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Header 2

List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 372107

Procurement Type: Central Contract - Fixed Amt

Vendor ID: VS0000014718

Legal Name: Greater Good Group LLC

Alias/DBA:

Total Bid: \$244,000.00

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Solicitation Description: Addendum #2 - Hosting of WVEDSS Application  
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Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
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**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 372107  
**Solicitation Description :** Addendum #2 - Hosting of WVEDSS Application  
**Proc Type :** Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation Response	Version
	2017-12-19 13:30:00	SR 0506 ESR12191700000002762	1

<b>VENDOR</b>
VS0000014718 Greater Good Group LLC

**Solicitation Number:** CRFQ 0506 EHP1800000003

**Total Bid :** \$244,000.00      **Response Date:** 2017-12-19      **Response Time:** 13:25:46

**Comments:** We are open to negotiations. Please do contact with any questions.

**FOR INFORMATION CONTACT THE BUYER**  
 April Battle  
 (304) 558-0067  
 april.e.battle@wv.gov

<b>Signature on File</b>	<b>FEIN #</b>	<b>DATE</b>
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Year 1 Hosting of WVEDSS Application				\$61,000.00

Comm Code	Manufacturer	Specification	Model #
43212200			

**Extended Description :** The vendor will host productions, staging and test environment for the NBS, and other supporting applications, PHINMS, Rhapsody  
(This includes sections 4.1.5 through 4.1.40 of specifications)

**Comments:** Pricing assumptions in the proposal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Year 2 WVEDSS				\$61,000.00

Comm Code	Manufacturer	Specification	Model #
43212200			

**Extended Description :** Vendor will provide ongoing support for existing electronic interfaces or integrations and future enhancements  
(This includes sections 4.1.6 through 4.1.40 of specifications)

**Comments:** Pricing assumptions in the proposal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Year 3 of WVEDSS				\$61,000.00

Comm Code	Manufacturer	Specification	Model #
43212200			

**Extended Description :** Vendor will provide ongoing support for existing electronic interfaces or integrations and future enhancements  
(This includes sections 4.1.6 through 4.1.40 of specifications)

**Comments:** Pricing assumptions in the proposal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Year 4 of WVEDSS				\$61,000.00

Comm Code	Manufacturer	Specification	Model #
43212200			

**Extended Description :** Vendor will provide ongoing support for existing electronic interfaces or integrations and future enhancements (This includes sections 4.1.6 through 4.1.40 of specifications)

**Comments:** Pricing assumptions in the proposal



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## 1. Technical Proposal

### 1.1 Qualifications

Team GGG (<http://GreaterGoodGroup.com>) brings a wealth of knowledge and skills in the required and requested areas - Electronic Disease Surveillance Systems (EDSS) like NEDSS Base System (NBS), Interoperability standards in Public Health US realm (HL7, LOINC, SNOMED), Cloud based Technical Infrastructure and Surveillance systems solutions architecture - of this project's scope.

Our team member, Srinath Remala, was instrumental in enabling ELR (electronic lab reporting) interface at WV and collaborated with WV ELR Coordinator and WVEDSS team in that effort. Included in *References* section is a **letter from Dr Haddy**.

**Srinath Remala** will be the Technical Director and responsible for the delivery of this project.

In this section we respond to each item in the “**3. Qualifications**” section of the *Specifications.doc* in the bid package. None of the text from the specifications document is modified and is replicated from the original Specifications document. Our response is noted under respective line item with a “Response:” tag.

3. QUALIFICATIONS: Vendor, or Vendor's staff if requirements are inherently limited to individuals rather than corporate entities, shall have the following minimum qualifications:

3.1. Vendor must have three years of experience setting up, installing, configuring, maintain, trouble shooting and operating the NEDSS base system (NBS) application provided by the Centers for Disease Control and Prevention (CDC). Vendor must submit resume upon request detailing experience with NBS.

Response: Yes. We have the required experience and can provide resumes plus reference letters from jurisdictions upon request.

3.2. The vendor must possess 3 years' experience in providing ASP (Active Server Pages) support, particularly for public health functions.

Response: Yes. We have the required experience and can provide resumes plus reference letters from jurisdictions upon request.

3.3. The vendor must have at least 3 years knowledge and experience with integration, engines, HL7 standards, LOINC and SNOMED codes, Rhapsody, ELR, EHR, LIMS, data backup and recovery, and database management. Vendor must submit resume upon request detailing experience with NBS.



Response: Yes. We have the required experience and can provide resumes plus reference letters from jurisdictions upon request.

3.4. Vendor must have WVEDSS up and running in production with 8 weeks of contract award, this includes test and staging.

Response: Yes. We are comfortable with the outlined timeline.

1.1.1. Company overview

**Greater Good Group LLC (GGG)**, formed in 2006, is a boutique informatics consulting firm. We are based in Atlanta and has extensive experience working with State and Local jurisdictions, in advancing Population and Public Health. **Team GGG** has in-depth understanding and extensive hands-on experience in the context of Meaningful Use in general and Electronic Lab Reporting (ELR) in specific with jurisdictions across the nation.

GGG team’s subject matter experts include Public Health Informatics practitioners, Technical professionals, Informatics Fellows lead by **Srinath Remala**, Founder and Principal of GGG.

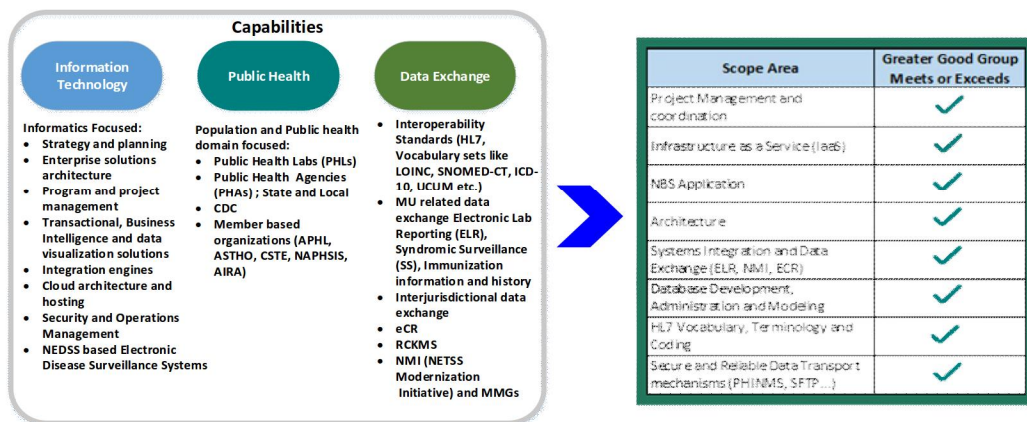


Figure 1: High Level Capabilities Mapping to Scope Areas

GGG’s team brings very strong functional knowledge, technical skill sets and implementation expertise. Plus the cross-functional perspective, relationships and deep knowledge of technical landscape at Public Health organizations across the country.



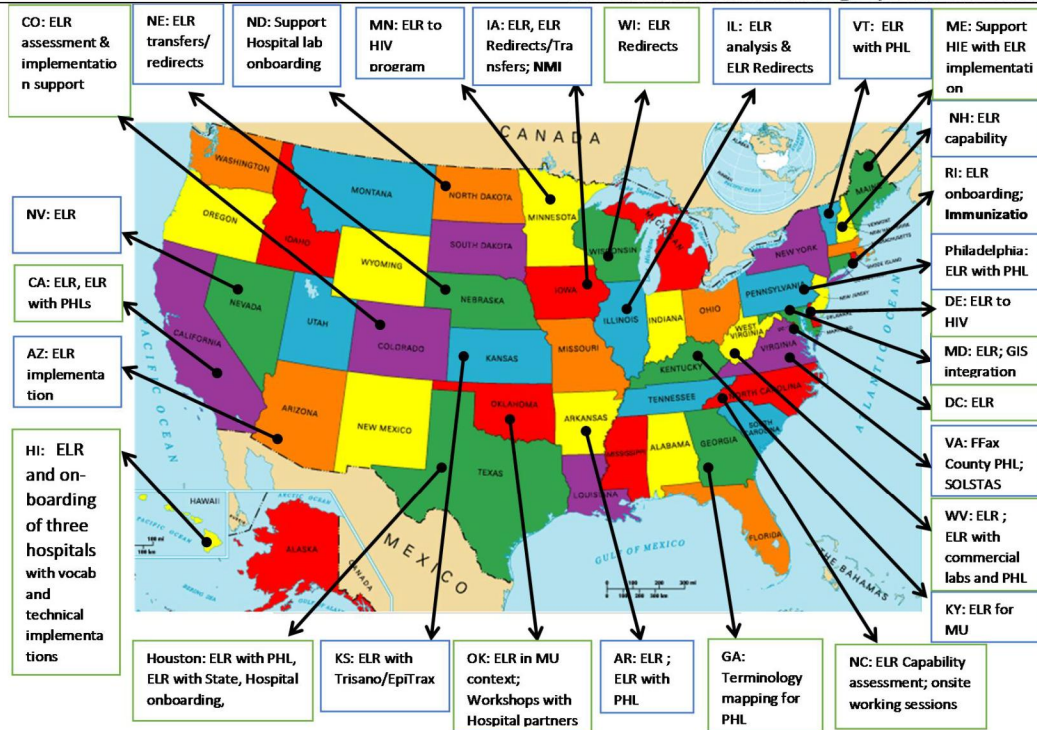


Figure 2: Implementation and Technical Assistance Experience

1.2 Scope-of-work & Deliverables

In this section we respond to each item in the "4.1 Mandatory Contract Services Requirements and Deliverables:" section of the Specifications.doc in the bid package. None of the text from the specifications document is modified for this. It is a replicated from the original Specifications document. Our response is noted under respective line item with a "Response:" tag.

4.1 Mandatory Contract Services Requirements and Deliverables: Contract Services must meet or exceed the mandatory requirements listed below.

4.1.1 Vendor must provide application logon security with role based access.

Response: Yes. We will port the current WVEDSS (an NBS installation) security model in place to the cloud hosted instance. In addition, we will enable a two-factor authentication for each NBS user. Multi-factor authentication will be included and second (2nd) authentication will happen via a phone call or a text message or mobile app per individual user's preference. The phone number, to receive a call, for the user could be changed on-demand and will be included as the Support Desk service. This will secure access to NBS and the underlying data more effectively.



**4.1.2** Vendor must submit a plan via email to Tim Neely of how a data breach will be handled within 30 days of award.

Response: Yes. We will provide data breach incidence response plan that is comprehensive and complete using life cycle approach of a breach incident.

**4.1.3** The vendor will migrate all existing West Virginia data to the vendors cloud environment within g tow (2) weeks of contract award.

Response: Yes. We will migrate West Virginia’s current/existing WVEDSS (NBS) data from *Production, Staging* and *Test* instances to our respective cloud provisioned database environments within two (2) weeks.

**4.1.4** The vendor will host productions, staging and test environment for the NBS, and other supporting applications, PHINMS, Rhapsody

Response: Yes. Three (3) environments **production, staging** and **test** environments for WVEDSS (NBS) along with related supporting applications SAS 9.3, PHINMS and Orion Rhapsody, release/versions currently in effect, as part of WVEDSS ecosystem. West Virginia team will be responsible for providing installation modules/discs for each of these commercial software along with corresponding operational licenses. We will collaborate with WV team, as needed, in interacting with the corresponding software vendor.

Additional details are presented in **1.3 Our Approach** section.

**4.1.5** Vendor will provide ongoing support for existing electronic interfaces or integrations and future enhancements.

Response: Yes. We bring broad and deep expertise in electronic data exchange in Public Health realm and well qualified to support this requirement.

**4.1.6** Vendor must sign a vendor confidentiality agreement and ensure privacy of data prior to contract award (see attachment 2).

Response: Yes. We will sign confidentiality agreement and ensure privacy of data prior to contract award. All of our team members will undergo information security training and a background check.

**4.1.7** The vendor will maintain application security to prevent unauthorized access to or disclosure of data transmissions.

Response: Yes. We will implement applicable NIST security controls to harden the environment. We will also provide

**4.1.8** The vendor will notify the State of WV, Office of Epidemiology and Prevention Services by phone and email, given upon award of contract,



of any unauthorized attempt to obtain access or otherwise tamper with data immediately upon discovery.

Response: Yes. We will notify as requested any unauthorized attempt to obtain access or otherwise tamper with data immediately upon discovery. We will initiate the submitted data breach incidence response plan, as applicable.

**4.1.9** The vendor will maintain active audit logs for one month on the server and store the previous month, keeping four months of audit logs onsite.

Response: Yes. Audit logs will be secured per the above requirement.

**4.1.10** The vendor will provide privacy protections equivalent to those provided by Standards for Privacy of Individually Identifiable Health Information., 45CFR Part 160 and Sub-Parts A & E of Part 164. <https://www.hhs.gov/sites/default/files/indroduction.pdf>

Response: Yes. Each of our team members, with access to WVEDSS data, will go through an annual HIPPA awareness course.

**4.1.11** The vendor will notify the State of WV, Office of Epidemiology and Prevention Services immediately by phone and email, given upon award of contact, of any unlawful or unauthorized use or disclosure of PHI of with they become aware, if the data is determined to have been compromised. The vendor will provide all necessary details including, but not limited to, what data was compromised, when, how and by whom; and when they first became aware and provide a corrective action plan as to how any unlawful or unauthorized access will be avoided in the future.

Response: Yes. We will initiate the data breach incidence response plan, as applicable.

**4.1.12** The vendor will work with the State of WV, Office of Epidemiology and Prevention Services to investigate and comply with any state for federal laws <http://www.technology.wv.gov/SiteCollectionDocuments/Policies%20Issued%20by%20the%20CTO/2017PO1001SecuritySept2016.pdf>) if any unlawful or unauthorized use for disclosure occurs including, but not limited to, payment of amounts deemed reasonable and necessary to mitigate the effects of breach.

Response: Yes, our data breach response will work with the State of WV, Office of Epidemiology and Prevention Services to investigate and comply with any state for federal laws in the context of 4.1.12. Each incidence will be reviewed



and investigated thoroughly to identify the cause of breach and responsible parties.

**4.1.13** The vendor will document and keep current its security measures as required by applicable law

<http://www.technology.wv.gov/SiteCollectionDocuments/Policies%20Issued%20by%20the%20CTO/2017PO1001SecuritySept2016.pdf>).

Response: Yes. We will review the above referenced policy from WV Technology office and amend/augment our security measures as applicable.

**4.1.14** In the event of termination of vendor services, the vendor will surrender and transfer all data to Tim Neely, allowing for electronic download (file transfer protocol (FTP). After confirmation of successful transfer the vendor will destroy all data to ensure data privacy.

Response: Yes. As part of transition-out, we will adhere to the above requirement.

**4.1.15** The vendor will migrate ALL existing West Virginia Data to the vendor's cloud environment with two (2) weeks of contract award.

Response: Yes. Refer to item 4.1.3.

**4.1.16** Vendor must host the NBS application on an established stable commercial web services platform.

Response: Yes. We will chose a hosting and IaaS (Infrastructure as a service) provider that is stable and a commercial web services platform like Amazon Web Services (AWS), Microsoft's Azure.

**4.1.17** Vendor must perform system updates as new patches and/or new releases for the NBS, and any component software are made available (per WVEDSS team request) following the practices below:

Response: Yes. We will include these as part of change management and configuration management processes, for the duration of the contract.

**4.1.17.1** Apply updates/patches/new releases to test environment first.

**4.1.17.2** West Virginia staff will perform User Acceptance testing (UAT) and deem the product update acceptable and usable.

**4.1.17.3** Vendor will apply the update to staging; wait for UAT and then the production environment with UAT.

**4.1.17.4** Ensure routine and update activities on hardware and software will not be performed during the Office of Epidemiology and Prevention



Services business hours Monday-Friday 7:30 AM-5:00PM (EST)  
without written pre-approval from the WVEDSS Project Coordinator,  
or designated alternate.

**4.1.17.5** Notify the WVEDSS Project Coordinator (or designated alternate) of any routing update activities, or any disruption of service to WVEDSS planned or unplanned. This includes problem assessments, updates for problem resolution, and restoration expectations.

**4.1.18** The vendor will provide a formalized change request process/help desk mechanism to manage changes to WVEDSS environments that will be used for the duration of the contract.

Response: Yes. A formal change request and configuration management process will be introduced as a standard operating procedure (SOP) and will be effective for the duration of the contract.

**4.1.18.1** Utilize application configuration management and version control.

Response: Yes. We will document configuration management at the start of the project with identified configuration items (CIs) and will keep the repository updated for the duration of the project.

**4.1.18.2** Document and maintain unique WVEDSS system requirements, specifications, design details, technical support processes, and modification's and provide this information to DHHR at the time of contract award and upon any changes made to these environments.

Response: Yes. Will adhere to the configuration and change management SOP.

**4.1.18.3** Provide application deployment and technical support overviews to state representatives, two (2) months in advance, to explain the impact of any proposed or planned network, hardware and software changes; agree on schedules for making changes; and obtain any required state input and approval.

Response: Yes. We will adhere to configuration and change management SOP.

**4.1.18.4** Implement new message mapping guides as the CDC requests and obtain certification in sending each message guide for the State of West Virginia.

Response: Yes. We will support the implementation and on-boarding certification from CDC of new message mapping guides (MMGs) as part of the NETSS Modernization Initiative (NMI).



**4.1.18.5** Vendor must perform system monitoring on a daily basis, with reporting and resolution of anomalies.

Response: Yes. We will follow the **Perform functions documented under “Periodic Maintenance” section in NBS Systems Administration Guide**, as applicable in WVEDSS context.

**A daily health-check (including all nightly jobs, interfaces from the previous day, infrastructure availability) is done every morning and status report submitted by 8:30 AM**

**4.1.18.6** As needed, vendor will troubleshoot anomalies, either independently or working with the current CDC contractor. Record issues in the NBS CENTRAL portal (This is a website to record issues with NBS). Troubleshooting will apply to facets of the environment (NBS application, Rhapsody, SAS, PHINMS, etc.).

Response: Yes. We are very familiar with **NBS Central** portal and will use it to log issues for support from NBS Product Support team.

**4.1.18.7** Vendor will supply support services for addressing NBS application questions during normal business hours Monday-Friday 7:30 AM to 5:00PM (EST). Services will include telephone and email support for WVEDSS team members for reporting priority type issues. The West Virginia Office of Epidemiology and Preventions Services will retain a Help Desk for changing passwords, setting up or deactivating users and gathering specific information for tickets to vendor.

Response: Yes. We will have support services via telephone and email channels during normal business hours Monday- Friday 7:30 AM – 5:00 PM EST. We will coordinate with WV Help Desk in offering user provisioning and de-provisioning, two-factor authentication and other

A standard operating procedure (SOP) for support will be presented and adopted for the duration of the contract.

**4.1.18.8** Vendor will provide ongoing 24/7/365 support services for addressing data center, hardware issues, and system availability.

Response: Yes. We will proactively monitor the infrastructure and application availability and respond to incidents per the incident response SOP.

**4.1.19** The West Virginia Office of Epidemiology and Prevention services, ELR Coordinator will continue to work with laboratories, hospital and other sources



for electronic laboratory reporting. Vendor will do the following to allow this to happen.

Response: Yes. We will support ELR Coordinator in on-boarding and transitioning to production of new ELR sources.

**4.1.19.1** Provide system access for the ELR Coordinator to NBS queue oversight, management, or processing for de-duplication, notification of disease messaging to the CDC, incoming electronic data streams, Rhapsody and PHINMS.

Response: Yes. We will provide requested access to ELR Coordinator.

**4.1.19.2** Interface with the West Virginia SFTP (Secure File Transfer Protocol) server through Rhapsody or equal to receive electronic lab reporting (ELR) from the West Virginia Health Information Network (WVHIN).

Response: Yes. We will enable SFTP, over internet, from WVHIN as an ELR input.

**4.1.19.3** Push Cancer, Lead and other data determined or needed by WVEDSS Project manager back to the state SFTP server.

Response: Yes. We will enable SFTP connection, over internet, to transmit Cancer, Lead ELR feeds and other data requested by WVEDSS Project manager back to State SFTP server.

**4.1.20** Vendor will provide read only access (with permissions authorized by the WVEDSS Project Coordinator) to database(s) for WVEDSS team members, which will allow for connections from SQL (Structured Query Language) and SAS.

Response: Yes. We will provide the requested read only access, per WVEDSS project coordinator approvals, to WVEDSS team members. We will instill mechanisms to ensure access privileges adhere to data security and privacy controls.

**4.1.21** Vendor will create five (5) views each year in the databases as requested by WVEDSS team members to create new reports in the application with timeframe outlined by WVEDSS team members.

Response: Yes. We will create up to five (5) views per WVEDSS team member request and mutually agreed upon delivery timelines.

**4.1.22** Vendor will resolve any issues with messages reported by CDC to be blank or missing the payload, with one (1) business day of notification.

Response: Yes. We will strive to resolve any issues with messages, relevant to WVEDSS (NBS), reported by CDC to be blank or missing the payload within one (1) business day of notification.



**4.1.23** Vendor will acknowledge Priority 1 and 2 issues email with 1 hour and other email traffic regarding help desk issues within 24 hours of receipt.

Response: Yes. We will incorporate these requirements into our support SOP.

**4.1.24** Vendor will support the West Virginia Office of Epidemiology and Prevention Services technical and business needs, though verbal and written information in relation to the WVEDSS when in contact with CDC, CDC's designated vendor for national NBS development, NEDSS Users Group calls, and partners that the West Virginia Office of Epidemiology and Prevention Services may work with for electronic data stream implementations.

**4.1.25** Vendor will provide a ticketing system for make use of the existing NBS ticketing system.

Response: Yes. We will introduce a simple web based ticketing system (like JIRA or Redmine) to track all support requests. We will train/walk-through of the system with WV Helpdesk team. In addition, we will initiate tickets in NBS (central) ticketing system as needed.

**4.1.26** Vendor will utilize the following State assigned Ticket Priorities to respond to issues affecting the system.

Response: Yes. We understand and we will incorporate these requirements into our support service SOP.

**4.1.26.1** Priority 1 (Showstopper)-Immediate

**4.1.26.1.1** The production system is unusable or down.

**4.1.26.1.2** Response will be with one (1) to two (2) hours and usability or System status will be returned to operation within twelve (12) Hours but no longer than twenty-four (24) hours, unless there is a catastrophic failure.

**4.1.26.2** Priority 2 (Critical) - Urgent

**4.1.26.2.1** There are critical issues with the system or its components.

**4.1.26.2.2** Response will be within the same business day, fixes will be completed, and system will be returned to operation with twenty-four (24) Hours but no longer than forty-eight (48) hours, unless a patch is needed from The CDC NBS team.

**4.1.26.3** Priority 3 (Average) – Normal

**4.1.26.3.1** Standard issues or challenges with entering and processing data where an error may occur.

**4.1.26.3.2** Response will be within 24 to 48 hours and issues resolved within a five (5) day workweek, unless the issue requires a patch from the CDC NBS team.

**4.1.26.4** Priority 4 (Low)

**4.1.26.4.1** Questions not associated with any current issue.





**4.1.26.4.2** Response will be within three (3) business days but no longer than five Business days.

**4.1.27** Vendor must designate a project manager (PM) for the West Virginia Office of Epidemiology and Prevention Services project. The PM will arrange for regularly scheduled (bi-weekly) teleconference meetings with WVEDS team member to review open issues, new work, status of ongoing work, etc.

Response: Yes. We will assign a Project manager who is knowledgeable of NBS, Public Health and cordial to work with. The PM will be responsible to ensure meeting the service level agreements (SLAs) and delivery of mutually agreed work products.

**4.1.28** Vendor will provide Website security certificate procurement and management as related to the NBS hosting solution for SSL (Secure Socket Layer) traffic, encrypted payloads, server to server certificate authentications.

Response: Yes. We will procure and install required certificates supporting SSL for all internet traffic in this context. We will use CDC provided SDN cert for payload cryptography in PHINMS. Plus needed authentication certificates to communicate with WVHIN SFTP server and State SFTP server.

**4.1.29** Vendor must provide a Disaster Recovery Plan: A copy of the hosting DRP and Continuity of Operations Plan (COOP) must be delivered to the West Virginia Office of Epidemiology and Prevention Services with thirty (30) day of contract award. Vendor must have a disaster recovery facility and provide documented policies and procedures to implement a recovery. If a complete failure occurs, the proposed solution must be available within twenty-four (24) hours. Annual testing must be conducted to ensure a smooth transaction when/if the plan ever needs to be activated. The test will occur six (6) months into each contract period. The vendor will provide a copy of the annual test results to the West Virginia Office of Epidemiology and Prevention services within (30) days of disaster recovery demonstration.

Response: Yes. Our proposed hosting architecture will meet the Recovery Time Objective (RTO) of twenty four (24) hours. Per the stated specifications/requirements (daily incremental backups), Recovery Point Objective of twenty four (24) hours is achievable as well. We will provide DRP and COOP as requested. Plus, will conduct the test once each year, during the contract period, and submit the results as requested.

**4.1.30** Vendor must support the implementation of new Page Builder pages, through data porting.

Response: Yes. We will support implementation of new page builder pages and corresponding data porting. This effort will be tied into the message mapping



guide requirement **4.1.18.4**. Each request for data porting will be tracked as a support request and will be treated as a project with schedule and dependencies listed. We will scope up to three (3) data porting exercises per option-year.

**4.1.31** Vendor must perform daily incremental system backups and weekly full backups on production, saving (3) weeks if production backups. Vendor must also perform weekly backups of staging and test, saving two weeks with secure offsite storage of the production system data at a disaster recovery facility or similar.

Response: Yes. We will perform the database backups and implement retention requirements as requested. We will use storage service offering (e.g. **S3** buckets in AWS) of cloud services provider and incorporate life cycle policies to automate the retention requirements.

**4.1.32** Vendor must function as a liaison between end users and application vendors) e.g. Rhapsody, PHINMS, and Microsoft) as related to the NBS hosting solution.

Response: Yes. We understand and we will. It is a standard practice with our other customers. We will include **SAS** along with the other mentioned software list above.

**4.1.33** Vendor will create and provide to the ELC Epidemiologist, the ELC Coordinator, the status of open issues, recently closed issues, deliverables, and any perceived issues. This report must be submitted within fourteen (14) days of the end of the previous month.

Response: Yes. We will introduce a SOP to cater to this requirement

**4.1.34** Vendor will provide a Service Level Target of 99.5 percent for operations of ASP infrastructure. "Infrastructure" is defined as the ASP network, hardware, and operating systems.

Response: Yes. The IaaS cloud architecture we provision will meet or exceed the requirement.

**4.1.35** Vendor will maintain all hardware and software operation within a TIA-942 (Telecommunication Industry Association) Tier 1 data center or equal.

Response: Yes.

**4.1.36** Vendor must provide support services (for the duration of the contract) for network management, database management and security management including pro-active monitoring of system where appropriate.



Response: Yes. We understand and we will.

**4.1.37** Vendor must coordinate with the WVEDSS Help Desk staff to handle user provisioning.

Response: Yes. Refer to **4.1.18.7**

**4.1.38** For the duration of the contract and eventual NBS updates, vendor must ensure continuing hardware and software compatibility to avoid data loss, functionality loss or usability issues.

Response: Yes. We will ensure hardware and software compatibility with NBS for the duration of the contract. If future upgrades of NBS require/demand higher computing resources, highly unlikely, we will discuss and upgrade hardware upon WVEDSS project coordinator approval. Incremental costs, if any, will be passed over to State.

**4.1.39** At the conclusion of the contract, or if the contract become void for any reason, all data (active directory users, Rhapsody Routes, databases and other pertinent licenses and software) will revert to the ownership of the Office of Epidemiology and Prevention Services.

Response: Yes. We understand and agree. Infrastructure hosted by us will not be transferred but the data will be made available for migration to WVEDSS team (or designate) hosted databases.

**4.1.40** Contract Item must meet or exceed the mandatory requirements listed below. “Vendor should provide with their bid a copy of any hardware or software licensing and/or support terms and conditions which the State of West Virginia or the Agency must agree to or accept, either in writing or digitally, in order to order and receive the commodities or services offered as part of this contract. Written terms will be required prior to the award of any contract resulting from this solicitation. Failure to provide additional terms and conditions may result in disqualification of the vendor’s bid.

Response: None listed.

**1.3 Our Approach:**

We will walk you through our approach, at a high-level, in this section. Intent is to provide you with a view into our disciplined approach with a client-focused delivery mind set.

- ◆ Methodology:
  - Project management :
    - Team GGG believes in *Right Process and tools*** (not a Heavy Process or a Light Process). We are outcome driven and customer satisfaction is extremely valued. In order to achieve this, our project management plan will include 1.



Schedule (transition and ongoing) 2. A set of standard operating procedures (like change request, user provisioning, support request, configuration management). 3. Stakeholder management 4. Quality assurance plan 5. Knowledge management to name a few.

We will review these with WVEDSS team and adapt it to fit the project needs.

- Communication management: Communication is very critical to keep all stakeholders engaged and informed. We will instill following mechanisms at a minimum to have an effective and efficient communications a) bi-weekly status calls, b) Monthly status reports c) Register for issues, risks, action items d) Documentation repository e) Change request process

- Leverage NBS Product level resources.

- Will use NBS product documentation to ensure best practices and recommendation are implemented as applicable. Here is an example of documents focusing on security and authentication guidelines for NBS product

Name
→ Appendix_A_Integrating_State_Authentication_with_the_NBS
Appendix_B_NBS_Database_Setup_for_Oracle
Appendix_B_NBS_Database_Setup_for_SQL_Server
→ Appendix_C_Web_Proxy_Configuration_Guide
Appendix_D_ODBC_Data_Source_Creation_For_SAS
Appendix_E_SAS_Installation
→ Appendix_F_IP_Data_Encryption_Guide
→ Appendix_G_Perimeter_Hardening
Appendix_H_Sun_DS_5.2_Windows_Installation_and_Configuration
Appendix_I_NBS_Rhapsody_Case_Notification_Route_Installation_Guide
Appendix_J_Oracle_Release_2_9.2.0.7_Patch_Set_6_Notes
Appendix_K_Setting_Up_a_Dedicated_SAS_Server
Appendix_M_Installing_Centrus_Products
Appendix_N_JMS_Hypersonic_SwitchOverTo_DB

- NBS Central** is an extremely rich knowledge repository. We use it extensively and intend to continue that on this project.
- NBS product team**, with a charter to support all NBS jurisdictions, is an extremely valuable resource. Their commitment to customer service is awesome and their support is price-less. They always appreciate a jurisdiction with self-sufficient team and one that can take a hint and guidance from them and run with it to resolve the issue they encountered in the local instance. It's a win-win-win for all, as it eases their support burden and they must be overwhelmed with so many national level projects.
- NBS User Group and SME calls:** participate and collaborate with peer jurisdictions to benefit WVEDSS implementation.

- ◆ Solution Architecture : GGG will be responsible for the acquisition, provisioning and service contract management of infrastructure components using **laaS** model and packaging them along with licences provided by WVEDSS team (for SAS and Rhapsody) into an operating platform for the NBS ecosystem. Our parameters for hosting are:
  - Use required/**minimum configuration or better** (e.g.: *m4.x.large*: 4 cores & 16GB RAM for NBS servers) to begin with and scale up or down based on the capacity planning and response time benchmarking. This mitigates the risk of provisioning overcapacity or under-capacity. Specifications for NBS version 5.0 didn't provide any sizing benchmarks for the minimum vs. recommended configurations. We have the option to consolidate App Server and Component servers. This opens up options for High-Availability implementation. So have options and will pick one during the transition-in phase based on capacity planning exercise.
  - The deployment architecture will be same for both (Production, Staging and Test) environments. Availability and scale for Staging and Test could be different. Other environments for a specific use case like data migration, training etc. can be provisioned just-in-time & terminate post-use.
  - Encryption:
    - All data transmitted over internet, in this context, will be encrypted.
    - Data-at-rest (Databases only) will be considered.

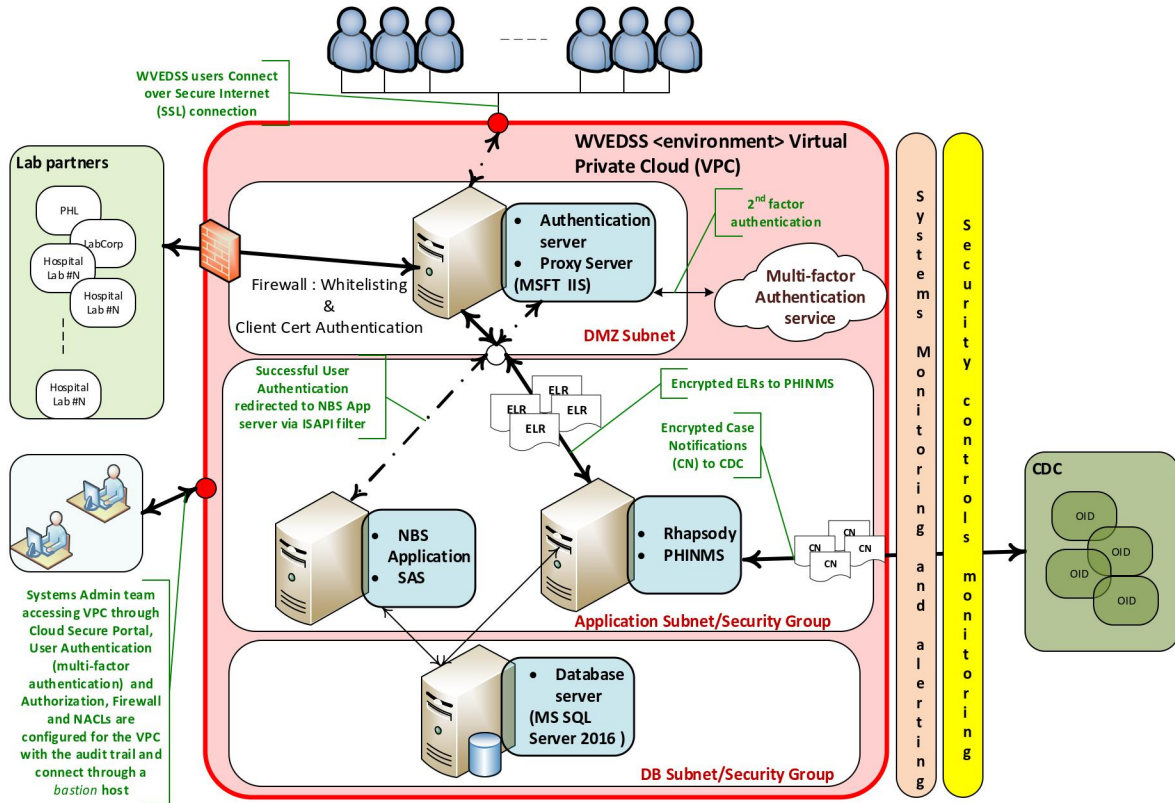


Figure 3: Deployment / Physical Architecture for a WVEDSS Environment

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Hosting of WVEDSS Application EPS16-118



- ◆ Transition Plan:
  - We will migrate WVEDSS (NBS) databases in two (2) weeks after contract start date. Upon verification and validation by the WVEDSS team, it will be refreshed with latest backups before cut-over to production.
  - We will work with interface partners in parallel to establish PHINMS connections. GGG will assign a project manager for this transition phase.
  - Figure below depicts a template for transition. We will revise this as part of kick-off meeting. We strive to complete the transition sooner than later. However, we are cognizant of the need for transition time and preparing the interface partners for the change to name a few. Here is a draft outline keeping in mind the requested 8 week time frame, in the specifications. The idea is to finalize this during the kick-off meeting.

Sample Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
<b>Kick-off meeting</b>	X							
<b>Provisioning</b>								
Provision a shell physical environment		X						
Authentication								
App server (with SAS installed)								
Integration server (Rhasody and PHINMS installed)								
DB server								
Provision SSL certificates								
Deploy WVEDSS (NBS)		X						
Install WVEDSS NBS								
Import WVEDSS DB snapshot								
Verification and Validation			X					
Help Desk and User training			X					
Connect with Partners				X				
Initiate communication								
Distribute certificates								
Test with Lab partners Staging and Prod PHINMS								
Test with CDC's								
Production Cut-over					X			
Migrate current DB to new DB								
Reconnect Lab Partners PHINMS to new endpoint								
Decommission existing environment						X		
<b>Review current state</b>								
<b>Develop Go-forward operational model</b>								
Present and review model and approach		X						
Populate with the content				X				
Instil Go-forward operational model							X	

Figure 4: Draft Transition plan

1.4 Our Team:

- Comprises of practicing professionals in Public Health and brings very strong functional knowledge, technical skill sets and implementation expertise. Benefit: Ready from day-one
- Provides **built-in redundancy** in terms of skill sets and knowledge across team members. Benefit: Reduced risk of disruption to WVEDSS deliverables when a team member is unavailable for unforeseen reason
- Offers an **agile staffing solution** that allows for partial staffing of positions providing a workforce that readily adapts to changing priorities and WVEDSS's requirements. Benefit: Financial flexibility without any fixed costs requirements
- Model facilitates short and long-term **Capacity building in Public Health**, by bringing a mix of PH and Technical SMEs into PH domain.

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- All of these, **at same or better cost** for our clients, in this instance WVEDSS team at The Office of Epidemiology and Prevention Services (OEPS).

GGG will designate a Project Manager, who will maintain a detailed schedule, monitor interdependencies, and coordinate activities with WVEDSS, GGG Team, and other stakeholders, where necessary, to ensure that timelines are met and any issues that arise are quickly resolved to WVEDSS team's satisfaction. Timelines and issues will be transparent to WVEDSS team and the appropriate OEPS business owners/stewards.

We will also designate a support desk contact who will serve as a single point-of-contact for all support needs.

**Srinath Remala will be your Technical Director and responsible for the delivery of the project.**

**Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**Contract Manager: Anitha Remala**  
**Telephone Number: 7708564607**  
**Fax Number: Not applicable.**  
**Email Address: aremala@gggllc.com**



2. Business Proposal

Dec 19th, 2017

Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

**Attn:** April Battle  
Contract Specialist

Re CRFQ 0506 EHP1800000003 Hosting of WVEDSS Application EPS16-118

Dear Ms. Battle:

Greater Good Group, LLC (GGG) is pleased to provide this Business Proposal in response to the CRFQ 0506 EHP1800000003 Hosting of WVEDSS Application EPS16-118. This proposal is predicated upon all the terms and conditions of the referenced RFQ. The proposal is valid for 60 days from the date of receipt by the Rhode Island administration.

GGG is committed to offering our best support to OEPS and WVEDSS teams through this effort. We look forward to the opportunity to extend and further strengthen our relationship and very confident that the results will benefit WV residents.

Some of the specifics like team members and pricing break downs are omitted from this proposal due to business confidentiality reasons. However, we can provide them through interviews or follow-up as needed.

If there are any questions concerning this submission, please contact me directly. We look forward to discussing any aspect of our response and to supporting the WVEDSS team through this initiative.

Sincerely yours,

Anitha Remala, CEO  
Contract Manager  
Greater Good Group LLC

2.1 Pricing assumptions:

1. GGG is provisioning hosting on IaaS with system software licenses only (Server Operating system, MS SQL Server Standard edition) only. WVEDSS team will provide licenses for all other software that is part of NBS ecosystem (SAS 9.3, Orion Rhapsody)
2. Hosting will be provisioned through a commercial cloud IaaS provider<sup>1</sup>.
3. The availability of **staging** and **test** environments could be less than 24\*7, taking advantage of on-demand activation available on Cloud hosting. Pricing is based on these environments to be available **up to 50%** for staging and **up to 40%** for test environment

<sup>1</sup> <https://www.youtube.com/embed/YdSVbFFwO8U> A key note speech by AWS Security Officer





- during business hours. We can be flexible to do a mix and match based on WVEDSS needs as we gain better understanding of usage needs
4. If any additional environments are to be provisioned for data migration, training etc., the costs will be billed as other direct costs.
  5. In-scope: Our services are Infrastructure provisioning and maintenance, Support and upkeep of WVEDSS application and ancillary software components (PHINMS, Orion Rhapsody, SAS 9.3 for NBS). Support of **Pagebuilder** pages and message mapping guide implementation.  
Out-of-scope: Not responsible for any development and/or enhancements within NBS or using the ancillary products Rhapsody or SAS.
  6. Data migration is limited to current WVEDSS (NBS) data only and nothing else.
  7. All work will be performed remotely and no onsite at OEPS facilities.
  8. We strongly believe it is a shared responsibility between WVEDSS team and Team GGG to deliver a successful solution for OEPS. To that effect, we will establish Responsibilities, Expectations, Communication channel upfront and look forward to a strong collaboration with WVEDSS team.
  9. Our year-1 pricing assumes set up costs and future years are adjusted for price increases.

### 3. References



Earl Ray Tomblin  
Governor

STATE OF WEST VIRGINIA  
**DEPARTMENT OF HEALTH AND HUMAN RESOURCES**

**Bureau for Public Health**  
Office of Epidemiology and Prevention Services  
350 Capitol Street, Room 125  
Charleston, West Virginia 25301  
Telephone: (304) 558-2195 Fax: (304) 558-6478

Karen L. Bowling  
Cabinet Secretary

May 17, 2016

To whom it may concern:

Mr. Srinath Remala visited the West Virginia Bureau for Public Health, Office of Epidemiology and Prevention Services as the member of the Centers for Disease Control and Prevention-sponsored Association of Public Health Laboratories' Technical Assistance team in December 2014 to offer us assistance in electronic laboratory reporting (ELR) implementation. Mr. Remala offered in-depth subject matter expertise and hands-on technical implementation assistance prior to the visit remotely and used the on-site visit to conduct user acceptance testing and knowledge transfer to our staff. Through his technical assistance West Virginia attained the capability for automated ELR processing and connected LabCorp, West Virginia's first ELR partner, in Feb 2015. He also trained staff for continuing ELR onboarding.

West Virginia now has a reliable ELR processing capability, receiving feeds from commercial labs like LabCorp, Mayo and Quest, as well as hospital labs within the State.

Specific areas of technical assistance that were provided by Mr. Remala include:

- Offering expertise and training for staff in evaluating ELR test feeds along with remediation recommendations for expedited onboarding of ELR partners;
- Software programming and configuring Orion Rhapsody integration engine for ELR processing and routing of ELRs to the appropriate surveillance systems including National Electronic Disease Surveillance System Base System (NBS);
- Developing technical work-around, in the Rhapsody integration engine, addressing constraints of receiving/consuming ELR by surveillance systems; and
- Developing options for daily monitoring of ELR processing and consumption by the surveillance systems, specifically the NBS.

I am very pleased to note that his services were very valuable in helping West Virginia attain the long-awaited goal of ELR capability.

Respectfully,

Loretta E. Haddy, PhD, MS  
State Epidemiologist and Director

**SOLICITATION NUMBER: CRFQ 0506 EHP1800000003**  
**Addendum Number: 1**

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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:**

To clarify that the bid opening date is December 19, 2017, at 1:30 PM EST and is not December 9, 2017, at 1:30 PM EST.

No other changes.

**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.

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: CRFQ 0506 EHP1800000003**

**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)

- |   |  |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> 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 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.

Greater Good Group

\_\_\_\_\_  
Company

*P. Anita*  
\_\_\_\_\_

Authorized Signature

\_\_\_\_\_12/19/2017\_\_\_\_\_

Date

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