edvantage™
Educational Improvement System

Response to State of West Virginia Department of Education RFP EDD398772 for Statewide Longitudinal Data System

Versifit Technologies, LLC

October 7, 2013

ORIGINAL

THIS PAGE INTENTIONALLY BLANK

Transmittal Letter, Versifit Technologies, LLC

October 7, 2013

Connie Oswald
WVDOE
2019 Washington Street, East
Charleston, WV 25305

Versifit Technologies, LLC
103 W. College Avenue, Ste 923
Appleton, WI 54911
Ph: 820-930-0102
Fx: 820-930-0304

Dear Ms. Oswald:

Versifit Technologies, LLC, is pleased to present its innovative Edvantage solution in response to the West Virginia Department of Education (WVDOE) Request for Proposal #EDD398772 for a PK-12 Statewide Longitudinal Data System (SLDS). Edvantage is designed both to fulfill all of your present Data Warehouse data requirements and to satisfy all of your future needs.

Versifit has successfully focused on PK-12 Education Business Intelligence and Data Warehousing for more than 14 years, implementing our Edvantage Data Warehouse for three state education agencies (Oregon, Hawaii, and Wisconsin), as well as nearly 700 independent school districts.

We are proud to introduce Celero Partners, Inc., one of the nation's premier education consulting firms, as a partner on this project.

The Edvantage solution has been specifically designed based on input from educators to deliver a complete Data Warehouse Solution: A comprehensive Data Warehouse with Extract, Transform, and Load (ETL) capabilities as well as data cleansing; a user-friendly Dashboard; and an extensive, effective Reporting system for data-driven decision making.

With over 500,000 hours of experience working with PK-12 education clients to build state, regional, and district Data Warehouse Solutions, we believe that Versifit, together with Celero Partners, Inc., can supply the WVDOE with:

- A complete Statewide Longitudinal Data System (SLDS) and Data Warehouse and Reporting System (DWRS);
- Business Intelligence Tool, including Dashboards;
- Highly secure data: student, staff, HR, financial, etc; and
- Ongoing Training and Support that will exceed your expectations.

Edvantage
Data
Warehouse
Educational
Improvement System
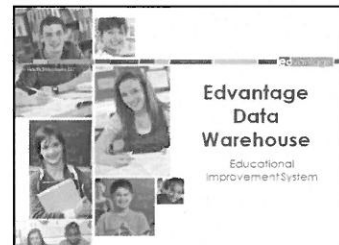
We want to thank the WVDOE for this exciting opportunity to respond and we look forward to hearing from you regarding your final award determination. In the meantime, if you have any questions or wish to discuss specific parts of this proposal, please contact Michael Restle at 920-830-0102 or restlem@versifit.com.

Versifit acknowledges acceptance of the requirements of the WVDOE RFP EDD398772 and receipt of any and all Addenda(s) to the RFP.

Sincerely,

Michael Restle, President
Versifit Technologies, LLC

THIS PAGE INTENTIONALLY BLANK

Table of Contents

Executive Summary

Introduction

Versifit Technologies, LLC and Celero Partners, Inc., are pleased to offer our **Edvantage** State Longitudinal Data System (SLDS) solution in response to the West Virginia Department of Education (WVDOE) RFP #EDD398772 for a State Longitudinal Data System (SLDS) and Data Warehouse Reporting Solution (DWRS). We understand your desire to implement an SLDS and DWRS to "…provide stakeholders with timely access to information and reporting …" with comprehensive security, "…allow for the creation of reports that include longitudinal statistics … to guide school-, district-, and state-level improvement efforts," and "help the Agency implement policies and promote practices including professional development and credentialing" for data literacy. We concur with your conclusion that a DWRS will promote continuous school improvement, improve student achievement and that the new SLDS will serve as a "cleansed" source for the P-20W SLDS. Our **Edvantage** SEA SLDS and reporting system has the proven capability (successful implementation in three state education agencies and 700 school districts) to meet your objectives. Edvantage is more than a SEA solution; it includes the state, region, district, school, student, assessment, staff, finance, human resource, transportation, and health data and reporting needed to drive continuous school improvement.

In fact Versifit is confident that our **Edvantage** solution will help WVDOE to accomplish its strategic goals:

1. All students will be taught in learning environments that connect not only reading/English language arts, mathematics, science, social studies the arts, world languages, health, physical education, and career/technical education but also the mind, heart, body and spirit in ways that result in all students acquiring 21st century skills and meeting or exceeding state, national and international curriculum standards.

2. All students will develop the personal skills and dispositions of wellness, responsibility, cultural awareness, self-direction, ethical character and good citizenship in an environment that is caring and safe.

3. All students will graduate from high school prepared for post-secondary education and career success through personalized pathways and guidance that focus students on productive and satisfying lives.

Why Edvantage?

Qualifications and Experience

- VersiFit is teaming with Celero to provide WVDOE with a team that is unsurpassed in experience and success implementing SEA and LEA SLDS and DWRS solutions.

- Every team member will have more than 6 years of experience and most will have more than 12 years of experience. Celero team members have experience working with WVDOE.

- Over 14 years and 500,000 hours of education experience working with PK-12 Education agencies to build, implement, and develop state, regional, and district educational data management systems with complete source-system integration.

- No offshore resources; VersiFit makes a commitment to protect American technology jobs.

The Solution

Architecture, Infrastructure, Development, & Technical Support

Architecture

Versifit proposes Microsoft technology, as seen below, along with the option of using an Open Architecture. Along with expert Project Management and our iterative approach, the Edvantage Solution is flexible and extensible, providing easy-to-use dashboard analysis and reporting features.

Component	Proposed Software	Optional Software
SLDS/Data Warehouse	**Versifit Edvantage Data Warehouse Standard Data Model**	Versifit Edvantage Data Warehouse Standard Data Model
Data Base	**MS SQL Server 2012. Enterprise**	Oracle or other major data base
Reporting and Analysis Layer	**SAP Business Objects WebIntelligence**	MS Reporting and Analysis Services or other BI tool
ETL & Data Quality	**Versifit Data Connector & Versifit Data Quality Analyzer**	MS SSIS & Transformation Services
Portal and Dashboard	**Edvantage Dashboard**	Edvantage Dashboard

The Edvantage infrastructure will be compatible with the WV K-12 public school environment, as well as with the WVEIS on the Web (WoW).

Infrastructure and Development

SLDS and Data Warehouse

- The most comprehensive SLDS data model in education, which includes domains for staff effectiveness, advanced teacher-student linkage, dropout prevention, and special education case management.

- COTS, but with features to give West Virginia the ability to add and modify any and all Edvantage elements, cubes, metrics and reports, ETL, etc.

- Longitudinal data for summative and formative assessments, including college entrance exams, enrollments, finance, special education, discipline, common core data, annual state performance, programs, interventions, staff, staff qualifications, staff schedules, advanced staff-student linkage, and nutrition.

- Comprehensive Metadata and Data Quality Features.

- All components of the VersiFit Edvantage SLDS have a comprehensive integrated meta-data repository and are driven by meta-data.

- Full extraction, transformation, and loading metadata at the build, table, and individual data element levels.

- Assured data quality through the creation, implementation, and documentation of a thorough testing approach, as well as comprehensive error logging and reporting. Data Quality Monitor to help districts and schools track data errors.

- Open-architecture to support platform independence.

- Recommended by the CCSSO as an excellent longitudinal data system in 2009 following an Independent Third Party review funded by the U.S. Department of Education for the State of Hawaii.

ETL and Data Extractor

- VersiFit will build custom extractors for West Virginia data collections.

- Edvantage procedures to support advanced teacher-student link needed for teacher effectiveness analysis.

Full Compliance with FERPA

- Complete FERPA compliance.
- Security based on *any* security framework like Active Directory (AD), Lightweight Directory Access Protocol (LDAP), and customized application security systems, as well as *multiple security sources* with full *row-level security.*

Security and Performance

- Complete Administration, User, and Security management, including online reporting of data warehouse and end user activities; the capacity to monitor refreshment of data within the data warehouse; and tools for Performance Management.

Technical Support

Premium Support

- VersiFit will provide Premium Support and take full responsibility for technology administration and development of customizations of the SLDS for the first school calendar year.

- Complete Administration, User, and Security management, including online reporting of data warehouse and end user activities; the capacity to monitor refreshment of data within the data warehouse; and tools for Performance Management.

Analysis and Reporting

World-class Reporting Technology

- The **Edvantage Dashboard** is a simple tool for all users to get information at a summary level down to an individual student level.

- **Edvantage Ad-hoc** is a powerful tool for power users to create reports and conduct detailed analysis.

- **Edvantage** has ease-of-use features as well as advanced capabilities to appeal to constituent groups ranging from novice to power user. All multi-dimensional analysis—drill-down, drill-through, drill-up, and drill-across—are available.


- Integrated and embedded tier-1 end-to-end Microsoft Business Intelligence reporting software: Analysis Services, ReportingServices, and Office Excel and Word Integration.

- A library of Microsoft Reporting Services pre-built SEA SLDS reports.

- Microsoft Reporting Services models to support ad-hoc report creation.

- Microsoft Analysis Services cubes.

- An extensive catalog of pre-built dashboard key performance indicators and analytical reports.

What You Can Do

State and District Administrators

- View overall school achievements compared with state standards.

- Have hundreds of the most common student reports at your disposal.

- Use ad hoc analysis for quick, impromptu reports.

- View district performance reviews.

- Access information easily through any browser, with no need for extra desktop software.

- Analyze data through drilling to more and more specific information.

- Be totally confident that all information is secure.
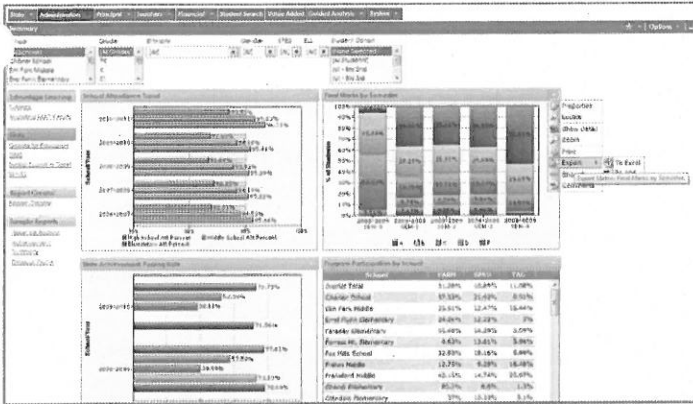
Teachers

- View student information at a glance.
- Drill to full student profiles.
- Have pre-built content.
- Monitor student performance (gaining, maintaining, or failing).
- Set goals and track progress towards goals.
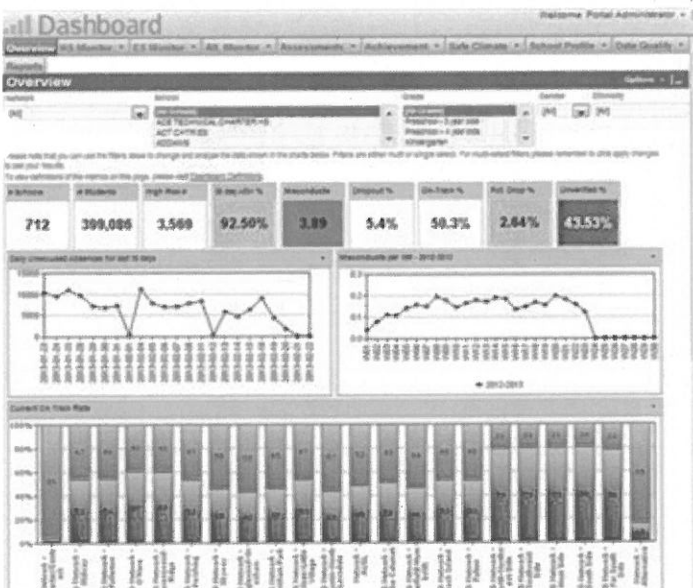
Professional Development Services and Project Management Transition Strategy

Professional Development Services

- A comprehensive professional development program, including complete system documentation, onsite-customized user training,

and our comprehensive software support and AS maintenance program.

- Train-the-trainer and user training
- Training in multiple locations over several years
- Solution use and data literacy training
- Case study training method

Project Management

- Every Versifit project is managed by a dedicated team leader with extensive experience in project management according to carefully designed, repeatable, time-tested, and continuously improving processes that reflect Versifit's organizational commitment to superior project management.
- Versifit completes quality reviews on all of our projects to verify that our methodologies and processes are followed and that we meet the highest level of customer satisfaction.
- At project startup, Versifit provides standard Project Management Institute (PMI) tools, templates, and processes that can be customized to meet each project's needs. Progress is monitored on a regular basis for on-time completion of deliverables and milestones throughout the duration of the project.
- Weekly project meetings will be held during the project

Approach and Methodology

- VersiFit will use its phased, proven methodology, based on the Project Management Institute (PMI) PMBOK, a proven phased project management and implementation methodology, that has led to our 99% success rate in implementing state, regional, and district longitudinal data systems. The major phases of the methodology are:
  - Project Initialization
  - Discovery and Data Assessment
  - Architecture Design
  - Data Cleansing and ETL Configuration
  - Data Warehouse Implementation
  - Testing, Validation, and Training

Transition Strategy

Comprehensive Knowledge Transfer

- A comprehensive transition plan based on a joint strategy will be developed.
- WVDOE staff will be included in all roles and activities during the project.
- Edvantage administration professional development workshops, as many as needed (usually 8) will be conducted for WVDOE staff.
- WVDOE, Versifit and Celero resources will work closely during production migration, with Celero and Versifit resources onsite to support all facets of the production migration.

Deployment

Timeline

Assuming a start date of January 6, 2014, Versifit can have all portal, content management, dashboard KPIs, and reports in production by **December 12, 2014.**

Celero Partners, Inc.

Versifit is proud to include Celero Partners, Inc., as a subcontractor on this project.

See Response to Section 4, Subsection 4.3., "Qualification & Experience" for more information on Celero.

The remainder of this Proposal follows the format as outlined in the RFP, p. 34.

Attachment A: Vendor Response Sheet

Section 4 – Subsection 4.3 Qualification & Experience

Requirement

4.3.1 The Vendor's proposal must consist of a detailed narrative that describes its company, including but not limited to

4.3.1.a. The Vendor's origin, mission, historical growth (including when the company was established), and the hours of operation of the Vendor that proposed to perform services required by this RFP.

Response

Versifit

Company Background

Versifit Technologies, LLC is a privately held, K-12 education Systems Integration & Software Development Company, with headquarters in Appleton, Wisconsin. We are one of only a handful of U.S. companies that have successfully focused on K-12 Education Business Intelligence and Data Warehousing for more than 14 years.

Mission

Versifit's mission is to provide the best, most up-to-date data warehousing and business intelligence solutions to K-12 markets. We focus on state education agencies as well as school districts of all sizes, from large urban districts to mid-sized urban/suburban districts, to remotely located micro-districts. We have many solid references, as we have successfully implemented our solution in three state education agencies (the Hawaii DOE, the Oregon DOE, and the Wisconsin DPI), as well as in diverse school districts, such as Chicago Public Schools, Milwaukee Public Schools, and Portland Public Schools (Oregon).

History

Before Versifit became an education company, we built Business Intelligence Systems for large corporations like Lands End, Pfizer, Proctor and Gamble, Kraft Foods and Harley Davidson. Our first BI system was built in 1993 and is still running today.

In 1998, Versifit began developing its expertise in the K-12 Public Education sector. Learning the key integration points for virtually any student system (CIMS, SASI, Pentamation, Powerschool, and eSIS are a few), and the unique informational needs of educators, administrators, students, and parents, our Edvantage Solution has continued to evolve and include ever more sophisticated capabilities.

We have a solid heritage of using advanced data mining techniques. The difference between the commercial sector and public education when it comes to data mining is the payback. In the commercial sector, small data variations applied over huge market segments have lead to large returns for commercial corporations and they can justify the outlandish costs associated with building these systems. In the education sector, the data sets are still very small and the richest data that could potentially lead to real insight about personalized learning is not captured anywhere in schools today. Versifit will help you develop personalized learning through advanced data visualization—capturing, understanding, and applying this data for effective data-driven decision making.

Today our solution is running in school districts from coast to coast and is recognized as the value-leading solution for K-12, combining world class design, open architecture, and a customizable framework into a remarkably affordable package appropriate for state agencies as well as small, medium, and large school districts.

Versifit's hours are 7:00 a.m. to 6:00 p.m., CST, Monday through Friday.

The Versifit Solution

Versifit's Edvantage Solution provides more capability for less money than any other educational analysis solution available. Edvantage offers the absolute best in technology, performance, usability, functionality, and efficiency in a proven, customizable package supported by a dedicated software maintenance and support

program. We are state-of-the-art engineers and designers who deeply understand the world of education data. The breadth of our Edvantage solution and our large, satisfied customer base are our competitive differentiators.
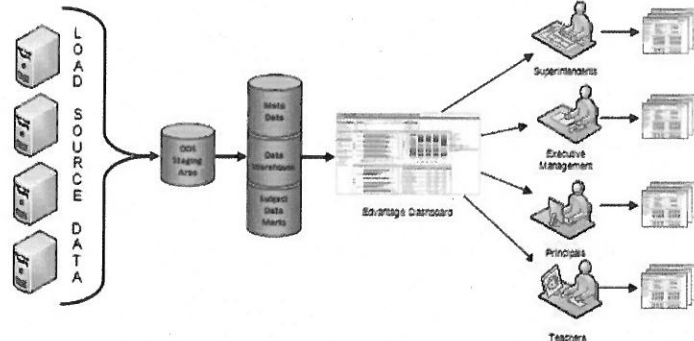
| Timely Data Integration | Easy Access | World-Class Reporting |

With the Edvantage solution implemented in three state education agencies and nearly 700 school districts, Versifit has over 500,000 hours experience building and implementing educational data management systems. Every Versifit resource will have at least six years' experience; most have over 10 years' experience.

Versifit sponsors nationwide Regional Centers of Excellence which provide a dynamic venue for exploring new ideas to ensure our clients reap technology improvements well into the future. Please see www.versifit.com for more information.

Celero Partners, Inc.

Company Background

One of the nation's premier education consulting firms, Celero provides education expertise, capacity, and success. A foremost expert in data-driven decision making to improve student achievement and teacher effectiveness, we understand that data collection will only be useful if the data is accurate, relevant, timely, and actionable. Celero offers a complete line of educational services, including school turnaround, teacher effectiveness, longitudinal data system development, and deployment.

Mission

At Celero, our mission is to be the instrument of change.

To help education agencies transition from subjective assessment and gut-feel to fact-based, data-driven decision making. We deliver cutting-edge technology-based education strategies, programs, and solutions to improve educational outcomes for all children. We bring practical and timely operational values to assist education agencies with improving student and staff achievement around three pillars of education transformation.

Services

Celero provides services to K-12 institutions throughout the United States and understands where technology is today, where it's going to be in the future, and how it can be applied to support an organization's vision and long-term goals. By understanding weak signals and early indicators of education transformation, we help to increase our clients' efficiency through innovative technology. We provide education expertise, capacity, and knowledge transfer to all of our clients. A nationally recognized education consulting firm, we have the collective expertise to educate organizations on best-in-class solutions that deliver bottom-line results.

Qualifications

The Celero team is comprised of some of the top experts in the industry, consulting at the national, state, local, and school level. Having deep technical, operational, and advisory expertise, our education team includes nationally recognized technical experts in state longitudinal data systems (SLDS), including system design, implementation planning, and ongoing operations and data utilization. Celero is also recognized as having operational leaders in education system integration and enterprise data requirements, as well as functional and technical experts in agency and program operations, advising state and local education agencies (SEAs and LEAs) across the country. Celero will serve as Sub-Contractor on this assignment.

Approach

Our approach to delivering projects is to collaborate with and transfer knowledge to the internal team. This is reflected in our organizational structure, where each Celero Team member is "shadowed" by a WV staff member. This allows the gradual and required knowledge transfer to occur on a daily basis, rather than at given milestones. This approach builds a deeper

understanding of the management and maintenance of both the data warehouse and the associated toolset to support it.

The Celero PM will ensure progress is being made, working closely with the Versifit team and the West Virginia team to ensure we are meeting the timeline. Our experience in other SEAs and LEAs has proven this to be the best approach in managing and building a unified team. Celero recognizes the importance of the integral involvement of WV staff to achieve project success.

Experience

The New Mexico Public Education Department

The State of New Mexico engaged Celero to assist them with the design, procurement, and implementation of their SLDS. STARS developed and implemented to assist the State of New Mexico collect, store and report Student, Staff, Course, Assessment, Federal Programs, Financial, and location data. STARS has been operational for four years, all federal and state reporting is being done via STARS. Celero was additionally retained to provide operational support as NMPED expanded its reach to present record level data to the classroom and beyond.

Little Rock School District

Celero is currently implementing and providing LRSD with data warehouse and ODS capabilities. Celero is providing operational, implementation, project management, training and on-going support to strategize and phase rolling data to the teacher desktop.

Requirement

4.3.1.b. Prior experience developing and successfully implementing statewide or large-district projects including a data warehouse and reporting solution for a statewide educational agency or major metropolitan school district within the past five years. These projects should be comparable in size or larger than the proposed solution for WVDE, its 55 Local Education Agencies, and its 600+ schools and 200,000+ student population.

Response

Versifit has implemented our solution in three state agencies as well as nearly 700 school districts all over the country, from 10k to 870k students, including Wisconsin DPI (870,000 students), Oregon DOE (700,000 students); and Chicago Public Schools (400,000 students), with a 99% retention rate. We measure success by users adopting the solution, not just by us installing it.

Requirement

4.3.1.c. Description and methodology of education-related projects.

Response

Implementation Methodology

The proposed implementation approach/methodology follows that used by PMI, as seen in the PMBOK guide.

Versifit will follow the Project Management Body of Knowledge (PMBOK) published by the Project Management Institute (PMI) to provide world-class Project Management. The basic PMI Project Management Approach includes the following five process groups.

- Initiating Process Group
- Planning Process Group
- Executing Process Group*
- Monitoring & Controlling Process Group
- Closing Process Group

(PMBOK, Chapter 3, p. 39. All references to PMBOK in this proposal are from the Project Management Institute, *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Fourth Edition, 2008, Project Management Institute, Inc., Newton Square, PA.

*Under the "Executing Process Group," Versifit employs the following methodology.

Discovery & Definition

- Identify Data Sources, DW Requirements, Transformation Rules and Metadata Definitions
- Identify Dashboard and Report Requirements

Data Analysis and Detailed Design

- Profile data sources
- Prepare a Gap Analysis
- Design Dimension Tables
- Design Fact Tables
- Design Data Acquisition
- ETL Dashboard and Reports
- Create Test Strategy
- Review High-Level Design

Development

- Develop ETL Procedures
- Develop DW Administration Routines
- Develop Reporting and Dashboard Environment

Validation

- Test and Validate Data
- Debug ETL, DW, Data Marts, Dashboards, and Reports

Implementation

- Load Production Data
- Provide Data Mart-Driven Reporting
- Provide Full Dashboard Analysis

Requirement

4.3.1.d. Description of educational expertise, qualifications, certification, etc.

Response

The Edvantage solution has been implemented in three state education agencies and nearly 700 school districts, with over a 99% retention rate over the last 14 years. Versifit has over 500,000 hours' experience building and implementing educational data management systems.

Versifit has experienced educational PhD's on its staff and every Versifit resource will have at least six years'

experience; most have over 12 years' experience implementing educational data warehouses, analyses, and reports. Versifit brings not only experienced technologists to each project but also business analysts and consultants who have worked in districts or with education research centers for ten or more years. Resumes of key resources will be provided.

VersiFit invests in continuing education for our resources, and project leaders regularly attend industry conferences such as the NCES, MIS, and DC-STATS or seminars such as those offered by Edward Tufte or Ralph Kimball to stay current on the issues facing education and the latest thought on addressing such issues.

Versifit Technologies and the Value-Added Research Center (VARC) have collaborated over the past eight years on important topics such as data quality of student teacher linkages, tracking classroom- and student-level cost measures, and developing data management and reporting best practices.

Specifically, VersiFit and VARC have collaborated with Madison Metropolitan School District, Milwaukee Public Schools, Chicago Public Schools and the Wisconsin Department of Public Instruction to develop dashboard and reporting tools that make value-added, student growth percentiles, and other outcome measures accessible and understandable to practitioners. This partnership has also led to developments in how Versifit manages, analyzes, and reports multiple measures (e.g., balancing attainment with value-added data and using multiple assessments to build a composite score).

Since early 2013, Versifit has partnered with Harvard's Strategic Data Project (SDP) to develop district and state capacity for data analysis and decision support. Versifit's automated connectors and the Edvantage data model and reporting tools enable SDP researchers to efficiently deploy analytic content to many different stakeholder groups. During Phase I of our partnership, Versifit deployed SDP's analysis of National Student Clearinghouse post-secondary data to the State of Wisconsin DPI. Phase II will implement Versifit and Harvard products at a large urban school district to support analysis of inputs, processes, and outcomes.

Requirement

4.3.1.e. Any relevant experience that indicates the qualifications of the Vendor, and any subcontractors, in

the performance of this contract.

Response

Versifit

Wisconsin Department of Public Instruction, 870,000 students

Primary challenges

Versifit loaded student and school System (data warehouse) and Wisconsin state proficiency assessments from DPI's custom Longitudinal Data. All data needed to be profiled to determine what programming changes were needed for the Edvantage ETL software since there was no pre-defined connector for the custom DPI data warehouse.

What we did

Versifit consultants worked with DPI personnel to profile their data, standardize the data, and modify the Edvantage ETL connectors to load from their LDS. We also assisted with the data validation, and provided dashboard and reporting content recommendations.

Result

Edvantage was successfully installed and has been in operation for 3 years as the statewide data warehouse for Wisconsin. We are working with DPI now to help them implement educator effectiveness analysis and reporting.

Key contributions of Versifit team

Versifit consultants provided Project Management, Education Analyst support, Data Base Analyst support including data profiling ,data model enhancement, and data validation, ETL configuration and customization, dashboard and report customization and provided education innovation consulting assistance for educator effectiveness.

Celero

The New Mexico Public Education Department

The State of New Mexico engaged Celero to assist them with the design, procurement, and implementation of their SLDS. STARS developed and implemented to assist the State of New Mexico collect, store and report tudent, Staff, Course, Assessment, Federal Programs, Financial, and location data. STARS has been

operational for four years, all federal and state reporting is being done via STARS. Celero was additionally retained to provide operational support as NMPED expanded its reach to present record level data to the classroom and beyond.

Requirement

4.3.1.f. A list of contracts the Vendor has had during the last five (5) years that relate to the Vendor's ability to perform the services needed under this RFP. List contract reference numbers, contract period of performance, contact persons, telephone numbers, and fax numbers/e-mail addresses. Include a brief summary of each project's goal, deliverables, milestone events, etc., and the role of the Vendor in accomplishing such items.

Response

Versifit has implemented the Edvantage solution in three state education agencies and nearly 700 school districts, nation-wide. The following table presents some of our top districts/agencies from 2008 to present. If Versifit is selected as a finalist, Versifit will obtain permission from clients for contract reference numbers, etc., if necessary.

Organization	Contact	Year	Product(s)
Tigard Tualatin SD 23j Tigard, OR 97223	Susan James, IT Manager (503)431-4000	2008	Data Warehouse, ETL, Dashboard & Reporting
Chicago Public Schools Chicago, IL 60603	John DiCello, Dashboard Application Mgr (773)553-1669	2009	Data Warehouse, ETL, Dashboard & Reporting
Hawaii Department of Education Kapolei, HI 96707	Allan Stone, Director, Information Systems (808)586-3212	2009	Data Warehouse, ETL, Dashboard & Reporting
Scappoose School District 1J Scappoose, OR 97056	Bill Jensen, IT Manager (503)543-6374	2009	Data Warehouse, ETL, Dashboard & Reporting
Academy for Urban School Leadership Chicago, IL 60634	Troy Zoschke, IT Manager (773)534-0288	2010	Dashboard & Reporting
Buffalo Public Schools Buffalo, NY 14202	Mark Gaynor, Data whse Project Manager (716)816-3554	2010	Data Warehouse, ETL, Dashboard & Reporting
Clover Park School District # 400 Lakewood, WA 98499	Craig Cook, IT Director (253)583-5101	2010	Data Warehouse, ETL, Dashboard & Reporting
Richland School District Richland, WA 99352	Mike Leseberg, Director of Information	2010	Data Warehouse, ETL, Dashboard & Reporting

Organization	Contact	Year	Product(s)
	Systems (509)967-6110		
Wisconsin Dept. of Instruction Madison, WI 53707	Kurt Kiefer, Assistant State Supt. (608)266-2205	2010	Data Warehouse, ETL, Dashboard & Reporting
Education For The Future Chico, CA 95929	Victoria L. Bernhardt, Executive Director (530)898-4482	2012	Data Warehouse, ETL, Dashboard & Reporting
Minnesota Region I ESV Moorehead, MN 56560	Bob Wheeler, Executive Director (218)284-3101	2012	Data Warehouse, ETL, Dashboard & Reporting
Santa Clara County Office of Education San Jose, CA 95131	Kelly Calhoun, Chief Technology Officer (408)453-6728	2012	Data Warehouse, ETL, Dashboard & Reporting
Federal Way SD Federal Way, WA 98003	Ron Mayberry, Executive Director (253)945-2110	2013	Data Warehouse, ETL, Dashboard & Reporting
Harvard Center for Edu. Policy Research Boston, MA	Michael Tith, Project Manager (617)496-9010	2013	Data Warehouse, ETL, Dashboard & Reporting
Marana USD Marana, AZ 85653	Brett Kramer PhD, Executive Director, (520) 616-6399 Improvement	2013	Reporting

Requirement

4.3.2.   The successful Vendor must document its knowledge related to the technical aspects of the solution and the capacity to successfully train WVDE staff according to the goals in this RFP.

Response

Versifit has implemented its Edvantage solution in three state education agencies and nearly 700 school districts, successfully training client staff in many education agencies, such as the Hawaii DOE, Chicago Public Schools, Wisconsin DPI, etc.

The knowledge transfer process begins early in the project. Specifically, our experienced educational consultants engage the state functional and technical subject-matter experts in a series of workshops during the project Discovery phase that introduces them and instructs them at a very granular level to important project topics like security, key performance indicators, and report content.

Versifit will provide West Virginia with both train-the-trainer and constituent training for educational stakeholders—including executives, principals, and teachers—to learn about how to apply data to solve

specific problems. A series of training workshops is conducted by Versifit trainers for West Virginia.

While VersiFit accepts sole responsibility in this proposal for the successful implementation of the solution, we do offer the WVDE an opportunity to have key department resources work collaboratively on development and implementation tasks. We have found on prior implementations that this type of hands-on learning can be exceedingly valuable (is not lost as classroom training can be). Our proposal includes all of these training options and during project initiation, we will work with the WVDE team to tailor the education specifically for department needs.

Requirement

4.3.3   The Vendor's proposal must also consist of narrative that describes, in detail, the Vendor's:

4.3.3.a. Experience of staff (list qualifications, educational background, certifications, etc.) who will be assigned to this project, including key subcontractors when applicable.

Response

See Key Staff Resumes, p. 17 of this Proposal for staff qualifications.

Requirement

4.3.3.b. The amount of time (FTE allocated to the project) each staff is to be assigned to the project.

Response

Staff Assigned to this Project	Approximate FTE
Project Manager	.5
Education Consultant	.25
Chief Architect/ Technology Lead	.5
Database Administrator	.25
ETL Specialist	2
Dashboard and Reporting Specialist	1
Training Specialist	.5

Requirement

4.3.3.c. Experience of staff in completing similar projects. Include specifics regarding the data model, reporting, analytics, and any other key deliverables/components/aspects of the projects.

Response

See Key Staff Resumes, p. 17 of this Proposal for specific projects of various staff members.

Requirement

4.3.4. The vendor should provide resumes for the key project staff, which include information on the individual's particular skills related to this project, education, experience, significant accomplishments and any other pertinent information. The Vendor must commit that staff identified in its proposal to actually perform the assigned work. Any staff substitution should have comparable experience and qualifications, and has to have prior approval by the WVDE.

Response

Key Staff Resumes

Daryl Landavazo

Project Manager

Experience

➤ Daryl has over 15 years of experience in the Information Technology industry. Daryl has designed and implemented Wide Area Networks to operational systems to collect and report data. Installed video conferencing and distance learning systems to Operational Budgets systems. Daryl has an incredible talent for understanding the business need and finding the appropriate solution that solves the need all within the existing resources a client may have. This clarity of addressing the business at hand and Daryl's vast knowledge in the government sector industry has allowed for his projects to be successful with a 100% success rate of being implemented.

➤ Recently, as the Project Manager, Daryl has completed the design, vendor evaluation, selection, implementation and operational support of one of the nation's leading Statewide Longitudinal Data System (SLDS), New Mexico's STARS. Daryl was responsible for project management of New Mexico's Student Teacher Accountability Reporting System (STARS). This required replacing a variety of district collections and consolidating the collections into one. This entailed implementing a data warehouse to house store all the data coming in from desperate systems. The goal of the data warehouse was to have all state and federal report requirement satisfied by the data. A Decision Support system was attached to the data warehouse, effectively calculating State funding, High-Qualified teachers, State and District report cards as well as almost all Federal reporting requirements. In 6 months, STARS was developed and put into production. Currently STARS is in its fourth year of operation. With Celero as a partner, STARS is continuing to expand it functionality and have data accessed by users across the state ranging from school users to state legislators.

➤ While at the New Mexico Public Education Department Daryl was a member of EIMAC and was a member of an EIMAC standing committee on EDEN/EdFacts. Also under Daryl's leadership New Mexico became a member of the Decision Support Architecture Consortium (DSAC). Participating in national committees allowed for in depth knowledge of what other SEAs were doing as well as what the best practices were for implementing State systems to address Federal reporting, data collection, Licensure systems, and student and teacher id systems.

Recent Projects

➤ Currently providing Quality Assurance and oversight to the U.S. Virgin Islands with a Statewide Student Information System implementation.

➤ Currently providing operational support to state Charter schools in New Mexico to address state and federal reporting requirement as well as

developing Key Performance Indicators to judge their performance against other peer Charters and peer public schools.

➢ Led the re-design, and implementation of ECS' new IT Infrastructure.

➢ As a member of the New Mexico Public Education Department functioned in a multitude of roles from executive to technical. Has extensive knowledge in Federal reporting and data collection.

- Director of Information Technology for the New Mexico Department of Education

- Program Manager for the SEAs SLDS

- Agency CIO for 6 months

- Led the selection and implementation of the SEAs financial system

- Redesigned the SEA's network and security infrastructure

- Member of EIMAC standing committee on EDEN/EdFacts

- Led the Design and implementation of the SEAs Child Nutrition Programs Information Management System

- Consolidated SEA's Application Architecture from seven back end DBMS to two. This has saved the Agency over a million dollars.

- Implemented the Agencies first state-wide student level collection.

- Designed and Implemented the SEA's state-wide unique ID system.

- Managed a division of 20.

Education/Expertise

➢ BA in Math and Computer Science: St. John's University (MN) with minor in Spanish

➢ Several certifications from Microsoft to include MCP+

➢ Professional Manager from the University of New Mexico

➢ Baldridge Certified

Brian Pritzl

Chief Technology Lead

Mr. Pritzl is the Chief Technology Officer for Versifit and has more than 24 years of experience developing data warehouses, ETL and analytical solutions and more than 13 years doing so, specifically in the education market (P-20, LEA, SEA and IHE). He has been designing and implementing large, enterprise-class database management systems, business intelligence tools, and analytical systems for both public and private sector clients ranging from Disney and Proctor & Gamble to Chicago Public Schools and the Hawaii Department of Education. Mr. Pritzl is the Lead Architect of the Edvantage analytical solution for education which is in use at three state educational agencies as well as nearly 700 school districts.

Experience

Mr. Pritzl has extensive experience with design and management of Business Intelligence solutions, including:

➢ Creating analytical data models both relational and multi-dimensional using a variety of approaches (such as dimensional modeling).

➢ Analysis of source data (profiling) and design of extract, transform, and loading (ETL) procedures.

➢ Design of enterprise performance measures/metrics, reports, and analyses.

➢ Security design for large enterprise business intelligence solutions.

➢ Reports & analytical applications utilizing packaged inquiry, reporting and analysis tools (e.g. Business Objects, Cognos, Hyperion Enterprise, etc.), and desktop productivity tools (such as Microsoft Access and Excel).

➢ Utilization of high-end statistical packages such as SPSS to perform data mining and sophisticated analyses.

Recent Projects

➢ Mr. Pritzl has been lead data warehouse/business intelligence architect on numerous projects including, but not limited to:

- **Chicago Public Schools** – Lead Architect for the Edvantage enterprise data warehouse and consolidation of all departmental and application analytical silos.

- **Oregon Department of Education** – Lead Architect, KIDS Project, Statewide Data Integration and Longitudinal Analysis System

(LDS) and daily bi-directional LEA-SEA data feeds.

- **Columbus Public Schools** – Lead Architect, Edvantage Data Warehouse, Dashboard, and Reporting Suite (BI) Implementation.

- **Portland Public Schools** – Lead Architect, Edvantage Data Warehouse, Dashboard, and Reporting Suite (BI) Implementation.

- **Highline Public Schools** – Lead Architect, , Edvantage Data Warehouse, Dashboard, and Reporting Suite (BI) Implementation.

Education/Expertise

- MA Humanities, Speech, Univ. of Wisconsin-Oshkosh Graduate College

- BS Communications, Univ. of Wisconsin-Oshkosh College of Speech

- Business Objects Certified, Hyperion Certified

Steve Westerhouse

Database Administrator

Experience

- Mr. Westerhouse is a lead software architect at Versifit with **14 years** of software design and development experience, including the creation of dozens of transactional and analytical applications and data warehouse solutions. He provides technical direction to the other developers & DBAs.

- Mr. Westerhouse is the data replication, extraction, transformation/cleansing, and loading expert in Versifit's business intelligence practice and has built analytical data models for a wide variety of applications both analytical and operational in nature.

- Extensive programming and administrative experience with Microsoft SQL Server and Oracle Database platforms and is fluent in TSQL and PL/SQL. He speaks before IT groups on these databases and their features.

- Expert in design, modeling, and implementation of dimensional star schemas as well as normalized transactional data models.

Recent Projects

- **Columbus Public Schools** – Implemented student data warehouse in Oracle 8i and in Oracle 9i. Designed & developed custom routines to automate

data warehouse building procedures. Created a client application to upload external student data from text files into a staging area and then database procedures to merge the staged data into the data warehouse.

- **Oregon Department of Education** – ETL Lead, Statewide Data Integration and Longitudinal Analysis System

- **Tulsa Public Schools** – ETL Lead, Data Warehouse, Dashboard, and Reporting Suite Implementation

- **Milwaukee Public Schools** – ETL Lead, Data Warehouse, Dashboard, and Reporting Suite Implementation

Education/Expertise

- BS Computer Science, Professional Emphasis, University of Wisconsin-Oshkosh

- Crystal and Business Objects Enterprise software suite utilizing ASP, JSP, or Web Services

- MS SQL Server DBA, Oracle PL/SQL Developer, Programming Languages: C# and .NET Framework, C, C++, Delphi, Java, JavaScript, Desktop development in MS Access and Crystal Reports. ETL and data replication tools such as Informatica PowerCenter, Ascential DataStage Microsoft DTS, Business Objects Data Integrator, Data Mirror Transformation Server and DataFlux dfPower Suite. ER Studio data modeling tool.

Jeff Watson
Functional Lead/Education Analyst

Experience

- Mr. Watson is a Senior Education Consultant at VersiFit with the following duties:
  - Analyzing educational policy at local, state, and federal levels,
  - Supplying project leadership related to systems development for K-12 and Higher Education partners,
  - Researches and develops decision support tools and resources
  - Develops partnerships with new and existing clients,
  - Defines, plan, and manages decision support projects, and
  - Develops implementation processes and strategic planning tools.

- He has over ten years' experience as a researcher and

project lead supporting projects related to data systems integration within the context of K-20 quality and improvement decision making. He has worked on a variety of projects in areas such as teacher preparation, performance-based compensation, program evaluation, state-wide longitudinal data systems, and LEA data warehousing.

➢ Mr. Watson focuses on issues related to program improvement decision making, data quality, data warehousing strategies and system integration, decision support, and data-informed decision making.

➢ Jeff has published and presented extensively in the areas of Student-Teacher linkage, Decision Support Systems, Data Quality, etc.

Recent Projects

➢ **Project Lead, Teacher Effectiveness Initiative**

- Provided leadership and goal setting to support 14 Institute of Higher Education (IHE) use of value-added data and other measures to improve how teachers are prepared and supported.

- Supported state agencies' (MN DOE, ND DPI, SD DOE) efforts to build technical systems capacity to support IHE program improvement, including collecting, storing, analyzing, verifying, and reporting.

- Developed and disseminated data quality management tools and resources across K20 partners, including SEAs, LEAs, and IHEs. Emphasis has been student – teacher linkages and data integration applications.

➢ **Data Systems Lead, Wisconsin Department of Public Instruction Educator Effectiveness Initiative**

- Developed framework and tools that increase Wisconsin's Department of Public Instruction capacity to integrate disparate sources of educator evaluation data.

- Identified WI DPIs Educator Effectiveness Initiatives' data needs and assessed the capacity of district and state agencies to support those needs.

➢ **Researcher, Evaluation of the Regional Teacher Union Reform Network (TURN)**

- Supported data collection, analysis, and reporting activities.

➢ **Content Expert, Teacher Incentive Fund (TIF) 2, 3 Programs**

- Developed resources related to student-

teacher linkage data quality for TIF grantees through the Center for Educator Compensation Reform (CECR) and TIF Technical Assistance program.

- Designed and implemented tools and methods for measuring student-teacher linkage data quality.

- Developed resources for information technology infrastructure development and design through the CECR and TIF TA program.

➢ **Technical Assistance Provider, Teacher Incentive Fund (TIF) 1, 2 Programs**

- Assisted TIF grantees in the design and implementation of data systems in support of compensation systems.

- Developed a framework for measuring and managing data quality for TIF projects.

- Specified data system requirements for performance-based compensation systems.

Education/Expertise

➢ Ph.D., Industrial and Systems Engineering, University of Wisconsin–Madison

➢ M.S., Cognitive Psychology, University of Wisconsin–Madison

➢ B.S., Psychology, University of Texas–Arlington

Requirement

4.3.5. The Vendor's proposal should provide references that list names, addresses, telephone numbers, and fax numbers/email addresses of three (3) business references for which work (comparable to that required by this RFP) has been accomplished, and briefly describe the type of service provided. The Vendor must grant permission to WVDE to contact the references. Do not include current WVDE staff as references. Contacting references will be at the discretions of the WVDE.

Response

Versifit grants permission to WVDE to contact the following references.

Agency	Chicago Public Schools, PK-12, 400,000+ Students
Name	John DiCello
Address	125 Clark Street, Chicago, IL 60603
Phone/Fax	773-553-1669/773-553-5590
E-mail	jdicello@cps.k12.il.us
Service Provided	Edvantage Data Warehouse, Dashboard, and Report Suite design, development, implementation, user training, and knowledge transfer. Currently providing ongoing maintenance, support, and enhancement services.
Agency	Wisconsin Department of Public Instruction, PK-12, 870,000 Students
Name	Kurt Kiefer
Address	125 South Webster, Madison, WI 53707
Phone/Fax	608-266-2205 or 608-663-4946/608-267-1052
E-mail	Kurt.kiefer@dpi.wi.gov
Service Provided	Design, development, and implementation of state-wide Longitudinal Data System, user training, and knowledge transfer with ongoing maintenance, support, and enhancement services.
Agency	Hawaii Department of Education, PK-12, 180,000 Students
Name	Gary Sanehira, Hawaii Department of Education Office of Information Technology
Address	601 Kamokila Blvd., Room 495, Kapolei, HI 96707
Phone/Fax	808-564-6058/808-586-3227
E-mail	gary_sanehira@notes.k12.hi.us
Service Provided	Design, development, and implementation of state-wide Longitudinal Data System, user training, and knowledge transfer with ongoing maintenance, support, and enhancement services.

Section 4 – Subsection 4.4 Project Goals: 4.4.1 Goal I: Architecture, Infrastructure, and Development

As part of the WVDE's PK-12 SLDS initiative, the first goal is to contract with a vendor that can provide the necessary components and identify the necessary architecture, infrastructure, and software deliverables needed to build and train on a Data Warehouse and Reporting System (DWRS), either through the Vendor's own resources and/or through subcontractors. If using a subcontractor, the WVDE will only sign a contract with the successful Vendor that will act as the single point of contact for the WVDE and who retains responsibility for the performance of this contract and the work performed by its subcontractors.

As part of goal 1, the WVDE seeks to ensure that the successful vendor is able to provide a stable environment for the DWRS. This includes assuring that (1) all proposed hardware meets all needs of the DWRS and maintains a high level of availability (available at least 22 hours daily); (2) software is developed or maintained to address issues in a timely fashion; and (3) network issues result in as few outages as possible (historical performance of no more than one per quarter).
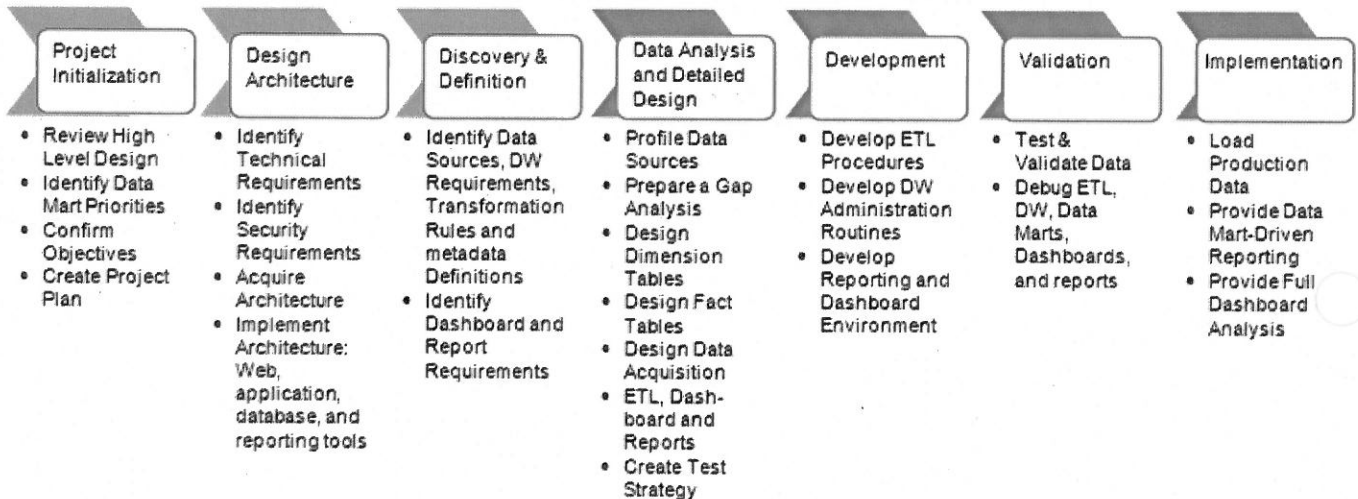
Requirement

The project objectives for 4.4.1. are:

4.4.1.1. For the successful Vendor to provide a DWRS owned and operated by the WVDE—and accessible to the WVDE, Regional Education Service Agencies, Local Education Agencies, schools, and the public. Vendors are to provide proof of their ability to meet the specifications associated with goal objectives and required by this RFP, include the following:

4.4.1.1.a. a detailed explanation of the process and associated steps taken to implement a DWRS;

Response

Versifit's process and the associated steps taken to implement a DWRS are seen in the following diagram.

Project Initialization	Design Architecture	Discovery & Definition	Data Analysis and Detailed Design	Development	Validation	Implementation
• Review High Level Design • Identify Data Mart Priorities • Confirm Objectives • Create Project Plan	• Identify Technical Requirements • Identify Security Requirements • Acquire Architecture • Implement Architecture: Web, application, database, and reporting tools	• Identify Data Sources, DW Requirements, Transformation Rules and metadata Definitions • Identify Dashboard and Report Requirements	• Profile Data Sources • Prepare a Gap Analysis • Design Dimension Tables • Design Fact Tables • Design Data Acquisition • ETL, Dashboard and Reports • Create Test Strategy	• Develop ETL Procedures • Develop DW Administration Routines • Develop Reporting and Dashboard Environment	• Test & Validate Data • Debug ETL, DW, Data Marts, Dashboards, and reports	• Load Production Data • Provide Data Mart-Driven Reporting • Provide Full Dashboard Analysis

Requirement

4.4.1.1.b. a list of all proposed software required to implement the DWRS. List the manufacturer of the software and recommended version levels. If the successful Vendor has developed custom software for components of the DWRS, this software should be described along with details about successful implementations with other customers. Specify whether the software is server side or client side and specify the acceptable browsers and any necessary plugins at the client level.

Response

Component	Proposed Software	Optional Software
SLDS/Data Warehouse	**Versifit Edvantage Data Warehouse Standard Data Model**	Versifit Edvantage Data Warehouse Standard Data Model
Data Base	**MS SQL Server 2012. Enterprise**	Oracle or other major data base
Reporting and Analysis Layer	**SAP Business Objects WebIntelligence**	MS Reporting and Analysis Services or other BI tool
ETL & Data Quality	**Versifit Data Connector & Versifit Data Quality Analyzer**	MS SSIS & Transformation Services
Portal and Dashboard	**Edvantage Dashboard**	Edvantage Dashboard

Below is a partial list of supported browsers:

- Internet Explorer 7 and above
- Mozilla Firefox
- Safari
- Chrome

All end user interfaces are browser based (server-side).

Dashboard development is browser based (server-side)

SSRS development is client-side.

ETL development is client-side.

Requirement

4.4.1.1.c. the proposed database infrastructure to be utilized for the DWRS. List any unique features of the proposed database which are critical to the implementation of the DWRS. Describe any limitations the database may have related to access using standard SQL. Describe any connectivity options such as Open Database Connectivity [(ODBC)/Java Database Connectivity (JDBC)] the database supports;

Response

Edvantage database infrastructure supports (and has successful deployments using the major DBMS such as Microsoft SQL Server, Oracle and Postgres and is limited only by the limitations of the selected database platform. For example, in Oracle and Postgres deployments, the data warehouse supports Active-Active clustering but when deployed on Microsoft SQL Server the clustering support is Active-Passive. While this is a technical limitation of SQL Server, the Edvantage data warehouse has been certified as fault tolerant by third party auditors for clients such as Chicago Public Schools. There are no limitations related to access using standard SQL reporting tools or standard SQL syntax.

Direct access to the data in the Edvantage solution is available via ODBC, JDBC, OLEDB or other standard database connections as supported by the selected platform. VersiFit recommends that most all end users (consumers) of Edvantage do not have direct access to the database and access through proxy accounts defined for the Dashboard and

Reporting/Analysis toolsets. These proxy accounts would only have read (SELECT) permissions to the data warehouse schemata.

The Versifit ETL engine is capable of sourcing data from any Java Database Connectivity (JDBC) or Open Database Connectivity (ODBC) compliant source data source on any schedule, as required.

Requirement

4.4.1.1.d. the minimum hardware requirements for all servers used as part of the DWRS, along with details about hardware required to accomplish load balancing if needed;

Response

The Edvantage solution does not require any specialized devices and was designed to be hardware agnostic (running successfully in both Windows-Intel platforms and Unix-RISC systems. The required hardware will vary dependent upon the service-level agreements (SLAs) that have been defined by WVDE and other stakeholders and the scope of data and analyses within the Edvantage solution which will be deployed. Clients have spent from $15K to $250K on establishing their successful deployments and VersiFit will work with the WVDE team as part of this engagement to right-size the hardware. The following tables define reasonable minimum server requirements based upon similar deployments.

Database Server	
CPU	4 x 8 core Intel Xeon E5-2690 (higher clock speeds more critical then number of processor cores)
MEMORY	256GB DDR3-1600
DISK	SSD 2 x 200GB RAID 1 (System/App) SSD 6 x 400GB RAID 5 (Main Data) 15K SAS 6 x 800GB RAID 5 (Archival Data)
NIC	1000Mb or better
Application Server	
CPU	2 x 8 core Intel Xeon E5-2690
MEMORY	32GB DDR3-1600
DISK	SSD 2 x 200GB RAID 1
NIC	1000Mb or better

Load balancing is performed based on an analysis of the unique needs of the Client. The Edvantage front-end applications have a service-oriented architecture and scale both horizontally and vertically. The MS SQL Server database provides load-balancing techniques, though not through a service-oriented architecture but through advanced data management techniques that will be evaluated as necessary to provide optimization for the Client. This is usually performed after implementation when the production usage is better known and performance statistics can be gathered and evaluated. If a 99% uptime SLA has been defined, then two of each server would be required and a development environment is also recommended.

Requirement

4.4.1.1.e. the network requirements of the proposed solution, along [with] estimated bandwidth needs as well as documentation supporting the estimates;

Response

All of the Edvantage Solution and source system servers should be connected at 1Gbps switched speeds (switched 100Mbps may be acceptable for smaller deployments < 30K active students). For the typical users (viewers/consumers) only web pages (including some JavaScript and session information) is transmitted. Most any LAN connections and internet connections as low as 128kbps have proven to be acceptable. For developers and administrators, a 10/100Mbps is recommended and high-speed internet connections (1.5Mbps +) have been used successfully for even the more demanding activities.

The estimated Edvantage Dashboard page size is 60KB and the average user hits 10 pages so based on your anticipated user count you can derive the total bandwidth requirement.

Requirement

4.4.1.1.f. the methodology used to determine storage capacity requirements of the proposed solution. The initial storage capacity of the proposed solution should allow for ten years of longitudinal data based on a student population of approximately 300,000 students and approximately 40,000 teachers and administrators. Describe scale up strategy for additional storage and its maintenance. Include any cost details in the separate cost proposal;

Response

Edvantage has the ability to store multiple years of demographic data. In Milwaukee, Versifit loaded 20 years of student, school and historical assessment data as well as the current source system data.

While capable of providing the capacity to store more than 20 years of student unit records and related data maintained in one repository, the Edvantage Data Warehouse can combine older aggregate data longitudinally with newer detailed unit record data. This

ability is built on a solid foundation of data warehousing principles and best practices.

We base capacity on the typical record size requirements for student, staff, and schools. We figure the number of records you have, estimate the number added each year, and forecast based on that.

Requirement

4.4.1.1.g. any additional hardware or software that is required to make the system fully functional which was not listed in the previous sections such as firewalls or minimum requirements for workstations;

Response

Network

Dependent upon the WVDE network infrastructure **no additional network hardware** is expected to be required to make the Edvantage solution fully functional for the WVDE. The Edvantage solution should be able to leverage existing firewalls and hardware load balancers if the solution is to be exposed in this manner and if clustering is required by the SLAs. Versifit can provide software load-balancing solution if the WVDE does not presently have a hardware solution.

Workstations

The solution is browser based and has been certified for Internet Explorer 7+, Chrome , FireFox, and Safari. All common laptop/desktop/mobile platforms (Windows, Linux/UNIX, Mac and Android) are supported. While Versifit recommends a minimum 1024x768 resolution for optimal dashboard and report consumption, it is not required and scrolling may be required at lower resolutions.

Requirement

4.4.1.1.h. a diagram, including notations/descriptions, that shows the system configuration and alternatives for each layer including the need for dedicated hardware or the use of virtualized services. Describe how the Vendor will work with the WVDE to ensure all required hardware and software are in place to successfully develop and implement the DWRS. While the WVDE intends to purchase required hardware (including servers, backup hardware, network cards, etc.) external to this RFP, the vendor may provide, as an option a cost proposal for vendor supplied servers and additional hardware as part of the cost proposal as outlined in Section 5.3.;

Response

System Configuration

Data Warehouse & Dashboard
Edvantage Standard Environment
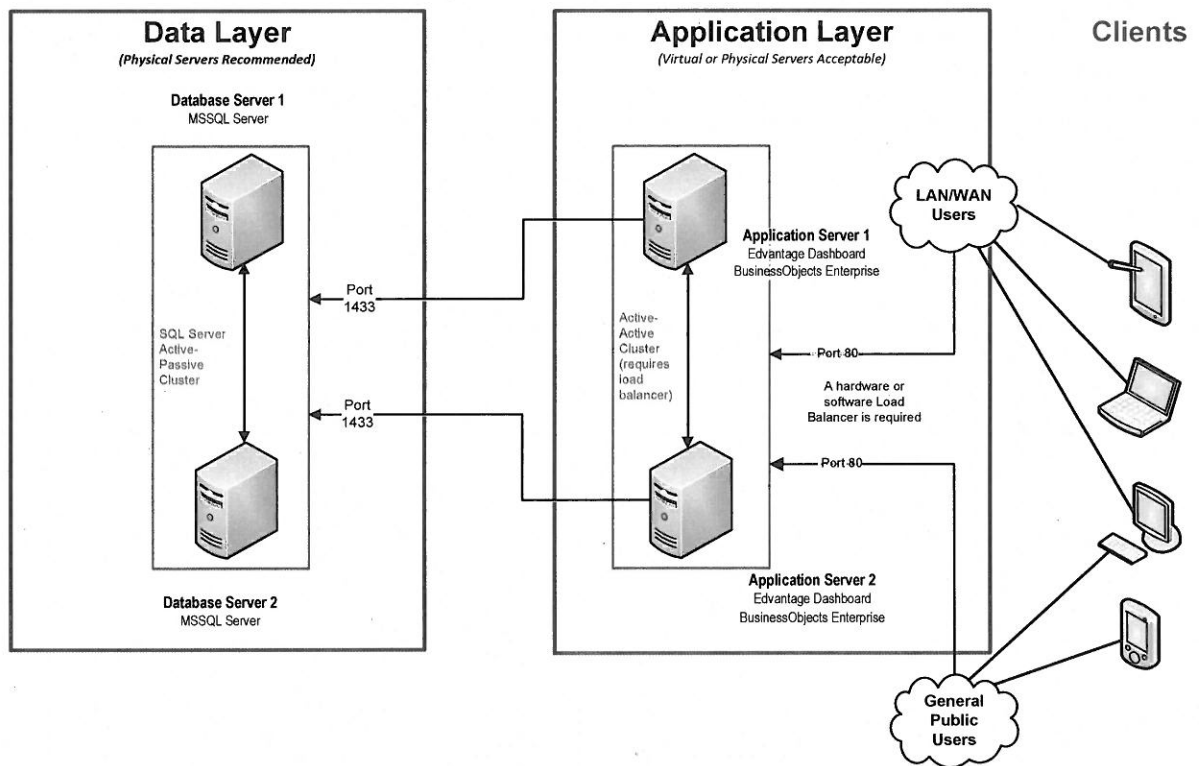
© 2002-2013 VersiFit Software LLC

The *Design Architecture* phase leverages the results of the *Project Initialization* phase to determine the most efficient and effective infrastructure to support Edvantage. The hardware and software recommendations presented in this response are sized for current and future needs. If existing infrastructure is sufficient to support Edvantage, then it is checked for compatibility. This phase prepares the environment for the development phase and preparation for the production environment begins during this phase.

Requirement

4.4.1.1.i. how the Vendor will adequately staff this objective. Include a description of the Vendor's organizational hierarchy, the communication protocols and structure to keep the WVDE informed, and the identification of critical issues/problems and how those are escalated and monitored until resolution.

Response

The Company Organization is seen below.
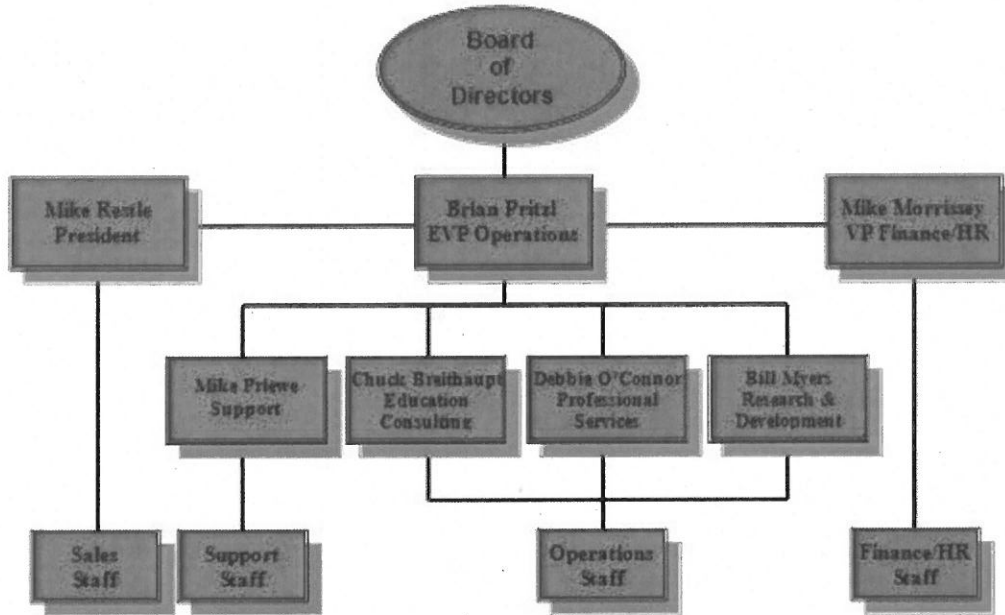
The project organizational structure of the Versifit team is seen below.

Project Organization Chart

Project Communication Plan

The Key Stakeholders table and Project Communication table presented on the following pages have been prepared to identify key Longitudinal Data System project stakeholders and project management office participants as well as the project communication documents. The Key Stakeholders table contains the name, project role, department, title, phone #, and email address of the stakeholder. The Project Communications table contains the document name, recipients of the documents, the author (person responsible for creating and updating the document), how often the documents need to be updated and where the document is stored (artifact location).

Key Stakeholders Table					
Name	**Project Role**	**Department**	**Title**	**Phone #**	**Email Address**
	Executive Sponsor	Information & Technology Services	Chief Information Officer (Project Sponsor)		
	Stakeholder	Chief Education Office	Chief Education Officer		
	Stakeholder	Research, Evaluation & Accountability	Officer		
	Stakeholder	Applied Research	Interim Director		
	Executive Sponsor, PMO	Information & Technology Services	Deputy Chief Officer		
	Stakeholder, PMO	Strategy & Planning	Associate Planner		
	Project Manager, PMO	Diamond Consulting	Dashboard Phase 3 Project Manager		
	Project Team, PMO	Diamond Consulting	Senior Consultant		

Project Communications Table					
Document	**Purpose**	**Recipients**	**Author**	**Update Frequency**	**Artifact Location**
Status Report	Update stakeholders on progress of the project.	PMO	Project Leader/Coordinator	Weekly – Issued EOD Friday	VFX
Executive Status Report	Update project sponsors & stakeholders on progress of the project.	Project Sponsors, PMO	Project Leader/Coordinator	Monthly – Issued EOD Last Friday of the Month	VFX

Project Communications Table

Document	Purpose	Recipients	Author	Update Frequency	Artifact Location
Risk Management Document	Update project stakeholders on project obstacles & ways to mitigate/eliminate risks.	PMO	Project Leader/Coordinator	Weekly – Updated EOD Friday	VFX
Issue Management Document	Create a record of project issues for resolution.	PMO	Project Leader/Coordinator	Weekly – Updated EOD Friday	VFX
Change Control Document	Describe project scope changes, estimate their impact, cost & disposition.	Project Sponsors, PMO	Project Leader/Coordinator	As Required	VFX
Project Plan	Project phase & tasks document used to track progress against plan.	PMO	Project Leader/Coordinator	Weekly – EOD Friday	VFX
Project Team Meetings	Coordinate & align scheduled tasks for following week.	Teams: Functional Team, Technical Team, UI Team, Dashboard Team, Report Team, Test Team, Training Team	Project Team Lead	Weekly – Friday PM or Monday AM	VFX
UI, Dashboard, Report Demonstrations	Get approval on design and content.	Project Sponsors, PMO	Team Lead	Prototype for August End, Domain Completion Ends	Dev Link
Security Audit	Independent review for security design compliance.	Project Sponsors, PMO, Versifit	Security Auditor	Once at Completion of Security Audit	VFX

Project Communications Table

Document	Purpose	Recipients	Author	Update Frequency	Artifact Location
Notice of Completion of Milestone & Deliverables	Communicate end of a project milestone and related deliverables.	PMO	Project Lead/Coordinator	End of Project Milestones	VFX

Project Team Meetings

The Project Team meetings are held on a regular basis to facilitate communication of critical project status and issues. Project Team meetings address the following project related information:

- Project status, progress, and performance.
- Changes to project scope, direction, and schedule.
- Critical project risks and issues, recommendations, and resolutions.

Any action items identified within the Project Team meetings are documented and actions are taken by Project Management. Project Management reports back to the Steering Committee.

Weekly Project Status Meetings

Status meetings will be held once a week. The status meetings will be chaired by the WV Project Manager and attended by project leaders, the Integration Partner Project Manager, and other personnel as appropriate. The list below shows the items that the Project Manager will deliver as part of the status reporting procedure:

Weekly status meetings standard agenda items:

- Tasks Completed this Week
- Tasks Scheduled for Next Week
- Project Plan Review
- Issues
- Risks

Anticipated Risks

Based upon Versifit's experience in SLDS projects in three states and nearly 700 districts, we believe that the following areas of uncertainty pose risks for the State Longitudinal Data System project.

Risk	Monitored Via . . .	Mitigated By . . .
Lack of available Subject Matter Expertise of existing Source Systems/Data Feeds or OTP	▪ Project schedule variances, especially during the SME intensive Discovery period ▪ Meeting cancellation/ rescheduling tracking, especially during Discovery and Business Scenario development tasks	▪ Proactive scheduling prior to project kick-off and during Project Initiation ▪ Communications Plan ▪ Project Sponsor support in articulating the benefits and importance of participation ▪ Preparedness at initial meetings to demonstrate commitment to use time valuably

Inability to achieve consensus on definitions and semantics across Source System/Data Feed owners	▪ Project schedule variances in the Discovery phase and during the design of the logical and physical data model ▪ Multiple entries in the Project Issue Tracking system regarding Data ▪ Lengthy debate in Data Model workshops	▪ Promote available Education Metadata Standards as a canonical format ▪ Identify potential major discrepancies during Discovery and plan for increments so as to avoid critical path challenges early in the project ▪ Establish escalation processes early in the project and issue resolution processes to avoid "wheel spinning"
Documentation of Source Systems or Data Feeds is out of date or incomplete	▪ Analysts are reviewing DDL, file structures and code during Discovery rather than specs ▪ Analysts are creating rather than aggregating specs during Discovery	▪ "Assume the worst" for planning the Discovery phase and be prepared to create specs from DDL, file structures and code ▪ Ensure that the team has skills to re-engineer DDL, file structures and code into design specs

Critical Success Factors

This project will be successful if:

- Subject Matter Expertise is available to the project team. Specifically, knowledge of the business, existing source systems, new OTP system, data feeds and ETL components must be readily available during Discovery, business scenario definition and requirements validation activities.

- Project Sponsorship is fully engaged and proactive in resolving issues. It is particularly important that the sponsors drive consensus for escalated issues around customer attributes and semantics.

- Source System and data feed information is available and accurate.

- The Project Team's productivity is not hampered by "district lag". It is imperative: that documents are reviewed in a timely fashion and required project "infrastructure" (space, hardware, software, security badges, etc.) is provided on or ahead of schedule.

- The Scope identified in the SOW is consistent with the requirements that are identified during Discovery and requirements validation.

- Silo politics take a backseat to aggregate business benefit and requirements.

Requirement

4.4.1.2. Ensure that the DWRS solution includes appropriate validation processes to ensure consistency from source and each step through which the data travel that result in end-use of the DWRS. Specify the proposed process, timeline, and benchmarks to validate data from source to destination that includes each step through which the data will travel; and identify, repair, and notify WVDE staff with regard to data validation.

Response

During the ETL processing within Edvantage the status and detailed statistics are logged for every record processed. Views, Reports and Dashboards over this ETL execution statistics provide detailed insight into the processing and visibility of any issues. The solution will send designated WVDE administrators emails of this information always or for defined events.

The Edvantage solution includes a complete Data Quality module which offers all of the standard auditing and validation utilities. During the ETL processing every value is tested against defined basic rules (required, valid list/range, etc.) and then advanced business-logic (such as grade level appropriate for age or for he enrolled school's grades offered) can be added. All such rules are defined in metadata to provide WVDE with flexibility to change validation as requirements change without complex programming. Records which have data issues are flagged and detailed audit records are written to a log table. These audits are subsequently loaded into their own data mart within Edvantage for both operational reporting of issues to be resolved for high-level analysis of data quality.

All user activity within the Edvantage dashboard can be logged including the pages visited, execution statistics, and even the filters and queries executed. This metadata can provide WVDE administrators with valuable performance tuning information and can satisfy any regulatory compliance (e.g. FERPA) testing .

Requirement

4.4.1.3. Ensure that the DWRS solution sufficiently encrypts and protects data from their identification in the source database to potential analyses of those data (beginning to end). Provide a detailed description of

4.4.1.3.a. how the proposed solution provides adequate protection of educational student and staff data while adhering to the various requirements of this RFP including, but not limited to those Acts listed in Section 4.2 (i.e., FERPA, COPA, and HIPAA).

Response

Compliance to Family Education Rights and Privacy Act (FERPA) and Health Insurance Portability and Accountability (HIPAA) requirements, as well as COPA, is carefully architected in the Edvantage SLDS. Edvantage conforms to business intelligence best-practices for security and offers the foremost security and monitoring technologies available, complying with FERPA, HIPAA, COPA and all typical privacy and security standards, while adhering to the various requirements of this RFP.

Requirement

4.4.1.3.b. the proposed solution's data-encryption techniques

Response

To protect sensitive data (content, passwords, etc.) encryption is employed in three ways within the Edvantage solution.

- Passwords for local users and database connections are encrypted with a 128-bit key and the private key itself is encrypted with another internal key.
- We recommend that SSL certificates be created or acquired to secure communications among the remote connections to the application servers. All of the applications in the Edvantage solution support SSL.
- Finally, transfers of data between the Districts and the State should be encrypted. We recommend transferring this data via a password-protected, compressed data file through an encrypted FTP tunnel (we support either FTPS or SFTP).

4.4.1.3.c. successful examples from prior completed contracts, along with issues/shortcomings that had to be resolved in those contracts and the manner in which they were resolved.

Response

Milwaukee Public Schools

Primary challenges

Versifit loaded 20 years of student, school and historical assessment data as well as the current source system data. All data sources needed to be profiled to determine what programming changes were needed for the Edvantage pre-defined ETL software since there were numerous changes to the way data was collected and reporting over the 20 year period. Because we had no source, Versifit also created a school calendar utility to rebuild school calendars that were 20 years old.

What we did

Versifit consultants worked with MPS personnel to profile their data, standardize the data, and modify the Edvantage pre-defined connectors to load from their original custom data warehouse, eSIS Student Information System as well as with the MUNIS Human Resources and Finance systems. We also assisted with the data validation and the design and development of dashboard and reporting content.

Result

Edvantage was successfully installed and has been in operation for 8 years. We have worked with MPS to add analytic applications like the SAIL at risk early warning system and the Edvantage Human Resources Capital Management application. The Edvantage dashboard and reports are accessed and used by 1000's every week by the MPS Central Office, Principals, and educators.

Key contributions of Versifit team

Versifit consultants provided Project Management, Education Analyst support, Data Base Analyst support including data profiling ,data model enhancement, and data validation, ETL configuration and customization, and dashboard and report customization.

Chicago Public Schools

Primary challenges.

Versifit loaded student, school, and historical assessment data from CPS's Operational Data Store as well as then current source system data Pearson Chancery SMS. All data sources, especially the ODS, needed to be profiled to determine what programming changes were needed for the Edvantage ETL software since there was no pre-defined connector for the custom ODS. More than 140 individual tables were accessed in the ODS as well as numerous assessment test data sources, and program data sources.

What we did

Versifit consultants worked with CPS personnel to profile their data, standardize the data, and modify the Edvantage ETL connectors to load from their Operational Data Store, Chancery Student Information System, and Illinois state proficiency assessment. We also assisted with the data validation, re-engineered the Boston Consulting Group dashboard and reporting content, and provided education innovation consulting.

Result

Edvantage was successfully installed and has been in operation for 5 years. We have worked with CPS to add analytic applications like the at risk early warning system. The Versifit Edvantage dashboard and reports business intelligence tools have replaced the original Microsoft Business Intelligence technology.

Key contributions of Versifit team

Versifit consultants provided Project Management, Education Analyst support, Data Base Analyst support including data profiling ,data model enhancement, and data validation, ETL configuration and customization, dashboard and report customization, and provided education innovation consulting.

Wisconsin Department of Public Instruction

Primary challenges.

Versifit loaded student and school System (data warehouse) and Wisconsin state proficiency assessments from DPI's custom Longitudinal Data. All data needed to be profiled to determine what programming changes were needed for the Edvantage ETL software since there was no pre-defined connector for the custom DPI data warehouse.

What we did

Versifit consultants worked with DPI personnel to

profile their data, standardize the data, and modify the Edvantage ETL connectors to load from their LDS. We also assisted with the data validation, and provided dashboard and reporting content recommendations.

Result

Edvantage was successfully installed and has been in operation for 3 years as the statewide data warehouse for Wisconsin. We are working with DPI now to help them implement educator effectiveness analysis and reporting.

Key contributions of Versifit team

Versifit consultants provided Project Management, Education Analyst support, Data Base Analyst support including data profiling ,data model enhancement, and data validation, ETL configuration and customization, dashboard and report customization and provided education innovation consulting assistance for educator effectiveness.

Requirement

4.4.1.4. Allow for role-specific access across all levels of the DWRS by providing

4.4.1.4.a. a detailed explanation of the steps to ensure the proposed solution supports role-specific access.

Response

Role level permissions will (initially) be driven by user attributes found in the SIS, HR system, and/or other sources of staff information.

The security framework of the Edvantage SLDS allows for access to data to be restricted at all of the required levels: Content (reports & analyses), Domain (subject areas), and Entity (table), Class (group of elements), Element (column) and row levels. This access can be restricted at a user or group level. The Edvantage Solution has a role-based security model which can restrict access at the object-level. The groups (roles) of security repositories such as LDAP or AD are utilized to provide access to the Edvantage Solution and to the content it contains. All of the required layers of security (Folder, Content [Dashboard or Report], Table, Column, or Row) can be managed by group or role.

The Edvantage Longitudinal Data System security role creation and user assignment interface has the functionality to configure multiple roles at the same time

and multiple users to a role. More than one role can have permissions to a report granted or revoked in the same action. During the discovery security review and requirements workshop, we would examine these security requirements. We will use the security interface to meet Client's requirements and the Client IT Security Administrator would be trained to use the interface. The roles for multiple groups can be modified simultaneously and multiple groups can have permissions.

Requirement

4.4.1.4.b. detailed information on the steps proposed in the solution to support the masking of data, while preserving database linkages, between the source database and any target databases that would be accepted in the DWRS.

Response

The Edvantage solution maintains data lineage throughout the data migration/transformation processes. This allows the data to be traced easily through the entire process back to its original source of record. This is especially helpful when looking at student records, which could come from multiple sources.

During the process of migrating data to the data warehouse, data can be transformed to a more reportable state. For example, consolidating a.m. Kindergarten, p.m. Kindergarten, and full day Kindergarten to be simply K. With the data model, each individual source value is stored, as well as the preferred reported value.

Requirement

4.4.1.5. For the successful Vendor's solution to function as a seamless component of West Virginia's educational network and public Internet as appropriate.

Response

Our goal with every deployment of Edvantage is to deliver a seamless, integrated, and integral solution to the educational agency and to the public, as appropriate. We have delivered this to many states and districts. Specifically, with the Wisconsin Department of Public Instruction, an internal secured dashboard was deployed and as well as a publically facing dashboard.

The internal secured dashboard is available to all state public instruction employees, every Wisconsin district administrator (Superintendent, assessment directors, etc.) and principal in the state. Built-in security allows for student information to be shared to the correct users. Security assignments are also delegated so district personal can manage access requests to the state portal.

The public site will be released shortly. It presents aggregated data that accounts for configurable small cell suppression rules. The public site allows users to compare districts and schools across the state and see how their district is performing in attendance, behavior, the state test, ACT, and more.

Requirement

4.4.1.5.a. Provide detailed narrative of how the proposed solution functions within a privately addressed network. The narrative should include (at a minimum specific details around (1) any IP translation issues that may need to be addressed by the WVDE prior to implementation; (2) firewall considerations; (3) a comprehensive list of all ports required for every component of the Vendor's proposed solution; and (4) encryption details.

Response

IP Translation Issues

TCP/IP is used for all network communications. No other protocols are required and translation has not been an issue within the Edvantage solution.

Firewall Considerations

The Edvantage Solution has been exposed to remote users in a variety of fashions dependent upon each client's infrastructure and to suit their local policies and practices. The application server has been placed in a DMZ and traffic secured utilizing SSL. While not required, SSL is recommended even for internal deployments (although a public certificate is not necessary for internal deployments). Other clients have utilized VPN to create a secure remote connection to the Edvantage Solution inside the firewall.

IP Ports Required

All traffic between the applications is IP based. The following ports are open for various applications (although these can be configured to use other ports): IP

Port 1433 for SQL (1521 for Oracle); 389 for integration with LDAP; 8080 and 8005 for Business Objects; 80 for the Edvantage Dashboard; and 6400 through 6420 for Business Objects SOA, which uses dynamically determined ports but can be forced to run on certain ports, which provides flexibility.

Encryption Details

To protect sensitive data (content, passwords, etc.) encryption is employed in three ways within the Edvantage solution.

- Passwords for local users and database connections are encrypted with a 128-bit key and the private key itself is encrypted with another internal key.
- We recommend that SSL certificates be created or acquired to secure communications among the remote connections to the application servers. All of the applications in the Edvantage solution support SSL.
- Finally, transfers of data between the Districts and the State should be encrypted. We recommend transferring this data via a password-protected, compressed data file through an encrypted FTP tunnel (we support either FTPS or SFTP).

Requirement

4.4.1.5.b. Provide detailed narrative that describes the installation and contingency plans, and timeline for installation of the DWRS.

Response

From the beginning of the project, the VersiFit Project Manager works through a detailed project plan not only to document our standard development tasks, but also to incorporate the client's preferred implementation approach, such as whether phases will be used by either functionality or stakeholder role. During creation of that plan, the Project Manager notes potential resource conflicts, duration conflicts, and feeder task risks. These types of risks, along with others that may be noted in discussion with the client, are then documented in a risk assessment document along with mitigation plans. As the development proceeds, the Project Manager initiates sessions to discuss the implementation plan with the client and to discuss benefits and challenges inherent in

different approaches. Once the implementation plan is drafted, the VersiFit Project Manager then reviews that plan for risks, documents them in the project Risk Assessment and documents mitigation plans. The mitigation plans are reviewed with the client throughout the project for adjustments as needed. As the implementation approaches, the VersiFit Project Manager will initiate sessions with the team members to review the plan and discuss roles, responsibilities, communications, hand offs, approvals, and any further risks that are identified along with mitigation plans. During the production installation and go-live, the team will operate under the implementation plan with close communications and support from the onsite team and remote assistance where needed. A typical production installation and go-live occurs over 2-3 days to accommodate handoffs, approvals, incremental testing, and communication.

Requirement

4.4.1.5.c. Provide detailed narrative of considerations when the Vendor's proposed solution is accessed via the public Internet. The narrative should address (at a minimum) (1) risks associated with public Internet access; (2) how the Vendor will adhere to user-access roles, privacy requirements, and suppression rules throughout public report development; and (3) encryption details.

Response

FERPA and other personal information acts are of the utmost importance when dealing with publically facing data. When data is available to the public, a user should never be able to identify a single student. We are fully aware of these requirements and put great focus towards providing a secure, but flexible, solution.

The first part of the solution to deliver public data is to limit the data that is exposed. Generally, only aggregate-level data is made available. Student level information isn't even available in the public database instance. The next part of the solution is the small cell suppression rules. These rules can be as simple as not allowing any single cell to be less than 20 or as complex as no cell less than 20 and not including that group in any other count. The public site is generally deployed in a separate instance so access rules are not critical, as it is public access. The site is also located in a DMZ zone.

Requirement

4.4.1.6. For the successful Vendor to provide a DWRS that appropriately load-balances heavy system use and uses automated upgrades. Provide detailed narratives on how the Vendor proposes to implement a system that uses automated upgrades of Operating Systems, software, and database components. Describe the process including planning, implementation, verification, and evaluation.

Response

The Dashboard and reporting applications have an SOA architecture and support Active-Active Load-Balancing. The database can also be load balanced in an active-active fashion dependent upon the DBMS selected. Load-balancing can be accomplished using either separate physical or virtual servers. The specifics of load-balancing for each client will be customized to meet the specified SLAs. This is usually performed after implementation when the production usage is better known and performance statistics can be gathered and evaluated.

A full Client SIS replacement would require changes to the Edvantage SLDS ETL processes. Since Edvantage has been sourced from many student information systems, it is likely that much of the ETL process workflows would require only modest Client customization. The Edvantage ETL processes use SSIS and stored procedures that can be maintained by Client personnel, other local consultants, or Versifit consultants.

Upgrades of Client systems like Human Resources, Finance, Special Education, Facilities, State Assessments, test data sources like ACT, SAT, DIBELS, CBM, MAP, Health, food services, and surveys Source system do not usually affect the efficacy of the Edvantage ETL processes to effectively source data. If, however, a complete system replacement or a system upgrade does significantly change the source database design, it will be necessary to make changes to the Edvantage ETL processes. Client will be provided with the tools necessary to alter the ETL processes to integrate with the upgraded source system. Versifit will provide Client with our ETL maintenance methodology, Edvantage documentation, and knowledge transfer to enable it to maintain its ETL. Client will have the software necessary to maintain the ETL processes to

support data exchange. Alternately, other local consultants or Versifit consultants will use SSIS to provide this capability.

VersiFit Edvantage products have an annual upgrade cycle; however, individual products may have a semi-annual release. Clients with paid maintenance will receive email notifications announcing new product upgrade releases. While upgrades can occur automatically, we encourage that they are scheduled, tested, and planned, rather than just happening.

At the time of online registration, all VersiFit Software customers have the option to subscribe to an email distribution group to receive regular notification of technical updates or informational releases. Notification of software improvements made available in product updates are also announced to customers via the VersiFit Software Support web site, and occasionally by email where appropriate.

Customers are strongly encouraged to review all read-me files included with any software update to ensure the update is applicable to your specific product version and build. The product roadmap is for the most part determined by our national user group. They meet regularly and discuss proposed system enhancements. From these discussions comes our feature release schedule. This schedule is dynamic to the extent that it reflects our clients' most pressing development needs.

Requirement

4.4.1.7. For the successful Vendor to provide its robust software and its software problem resolution plan. The specifications associated with this objective include:

4.4.1.7.a. how the proposed reporting tool can handle simultaneous secure authentication from various locations across the state and quantify estimated performance degradation;

Response

The Edvantage Longitudinal Data System security framework will be configured to support multiple levels of access to aggregate level metrics and data. It will restrict student-level (row-level) data access.

The Edvantage Longitudinal Data System is the only mature and proven multi-district solution running on a single instance of a database. As a result, our security is thoroughly proven to support multiple administrative security domain levels. For example, the SEA can administer all users and a Local Education Agency (LEA) administrator can administer users for their respective district.

The Edvantage Longitudinal Data System security framework supports heterogeneous authentication using major security repositories such as Lightweight Directory Access Protocol (LDAP), Active Directory (AD), and custom authentication methods. Versifit has integrated with other clients' security repositories. The unique part of the Edvantage solution is that it can connect to multiples of these security solutions and they can all be used at the same time. We are currently integrating Edvantage with the state of Hawaii's proprietary single-sign-on solution.

Requirement

4.4.1.7.b. a detailed narrative of the Vendor's proposed support structure for software development and implementation issues. The narrative should address the levels of software failure and escalation path for issues from identification to resolution; and a proposed plan regarding software issues for issue identification, issue ownership, and issue resolution during development, implementation, and transition to WVDE operation of the DWRS.

Response

During the development and implementation of Edvantage, the team of VersiFit staff and client staff will be fitting the client's business rules into the Edvantage solution. During that process, it is expected that there will be items which require further information gathering or adjustment of the Edvantage solution itself. In both situations, any item requiring further follow up is recorded in VFX, our project issue tracking system. This system assigns a unique Issue ID which can be referenced in documentation, communications, and included in project status reports. The system maintains the discussion thread of an issue and decisions reached for historical reference as well as approvals. An owner is assigned to the issue at the time of entry along with a due date. The issue owner and the project manager, as well as other interested parties, receive a daily email regarding the status of the issues. The system provides for ten levels of priority which can

be adapted to the client's preference. Also, each level of priority can be configured to send a text to the assigned recipients or receive an immediate email in addition to the daily reminder email. The best practice is to assign the issue to the person who can take an action toward resolution and when complete, he/she changes the ownership to the person who can either verify completion or take the next action. Issues are reviewed on a regular basis, at least weekly, by the Project Manager for timely action. The expectation of timeliness is set with the client at the beginning of the project, typically 24 hours for each action on a medium priority issue, while high priority issues are typically expedited to achieve 24 hours to completion where possible. These expectations can be adjusted during the different phases of the project, for example, quicker resolution may be needed during implementation than during development. Issues that are not being acted upon in the expected turnaround time are escalated from the VersiFit Project Manager to the client Project Manager if the issue owner is from the client's team, or to VersiFit management if the issue owner is on the VersiFit team. Escalation serves to confirm the appropriate issue ownership, remove roadblocks, implement mitigation plans, and prioritize resource schedules to enable them to work on the issue.

During transition, the typical schedule is to have the client team run the solution for 30 days under guidance from the implementation team. During this time, the client team should attempt the daily operations and content development, asking for assistance as needed to augment their training. Issues identified during this period are handled like issues during the regular project, with the implementation team responding according to the expectations set by the team. After the 30 day transition period, the client transitions to support, which utilizes the same issue tracking system and will have access to see the issues already recorded and resolved during the project for reference. The support team utilizes the issue escalation and resolution timelines documented in our maintenance agreement.

R e q u i r e m e n t

4.4.1.8. Describe the schedule of patches and fixes, and the proposed plan to test components of the DWRS to ensure successful design, development, implementation, and transition to WVDE operation of the DWRS.

R e s p o n s e

Versifit Edvantage products have an annual upgrade cycle; however, individual products may have a semi-annual release. Clients with paid maintenance will receive email notifications announcing new product upgrade releases. Versifit clients are responsible for installing product upgrades. New product release installation programs and scripts are sent to clients to facilitate installation. New product release documentation accompanies the product upgrade software.

At the time of online registration, all Versifit Technologies customers have the option to subscribe to an email distribution group to receive regular notification of technical updates, informational releases, and new and updated monthly Hot Fixes and Service Packs. Notification of software improvements made available in product updates are also announced to customers via the Versifit Technologies Support web site, and occasionally by email where appropriate.

Customers are strongly encouraged to review all read-me files included with any software update to ensure the update is applicable to your specific product version and build. The product roadmap is for the most part determined by our national user group. They meet regularly and discuss proposed system enhancements. From these discussions comes our feature release schedule. This schedule is dynamic to the extent that it reflects our clients' most pressing development needs.

Section 4 – Subsection 4.4 Project Goals: 4.4.2 Goal II: Technical Support

R e q u i r e m e n t

The project objectives for this goal are as follows:

4.4.2.1. For the successful Vendor to provide a solution that allows for the successful data exchange with the WVDE and external data systems to support an effective DWRS. The specifications associated with this objective include the following. Include relevant examples from previous work with statewide or comparable education systems:

4.4.2.1.a. Describe in detail the proposed process to populate the DWRS.

Response

The Data Warehouse Reporting System will be populated in the following manner.

Versifit's mature Architecture has been refined and expanded to include all the data areas necessary for data warehouse and reporting system requirements. The architecture for the data model is comprised of analytical data layers, each with its own unique purpose. The data layers are connected by the extract, transform, and load process (ETL).

So that changes to the source system do not require extensive changes to the analytics, the source system is abstracted from the analytical systems. Edvantage Architecture can easily adjust to include new data areas and elements because of its flexible and customizable design. For incredible cost and time savings as well as the additional advantage of providing initialization information for new systems, the historical data and derivative analytics are retained regardless of the changes made to the source systems. The rich, comprehensive data environment of the Edvantage architecture will satisfy your reporting needs for years to come.

The Edvantage Solution has a superior data topology developed to accommodate the demanding data processing needs of an educational system. Each data layer serves a unique and critical purpose in the system:

- The Operational Data Store (ODS) system will collect all source system data, provide first level transformations, error reporting, and consolidate to support operational reporting without impacting the operational system.
- The Longitudinal Data Warehouse is a repository for storing large amounts of historical data for longitudinal analysis.
- The optimized Data Subject Marts, modeled as star schemas with dimensions, facts, and aggregates, provide quick response time and data extractions for subject-focused reporting and analysis purposes.
- Aggregated data with several dimensions contributing to the summary are organized into an online analytical processing (OLAP) cube using Microsoft AnalysisServices. It offers summarized information that can be used for broad analysis of a large set of data. It is usually prepared each day so that the consumer is

provided with quick access to the aggregated data instead of waiting for the data to be summarized on the fly at the time of request. Further detail for areas of interest can be delivered with links and drill-through capabilities.
- Lowest level granularity at a student and assessment item level offers exceptional benefits for drill-down and in-depth analytical review.

The Versifit Edvantage Solution can access data from multiple Database Management Systems, including but not limited to Microsoft SQL, Oracle, DB2, MySQL, Pervasive, FileMaker, Sybase, and Access.

In the first step of our data warehouse solution implementation, Versifit will thoroughly profile disparate and dispersed source systems for their accessibility, data content, data redundancy, and data accuracy. Versifit will connect these systems using the ODS. The informational systems can be horizontally or vertically integrated or both to allow maximum data integration depending on reporting requirements.

Extract Transform and Load (ETL) to ODS

Client can quickly add new data sources both to your system and to the operational and analytical data stores because the extraction process is a metadata-driven approach to extract the data from the various sources into layered targeted data stores. For the initial source information systems, the targeted data store is the ODS, which is used as the data source for the analytical system. Data consistency, data quality, and data timeliness concerns are promoted and controlled through the ETL's metadata-driven approach.

After the extraction, LDE has the option to transform and load the data using either the stored procedure language of your underlying database system, or a high-end ETL tool according to the data volume.

To be readily changed as the educational analytical needs change, business rules associated with cleansing, consolidating, and transforming data are used by the ETL process, but are stored in the metadata.

Operational Data Store (ODS/Staging Area)

The Operational Data Store (ODS) or "Staging Area,"

serves a dual role both as a resource for operational reporting and as a consolidated source for analytical reporting. For operational reporting, it alleviates the resource burden placed upon the operational information systems by daily reporting. It will remain in a highly normalized structure for tactical application purposes.

The primary role of the Staging Area is to serve as a repository of extracted source data from all Client source systems required to populate the Longitudinal Data System. The Staging Area schema includes highly normalized tables similar to their source system databases. Many data quality issues are identified or resolved at this point using business rules and source data transformations applied to the source system data. The Staging Area extraction is done though a metadata-driven interface to incorporate business rules changes and to ease source data additions.

Requirement

4.4.2.1.b. Provide a detailed narrative describing the tools the Vendor's solution leverages for (1) the Extract, Transform, Load (ETL) process, (2) reporting processes, and (3) analysis and interpretation of data in the reports.

Response

ETL, Reporting, and Analysis Tools:

ETL	Versifit Data Connector & Versifit Data Quality Analyzer Versifit's uDL
Reporting processes	SAP Business Objects WebIntelligence
Analysis and interpretation of data in the reports	SAP Business Objects WebIntelligence

Requirement

4.4.2.2. For the successful Vendor to provide a DWRS that has appropriate levels of support and training for the WVDE technical staff. The specifications associated with this objective include the following:

4.4.2.2.a. Provide a detailed list of the proposed documentation, the process to develop documentation, and the expected content of the documentation that will be provided to the WVDE as part of the installation and configuration of the Vendor's proposed solution. Describe the necessary software that is required to access the documentation.

Response

Technical Documentation

Complete documentation is included with every installation. Included are comprehensive administrator, developer, and user guides for the Edvantage Dashboard and embedded software. Technical & administrative documentation is provided for the data model and ETL. The Dashboard provides on-line help for the end user. Some items included within the technical guides are:

- Infrastructure Considerations
- Oracle Installation Considerations
- Environment Installation and Configuration
- Database
- Dashboard
- Reporting
- Data Warehouse Build Procedure
- Build Procedure Troubleshooting
- Backup/Recovery
- SIS Upgrade Considerations
- Database Upgrade Considerations
- Edvantage Upgrade Considerations
- Supporting Data Warehouse Administration Documentation:
- Infrastructure Worksheet
- Data Flow Diagram
- Metadata Diagram
- ERD Diagram
- Windows and UNIX Example Automation Script
- Print Package Build Dependency Chart

Documentation is delivered in PDF documents, quick reference sheets, and a keyword searchable online wiki site.

Requirement

4.4.2.2.b. Describe any Data Dictionary tools (auto generated & updating) included with the vendor's proposed solution.

Response

Versifit will provide West Virginia with the Edvantage Data Dictionary to store business and technical metadata. The Edvantage data dictionary is integrated in Edvantage.

The web-based Portal will provide access to provide entry and maintenance capabilities. End user access to the Edvantage Data Dictionary content will be through the Portal and alternatively through data dictionary hardcopy reports.

The Edvantage Data Dictionary stores metadata, including Element Name, Description/Definition, Possible Values, Data Source, Department/Organizational Unit Assignment, Data Manager (note at this point not Data Managers), Raw, or Calculated, Collection Closing Date, Use of Element, and Dependencies. Versifit will add a cross reference capability to report usage and business rules based on requirements identified during the Discovery and Requirements Phase Data Quality Workshops.

The Edvantage Data Dictionary provides searchable metadata attributes for constituents with the appropriate permissions. The Edvantage Data Dictionary will have a web services interface to allow other West Virginia applications to query the West Virginia metadata.

Requirement

4.4.2.2.c. Specify which of the Vendor's listed staff or sub-contractors will be responsible for each aspect of the documentation development and knowledge transfer processes. Provide examples of how these staff have successfully developed technical documentation and trained technical staff during transition in prior projects.

Response

Debbie O'Connor has the overall responsibility for project documentation. Steve Westerhouse will provide System administration, ETL, and Database processes. Jeff Watson is the functional, data literacy, and state, district, and school improvement lead; and Brian Pritzl will handle data integration.

Requirement

4.4.2.2.d. Provide a detailed narrative of the anticipated installation schedule, including a proposed knowledge transfer plan.

Response

The following is a SAMPLE one-year Project Work Plan draft. Specific dates and tasks will be adjusted to fit West Virginia's specific project.

Edvantage SAMPLE Project Plan Draft

Edvantage Project Plan	Mon 1/6/14	Wed 11/12/14	
Project Initiation	**Mon 1/6/14**	**Tue 2/4/14**	
Preliminary project work plan and schedule ready for review	Mon 1/6/14	Mon 1/6/14	PM / Architect
Identify Project Team Members	Tue 1/7/14	Tue 1/7/14	PM / Architect
Setup of Project in the Project Site (VFX)	Tue 1/7/14	Tue 1/7/14	PM / Architect
Assemble & Distribute Pre-Work List	Tue 1/7/14	Tue 1/7/14	PM / Architect
Create Edvantage Environment	Tue 1/7/14	Mon 1/27/14	Database Analyst
Load Edvantage Data Base and ETL Procedures	Mon 1/27/14	Tue 1/28/14	Database Analyst
Conduct Project Kick-off Meeting	Tue 1/28/14	Tue 1/28/14	PM / Architect
Get Access to SMS Production Database to Facilitate Data Profiling	Tue 1/28/14	Wed 1/29/14	Database Analyst
Final project work plan and schedule submitted for approval	Thu 1/30/14	Tue 2/4/14	PM / Architect
Architecture Design	**Mon 1/6/14**	**Mon 2/24/14**	
Workshops	**Mon 1/6/14**	**Mon 2/24/14**	
Security	Tue 1/28/14	Thu 1/30/14	PM / Architect
Infrastructure	Thu 1/30/14	Fri 1/31/14	PM / Architect
	Mon 1/6/14	Mon 1/6/14	
Project Work Plan and Schedule Approved	Mon 2/24/14	Mon 2/24/14	Client PM
Logical and Technical Design Documents for Proposed Solution Completed	Fri 1/31/14	Mon 2/3/14	PM / Architect
Logical and Technical Design Documents for Proposed Solution Approved	Mon 2/17/14	Mon 2/17/14	Client PM
Domain Discovery, Design, and Development	**Wed 1/29/14**	**Mon 9/29/14**	
Finalize Infrastructure and Test Connectivity for Development	Fri 1/31/14	Mon 2/3/14	Database Analyst
Core Development	**Wed 1/29/14**	**Thu 2/13/14**	
Analysis and Documentation	**Wed 1/29/14**	**Thu 2/6/14**	
Standards	Wed 1/29/14	Wed 1/29/14	PM / Architect
Calendar Dates	Wed 1/29/14	Wed 1/29/14	PM / Architect
Time	Wed 1/29/14	Wed 1/29/14	PM / Architect
Rooms	Wed 1/29/14	Wed 1/29/14	PM / Architect
School Dates Workshop	Wed 1/29/14	Thu 1/30/14	PM / Architect
School Dates Addt'l Analysis	Tue 2/4/14	Tue 2/4/14	PM / Architect
Facilities Workshop	Thu 1/30/14	Thu 1/30/14	PM / Architect
Addt'l Facilities Analysis	Wed 2/5/14	Wed 2/5/14	PM / Architect
Students Workshop	Thu 1/30/14	Fri 1/31/14	PM / Architect
Addt'l Students Analysis	Wed 2/5/14	Wed 2/5/14	PM / Architect
Schools Workshop	Mon 2/3/14	Mon 2/3/14	PM / Architect
Addt'l Schools Analysis	Wed 2/5/14	Wed 2/5/14	PM / Architect
Schools Evolved	Mon 2/3/14	Mon 2/3/14	PM / Architect
Staff Workshop	Tue 2/4/14	Tue 2/4/14	PM / Architect
Addt'l Staff Analysis	Wed 2/5/14	Thu 2/6/14	PM / Architect
Staff Assignments Workshop	Tue 2/4/14	Tue 2/4/14	PM / Architect
Addt'l Staff Assignments Analysis	Thu 2/6/14	Thu 2/6/14	PM / Architect
Development	**Wed 1/29/14**	**Thu 2/13/14**	
Setup for Instances	Wed 1/29/14	Thu 1/30/14	Programmer Analyst 1
Revise ETL for Facilities	Wed 2/5/14	Wed 2/5/14	Programmer Analyst 1
Facilitate Initial Population of Facilities XTable	Wed 2/5/14	Wed 2/5/14	Programmer Analyst 1
Revise ETL for School Dates	Wed 2/5/14	Wed 2/5/14	Programmer Analyst 1
Revise ETL for Students	Wed 2/5/14	Thu 2/13/14	Programmer Analyst 1
Revise ETL for Student Details	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Revise ETL for Students Evolved	Wed 2/5/14	Wed 2/5/14	Programmer Analyst 1
Revise ETL for Student Attribs	Wed 2/5/14	Wed 2/5/14	Programmer Analyst 1
Modify Automation Metadata and Run Students ETL	Wed 2/5/14	Fri 2/7/14	Programmer Analyst 1

Edvantage SAMPLE Project Plan Draft, continued

Task	Start	Finish	Resource
Revise ETL for Schools	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Revise ETL for Schools Annual Attribs	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Revise ETL for Rooms	Wed 1/29/14	Thu 1/30/14	Programmer Analyst 1
Facilitate Initial Population of School Annual Attributes Xtable	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Facilitate Initial Population of Schools XTable	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Modify Automation Metadata and Run Schools and Calendars ETL	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Revise ETL for Staff	Thu 2/6/14	Thu 2/6/14	Programmer Analyst 1
Revise ETL for Staff Assignments	Thu 2/6/14	Fri 2/7/14	Programmer Analyst 1
Validate	**Fri 2/7/14**	**Wed 2/12/14**	
Validate Students	Fri 2/7/14	Wed 2/12/14	Client QA
Validate Schools	Fri 2/7/14	Fri 2/7/14	Client QA
Validate Staff	Fri 2/7/14	Fri 2/7/14	Client QA
Discipline and Discipline Actions	**Tue 2/4/14**	**Wed 2/12/14**	
Analysis and Documentation	**Tue 2/4/14**	**Wed 2/5/14**	
Discipline Incidents Workshop	Tue 2/4/14	Tue 2/4/14	PM / Architect
Discipline Actions Workshop	Wed 2/5/14	Wed 2/5/14	PM / Architect
Development	**Wed 2/5/14**	**Tue 2/11/14**	
Setup for instances	Wed 2/5/14	Thu 2/6/14	Programmer Analyst 1
Revise Discipline Incidents ETL	Thu 2/6/14	Fri 2/7/14	Programmer Analyst 1
Revise Discipline Actions ETL	Fri 2/7/14	Mon 2/10/14	Programmer Analyst 1
Run Discipline ETL	Mon 2/10/14	Tue 2/11/14	Programmer Analyst 1
Validate	**Tue 2/11/14**	**Wed 2/12/14**	
Validate Discipline	Tue 2/11/14	Wed 2/12/14	Client QA
Programs	**Wed 2/5/14**	**Mon 2/17/14**	
Analysis and Documentation	**Wed 2/5/14**	**Thu 2/6/14**	
Programs Workshop	Wed 2/5/14	Wed 2/5/14	PM / Architect
Program Membership Workshop	Wed 2/5/14	Thu 2/6/14	PM / Architect
Development	**Thu 2/6/14**	**Thu 2/13/14**	
Setup for instances	Thu 2/6/14	Fri 2/7/14	Programmer Analyst 1
Revise ETL for Programs	Fri 2/7/14	Mon 2/10/14	Programmer Analyst 1
Revise ETL for Program Membership	Mon 2/10/14	Wed 2/12/14	Programmer Analyst 1
Run Programs ETL	Wed 2/12/14	Thu 2/13/14	Programmer Analyst 1
Validate	**Thu 2/13/14**	**Mon 2/17/14**	
Validate Programs	Thu 2/13/14	Mon 2/17/14	Client QA
Enrollments	**Mon 3/17/14**	**Wed 3/26/14**	
Analysis and Documentation	**Mon 3/17/14**	**Mon 3/17/14**	
Enrollments Workshop	Mon 3/17/14	Mon 3/17/14	PM / Architect
Addt'l Enrollments Analysis	Mon 3/17/14	Mon 3/17/14	PM / Architect
Developmenet	**Tue 3/18/14**	**Mon 3/24/14**	
Setup for instances	Tue 3/18/14	Wed 3/19/14	Programmer Analyst 1
Revise ETL for Enrollments	Wed 3/19/14	Wed 3/19/14	Programmer Analyst 1
Run Enrollments ETL	Thu 3/20/14	Fri 3/21/14	Programmer Analyst 1
Revise ETL for Enrollment Aggregates	Fri 3/21/14	Fri 3/21/14	Programmer Analyst 1
Run Enrollment Aggregate ETL	Fri 3/21/14	Mon 3/24/14	Programmer Analyst 1
Validate	**Mon 3/24/14**	**Wed 3/26/14**	
Validate Enrollments	Mon 3/24/14	Wed 3/26/14	Client QA
Period Attendance	**Mon 3/17/14**	**Tue 3/25/14**	
Analysis and Documentation	**Mon 3/17/14**	**Tue 3/18/14**	
Period Attendance Workshop	Mon 3/17/14	Mon 3/17/14	PM / Architect
Addt'l Period Attendance Analysis	Tue 3/18/14	Tue 3/18/14	PM / Architect

Edvantage SAMPLE Project Plan Draft, continued

Task	Start	Finish	Resource
⊟ Development	Tue 3/18/14	Mon 3/24/14	
Setup for instances	Tue 3/18/14	Wed 3/19/14	Programmer Analyst 1
Revise ETL for Period Attendance	Wed 3/19/14	Fri 3/21/14	Programmer Analyst 1
Run Period Attendance ETL	Fri 3/21/14	Mon 3/24/14	Programmer Analyst 1
⊟ Validate	Mon 3/24/14	Tue 3/25/14	
Validate Period Attendance	Mon 3/24/14	Tue 3/25/14	Client QA
⊟ Daily Attendance	Tue 3/18/14	Wed 3/26/14	
⊟ Analysis and Documentation	Tue 3/18/14	Tue 3/18/14	
Daily Attendance Workshop	Tue 3/18/14	Tue 3/18/14	PM / Architect
Addt'l Daily Attendance Analysis	Tue 3/18/14	Tue 3/18/14	PM / Architect
⊟ Development	Wed 3/19/14	Tue 3/25/14	
Setup for instances	Wed 3/19/14	Thu 3/20/14	Programmer Analyst 1
Revise ETL for Daily Attendance	Thu 3/20/14	Fri 3/21/14	Programmer Analyst 1
Revise ETL for Attendance Summaries	Fri 3/21/14	Mon 3/24/14	Programmer Analyst 1
Run Daily Attendance ETL	Mon 3/24/14	Tue 3/25/14	Programmer Analyst 1
⊟ Validate	Tue 3/25/14	Wed 3/26/14	
Validate Daily Attendance	Tue 3/25/14	Wed 3/26/14	Client QA
⊟ Core 2-Courses	Mon 4/7/14	Wed 4/16/14	
⊟ Analysis and Documentation	Mon 4/7/14	Tue 4/8/14	
Courses Workshop	Mon 4/7/14	Mon 4/7/14	PM / Architect
Addt'l Courses Analysis	Mon 4/7/14	Mon 4/7/14	PM / Architect
Course Offerings Workshop	Mon 4/7/14	Mon 4/7/14	PM / Architect
Addt'l Course Offerings Analysis	Tue 4/8/14	Tue 4/8/14	PM / Architect
Scales Workshop	Tue 4/8/14	Tue 4/8/14	PM / Architect
Addt'l Scales Analysis	Tue 4/8/14	Tue 4/8/14	PM / Architect
⊟ Development	Mon 4/7/14	Tue 4/15/14	
Setup for instances	Mon 4/7/14	Tue 4/8/14	Programmer Analyst 1
Revise ETL for Courses	Mon 4/7/14	Thu 4/10/14	Programmer Analyst 1
Revise ETL for Course Offerings	Tue 4/8/14	Fri 4/11/14	Programmer Analyst 1
Run ETL for Courses and Course Offerings	Fri 4/11/14	Tue 4/15/14	Programmer Analyst 1
Revise Scale ETL	Tue 4/8/14	Wed 4/9/14	Programmer Analyst 1
⊟ Validate	Wed 4/9/14	Wed 4/16/14	
Validate Courses and Course Offerrings	Tue 4/15/14	Wed 4/16/14	Client QA
Validate Scales	Wed 4/9/14	Wed 4/9/14	Client QA
⊟ Final Marks	Tue 4/8/14	Wed 4/16/14	
⊟ Analysis and Documentation	Tue 4/8/14	Tue 4/8/14	
Final Mark Workshop	Tue 4/8/14	Tue 4/8/14	PM / Architect
Addt'l Final Marks Analysis	Tue 4/8/14	Tue 4/8/14	PM / Architect
⊟ Development	Tue 4/8/14	Tue 4/15/14	
Setup for instances	Tue 4/8/14	Thu 4/10/14	Programmer Analyst 1
Revise Final Marks ETL	Thu 4/10/14	Mon 4/14/14	Programmer Analyst 1
Run Final Marks ETL	Mon 4/14/14	Tue 4/15/14	Programmer Analyst 1
⊟ Validate	Tue 4/15/14	Wed 4/16/14	
Validate Final Marks	Tue 4/15/14	Wed 4/16/14	Client QA
⊟ Period Marks	Tue 4/8/14	Mon 4/21/14	
⊟ Analysis and Documentation	Tue 4/8/14	Wed 4/9/14	
Period Marks Workshop	Tue 4/8/14	Tue 4/8/14	PM / Architect
Addt'l Period Marks Analysis	Tue 4/8/14	Wed 4/9/14	PM / Architect
⊟ Development	Wed 4/9/14	Fri 4/18/14	
Setup for instances	Wed 4/9/14	Thu 4/10/14	Programmer Analyst 1

Edvantage SAMPLE Project Plan Draft, continued

Revise Period Marks ETL	Thu 4/10/14	Thu 4/17/14	Programmer Analyst 1
Run Period Marks ETL	Thu 4/17/14	Fri 4/18/14	Programmer Analyst 1
⊟ Validate	**Fri 4/18/14**	**Mon 4/21/14**	
Validate Period Marks	Fri 4/18/14	Mon 4/21/14	Client QA
⊟ Student Schedules	**Tue 4/8/14**	**Tue 4/15/14**	
⊟ Analysis and Documentation	**Tue 4/8/14**	**Wed 4/9/14**	
Schedules Workshop	Tue 4/8/14	Wed 4/9/14	PM / Architect
Addt'l Schedules Analysis	Wed 4/9/14	Wed 4/9/14	PM / Architect
⊟ Development	**Wed 4/9/14**	**Mon 4/14/14**	
Setup for instances	Wed 4/9/14	Thu 4/10/14	Programmer Analyst 1
Revise ETL for Schedules	Thu 4/10/14	Mon 4/14/14	Programmer Analyst 1
Run Schedules ETL	Mon 4/14/14	Mon 4/14/14	Programmer Analyst 1
⊟ Validate	**Mon 4/14/14**	**Tue 4/15/14**	
Validate Schedules	Mon 4/14/14	Tue 4/15/14	Client QA
⊟ Curriculum Marks	**Wed 4/9/14**	**Tue 4/15/14**	
⊟ Analysis and Documentation	**Wed 4/9/14**	**Wed 4/9/14**	
Curriculum Marks Workshop	Wed 4/9/14	Wed 4/9/14	PM / Architect
Addt'l Curriculum Marks Analysis	Wed 4/9/14	Wed 4/9/14	PM / Architect
⊟ Development	**Wed 4/9/14**	**Mon 4/14/14**	
Setup for instances	Wed 4/9/14	Thu 4/10/14	Programmer Analyst 1
Revise ETL for Curriculum Marks	Thu 4/10/14	Mon 4/14/14	Programmer Analyst 1
Run Curriculum Marks ETL	Mon 4/14/14	Mon 4/14/14	Programmer Analyst 1
⊟ Validate	**Mon 4/14/14**	**Tue 4/15/14**	
Validate Curriculum Marks	Mon 4/14/14	Tue 4/15/14	Client QA
⊟ At Risk/Early Warning	**Mon 5/5/14**	**Tue 5/20/14**	
⊟ Analysis and Documentation	**Mon 5/5/14**	**Thu 5/8/14**	
At Risk/Early Warning Workshop	Mon 5/5/14	Mon 5/5/14	PM / Architect
Addt'l At Risk/Early Warning Analysis	Tue 5/6/14	Thu 5/8/14	PM / Architect
⊟ Development	**Thu 5/8/14**	**Mon 5/19/14**	
Create ETL for At Risk/Early Warning	Thu 5/8/14	Wed 5/14/14	Programmer Analyst 1
Run ETL for At Risk/Early Warning	Wed 5/14/14	Mon 5/19/14	Programmer Analyst 1
⊟ Validate	**Mon 5/19/14**	**Tue 5/20/14**	
Validate At Risk/Early Warning	Mon 5/19/14	Tue 5/20/14	Client QA
⊟ Diploma Requirements	**Tue 5/6/14**	**Wed 5/21/14**	
⊟ Analysis and Documentation	**Tue 5/6/14**	**Fri 5/9/14**	
Diploma Requirements Workshop	Tue 5/6/14	Tue 5/6/14	PM / Architect
Addt'l Diploma Requirements	Wed 5/7/14	Fri 5/9/14	PM / Architect
⊟ Development	**Fri 5/9/14**	**Tue 5/20/14**	
Create ETL for Diploma Requirements	Fri 5/9/14	Thu 5/15/14	Programmer Analyst 1
Run ETL for Diploma Requirements	Thu 5/15/14	Tue 5/20/14	Programmer Analyst 1
⊟ Validate	**Tue 5/20/14**	**Wed 5/21/14**	
Validate Diploma Requirements	Tue 5/20/14	Wed 5/21/14	Client QA
⊟ Staff Qualifications	**Mon 7/14/14**	**Wed 8/6/14**	
⊟ Analysis and Documentation	**Mon 7/14/14**	**Fri 7/18/14**	
Staff Qualifications Workshop	Mon 7/14/14	Mon 7/14/14	PM / Architect
Addt'l Staff Qualifications Analysis	Mon 7/14/14	Fri 7/18/14	PM / Architect
⊟ Development	**Fri 7/18/14**	**Tue 8/5/14**	
Revise ETL for Staff Qualifications	Fri 7/18/14	Mon 7/28/14	Programmer Analyst 1
Run Staff Qualifications ETL	Mon 7/28/14	Tue 8/5/14	Programmer Analyst 1
⊟ Validate	**Tue 8/5/14**	**Wed 8/6/14**	

Edvantage SAMPLE Project Plan Draft, continued

Task	Start	Finish	Resource
Validate Staff Qualifications	Tue 8/5/14	Wed 8/6/14	Client QA
Staff Development	**Mon 7/14/14**	**Wed 8/6/14**	
Analysis and Documentation	**Mon 7/14/14**	**Fri 7/18/14**	
Staff Development Workshop	Mon 7/14/14	Mon 7/14/14	PM / Architect
Addt'l Staff Development Analysis	Tue 7/15/14	Fri 7/18/14	PM / Architect
Development	**Mon 7/21/14**	**Tue 8/5/14**	
Revise ETL for Staff Development	Mon 7/21/14	Mon 7/28/14	Programmer Analyst 1
Run Staff Development ETL	Tue 7/29/14	Tue 8/5/14	Programmer Analyst 1
Validate	**Wed 8/6/14**	**Wed 8/6/14**	
Validate Staff Development	Wed 8/6/14	Wed 8/6/14	Client QA
Staff Attendance	**Tue 7/15/14**	**Mon 8/4/14**	
Analysis and Documentation	**Tue 7/15/14**	**Thu 7/17/14**	
Staff Attendance Workshop	Tue 7/15/14	Tue 7/15/14	PM / Architect
Addt'l Staff Attendance Analysis	Tue 7/15/14	Thu 7/17/14	PM / Architect
Development	**Fri 7/18/14**	**Fri 8/1/14**	
Revise ETL for Staff Attendance	Fri 7/18/14	Fri 7/25/14	Programmer Analyst 1
Run Staff Attendance ETL	Mon 7/28/14	Fri 8/1/14	Programmer Analyst 1
Validate	**Fri 8/1/14**	**Mon 8/4/14**	
Validate Staff Attendance	Fri 8/1/14	Mon 8/4/14	Client QA
Test Scores	**Tue 7/15/14**	**Mon 8/4/14**	
Analysis and Documentation	**Tue 7/15/14**	**Wed 7/23/14**	
Tests	Tue 7/15/14	Thu 7/17/14	PM / Architect
Test Benchmark	Thu 7/17/14	Fri 7/18/14	PM / Architect
Test Scores	Fri 7/18/14	Wed 7/23/14	PM / Architect
Development	**Thu 7/17/14**	**Thu 7/31/14**	
Setup for instances	Thu 7/17/14	Fri 7/18/14	Programmer Analyst 1
Revise Tests ETL	Thu 7/17/14	Fri 7/18/14	Programmer Analyst 1
Facilitate Initial Population of Benchmarks XTBL	Fri 7/18/14	Mon 7/21/14	Programmer Analyst 1
Revise State Test Scores ETL	Mon 7/21/14	Tue 7/22/14	Programmer Analyst 1
Revise Test_Score_Summary ETL	Wed 7/23/14	Wed 7/23/14	Programmer Analyst 1
Run Tests ETL	Wed 7/23/14	Thu 7/24/14	Programmer Analyst 1
EOG and EOC Test Loader	Thu 7/24/14	Mon 7/28/14	Programmer Analyst 1
IDEA ESL Test Loader	Mon 7/28/14	Tue 7/29/14	Programmer Analyst 1
Alternative Assessments Test Loader	Tue 7/29/14	Thu 7/31/14	Programmer Analyst 1
Validate	**Thu 7/31/14**	**Mon 8/4/14**	
Validate Test Scores	Thu 7/31/14	Mon 8/4/14	Client QA
Finance	**Mon 9/8/14**	**Mon 9/29/14**	
Analysis and Documentation	**Mon 9/8/14**	**Thu 9/18/14**	
Financial Calendar	Mon 9/8/14	Mon 9/8/14	PM / Architect
Addt'l Financial Calendar Analysis	Mon 9/8/14	Wed 9/10/14	PM / Architect
Entities	Mon 9/8/14	Mon 9/8/14	PM / Architect
Addt'l Entities Analysis	Tue 9/9/14	Tue 9/9/14	PM / Architect
GL Accounts	Tue 9/9/14	Tue 9/9/14	PM / Architect
Addt'l GL Accounts Analysis	Tue 9/9/14	Wed 9/17/14	PM / Architect
Period Balances	Tue 9/9/14	Tue 9/9/14	PM / Architect
Addt'l Period Balances Analysis	Wed 9/10/14	Wed 9/17/14	PM / Architect
Journal Details	Wed 9/10/14	Wed 9/10/14	PM / Architect
Addt'l Journal Details Analysis	Wed 9/10/14	Thu 9/18/14	PM / Architect
Payroll	Wed 9/10/14	Wed 9/10/14	PM / Architect
Addt'l Payroll Analysis	Thu 9/11/14	Fri 9/12/14	PM / Architect

Edvantage SAMPLE Project Plan Draft, continued

Task	Start	Finish	Resource
Development	**Mon 9/8/14**	**Mon 9/29/14**	
Setup for instances	Mon 9/8/14	Tue 9/9/14	Programmer Analyst 1
Financial Calendar	Wed 9/10/14	Mon 9/22/14	Programmer Analyst 1
Entities	Wed 9/10/14	Thu 9/11/14	Programmer Analyst 1
GL Accounts	Wed 9/17/14	Fri 9/26/14	Programmer Analyst 1
Period Balances	Thu 9/18/14	Mon 9/29/14	Programmer Analyst 1
Journal Details	Thu 9/18/14	Fri 9/26/14	Programmer Analyst 1
Payroll	Mon 9/15/14	Wed 9/17/14	Programmer Analyst 1
Validation	**Thu 9/11/14**	**Mon 9/29/14**	
Financial Calendar	Mon 9/22/14	Mon 9/22/14	Client QA
Entities	Thu 9/11/14	Thu 9/11/14	Client QA
GL Accounts	Mon 9/29/14	Mon 9/29/14	Client QA
Period Balances	Mon 9/29/14	Mon 9/29/14	Client QA
Journal Details	Fri 9/26/14	Mon 9/29/14	Client QA
Payroll	Wed 9/17/14	Thu 9/18/14	Client QA
Infrastructure, Architecture, and Development Completed	Fri 9/26/14	Fri 9/26/14	PM / Architect
Prepare an Implementation Project Plan/Data Migration Plan	Wed 9/10/14	Mon 9/15/14	PM / Architect
Transition Strategy Approved	Mon 9/22/14	Mon 9/22/14	Client PM
	Mon 1/6/14	Mon 1/6/14	
Analysis and Reporting	**Thu 9/11/14**	**Wed 11/12/14**	
Analysis and Documentation	**Thu 9/11/14**	**Tue 9/16/14**	
Reporting Requirements Workshop	Thu 9/11/14	Thu 9/11/14	Content Architect
Performance Management and Dashboard Design	Thu 9/11/14	Tue 9/16/14	Content Architect
Development	**Thu 9/11/14**	**Wed 11/12/14**	
Small Cell Suppression	Thu 9/11/14	Thu 9/25/14	Reporting Specialist
Install Edvantage Standard Reports and Universes	Thu 9/11/14	Fri 9/12/14	Reporting Specialist
Custom Reports	Thu 9/11/14	Fri 10/24/14	Reporting Specialist[20(
Agreed Upon Set of Standard Queries Developed, Installed, and Accepted	Fri 10/24/14	Wed 10/29/14	Reporting Specialist
System Production Reports Created	Wed 10/29/14	Wed 11/12/14	Reporting Specialist
Validation	**Tue 9/16/14**	**Tue 9/23/14**	
Test Dashboard	Tue 9/16/14	Tue 9/23/14	Client QA
System Testing and Validation	**Mon 1/6/14**	**Fri 10/24/14**	
System Test Plan Creation	Mon 1/6/14	Fri 1/24/14	PM / Architect
Test Full Edvantage Daily Load/DW Built and Loaded	Mon 9/22/14	Thu 9/25/14	Database Analyst
Migrate Historical Data and Test Full Edvantage Daily Load	Thu 9/25/14	Thu 10/9/14	Database Analyst
Performance Tuning	Thu 10/9/14	Thu 10/23/14	Database Analyst
Unit and System Tested and Tuned	Thu 10/23/14	Fri 10/24/14	
Training	**Mon 1/6/14**	**Fri 9/26/14**	
Business Objects	**Tue 9/16/14**	**Fri 9/19/14**	
Web Intelligence	Tue 9/16/14	Wed 9/17/14	Trainer
Administration and Security	Wed 9/17/14	Thu 9/18/14	Trainer
Universe Design	Thu 9/18/14	Fri 9/19/14	Trainer
Edvantage Dashboard	**Mon 1/6/14**	**Fri 9/26/14**	
Prepare for Training Sessions	Fri 9/19/14	Tue 9/23/14	Trainer
Dashboard Basic Administration and Development Knowledge Transfer	Tue 9/23/14	Tue 9/23/14	Trainer
Dashboard Administration and Development Classroom Training	Wed 9/24/14	Thu 9/25/14	Trainer
End User Train the Trainer	Fri 9/26/14	Fri 9/26/14	Trainer
Electronic Training Modules	Mon 1/6/14	Wed 3/19/14	Trainer
End User Training Complete	Fri 9/26/14	Fri 9/26/14	PM / Architect
User Documentation Delivered	Fri 9/26/14	Fri 9/26/14	PM / Architect

Edvantage SAMPLE Project Plan Draft, continued

User Documentation Delivered	Fri 9/26/14	Fri 9/26/14	PM / Architect
System Administration Training	Fri 9/26/14	Tue 9/30/14	Database Analyst
Upgrade/Migraton Training	Tue 9/30/14	Wed 10/1/14	Database Analyst[50%
Professional Development Complete	Wed 10/1/14	Thu 10/2/14	PM / Architect
⊟ **Deployment**	**Mon 1/6/14**	**Thu 10/30/14**	
Business Objects Deployment	Wed 9/10/14	Thu 9/11/14	Reporting Specialist
Dashboard Install	Thu 9/11/14	Fri 9/12/14	Reporting Specialist
Web Interaction Tested and Implemented	Fri 9/12/14	Fri 9/12/14	Reporting Specialist
Business Objects Admin Knowledge Transfer	Thu 9/11/14	Thu 9/11/14	Reporting Specialist
Truncate Edvantage	Fri 10/24/14	Mon 10/27/14	Database Analyst
Run Production Migration and First Daily Load	Mon 10/27/14	Wed 10/29/14	Database Analyst
Provide On-site Troubleshooting Assistance	Wed 10/29/14	Thu 10/30/14	Database Analyst
System Administration Documentation Delivered	Thu 10/30/14	Thu 10/30/14	PM / Architect
System Operations Documentation Delivered	Thu 10/30/14	Thu 10/30/14	PM / Architect
Performance/Tuning Documentation Delivered	Thu 10/30/14	Thu 10/30/14	PM / Architect
Implementation Complete	Thu 10/30/14	Thu 10/30/14	PM / Architect
Technical Support Complete	Thu 10/30/14	Thu 10/30/14	PM / Architect
	Mon 1/6/14	Mon 1/6/14	
Project management	*Tue 2/4/14*	*Mon 6/16/14*	PM / Architect

Proposed Knowledge Transfer Plan

Versifit's training and knowledge transfer program is outlined below.

Constituent (User) Training

Versifit will provide both train-the-trainer and West Virginia constituent training for educational stakeholders—including executives, principals, and teachers—to learn about how to apply data to solve specific problems. A series of training workshops is conducted by Versifit trainers for West Virginia

Project Participation for State Personnel

Knowledge Transfer Workshops & Participation in Project Implementation

The knowledge transfer process begins early in the project. Specifically, our experienced educational consultants engage the state functional and technical subject-matter experts in a series of workshops during the project Discovery phase that introduces them and instructs them at a very granular level to important project topics like security, key performance indicators, and report content.

West Virginia functional personnel will participate in discovery and design workshops throughout the project. They provide requirements and they teach how to understand the new power and depth of the analysis capability now at their disposal. Versifit teaches them to think about data in new and unexpected ways and exposes them to analytical best practices from other districts around the country.

West Virginia technology personnel work with Versifit personnel as their time permits. A Knowledge Transfer plan is prepared during the Project Kickoff phase and West Virginia resources are scheduled to work on specific tasks for knowledge transfer.

Technology Training

Training for West Virginia technology personnel is again provided in workshops. During these 2 to 4 hour technical training workshops, we answer the following questions:

- What did we do?
- What tools did we use?
- How did we implement it?
- What do you need to know to use it?
- What do you need to know to run it?
- What do you need to know to administer it?
- What documentation exists to help you?

These workshops are often videotaped and notes are kept for follow-up. Each workshop includes technical documentation submitted to West Virginia in binders and soft-copy for reference.

We also conduct the following technical knowledge transfer workshops for West Virginia technical resources:

- Dashboard and Functional Overview
- Application Design
- Infrastructure Design
- Database Design
- Data Extraction, Transformation, and Loading Design
- Report Design
- Application Administration
- Application Maintenance and Enhancement

- ☑ Online webinars
- ☑ Manuals
- ☑ Online help
- ☑ Recordings of training classes for online distribution
- ☑ Materials for face-To-face end-user sessions
- ☑ Manuals for train-the-trainer session

Power User Training Specifics

Section 4 – Subsection 4.4. Project Goals: 4.4.3 Goal III: Analysis and Reporting

Requirement

The reports created through the DWRS will meet multiple purposes, including but not limited to:

- Federal and state reporting
- Supporting policy decisions
- Informing program development and evaluation
- Within and cross-state comparisons
- Linking validated data that are collected within and outside the WVDE's transactional system
- Providing on-the-fly and static reporting

Reports should be designed in such a way that they provide information about students, schools, counties, and the state using data available in the DWRS to help inform decision-making. The WVDE seeks, through the use of an interoperable electronic platform, to produce data-based reports that are timely, relevant, and usable to stakeholders including students, teachers, parents, administrators, policymakers, and the general public in traditional, as well as, innovative formats. Interpretability of this information will be enhanced through innovative graphic displays and print-optimized files.

Response

The Edvantage reports will meet all of the above requirements.

Some examples of Edvantage reports follows.

KPI's

Be it early childhood, monitoring graduation requirements, or measuring assessments, the Edvantage solution can store, analyze, and present the information.
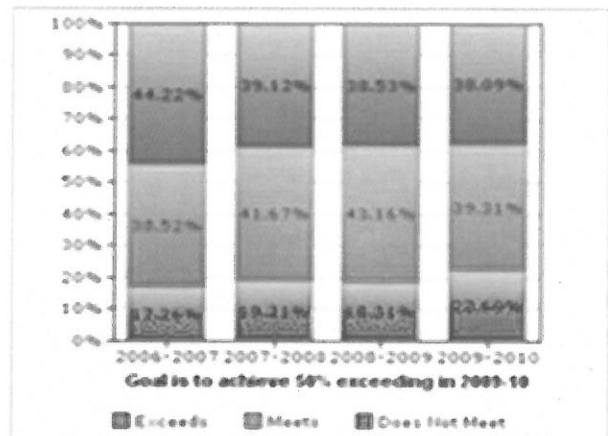
Reading Assessment Proficiency
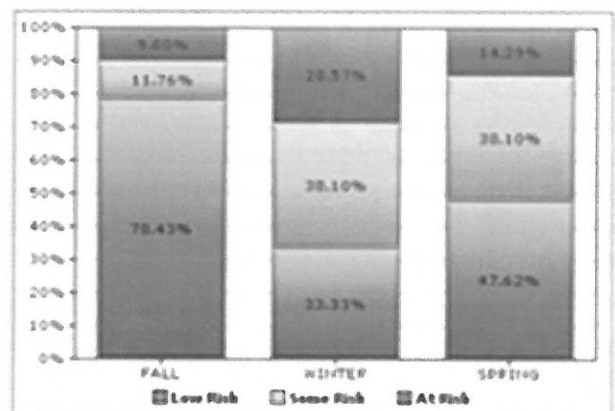
DIBELS Nonsense Word Fluency growth by offering
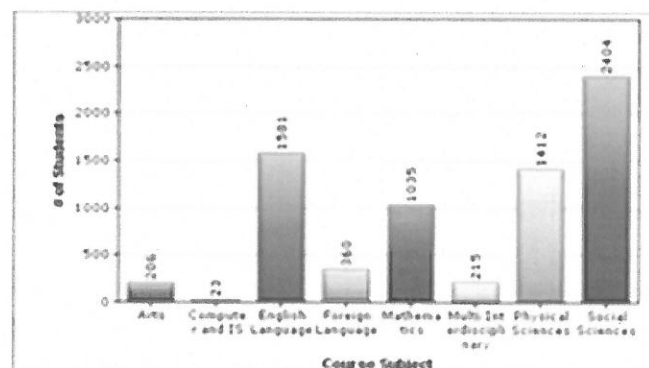
Students taking AP Courses
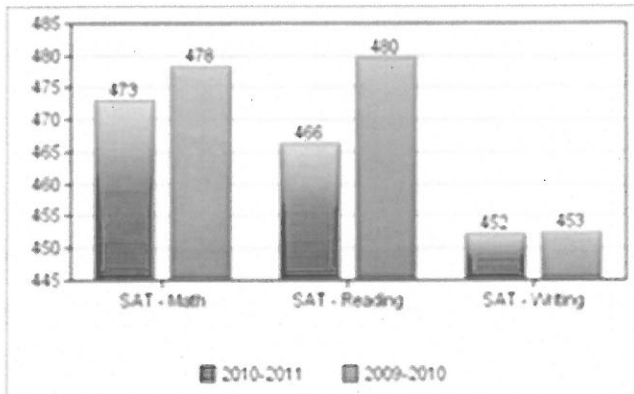
SAT Average scores by subject
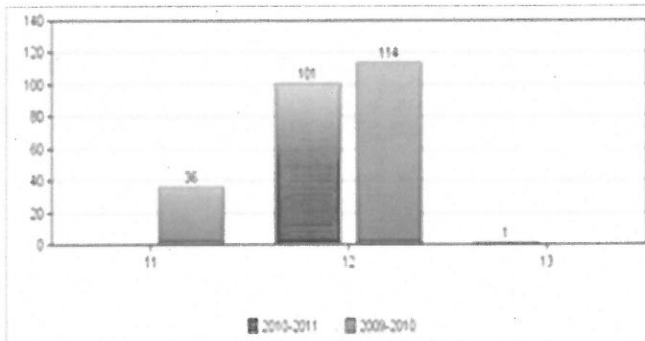
Number of ACT test takers by grade
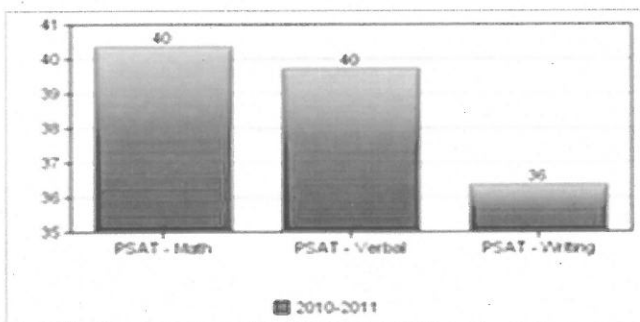
Average PSAT Scores by subject
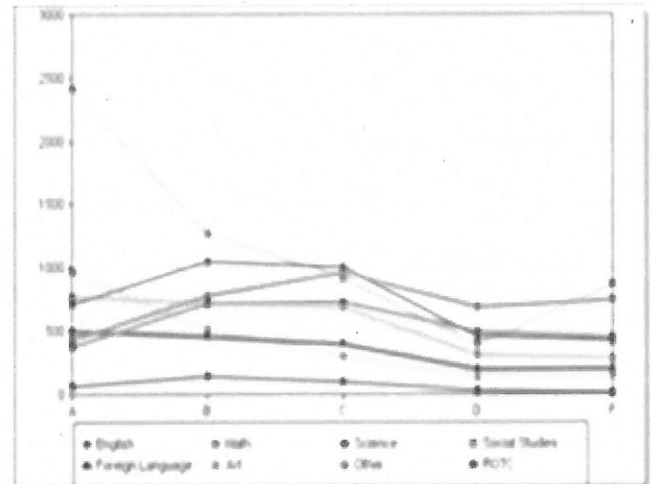
Distribution of marks by course subject
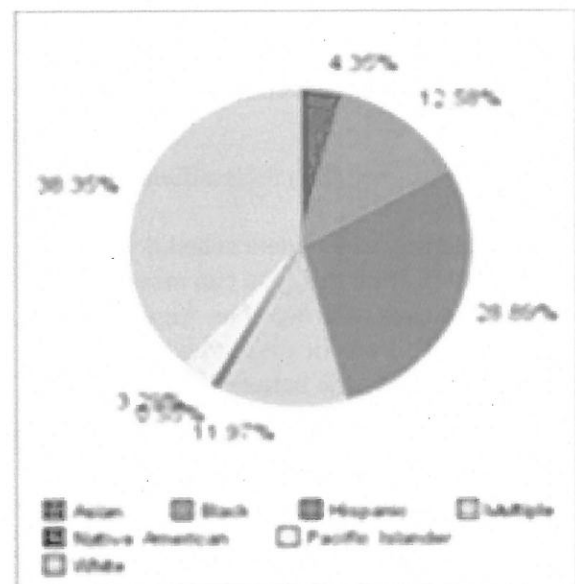
Ethnicity percentages

The assessment data model in Edvantage allows for analysis of KPI's relating to assessments. All test data can be presented by multiple grade disaggregation, including student current grade (cohort), student annual grade (8th graders year over year), and grade at time of test. This applies to every piece of student information.

Filtering allows you to show scores above/below a certain point. Banding can also be done to color code proficiency levels.

KPI example's

- Early literacy (PreK – 2nd Grade)
- Advanced reading achievement (3rd – 8th Grade)
- Advanced mathematics achievement (3rd – 8th Grade)
- Writing performance assessment (3 or higher at Grade 2, 4 or higher at Grades 6 and 9)
- AP (3 or better), IB (4 or better)
- SAT (1650+), ACT (24+)
- UC/CSU A-G course completion, C or better
- Exhibiting 21st century skills

We track the ELL classification level for each student so you always know what the student's current classification is and what it has been over time. ELL is also a standard filter allowing all content to be analyzed by ELL status.

- English Learner (EL) reclassification within six years

Course, Course Offering, and student schedule are all part of the data model. With this, you can measure how students are doing in each offering of an Algebra I course or combined. This can be disaggregated by grade to answer if different grades do better in an Algebra I offering than others.

- Algebra I, B or better (8th grade)

We have a robust model to store surveys for analysis

- Socio-emotional learning scale (SELS)
- Edvantage Dashboard: A simple tool for all users to get information: from a summary level down to an individual student level.
- Edvantage Ad-hoc: A powerful tool for power users to create reports and conduct detailed analysis.

Web-based Cross Browser Support

- The Edvantage toolset is completely **web-based** and can be used over any internet connection.
- **Same interface** is used for administration, development, and usage.

- It is tested in all browsers and platforms. This includes IE, Chrome, Firefox, Safari, Android phones, Android Tablets, Macs, IPad's, and IPhones.
- Same experience on all browsers and platforms.

Chrome

Safari

Firefox

Internet Explorer

Report – Create and Edit Process

Steps to create a report

Select a Universe
- Pre-built for each data domain

→

Select Data
- Columns
- Filters
- Prompts

→

Run Query
- Builds the data set you requested.
- Requests prompted values

→

Format Report
- Chart the data
- Add alerts
- Add sum, min, max, etc.

→

Publish for Users
- Publish to a folder for users to run the report
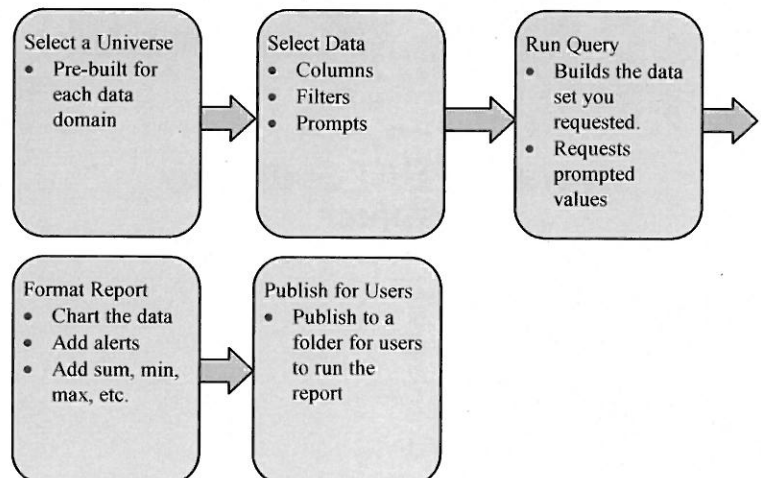
Steps to Edit a Report
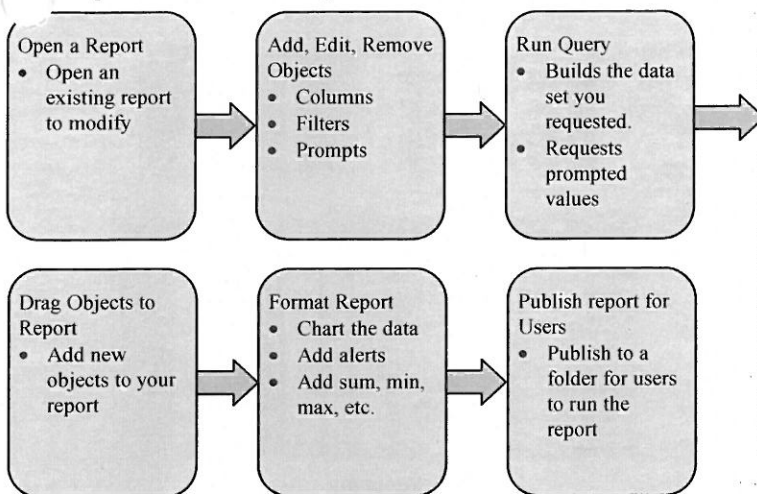
Interaction and Drilling
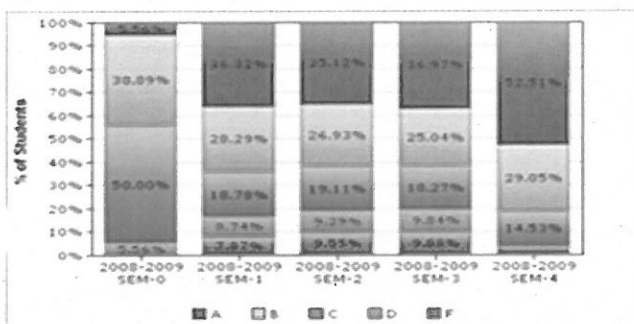
From a section of a bar in a chart

To a Student List   To a Student Profile

- Data can be disaggregated by any piece of data.
- Users can drill to other dashboards, reports, student lists, student detail, and URL's (to name a few) by left or right clicking on any chart element or data set.
- You can have any number of drill paths configured

Supported Measurements

- Widely-utilized measurements, such as count, sum, min, max, and mean, apply

throughout any data set, including analysis over time.
- Calculations such as correlation and regression are complex, but are also supported.
- District thresholds can be customized via the toolset.

Shows configuration of attendance threshold used in these charts

Shows how thresholds are applied to a data set
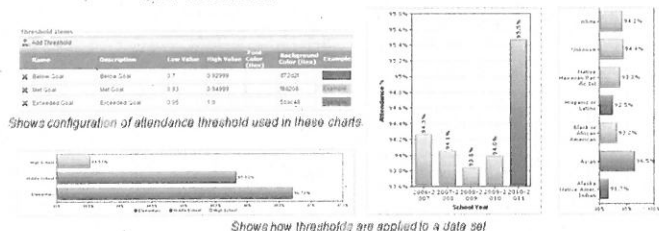
Content Delivery

- The Edvantage dashboard is a common delivery method for all dashboards and reports.
- Content/Data can be exported to excel or PDF.
- Publication is as easy as saving to a folder or using the built-in migration tool.

Showing Export functionality for a metric. Can be done from a dashboard or report as well

Cohorting

- Dynamic, Manual, and sourced cohorts exist.
- Dynamic cohorts are built by a data process to keep the list up to date.
- Sourced cohorts are loaded from another system that may store this information
- Manual cohorts are created by users on-the-fly. They can be created interactively through the tool from any list.

Cohort selection from a student list

Missing or Blank Data Points

- This is configurable by chart and data set.
- The values can be shown as blank, replaced, or hidden.

Shows handling of blank or no results

Data for Teachers

- Pre-built content for teachers
- Roster gives at a glance view of student information.
- Can drill to get the full profile of a student.
- Reports exist to look at student performance (gaining, maintaining, or falling)
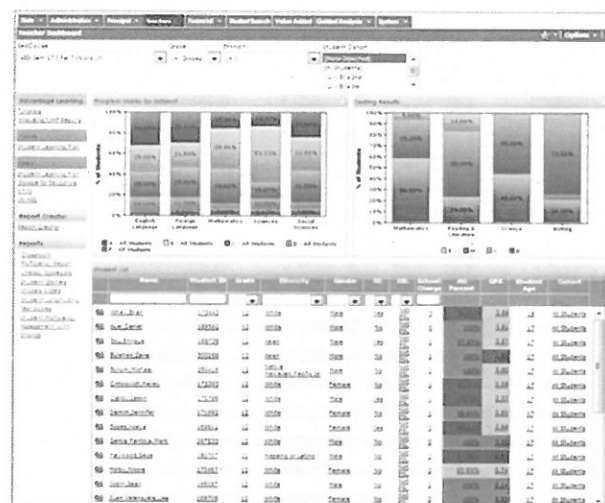
Teacher Summary

- Student Profile is available for every student.
- All student information is detailed.
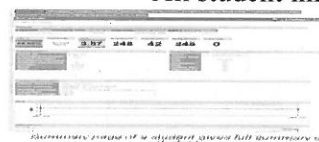
Common Core Reporting

This teacher dashboard outlines common core elements and associated proficiency.

Shows common core breakdown for Language arts for a specific course.

Student Growth

- Assessment information can be show at any level with any disaggregation.
- Individual student growth and projections can be shown with growth chart.

Compare Strand Level Data on Assessments

Shows strand level comparison for DIBELS for each offering that occurred in the current school year

Track Student Progress Towards Graduation

Shows a counselor view of the counselors students and their progress towards graduation

A Student's Progress Towards Graduation

Drill to an individual student and look at progress towards graduation

Finance Data
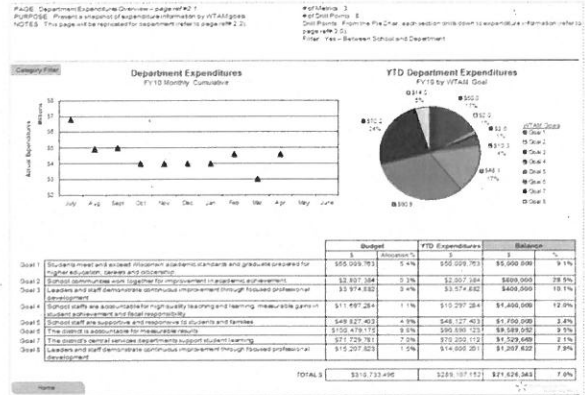
Financial reports are available if financial data is in the data warehouse.

Finance Data Compared to Goals
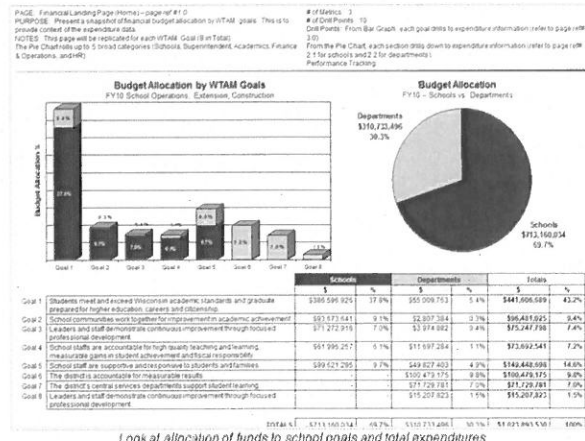
Look at allocation of funds to school goals and total expenditures
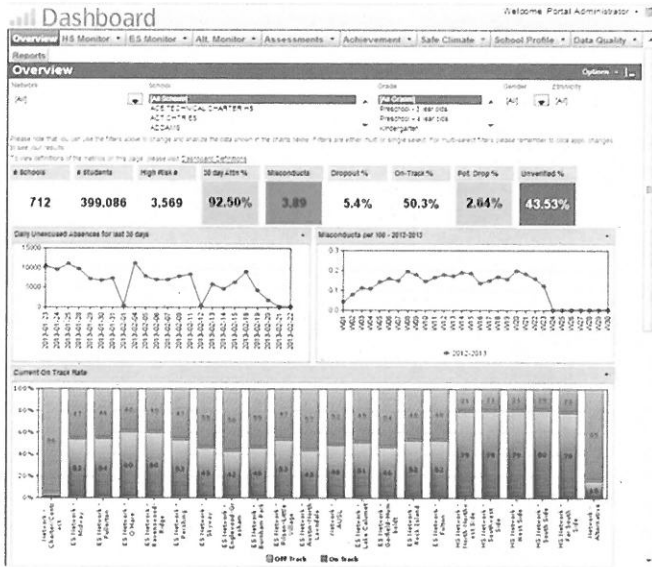
KPI Dashboard

KPI dashboard for Chicago Public Schools. Shows at a glance monitoring of KPI's. Also shows configuration to make the dashboard and navigation fit specific needs.

System Usage Dashboards
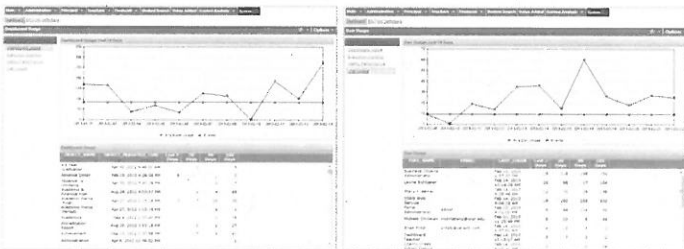
Monitor to see what dashboards are being used or not.

Monitor to see what users are using the dashboard, what they are using, and how often

System Performance Dashboards

See how the system is performing

See how each metric is performing and its individual impact on performance.

The project objectives for this goal are as follows:

Requirement

4.4.3.1. For the successful Vendor to develop flexible reporting tools that can pull from mapped elements within the data model and are integrated with the proposed DWRS solution for the WVDE. To meet this objective, provide responses for the following:
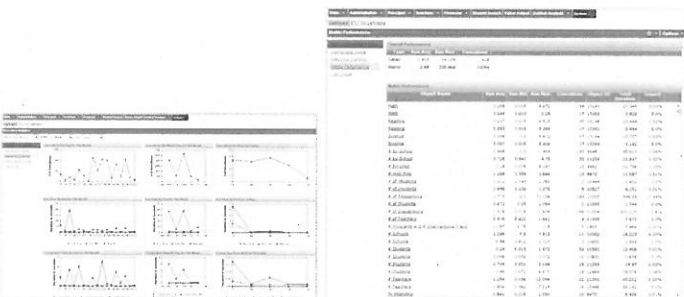
4.4.3.1.a. the proposed development, implementation, and training strategy to provide reporting tools with Web-based interfaces;

Response

The reporting tools provided in the Edvantage solution come pre-mapped to all of the available elements in the data model. This facilitates quick development of reports using the system.

For training information, see p. 49 of this Proposal.

Requirement

4.4.3.1.b. the proposed reporting tool and its features;

Response

Edvantage contains a powerful, yet intuitive set of administrative and reporting tools appropriate to both the kind of information that is being accessed and the user who is accessing the information.

The integrated Business Objects reporting suite is administered through web-based tools. For report development, WebIntelligence (WEBI) by Business Objects provides web-based report development and ad hoc analysis. It is the most commonly used tool for analytical content development and satisfies the majority of report requirements; however, it is not suited for highly complex report structures. Highly structured and complex reports are created through the client-based development tool Crystal Reports from Business Objects.

The Edvantage Dashboard is designed to be a central delivery mechanism for all of a state's reporting needs. Not only is the Edvantage Dashboard capable of

presenting all kinds of standard custom charts, it also seamlessly integrates with SSRS and other reporting tools. All of the content within the dashboard can be exported to multiple formats, queries can be shown to technical users, and content can be filtered dynamically with configurable filters.

Requirement

4.4.3.1.c. the steps proposed to develop, test, monitor, support, and revise as necessary, a reporting tool that can support the target number of concurrent and total users while applying suppression rules;

Response

The Edvantage solution is designed to track performance at every level to assure that all content is delivered to all types of users within the expected SLA(s). As part of each implementation, we conduct load testing to peak concurrent use to assure all expectations are met. Our solution has been tested to concurrently support 6,500 internal users as well as for public access. Data volumes have been in excess of 800,000 students with 7 years of available detailed history.

Requirement

4.4.3.1.d. how the tool allows all users to build custom reports while also applying privacy requirements, suppression rules, and user-access roles;

Response

The Edvantage solution provides completely pre-developed universes over our data model to facilitate the development of subsequent custom reports and ad hoc reports, while applying privacy requirements, suppression rules, and user-access roles.

Edvantage provides the end-user with the ability to create customized reports to select content from the available data sources and a menu of data fields from those sources to create multiple-measures reports. The available data sources include data that has been entered through the assessment management system (e.g., teacher-entered Mastery Manager scores).

The end-user can customize an automatically generated report if she or he has the correct permissions and can

also save the report with the correct permissions.

While our proposed solution is completely web based, it is a very mature design, which will allow for customization and personalization of the portal and dashboards without complex web programming. In most of our installations, all of the user interfaces are customized to conform to district style sheets and design conventions.

User Authentication

All users have unique ID's and required passwords as their login credentials, regardless of the security repository used. Users cannot access the system without authentication and membership in a defined group. These credentials are required for login with every session a user opens. Anonymous, generic, or default logins are not allowed. Privilege escalation protection is inherent in the security challenges for every session. Users never have access to any underlying security model to be able to make alterations. Users of the Edvantage Solution do not have access to the underlying databases. All data requests for Dashboards and reports are executed by the application server (proxy accounts). Every session has a designated inactivity timeout period that is configurable, but should be set within an upper range of no more than 10 minutes due to the sensitivity of the content.

This security level identifies a user and verifies correct user name and password. The Edvantage Dashboard supports Active Directory (AD), Lightweight Directory Access Protocol (LDAP), and custom security repositories; and is capable of heterogeneous authentication (can use multiple directories in the same instance to authenticate a user). We recommend where feasible that a local AD or LDAP repository be utilized, but this can be difficult in some regional or state deployments. In these cases, we advocate either the creation of a separate AD or LDAP repository for the region/state, or the use of our application's security repository for authentication. Single-Sign-On (SSO) is possible with the proposed solution so long as the conditions required by the authentication engine are met.

Content Access

Reports and data are protected through the underlying security model. Administrators create groups with defined roles and then they assign users to these groups according to their data needs. Users are thus granted permission to access reports, databases, tables, fields, or even individual records, according to their defined roles and groups.

Dashboard users are classified into groups and each group has a defined level of access to content (i.e. Reports/Analyses, Dashboard Pages, Metrics, etc.). These groups are defined in the Dashboard. If LDAP or AD is used for authentication, the groups are typically defined there as well and then mapped into the corresponding Dashboard groups (more on this below).

Row-Level Data Access

Based on data that associates Dashboard users to a subset of data (e.g. schools or students), users are presented with data sets specific to their scope of responsibility. The Edvantage Solution provides a comprehensive model for the definition and maintenance of row-level security which will leverage the row-level definitions in the district's student management system.

The Edvantage Solution has a role-based security model which can restrict access at the object level. The groups (roles) of security repositories such as LDAP or AD are utilized to provide access to the Edvantage Solution and to the content it contains. All of the required layers of security (Folder, Content [Dashboard or Report], Table, Column, or Row) can be managed by group or role. The roles or groups defined in the Student Management System (SMS/SIS) provide access to the data presented in that content (reports or dashboards); consequently, a teacher only sees the reports and dashboards designated for her role, and then she only sees the data on those reports or dashboards for the students she has in her classes.

The Edvantage Solution leverages the data pertaining to a staff member's data in the underlying SMS. We link authenticated users to their corresponding logins or teacher/staff records in the SMS and load our own row-level security tables. Our security tables have user interfaces to augment the security definitions of the SMS so that individuals requiring row-level access to the analytical data, but who are not defined in any way in the SMS, can have restricted access. These security tables are joined to the analytical data tables in the semantic metadata of the reporting and analysis software.

Heterogeneous Security Model

The heterogeneous security model offers a unique layering of security policies. It is flexible enough to allow for global and regional security policies to be applied to any user because it uses multiple directories in the same instance to authenticate a user. Combined with the role-based or row-based security policies, hierarchical delegation of control can be restricted to specific classes of users, groups, sites, and modules.

Hardened Security

The Edvantage Solution is hardened and resistant to internal and external compromise. The security model and application are kept up-to-date with the latest security patches. Any and all vulnerabilities are addressed in an immediate fashion.

Encryption

To protect sensitive data (content, passwords, etc.) encryption is employed in three ways within the Edvantage Solution.

- Passwords for local users and database connections are encrypted with a 128-bit key and the private key itself is encrypted with another internal key.
- We recommend that SSL certificates be created or acquired to secure communications among the remote connections to the application servers. All of the applications in the Edvantage Solution support SSL.
- Transfers of data between the Districts and the State should be encrypted. We recommend transferring this data via a password-protected, compressed data file through an encrypted FTP tunnel (we support either FTPS or SFTP).

Safe SQL

The applications in the Edvantage Solution are written to protect against SQL insertion attacks and test any values which will be added to the dynamically generated SQL. The Edvantage Dashboard goes further, only allowing for entry of string values in the login screen and in the restricted access administrative/developer interfaces.

Family Educational Rights and Privacy Act (FERPA)

The Edvantage Solution takes every measure to protect privacy and private information. Through the encryption, authentication, and access controls described above, the solution supports the FERPA and state-specific privacy laws, prevents data compromise, and strengthens the system from unauthorized access. Data is secured and confidential with uncompromised data integrity.

Requirement

4.4.3.1.e. how the proposed reporting tool can provide varying levels of security access for running reports, creating reports, publishing reports, and any other needed reporting functionality for users;

Response

The Edvantage solution has a role-based security model which can restrict access at the object-level. The groups (roles) of security repositories such as LDAP or AD are utilized to provide access to the Edvantage solution and to the content it contains. All of the required layers of security (Folder, Content [Dashboard or Report], Table, Column or Row) can be managed by group or role. The roles or groups defined in the Student Management System (SMS/SIS) provide access to the data presented in that content (reports or dashboards). So a teacher only sees the reports and dashboards designated for her role, and then she only sees the data on those reports or dashboards for the students she has in her classes.

Requirement

4.4.3.1.f. how the product is scalable.

Response

There are several Edvantage features that address scalability and performance requirements:

- The analytical data models in the federated data warehouse architecture of the solution follow the mature star-schema design approach used by the predominant BI community. This design has been used for more than 30 years for its high performance characteristics and is considered

the optimal design for very large data sets. There are a variety of steps that may be taken to support data growth. Increased indexing and partitioning of the data are the most common and the latter is supported with the proposed solution. However, Versifit recommends additional disk arrays.

- The proposed Edvantage ETL has been utilized in school districts sized from 10,000 to 150,000 active students and in regional and statewide deployments to about 700,000 students. The initial deployment utilizes only modest multi-threading and parallelization, and both the threads can be increased and tasks can be more parallelized within the metadata to provide throughput increases.

- Edvantage is a browser-based solution with the workload on the server, which means that scalability can be easily managed within the host environment.

- The recommended architecture distributes the longitudinal data system workload across multiple servers, which means that scalability can be easily managed within the host environment.

- The embedded reporting and analysis software is built with a service-oriented architecture (SOA) in multi-tiered web services architecture to allow the system to grow and evolve with the increased data load or changing environments. Edvantage can be scaled vertically or horizontally to meet performance requirements.

The Edvantage solution Database and Application Servers are provided with the Edvantage solution. These servers are optimal for the type of analytical performance required of large districts. They scale to meet anticipated growth and reporting requirements. Versifit provides the space requirements and plugs them into the current district environment. All configuration and optimization is done by our skilled team. These servers make the installation of the educational, analytical environment quick and easy.

Requirement

4.4.3.1.g. the design principles, design elements, proofing process, style guide, and signature sign-off procedures for electronic and print-on-demand reports; and

Response

Versifit will work with West Virginia to meet your unique requirements and finalize all design principles, design elements, proofing processes, style guide, and signature sign-off procedures for electronic and print-on-demand reports.

Requirement

4.4.3.1.h. the capacity that the creation and modification of reports can also be carried out via a thin client or thick client. Specify whether the proposed reporting tool includes a thick client as well as a thin client, and if so describe which features are available in each.

Response

Edvantage is fully web-based, with no processing or software running on the user's PC.

Requirement

4.4.3.2. To provide reports that have drill ability up, down, and through data, and export capabilities, based on role-level access, as specified in Goal 1. To meet this objective:

4.4.3.2.a. describe in detail how the proposed solution allows users to drill up, down, and through data in any relevant report while adhering to user-access roles, privacy requirements, and suppression rules;

Response

All multi-dimensional analysis—drill-down, drill-through, drill-up, and drill-across—are available. These capabilities are available across tools, and the Edvantage Dashboard can drill through to any reporting content. Edvantage reporting supports drill-through to any external applications or content via URL. Drill-context can be passed in the drill action. For example, clicked student ID can be passed to Systems Management Server (SMS).

Requirement

4.4.3.2.b. describe in detail how the Vendor allows users to configure reports to adjust the parameters;

Response

Reports are web-based and feature filters sometimes referred to as parameters, as well as the capabilities of drill-down and roll-up, to meet statewide reporting requirements, along with longitudinal analysis that enables users to see the data at different levels of detail.

There is a very rich, diverse, and flexible parameter list for all reports and dashboard elements. Common filters (parameters) include District (All), Grade Groups, School, School Year, Gender, Race, CWD, ELL and Disadvantaged. Other parameters include cascading prompts, computations, calculations, defined lists, or user inputs. Parameter lists can be configured as to quantity and value by the developers or the end-users (with the proper permissions).

Requirement

.4.3.2.c. describe in detail how the proposed solution will allow for exportable files in multiple formats that pull from the DWRS while adhering to user-access roles, privacy requirements, and suppression rules. Specify the formats in which the proposed solution will be able to export files, the development process used to make reports exportable, and the way in which end-users will access tools to export files.

Response

Edvantage adheres to user-access roles, privacy requirements, and suppression rules while being able to export the data in all of the most commonly requested formats: Excel, PDF, CSV, and Word. This feature can be disabled by user or role. The Edvantage solution also has a proven means to extract data from virtual storage access method (VSAM) files as well as the advanced capability to export data to SPSS, SAS, or Excel.

Section 4 – Subsection 4.4 Project Goals: 4.4.4 Goal IV: Professional Development

Services

The project objectives associated with Goal 4 are listed below:

Requirement

4.4.4.1. To develop a training plan that demonstrates the capacity of the Vendor to deliver the training, demonstrate evidence of enhancing the capacity of training recipients, and to demonstrate differentiated training goals and methods for WVDE developers/programmers, train-the-trainer recipients who will disseminate information/provide training, and end-users.

Response

Training

Constituent (User) Training

Versifit will provide both train-the-trainer and West Virginia constituent training for educational stakeholders—including executives, principals, and teachers—to learn about how to apply data to solve specific problems. A series of training workshops is conducted by Versifit trainers for West Virginia:

Project Participation for State Personnel

West Virginia will participate in knowledge transfer and training that includes the following services:

- Project Participation for West Virginia Personnel
- Technology Training

Project Participation for District Personnel

Knowledge Transfer Workshops & Participation in Project Implementation

The knowledge transfer process begins early in the project. Specifically, our experienced educational consultants engage the district functional and technical subject-matter experts in a series of workshops during the project Discovery phase that introduces them and instructs them at a very granular level to important project topics like security, key performance indicators, and report content.

West Virginia functional personnel will participate in discovery and design workshops throughout the project. They provide requirements and they teach how to understand the new power and depth of the analysis capability now at their disposal. Versifit teaches them to think about data in new and unexpected ways and exposes them to analytical best practices from other districts around the country.

West Virginia technology personnel work with Versifit personnel as their time permits. A Knowledge Transfer plan is prepared during the Project Kickoff phase and West Virginia resources are scheduled to work on specific tasks for knowledge transfer.
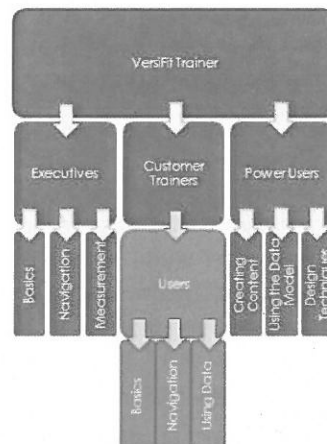
Technology Training

Training for West Virginia technology personnel is again provided in workshops. During these 2 to 4 hour technical training workshops, we answer the following questions:

- What did we do?
- What tools did we use?
- How did we implement it?
- What do you need to know to use it?
- What do you need to know to run it?
- What do you need to know to administer it?
- What documentation exists to help you?

These workshops are often videotaped and notes are kept for follow-up. Each workshop includes technical documentation submitted to West Virginia in binders and soft-copy for reference.
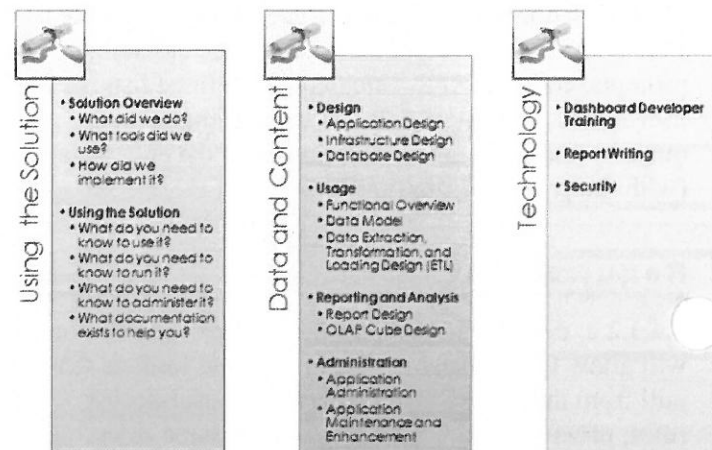
We also conduct the following technical knowledge transfer workshops for West Virginia technical resources:

- Dashboard and Functional Overview
- Application Design
- Infrastructure Design
- Database Design
- Data Extraction, Transformation, and Loading Design
- Report Design
- Application Administration
- Application Maintenance and Enhancement.

- ☑ Online webinars
- ☑ Manuals
- ☑ Online help
- ☑ Recordings of training classes for online distribution
- ☑ Materials for face-To-face end-user sessions
- ☑ Manuals for train-the-trainer session

Power User Training Specifics

Requirement

4.4.4.2. To conduct training sessions and create training modules, both initial and follow-up, with differentiated goals for WVDE developers/programmers using face-to-face trainings, supporting documentation, and resources to support this group, train-the-trainer recipients who will disseminate information/provide training within WVDE, to school and district users, and to other public-facing users who wish to access the publicly available portions of the SLDS; and end-users that include both electronically mediated modules and print-ready resources.

Response

The necessary documentation will be created as part of the project. The materials themselves can be distributed through the Edvantage dashboard to all users based on role or through another mechanism available through the state.

Requirement

4.4.4.3. The contractor should be on-site at WVDE to (1) install and implement the DWRS in a test environment, with the intent of ultimately moving it to a live environment; (2) to train 2-5 technical support staff on installation and maintenance of all components of the DWRS; (3) to train 5-10 functional experts on use of the reporting tool to build, modify and run reports; (4) to train 2-5 technical support staff on use of the ETL tool to modify delivered mappings and create new ones.

Response

Versifit personnel will be on-site for all of the appropriate and necessary requirements.

Section 4 – Subsection 4.4 Projects Goals: 4.4.5 Goal V: Project Management

The project objectives associated with Goal V are listed below:

Requirement

As part of the WVDE's PK-12 SLDS initiative, the fifth goal of the project is to have a comprehensive and responsive management plan that supports the development and execution of the DWRS and all associated goals stated in this RFP. The WVDE believes that strong project management is paramount to an initiative's success and it should include an efficient and complete communication strategy to support WVDE with the goals and objectives within this RFP.

In addition, holistic project management should allow the state to understand the scope and sequence of the project through access to clearly articulated project schedules, staffing allocations, proposed timelines and deliverables, success metrics, phasing, issue and risk management, tracking, and resolution.

Response

A strong project management foundation is the key to your success and project management is the value driver that helps your organization gets the most out of its performance. Project management improves your

processes and ensures that you're not just executing randomly and aligns your projects to your business strategy and needs, making sure those projects are delivering results that facilitate your goals. The bigger and more complex a project gets, the more you need formal processes and techniques to effectively manage the work to define the project plan, manage the work plan, manage issues, risk, scope, communication, documentation, quality, and metrics. One of the many skills required of a project manager is the ability to ask searching questions and persevere until a clear answer is obtained. Many of the pitfalls in projects could be avoided if questions were articulated fully and if the answers were given clearly and in detail at the beginning of the project and continuing throughout the project.

The Celero project management team are all highly experienced in the process of controlling the achievement of project objectives and utilizing the existing organizational structures and resources to manage the project by applying a collection of tools and techniques, without adversely disturbing the routine operation of the company. Assigned to drive and lead this project is Celero Project Manager and Education Expert Daryl Landavazo.

As Project Manager, Daryl will manage the daily activities of the project team and participate in key deliverable activities. This multi-disciplinary team member is responsible for establishing the change control process, meeting deliverable time frames, participating in team deliverable creation, managing communications, and overseeing change management activities of internal and external team members. Responsibilities include the development and delivery of all Project Management Deliverables including the elements of the Project Management Plan and driving and managing the overall strategy and business unit related to Decision Support and Data Warehousing within the WV State l Data Warehouse System project. Additionally the Project Manager will help identify and manage partners, projects, people and budgets.

Requirement

4.4.5.1. To develop a comprehensive project management plan to drive project success in Goals 1 through 5. As part of this project management plan, the vendor should provide a complete description of proposed project management tools, which include

samples from previously completed projects, processes, and deliverables that will be used to manage the work of the Vendor and all interactions with the WVDE. It should be clear from the description that the Vendor has the capacity to implement and manage a project of the size and scope of the WV SLDS Initiative.

Response

Versifit and its partner Celero are assigning an experienced Project Manager that is fully knowledgeable in all PMI tasks and responsibilities. Additionally, Versifit has a successful track record of SEA SLDS implementations for Oregon, Hawaii, and Wisconsin.

Versifit and the Celero Team view project management as a strategic competency. For projects of this magnitude, Versifit tailors our project management activities to meet the requirements in an aggressive timeline. Utilizing our proven comprehensive framework, we plan, estimate, control, and track the project in a consistent manner. The objective of good project management is to deliver Edvantage on time, on budget, and exceeding requirements. Additionally, we are committed to a high degree of Knowledge Transfer, which we provide through our Joint Design and Development Approach to empower you with self-sufficiency.

Project Management Processes

All project management tasks are organized into five processes to help project managers understand what project management tasks need to be performed for a successful project. The business intelligence project management processes are:

- **Control and Reporting** - Addresses tasks that help you determine the scope and approach of the project, manage change, establish effective communications and resolve issues. It contains guides for you to control using the project management plan and to report project status.
- **Work Management** - Addresses tasks that help you define, monitor, and direct all work performed on the project. You also maintain a financial view of the project.
- **Resource Management** - Addresses the right level of staffing and skills, and the working environment to support the project.

- **Risk Mitigation and Quality Management** - Addresses tasks and quality measures to make sure that the project meets the organization's purpose and expectations throughout the project life cycle.
- **Configuration Management** - Addresses tasks that help you store, organize, track, and control all items produced by and delivered to the business intelligence project. The Configuration Management process also calls for you to provide a single location from which all project deliverables are released.

Joint Design & Development Approach

The success of a project relies on many factors. Versifit believes one of the most important factors is the cooperation and communication of both the WV and the Versifit teams. To accomplish this blending of teams, Versifit will utilize the following practices:

- **Joint General Project Management**–Jointly develop high-level project plan and guide WV resources on salient project steps. Versifit will also participate in project status meetings and conference calls
- **Discovery & Design Meetings and BI Mentoring Sessions**–WV and Versifit will participate in ongoing discovery and mentoring sessions. Each session should last no more than two hours. These sessions provide the insight and information necessary to deliver a successful, high-quality implementation. They are also the optimal mechanism for knowledge transfer of Versifit's project methodology and deliverables.

The Project Work Plan will be maintained throughout the project, and updated daily or on a weekly basis at a minimum. The Project Work Plan, along with a Status Report, will be the basis of the Managers' Weekly Project Status Meeting, which will cover progress, plans, and issues. This Status Meeting ensures no surprises to either the client or the vendor, and keeps management aware and involved throughout the project lifecycle.

Requirement

4.4.5.2 To engage in effective communication strategies that bring the communication plan to fruition. The specifications for this objective include:

4.4.5.2.a. detailed plans to the WVDE around creating engaging, effective electronic communications for use with the SLDS initiative and camera-ready electronic and print-optimized content for posting on the WVDE's SLDS Web site; and

Response

The goal of communication is of course to provide the most accessible, complete, and accurate management system, in order to implement the deliverables of the project as effectively as possible, on time and under budget. Various media will be employed, such as emails, reports, phone messages, weekly status meetings, workshops, etc., in a timely manner. Status meetings will handle issues, risks, etc., during both weekly meetings and ad hoc meetings.

Requirement

4.4.5.2.b. a detailed description of how the Vendor prepares and disseminates appropriate communications to personnel identified by the WVDE to ensure that all critical staff members are fully informed about the project development and execution.

Response

Project Communication Plan

The Key Stakeholders table and Project Communication table presented on the following pages have been prepared to identify key State Longitudinal Data System project stakeholders and project management office participants as well as the project communication documents. The Key Stakeholders table contains the name, project role, state department, title, phone #, and email address of the stakeholder. The Project Communications table contains the document name, recipients of the documents, the author (person responsible for creating and updating the document), how often the documents need to be updated and where the document is stored (artifact location).

Key Stakeholders Table

Name	Project Role	Department	Title	Phone #	Email Address
	Executive Sponsor	Information & Technology Services	Chief Information Officer (Project Sponsor)		
	Stakeholder	Chief Education Office	Chief Education Officer		
	Stakeholder	Research, Evaluation & Accountability	Officer		
	Stakeholder	Applied Research	Interim Director		
	Executive Sponsor, PMO	Information & Technology Services	Deputy Chief Officer		
	Stakeholder, PMO	Strategy & Planning	Associate Planner		
	Project Manager, PMO	Diamond Consulting	Dashboard Phase 3 Project Manager		
	Project Team, PMO	Diamond Consulting	Senior Consultant		

Project Communications Table

Document	Purpose	Recipients	Author	Update Frequency	Artifact Location
Status Report	Update stakeholders on progress of the project.	PMO	Project Leader/Coordinator	Weekly – Issued EOD Friday	VFX
Executive Status Report	Update project sponsors & stakeholders on progress of the project.	Project Sponsors, PMO	Project Leader/Coordinator	Monthly – Issued EOD Last Friday of the Month	VFX
Risk Management Document	Update project stakeholders on project obstacles & ways to mitigate/eliminate risks.	PMO	Project Leader/Coordinator	Weekly – Updated EOD Friday	VFX
Issue Management Document	Create a record of project issues for resolution.	PMO	Project Leader/Coordinator	Weekly – Updated EOD Friday	VFX
Change Control Document	Describe project scope changes, estimate their impact, cost & disposition.	Project Sponsors, PMO	Project Leader/Coordinator	As Required	VFX
Project Plan	Project phase & tasks document used to track progress against plan.	PMO	Project Leader/Coordinator	Weekly – EOD Friday	VFX
Project Team Meetings	Coordinate & align scheduled tasks for following week.	All Teams	Project Team Lead	Weekly – Friday PM or Monday AM	VFX
UI, Dashboard, Report Demonstrations	Get approval on design and content.	Project Sponsors, PMO	Team Lead	Prototype for August End, Domain Completion Ends	Dev Link
Security Audit	Independent review for security design compliance.	Project Sponsors, PMO, Versifit	Security Auditor	Once at Completion of Security Audit	VFX
Notice of Completion of Milestone & Deliverables	Communicate end of a project milestone and related deliverables.	PMO	Project Lead/Coordinator	End of Project Milestones	VFX

Project Team Meetings

The Project Team meetings are held on a regular basis to facilitate communication of critical project status and issues. Project Team meetings address the following project related information:

- Project status, progress, and performance.

- Changes to project scope, direction, and schedule.
- Critical project risks and issues, recommendations, and resolutions.

Any action items identified within the Project Team meetings are documented and actions are taken by Project Management. Project Management reports back to the Steering Committee.

Weekly Project Status Meetings

Status meetings will be held once a week. The status meetings will be chaired by the WV Project Manager and attended by project leaders, the Integration Partner Project Manager, and other personnel as appropriate. The list below shows the items that the Project Manager will deliver as part of the status reporting procedure:

Weekly status meetings standard agenda items:

- Tasks Completed this Week
- Tasks Scheduled for Next Week
- Project Plan Review
- Issues
- Risks

Section 4 – Subsection 4.4 Project Goals: 4.4.6 Goal VI: Transition Strategy

The objectives for this goal include:

Requirement

4.4.6.1. To transfer the program and all associated deliverables to the WVDE by project conclusion. The responses to this objective should provide

4.4.6.1.1. Detailed information regarding the duration of the proposed transition plan, including transition meetings, core transition team members, FTEs required for transition team, administrative rights and access to all project deliverables;

Response

VersiFit will provide a formal detailed transition plan covering these requirements. As a deliverable of the proposed implementation, VersiFit provides a complete data warehouse design knowledge transfer session with the purpose of providing the district resources with a

solid understanding of the design and a comfort-level to extend the model as required.

Requirement

4.4.6.1.2 A detailed schedule for the transition that presents a sequential, step-by-step description of the tasks or events and a timeline for the transition of materials and procedures; and

Response

Requirement

4.4.6.1.3 Detailed information on maintenance for the software and hardware, if applicable to successfully support the DWRS.

Response

Note: Client is responsible for maintaining the hardware unless Premium Support is purchased.

Versifit Support Plan

Versifit offers three levels of support, or we can tailor a solution to meet your needs.

Product Maintenance
- Software Upgrades
- Fixes
- Enhancements
- Help Desk

Service Agreements
- Pre-Paid Hours for Any Service
- Does NOT Expire

Premium Support Agreement
- Augments Internal Staff
- FTE -Based (0.5/1.0/1.5) System Administration Support and Services

Product Maintenance & Support

Edvantage includes a standard software support program, described below.

Coverage

All programs offer coverage from 8:00 am through 6:00 pm Monday through Friday Central Time excluding the standard U.S. holidays (10 days each year listed on the Versifit and K12Intelligence.com web sites).

All programs will be renewed on July 1 of each year. Fees for maintenance purchased after July 1 will be pro-rated for the remainder of the period through June 30.

Number of User Support Contacts

- Maintenance Contacts: Five (5) experts from your organization may be designated to lead the Edvantage relationship with Versifit Technologies. For an additional fee, you can assign more contacts.
- Support Contacts: Support contacts are limited to 3 pre-registered individuals per customer. The customer will assign a main contact. Authorized third party contractors may be registered for contact.
- Primary Support Contact: This contact is the only one authorized to change who is a contact for the client or other client information in the system. This person can create a case.
- Primary Deployment Technical Contact: This contact receives all bug fixes, enhancement code, etc., and is our primary point of contact for our development team when we are developing, testing, and deploying new code. This role must be able to coordinate with the client DBAs and applications and infrastructure staff.
- Secondary Technical Support Contact/s. These are the technical team leaders at the client who will also be responsible for the Edvantage Solution site support and content development.
- A web-form will be sent to each participating customer to identify his or her contacts.

Case Logging

Telephone Case Logging: A central contact point offers you telephone access to report issues during standard business-day hours.

Online Case Logging: Access when you need it. There is a 24/7 online application to log new cases and, as available, track and update case information.

Means of Contact: Versifit will provide three the standard approaches to communicate product issues to the product maintenance team.

Online – The primary means of communicating product issues to the Edvantage Solution maintenance team will be by logging in and creating a case at http://support.k12intelligence.com. In addition to being able to clearly communicate the issue (including posting documents and screen images), the creation of a case online will immediately send emails and cellular text messages to the on-call engineers. This approach provides immediate feedback in creation of the case & reference number as well as traceability for both the client and Versifit. All maintenance cases can also be viewed and maintained from the Versifit Extranet (VFX). If your Edvantage Solution environment is offline, please set the priority of the case to the "1" for *priority* routing.

Phone – Clients on maintenance can call the maintenance team directly at 800-610-1313 option 2. This line should be covered during standard business hours but is not necessarily the quickest means of communicating your issue (the online method will send immediately notify the on-call Versifit staff). If your Edvantage Solution production environment is offline, please contact Versifit on this line as well as creating a case online.

Email – Product issues can be emailed to the maintenance team at support@k12intelligence.com. These messages will be forwarded to the on-call technical support engineer and manager. If your Edvantage Solution production environment is offline please include "URGENT SYSTEM OFFLINE" in the email reference and also call the team at the phone number referenced above

Communications to the maintenance team should include the following:

- A complete description of the issue including an error numbers and/or messages and/or examples such as SQL statements or production keys

(Student ID, Course Sections, etc.)

- If the issue is intermittent or is regular and can be reproduced.
- The environment (browser & operation system versions, hardware) if it is a client issue
- If you should be contacted at an alternate phone number or email than the one on record provide those
- A priority rating (following those listed below)

Self-Service Online Reporting: With access to a case/issue summary report, you are better able to identify recurring issues that may be resolved with consulting or education services.

You and the Edvantage Solution product support engineer will work together to assign the appropriate severity level to your case. The severity level assigned will reflect the nature and urgency of your case. A lower severity level does not mean that the development team devotes less time or energy to resolving your problem quickly and efficiently.

Note: When possible, the Product Support team will attempt to provide a workaround for your case until the problem can be resolved. Descriptions of case severity levels and response time guidelines can be found below.

| Rating	Initial Response Goal	Update Frequency Goal	Case Classification
Priority 1	1 Hour	2 Hours	The Edvantage production environment is 80-100% unavailable from either a technical or business perspective.
Priority 2	2 Hours	1 Day	The Edvantage production environment is 20-80% unavailable from either a technical or business perspective.
Priority 3	4 Hours	3 Days	The Edvantage production environment has failed to perform a non-mission-critical task and is 1-20% unavailable. The problem is deemed one that can be worked with in the short term. The Edvantage Solution development environment is 0-100% unavailable.
Priority 4	8 Hours	5 Days	A minor problem, which does not make the production or development environment unworkable, is not related to a system failure.
Priority 5	1 Day	None	Content Development Support or "How-To" Inquiries

* Response goals are in business hours & days – if a Priority 1 issue was reported in the evening we would strive to respond within the first business hour of the next business day.

Service Agreements

Versifit offers reasonably-priced Service Agreements for non-maintenance items such as:

- How-To
- Content Development
- Customizations.

Premium Support
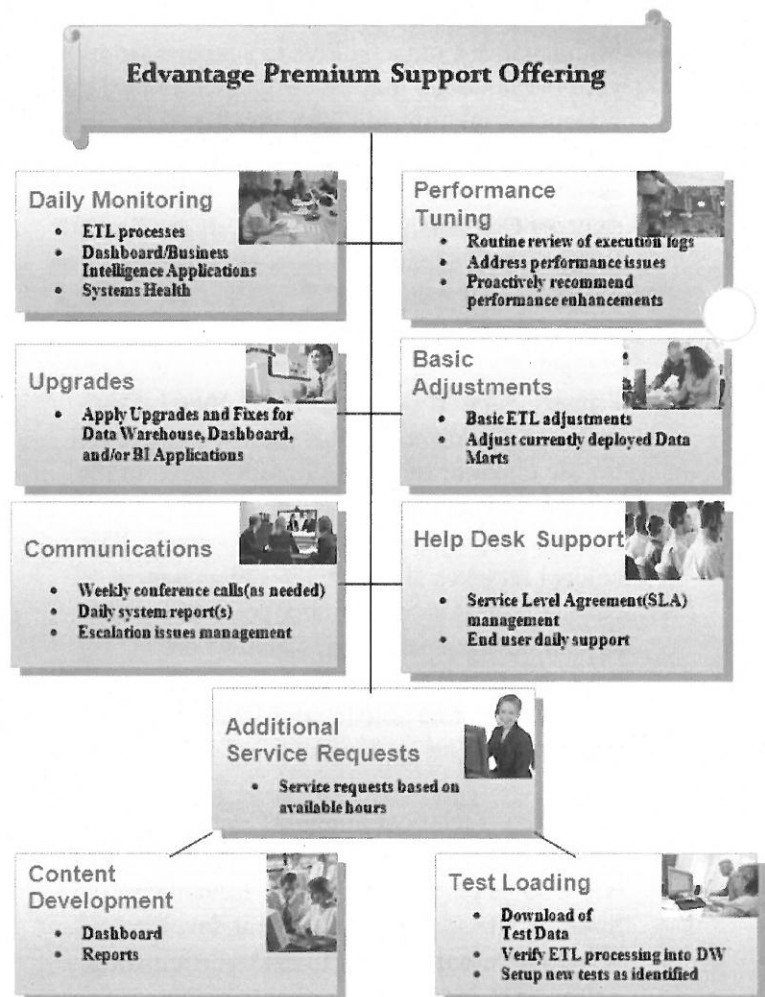
State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Solicitation

NUMBER	PAGE
EDD398772	1

RFQ COPY
TYPE NAME/ADDRESS HERE

ADDRESS CORRESPONDENCE TO ATTENTION OF:

CONNIE OSWALD
304-558-2157

DEPARTMENT OF EDUCATION

BUILDING 6
1900 KANAWHA BOULEVARD, EAST
CHARLESTON, WV
25305-0330

DATE PRINTED
09/25/2013

BID OPENING DATE: 10/09/2013   BID OPENING TIME   1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

ADDENDUM NO. 1

1.   TO MOVE THE BID OPENING DATE FROM: 10/02/2013
                                     TO: 10/09/2013
     SAME LOCATION & TIME.
2.   TO PROVIDE THE ADDENDUM ACKNOWLEDGMENT. THIS
     DOCUMENT SHOULD BE SIGNED & RETURNED WITH YOUR BID.
     FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUAL-
     IFICATION OF YOUR BID.

     END OF ADDENDUM NO. 1

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

SOLICITATION NUMBER: EDD398772
Addendum Number: 01

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[✓]   Modify bid opening date and time

[   ]   Modify specifications of product or service being sought

[   ]   Attachment of vendor questions and responses

[   ]   Attachment of pre-bid sign-in sheet

[   ]   Correction of error

[   ]   Other

Description of Modification to Solicitation:

1. To move the bid opening date from 10/2/2013 to 10/9/2013. Same time & location.
2. To provide the addendum acknowledgment.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

Revised 6/8/2012

ATTACHMENT A

4

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: EDD398772

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[✓] Addendum No. 1   [ ] Addendum No. 6

[ ] Addendum No. 2   [ ] Addendum No. 7

[ ] Addendum No. 3   [ ] Addendum No. 8

[ ] Addendum No. 4   [ ] Addendum No. 9

[ ] Addendum No. 5   [ ] Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Versifit Technologies, LLC
_____
Company

_____
Authorized Signature

10/7/13
_____
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

Attachment B: Mandatory Specification Checklist

List mandatory specifications contained in Section 4, Subsection .5:

Section 4 – Subsection 4.5:

4.5.1 All aspects of the proposal must adhere to rules and regulations set forth in the, child Information Protection Act (CIPA), Family educational Rights and Privacy Act (FERPA), Child Online Protection Act (COPA), and Health Insurance Portability and Accountability Act (HIPAA).
THE SOLUTION SHALL NOT BE PROPRIETARY

Vendor Response: All aspects of the proposal adhere to rules and regulation set forth in CIPA, FERPA, COPA, and HIPAA. The solution is not proprietary.

Section 4, Subsection 4.5:

4.5.2. Vendor must agree that the vendor-developed DWRS and all associated deliverables will be owned and operated by the WVDE upon project conclusion.

Vendor Response: Vendor agrees that the vendor-developed DWRS and all associated deliverables will be owned and operated by the WVDE upon project conclusion.

Section 4, Subsection 4.5:

4.5.3. Vendor must relinquish ownership of the DWRS to the Agency upon project conclusion.

Vendor Response: Versifit will relinquish ownership of the DWRS to the Agency upon project conclusion.

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Versifit Technologies, LLC
(Company)

(signature)
(Representative Signature)

Michael Restle, President
(Representative name, title)

920-830-0102/920-830-0304
(Contact Phone/Fax Number)

October 7, 2013
(Date)

Agreement Addendum for Software

In the event of conflict between this addendum and the agreement, this addendum shall control:

1. DISPUTES – Any references in the agreement to arbitration or to the jurisdiction of any court are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.

2. HOLD HARMLESS – Any provision requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.

3. GOVERNING LAW – The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.

4. TAXES – Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.

5. PAYMENT – Any references to prepayment are deleted. Fees for software licenses, subscriptions, or maintenance are payable annually in advance.

6. INTEREST – Any provision for interest or charges on late payments is deleted. The Agency has no statutory authority to pay interest or late fees.

7. NO WAIVER – Any language in the agreement requiring the Agency to waive any rights, claims or defenses is hereby deleted.

8. FISCAL YEAR FUNDING – Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.

9. STATUTE OF LIMITATION – Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.

10. SIMILAR SERVICES – Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.

11. FEES OR COSTS – The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.

12. ASSIGNMENT – Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.

13. LIMITATION OF LIABILITY – The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision in the agreement limiting the Vendor's liability for direct damages is hereby deleted. Vendor's liability under the agreement shall not exceed three times the total value of the agreement. Limitations on special, incidental or consequential damages are acceptable. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.

14. RIGHT TO TERMINATE – Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor. Agency agrees to pay Vendor for services rendered or goods received prior to the effective date of termination. In such event, Agency will not be entitles to a refund of any software license, subscription or maintenance fees paid.

15. TERMINATION CHARGES – Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.

16. RENEWAL – Any reference to automatic renewal is deleted. The agreement may be renewed only upon mutual written agreement of the parties.

17. INSURANCE – Any provision requiring the Agency to purchase insurance for Vendor's property is deleted. The State of West Virginia is insured through the Board of Risk and Insurance Management, and will provide a certificate of property insurance upon request.

18. RIGHT TO NOTICE – Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.

19. ACCELERATION – Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.

20. CONFIDENTIALITY – Any provision regarding confidentiality of the terms and conditions of the agreement is hereby deleted. State contracts are public records under the West Virginia Freedom of Information Act.

21. AMENDMENTS – All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

ACCEPTED BY:

STATE OF WEST VIRGINIA

VENDOR

Spending Unit: _____

Signed: _____

Title: _____

Date: _____

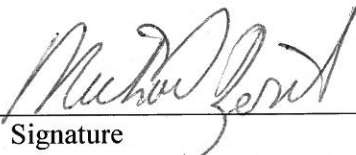Company Name: Versifit Technologies, LLC

Signed: _____

Title: President

Date: October 7, 2013

Attachment

PO#_____

This agreement constitutes the entire agreement between the parties, and there are no other terms and conditions applicable to the licenses granted hereunder.

Agreed

_____	10/7/13	_____	_____
Signature	Date	Signature	Date
President			
Title		Title	
Versifit Technologies, LLC			
Company Name		Agency/Division	

Vendor Preference Certificate

The Vendor Preference Certificate does not apply to Versifit in this project.

Rev. 07/12

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1.   **Application is made for 2.5% resident vendor preference for the reason checked:**
____   Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
____   Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
____   Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2.   **Application is made for 2.5% resident vendor preference for the reason checked:**
____   Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3.   **Application is made for 2.5% resident vendor preference for the reason checked:**
____   Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4.   **Application is made for 5% resident vendor preference for the reason checked:**
____   Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5.   **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
____   Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6.   **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
____   Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7.   **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**
____   Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____   Signed: _____

Date: _____   Title: _____

STATE OF WEST VIRGINIA
Purchasing Division

RFQ No. <u>EDD398772</u>

Purchasing Affidavit

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal or any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"**Debt**" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"**Employer default**" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"**Related party**" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Versifit Technologies, LLC

Authorized Signature: *[signature]*   Date: 10/8/13

State of Wisconsin

County of Outagamie to-wit:

Taken, subscribed, and sworn to before me this 7th day of October 2013

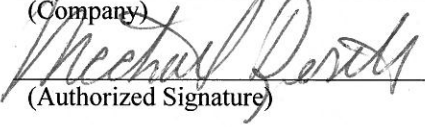My commission expires 9/11/16 2013

AFFIX SEAL HERE   NOTARY PUBLIC *[signature]* Michael D. Morrissey

[notary seal: MICHAEL D. MORRISSEY — NOTARY PUBLIC — STATE OF WISCONSIN]

Certification and Signature Page

By signing below, I certify that I have reviewed this solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Versifit Technologies, LLC
_____
(Company)

_____
(Authorized Signature)

Michael Restle, President
_____
(Representative Name, Title)

10/8/13
_____
(Date)

Addendum Acknowledgment Form
Solicitation No.: EDD398772

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.
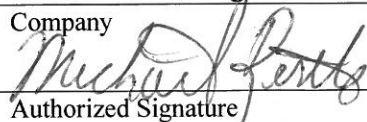
Addendum Numbers Received:

(Check the box next to each addendum received)

☑ Addendum No. 1	☐ Addendum No. 6
☐ Addendum No. 2	☐ Addendum No. 7
☐ Addendum No. 3	☐ Addendum No. 8
☐ Addendum No. 4	☐ Addendum No. 9
☐ Addendum No. 5	☐ Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Versifit Technologies, LLC
Company

Authorized Signature

October 7, 2013
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.