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WV Purchasing Division

Software Information Systems, LLC

A CONVERGE COMPANY

Technical Proposal

for

**WV Department of Health and Human
Resources CRFP MIS2300000001**

REQUEST FOR PROPOSAL

PREDICTIVE ANALYTICS SOFTWARE/ SERVICES

9/28/2022

Signature: _____

Name: _____

Title: _____

Software Information Systems, LLC
165 Barr Street, Lexington, KY 40507
Phone: 859-977-4747
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Contact: Charlie Arnett
Email: carnett@thinksis.com



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Section I: Submittal Letter

September 28, 2022

Crystal Hustead

Crystal.G.Hustead@wv.gov

2019 Washington Street,
East Charleston, WV 25305

Dear Ms. Hustead;

Software Information Systems, LLC (SIS) appreciates the opportunity to present our solution proposal for the West Virginia State Department of Health and Human Resources for Predictive Analytics Software and Services RFP. We are confident that we are uniquely qualified to assist the DHHR with meeting its important goal of 18 data science projects over the next 12 months, given our many years of experience in the information technology industry and our strategic affiliation as part of the Converge Technology Solutions Corporation (Converge) portfolio of companies.

SIS is a total technology solution provider, working with best of breed technologies and some of the brightest talent in the field. We have an Advanced analytics team comprised of 100+ technical experts. Many of our data scientists come to us with years of experience and ivy league education. Clients rely on our consultative engagement model where we serve as business partners, advisors and strategists. For example, we helped a client with team of 8 improve their analytics using data science to produce 50X the revenue outcomes. We love delivering these types of results for our customers.

Thank you for your consideration of our proposal. Please feel free to reach out to me directly if there are any questions.

Sincerely,,

Charles D. Arnett

carnett@thinksis.com

(304) 549-7698

Software Information Systems, LLC

165 Barr Street

Lexington, KY 40507

Section: Vendor Response

SECTION 4: PROJECT SPECIFICATIONS

4.1. Background and Current Operating Environment: The WV Department of Health and Human Resources encompasses the Bureaus for Medical Services; Family Assistance; Child Support Enforcement; Public Health; Social Services; the Office of Health Facilities; Inspector General, and the Office of Drug Control Policy (ODCP). This solicitation is offered by the West Virginia Department of Health and Human Resources Office of Management Information Services on behalf of the Bureau for Behavioral Health (BBH) and the Office of Drug Control Policy (ODCP).

The Office of Drug Policy currently performs data analytics utilizing staff epidemiologists, contracted data scientists, and Information Technology staff from the agency's Office of Management Information Services (OMIS). In addition to the ODCP's own databases, data from the Offices of Emergency Medical Services (EMS), Vital Statistics, and other appropriate Agency data stores are utilized in the development of data models to visualize data, inform policy and make operational decisions at both the State and local levels. Data formats may be SQL, SAS, or other.

The Bureau for Behavioral Health performs data analytics utilizing staff epidemiologists, contracted data scientists, and Information Technology staff from OMIS. BBH data sources include their own databases and other appropriate data stores in a number of formats including SQL, SAS, and other common database formats.

4.2. Project Goals and Mandatory Requirements: The Agency, on behalf of the Bureau for Behavioral Health (BBH) and the Office of Drug Control Policy (ODCP), wishes to license Predictive Analytics Software utilizing Machine Learning and Artificial Intelligence. In addition to the software licenses, the selected vendor will provide integrated tools for data cleansing and transformation; access to a presentation layer for data visualization (may be part of the vendor solution or a third party product. State reserves the right to utilize their own data visualization product such as Microsoft Power BI or Tableau); data modeling services; a hosted, secure Cloud repository; and training and technical support. Vendor should describe its approach and methodology to providing the service or solving the problem described by meeting the goals/objectives identified below. Vendor's response should include any information about how the proposed approach is superior or inferior to other possible approaches.

4.2.1. Goals and Objectives - The project goals and objectives are listed below.

4.2.1.1 Through vendor provided training and the use of vendor provided, integrated tools, 10 Agency staff will become proficient in the cleansing and transformation of State datasets for use in data modeling.

4.2.1.2 Agency data will be cleansed, transformed and uploaded to a hosted, secure Cloud data repository utilizing the Agency's Secure File Transfer Protocol (SFTP) or other approved and secure upload.

4.2.1.3 Agency intends to undertake up to 18 projects over the 12 month life of the project utilizing cleansed and transformed data sets with the tools and services procured in this effort.

4.2.1.4 Agency defined Scope of Work documents will detail the amount of technical support, not to exceed 5 hours per active project per week.

4.2.1.5 Ten licensed users at the Agency will be utilizing the procured software. It is anticipated that five users will be performing unlimited predictive analytics and modeling using agency data sets and the software and services proposed in response to the RFP.. The remaining five users will use the tools to view data models and visualizations.

4.2.2. Mandatory Project Requirements - The following mandatory requirements relate to the goals and objectives and must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it will comply with the mandatory requirements and include any areas where its proposed solution exceeds the mandatory requirement. Failure to comply with mandatory requirements will lead to disqualification, but the approach/methodology that the vendor uses to comply, and areas where the mandatory requirements are exceeded, will be included in technical scores where appropriate. The mandatory project requirements are listed below.

4.2.2.1 TRAINING

4.2.2.1.1 Vendor shall provide 40 hours of instructor lead, virtual training to up to 10 Agency Staff covering the data cleansing and transformation tools and all of the functions of the Predictive Analytics Software.

Response: Our enablement instructors have a long tenure implementing the IBM technologies. We can provide instructor led virtual classroom training and knowledge transfer sessions for designated Agency staff.

4.2.2.1.2 Training shall be broken down, at a minimum, into segments for Data Transformation, Predictive Analytics for Developers, and Predictive Analytics for Viewers.

Response: The 40 hours of training will be broken out by subject area, including Data Preparation/Transformation and Predictive Analytics. The Predictive Analytics component can be differentiated for users who will develop predictive models versus users who will consume resulting output.

4.2.2.1.3 Training shall be interactive and shall be recorded and made available for Agency use as a refresher or to train additional licensees.

Response: Our enablement instructors use a consultative approach that is highly interactive and provide students with the opportunity to do guided learning, ask questions, and posit real-world scenarios. The training sessions can be recorded and shared with the Agency for use with participants.

4.2.2.1.4 Training shall be provided during regular business hours and will not exceed 8 hours per business day.

Response: All training that we provide falls within normal business hours.

4.2.2.2 DATA REPOSITORY/SECURE FILE TRANSFER

4.2.2.2.1 Vendor shall host the Agency data in vendor's secure, U.S. based, Cloud repository. The Agency will not provide an environment for the repository.

Response: The IBM Cloud has several US-based locations, two of which are Multi-Zone Regions (MZRs) offering High Availability (HA) features. The complete data center map can be found here:

<https://www.ibm.com/cloud/data-centers>

4.2.2.2.1.1 Vendor will provide adequate Cloud storage and compute resources for 10 Agency users and up to a total of 18 Agency projects, adding resources as necessary to avoid performance degradation.

Response: IBM Cloud Storage services offer a scalable, security-rich and cost-effective home for your data while supporting traditional and cloud-native workloads. Provision and deploy services such as access object, block, and file storage. Adjust capacity and optimize performance as requirements change. Pay only for the cloud storage you need. The stated requested formats included SQL and "other data formats" and IBM Cloud supports over 40 different types of data formats for the varying project needs.

4.2.2.2.1.2 Agency staff must be able to securely transfer data and models in formats including, but not limited to those included in 4.2.2.4.2, to the Agency SFTP for use with other Agency software.

Response: Via the IBM Cloud subscription, the Agency be able to build a compute node to host an instance of the Agency approved SFTP server. This approach leverages the resources, expertise, and security requirements the

Agency has today.

4.2.2.2.2 Data repository shall include industry standard antivirus and antimalware protection. Vendor must name the products utilized in their response.

Response: IBM Security ReaQta SaaS provides malware and virus prevention, detecting, response for Advanced Attacks at the endpoint layer. ReaQta leverages its AI and automation capabilities to continually monitor and protect.

4.2.2.2.3 Data in the repository shall be encrypted both at rest and in transit.

Response: The IBM Cloud Pack for Data as a Service (CP4DaaS) provides the configuration mechanisms to enable encryption for data at rest and data in transit. IBM Security Guardium Data Encryption provides a consistent policy enforcement across their data estate; helps address compliance with privacy regulations; protects data across environments through transparent encryption and tokenization; and provides granular data encryption at the field and row level to protect against insider threats. This set of solutions enable secure quick access to information for authorized users, while maintaining the security policies and compliance of the data assets.

4.2.2.2.3.1 All mechanisms used to encrypt data shall be FIPS 140-2 compliant and operate using the FIPS 140-2 compliant module (Standards available on the National Institutes for Standards and Technology (NIST) Website - <https://csrc.nist.gov/publications/detail/fips/140/2/final>). Vendor must name any products utilized to provide encryption.

Response: IBM Guardium Data Encryption HSM FIPS is 140-2 Level 3 certified. This component is highly scalable and provides data encryption, tokenization, data masking and key management capabilities to help protect and control access to data across the hybrid multi-cloud environment. Guardium Data Encryption is delivered with a virtual Hardware Security Module (HSM) service that allows you to host encryption keys and perform cryptographic operations in a cluster of FIPS 140-2 Level 3 certified HSMs.

4.2.2.2.3.2 Storage devices where data has resided must be securely sanitized according to MARS-E MP-6 Media Sanitization security prior to use. A guidance document is available at the Centers for Medicare and Medicaid Services website (<https://www.lilis.gov/guidance/document/minimum-acceptable-risk-standards-exchanges-mars-e-20>).

Response: IBM will securely sanitize physical media intended for reuse prior to such reuse, and will destroy physical media not intended for reuse, consistent with NIST guidelines for media sanitization. Following is the link to the complete terms and conditions IBM Data Security and Privacy Principles:
<http://www.ibm.com/cloud/data-security>

4.2.2.2.4 Data repository shall include a perimeter firewall. Vendor must

identify the firewall that is used.

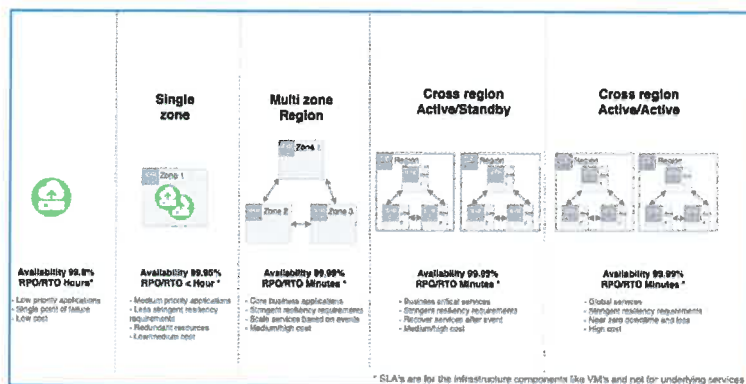
Response: IBM Security Managed SASE Service Advanced (SASE: Firewall-as-a-Service) provides a perimeter firewall and Remote Browser Isolation.

4.2.2.2.5 Data will be stored in at least two geo redundant locations making it improbable that a single event, whether naturally occurring or manmade, will impact both locations. In the event operations are interrupted at the primary data center, Agency operations will be shifted to the secondary location within 4 hours.

Response: With IBM Cross Region Storage your data can be stored in up to three regions within the US.

These locations are Dallas, Washington DC, and San Jose. This capability offers multi-regional protection with concurrent regional access. Please see the following RPO/RTO "Levels of Resiliency" in the IBM Cloud documentation and figure

<https://cloud.ibm.com/docs/ha-infrastructure?topic=ha-infrastructure-landing-about-ha-dr-backup>



In addition to the cross-region storage, IBM Cloud further offers a Multi-Zone Region (MZR) availability for SQL and noSQL formats.

4.2.2.2.6 Vendor shall scan incoming data for fields that appear to contain Personally Identifiable Information (PII) or other sensitive data types and reject flagged files back to the Agency to verify no sensitive data is included.

Response: IBM Security Discover and Classify will identify sensitive data on the network and data at rest repositories to be scanned. This capability helps determine what actions to perform if PII or other sensitive information is detected.

4.2.2.2.7 Vendor shall acknowledge that all data in the repository is the property of the Agency and will be provided to the agency upon request. Data in the repository at the end of the contract period will be provided to the Agency in a mutually agreeable format and upon written notice by the Agency, all copies in the possession of the vendor will be destroyed with a certificate of data

destruction provided to the agency.

Response: IBM Cloud's Standard Cloud Services Agreement acknowledge this RFP's requirements:

<https://www.ibm.com/support/customer/csol/terms?id=Z126-6304&cc=us&lc=en#detail-document>

and references the published IBM Data Security and Privacy Principles (DSP)

<http://www.ibm.com/cloud/data-security>

Furthermore, if required, IBM Cloud uniquely provides a Keep Your Own Key (KYOK) approach, that provides Technical (not just policy) Enforcement by handing over the keys to specific cloud services so that only the client can access data (and IBM cannot). This aligns with the FIPS 140-2 level 4 requirements.

4.2.2.2.8 Agency will upload cleansed and transformed data to the Agency SFTP Server and notify the vendor by email when it is available. Vendor will move the data from the SFTP server to the data repository.

4.2.2.2.9 Vendor will certify that the hosted cloud environment satisfies MARS-E privacy controls (available at

<https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/3-MARS-E-v2-0-Catalog-of-Security-and-Privacy-Controls-11102015.pdf>), including privacy training and awareness, and rules of behavior.

Response: The services provided via the IBM Cloud for Government meets FedRAMP High Authorization which would be a platform that meets MARS-E requirements.

4.2.2.2.10 Vendor agrees that the hosted cloud environment will be available to Agency staff for data transfer and data modeling 99% of the time, 24 hours per day, 7 days per week, with the exception of scheduled downtime.

Response: The minimum availability service level for IBM Cloud is 99.9%. A complete description can be found here

<https://www.ibm.com/support/customer/csol/terms?id=i126-9268&lc=en#detail-document>

4.2.2.2.10.1 Vendor proposal shall include maintenance windows and scheduled downtime which shall occur in off-peak hours, between 8:00 p.m. and 6:00 a.m., Eastern Time (ET) Monday through Friday or on Saturday, Sunday or State Holidays.

Response: IBM Cloud® performs periodic maintenance on the underlying server hosts that run virtual servers. This maintenance can be upgraded to the software on the underlying hypervisor, updates to the firmware on the systems or other security and performance updates. In general, users don't experience any issues during these upgrades. A complete description can be found here:

<https://cloud.ibm.com/docs/vpc?topic=vpc-about-cloud-maintenance>

4.2.2.2.10.2 Vendor shall provide a system downtime report delineating

both scheduled and unscheduled downtime for the month, with each monthly invoice for cloud services.

Response: IBM publishes the current status, history, planned maintenance, and incident reports on the IBM Cloud Status page that's available in real-time:

<https://cloud.ibm.com/status/history>

4.2.2.2.10.3 Vendor agrees that for any month unscheduled downtime is greater than 1% but less than 2.51%, Agency may deduct 2.5% from the total due on the monthly invoice. If unscheduled downtime is equal to, or greater than 2.51%, Agency may deduct 5% from the total due.

Response: IBM Cloud exceeds the stated requirement. For uptime less than 99.9% a credit of 10% is applied, for uptime less than 99% a credit of 25% is applied and for uptime less than 95% a 100% credit is applied. A complete description can be found here

<https://www.ibm.com/support/customer/csol/terms?id=i126-9268&lc=en#detail-document>

4.2.2.3 DATA MODELING PROJECTS/

4.2.2.3.1 Agency will initiate project requests by preparing a data set and uploading to the SFTP server. Vendor shall move the dataset to the hosted cloud repository. Agency staff will perform preliminary data modeling in the cloud before initiating a project with the vendor.

Response: The Converge team will work with the Agency to determine the best method of transferring prepared data from the SFTP server to the cloud object storage. This could include scripting to automate transfers, or the invocation of the data components of the platform. The data ultimately will be made available in the Data Science interface of Cloud Pak for Data, for use by the Data Scientist.

4.2.2.3.2 Within 2 business days of a request to initiate a project, Vendor shall schedule a meeting with Agency staff to occur within 5 business days. Agency and vendor will determine the project scope including desired outcomes, number of models desired, and a not to exceed estimate of project duration (expressed in hours of support required per week). Within 2 business days after the meeting, the vendor will provide a draft project scope for Agency approval.

Response: The Converge team will coordinate with the Agency staff to schedule a kickoff call for every project initiated. The Converge Data Scientist will determine the scope of the use case, which may require both business inputs and data/technical inputs supplied by Agency staff. The draft project scope will be provided to Agency staff for approval.

4.2.2.3.3 Upon receipt from the Agency of an approved project scope vendor shall begin providing up to 5 hours of data scientist support per week to the

Agency project staff at the data scientist billable rate proposed in the RFP response until the scope of work is satisfactorily completed. Vendor or Agency may request fewer support hours per week, spreading the total hours over a longer period of time but any such modification shall require mutual agreement of the parties in the project scope.

Response: Since each project is capped at 5 support hours per week, the Converge Data Scientist will coordinate with the Agency staff on tasks to be completed. These may include providing recommendations and/or hands-on support for data preparation, predictive/Data Science modeling, deployment, and operationalization of Data Science results.

4.2.2.3.4 Vendor agrees that the project duration in the scope of work is a not to exceed estimate and the hours billed shall represent actual hours worked.

Response: All Converge consultant hours will be tracked using the Converge time keeping system, which is the source system for invoicing. All projects have a project budget that is maintained in the time keeping system so that project burndown can be tracked.

4.2.2.3.5 Agency may request changes to the scope of work resulting in a modified scope of work. Vendor shall prepare a new estimate of required support for the modified Statement of Work. Changes in scope that add no more than 25% to the project duration shall be considered a project change and added to the maximum billable hours for the project. A scope change that adds greater than 25% shall be considered a new project.

Response: The Converge team will coordinate with the Agency on any scope changes to a project, and will collaborate on a revised estimate. The Converge Advanced Analytics team utilizes an agile methodology to support data science projects, including sprint-based efforts and regular stand-ups to determine project progress and address any required modifications to scope or deliverable.

4.2.2.3.6 Vendor shall support up to 18 total projects during the 12 month life of the contract including up to 6 projects concurrently.

Response: The Converge Data Scientist will collaborate with the Agency staff to understand and develop project plans for the anticipated 18 projects over the course of the 12 month life of the contract. Support activities can include defining use cases, prioritizing use cases, identifying required data and data preparation tasks, as well as identifying predictive modeling techniques, evaluation and success criteria, and deploying results to end users.

4.2.2.3.7 Agency may adjust the priority of projects, placing a lower priority project on hold to keep the number of concurrent projects to six or

fewer. Vendor shall accommodate the Agency priorities.

Response: The Converge Data Scientist will work with the Agency staff to adjust work efforts based on prioritization.

4.2.2.3.8 Upon contract award, the Vendor shall designate one primary contact and at least one backup that will be the initial point of contact for all project engagements under this contract. Only projects properly initiated with the Vendor point of contact are valid projects under the contract.

Response: Converge will designate a Project Manager to oversee the project logistics and a Technical Lead who will be primary contact for all Data Science related activities and decisions.

4.2.2.4 REQUIRED SOFTWARE

4.2.2.4.1 Vendor shall list in their technical proposal **ALL** of the software the State Agency will need in order to satisfy the stated goals and objectives and to meet all of the mandatory requirements within the RFP.

Response:

- IBM Cloud Pak for Data as a Service (CP4DaaS)
- IBM Cloud Tier 3 subscription
- IBM Cloud: Storage on Cloud
- IBM Security Guardium Data Encryption
- IBM Security Guardium Data Protection
- IBM Security Discover and Classify
- IBM Security Managed SASE Service Advanced (SASE: Firewall-as-a-Service)
- IBM Security ReaQta (SaaS)

4.2.2.4.2 Predictive analytics software proposed in response to this RFP must have the capability to process text data via natural language processing and must handle multiple file formats including, but not limited to (.csv, .tsv, .dsv, .xls, .xlsx, .sas7bdat, .geojson, .gz, .bz2, .tar, .tgz, .zip). The software must be able to export data in formats that are compatible with popular data visualization software including, but not limited to Tableaux and Microsoft Power BI.

Response: IBM Cloud Pak for Data as a Service (CP4DaaS) has built in functionality and capability to process text data via Natural Language Process techniques thru Watson Studio and Watson ML. The method you choose for analyzing data or building models help the State of WV to determine which tools best fit for their needs and it all comes in the Cloud Pak for Data as a Service (CP4DaaS).

- Analyze data by writing code in Jupyter Notebooks
- Visualize and prepare data in Data Refinery
- Develop Shiny applications in the RStudio

- Visualize your data without coding with Cognos Dashboards Embedded
- Automatically build ranked list of model candidate with the AutoAI tool
- Build predictive models on graphical canvas with SPSS Modeler.
- It supports all the file formats given in the Agency requirement and it is compatible with popular visualization software.

4.2.2.4.3 Vendor will clearly identify any software that is proprietary and will explain the basis for software licenses including whether the licenses are named user licenses or concurrent user licenses; whether licenses are annual or perpetual; any requirements requiring software to be under vendor support contracts; etc.

Response: IBM Cloud Pak for Data as a Service (CP4DaaS) software package is built on open-source technology stacks and IP is owned by IBM. It is offered via subscription-based licensing model. Advanced Support must be selected.

4.2.2.4.3.1 Vendor proposal shall indicate whether licenses are transferable (from an Agency staff member leaving the project to a new staff member) and whether and, how a license might be upgraded during the license term, for instance from a view only license to a license with full access to SW features.

Response: There are no transferring licenses. The System Administrators for the solution can easily add / modify / remove a user from a project account.

4.2.2.4.4 Vendor will clearly identify any required third party software, if Vendor is an authorized distributor of such third party software or if the Agency will have to procure their own licenses. (NOTE: Where an existing Agency or Statewide Contract includes the required third party software, Agency reserves the right to purchase from the existing contract rather than from the Vendor.)

Response: SIS, A Converge Company is a platinum IBM partner and reseller. All software needed is included in the cost estimate

4.2.2.4.5 Vendor will address their approach to SW version and release updates (including bug fixes). The response should include details regarding what updates are required vs. optional; the amount of notice the Agency will be provided for routine updates; the amount of notice the agency will be provided for bug fixes; etc.

Response: Approach to new release updates:

- Open support ticket
- New release notes will be shared with agency at least 6 weeks before the upgrade.
- Update latest security updates from Red Hat OS are downloaded 4-6 weeks before product system releases and tested extensively for the products running on Red Hat OpenShift.
- Minimum of 6 weeks will be provided to the agency for bug fixes.

3. Qualifications and Experience: Vendor should provide information and documentation regarding its qualifications and experience in providing services or solving problems similar to those requested in this RFP. Information and documentation should include, but is not limited to, copies of any staff certifications or degrees applicable to this project, proposed staffing plans, descriptions of past projects completed (descriptions should include the location of the project, project manager name and contact information, type of project, and what the project goals and objectives were and how they were met.), references for prior projects, and any other information that vendor deems relevant to the items identified as desirable or mandatory below.

4.3.1. Qualification and Experience Information: Vendor should describe in its proposal how it meets the desirable qualification and experience requirements listed below.

4.3.1.1. Vendor should demonstrate that they have provided predictive analytics SW, including machine learning and artificial intelligence to companies and agencies in the United States for a minimum of five years prior to this bid opening.

Response: Converge Technology Solutions Corp. is a software-enabled IT & Cloud Solutions provider focused on delivering industry-leading solutions and services. Converge's global solution approach delivers advanced analytics, application modernization, cloud, cybersecurity, digital infrastructure, and digital workplace offerings to clients across various industries. Converge supports these solutions with advisory, implementation, and managed services expertise across all major IT vendors in the marketplace. The Converge Advanced Analytics team has over 30 years' experience delivering data and analytics software and services, including predictive analytics, machine learning, and AI.

4.3.1.1.1 Vendor should provide the current release of the SW being proposed and comment on the maturity level of that release.

Response: Cloud Pak for Data is on version 4.5.x, with the latest release occurring in August 2022. The Cloud Pak platform is mature and stable, having been in the marketplace for several years, with component applications and infrastructure that have been used by clients for decades.

4.3.1.2. Vendor should provide a staffing plan that will clearly support the requirements enumerated in the RFP. The plan should include, at a minimum, resumes for proposed staff along with copies of certifications or degrees applicable to this contract; descriptions of past projects completed; project manager name and contact information for past projects; and, customer name and contact information for each project cited.

Response: Converge will provide a Data Science resource and a Project Manager to oversee the success of the project. Specific, named resources will be determined upon award and based on both required skills and availability. The Converge Advanced Analytics practice has over 20 members on its Data Science team, supported by a PMO who will supply the project manager. In addition to training and consultative skills, the Data Science team has the following skills:

AI and Machine Learning– Team Resume

NLP/NLU – Cloud APIs (AWS, IBM, GCP, Azure), Spacy, NLTK,

Gensim, CoreNLP, Sci-Kit Learn, FastText, BERT, GPT3, and more

Data Pipelines/Data Engineering – NUMPY, SciPY, Pandas, Dask, Luigi, Apache Airflow, Bonobo, PySpark

ML Libraries – SciKit-Learn, XGBoost, TPOT, Auto-SKLearn, Auto-Keras, R, SAS, SPSS, Stan

Time Series – tsFresh, SkTime, Darts, Prophet

Feature engineering – Pandas, SkLearn, Featuretools, FeatureEngine

Deep Learning Frameworks – Tensorflow, Keras, PyTorch, Café, HuggingFace, OpenAI, PaddlePaddle, Onnx, cudnn

MLOps and Services – DVC, CML, Kubeflow, MLFlow, Elasticsearch



4.3.1.3. Vendor should address how they will make substitutions for proposed staff if staff leave the project before completion. The plan should address Agency's prerogative to accept or reject proposed replacements for any or for no cause.

Response: Any staffing changes will be made in a mutually agreeable way, including identification of any replacement staff.

4.3.2. Mandatory Qualification/Experience Requirements - The following mandatory qualification/experience requirements must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it meets the mandatory requirements and include any areas where it exceeds the mandatory requirements. Failure to comply with mandatory requirements will lead to disqualification, but areas where the mandatory requirements are exceeded will be included in technical scores where appropriate. The mandatory qualifications/experience requirements are listed below.

4.3.2.1. Vendors must have at least two existing Federal, State or Local government accounts where they have provided the full range of services requested in this RFP for at least two years.

Response: The Converge team has worked with state and local government agencies over the last five years, providing implementation, training, and development work across data and analytics disciplines. This includes training and development work on predictive analytics and strategic consulting on data science.

State of Rhode Island, Department of Health

Deployed a contact-center-as-a-service solution augmented by a virtual assistant built with IBM Watson Assistant.

Link: <https://www.ibm.com/case-studies/rhode-island-department-of-health-ibm-services-contact-center>

City of Tyler, Texas

Modernized its IT infrastructure to better serve the community during and beyond the pandemic.

Link: <https://www.ibm.com/case-studies/city-of-tyler-digital-transformation/>

Miami-Dade County

Miami-Dade County uses data and AI to enhance public utilities.

Link: <https://www.ibm.com/case-studies/miami-dade-county-cloud-watson-services/>

Geisinger Health System

Geisinger teamed up with IBM to use machine learning tools to identify characteristics associated with a higher risk of mortality, helping clinicians to develop more effective treatments.

Link: <https://www.ibm.com/case-studies/geisinger-health-system>

City of Austin

The city government was able to quickly deploy an interactive and intuitive communication tool that could deliver accurate and up to date information about the public health COVID-19 crisis.

Link: <https://www.ibm.com/case-studies/city-of-austin-watson>

4.3.2.2. For each of the accounts listed in response to 4.3.2.1, vendor shall provide a reference including Name, title, email address, phone number, and the date range in which services were provided.

Response: Converge client information is considered confidential. However, our team can facilitate contact with references if we progress to the final/selection stage of the RFP. IBM is obligated to submit a request, which includes the requestors contact information, to share the name, title, email address, and phone number of the Government Point of Contact receiving the IBM services. For any or all references of interest, IBM will initiate the process to provide the necessary contact information to the respective Point of Contact for the Government of West Virginia.

4.3.2.3. Vendor must provide an organization chart with sufficient detail to demonstrate the ability to support up to the maximum number of projects over the life of the contract

as well as to support the maximum number of concurrent projects at any point over the life of the contract.

Response: Please see the chart below that outlines the Converge Advanced Analytics practice, supporting technology areas and staffing information.

Converge Advanced Analytics

- **Our Practice** boasts a 30+ year heritage to accelerate business outcomes through emerging technologies. Our portfolio includes thousands of projects spanning all industries.
- **Our Team** of 100+ dedicated experts support clients with strategy, design, development, deployment, managed services and support of critical work loads, application modernization and green field solutions across North America.
- **Our Success** drives 10x business outcomes through our strategic, transformative thought leadership coupled with our innovative, multi vendor, technology solutions.



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Artificial Intelligence (AI) & Machine Learning

- Custom Application Development
- Virtual Agents (Speech & Text)
- Deep Search (NLP/NLU)
- Predictive Analytics
- Visual Insights
- Data Science
- Process Automation (RPA)

Business Analytics (BA) & Visualization

- Self service & Dashboarding
- Metadata Modeling
- Visualization
- Enterprise Reporting
- Analytics Governance

Data Modernization

- Pipeline Architecture
- Integration (ETL/ELT)
- Governance
- Master Data Management
- Platforming & Design
- Virtualization & Federation

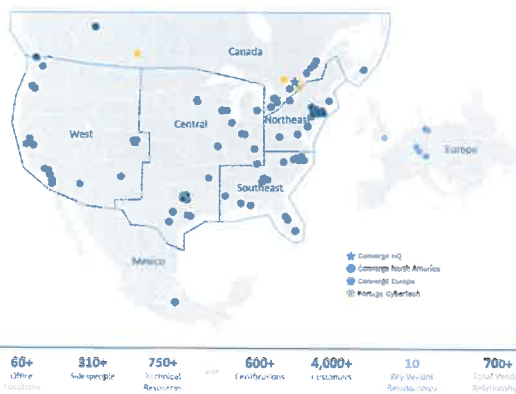
Financial & Operational Performance Management (FOPM)

- Forecasting & Budgeting
- Financial Reporting
- HR Planning
- Migration & Upgrades
- Implementation / Training



Converge Platform

Scaled Footprint with Strong Vendor Relationships and Capabilities



IBM 2021 - Top NA Self Business Partner 2021 - Season Award for Outstanding Technology SSS 2021 - IBM Data and AI Business Unit Excellence 2021 - IBM Business Unit Excellence Award for Digital Trust Platinum Partner Status	IN-RAM! 2020, 2021 & 2022 Ingram Micro Cloud Reseller of the Year Award for North America 2022 Ingram Micro Women in Cloud Female Leader of the Year Award, Rochelle Manns 2021 - Ingram Micro Blue Series Partner of the Year & CORE Partner of the Year NA
PURE IT PARTNERS 2022 - Advantage Partner of the Year 2021 - Elite Partner Status	CRN 2022 - Solution Provider 500 List Ranked #36 2022 - Tech Elite 250 Category 2021 - Managed Service Provider 500 List in Elite 150
PAIOWATTO 2021 - Diamond Status	Red Hat 2021 - Top NA IBM and Red Hat Synergy Partner Premier/APEX Partner Status
Hewlett Packard Enterprise 2021 - North America SMB Partner of the Year 2021 - Platinum Partner Status	vmware MC: Data Center Virtualization MC: Network Virtualization MC: VMware MC: Cloud Managed MC: Cloud Managed

Established in 1982, SIS is a technology solutions and services company, collaborating with clients on innovative data center strategy, technology, and application solutions in the cloud or on-prem. As a nationally recognized technology and managed IT solutions provider, SIS knows to combine predictability with quality to support mission-critical assets. Our top-down strategy, involving

management, business decision makers and IT staff in the development process has consistently delivered solutions that reduce costs and improve efficiencies.

In January of 2019, SIS was wholly acquired by Converge Technology Solutions Corporation ("Converge"), which is headquartered in Toronto, Canada. Converge is building a North American IT Infrastructure provider selling hardware, software, and managed services solutions to Corporate and Government customers by acquiring IT Solution Providers ("ITSPs") and has made 24 strategic acquisitions since its establishment in 2016. Converge has approximately 1,400 employees and over 4,000 customers. The Management Team, Board, and Founders have extensive acquisition and management experience in both the private and public markets. Converge is on a trajectory for exponential revenue growth, targeting \$3B+ annual run-rate revenue in 2-3 years. Other subsidiaries of Converge to date include:

SIS is proud to maintain a wide variety of service competencies, delivered by our team of trained and experienced engineers and consultants. Further, as a part of the Converge portfolio of companies, SIS is positioned to collaboratively leverage competencies and expertise within our expanding family of IT solution providers, as well as our strategic technology partnerships, to bring our clients quality solutions. Our goal is to be a trusted partner that brings together world-class solutions and services to help reduce costs, increase efficiency, and create competitive advantages. We invite you to find out more at www.convergetp.com.





Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Proposals
Info Technology

Proc Folder: 1090427			Reason for Modification: ADDENDUM 4 TO PROVIDE REVISED COST SHEET AND SAAS ADDENDUM
Doc Description: REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/ SERVICES			
Proc Type: Central Master Agreement			
Date Issued	Solicitation Closes	Solicitation No	Version
2022-09-22	2022-09-28 13:30	CRFP 0506 MIS2300000001	5

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name : Software Information Systems

Address :

Street : 165 Barr St

City : Lexington

State : KY

Country : USA

Zip : 40507

Principal Contact : Karen Smallwood

Vendor Contact Phone: 859-398-3222

Extension:

FOR INFORMATION CONTACT THE BUYER

Crystal G Hustead
(304) 558-2402
crystal.g.hustead@wv.gov

**Vendor
Signature X**

Karen A. Smallwood

FEIN# 61-1371685

DATE 9/26/22

All offers subject to all terms and conditions contained in this solicitation

REQUEST FOR PROPOSAL
WV Department of Health and Human Resources
CRFP MIS2300000001

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.

Software Information Systems
(Company)

Karen Smallwood, Director of Contracts and Compliance
(Representative Name, Title)

859-977-4796/859-977-4750
(Contact Phone/Fax Number)

9/26/22
(Date)

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title) Karen Smallwood, Director of Contracts and Compliance

(Printed Name and Title) Karen A. Smallwood, Director of C&C

(Address) 165 Barr Street, Lexington, KY 40507

(Phone Number) / (Fax Number) 859-977-4796/859-977-4750

(email address) Karen.Smallwood@convergetp.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through myOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Software Information Systems

(Company) Karen A. Smallwood, Director of C&C
(Authorized Signature) (Representative Name, Title)

Karen Smallwood, Director of Contracts and Compliance
(Printed Name and Title of Authorized Representative) (Date)
859-977-4796/859-977-4750

(Phone Number) (Fax Number)
Karen.Smallwood@convergetp.com

(Email Address)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: MIS2300000001

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 checked="" 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 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.

Software Information Systems

Company

Karen A. Smallwood

Authorized Signature

9/26/22

Date

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

In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

State of West Virginia
Purchasing Division

By: _____

Printed Name: _____

Title: _____

Date: _____

Vendor Name:

By: Karen A. Smallwood

Printed Name: Karen Smallwood

Title: Director of Contracts and Compliance

Date: 9/26/2022

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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 exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Software Information Systems

Authorized Signature: Karen A. Smallwood

Date: 9/26/22

State of Kentucky

County of Fayette, to-wit:

Taken, subscribed, and sworn to before me this 9th day of September, 2022

My Commission expires January 22, 2025.

AFFIX SEAL HERE

NOTARY PUBLIC Vanessa Thurst