
10.	Ability to track the receipt of triggering documents and the status of the business process through completion for all business processes	●					
11.	Ability to "route back" to the original worker a work item that is sent back by a reviewer so that the original worker can make the needed correction/changes; upon completion the item should "route forward" to the same reviewer.	●					
12.	Ability to assign a work item to either a work queue or to a specific user	●					
13.	Ability for the system to identify those cases where the processing of a work item has been suspended for a defined period of time and create and/or forward the work item to the appropriate work process/unit for processing	●					
14.	Ability for the system to show the status of all work objects in the system by workflow processes and any sub-processes (what activity / step it is in, who is working on it, when was it completed, etc.)	●					
15.	Ability to adjust the movement of work items throughout the workflow to reflect organizational changes, changing process responsibilities, effective dates, etc.	●					
16.	Ability to age suspended work items and automatically route work items depending upon aging criteria	●					
17.	Ability to allow for reassignment of a work item that has been assigned/retrieved/reserved by an individual in cases of sickness, injury, employee terminations, date range, or absence and retain the reason(s) for such reassignment including the identification of the individuals from and to involved in the reassignment	●					
18.	Ability to attach and save notes, a standardized workflow review form, and/or a standalone file (e.g. Word document, Excel spreadsheet, Text file, Voice file, etc.) to a work item and make the attachment visible to authorized users	●					
19.	Ability to create/read/update/delete users assigned to work queues without interrupting the workflow processing	●					
20.	Ability to have defined workflow processes for all of those processes WVCPRB elects to workflow-enable	●					
21.	Ability to identify/indicate due dates/completion dates and assign them to a particular work item and/or work step within a workflow process. Exceeding the due date/completion date would cause the associated work item to follow a user defined "exception route"		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
22.	Ability to identify/notify/restrict (selectively) all parties when there are multiple work processes activated	●					
23.	Ability to interface the existing imaging system to the new Line-of-Business / Workflow system so that indexed documents, cross-referenced to document types within the new system, trigger work requests within the appropriate workflow(s) in the new system and update the new system's document tracking log as necessary	●					
24.	Ability to merge a work item created as the result of an incoming document to an already existing work item	●					
25.	Ability to perform version control of work flows, and the migration of work flow folders from one version to another, including documentation of changes made to the workflow processes.	●					
26.	Ability to recognize if an account/folder needs special processing in another work area and allow the manual, "on-the-fly" definition of an alternative (ad hoc) routing of the work item		●				
27.	Ability to recognize the Account Status (Active, Retired, Inactive, etc.) in a member's database record and based upon the action or request of the member, generate and forward multiple work items for simultaneous processing by the appropriate work areas	●					
28.	Ability to record forms and documents received and correspondence sent and notify other workflows that are in-process	●					
29.	Ability to support a checklist of documents which are required to process a work item within a particular work step / work process. The checklist should be updated, without manual intervention, as the notification of the documents is sent from the imaging system or as the result of a WVCPRB user screen entry. (This is particularly useful when managing a suspended work item that awaits information from several sources.)		●				
30.	Ability to support a document rendezvous capability such that a work process suspended while awaiting the receipt of additional information can be automatically resumed upon the receipt of that information (and recognition that the information may arrive as a paper document, a fax, or even a phone call)	●					
31.	Ability to support a time-based alarm/reminder capability for follow-up tracking of functions within a workflow (e.g., non-receipt of the bank information within a definable number of business days) both in automatically generated correspondence to members who have not responded to requests for additional information and ticklers to staff who may need to provide personal follow-up on incomplete tasks	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
32.	Ability to support work process suspension capability such that, for example, the processing of a request for direct deposit can be suspended while awaiting the receipt of bank confirmation of the account number and routing information	●					
33.	Ability to suspend the processing of a work item because WVCPRB is awaiting information from an external entity (member, employer, 3rd party, etc.) or from an internal entity (users, audit, reviewer, etc.) and resume, without requiring manual intervention, the processing of that work item once the information has been received	●					
34.	Ability to utilize a Delegation of Authority feature that fully supplies the user environment (with security) of one member of staff to another for completion of work items owned, and maintenance of that member of staff's work items for planned and unplanned absences from work.		●				
35.	Ability to, within any work step / work process, modify the values of work item attributes associated with the work item		●				
36.	Ability to display unique identifying member information on each screen when focused on a single member	●					
37.	Ability to collaborate or share information to another process or individual outside of the normal workflow process, with visibility as to who collaborated or shared the process.		●				
38.	Ability to have visibility / disclosure of other work being performed, and knowledge / notification of any changes occurring to a member account.	●					
39.	Ability to assign, change values of, and query against the value of any work item attribute	●					
40.	Ability for the system to handle conditional routing of a work item based on defined business purposes or state of work item attribute	●					
41.	Ability to simultaneously create and test multiple additional workflow routes without impact to other users doing the same thing.		●				
42.	Ability to release to production new workflow routes without significant impact to the production system.	●					
43.	Ability to release to production tested modifications to workflow routes without significant impact to the production system. It is essential that existing work objects continue to be processed, not lost for example, because of the deletion of a work step in the modified route.	●					
44.	Ability to initiate multiple work objects upon the receipt of a single document (e.g., initiate a change of address process as well as a service retirement upon receipt of a service retirement form that indicates that it contains a new address)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
45.	Ability to "leave" a work process in order to access another process without exiting/stopping the first process (i.e., multi-tasking)	●					
46.	The ability to fully automate rote tasks such as the acknowledgement of receipt of information or other member communication. In this model, the first work step after scanning and indexing of many documents received from the member might be a robot step which would use automated correspondence generation to generate, print, transmit, and archive an acknowledgement letter	●					
47.	Ability to integrate with the imaging system such that the receipt of a turn-around document (typically a bar-coded request for additional information) can match the received response to a suspended process, restart the process, and reassign it to the staff member who was originally doing the processing	●					
48.	The ability to create multiple (re-usable) levels within a workflow or route. The purpose of this requirement is to ensure consistency of similar processing even when that processing is done as part of different workflow routes		●				
49.	As an expansion of the work process suspension capability and the automatic generation of reminders/ticklers, the workflow system should also work in concert with the LOB to provide date-effective processing. Thus a staff member can enter the data associated with a change and specify that the change is to occur at a specified future effective date – and be assured that the change takes place on the specified date	●					
50.	Ability to do simulation of a process or a change to a process to evaluate the potential effects of the change		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	Output						
51.	Ability to produce the following workflow reports (at least): • All suspended work items • All work items in process • User-oriented work throughout to include information such as work items processed by each user, the average/maximum/minimum time required for processing, etc. • Queue-oriented work throughput to include information such as queue lengths, average/maximum/minimum queue time, and other performance metrics. • All work processed through the system during a user-specified period of time, identifying the work items by type, member id, etc. • Quality related metrics such as number of work items reworked, by user, etc. • All completed work processes (and the metrics and attributes associated therewith)	●					
52.	Ability to query on workload individually by process and/or by all processes (i.e., daily, weekly, monthly, calendar year, fiscal year). Identify how many work items are at each work step	●					
53.	Ability to integrate the workflow system to an industry standard facsimile (fax) system in order to support: • Automated inbound transmittal of received faxes as work items for processing or documents to be matched with work items currently in suspension while awaiting the receipt of those documents • Automated outbound transmittal of correspondence by fax instead of by letter or email	●					
54.	The ability to capture work item-specific information at the completion of a workflow. Such information would include (but not be limited to) all process flow metrics, including times and user names, etc.	●					
55.	Ability to generate both pre-defined and ad hoc reports of all system metrics and to support export of that data, e.g., for graphing	●					
	CONTROL						
56.	Ability for supervisor to monitor and be notified of staff's assigned work and progress	●					
57.	Ability to "turn on" and 'turn off' the audit / review step of various workflow business processes based on WVCPRB defined parameters (e.g. by user, by business process, etc.)		●				
58.	Ability to prevent a work item from being removed from the workflow system without an entry being made in the workflow tracking log	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
59.	Ability to query on work items that have been assigned/retrieved/ reserved by an individual	●					
60.	Ability to report and/or query on how much "lapsed time" a work item spent in every work step of a work process in order to ascertain and report on how long it took to perform various processing on an account (e.g., establish "normal" processing time from start to finish)	●					
61.	Ability to search such that the status (active, suspended awaiting additional information, etc.) of any work-item can be determined through a simple query based on multiple criteria such as member name, date-initiated, member id, etc.	●					
62.	Ability to support measurement capabilities, including but not limited to average/maximum/minimum queue time, queue lengths, performance metrics, and process bottleneck identification. Provide workflow tracking, statistics and process/user throughput reports	●					
63.	The ability to define (graphically) work process maps which, when implemented, automatically "route" work from the mailroom to an individual (or role) and from one individual to another. Such routing may be conditional; for example, the level of approval for signing a refund authorization may vary depending on the size of the refund. Such work process maps should be maintainable by a user administrator level staff member – not requiring advanced IT training and skills	●					
64.	Ability to assign work using a role-based model, thus easily addressing personnel substitutions and absences, as well as individually	●					
65.	Ability for management to see who has selected a work item and returned it to the work queue without further processing	●					
66.	The ability for a trained administrative user (not an IT specialist, but perhaps a 'super-user") to easily add users to the system; create, change, or "tune" workflow processes; and change, modify, or alter maps to rectify bottlenecks and inefficiencies. The vendor should describe any limitations regarding the number of workflow parameters for document types and workstation routing	●					
67.	The capability to control (via a secure method) additions and/or modifications to workflow parameters	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
68.	Ability to integrate with the LOB in a seamless way (create actions by use of pull down menus, icons, and similar or related features) that can best be explained in the following example: When a member passes away, upon receipt of a death notice (by whatever means), a single workflow process is initiated that sends certain turnaround documents to the beneficiary for completion and return. The workflow should contain the appropriate steps to process and complete the entire operation. In addition, the capability should exist for WVCPRB management to monitor the entire process via the workflow management solution	●					
69.	Ability (through integration with the LOB application) to provide a user-friendly application environment that promotes pre-existing concepts already familiar to users, including the concept of file folders, attachments, assignments and the use of colors to show the status of an item at a glance		●				

2.4.6.2   Contact Management

WVCPRB requires a contact management logging and reporting capability, fully integrated with the proposed line-of-business solution. WVCPRB anticipates that vendors may propose an existing, cost-effective integrated contact management log software package (either integrated and part of its solution or a third-party package that is interfaced to the proposed LOB solution), but is open to considering any reasonable proposal for satisfying the requirements indicated below.

We note that one highly desired requirement is that the proposed solution should include a means to easily capture and subsequently reference all customer encounters.

As part of the prescribed functional requirements, the vendor should propose a series of Customer Service Screens (not to exceed five in number) whereby a user can enter the member's Social Security number or WVCPRB identifier number and bring up a customer profile screen filled with all of the key information regarding a plan participant. The specific information to be displayed may depend on participant status (including but not limited to member, retiree, disability recipient, or beneficiary).

One of the five screens to be provided is a customer contact journal, directly accessible upon entry of SSN, WVCPRB identifier, or phone number. WVCPRB desires the journal to provide a historic trail of key participant events and transactions, displayed from most recent to oldest. The journal entries should include but not be limited to the original membership date, estimate request dates, change of beneficiaries, service interruptions, refund dates, service purchase dates, and telephone contacts. The journal entries should provide links to supporting objects – for example, a refund date in the journal should provide a link to a refund record or letter, so the user can readily retrieve and view the amount of the refund. In addition, the journal entries should be categorized and filterable so that one can view, for example, only those entries dealing with loans.

The information in the Customer Service Screens should support the use of "Challenge Questions" so that a staff member taking a call from a purported member or retiree can readily ask – and verify the answer to – a set of questions to which only the member would know the answers. These questions (and answers) may or may not be the same as those used to validate a member's identity when they log onto the web interface with their user ID and PIN.

In summary, these five (5) screens should be "call center" or customer relationship management (CRM) oriented, quick response, densely packed with data, and able to trigger standard customer service workflows quickly as needed. Should the vendor in fact propose an existing CRM package which is tightly integrated with the LOB solution, and should that CRM package provide screens such as those described above, WVCPRB may accept that solution. The goal is meeting the functional requirements described above.

Either in its response to this set of Contact Management requirements or as the subject arises in the requirements associated with correspondence, imaging, and workflow, the vendor should consider (and discourse within its response on) the following items:

- How (procedures) to sort significant correspondence out of the bulk of incoming mail

- Establishing (rules and procedures) relationships among individual pieces of correspondence / requests for information. Illustrative examples include:

  o Letter from a participant requesting information on retirement options and expected benefits

  o Correspondence to/from the participant from/to WVCPRB requesting additional / clarification of information pertaining to the participant's credited service and/or contributions

  o Return of the requested information / clarification from the participant to WVCPRB

  o Correspondence from WVCPRB to the participant setting forth retirement options and expected benefits under each option

  o Letter from the participant to WVCPRB with accompanying application, which selects a particular option.

- Secure archiving of correspondence that should remain available for an extended period of time

- Tracking of follow-up activity and turnaround time associated with correspondence / requests for information

- Reporting of new, open, and closed correspondence items / requests for information, by department, by user-specified date range

- Integration of the correspondence management functions with the other features and functions of the future system, particularly the automated letter generation capability that is part of the mandatory line-of-business (LOB) system.

WVCPRB desires that the vendor conduct interviews and analyses as necessary to identify and accommodate all possible types of problem resolution investigation types

Table 32: Functional Requirements for Contact Management

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture user-entered, free form notes on contacts (email, phone call, counseling session, etc.) with WVCPRB customers (automatically applying user-id, user name, date, time stamp, etc.) and requiring user-selection of a category. Note records are to be limited in length by WVCPRB, able to be sorted and filtered based on various criteria such as date/time, WVCPRB contact, type of contact, disposition, etc., and viewable by any other authorized user. Use of standard (drop-down) codes to minimize need for free-form typing of comments is encouraged.	●					
2.	Ability to update the contact information to reflect the most recent transaction or information provided to the customer via the system (e.g., change in beneficiary, retirement estimate) or as a result of a communication between WVCPRB and the customer – typically by phone, email, portal, or fax (and, far less frequently, in person).	●					
3.	Ability to automatically update the contact database and member records for life events, including but not limited to beneficiary designation, request for retirement benefit estimate, retirement application, disability application, termination of employment, refund requests, service credit purchases, and death of member, retiree, or beneficiary.	●					
	PROCESS						
4.	Ability for users to access history of all information that was historically provided / sent to the member directly from customer service screens	●					
5.	Ability to access the customer account update screen directly from any customer service screen. The account update screen should include key information such as preferred address, email address, phone number, etc.	●					
6.	Ability to sort and/or "filter" user comments so that a user can see all comments, just comments related to a business area, just comments for a business process, just comments for a window of time or subject, scroll through comments chronologically, etc.		●				
7.	Ability to maintain an indicator stating how the member/employer wants correspondence distributed (e.g., e-mail, USPS, fax, relay telephone, Braille, etc.)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
8.	Ability to automatically link all correspondence sent to the customer – including life cycle events such as benefit estimates, Member Annual Statements, COLA adjustments, and the like to the contact management log system and be viewable by the user by clicking the mouse button	●					
9.	Ability to support tracking of all communications (both in- and out-bound) with a customer. Methods of communication include at least portal (eForms), email, faxes letters, phone calls, recorded counseling sessions, etc.	●					
10.	Ability to find and easily make available information on any contact by SSN, WVCPRB identifier, name, date of birth, phone number, or other lookup fields .	●					
11.	Ability to maintain day, week, and month calendars in the System to permit users to schedule future activities, such as a callback to a member who requested information that is typically provided by phone (rather than by a letter or form). Calendar activities should be automatically linked to contacts. Instant access to contacts from the calendar should be supported.		●				
12.	Ability to include in the System standard reports (modifiable by the user) and a user-friendly report writer for creating custom reports with graphics, headers, footers, totals, subtotals, sorting, and statistics.	●					
13.	Ability to provide in the report writing tools a method of adding new reports to a report menu for easy access.	●					
14.	Ability to integrate the Contact Management log capability with the LOB workflow system, and not require duplicate input of data or separate action and/or access modes. Such integration should support not only initiation of work but also reporting on the status of member-related work in order to answer questions such as "What is the status of my earlier request for …?"		●				
15.	Ability to establish customer service screens that facilitate the accurate and timely response to "standard" service requests received by telephone from various WVCPRB constituencies, including, but not limited to: active members, inactive members, retirees, beneficiaries, employers, legislators, banks, board members, vendors, and TPAs.		●				
16.	Ability to provide a series of densely packed Customer Service Screens whereby a user can enter the member's WVCPRB identifier number and bring up a customer profile screen filled with all of the key information regarding a plan participant. The specific information to be displayed may depend on participant status (including but not limited to member, retiree, disability recipient, or beneficiary).	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
17.	Ability to provide a densely packed, single screen that is a customer contact journal for a member to provide a historic trail of key participant events and transactions, displayed from most recent to oldest. The journal entries should include but not be limited to the original membership date, estimate request dates, change of beneficiaries, service interruptions, refund dates, service purchase dates, and telephone and other contacts	●					
18.	Ability to include links to supporting objects in customer service screens – for example, a refund date in the journal should provide a link to a refund record or letter, so the user can view information not otherwise part of the electronic customer record.	●					
19.	Ability to populate customer service screens within a 2 second response time.	●					
20.	Ability to have densely populated customer service screens with information logically grouped to facilitate the user's locating the desired data. These screens are not to be the same as those used by other WVCPRB employees in processing work and updating records; instead, they should be query and customer service oriented.	●					
21.	Ability to initiate standard workflows via customer service screens through hot key, check boxes, radio buttons or a single drop down list.	●					
22.	Ability to search through all notes, emails and correspondence sent to and from customers for specific words or phrases. Such a search should be accomplished with a single management-level query. WVCPRB management intends to use such a query in order to find, for example, the number of users who have complained about the quality of telephone support. Similarly such a search would also be used by authorized users against all the information in a single customer's record		●				
23.	Ability to input and maintain multiple-date sensitive addresses for all customers)	●					
	OUTPUT						
24.	Ability to provide WVCPRB users with easy (single query) access to all pertinent information on a "customer" (member, retiree, or beneficiary) when a contact occurs	●					
25.	Ability to produce reports from the system such as a contact list, all notes and/or all history (chronologically) for a contact, and any other view exactly as it appears on the user's screen	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
26.	Ability to support standard service questions from members including: Typical types of "standard" service requests received by WVCPRB to be supported include, but are not limited to: • "What's my balance?" • "What will my refund be?" • "Can I have a balance letter? • "What's the status of my benefit estimate request / retirement application?" • "What's the status of my refund check?" • "When will I get my pension check?" • "Where is my pension check / direct deposit?" • "Can I change my address?" • "Can I change my beneficiary?" • "Explain my deductions." • "I didn't get a Member Annual Statement." • Verify pensioner's amount. • Requesting forms • Benefit Estimate request • "Please change my … ."		•				
27.	Ability to initiate the generation of standard correspondence and fulfillment of form and publication requests, including normal data bookmarks and bar-coding, from the customer service screen – and record same as a customer interaction	•					
28.	Ability to provide access to all customer correspondence with the ability to provide resends/reprints as needed through various media (hardcopy, email, portal, etc.)	•					
CONTROL							
29.	Ability to automatically display all past activity tracking events that are similar to the member's current request in order to alert the user that the member is perhaps "fishing" for a different WVCPRB response to his/her previous inquiry		•				
30.	Ability to include in the correspondence management features all applicable levels of internal controls and appropriate segregation of duties, including the ability to approve letters to be sent or printed.	•					
METRICS							
31.	Ability to enumerate all contacts, interactions, issue resolutions, etc.	•					
32.	Ability to track requests that require WVCPRB response and the method for responding (call, correspondence, e-mail, etc.)	•					

2.4.6.3 Enterprise Content Management (ECM)

As the treatment and management of electronic content has expanded over the years from file management to include technologies such as report management and Imaging, other areas of content needing management have also been loosely coupled with report management and Imaging. WVCPRB has chosen to adopt the broadest definition of ECM to include all of the technologies and content areas listed below:

- Correspondence Management
- Imaging
- Paper- and Electronic-Forms
- Print on Demand

Requirements for all of these areas are covered in the sections that follow.

As part of the goal of enhanced member communication, WVCPRB will investigate dispensing with pre-printed forms and correspondence. Instead, forms (and other informational content) are envisioned to be requested via a Web-interface, pre-populated as appropriate with member information, and printed on demand. Should a member request forms via telephone, or email-based request, the system should still enable the pre-population of form data. CPRB desires that any turn-around forms include a bar-code representing any information known to the system at the time the form is printed (e.g., form number, member unique ID, member name, member DOB, and/or member SSN). WVCPRB desires the generation of such a form to initiate a workflow. WVCPRB believes that such a bar-code on all outgoing correspondence should facilitate indexing of the forms when they are completed by a member and returned to WVCPRB. WVCPRB requires use of a 2D bar-code font such as PDF-417. WVCPRB further requires that any scanning hardware/software specified and/or supplied as part of the solution be able to read and correctly interpret the bar-code font.

Much of the material and many of the requirements listed in the topics within ECM overlap. WVCPRB anticipates Content on Demand to be available via the web, instances of electronic forms should be printable and subsequently available from the electronic member record archive, etc. Every effort has been made to categorize the material within the ECM sub-sections below appropriately.

2.4.6.3.1 Correspondence Management

As described in RFP Section 4.2.5.1.6, WVCPRB currently generates significant amounts of correspondence with its members. WVCPRB envisions a new LOB solution as being able to generate and archive such correspondence automatically, printing only the copy that is to be mailed to the member – if even that copy is to be printed and mailed. WVCPRB further requires the system to automatically create a tickler within the workflow system in those situations in which the generated correspondence requires follow-up action (e.g., a request to the member for more information to be supplied within ten days).

Furthermore, since Correspondence Generation is not typically part of a traditional ECM solution, WVCPRB desires **the vendor to discuss the specifics of its Correspondence Generation implementation.**

As an integrated part of the LOB solution, WVCPRB is seeking a correspondence management solution for managing the correspondence with members, especially responding to written customer requests received and sent via mail, electronic forms, fax, or email. The correspondence management feature should involve well-defined procedures and processes (both automated and manual) for managing the receipt of, imaging of, indexing of, routing of, filing of, retrieval of, and response to incoming written requests for information as well as all outbound correspondence of any sort.

WVCPRB currently utilizes a number of standard documents (forms, reports, letters, and spreadsheets), which are currently generated on the legacy system. A listing of these documents is provided in Appendix E, Exhibits 9, 10, and 12.

The vendor should propose to replace or convert these document templates to be compatible with the correspondence management solution proposed in the new system and to integrate them into the new system's line-of-business and workflow components. WVCPRB desires for the vendor, after contract award, to define in detail all requirements pertaining to the existing documents and their conversion to the new environment. There are a number of approaches that are acceptable to WVCPRB:

- Using conversion tools, convert the files and manually clean up

- Manually enter all document templates

- Scan documents and then manually clean up

- Any other technique that should satisfy the requirement.

In the implementation of the new system, standard letters should be generated automatically. Examples include but are not limited to benefit estimate letters, requests for certifications, and service buyback information. These letters may be maintained as word processing template documents. When a user task that invokes one of these standard letters is exercised, the new system should automatically merge the letter template with the necessary database information (including but not limited to member / beneficiary name and address, service credits, and monthly benefit amount). WVCPRB desires that the selected vendor implement the integration capability for all data insertion, i.e., name, address, service credits, etc., in forms and letters using appropriate, typically MS Office, tools. Depending on the specific business process, it may be required that the user be able to view the letter on his/her workstation screen, modify it if he/she chooses, and trigger printing of the letter with a click of the mouse button. The act of printing should also automatically send an appropriately indexed copy of the letter to the member record for storage as a TIFF image, a PDF, or other immutable form. The vendor should also note that some letter types (e.g., COLA notifications) are anticipated to be printed in large quantities as the result of an unattended process. Such "batch" correspondence should be able to take advantage of multiple, high-speed printers and need not be sent to any user's desktop for approval as part of the printing process.

The vendor should consider the following items:

- Establishing (rules and procedures) relationships among individual pieces of correspondence / requests for information. Illustrative examples include:

  o Correspondence to a stakeholder that responds to a request for information on retirement options and expected benefits

  o Correspondence to a stakeholder from WVCPRB providing additional or clarifying information pertaining to the participant's credited service and/or contributions

  o The implications on correspondence generation of the need for appropriate handling of the return to WVCPRB of the information / clarification requested of the participant

  o Correspondence from WVCPRB to the participant setting forth retirement options and expected benefits under each option.

- Secure archiving of correspondence that should remain available for an extended period of time

- Tracking of follow-up activity and turnaround time associated with correspondence / requests for information

- Reporting of new, open, and closed correspondence items / requests for information, by department, by user-specified date range

- Integration of the correspondence management functions with the other features and functions of the future system, particularly the automated letter generation capability that is part of the mandatory LOB system.

The correspondence management feature should have applicable levels of internal controls and appropriate segregation of duties, including in some instances the ability to approve letters to be sent or

printed. If an investigation requires some type of monetary adjustment, it should have management approval before being released to the annuity payroll or accounting system for check generation.

WVCPRB desires the vendor to conduct interviews and analyses as necessary to identify and accommodate all possible types of problem resolution investigation types.

Several of the requirements in the table below discuss the automated capture of a copy of all outgoing member correspondence directly into the member archive. WVCPRB recognizes that if the first printed copy is discarded for some reason and the document is changed and printed again, there is the possibility of capturing more documents than are actually transmitted to a member. The vendor should discuss how to avoid or manage this possibility in their response.

A designated user / system administration (as opposed to information systems) function should be able to create new and maintain existing standard letters through the use of the word processing software.

The table below presents requirements that cover correspondence generation management.

Table 33: Functional Requirements for Correspondence Management

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to capture annotations on correspondence		●				
2.	Ability to capture an "image" of any web-submitted, electronic form into the correspondence archive as if the form had been submitted on paper (including the ability to retrieve and print same)		●				
3.	Ability for WVCPRB to use an enterable standardized form online to initiate a member request and then to capture an "image" of the completed form in the correspondence archive		●				
4.	Ability to automatically capture, index, and archive an "image" of every piece of correspondence (letter, email, web-posting, etc.) exchanged with a customer	●					
	PROCESS						
5.	Ability to accommodate "returned mail" as one of the imaging document types and to trigger a returned mail workflow process for processing, investigation, etc.		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
6.	Ability to customize system generated correspondence using pre-defined templates and any combination of the following capabilities • Auto-populating (tagged) blank fields with data drawn from a member/ retiree/ beneficiary/ employer account (with the ability to override some fields) • Auto-population of the appropriate signature. • Manually selecting different paragraphs based on the input from the user • Automatically selecting different paragraphs based on member account information and/or unique situations • Permitting the addition of one or more free-form text paragraphs at any location in the correspondence template - given the appropriate authority to make such changes/insertions		•				
7.	Ability for an authorized individual (not necessarily IT) to create new correspondence, including all of the varieties discussed above, e.g., data insertion (e.g., signature, name, address, service credits, etc.), optional paragraphs in forms and correspondence using appropriate tools and controls		•				
8.	Ability to maintain and manage the various versions of documents (e.g. accept old form and if more data is necessary, pre-fill new form and send to member) over time when changes are made to standardized forms, correspondence, and reports		•				
9.	Ability to provide for correspondence to be generated presorted with postal barcode and both 5- and 9-digit zip code		•				
10.	Ability to track, archive and manage all in- and out-bound e-mail messages and faxes as electronic correspondence	•					
11.	Ability to distribute forms initiated via request by workflow or Web (or other method)		•				
12.	Ability to support both mandatory and non-mandatory fields on all forms. This manifests itself in the automated validation of forms completed and submitted via the web interface as well as automated Optical Character Recognition (OCR) or Optical Mark Reader (OMR) treatment of scanned paper forms.	•					
13.	Ability to accommodate undelivered email as the trigger of an email workflow process for further investigation, etc.		•				
14.	Ability to flag an account so that all correspondence being sent to the member/retiree is reviewed by a named upper manager.		•				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	Output						
15.	Ability to capture information and generate a report (electronic or paper) on mass mailings (type, to whom, how transmitted, and when)		●				
16.	Ability to print both blank and pre-filled forms, bar-coding information as appropriate	●					
17.	Ability to generate additional information or follow-up correspondence as needed when further documentation is needed and/or additional data is missing, including a form pre-filled with correct information provided on a received but incomplete form and highlighting the areas that need to be completed or corrected		●				
18.	Ability for the system to handle all of the following correspondence generation options based on existing correspondence templates: • End-users generate their own correspondence and print it themselves (locally) • End-users generate their own correspondence then send it to centralized system (queue) for consolidation, mail assembly (including addition of inserts), folding, envelope stuffing, and appropriate distribution (recognizing that not all customer-selected distribution vehicles require actual printing, folding, stuffing, etc.) • End-users generate their own correspondence then send it via an email attachment, fax, portal, etc., based on recipient's preference as specified on file	●					
19.	Ability to generate additional information correspondence when further documentation is needed and/or data is missing; ability to generate follow-up correspondence as needed	●					
20.	Ability to generate all forms and correspondence (including appropriate redesign and combining of current forms and correspondence and creation of new ones) in such a way as to support use of pre-populated (with requesting member information) fields, barcode capability, constrained handprint for Intelligent Character Recognition (ICR), etc., including print-on-demand and web-based requests for forms		●				
21.	Ability to generate automatic reminder correspondence when the specified "wait" period has been exceeded for a response from a user, employer, etc.		●				
22.	Ability to produce on demand mailing labels for mass mailings in up to 7 different formats, with appropriate selection and sort options		●				
23.	Ability to sign correspondence with staff names (using signature fonts or pasted images or ...)	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
24.	Ability to archive (at the same time that it is printed or otherwise transmitted to the member) all auto-generated correspondence along with the method of transmission. The purpose of this requirement is to ensure that the solution is not dependent upon separate user actions to archive and to print	●					
25.	Ability to, when auto-archiving correspondence, automatically capture the appropriate information from the correspondence generation utility such that the document indexing is done automatically rather than requiring the staff member to re-input index information		●				
26.	Ability to automatically generate, transmit, and deliver appropriately both individual and mass-produced correspondence		●				
27.	Ability to use a 2-D bar code (such as PDF-417) in every instance in which the application of a bar code is utilized		●				
28.	Ability to define packets of information/forms based on business process and typical customer needs to satisfy fulfillment		●				
29.	Ability to support generation of material for and execution of mass mailings to targeted or general audiences		●				
30.	Ability (optionally) to include references to and text of applicable law, particularly in correspondence generated within disability-related processes		●				
31.	Ability to retransmit correspondence to customers by extracting from the archive (complete with appropriate watermark)		●				
32.	Ability to stop transmission of correspondence sent in error prior to its transmission		●				
33.	Ability to redact specific portions of retrieved (from the archive) correspondence and forms when sending copies of that material to other recipients	●					
34.	Ability to automatically include with generated correspondence appropriate indicators that support all features of automated mail processing equipment (assembly, folder, stuffer, etc.)		●				
35.	Ability to generate a custom correspondence from a Word or similar document by establishing a population of members and or retirees who should receive the correspondence. The population would be automatically selected by the system based upon demographic data within the system (i.e., all active members of a plan or plans, all retirees making less than $600 per month, all retirees who have been retired more than five year, all retirees in a particular city, county, or state. Including the ability to auto-image the correspondence to the member or retiree file.)	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
36.	Ability to send a copy of a document originally printed and sent to one address to a different address (without changing the address on the original document) and record the event (and the second address) in the member record (e.g., encounter note)		●				
	CONTROL						
37.	Ability to provide a valid / invalid address checkbox for an employer and person addresses and if the address is marked invalid – track all correspondence that should have been sent until a valid address is known and then generate all the past correspondence (pending user approval) to the new valid address. Flag bad addresses.		●				
	METRICS						
38.	Ability to report statistics on each type of form / correspondence generated		●				

2.4.6.3.2 Imaging

The existing Documentum (ApplicationXtender) imaging solution is described in RFP Section 4.2.5.4. Given the amount of training and general experience that WVCPRB has invested in ApplicationXtender, we wish to retain that application. We also require that the imaging solution be tightly integrated into the LOB solution using the API that is a part of the application. The requirements in the table below discuss the ApplicationXtender features and functions that WVCPRB envisions to be exposed in the integrated application.   (The vendor is offered the option [see Section 2.14.6 Replacement of Existing ApplicationXtender Imaging System] of recommending the replacement of the ApplicationXtender with another commercially available imaging system. We point out that this is an option and that therefore the vendor should propose the integration of ApplicationXtender as required herein.)

WVCPRB desires the vendor to determine if ApplicationXtender, as it is configured and maintained by WVCPRB, meets the requirements of this Section. Should the vendor determine that changes need to be made to Application Xtender, WVCPRB anticipates the vendor should oversee the work of WVCPRB's ApplicationXtender support vendor in making those changes.

WVCPRB points out that just as member-related documents should be available as part of the member record in the LOB solution, employer-related documents should be available through the employer-based functionality within the LOB solution. In addition, the vendor should ensure that appropriate security is provided such that access to disability documents (a subset of the member record) is limited to a designated set of staff members.

The vendor is therefore required to provide an integrated imaging solution that meets the requirements stated in the table below. We feel that tight integration of imaging into the LOB application is a critical success factor for enthusiastic acceptance by WVCPRB staff. We note that the current scanning process and indexing scheme may not lend themselves well to such integration. In their response, the vendor should describe the pre-processing image scanning process as well as point out what changes they

would make to the current indexing scheme (if any) to better support automated processing. Examples of possible improvements that WVCPRB would consider include:

● The use of a batch number index in the scanning and subsequent storage of paper documents

● Rationalization of WVCPRB's current assignment of document types

● The application of bar-coding to forms as they are delivered from WVCPRB and the recognition of the bar-codes upon the receipt of the forms in WVCPRB's mailroom.

As part of the goal of enhanced member communication, WVCPRB will consider dispensing with pre-printed forms and correspondence. Instead, forms should be requested via a Web-interface, pre-populated with member information, and printed on demand. Should a member request forms via a telephone call or email-based request, the system should still enable the pre-population of form data. WVCPRB envisions the forms to include a bar-code representing any information known to the system at the time the form is printed (e.g., form number, member unique ID, member name, member DOB, and/or member SSN). Generating such a form should initiate a workflow. WVCPRB believes that such a bar-code on all outgoing correspondence will facilitate indexing of the forms when they are completed by a member and returned to WVCPRB. WVCPRB requires use of a 2D bar-code font such as PDF-417. WVCPRB further requires that any scanning hardware/software specified and/or supplied as part of the solution be able to read and correctly interpret the bar-code font.

Table 34: Functional Requirements for Imaging

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability for the new system to receive the Scan Date index from the imaging system for various business processes' date logic / edits	●					
2.	Ability on scanning to group documents into like batches based on document properties (document size, document type, color, orientation, etc.)		●				
3.	Ability to add any of the following annotations to images: • Highlighter • Sticky notes • Black out (redaction) – without changing the underlying document • Digital stamp • Watermark • Author id stamp, to identify annotation author and date • Date stamping • User annotations • Sticky notes with callouts • Annotations with callouts • Shapes (e.g., circles, clouds) • Bates stamping (sequential number increments).		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
4.	Ability to attach a separate file (Microsoft Word, Microsoft Excel, etc.) to the imaged document for additional clarification / explanation related to that image when the simple add annotations feature is not sufficient		●				
5.	Ability to automatically assign a unique batch numbering / batch naming standard		●				
6.	Ability to automatically identify and eliminate blank pages during document scanning and indexing, including the blank, back sides of documents		●				
7.	Ability to automatically remember the last set of index attributes used (persistent indexing) for cases where all documents in a batch belong to the same person or where all documents in a batch belong to the same document type		●				
8.	Ability to capture metrics on image indexing to monitor efficiency		●				
9.	Ability to ensure that multiple users are prevented from selecting and indexing the same batch	●					
10.	Ability to format the data entered from Web "Self-Service" into a standard template so that it can be stored as an image in the imaging system for historical reference		●				
11.	Ability to handle the imaging of generated correspondence whether generated online by WVCPRB users or from bulk processing		●				
12.	Ability to index a single page, a single document, or a set of documents		●				
13.	Ability to manage the scanning process with multiple industry-standard scanners, scanning simultaneously	●					
14.	Ability to perform a double key entry index validation/verification process to ensure accuracy.	●					
15.	Ability to perform re-scans of a single page, single document, or all documents in a batch	●					
16.	Ability to represent a multi-page document as a single document within the imaging archive	●					
17.	Ability to scan both single-sided and double-sided (duplex) documents	●					
18.	Ability to scan color paper and save as a white document with black text	●					
19.	Ability to trigger one or more workflow processes for each specific document in a batch of scanned documents when that batch is released to the archive.		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
20.	Ability to verify or look up index attributes against the LOB database (or an extract therefrom) to avoid having to key-in attributes that already exist in electronic format and minimize the probability of data-entry error or duplication	●					
21.	Ability to perform automatic form/document recognition and auto population of data into the workflow/pension application using appropriate confidence levels and thresholds.		●				
22.	Ability to read bar codes and perform optical character recognition (OCR) to assist in validation/verification	●					
23.	Ability to create an electronic member record for individuals upon the first receipt of a document, especially when there may not yet be a member record in the LOB solution	●					
24.	Ability to use Optical Character Recognition (OCR) to read machine printed text for use in indexing a document		●				
25.	Ability to use Intelligent Character Recognition (ICR) to read constrained hand printed text for use in indexing a document		●				
26.	Ability to automatically place (based on member identifier, e.g., SSN) a scanned document into the correct member's electronic folder		●				
27.	Ability for an authorized user to move one or a set of documents from one folder to another and to appropriately update the indexes in the case, typically in the case when one or more documents have been incorrectly indexed with full audit tracking	●					
28.	Ability to merge two (2) individuals' imaged member folders into a single consolidated folder with full auditing		●				
29.	Ability, upon indexing within the imaging solution, to perform index validation through an automatic look-up in the LOB database. This would include validation (in various combinations) of at least the unique member ID, the member name, the member DOB and the member SSN. The validation would be used to determine whether the member already exists and to avoid data errors, redundant data entry, and duplicate folder images	●					
30.	Ability, while indexing within the imaging solution, to assist the indexer when the only data available from an imaged document may not uniquely determine the member to whom the document belongs. Assistance might include (but not be limited to) popping up a list of all members with the indicated last name and allowing the indexer to select one by DOB, by address, or by SSN		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
31.	Ability to ensure real-time data synchronization between the LOB database and the imaging solution. For example: • Changing an index value, such as Social Security number, in the LOB system would automatically update the corresponding index for that person in the imaging solution • Changing the name in the LOB system would automatically update the corresponding index for that person in the imaging solution	●					
32.	Integration of the imaging system with the electronic workflow system such that the release of an image (or batch of images) to the image archive initiates the appropriate workflow process(es) for each of the documents in the batch (including paper-based wage and contribution reporting)	●					
33.	Ability on scanning to group documents into like batches based on member or retiree/pensioner properties (SSN, Member number, …)		●				
34.	Ability to scan documents in duplex mode and use threshholding to determine automatically whether the back side of a document should be retained or discarded		●				
35.	Ability to do full-text indexing of documents to support later retrieval via full text searches	●					
36.	Ability to import (and appropriately index) imaged (or PDF) documents generated outside the LOB or imaging system	●					
	Process						
37.	Ability for any (authorized) user to change one specific index value of any imaged document (e.g., erroneously assigned Document Type) with full auditing		●				
38.	Ability to perform full page browsing through a member's document, a set of a member's documents, or all of a member's documents from any starting point		●				
39.	Ability for integration of the imaging retrieval and viewing capability with LOB member screens so that any user looking at member data in the LOB solution can retrieve and view member-related documents in a seamless, integrated manner (such as the provision of an "Images" button) without having to provide retrieval keys into the imaging system a second time	●					
40.	Ability for the new system to support the existing imaging indices used by WVCPRB	●					
41.	Ability for the system to query based on standard criteria (indices)	●					
42.	Ability to abort lengthy searches without aborting the client PC or the server	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
43.	Ability to allow a document to be viewed by more than one user concurrently	●					
44.	Ability to allow access to annotations based on security attributes		●				
45.	Ability to allow the viewing of documents at "fit-to-page" as the default. Users should not be required to resize each page	●					
46.	Ability to apply further search criteria to the results of a search	●					
47.	Ability to browse from page to page	●					
48.	Ability to compare two documents side by side	●					
49.	Ability to create and distribute pre-defined searches for multiple users		●				
50.	Ability to easily move either a single page or multiple pages from a multi-page TIFF to another multi page TIFF file, with full auditing.	●					
51.	Ability to easily perform re-indexing of document properties. Available only at the appropriate security level	●					
52.	Ability to easily reorganize (re-order, rotate, etc.) pages in a multi-page TIFF (or multi-image file) at any time, with full auditing.	●					
53.	Ability to enlarge specific areas of an electronic file	●					
54.	Ability to have pre-defined search templates		●				
55.	Ability to jump directly to: • The first page of a document • The last page of a document • The previous page of a document • The next page of a document • A specific page of a document.	●					
56.	Ability to inform the user that a search is being processed (i.e., display the Windows hourglass or a percent (%) complete bar / value)		●				
57.	Ability to modify stored searches		●				
58.	Ability to name and save search criteria for reuse		●				
59.	Ability to import query criteria (e.g., a list of SSNs), without having to individual key or copy into the query screen		●				
60.	Ability to open multiple windows for multiple documents		●				
61.	Ability to overlap documents for comparison	●					
62.	Ability to pan (electronically grab the imaged document and move it around to the location desired) and zoom viewed content	●					
63.	Ability to perform Boolean searches (i.e., "and", "or", "not", etc.) with grouping operators (usually represented as parenthesis)		●				

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
64.	Ability to perform range searches for dates and numbers that are indexed (e.g., all documents indexed between 10/1/06 and 10/15/06)	●					
65.	Ability to provide an image viewing and record locking mechanism to allow multiple users to view an image at the same time, yet allowing only one user at a time to modify / annotate / mark up an image	●					
66.	Ability to re-index a document as the result of assignment of an incorrect index attribute	●					
67.	Ability to remember user settings for viewing across documents and user sessions	●					
68.	Ability to retrieve documents to a workstation from a query hit list	●					
69.	Ability to rotate (and save) one page in a two-sided document		●				
70.	Ability to save search criteria into folders for frequently accessed documents		●				
71.	Ability to search on date variations (e.g., using 7/1/02 or 07-01-02, or July 1, 2002 should all work and all provide the same result)	●					
72.	Ability to search using special characters as literals in the search string	●					
73.	Ability to size and zoom images	●					
74.	Ability to specify the opening of landscape documents in landscape view. The users should not have to rotate a landscape document	●					
75.	Ability in a multi-page document containing both portrait and landscape pages, to have each page display without the need to rotate		●				
76.	Ability to synchronize index values between the LOB and Imaging systems, e.g., name and status changes.		●				
77.	Ability to temporarily store all search queries in a particular search session until the sets are released or the session ended by the user		●				
78.	Ability to view multiple thumbnails at once		●				
79.	Ability to view sheets of correspondence, legal size, and non-standard-sized documents	●					
80.	Ability to view the following document/image formats: ASCII, BMP (Windows Bitmap), GIF, HTML, JPEG, PDF, RTF, TIFF CCITT IV (tiled), XML, and Microsoft Office documents. Use of a proprietary document/image format is discouraged. Images should be stored in TIFF 6.0 format.		●				
81.	Ability to simultaneously view thumbnail sketches of multiple documents and multiple pages in a single document allowing users to browse rapidly through pages	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
82.	Ability with any search, that exceeds 5 seconds, to display the first [500, a configurable number] records, notify the user that only the first 500 were displayed, and then prompt the user with the following options: • Cancel or • Refine search or • Continue for another 500 records.	●					
83.	Ability to sort at least within categories by document name, date range, or other index fields	●					
84.	Integration of the imaging system into the LOB application user interface such that retrieval of a member's documents (when a member's record is open on the screen) may be initiated with minimal use of keyboard or pointing device. For example, a solution that requires the user to key in or cut and paste the member identifier from one application to another is unacceptable		●				
85.	Image retrieval integration with the LOB query capability such that the output of a query can be used to retrieve images. For example, a WVCPRB counselor may need to retrieve and review all the beneficiary designation forms for a particular individual (the named beneficiary, not the member). In such a situation, the result set should be readily usable as the input for retrieving the beneficiary designation forms		●				
86.	Ability to, upon performing a retrieval from within the LOB application, if the member ID (or other unique identifier) does not uniquely determine a member (this should happen only if there has been an error in indexing), a list of the members matching the ID entered (including names, dates of birth, and Social Security numbers) should be presented so that the user can select the specific member being queried	●					

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
87.	Ability to, upon performing retrieval from within the LOB application, if the member ID uniquely identifies a member, to present the results as a list of the sub-folders within the folder. Sub-folders which refer to unique documents would indicate the form number and scan date, while those which are collections would permit the user to expand them appropriately. When a user chooses to expand a collection, its contents would be listed showing form number and scan date. Alternatively, the user might choose to view all of the documents in a collection, either full size or as thumbnails. Regardless of the method the user chooses, she or he would then be able to select one or more individual documents for full size viewing, annotation, etc. When the list is presented in "detail" mode, the user should be able to sort any of the columns/attributes in the list		●				
88.	Ability for each user individually to specify the location and size of the viewing window on their screen so that the window always appears in the same size and location until the user changes those parameters		●				
89.	Ability of the imaging system (operating in stand-alone mode) to support classes of documents beyond those used just in the retirement system		●				
90.	Ability of the imaging system (operating in stand-alone mode) to support user queries outside of the LOB application		●				
91.	Ability to search for and retrieve member documents in one of two ways: • Searching for and retrieving a specific document based on a unique combination of keys such as member ID and form number and scan date • Treating the retrieval like an electronic analogy of the paper-based member folder, e.g., in response to a query by member ID (initiated through a control on a window or browser page), the interface should respond with a screen which presents selection information from which the user selects the necessary document(s)	●					
92.	Ability to temporarily assign one or more documents in the member archive to one or more "Case" folders or "virtual paper clips" in order to assist in subsequent retrievals	●					
93.	Ability to apply user security to "case" folders and "virtual paper clips"	●					
	OUTPUT						
94.	Ability for the results of any query (a list of available documents or an image itself) to be easily copied into a user's desktop application for inclusion in another document such as a word or excel document		●				

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
95.	Ability to copy selected portions of viewed documents and paste into other applications specifically Microsoft Office Suite, SQL forms documents, etc.		●				
96.	Ability to export images into multiple standard image formats		●				
97.	Ability to identify documents printed from the imaging system, i.e., a watermark or similar notation	●					
98.	Ability to integrate the imaging system to an industry standard facsimile (fax) system in order to support outbound transmittal of images as well as to support inbound transmittal of faxes into the imaging system – and subsequently into workflow processing	●					
99.	Ability to print, export to CD, incorporate in email, etc., a range of pages within an imaged document	●					
100.	Ability to print, export to CD, incorporate in email, etc., a single page of an imaged document	●					
101.	Ability to print a summary of query results	●					
102.	Ability to print, export to CD, incorporate in email, etc., an entire imaged document	●					
103.	Ability to print, export to CD, incorporate in email, etc., an individual's entire set of archived documents as the result of a single key press or mouse click		●				
104.	Ability to print annotations superimposed on image as well as to print without annotations and to print some annotations (e.g., redactions, watermark) but not others	●					
105.	Ability to print search criteria		●				
106.	Ability to print, export to CD, incorporate in email, etc., selected documents of any format from the query results list without opening the documents individually. Options should include printing (or not printing) annotations	●					
107.	Ability to print, export to CD, incorporate in email, etc.: • The contents of the current screen • The entire document • A page or selection of a document.		●				
108.	Ability to provide a user / security specified printing "on / off" switch – the imaging system should have user / security features that control whether a given user can print documents	●					
109.	Ability to route output from the imaging system to any printer on the network or attached to a PC	●					

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	CONTROL						
110.	Ability to audit controls to ensure that all documents contained in a batch get scanned once and only once (no omissions)		●				
111.	Ability to automatically route / send unknown or illegible document types to an investigation queue for resolution without suspending the entire batch	●					
112.	Ability to capture, display, and print metrics on throughput and accuracy of individual steps within the image acquisition process.		●				
113.	Ability to provide audit controls to ensure that scanned documents get indexed once and only once	●					
114.	Ability to sample and verify indexed documents prior to the committal / update to the imaging system		●				
115.	Ability of the imaging system (operating in stand-alone mode) to provide user administration capabilities such as adding users, setting user access rights, etc. with a MS Windows-based UI		●				

2.4.6.3.3 Paper and Electronic Forms (eForms) and the Web

WVCPRB desires that the selected vendor redesign all existing forms and letters (and/or combine where appropriate to reduce their number – subject to agreement from WVCPRB), to design all new forms and letters, and to include barcode capabilities, appropriately integrated with imaging and workflow components of the new system. For a listing of WVCPRB's current forms, letters and reports please see Appendix E, Exhibits 8, 9, and 10.

WVCPRB staffs are to be trained by the selected vendor on how to use all form creation tools to maintain and update existing forms, and to create new ones.

Finally, WVCPRB desires the selected vendor to implement in the new system the functionality of all existing reports, forms, and letters (unless otherwise agreed to by the vendor and WVCPRB during the requirements definition and design phases), as well as for implementing all new desired reports.

To minimize member / retiree confusion as they migrate from the use of paper forms to electronic (eForms) forms, the vendor should design the interface screens used for member-initiated electronic input (e.g., web-based change of address or web-initiated service retirement) to appear like the paper form used for the same purpose. (This may be done by changing the layout of the paper form during the form redesign to match electronic form screens that already exist – subject to WVCPRB approval.) In addition, since WVCPRB desires to retain copies of all correspondence with our members / retirees in the document archive, every eForm completed and submitted by a member would need to be instantiated in the electronic member archive – in such a form that when viewed or printed from the archive, the form image appears as if it had been completed on a paper form.

WVCPRB requires that the vendor enhance WVCPRB's current Web-based capabilities to include at least the following:

- All of the "Ability To" functionality requirements that are indicated in the tables in Section 2.4 Functional Requirements as being "Exposed via Web"

- Secure member log-on that requires the use of a unique member ID, a password and/or PIN, and challenge questions such as those as discussed in the introduction to Section 2.4.6.2. (This capability should include a capability such as a "cookie" or other token that supports member re-login and use of the secure web site capabilities)

- Download for printing of paper forms – with or without pre-population of member data – and automatic bar-coding of populated data where appropriate. The implemented turn-around bar-coding should be supported by the document capture system required as a part of the ECM sub-system

- Electronic forms – for all those self-service functions deemed permissible (i.e., those that do not require notarization or member signature), including the ability to submit a request for information (the use of an electronic form should result in the capture into the document archive of an instantiation of the form – **as if it had been completed in its paper form**).

- Basic and data-driven benefit estimate calculators for all plans – using the same estimating calculator that is used in the actual calculation of retirement benefits – and offering all of the same options

- View-only access by member to member's data including transaction history, demographic data, and (if opted for by the member as part of their "personal communications profile") any outgoing correspondence for which the member/annuitant has received email notification

- View-only access by member to any member-initiated transaction such as a request for purchase of service, including notification of any missing documentation or other information for which the member may be "on the hook"

- Email notification to member of recent addition of documents to the member's folio or image archive.

WVCPRB notes that any enhancement that is done to the current Web-based capabilities should be done in the context of the current WVCPRB "brand," retaining layout and style where appropriate and developing new pages consistent with that "brand" where necessary.

The following section presents requirements that cover electronic forms management.

Table 35: Functional Requirements for Paper and eForms and the Web

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	INPUT						
1.	Ability to support one-click ordering of forms and publications		●	●			
	PROCESS						
2.	Ability to replace current paper-based enrollment process with web based material		●	●			
3.	Ability to ensure that electronic and paper-based forms follow the same design and development steps so that the approved end result of the design process results in forms that are very similar (if not exactly the same) in layout		●	●			

Requirement ID	Description	Highly Desire	Desire	Exposed via Web	Compliant	Customize	Non-Compliant
	OUTPUT						
4.	Ability to provide an interactive, real-time member/retiree statement on the web supporting, drill-down capability to expand general information into detailed, etc.		●	●			
5.	Ability to ensure that any electronic form completed on the web can be immediately printed by the user or submitted and later recalled for viewing or printing from the archive and when printed or viewed looks substantially like the paper version of the same form (including details such as the form number)		●	●			
	CONTROL						
6.	Ability to assess all two-way web activity, e.g., pages most visited, requests most frequently made, forms most frequently used		●				
7.	Ability to support user feedback during their use of the portal, e.g., through use of comment screens		●	●			
	METRICS						
8.	Ability to perform usability testing (and gathering analytics relating to such) on the web interface		●				

2.4.6.3.4 Print on Demand

WVCPRB currently maintains over 20 different informational brochures, handbooks, etc. Nearly 90,000 such documents are printed each year. An undetermined proportion of those pre-printed brochures are discarded because of changes in content prior to their use. Worse, despite WVCPRB's best efforts at announcing the issuance of updated materials, some of the pre-printed material is not discarded, even though the brochures and booklets contain outdated information. The opportunity that avails itself when reformatting such material for delivery by multiple means (with an emphasis on replacing paper with electronic delivery) means that the provision of content on demand is an appropriate solution.

Table 36: Functional Requirements for Print on Demand

REQUIREMENT ID	DESCRIPTION	HIGHLY DESIRE	DESIRE	EXPOSED VIA WEB	COMPLIANT	CUSTOMIZE	NON-COMPLIANT
	PROCESS						
1.	Ability to replace current pre-printed brochures, publications and other informational materials with a true content management system that would support a print-on-demand capability that draws upon pre-approved paragraphs of content	●					
2.	Ability to design information/educational material specifically for use on the web portal in order to take advantage of mixed media capabilities, etc.	●	●				
3.	Ability to support customer ordering of materials via the web, etc., specific to their registered and/or entered criteria	●	●				
4.	Ability to support multiple, portable desk-top print centers (with appropriate security) to produce customer specific, targeted marketing, educational and informational materials that would serve the needs of WVCPRB	●					
5.	Ability to support a web-based ordering system to permit customers (with appropriate security) to request information, educational materials, etc.	●	●				
	OUTPUT						
6.	Ability to intuitively (e.g., member life events, member demographics) "push" information and educational material to customers' email address or by letter possibly triggered by pre-defined milestones, current events, special opportunities, etc.	●	●				
7.	Ability to quickly produce generic documentation of plan and benefit information to reduce / eliminate the need for an inventory of pre-printed booklets and brochures	●					

2.4.7 *Additional New Functionality (Introduction)*

In addition to the detailed business requirements relating to the existing and the desired "to be" WVCPRB functions defined in RFP Section 4.2.6 and Appendix D Section 2.4, respectively, WVCPRB desires that the new solution provide additional new functionality as described in the following sections.

Although some of the requirements in the following sections have been included in the desired "to be" matrices of Section 2.4, these new functionality requirements are set forth separately in this section – and vendors are requested to provide a separate response to them – for the following reasons:

● Many of them span more than one of the business function areas defined in RFP Section 4.2.6 and Appendix D Section 2.4

● Given that the requirements set forth in this section represent functional capabilities that generally do not currently exist at WVCPRB, WVCPRB is interested in receiving a narrative response from

vendors, discussing in detail how the new functionality can be implemented and what additional capabilities the vendor can provide in these areas above and beyond those that have been explicitly stipulated below.

2.4.7.1 Universal Update Capability

WVCPRB considers a key requirement of the overall new system to be the provision for:

● The modification of <u>any</u> values of the data in <u>any</u> of the fields of <u>any</u> of the records or tables in the database as a <u>user</u> (not a computer programmer) function, i.e., a universal change capability generally applicable to <u>all</u> fields, with the possibility that a small number of fields should be protected from modification (to be determined during the system design). WVCPRB plans for this universal update capability to be <u>severely restricted</u> to only certain limited and tightly controlled user-ids.

● WVCPRB desires that all such updates to data fields be date/time stamped along with an identifier of what logical user-id performed the modification. Batch updates should be identified by the date and the program name. Again, it is desired that the system have sufficient security and internal controls, as well as appropriate segregation of duties, to allow certain changes to be made only by certain appropriate staff

● A daily (and upon demand) report, i.e., log or journal, of database changes should be generated. It is desirous for the log or journal to be capable of being sorted by any of the fields (i.e., including but not limited to: time change was entered, the data field altered, user-id, physical terminal id, and combinations thereof). Multiple journals (see below) should be capable of being merged together and manipulated / analyzed. This report should be designed in a format that is easily comprehendible by non-IT personnel, such as a supervisor or administrator

● WVCPRB intends to store the journal file containing this information on-line forever.

2.4.7.2 Consistent Use of Unique Member ID

WVCPRB requires that the new LOB be based on the use of a Unique Member ID, rather than the member Social Security Number as is currently the case. Such a change requires at least the following actions:

● Determination of the format of the Unique Member ID including consideration of topics such as:

   o Number of characters

   o Use of alpha and numeric characters

   o Potential use of the ID to indicate member characteristics, e.g., plan, status

● Provision of a field in the member record to store the Unique Member ID

● Changing all correspondence to use the Unique Member ID rather than the SSN or terminal four digits of the SSN

● Assigning the new member ID to each imaged record and ensuring that images are retrieved using the new Unique Member ID rather than the SSN as is done currently

● Assistance in planning of an education and roll-out campaign to alert members to the use of their new Unique Member ID rather than the SSN. (WVCPRB will conduct the actual campaign.)

● Member searches that continue to support use of SSN as well as the new Unique Member ID since members may not always have their Unique Member ID at hand when communicating with WVCPRB.

In their response, vendors should to provide a discussion of the above topics and others that arise as a result of the indicated change. Of particular interest to WVCPRB is any experience the vendor may have with similar such migrations in other public retirement agencies, including issues that arose, etc.

2.5 TECHNICAL REQUIREMENTS

2.5.1 *Browser-Based Solution*

WVCPRB desires a zero-footprint, browser-based solution. WVCPRB believes such a solution provides a number of advantages, including ease of installation and support, readiness for remote (from WVCPRB offices) accessibility (when enabled with the appropriate security) – while still enabling a rich client interface as well as providing the option/alternative for telecommuting. However, WVCPRB recognizes that some scanner controllers are not yet web-enabled (and in the low numbers involved, may not need to be so enabled). There may be other special-purpose client interfaces that the vendor proposes as part of the solution that are still thick-client interfaces.

Because WVCPRB has no control over the browser platform that active members and retirees select for use on their own computers, it is essential that any portion of the solution exposed to WVCPRB customers via the web should support the current release and at least one previous version of Microsoft's Internet Explorer, FireFox Mozilla, Google Chrome, Safari, and Opera.

As discussed above (and elsewhere in this RFP), WVCPRB requires a browser-based application with any integrated sub-systems such as ECM or CRM also browser-based. Should the vendor propose any sub-system client interfaces that are not browser-based (e.g., scanner controller clients), they should provide a full discussion of the benefits accrued from such an approach and of the downside of using a thin-client interface.

2.5.2 *Separate Production, Development, Test/QA, and Training/Ad Hoc Environments*

WVCPRB highly desires the vendor to specify and deliver at least production, development, test/QA, and training/Ad Hoc query environments, to reside within WVCPRB's current technical environment. It is envisioned that these environments have the ability to support all the requirements as laid out in Section 2.2.1 Nature of Desired Solution. The vendor must provide a multi-tiered solution environment that is physically separate from the other server components in WVCPRB's infrastructure and includes, at least, two **physical** environments, Production and Development. The Vendor should provide recommendations for how to implement the environments (e.g., how many logical environments in how many physical environments) and explain why its recommended environment structure is preferred. The redundancy provided by two physical environments may be used to satisfy Disaster Recovery requirements.

- **Production Environment:** The vendor should provide specifications for a multi-tiered, redundant environment that is physically separate from the other server components in WVCPRB's infrastructure. Specifically, production server components should not reside on the same frame or physical virtual server in order to minimize outages due to upgrades or outages of systems/components that are not part of the production LOB solution. WVCPRB desires that any redundant components be located at two geographically separated data centers (West Virginia's primary and secondary data centers) to ensure system availability/business continuity in the case of the loss of either data center, or LOB solution failure of any single component failure (i.e., failover capability), or to perform routine migration activities. Although the Vendor should recommend all necessary components, WVCPRB reserves the right to consolidate certain functions within the existing WVCPRB infrastructure if it is mutually decided that WVCPRB's components meet the vendor's specifications. For example, if it is proposed that Web servers are necessary and WVCPRB and the vendor determine that adequate components exist in WVCPRB's infrastructure, they can be substituted.

- **Development Environment:** The vendor should provide specifications for an environment to be utilized by IT staff to test LOB solution changes/implementations, upgrades to system software or hardware and any/all system or application configuration changes. This is anticipated to also serve as the initial integration testing environment for application changes, database changes, configuration changes, and any other changes that may affect the LOB solution including software upgrades of any

system software. Additionally, the IT staff should be able to refresh/reset data for development testing purposes.

- **Test Environment:** The vendor should provide specifications for an environment to be utilized by business staff to test LOB solution changes/implementations, upgrades to system software or hardware, any/all system or application configuration changes, and QA. WVCPRB plans to use this environment for User Acceptance Testing.   Additionally, the business staff should be able to refresh/reset data for User Testing purposes. The test environment should provide for importation of a full data set (e.g., all demographic data, transactions) and be able to do so a number of times (as required) during the testing process.   Further, WVCPRB desires that the utility provided that accomplishes this, remain available to WVCPRB staff after implementation of the new system. WVCPRB also plans for this test environment to be used to evaluate wage and contribution reports submitted by employers as they adopt the new wage and contribution reporting format.

- **Training/Ad Hoc Query Environment:**   The vendor should provide specifications for a training environment to be used to train all users of the LOB solution (e.g., internal business staff, employers, external business partners); WVCPRB also desires this to be a multi-tiered environment to facilitate the training of our external business partners. This environment should contain all components of the production LOB solution. WVCPRB requires the flexibility to manage the migration of all approved production modifications to the LOB solution into the training environment. For example, routine updates to the LOB solution can be migrated to both the training and production environments concurrently, while major releases or modifications to the LOB solution may be migrated to the training environment prior to production migration in order to provide the opportunity for appropriate training of business staff and external partners. Additionally, the business staff should be able to easily refresh/reset data for new training sessions.

    The vendor should provide an approach and details regarding ad hoc query capabilities for business staff as defined in Sections 2.4.5.4 Reporting and 2.4.5.5 Statistical Reporting. WVCPRB desires this ad hoc query capability to be built into the LOB solution and allow business staff to query live (or replicated) production data for reports and/or information without impacting the performance of any LOB solution real-time transactions or unattended process.

The vendor's response should describe in detail how it intends to meet these requirements, including adequate hardware (including but not limited to processors, memory, and disk) and configuration and version management tools.

The vendor should provide a methodology and tools for maintaining the multiple environments (including backup and recovery as well as data refresh and migration capabilities) on an ongoing basis once the project is completed. All environments should be sized according to the usage information as described in Section 2.5.8.1 System Sizing and Performance Requirements. WVCPRB also desires the vendor to propose and provide appropriate documentation, end-user training, and operations procedures to enable WVCPRB to effectively and efficiently maintain and utilize all environments.

As noted above, if located in a separate geographical location, the second physical environment may also serve as the Disaster Recovery and or Business Continuity environment (see Section 2.13.1). If the vendor proposes the second physical environment to serve in this capacity, depending on the Disaster Recovery Plan, it will be necessary for one of the logical environments to be capable of supporting the same number of staff users, employers, and external members as the Production Environment. If the second physical environment is not part of the Disaster Recovery Plan, the logical environment used for test should be capable of supporting at least fifty percent of the number of users. Furthermore, WVCPRB desires the database(s) in the query environment to consist of one hundred percent (100%) of the actual data in the existing WVCPRB production database. These databases should be produced by a database copy, save and restore utility, or other utility or tool.

Further, WVCPRB desires the utility remain available to WVCPRB staff after implementation of the new system. In addition to supporting the testing of the new system upon its implementation, the objective of

the utility and test database is to provide staff with the ability to test system enhancements and modifications (possibly several years) after cutover.

2.5.3 *Technical Architecture*

WVCPRB requests that the vendor respond with a high level Architecture for the LOB solution supported with diagrams depicting the interactions among the various system components. The purpose of these diagrams is to ensure that WVCPRB understands the essential design of the proposed solution, and can determine that the design is generally consistent with the budget, scope, and capabilities represented in this RFP. Diagrams should include architectural views that reflect the application architecture, information architecture and related data models, and corresponding software and hardware architectures.

WVCPRB's objective with respect to multi-task, typically unattended processing is that all processes described in the RFP and the proposal are able to be run concurrently while the system continues to meet response time and elapsed job processing requirements. Specifically, WVCPRB requests that response time requirements (including self-service) be met independent of how many WVCPRB users are online, how many Web-based users are online and independent of what processes or scripts are being run, such as wage and contribution edits, wage and contribution posting, interest posting, annuity payroll running, etc.

The sections that follow provide the vendor with an overview of the required technical and architectural aspects of the desired solution.

2.5.3.1 Application Architecture

Application architecture identifies criteria and techniques associated with the design of applications for WVCPRB's distributed computing environment that can be easily modified to respond quickly to WVCPRB's changing business needs, as well as to the rapidly evolving information technologies available to support those needs.

WVCPRB foresees continued operation in an environment which is dynamic and complex in nature. In response, WVCPRB wishes to develop a system that is both robust and flexible. The application architecture is a critical link for WVCPRB between the demands of the environment and a continuing capability to automate and manage the complex tasks that result.

WVCPRB envisions a solution which is designed along logical application boundaries that mimic the business processes they support. The solution should make effective use of reusable components in order to improve flexibility, scalability, and extensibility into applications. To improve scalability, reliability, and extensibility, the solution should separate these components into at least three layers: data access, business application logic (including business rules), and user interface.

The solution should enable:

- Ease of integration of applications and application services
- Efficient reuse of existing application assets
- Rapid development and deployment of new applications
- Responsiveness to changing business needs
- Date-effective, rules-based configuration of the changing business rules under which WVCPRB operates.

WVCPRB desires that the proposed application, application framework, and commodity software be architected in a way that supports the system sizing and performance requirements described in Section 2.5.8 Operational Requirements.

The underlying application framework should support a durable solution as seen through mind share and market share of the standards and products proposed. This is evidenced by the accommodation of the

framework in leading technology products; products integrate with the framework, and development platforms use the framework to add value by extension (e.g. through modeling tools, source code repositories, debugging environments). There should be evidence of vitality and evolution in the framework itself, and of continued interoperability with relevant standards.

WVCPRB software selection process has no inherent bias regarding the open source model. For the software proposed in the application architecture, the vendor should discuss any significant risks and/or benefits associated with the products suggested. As with all components of the architecture, WVCPRB views technical support, available skills, long term viability, interoperability, flexibility, and adherence to relevant standards as potential differentiators in a long term solution.

2.5.3.2 Information and Data Architecture

WVCPRB understands Information Architecture, as it applies to pension administration solutions, to be the practice of structuring information (both knowledge and data) for the specific purpose of supporting rapid, accurate processing of member- and retirement-related information. It encompasses both the data modeling and the analysis and design of the information (both data entities and their interrelationships) in the system. As such, a solution's information architecture informs its ability to respond effectively to capabilities such as those required by executive information systems (EIS) and decision support systems (DSS).

The vendor's response should describe in pertinent detail the specific aspects of the information architecture that have been employed in order to ensure that the solution meets the following requirements:

● Insulate transaction-processing systems from the large ad hoc queries required by analytical processing systems

● Provide a cross-organizational view of data

● Provide access to data not found in transaction systems, including summary data, historical data, and external data.

WVCPRB desires that unattended processing be able to perform commits at both the transaction and unattended process level. If an error occurs, recovery of the unattended process is envisioned to be able to resume at the commit point.

WVCPRB points out that the management and architecture of non-structured data such as that found in correspondence and other imaged documents, forms, reports, etc., in other words, the non-structured data of Enterprise Content Management should also be covered in the vendor's discussion of information architecture.

The mission of Data Architecture is to establish and maintain an adaptable infrastructure designed to facilitate the access, definition, management, security, and integrity of data across WVCPRB.

WVCPRB considers it essential that the system employ a relational database management system (RDBMS) within its data storage architecture. WVCPRB desires one of the following to be supported:

● Microsoft SQL Server

● Oracle Database

● IBM DB2.

In its use of the RDBMS, WVCPRB desires the application to take advantage of transaction processing in such that any operations carried out on the database that are independent are either all completed successfully or all cancelled successfully. The application should be architected in such a way as to take advantage of:

- **Rollback** – that is, ensuring database integrity by recording intermediate states of the database as it is modified, then using these records to restore the database to a known state if a transaction cannot be committed. For example, copies of information on the database *prior* to its modification by a transaction might be set aside by the system before the transaction can make any modifications (this is sometimes called a *before image).* If any part of the transaction fails before it is committed, these copies would be used to restore the database to the state it was in before the transaction began

- **Rollforward** – that is, keeping a separate journal of all modifications to a database (sometimes called *after images);* this is not required for rollback of failed transactions, but it is useful for updating the database in the event of a database failure, so some transaction-processing systems provide it. If the database fails entirely, it would be restored from the most recent back-up. The back-up does not reflect transactions committed since the back-up was made.   However, once the database is restored, the journal of after images can be applied to the database (*rollforward)* to bring the database up to date. Any transactions in progress at the time of the failure would then be rolled back. The result is a database in a consistent, known state that includes the results of all transactions committed up to the moment of failure. If the solution does not support rollforward, the Vendor should explain how a recovery such as the one described above is accomplished

- **Deadlock avoidance** – in some cases, two transactions may, in the course of their processing, attempt to access the same portion of a database at the same time, in a way that prevents them from proceeding. For example, transaction A may access portion X of the database, and transaction B may access portion Y of the database. If, at that point, transaction A then tries to access portion Y of the database while transaction B tries to access portion X, a *deadlock* occurs, and neither transaction can move forward.   Transaction-processing systems – and the proposed solution – should be designed to detect these deadlocks when they occur.   WVCPRB envisions that typically both transactions are cancelled and rolled back, and then started again in a different order, automatically, so that the deadlock does not occur again.

- **Availability requirements** –as discussed in Section 2.5.8.1 System Sizing and Performance Requirements and Section 2.5.8.1.2 High Availability Requirements

- **24x7 vendor support** – whichever RDBMS is recommended, it is highly desired that 24x7 technical support be guaranteed with the ability to escalate a problem to a severity level that would provide for immediate response.

- **Performance monitor** – a performance monitor providing detailed information at the database thread and system level which provides such information as tables accessed, access path used, CPU utilization, number and access time of I/Os, utilization of system resources, lock contention etc. should be provided, in order to respond to performance and application problems and to aid in scaling the data architecture components for new or changed applications.

- **Explain access path** – a method to analyze the access path of complex database queries to be able to determine the causes of poor performance.

- **Easily scalable** – WVCPRB desires an architecture which provides a non-disruptive means for growth and for handling peaks.

- **Full set of utilities** – WVCPRB desires that the RDBMS come with a comprehensive set of utilities for managing the database system providing for backup/recovery, loads, reorganizations, copying, repairing etc.

- **Active catalog** – catalog data should be accessible for automating management functions.

WVCPRB anticipates that these databases can be produced by a database copy, save, and restore utility or other utility or tool.

Vendors should provide in their proposal the data structure / logical data model utilized in the solution being proposed. The vendor should describe the approach it intends to use to reconcile its logical data

model with WVCPRB current data. The vendor should discuss what features are available in both its particular design and its selected database management system to avoid redundant data.

The data schema diagram should be provided in the vendor's proposal for review and evaluation by WVCPRB's technical staff.

WVCPRB requests the vendor to provide both a data dictionary (including table descriptions, field or column definitions and types, defined keys, and value domains) and a schema definition for use by WVCPRB in using the ad hoc query and reporting capability.

Outside of its use of an RDBMS, the vendor should describe the data formats and data languages it plans to use in its proposed solution to support data presentation and exchange. CPRB prefers the vendor to provide a discussion of at least the following:

- The use of Adobe Acrobat Portable Document Format (PDF) for non-editable electronic documents (except images which may be stored in the TIF format specified elsewhere in this RFP)

- The use of the most recent version of eXtensible Markup Language when capturing or authoring document content that requires further automated processing by other information systems and Web-based clients using standard XML browsers

- The ability to import or export standard comma delimited files

- Shared disk files.

2.5.3.3 Integration Architecture and Related Technologies

Integration architecture specifies how various automated applications operating on different platforms can effectively work together. Integration techniques should be used when new application systems need to access existing application systems, while maximizing the investment in existing systems and platforms.

The solution should provide clearly defined application programming interfaces (APIs), such as Web Services, for the purposes of documentation and application integration.

The State of WV is in the process of implementing an Enterprise Resource Planning (ERP) system. The successful vendor should demonstrate the ability to integrate and/or interface with complex, modular systems, such as those commonly found in Enterprise Resource Planning Systems (ERPs).

WVCPRB desires that the solution maintain terminal emulation capability to provide access to WVCPRB's mainframe-based, legacy application during the phased implementation. To clarify, vendors should ensure that WVCPRB staff can perform their work processing with no loss of productivity in:

- The current legacy environment, or

- The new solution environment, or

- Both environments simultaneously.

The system should be developed with sufficient flexibility to permit attachment to all the currently existing systems described in RFP Section 4.2.5 Detailed Information on the Legacy Environment and provide an integration architecture that allows connection to WVCPRB's existing email (MS Exchange) and Directory Services capabilities.

WVCPRB prefers proposed solutions that provide a single point of management for all of the system interfaces within the solution environment. Such an "interface gateway" provides a single point to manage design, execution, security, performance, monitoring, documentation, etc.

A component-oriented architecture enables efficient reuse of existing application assets, faster deployment of new applications, and improved responsiveness to changing business needs. Reusable software components are the building blocks that make a system able to respond quickly to change. While WVCPRB does not currently have architectural components or skills in support of this type of

architecture, the potentially significant business value of this approach is recognized. The current state of component architecture centers on the concepts of Service Oriented Architecture (SOA). There is a spectrum of attributes that indicate degrees of commitment to the SOA theory. These attributes include:

- Use of service interfaces to software components (service implementations). The use of such separately standing and programmatically open interfaces ensures at least a degree of loose coupling and openness for new use of the software component (service) from outside its original context.

- Granularity of business functionality represented by the interfaces. SOA modularity is intended for cross-application use of business components (services).

- Visibility of the interface definitions and entry points for external reuse (cross-application or cross-enterprise).

The following attributes, while not by definition components of SOA, present potential value in a WVCPRB LOB application:

- The use of specific, named protocols, such as simple objective access protocol (SOAP) and hypertext transfer protocol (HTTP. Support for commonly accepted, standards-based protocols can ensure continued technical viability, and improve technical agility.

- The use of named programming specifications, such as Web Services Description Language (WSDL) and Business Process Execution Language (BPEL). Again, accepted, open standards provide durability and flexibility.

- Documentation for each component including a well-defined set of input and output parameters for each interface option provided, and a library, or repository, of information about reusable components

- Modularity, providing a means to support a reuse methodology

- Use of named types of tools, such as Enterprise Service Buses (ESBs) or Business Process Management (BPM) tools

Middleware facilitates and simplifies communication within and between heterogeneous, distributed application systems. WVCPRB does not currently employ middleware technology in this fashion, although WVCPRB *does* use Web Application Servers and Microsoft Exchange, both of which have some functionality that is usually listed as "middleware." There is not currently an Enterprise Service Bus (ESB), message queue architecture or Enterprise Service Registry in use at the enterprise level in WVCPRB. WVCPRB recognizes the value of open standards and the technical and commercial viability of products (as, for example, indicated in Gartner's "Magic Quadrant" evaluations).

Groupware establishes a foundation for collaboration and communication. Collaboration focuses on local and ad hoc workgroups, while communication focuses on sharing information. Groupware is a combination of technologies enabling an organization to create, share, and leverage an accumulated knowledge base. Groupware technologies include electronic mail (email), calendaring and scheduling as well as some newer multimedia technologies such as instant messaging, blogs, and wikis. The comprised technologies should comply to a set of common protocols and infrastructure standards, allowing them to communicate with one another. It is anticipated that the proposed solution can integrate with the groupware technologies (e.g., the Microsoft Exchange email system) that WVCPRB has as discussed in RFP Section 4.2 Background (Current WVCPRB Environment) to the greatest extent possible. WVCPRB envisions the proposed solution as providing the capability for external partners to be able to interact with the proposed calendar and scheduling system.

The vendor should explain the degree to which the proposed solution adheres to the principles listed in this section, and the approach to integrating a component-oriented capability into WVCPRB on both a technical and organizational level. The vendor should also explain the approach to securing transactions across the component architecture. Where the proposal diverges from these principles, the vendor should explain the value to WVCPRB in accepting the divergent approach.

2.5.3.4 Systems Management Architecture

Systems management architecture defines the framework for efficient and effective management of the State's distributed information processing environment in order to support and enhance the productivity of its automated business systems. It identifies the requirements for managing and supporting enterprise-wide technical architecture with primary emphasis on centrally managing distributed systems at geographically dispersed sites. Resources managed include the systems, databases, applications, networks, and Internet components necessary to conduct the automated business functions of the State.

It is preferred that the solution support the system management architecture through the support of Simple Network Management Protocol (SNMPv2) manageable platforms. **WVCPRB greatly desires that the vendor propose and implement application, capacity, and performance monitoring capabilities for all components of its solution.** The management suite should monitor the collective system(s), proactively anticipate potential issues, and proactively alert support staff so that problems can be addressed and avoided.

In addition, the solution should support all other systems management architecture guidelines and standards as specified by West Virginia state standards:

> http://www.technology.wv.gov/about-wvot/Pages/policies-issued-by-the-cto.aspx.

2.5.3.5 Directory Services Security Architecture

Directory Services Security Architecture identifies criteria and techniques associated with protecting and providing access to WVCPRB information resources. It facilitates identification, authentication, authorization, administration, audit, and naming services. WVCPRB's technological resources should be available to users across the enterprise regardless of location or platform. Therefore, it is critical that WVCPRB implement security and directory services in such a manner that its information infrastructure is protected and accessible while, at the same time, its functionality is unimpeded and its business services are readily available.

In addition, it is important that the solution:

● Support the most recent version of Secure Sockets Layer (SSL) for secure communication between Web servers and Web browsers

● Support IP protocol security extension (IPSec) where applicable

● Provide underlying hardware and software that, in providing Directory Services, conforms to generally accepted security practices

● Support the use of the most recent version of Multipurpose Internet Mail Extensions (MIME) for securing email communications where applicable

● Integrate with a directory services infrastructure such as Microsoft Active Directory and supports Lightweight Directory Access Protocol (LDAP) for capabilities such as single sign-on

● Support open, industry-accepted standards for applicable uses of cryptography such as Advanced Encryption Standard, Data Encryption Standard, or Triple DES. More specifically, WVCPRB desires that the solution supports the use of unique IDs that are cross-referenced to encrypted social security numbers.

Furthermore, WVCPRB desires the architecture to permit use of the comprehensive system required to provide public-key encryption and digital signature services also known as a public-key infrastructure (PKI). Encryption pertains as follows:

● Any member data transmitted over unsecured connections

● Any security tables, the breaching of which would endanger the integrity of the system,

● Any passwords stored under the control of the LOB application

● Any other operational data (e.g., assignment of user ID to roles, assignment of roles to permissions, assignment of workflow roles), if not protected from access by a determined user.

WVCPRB will not permit the successful vendor to retain possession of the "master encryption keys" of any encryption system they implement or utilize with their proposed solution. This pertains to any master encryption keys for all environments that contain sensitive or private data as described in Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments.

Finally, because security control impacts the entire enterprise, WVCPRB desires its implementation to be easy to administer, verify, and sustain.

The vendor's solution should comply with Federal law and applicable state statutes with regard to "electronic signatures" and alternate means of authentication. WV Code 39A authorizes WVCPRB to use electronic signatures and alternate means of authentication, and requires WVCPRB to follow these guidelines. The following links to the West Virginia Legislature web site provide complete and current background and directions, as well as West Virginia law, and are provided for vendors to ensure their solution complies with WV Code 39A:

http://www.legis.state.wv.us/WVCODE/ChapterEntire.cfm?chap=39a

The following web site also provides a link to the federal Electronic Signatures in Global and National Commerce Act (E-Sign):

http://www.ftc.gov/os/2001/06/esign7.htm

"http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_bills&docid=f:s761enr.txt.pdf

WVCPRB desires that the vendor's proposed architecture be in alignment with the West Virginia standards. Data should be categorized in terms of confidentiality, integrity, and availability into the following categories (see Section 2.5.6.7 Security and Controls for details on these categories):

● Public

● Internal use only

● Confidential

● Restricted Confidential

2.5.3.6 Platform Architecture

Platform architecture identifies hardware platforms and associated operating systems supporting WVCPRB's business. It describes the platform requirements for building a solution infrastructure as well as the storage architecture associated in maintaining the data generated. WVCPRB desires that the proposed solution adhere to WVCPRB's preferred server environments, including the following:

● Hardware: Hewlett-Packard is the only acceptable hardware vendor

● Software:

Windows Server 2008

UNIX (Hewlett-Packard's HP-UX strongly preferred, Sun Solaris is not acceptable).

Vendors may propose a different platform architecture but should demonstrate its interoperability with WVCPRB's preferred environment as well as ensuring that appropriate training requirements and costs thereof are included in the vendor's response. In addition, WVCPRB desires that the solution support all other platform architecture guidelines and standards as specified by the West Virginia Office of Technology.

WVCPRB requests the following capabilities of the platform the vendor chooses to specify (whatever that platform):

- The platform supports redundant capability with at least one component capable of physical separation at the replication site called for under WVCPRB's Disaster Recovery Plan (DRP)

- The platform also supports the eventual addition and full integration of PDAs and other such remote, mobile devices.

The vendor's response should include a discussion of the vendor's understanding of "high availability" and how the proposed solution provides it.

The solution should support all conceptual architecture guidelines and standards.

As noted in the standards, WVCPRB has no bias for or against Java, .Net, SOA or any other development platform or language. However, we are biased towards solution that provide a good business fit and can be demonstrated to be a mainstream architecture. With that in mind, it is desired that the solution make effective use of reusable components in order to improve flexibility, scalability, and extensibility into applications.

2.5.3.7 Network Architecture

WVCPRB desires that the proposed solution is capable of operating within the WVCPRB network architecture, network software and network management software as described in RFP Section 4.2.5 Detailed Information on the Legacy Environment. WVCPRB is responsible for network operation and hardware.

Where significant changes to design, bandwidth, or capabilities of the WVCPRB network are necessary for the operation of the proposed solution, the vendor should include information and supporting diagrams at a level consistent with the solution architecture information.

2.5.3.8 Accessibility Architecture

The solution ultimately provided by the selected vendor should comply with accessibility standards identified on the following web-sites:

http://www.section508.gov/index.cfm?fuseAction=stds

http://www.w3.org/TR/WAI-WEBCONTENT

The vendor should present in its proposal the modifications necessary to the base system to ensure compliance with each such standard. Every effort should be taken by the vendor to understand the standards identified at the specified web-site and to propose a solution that, once implemented, complies with the standards identified therein.

2.5.4 *Standards*

The sections that follow provide the vendor with an overview of the standards that WVCPRB considers important to be applied in their provision of a new pension administration system.

2.5.4.1 User Interface Standards

The vendor should provide a discussion of how its solution meets the following guidelines:

- The system interface is to be a browser-based, (zero footprint for all users outside of the WVCPRB firewall), client

- The system is to be fully integrated and all subsystems are to be seamlessly interfaced (e.g., no re-keying of a member identifier required when retrieving an imaged member record)

- The application is to have an intuitive look and feel and allow for easy navigation,

- The application is to have a consistent style such that users encountering an operation for the first time should feel that the screen is 'familiar" with common options and capabilities available in the same geographic location on the screen. Specifically the system should demonstrate:

  o Learnability (e.g., intuitive navigation) for all users; solutions which allow flexible, long-term, cost-effective customization of screens to promote the use of familiar, internal WVCPRB "language" as opposed to solutions which "force" users to learn a new "language"

  o Efficiency of use (e.g., speed of navigation through the system, minimal "drill down" to get to the information that is needed, appropriate density of information on a screen to reduce number of screens to navigate, etc.)

  o Memorability, especially for casual users

  Since usability of the product is essential for the LOB solution, vendors should respond how their application's user interface will have an impact on WVCPRB in the long-term. They should describe how it will affect operating costs, staff training time estimates, and productivity. Actual metrics/statistics from previous projects may be provided. (The vendor should describe in their response just how they meet the above requirements. The description should include reference to any standards incorporated in the user interface design and/or testing such as the International Organization for Standardization's Guidance on Usability [ISO 9241-11].)

- WVCPRB desires all functionality exposed to members / retirees through the WVCPRB web-site to have a consistent look and feel, and conform to WVCPRB style standards and branding. The vendor may see an example of that style and branding at the WVCPRB web-site:

  http://www.wvretirement.com

- For any sub-system application utilities (e.g., image scanning) that are client / server based (and justified as such), the application should be able to be minimized. When minimizing the application, all subordinate or "children" windows / panels of the LOB should also be minimized. If a user is performing specific work process, the user should be able to minimize this work, and all related windows / panels for that work should be minimized together – and maximized together at the appropriate time.

- Interfaces should be ADA compliant, see Section 2.5.3.8 Accessibility Architecture.

Examples / samples demonstrating adherence to these standards should be included in the vendor's proposal.

2.5.4.2 Data Exchange Standards

WVCPRB desires that the solution comply with the National Automated Clearing House Association (NACHA) requirements for transactions that are performed electronically (EFTs, ACHs, and others).

2.5.4.3 Name and Address

One of the goals of the project is to move to an environment which should allow for various presentation modes with regard to how data is extracted and formatted. (WVCPRB hastens to point out that this is a discussion of variety in presentation, not storage. The vendor is encouraged to use a single format for storage of all names and addresses, measurements, currency amounts, dates, etc.)

The application should not force a single "name" structure or "address" structure. The application should allow for varying structures based upon the business and user need for that information and the type of correspondence to be generated. As an example, if WVCPRB elects to generate the following with a different name or address structure, the system should not limit this decision:

Table 37: Varying Name and Address Structures to be Accommodated

ITEM	NAME / ADDRESS STRUCTURE	EXAMPLE
Refund Check	FirstName LastName Address 1 City, State, Zip 5	JOHN DOE 111 STATE ST. ATLANTA, GA 87111
Pension Check	LastName, FirstName Address 1 City, State, Zip 5	Doe, John 111 State St. Atlanta, GA 87111
Estimate Letter	Title FirstName LastName Address 1 City, State Zip 5 + 4 Dear Title <<last name>	Mr. John Doe 111 State St. Atlanta, GA 87111-2222 Dear Mr. Doe,
Retirement Form	Information (to be extracted as entered)	john doe 111 state street atlanta, ga 87111
Internal Reports	One Line only – report format	Doe, John Edwards, Steve Erickson, Sally

The application should also support the use of 11-digit ZIP codes required for National Change of Address (NCOA), Coding Accuracy Support System (CASS), and Delivery Point Validation (DPV) list certification.

2.5.4.4 Workflow Sub-System

The vendor should provide a discussion of how its workflow sub-system conforms to the interface specifications of the Workflow Management Coalition (WfMC) and uses BPEL to describe the orchestration of services within the business processes.

An example or sample demonstrating adherence to these standards should be included in the vendor's proposal.

2.5.4.5 Executing Business Processes Regardless of Source of Work

Although WVCPRB requires the LOB processes to be workflow-enabled, WVCPRB desires the ability to access these processes / functionalities outside of the workflow system to also exist. WVCPRB users should have access to this information and these processes not only when the work is initiated from "within" the workflow sub-system (such as through the receipt of a document, e.g., Change of Beneficiary Form), but also on a non-workflow (i.e., ad hoc) basis. The system should be sufficiently flexible to ensure that users can perform their work regardless of the technical state of the workflow sub-system, i.e., such work should be able to be initiated via receipt of a document, a phone message or other event that initiates workflow processes. The work should also be accessible on an ad hoc basis (i.e., not requiring that the user submit a document in order to have it enter a queue from which the user then draws the document in order to execute the work process). At all times the appropriate workflow system should be maintained so that system metrics, status, etc., are updated to reflect work completed. The

workflow system should appropriately manage potentially conflicting tasks, e.g., prohibit processing a change of beneficiary form after receipt of notice of death.

2.5.4.6 Parameterization

Throughout the requirements that are discussed in this RFP, reference is made to various, user-administered, date-sensitive, system-wide, parametrically set numerical values and rules. WVCPRB desires that a system administrator (not an IT staff member) be able to perform their maintenance. Maintaining parameters should require **no** program or code changes. No such data should be hard coded in the system.

As part of their response, the vendor should provide a detailed discussion as to how they intend to meet the parameterization requirement related to data elements, values, and business rules. Further, a list of those data elements, values, and business rules which are supported by the vendor's approach to parameterization (as well as a list of those data elements, values, and business rules which are **NOT** supported by the above) should be provided.

2.5.4.7 Timer Capability

WVCPRB desires that a timer capability be available on <u>all</u> screens and menus and images. This capability should display the elapsed time from the moment that the enter key is depressed or the mouse button is clicked until the screen starts to paint or show the data. Ideally, the information to be provided should include date, start time, stop time, and elapsed time. This capability should be activated/deactivated by a function key, icon, or pull down menu by individual client workstations. See Section 2.5.8.1 System Sizing and Performance Requirements for additional information.

2.5.5 *Hardware*

The sections that follow detail WVCPRB's requirements surrounding hardware for this procurement.

2.5.5.1 Hardware (Introduction)

The vendor should provide in its technical proposal a List of Required Hardware, including the specification and configuration of all of the hardware components required to support the proposed solution, including an appropriately sized development, test, training, QA, and query environment for use during the phased implementation. The list should also include any additional hardware required to provide a development, test, training, QA, and query environment for both the Microsoft Dynamics Accounting solution and the Documentum ApplicationXtender ECM solution[2]. The vendor should include the List of Recommended Hardware in both the technical proposal and in the cost proposal. The List of Recommended Hardware in the technical proposal should only list the required hardware components (as described above) and list NO cost information. The List of Recommended Hardware in the cost proposal should be identical to this but INCLUDE cost information. **Under no circumstances should cost information be listed in the technical proposal.**

WVCPRB considers it critical for the vendor to accept responsibility for acquiring, installing, configuring, and testing all (including accounting and imaging) required hardware in the West Virginia Office of Technology (WVOT) data center and in the separate Disaster Recovery site[3].

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[2] As noted in RFP Sections 4.2.5.3 and 4.2.5.4.1, WVCPRB has single MS Dynamics and ECM production environments. For "second physical environment" purposes, the vendor is to list duplicates of those server and storage environments and sufficient scanner capability to scan incoming mail in degraded fashion.

[3] The power at both the WVOT site in Charleston and at the Disaster Recovery site is fully conditioned. Although the list of specified hardware must include an estimate of the amount of power and air conditioning required, there is no need for any UPS or surge protection on equipment installed in those sites.

Only if WVCPRB chooses to exercise Option 1 will WVCPRB be responsible for the acquisition of the required hardware (Reference Section 2.14.1 Hardware Procurement).

WVCPRB desires that the vendor's recommended hardware configuration support all RFP requirements and be capable of expansion to support future functionality as described in this RFP. The recommended configuration should include the appropriate number of servers, hubs, routers, switches, workstations (desktop PCs), storage, and all other necessary hardware.

The vendor should include the following in its proposal:

● Provide the date (in terms of the number of calendar days after the project start date) by which the vendor intends to have the hardware environment fully installed, configured, tested, and ready for use

● **Indicate agreement that the vendor accepts the responsibility to acquire, install, configure, test, and make ready for use the full hardware environment** – meeting all of the installation and configuration requirements listed above by the date specified per the first bullet. Responsibility for the successful acquisition, installation and configuration of the hardware is that of the vendor. However, the vendor agrees that WVCPRB and WVOT staff will participate in the effort for the purposes of knowledge transfer

● Because WVCPRB "downtime" available to support installation is anticipated to be at a premium, configuration, tuning, and similar or related activities, agree to schedule them in such a way that they do not interfere with WVCPRB or WVOT operations

Should the proposed hardware configuration prove inadequate to support the new solution – in terms of functionality, performance, availability, or scalability, WVCPRB greatly desires the vendor to be responsible for funding such additional hardware purchases as may be necessary to bring the solution into compliance with RFP requirements. Whether the vendor itself purchases the additional hardware or reimburses WVCPRB for its purchase is anticipated to be determined at the sole discretion of WVCPRB – in either case, WVCPRB desires not to incur any additional cost on the part of WVCPRB for the acquisition of any such additional hardware. WVCPRB also considers it critical for the vendor (not WVCPRB, nor the hardware vendor) to accept responsibility for acquisition, testing, installing, and appropriately configuring the additional hardware. WVCPRB will consider any project delays that result from the need to expand / replace the hardware environment as the responsibility of the vendor. The vendor should not anticipate WVCPRB's approval of any change orders relating to such a situation.

WVCPRB's current processing infrastructure includes workstations (desktop PCs) and associated equipment as well as imaging and MS Dynamics servers, some of which is likely to be suitable to support proposed solutions. The vendor should include existing WVCPRB hardware components, to the degree they are suited to support the proposed solution, in the recommended hardware configuration – WVCPRB anticipates that some of the existing hardware is acceptable in the new solution, some require upgrade, and some require replacement and/or augmentation with additional components. **In providing its recommended hardware configuration, the vendor should clearly delineate existing hardware components that are usable as is vs. existing hardware that requires upgrade vs. new hardware components that WVCPRB needs to purchase to support the proposed solution**. Since any hardware components proposed for re-use are currently in production use, any hardware components proposed for reuse should have a clearly defined migration path and timeframe defined.

In their response, vendors are cautioned to include **all** ancillary equipment required by the proposed solution such as cabling, connectors, equipment racks, and backup devices.

2.5.5.2 Servers

The vendor should provide detailed information on all servers required to affect the proposed solution, including number of servers, processor configurations, and speeds. Include number of processors, memory and disk cache for each server. Vendors are cautioned to address all necessary routers, hubs, and other miscellaneous hardware requirements relating to servers

It is the vendor's responsibility in the proposal to recommend an appropriately sized platform to accommodate up to 85 concurrent sessions of WVCPRB staff users (whether internal or external [i.e., working from home or another remote location]), 75 active Wage and Contribution transmissions occurring (i.e., 75 employer wage and contribution reports simultaneously submitted), and 500 concurrent external users accessing the system through the Web – all while still meeting the response requirements described in Section 2.5.8.1 System Sizing and Performance Requirements. WVCPRB desires the proposed configuration to support a strategy to dynamically manage traffic across servers to obtain appropriate load balancing. Further, the vendor should assume a two percent annual increase in the number of concurrent sessions to be accommodated for 10 years after the new system's implementation. If anytime during that period, the proposed solution fails to accommodate the required number of concurrent sessions while still meeting system response time requirements, WVCPRB greatly desires the vendor to fund such additional hardware purchases as may be necessary to bring the solution into compliance with RFP requirements.

Minimum specifications for servers in West Virginia are:

- Rack mounted

- Hewlett-Packard

- 1 Quad Core Processor

- Redundant hot-swappable power supplies

- 4 GB Ram

- Mirrored 146GB Drives for OS

- Any data partition is recommended to be Raid 5 with hot spare or to vendors requirements

- 5 year 24x7 4 hours response maintenance/warranty

- ILO (Integrated Lights Out) card with In Case of Emergency (ICE) license

As noted, web applications which are to be available to reporting units, active members, or retirees should be sized to accommodate 660 concurrent sessions initially (as indicated in the preceding paragraph) and rising to 875 concurrent sessions within five years of the system's rollout.

The vendor is reminded that, in developing its server specifications, WVCPRB desires the proposed solution to include an appropriately sized, fully redundant development, test, training, QA, and query environment for use during the phased implementation. See Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments.

2.5.5.3 Personal Computing Devices and Other Interactive Devices

The vendor should provide basic detailed information on all personal computing devices (e.g., desktop PCs, laptops, PDAs, etc.) required to support the proposed solution. Include processor speeds, memory and disk cache configuration. For each device, the vendor should indicate whether the requirement can be satisfied by existing WVCPRB equipment as is, or if existing WVCPRB equipment requires upgrading (include all upgrade information) or replacement. Please see RFP Section 4.2.5.1 General Pension Administration for quantities and specifications of the configuration of WVCPRB's existing desktops.

WVCPRB believes that its current desktop PCs are adequate to support the new system. Vendors should review the current WVCPRB technical environment (see RFP Section 4.2.5.1) to confirm this belief or to recommend changes and upgrades as necessary. Any upgrades deemed necessary should take advantage of flat-screen technology to minimize use of already limited desk-top space.

2.5.5.4   Storage

The vendor should specify the storage configurations necessary to support the proposed solution. RAID 5 or greater should be proposed. WVCPRB requires use of magnetic storage for the images in the ECM system as well as any report documents stored in the electronic document archive.

As noted in RFP Section 4.2.5.4, WVCPRB currently has an archive of 1.1 million images that is sized for one TB of magnetic storage. WVCPRB anticipates scan volumes to decrease in a well-implemented LOB solution which has the ability to recall information that is currently printed and scanned. See RFP Section 4.2.5.4.3 for a presentation of current scanned image volumes.

While WVCPRB does not currently make use of Computer Output to Laser Disk (COLD) technology, WVCPRB is interested in minimizing the volume of paper reports and desires the vendor discuss the possible use of COLD as an enabling technology – or alternatively, using the imaging application as is done today. The storage capacity recommended for the system should take the use of report storage into account.

In addition, WVCPRB greatly desires that retrieval of electronic document-based member information be available via a single (application-initiated) query. Thus, a WVCPRB staff member should with minimal input such as the selection of a single image icon, be presented with a list of all document-based member data, whether that information was put into the archive via imaging, COLD, or some other technology. Vendors should discuss their document archive strategy which makes this possible.

As noted in Section 2.4.4.25 Telephone-Based Customer Relations, WVCPRB desires the ability to record telephone calls into member records for a period certain. In the list of required hardware, the vendor should list separately the amount of storage required for a year's worth of recorded telephone calls, indexed to the member record. Note that should WVCPRB decide prior to procurement that they require storage for a period longer than a year, they may decide to procure two, three, or even N times the specified storage capability.

2.5.5.5   Printers and Peripheral Equipment

The vendor's hardware specifications should provide sufficient printing capability to support the printing of all reports and documents generated by the system as well as other in-house, system-generated printing needs such as member correspondence. Those specifications should take advantage of the current inventory of WVCPRB's printers and specify only those additional printers that are deemed necessary. To assist the vendor in that determination, WVCPRB provided a table in RFP Section 4.2.5.1.6 of approximate system-generated print volumes which need to be supported by the existing WVCPRB printers until the new LOB solution is put into service.

As a guide, WVCPRB suggests the vendor consider and assess the need for at least the following printing capabilities:

● High speed, duplex-capable, large capacity laser printer(s) for the continued, effective printing of any formerly wide-carriage and multi-part reports (to be located in the Data Center)

● Adequate high or medium-speed laser printers with duplex-capable and large capacity bins for printing of hard copy output, including but not limited to correspondence and medium size reports

● Adequate high-speed laser printers with large capacity bins to support the printing of large-scale reports including but not limited to annual statements, and 1099Rs

● Portrait and/or landscape capabilities enabled by application software printer drivers

● The ability to view large reports such as the retirement check register on-line

● The ability to print to an envelope feeder.

The successful vendor should provide the capability for users (not assisted by IT personnel) to redirect all outputs to any of the appropriate printers or other devices attached to the network in a simple one step

process. In addition, users (not IT) should have the capability to change their default printer for all system output in a simple one-step process.

For an inventory of existing printers see RFP Table 7 WVCPRB Current Printer Inventory.

2.5.6 *Software*

The sections that follow detail WVCPRB's requirements surrounding software for this procurement.

2.5.6.1 Overall Software Requirements

The vendor's proposed solution should include NO software or hardware locks, traps, dongle keys, or similar security measures that would in any way deny WVCPRB full and complete access.

WVCPRB desires that the source code for any software (be it the customized line-of-business application, middleware, a code generator, a specialized I/O routine, or any similar or related item) which is developed by the contractor, or an affiliate company that is 20% or more owned by the contractor, and used in the new system be escrowed on WVCPRB's behalf. The vendor should agree to deliver into escrow application source code with the delivery of each functional rollout phase during the project. WVCPRB considers its acceptance of a phase contingent upon this requirement being met. In addition, once the first functional rollout phase has been delivered, source code updates should be delivered (into escrow) no less frequently than quarterly. Source code for linkages to/from the system (which may be developed by a sub-contractor) is similarly to be placed in escrow. It should be updated and delivered to escrow throughout the duration of the project.

The vendor should indicate in their response their acceptance of the requirements in this section.

2.5.6.2 LOB Application Software

The line-of-business (LOB) application should be described with respect to the following attributes:

- Language
- RDBMS
- Transaction sub-executive (if any)
- Development and deployment environment
- Screen generator
- Report generator
- Middleware
- Any third party tools.

In addition to the above, for each application component proposed, the vendor should answer the following questions:

- Does the application make use of any "middleware," i.e., any proprietary, internally developed layer to permit access to and use of interchangeable relational databases? If so, what is it and is it commercially available?
- What user interface(s) is utilized?
- What application development tools are used? Do tools define the applications? Are tools used for engineering, developing, and/or maintaining the applications?
- What source languages are utilized for the application? If multiple ones are used, describe each and what percent of the entire system is each written in?

- Confirm vendor's intention to deliver <u>ALL</u> application source code (including but not limited to any middleware, workflow software, or imaging software) to an escrow account established on WVCPRB's behalf and in conformance with the schedule as described in 2.5.6.1.

- What data base management system is used? Is it relational? Was the system originally designed with this data base management system or was it retrofitted or back fitted to it?

- What operating system is used on the servers? Clients?

- Confirm that the solution can support Internet Explorer, FireFox Mozilla, Google Chrome, and Opera browsers, including at least the current version and the immediately preceding version of all products

- Provide a brief history of the application. The narrative should include all major events from the original version to present, including events such as original environment, any re-engineering (and why), introduction of an RDBMS, support for a browser-based interface, etc.

- Confirm the inclusion of a date/time stamp, along with an identifier of what logical user-id performed the modification or initiated the unattended process that actually modified the database, for all modifications of data on the database

- Clearly describe the system architecture.

Vendors should include as attachments to their proposals the following:

- A comprehensive list of all documentation (including but not limited to user, system, and operational) delivered with their systems. Include samples (which WVCPRB will return, if so requested) of <u>all documentation products for evaluation</u>

- Screen "snapshots", windows, and screens from the system they have implemented that was most similar to the one being sought by WVCPRB

- A list of <u>all</u> standard reports supplied with the system being proposed, classified as management, operational, or financial. <u>Appropriate samples should be included in the vendor's proposal.</u> Of particular interest is a sample of the member's annual statement produced by the proposed system.

WVCPRB desires the vendor to provide all upgrades and patches to application software over the course of the contract. In addition, WVCPRB technical staff should be trained in the application and installation of such patches and upgrades. Documentation and manual updates, as well as letters of transmittal, should always accompany such patches and upgrades.

2.5.6.3   Source Code for LOB Application Software

The vendor must agree to provide WVCPRB with a perpetual, non-exclusive, irrevocable license to use the LOB software including delivery of the source code. WVCPRB should be provided with an option, at any time (i.e., during the project, during the warranty period, and/or at any time after the end of the warranty) to purchase the source code of the then current version of the LOB application software. The price for the purchase of the source code should be included as a separate table in the cost proposal. (See 3.2.14.3 Option to Purchase Source Code for LOB Application Software

2.5.6.4   Offshore Packages

Given the span and scope of the project, WVCPRB anticipates that vendors may propose a solution that includes one or more off-the-shelf packaged software products that it intends to integrate with the LOB functionality, thereby presenting a "seamless" interface to the system user. However, WVCPRB has a concern about the proposal of packages developed "offshore" – where offshore is defined as anywhere not within the US or Canada.

The potential problem is not foreign authorship *per se*, but rather the suitability of the package's functionality for use in the U.S., the quality and suitability of documentation and training materials, the

availability of software support in the U.S., and the availability of certified training services for U.S. customers, as well as familiarization with applicable federal statues, IRS code, and U.S. practices.

In light of these concerns, vendors should note that WVCPRB anticipates initially looking most favorably on solutions that **do not** include software packages developed offshore. However, if the vendor feels strongly that a foreign-authored product offers significant functional and/or economical advantages, WVCPRB intends to consider and fairly evaluate a solution that includes that product. In that instance, the vendor's proposal should discuss the package's advantages in detail **and** should provide the following detailed information:

● Confirmation that the product and all related literature (such as user manuals, training materials, system documentation) are available in English

● Confirmation that all documentation and training materials match the version or release of the software to be installed

● Indication of when the product was first installed at a U.S. site

● Identification of the number of software support personnel in residence in the U.S. and what guarantees are available in terms of response time and time-to-fix should problems develop with the package

● Identification of the number of certified training personnel resident in the U.S.

● At least five (5) U.S. reference accounts that can be contacted in order to validate the suitability of the product and the customer's level of satisfaction with both the product and the services provided (installation, training, software support, etc.)

Should WVCPRB award a contract to a vendor who included a foreign-authored package in its proposed solution, and problems arise during the project in connection with that package in any of the areas cited above, WVCPRB desires the vendor to be responsible for replacing the proposed package with one acceptable to WVCPRB (as determined solely by WVCPRB), with no change in the project's cost or schedule. In other words, it is WVCPRB's intention that any vendor who proposes to include a foreign-authored product in the solution, bears all of the risk inherent to the selection of the offshore-developed package, and, if necessary the costs to replace that product.

2.5.6.5 Commodity Software Introduction

The vendor should provide in its technical proposal a List of all of the necessary Commodity Software (such as operating systems, database management software, office suite, accounting and imaging software, and tools) – both new and upgrades –required to support the proposed solution. The software products specified should support all RFP requirements (including the multiple environments described in Section 2.5.2   Separate Production, Development, Test, Training, and Query Environments).   They should also be capable of being upgraded to support future functionality as described in this RFP. The List of Commodity Software should clearly explain the number of copies of / licenses for each software product required to implement the proposed solution.

The vendor's List of Software should appear in both the technical proposal and in the cost proposal. The List of Software in the technical proposal should only list the required software components (as described above) and list NO cost information. The List of Software in the cost proposal should be identical to this but INCLUDE cost information. **Under no circumstances should cost information be listed in the technical proposal.** In both instances the list should clearly specify the appropriate number of copies of / licenses for each software product required to implement the proposed solution.

WVCPRB considers it critical for the vendor to accept responsibility for acquiring, installing, configuring, and testing the required software on the hardware already installed by the vendor at the

WVCPRB-specified location(s)[4]. **Only if WVCPRB chooses to exercise Option 2 will WVCPRB be responsible for the acquisition of the required hardware (**Reference Section 2.14.2 Commodity Software Procurement).

Should the vendor's commodity software (or the version specified or the number of copies / licenses indicated) prove inadequate to support the new solution – in terms of functionality, performance, availability, or scalability – WVCPRB greatly desires the vendor to be responsible for acquiring such additional software as may be necessary to bring the solution into compliance with RFP requirements at no additional cost to WVCPRB. In such a situation, WVCPRB also considers it critical for the vendor to accept responsibility for installing and configuring the additional software. WVCPRB will consider any project delays that result from the need for the vendor to expand / replace commodity software to be the responsibility of the vendor. The vendor should not anticipate WVCPRB's approval of any change orders relating to such a situation.

WVCPRB's current processing infrastructure includes numerous commodity software products, some of which are likely to be suitable to support proposed solutions. The vendor should include existing WVCPRB commodity software products, to the degree they are suited to support the proposed solution, in the List of Commodity Software. WVCPRB believes some of the existing software is acceptable in the new solution, some require upgrade, and some require replacement and/or augmentation with additional components. **In providing its List of Recommended Commodity Software, the vendor should clearly delineate existing commodity software products at WVCPRB that are usable as is vs. existing software that requires upgrade vs. new commodity software products needed to support the proposed solution.**

2.5.6.5.1 Operating System

WVCPRB desires operating system level software to be included in the new solution to be consistent with the platform architecture discussion (see Section 2.5.3.6) and should be described by the vendor in the proposal, including version / release information and the vendor's rationale for selecting each proposed product.

Each platform's operating system should be a stable, proven operating system. While it is not mandatory that all platforms use the same operating system, seamless interfaces between each should be provided. Further, the number of different operating systems to be maintained and supported by WVCPRB will be a significant factor in evaluating the proposals, with fewer (preferably one) operating system(s) much preferred.

2.5.6.5.2 Network Software

WVCPRB also desires proposed Network Software to be consistent with the Network Architecture discussion in Section 2.5.3.7. Vendors should propose the most current and appropriate version of the following network system software or equivalent alternate software of greater functionality:

● Network operating system to support WVCPRB end users, including remote dial in access users, plus vendor development personnel

● Ability for non-WVCPRB personnel (such as visitors, vendors, and trainers) to use the WVCPRB network for Internet access only

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[4]   The sole exception to this requirement will be the installation and configuration of the accounting and imaging software on the second physical environment. That software must be installed by the third party Microsoft and Documentum partners who are currently (and will continue to be) responsible for WVCPRB's accounting and imaging software support. Given appropriate notice, WVCPRB will arrange with those vendors to have them available to perform appropriate installation and configuration of the packages on the second environment under the successful LOB vendor's direction.

● Other software as proposed, discussed, and specified by the vendor, including but not limited to test script generators and drivers

● Hub or Ethernet Switch software.

2.5.6.5.3 Relational Database Management Software

Database management capabilities should be included in the vendor's proposal. The vendor's solution should be based on current, proven database technology and be able to store all data elements using logical views to provide varying associations of data elements. WVCPRB desires that database management capabilities include comprehensive data dictionaries (delivered by the vendor on a phase-by-phase basis) and data models that can be used as reference by end-users as well as programmer/analysts. Also required is the ability to cross-reference fields and files, sorted and/or indexed by a variety of keys, as well as all tables (rows and columns). Version and release should be specified.

Vendors should provide in their proposals the data structure / logical data model utilized in the solution being proposed. Further, they should discuss what features are available in both their particular design and their selected database management system to avoid redundant data. The degree of redundant data should be discussed.

The data schema diagram should be provided in the vendor's proposal for review and evaluation by WVCPRB's technical staff.

The vendor should propose and must provide both a data dictionary (including table descriptions, field or column definitions and types, defined keys, and value domains) and a schema definition for use by WVCPRB in using the ad hoc query and reporting capability.

2.5.6.5.4 Software Version Upgrades During the Life of the Project

As described in RFP Section 4.2.4.2.4 Current System Refresh Policy, WVOT implements new versions of operating systems and patches as they are released by their vendors and subsequently tested by WVOT. They are rolled out to the user community upon the successful completion of the testing. WVCPRB desires the vendor to be able to accommodate such newer versions of operating systems and patches in concert with the WVOT deployment in its production environment. At least six weeks' notice of such rollouts will be provided.

2.5.6.6 System Software Tools

System tools to be included in the proposed solution should include, but not be limited to:

(1) Performance measurement / capacity planning tools – on several discrete levels:

o The vendor should include tools that record on-going performance information without significant impact on system performance. WVCPRB anticipates system response time to be maintained while such tools are in use. These tools should also include reporting capabilities to show trends of all significant system resources over time, reflecting history by date and by time of day, as well as the capability to make projections based on cumulative history

o The vendor should also provide real-time performance analysis tools, which can be used to trouble-shoot performance problems as they occur. WVCPRB anticipates system response time to be maintained while such tools are in use.

(2) Operations support tools – the vendor should include a variety of tools that assist and enhance computer operations, including:

o Job scheduler - capable of automatically initiating jobs based on time of day, day of week, or calendar date and/or the successful completion of "predecessor" events

- o Comprehensive backup and restore functions at the system, volume, directory / catalog (and subdirectory / sub-catalog), and discrete file levels for all media on all platforms (making use of the WV Office of Technology-supplied system backup capability as described in RFP Section 4.2.5.6.3).
- o Export/import capabilities that support straightforward transfer of files (and extracts of files) among the various hardware components, i.e., XML or comma delimited ASCII files
- o Report generator or conversion tools capable of automatically converting reports to PDF format.

(3) Intruder logging and alert software for all platforms should be provided. The software should log all connections to any platform, including identification of user, point of connection, time, and duration of session. WVCPRB should be able to direct the software to monitor and record all activity that occurred during a session, based on user identification code or point of connection. In addition, the software should alert operations whenever attempted and "failed" log-ins exceed a user-defined threshold. WVCPRB anticipates system response time to be maintained while such tools are in use. For additional information in this regard, please refer to Section 2.5.8.1.7 which discusses network vulnerability assessments.

2.5.6.7 Security and Controls

Note that in addition to the platform security and control requirements outlined below, WVCPRB also desires that the vendor comply with the functional audit and control requirements described in Section 2.4.5.2.

Prior to the authorization of the new system, WVCPRB envisions the following controls to be in place:

- Completion of the Security Accreditation and Certification (see Section 2.13.3.4 IT Security Certification and Accreditation
- Mitigation of all relevant risks identified in Risk Assessment (see Section 2.6.3.10 Risk Management)
- Establishment of rules of behavior
- Full development and testing of any contingency plans
- Development, review, and update of the Security Plan (see Section 2.13.3.3 System Security Plan).

The system should be designed to control and limit access via logins and/or other security mechanisms. Access control, and integrated security in general, should be managed by role rather than by authorizing a specific individual.

The principle of least privilege should be in effect. WVCPRB desires that critical functions be divided among different roles so that no one individual has all of the necessary authority or information that could result in fraudulent activity.

The LOB solution should provide the capability for the system administrator to generate a status report detailing the values of all configurable security parameters.

Throughout the system, the system administrator should be able to provide access and restrictions based on individual user roles. At the least, the LOB solution should provide the following controls:

- Transaction access
- Process access
- Transaction approval process
- Workstation location access
- Workstation time restriction
- Restriction of user access to operating system, system files and utilities
- Restriction of user access to security files and resources

- Prevention of users from elevating their privileges or managing their own access to resources
- Restriction of access by job function
- Restriction of access by organizational unit.

In terms of the types of access that may be granted, at least, create, read, update, execute, and/or delete access should be available, but WVCPRB should also be able to restrict user access to only those necessary to perform job duties.

WVCPRB desires that the vendor populate security repositories and associated them and their roles into the system using an appropriate security administration tool, and provide written affirmation certifying that it has done so prior to any User Testing or production activities. The vendor should work closely with WVCPRB staff to define the roles necessary to perform all required business functions.

The solution should provide support of LDAP or SSO authentication. The vendor should provide a description of the method(s) of authentication provided and how that authentication appears to the user.

The system should provide an advisory warning message on the login screen regarding authorized and unauthorized use of WVCPRB'S business information and the possible consequences of such violations.

Upon authorization of the login user name and password, the system should display, for that user name, the date and time either of the last successful login or the number of unsuccessful attempts to access the system since the last successful system access.

In addition to the West Virginia Office of Technology reference for Active Directory password requirements and criteria that can be found at:

<center>http://www.technology.wv.gov/support/Pages/PasswordCriteria.aspx</center>

the vendor should comply with the material provided below.

In general, the system should not allow simultaneous logins with the same user name and password. Should a user try to log in more than once, the system should ask him/her if he/she wishes to terminate the active session. If the answer is yes, then the system should terminate the active session and establish a new session. If the response is no, the login is not allowed. However, WVCPRB notes that in the current environment, IT support personnel, called to a user's desktop to diagnose a problem, are permitted to log in on that desktop with their own user-id even while maintaining the session they may already have open (but locked) on their own desktop. The vendor should describe how WVCPRB can continue to provide this level of support while adhering to the single login policy stated above.

Either the user logs off the system or is automatically logged out of the system after a user administrator defined period of idle time (the maximum idle time value should be a parameter modifiable by the system administrator). The system should provide a notification one minute prior to a time out. Whether the user logs off or the system logs the user off after the idle time threshold has been exceeded, the system should then ensure that all objects created for the user at the back-end are destroyed and that the system exits cleanly.

After multiple unsuccessful login attempts, WVCPRB desires that the system:

- Disable the user account for a period of time previously defined by the security administrator
- Record the event for audit
- Inform the user of a contact who will unlock the account – or provide another means of authenticating the user password.

Passwords should be at least eight characters in length, include both letters and numbers, and not be case sensitive. Passwords should not be displayed in the application at any time. The system should have the ability for passwords to automatically expire after a specified period of time and should prompt users to change their password several days before they are due to expire. When changing a password, the user should enter the old password once and the new password twice. If the password change fails,

the user should be informed that the request to change the password has failed and the reason for the failure, in plain English. Then the user should be advised to try again by logging out and logging back in. Passwords should be stored in an encrypted manner so that they cannot be obtained by WVCPRB systems maintenance personnel or any unauthorized intruder who gains access to the system.

If the user forgets his password, the system should supply a password Q&A to assist in remembering – and if that fails as well, the system administrator should be able to reset the password to a temporary value. The system should disable any account with a temporary password that is more than 8 days old.

WVCPRB desires the system to provide tools for the system administrator to manage user accounts, including such tasks as resetting a password and activating, suspending, or deleting a user account. WVCPRB desires that these functions be limited to only the system administrator or other well-defined privileged users.

The system should have the capability to suspend or activate a user account. This may occur for the following reasons:

- Account is locked out after password is entered incorrectly more than three times

- If the user temporarily is not entitled to access

- The account is suspended by a systems administrator, for example if a security breach is suspected

- The account has been inactive for an extended period of time.

WVCPRB desires that the system provide the capability to ensure that relevant information about actions performed by users can be linked to the user in question in sufficient detail so that the user can be held accountable. The system should maintain information sufficient for after-the-fact investigation of loss or impropriety and should provide individual user accountability for all security-relevant events. The system should protect this information from unauthorized access or modification.

It is desired that the system provide tools for the system administrator to monitor the activities of specific terminals or network addresses in real time.

The system level log should allow review of key security events, including:

- Logon and logoff of users, including failed logins

- Change or reset of passwords

- Creation or deletion of users

- Amendment of user rights

- Suspension or activation of user accounts

- Archiving procedures.

The system administrator should be provided the capability to independently and selectively review the actions of any one or more users, including privileged users, based on individual user identity.

WVCPRB desires the system to provide a real-time capability to monitor and log the occurrence or accumulation of security-relevant events that may indicate an imminent security violation and immediately notify the system administrator when events exceed established thresholds.   If the occurrence or accumulation of these security relevant events continues, the system should take the least disruptive action necessary to terminate the event involved.

The system should provide an interface for the Security Administrator to manage user accounts. The interface includes such tasks as resetting a password and activating, suspending or deleting a user account.   These functions should be limited to only the Security Administrator or other well-defined privileged users.

There should be a reporting mechanism that allows security administrator(s) the ability to report the current security access for any individual or group of individuals by role for an on-going (annual) security review or on demand. One should be able to select an individual or a group of individuals, by name, role, organizational unit, or privilege to generate such a report.

Finally, as WVCPRB envisions the proposed system to be browser-based for both internal and external users, the vendor should discuss its solution's approach to safeguarding personal and private information (as discussed in Section 2.7.1 Data Security) from fraudulent efforts to gain access to such information. The vendor should provide methods to encrypt, redact or otherwise secure such information with respect to its level of confidentiality/importance and not only prevent unauthorized access but alert authorities of access attempts.   That discussion should consider WVCPRB categorization of data in the following levels:

- **Public** - Public information that may be made freely available, unrestricted, and has been approved for release to the public. However protecting the integrity of the information on the Web site is important (e.g., protection against hackers who seek to deface the Web page or change data). Examples of public data include information in the public domain, published annual reports, and press statements.

- **Internal use only** – Information that is accessible to and used by WVCPRB personnel only, without restriction, in the performance of their job duties. Examples include internal memos, minutes of meetings, internal project reports, non audit work papers, audit plan, procedures.

- **Confidential** – Confidential data that is sensitive information such as: human resource data, audit findings and conclusions that are not ready for distribution, as well as internal audit working documents, accounting, and sensitive customer information. Examples include:

  o Private in nature, e.g., Social Security number, driver license or non-driver ID, account number, credit or debit card number with a security code (PIN) or account password

  o Personal in nature, e.g., payroll information (individual), retirement system information (beneficiaries)

  o Medical data, healthcare information, client reports

- **Restricted Confidential** – This is highly sensitive internal information such as: Investment strategy; legislative proposals; investigations; information protection review and penetration test findings; certain audit findings and conclusions that are not ready for any distribution; certain personnel/labor management actions. Access to this information is highly restricted and distribution is controlled to a very select few.

2.5.7 *Installation and Configuration*

Two existing data centers are available at WVOT to accommodate the installation of new production and disaster recovery hardware.   As part of their response to the RFP, vendors should stipulate their requirements to support the vendor's proposed solution (including but not limited to physical floor space, air conditioning load, power requirements, fire suppression, smoke, water, and heat sensors).   This information should be presented as an attachment to the vendor's proposal.

The vendor should commit to be responsible for providing, and should (in the cost proposal) propose ALL costs associated with, the following installation services:

- Inventorying, uncrating, setting up, and connecting any new equipment and software and ensuring that all the proposed equipment and software are fully operational

- Labeling all hardware with simple labels including the server name and describing the function of the equipment; examples include but are not limited to "AppServerP – Production LOB Server" and "DBServerD – Development Database Server." Such labeling should be done in a form compatible with WVCPRB's and WVOT's existing naming conventions and signed off on by WVCPRB/WVOT prior to implementation

● During the period of "dual cohabitation" between the existing system and the new system, maintaining PC workstation access to both environments, but NOT for maintaining WVCPRB's legacy applications

● Installation, burn-in, and checkout of all PC, server, and related hardware and software

● Delivery and installation of all additional equipment (including but not limited to memory, cables, and connectors) required to establish the proposed configuration. WVCPRB considers failure on the part of the of vendor to include all components to implement a complete, working system, to be cause for the vendor (contractor) to make any necessary additions at no cost to WVCPRB

● Attaching all proposed devices to the network. This includes but is not limited to the running of and installation (in the computer room – up to the patch panel) of all required cables, hubs, routers, and modems. This requirement includes upgrading (as necessary) and integration of any existing equipment retained in the new solution. All jacks, connections, connectors, ports, platforms, PCs, modems, and similar or related items should be clearly labeled using industry standard methodologies and labels as approved by WVCPRB/WVOT

● Providing a schematic / network diagram of all platforms, servers, hubs, repeaters, modems, client PCs, printers, and similar or related items, which should be developed and maintained using an automated tool or package. The tool should be delivered to WVCPRB and maintained by the vendor. WVCPRB desires that the vendor update the network diagram from the time of installation of the infrastructure though final acceptance of the new system no less frequently than every 90 days or whenever major new hardware or software changes occur. The vendor should include a sample of similarly prepared schematics with its proposal

● Establishing the appropriate security level and access permissions / restrictions for each user on the system based on information obtained from WVCPRB technical staff. The vendor is also responsible for establishing system security measures necessary to protect operations against unauthorized internal or external access into the communications, servers/platforms or operating system infrastructure

● Establishing a menu-driven GUI interface, in coordination with WVCPRB technical staff, with standard scripts, icons, APIs, and similar or related items for each user which will provide user access to the proposed software with full printing capabilities and the capability to route print from any workstation to any printer attached to the network, including remote users and remote printers. For example, a benefits counselor logged into the system from a remote location should be able to print a benefits estimate on a printer attached to his or her laptop computer or other remote device

● Documenting script, API, icon, and other set-ups

● Providing racks for the mounting of all equipment in a neat and orderly manner in the computer room. WVCPRB desires the vendor to install all new equipment in such racks. The vendor should provide an inventory of same.

WVCPRB desires the successful vendor to incorporate into its schedule 15 business days at the end of the hardware and commodity software installation period for WVCPRB's review, testing, and acceptance of the hardware and commodity software. During that period WVCPRB will assess installation and configuration of the system hardware, cabling, and related components, as well as the commodity software. Prior to acceptance, WVCPRB desires the successful vendor to evidence that all hardware components have been registered with the hardware manufacturers and all commodity software products have been registered with the commodity software publishers under WVCPRB's name as owner.

Vendors should understand and agree that WVCPRB anticipates a minimal amount of "downtime" to be available to them to support installation, configuration, tuning, and similar or related activities. Thus, vendors should plan on completing this work during evening and weekend hours.

The vendor should state in its cost proposal its hourly rate for customization of scripts, APIs, software, and similar or related items over and above that required in this RFP.

2.5.8   *Operational Requirements*

Given WVCPRB's expectations of greatly increased member self-service via Web-browsers and the like, WVCPRB believes that the application architecture should support member Web-based access near 24 hours a day, 7 days a week, except during those times specifically scheduled (by WVCPRB) for system maintenance, backup and downtime.

2.5.8.1   System Sizing and Performance Requirements

The vendor should specify the configuration of hardware and software platforms on which it plans to implement the new solution, as well as their configurations.

The vendor should recommend an appropriately sized solution to accommodate the following:

Table 38: Solution Sizing

TYPE OF ENVIRONMENT	POTENTIAL WVCPRB USERS (WHETHER ON-SITE OR OFF-SITE, I.E., REMOTE LOCATIONS)	POTENTIAL EXTERNAL USERS (EMPLOYERS AND OTHER BUSINESS PARTNERS)	POTENTIAL EXTERNAL USERS (MEMBERS, PENSIONERS, BENEFICIARIES)
Production	85	500	85 + 500 + 78,500 + 52,000 + 850
Development, testing, training, other	85 / 4.0	500 / 4.0	100

In the table above, note that "potential users" means the count of users that could possibly, if appropriately authorized, log in to the system. Also, as discussed in Section 2.4.4.10 Employer Reporting, employers and other business partners may be logging into the system, at least on a weekly, bi-weekly, or monthly basis according to their payroll frequencies. **It is up to the vendor to appropriately size the solution to accommodate the <u>actual</u> number of users, based on the potential number of users listed above along with the likelihood of concurrent usage.**

The vendor should consider current workload and resources as described in RFP Section 4.2 Background (Current WVCPRB Environment) when projecting appropriate sizing.   The proposed configuration should support a strategy to dynamically manage traffic across servers to obtain appropriate load balancing. Further, the vendor should assume a two percent annual increase in the number of potential users.

WVCPRB's objective with respect to multi-task, typically unattended processing is simple – all processes described in the RFP and the proposal should be able to be run concurrently while the system continues to meet response time and elapsed job processing requirements. To that end, WVCPRB requires:

● Response time requirements are anticipated to be met independent of what other jobs, processes, or scripts are being executed.

● On-line response time requirements are anticipated to be met independent of how many WVCPRB users are on line, how many Web-based users are on-line, and independent of what processes or scripts are being run – such as wage and contribution edits, wage and contribution posting, interest posting, annuity payroll running, etc.

● WVCPRB desires elapsed time performance requirements for various process-intensive activities to be processed within the following timeframes:

  o Wage and contribution edits: 40,000 members/hour
  o Wage and contribution posting: 40,000 members/hour

  o   Interest posting: 40,000 members/hour
  o   Annuity payroll processing: 40,000 retirees/hour
  o   1099 generation: 40,000 individuals/hour

The preferred vendor's solution should be architected, configured, and sized so that ALL functionality (including employer reporting) can be processed on-line in real time – both editing and updating. In general, solutions that require overnight batch jobs to update the LOB database will be rejected. During system design, WVCPRB may consider permitting a small number of unattended process routines for very limited purposes providing the vendor can justify the proposed exceptions and can ensure that those exceptions are not in any way anticipated to compromise WVCPRB business processes. WVCPRB's expectation is that unattended processing should be confined to end-of-period jobs such as the production of monthly annuity payroll checks, year-end 1099s, and annual member statements. WVCPRB desires the vendor to provide a complete and comprehensive list of all such unattended processes in its proposal, along with an explanation of why these processes have to be performed in such a manner and assurance that those unattended processes are not, in any way, anticipated to compromise WVCPRB's real-time, interactive business processes.[5]

WVCPRB desires the vendor's proposed solution to provide near 24x7 availability for all Web-enabled capabilities. Vendors should allocate no more than four hours per week of scheduled **Web site downtime**. Degradation of WVCPRB's current system availability is not acceptable.

The platform(s) should be sufficiently sized and appropriately configured (in terms of memory, disk capacity, processor speed, and similar or related criteria) to meet the performance requirements specified below for a period of 10 years after the end of the warranty period defined in this RFP, based upon an anticipated growth in volume of two percent per year. WVCPRB desires t**he vendor** to provide all additional hardware and/or hardware upgrades necessary to meet the following system response time and performance criteria within thirty (30) days of being informed by WVCPRB that one or more of the criteria are not being satisfied:

● WVCPRB desires the vendors to ensure response time averaging two (2) seconds or better, and never more than three (3) second response time, for <u>all</u> on-line activities. Response time is defined as the amount of time between pressing the RETURN or ENTER key or depressing a mouse button and receiving a data-driven response on the screen, i.e., not just a message or indicator that a response is forthcoming. **For this purpose, WVCPRB intends for response time to be measured on a PC permanently connected directly to a private LAN segment in the server room – in order to eliminate any issues that could be attributable to WVCPRB's LAN traffic, or other software that may be running on users' workstations over the LAN, or other similar issues. Vendors should include this PC in the list of recommended hardware to be included as part of the project's technical requirements.**

● The following example is excluded from the two (2) second response time requirement: Advanced search queries utilizing wild cards and Boolean logic. Example: Search for last name like "Smith%" and first name not like "Sa%."

● System uptime as specified in Section 2.5.8.1.2 High Availability Requirements

● WVCPRB anticipates any unattended process being executed to be completed in a reasonable amount of time and should also take into consideration recovery time, if the unattended process should fail. Unattended processes should complete in a timely fashion to meet business requirements and business calendars.

These response times should be attained while running load tests which include mutually agreed-upon (by the successful vendor and WVCPRB) volumes for WVCPRB users, employers, other business

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[5]   Such assurances must confirm that regardless of which and how many of the unattended processes or scripts are running simultaneously in the background, WVCPRB's interactive performance requirements of the system will continue to be met.

entities, members, pensioners and beneficiaries based on a percentage of potential users as listed above in Table 38: Solution Sizing.

In sizing their proposed solutions, vendors should provide all background information to support their conclusions regarding the amount of system resources needed in the following areas:

- Servers
- Speed
- Number
- Processors
- Workstations (desktop PCs)
- Backups
- Memory
- Storage
- Network traffic
- Cabling.

If WVCPRB requires additional runtime improvements to meet performance requirements stated in this RFP, the vendor should cooperate fully and support any such requests without delay and at no cost to WVCPRB.

2.5.8.1.1   Scalability Requirements

The preferred solution should provide the ability to scale the environment beyond that necessitated by the current growth predictions through the addition of hardware (or hardware components such as CPU and RAM), further partitioning the application to scale across hardware, or other means.

As stated previously, the solution should be able to meet the projected growth in processing volume of at least two percent per year for a period of 10 years following the end of the warranty period with no additional cost to WVCPRB.

2.5.8.1.2   High Availability Requirements

WVCPRB believes it critical for the solution to provide for a system uptime of 99.9%, or near 24 hours a day, seven days a week, for all major functions proposed**.** Activities such as maintenance, backups, system change migration, unattended processes, etc. should generally take place while the system is "up," thereby minimizing the need for scheduled downtime. For the 0.1% downtime, WVCPRB anticipates that 90% should be scheduled. From a typical user standpoint (both internal WVCPRB staff and external customers), the system should be reliable and robust to promote user acceptance.   WVCPRB is interested in the vendor's view of this requirement in relationship to the potential overall cost and complexity of the system.

Vendor should specify how availability is measured, under what conditions this guarantee may not be met, and the remedies available to WVCPRB if it is not met.

To the extent that the proposed system is distributed, all components should be designed redundantly, so that the system maintains availability through any single component failure.   Certain common infrastructure components (DNS, routers) that provide the desired level of availability may already be in operation and available within WVCPRB. WVCPRB will be responsible for updating/maintaining physical data center capabilities including, but not limited to Data Center(s)' cooling system, electrical system, IT equipment, and physical structure of the building(s).

The vendor should ensure that processor and database intensive processes, such as month-end annuity payroll production or interest application, are completed within four hours from their initiation – and that such jobs have no impact on interactive access performance even while they are executing.

2.5.8.1.3   Planned Downtime Requirements

To explain how planned downtime issues can be minimized within the new solution, the vendor's proposal should address:

- How the solution minimizes (or removes) the need for maintenance of architectural and operational infrastructure. This includes online maintenance tools, as well as procedures and techniques to shrink scheduled maintenance windows

- Maintenance activities for hardware, operating system, software, application, database and network components

- Upgrade activities for hardware, operating system, software, application, database, and network components.

Vendors should include a methodology to demonstrate the on-line maintenance techniques applicable to the planned downtime areas identified above.

2.5.8.1.4   Recoverability Requirements

Vendors should include in their proposals information on recovering from failures if the proposed solution components or procedures fail. The response should include recovery types and levels offered by the proposed high-availability solution. Examples include:

- Services offered, such as 24×7 service contracts

- Types and levels of service provided

- How a vendor responds to failure scenarios, including how components are replaced

- Restore/recovery procedures

- Tools employed to restore the database and application to the users.

To confirm the proposed solution's ability to meet reasonable recovery requirements, vendors should provide recovery time estimates. Examples (to be met) include:

- Full database recovered within 24 hours

- No individual table recovery of more than 4 hours

- Recovery of full on-line imaging capability within 24 hours.

Furthermore, provision of interim recovery should be a feature of the system. For example, should a process be 95% complete when the system fails, the process should have been check-pointed and should not have to be re-run in its entirety. The vendor should describe in its response how this capability is achieved.

2.5.8.1.5   Operational Support Requirements

Operational support encompasses the personnel, procedures, and tools for day-to-day operational support, maintenance, upgrades, and monitoring of the system.

To address how operational support issues can be minimized within the new solution, the proposal should address how the proposed solution:

- Provides an environment that leverages appropriate operations management tools, including both day-to-day systems management tools (e.g., performance monitoring) and capacity planning tools

- Includes vendor-provided tools for monitoring the system and vendor assistance in setting operational standards for those tools

- Offers an environment that minimizes the cost and work effort of operations support.

Vendors should specifically discuss pertinent operational architecture aspects of the solution, including prevention of failures, meeting availability requirements, general keep-alive system activities, and scheduled or planned downtime.

2.5.8.1.6 Security Considerations

WVCPRB will not accept a solution to which acknowledgement of security concerns are "bolted on" as an afterthought. WVCPRB greatly desires that security be designed into the solution and assist in providing a protective shell within which the solution operates effectively – and securely. To that end, WVCPRB desires that the successful vendor highlight as part of every requirements and design document those aspects of the particular set of requirements and design that pertain to security. Starting with, and in the context of the Security Plan (see Section 2.13.3.3 - System Security Plan), WVCPRB reserves the right to review all requirements documents for security concerns and design documents for answers to those indicated concerns. In addition, WVCPRB plans to conduct code reviews of delivered code to ensure that the code is written to prevent exploitation by hackers and other such attacks. In addition, the QA/IV&V vendor described in Section 2.6.1.2 Project Oversight will provide assistance in reviewing the design, development, testing, and rollout of any and all security concerns.

2.5.8.1.7 Network Vulnerability Assessment

Protection of member information through means such as determination of system vulnerability is a critical issue for WVCPRB. The successful vendor is responsible for providing a secure network environment. To ensure the security of the environment, WVCPRB desires the vendor to specify, provide, install, and configure suitable hardware and software tools including, but not limited to, virus protection software, patch management, firewalls, secure VLANs, and intrusion detection systems (IDS) if it is determined that WVCPRB's current network security systems are not appropriate for the new LOB.

A third-party organization, selected by WVCPRB, will, at a minimum, conduct periodic vulnerability assessments of the network. These assessments will be conducted at the following intervals:

- At the time of the initial installation of the infrastructure
- At the time of the completion of **each** functional rollout phase
- Once during the warranty period prior to final handoff of the solution to WVCPRB.

Thus, if there are two functional rollouts, there will be a minimum of four separate vulnerability assessments performed.

The scope of the vulnerability assessment will include at a minimum, a scan of external entry points into the network, a review of all devices on the network with static IP addresses and a random 10% sample of the DHCP devices and, to the extent they apply, a review of server, firewall, and IDS configurations. The definition of the full scope of the assessment will be the responsibility of the third party organization performing the assessment and approved by WVCPRB.

Upon completion of the assessment, the third party organization will review all events with WVCPRB personnel, determine which of the identified shortcomings are false positives and which actually need repair, and agree upon any remaining shortcomings. In the event there remain shortcomings in the network security configuration, the successful vendor will be immediately notified. At that point, WVCPRB considers the vendor responsible for rectifying all remaining shortcomings within fifteen (15) business days of being advised of them. The rectification effort may consist of any combination, or all, of the following elements: additional hardware components, additional software tools, installation services, and/or configuration services. It should include suitable testing to confirm to WVCPRB's satisfaction that all of the identified security shortcomings have been eliminated. Subsequent to the initial fifteen day rectification effort, the third party organization will again assess network security. If additional shortcomings are identified and further repair deemed (by WVCPRB) to be necessary, the successful vendor will be so informed and be given ten (10) business days to provide final rectification. WVCPRB believes that all costs associated with any rectification effort (including any and all verification by the third

party network verification organization that said rectification was sufficient) should be borne by the successful vendor. Any delay caused by the assessments being conducted under this Section will not constitute a WVCPRB-caused delay.

In the event that the vendor is unable to resolve all network security issues to the satisfaction of WVCPRB and the third-party assessment organization in two iterations as described above, WVCPRB reserves the right (and will notify the vendor of its intent) to engage the services of another (different from the organization doing the security and vulnerability analysis) third-party organization to resolve all remaining network security issues. In this situation, WVCPRB believes the vendor should issue a credit to WVCPRB for the full amount of the cost of the third-party organization's efforts to correct the situation. The credit should be applied to the first invoice issued by the vendor to WVCPRB following notification to the vendor of the amount expended on the additional assessments and/or third-party services. WVCPRB will make reasonable efforts to insure that the cost of any goods or services procured by WVCPRB under this Section (which may ultimately be borne by the successful vendor) are reasonable.

2.5.8.2 Software Version Control

Software version control software should be provided. At the least, automated date/time stamping and labeling of various versions should be supported. At least three (3) generations should be maintained on-line. The software version and configuration control tools and methodology should be:

- An industry standard set of tools and methodologies and
- Described and discussed in the vendor's proposal
- Able to track source code changes between versions for audit and control purposes.

2.5.8.3 Interface Requirements

2.5.8.3.1 Remote Access

WVCPRB believes that the community of remote access users is divided into five groups:

- **Members and Retirees** – Individuals with controlled access to their member record as well as a range of administrative functions, such as benefit estimates and address change requests
- **Employers** – Organizations who require remote access in order to complete Web-based reporting of member wages and contributions along with any administrative tasks related or unrelated to wage reporting
- **Other External Stakeholders** – Individuals (some third party payees, other retirement systems, etc.) who require access to view, extract, or submit information pertaining to a member(s), pensioner(s), or beneficiary(ies)
- **Staff Members** – WVCPRB employees who work from home or who log in from remote counseling and member education sites
- **IT Support** – those members of the vendor (or software or hardware support) staff who have been contracted to provide (sometimes remote) support of the system.

WVCPRB further believes that all five groups should be given access via the Internet. Such access would mean that staff members, for example, logging into the WVCPRB system from outside the WVCPRB office would continue to have access to the same services (such as office automation, LOB application, workflow, imaging, and email) that they enjoy while sitting at their desks.

Vendors should describe in their proposals how the solution they propose would effect the required remote access for all five groups described above. The description should include discussions of:

- The particular features to which each group of user would have access

- How security would be managed for members of each group

- The advantages and disadvantages (both technical and user-related) of such access and how the vendor has overcome the challenges posed by remote access in prior installations.

2.5.8.3.2 Other Applications

The new pension solution should interface with the following applications:

- The existing Microsoft Dynamics financial application (as described in RFP Section 4.2.5.3) at the DST level

- The existing ApplicationXtender (or its replacement) imaging capabilities as described in RFP Section 4.2.5.4.

2.5.8.3.3 Integration with External (to WVCPRB) Entities

The new pension system should interface with the external entities listed in Table 40. As part of the LOB implementation, the successful vendor is requested to develop a complete set of specifications for and subsequently implement an automated interface to each of the entities listed below.

The State of West Virginia is currently in Phase One of the implementation of a State Government-wide Enterprise Resource Planning (ERP) solution. The vendor chosen to implement the ERP solution is CGI Group, Inc. The products which will be implemented are CGI Advantage for Financial and HRM, and Kronos for time and labor.

A tentative ERP Implementation Schedule is included as Table 39. The interfaces identified *to date* which are anticipated to be made through the new ERP system are so noted by the ERP Phase indicated in the last column in

Table 40.[6] To be clear, WVCPRB desires the LOB solution to support multiple automated interfaces to various aspects of the ERP solution. The vendor should use the ERP implementation schedule as a guide to planning the LOB solution installation, configuration, customization, and rollout so as to minimize the number of iterations of integration that are necessary, i.e., scheduling the integration of payroll contributions of State employees (see the third line of Table 40: Integration with External Entities for release prior to ERP's Phase Three rollout date of January of 2014 would necessitate integration with EPICS and subsequently with ERP.

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[6] It is possible that other interfaces will be identified as both the LOB solution and ERP system are designed and implemented.

Table 39 Tentative ERP Implementation Schedule

PHASE	IMPLEMENTATION PERIOD	GO-LIVE
1 – CORE FINANCE & PROCUREMENT	DECEMBER 12, 2011 – OCTOBER 1, 2013	OCTOBER 1, 2013
2 – REMAINING FINANCE & PROCUREMENT AND TRANSPORTATION	FEBRUARY 14, 2012 – APRIL 1, 2014	APRIL 1, 2014
3 – HUMAN RESOURCES & PAYROLL	JANUARY 3, 2012 – JANUARY 2, 2014	JANUARY 2, 2014
4 – TRANSPORTATION & FACILITIES	FEBRUARY 11, 2013 – JULY 1, 2014	JULY 1, 2014

Table 40: Integration with External Entities

AGENCY	GENERAL DESCRIPTION OF DATA	ERP PHASE
Division of Motor Vehicles	Member data from DMV driver database	2
Division of Personnel	State employee name, address and SSN (from)	3
EPICS	Payroll contribution deductions from State employees and State employer contributions. Reinstatement of previously withdrawn service (after tax deductions)	3
FBMC	Insurance premiums	3
Great West Retirement Services	Third party administrator of the TDC plan	N/A
IMB	Fund transfers	1
IRS	Annual 1099R data (file transfer capability)	3
LexisNexis	Member and case law searches	N/A
PEIA	Insurance premiums	3
State Legislature	Fiscal notes	N/A
State Tax Department	Income verification data, annual 1099R data	3
STO	Banking operations (stop payments, reissuing of payments, fund transfers, etc.). Member names to Unclaimed Property	1

AGENCY	GENERAL DESCRIPTION OF DATA	ERP PHASE
STO/WVCPRB Website	Retirement contributions, monthly service and salary data from non-State employees and employers	1
Third party providers	Health and life insurance for certain plan members	N/A
WVDHHR	Certificates of death	N/A
WVEIS	Annual gross wages and service from County Boards of Education	N/A
WVFIMS	All forms of payment distributions, including but not limited to retiree annuities, beneficiary annuities, disability retirement payments, death benefit payments, employee contribution withdrawals	1
WVOT	Mainframe, mainframe-based batch print capability, WVOT-supplied backup, internet and voice communications, WVOT-supplied SSA death master file	N/A

2.6 PROJECT MANAGEMENT-RELATED SERVICES AND DELIVERABLES

In addition to the business and technology requirements specified, WVCPRB has identified several project management-related areas that are of importance in selecting a vendor. These requirements have been accumulated under a single heading — Project Management-Related Required Services and Deliverables. The intent of this section is to inform the vendor of its responsibilities and WVCPRB's preferences for its conduct over the duration of its relationship with WVCPRB in the following areas:

- Project management
- Assisting WVCPRB staff and users
- Standard project management deliverables
- Process and organizational change recommendations and transition management
- Data
- Project staffing
- Training and knowledge transfer
- Testing processes and procedures

2.6.1 *Project Management (Intro)*

WVCPRB greatly desires the vendor to be competent in project management skills. The vendor's approach to project management should be adaptable to the West Virginia Office of Technology Project Management Methodology (see reference below):

http://www.technology.wv.gov/ProductsAndServices/pmo/Pages/ProjectLifeCycle.aspx

and based upon and compatible with Project Management Institute's Project Management Body of Knowledge (PMBOK) and should ensure that:

- Project planning is part of normal daily activities
- Resource planning occurs in conjunction with WVCPRB management

- There is an established path for escalation of project issues

- Risk management is included as part of the normal process

- Project management is able to provide reports to WVCPRB business units and management on the progress against project objectives, to ensure continued project support

- The project plan is organized in a phased approach that provides achievable and demonstrable milestones and deliverables. The engagement should be managed to meet specific milestones with an established method of reporting project status.

2.6.1.1 Relationship

This engagement will be a long-term relationship; therefore, the nature of the relationship will be key to the success of the project. To address this issue, the proposed solution and approach should ensure that:

- The vendor has a demonstrated ability to understand and deliver realistic mission-critical systems

- There is a high degree of cooperation between WVCPRB and the vendor

- The vendor can provide technical leadership and has the courage to suggest innovative solutions and take advantage of opportunities as they present themselves

- The vendor understands the aggressive nature of the schedule and agrees to take ownership of tasks in a proactive manner

- The vendor understands the vision for WVCPRB and is able to align the vendor's capabilities with WVCPRB's needs

- The relationship is not an opportunity to sell untried vendor offerings that may place WVCPRB at risk in meeting its business objectives.

2.6.1.2 Project Oversight

WVCPRB desires the vendor to report to the WVCPRB Project Manager, who will be a WVCPRB staff member dedicated to this project on a full time basis. The vendor should report project status to the Project Manager as described in Section 2.6.3.3. The WVCPRB Project Manager, in turn will provide regular status reporting to the following committees:

- The WVCPRB Steering Committee

- The West Virginia Office of Technology Executive Project Management Office (WVEPMO)

- The West Virginia Office of Technology Portfolio, Program, and Project Management Board (P^{3}MB)

- The West Virginia Department of Administration Program Steering Committee (WVDoASC)

WVCPRB anticipates that reporting to be assisted by the vendor project manager, through providing information, status, etc., as required.

The project organizational structure is as depicted below:

Figure 4 Project Organization Structure
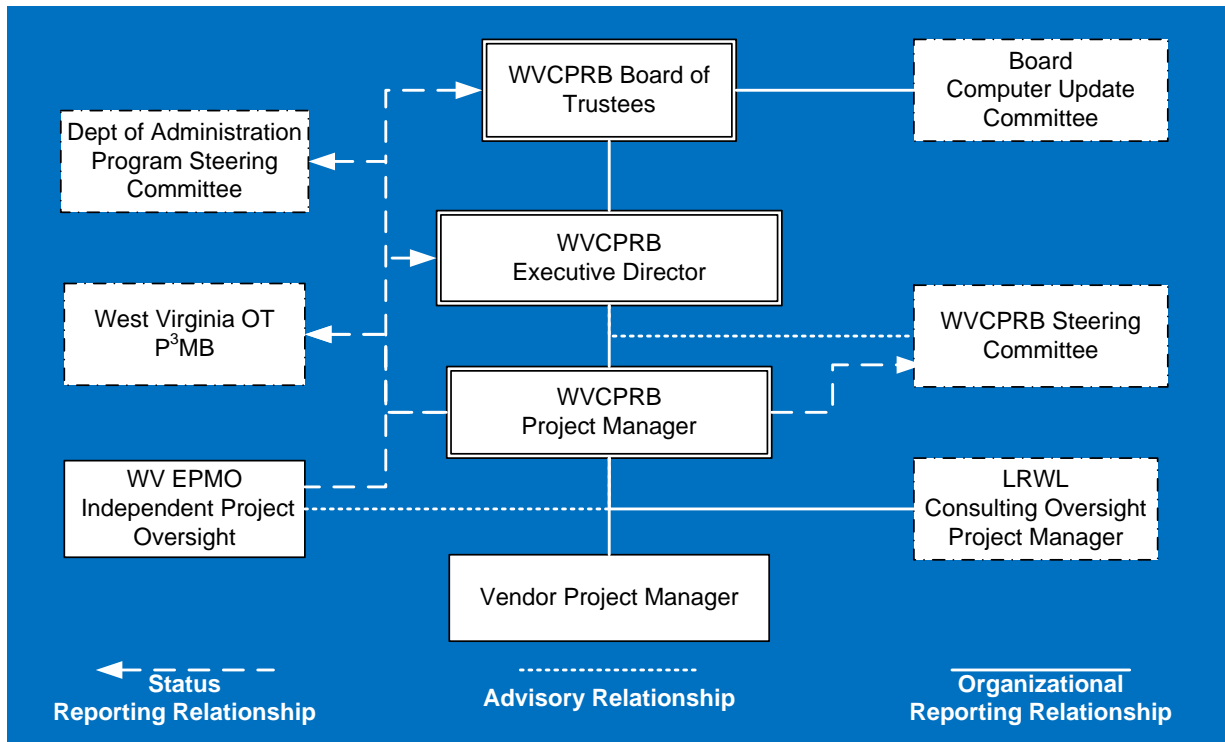
2.6.1.3 Three Party Relationship

All vendors should understand and acknowledge in their proposals that the project is a three-party relationship among WVCPRB, the selected vendor, and the Oversight Project Manager / Quality Assurance (OPM/QA) consultant selected by WVCPRB. The OPM/QA consultant will assist WVCPRB with any and all of the following (without restriction): (1) assessing the project methodologies, planning, and execution, (2) assessing implementation quality, (3) evaluating quality and compliance of deliverables, and (4) participating in activities such as hands-on testing of the solution in order to accomplish the first three listed activities. The selected OPM/QA consultant will also assist WVCPRB in developing and implementing the following project monitoring procedures:

● Project schedule monitoring

● Project scope monitoring (including change control)

● Project budget monitoring

● Project quality assurance monitoring (the four points listed above)

WVCPRB anticipates all written project materials (e.g., statements of work, project plans and schedules, design documents, test materials, training materials, form and letter templates) to be provided directly to the OPM/QA consultant by the vendor, as well as to appropriate WVCPRB staff for review and approval. The OPM/QA consultant will review all such materials and provide suggestions and comments in the same time frame and in the same manner as will WVCPRB staff.

It is the vendor's responsibility, and not WVCPRB's, to deliver such project materials directly to the OPM/QA consultant. Nor is it the OPM/QA consultant's responsibility to access the material from an internal e-mail system. This delivery to a third party may well require additional document preparation steps relative to the delivery to WVCPRB staff. The deliveries should be made electronically via (Internet)

e-mail. The documents being delivered should be complete, i.e., no "embedding" of documents using "shortcuts" is not considered acceptable unless they can be opened after being transmitted through the Internet.

Therefore, vendor staff may be required to perform some document and file manipulation in order to accommodate the delivery to the OPM/QA consultant. Further, due to e-mail transmission constraints, no files bigger than 6 MB may be sent. This limitation may require additional planning and coordination on the part of the vendor to ensure that materials are delivered for review in a timely fashion. Vendors should plan to compress or "zip" all significant files. Vendors are cautioned to factor into their project-staffing plan any additional efforts related to delivery of project materials to the OPM/QA consultant.

After contract execution at the project's inception, the vendor will be provided with e-mail addresses and distribution lists for submission of the various project materials.

WVCPRB prefers the Vendors acknowledge in their proposals that it is their responsibility to provide all such written project materials to the independent, outside OPM/QA consultant via e-mail as described above (as well as to WVCPRB staff).

WVCPRB's outside OPM/QA consultant will be bound to reasonable commercial terms of confidentiality protecting the confidential or proprietary information of vendor and its subcontractors. As such, no material should be limited in its distribution and/or restricted from review and discussion with such a consultant.

2.6.1.4 Vendor Responsibility for Detailed Requirements Definition

Vendors should note that WVCPRB's environment is governed by a myriad of rules, regulations, "standard" operating procedures, and long-standing practices (both formal and informal, documented and undocumented). Developing a <u>full</u> set of all of the rules, regulations, procedures, and practices that need to be accommodated in the new solution is a critical, integral part of the project – and the key to its eventual success. Vendors should factor into their proposals, in terms of manpower, cost, and schedule, their responsibility to completely:

● Explore and define all such rules, regulations, policies, procedures, practices, and calculations – both written and unwritten (i.e., policy of long standing) – that currently exist and those to be added in the new environment

● Develop pertinent specifications

● Implement those capabilities.

In preparing their responses to this RFP, vendors are cautioned to budget sufficient manpower to decompose this information to a level of detail sufficient to obtain sign-off from WVCPRB staff during the initial phases of the implementation.

Among other factors, vendors' responses will be evaluated on the basis of their commitment to this portion of the effort, as evidenced by their work plan for addressing this issue and the manpower, time allotment, and quality of vendor staff proposed to be dedicated to it.

Because this issue is critical, WVCPRB desires the vendors to **affirm in writing, both in their proposals and in the accompanying cover letter,** their understanding of this responsibility. In developing the requirements definition of the new system, WVCPRB desires the selected vendor to involve WVCPRB staff members in many requirements and design "workshop" sessions. This involvement of staff members is understood by WVCPRB as being essential to preparing correct, comprehensive requirements definitions and systems designs. Yet the time required of WVCPRB staff for this level of participation may inhibit the day-to-day business of WVCPRB. Therefore, WVCPRB requires that staff participation in the requirements definition process be as efficient as possible. This includes determining what staff will be needed and when so the WVCPRB management team can plan workload issues in advance.

To this end, WVCPRB greatly desires that any written materials supplied by the vendor for use in requirements and design meetings with WVCPRB staff be targeted specifically to WVCPRB. WVCPRB recognizes that the vendor may utilize materials prepared for other retirement system customers to "bootstrap" the design definition effort. However, such materials should be purged of any specifics (including but not limited to name references, forms numbers, and calculation routines) that relate to another of the vendor's customers. Ideally, these materials should be tailored to WVCPRB's specific business practices from the time they are first exposed to WVCPRB staff members. At the very least, they should be neutral, that is, they should not contain any overly specific references to specific practices of other retirement systems so as to avoid any confusion or wasted effort during the requirements definition and design sessions with WVCPRB staff.

2.6.1.5 Multiple Products, Services, and Methodologies

It is essential that the vendor understand that WVCPRB is seeking more than just a "software development" company. Mature software product development skills and experience are a necessary, but far from sufficient, qualification. WVCPRB understands that each vendor has (or should have) a methodology for developing and deploying its particular (retirement) solution, but WVCPRB is seeking a solution comprised of more than just those tasks and items identified in the vendor's development methodology. In order to deliver the broad, integrated solution that WVCPRB seeks, WVCPRB desires the successful vendor to have experience with, and methodologies to address, numerous other disciplines such as procedure document development, training, and workflow analysis, in addition to retirement industry knowledge. Vendor proposals should provide evidence of a mature, proven methodology in each of these other critical areas of the project.

Therefore, the vendor's proposal should address not only the standard system development methodology referenced above, it should also provide a detailed discussion of the methodology it intends to employ in each of the following areas:

- **Project management** – Vendor's project management structure, procedures, roles and responsibilities, client reporting, meetings, and provisions for replacement of personnel.

- **Project scheduling** – Scheduling tools and procedures, schedule updating, reporting against the project schedule, and responding to change orders.

- **Data conversion and bridging** – Conversion and bridging planning, data mapping from the existing to the new environment, identification of data errors, alignment of data conversion / bridging with project phases, identification of data to be bridged vs. dual entry, techniques for bridging new system data to existing system and vice-versa, identification of data fields that need to be balanced and/or within acceptable tolerances as agreed to with WVCPRB, and reporting on reconciliation and balancing of converted / bridged data.

- **Data cleansing** – Correction of basic errors in the data in legacy systems, including, but not limited to inconsistencies, errors, and missing data

- **Configuration management** – Version control

- **Enterprise Content Management (ECM)** – Integration of ApplicationXtender or its replacement (imaging and further development of ECM capabilities) and their full integration with the new solution

- **Risk management** – Identification and mitigation strategies related to all facets of risks associated with the project, including a discussion of the methodology for designing and implementing information and infrastructure security

- **Project change control** – Defining new / changed requirements, developing an estimate, evaluating schedule effects, WVCPRB approval, integrating requested changes into the project, and testing

- **Problem incident reporting** – How to report a problem, how the problem is assigned for resolution, integrating the "fix" into the project, regression testing, WVCPRB acceptance, and analysis and trend tracking

- **System operation** – Configuration control, job scheduling, equipment maintenance, written documentation and procedures, personnel scheduling, and problem resolution

- **Infrastructure and information security** – Defining security requirements for enterprise information and applications and developing a security plan to address the requirements

- **Training** – Determining training needs, developing training materials, scheduling training appropriately within the overall project, assigning trainers, providing training facilities as necessary, and gauging the effectiveness of training; training methodology should address training not only in navigation, screens, data entry, and the like, but also in the use of the new solution to perform various job functions, processes, and sub-processes

- **Testing** – Preparing test plans, test schedules, test variants, test scenarios, test cases, test data, expected results; executing tests; reporting test results; referring problems identified in testing for resolution; integration with problem incident report methodology, and re-testing after the problem has been resolved.

During the course of the project, WVCPRB desires the vendor to deliver and support all products and services described in the RFP – not just those steps described in its standard system development and deployment process.

2.6.1.6 Project Management and Control Methodology

Vendors should address in their proposals the following basic requirements in the areas of project management and control.

The vendor should describe in detail the methodology it intends to utilize to manage and control the project including its change control methodology. The vendor's methodology should be based on the Project Management Body of Knowledge.

Due to the magnitude and complexity of the effort, it is essential that an automated project management tool be utilized for this purpose; Microsoft Project or Primavera are the only acceptable standard project management tools. The updated project files and project information should be stored in the shared project repository and available for review at any time.

The vendor should provide examples of its use in previous efforts on behalf of other clients.

The vendor should use the tool to automatically reflect the effect on the overall project of changes in various parameters, e.g.:

- Changes in project scope / requirements

- Changes in project schedule

- Changes in resource availability.

The vendor should be prepared to automatically generate various reports to reflect the project's status at any point in time, e.g.:

- Gantt charts depicting start date, end date, and duration of individual tasks

- PERT charts depicting task interdependencies

- Graphical display of the project's critical path

- Percent complete status of individual tasks

- Calendar driven, manpower loading charts, by individual task, for both vendor and WVCPRB staff including variable man-hours per work day

- Calendar driven manpower loading charts, by month/week, for both vendor and WVCPRB staff including variable man-hours per work day.

The vendor should describe in its proposal the control methodology that it intends to utilize to ensure that any problems that may develop in the course of the project (including but not limited to schedule slippages or resource constraints) can be quickly identified and resolved. The vendor should provide examples of how this project control technique, i.e., issue resolution, has been utilized successfully in previous similar engagements on behalf of other clients.

WVCPRB believes the project management tools should be an integrated part of the vendor's system development life cycle approach and project management methodology.

Configuration management and change control methodology are critical to the success of this effort. The vendor should describe the methodology and mechanisms it has in place and intends to use to support the effort. Particular emphasis should be placed on the management and control of revisions, as well as WVCPRB's responsibilities in this area. For further information, refer to Sections 2.6.3.7 and 2.6.3.9 which describe detailed requirements pertaining to change requests and problem incident reports.

2.6.1.7 System Development Life Cycle (SDLC)

Out of consideration for the demands that will be placed on WVCPRB staff members during the course of the project, in addition to the demands of their day-to-day duties, vendors should state their commitment to utilize a <u>single</u> system life cycle methodology and terminology for <u>all</u> portions of the project. For example, if the vendor proposes to procure, customize, and integrate a third party "payroll generation package" into the overall solution, then WVCPRB desires that all activities relating to the payroll package observe the same system life cycle methodology utilized in developing the rest of the line-of-business solution. WVCPRB greatly desires staff members to be educated in and utilize only <u>one</u> (not several) life cycle methodology and terminology set for the duration of the project.

WVCPRB prefers methodologies that allow WVCPRB staff multiple opportunities to validate requirements and design. For this reason, an iterative development methodology is favored for use in the development of the pension application. Ideally, this includes an opportunity to view rapid prototypes of requirements and design concepts, screens, content, and application flow. (Such prototypes do not necessarily need to become operational nor be reused during development.) Simulation of workflow and performance measurement within the design effort is also desirable. Proposals that include in the development period a conference room pilot – wherein users see the full member life cycle from enrollment, through withdrawal and refunds, re-enrollment, refund buy back, retirement, return to work, change of address, beneficiary, plan, etc. – would be viewed favorably by WVCPRB.

WVCPRB has a high level of concern with regard to the system development life cycle and configuration control. WVCPRB believes it necessary for the project to be divided into multiple functional rollout phases, each including numerous activities / tasks which should be implemented sequentially or on an overlapping basis. WVCPRB envisions each rollout phase to involve numerous deliverables (documents and software), which should be submitted to various WVCPRB staff members for review and revision over multiple iterations. It is anticipated that active participants should include not only WVCPRB and WVOT technology staff, but also the vendor's staff, possibly working from multiple locations, as well as other contractors to WVCPRB whose activities need to be coordinated with the new system development effort. This may include quality assurance consultants, oversight project management consultants, process change consultants, and others.

WVCPRB currently has the following preference regarding the implementation order of phases within the overall engagement. The capability described in Phases 1, 2, and 3 below should be provided first; others are open to discussion. The vendor should provide information regarding its preference if different from the following order (see also Section 2.6.1.8 Phasing the Project):

1. Detailed work plan, a top-level Concept of Operations document (described in Section 2.6.2.1), a Risk Management Plan (described in Section 2.6.3.10), and a Development Methodology Overview – End User document (described in Section 2.6.2.2).

2. Detailed requirements document, a revised detailed work plan and an updated Requirements Traceability Matrix.

3. Installation and configuration of all new / upgraded hardware and software, including ECM capabilities

4. Phased implementation and rollout of solution consisting of at least two stages, during each (all) of which WVCPRB desires the successful vendor to be responsible for the execution of its solution development methodology (final requirements sign-off, configuration and development, data conversion (described in Section 2.7.2), unit, system, life-cycle, etc., testing (described in Section 2.11), training of WVCPRB personnel (and employers if necessary) (described in Section 3.2.10), documentation, etc.)

5. Post Implementation Warranty (described in Section 2.13.2.1)

6. Post Warranty Support (described in Sections 2.13.2.2 and 2.13.2.3)

See Section 2.6.1.8 for additional details.

WVCPRB's objective is to be assured that an appropriate control scheme is put in place and rigorously applied to all project activities such that all project participants understand what they are working on, what is expected of them, and how it fits into the overall project. Specifically, WVCPRB wants to ensure that, without exception, all project participants – the vendor's staff, WVCPRB staff, and all concerned third parties – when approaching a task (whether it is developing software, drafting / updating written documents, or reviewing a deliverable), clearly understand:

- The phase of the project to which the task relates

- Which revision / release they are working on (and that it is the current revision / release)

- The date of the revision / release

- How many previous versions were developed and reviewed

- What has been changed, added, or deleted relative to the previous release

- What functions or features the delivery should contain and what it should not contain

- If it is a written deliverable, how many pages it should contain

- The e-mailed documents or the CD-ROMs that accompany the delivery (if applicable) and precisely what those e-mails or CD-ROMs contain

- When a response is required

- When the next release can be expected.

Below are compiled WVCPRB's basic requirements for maintaining control throughout the project to its successful conclusion. The vendor should include in its proposal a detailed description of the control procedures and methodologies it plans to employ to ensure adequate project control as described below.

2.6.1.7.1 Written Deliverables

In its proposal, WVCPRB desires the vendor confirm that (unless otherwise specifically agreed to by WVCPRB, on a per-document basis) all documents (both hard and soft copy) to be delivered during the project should include the following "history" of generation:

- Submittal of an outline for review and approval

- Submittal of the final, complete draft for review and approval

- Submittal of the final, complete document for final review and acceptance.

Furthermore, all documents, starting with the response to this RFP, should be delivered in a current or immediately previous version of MS Office Suite (Excel, PowerPoint, Word, Visio) or MS Project or

Primavera P6, version 7. These files should be in an "unlocked" form such that WVCPRB can use revisions and comments in reviewing them.

For any well-defined <u>class</u> of documents (e.g., business process models) WVCPRB may require the vendor to supply a single outline, a single sample section, and a single draft sample pertaining to all documents in that class. Also, it is understood that, in most cases, multiple drafts may be submitted for review before the final document can be submitted for acceptance. WVCPRB requests the vendor supply to the designated WVCPRB Project Manager both (a single) hardcopy and WORD and/or Excel file(s) and/or graphical representation software file(s). In most instances, the electronic copy should be submitted via e-mail. Unless otherwise agreed between WVCPRB and the vendor, the vendor should be responsible to distribute via e-mail the delivered documents to all reviewers including WVCPRB's Oversight Project Management / Quality Assurance consultant.

The vendor should detail its proposed control methodology pertaining to written deliverables, taking care that the following basic requirements are explicitly included:

- Each deliverable should include a cover page identifying:
  - The title of the deliverable and the unique document number (e.g., a Test Plan might have an identifier of '999'; later revisions of the Test Plan would bear the same identifier but different revision numbers)
  - The associated Work Breakdown Structure (WBS) number from the project plan
  - The phase to which it pertains (if applicable)
  - The issue date (distribution date)
  - The effective date (last update)
  - The revision number

- Each deliverable should contain a revision tracking page that explains in detail what changes were made from one revision to the next, who is responsible for those changes, and who from among the WVCPRB project team approved the previous set of changes

- Each page should contain a footer (or header) identifying:
  - The deliverable title (possibly abbreviated)
  - The effective date
  - The revision number

- Every hard or soft copy deliverable should be page numbered (continuously from first page to last) and, except in trivial cases, should include a table of contents

- Every deliverable should be delivered in hard copy form and electronic form via e-mail. Submitting one or more files in one or more ZIP files is acceptable as is submitting large files via File Transfer Protocol (FTP) or CD-ROM

- Every deliverable should be fully integrated in the sense that all diagrams, screen images, report layouts, spreadsheets, and similar or related items should be inserted in the appropriate place. References to external files should be avoided

- If the document was initially drafted in several small files which were then assembled into a master document (to enable meaningful page numbering), the master document should be provided on the CD-ROM or e-mail

- All CD-ROMs should be clearly labeled (title, identifier, and revision number) and dated

- All hard copy deliverables should be suitably bound both for the convenience of the reader and to prevent the loss of pages. Documents of fewer than 40 pages can simply be stapled.
  - Larger documents should be delivered in some sort of binder, and if they exceed 100 -150 pages, they should be delivered in a three-ring binder with dividers separating major sections

- o If a binder is used, the document title, identifier, revision number, effective date, and issue date should appear on the cover and the spine of the binder

- Every deliverable, without any exceptions, should be accompanied by a professionally prepared letter of transmittal (e-mail message is acceptable), which indicates:

  - o The issue (distribution) date

  - o The title and identifier of the deliverable

  - o The revision number

  - o The effective date (last update)

  - o A description of how the deliverable fits into the overall solution, with explicit section and page number references to the Development Methodology Overview – End User (DMO) document (see Section 2.6.2.2)

  - o A summary of how this version has changed relative to the last revision (e.g., referring to a review meeting where the previous version was discussed). Other than this high level written summary, detailed changes may be shown in WORD "revisions" for ease of understanding

  - o Any sections that are missing (remain to be developed) and an estimate of when they are anticipated to be available

  - o The date by which comments should be returned and to whom they should be forwarded; other actions may be requested, such as requesting WVCPRB to set up a review meeting

    Note: WVCPRB staffs are always to be allocated at least five (5) business days to turn around a deliverable under review. In addition, WVCPRB would prefer that all deliverables be reasonable in volume in order to permit the review to be completed within five (5) business days. A deliverable which would require the average person more than eight (8) applied hours to review would not be considered reasonable in volume given the five-day turnaround cycle. Deliverables requiring more than eight (8) hours of review should be allocated a proportionately longer review cycle. Also, WVCPRB desires the vendor not deliver an unusually large quantity of deliverables in a short time period (i.e., NO "PILING ON") that would preclude WVCPRB from meeting their review timeframes.

    WVCPRB acknowledges the need for the prompt review of written deliverables. However, the vendor cannot assume that an absence of formal sign-off or feedback within five business days of deliverable submittal constitutes WVCPRB's acceptance of that deliverable.

  - o If applicable, notice that this is the last revision cycle and the next release should be the final document – or, alternatively, an indication of when the next release can be anticipated to be delivered

  - o The name of the person making the delivery.

2.6.1.7.2 Software Deliverables

The vendor should detail its proposed control methodology pertaining to software deliverables, taking care that the following basic requirements are explicitly included:

1. Installation of the application software on the appropriate hardware platform(s); each screen and report in the application should indicate the release number of the software and the date of issue of that release, so there will never be any question as to what is being tested and whether it is the current version. Ideally, software release numbers should correspond to the revision numbers of any accompanying written deliverables

2. All GUIs, screens, menus, and similar or related items should have the version/release number of the software shown as well as the date of last modification of the software; this can either be present all

of the time, or it can be displayed based upon a user request (including but not limited to icon activation or pull down menu)

3. Similarly all reports should display in their heading the version/release number, the date of last modification of the software (not simply the report print date) that generates the report, as well as the name of the program that generates the report. All reports should have unique names, as well as the date of the report run, printed in the heading

4. Delivery of media, or identification of directories, containing both source code and object code; media should be clearly labeled with the title of the delivery, the date of issue, and the release number

5. Delivery of all appropriate accompanying documents (for example, user documentation and test plans / scenarios); these documents should be prepared in a timely fashion and delivered in accordance with the procedures for written deliverables outlined above

6. Attached to the letter of transmittal should be a listing of all media included in the delivery, indicating all folders, subfolders, and files.

2.6.1.7.3 Tracking of Deliverables

It is WVCPRB's intention that both the vendor and WVCPRB make a concerted effort to track all deliverables, both written deliverables and software deliverables. Absent a detailed procedure for tracking deliverables, there is great concern that serious problems including but not limited to the following may arise: some people who should review a deliverable do not receive a copy, some people may find themselves reviewing an outdated (non-current) version, or feedback from some people on a particular deliverable may be overlooked.

The vendor should detail its proposed control methodology pertaining to tracking written and software deliverables, taking care that the following basic requirements are explicitly included:

1. The vendor should maintain a computerized deliverables control file (readily available to the WVCPRB Project Manager to review on-line or in printed form) which is capable of always providing the current status of any particular deliverable (written or software); this tracking control file should contain a separate tracking form / record for each revision / release of each deliverable, indicating:

   o   Title and identifier of deliverable
   o   Revision / release number
   o   Date of issue
   o   Effective date
   o   Location of the deliverable if delivered online
   o   Project phase to which the deliverable pertains
   o   Narrative description of the deliverable, indicating what is included and what is not included
   o   Narrative description of how the deliverable fits into the overall solution, with explicit page / section number references to the Concept of Operations document (see Section 2.6.2.1)
   o   Date that the response is due from the WVCPRB Project Manager

2. Attached to the tracking form should be a copy of the vendor's letter of transmittal / e-mail message that accompanied the delivery. These forms / records should be sorted by revision / release within deliverable identifier

3. Whenever a deliverable is issued, a complete copy (including but not limited to transmittal letter and CD-ROMs) should be forwarded to the WVCPRB Project Manager. There may be instances in which the vendor is asked to present "draft" versions to the Quality Assurance consultant for comment prior to releasing the "final" draft to WVCPRB

4. The WVCPRB Project Manager will maintain a deliverables control file containing the same information (listed above) for each deliverable received from the vendor

5. In general, responses to deliverables will be channeled through the WVCPRB Project Manager, who will record the receipt of the responses in WVCPRB's deliverables control file, prepare a single consolidated response, and forward it to the vendor

6. At the project management status meetings, WVCPRB desires the vendor to formally report all of the deliverables issued during the status reporting period in a cumulative table format showing the delivery and anticipated turnaround dates. The WVCPRB Project Manager will confirm that all deliverables reported by the vendor were received based on WVCPRB's deliverables control file. To avoid deliverables "slipping through the cracks," the vendor should submit a weekly report of deliverables' status, e.g., those awaiting review, in revision, in test, in rework. Refer to Section 2.6.3.3 for additional status reporting requirements.

The vendor should describe in its proposal its approach to the above, including providing samples. If the vendor takes exception to the above, the vendor should describe an alternate methodology that can satisfy the same objectives.

Regardless of the methodology proposed by the vendor, WVCPRB requires the following with regards to software deliverables:

● Use of version control software tools that allow WVCPRB project staff to track and audit code as it migrates through the SDLC

● Well-enforced use of migration with each release of code such that it migrates through the following sequence of environments:

  o Development
  o Test
  o Staging
  o Production

● The ability to generate reports that support each migration, the use of which should help ensure that all of the correct modules and configuration files are migrated through each environment

The vendor's proposal should include a description of the process that vendor uses to ensure that each release of software is complete and correct. Finally, WVCPRB requires written acknowledgement within the vendor's response acknowledging the vendor's understanding of and willingness to comply with the above requirement.

2.6.1.8 Phasing the Project

WVCPRB is seeking proposed solutions that embrace a phased approach. WVCPRB seeks to avoid a "big bang" approach in which the entire solution is brought on-line in one cutover. By requiring the vendor to deliver the solution in phases, the amount of change that must be absorbed by the organization, particularly the system end-users, at any one time can be reduced to manageable levels. WVCPRB recognizes that such a phased approach may incur the added cost of data bridging efforts in the form of temporary bridging routines needed to keep the legacy system and the new solution synchronized during the period when both systems will be in use.

Therefore, it is preferred that vendors provide proposals that which plan to structure the implementation into several phases. The required Phases are defined by WVCPRB below:

Figure 5 Required Project Phasing
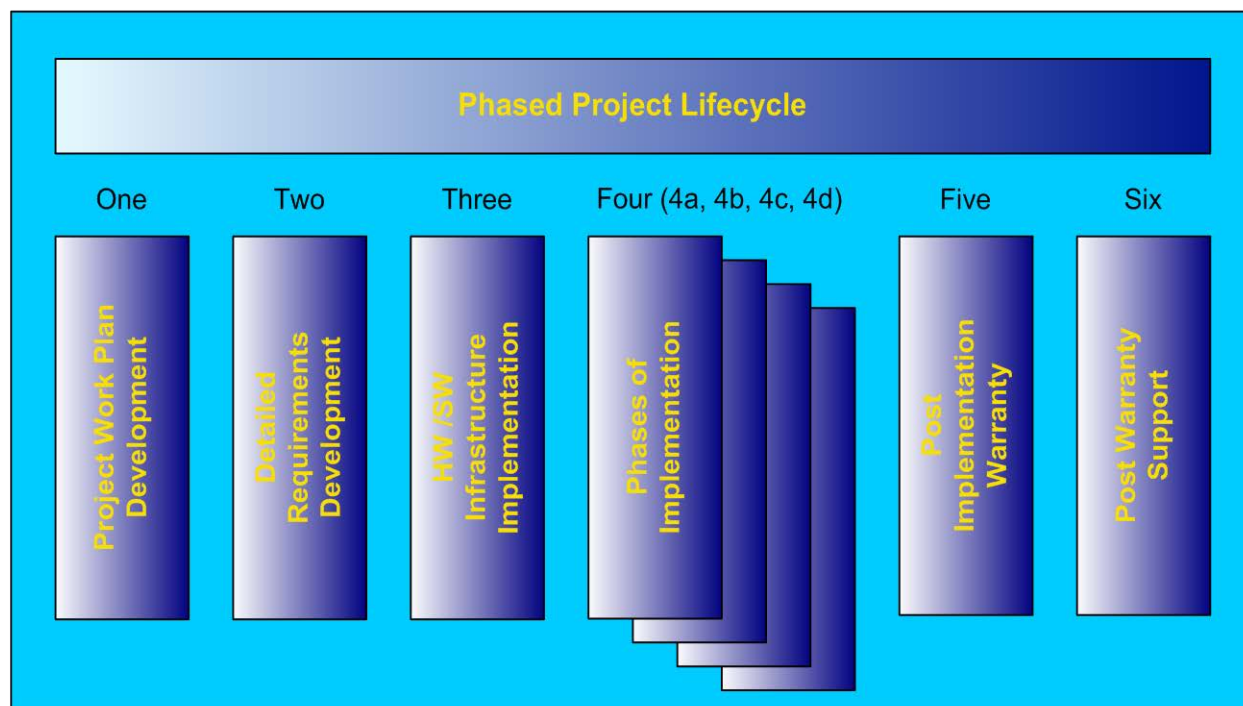
Phase 1 - Delivery of a detailed work plan within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables. WVCPRB desires that the detailed work plan include a Transition Plan, an Integration Plan, a Data Migration / Conversion Plan, a preliminary Data Bridging Plan, a Rollout plan, a Training Plan, and a Work Breakdown Structure Plan, including but not limited to narratives, task definitions, schedules, Gantt charts, dependencies, WVCPRB and vendor manpower loading, payment points tied to deliverables tied to the work plan, and monthly cash flow projections. This plan should encompass all mandatory project elements and all options authorized to date at that time.

Phase 2 - Delivery of a detailed requirements document, a revised detailed work plan, a top-level Concept of Operations document (described in Section 2.6.2.1), and a Development Methodology Overview – End User document (described in Section 2.6.2.2). WVCPRB anticipates the vendor can complete this phase within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables.

Phase 3 - Including but not limited to implementation of proposed hardware and software infrastructure, i.e., installation and configuration of a network, removal of current desk top PCs and replacement with more-robust standard client PCs (if necessary), upgrade to existing network components and PCs (if they are suitable for re-use), and upgrade/installation of office automation, internal and external e-mail, ECM System and network printers as necessary. WVCPRB anticipates the vendor can complete this phase within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables.

Phase 4 (comprising at least 4a and 4b) - is left to the vendor to define in its proposal. These later project phases are anticipated to consist of the functional rollout (including, but not necessarily limited to, Membership and Benefits) of the new line-of-business system, thus replacing all of WVCPRB's current legacy pension systems. The vendor should discuss how it plans to phase the remainder of the effort. This discussion should address the rationale for the recommended breakdown of the functional roll-out into phases, the reasons for the recommended sequence of the functional rollout, and a top-level schedule indicating expected start and completion dates for each phase. The proposal provided by the vendor and the ensuing contract should clearly define all of the elements of each phase and the

relationship among phases in terms of schedule and deliverables. Finally, WVCPRB points out that incorporating a "parallel" phasing strategy (e.g., cutting over and operating under the active member component of the new LOB while still maintaining the same information and conducting the same tasks under the active member component of the legacy system) is not acceptable.

WVCPRB requires that Phase 4a (i.e., the first functional rollout of the new pension application) include delivery of the required ad hoc query and reporting capability. In this way, "super users" and IT staff can have the early capability to run ad hoc queries, generate reports, and perform all "balancing and reconciliation" activities, thereby achieving a level of self-sufficiency well before final system rollout. In addition, WVCPRB desires that integrated ECM be rolled out in the first functional rollout phase and all subsequent phases.

Phases 5 and 6 – are the Post-Implementation Warranty and Post-Warranty Support periods as they are described in Section 2.13.2.

In particular, vendors should discuss in their proposals how the phased transition to the new environment can be accommodated with regard to WVCPRB's existing Web site. As LOB functionality is rolled out in phases, this new functionality should be reflected in the WVCPRB Web site. WVCPRB considers it the vendor's responsibility to suitably integrate WVCPRB's existing Web functionality with the new LOB functionality for each functional rollout during the phased implementation.

2.6.1.9 Project Work Plan

The vendor assumes full responsibility for planning, scheduling, and completing all project tasks. The table below provides a summary of the specific work plans the vendor is desired to provide at particular times in the project. The components of the specific plans are described below the table:

Table 41: Required Project Plans

PLAN NAME	DELIVERY	CONTENTS
Initial Plan, Version 1	As part of proposal	High-level plan including options
Initial Plan, Version 2	As part of proposal	High-level plan without options
Phase 1 Detailed Plan	At time of contract signing (as indicated in Table 1 in Section 2.3)	Initial Plan expanded to include detailed plan of first Phase of the project.
Complete Detailed Plan, Version 1	As indicated in Table 1 in Section 2.3	Phase 1 Detailed Plan expanded to include same level of detail for entire project.
Complete Detailed Plan, Version i	As required	Updated version of plan.

2.6.1.9.1 Initial Plan

The vendor should include an initial high level project work plan in its proposal. It should be understood that the high-level plan should subsequently be expanded into a revised, more detailed version of the above work plan to be delivered in two parts that make up the first two contractually required deliverables of the project. At the time of contract execution, WVCPRB desires that the selected vendor deliver a completed work plan for the first phase of the project; the detailed plan for the remaining phases of the project are anticipated to be delivered within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables. The total work plan is anticipated to be subject to on-going modification, periodic updating, and "explosion" into greater detail as the project progresses.

In developing their work plans, vendors should be sensitive to the fact that the months of January through March (annuity payroll and legislative session); July, August, September (TRS and annuity payroll), and October through January (PERS) are periods of high levels of business activity for WVCPRB.

The high level work plan should include, at the least:

1. A Work Breakdown Structure (WBS):

  o Phase 1 – detailed plan for this Phase is anticipated to be delivered at time of contract execution

     Activity 1
     - Task*/Milestone 1*
     - *Task/Milestone 2*
     - *…*
     - *Task/M*ilestone n
     Activity 2
     …
     Activity n

  o Phase 2

  o …

  o Phase n

2. Definition of project phases (see Section 2.6.1.8) to include description of the activities within the phase.

3. Definition of tasks that comprise each project activity within a phase, including:

  o Task title
  o Task description/narrative
  o Task start and end dates
  o Effort required in work hours
  o Personnel assigned
  o Dependencies, predecessors, successors
  o Status (% complete)

4. Identification of major project milestones, e.g.:

  o Requirements analysis
  o Hardware installation
  o Software modification
  o Software installation
  o Data conversion
  o Testing
  o Training
  o Acceptance
  o Cutover / transition / deployment
  o Description of deliverables, including at the least all deliverables called for in Section 2.4.

The work plan should clearly identify that the implementation is phased according to the requirements stated in Section 2.6.1.8 and indicate the elements included in each project phase. A high-level project schedule based on the target dates stipulated in the RFP (see Section 2.4), presented in a Gantt chart or other suitable format, should be included. Two versions of the completed high-level work plan are requested. In the first, the vendor should include only the functional elements of the procurement. In the

second, the functional portions and <u>all</u> options (e.g., notification date by which WVCPRB must have the required – but separately procured under Option 1 – hardware on site) should be presented.

2.6.1.9.2 Phase I, Detailed Plan

At the time of contract signing, WVCPRB desires the vendor to provide a detailed work plan for the first phase of the project (see Section 2.6.1.8), covering all tasks to be accomplished during that phase. The detailed work plan should be based on the high level work plan included in the vendor's proposal, including any modifications made in conjunction with a best and final offer. WVCPRB will review the plan and provide the vendor with written comments within five (5) business days of the receipt of the plan. The vendor should revise the plan to reflect the review and republish the plan within five (5) business days. This first portion of the complete detailed plan should guide the execution of project-related work during the first phase of the project.

2.6.1.9.3 Complete Detailed Plan

Within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables, WVCPRB desires the vendor provide to WVCPRB a complete detailed work plan for all portions of the project. Like the plan for Phase I, the complete detailed work plan should be based on the high level work plan included in the vendor's proposal, including any modifications made in conjunction with a best and final offer. It should include any options that have been authorized to date at that time. WVCPRB will review the plan and provide the vendor with written comments within ten (10) business days. The vendor should revise the plan to reflect the review and republish the plan.

The detailed work plan and schedule should then be updated on a mutually agreed schedule, at least, whenever major new phases are undertaken, whenever change orders are initiated, and no less frequently than every three (3) months.

2.6.2 *Assisting WVCPRB Staff and Users*

The following sections discuss the successful vendor's responsibilities for assisting WVCPRB staff and users throughout the project.

2.6.2.1 Concept of Operations

To improve the end-users' understanding of the look and feel and capabilities to be expected in the new system – i.e., what will be delivered – WVCPRB believes it critical for the vendor to produce a top-level Concept of Operations (COO), to be delivered within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables. The COO is defined below.

Following are critical requirements for the COO:

● It may not exceed 20 pages in length. There are two reasons for this limitation. First, the document should be "digestible" by the end-user reader. Second, it forces the narrative to be at the appropriate level, i.e., a 'bird's eye' view of the new solution. For example, the COO may discuss the generation of retirement benefit estimates for members, but it should not discuss the specific retirement options from which the member can select, or the specific rules for calculating service credit.

● It may not include appendices or attachments.

● It should be targeted to, and understandable by, the end-user community (not IT staff).

● It should be delivered at the earliest possible point in the project, i.e., with the detailed work plan and schedule – prior to any requirements or gap analysis sessions.

● The delivery of the COO should be accompanied by vendor briefings describing the document and walking end-users through it.

Vendors should discuss the Concept of Operations in their proposals and to present a recommended approach. In their proposals, vendors should confirm their commitment to providing the Concept of Operations and establish their understanding of its purposes.

Vendors should also explain in their proposals how they propose to guarantee that requirements set forth in this RFP can be reflected appropriately in the COO – i.e., vendors should discuss in detail how they intend to establish the "traceability" of RFP requirements to the COO document.

The COO should explain what the end-users should expect in terms of the new system's functionality and graphical user interface – e.g., processes, calculations, workflow, screens. End-users coming from the old legacy system may have no idea how the new environment will look and behave. The COO should address this topic.

The COO should describe in end-user-oriented English (without technical terms) how the new solution is envisioned to operate from the end-user's perspective. It should discuss how particular staff positions will interact with automated features of the new solution. Conversely, it should identify all processes that will continue to be manual in nature after the new solution is fully implemented. Process flow diagrams, as well as appropriate samples of screens, may be helpful and would be encouraged by WVCPRB, but the page-length limitation cannot be violated.

The COO should describe the high level features (e.g., retrieving images of documents, faxing documents, printing documents and screen images), as well as the major business functions (e.g., enrolling members, issuing refunds, posting service credit purchases, generating retirement benefit estimates), available to the end-users. It should include a discussion of how data will be entered into and accessed from the new system, and how data will be automatically passed from screen to screen for the end-user's convenience.

In their proposals, vendors should to provide a table of contents of the COO document and describe their approach to meeting this requirement. In addition, appropriate samples should be included in the proposal.

2.6.2.2 Development Methodology Overview for End-Users

To improve the user community's understanding of the development process and the effectiveness of the deliverables review and revision cycle when the project is in progress, i.e., the development steps, WVCPRB desires the vendor to produce a top-level, Development Methodology Overview (DMO) document defined below. WVCPRB desires the DMO be delivered within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables.

Following are critical requirements for the DMO:

- It may not exceed 15 pages in length. There are two reasons for this limitation. First, the document should be "digestible" by the reader, an end-user. Second, it forces the narrative to be at the appropriate level, i.e., a 'bird's eye' view of the methodology

- It may not include appendices or attachments

- The DMO should be written to, and understandable by, the end-user community (not IT staff)

- It should delivered at the earliest possible point in the project, i.e., with the detailed work plan and schedule – and prior to any requirements or gap analysis sessions

- The delivery of the DMO should be accompanied by vendor briefings describing the document and walking end-users through it.

Vendors should discuss the Development Methodology Overview document in their proposals and to present a recommended approach. In their proposals, vendors should confirm their commitment to providing the Development Methodology Overview document and establish their understanding of its purpose.

The DMO should describe, at a high level, how the system is envisioned to be defined, designed, tested, and deployed, i.e., a summary of the vendor's development life cycle for the project – aimed at <u>end-users</u>.

The vendor should describe in a brief, high level fashion its proposed system development life cycle methodology. This explanation should be aimed at the end-user community. The intricacies of code design, development, and unit testing need not be addressed, since these activities typically do not involve the user. Instead, attention should be focused on the <u>meetings</u> and <u>activities</u> which involve the end-users and the <u>deliverables</u> that the users will be required to review and approve – and how these areas of user involvement fit into the overall methodology. This part of the DMO should describe WVCPRB end-user staff responsibilities, the vendor's responsibilities, and what responsibilities are jointly shared. Vendors are encouraged to use diagrams, pictures, and graphics to facilitate end-user understanding.

Vendors should provide a table of contents of the document and describe their approach to meeting this requirement. In addition, appropriate samples should be included in the proposal.

2.6.2.3 Retirement Design Topics

There are numerous "philosophical" issues concerning the design of the new solution that require exploration and discussion between the vendor's staff and WVCPRB staff. <u>Examples</u> of such philosophical design topics include:

- Should the system maintain one account or multiple accounts if the member is a participant in multiple plans?

- Should a member have only one account or should a member have two accounts, i.e., a member account and (after retirement) a benefit account?

- Should beneficiaries be tied to the member or to the member's account or have separate accounts?

- Should a process be a workflow process or a non-workflow process?

- Which user roles should have access to which data and which processes?

- Should the deletion of a plan be permitted and, if so, under what circumstances?

- Should system tables be maintainable via a user screen or only via a system tool?

- Should correct wage and contribution records in an employer report be posted individually, or should the report be posted *in toto* only after <u>all</u> individual records are correct?

- Should users be permitted to reverse a transaction by pressing a single button and, if so, under what circumstances?

- Should users have the ability to change a member's status, or should status updates only be performed automatically by the system based on other processing?

- How many decimal places should be accommodated in calculations and data storage?

These and numerous other topics that are anticipated to significantly influence the design and operation of the new system need to be addressed at the project's inception. The vendor should schedule and chair a meeting with appropriate WVCPRB staff shortly after the project's start – between sixty and ninety days after the start of the project. This meeting should be held in advance of any design meetings, although it may follow an initial "get-acquainted" session. WVCPRB believes it to be the vendor's responsibility to:

- Prepare the agenda for the meeting and guide the discussion

- Educate WVCPRB staff in the pro's and con's (potential risks and rewards) of each design decision based on the vendor's experience in similar projects

- Point out interactions among the design topics which could influence the approach to be chosen

- Provide information on the possible effect of later changing a design decision

- Publish and distribute a written record of the meeting and the decisions stemming from it.

In addition, follow-up meetings should be held every three months during the project. The vendor should have the same responsibilities at the follow-up meetings that it fulfilled in the initial meeting. At these follow-up meetings, participants should have the opportunity to raise new design philosophy topics and to re-visit topics previously discussed. Again, decisions made at each follow-up meeting should be published in written form by the vendor and distributed to all participants.

Due to the vendor's familiarity and experience with new pension solution implementations, WVCPRB is relying on the vendor to identify all such design topics in a timely fashion for discussion with WVCPRB staff. It is acknowledged that, should WVCPRB change a decision it had made earlier relating to a design topic raised by the vendor, vendor may have reason to submit a change order for additional work mandated by the change. However, should the vendor fail to raise a given design topic for WVCPRB decision (and, instead, make an incorrect assumption relating to that design topic), then no related change order may be submitted, and WVCPRB believes any remedial work necessitated by the vendor's erroneous assumption should be performed at no additional cost to WVCPRB.

2.6.2.4   Vendor Activities Before and After Meetings with WVCPRB Staff

WVCPRB's ability to support the project is directly related to the amount of time available for WVCPRB staff to dedicate to it in addition to their normal duties. WVCPRB understands that the project cannot be completed without extensive input from our staff. Yet, other demands on their time and energy dictate that their project participation be highly efficient and productive. Therefore, certain procedures and guidelines should be observed when scheduling WVCPRB staff to attend meetings and other project work sessions.

Prior to scheduling formal meetings with WVCPRB staff, the vendor should fulfill the following requirements:

- Ensure that all vendor staff, no matter when they are introduced into the project, who are scheduled to participate have read this RFP and reviewed all of its appendices as well as the vendor's proposal. Meetings with WVCPRB staff should be used to clarify and expand upon the information contained in the RFP, NOT for a general review of its contents. No meeting time should be "wasted" in collecting and reviewing forms and letters, for example, since current forms, letters, and reports have been included in the RFP (see Appendix E, Exhibits 9 and 10).

- Prepare a specific, detailed meeting agenda and distribute it to all participants at least three business days prior to the meeting. By providing advance notice of what is to be covered, participants can be better prepared to bring appropriate resource materials and to provide necessary input in an efficient manner. In addition, the need for follow-up meetings may be minimized.

- Attach to the agenda a description of the products and/or objectives that are expected to result from the meeting (e.g., design of a particular new system output, clarification of requirements in RFP Section n). By thus defining the meeting's objectives in advance, discussions should be better focused with less temptation to wander into time-consuming digressions.

The vendor is requested to provide minutes of all meetings held with WVCPRB staff. They should be published within two business days of each meeting.

Further, when legitimate digressions do occur – e.g., discovery of an ambiguity in an RFP requirement that requires resolution – they should be added to the agenda of a subsequent meeting, rather than addressed in an *ad hoc* fashion at the original meeting. In other words, decisions that should be confined to one or two persons should not occupy a roomful of staff simply because they happen to be convened at the time the issue arose. WVCPRB believes it to be the vendor responsibility, via its planning and preparation activities, to ensure that WVCPRB staff time devoted to the project is utilized in the most efficient and productive manner possible.

2.6.2.5 High Level Demonstration of Base Functionality – Conference Room Pilots

The vendor is requested to provide multiple demonstrations (or "conference room pilots' [CRP]) of LOB functionality during the development of the new pension solution. The demonstrations are intended to provide the users with an opportunity to see the full member life cycle from enrollment, through withdrawal and refunds, re-enrollment, refund buy back, retirement, return to work, change of address, beneficiary, plan, etc. The objective is to develop user familiarity and comfort with the new solution – its look and feel, menu and screen navigation, and data entry features (pull-down lists, radio buttons, wizards, etc.) – as early as possible in the project and then as successive detail is built into the solution. By doing so, WVCPRB anticipates that users will be better able to provide reliable decisions and input relating to system design alternatives.

The initial demonstration need not reflect WVCPRB-specific functionality. A hands-on presentation of the vendor's base solution will suffice. Note that this means more than showing a series of screens pre-populated with data – the intent is to have a live demonstration from which users can draw inferences about operations, performance, etc. The presentation should include end-to-end transactions showing entry of new data, use of workflow tools, performance of relative calculations, and printed output if applicable. For that reason, WVCPRB desires the demonstration be on the production equipment and the database, all transaction files, scrollable list boxes, etc., should be of a size similar to those with which WVCPRB works in their current operations. The vendor should include a suggested set of scenarios for the initial, overall CRP as an attachment to their proposal. If selected, WVCPRB requests the vendor work with WVCPRB's Project Manager to refine the proposed initial CRP scenario before the completion of Phase 3 of the project. The agreed upon scenario should be executed successfully. In the event the system fails to complete the scenario; the issues should be resolved and the scenario re-demonstrated successfully within five business days.

The initial demonstration should be scheduled as soon as possible in the project, but no later than Phase 3, i.e., the implementation of proposed hardware and software infrastructure. The vendor should facilitate each session, ensuring that all system users attend the conference room pilot in groups of manageable size.

The demonstration should be repeated during the design / development effort for each functional rollout phase of the new solution. For each phase-related demonstration, it should be on the end-to-end business functionality that is planned to be delivered as part of that project phase.

2.6.3 *Standard Project Management Deliverables (Intro)*

WVCPRB understands that vendors will bring to the project their own project methodologies and standard deliverables. However, WVCPRB has identified a set of project deliverables that the vendor is requested to provide. They are described and defined in detail in the following subsections.

2.6.3.1 Requirements Traceability Matrix

To assist WVCPRB in tracking all project requirements and deliverables, a Requirements Traceability matrix will be initially prepared by WVCPRB, then completed and regularly maintained by the vendor. This section discusses the purpose of and detailed requirements for the Requirements Traceability matrix.

In developing the new integrated retirement system for WVCPRB, requirements will be defined in further detail at every step in the process. Prior to beginning work with the vendor, a number of steps will have occurred:

- Development of the Request for Proposal
- Issuance of questions by vendors and preparation of responses by WVCPRB
- Receipt of the proposal from vendor by WVCPRB
- Issuance of questions by WVCPRB and preparation of responses by vendor.

- Solicitation and receipt of BAFO, if appropriate
- Execution of the contract.

The first two phases of the ensuing effort typically constitute project start up and planning, followed by the development of a detailed Requirements Definition. The third phase consists of the implementation of the project's hardware and software infrastructure. (Subsequent phases should include the rollout of user-oriented functionality and enabling technologies.) The vendor's proposal is anticipated to have defined a number of processes, activities, and deliverables. Described in this section is a process and product (document) that is planned to be prepared by WVCPRB and the vendor as part of the effort to:

- Further, more-precisely define the requirements.

- Provide a trail or "traceability" of requirements to be met – starting from the RFP, going through the proposal, the question-and-answer cycle, and best and final offer, and culminating with the preparation of the requirements document.

- Provide a common understanding for the "go-forward" activities of subsequent phases, including "what" will be delivered and "when" in the project's evolution it will be delivered.

The product to be prepared by WVCPRB and the vendor to achieve WVCPRB's objectives consists of a Requirements Traceability Matrix in the format of a Microsoft Excel workbook. As prepared by WVCPRB, the Excel workbook will consist of several spreadsheets corresponding to requirements areas, such as LOB, Technical, Miscellaneous, Software, Option 1, Option 2, etc. The matrix will include ten columns, the contents of which are described below (and which may be modified if WVCPRB so desires):

1. **No.** – Sequential unique number, identifying the requirement. They are aggregated by major category (e.g., LOB requirements may be numbered L-1, L-2, etc., technical requirements may be numbered T-1, T-2, etc.). The unique identifier should follow each line item through the project, regardless of how the line items may be reorganized or "shuffled" among the various spreadsheets in the workbook.

2. **Requirement (Description) per Contract Exhibits / RFP** – A summarized description of the requirement.

3. **Source** – Identification of the source of the requirement. The source may be the RFP, the vendor's proposal, Q&A, BAFO, contract, contract exhibits, etc.; in some cases only one reference is made back to the RFP / proposal / contract, etc.; in others, multiple references are made.

4. **Page / Section** – The location of the requirement in the source.

5. **Phase** – The phase of the project in which the requirement is scheduled to be delivered per the project plan.

6. **SOW** – The vendor's Statement of Work which includes the requirement, if applicable.

7. **Received Date / Who** – The date that the requirement was delivered to WVCPRB, and to whom it was delivered.

8. **Accepted Date / Who** – The date that the requirement delivery was accepted by WVCPRB and by whom it was accepted.

9. **Comments** – Any comments relating to the requirement. Comments should include, among other things, an explanation of what caused a requirement to be removed or added. This should be specific, citing specific conversations which have previously occurred between WVCPRB and the vendor, the date and attendees, and the prior document which transmitted this information (including but not limited to meeting minutes, status report, and specific correspondence) to WVCPRB. As stated elsewhere in this RFP, WVCPRB desires that any agreement between WVCPRB and the vendor to eliminate project requirements stated in the RFP, the vendor's proposal, or the contract be in writing, executed by both parties.

10. **Test Case** – If applicable, identification of the test case that confirms that the requirement has been satisfied.

Activities on the part of both WVCPRB and the vendor related to the traceability issue are anticipated to include:

● First, WVCPRB will prepare the matrix that codifies and organizes the requirements of the RFP and executed contract. An example of the matrix as it will be delivered to the vendor by WVCPRB is shown in Exhibit I herein. WVCPRB will complete columns 1 (No.), 2 (Requirement Description), 3 (Source) and 4 (Page / Section) and deliver it to the vendor for review

● Next the vendor should review the matrix and verify its accuracy. Any discrepancies or differences in interpretation should be mutually resolved before the next step

● Then the vendor should complete columns 5 (Phase of the project in which the vendor anticipates implementing the requirement) and 6 (SOW, the Statement of Work to be prepared by the vendor which should include the requirement)

● In cases where a function described in the RFP is not "carried" forward, the vendor should note this by providing a written explanation in the comments column (9) for that function. Further, if there are any new functions that have evolved during the requirements analysis, the vendor should add them as appropriate entries at the end of the matrix. An example of the matrix as it should be completed by the vendor is provided in Exhibit II

● The vendor should then provide the matrix to WVCPRB for review

● WVCPRB staff should review the matrix – annotating any differences of opinion that they have with respect to the vendor's completion of the matrix. The annotated matrix should be returned to the vendor

● Next, a meeting or series of meetings should be held at which discussions should occur to resolve any differences

● Then WVCPRB and the vendor should update the matrix so that it reflects the agreed upon changes, and it should become part of the deliverables from the Requirements Definition. If appropriate, any changes to schedule and cost should be identified at this time

● WVCPRB will provide the matrix to the vendor within the period specified in Table 1 Delivery Due Dates for Major Deliverables in Section 2.3 Project Timetable – Major Deliverables. The revised, updated, completed matrix should be provided to WVCPRB by the vendor within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables. The matrix is intended to provide a more precise reference point for the "go-forward" strategy for the implementation phases.

Columns 7 and 8 should be filled in as portions of the project are completed by the vendor and delivered to WVCPRB for review and acceptance. Column 10 should be filled in by the vendor as test plans, test scenarios, test cases, etc. are developed during the course of the project. Exhibits 1, 2 and 3 on the following pages show three stages in the development of a small portion of a sample RTM

Furthermore, WVCPRB believes it to be **the vendor's responsibility for tracking and matching project requirements**, not only from the RFP (and associated amendments, questions and answers, vendor's proposal and any amendments thereto) to the design definition, but also through the requirement definition, design, and implementation activities. At any time, should WVCPRB question how a particular requirement expressed in the RFP / procurement cycle will be addressed in the new system, the vendor should be able to demonstrate how that requirement was carried forward from the RFP into the proposal, the requirements definition, the system design, and eventually the final implementation.

Exhibit **1** Requeability Matrix Example

1	2	3	4	5	6	7	8	9	10
No.	Requirement per Contract Exhibits / RFP	Source	Page / Section	Phase	SOW	Received Date / Who	Accepted Date / Who	Comments	Test Case(s)
L-1	Ability to capture user-defined parameters for calculating employer penalties and interest charges relating to late reports / remittances	RFP	B-1.1.14						
L-2	Ability to capture historical rates and factors with effective dates so that retroactive calculations use the appropriate figures	RFP	B-1.1.14						
L-3	Ability to capture a new employer's plan history (i.e., in previous retirement system) and make it available on-line	RFP	B-1.1.14						

Exhibit **2** Requirements Traceability Matrix Example with Vendor Entries

1	2	3	4	5	6	7	8	9	10
No.	Requirement per Contract Exhibits / RFP	Source	Page / Section	Phase	SOW	Received Date / Who	Accepted Date / Who	Comments	Test Case(s)
L-1	Ability to capture user-defined parameters for calculating employer penalties and interest charges relating to late reports / remittances	RFP	B-1.1.14	4	6				
L-2	Ability to capture historical rates and factors with effective dates so that	RFP	B-1.1.14	4	6				

1	2	3	4	5	6	7	8	9	10
No.	Requirement per Contract Exhibits / RFP	Source	Page / Section	Phase	SOW	Received Date / Who	Accepted Date / Who	Comments	Test Case(s)
	retroactive calculations use the appropriate figures								
L-3	Ability to capture a new employer's plan history (i.e., in previous retirement system) and make it available on-line	RFP	B-1.1.14	4	6				

Exhibit **3** Completed Requirements Traceability Matrix Example

1	2	3	4	5	6	7	8	9	10
No.	Requirement per Contract Exhibits / RFP	Source	Page / Section	Phase	SOW	Received Date / Who	Accepted Date / Who	Comments	Test Case(s)
L-1	Ability to capture user-defined parameters for calculating employer penalties and interest charges relating to late reports / remittances	RFP	B-1.1.14	4	6	20070502 PPC	20070516 RK	None	CALC-1, -2, -3, & -8
L-2	Ability to capture historical rates and factors with effective dates so that retroactive calculations use the appropriate figures	RFP	B-1.1.14	4	6	20070502 PPC	20070516 RK	None	CALC-4 & -5
L-3	Ability to capture a new employer's plan history (i.e., in previous retirement system) and make it available on-line	RFP	B-1.1.14	4	6	20070502 PPC	20070516 CLF	Requires collaboration on format of transferred data.	CALC-6, -7, & -8

2.6.3.2 Statements of Work

WVCPRB desires that all work to be done under the contract to be awarded be covered by written Statements of Work (SOW) authorized by WVCPRB, which define reasonable components of work. Thus, manageable "chunks" of work are anticipated to be defined, executed, and managed. When viewed in the aggregate, these "chunks" comprise the entire project.

The vendor should submit detailed written SOWs to the WVCPRB Project Manager for review, possible revision, and acceptance. WVCPRB will require up to ten (10) business days to review and authorize a SOW (with an extension permissible if jointly agreed to, in writing, by both the vendor and WVCPRB Project Managers). Therefore, the vendor should factor in this review period when scheduling its activities under the contract. Under no circumstances, should any work be done absent a SOW duly authorized by the WVCPRB Project Manager.

Conversely, the vendor should not issue SOWs for work to be done in the distant future – i.e., vendors should not attempt to "bank" SOWs. While WVCPRB understands the vendor's desire to be able to schedule its personnel as far in advance as possible, WVCPRB's objective is to ensure that SOWs are developed in a "just-in-time" fashion in order that they reflect the project's most recent developments – and 'downstream' SOWs benefit from the experiences of the upstream SOWs. WVCPRB wishes to avoid having work conducted under "stale" SOWs. Therefore, the vendor should deliver each SOW no sooner than the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables prior to the date that work under that SOW is scheduled to begin. If work on a particular SOW does not begin within that same period of WVCPRB's authorization of the SOW, then WVCPRB reserves the right to require that the SOW be re-issued and re-authorized prior to commencing work there under.

This provision provides the vendor with a "grace period" equivalent to the period elapsed between delivery of the SOW and WVCPRB's authorization of it. For example, if the period specified in Table 1 is 30 days, the vendor may deliver an SOW on day 0 for work scheduled to begin on day 30. If WVCPRB takes the full ten days to authorize the SOW, then the vendor may begin work at any time between day 10 (when the SOW is authorized) and day 40 (30 days after authorization). If work under the SOW does not begin by day 40, however, WVCPRB may require that the SOW be re-issued and re-authorized prior to commencing work.

In their proposals, WVCPRB desires the vendors to confirm their understanding of the above stated requirements relating to SOWs and their timing.

For the total project, the vendor should develop, submit, and receive approval from WVCPRB for no more than ten [10] SOWs addressing the activities within the project. WVCPRB and the vendor should mutually agree on the format of the SOW within thirty (30) days of the start of the project. In concept, SOWs should contain:

Statements of Work
   Number
   Title
   Overview
   Objectives
   Scope
      Within SOW
      Outside of SOW
   WVCPRB manpower
   Start criteria
   Acceptance criteria
   Quality Assurance
   Roles and Responsibilities
      Vendor

> Subcontractors
> WVCPRB Users
> WVCPRB IT
> WVOT Technical Staff
> OPM/QA
> Other
> Assumptions and constraints
> Reference to RFP and Proposal
> Extracts From Requirements Traceability Matrix Schedule
> Payment schedule
> Cost
> > Original
> > Current
> > Explanation of Deviation
> Critical Success Factors
> Signatures

2.6.3.3 Weekly Status Reports and Project Status Meetings

The vendor is requested to submit written weekly status reports and to facilitate weekly project status meetings. The status reports should include separate sections that cover all parallel parts, phases, or aspects that were in progress or had been completed during the reporting period or that are scheduled to begin during the next reporting period.

The status reports should be available to the WVCPRB Project Manager by 5:00 PM Monday of the week following the reporting period. The weekly reporting period ends at the close of business each Friday (not the start of business, Monday morning). Ad hoc status reports may also be required if WVCPRB Project Manager feels they are needed. Four (4) types of reporting should be included:

1. Project phase and task status / progress reports in which:

   o Overall project status is shown in a chart form with sub-phases identified

   o Analysis of current status relative to work plan is graphically shown by chart overlays or a similar technique in the weekly status reports; the vendor is requested to use an automated tool such as Microsoft Project. Regardless of the means of presentation, status should be shown for every activity underway (or scheduled to be underway) for the period being reported[7]

   o Hours expended and hours-to-go are shown for each work task

   o Schedules and work plans are updated if necessary, showing both the old and new versions.

2. Narrative status / progress reports outlining:

   o Work completed to date

   o Problems encountered and proposed solutions

   o Problems anticipated in coming reporting periods and proposed solutions (alternatives)

   o Work estimated to be accomplished during the subsequent period

   o Any other points of significance relating to schedule or other aspects of the project.

   o Overall project status is shown in a chart form with sub-phases identified

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[7] While the level of detail varies, the description here typically requires reporting against detail at least four levels deep in the project Work Breakdown Structure (WBS)

  o Analysis of current status relative to work plan is graphically shown by chart overlays or a similar technique in the weekly status reports; the vendor is requested to use an automated tool such as Microsoft Project

  o Hours expended and hours-to-go are shown for each work task

  o Schedules and work plans are updated if necessary, showing both the old and new versions.

3. Ad hoc status / progress information.

4. Project metrics – during various project phases:

  o Deliverable status, with percentage of completion and time ahead or behind schedule for particular tasks

  o An analysis of risk anticipated, proposed mitigation strategies and resolved risks

  o Proposed changes to the project schedule, if any

  o Project Budget, including change orders, if any

  o Specification development – in process, in review, rejected, accepted, in rework

  o Test – available for test, in test, accepted, rejected, in rework, in retest

  o Other.

WVCPRB understands that, given the project's magnitude, comprehensive weekly status reports may be lengthy and highly detailed. Any status report that exceeds ten (10) pages in length should be accompanied by a one to two-page management summary.

The final format of the status report should be mutually agreed upon between WVCPRB and the vendor within thirty (30) days of the project start date. Vendors should include samples of previously used status reports on other similar projects.

2.6.3.4 Executive Level Reporting

In addition to detailed project status reports, WVCPRB requested that the vendor produce a monthly executive level report presenting project summary information targeted at an executive audience (e.g., project sponsors, the Board of Trustees, the WVOT P^{3}MB,). This report should provide a succinct monthly summary of the project's status against key indicators and furnish decision makers with an analysis tool and communication vehicle for proactive planning and risk mitigation. The objective is to keep executives and sponsors aware of the project's status in order to enable prompt decision making aimed at restoring the project's health when problems develop – e.g., decisions to enlist additional resources, appropriate additional funds, and/or adjust the project's scope.

The report should provide information for each of the key project indicators, i.e.,:

- Milestones (schedule)
- Budget
- Scope
- Risk
- Quality (test results).

To the extent possible, executive level reports should make use of graphics to depict the status of the indicators listed above. Such reports are frequently characterized as 'dashboard' or 'critical success factor' reports. Samples should be included in the vendor's proposal.

2.6.3.5 Monthly Steering Committee Meeting

Successful projects require constant communication among all parties and well defined structures for maintaining control, reviewing progress, settling disagreements or amending the project based on exigent

circumstances. The Steering Committee meeting represents an opportunity to bring together the major stakeholders on a regular basis to accomplish, among other things, the following:

- To monitor the progress of the project as it relates to the overall project work plan

- To facilitate the resolution of disputes or provide additional clarification of issues at the highest level

- To encourage collaboration among all of the participants by reminding them that the project enjoys support at the highest levels within the organization.

Meetings of the WVCPRB Steering Committee will be scheduled on a monthly basis. The vendor's Project Manager and other vendor senior staff as appropriate, should attend each of these meetings.

As requested by the WVCPRB Project Manager, the vendor's Project Manager may occasionally be required to deliver a presentation on pertinent topics at the Steering Committee meeting.

Prior to each Steering Committee meeting, the vendor's Project Manager should meet with the WVCPRB Project Manager and others as deemed appropriate by the WVCPRB Project Manager in order to develop the meeting agenda.

No later than two business days after each Steering Committee meeting, minutes of the meeting should be prepared and distributed by the vendor to all meeting participants and all other project participants who are affected by the meeting's outcome.

On occasion, the WVCPRB Project Manager may be required to attend the Department of Administration Steering Committee (DOASC) meeting and/or the Office of Technology Portfolio, Program, Project Management Board (P^{3}MB) meeting. On those occasions, the WVCPRB Project Manager may request the OPM and/.or LOB vendor's assistance and/or attendance at those meetings.

2.6.3.6 Requirements Analysis

The vendor's early efforts in developing the LOB solution are anticipated to consist of collaborative efforts between vendor staff, WVCPRB users, and WVCPRB IT staff to identify the differences between the vendor's template solution and WVCPRB's specific requirements. This portion of the project may be termed GAP analysis, requirements definition, etc. depending upon the vendor's development methodology. For the purposes of this discussion, it will be called <u>GAP analysis</u>.

Vendors should take note that WVCPRB considers it essential that WVCPRB IT staff who support the legacy system will be actively engaged in the GAP analysis – since they are often, in many areas, equally knowledgeable (but with a different perspective) about both the "as is" current environment and the desired "to be" environment than are the users. This participation should be carefully scheduled.

During the first GAP analysis session on a given topic, the vendor should excerpt from the Requirements Traceability Matrix / RFP and review with the users and WVCPRB IT staff what the Requirements Traceability Matrix / RFP expressed for requirements on that topic.

Throughout the course of the project, the RFP requirements ALWAYS pertain, unless during GAP analysis, the users agree to eliminate an RFP requirement AND a written agreement to that effect is prepared by the vendor and signed by the WVCPRB Project Manager. If WVCPRB agrees to such a "reduction" in requirements during GAP analysis, WVCPRB will not expect the vendor to reduce its fixed price. However, WVCPRB anticipates the vendor should, as part of the written agreement to eliminate the requirement, issue WVCPRB a "credit memo" which estimates the dollar value of the effort that is avoided by virtue of eliminating the requirement. WVCPRB intends to be able to apply all such credit memos to offset the cost of future Change Control Requests (CCRs). The vendor should describe in its proposal how the "credit" would be determined based on the effort avoided due to the reduction in requirements.

If at a later date, WVCPRB wishes to restore a requirement that it had agreed in writing to eliminate, then that requirement is subject to a CCR. In that event, however, the cost of the CCR cannot exceed the value of the credit memo that was earlier issued by the vendor for eliminating that requirement. Vendors

should note that WVCPRB intends to utilize credit memos to offset any CCR, regardless of whether or not the credit memo was for the same previously eliminated requirement.

Vendors should take note of, and confirm in their proposals, the following: **under no circumstances may WVCPRB's approval of system design and/or specifications abrogate the RFP requirements.** WVCPRB staff invested a great deal of time in developing the RFP requirements. The vendor, not WVCPRB staff, is responsible for ensuring that all RFP requirements are correctly reflected in vendor design and/or specification documents. Absent a specific written agreement to eliminate or modify an RFP requirement, signed by the WVCPRB Project Manager, that RFP requirement remains operative.

The vendor should provide a sample GAP document template for review and modification by WVCPRB prior to starting the first GAP session. The GAP document should clearly identify what required functionality exists in the base-LOB application and what functionality has to be added or modified to conform to or satisfy WVCPRB's requirements. If the GAP documents are silent on a requirement and no written agreement pertaining to eliminating it is authorized, then ALL RFP provisions pertaining to that requirement stand.

Vendors should, as a part of their proposal, to provide a written description of the methodology they use in accomplishing the GAP analysis discussed above. The description should be accompanied by appropriate supporting sample documents (e.g., sample GAP meeting schedule, sample meeting agenda, sample meeting summary). WVCPRB is particularly interested in understanding the "How To" training given to vendor's GAP analysis meeting facilitators, providing instructions on issue "parking," issue resolution, etc.

WVCPRB is also very interested in understanding how during the determination of requirements, the vendor plans to communicate to WVCPRB staff the details of "How?" the vendor intends to meet a requirement (in addition to the "Yes, it's in there," response that leaves the "What it looks like" question unanswered.) What WVCPRB wishes to avoid is agreement and sign-off on the existence of a function, only to find later that there was great mis-understanding on the part of WVCPRB staff. To this end, WVCPRB staff will be instructed not to sign off on requirements and specifications that they do not understand.

2.6.3.7   Change Orders, Change Control and Reporting

This section includes requirements pertaining to change control, change reporting, and the management of the integration of changes over the course of the project.

2.6.3.7.1 Change Orders

It is to be anticipated in a project of such magnitude that WVCPRB will make periodic requests for changes in the new solution. Such changes typically incur additional costs and possibly delays relative to the project schedule. The WVCPRB Project Manager will provide all such change requests in writing to the vendor's Project Manager. The vendor's Project Manager should respond to such change requests with a written proposal for completing the change. The vendor's proposal for implementing the change – i.e., the change order – should be delivered to WVCPRB by the vendor within ten (10) business days of the vendor's receipt of the written request for the change. The change order is envisioned to define the effort involved in implementing the change, the total cost of implementing the change, and the effect, if any, of implementing the change on all pertinent project schedules.

It should be understood by the vendor that WVCPRB does not intend to pay for the effort involved in developing the change order. Just as the vendor bears the cost of developing its proposals in response to this RFP, the vendor bears the cost of estimating the cost, time, and manpower required to implement all change requests forthcoming from WVCPRB during the course of the project. Vendors are cautioned to factor into their proposed approach, cost, and manpower estimates sufficient resources to respond to WVCPRB's change requests as they arise throughout the project.

Further, it is pointed out to the vendor that the responses should describe the completion of the work requested, as opposed to a response that describes the cost for an analysis and plan.

2.6.3.7.2 Legislative Changes

It is the vendor's responsibility to ensure the "currency" of the LOB application software for any legislation that is in effect at the time of contract signing, regardless of whether or not the legislation existed at the time the vendor's proposal was submitted.

2.6.3.7.3 Credits for Unneeded Deliverables

If it is determined after contract approval that some deliverables or portions of deliverables are not needed, a credit may be due to WVCPRB. The vendor should be prepared to demonstrate how it arrived at the credit amount if the deliverable prices are bundled. The vendor should use the hourly rates quoted by the vendor in Cost Schedule 3 when determining the credit to be applied for the work items that are no longer needed.

2.6.3.7.4 Change Request Reporting

Vendors should provide evidence in their proposals that they have in place and intend to utilize an automated and demonstrable Change Request Reporting (CRR) system for managing and facilitating change requests.

The desired summary / reporting mechanism should be in a spreadsheet format. It should summarize current and "phase-to-date" change requests and include graphics capabilities showing trends in change requests received and satisfied, as well as the existing backlog of authorized change requests at any point in time. Examples of the summary / trend information of interest to WVCPRB include (at both the individual functional or business area level and the delivery phase level, as well as for the project in total):

- Number of change requests received at any point in time
- Number of change requests analyzed by the vendor (and estimates provided to WVCPRB) at any point in time
- Number of change requests authorized / rejected by WVCPRB at any point in time
- Number of closed (i.e., completed) change requests since the beginning of the project and the beginning of the current phase
- Number of change requests opened / closed in the last month.

The CRR system can be custom developed or a package. The vendor should describe the proposed CRR system in its proposal. After contract award, the proposed CRR system should be presented to WVCPRB in detail. The vendor should agree to provide training to appropriate WVCPRB staff as necessary to facilitate their use and understanding of the CRR system.

The vendor should provide, on a no less frequent than monthly basis, copies of the CRR status report to WVCPRB for review.

WVCPRB requests the vendor to deliver a detailed Change Control Plan / Methodology for use throughout the project within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables.

2.6.3.8 Vendor Analysis Tasks

Over the course of the effort, the successful vendor may be required, from time to time, to conduct various analysis tasks. These tasks would be directed at potential, new / revised project requirements. For the purposes of discussion, examples include: assessing the feasibility of speeding up processing times, examining alternative check printing solutions, accommodating a new data interface with another state agency or financial institution, and adding a new form letter to be generated by the system.

When WVCPRB requests that such an analysis task be undertaken, the vendor should:

- Consult with WVCPRB staff to develop an unambiguous definition of the new / revised requirement

- Analyze the alternatives for satisfying the new / revised requirement, addressing the advantages and disadvantages of each

- Identify any problems which may arise as a result of satisfying the new requirement

- Propose the "best" (generally, least costly / disruptive or most expedient) alternative for satisfying the new requirement

- Prepare a schedule and cost proposal for satisfying the new requirement, including an indication of where in the project work plan the new requirement should be addressed

- Present the written analysis to WVCPRB for authorization.

If WVCPRB chooses not to authorize the implementation of the new requirement, the vendor's effort ends at that point. However, if a particular requirement is not immediately authorized, WVCPRB may wish to reconsider its position at some future point in the project. In this event, the vendor would be given the opportunity to revise its analysis, since it is understood that interjecting a new requirement later in the project generally involves greater expense and/or effort than would have been the case had it been authorized when originally proposed.

If / when WVCPRB authorizes implementation of the new requirement, WVCPRB desires the vendor to be responsible for integrating the effort into the overall project and for satisfying the new, authorized requirement for the price proposed in the analysis (as possibly revised per the above discussion).

Although WVCPRB would anticipate paying for the implementation of the new requirement at the cost estimated by the vendor, the analysis effort itself should not be billed for separately. Vendors are cautioned to include in their cost bids (in response to this RFP) sufficient resources to conduct such analysis tasks as requested by WVCPRB.

In their technical proposals, vendors should state their commitment to provide such analysis services within their fixed price bids.

WVCPRB wishes to convey that the scope of such analysis tasks would be "reasonable" in magnitude, as indicated by the examples provided in the introductory paragraph above. WVCPRB does not request the successful vendor to provide analysis services relating to major new requirements at no additional cost.

2.6.3.9 Problem Incident Reports

Vendors should provide evidence in their proposals that they have in place and intend to utilize an automated and demonstrable problem incident reporting (PIR) system for managing and facilitating test-related activities as well as production problems. The PIR system should offer the following basic attributes:

- It should provide ready, secure access to WVCPRB, the OPM / IV&V / QA consultant, and the vendor for the purpose of determining individual problem status as well as general system status and quality trends

- It should define how PIRs are initiated, uniquely identified, and logged, and by whom

- It should relate each PIR to the particular functional area (e.g., employer reporting, benefit estimates) or appropriate area, e.g., training, documentation, etc.

- It should relate each PIR to the appropriate test variant / scenario / case / data set

- It should record both the expected and actual test result as alphanumeric, numeric or date as appropriate to the PIR

- It should track the status of, complexity of, and priority accorded to each PIR

- It should provide for relating PIRs to change orders when appropriate (in those cases where what was originally thought to be a problem incident is actually determined to be a request for a design change)

- It should track the scheduled fix delivery date

- It should track the fix release number through which the PIR was addressed

- It should provide for tracking efforts to correct the problem and the eventual resolution of the problem incident

- It should include a summary / reporting mechanism as described below

- A manual approach using WORD, email, or Excel documents is not sufficiently robust and is therefore not acceptable; however, the system should be capable of automatically exporting information to those systems.

The desired summary / reporting mechanism should be in a row-and-column format. It should summarize current and "phase-to-date" PIRs and include graphics capabilities showing trends in problem incident reporting and resolution, as well as the existing backlog of PIRs at any point in time and amount of time (maximum, minimum, average) to close out and correct PIRs. Examples of the summary / trend information of interest to WVCPRB include (at both individual functional or business area levels, delivery phases, as well as the project in total):

- Number of test cases for the phase, cases to execute and cases executed – for the phase and for each LOB area.

- Number of test case data sets for each executed test case.

- Number of executed test cases with one or more PIRs (opened or closed).

- Number of test cases undergoing rework.

- Number of test cases awaiting or undergoing retesting.

- Number of open PIRs at any point in time.

- Number of closed PIRs since the beginning of the project and the beginning of the current phase.

- Number of PIRs opened / closed in the last week/last month.

A detailed listing of the information of interest (not just a summary total), as outlined above, should be made available in printed format. For example, referring to the first item in the list, the PIR system should provide a list of the test cases for the phase, a list of the case to execute and a list of the cases executed.

An example report, illustrating how some of this information could be presented, is provided below:

Figure 6 Sample Detailed PIR Report

UAT Statistics for Active

As of	10/6	10/7	10/8	10/9	10/10	10/13	10/14	10/15	10/16	10/17
Test Case Breakdown										
Total Test Cases	83	83	83	83	83	83	83	83	83	83
Total Test Cases Executed	4	7	12	17	19	25	27	31	32	37
Total Cases Remaining	79	76	71	66	64	58	56	52	51	46
Total Data Sets	44	47	57	62	66	78	83	78	78	78
Executed Cases										
With PIRs	3	5	7	10	11	13	17	18	18	19
In Rework	3	3	3	3	2	3	4	4	3	1
In Retest	0	2	4	5	3	2	3	2	2	2
Completed	1	2	5	9	14	20	20	25	27	34
PIR Breakdown										
Total Open PIRs	0	7	9	11	15	17	16	11	9	8
S/W Defects	0	3	5	6	8	8	6	2	3	2
Data Conversion	0	4	4	5	7	9	10	9	6	6
New PIRs										
S/W Defects	3	2	1	2	0	3	1	3	1	2
Data Conversion	4	0	1	2	2	3	1	0	0	0
Closed PIRs										
S/W Defects	0	0	0	0	0	5	5	2	2	5
Data Conversion	0	0	0	0	0	2	2	3	0	0
Total Open PIRs	7	9	11	15	17	16	11	9	8	5

Graphics illustrating the progression of testing and PIR activity over time should also be provided showing trends. The following is provided as an example:

Figure 7 Sample PIR Progress Graph
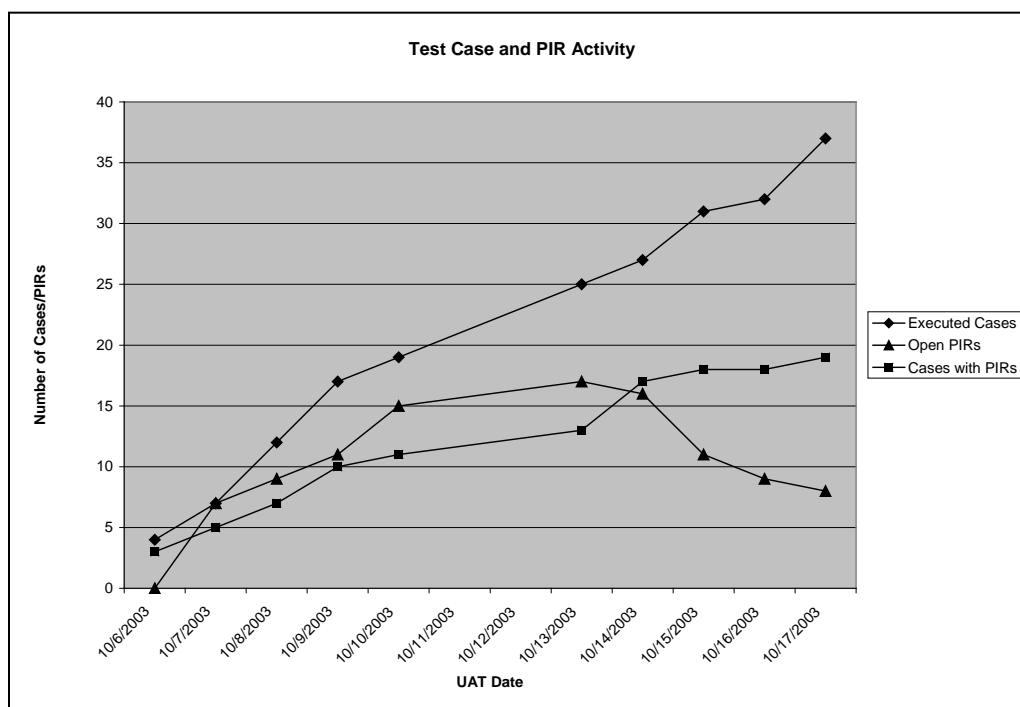
The PIR system can be custom developed or a package – although a commercial-off-the-shelf (COTS) approach is more desirable. A manual approach using a word-processor, e-mail, or electronic spreadsheet document **is not acceptable**. The vendor should describe the proposed PIR system in its proposal.

After contract award, WVCPRB requests that the proposed PIR system be presented to WVCPRB in detail within the period specified in Table 1 in Section 2.3 Project Timetable – Major Deliverables.

The vendor should provide training to appropriate WVCPRB staff as necessary to facilitate their use and understanding of the PIR system. User testing may proceed after the PIR approach has been presented to, reviewed by, and accepted by WVCPRB.

In addition, the vendor will be requested to implement a methodology for classifying PIRs. Such methodology should include conducting joint meetings with WVCPRB (at mutually agreed to intervals) to determine the classification of PIRs. Classifications may be either warranty related, where the vendor bears the cost of the modification, or non-warranty (i.e., system enhancement, design change, out of scope) related, where the vendor should provide a cost estimate to WVCPRB. Vendors should fully describe their methodology for classifying PIRs in their proposals, including representative examples of each of the proposed classes of problems.

At the conclusion of the project, WVCPRB desires the vendor to leave the agency with a copy of the PIR system and the complete database of all reported problem incidents (including those found and reported by the vendor test staff as well as those reported by WVCPRB) for the project. In addition, as part of the leave-behind, vendor is requested to provide documentation and training for WVCPRB administration and IT personnel as appropriate.

2.6.3.10 Risk Management

Risk management includes identification, analysis, planning, tracking, control, and communication of risk areas associated with all project phases. Risk assessment and management are on-going tasks in any

project. The vendor should demonstrate that it can provide a risk management (analysis and mitigation) strategy and methodology that can be used throughout the project to monitor potential risks and to develop mitigation strategies in anticipation of any problems that may arise. Then, based on feedback, assessments can be updated on a continuing basis for the duration of the project. While some risks can be identified from the outset of a project, others may emerge in the course of the project's life cycle.

The risk management strategy and methodology should address how the vendor proposes to accomplish the following:

- Define measures of success and set targets
- Identify key assumptions
- Identify, analyze, and document risks that threaten the ability to achieve the success targets
- Develop and document mitigation strategies for each identified risk
- Specify tasks to implement the mitigation strategy
- Build consensus on appropriate mitigation strategies
- Establish criteria for escalating risks
- Enlist support for mitigation steps that are outside of the project's direct control
- Monitor and report on risks.

Further, as a part of their response, the vendor should provide a list of the top twenty risks they currently foresee with this project, their assessment of the probability of their occurrence, and the steps they intend to take to avoid or mitigate those risks.

At key points in the project cycle and no less frequently than quarterly, the successful vendor will be requested to conduct formal risk assessments, to review the status of project risks to ensure that appropriate mitigation strategies are in place and to report on the project's risk status.

2.6.3.11 Deliverable Repository

During the course of the implementation of the new system, numerous written deliverables should be provided to WVCPRB by the vendor. These deliverables can be expected to range from requirements meeting notes, to vendor's status reports, to operations manuals, etc. Many of these items should be delivered in multiple versions.

The vendor may choose to deliver project documents in PDF format. However, WVCPRB requires that all documents also be delivered in the appropriate Microsoft Office suite (current or immediately previous revision) document format with no locks, inhibitors, etc. that restrict the use of track changes or comments. Starting with the response to the RFP and continuing through the last written deliverable on the project, the vendor should use MS Project, MS Visio, MS Excel, MS Word, or MS PowerPoint as the file format for all written deliverables.

It is imperative that all versions of all documents delivered at any point in the project and at the end of the project can be identified, located, and accessed by both vendor and WVCPRB staff as needed. To that end, WVCPRB will make available a Microsoft SharePoint portal and repository within which the vendor may maintain a repository of all written project deliverables in electronic form. The deliverables should be accessible to all project participants, including via remote dial-up or through the Internet.

Working in conjunction with the West Virginia Office of Technology, the vendor should ensure that the deliverables repository is designed and organized (with appropriate training provided to WVCPRB staff) such that WVCPRB staff can efficiently locate and retrieve any document of interest. Write permission to the repository will be suitably restricted. While anyone involved in the project should be able to access all repository items, the ability to add to, delete from, or modify the repository's contents will be strictly controlled and restricted to authorized project personnel. WVCPRB desires the <u>vendor to be responsible</u> throughout the project until final turnover, to guarantee the continuous correctness and completeness of the repository's contents.

Vendors should describe in their proposals:

● Their commitment to satisfying the requirements for the deliverables repository

● How they propose to organize the SharePoint repository for ease of use and access

● How they would suggest setting up control of the repository to guarantee, on a continuous basis, the correctness and completeness of the repository at any point in time

● Their commitment to produce a document (which itself should be included in the repository) describing the deliverables repository, how it is organized, and how items from it can be accessed

● Their commitment to train WVCPRB staff in the use of the repository (including an administrator, managers, and end-users)

2.7 DATA

The following sections set forth the vendor's responsibilities relating to the migration of data from the legacy environment to the new solution as well as the precautions the vendor is requested to take to ensure the security of WVCPRB's member and retiree data.

2.7.1 *Data Security*

WVCPRB considers the security of member and retiree data to be paramount throughout the execution of this project. WVCPRB recognizes that access to the real data may be necessary for both data conversion and for debugging of any problematic calculations; however the risk of loss or inappropriate use of personal data, possibly leading to identity theft or other such abuses is high. Therefore, we desire that the vendor provide a discussion in their response regarding how they propose to manage the security of WVCPRB's data during the project implementation. That response should eventually be incorporated into the Security Plan discussed in Section 2.13.3.3.

The response should include at least the following information:

● A written commitment that all vendor personnel (including those who may work off-site) should sign a West Virginia-supplied non-disclosure and confidentiality agreement before they do any work on the project (see EXH 2 Sample of Non-Disclosure Document); such forms subsequently to be submitted to WVCPRB Project Manager.

● A complete list of exactly which data vendor considers to be personally identifiable information (PII)

● A written commitment that none of the PII should be sent off-site, even when sent in encrypted files or email correspondence[8]

● A written commitment that none of the PII should be stored on any local PCs (including vendor laptops) without specific permission from the WVCPRB Project Manager – and should that permission be forthcoming, stored only in encrypted format

● A description of which vendor staff need access to PII and why

● A written commitment that all vendor staff assigned to the project have successfully undergone Information Security Awareness Training from a reputable vendor (e.g., Symantec) or taken the West Virginia Office of Technology-developed training. A copy of the certification of the successful completion of such training should be given to the WVCPRB Project Manager upon request.

Under no circumstances is the vendor permitted to remove ANY WVCPRB data from the WVCPRB site. This provision includes a prohibition from accessing the on-site data via an external device connected

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[8] The temporary office space referenced in Section 2.1 will be considered the vendor's primary work facility for this project and therefore not an off-site location.

over the web or otherwise. WVCPRB recognizes that the eventual solution may involve electronic submission of member data by employers as well as member-initiated, web-based self-service that accesses and alters member data. However, the controls to ensure the inviolability of those transmissions are not yet in place.

2.7.2   *Data Conversion and Bridging*

WVCPRB understands that a critical component of the project is the accurate and complete conversion of legacy system data to the new environment.

2.7.2.1   Data Conversion Plan

The vendor is requested to create a data conversion plan that establishes the conversion environment and outlines strategies for both the automated and manual conversion of data for the new solution. The basic data conversion plan should:

1. Identify how the conversion requirements should be confirmed and refined

2. Map out how the data elements in the legacy system should be analyzed

3. Prepare a data conversion specification

4. Identify the approach for manual data conversion, including the design of data collection forms and creation procedures for unreliable legacy system data

5. Discuss options for satisfying data required of the LOB solution data model that is not present in the data to be converted (e.g., termination dates that only the employer has)

6. Develop data conversion test scripts

7. Create the schedule for conversion activities

8. Keep the data conversion consistent with the implementation schedule.

WVCPRB desires the vendor to map legacy data to the new solution and design the data conversion flat file extracts from the legacy system, based on file formats defined collaboratively by the vendor and WVCPRB. WVCPRB staff will design, develop, and implement any modifications on the legacy side required to produce the flat file extracts for data bridging or data conversion. WVCPRB will be responsible for manual corrections to legacy system data.

As part of the conversion plan, WVCPRB requests that the vendor include plans for testing the conversion process, including full reconciliation and balancing procedures for ensuring that all legacy system data was correctly converted and loaded. The conversion plan should elaborate how the vendor intends to protect the integrity and confidentiality of the data throughout the conversion process.

In addition, WVCPRB requires that the implementation be accomplished in distinct implementation phases for the LOB functionality. Thus, not only data conversion, but also data bridging (the regular, periodic "synchronizing" of data between the old and new environments during the period when both environments will be in use), are crucial activities in assuring a successful implementation. Refer to Figure 8 Phased Data Conversion and Bridging for an illustration of this process.

2.7.2.2   Data Conversion Strategy and Methodology

Vendors should demonstrate in their proposals that they have in place a strategy and methodology for data conversion and bridging that is comparable to and compatible with their methodology for the design and development of the LOB solution. Although WVCPRB recognizes that data architects and other technical specialists may execute the conversion and bridging activities, appropriate management and planning disciplines should also be applied to the effort to ensure that:

- There is adequate coordination between the data conversion and bridging effort and the other project components (design, development, testing, training, etc.)

- There is adequate communication about the data conversion and bridging effort with WVCPRB managers, business area owners, and users, as well as with the vendor's other project team members.

Therefore, vendors should include in their proposals their proposed strategy and methodology for data conversion and bridging. The methodology should embrace the same degree of rigor and formality as the vendor's system development methodology. The conversion and bridging methodology should address the following areas of concern:

- The planning of the data conversion and bridging effort and how those plans should be communicated to (and approved by) WVCPRB managers, business area owners, and users, as well as vendor development teams; WVCPRB requires that a detailed, written conversion and bridging plan be prepared for each functional rollout phase.

- When conversion and bridging activities should be scheduled relative to the development effort.

- The roles and responsibilities of vendor and WVCPRB staff (users and IT) in the conversion and bridging effort; such roles and responsibilities should identify the processes and procedures to be used by both the vendor's staff and WVCPRB staff in performing the verification that all data was converted correctly.

- The development of written procedures, methods, and checklists for balancing and reconciling conversion and bridging of data between the legacy environment and the new environment. This includes, in addition to developing the procedures, validating them with WVCPRB staff during testing and training, training WVCPRB staff in their use during testing, and validating that they are being used properly on an on-going basis. The procedures should provide sufficient controls that vendor and WVCPRB can readily discern the validity of any step in the conversion process as well as the validity of the converted data. WVCPRB desires the procedures to be reviewed and approved by WVCPRB's auditor and/or CFO prior to their use.

- Techniques to be used in cleaning and converting legacy system data (e.g., data mapping, automated conversion routines, balancing, and reconciliation of the converted data at various points throughout the conversion process).

- Development of data bridging routines addressing the update of the new environment with data entered into the old environment and vice versa during the period when both systems will be in use; the methodology should also identify the procedures to be implemented to assure that forward and backward bridged data is correct.

- The possible need for dual data entry.

- Training of users at the time of a functional rollout phase cutover as to what data needs to be entered in which system and how.

- Synchronization of the data conversion and bridging effort with the various other aspects of the project (e.g., LOB development, imaging capability, backfile conversion, business process reengineering, organizational restructuring).

- A method to communicate to users what default values were used during conversion and why.

- The strategy to be employed for any conversion of images and/or the indexing scheme and their indexes.

Figure 8 Phased Data Conversion and Bridging below is provided to illustrate the data conversion and bridging process as envisioned by WVCPRB.

Figure 8 Phased Data Conversion and Bridging

Phase	Legacy System Data	New System Data	Reconciliation and Balancing

Currently

All data and processing reside in the legacy system

Phase 4a

The first data conversion (C_1) occurs upon the first phase cutover. Data is entered into both systems, with forward bridging (FB_1) of data from the legacy system to the new system and backward bridging (BB_1) from the new system to the legacy system.

C_1

FB_1

BB_1

The results of the data conversion are reported in the DCCAR. Three sets of Balancing & Reconciliation Processes and Procedures are applied to ensure the correctness of the converted data (C_1), the forward bridged data (FB_1) and the backward bridged data (BB_1).

Data Conversion / Cleansing Audit Report (DCCAR)

Phase 4b

The second data conversion (C_2) occurs upon the second phase cutover. Data continues to be entered into both systems, with forward bridging (FB_2) of data from the legacy system to the new system and backward bridging (BB_2) from the new system to the legacy system.

C_2

FB_2

BB_2

The results of the data conversion are reported in the DCCAR. Three sets of Balancing & Reconciliation Processes and Procedures are applied to ensure the correctness of the converted data (C_2), the forward bridged data (FB_2) and the backward bridged data (BB_2).

Data Conversion / Cleansing Audit Report (DCCAR)

Phase 4c

The final data conversion (C_3) occurs upon the third and final phase cutover. At this point, data is entered only into the new system. Data bridging between the two systems is no longer required.

C_3

The results of the data conversion are reported in the DCCAR. A single set of Balancing & Reconciliation Processes and Procedures is applied to ensure the correctness of the final data conversion (C_3).

Data Conversion / Cleansing Audit Report (DCCAR)

2.7.2.3   Data Cleansing and Conversion Audit Report

In addition to planning and executing the data conversion efforts, the vendor is also requested to create a Data Cleansing/Conversion Audit Report (DCCAR). This report should be in a format and at a level of detail that is appropriate for WVCPRB Executive Management, IT staff, users, and an internal or external auditor to review and approve. This report should contain an overall summary of the effort that was undertaken along with a brief, but complete, listing of all the types of data fixes that were made – both manual and automated.

For <u>each</u> type of data fix effected in each functional rollout of the new solution, the vendor should set forth in the DCCAR, at least, the following information:

1. The problem the data was causing

2. The number of occurrences

3. The type of fix that was applied (e.g., manual or automated)

4. The number of records fixed

5. The number of records unable to be fixed

6. A list of all records fixed and copies of all "before" and "after" data

7. The benefit of having fixed this data problem.

For each functional rollout of the new solution, the data cleansing/conversion audit report should first be delivered in "draft" form for WVCPRB review and then based on feedback provided, it should be updated by the vendor into a formal project deliverable.

2.7.3   *Converting and Validating Accounts*

In converting and validating member accounts as they are transitioned from the legacy system to the new solution, great care should be taken with regard to accounts that included a refund in the legacy system. These situations can create a potential problem when, after the account has been converted and the new solution is in use, the member wishes to "buy back" the refund that was processed under the legacy system. WVCPRB desires the vendor to be responsible for accommodating these situations and to ensure that such problems do not materialize.

In the case of member accounts that included one or more refunds under the legacy system, it is not sufficient simply to convert account <u>balance</u> information from the legacy system. Rather, it is imperative that all detailed data associated with the refund(s) under the legacy system be converted and validated. It is possible that such refund details have not been retained in the legacy system and should be "re-created" for porting to the new solution.

Because the buyback of a refund typically involves repaying contributions for specific time periods, as well as paying accrued interest on the refunded amount attributable to the period between the issuance of the refund and the buyback, the following detailed data should be preserved for each refund when converting and validating these accounts:

1. The date of issuance of the refund

2. The amount of member contributions that were refunded, by pay period

3. The amount of earned service credit associated with the refunded amount, by pay period

4. The amount of employer contributions remitted during the period to which the refund pertained, by pay period

5. The pay periods to which the refund pertained (members may typically request partial, as well as full, refunds)

6. Details of interest postings for any interest that was refunded (i.e. interest amounts and posting dates for each interest posting during the period of the refund)

7. The amount of interest that was refunded (if applicable)

8. The actuarial interest rate(s) applicable to the period between the issuance of the refund and the cutover to the new solution (varying interest rates are possible) – it is assumed that actuarial interest rates applicable to periods after the cutover are maintained in the new solution database.

WVCPRB desires the above information (and possibly additional data) to be available in the new solution database in order to process refund buybacks. Bear in mind that members who initially request only a partial refund may be permitted to request multiple refunds. Therefore, the full set of detailed data should be identified for all historical refunds issued to the member.

In their proposals, vendors should state their commitment to fully resolving the refund issue prior to porting member data to the new solution.

Vendors' proposals should demonstrate their understanding of the issue and include a comprehensive approach for addressing WVCPRB concerns in this regard. At the least, the vendor's proposed approach should address:

1. How member accounts that include a refund under the legacy system are planned to be identified

2. Exactly which detailed data should be identified or re-created, and then converted, in order to enable smooth processing of buybacks in the new solution of all historical refunds in the legacy system

3. How the necessary detailed data should be "mined", created, or re-created for porting to the new solution

4. The vendor's commitment to ensure the correct conversion of such accounts and, in the event an unexpected problem arises, to resolve the problem at no additional cost to WVCPRB.

2.7.4 *Interim Wage and Contribution Reporting*

To support the timing and phasing of employers migrating from the current wage and contribution function to the new Web-enabled wage and contribution function, the vendor is requested to provide two (2) translation capabilities.

As background, there are three possibilities that create a timing issue:

1. An employer has capability in place to provide wage and contribution reporting in the required format at the required time. No conversion or translation software is needed, in this case.

2. An employer does not have the capability in place at the required time; thus WVCPRB needs to have translation software available that converts from the "old" format, to the "new" wage and contribution format.

3. An employer has the new format in place, but WVCPRB has not yet implemented the "new" format; thus WVCPRB needs to have translation software available that converts from the "new" format to the "old" wage and contribution format.

The vendor should provide translation capabilities to support the examples cited above. This includes software to be executed by WVCPRB operations staff; software source code, operational documentation, and applications documentation should also be provided.

2.8 PROJECT STAFFING

In addition to requiring the project staffing plan described below, WVCPRB has a number of other project staff-related requirements as indicated in the sections that follow.

2.8.1 *Project Staffing Plan*

The vendor should include in its proposal a preliminary project staffing plan. This plan should lay out the reporting structure of the vendor's team that are anticipated to be assigned to the effort and illustrate how this reporting structure fits into the vendor's overall organizational structure.

The staffing plan should include estimates of the manpower loading of project phases, broken out by staff category (including but not limited to managers, supervisors, analysts, programmers, users, trainers, and subject matter experts), differentiated by vendor (prime contractor) staff, subcontractor staff, and WVCPRB staff. In a second presentation, manpower loading should be estimated by staff category by month for the duration of the project. The staffing plan should include appropriate totals so that WVCPRB can identify total hours to be expended, per phase and for the entire project, by vendor staff and (separately) by WVCPRB staff – i.e., subtotaled by vendor and by WVCPRB and totaled across the project.

WVCPRB is interested in how the vendor proposes to accommodate personnel problems should they arise. The vendor should include in its project staffing plan a description of the steps that it intends to take should it become necessary to replace personnel assigned to the effort due to illness, termination of employment, disciplinary problems, or similar situations.

2.8.2 *All Personnel*

WVCPRB desires that all staff members and subcontractor staff members assigned to the project who may interface with WVCPRB staff to have read both the RFP and the vendor's technical proposal, as well as any clarifications to the technical proposal, to gain an overall understanding of the project and its objectives, prior to interacting with any member of WVCPRB staff. Signed and dated certifications that vendor staff members have read the above documents should be kept on file and may be requested by WVCPRB for review. Under no circumstances will such an initial familiarization with the RFP, project objectives, current operating environment, desired functionality or other project objectives or requirements be provided by WVCPRB staff members.

And because personnel should be familiar with the contents of the RFP, after award of the contract to the vendor, prior to requesting any material, the vendor should to review the RFP and its appendices for the necessary information first. If after reviewing that material, samples of any forms, letters, reports, procedures, etc. are found not to be in the appendices, then the vendor may request them from WVCPRB staff.

2.8.3 *Project Manager*

The vendor must designate a single full-time Project Manager to the project. His or her duties should be focused exclusively on the management and coordination of the project. He/she is envisioned to be the primary on-site customer liaison, responsible for coordination, scheduling, delivery of a quality work product, and resolution of issues. He/she should have no responsibilities relating to design, development, testing, or training. Nor may he/she work on projects for other customers of the vendor. The Project Manager should be on-site at least 80% of the time, i.e., at least four (4) days per week on average. He/she should be responsible for working closely with WVCPRB's designated Project Manager, generally on a daily basis, either in person or via telephone and/or email.

WVCPRB desires that the vendor agree to commit its proposed Project Manager to remain continuously assigned to the project (except in the case of death or termination of employment – or with WVCPRB's approval) for at least the first year of the project's duration. Following that period, should the proposed Project Manager be rolled off to another assignment, he/she should be replaced by a deputy Project Manager or other similar leader who is already on the project and familiar with the proposed solution, with the members of the vendor project team and with WVCPRB. WVCPRB requests the vendor to provide notice in writing of any such proposed change at least one calendar month prior to the actual substitution, and WVCPRB desires the exchange of personnel to be approved, also in writing, by the WVCPRB Project Manager. In all instances of exchange, WVCPRB reserves the right to approve the candidate proposed by the vendor as a replacement.

The vendor's Project Manager should be authorized and empowered by the vendor to make binding commitments to WVCPRB relating to the project and the vendor's scope of activities (but not necessarily relating to the terms and conditions of the contract between WVCPRB and the vendor's firm). A statement to that effect should be included in the vendor's response.

2.8.4 Key Personnel

WVCPRB requests the vendor to identify its intended key personnel in the staffing plan, and the vendor is requested to commit these staff members to remain assigned to the project for at least a year following the commencement of the portion of the project for which they are responsible (i.e., should the documentation coordinator be identified as one of the key personnel, that individual cannot be reassigned until documentation planning and development has been underway for at least a year) without WVCPRB's prior written agreement. At the least, key personnel to be identified include the Project Manager (see discussion above), the lead analyst or Deputy Project Manager, and at least one additional senior full-time staff member.

For all key personnel being proposed to WVCPRB, the vendor should identify all other projects / procurements on which the same staff members are currently working and / or for which the same staff members are being proposed. Further, the vendor should describe its approach for resolving the situation wherein, if it is awarded WVCPRB's project (and possibly another(s) for which the staff member is also proposed), it plans to resolve the resulting staffing conflict.

The vendor is requested to provide a list of all its active retirement projects (development and implementation) that are ongoing at the time the proposal is submitted to WVCPRB and describe its approach for supporting this project in view of those prior commitments.

2.8.5 Replacement of Personnel

The vendor's staff volatility index should be provided in the proposal, i.e., percent turnover over the past three (3) years and how that number is calculated. This volatility index should be provided both for the entire company and for three (3) referenced public employees' or teachers' retirement system implementation projects.

WVCPRB reserves the right to require removal of any vendor staff or subcontractor staff from the engagement at WVCPRB's sole option, for any reasonable and legally valid basis. WVCPRB shall not exercise this option unreasonably. The vendor should be fully responsible for performance of work by its staff and by its subcontractor's staff.

WVCPRB desires that the skill level and experience of any replacement for staff who are removed from or leave the project for any reason match or exceed the replaced staff member. WVCPRB reserves the right to approve/reject the replacement prior to assignment as well as at any time during the project. (Such right of rejection will not be exercised unreasonably by WVCPRB.) WVCPRB anticipates that any vendor staff or subcontractor staff specified as "Key Personnel" who is replaced or substituted should be pre-approved in writing by the WVCPRB Project Director.

Further, any replacement (planned or otherwise) not occasioned by illness or sudden death should be assigned at least two weeks prior to reassignment of the staff member being replaced in order that a smooth, effective transition / transfer can occur. In such an event, a transition / transfer plan should be provided to WVCPRB in writing two weeks prior to the start of the transition. In their proposal, vendors should include a sample of such transition plans.

2.9 DOCUMENTATION

As a goal, the system provided by the vendor should be so easy to use, so self-explanatory, and so intuitive that little or no documentation is necessary. However, laudable as that goal may be, WVCPRB requires that the vendor provide two types of documentation for the new pension administration system:

- User documentation, including electronic help

- System administration documentation including material for both business analysts who need to reconfigure a function and IT staff who need to reconfigure/maintain/support the system.

Both types of documentation (user and system) should document not just the proposer-provided LOB solution, but also, at the appropriate level (i.e., user or system administration – or both), the use and/or interface to systems with which the LOB solution is integrated. For example, as noted in RFP Section 4.2.5.4, WVCPRB currently has an imaging solution. The standalone use and administration of that solution in WVCPRB current business and operating environment is well documented and understood. However, once the imaging solution is integrated into the LOB, the user steps involved in the retrieval and viewing of a member / retiree's imaged record or the administration steps involved in image archive backup and recovery may change.   The proposer-supplied user and system administration documentation should therefore include documentation of the imaging solution in the context of the LOB solution.

The required documentation is discussed in the sections that follow.

2.9.1 *User Documentation*

The most important piece of user documentation associated with the new solution is described below as the Work Process Manual. But that is not all of the user documentation that should be delivered as part of the system. Below WVCPRB documents a basic set of requirements for user-oriented documentation for the new solution.

2.9.1.1 Work Process Manual

To augment the user work process training effort, the vendor is requested to produce a hard copy Work Process Manual and a corresponding on-line help facility (see below) to assist the users in processing work with the new solution. The manual should be organized to correspond with the work processes for which each user is responsible. Planning for the manual and help facility should start at the beginning of the requirements definition effort. WVCPRB desires the manual to reflect the 'as built' nature of the system, and not the as defined or as designed. It should include an index as well as a table of contents.

WVCPRB envisions the Work Process Manual to address all manual, as well as automated, work processes in the new environment. As a representative example of particular interest to WVCPRB, the vendor is responsible for establishing and documenting appropriate procedures for the issuance of "manual" and "one-of" checks. These "manual check" procedures should explicitly address the following topics:

- How to issue a "manual" or "one-time" check, keeping in mind that only persons with appropriate roles and permissions are authorized to issue "manual" and "one-time" checks

- How to ensure that all "manual" and "one-time" checks are subjected to review and approval by a person different from the person who created the checks and having appropriate permissions to do so

- How to identify every "manual" and "one-time" check as either an original or a replacement check

- How to collect all necessary "manual" check information, including the number of the check, the amount of the check, tax withholding amounts, other deduction amounts, the fund from which the check was issued, and the type of the check (benefit or refund, original or replacement) for purposes of making the appropriate general ledger entry

- How to view all "manual" and "one-time" checks, which are recorded in check number sequence in a single location for easy access

- How to appropriately post all "manual" and "one-time" checks so they are linked to the recipient in the pension solution, including ensuring that the issue date in the solution is the check's true issue date (not necessarily the posting date)

- How to access a list of all outstanding "manual" and "one-time" checks which includes all "manual" and "one-time" checks that have been issued but not yet posted to the pension solution

Other manual or quasi-manual processes / procedures that WVCPRB anticipates to be developed by the vendor and addressed in detail in the Work Process Manual include, but are not limited to:

- Procedures for the processing of "manual" contribution payments, ensuring that different employees are responsible for preparing the deposit, posting to the pension solution, and posting to the cash receipts ledger. The vendor should establish and document procedures for depositing and tracking contribution payments that are not accompanied with the necessary paperwork to identify the member accounts to which they pertain, including procedures for accurately posting the contribution to member accounts in the pension system when the paperwork later becomes available.

- Procedures for reconciling all WVCPRB checking accounts, including confirmation of the accuracy of the outstanding checks report. WVCPRB desires the reconciliation process to also include "manually" generated checks.

- Procedures, for all plans / funds, for reconciling member and employer reserves as indicated in the pension solution database against the general ledger reserve balances for same.

- Procedures by which WVCPRB staff can identify the source of all automatic computer generated entries against the general ledger.

- Procedures for reconciling dual general ledgers if separate general ledgers are maintained for calendar year and fiscal year reporting or if there is the ability to display information in both modes.

- Procedures for periodically loading actuarial tables, approved by the system's actuary to accurately calculate the benefits for each option for each plan. In addition to documenting all steps to accomplish the processing of work, the Work Process Manual should make appropriate references to and reflect both automated and "manual" provisions designed to ensure the proper segregation of duties for internal security and control purposes according to accepted industry standards and best practices as described by the AICPA and COBIT. Examples include: ensuring that a user cannot update his or her own account, ensuring that account reconciliation is performed by someone other than the person responsible for general ledger postings, ensuring supervisor review of account reconciliations. While it is WVCPRB's responsibility to implement the recommended segregation of duties, the vendor is requested to develop the procedures and describe such segregation processes in terms of roles and work processes.

In addition to a detailed Table of Contents, the Work Process Manual should include a detailed, indented index to assist the user in locating the information of interest.

2.9.1.2 Work Process On-Line Help Facility

WVCPRB envisions the on-line help facility to reflect the 'as-built' nature of the system, and not the as-defined or as-designed. The on-line help facility envisioned by WVCPRB should operate much like Microsoft Word's Word Help with its "Search for:" help assistance. A field should be provided near the top of each system screen into which the user can enter a "natural language" question (e.g., "How do I reprint a member's annual statement?") or a series of key words (e.g., "annual statement reprint"). The help facility should respond with a list of likely work processes / sub-processes from which the user can select. When the user selects an item from the list, the appropriate excerpt from the Work Process Manual should be displayed.

At the same time, WVCPRB desires the user to have access to online help from the WVCPRB website, from which they would download and / or play instructional videos, view interactive "How To" sessions, etc. The help available, while all drawn from the same library of help text (so that a user's question is answered from the same source as a member's question), should also be configurable so that a member of WVCPRB staff has access to and obtains more information than does a member.

WVCPRB envisions the on-line help facility should make extensive use of the screen-based help technology available today, e.g., providing a definition of a screen element, field, or control in the form of a "tip," as well as text that offers assistance to the user in answering "What do I do here?" Such on-line contextual help should also provide the user with the ability to step back from the individual screen element and provide help on the entire screen and back a step further to the process in which the user is currently involved. As a further aid to understanding the process, the system should also provide access to on-line tutorials (both video and text) that allow the user to learn on the job and provide step-by-step task guidance, especially for those tasks that seldom need to be executed and are therefore not engrained in the users' memory.

The vendor's proposal should describe the method and tools provided within the solution to ensure that on-line help, the context sensitive help, and any hardcopy help manuals and training materials are kept in synch. The solution delivery should include training on the appropriate use of these tools to keep all help up to date as changes are made to the solution after roll-out.

With the exception of the videos described above, the proposer is also responsible for populating the on-line and context-sensitive help with the appropriate definitions and text. Such material should meet the WVCPRB standards for style and "branding" that exists when said tools are developed.

All forms of on-line help, including the context-sensitive form and the on-line tutorials should provide the capability for the proposer and WVCPRB to augment the actual text or video with links to the relevant rules and policies in relationship to the context – and to change or update those links as necessary.

Because the capabilities of the on-line Help facility may influence the design of the solution's user interface, it is important to WVCPRB that the on-line help system be demonstrated as part of the High Level Demonstration of Base Functionality described in Section 2.6.2.5. This demonstration should include instances of how a user might drill down from general to specific help, access references to pertinent statutes or case law, and use context-specific help.

2.9.1.3   Delivery of Work Process Manual and On-Line Help

Both the Work Process Manual and the on-line help facility should be delivered in final draft form at least three weeks prior to the time of each functional cutover. WVCPRB will review the material and respond with comments and corrections in timely fashion. Upon receipt of those comments, at least one week prior to cutover, the corrected material, accompanied by an addendum describing all changes that have occurred since the distribution of the original deliverables, should be provided.

Similarly, WVCPRB desires that a working draft of both hardcopy and on-line help be available at the beginning of User Training and User Acceptance testing so that those WVCPRB staff responsible for testing the applications can have access to the help facilities during their testing.

2.9.1.4   ECM Operations Manual

A key criterion for success of this effort is the on-going "Day-Forward" aspect with respect to new, incoming documents that are received by WVCPRB – both prior to and after the implementation of the new LOB application.

WVCPRB understands that with the implementation of the new solution, WVCPRB's procedures and processes relating to incoming correspondence and documents will significantly change.

Historically, hard copy documents received in the mail have been identified and sorted, distributed to appropriate staff for action, and subsequently scanned along with any response generated by WVCPRB – i.e., back-end scanning. And as described in RFP Section 4.2.5.4.3, documents were scanned as packets based on the business process in which they were used. Whenever it later became necessary to refer to the same documents, they were retrieved and viewed on the staff members' workstation screens.

In the new environment, incoming correspondence and documents should be identified, sorted, then scanned and indexed. The hard copy should be filed and, except for unusual circumstances, not have to

be retrieved later. Instead, the initial scanning and indexing process should place the images in the member's / retiree's / beneficiary's electronic folder and then trigger appropriate workflow streams – i.e., front-end scanning. The images should be 'linked' to automatically generated 'work packets' that should appear in the work queues of staff members. When staff members retrieve the work packets from their queues to process the work, the images should be available for viewing at the staff members' desktop workstations. Document images should be accessible to multiple users at the same time. Thus, a single piece of correspondence can trigger multiple workflow instances, and multiple users can work with the document simultaneously.   If WVCPRB generates any correspondence in the process, that correspondence should be automatically imaged and indexed and added to the member's / retiree's / beneficiary's electronic file folder.

Therefore, there is a need to develop a new "model" for the handling and processing of incoming and outgoing correspondence and documents in the future environment – a model that integrates the imaging and workflow capabilities of the new solution, as well as its automatic correspondence generation features, with the still necessary "manual" chores of opening and sorting the mail and filing the hard copy. The new model should accommodate an expanded use of specific document types. The new model should also accommodate the rare occasion when it is necessary for the retrieval of the hard copy from the files during the retention period and later re-filed (through use of batch numbers).

Regardless of whether the current imaging system is retained or replaced, the vendor is requested to be responsible for defining and carefully documenting this new document handling / processing model.

The vendor should provide a detailed approach / strategy document explaining how incoming documents are envisioned to be handled both before and after the implementation of the new solution. Vendors should present their methodology for addressing this "Day-Forward" issue in their proposal in adequate detail to demonstrate a complete understanding of the situation. Further, they should pose in their proposal a solution that is simple, straightforward, and easy to control. Topics such as the following should be included:

1. Sorting significant correspondence out of the bulk of incoming mail

2. Preparing the correspondence for scanning

3. Scanning and indexing the significant correspondence, ensuring that the images are placed in the correct electronic file folder

4. Handling new documents received for a new person

5. Handling documents that are incomplete

6. Handling multi-page documents

7. Handling documents that are not related to WVCPRB's retirement business processing

8. Handling documents that require a new folder/sub-folder to be created.

9. Handling new documents received for a person whose record is already involved in another process (e.g., an address change for someone whose retirement application is in process)

10. Handling of checks, original birth and marriage certificates, and legal documents

11. Handling documents that are unlikely to produce a readily legible image.

2.9.2   *Administrative and System Documentation*

The sections below define the documentation required for system administrators, those who will reconfigure components of the solution and those who will support it.

2.9.2.1 General System Administration Documentation

System documentation that is requested to be provided includes, but is by no means limited to:

- Backup and recovery procedures (complete with recommended schedule)
- Error code descriptions accompanied by a discussion of how to work around or recover from the particular error condition.
- System tuning discussion, providing WVCPRB personnel with the information they need to adjust performance

2.9.2.2 General System Configuration Documentation

System configuration documentation that is requested to be provided includes, but is by no means limited to:

- Documentation on all aspects of pension administration system configuration such as changing of tax codes, addition of new plans, etc.
- Documentation on aspects of the system that are configurable but other than pension administration system-specific (e.g., frequency of backups)

2.9.2.3 System Maintenance and Operations Documentation

The Vendor is requested to provide both hard- and electronic copies of all documentation required by WVCPRB staff or their designee (such as the vendor or another third party) to maintain and operate the system following the turnover of the responsibility of those operations from the vendor staff to the WVCPRB.

2.10 TRAINING AND KNOWLEDGE TRANSFER

WVCPRB views the material upon which the proposer is requested to provide training as a continuum, ranging from high level user familiarization material to detailed IT-level system administration training. Similarly, the WVCPRB community is another continuum ranging from supervisory level casual users to IT developers and support and administration personnel. Providing a perfect match between the material provided and the community to be trained is a difficult task. In an attempt to apply some order to that task, WVCPRB believes that the proposer should provide three comprehensive training programs, addressing the respective training needs of:

1. WVCPRB's users (WVCPRB's business staff and managers) including:

    o Staff involved in System Requirements and Design
    o Staff involved in UAT
    o The general user population and
    o Staff providing user-managed system administration

2. WVCPRB and WVOT business analysts and technical staff (operations staff, programmers, data / technical team)

3. Employers and employers' payroll service providers or service bureaus.

As part of the continuum mentioned above, the training programs for WVCPRB staff should encompass all platforms, applications, and environments included in the proposed solution. In addition, any changes to use or administration of existing WVCPRB applications (e.g., integrated Documentum imaging, automated Great Plains interface) should also be incorporated into the proposer-provided training. All three of the training programs should be presented in a phased manner, i.e., not all at the beginning or at the end of the project, but corresponding to the phasing of the overall project.

The format of the training to be provided to both WVCPRB groups (users and technical staff) is anticipated to include, in addition to classroom instruction, training workshops / laboratories that offer

participants hands-on experience with all of the facets of the new solution pertaining to their job duties. On the other hand, the training to be provided to the employers and employers' payroll service providers or service bureaus may consist of classroom training combined with Web-based training.

Training to be provided to the employers and employers' payroll service providers or service bureaus may consist of classroom training or Web-based training.

The vendor is requested to provide on-site training in all aspects of the new system. WVCPRB prefers all trainers to be certified as trainers by the developer of any of the third party products on which WVCPRB staff is being trained. This includes but is not limited to: office automation, relational database management system, CASE tools, and third party development tools. This training can be accomplished by vendor staff or subcontractor staff. However, while WVCPRB recognizes that subcontractors may provide some training services, the vendor (prime contractor) retains sole responsible for the quality and timely completion of all training activities.

Regardless of the format and schedule for training (of all types) proposed by the vendor, WVCPRB requests the vendor (or its subcontractor[s]) to conduct training sessions for users and technical users. A "train-the-trainer" approach is <u>not</u> acceptable except for employer training and where specifically listed either related to the system development life cycle or for end-user training. Vendors should develop their training plans and price their training services accordingly. Training is requested to be scheduled such that, in general, no more than 50% of staff of an organizational unit is away from work at any given time.

Under no circumstances may any training session be conducted on any of the topics pertinent to the vendor provided solution or any of its components without hardcopy reference material, a workbook, or a user guide supplied in sufficient number and in sufficient detail for those to be trained. Such reference or training material should thoroughly cover the subject matter and be written at the appropriate level for the intended audience. In addition, such material should be provided to WVCPRB in draft form for review and feedback to be incorporated by the vendor prior to the conduct of any related training sessions. All topics on which users are to be trained should also be documented on flash cards or an equivalent one-page "quick-reference" vehicle to which users can readily refer when seeking assistance on a topic.

The vendor is requested to provide sufficient copies of all training materials for all trainees plus a reserve equal to 10% of the total number of copies. The vendor is requested to provide all electronic source documents, graphics, and the like used in the development and presentation of all aspects of training. All training materials may be copied by WVCPRB without restriction. Vendors should develop their training plan and price their training services accordingly.

The vendor should specify the expected performance and the expected outcomes of each type of training to be provided. In conjunction with this, the vendor should develop evaluation tools to determine whether the training efforts produced the expected results. The evaluation should consist of various tests administered to trainees at each training session. This evaluation tool may be used to identify weaknesses of the training program and specific revisions that need to be made. Information regarding the actual training results should be provided in an evaluation analysis report. The trainers for all training efforts should utilize the evaluation survey tool.

WVCPRB will provide a training contact person who will work with the vendor to coordinate training activities. The vendor should provide WVCPRB with a list of training classes, their duration, their intended "audience," and student capacity. WVCPRB and the vendor should jointly determine the training dates and schedule WVCPRB staff and facilities.

The following subsections define the specific training requirements for users versus technical staff versus employers.

2.10.1 *User Training*

As noted in the previous section, user training has four major audiences or constituencies, any one of which overlaps at least one other:

● Those users and business analysts involved in System Requirements and Design sessions, many of whom may need to be taught the concepts of Joint Application Design, etc.

● Those users involved in UAT who require familiarity with both the application and testing activities, such as methodologies, PIR reporting, and regression testing

● The general population of users and managers who do not require familiarity with testing activities

● Staff (possibly the business analysts) who will be providing post-installation, user-managed system administration if there are such tasks in the solution provided.

Since the four constituencies require separate (different material and different timing) training, separate training sessions are requested to be delivered to each. Appropriate training should be delivered to each constituency for each of the functional roll-out phases. Finally, training should be delivered just in time (JIT) so that the material is still fresh when the users must put what they learned to use.

Vendors may assume that WVCPRB staff is experienced with the Microsoft Windows environment and, thus, require no training in basic Windows operation. Vendors may also assume that WVCPRB staff understand the business rules and associated workflow corresponding to their job responsibilities.

2.10.1.1 Training in the Development Methodology

WVCPRB considers it critical for WVCPRB staff members to be educated in the process that will be used to define the new system's requirements, design the solution, and implement it. WVCPRB users in particular have limited familiarity with system development life cycle methodologies including, but not limited to, design "workshops," Joint Requirements Planning (JRP) sessions, and Joint Application Development (JAD) sessions. Yet their input is essential, and the design issues they approve early in the project are anticipated to be the foundation on which subsequent activities should be based later in the project.

From the point of view of obtaining a solution that meets or exceeds WVCPRB's requirements, it is essential that WVCPRB staff members who participate in JRP and JAD sessions understand the importance of their sign off on the specifications and designs that result from those sessions. This training should emphasize to staff members that their signatures represent WVCPRB's commitment that the specifications are complete and correct.

The proposer should include in its proposal a commitment to provide a series of orientation training sessions for all WVCPRB staff members who will participate in the project:

1. The first orientation session should occur within the first two months of the project

2. The second should occur prior to the start of any requirements definition / gap analysis

3. The third should occur prior to the start of the design effort.

4. The next should occur at the start of for the first functional rollout phase of the project.

With particular regard to development methodology training, the user training program should be coordinated with the preparation of, and addressing the contents of, the Development Methodology Overview – End User (DMO) document to be delivered by the proposer (see Section 2.6.2.2). Each of these development methodology training sessions should each involve no more than 10 - 15 WVCPRB participants.

The topics to be covered in each development methodology training session include:

● An overview of the process – how the project is planned to progress from the RFP to gap analysis and requirements definition, through design, and implementation via various steps, including but not limited to, joint applications development sessions, joint requirements planning sessions, prototyping sessions, conference room pilots, and office modeling, test, and training

● Where in the overall process this and the next step fits in

- The role to be played by WVCPRB users

- The meetings WVCPRB users will attend and their purpose

- The deliverables WVCPRB users will have to review and approve

- How the scope of the project is determined by the information WVCPRB users provide (i.e., the level / detail of review necessary)

- How changes in scope can occur if requirements are not fully defined at the beginning of the project

- Emphasis on the importance of WVCPRB users' participation and review activities, including the fact that their participation in the project will directly affect their work duties after the new system is implemented

- Emphasis on how failure to correct a deficiency during a review activity early in the project can have a serious impact on the project's cost and completion date later in the process.

For each phase, this DMO training process should be repeated.

Vendors should address in their proposals a plan for conveying this information to WVCPRB users. Vendors may wish to include in their plan a form to be completed and signed by each user trainee at the conclusion of the training session confirming their understanding of the importance of their participation in the project's activities.

2.10.1.2 User Acceptance Test Training

Just as WVCPRB staff members need focused training in the process that the vendor plans to use to define the new system's requirements, design the solution, and implement it, they should also be trained in the purpose and execution of UAT. WVCPRB believes that staff participation in UAT serves two purposes:

- It validates that the provided solution meets the requirements that were developed early in each phase

- It provides users with hands-on experience in the solution they will soon be using every day, reinforcing the points that were made (or should soon be made) in user training.

However, many users approach UAT with a lack of understanding of the purpose of UAT and of their role in making UAT a success. The UAT training provided by proposer is anticipated to accomplish the following:

- Provide preliminary general and work process user training (as described in the following sections)

- Provide testers with proficiency in the use of any automated test or result recording tools provided by the proposer (including the test repository described in Section 2.11)

- Provide testers with an overview of general test practices so that, upon completion of the scripted phase of UAT, they can further exercise the system with ad hoc tests that probe the limits of the design and specifications (e.g., determining the results of trying to retire a member with too few years of service, with a day less than the required years of service, with exactly the required years of service, …)

WVCPRB recognizes that some users are by nature better testers than others, devising scenarios that truly test the system, etc. There is no expectation that the training provided by the proposer can make every user an expert tester. There is every expectation that every user who completes UAT training should be a competent tester who understands the goal of their execution of UAT.

As noted in Section 2.11.3 that describes User Acceptance Testing, no user testing may start until WVCPRB staffs are trained in testing methodologies and problem incident reporting.

2.10.1.3 General User Training

Topics to be addressed in the user training program include, at the least, those items listed below:

1. Vendor's system development methodology – aimed at users

2. Identification of the legacy processes that each user previously performed and how such processes map to the new processes. The purpose is for users to understand what they used to do vs. what they will do in the future.

3. With respect to the new system's functional capabilities:

4. This training should be focused on educating the users in how to accomplish their job duties, i.e., which processes / sub-processes apply to the user's particular job responsibilities and how to invoke and execute those processes and sub-processes

5. This level of training is distinct and separate from training in user procedures (menus, windows, screens, radio buttons, etc.) defined below

6. It includes training in the use of the Work Process Manual and help facility discussed in Section 2.9.1.3, and encompasses all manual as well as automated processes

7. Where appropriate, this training also indicates where processing that previously was done manually (or with an access database or excel spreadsheet) is now done as a part of the actual pension administration system. This should help wean users from the use of their former "outside the system" tools

8. User procedures (including but not limited to navigating menus and screens, entering data, queries, and "short-cuts" / "hot keys")

9. User system administration (including but not limited to system functional access and system-wide parameters)

10. User maintenance of date sensitive parameters, variables, and coefficients used in the system

11. All applicable balancing and reconciliation processes involved in bridging and/or converting data

12. Use of the various documentation deliverables, including on-line help and error messages

13. Query language(s)

14. Report writer products

15. Integration (if any) with the MS Office automation suite

16. fax capability

17. Internet access capability

18. Deliverables repository.

The vendor should include in its proposal a top level User Training Plan that identifies the specific topics that are planned to be covered. This training plan should also identify the courses scheduled to be provided (including a brief description of each course's contents) and should include descriptions of:

1. Materials / facilities to be provided by WVCPRB

2. Training materials that should be developed by / delivered by the vendor

3. The number of hours required by WVCPRB users for attending classroom sessions, training laboratories, and for independent study.

Of particular importance in this regard is the Work Process Manual (and Help Facility) discussed in Sections 2.9.1.1 and 2.9.1.2. No training relating to the use of the new pension application should be conducted until the Work Process Manual is provided (first for review, revision and approval by WVCPRB

project management) and subsequently to all trainees. The pension application training sessions are anticipated to be based on the Work Process Manual and include instruction in its use. WVCPRB recognizes that it prefers the new solution to be delivered in phases. Therefore, it is understood that there are likely to be multiple versions of the Work Process Manual (each more complete than the preceding version) corresponding to the project's functional rollout phases. Before any user training is conducted in support of a functional rollout, it is imperative that the Work Process Manual supplied to the trainees be complete in terms of the processes and sub-processes used in that rollout.

The preceding paragraph is not relevant to user orientation sessions, training in the project's system development life cycle, or similar training relating to project methods and processes – as opposed to the use of the new solution itself.

2.10.1.4 Initial Work Process User Training

A particular concern of WVCPRB is the ability of users to process work and fulfill their job duties utilizing the new solution as soon as it first becomes available at the time of the initial functional cutover. As described above, the vendor is requested to provide standard training in the new solution, to familiarize staff with the technical environment: screen navigation, windows, containers, tabs, wizards, drop down lists, radio buttons, hot keys, data entry fields, and the like. But this training, while essential, is not sufficient to equip the users to begin processing work efficiently. Users do not think in terms of tabs and containers and wizards, etc. They think in terms of processes and sub-processes – e.g., enrolling a member, generating retirement estimates, issuing refunds, setting up service purchases, etc. This is the reason for the stress placed on **training in work processes** in this RFP.

The vendor should identify for each user functional group the work processes and sub-processes for which they are responsible. In identifying the processes that should be documented, the vendor should adopt the terminology with which the users are already familiar. Users will be asked to confirm that all work processes for which they are responsible have been identified in terms that are familiar to them.

For each work process / sub-process identified, the vendor should develop a user-friendly script to be followed in using the new system to complete the process. Each script should start at system logon and "walk" the user through the windows, containers, tabs, wizards, screens, etc., in sequence, that have to be accessed in order to complete the work process. The scripts should address all drop down lists, radio buttons, data entry fields, etc., to be utilized in processing work. Included in each procedure should be any necessary interaction with workflow management features, such as selecting a work packet from the user's work queue, passing work on to another user / reviewer, resuming work on a work packet passed from another user, suspending work packets until a subsequent triggering event occurs, closing out completed work packets.

Each process "walk" in the manual should be complete in itself with no cross-references to other process "walks." For example, there may be a process called "Retirement Application." As part of processing an application for retirement, the user may review the member's demographic information included on the application form and update the database with any changes. No doubt there should be another process in the manual for "Change Demographic Information." Nevertheless, the section on "Retirement Application" should **not refer** the user to the "Change Demographic Information" section, but rather should **include the contents** of that section, with any adjustments necessary to account for navigating to demographic information processing from the retirement application process (rather than from system logon). WVCPRB understands that this approach can result in significant duplication within the manual. However, duplication is necessary to avoid the confusion which would result from forcing the user to refer from one process "walk" to another, possibly several times, in order to complete a single work process.

The vendor's training plan should include instruction in the use of both the Work Process Manual and the on-line help facility.

2.10.1.5 Integrated ECM Training

WVCPRB expects that the workflow component (and the subsequent training) of ECM should be so well integrated into the pension administration system that no workflow-specific training is necessary for users. However, user training in the use of the newly integrated imaging solution is requested to be included in the top level training plan presented in the vendor's proposal. WVCPRB requires that the successful vendor provide a comprehensive imaging training program that addresses training on the imaging system as integrated with the LOB solution. User training should encompass all modules that are a part of the imaging solution and address the training needs of:

1. File room / mail room end-users

2. Staff members

3. Supervisors and managers.

Topics to be addressed in the imaging training program should include although not strictly limited to:

1. Integrated imaging system's functional capabilities – in the context of business processing

2. Document preparation and scanning capabilities (for the file room / mail room personnel)

3. Basic user procedures (navigating menus and screens, scanning, indexing, retrieving images, entering data, queries, "short-cuts" / "hot keys")

The format of the training to be provided should include not only classroom instruction, but also and more importantly, training workshops / laboratories that offer participants hands-on experience with all of the facets of the new imaging solution that pertain to their job duties. This also means that general application user training should include training on searching for, retrieving, annotating, etc., electronic member records.

Imaging system training should be based on the delivered imaging system User Manual but be supplemented with overhead presentation materials, workbooks, labs, etc., as necessary.

2.10.2 *Technical Staff Training*

WVCPRB has chosen to include in this section the training on all aspects of the vendor's proposed solution that are not included in the user training specified in the previous section (Section 2.10.1). Therefore, we include under Technical Staff the training of business analysts as well as WVCPRB's IT staff. Obviously, while business analysts may not need training on the operating system(s), but the overall principles under which they initially observe and later learn how to configure the pension administration solution are the same as those that govern how the IT staff should be trained.

2.10.2.1 General Technical Training

Topics to be addressed in the technical staff training program include, at the least, those items listed below:

1. All applications software, whether packaged or customized

2. Hardware operations

3. Operating system level software

4. Systems administration

5. Troubleshooting and fault isolation

6. Query language(s)

7. Report writer products

8. 4GL(s)

9. Network (administration, management, tools, commodity software)

10. Development languages

11. Tools and techniques which are to be employed in customizing and maintaining the applications software

12. Data base management system

13. Data modeling tools

14. Test script generators

15. Office automation suite

16. fax capability

17. Internet access capability

18. Deliverable repository.

Training in both the use and the administration of software tools is requested. It is desired that this training be provided in the off-site location specified in Section 2.13.3.5. However, if such training is only available through a certified trainer outside of the Charleston, WV, area, <u>then the vendor is requested to bear the cost of such trips by WVCPRB staff. Vendors should disclose such costs</u>, if any, in the proposal.

The vendor is requested to include in its proposal a top level technical staff training plan that identifies the specific topics which are planned to be covered. This training plan should also identify the courses to be provided (including a brief description of each course's contents) and should include descriptions of:

1. Materials / facilities to be provided by WVCPRB

2. Training materials the vendor plans to develop and deliver

3. The number of hours required by WVCPRB technical staff members by job category for attending classroom sessions, training laboratories, and for independent study.

Like WVCPRB users, technical staff members are also to be trained in the vendor's development methodology. The vendor may assume the existing technical staff is familiar with development methodologies in general.

Finally, in addition to any formal training that vendor provides, it is WVCPRB's desire that their technical staff should be involved (if only as observers) whenever a task (e.g., system software installation and configuration, solution configuration, system backup, database tuning) is performed that may eventually fall to the WVCPRB technical staff to perform. This approach should also make the eventual formal training in tools, processes, and procedures much more useful. In fact, vendor is encouraged to incorporate into its technical training references to activities previously performed by vendor staff but witnessed by WVCPRB technical staff.

2.10.2.2 Pension System Administration System Training

Training in the administration of the new pension administration solution should be addressed per the training requirements established above and is requested to be included in the top level training plan presented in the vendor's proposal. WVCPRB requests that the successful vendor provide a comprehensive administration training program for approximately ten (10) employees, comprised of a mix of business analysts and IT staff members.

Topics to be addressed in the administration training include, but are by no means limited to:

1. Reconfiguration of all aspects of the system such as adding a new plan, a new user, changing the tax tables, etc.

2. Support of the employer-reporting sub-system portion of the solution so that new employers can added to the system, trained and supported by WVCPRB staff

3. Support of the web-based member self-service sub-system of the solution, intended to enable WVCPRB staff to later be able to expose (using appropriate security) functions currently accessible only to internal users.

2.10.2.3 ECM Administrative and Technical Training

Training in the administrative and technical aspects of the integrated imaging and workflow management solution is requested to be included in the top level training plan presented in the vendor's proposal. WVCPRB requires that the successful vendor provide comprehensive imaging and workflow training that addresses the imaging and workflow solutions as they are integrated with the LOB solution. Training should encompass all modules that are a part of the imaging and workflow management solution and address the training needs of:

1. Scanner operators

2. Indexers (if different from the scanner operators)

3. Quality assurance workers

4. Business analyst end-users

5. Supervisors and managers

6. Staff members assigned to maintaining imaging/workflow

7. IT operations and programming staff.

Topics to be addressed in the imaging and workflow training program include, as appropriate and at least:

1. Imaging system's functional capabilities as they are integrated with the business processes

2. Document preparation and scanning capabilities (for scanner operators only)

3. Basic user procedures (navigating menus and screens, scanning, indexing, retrieving images, entering data, queries, "short-cuts" / "hot keys")

4. Workflow processes and procedures

5. Basic system administration features (e.g., system functional access and system-wide parameters)

6. Troubleshooting and fault isolation

7. Application / operation support

8. Hardware operation and maintenance.

The format of the training to be provided should include not only classroom instruction, but also and more importantly, training workshops / laboratories that offer participants hands-on experience with all of the facets of the new imaging solution that pertain to their job duties.

2.10.3 *Employer Education and Training*

WVCPRB recognizes that to receive the full benefit of a new pension system, employers may have to change the format and mode by which they report wage, contribution, service, and employment information to WVCPRB. Education and training of the employers is a project in itself. It should be properly planned, developed, executed, and integrated with the rest of the implementation. WVCPRB desires the vendor to be responsible for every part of this task but the actual delivery of the training which will be done by the four-five members of WVCPRB staff trained by the vendor. In the proposal, vendors are requested to address how they intend to perform the following tasks to support the employers

identified in Appendix E, Exhibit 13 (which enumerates the number of employers, their number of employees, the frequency and the mode of reporting):

● Develop an employer education and training plan

● Delivery of training to five members of WVCPRB staff who in turn will deliver training to the employers.

● The trained WVCPRB staff will subsequently conduct meetings with employers to define the project, communicate expected results of the project and identify the timeline for implementation. (WVCPRB anticipates the subsequent training of employers will require regional meetings and training sessions with employers, class-room style training with employers at WVCPRB, and Web-based training sessions)

● Develop technical manuals to be supplied to the employers identifying the required new file layouts

● Develop user manuals to be supplied to the employers that detail all necessary data preparation procedures and the Web-based reporting methods that will be utilized

● Provide the capability to accept employer data in **both** the old format and the new Web-based format, and provide the capability to convert / translate each to the "other" environment in support of a gradual transition of employers to the new Web-based reporting.

WVCPRB desires the vendor to be responsible for the training of appropriate WVCPRB staff in the new employer reporting system as follows:

● Demonstrating, and training WVCPRB staff in the use of, the new system to accept employer wage and contribution data in all legacy system reporting modes, as well as via the new employer reporting Web-site

● Demonstrating, and training WVCPRB staff in the use of, the new system's capability to "translate" wage and contribution data from each of the legacy system reporting modes / formats to the new Web-based reporting format

● Demonstrating, and training WVCPRB staff in the use of, the new system's capability to "translate" wage and contribution data from the new Web-based reporting format to each of the legacy system reporting modes / formats

● Demonstrating, and training WVCPRB staff in, the successful posting of employer wage and contribution data regardless of the mode / format (i.e., legacy system mode or Web-based mode) in which it is received

In addition to the training specified above, the vendor is requested to be responsible for providing transition support as described in Section 2.12.2.

2.11 TESTING

WVCPRB desires a comprehensive testing process to be in place and utilized to determine whether the solution delivered (both base functionality and customizations) satisfactorily addresses the requirements defined in the RFP as confirmed or revised during requirements definition.

Below is a diagram showing how the various development aspects and phases of a project relate to the various testing terms and definitions that WVCPRB employs. While the diagram as shown applies to the entire solution development life cycle, it is presented here to demonstrate the scope of testing as well as laying out the vendor responsibilities for the development and execution of test plans.

Figure 9 New LOB Testing Scope and Responsibilities
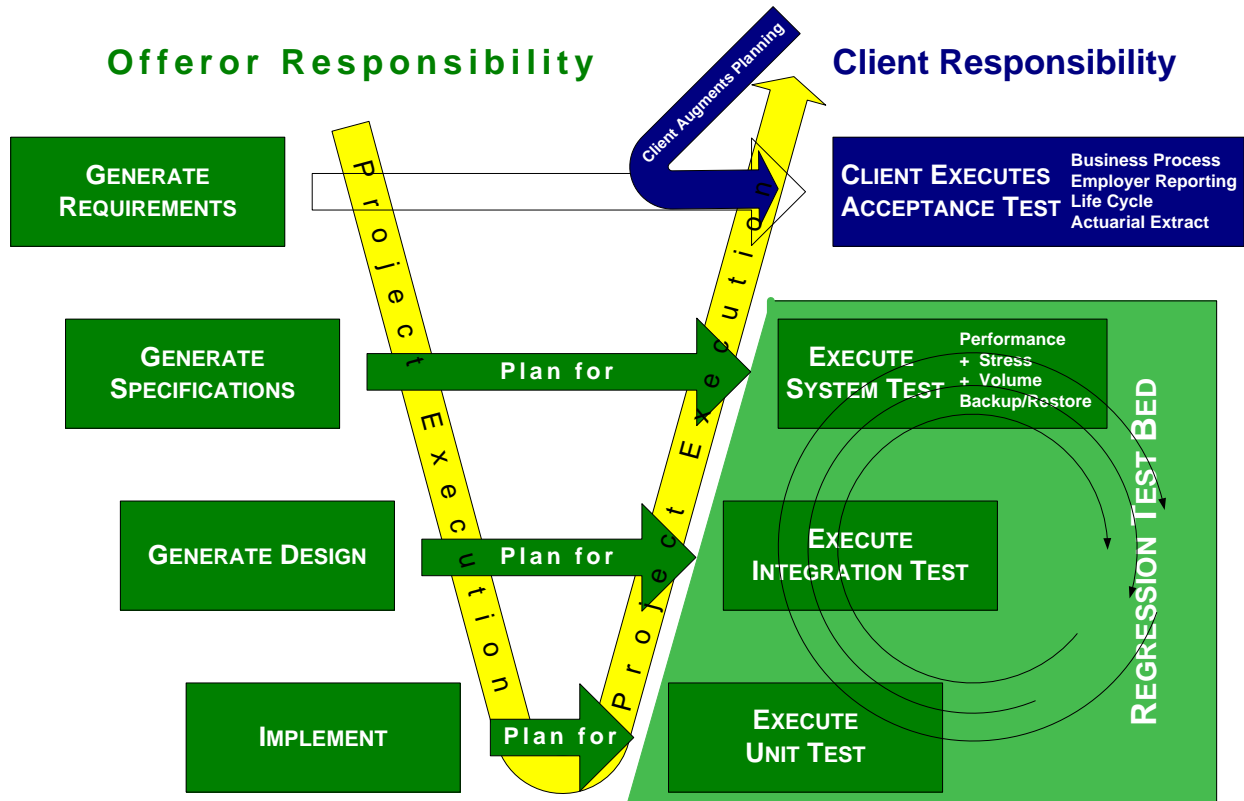
The diagram provides a wealth of information. It shows how the specifications for various test phases (on the right side of the project execution "V") are derived directly from solution development phases (on the left of the "V"). It also shows that vendor is requested to accept responsibility for all of the development phases, all of the test planning and preparation and all of the test execution except for the Client's Acceptance Test shown in the upper right hand corner of the diagram.

Testing terms may vary from vendor to vendor in their methodologies – but the fundamental requirements as stated herein should be met . If the vendor uses different terms, they should provide a mapping of their terminology to WVCPRB's. A list of test-related terms, along with their meaning in the context of this RFP, is provided below:

Scope of Testing   The range of tasks conducted on the solution to determine whether the solution satisfies the functional and technical requirements defined in the RFP as revised through the requirements definition process – as well as the internal design specifications and the high-level and detailed design of the system.

Vendor Testing or Vendor Acceptance Testing (VAT)   The hierarchical series of tests conducted by the vendor to verify proper functioning prior to delivering one or more components of the solution to WVCPRB. In order from simplest to most complex, VAT includes:

- **Unit Testing** – Tests performed by the programmer or developer to ensure the reliable performance of functions, procedures, and routines before making the product available to other developers within the larger component or system.

- **Integration Testing** – Testing of the solution with all its integrated components to ensure that they work together as designed, that the various sub-systems communicate with one another properly, errors are properly propagated from one component to another, etc.

- **System Testing** – Testing of the entire system (as a system) to ensure that the solution meets the design specifications. Specific components of the system test include:

Performance Testing – Tests designed and executed to determine whether or not the solution delivered satisfies the performance benchmarks identified in the RFP and refined and agreed to by WVCPRB and the vendor. Performance testing includes:

- **Stress testing** – designed to break the solution by overwhelming it or by depriving it of resources. The objective is to make sure that the system is recoverable – that it fails and recovers gracefully.

- **Volume testing** – testing the solution by introducing constantly increasing load in an attempt to expose weaknesses that do not surface in routine testing, such as memory management bugs, memory leaks, buffer overflows, or processor saturation.

Backup and Recovery Testing – Testing to verify that a backup of the applications software and data, following procedures defined by the vendor, can consistently and accurately be made and restored in an acceptable time period.

The vendor should note that system testing also includes complete execution of the vendor-generated User Acceptance Test scripts to ensure that when the system is handed off to WVCPRB, it executes the acceptance tests to a reasonable level of completion.

- **Regression Testing** – Possibly the most important aspect of the vendor's testing responsibility, regression testing is the principle of re-testing previous problem repairs subsequent to the correction of new problems to ensure that previously repaired problems do not recur. Regression testing is an integral part of any good software development methodology.

User Acceptance Testing (UAT)

Execution of a series of defined steps using predefined data the objective of which is to determine whether the actual outcome consistently, repeatedly, and accurately equals the expected result. User acceptance testing is a deliberate process and requires test scenarios, test cases, test data, and expected outcomes to be prepared (by the vendor) and known in advance of test execution. UAT occurs subsequent to the completion of VAT – though vendor-accomplished regression testing continues in response to changes and repairs of problems determined during UAT.

UAT also addresses:

- **Business Process Testing** – Scenarios covering all the business processes WVCPRB conducts using data sets designed to exercise all possible variations, permutations, and logic branches in base and customized function.

- **Employer Reporting Testing and Support** – Vendor-assisted testing of employer reporting functionality to confirm that employer wage and contribution reports can be received and posted via both legacy system reporting modes and the new solution's Web-based employer reporting

> capability.
>
> ● **Life Cycle Testing** – Testing a well-defined sequence of member or retiree events that effectively represent all, or a logical and related subset of, activities one would expect to occur over the life of a member or retiree.
>
> ● **Actuarial Extract File Testing** – Testing of the production of an annual actuarial extract file to provide the system's actuary with the information necessary to prepare an annual actuarial valuation, and optionally produce an experience study report at actuary's request.

As mentioned above and indicated in the diagram, WVCPRB requests the vendor to bear all responsibilities for test planning and preparation throughout the project.

These responsibilities include the identification and preparation of all test plans, test variants, test scenarios, test cases, test scripts, test data, and expected results for the <u>entire</u> system and *for all testing levels*. Furthermore, as indicated, WVCPRB requires that the vendor plan for and execute complete, end-to-end testing of the solution, not just the customizations done for WVCPRB. In addition, the vendor is requested to provide a mechanism for reporting actual test results vs. expected results and for tracking all errors and problems identified during test execution (see Section 2.6.3.9 Problem Incident Reports), as well as their resolution. This reporting mechanism should include trend analysis for tests completed, errors identified, rework efforts, and retesting efforts, in both numeric and graphical presentations.

When it comes time for WVCPRB execution of UAT of each roll-out phase, vendor should deliver to the WVCPRB project manager all of the vendor-prepared aforementioned materials at least two weeks prior to commencement of UAT – in both notebooks and end-user-logically-organized electronic copy. The vendor should also provide training as necessary to WVCPRB staff responsible for test activities – prior to the start of execution of UAT.

It is appropriate to assume that the majority of WVCPRB users are unfamiliar with structured, disciplined acceptance test procedures – their conduct and resource (time and staff) requirements. The preparation of necessary testing materials as identified in the preceding paragraph is the vendor's responsibility, though (again as indicated) WVCPRB reserves the right to review and approve the materials developed by the vendor and to augment those materials and test plans and scripts as WVCPRB sees fit. Note that WVCPRB does not anticipate user testing to begin until WVCPRB staff is trained by the vendor in testing methodologies and problem incident reporting (PIR) mechanisms.

In preparation for and execution of testing activities, the vendor is requested to:

1. Create the test environment, meeting the specifications of the test plans

2. Install the system in the separate development, test, training, QA, and query environment (see Section 2.5.2)

3. Ensure that sufficient and approved test data is populated in the test database(s)

4. Install and train WVCPRB staff on the use of an ad hoc query capability, complete with the ability to download the results of the queries in ASCII format or to an Excel spreadsheet as described in Section 2.4.5.4 – prior to execution of testing. Note that the ad hoc query capability is considered to include the appropriate data dictionary and schema definitions necessary for users to make effective ad hoc queries

5. Support the operation of the test system and deliver system output to WVCPRB as requested

6. Plan for documenting, and resolving any errors encountered during testing – and fully regression testing the subsequent repairs

7. Provide adequate technical and other staff dedicated to testing support and problem resolution while testing activities are in progress

8. Update the requirements traceability matrix demonstrating that the tests performed validate that specified system requirements, either listed in the "To Be" Business Requirements (Section 2.4) or through the requirements GAP analysis conducted as part of this implementation, have been met.

The diagram below shows WVCPRB's perception of the various tasks and their scheduling relative to one another; (Note, there is no intent to indicate that the project is limited to only two roll-out phases);

Figure 10 Relative Project Test Activities
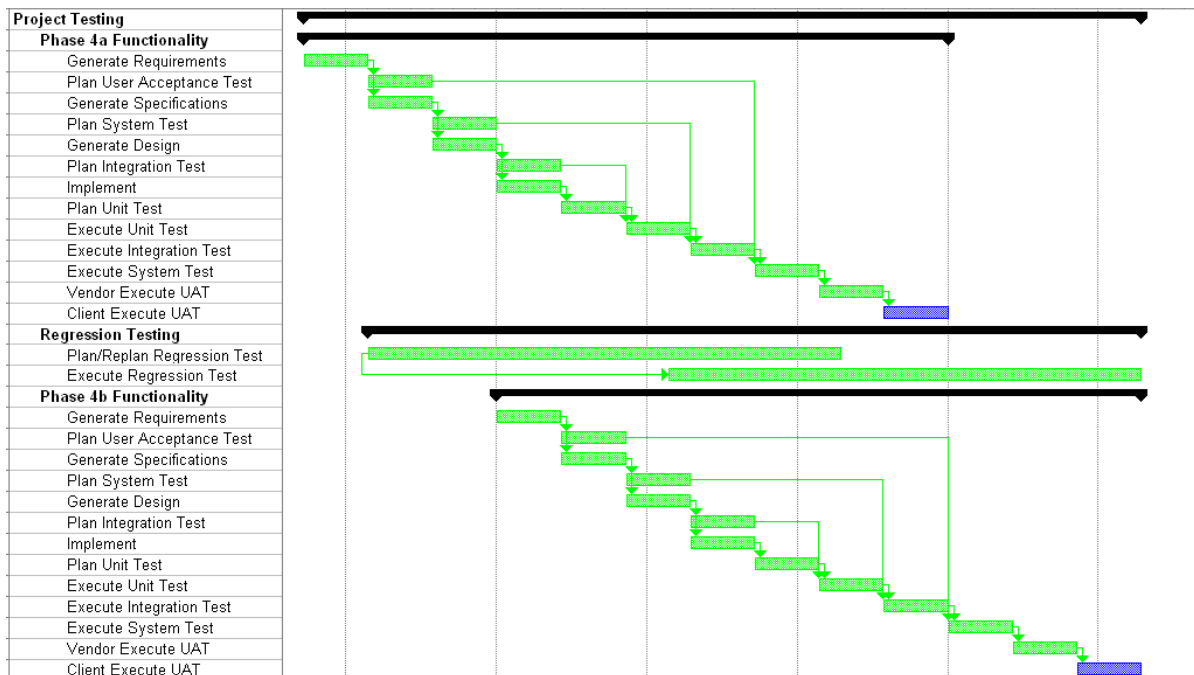
In its proposal, the vendor is requested to include its proposed test plan methodology. After contract award, the vendor will be requested to include details of its test plan methodology in the detailed project work plan. A separate test plan and set of test materials should be prepared for each functional cutover.

WVCPRB desires the vendor to be responsible for establishing a repository to contain the test data results. The repository should be accessible by the WVCPRB Project Manager as well as other members of the project team. Data and material in the repository should be stored in such a manner that it cannot be altered after being filed.

For the deliverables repository, vendors are requested to describe in their proposals:

1. Their commitment to satisfying the requirements for the testing repository

2. The location of the repository, the related backup procedures to be employed, and the recovery procedures to restore the repository documents in the event of an equipment failure

3. How they propose to organize the repository for ease of use and access

4. How the vendor intends to control the repository to guarantee, on a continuous basis, the correctness and completeness of the repository at any time

5. Their commitment to produce a document (which itself should be included in the repository) describing the testing repository, how it is organized, how items from it can be accessed, and how to recover the repository if necessary

6. Their commitment to train WVCPRB staff (including an administrator, managers, and end-users) in the use of the repository

7. Whether third party tools are utilized (if so, they should be provided by the vendor – and their price included in the vendor's cost proposal).

WVCPRB notes that automated or scripted testing is a critical component of delivering high-quality, high-performance and highly available applications. Automated testing and the associated tools give the ability to easily repeat, identify problems and execute test scenarios, and create a library of test scripts for reuse. Proposers should describe their methodology for automated testing and how they intend to use it during the different phases of testing, specifically acceptance testing.

WVCPRB is concerned about the amount of time to be allocated to testing relative to design and development. It is crucial that WVCPRB training and testing activities not be abbreviated in order to meet project implementation schedules; it cannot be assumed that when testing commences WVCPRB can allocate 100% of its resources to this effort. Therefore, WVCPRB requires that a fixed ratio apply to the time devoted to WVCPRB training and testing relative to the time devoted to vendor requirements definition, design, and development. We propose a 4:1 ratio – i.e., if the time required for the vendor to design, build, and test a particular functional rollout phase is eight months, then up to two months should be allocated to WVCPRB staff for training and test execution. The vendor should disclose in its proposal the assumptions it has used with regard to WVCPRB resources required during testing.

Vendors are invited to discuss this issue in their proposals and to offer an alternative approach. However, if they propose a significantly higher ratio of development time to testing time, they should explain the rationale for their alternative. Prior to contract execution, a fixed ratio should be discussed and agreed to. WVCPRB does not anticipate allowing deviations from the fixed ratio during the course of the project, except by express written approval of WVCPRB.

The following sections provide specific requirements and detail the vendor's responsibilities relating to both Vendor Acceptance Testing and User Acceptance Testing of the new solution.

2.11.1 *Scope of Testing*

WVCPRB is concerned as to the adequacy of the *scope* of testing of the pension administration application. It is understood that vendors proposing packaged solutions to be modified (as opposed to template-based or fully customized solutions) are likely test their base product via automated testing routines, then design specific test cases to validate their modifications to the base product.

However, **at the very least**, the vendor is responsible for designing test plans and specific test cases and developing all test materials (scenarios, scripts, data, etc.) necessary to exercise and validate each and every line item in the LOB spreadsheet of the Requirements Traceability Matrix described in Section 2.6.3.1, not just the functions that are customized for WVCPRB. The matrix requires the WVCPRB Project Manager (or other WVCPRB staff member appointed by the WVCPRB Project Manager) to sign off on every INDIVIDUAL line item in the matrix. In order for an authorized WVCPRB staff member to indicate, by his/her signature on the matrix, acceptance of an individual LOB function line item, the vendor should demonstrate through appropriate testing activities that the line item is satisfied by the solution as implemented.

In its proposal, the vendor is requested to state its commitment to design test cases and develop all related test materials (scenarios, scripts, data, etc.) necessary to validate, at least, each and every line item in the LOB spreadsheet of the Requirements Traceability Matrix. WVCPRB welcomes discussion of any additional LOB application testing being proposed by the vendor.

Thus the vendor requested develop and deliver a test plan and test materials for **_all_** functionality to be delivered to WVCPRB – regardless of its origin, i.e., baseline product, modification to a baseline product, or custom function.

The following subsections set forth specific topics that are requested to be addressed by the vendor's test plan and specific testing scenarios that are anticipated to be addressed by the vendor test team.

2.11.2 *Vendor Acceptance Testing*

WVCPRB desires the Vendor Acceptance Test to demonstrate the successful testing and operation of the system by the vendor, ensuring that the new solution is functioning and processing data correctly and ready for WVCPRB UAT. Tests requested to be performed within VAT include:

- <u>Unit</u> testing of any code developed specifically to address requirements or issues specific to WVCPRB

- <u>Integration</u> testing to ensure that all third-party and other application packages integrated into the solution perform properly and that information is exchanged among the components properly

- End-to-end application <u>system</u> testing, including stress tests, volume tests, and performance tests to ensure that the solution meets performance requirements under expected user loads, as well as backup and recovery testing. Note that such system testing is anticipated to also include complete execution (and certification that it has been successfully executed) of the vendor-generated test scenarios for UAT.

Furthermore, VAT should include continuous regression testing of the implemented solution to ensure that all subsequent fixes and changes to the system do not break things which worked prior to the implementation of those changes. Vendor Acceptance Testing is anticipated to be performed for each functional rollout phase of the project.

In fulfilling this responsibility, the vendor is requested to provide an internal, independent group to conduct vendor unit, integration and system testing before functionality is delivered to WVCPRB for UAT. Following what WVCPRB considers a "best practice" in solution development, the vendor testing team is anticipated to be <u>100% independent</u> of the development team. The independent vendor testing team should be present and available to support the WVCPRB test team during UAT.

The following subsections set forth specific requirements relating to the vendor's unit testing, integration testing, system testing, and regression testing.

2.11.2.1 Unit Testing

Unit testing is requested to be performed by the vendor for each functional rollout phase of the project. Certification that the vendor's test team has successfully completed all unit tests should be delivered to WVCPRB prior to the commencement of VAT. Note that it is not necessary to indicate the name of each module that has been unit-tested, merely, that unit testing has been completed.

2.11.2.2 Integration Testing

Integration testing is requested to be performed by the vendor for each functional rollout phase of the project. Even if there are no third-party package components in the rollout phase being tested, there may be issues with integration with WVCPRB's web site, the RDBMS underlying the solution or other such components. Certification that the vendor's test team has successfully completed all integration tests should be delivered to WVCPRB prior to the commencement of VAT.

2.11.2.3 System Testing

System testing is requested to be performed by the vendor for each functional rollout phase of the project. System testing is anticipated to be performed on one of the environments installed at the WVCPRB location and is requested to be witnessed by the WVCPRB Project Manager or his or her designee. System testing is anticipated to include end-to-end testing of the system to ensure that when WVCPRB executes the UAT scripts and processes, no unexpected errors or other deficiencies occur. In addition, system testing includes the performance- and backup and recovery-testing outlined in subsequent sections. WVCPRB further notes that at the conclusion of System Testing, vendor is requested to

execute the full vendor-developed suite of UAT tests to ensure that WVCPRB staffs commence their testing on a system that works.

Certification that the vendor's test team has successfully completed all system (including the pass through the UAT testing) tests should be delivered to WVCPRB prior to the commencement of VAT.

2.11.2.3.1 Performance Testing

The Vendor is requested to demonstrate via a performance benchmark test to be conducted as mutually agreed to between the vendor and WVCPRB, that the proposed solution meets all performance criteria when all of the following are running:

1. Standard LOB applications

2. Ad hoc query is in use

3. 85 concurrent sessions of WVCPRB staff users (whether internal or external [i.e., working from home or another remote location])

4. 75 active Wage and Contribution transmissions occurring (i.e., 75 employer wage and contribution reports simultaneously submitted)

5. 500 concurrent external users accessing the system through the Web (see below)

6. Multiple instances of unattended processes such as interest calculation, 1099 generation, etc.

Web applications available to reporting units, active members, or retirees are requested to be sized to accommodate 660 concurrent sessions initially and rising to 875 concurrent sessions within five years of the system's rollout.

The required performance benchmark test should include:

- **Stress testing** – Tests designed to break the solution by overwhelming it or by depriving it of resources. The objective is to make sure that the system is recoverable – i.e., that it fails and recovers gracefully.

- **Volume testing** – testing the solution by introducing constantly increasing load in an attempt to expose weaknesses that do not surface in routine testing, such as memory management bugs, memory leaks, buffer overflows, or processor saturation.

The performance test should be:

1. Described in detail in the vendor's proposal

2. Conducted as part of the acceptance of the first functional rollout phase that is moved into production

3. Conducted as a condition of acceptance of the full system.

WVCPRB understands the changing nature of computer technology and accepts that, at some point, the architecture procured under this project will be antiquated. With that in mind, WVCPRB requests that the vendor discuss in its technical proposal the means by which it upgrades its current client base to new platforms (e.g., new servers, new desktop PCs, new underlying architectures) and identify what cost, if any, may be incurred by WVCPRB in such an upgrade. In addition, WVCPRB expects that modifications and customizations to the LOB application be capped. Such request should be taken into consideration in the vendor's cost proposal.

Notwithstanding the above, the vendor should be aware of and understand that the performance requirements outlive the term of the contract. In the event that the combination of hardware and software specified by the vendor fails to satisfy performance requirements stipulated in Section 2.5.8 Operational Requirements (and elsewhere in the RFP), the vendor is requested to provide additional hardware, software, and services, as necessary, to rectify such performance shortfalls – at no additional cost to WVCPRB.

2.11.2.3.2 Backup and Recovery Testing

Vendors should agree in their proposals to conduct a backup/recovery test to confirm that a full system backup of the LOB can be completed within four (4) hours – and that a complete system restore of the LOB can be accomplished in the same amount of elapsed time (four hours). Similarly, depending on the volume of documents stored in the document archive(s), a full system backup and a complete system restore of the ECM solution is anticipated to be completed within twelve (12) hours. The complete backup/recovery tests are anticipated to be repeated for each functional rollout of the new solution.

During any backup/recovery test, should the vendor fail to demonstrate that a full backup and a full restore can each be completed within the specified four-hour (twelve in the case of ECM) window, WVCPRB requests the vendor , at its own expense, to take the steps necessary to enable the system to consistently meet the four-hour (twelve in the case of ECM) backup/recovery requirement.

2.11.2.4 Regression Testing

The vendor is requested to be responsible for developing test plans and all test materials, as well as for executing all tests and certifying their completion prior to user testing <u>for all functionality being delivered</u>. As a result of the user testing activities, problems may be identified that require correction. Those corrections should, in turn, require re-testing. In addition, when a second functional phase is developed on top of a first, features inserted into the second (and subsequent) phase(s) may cause functionality in the first phase to cease functioning. Those problems are identified through re-testing of the features of all phases prior to the current phase – as well as unit, integration and system testing of the most recent phase.

During the problem correction process as well as during the validation of previous phases, WVCPRB is concerned that appropriate <u>regression testing</u> be conducted. By regression testing, we mean re-testing to detect faults introduced during the modification and correction effort, both to verify that the modifications and corrections have not caused unintended adverse effects, and to verify that the modified and related (possibly affected) system components still meet their specified requirements.

As part of the overall system test plan, a regression test plan is requested to be developed by the vendor describing (1) the core test bed that ensures appropriate coverage of complete system functionality, and (2) how each specific programming change made to the solution should be classified and also how a test for its integrity should be incorporated into the regression test bed. Then when a programming change is made (and tested and integrated) in response to a problem identified during vendor or user test, the regression test bed should be augmented (according to the plan) to incorporate testing for the new repair as well as ensuring that prior repairs are not undone. Thus the regression test plan has two objectives: first, to validate that the change/update has been properly incorporated into the program; and second, to validate that there has been no change to the unchanged portions of the program.

The vendor is requested to:

1. Create a set of test conditions, test cases, and test data intended to validate that the unchanged portions of the program still operate correctly

2. Create a set of test conditions, test cases, and test data intended to validate that the change has been incorporated correctly

3. Manage the entire cyclic process.

Again, the vendor's independent test team is expected to execute the regression test and certify its completion in writing to WVCPRB prior to passing the modified application to the users for retesting. In designing and conducting such regression testing, the vendor is requested to assess the risks inherent to the modification being implemented and weigh those risks against the time and effort required for conducting the regression tests. In other words, the vendor should design and conduct <u>reasonable</u> regression tests that are likely to identify any unintended consequences of the modification while taking into account schedule and economic considerations.

Finally, WVCPRB believes that the set of regression tests developed during the implementation of the vendor's solution provide a complete test bed for testing of further revisions of the product as well as possible changes in configuration etc. For that reason, the vendor is requested to supply WVCPRB with the complete set of regression test instructions, scripts, expected outcomes, etc., upon final cut-over. WVCPRB will use the regression test bed to validate subsequent patches and releases of the operating system, releases of the pension administration system, and changes in configurations, etc., that WVCPRB business analysts make to the pension administration system. (Note that if the supplying of the regression test bed in usable form also requires that WVCPRB purchase an automated test tool of some description, the tool should be itemized in the list of commodity software called for in Section 2.5.6.5 of this RFP.)

In their proposals, it is requested that vendors acknowledge their complete understanding of and responsibilities for regression testing as described in this section.

2.11.2.5 Criteria for Cutover to User Acceptance Testing

Cutover from VAT to UAT is more than a date on a project plan. Prior to the commencement of UAT, the vendor is anticipated to have successfully completed all required testing required by the phase definition. At the conclusion of VAT for each phase, the vendor should provide written certification, signed by both the vendor's project manager and the vendor's Test Team Director (an individual separate and apart from the development staff charged only with test and quality assurance responsibility) that all tests have been completed satisfactorily (at least at a 97% level, that is, all testing completed with no more than 3% of the test cases not completing satisfactorily), that there are no critical PIRs, and that the system is ready for User Acceptance Testing.

The final output of VAT should be both hardcopy and electronic test materials including, but not limited to: test plans, test scripts, expected test results, actual test results, and tangible proof (i.e., screen prints [before and after images] or report output) that actual test results were compared to expected test results. WVCPRB does not intend to begin UAT until two weeks after **all** VAT material has been provided to WVCPRB. Life Cycle Testing and Employer Reporting Testing are anticipated to begin after Business Process testing has been completed.

2.11.3 *User Acceptance Testing*

UAT is requested to be conducted for each functional cutover. The vendor should plan for UAT to begin at least two weeks after all of the following have occurred:

1. The vendor has completed vendor unit testing

2. The vendor has completed vendor integration testing for the functionality included in the specific rollout phase

3. The vendor has completed vendor system testing for the functionality included in the specific rollout phase

4. The vendor has completed regression testing for all repairs found and implemented during VAT

5. The vendor has provided WVCPRB with all test materials, test results, and written certification, signed by both the vendor's project manager and the vendor's test team director (an individual separate and apart from the development staff charged with only test and quality assurance responsibility), that all tests have been completed satisfactorily (at least to the 97 percent level) and that the system is ready for User Acceptance Testing.

As mentioned elsewhere in this RFP, the vendor will be requested to provide an independent test team composed of vendor staff who had no hand in developing the system under test. That independent test team should be continuously present and available to assist the WVCPRB users in meeting their UAT responsibilities.

In addition to assisting WVCPRB users in utilizing the test materials and executing the tests, the vendor's independent testing team should also support users in reporting test results and in re-testing, as required, to confirm that all Problem Incident Reports were addressed correctly and thoroughly.

Tests conducted during UAT should be executed against converted data drawn from WVCPRB's current production legacy system as well as against new data added during execution of the test cases. As a result, the vendor should accommodate in its project plan and timeline the completion of some sufficient level of data conversion to provide a satisfactory sample data set. Just as the vendor is responsible for providing all of the test scripts, it is the vendor's responsibility to identify or create **all** of the data required to exercise **all** of the test scenarios that comprise the complete UAT suite of tests. While WVCPRB personnel will bring additional scenarios and data to the UAT, the prior completion of all tests requires that the vendor has identified and used WVCPRB data in their exercising of the UAT scripts.

Regardless of the project schedule, User Acceptance Testing for a rollout phase is anticipated to achieve a 99 percent success rate of the major processes run to completion without major error or issue for the testing to be considered complete. Final cutover of the system has further criteria as described in Section 2.11.4, below.

The following subsections discuss specific user acceptance testing requirements relating to business process testing scenarios, employer reporting testing, and (member) life cycle testing.

2.11.3.1 Business Process Testing Scenarios

WVCPRB is concerned about the "auditability" of the new pension application and procedures. Therefore, the following business process testing scenarios are requested to be addressed by the vendor in developing testing plans and materials, informing vendor unit testing[9], and in conducting vendor integration and system testing, and in supporting user acceptance testing. The applicability of the following testing scenarios depends on the particular functional rollout phase of the implementation being tested. Therefore, in order to demonstrate the "auditability" of the new solution, the vendor is responsible for addressing each of the following testing scenarios twice – in the project's first functional rollout phase to which it pertains **and** again prior to the final functional cutover to the new solution:

- With regard to both federal and state income tax, design and conduct tests which demonstrate successful reconciliation of the aggregate amount withheld from all benefit payments (including "manual" and "one-time" checks) issued during the annuity payroll period against the amount calculated to be submitted to tax authorities. This reconciliation of tax withholding should be demonstrated. Complete a test of the 1099R production process to ensure accurate aggregation of distributions, accurate calculation and reporting of basis recovery and all required tax information.

- Design and conduct a test to ensure the required minimum distributions works as desired.

- Design and conduct multiple tests as necessary to demonstrate that at all times WVCPRB's manual and computerized records, subsidiary ledgers, control ledger, and reconciled bank balance are in agreement.

- To ensure that when members request a refund, processing occurs automatically so they receive benefit of **all** of the appropriate funds in their account, design and conduct tests to confirm that:

  o The account remains in a workflow queue or an "open" status until final salary and contribution information is posted; when final posting occurs, the full amount remaining in the member's account is automatically paid to the terminated member

  o The refund amount reflects all interest earned by the account through the date of termination.

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[9] Typically unit test has little to do with business processes, since the testing is concerned with whether the specific code module accomplished (correctly) the functions for which it was designed. However, the business process defines an environment within which a code module must function, and thus the business informs the unit testing designed for the specific module.

- Design and conduct tests to demonstrate that the correct actuarial factors within the actuarial factor tables are used to calculate the benefits for each option for each plan. WVCPRB desires that tests ensure that ages for retirees and beneficiaries are calculated correctly based upon calculation procedures adopted by the WVCPRB. Design and conduct tests to demonstrate that when an account is put on "hold" – whether for QDRO or other reasons – that no benefit is distributed from it or change made to it other than by authorized users.

- Design and conduct tests to demonstrate the successful reconciliation of all WVCPRB draft accounts using the reconciliation procedures developed and delivered by the vendor, including confirming the accuracy of the outstanding checks report.

- Design and conduct a test to ensure that Internal Revenue Code IRC 415 limits are properly enforced and that the excess is accounted for.

- Design and conduct tests to confirm that when a user changes the status of a check to "void", the transaction is directed to a different user having appropriate system permissions (e.g., 'supervisory', 'audit', 'review') for review and approval before it is committed to the database. Further, confirm that for each check successfully changed to "void" status, a corresponding correct automatic entry is made to the general ledger.

- Design and conduct tests to demonstrate that all subtotals, totals, and grand totals reported or displayed by the pension solution can be 'decomposed' (via audit trail) such that the user can identify the source data used to compute the totals. Further, confirm that all appropriate subtotals, totals, and grand totals are provided in all reports.

- Design and conduct tests to demonstrate that every automated general ledger entry attributable to the pension solution can be identified as to its source and is posted correctly.

- Design and conduct tests to demonstrate that the pension solution can provide an accurate display and report of all contributions that have been received but not yet posted.

- If separate sets of records, files, and/or general ledgers are maintained for calendar year and fiscal year reporting, design and conduct tests to demonstrate that the two ledgers can be reconciled using the reconciliation procedures developed and delivered by the vendor.

- Perform a test check run. Design and conduct tests to demonstrate that:

  o Only users with appropriate permissions are able to access and update the check print file

  o The number of checks printed corresponds to the number to be printed per the print file

  o The aggregate amount of all checks printed corresponds to the aggregate amount of checks included in the print file

  o The numbering of all checks printed is correct – i.e., that the first check printed is numbered with the next available check number and that all remaining checks are numbered sequentially

  o A check register file is produced which is accurately identified as a 'trial' or 'final' run and that all amounts and check numbers are reconcilable with the actual checks produced.

  o Various deductions from and allocations of the benefit are handled correctly; basis recovery, QDRO, assignment, collections and offset accounts being examples.

- Design and conduct tests to demonstrate that contributions are accurately recorded as to the employer portion vs. member portion (based on the percentage of salary contribution factors pertaining to the particular plan).

- Design and conduct a test to demonstrate the ability to reconcile a given month's annuity payroll (both aggregate dollar amount and number of checks) to the previous pay period. To do so, create a 'test month' in which test transactions are entered consisting of:

  o Setting up several new retirees

  o Terminating / suspending benefits of several retirees

- o Reinstating several retirees whose benefits were previously terminated
- o Entering benefit adjustments for several retirees.
- o Then run a trial annuity payroll and confirm that:
- o The aggregate dollar amount of checks in the new annuity payroll trial run is equal to the aggregate dollar amount of the previous period's annuity payroll, plus the amount of benefits paid to the new retirees, minus the benefits of the retirees whose benefits were terminated / suspended, plus the benefit of the retirees who were reinstated, plus/minus the net amount of the benefit adjustments.
- o The number of checks printed in the new annuity payroll trial run is equal to the number printed in the previous month's annuity payroll run, plus the number of new retirements, plus the number of reinstated retirees, minus the number of retirees suspended / terminated.
- o Confirm the accuracy of a Monthly Annuity Payroll Summary Report reflecting the above.

- ● Design and conduct tests to demonstrate that the system automatically prevents the user from refunding to a member an amount that exceeds his/her account balance.

- ● Design and execute test cases to demonstrate that, for **all** groups, for **all** types of retirement (e.g., service, disability, death benefits, death in service refunds) and for **all** retirement options (e.g., regular, joint, level option payment plan):

- o The account enters and remains in a work queue or "open" status until final salary and contributions have been posted
- o When final salary and contribution information has been posted, the final benefit / payout amount is accurately calculated, including all applicable interest postings and COLA adjustments
- o All benefit checks reflect the final benefit amount
- o The member's account balance is zero
- o **All** cases of member and spouse death cause **correct** reallocation and recalculation of benefits.

- ● Design and conduct tests to confirm that death benefits paid to multiple beneficiaries are apportioned correctly among the recipients, and that the total paid to all beneficiaries is equivalent to the total calculated death benefit.

2.11.3.2 Employer Reporting Testing

In addition to the appropriate VAT of the new Employer Reporting System prior to the start of UAT, the vendor is requested to participate in the testing (and initial support as described in Section 2.12.2 of this RFP) of employer reporting. Vendor responsibilities in this area include:

- ● Demonstrating, and training WVCPRB staff in the use of, the new Web-based employer reporting test data bed

- ● Providing comprehensive, on-site support to WVCPRB staff in comprehensive testing of at least ten-percent (10) of agencies' reporting of wage and contribution data. The agencies to be thus supported should include:

- o WVCPRB's two largest agencies
- o WVCPRB's two smallest agencies
- o At least two other agencies using **each** of the legacy system reporting modes.

- ● The specific agencies subject to combined WVCPRB-vendor testing will be selected by the WVCPRB. **All** of the agencies selected for combined WVCPRB-vendor testing should be successfully tested (i.e., all wage and contribution posting results should match expected results) for at least two reporting cycles under **both** reporting modes (i.e., that employer's reporting mode under the legacy system and the new Web-based reporting method).

● Providing comprehensive, on-site support to WVCPRB staff in testing the reporting capability of every employer via the employer reporting Web-site at least once.

2.11.3.3 Life Cycle Testing

Complete Life Cycle Testing (LCT) is requested to be conducted prior to the final cutover to the new solution. Test and validation of the accuracy of the data conversion and bridging process is expected to be conducted prior to Life Cycle Testing (see Section 2.7.2 Data Conversion and Bridging and Figure 8 Phased Data Conversion and Bridging for additional information). LCT should immediately follow the successful completion of Business Process testing during the rollout of each phase. The vendor is requested to develop a plan for LCT and develop all test materials. The vendor is requested to conduct the LCT and certify its successful completion prior to turning LCT test materials over to WVCPRB users for their LCT activities.

LCT should consist of the execution of a series of well-constructed test cases designed to simulate a member's full life cycle from initial enrollment through his/her retirement, eventual death, and distribution of death benefits to beneficiaries. At the very least, it should address the following test scenarios / cases:

● Receipt of employer wage and contribution report for new member having no enrollment information in the system

● Automatic "triggering" of the appropriate response to that event related to the new member's enrollment – i.e., upon receipt of the wage and contribution report, generation of a workflow stream for WVCPRB staff to send an enrollment form to the new member, or automatically enroll the new member, or …

● Receipt of the completed enrollment form and entry of all enrollment information into the system

● Identification of incomplete information on the enrollment form and automatic "triggering" of a request for additional information from the member

● Receipt of the additional information and entry of the related data into the system, completing the enrollment process

● Periodic receipt and posting of additional employer wage and contribution data for the member

● Periodic posting of interest to the member's account

● Receipt and entry of updated beneficiary information

● Receipt, entry, and calculation of a loan

● Receipt of notification of member's termination of employment

● Receipt of member's refund application, including rollover information

● Calculation of amount to be refunded to terminating member including potential loan offset

● Audit / review of refund calculation

● Generation of (partial) refund check to member

● Processing of rollover of portion or all of a refund to member's financial institution

● Receipt of final wage and contribution information for member

● Calculation of remaining balance to be refunded to member

● Generation of check for amount of remaining balance

● Confirmation that account has been "zeroed" – both contributions and service credit

● Receipt of employer (different from original employer) wage and contribution for the terminated member

- Processing of return to work in a covered position by the member

- Re-enrollment of the member

- Receipt of application to buy back refund from previous period of membership

- Calculation of eligible service credit and cost of buyback, including interest

- Audit / review of buyback calculation

- Generation of letter to member with buyback information

- Receipt of buyback check from member (and/or roll-in of funds from financial institution qualified retirement account)

- Posting of service credit and contributions to member account reflecting buyback of previous service by member

- Receipt of application from member to purchase eligible service

- Entry of purchase of service information into system

- Calculation of cost of purchased service

- Audit / review of purchase of service calculation

- Generation of letter to member with purchase of service information

- Receipt of check from member to purchase service

- Posting of service credit and contributions to member account reflecting purchase of service

- Receipt of notice of death of one of member's designated beneficiaries

- Adjustment of allocation of member's death benefit to remaining beneficiaries

- Receipt of application for retirement from member

- Identification of incomplete information and/or required documents (e.g., date of retirement, birth certificate) to process retirement application

- Generation of letter to member requesting missing information / documents

- Receipt and entry into system of missing information / documentation

- Calculation of member's final average salary

- Audit / review of final average salary and initial retirement benefit amount

- Generation of retirement benefit estimate letter to member

- Transfer of member from active membership to retired status

- Receipt of final wage and contribution information for member

- Calculation of final retirement benefit amount including potential loan offset

- Audit / review of final retirement benefit amount

- Generation of first retirement benefit check / direct deposit / EFT

- Receipt of notice of retiree's divorce (QDRO)

- Calculation of benefit split between retiree and former spouse

- Audit / review of benefit split

- Receipt of notice of death of retiree

- Calculation of death benefit (lump sum or monthly annuity) for each beneficiary

- Audit-review of death benefit calculation

- Generation of check for lump sum death benefit to each qualified beneficiary

- Addition of qualified beneficiary to retirement annuity payroll in case of monthly annuity

- Close out of retiree's account

- Receipt of notification of death of last beneficiary

- Close out of beneficiary account

- Correct handling and accounting for basis recovery

- Correct accounting for required minimum distribution

- Production of 1099R, reprint of same, and production of data file for submission to IRS.

- Ability to accept multiple wage reports for a member – a member who works in two or more positions at the same employer or in two or more positions at separate employers.

- Ability for an elected official to terminate one WVCPRB covered job and still remain in his or her elected position and receive a retirement allowance

- Correct calculation and application of interest, COLAs, and other benefit adjustment and offsets

- Supplemental payments

- Ability of holds and flags place on a member's account to genuinely restrict access to or activity in the account.

LCT is also anticipated to include a test stream addressing disability versus regular retirement of the member. Additional test scenarios / cases that should be addressed in this version of LCT include:

- Receipt of application for disability retirement from member

- Entry of disability retirement application information into system

- Identification of incomplete information on the disability application and automatic "triggering" of a request for additional information from the member

- Receipt of the additional information and entry of the related data into the system

- Calculation of potential disability benefit amount

- Audit / review of potential disability benefit amount

- Scheduling of physician's exam

- Receipt of physician's report on member's disability

- Preparation of disability case materials for presentation to disability oversight authority

- Processing of denial of application for disability benefits and generation of denial letter to applicant, including information on rights to appeal decision

- Receipt of member's appeal of disability decision

- Processing of reversal of denial (approval) of disability benefits

- Generation of letter to member authorizing disability retirement, informing member of disability benefit amount and member's responsibilities for periodic re-certification of disabled status and reporting of earnings

- Generation of disability retirement benefit checks / direct deposits / EFTs

- Receipt of disability retiree's annual earnings information

- Automatic comparison of reported earnings against allowable earnings

- Calculation of automatic reduction of disability benefit based on retiree's having exceeded allowable earnings amount

- Audit / review of disability benefit reduction

- Generation of disability retirement benefit checks / direct deposits / EFTs in new (reduced) amount

- Receipt of physician's report indicating disability status no longer applicable

- Generation of letter to disability retiree indicating potential termination of disability benefits, with information on appeal process

- Automatic removal of retiree from disability annuity payroll based on failure to comply

- Receipt of appeal information indicating continuing disability after suspension of disability benefits

- Resumption of disability benefits based on successful appeal

- Calculation of "catch-up" amount to compensate disability retiree for period when benefits were suspended

- Audit / review of "catch-up" amount calculation

- Generation of check / direct deposit / EFT for "catch-up" amount

- Automatic "triggering" of disability retiree's benefit reversion calculation (based on age)

- Generation of letter to retiree informing him/her of benefit reversion calculation

As mentioned elsewhere in this RFP, the vendor is requested to provide an independent test team composed of vendor staff who had no hand in developing the system under test. That independent test team should be continuously present and available to assist the WVCPRB users in meeting their LCT responsibilities.

In addition to assisting WVCPRB users in utilizing the test materials and executing the tests, the vendor's independent testing team should also support users in reporting test results and in re-testing, as required, to confirm that all Problem Incident Reports were addressed correctly and thoroughly.

2.11.3.4 Actuarial Extract File Testing

The vendor is requested to develop an annual actuarial extract file and report capability to provide the system's actuary with the information necessary to prepare an annual actuarial valuation Furthermore, the system is anticipated to be capable of extracting data sufficient to allow WVCPRB and the actuary to develop as separate reports the Experience Study Report. All the above referenced reports or extracts should be run on an "as of" basis. This applies both for actually running the processes in a production environment as well as for running tests of the actuarial file. For example, if User Acceptance Testing were to occur in March, WVCPRB desires to use the most recently completed fiscal year for the reports or extracts. The vendor should develop the detailed requirements in this area based on interviews with system staff, the actuary, and potentially the investment consultant.

The actuarial extract file and report should contain, at least, the following data fields:

- **ACTIVE DATA** (includes all who are working or terminated but not yet receiving benefits)

Demographic

- Name
- SSN
- Birth date
- sex

Employment info

- ◆ Employer
- ◆ Employment status (active, terminated, etc.)
- ◆ Hire date
- ◆ Termination date (if applicable)
- ◆ Employer type (state, non-state, etc.)

Contribution information

- ◆ Employee contributions with interest
- ◆ Employee contributions without interest

Service amounts (total service, and also contributory service and military service)

Service and salary history (service earned and salary contributed on each year) for varying numbers of years

Final Average Salary

- ● **INACTIVE (RETIRED) DATA** (includes all retirees (including disabled) and beneficiaries. We also get a file with those who died within the past year so that we can reconcile participants).

  - o Demographic
    - ◆ Name
    - ◆ SSN
    - ◆ Birth date
    - ◆ Sex
  - o Beneficiary demographics:
    - ◆ Name
    - ◆ SSN
    - ◆ Birth date
    - ◆ Sex
  - o Key Dates
    - ◆ Retirement date/benefit start date
    - ◆ Dates at which benefit amounts change, or date at which benefits are terminated
    - ◆ Date of death (if applicable)
  - o Gross payment amount (might be nice to have net payment amount as well)
  - o Permanent annuity amount (if applicable)
  - o Retirement Option (Option and associated info, like continuation percent if J&S)
  - o Service Breakdown
    - ◆ Prior service
    - ◆ Contributory service
    - ◆ Sick Leave service
    - ◆ Military service
    - ◆ Reciprocal service
    - ◆ Parochial service

- ◆ Out of State service
- ◆ Regular and military service for 4800's (in TRS only I think)
  - o Contribution amounts
  - o Final Average Salary

Depending on the timing of cutover, the vendor is requested to produce the actuarial extract and report in test-mode for either the most recent year-end, or the prior year-end, or both. The extract file(s) and report(s) should be provided to the actuary not later than 60 calendar days before the scheduled final cutover to the new system. The system's actuary will compare the extract(s) / report(s) to the legacy system extract(s) / report(s) for the same year(s) and provide feedback to the vendor no more than 30 calendar days after receipt. WVCPRB desires the vendor to be responsible for making any necessary corrections, re-generating the extract / report, re-submitting the extract / report to the actuary, and receiving sign-off prior to cutover. The objective is to get the actuary's sign-off as one essential criterion for making the cutover "go-no go" decision.

2.11.4 *Criteria for Final Cutover*

The vendor is requested to certify in writing, signed by both the vendor's project manager and the vendor's test director (an individual separate and apart from the development staff, charged only with test and quality assurance responsibility), that the following criteria have been met prior to the cutover to the "live" processing for each functional rollout of the new system:

1. Successful WVCPRB execution of all User Acceptance Testing:

   - o Successful execution of all Business Process Testing (including a match {to the penny} between old and new system calculations of 250 benefit calculations)
   - o Successful execution of full Life Cycle Testing
   - o Successful execution of Employer Reporting Testing

2. Successful vendor execution of all Vendor Acceptance Testing:

   - o Successful execution of a full Regression test
   - o Successful execution of complete system testing
   - o Successful execution of a full stress test cycle
   - o Successful execution of full integration test
   - o Successful benchmark test
   - o Successful test and execution of all failover, backup and recovery operations
   - o Successful test of application, data, and infrastructure security (see also Section 2.13.3.4 IT Security Certification and Accreditation)

3. Successful reconciliation of all client checking accounts (including confirmation of the accuracy of the outstanding checks report), using the reconciliation procedures delivered by the vendor, at least once every two weeks during UAT; the reconciliation process is anticipated to include "manually" generated checks

4. Successful reconciliation of member and employer reserves in the pension solution database against general ledger reserve balances, using the reconciliation procedures delivered by the vendor, at least once every two weeks during UAT

5. Successful reconciliation of the calendar year general ledger and the fiscal year general ledger, using the reconciliation procedures delivered by the vendor, at least once every two weeks during UAT

6. Successful reconciliation of benefit annuity payroll to that of the preceding pay period

Vendors are reminded that, prior to the <u>final</u> functional cutover, in addition to meeting the criteria listed above, the system actuary must sign-off on the actuarial extract file / report capability of the new system (please refer to Section 2.11.3.4 for additional information in this regard).

In addition, there should be no critical PIRs outstanding and no more than 25 non-critical PIRs outstanding.

2.12 VENDOR SUPPORT DURING CUTOVER

The transition from the current business processes to those in each phase and each major sub-system are requested to be planned and managed by the vendor. Having implemented their solution in other locations and with other clients, the vendor understands that having received WVCPRB's approval of the UAT phase of testing is just one milestone in WVCPRB's transition into competent usage of the new solution – or of any of its critical subsystems.

The vendor is requested to detail in their response the cutover support plans for each phase of the LOB solution and for the specific sub-systems as indicated in the sections that follow.

2.12.1 *Line of Business Cutover and Transition Support*

Each rollout phase of the new solution will bring significant changes to the way that WVCPRB executes their business processes, some of them operational (new backup processes, new system reports or status dashboards to monitor and understand), and some of them user-oriented. WVCPRB's users and IT staff will have undergone training, and many will have participated in UAT, but they will not be fully prepared for the sudden change in their lives.

To assist in the transition, vendors are requested to plan for and provide a transition support team for the period from two (2) weeks before the scheduled cutover milestone until four (4) weeks afterwards[10]. The team of six (6) people should be staffed by vendor personnel with the following characteristics:

● A broad understanding of the solution

● Excellent people skills

● Excellent communication skills (possibly trainers)

● Patience for those times when they will be asked the same question four times in ten minutes

WVCPRB believes that the number of vendor staff devoted full-time to transition support may decrease during the transition period, but they require the full staffing for at least the first half of the post-go-live date.

2.12.2 *Employer Reporting Cutover and Transition Support*

WVCPRB desires the vendor to be responsible for staffing an employer help desk with qualified individuals who can address employers' technical and operational issues during the transition period from the old reporting mode / format to the new, required reporting mode / format. The help desk personnel should be responsible for maintaining access permissions, resetting user IDs and passwords, and providing technical responses and business/functional responses. The required timeframe for staffing the help desk should be:

● **Duration** – The help desk should exist and function for the two months prior to and six months after the go live date for Web-based employer reporting

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[10]   Obviously if the milestone date changes, the window during which the transition support team is active at WVCPRB's location will also move.

- **Transition from vendor to WVCPRB** – Initially WVCPRB will staff the help desk with at least two staff members. Within two months of the go live date for Web-based employer reporting, the vendor is requested to provide (and obtain WVCPRB approval of) a transition plan identifying the tasks necessary to transition the help desk responsibility to WVCPRB

- **Cutover from vendor to WVCPRB** – Two months prior to the completion of the vendor-staffed employer reporting help desk, the vendor, along with appropriate WVCPRB staff, should execute the (approved) transition plan.

It is understood that participation by WVCPRB staff in this effort is critical to its success. Therefore, the vendor should discuss in its proposal the role to be played by WVCPRB staff vs. vendor staff. The vendor should include in its proposed staffing plan the estimated number of hours that WVCPRB must be prepared to devote to it. However, in order for the employer education initiative to succeed, a **joint effort** between the vendor and WVCPRB is essential. Ultimately the ownership of this process, and the responsibility for its success, belongs to the vendor.

Vendor should specify the number of contact hours that need to be provided for training as well as the number of vendor staff to be assigned to the help desk.

Until the conditions described in the section on testing of the Employer Reporting System have been met, the vendor is requested to continue to provide support of WVCPRB staff on this critical subsystem.

2.13 OTHER REQUIRED SERVICES AND DELIVERABLES

In addition to the business, technology, and project management requirements specified, WVCPRB has identified several additional areas that are of importance in selecting a vendor. These requirements have been accumulated under a single heading — Other Required Services and Deliverables. The intent of this section is to inform the vendor of its responsibilities and the expectations for its conduct over the duration of its relationship with WVCPRB in the following areas:

1. Disaster recovery planning

2. Warranty and support

3. Miscellaneous.

2.13.1 *Disaster Recovery Plan (DRP)*

WVCPRB has an existing Disaster Recovery Plan (see Appendix E, Exhibit 14 WVCPRB Disaster Recovery Plan) that covers WVCPRB's current operations. However, with the implementation of a new pension administration system, that existing plan is anticipated to be augmented to reflect the new system. Therefore the vendor is requested to supplement the existing detailed, comprehensive Disaster Recovery Plan (DRP) to cover the new system. Note that the DRP is to cover only information processing disaster recovery planning and not a business- or enterprise-wide recovery plan.

The purpose of the DRP is intended to:

1. Avert an interruption of service wherever possible

2. In the event a disaster does occur, assist WVCPRB in accomplishing degraded-mode information processing activities until the problem is resolved

3. Assist WVCPRB in accomplishing a speedy, orderly return to normal production mode

4. Ensure that one of WVCPRB's primary goals, "getting the checks out on-time," is fully supported.

The DRP should address all aspects of the new solution, including but not necessarily limited to:

1. Hardware (all platforms, including network and PCs)

2. Peripherals

3. Operating system-level software

4. Applications software

5. Telecommunications

6. Data

7. Backup and restore procedures

8. Off-site, cyclical media storage

9. Workflow

10. Imaging activities

11. Procedures (both end-user and computer-related).

The DRP document should include a systems and software configuration inventory that form the basis for system replacement in the event of a disaster. It should include actions to be taken:

1. In the event any single component of the new solution is out-of-service

2. In the event of a "major" disaster that disables most of or all WVCPRB's processing capabilities

3. To restore normal operations once the disaster situation has been resolved.

It is anticipated to address both the actions that need to be taken to resolve the emergency situation and restore normal operations, and the alternative procedures that should be observed by system users to continue day-to-day business transactions (albeit in a degraded mode) while the resolution effort is in progress. Disaster recovery team members will be identified and their roles will be defined.

Additional requirements relating to the DRP include:

1. The DRP should support the phased implementation required by WVCPRB and proposed by the vendor. The DRP should be in place prior to cutover of each phase of the new solution, beginning with Phase 4. WVCPRB desires a draft to be submitted to WVCPRB for review at least one (1) month prior to scheduled system cutover for each phase.

2. The vendor is expected to evaluate various disaster scenarios and recommend the level of backup capability justified by the criticality of various client functions, e.g.:

   o The most critical functions may be moved off-site to a backup site until the disaster is resolved.

   o Less critical functions may be handled in a manual fashion until the disaster is resolved.

   o Some functions may be suspended entirely until normal processing capabilities are restored.

3. The DRP is anticipated to include written procedures to be followed in each case. It should also include a training plan aimed at:

   o Familiarizing disaster recovery team members with how to handle a crisis using the DRP

   o Cross training team members appropriately so that recovery procedures are not reliant on the presence of any single team member

   o Providing to system users and technical support staff an understanding of when and how to notify disaster recovery team members of a crisis.

4. The augmented DRP is requested to include a section describing how to test the plan in a "dry run" situation. It should also include a description of how best to conduct a periodic structured review of the plan itself and the processing environment and then update the plan appropriately. Use of a commercially available software tool to aid in disaster recovery planning would be favored. If such a tool is utilized by the vendor in developing the DRP, it should be delivered to WVCPRB for on-going use in updating the DRP – therefore, its cost should then be included in the vendor's cost proposal. The vendor should perform a test execution of the Disaster Recovery Plan and document the

outcome of testing. The Vendor is requested to provide certification, in writing, that the disaster recovery plan worked as defined.

5. WVCPRB expects to review the initial modified draft and provide feedback to the vendor, so that the DRP can be appropriately revised.

6. Vendor is requested to specifically address in the modified DRP how they intend to ensure there will be no disruption in the generation and distribution of checks.

7. Vendors should include in their proposals an outline of the modified DRP document, indicating how they would change the existing DRP (and discussion of any software tools to be used in its preparation).

2.13.2 *Warranty and Support*

The sections that follow provide discussion of the various aspects of Warranty and support that are requested of the vendor.

2.13.2.1 LOB Application Warranty

With regard to the customized line-of-business application, WVCPRB desires the vendor to warranty that it is operational, in its entirety, in accordance with the RFP's requirements and the specifications approved by WVCPRB, for 12 months after final turnover and acceptance of the last phase of the project. The cost for this warranty should be included in the vendor's cost proposal and be so identified. This implies a longer warranty period for portions delivered earlier in the project. If a component of the LOB solution (e.g., imaging software, Web server software) has a version upgrade, the vendor is requested to be responsible for upgrading such component without any additional cost to WVCPRB.

2.13.2.1.1 Limitations

In Section I-1.5 of their technical proposal, vendors should identify any and all limitations and constraints with respect to software maintenance and warranty. They should be explained in terms of risk, change control, and cost implication. If the vendor does not identify such limitations and constraints and if they are not all included in the single, appropriately labeled section, then warranty and maintenance protection afforded WVCPRB, and its associated costs, are anticipated to be as described above without limitation or constraint.

2.13.2.2 Post Implementation IT Support

Vendors are requested to propose and price post-implementation programmer support for the 12-month period beginning immediately after final system cutover and acceptance and ending 12 months later. WVCPRB desires a constant, uninterrupted 12-month period of on-site, full-time programmer support beginning on the date of final cutover to and acceptance of the new environment. Note that this is not to be confused with warranty support described in Section 2.13.2.1.

Although the ideal approach to this requirement is for the vendor to provide one or more persons who provided programming support during the implementation, it may be acceptable for the vendor to provide an alternate so long as the person assigned to the support effort is not new to the project.

Vendors should include in their cost proposals the hourly rate (including all expenses) that would be applicable to extending the programmer support beyond the initial 12-month warranty period. Include in the technical proposal response to this option the conditions under which the vendor would be willing to provide the extension of services if so requested by WVCPRB – for example, extensions should be in increments of six months or more and should be requested at least 60 days prior to the end of the current support period.

2.13.2.3 Post Implementation Operations Support

To maintain a stable production environment, and to allow a smooth turnover of system responsibility to WVCPRB, vendors are requested to propose and price post-implementation operations support for the 12-month period beginning immediately after final system cutover and acceptance and ending 12 months later. WVCPRB desires a constant, uninterrupted 12-month period of on-site, full-time operations support beginning on the date of final cutover to and acceptance of the new environment. Note that this is not to be confused with warranty support described in Section 2.13.2.1.

Although the ideal approach is for the vendor to provide a person who provided operations support during the implementation, it may be acceptable for the vendor to provide an alternate so long as the person assigned to the support effort is not new to the project.

Vendors should include in their cost proposals the hourly rate (including all expenses) that would be applicable to extending the operations support beyond the initial 12-month warranty period. Include in the technical proposal response to this option the conditions under which the vendor would be willing to provide the extension of services if so requested by WVCPRB – for example, extensions should be in increments of six months or more and should be requested at least 60 days prior to the end of the current support period.

2.13.2.4 Out Year Support

In continuing post implementation support, the vendor should propose and price out year support for a period of nine years beyond the initial twelve-month post warrant support period. The out year support pricing will also include any annual LOB Application License Fee.

WVCPRB desires that any annual increases in the vendor rates be capped at three percent (3%) or the Consumer Price Index (CPI), whichever is lower. For the purpose of evaluating the cost proposals, the rates reflected in Schedule 3A for post warranty years two through ten include by default a 3% increase on the preceeding year's rates. Vendors may use a percentage increase of less than 3% should they choose.

2.13.3 *Miscellaneous*

The material below covers additional topics, primarily those dealing with security concerns.

2.13.3.1 Offshore[11] Development

WVCPRB is aware that some retirement system solution providers have turned to offshore development facilities to achieve economies in costs related to the delivery of various aspects of their solutions and thus enhance their competitive position in the marketplace. WVCPRB is not necessarily opposed to this approach. However, WVCPRB greatly prefers that its prime provider of services for this project be a United States corporation, and that any offshore development related to this project constitute less than twenty five percent of the development effort as measured by the proportion of the effort (hours of vendor staff) devoted to the development aspect project. WVCPRB is concerned that if the offshore development model is not carefully managed, any savings in hourly rates may be more than offset by difficulties in related areas of the effort, especially project team communication and responsiveness.

Vendors are requested to state in their proposals whether or not offshore development facilities are intended to be utilized. If so, the following additional information should be provided:

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[11] For the remainder of this section, the term offshore shall include all countries not part of the contiguous forty eight states or not part of the fifty United States or not part of the fifty United States (including its territories and possessions) or not part of the fifty United States and Canada.

- The proportion of the overall effort that is anticipated to be met by the offshore development facility in terms of man-hours, i.e., what percent of the person hours of the overall effort are planned to be done offshore?

- The location of the offshore development facility and a description of its resources, attributes, etc.

- If the time zone of the off-shore location is different by more than four hours from that of WVCPRB, a description of the means taken to ensure constant, reliable communication, e.g., WVCPRB does not want its staff having to attend mid-night conference calls

- For what other public retirement system clients' implementations has the vendor used the offshore development facilities being proposed to WVCPRB? Were the offshore resources used for the same duties and in roughly the same proportion as is being proposed to WVCPRB? What percentages of those overall efforts were done offshore?

- The "boundary" that the vendor intends to exist between domestic support and offshore support – i.e., does the vendor plan that U.S.-based vendor staff be responsible for all on-site work in terms of requirements definition, programming specifications, training, and support, backed up by an offshore programming team, or does the vendor plan for offshore personnel to also participate in on-site activities? If offshore resources are planned to be involved in on-site activities, please describe those duties and responsibilities in detail.

- If offshore development is not allowed by WVCPRB and all development is planned to be performed in the continental U.S. what additional costs are anticipated to be incurred?

- If offshore personnel are planned to be involved in interfacing with WVCPRB staff, what assurance is offered that:

  o No language barriers may be encountered?

  o The offshore staff assigned is sufficiently familiar with the vendor's solution, U.S. 'culture', and retirement systems in general to fulfill their responsibilities as efficiently as would comparable U.S.-based staff?

- Is the use of offshore resources planned to be restricted only to the original development effort, or does the vendor intend to also utilize those resources to provide subsequent maintenance and support services?

- What quality ratings have been earned by the proposed offshore development facility (ISO 9000, CMM, SEI, etc.)?

- Describe your communications plan for assuring smooth, prompt, effective communications between your offshore development facility, your U.S. development center, and your on-site staff. What tools are planned to be utilized for effecting these channels of communication? How may time zone differences between your U.S. development center, your offshore development facility, and WVCPRB's location affect the project?

- During user testing, does the vendor intend to refer problem incidents to the offshore facility for correction, or is it planned that U.S.-based programming resources be used for 'debugging'? If corrections are referred to the offshore facility, are WVCPRB users expected to communicate directly with contractor personnel at the offshore site? If so how? If not, how does the vendor intend to provide such communications?

- will offshore development staff become involved in producing programming (or other) documentation for WVCPRB? If so, please provide a representative example of documentation produced by the same offshore resources for another client so that WVCPRB may gauge its quality.

- What steps does the vendor plan to take to ensure adequate availability of backup development (or other, as appropriate) staff in the event the proposed offshore facility is unable to provide the proposed services for whatever reason?

● What overall risk analysis and mitigation plans have been put in place to ameliorate the risks? Provide a copy or summary of such an analysis.

● What quality control measures does the vendor have in place to ensure that the functionality, products, or components developed offshore meet WVCPRB's expectations?

2.13.3.2 Vendor Certification

Vendors having CMM Level 3 or ISO 9000 certification should include in their proposal a copy of either or both certifications, if applicable to vendor's organization.

2.13.3.3 System Security Plan

The vendor is requested to produce a detailed System Security Plan.

The purpose of this plan is to provide WVCPRB with an overview of **all** of the security controls associated with the pension application throughout its life cycle. The plan should describe the processes and controls that are necessary to protect the application from loss, misuse, or unauthorized access to or modification of information.

Therefore the vendor's Security Plan should encompass at least the following:

● Security roles and responsibilities

● Protection against loss – continuity of system data:

  o System backup procedures – covering topics such as:

    ◆ Candidate information to be backed up (critical application components, configuration files, member data, event logs)

    ◆ Backup processes

    ◆ Suggested backup schedule for the different types of candidate data mentioned above)

    ◆ Use of the second physical environment as a backup for the backup processes

    ◆ Suggested handling of backed-up data and media (off-site storage, cycles, eventual destruction, etc.)

  o Disaster and recovery planning – covering such topics as:

    ◆ The Disaster Recovery Plan discussed elsewhere in this RFP (see Section 2.13.1)

    ◆ Recovery procedures using backed up system information (in the case of a non-disaster)

  o Software configuration management

  o Security incident handling, including, for example, system intrusion detection, denial of service attacks, etc.

  o Physical environment controls (power, lighting, fire, climate, water, etc.)

● Protection against misuse – inappropriate access to system:

  o User and device authentication

  o System administration procedures:

    ◆ Protection against viruses, worms, spyware, etc.

    ◆ Protection against possible denial of service attacks

    ◆ Definition of user security profiles, addition of new users, etc.

    ◆ Physical security (locks, security logs)

    ◆ Wireless access

- ◆ Remote access
- ◆ Mobile device access
- o Self-Service Access
    - ◆ Member / Retiree Self-Service Access
    - ◆ Employer Self-Service Access
- o Event logging
- o System interface security
- o Security training
- Protection against unauthorized access to or modification of data:
    - o Access control policy and enforcement
    - o Separation of duties and system privileges
    - o PINs or passwords and other security controls on member web-based access
    - o Appropriate methods for providing secure access for staff when out of the office
    - o Protection against system penetration by outside entities, the security aspects of such penetration and what assessments are to be done to ensure against such penetration
    - o Audit trails
    - o Data encryption:
        - ◆ Employer-submitted data
        - ◆ Web-based access to data by members, retirees and staff
    - o Vulnerability scanning
    - o Data security during project execution (see Section 2.7.1)
        - ◆ Description of vendor staff security education for this project
        - ◆ Agreement to provide (if requested) evidence of completed background checks on project staff
        - ◆ Description of system access control (applied to both vendor and WVCPRB staff) used during implementation
        - ◆ Description of process for environments to be monitored to determine if breach occurs (including tools used for monitoring and monthly reporting)
        - ◆ Steps to take should a breach occur during project execution
        - ◆ Discussion of monitoring of jump drives, memory sticks, and other portable memory devices during project
        - ◆ Discussion of procedures for securing data if taken off-site
        - ◆ Discussion of steps taken to ensure use of dummy data in training, testing, documentation, etc.
        - ◆ Methods used to secure data used in testing and repair – and scrubbing data subsequent to repair completion
        - ◆ Methods used to secure printed copies of data used during system implementation and destruction of same once project is complete
        - ◆ Methods used to test, validate and secure system patches during project
        - ◆ Methods used to secure technical system information (including passwords) prior to and during knowledge transfer to WVCPRB.

- Recommendations for monitoring the application's ongoing security requirements.

- Test procedures that can be incorporated into the test plans and activities described in Section 2.11.

Where topics in the security plan are covered in depth in other deliverables for which the vendor is responsible, the Security Plan can simply reference the other deliverable (e.g., Disaster Recovery Plan). However, security of data, access, etc., remains a concern from the start of the project. Therefore it is important that the Security Plan address the issues mentioned above, not just post roll-out, but also during the system implementation. Should the cross-referenced material mentioned above not be complete, the vendor should provide sufficient pertinent information within the operating Security Plan to provide guidance until the referenced material is complete.

The vendor should supply a provisional plan covering security during project execution as part of their proposal. That provisional plan (as modified by agreement with WVCPRB) is anticipated to govern security until the delivery of the final System Security Plan. The vendor is requested to deliver a completed, detailed System Security Plan within the period specified in Table 1 Delivery Due Dates for Major Deliverables in Section 3.2.3 Project Timetable – Major Deliverables.

2.13.3.4 IT Security Certification and Accreditation

The Federal Government has developed a program and guidelines under which the security of IT systems in support of the government can be evaluated in repeatable, comparable, consistent fashion. WVCPRB wishes to apply those guidelines to the certification of the security of the new LOB application, the program under which it is implemented and the resulting business environment in which it will continue to operate. The vendor is responsible for developing their work and implementation plans to include IT Security Certification and Accreditation activities for each release, performed by an independent contractor as described in NIST Special Publication 800-37, *Guide for the Security Certification and Accreditation of Federal Information Systems*.

A third-party organization, selected by WVCPRB, will, at a minimum, assist WVCPRB in the certification of the new LOB solution through execution of the following phases (as described in detail in the above-mentioned Guide):

1. Initiation Phase

2. Security Certification Phase

3. Security Accreditation Phase

4. Continuous Monitoring Phase.

The information security program will include:

- Periodic assessments of risk, including the magnitude of harm that could result from the unauthorized access, use, disclosure, disruption, modification, or destruction of information and information systems that support the operations and assets of the agency

- Policies and procedures that are based on risk assessments, cost-effectively reduce information security risks to an acceptable level, and ensure that information security is addressed throughout the life cycle of each agency information system

- Subordinate plans for providing adequate information security for networks, facilities, information systems, or groups of information systems, as appropriate

- Security awareness training to inform personnel (including contractors and other users of information systems that support the operations and assets of the agency) of the information security risks associated with their activities and their responsibilities in complying with agency policies and procedures designed to reduce these risks

● Periodic testing and evaluation of the effectiveness of information security policies, procedures, practices, and security controls to be performed with a frequency depending on risk, but no less than annually

● A process for planning, implementing, evaluating, and documenting remedial actions to address any deficiencies in the information security policies, procedures, and practices of the agency

● Procedures for detecting, reporting, and responding to security incidents

● Plans and procedures to ensure continuity of operations for information systems that support the operations and assets of the agency.

As with the Network Vulnerability Assessment described in Section 2.5.8.1.7, upon completion of the assessment, the third party organization will review all events with WVCPRB personnel, determine which of the identified shortcomings are false positives and which actually need repair and agree upon any remaining shortcomings. In the event there remain shortcomings in the system security, the vendor will be immediately notified. WVCPRB intends to hold the vendor responsible for rectifying all remaining shortcomings within ten (10) business days of being advised of them. The rectification effort may consist of any combination, or all, of the following elements: additional hardware components, additional software tools, installation services, and/or configuration services. It is anticipated to include suitable testing to confirm to WVCPRB's satisfaction that all of the identified security shortcomings have been eliminated. All costs associated with the rectification effort are anticipated to be borne by the vendor.

In the event that the vendor is unable to resolve all system security issues to the satisfaction of WVCPRB and the third-party assessment organization, WVCPRB reserves the right (and will notify the vendor of its intent) to engage the services of another (different from the organization doing the system security analysis) third-party organization to resolve all remaining network security issues. In this situation, the vendor is requested to issue a credit to WVCPRB for the full amount of the cost of the third-party organization's efforts to correct the situation. The credit should be applied to the first invoice issued by the vendor to WVCPRB following notification to the vendor of the amount expended on the third-party services.

2.13.3.5 Facilities to be Provided by the Vendor and by WVCPRB

Vendors should state in their proposals their requirements in regard to space, communication, etc. However, due to severe space and resource constraints at its offices at 4101 MacCorkle Avenue, WVCPRB will not be able to house the vendor staff at that location.

WVCPRB believes that the co-location of the vendor and WVCPRB project teams is an important aspect of the project. For that reason, they require that vendors procure space for themselves that will also house the co-located WVCPRB project team of eight members of staff. Further characteristics of the space provided should include:

● Fully furnished (desktops, chairs, lamps, tables, telephones, copiers, etc.) office or cubicle space for the vendor team and eight members of WVCPRB staff   (WVCPRB will be responsible for providing appropriate copier and printer paper, whiteboard markers, light bulbs, etc.)

● Co-located, fully furnished (tables, chairs, whiteboards, projector, etc.) meeting space suitable for all project meetings – as estimated by the vendor

● Co-located space suitable for training of WVCPRB staff when the time for training arrives

Vendors should provide their own workstations. WVCPRB will provide PCs and printers for its team of eight. WVCPRB will ensure connectivity to the development environment and the Internet for all members of both teams. The space should provide parking for the occupants plus up to ten other vehicles. The temporary office space is anticipated be located in Charleston, WV.

Notwithstanding the use of acquired office space, since they may occasionally also be using WVCPRB facilities (such as conference rooms, etc.) at 4101 MacCorkle Avenue, vendors are requested to agree to abide by all WVCPRB security and other policies and procedures.

2.13.3.6 Adherence to WVCPRB Workplace Policies

It is anticipated that a number of the vendor's project team should be on-site – some regularly over the course of the project; others periodically as the need arises. Regardless of their purpose in being on-site or the frequency with which they are there, all vendor staff are requested to adhere to WVCPRB workplace policies as described below.

● **Background Check** – The vendor should be able to provide proof of a background check, if asked, for all vendor staff and subcontractor staff that perform work either on-site or remotely on this project

● **Building Access** – In addition, any staff that work on-site are requested to be subject to WVCPRB Building Access Policy, see Appendix E, Exhibit 4. The WVCPRB Project Manager shall be responsible for allocating building access, equipment access, and any other necessary services available from WVCPRB which may be used by the vendor. Any use of WVCPRB facilities, equipment, internet access, and/or services should only be for project purposes as authorized by the WVCPRB Project Manager.

Network Connection – WVCPRB desires the vendor to provide its own personal computers which should comply with WVCPRB security policies before use is allowed at WVCPRB. A copy of the Visitor Computer Access Policy can be found in Appendix E, Exhibit 5.

2.14 OPTIONS

In addition to the requirements in the previous sections, WVCPRB has included the following optional requirements to this procurement. Vendors should respond with technical narrative and cost to all of the options. They are optional only in the sense that WVCPRB will have the option of authorizing them. WVCPRB may choose to authorize no options or any one, any combination, or all of the options. WVCPRB will make a decision as to whether or not to authorize each option at the time of a best and final offer.

2.14.1 *Hardware Procurement*

As stated previously in this RFP, the vendor is requested to provide in its proposal detailed specifications and configuration information for all of the hardware components necessary to support the proposed solution, including separate environments required per Section 2.5.2 Separate Production, Development, Test, Training, and Query Environments. The vendor's recommended hardware configuration should support all RFP requirements and be capable of expansion to support future functionality as described in this RFP. The recommended configuration should include the appropriate number of servers, hubs, routers, workstations (desktop PCs), storage, and all other necessary hardware such as cabling, connectors, equipment racks, and backup devices.

WVCPRB requests the vendor to supply the necessary hardware components; alternatively, as Option 1, WVCPRB may purchase the hardware components directly. Whether or not Option 1 is authorized, WVCPRB requests the vendor to be responsible for installing, configuring, and testing the hardware (as discussed in Section 2.5.5). The decision as to whether or not to authorize Option 1 will be made by WVCPRB at the time of the request for best and final offers.

2.14.2 *Commodity Software Procurement*

As stated previously in this RFP, the vendor is requested to provide in its proposal detailed specifications and configuration information for all of the commodity software components (operating systems, database management software, office suite (if necessary, and tools, etc.) – both new and upgrades – necessary to support the proposed solution, including the separate environments required per Section 2.5.2 Separate

Production, Development, Test, Training, and Query Environments. The vendor's recommended commodity software configuration should support all RFP requirements and be capable of expansion to support future functionality as described in this RFP. The recommended configuration should include the appropriate number of licenses, etc.

WVCPRB requests the vendor to supply the necessary commodity software components; alternatively, as Option 2, WVCPRB may purchase the commodity software components directly. Whether or not Option 2 is authorized, WVCPRB requests the vendor to be responsible for installing, configuring, and testing the commodity software (as discussed in Section 2.5.6.5). The decision as to whether or not to authorize Option 2 will be made by WVCPRB at the time of the request for best and final offers.

2.14.3 *Option to Purchase Source Code for LOB Application Software*

As indicated in 3.2.5.6.3 Source Code for LOB Application Software, WVCPRB seeks an option by which the vendor agrees not only to provide WVCPRB with a perpetual, non-exclusive, irrevocable license to use to the LOB software, but also the delivery of the source code. Under this option, the vendor should provide the price at which, at any time (i.e., during the project, during the warranty period, and/or at any time after the end of the warranty) WVCPRB may purchase the source code of the then current version of the LOB application software.

In responding to this option, the vendor should indicate their agreement to this option in their technical proposal and complete the table below as part of the cost proposal. This is not an option that WVCPRB may necessarily choose to exercise during best and final offer solicitation. In the cost proposal, the vendor should state that the prices provided in a copy of Table 42: Cost to WVCPRB of Exercising Option of Source Code Purchase (which should be included in the vendor's Cost Proposal are guaranteed for the period indicated in Column 1.

Table 42: Cost to WVCPRB of Exercising Option of Source Code Purchase

YEARS AFTER COMPLETION OF PROJECT	NOT TO EXCEED PRICE FOR SOURCE CODE
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

2.14.4 *Data Cleansing*

Data quality and accuracy are issues of utmost concern to WVCPRB. The amount of staff research time that must be devoted to processing any business request that relies on account data is directly dependent upon the accuracy and accessibility of data pertaining to the member's wages, contributions, and years of

service.   Existing data records pertaining to WVCPRB members may have varying degrees of inaccuracies and errors.

WVCPRB has undertaken a data cleansing analysis project in which they are determining the extent of the inaccuracies and inconsistencies and level of incompleteness among the existing data sets. However, we recognize that it is impractical to fully cleanse all of the WVCPRB data since we cannot (and do not want to) implement changes throughout the current system to insure that no "dirty" data sneaks in to infect cleansed data.   Therefore, the initial focus is on analysis with cleansing to be accomplished along with data conversion during the implementation of the new LOB.

As an option, vendors are requested to propose a fixed price solution to developing software tools aimed at building on the work done by WVCPRB at resolving errors / problems related to historical WVCPRB data and "cleansing" the data that to be carried forward into the new environment.   Initial candidate topics are presented below so that vendors can gauge the magnitude and complexity of the issues in this task. Candidate topics include:

- Possible cases related to Social Security number (SSN) mismatches or duplication

- Possible cases where WVCPRB has to investigate and fix demographic information, including name changes, incorrect birth dates, incorrect addresses, and duplicate Social Security Numbers

- Possible cases related to people on pension payroll with an inaccurate retirement type or retirement option

- Cases where dates have been defaulted versus the actual date being supplied

- Cases where the rates and factors that are to be used in various business calculations are not current, and therefore if a re-calculation is performed, errors often result

- Cases where the level of detail in a member's account varies based on his/her "life" in the system, as well as how he/she was reported over the years

- Cases where account statuses are not consistent across the system

- Cases where benefit account statuses and benefit payment statuses are not consistent across the system.

- Cases where individuals who have been successfully "switched" from active membership to pension payroll may still have a positive balance and an "active" status code in their membership account.

The items listed above, as well as other items identified by the vendor and WVCPRB, should be included as part of this option.   The data cleansing and data quality effort is anticipated to consist of seven (7) stages, totaling 2,000 man-hours of effort:

Stage 1 is anticipated to consist of three four-hour focus group sessions with up to ten (10) WVCPRB staff members, including at least one member of WVCPRB's IT staff knowledgeable of existing data problems.   These sessions should be conducted over a two-to-three-week period.   The following activities should be conducted: Using the above topics as a starting point, vendor staff should listen to a description of the data problems as presented by the WVCPRB staff members.   Vendor staff should explain and discuss its experience with data cleansing efforts at other client sites, which should stimulate additional problem descriptions from WVCPRB staff.   Based on this experience, vendor staff should provide guidance to WVCPRB staff in defining the tools that which may be the most useful.   Using the information collected during the focus group sessions, vendor staff should write up definitions of the most prevalent data problems, the tools which should be most useful in correcting them, and how the tools may be used by WVCPRB staff in the new environment.   The vendor's write-up will be reviewed by WVCPRB and appropriately revised.   Stage 1 should require vendor staff to expend approximately 200 man-hours over a three-week period.

In **Stage 2**, the vendor is requested to develop a design of the tools to be developed in the new environment, per Stage 1.   The design document should be presented to WVCPRB staff, reviewed, and

appropriately revised. WVCPRB staff will sign-off on the tool design. Stage 2 should require vendor staff to expend approximately 240 man-hours.

Stage 3 is anticipated to consist of the implementation of the tools by vendor staff. Stage 3 should require vendor staff to expend approximately 800 man-hours (the number and nature of the tools designed in Stage 2 should conform to an 800-manhour effort).

Stage 4 is anticipated to consist of the prototyping and testing of the tools by vendor and WVCPRB staff. Stage 4 should require vendor staff to expend approximately 200 man-hours of effort.

Stage 5 is anticipated to provide the opportunity for vendor staff to resolve any problems arising from the prototyping and testing effort in Stage 4 and to finalize the software tools for use in the new environment. Stage 5 should require vendor staff to expend approximately 200 man-hours of effort. Vendor staffs are requested to complete an entry in the Data Cleansing and Conversion Audit Report (see Section 2.7.2.3) for each cleansed data element.

Stage 6 is anticipated to consist of the installation / implementation of the tools in the new environment, as well as documentation and user training. Stage 6 should require vendor staff to expend approximately 200 man-hours of effort.

Stage 7 is anticipated to consist of defining and describing any additional data quality areas that have come to light as a result of having completed Stages 1 through 6. The vendor should describe additional activities that should be pursued, what the approach should be, what the benefits would be, and an estimate of the costs. Stage 7 should require vendor staff to expend approximately 160 man-hours of effort.

In addition to the products identified above, deliverables from this effort include weekly time sheets, substantiating that at least 2,000 man-hours of vendor staff effort were expended, as well as weekly written status reports pertaining specifically to this effort.

The vendor should identify in its proposal when in the project these tasks would be performed (and when they should be completed) assuming WVCPRB authorizes them at the start of the effort.

The vendor should provide a fixed price for the 2,000 man-hours of services described above.

Additionally, in its Cost Proposal, the vendor should provide a fixed hourly rate for any additional activities that WVCPRB may request under this option.

2.14.5 *Vendor Delivery of Employer Training*

Under this option, instead of using a train-the-trainer approach for the training of employers, WVCPRB would ask that the vendor not only develop the training program and materials as required in Section 2.10.3 Employer Education and Training, but also deliver the actual training. In their response to this option, vendors should address how they intend to perform the following tasks to support the employers identified in Appendix E, Exhibit 13 Employers who Report Information to WVCPRB (which enumerates the number of employers, the number of employees, the frequency and the mode of reporting):

● Develop an employer education and training plan

● Conduct meetings with employers to define the project, communicate expected results of the project and identify the timeline for implementation

● Develop technical manuals to be supplied to the employers identifying the required new file layouts

● Develop user manuals to be supplied to the employers that detail all necessary data preparation procedures and the Web-based reporting methods that will be utilized

● Delivery of training to the employers. CPRB anticipates the delivery of training to employers to be accomplished through the use of regional meetings and training sessions, class-room style training with employers at WVCPRB, and Web-based training sessions

● Provide the capability to accept employer data in **both** the old format and the new Web-based format, and provide the capability to convert / translate each to the "other" environment in support of a gradual transition of employers to the new Web-based reporting.

WVCPRB will provide two (2) members of staff familiar with WVCPRB's employers to assist in a limited manner in the scheduling and delivery of the training material, but vendor is requested to assume full responsibility for the successful execution and completion of the training.

Vendors are reminded that their cost proposal for this option should reflect only the incremental cost they would incur for the actual delivery of the employer training since the remainder of the program and material development should already be incorporated in their core technical and cost proposals.

2.14.6 *Replacement of Existing ApplicationXtender Imaging System*

WVCPRB's existing Documentum (ApplicationXtender) imaging solution is described in RFP Section 4.2.5.4. The agency has a significant investment in its current ApplicationXtender imaging solution in both user training and backfile conversion. We believe that the ApplicationXtender solution is viable and will meet all of WVCPRB's needs. However, we recognize that a vendor may feel that replacement of the ApplicationXtender package with another commercially available solution is a better, or possibly more functional long term solution for WVCPRB.

Despite its investment in ApplicationXtender, WVCPRB is open to changing its imaging platform – if there is no loss in functionality and if the change is appropriately justified by the vendor. Should the vendor propose the replacement of ApplicationXtender (either the scanning front end and/or the retrieval and storage/archive component) with a different, commercially available imaging system, they should provide at least the following in their response to this option:

■ A full justification of the proposal to use an imaging system other than ApplicationXtender

■ (In the Cost Proposal) a full listing of the costs of the suggested replacement – as well as a listing of the savings accrued by NOT integrating ApplicationXtender

■ A discussion of the methodology the vendor would use to migrate WVCPRB from the current ApplicationXtender imaging solution to the alternate one

■ A version of the project plan required under Section 2.6.1.9.1, that highlights the full implementation of the proposed imaging system and the migration from the current system to the new one (including training, documentation, etc.)

■ How may training in a new imaging viewer be accomplished with minimal disruption and inconvenience to WVCPRB staff?

■ Should the proposal include different archive from that currently in use, a written commitment to migrate all of WVCPRB's images from the ApplicationXtender platform to the alternate one.

Note that although the vendor is requested to respond to this option, a response of, "We intend to meet WVCPRB's needs by using the existing ApplicationXtender solution and do not propose an alternate package." is acceptable.

2.14.7 *Deferred Retirement Option Plan (DROP) Processing*

WVCPRB does not currently offer a Deferred Retirement Option Plan (DROP) to its members. However, WVCPRB wants to prepare for the possible introduction of such a plan by the legislature. With that in mind, WVCPRB requires that the offeror cost, as an option, DROP processing functionality integrated with the LOB solution. Given the nature of DROP processing, WVCPRB believes that such functionality could reasonably consist of modifications to the offeror's LOB solution or be made available through a module that "attaches" to the LOB solution.

Regardless of the means by which it is provided, the required functionality includes the following:

1. Enrollment and Maintenance

a. Ability to enroll retirees in the DROP program and record the accumulation and distribution characteristics of their deferred benefit

b. Ability to calculate and record the resulting effect of the DROP benefit on the defined benefit.

c. Ability to change addresses (e.g., primary and seasonal), beneficiaries and other related information in the same manner and to the same degree as for the defined benefit.

2. Transaction Processing

a. For every monthly (or more frequent) annuity payment made to the retiree, record the appropriate deduction for the DROP contribution in a manner that allows for separate accounting of the DROP for the retiree

a. On final distribution of the DROP benefit, ability to provide for a full accounting of how the benefit was derived, the appropriate dollar amounts and their taxability and tax impact.

b. Ability to make payments to appropriate taxing authority of any withholding taken during the course of the benefit.

c. Provide aggregation and export capability of DROP transactions (both deductions and distributions) to the appropriate General Ledger Accounts.

3. Reporting and Inquiry

a. Ability to produce a report of a members DROP activity (e.g., accumulation of contributions to DROP, disbursements from the plan)

b. Ability to produce a variety of management reports reflecting retirees' activity in the DROP between two dates, balance as of a particular date, and tax liabilities as of a date.

c. Ability to produce ad hoc reports through the same capabilities available in the LOB solution.

d. Ability to produce the appropriate year-end tax forms for retiree and for submission to taxing authorities.