



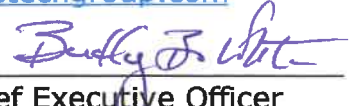
HHS Tech Group

09/27/22 09:45:32  
WV Purchasing Division

## Technical Proposal

# Request for Proposal CRFP MIS2300000001: Predictive Analytics Software and Services

September 28, 2022

Submitted to:	Submitted by:
<p><b>State of West Virginia Department of Administration, Purchasing Division for the Department of Health and Human Resources</b></p> <p><b>Attn: Crystal Hustead, Senior Buyer</b> Purchasing Division 2019 Washington Street East Charleston, WV 25305</p> <p>Phone: (304) 558-2402 Email: <a href="mailto:crystal.g.hustead@wv.gov">crystal.g.hustead@wv.gov</a></p>	<p><b>HHS Technology Group, LLC</b> 6600 North Andrews Avenue, Suite 570 Fort Lauderdale, FL 33309</p> <p><b>Contact: Susie Bird, Director of Business Development</b> Phone: (916) 612-0804 Corporate Fax: (954) 239-1405 Email: <a href="mailto:susie.bird@hhstechgroup.com">susie.bird@hhstechgroup.com</a></p> <p><b>Vendor Signature:</b>  Bradley B. White, Chief Executive Officer Signed: September 23, 2022</p>

**Predictive Analytics Software and Services Leader**

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## 2. Cover Letter

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September 23, 2022

State of West Virginia  
Department of Administration, Purchasing Division for the  
West Virginia Department of Health and Human Services  
2019 Washington Street East  
Charleston, WV 25305

Attn: Crystal Hustead, Senior Buyer

Re: Request for Proposal – CRFP MIS2300000001, Predictive Analytics  
Software and Services

Ms. Hustead,

The State of West Virginia Department of Health and Human Resources (the Agency) holds considerable responsibility in overseeing multiple subdivisions and offices under the Department alongside the wide-ranging, cumulative data utilized across each office. In order to best inform policy decisions and continue to elevate population health across the State, the Agency needs a vendor that brings direct project experience, staff expertise, and the technology needed to successfully perform accurate Predictive Analytics. By retaining a reliable, experienced vendor partner, the Agency will have both the expert resources and technology you need to ensure success.

HHS Technology Group, LLC (HTG) is a national leader in Predictive Analytics from both a services and technology perspective. Our out-of-the-box, Software-as-a-Service (SaaS) technology, known as **Discover your Data (DyD)**, is a proven solution that leverages Machine Learning (ML) and Artificial Intelligence (AI) to automate the ingestion of data and the analytical insights captured. Our technology is supported by our Analytics Team comprised of Epidemiologists, Data Scientists, and other staff from across HTG as well as staff from our subcontractor partner, Mathematica Inc.

We have provided additional details herein on the services and technology we will bring to best support the Agency. On behalf of all of us, thank you for this opportunity. We look forward to hearing from you and to providing a demonstration to your team soon.

Sincerely,



Bradley B. White  
Chief Executive Officer  
HHS Technology Group, LLC



### 3. Executive Summary

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The State of West Virginia Department of Health and Human Resources (DHHR or the “Agency”) oversees the critical services provided across all 55 counties in the State of West Virginia. Over 6,000 staff work hard every day to support the Health and Human Resources needs of the State. Among these many services includes support provided by the Bureau for Behavioral Health (BBH) and the Office of Drug Control Policy (ODCP) as the State works to target communicable diseases like COVID-19 as well as the mental health needs of residents.

The Center for Regional Economic Competitiveness (CREC) and West Virginia University (WVU) published research in 2015 which was recognized by the National Library of Medicine, National Center for Biotechnology Information on the changes in the Appalachian region among West Virginians and neighboring communities (Appalachian Regional Commission, 2015). By analyzing data trends and using Predictive Analytics, the Appalachian Regional Commission (ARC) was able to wisely distribute funds where they were needed most to have the greatest impact at the local level. This is just one example of how the power of data and the utilization of Predictive Analytics can be put to work to improve the health and wellbeing of residents across our local communities. As the Agency looks to the future, you are taking the right step forward in securing a vendor that brings this level of understanding, helping you take in the wealth of data the Agency has available and apply Predictive Analytics in order to maximize your effectiveness across the State and to inform the right policy decisions.

#### **HHS Technology Group: The Right Choice**

As a leader in providing Predictive Analytics from both a services and technology perspective since 2007, HHS Technology Group, LLC (HTG) brings the experience and staff expertise coupled with the technology you need to ensure success. Our out-of-the-box, Software-as-a-Service (SaaS) technology, known as **Discover your Data (DyD)**, is a proven solution that leverages Machine Learning (ML) and Artificial Intelligence (AI) to automate the ingestion of data and the analytical insights captured. In addition, our support staff brings extensive experience working with data, performing Predictive Analytics, and providing subsequent reporting to help inform policy decisions.

Working alongside HTG as our long-term subcontractor partner is Mathematica Inc.

**Mathematica.**

Progress Together

Our combined **Analytics Team** for the Agency brings **over 67 years of data-driven technology and Predictive Analytics experience**. Our proven technology backed by our Analytics Team comprised of Data Analysts, Data Engineers, Epidemiologists, Data Scientists, and other support staff brings the right level of project experience, staff expertise, and technology you need to ensure success.

Some of our many federal and state projects through the years have included large Predictive Analytics projects like our active work supporting the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Planning and Evaluation (ASPE). This nationwide project enables ASPE to securely view multiple years of Medicaid claims data, commercial health insurance data from across numerous payers, electronic health record (EHR) data, health risk assessment (HRA) data, and more across all 50 states through our secured online portal – leveraging the same technology as proposed herein to support the Agency. As a national project, this includes ongoing analyses of the State of West Virginia’s Medicaid data, enabling our team to not only analyze your 2 TB of data anticipated to be received, but further share our de-identified insights already obtained on your Medicaid population.



Additionally, as a national leader in Predictive Analytics services and technology, HTG manages nationwide public health data, including the COVID-19 Research Database (COVID RDB), with lab results and case record information analyzed to support public agencies across the country.

COVID-19  
**RESEARCH DATABASE**

Through our existing partnerships with the Rockefeller Foundation and the Rockefeller Pandemic Prevention Institute (PPI), we provide Predictive Analytics through our COVID RDB to deliver immediate access and insight to over 85 billion records from across hundreds of public and private data sources. Our modern **Data Sharing Gateway (DSG)**, part of our overall DyD technology, is designed to ingest

The  
**ROCKEFELLER  
FOUNDATION**

**Health Level Seven (HL7)**

International data and a range of other standard and custom data elements, including laboratory data from hundreds of data submitters concurrently. **Our cloud-based DSG can handle over one million transactions per hour** with auto-scaling in place to scale horizontally and vertically on demand.

Through our technology's load capabilities, we can maximize the volume of data which can be leveraged for performing Predictive Analytics, with additional ML and AI automation in place to yield data insights which our Analytics Team then reviews to validate and document intelligence gained. This has already resulted in our ability to accurately pinpoint trends in COVID-19, sharing our Predictive Analytics so that the forecasting of trends along with proper planning of resources can be conducted to inform public policies and make a real-world impact in local communities.

**Why Choose Us?**

- ✓ 67 years of data-driven technology and predictive analytics experience
- ✓ Ability to automate your analysis through Machine Learning and Artificial Intelligence
- ✓ Out-of-the-Box, SaaS technology, **Discover your Data (DyD)**, with built-in automation and intelligence
- ✓ Direct Federal and State contract work for Predictive Analytics – bringing proven project experience
- ✓ Dedicated Analytics Team ready for immediate work, pooling from **over 1,200 expert resources**

Another example of how HTG leverages our technology and staff expertise to perform Predictive Analytics includes our support for the Morris Hood III Chronic Kidney Disease Prevention Initiative. This project brought HTG and Mathematica's staff expertise together once again to support the National Kidney Foundation of Michigan and the State of Michigan at large. On this particular project, our technology is being used to automate the analysis of a large volume of health data, including from Medicaid claims, to accurately estimate the long-term costs of having chronic kidney disease. Our Analytics Team further supports our technology by bringing chronic condition cost estimation, Medicaid data analysis, and digital asset production and reporting expertise to help inform the Predictive Analytics gained.

**NATIONAL KIDNEY  
FOUNDATION.**

of Michigan

These are just some of the many examples we bring wherein our technology and staff expertise have been used to drive Predictive Analytics with real-world data insights that yield meaningful results. HTG and Mathematica bring over 1,200 Data Analysts, Data Engineers, Data Scientists, Epidemiologists, Information Technology resources, and a wide range of other support personnel to assist each agency's unique needs. Our Analytics Team is comprised of recognized experts in analyzing medical, behavioral health, pharmaceutical, lab, and other eligibility and claims data, including individual case record information, to support agencies across the country.

Overall, our team brings a proven history delivering innovative, data-driven technology solutions, Predictive Analytics, data management, intelligence reporting, and data analytics to support a wide range of Health and Human Services agencies and their initiatives through the years. Our projects continually involve enterprise-wide data ingestion and modeling, proven AI and ML modernization, Predictive Analytics, as well as extract, transform, and load (ETL) procedures, and the ongoing transmission of data and associated results reporting in multiple formats.

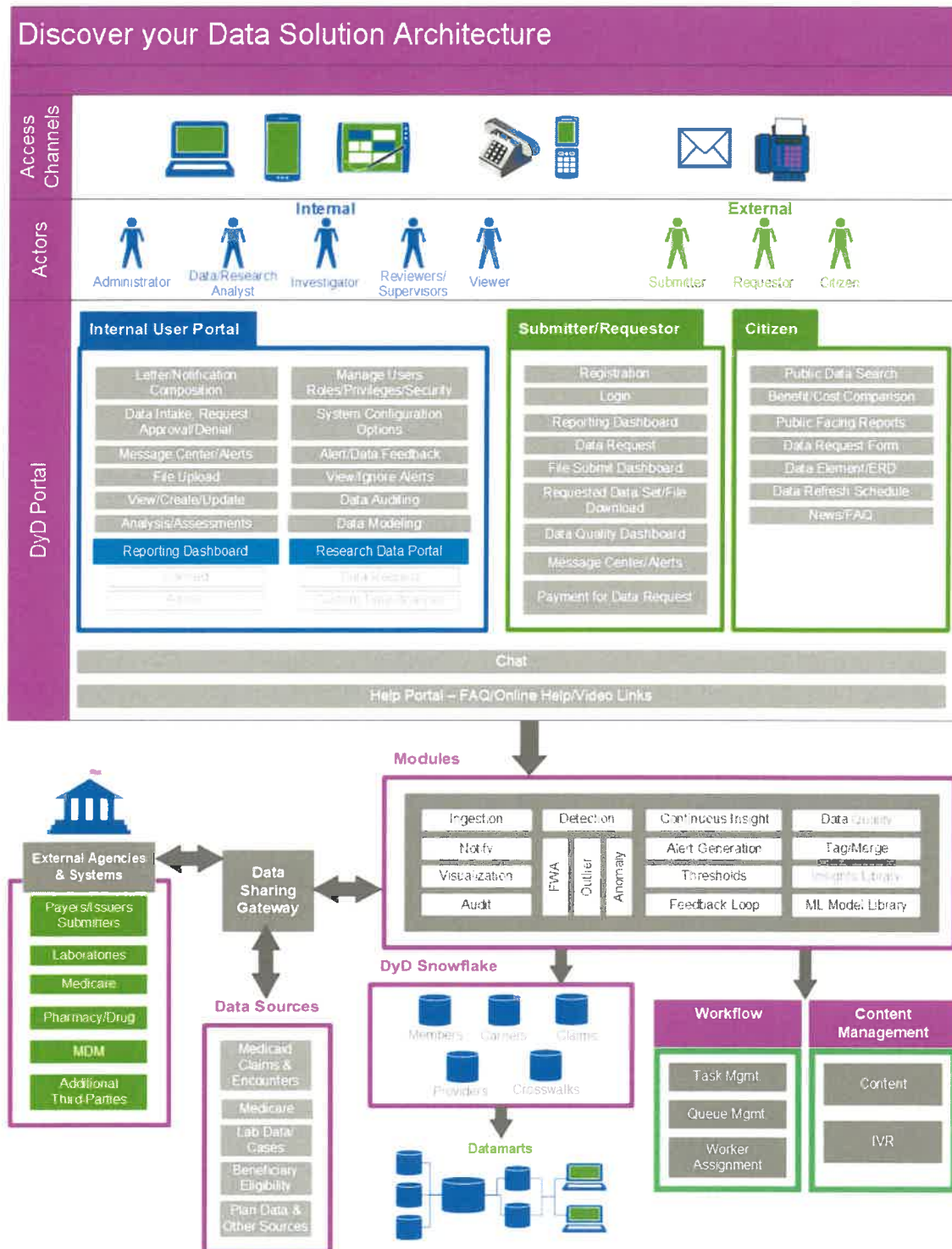
## Predictive Analytics Technology Overview

Alongside our Analytic Team's expertise and project experience is our **Discover your Data (DyD)** solution which was specifically built on a modular microservices platform with 'plug-n-play' technology components. This includes our **Data Sharing Gateway (DSG)** ingestion module to automate the intake process, validating, de-duplicating, analyzing, and transmitting health-related data, such as laboratory results and prescription drug information. Our solution is designed to seamlessly integrate with other systems as needed and has established Application Programming Interfaces (APIs) in order to deploy services quickly and efficiently.

By maximizing ML and AI, we are able to best automate the analysis process, eliminating manual methods, such as tabular CSV data comparisons, to deliver analytical findings and generate reports that provide meaningful data insights to drive policy decisions. Provided on the following page is a high-level overview of our DyD's Solution Architecture which can be integrated as needed with the Agency's systems in order to facilitate the transmission of data, with multiple standard and custom formats able to be supported.



## Exhibit 1. DyD Solution Architecture



### DyD – Key Technology Features

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Our DyD technology includes a wide range of out-of-the-box features to meet the complete needs of any Predictive Analytics project – from our **Data Enclave** to perform initial data ingestion, cleaning, and transformation to **Data Modeling** capabilities with a secured repository. At a high level, the following core features are included with DyD:

#### **Microservices Architecture**

- Services are well defined, loosely coupled, coarse grained, and business centric
- Use of Open Architecture Principles (Medicaid Information Technology Architecture [MITA] 3.0 aligned)
- Data Store/Lake using Snowflake Architecture/Schema

#### **Continuous Insight Generation Platform**

- ML and AI automation capabilities to derive continual insights
- Data Exploration Tool

#### **Data Visualization Engine**

- Visualize data insights, create interactive reports, and adjust dashboard information published in the DyD Portal

#### **Modern Research Analyst Integrated Development Environment (IDE) supporting MLOps**

- *Combining Machine Learning with DevOps and Data Engineering to maintain reliable, accurate ML models to maximize data insights*
- Prebuilt tools like SageMaker, H2O, Python, and Glue, along with established data connectors, model sets, and algorithms
- Bring Your Own Tools (BYOT) capability enabling the Agency to utilize your own software tools, such as specific reporting tools, as desired

#### **Modern, Intuitive DyD Portal**

- Secured, role-based access
- Individual Project/Case Management
- Chat/Messaging Module to send quick communications with help support able to be provided from within the online portal
- Ability to utilize the DyD Portal from any desktop, tablet, or smart phone

- Offline data capture capabilities
- Multi Formfactor support

#### **Secure Cloud Hosting**

- Deployed on the Amazon Web Services (AWS) GovCloud environment with FedRAMP compliance
- Aligned and compliant with federal, state, and industry standard security guidelines

#### **High Availability/Fault Tolerance**

- Can scale horizontally and/or vertically
- Scale based on demand using Kubernetes
- Auto-fault tolerance using Kubernetes
- Multi-cluster/node deployment

#### **Real-time 24/7 Monitoring**

- Infrastructure and business services
- Business metrics capturing

#### **Data Sharing/Publishing Module**

- Quick data export and publishing capabilities

#### **High Throughput DSG Ingestion & Data Quality Engines**

- Ability to support multiple standard and custom formats
- Pre-Built Data Maps for CMS LDS, APCD CDL, T-MSIS, and other standard formats
- Model and Insight Library
- Automated alerts and notifications
- Integrated Rules Engine to set thresholds for anomalies/outliers

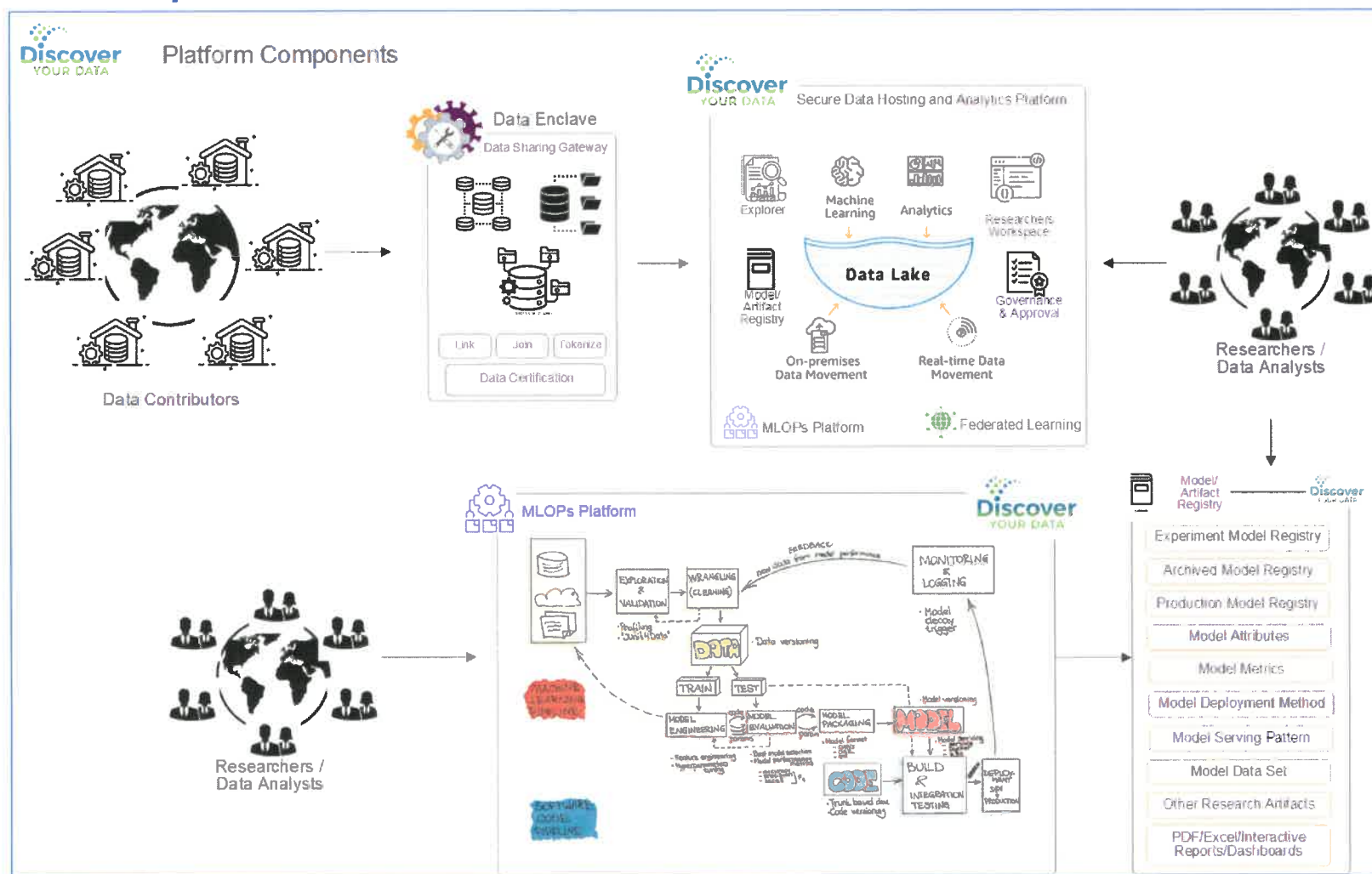
#### **Model Registry**

- Pre-defined set of models that can be leveraged such as Claims Classification Models, Member Profile, Claim Profile, Market Based Models, Chronic Conditions warehouse, Cost Calculator Models, Network Analysis Models, and more

In addition to these core features, provided on the following page is a detailed view of DyD's Functional Architecture.

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## Exhibit 2. DyD Functional Architecture

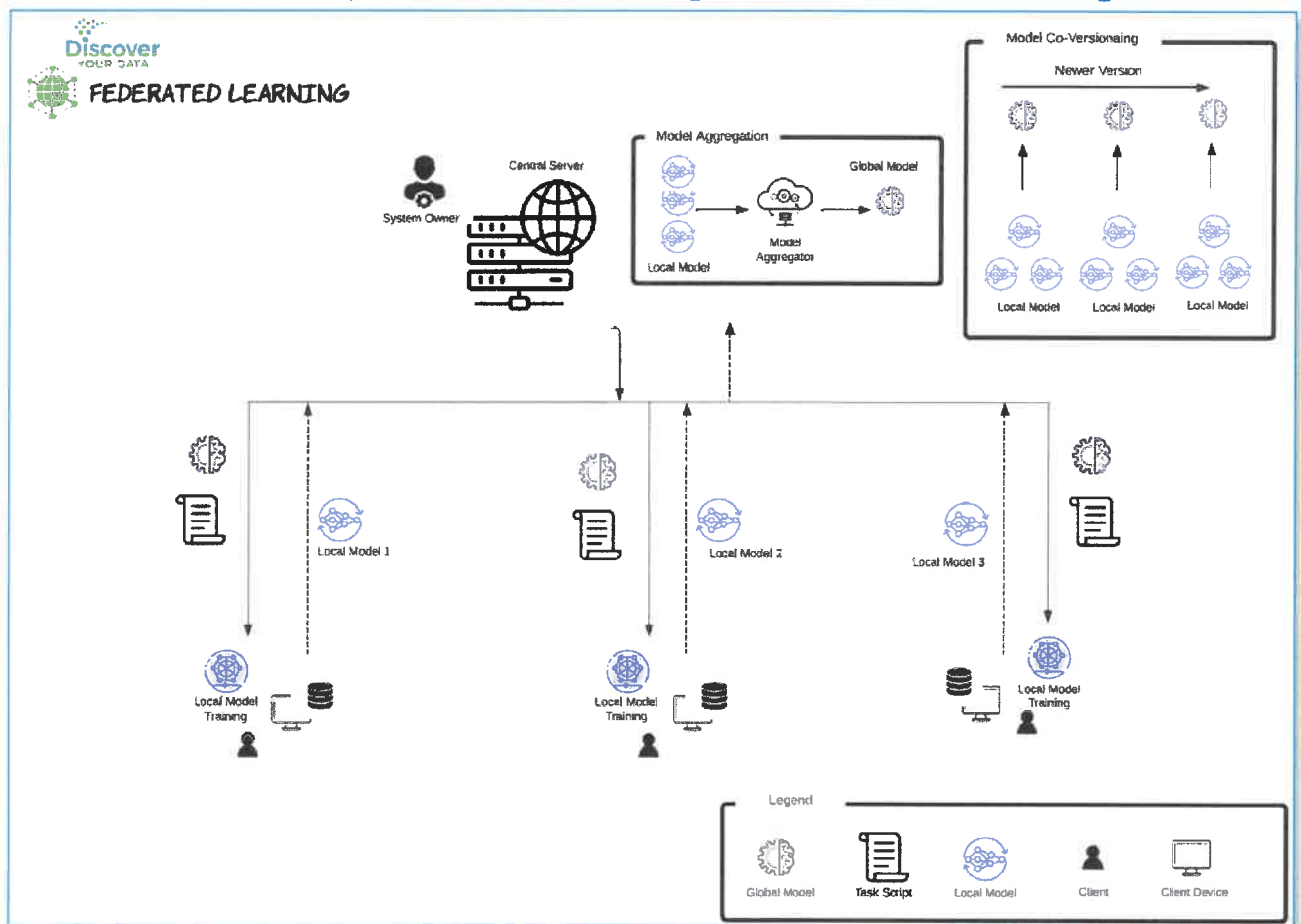




## Epidemiology Model Library for Federated Learning

DyD and our open source framework uses Federated Learning, a ML technique that trains algorithms to invoke collaborative learning across multiple decentralized systems. This shared global model enables data to be kept locally while maximizing data insights gained by accounting for data across multiple sources. Additionally, as noted within the RFP, HTG can also support the standalone receipt of the 2 TB of data anticipated. However, our Epidemiology Model Library could enable the Agency to eliminate manual processes, perform Predictive Analytics, and facilitate open research in an automated fashion with the expert support of our Epidemiologists, Data Scientists, and other staff. Provided in our next exhibit is an overview of how DyD uses Federated Learning to gain data insights across disparate systems.

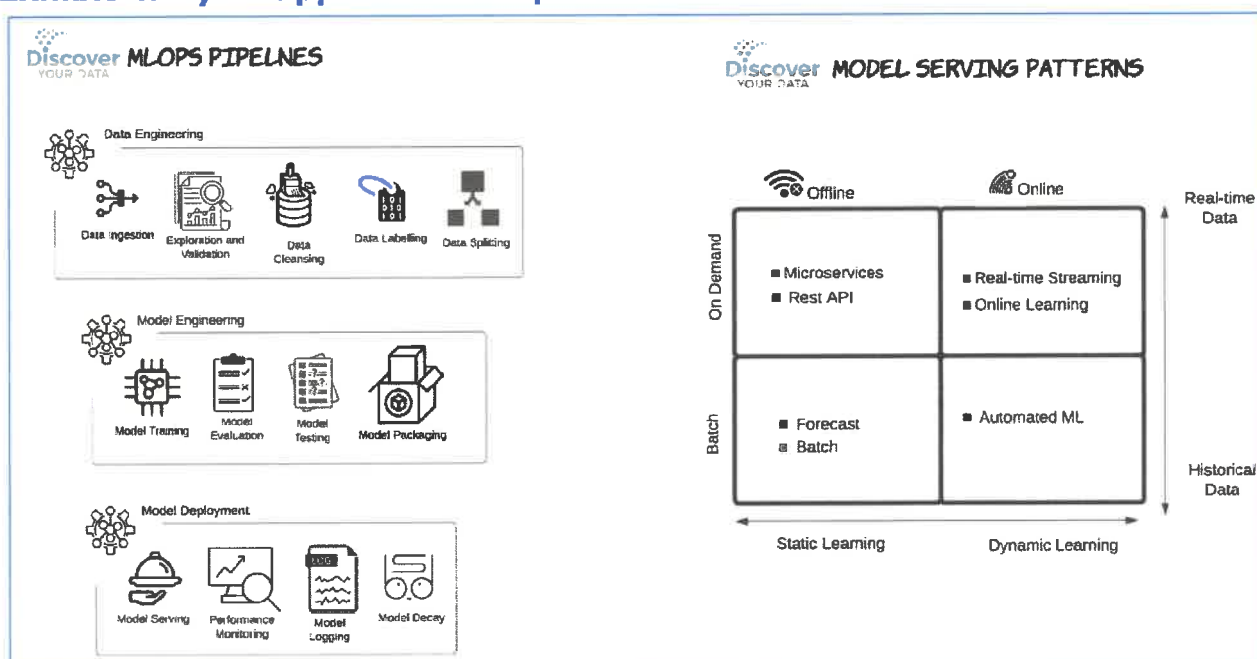
### Exhibit 3. DyD: Using Federated Learning to Maximize Data Insights



## MLOps Support

DyD also supports MLOps, combining Machine Learning with DevOps and Data Engineering to maintain reliable, accurate ML models to maximize data insights. This creates an Integrated Development Environment (IDE) that supports modern research, predictive analytics, and data model creation as shown in the next exhibit.

### Exhibit 4. DyD Support for MLOps and Model Creation

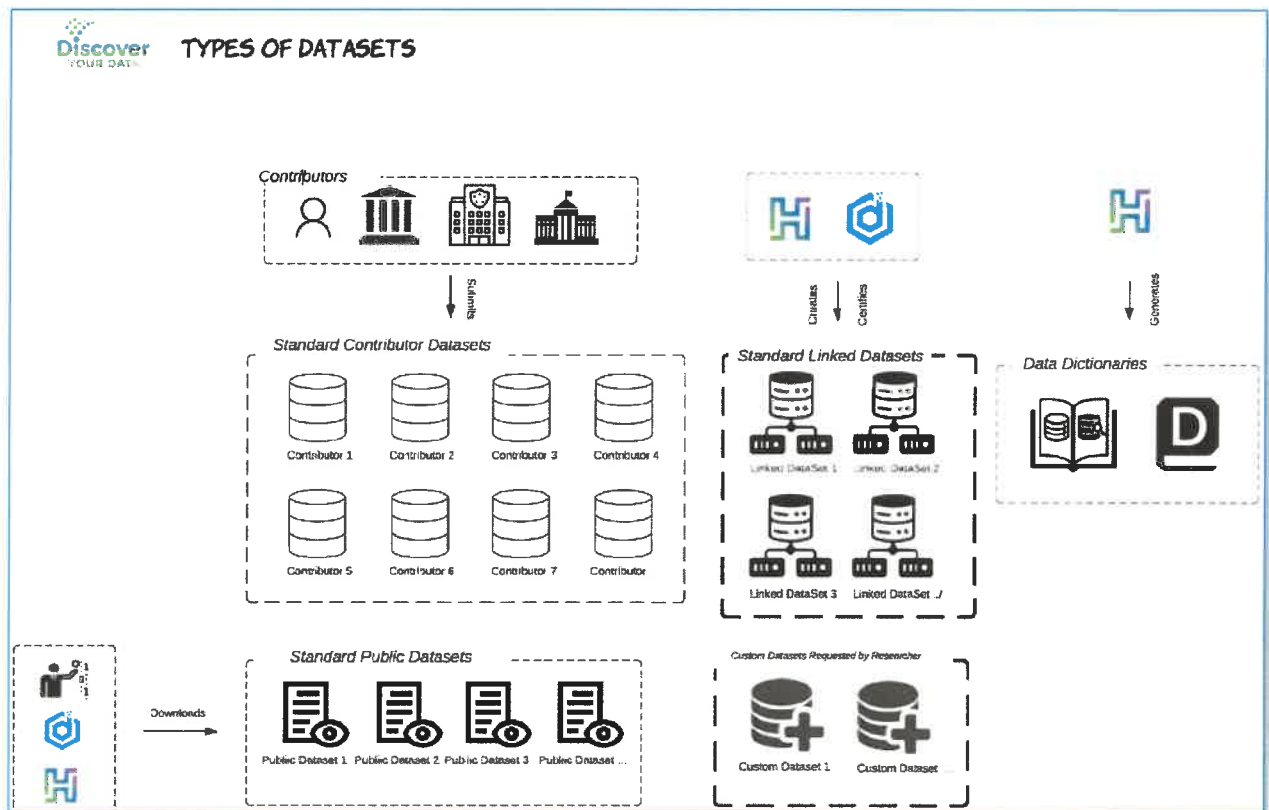


## Data Set Support and Researcher Access

Although the Agency has indicated that data sent will already be de-identified, note that DyD supports encrypted, secured dataset access and management out-of-the-box. This includes the ability to bring disparate datasets together via unique tokenization and data linkages. For example, through our existing Predictive Analytics work, DyD has existing data linkages and common data schemas including from systems and data sources like Mortality, Healthjump EHR, Office Ally Claims, AnalyticsIQ SDOH, Healthwise SDOH, Glooko Diabetes data, and more. As another example, through our COVID-19 Predictive Analytics work, we configured for other genomic and surveillance datasets. As the Agency begins to scope out

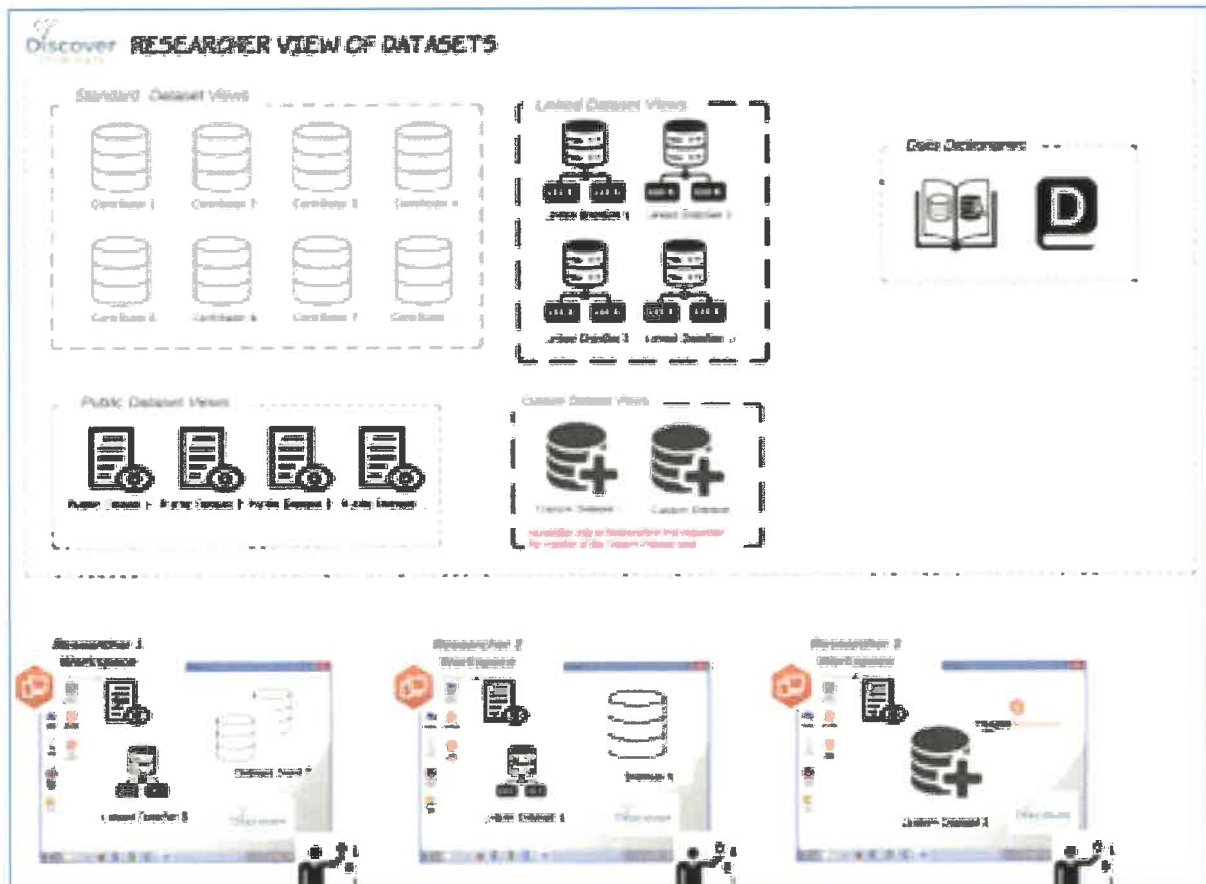
each of your 18 projects, our Analytics Team will be there to support each corresponding dataset that needs analysis with DyD able to handle a wide range of various types of datasets, as shown in the next exhibit.

## Exhibit 5. DyD: Supporting Various Types of Datasets



As datasets are analyzed, the Agency's staff can leverage DyD's standard provisioning capability. This will enable individual staff members to be able to publish and promote models/datasets to their own workspaces, as shown in our next exhibit. Although the Agency has noted that your team will de-identify the data, note that all data is protected by DyD's end-to-end encryption technology and our Access Control framework.

## Exhibit 6. DyD: Individual Researcher View of the Datasets

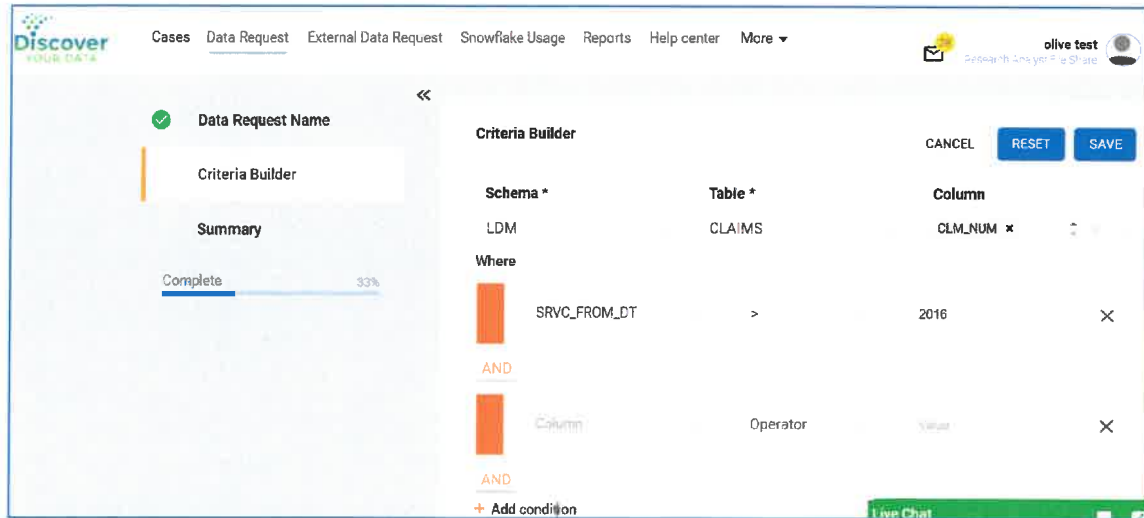


### DyD Portal

Each team member will have their own secured login to our DyD Portal with a designated workspace to work within as well as the ability to collaborate with their team members. Additionally, note that DyD has built-in extract, transform, and load (ETL) automation which could eliminate the need for the Agency to have ETL Developers to prepare the data for analysis. All data can be processed automatically through our DyD Portal. As the Agency works on each of your 18 planned projects, your designated staff can leverage our DyD Portal to eliminate manual processes, paperwork, and analyses.



## Exhibit 7. DyD Portal: Reducing Manual Work with Automation



The screenshot shows the 'Discover Data' Criteria Builder interface. On the left, a sidebar contains 'Data Request Name' (with a green checkmark), 'Criteria Builder', and 'Summary'. A progress bar under 'Summary' shows 'Complete' at 33%. The main area is titled 'Criteria Builder' and contains a table with columns: Schema \*, Table \*, Column, and Operator. The table has one row with the following values: Schema: LDM, Table: CLAIMS, Column: CLM\_NUM, Operator: >. Below the table, there is a 'Where' section with a red bar and the text 'SRVC\_FROM\_DT'. Below that, there is an 'AND' button and a 'Column' dropdown menu. At the bottom, there is an 'Add condition' button. On the right side of the interface, there are buttons for 'CANCEL', 'RESET', and 'SAVE'. A 'Live Chat' button is visible in the bottom right corner.

Through the utilization of ML and AI, including MLOps and Federated Learning, DyD is able to automate Predictive Analytics processes and modernize the end-to-end process, saving agencies considerable time and expense while streamlining the overall process. All projects are viewable and retrievable at any time, enabling the Agency to work on multiple concurrent projects as desired. In addition, as your team works each project, our Analytics Team of experts will be there to guide you throughout the process.

As each project is scoped out, we will bring the right staff needed from our pool of over 1,200 resources to support you. Depending on the project, this may be a Data Scientist, Epidemiologist, Data Analyst, Clinician, Pharmacist, Researcher, Statistician, Quality Assurance (QA) Reviewer, Health Policy expert, System Director/Cloud Architect, Developer, Engineer, Business Analyst, and more. Throughout each project, we will also ensure tight control on the resources utilized in order to stay within budget, including the five hours allocated per project per week. In addition, our support will be capped across resources at the hourly rate finalized under contract.

Overall, our DyD technology, Analytics Team, and project experience will be put to work to best support the Agency. We will bring our Predictive Analytics expertise and modern technology to elevate your current capabilities and support your team in how to best analyze data and derive meaningful insights that can inform the right public health policy decisions. This includes supporting your current needs now on this 12-month project, as well as our ongoing availability as your expert Predictive Analytics partner to support any future needs your team may have.

## 4. Project Specifications

As required, provided below and on the following pages are HTG's responses to each requirement as set forth in *Section 4: Project Specifications* of the RFP.

### 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.

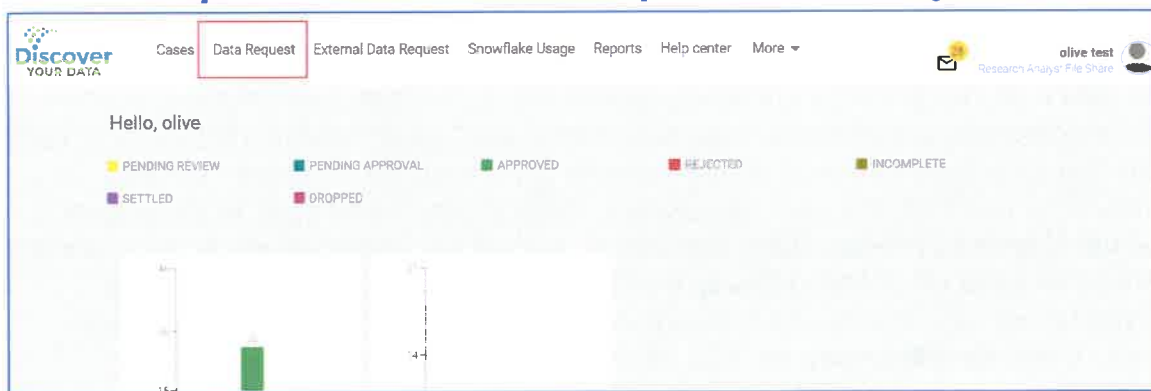
Confirmed. HTG's **Discover your Data (DyD)** technology alongside the expert resources of our Analytics Team will work to support the Agency, including the BBH and the ODCP, as the state works to perform Predictive Analytics to understand communicable diseases like COVID-19, the needs of residents, and more in order to leverage data to best inform public policies and actions that are ultimately taken within local communities.

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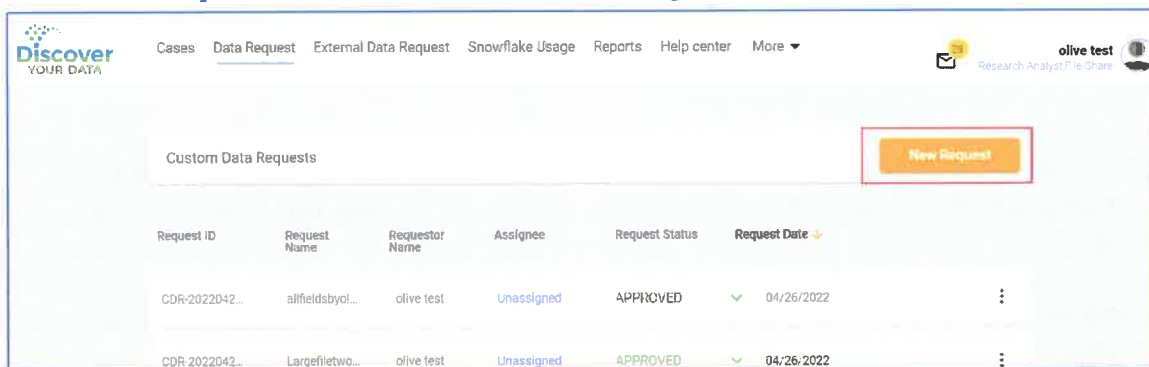
Our DyD technology includes the ability to support multiple standard and custom data formats out-of-the-box. In addition, our built-in ETL automation could eliminate the need for the Agency to have separate ETL Developers to prepare the data for analysis – *reducing your staffing costs further while maximizing automation.*

As shown in the following exhibits, in lieu of manually preparing data anticipated for project analysis, the Agency's allocated project staff can simply create a new request (Custom Data Request [CDR]), and DyD will create the data needed for the project without the significant need of Data Engineers to prepare the data to run the data analysis, generating summary results quickly and efficiently without all of the common manual intervention that would otherwise be required.

### Exhibit 8. DyD Portal: Select Data Request to Start Project



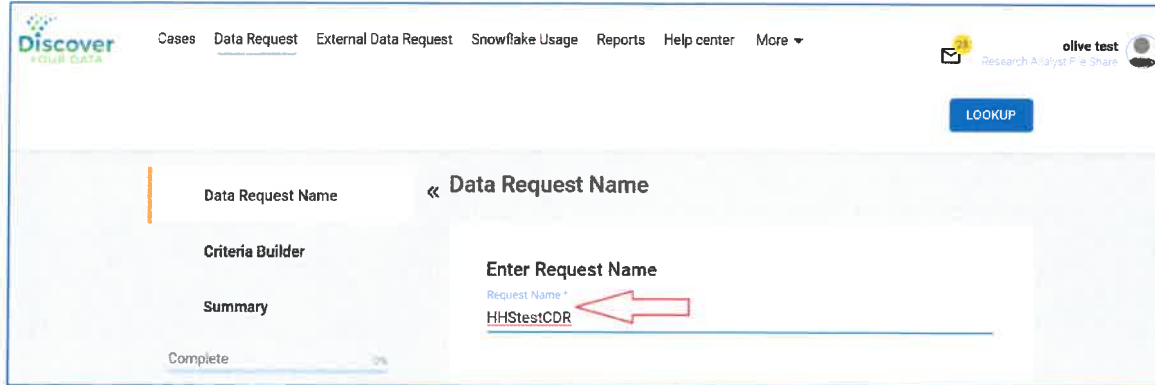
### Exhibit 9. DyD Portal: View Current Projects or Select New Request



The screenshot shows the 'Discover YOUR DATA' portal with the 'Data Request' tab selected. A 'New Request' button is highlighted in the top right. Below it is a table of Custom Data Requests.

Request ID	Request Name	Requestor Name	Assignee	Request Status	Request Date
CDR-2022042...	alifieldsbyol...	olive test	Unassigned	APPROVED	04/26/2022
CDR-2022042...	Largefieldtwo...	olive test	Unassigned	APPROVED	04/26/2022

## Exhibit 10. DyD Portal: Enter the Request Project's Name



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

olive test Research Analyst File Share

LOOKUP

Data Request Name « Data Request Name

Criteria Builder

Summary

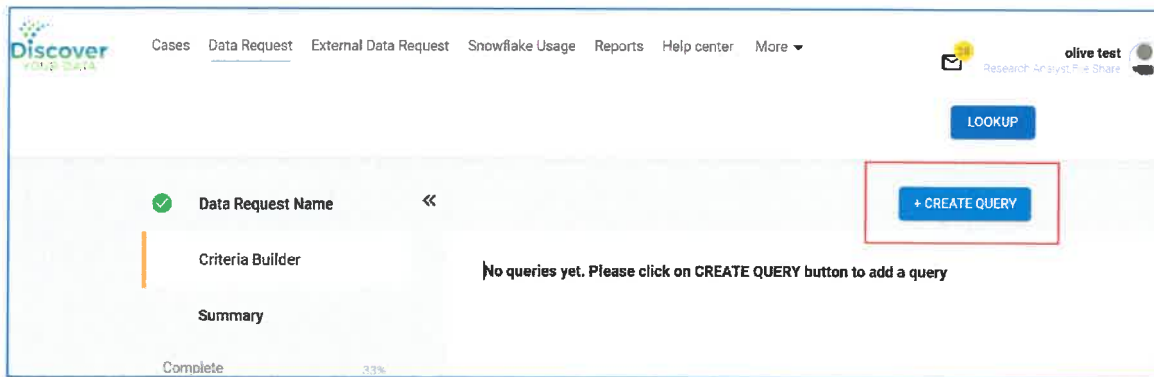
Complete 0%

Enter Request Name

Request Name \*

HHStestCDR

## Exhibit 11. DyD Portal: Select the Create Query Option



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

olive test Research Analyst File Share

LOOKUP

+ CREATE QUERY

Data Request Name ✓ «

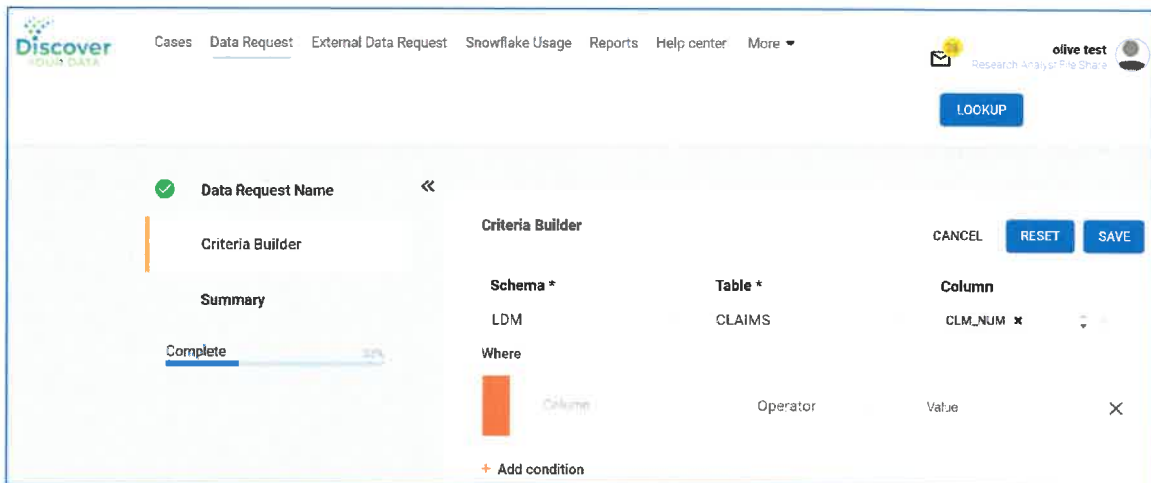
Criteria Builder

Summary

Complete 33%

No queries yet. Please click on CREATE QUERY button to add a query

## Exhibit 12. DyD Portal: Choose Schema, Table Name, & Data Columns



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

olive test Research Analyst File Share

LOOKUP

Data Request Name ✓ «

Criteria Builder

Summary

Complete 33%

Criteria Builder

Schema \*

LDM

Table \*

CLAIMS

Column

CLM\_NUM x

Where

Operator

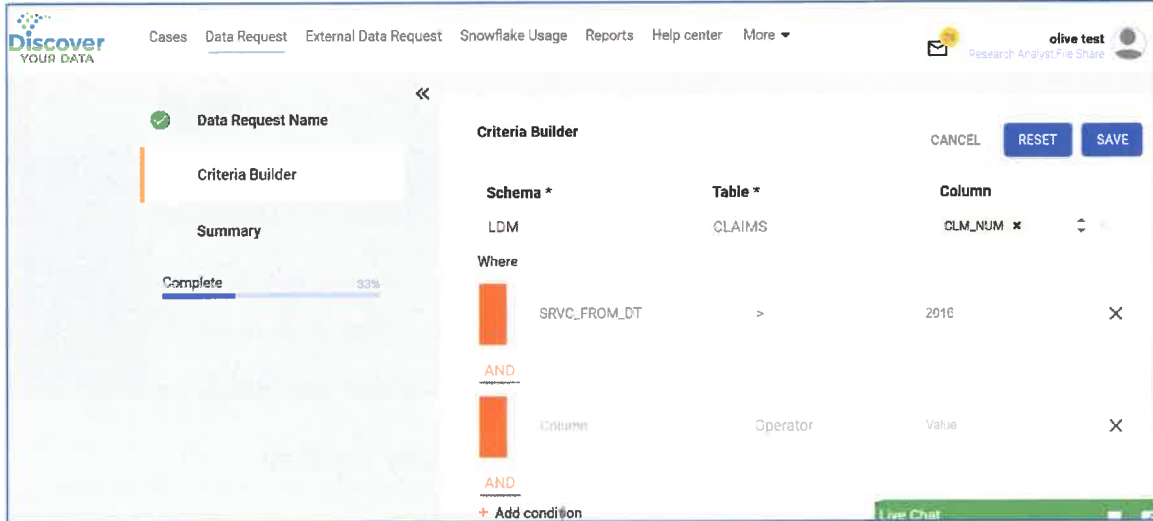
Value

+ Add condition

CANCEL RESET SAVE



### Exhibit 13. DyD Portal: Add Conditions as Needed & Save Query



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More

olive test Research Analyst File Share

Criteria Builder

Schema \* Table \* Column

LDM CLAIMS CLM\_NUM

Where

SRVC\_FROM\_DT > 2016

AND

Column Operator Value

AND

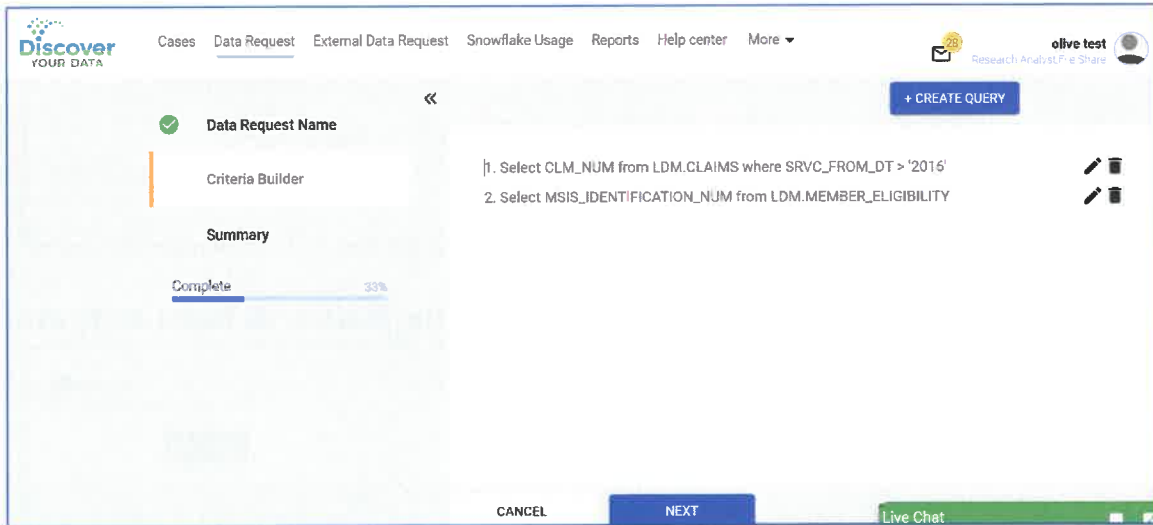
+ Add condition

Complete 33%

CANCEL RESET SAVE

Live Chat

### Exhibit 14. Build Custom Data Request (CDR): Multiple Data Queries



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More

olive test Research Analyst File Share

+ CREATE QUERY

1. Select CLM\_NUM from LDM.CLAIMS where SRVC\_FROM\_DT > '2016'

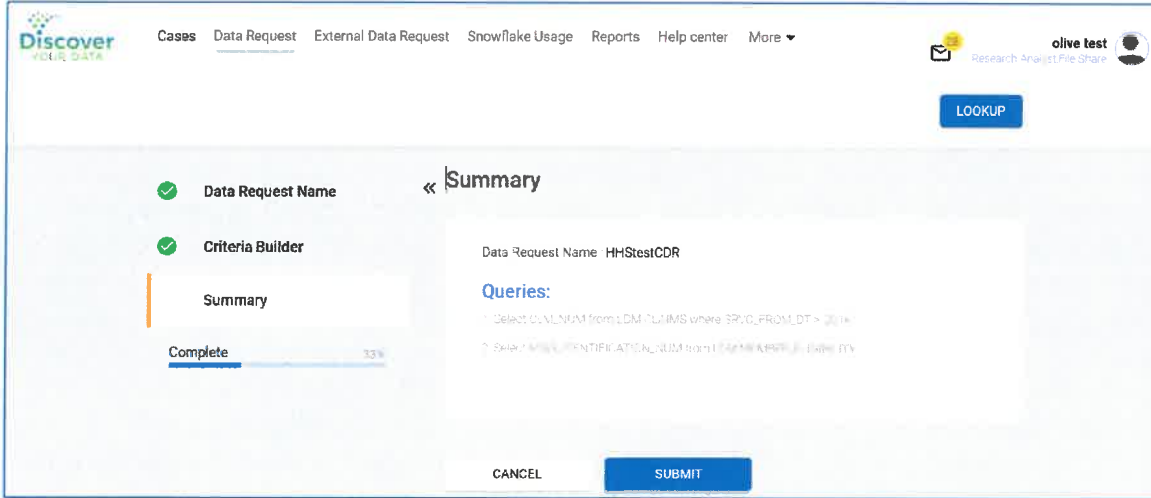
2. Select MSIS\_IDENTIFICATION\_NUM from LDM.MEMBER\_ELIGIBILITY

Complete 33%

CANCEL NEXT

Live Chat

## Exhibit 15. DyD Portal: Verify CDR on the Summary Page & Submit



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

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LOOKUP

Summary

Data Request Name HHSestCDR

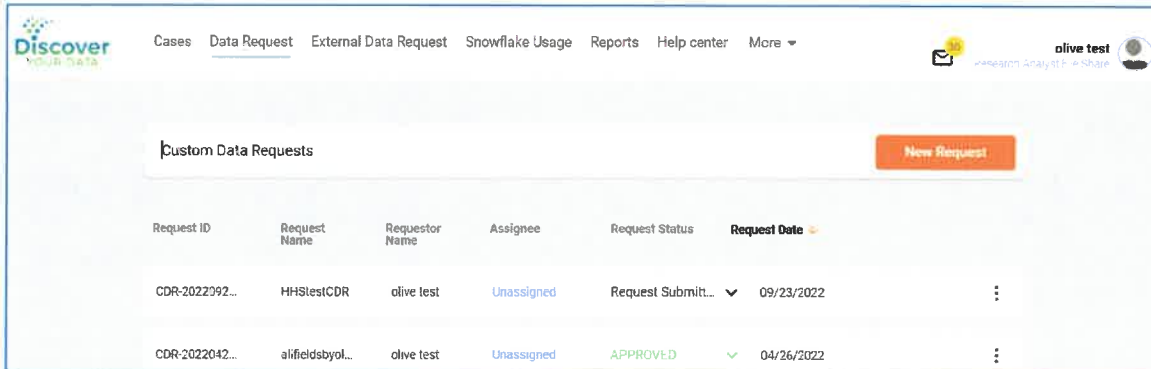
Queries:

Select CUMSUM from tDM\_CLAIMS where SRCO\_FROMLDT > 2016

SELECT IDENTIFICATION\_NUM from tDM\_IDENTIFICATION

CANCEL SUBMIT

## Exhibit 16. DyD Portal: CDR Appears Under the Data Request Tab once the Request is Submitted



Discover YOUR DATA

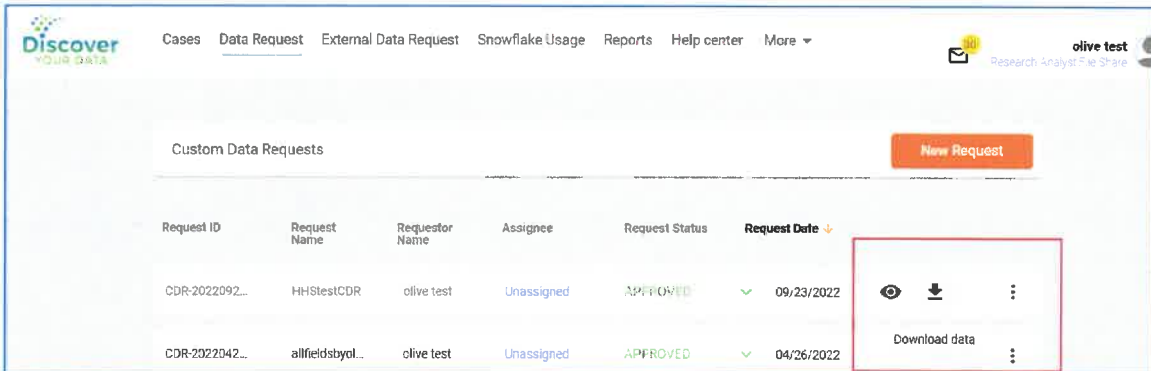
Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

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Custom Data Requests New Request

Request ID	Request Name	Requestor Name	Assignee	Request Status	Request Date
CDR-2022092...	HHSestCDR	olive test	Unassigned	Request Submitt...	09/23/2022
CDR-2022042...	allfieldsbyol...	olive test	Unassigned	APPROVED	04/26/2022

## Exhibit 17. DyD Portal: Once Approved, the User Can Download the CDR in the desired File Format



Discover YOUR DATA

Cases Data Request External Data Request Snowflake Usage Reports Help center More ▾

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Custom Data Requests New Request

Request ID	Request Name	Requestor Name	Assignee	Request Status	Request Date
CDR-2022092...	HHSestCDR	olive test	Unassigned	APPROVED	09/23/2022
CDR-2022042...	allfieldsbyol...	olive test	Unassigned	APPROVED	04/26/2022

Download data

## 4.2. Project Goals and Mandatory Requirements

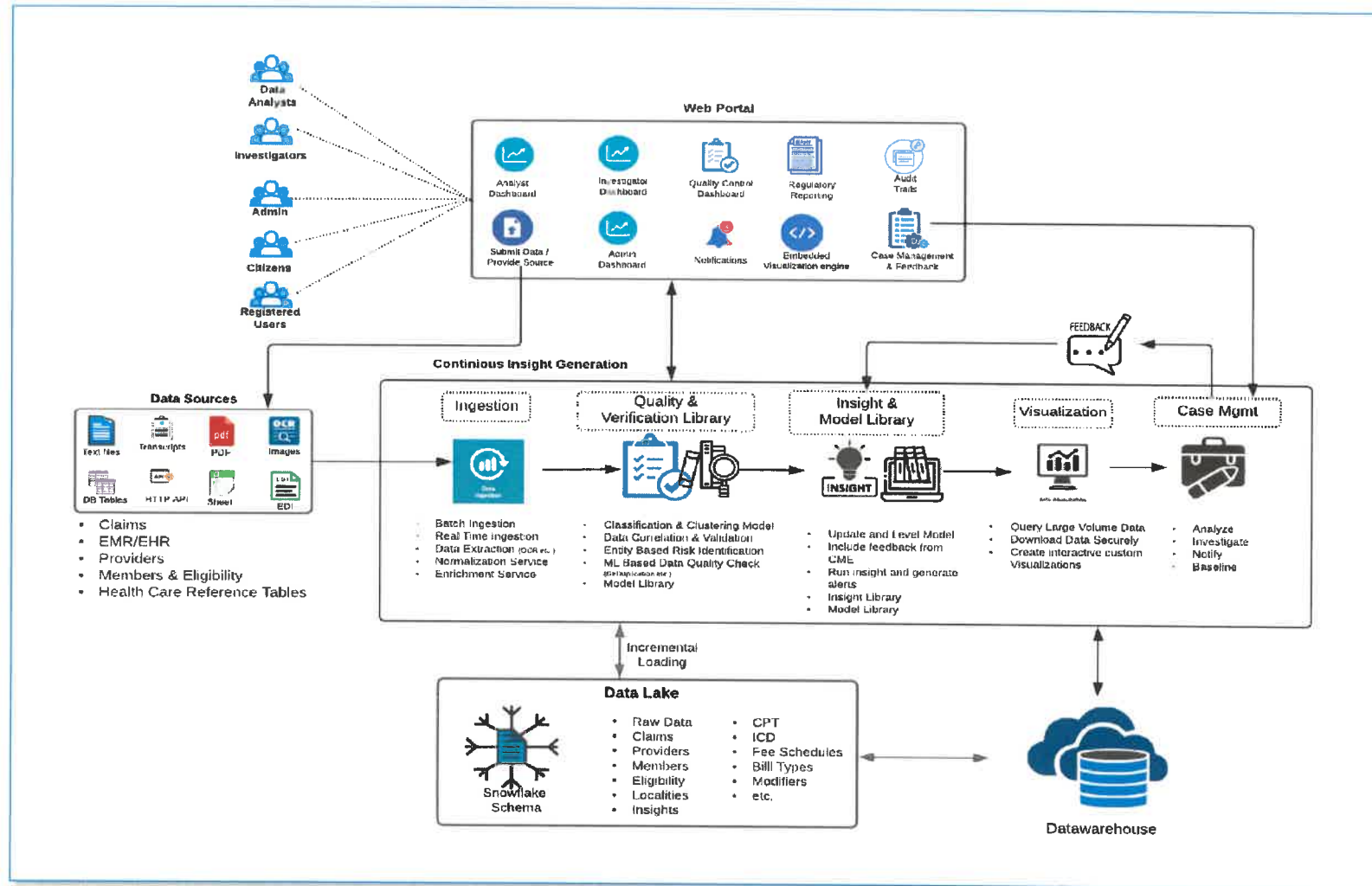
The Agency, on behalf of the Bureau for Behavioral Health (BBH) and the Office of Drug Control Policy (ODCP), wishes to license Predictive Analytics Software utilizing Machine Learning and Artificial Intelligence. In addition to the software licenses, the selected vendor will provide integrated tools 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.

Confirmed. Our DyD technology has established ML and AI capabilities, including MLOps and Federated Learning, to automate Predictive Analytics processes and modernize the end-to-end process – *bringing a level of modernization and automation unlike any of our competitors*. Our technology has high throughput DSG Ingestion and Data Quality Engines to automate the data cleansing and transformation process. DyD can support a wide range of standard and custom data formats with pre-built Data Maps in place for common healthcare data formats, such as Transformed Medicaid Statistical Information System (T-MSIS) Analytics Files (TAF) and Research Identifiable Files (RIF).

To perform Predictive Analytics, data modeling, and data visualization, DyD leverages Federated Learning, a ML technique that trains algorithms to invoke collaborative learning across multiple decentralized systems. Our DyD Portal enables individual users to access their own secured workspace as well as collaborate with others with in-portal messaging and work collaboration features. Our solution also has a Bring Your Own Tools (BYOT) capability, enabling the Agency to install and utilize Tableau and other software tools as desired within DyD.

Provided in our next exhibit is a detailed view of DyD's overall architecture and all core functions and features.



## Exhibit 18. DyD Architecture Detail









### DyD: Cloud Hosted, SaaS Solution with Strong Security and Access Control

All data is securely stored within the Amazon Web Services (AWS) GovCloud environment. This ensures ongoing FedRAMP compliance and alignment with federal, state, and industry regulatory standards, including Health Insurance Portability and Accountability Act (HIPAA) compliance. Although the Agency has indicated that data received will already be de-identified, note that DyD still supports full encryption and can also support the automation of ETL processes, data cleansing, and transformation through our solution. DyD also features an Access Control Framework, with access control adopted from the following models:

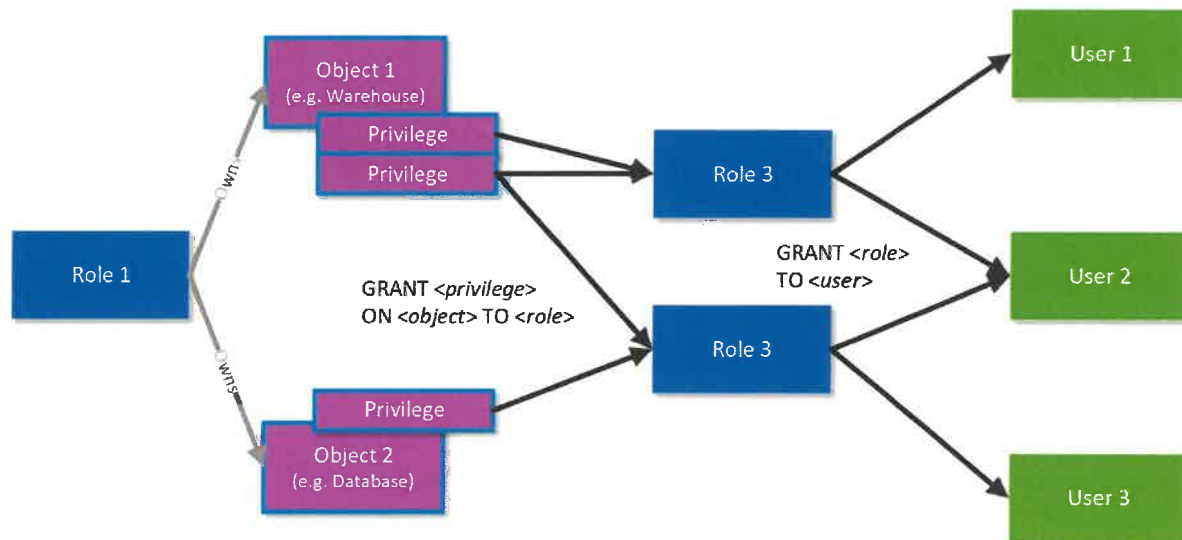
-  **Discretionary Access Control (DAC):** Each object has an owner, who can in turn grant access to that object.
-  **Role-based Access Control (RBAC):** Access privileges are assigned to roles, which are in turn assigned to users.

The key concepts to understanding access control in DyD are:

-  **Securable Object:** An entity to which access can be granted. Unless allowed by a grant, access will be denied.
-  **Role:** An entity to which privileges can be granted. Roles are in turn assigned to users. Note that roles can also be assigned to other roles, creating a role hierarchy.
-  **Privilege:** A defined level of access to an object. Multiple distinct privileges may be used to control the granularity of access granted.
-  **User:** A user identity recognized by DyD, whether associated with a person or program.

In our model, access to securable objects is allowed via privileges assigned to roles, which are in turn assigned to other roles or users, as shown in our next exhibit. In addition, each securable object has an owner that can grant access to other roles.

### Exhibit 19. DyD: Access to Securable Objects Granted by Role



### Training and Technical Support

Our Analytics Team will provide a complete walkthrough of DyD along with training on how to use our self-service DyD Portal. This includes support for all initial and ongoing training needed. Training can be provided in a Train-the-Trainer fashion to enable the Agency to train additional team members as they come on to the project. Our Analytics Team will also be continually available as needed to provide any additional training necessary through the year as well as our technical support.

Recognizing the Agency's controlled budget of no more than five support hours per project per week, we will work with the Agency to review each of the planned 18 projects over the 12-month period. As each project is scoped out, we will bring the right team member(s) needed from our pool of over 1,200 resources to support you. Depending on the project, this may be a Data Analyst, Data Engineers, Data Scientist, Epidemiologist, Clinician, Pharmacist, Researcher, Statistician, Quality Assurance (QA) Reviewer, Health Policy expert, System Director/Cloud Architect, Developer, Engineer, Business Analyst, and more. Through each project, we will ensure tight control on resources utilized in order to stay within budget, with our support capped across resources at the hourly rate finalized under contract.

#### 4.2.1. Goals and Objectives

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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.

Confirmed. Our Analytics Team will work directly with the Agency's staff to provide knowledge transfer and training to your team alongside our best practices and lessons learned from our other successful Predictive Analytics projects in order to maximize your ability to succeed. Although our technology is able to automate many of the otherwise manual data cleansing and transformation processes, we will both demonstrate how our solution automates processes as well as showing new skills your own team can use to become proficient in proper data cleansing and transformation.

Our Analytics Team, comprised of a pool of over 1,200 experts, stands committed to elevating your own Predictive Analytics capabilities and skills. We will bring on appropriate team members in alignment with each project, leveraging our extensive knowledge and project experience alongside the capabilities of our DyD technology to help your team maximize automation and accuracy while deriving meaningful results from the datasets.

To jumpstart this initiative from the very first project started, we will bring our out-of-the-box DyD technology which inherently features all of the key components needed, including automated ML and AI to support ETL processes, data cleansing and transformation, security control, model registry and deployment, Federated Learning to enhance ML capabilities and data insights gained, as well as strong security and access controls within the AWS GovCloud controlled environment.

In addition, the Agency can Bring Your Own Tools (BYOT) like SAS, Stata, and others within our established workspaces (preloaded with Open Source software) to conduct analyses, connecting to our Data Lake, or leveraging our integrated Data Visualization Engine if desired. Our Data Ingestion Pipeline has established data schemas and models in place which define the associated parameters/fields necessary to maximize data modeling and the ultimate insights gained. We will walk the Agency through this during our training to ensure the right data is received in order to produce the greatest

meaningful insights. As we work each project, we will continue to remain available to provide additional training and technical support as needed.

**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.

Confirmed. Our Analytics Team will support the Agency through this process. Our DyD technology has established data cleansing capabilities to eliminate manual processes, with automation in place to intake, cleanse, and transform the data as received as well as rejecting data that needs refinement. Our Analytics Team will work with the Agency in these cases to ensure all of the necessary data elements are in place as well as proper data quality, providing feedback as needed to the Agency. We have established rules and data maps already pre-built as part of our overall solution which allocates rules to associated data elements. We support the intake of data via SFTP, as desired, but can also support a wide range of standard and custom data formats. All data received will be securely stored within the AWS GovCloud environment.

**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.

Confirmed. Our Analytics Team is committed to supporting the Agency through each of the 18 projects to be completed. This includes our initial consultative guidance on Predictive Analytics best practices and our recommendations for maximizing effectiveness and the data insights gained. We bring a wide range of project experiences performing Predictive Analytics, from federal support to the Centers for Medicare and Medicaid Services (CMS), ASPE, and other agencies down to the state level, like the National Kidney Foundation of Michigan.

In all, we bring over 67 years of data-driven technology and Predictive Analytics experience. Our direct support through the years includes working with medical, behavioral health, and pharmaceutical data, such as analyzing T-MSIS datasets, data from CMS, including the Medicaid data of West Virginians, and more. Our Analytics Team comprised of Data Analysts, Data Engineers, Epidemiologists, Data Scientists, and other support staff will provide the services you need alongside automation – from initial data cleansing and transformation through ongoing concurrent analyses, model



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creation, and reporting across multiple projects – all automated through our DyD technology, saving the Agency time and resource expenses. Additionally, our Analytics Team and DyD technology will continue to be available to support your future needs should the Agency wish to expand beyond the initial 18 projects currently planned.

**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.

Confirmed. As each project is scoped out, we will bring the right staff needed from our pool of over 1,200 resources to support you. Depending on the project, this may be a Data Analyst, Data Engineer, Data Scientist, Epidemiologist, Clinician, Pharmacist, Researcher, Statistician, Quality Assurance (QA) Reviewer, Health Policy expert, System Director/Cloud Architect, Developer, Engineer, Business Analyst, and more. Once assigned, we will ensure tight control on the resource(s) utilized in order to stay within budget, working no more than the five hours allocated per project per week. In addition, our support will be capped across resources at the hourly rate finalized under contract.

Furthermore, note that in licensing our DyD technology, this inherently includes technical solution support at no additional cost. This ensures the five hours available per project are spent focused on the specific project at hand, working with your team to provide our Predictive Analytics expertise and guidance while our DyD technology solution is maintained at no additional hourly cost.

**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.

Confirmed. We will provide our enterprise-wide licenses, enabling the 10 users from the Agency to leverage our DyD technology and online portal, available 24/7 to meet your needs. Both the researcher license seats and the visualization and modeling only seats will have full data exploration capabilities with access control restricted based on the user's assigned role and permission level.

Apart from the Agency's anticipated users, we can also provide de-identified, read only access as desired, enabling other agencies to see the same level of data insights gained. We have seen this be very effective in our other projects, fostering open collaboration among other state agencies. We have also had clients who elected to provide limited, de-identified information to the public in order to share data insights gained, such as the Medicaid and Children's Health Insurance Program (CHIP) Scorecard. We will work with the Agency to provide secured access to data in alignment with these types of final decisions made per project.

#### 4.2.2. Mandatory Project Requirements

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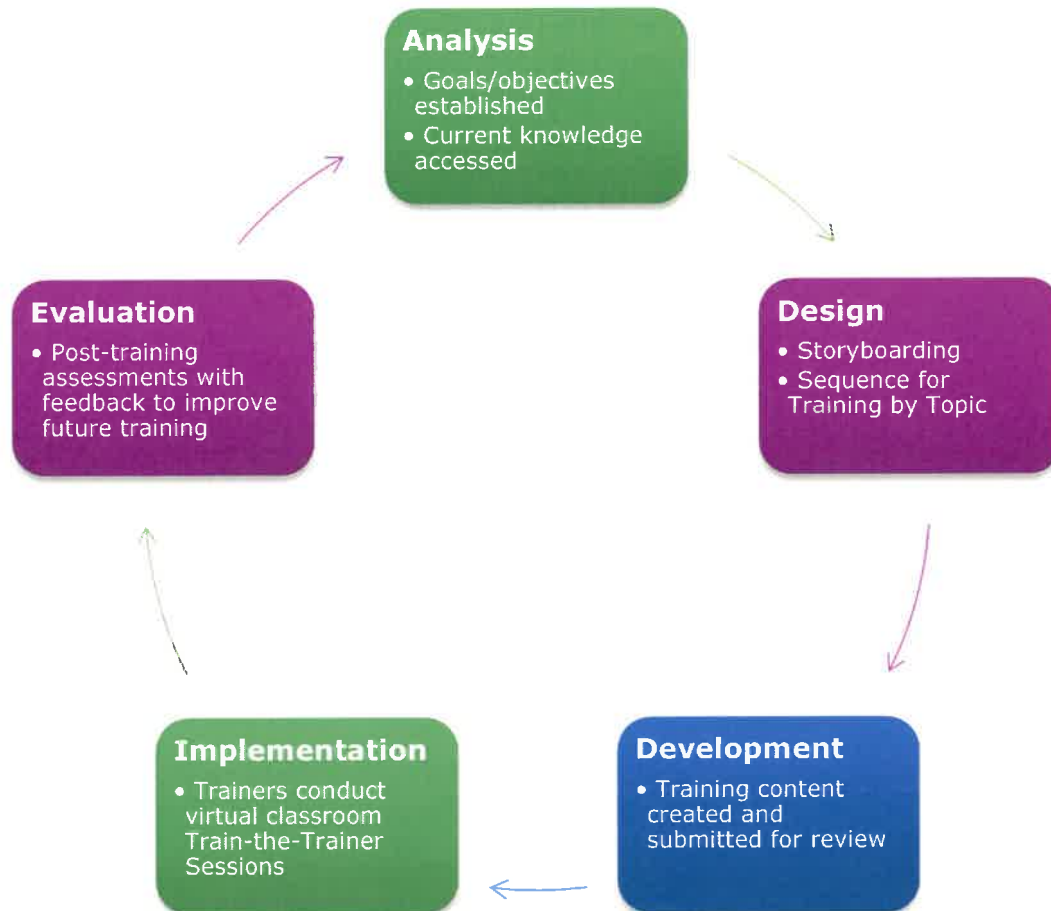
The following mandatory requirements relate to the goals and objectives and must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it will comply with the mandatory requirements and include any areas where its proposed solution exceeds the mandatory requirement. Failure 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.

Confirmed. HTG is dedicated to ensuring full compliance with all mandatory project requirements. Please see our individual responses provided below and on the following pages as required.

##### 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.

Confirmed. HTG typically takes a Train-the-Trainer approach to training, providing comprehensive training on all aspects of our DyD technology and our online portal, including our data cleansing and transformation tools. Our Training Approach, topics, assessments, and training materials are all developed and aligned with the ADDIE Model. ADDIE stands for Analysis, Design, Development, Implementation, and Evaluation, which are the five distinct phases for creating effective training materials for long-term knowledge retention and understanding. Provided in the following exhibit is additional information on the ADDIE Model.

**Exhibit 20. ADDIE Model for Training Delivery & Deliverables**

Our Training Plan will include details on all training tasks and objectives and their associated milestones, including sessions to be conducted, remote access information, and other details. We will plan to utilize GoToMeeting as our virtual training platform, but are also amenable to utilizing Microsoft Teams or other technology desired. As a standard, we also limit the number of staff for each session to up to 25 participants to ensure that the trainer is able to accommodate all questions participants may have while ensuring proper knowledge transfer and understanding of the curriculum. However, with 10 staff members anticipated to be needed for training in all, all staff should be able to receive training at the same set of general sessions with separate drill down sessions for each user type anticipated (e.g., training specific to predictive analytics and modeling vs. tools training specific to

viewing data models and visualizations only. Our Lead Trainer will record all web-based training sessions for future reference via our online meeting platform, as well as provide refresher training sessions on an ongoing basis as needed to ensure full understanding.

Our Lead Trainer will ensure the successful completion of all training sessions, along with training materials provided for use in the session and to keep for future reference. Our solution comes with a standard robust set of help materials, Quick Reference Guides (QRGs), and user manuals for various user types and roles. Apart from formal Train-the-Trainer training and our training materials, our team will continue to be available for ongoing technical support and troubleshooting as needed at no additional cost (separate from our five hours of Analytics Team support). These resources will be available throughout the contract to ensure the Agency and all users are fully supported.

**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.**

Confirmed. Our current DyD training curriculum covers data transformation, data modeling, as well as Predictive Analytics processes and best practice techniques. We ensure training is provided from both a functional perspective, going over the various features of the portal, including all self-service capabilities, as well as from a best practices perspective, sharing our project experiences and lessons learned on how to best perform Predictive Analytics, leverage our ML and AI capabilities to maximize automation and data insights, as well as knowledge transfer of techniques which can be utilized to perform data visualizations.

We are also aligned with the Agency in ensuring training sessions are broken down further as applicable to the corresponding user roles. This includes holding specific training for users that will work directly with the data to perform Predictive Analytics and other tasks to develop data insights, with separate training provided to those users who will view the information only, leveraging our tools and reporting capabilities.



**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.**

Confirmed. As a standard, all of our GoToMeeting training sessions are recorded, with a link provided to the training following each session along with our associated training materials available. Materials are available both as a handout as well as stored within the secured online shared repository (e.g., SharePoint or other repository approved). Additional live chat as well as help materials are available from within the DyD Portal. All of our trainers follow our ADDIE Model and Train-the-Trainer approach to deliver interactive, engaging training that is not only effective but ensures long-term knowledge retention.

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

Confirmed. HTG will align with the Agency's schedule needs for training in order to minimize any interruption to your team's standard workday. All sessions will be conducted during Eastern Time (ET) business hours. We will of course ensure that our trainers do not exceed 8 hours per day for training. However, as a best practice, we advise each training session is no longer than 1-2 hours in length, scheduling follow up sessions as needed. This ensures minimal interruption to each staff member's workday, holding sessions over lunch as "Lunch-and-Learn" training or in the morning hours in order to maximize retention. We have found that longer training sessions tend to result in some degradation in knowledge retention vs. holding meaningful, engaging, and interactive sessions of a reasonable length, with each session focusing on a smaller set of topics to maximize understanding and proficiency.

**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.**

Confirmed. HTG utilizes AWS GovCloud to securely host all data within the Data Store/Lake using the Snowflake Architecture/Schema. AWS GovCloud provides added security and protection along with FedRAMP compliance, with U.S.-based data centers utilized only. Both a standard site as well as a geographically disparate automatic failover site will be in place to support

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disaster recovery and business continuity. This further ensures continual uptime and availability of all data with 24/7 access.

**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.

Confirmed. Our cloud-based technology can handle over one million transactions per hour with auto-scaling in place. Our solution has high availability and fault tolerance, with the ability to scale horizontally and/or vertically on demand through a multi-cluster/node deployment. Our scaling in place dynamically adjusts to provide the immediate, on demand availability of data. We use Kubernetes for both automated scaling as well as auto-fault tolerance to ensure no degradation in data access, response time, or availability.

**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.

Confirmed. DyD can support a multitude of standard and custom data formats, from standard CSV files uploaded through SFTP to APIs to integrate with other systems. To best support the Agency, DyD uses Federated Learning to perform Predictive Analytics, maximizing ML and AI automation and eliminating the need to move data around by “training” algorithms to invoke collaborative learning from across multiple decentralized systems. This shared global model enables data to be kept locally while maximizing data insights gained by accounting for data across multiple sources. As required however, HTG can also support the secure transfer and exchange of standalone data in the formats discussed and established at the start of each project.

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

Confirmed. Our secured data repository uses ClamAV for antivirus and anti-malware protection. ClamAV is an open source antivirus engine that automatically detects viruses, trojans, and other malware and threats with continual scanning technology.

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

Confirmed. All data is encrypted at rest and in transit with a minimum 128-bit Advanced Encryption Standard (AES).

**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.

Confirmed. As a standard, HTG aligns with the NIST as well as all other federal, state, and industry standards for the utilization of healthcare and related data. Our compliance with NIST includes the FIPS 140-2 Security Requirements for Cryptographic Modules which establishes standard controls for security, identification and authentication, system protections, data integrity, and other standards which we adhere to. In addition to aligning to NIST and the FIPS 140-2, we also leverage the AWS GovCloud environment for secured hosting, perform 24/7 ongoing monitoring of the solution, and use Sealed Secrets for Kubernetes for encryption.

**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.hhs.gov/guidance/document/minimum-acceptable-risk-standards-exchanges-mars-e-20>).

Confirmed. Through our work using Medicaid data and other healthcare datasets for other Predictive Analytics projects, our Analytics Team is well adept at complying with CMS guidance and regulations. This includes compliance with the sanitization standards published as part of the Minimum Acceptable Risk Standards for Exchanges (MARS-E) 2.0, including the latest publication issued in June 2020.

All data is hosted within the secured Amazon GovCloud environment using the Amazon Simple Storage Service (Amazon S3) bucket for data storage. All associated hardware, software, and firmware maintenance tools utilized by the data center are in compliance with MARS-E and FedRAMP. In addition, to support proper data sanitization and handling, DyD automatically sorts data by type and any Protected Health Information (PHI) is fully encrypted

and securely transmitted. Our DyD technology also features an internal message box to send and receive secure communications, uses HTTPS for all web connections, and uses Sealed Secrets for Kubernetes for encryption, including protecting data during transit using TLS/SSL 1.3, and protecting data at rest within the database using AES 256-bit encryption, at a minimum.

**4.2.2.2.4. Data repository shall include a perimeter firewall. Vendor must identify the firewall that is used.**

Confirmed. HTG ensures appropriate firewalls are in place to protect data, including using the AWS Virtual Private Cloud (VPC) and Security Group to restrict traffic. All inbound and outbound traffic is securely controlled using the VPC Security Group with associated protocols and rules in place under a deny all/allow approved standard.

**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.**

Confirmed. By hosting within the AWS GovCloud environment, we utilize AWS' U.S.-based Availability Zones aligned to the final standards defined, with established auto-failover mechanisms that retain data securely at two geographically disparate locations. This ensures the continual availability of data in the event of a disaster. In alignment with the Agency's requirement, we will ensure a maximum Recovery Time Objective (RTO) of 4 hours or less is maintained throughout the contract.

**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.**

Confirmed. DyD's Data Sharing Gateway (DSG) and Data Quality Engines are designed to ingest data, analyze all elements received, and accept or reject the data in whole or in part. This includes identifying PHI as well as PII-related data to ensure sensitive data is excluded. These processes are automated within DyD, rejecting files as appropriate based on established rules and sending subsequent communications back to the data submitter.



**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.

Confirmed. All data transmitted, processed, and stored is the sole property of the Agency. Data will remain retrievable on demand throughout the contract. Further, for each one of our data projects we engage in, we establish a Data Use Agreement (DUA) as a standard in order to remain aligned on all data use and associated protocols.

At the end of the contract period, we will work with the Agency to ensure the secured transmission of all data stored back to the Agency and/or destroy the data in alignment with our discussions held and any written notice provided. If destroyed, we will provide an accompanying certificate of data destruction in alignment with NIST standards.

**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.

Confirmed. Our DyD solution features a Data Enclave which will migrate data on demand as appropriate, analyzing and harmonizing the data for storage in the data repository to support downstream analyses and other Predictive Analytics activities. Additionally, note that DyD has built-in ETL automation which could eliminate the need for the Agency to pre-cleanse and transform the data, saving you from additional ETL Developer resource costs to prepare the data for analysis.

All data can be processed automatically through our DyD Portal. We will demonstrate these features and functions with the Agency as we move forward in order to finalize our approach while ensuring full alignment to your needs and requirements.

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**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.

Confirmed. Our DyD technology is MARS-E compliant, including alignment to the privacy controls established under the Volume III Catalog as published by CMS. Our MARS-E controls are mapped to our Service Organization Controls (SOC) II Type 1 and Type 2 compliance. We undergo routine third-party audits as part of our existing agency contracts and maintain ongoing compliance. In addition, we require all staff to complete initial (upon hire) and ongoing privacy and security training on an annual basis, at a minimum, in order to ensure both technology compliance through audits as well as the compliance of our team members.

**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.

Confirmed. Our DyD technology, including our data repository, are continually available and designed for 24/7/365 use, with a 99% or higher availability guarantee under contract. All data transfers occur in real-time and can be set at established frequencies, such as ongoing daily transmissions. Downtime is limited to maintenance needs only and is performed off hours overnight to minimize any potential for user disruption. The Agency will be informed in advance of all maintenance and information will be posted within the DyD Portal and distributed through automatic notifications when each maintenance period is scheduled.

**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.

Confirmed. We are already aligned to these hours today, with routine maintenance performed typically during the early morning hours from 1-3 a.m. ET as necessary. This ensures standard availability during office hours.

**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.

Confirmed. As a standard, HTG continually agrees to specific Service Level Agreements (SLAs) as well as associated penalties under contract, including for downtime. We have 24/7 monitoring in place over our technology today and can provide the Agency with access to the same real-time dashboards and reports which HTG leverages to monitor and produce ongoing monthly SLA reporting.

**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.

Confirmed. HTG agrees with this SLA and has no changes. We are also amenable to establishing additional SLAs under contract, as needed and discussed with the Agency.

#### **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.

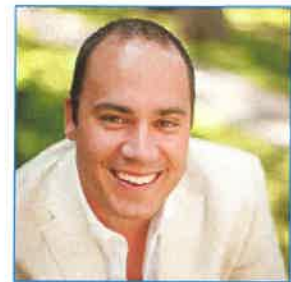
Confirmed. Our Analytics Team will support the Agency as needed and requested with each individual project. HTG recognizes these preliminary activities which the Agency is planning to perform are designed to minimize costs, ensuring support is provided for up to five hours only per project in order to control costs.

However, please note that in licensing our technology, all of the out-of-the-box features of DyD will be fully available to the Agency for your use at no additional cost. This includes our automated ETL and data modeling capabilities which the Agency can take advantage of in order to modernize and automate your existing processes.

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**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.

Confirmed. Our Contract Manager, Chad Roman (shown on the right), will work with the Agency and ensure alignment to these specific timelines required. This includes holding prompt meetings with the Agency on each project, working quickly to provide a final draft project scope for your approval within 2 business days or less following each discussion.



Part of our analysis in reviewing the scope and estimating the work effort will also include identifying the correct team member(s) needed to support the particular project. Once approved, we will deploy the specific resource(s) needed, such as a Data Analyst or Engineer, Data Scientist, Epidemiologist, or other team member as appropriate to that project. Our Analytics Team is comprised of a pool of over 1,200 resources enabling us to have a 'ready bench' of staff to support the Agency through each project.

**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.

Confirmed. As each project is scoped out, we will bring the right team member(s) needed from our pool of over 1,200 resources to support you. Depending on the project, this may be a Data Scientist, Epidemiologist, Data Analyst, Clinician, Pharmacist, Researcher, Statistician, Quality Assurance (QA) Reviewer, Health Policy expert, or other resource. Throughout each project, we will ensure tight control on the specific assigned resource(s) utilized in order to stay within budget, not exceeding the five hours allocated per project per week. Our support will also be capped across resources at



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the hourly rate finalized under contract. Any deviation from this will require mutual agreement on the part of both the Agency and HTG.

**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.

Confirmed. We will ensure hours are not exceeded and remain in alignment with the approved amount of hours eligible to be billed. All invoices will reflect the actual hours worked, including invoicing for less than the five hours allocated if the full length of time was not utilized.

**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.

Confirmed. HTG is in alignment with these definitions as provided with no changes. Should a given project's scope change more than 25%, we will assert this as a new project, promptly providing a new draft project scope within 2 business days following our discussion, as required.

**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.

Confirmed. Our Analytics Team brings the inherent resources necessary to take on multiple concurrent projects in parallel (e.g., taking on 6 projects in parallel every 4 months for a total of 18 projects for the year). Following the initial 12-month contract, we will continue to remain available as needed should the Agency have additional project needs.

**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.

Confirmed. We will work collaboratively with the Agency through each project as defined, adjusting as necessary should priorities change.

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**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.

Confirmed. Chad Roman, our designated Contract Manager, will serve as your primary point of contact throughout the contract as work begins on each project. Should Chad not be immediately available, our backup and escalation point is Thomas Swider, Executive Vice President of Professional Services (as shown on the right).



#### **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.

Confirmed. Our Discover your Data (DyD) technology is an all-inclusive SaaS solution fully hosted and maintained within the secured AWS GovCloud environment. Our DyD technology includes all of the associated backend technology and tools necessary to perform data processing and analysis activities – from initial data ingestion and modeling to data analysis and ongoing reporting. Please see our *Executive Summary* for several exhibits which depict all of the integrated backend tools and technology that comprise our DyD solution.

**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 Tableau and Microsoft Power BI.

Confirmed. HTG can fully support these formats listed and can export data into multiple formats as well. Our technology has high throughput DSG Ingestion and Data Quality Engines to automate the data cleansing and transformation process with the ability to support these formats as well as additional custom data formats as needed, with pre-built Data Maps in place.

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Our solution also includes a Bring Your Own Tools (BYOT) capability, enabling the Agency to install and utilize Tableau or other software tools as desired within DyD.

**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.

Confirmed. HTG remains highly amenable to providing associated licenses of our proprietary DyD technology proposed in alignment with your needs. We have multiple types of licenses, including View Only and Developer licenses provided on an annual basis throughout the contract. Our Developer software licenses are named, but are transferable as needed to another user. Additional licenses can be added on at any time. We will work with the Agency throughout the contract to ensure all users have the appropriate access needed, adjusting licenses allocated as necessary.

**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.

Confirmed. Licenses are transferable as needed, so long as the type of license remains the same (e.g., View Only license transferred from one user to another View Only user). Licenses can be upgraded at any time to another type of license as needed.

**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.)

Confirmed. The Agency will not be required to separately procure any third-party software. Our DyD solution proposed includes all of the necessary backend components required to provide end-to-end Predictive Analytics support – from initial data ingestion and transformation to ongoing analyses.

HTG is authorized to include all the backend components that are a part of our technology and, as a cloud-based hosted solution, we will maintain accountability for the ongoing reliability and performance of our technology. Please see our *Executive Summary* for several exhibits which depict all of the integrated backend tools and technology that comprise the overall architecture of our DyD solution.

**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.

Confirmed. Our DyD technology is designed for continual 24/7 availability, with 99% or higher uptime guaranteed under contract. Release updates, bug fixes, and other maintenance activities are performed off hours overnight to minimize any potential for user disruption, typically during the early morning hours from 1-3 a.m. ET as necessary. This ensures standard availability during office hours. In addition, these hours are often limited to an established cadence, such as the third Saturday of every month.

Advance notice of all standard maintenance and information will be posted at least one week in advance within the DyD Portal and distributed through automatic notifications when each maintenance period is scheduled. Should a hot fix/patch be necessary, we will provide a minimum of 48 to 72 hours advanced notice to the Agency. Finally, HTG has the ability to deploy to a previous release version as needed as well as delay a given release, as needed and discussed with the Agency.



### 4.3. 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.

Confirmed. As required, HTG has included a response to each requirement as set forth in this section. Please see our information provided below and on the following pages for details. Further, as each project is scoped out, we will ensure the right resource(s) are appropriately assigned to meet each project's unique needs and requirements.

#### 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.

Confirmed. Our Analytics Team not only meets – but exceeds – this requirement, bringing over 67 years of data-driven technology and Predictive Analytics experience. Our proven technology, DyD, is currently at version 4.22.131 with numerous projects executed through the years. Our DyD technology backed by our Analytics Team comprised of Epidemiologists, Data Scientists, and other support staff brings the right level of project experience, staff expertise, and technology you need to ensure success.

Throughout our *Executive Summary*, we have included numerous specific examples to highlight our experience, including at the federal level, such as our work with the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Planning and Evaluation (ASPE). In

addition, we included other national project examples, such as our COVID-19 Research Database (COVID RDB) we maintain with over 85 billion records from across hundreds of public and private data sources as part of our partnership with the Rockefeller Foundation and the Rockefeller Pandemic Prevention Institute (PPI). Our support also stretches to state level work, like our work on the Morris Hood III Chronic Kidney Disease Prevention Initiative for the National Kidney Foundation of Michigan.

All of our federal and state projects through the years have included large Predictive Analytics scopes of work, delivering innovative, data-driven technology and support services, analytics expertise, data management, intelligence reporting, and more to support a wide range of Health and Human Services agencies and their initiatives. Our projects continually involve enterprise-wide data management, AI and ML technology, predictive analytics, integration, and the ongoing transmission of data in multiple standard and custom formats.

Some of our large, enterprise-wide technology and analytics projects include our support to federal agencies like CMS, all the way to individual state-enterprise-wide projects, such as our technology implementation and ongoing operations in Wyoming to support their Medicaid Management Information System (MMIS), known as the Wyoming Integrated Next Generation System (WINGS) Project. We have also supported numerous agencies in California, such as our work for the California Public Employees' Retirement System (CalPERS), Child Welfare Digital Services (CWDS) for the Child Welfare Services California Automated Response and Engagement System (CWS-CARES) to enhance various agencies' use, access, and insight into their data. Some of our many additional Predictive Analytics projects include, but are certainly not limited to, those highlighted in our next exhibit.

### **Exhibit 21. Project Experience Examples**

<b>Client</b>	<b>Project/Experience Summary</b>
<b>CMS MAEDI</b>	Since 2017 on the Medicare Advantage Encounter Data Integrity (MAEDI) Plan Management and Analytic Support project, our team has extracted Medicare Advantage (MA) encounter data from the Integrated Data Repository where we have examined hospital transfers, inappropriate transportation billings, telehealth, home risk assessments, and other high-risk areas for CMS to help them oversee the Medicare Advantage program. Our team members

Client	Project/Experience Summary
	<p>include former state and commercial Program Integrity leaders that that have performed analytics and have designed and implemented action strategies that enabled states to recover provider-driven overpayments directly from the plans. Through our work, we produce multiple products, including quarterly report cards to hundreds of Medicare Advantage commercial payers and operational analyses for CMS. Report cards and other products undergo extensive quality assurance (QA) processes, such as automated checks confirming algorithms are working as expected, and manual checks to ensure reports are properly formatted.</p> <p>This work also includes the development of an encounter data system to support the ongoing administration of the Medicare Advantage program and to inform the design of future innovations, impact evaluations, and policy developments. This work has also included offering options to improve encounter data integrity, designing and conducting rigorous analyses of the MAEDI to support CMS operational and analytic uses, preparing compliance reports for each contract entity, and maintaining an impact reporting tool for CMS that tracks the contracts' performance.</p>
<b>CJR Model Monitoring</b>	<p>Working with CMMI, we developed and implemented the monitoring and reporting procedures to support Program Integrity and other initiatives for the Comprehensive Care for Joint Replacement (CJR) model. Through our work, we identify and help address vulnerabilities in alternative payment programs, including accountable care, total cost of care, and episode-based models. Our analytics engine applies pattern analysis and other methods on lower joint replacement episodes of approximately 52,500 beneficiaries per year and over \$1.3 billion dollars in payments, to identify outlier hospitals and potential program integrity issues among one or a combination of 22 metrics on cost, quality of care, and beneficiary access dimensions.</p>

Client	Project/Experience Summary
	<p>This work also includes providing reports and updates for the monitoring of multiple entities that provide care during the course of a CJR episode, including hospitals, post-acute care (PAC) providers, physicians, and physician group practices. The monitoring and reporting processes are the foundation of ensuring compliance with all CJR model rules and that beneficiaries are not subjected to cost-saving practices that sacrifice access or quality care.</p> <p>The monitoring and reporting processes include the creation of individual and aggregate performance reports which provide detailed information to CMS and CJR hospitals about their care practices and patterns under the CJR model, as well as results of compliance monitoring. The CJR model also tests the use of bundled payments for an episode of care during and after a hospital stay for Medicare Severity-Diagnosis Related Groups (MS-DRGs) 469 and 470.</p>
<b>MA APCD</b>	<p>Through this work, we support the Massachusetts Health Policy Commission (HPC) in its statutory requirement to prepare an annual report on trends in state health expenditures for the HPC's Board of Commissioners. Using data from the state's version 3.0 APCD and Medicare data from ResDAC, our team produced analyses of statewide cost trends for enrollees in commercial plans, Medicare fee-for-service (FFS), and MassHealth MCOs. Over the course of the project, we acquired the state's APCD and Medicare data, performed a data examination analysis, applied the MS-DRG, TCOC, and Johns Hopkins ACG groupers to the data, and developed a set of claim-level and person-level analytic files and user documentation. In addition, we developed and populated a series of exhibits tracking medical and pharmacy spending over time by market segment, provider type, and type of service, and tracking enrollees' health status and average risk score over time.</p>



Client	Project/Experience Summary
	<p>We also conducted several ad hoc analyses using the APCD and Medicare FFS files. We developed an analytic file and set of exhibits examining medical service use and spending in the last year of life among Medicare FFS beneficiaries who had passed away. We developed another analytic file and set of exhibits examining patterns of post-acute care service use and care following any hospital admission and following admission for selected major joint replacements.</p>
<b>CMS MACBIS</b>	<p>Our work for the Medicaid and CHIP Business Information Systems (MACBIS) project involves claims and enrollment data services for approximately 71 million beneficiaries enrolled in Medicaid and CHIP. Our work involves multi-payer health care claims and encounter data file collection, processing, analysis, validation, quality assurance, and the review of Program Integrity (PI) data submissions for data quality, supporting users of the PI dashboard; producing TAF, including monthly and annual beneficiary summary, provider, and managed care plan files and monthly claim files; designing the DQ Atlas, a web-based platform, that allows users to access TAF data quality information by topic, state, and reporting year; providing training to CMS staff on new analytic tools; and supporting the DataConnect Helpdesk. We also supported the design, content, and production of mandated reports, complex studies utilizing the TAF, data visualizations, and replication reports to reduce state reporting burdens, and build and support the roll out of TAF-based replication reports.</p> <p>This work also involves supporting healthcare data analysis, such as multi-payer comparisons of cost, utilization, and quality; demonstrated experience in understanding, application of, and compliance with state and federal privacy and data security law; demonstrated subject matter expertise in data quality assessment and improvement in integrated multi-payer healthcare data; and the successful delivery and integration of services</p>

Client	Project/Experience Summary
	<p>and technology with other components in a multi-vendor, multi-module IT environment.</p> <p>Further, our work on the MACBIS project involves data aggregation, data analysis, software licenses, interface and transformation services, data storage, data security, data hosting, and overall program and vendor management. As part of our work, we developed and maintained a large database of data quality measures used to validate state T-MSIS data; provided database support and directed technical assistance to states and territories submitting T-MSIS data; summarized the quality of state T-MSIS data across a range of selected priority items; and produced state reporting guidance for dissemination to states and all-state webinars to improve the quality and consistency of T-MSIS submissions.</p>
<b>Arkansas Eligibility and Enrollment</b>	<p>Our work supporting the Arkansas Eligibility and Enrollment Framework (EEF) project, an initiative of the Department of Human Services, included modernizing their eligibility and enrollment system used for Medicaid, the Children’s Health Insurance Program (CHIP), and the Supplemental Nutrition Assistance Program (SNAP), which was required to support compliance with the Affordable Care Act (ACA) – reaching nearly one million enrollees across the state. Our team led the architecture, design, and implementation of the AR EEF solution, with key accomplishments including:</p> <ul style="list-style-type: none"> <li>• Design and implementation of the Enterprise Architecture Framework Components Enterprise Service Bus (ESB), Master Data Management (MDM), and Consumer Communications</li> <li>• Achieved the Federally mandated Go Live dates of October 1, 2013 and January 1, 2014 for open enrollment; this included facilitation of SNAP for the October 2013 deadline</li> <li>• Completion of required CMS ELC deliverables, documentation, and gate reviews</li> </ul>

Client	Project/Experience Summary
	<ul style="list-style-type: none"> <li>• Implementation of the Citizen Portal and required integration points such as Healthcare.gov, the Federal Data Services Hub (FDSH), and others</li> <li>• Configuration and integration of required third-party components to effectuate Medicaid enrollments and facilitate data transfer in the Arkansas MMIS system</li> </ul> <p>Our team had primary responsibility for the integration of multiple COTS products to create the core functionality and enterprise architecture of the AR EEF. As the Systems Integrator and the DDI Lead, our team had project management responsibilities for the delivery of the solution. Our team was responsible for creating and managing the project schedule, project activities, deliverables, documentation creation, CMS gate reviews, and issues and risks.</p>
<b>CMS MIDAS</b>	<p>Our work on the Multidimensional Insurance Data Analytics System (MIDAS) project involved the design and implementation of analytics based on exchange enrollment and linkage of enrollment data with Qualified Health Plan (QHP) data to support the implementation of the health insurance exchanges within CMS. Data from MIDAS supports coordination with Medicaid, CHIP, Basic Health Plan (BHP), and the Preexisting Conditions Insurance Plan (PCIP).</p>
<b>Minnesota MNsure Exchange</b>	<p>Our work supporting Minnesota’s Department of Human Services (DHS) included the building out of a new Medicaid enrollment system. Our team led the requirements, design, architecture, and implementation of the overall solution. This included the integration of all Commercial off-the-shelf (COTS) products, the Federal Data Services Hub (FDSH), and integration with the State’s specific systems, including the MMIS, PRISM, MAXIS, SMI, and other state verification resource systems.</p> <p>Furthermore, we also had project management responsibilities, database administration responsibilities in</p>

Client	Project/Experience Summary
	the lower environments, and full Quality Assurance responsibilities, including leading User Acceptance Testing (UAT). Minnesota DHS continues to run our technology today, supporting over 1.1 million people.
<b>Missouri Eligibility, Determination, and Enrollment System (MEDES)</b>	<p>We also bring experience supporting the Missouri Eligibility, Determination, and Enrollment System (MEDES), a system which supports over 846,000 lives across the state. Our company was the employer of the original team that was selected to work with the Department of Social Services (DSS), the Family Services Division (FSD), and the Information Technology Services Division (ITSD) in the capacity of Prime Contractor and Systems Integrator. This included leading the integration of multiple COTS products, required integration points for the new Integrated Eligibility &amp; Enrollment (IE&amp;E) system such as Healthcare.gov, FDSH, and numerous state interfaces to create the core functionality and enterprise architecture of the MEDES technology.</p> <p>We then continued to support the MEDES project, working as an integral partner to provide data and infrastructure services as part of the Operations Team. This latest role included release management, infrastructure support, database administration, IBM Cúram development, business analysis, security, quality assurance, deployment engineering, and server administration services.</p>

**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.

Our DyD technology's current version number is 4.22.131. Our proven technology is a mature solution built on a modern, microservices architecture to maximize adaptability and scalability to align with each specific agency's needs.



**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.

### Staffing Plan

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Confirmed. As each project is scoped out, we will bring the right staff needed from our pool of over 1,200 resources to support you. Depending on the project, this may be a Data Analyst, Data Engineer, Data Scientist, Epidemiologist, Clinician, Pharmacist, Researcher, Statistician, Quality Assurance (QA) Reviewer, Health Policy expert, or other team member. Throughout each project, we will also ensure tight control on the resources utilized in order to stay within budget, including the five hours allocated per project per week. In addition, our support will be capped across resources at the hourly rate finalized under contract.


We anticipate deploying 1-2 resources from our pool for each of the 18 projects, bringing up to 36 team members to support the Agency at any given time throughout the 12-month duration. Our Contract Manager, Chad Roman, will work with the Agency to ensure alignment to each project's specific scope, bringing in appropriate resources as each project's scope is defined and finalized.

#### **HTG's Contract Manager: The Right Leader to Guide the Agency's Projects**

- ✓ Over 21 years of relevant work experience
- ✓ Over 9 years of specific Program/Contract/Project Management and Director level experience
- ✓ Numerous licenses and certifications, including being a Project Management Professional (PMP) from the Project Management Institute
- ✓ Medicaid Learning Center (MLC) Certified Medicaid Professional
- ✓ Scrum Master Certified from the Scrum Alliance
- ✓ Holds both Master and Bachelor degrees

As various resources are identified for each project, we will share their applicable experience, resumes, references, project history, and copies of their certifications/degrees with the Agency as desired to demonstrate their ability to properly support you. Team members can also be replaced as needed, particularly if the scope of work for a given project changes. For now, provided below and on the following pages are the credentials of our Contract Manager followed by examples of staff we have available within our pool to support the Agency.

### Exhibit 22. Chad Roman: Contract Manager Resume

Chad Roman Contract Manager	
<p>With over 21 years of relevant experience, including 9 years specifically in Contract, Program, and Project Management, Chad brings broad expertise in executing data-driven technology projects, overseeing each project including the implementation of technology, execution data analyses and other support services, and ensuring client success. He is well adept at leveraging human capital by identifying organizational and customer needs to achieve the optimal collaboration of skills to meet specific project goals and objectives. Chad is a technology, data analytics, and business solutions expert with over 21 years of experience, including successfully executing several major Public and Private sector projects throughout his career.</p>	
Experience	
<p><b>HHS Technology Group, LLC</b></p> <p><b>01/20 – Present</b></p> <p><b>Project Director/Contract Manager</b></p>	<p>In his current position, Chad ensures the completion and success of specific technology and data-driven enterprise projects to support each public sector initiative/project, including for specific State Medicaid and other Health and Human Services agencies.</p> <ul style="list-style-type: none"> <li>Manages and supports the contract, working in collaboration with each agency to meet their unique needs</li> </ul>

### **Chad Roman Contract Manager**

- Aligns each project's scope and needs to the right resources, selecting and interviewing from our pool of resources to identify the right team member(s) to support each given project
- Monitors all facets of the contract, from staffing levels to specific Key Performance Indicators (KPIs), providing associated reports to demonstrate adherence to all service levels
- Meets with each agency on a regular cadence to review project progress, additional staffing needs, and any changes required to the scope
- Responsible for implementing complex information and analytics technology in support of State Government Health and Human Services programs, playing a key role in nurturing State Government business members and stakeholder relationships
- Provides streamlined solutions to support internal and external technology users and data analytics activities, enhancing and automating existing processes as necessary to stay within budget and ensure the on-time delivery of our technology and services

#### **NEC Corporation of America**

**07/17 – 12/19**

#### **Senior Project Manager**

While in his role as a Senior Project Manager, Chad managed all aspects of this corporation's Government Agency projects throughout the project lifecycle including the project scope, schedule, communications, risks/issues, resources, quality, costs, and change management.

- Served as a principal liaison to the Government client with regards to day-to-day

**Chad Roman**  
**Contract Manager**

management of the project plan and its progress

- Led teams across multiple time zones in the implementation and ongoing operation of data-driven technology with multiple critical interfaces

**Conduent, formerly  
Xerox Business  
Services****06/13 – 07/17****Program Manager/  
Project Manager**

Chad led and directed resources across multiple projects that focused on on-time delivery, staying within scope and budget from initiation through delivery, with projects including:

- Data-driven technology in support of the California Medicaid Management Information System (CA-MMIS)
- Federally mandated program to replace recipients' SSN-based identifiers to randomly generated identifiers to protect confidential data while maximizing data analytics capabilities
- Solution to natively integrate International Classification of Diseases, 10<sup>th</sup> Edition (ICD-10) codes into the MMIS to eliminate the crosswalk to ICD-9 codes

**Additional previous experience can be provided upon request.**

**Education, Certifications & Credentials**

- Master of Science – Project Management, Boston University, Boston, Massachusetts
- Bachelor of Science – Business Administration, Robert Morris University, Pittsburgh, Pennsylvania
- Project Management Professional (PMP) Certification
- Medical Learning Center (MLC) Certified Medicaid Professional
- Certified ScrumMaster



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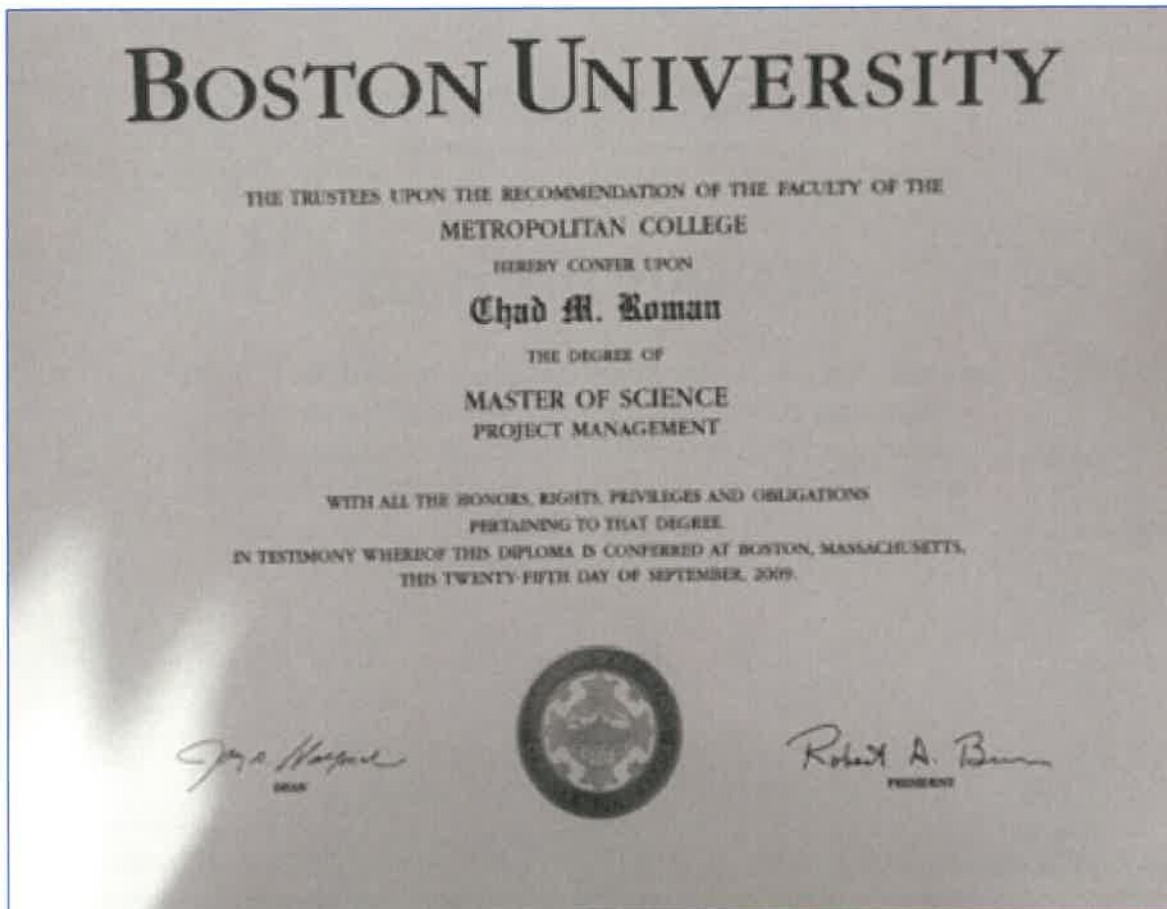
**Exhibit 23. Chad Roman: PMP Certification**



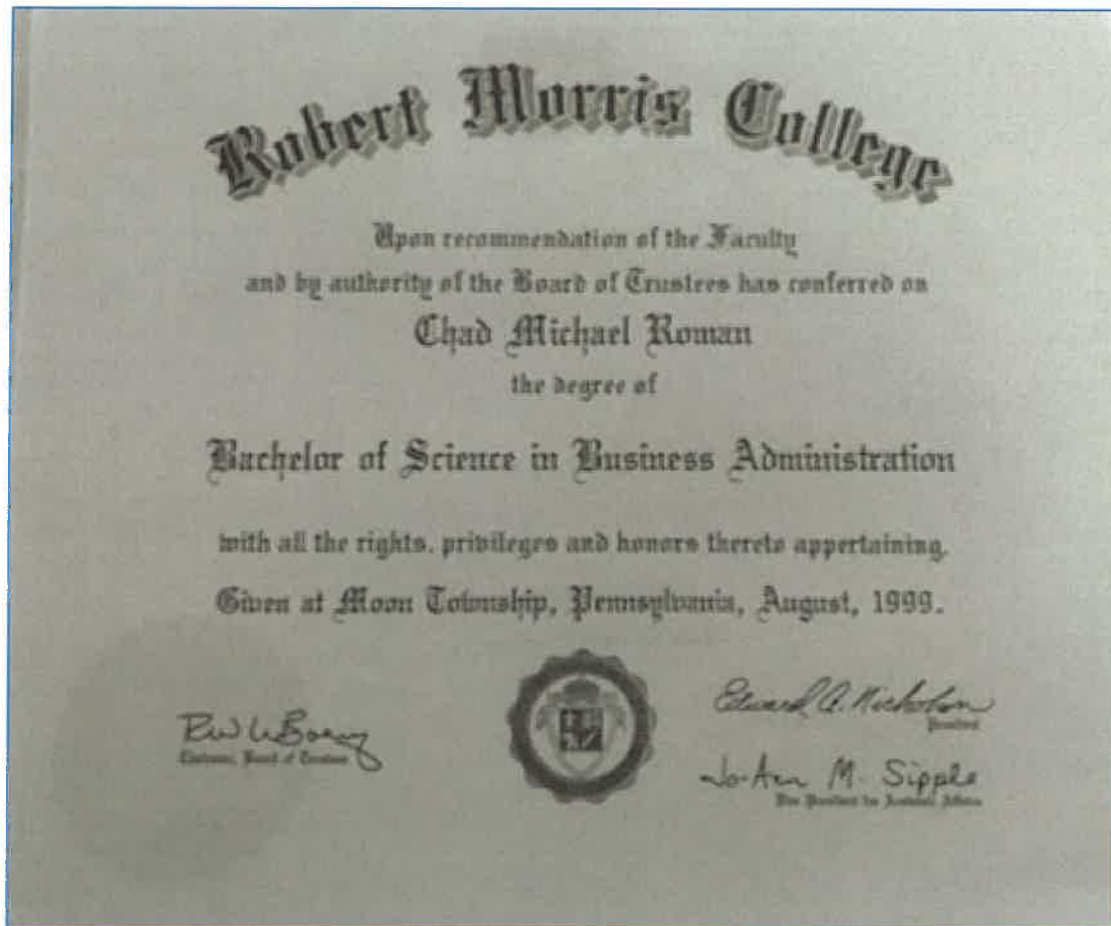
**Exhibit 24. Chad Roman: ScrumMaster Certification**



**Exhibit 25. Chad Roman: Master of Science Degree Copy**



**Exhibit 26. Chad Roman: Bachelor of Science Degree Copy**





## Exhibit 27. Chad Roman: Examples of Past Projects Completed

Past Project Example #1	
<b>Name of the Project:</b>	WY PRESM Project
<b>Location:</b>	Cheyenne, WY
<b>Project Manager:</b>	Chad Roman
<b>Phone:</b>	(530) 771-7045
<b>Email:</b>	chad.roman@hhstechgroup.com
<b>Type of Project:</b>	Technology and Services Implementation
<b>Project Goals/Objectives:</b>	Implement new technology and support services for the Wyoming Integrated Next Generation System (WINGS) Modern, Modular MMIS Project
<b>HTG Achievements of Goals/Objectives:</b>	Technology successfully implemented with ongoing services and support provided

Past Project Example #2	
<b>Name of the Project:</b>	Egypt MOI MBIS Project
<b>Location:</b>	Cairo, Egypt
<b>Project Manager:</b>	Chad Roman
<b>Phone:</b>	(530) 771-7045
<b>Email:</b>	chadroman@gmail.com
<b>Type of Project:</b>	Data-driven technology, including secure registry to protect confidential information
<b>Project Goals/Objectives:</b>	Implemented the first non-U.S. automated identification system
<b>Achievements of Goals/Objectives:</b>	Solution successfully implemented, enabling the client to gain entry into the global market

### Exhibit 28. Analytics Team: Bringing a Pool of Over 1,200 Experts

Staff Member	Resume/Experience Summary (Specific team members may include these noted; to be assigned in alignment with each project’s final scope)
<p><b>Dr. Wang</b></p> <p>Ph.D., Evaluation, Measurement and Statistics, University of Delaware</p> <p>Data Scientist</p>	<p>Dr. Wang, a Senior Data Scientist, brings extensive experience in research design, quasi-experimental analysis, causal inference, health quality measures, and data visualization. Dr. Wang has served as task lead and data scientist roles in multiple CMS-, AHRQ-, and commercial-funded quality measure and predictive analytics projects.</p> <p>For example, Dr. Wang incorporated Bayesian Improved Surname Geocoding to impute race and ethnicity in the Public Health Foundation project (PHF). Data was later used to create an interactive dashboard to help combat the COVID-19 pandemic through effective and equitable contact tracing strategies. Dr. Wang also conducted quantitative analyses to help develop and refine the Agency for Healthcare Research and Quality (AHRQ) and their Hospital-level Quality Indicators (QIs). Dr. Wang led the team to fit risk-adjustment models, produce benchmark tables, create interactive reports, and deliver software code and documentation to AHRQ.</p>
<p><b>Dr. Farid</b></p> <p>Ph.D., Health Policy, Economics Track, Harvard University</p> <p>Health Researcher and Data Analytics Expert</p>	<p>Dr. Farid, a Health Researcher, has extensive quantitative evaluation experience using Medicare and Medicaid claims data. Through the years, she has been involved in a range of Medicare projects including analyses to identify risk factors among beneficiary populations with high drug costs. She has experience working on litigation cases at Greylock McKinnon Associates, supporting analyses to estimate the economic cost of opioid and heroin use disorder to public health insurance programs and to society. She worked on several Medicare and Medicaid projects, including analyzing the impact of home-based primary care on Medicare expenditures during the end-of-life as part of the Independence at Home (IAH) demonstration evaluation and providing technical assistance to Section</p>

<b>Staff Member</b>	<b>Resume/Experience Summary</b> (Specific team members may include these noted; to be assigned in alignment with each project's final scope)
	1115 Medicaid demonstration evaluations. She also has experience conducting benefit-cost analysis and estimating net benefits under different parameter assumptions. She conducted benefit-cost analyses and projected the future net benefits of the Promoting Readiness of Minors in Supplemental Security Income (PROMISE), an SSA demonstration intended to promote education and employment outcomes among youth with disabilities.
<b>Mr. Kuncaitis</b>  M.P.A, Health Care Administration, Western Michigan University  Medicaid Data Analysis and Subject Matter Expert (SME)	Mr. Kuncaitis, a Senior Researcher and Medicaid Data Analysis and Subject Matter Expert, began his career in the Michigan Medicaid program almost 20 years ago. For the last 11 years, he has worked closely with CMS and states to collect Medicaid and CHIP administrative data directly from states and convert it into research files for a wide range of federal, state, and commercial data users. He has worked closely with states for many years to improve the mapping of data from their source systems to the standard federal Transformed Medicaid Statistical Information System (T-MSIS) format. He has supported a wide range of state-level program evaluations using Medicaid and CHIP data, including the recent development of federal Early and Periodic Screening, Diagnostic and Treatment (EPSDT) metrics calculated using state Medicaid data in T-MSIS.
<b>Dr. Pu</b>  Ph.D., Social and Administrative Sciences in Pharmacy, University of Wisconsin at Madison	Dr. Pu, a Senior Health Researcher, brings extensive expertise in health outcomes research, predictive analytics, and data analyses. She has served on multiple projects involving complex data with technical demands, bringing extensive experience working with foundations and clinical clients to support their research and quality improvement efforts through data collection and exchange, study design, statistical analysis, and the dissemination of findings.

<b>Staff Member</b>	<b>Resume/Experience Summary</b> (Specific team members may include these noted; to be assigned in alignment with each project's final scope)
<p>Senior Health Researcher and Data Analytics Expert</p>	<p>For example, Dr. Pu was the Research Team Lead for the Comprehensive End Stage Renal Disease (ESRD) Care Model dashboard. This interactive dashboard allows the ESRD Seamless Care Organizations to monitor their performance and identify opportunities for improvement. Dr. Pu also directed several evaluation analyses of innovative care delivery models, including the impact analysis of Medicare Part D for the Million Hearts Cardiovascular Disease Risk Reduction Model.</p> <p>Dr. Pu is experienced in deploying innovative digital solutions and led the effort to develop an interactive dashboard during the COVID pandemic to present key demographic characteristics of contact tracers as well as the communities they serve. This dashboard helped states and counties to develop strategies to better meet their communities' contact tracing needs and to address health disparities.</p>
<p><b>Ms. Schoenfeldt</b></p> <p>BA, Economics, Brown University</p> <p>Data Analyst</p>	<p>Ms. Schoenfeldt, a Senior Data Analyst, brings a wide range of data-driven project and predictive analytics experience, including developing a data pipeline in AWS from the Radiation Oncology Model Implementation and Monitoring project. Ms. Schoenfeldt has worked extensively with Medicare claims data and has implemented metrics on Medicaid claims data for 1115 demonstrations. She also has experience with risk scores from calculating risk-adjustments for the AHRQ quality software.</p>
<p><b>Dr. Chen</b></p> <p>M.D., Albert Einstein College of Medicine and M.Sc., Health Policy and Management,</p>	<p>Dr. Chen, a Senior Clinician Researcher, brings extensive experience using Medicare and other secondary claims data to construct analytic variables and datasets to evaluate the impacts of the Center for Medicare and Medicaid Innovations (CMMI) models on the quality of health care, access to care, and patient outcomes. For the Evaluation of the Medicare Care Choices Model, he is currently using CPT/HCPCS and</p>



<b>Staff Member</b>	<b>Resume/Experience Summary</b> (Specific team members may include these noted; to be assigned in alignment with each project’s final scope)
<p>Harvard T.H. Chan School of Public Health</p> <p>Clinical Quality Assurance (QA) and Data Analyst/Reviewer</p>	<p>ICD-10 diagnosis and procedure codes in various Medicare claims files to define the study cohorts of patients with specific diagnoses and severity of disease, and to define process quality of care outcomes.</p> <p>He is currently also a Quality Assurance Reviewer for a large CMS quality measures project and an Advisory Board Member for another CMS large measures project. Both of these projects maintain and develop quality of care measures using diagnosis and procedure in Medicare claims data to identify patients eligible for the measures, and the actual measures themselves. He has evaluated CMMI models to improve care for patients with Stages 4 and 5 chronic kidney disease.</p> <p>Dr. Chen is also a practicing General Internist who has practiced many years in ambulatory, acute inpatient, and long-term care settings. He is also currently a volunteer faculty member at Rutgers Robert Wood Johnson Medical School, supervising medical residents at a local Federally Qualified Health Center (FQHC) that serves an underserved population with a high proportion of Hispanic and Medicaid patients who have a high prevalence of diabetes and hypertension. He and his residents regularly check and discuss routine serum chemistries and urinalysis, control patients’ risk factors for kidney and heart disease, assess for and manage microalbuminuria, and work patients up for diminished estimated GFR, referring appropriate patients to the nephrology clinic for additional work-up and care.</p>
<p><b>Dr. Markovitz</b></p> <p>Sc.D., Epidemiology, Harvard T.H. Chan School of Public Health</p>	<p>Dr. Markovitz, a Senior Researcher, brings over a decade of experience leading quantitative analyses and predictive analytics projects focused on chronic disease prevention and quality improvement. She previously worked at a commercial insurer where she identified CKD and ESKD patients and their costs using a combination of clinical registry and commercial claims</p>

Staff Member	Resume/Experience Summary (Specific team members may include these noted; to be assigned in alignment with each project’s final scope)
Data Analyst and Research Lead	data, with the goal of designing physician performance metrics to improve quality and reduce the cost of care for patients with kidney disease. She currently leads analyses to evaluate the quantitative impacts of cost reduction and quality improvement initiatives, including CDC’s WISEWOMAN and CMS’s Million Hearts Cardiovascular Disease Risk Reduction Model, which both focus on cardiovascular disease prevention. She brings a public health and equity-focused lens to her work.

**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.

Confirmed. With a pool of over 1,200 experts, our Analytics Team brings the inherent ability to provide a suitable replacement quickly and efficiently as needed, particularly as each project is scoped out and as it may change over time. In addition, should the Agency desire a substitute staff replacement for any reason, this will be quickly accommodated to ensure the project stays on track. Throughout each project, our Contract Manager will monitor staffing levels, ensuring alignment to each project’s hours allocated for work, and making substitutions as necessary, including as desired by the Agency. We accept that all projects are in the ultimate control of the Agency and we will make any staff substitutions as desired throughout the contract period.

#### 4.3.2. Mandatory Qualification/Experience Requirements

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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.

Confirmed. As required, we have included a response to each requirement as set forth in this section to fully demonstrate how we meet these requirements.

**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.**

Confirmed. Throughout our proposal, we have included many specific project examples for the Agency to demonstrate our 67 years of collective experience performing the exact same work as desired and in scope for this procurement. This includes projects listed in *Exhibit 21. Project Experience Examples* as well as those provided in our *Executive Summary*.


For our two accounts required to be noted herein, our first example project is with the Morris Hood III Chronic Kidney Disease Prevention Initiative supporting the National Kidney Foundation of Michigan. We have included reference contacts for both the foundation and the State at large in *Exhibit 29. Account References*. Provided is an overview of this project:

 **State Level Project Example:** This project is a great example of how HTG leverages our technology and staff expertise to perform Predictive Analytics through our DyD technology and staff support for the Morris Hood III Chronic Kidney Disease Prevention Initiative. This project brought HTG and Mathematica's staff expertise together once again to support the National Kidney Foundation of Michigan and the State of Michigan at large.

On this particular project, our technology is being used to automate the analysis of a large volume of health data, including from Medicaid

claims, to accurately estimate the long-term costs of having chronic kidney disease (CKD). The four main aspects of the data analytics and DyD technology work involved includes **(1)** Cost Calculator, **(2)** Risk Calculator, **(3)** proportion of beneficiaries with risk factors receiving a kidney profile, and **(4)** the impact of COVID-19 on the progression rate of CKD. In addition, there are ongoing additional analyses on the intermediate cost of CKD based on claims data received. Our Analytics Team further supports our technology by bringing chronic condition cost estimation, Medicaid data analysis, and digital asset production and reporting expertise to help inform the Predictive Analytics gained.

Our second example project is with the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Planning and Evaluation (ASPE) wherein staff across HTG and Mathematica are utilizing our DyD technology and support services to execute this project. Since we are a subcontractor to Mathematica for this project with the Federal government, we have included our reference contact at Mathematica in *Exhibit 29. Account References*. Provided is a summary of this project:

 **Federal Level Project Example:** Our active work supporting the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Planning and Evaluation (ASPE) is a nationwide project that enables ASPE to securely view multiple years of Medicaid claims data, commercial health insurance data from across numerous payers, electronic health record (EHR) data, health risk assessment (HRA) data, and more across all 50 states through our secured online portal – leveraging the same technology as proposed to support the Agency.

Our specific Scope of Work for ASPE includes the provision of DyD and our portal which acts as an online analytic tool that supports the rapid analysis of Medicaid and Commercial claims and related data, including medical and prescription drug datasets. Analytics staff then generate descriptive statistics from the claims data (e.g., What are the average payments for treatment? What is the average length of stay of a person hospitalized for a certain condition?). In addition, DyD facilitates the creation of analytic data files from the claims data (e.g., creation of variables, limiting the data set to specified sub-populations, and more).



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**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.

Confirmed. Please see our corresponding references provided in the following exhibit.

### Exhibit 29. Account References

Reference #1		
<b>Name:</b>	Linda Smith-Wheelock	Brian Keisling
<b>Title:</b>	President & CEO, National Kidney Foundation of Michigan	Deputy Director, State of Michigan Department of Health and Human Services (DHHS)
<b>Phone:</b>	(734) 222-9800 ext. 2180	(734) 481-2000
<b>Email:</b>	lsmith-wheelock@nkfm.org	KeislingB@michigan.gov
<b>Date Range:</b>	N/A – Ongoing Active Project	

Reference #2	
<b>Name:</b>	Bill Reeves
<b>Title:</b>	Vice President, Mathematica for Federal HHS ASPE Project
<b>Phone:</b>	(609) 750-4090
<b>Email:</b>	wreeves@mathematica-mpr.com
<b>Date Range:</b>	N/A – Ongoing Active Project

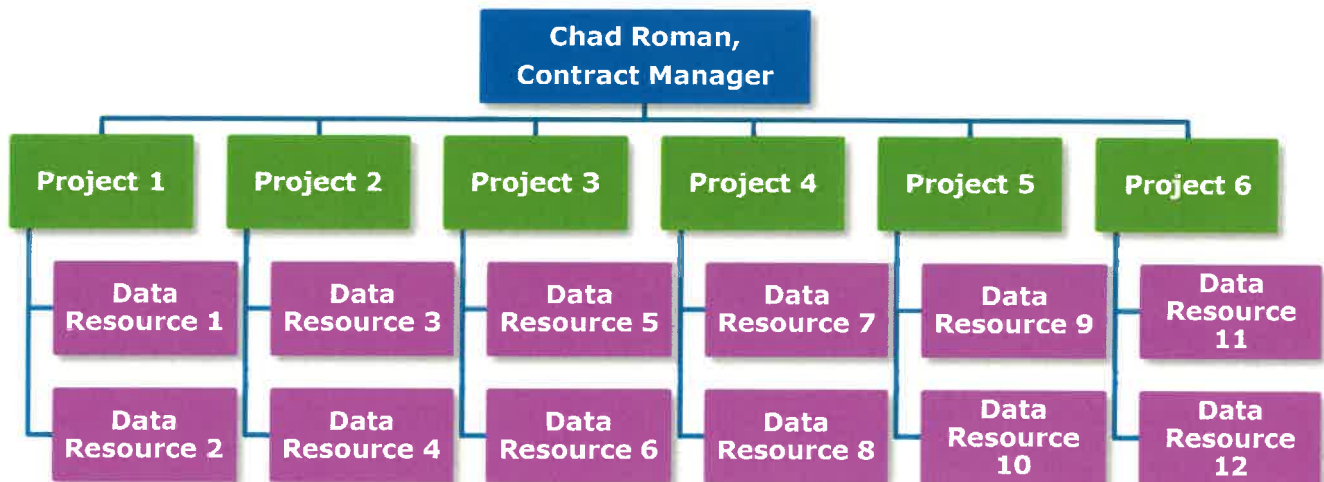
**4.3.2.3.** Vendor must provide an organization chart with sufficient detail to demonstrate the ability to support up to the maximum number of projects over the life of the contract as well as to support the maximum number of concurrent projects at any point over the life of the contract.

Confirmed. As each project is scoped out, we will bring the right staff needed from our pool of over 1,200 resources to support you. Depending on the project scope, this may be a Data Scientist, Epidemiologist, Data Analyst, Clinician, Pharmacist, Researcher, Statistician, QA Reviewer, Health Policy expert, or other team member. We anticipate deploying 1-2 resources from our pool for each of the 18 projects, taking on up to 6 (or more) projects in parallel every 4 months for a total of 18 projects for the year. Our Contract Manager, Chad Roman, will work with the Agency to ensure alignment to each project's specific scope, bringing in appropriate resources as each

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project's scope is defined and finalized. For now, please see our high-level organizational chart as provided in the next exhibit.






## Exhibit 30. Org Chart: 6-12 Resources Deployed Every 4 Months



## **5. Required Forms – Completed & Signed**

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As required, provided on the following pages are HTG's completed and signed forms included in the following order:

-  RFP Bid Certification
-  Federal Funds Addendum
-  Contract Administrator Contact and Certification
-  Addendum Acknowledgment Form
-  Signed Bid Forms and Addendums

**RFP Bid Certification**

Please see the following page for our bid certification required.



**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.

  
(Signature)

HHS Technology Group, LLC  
(Company)

Bradley B. White, Chief Executive Officer  
(Representative Name, Title)

(754) 300-3366 / (954) 239-1405  
(Contact Phone/Fax Number)

9-23-22  
(Date)

**Federal Funds Addendum**

Please see the following pages for our signed Federal Funds Addendum.

**FEDERAL FUNDS ADDENDUM**

2 C.F.R. §§ 200.317 – 200.327

**Purpose:** This addendum is intended to modify the solicitation in an attempt to make the contract compliant with the requirements of 2 C.F.R. §§ 200.317 through 200.327 relating to the expenditure of certain federal funds. This solicitation will allow the State to obtain one or more contracts that satisfy standard state procurement, state federal funds procurement, and county/local federal funds procurement requirements.

**Instructions:** Vendors who are willing to extend their contract to procurements with federal funds and the requirements that go along with doing so, should sign the attached document identified as: “REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS (2 C.F.R. § 200.317)”

Should the awarded vendor be unwilling to extend the contract to federal funds procurement, the State reserves the right to award additional contracts to vendors that can and are willing to meet federal funds procurement requirements.

**Changes to Specifications:** Vendors should consider this solicitation as containing two separate solicitations, one for state level procurement and one for county/local procurement.

**State Level:** In the first solicitation, bid responses will be evaluated with applicable preferences identified in sections 15, 15A, and 16 of the “Instructions to Vendors Submitting Bids” to establish a contract for both standard state procurements and state federal funds procurements.

**County Level:** In the second solicitation, bid responses will be evaluated with applicable preferences identified in Sections 15, 15A, and 16 of the “Instructions to Vendors Submitting Bids” omitted to establish a contract for County/Local federal funds procurement.

**Award:** If the two evaluations result in the same vendor being identified as the winning bidder, the two solicitations will be combined into a single contract award. If the evaluations result in a different bidder being identified as the winning bidder, multiple contracts may be awarded. The State reserves the right to award to multiple different entities should it be required to satisfy standard state procurement, state federal funds procurement, and county/local federal funds procurement requirements.

**State Government Use Caution:** State agencies planning to utilize this contract for procurements subject to the above identified federal regulations should first consult with the federal agency providing the applicable funding to ensure the contract is compliant.

**County/Local Government Use Caution:** County and Local government entities planning to utilize this contract for procurements subject to the above identified federal regulation should first consult with the federal agency providing the applicable funding to ensure the contract is compliant. For purposes of County/Local government use, the solicitation resulting in this contract was conducted in accordance with the procurement laws, rules, and procedures governing the West Virginia Department of Administration, Purchasing Division, except that vendor preference has been omitted for County/Local use purposes and the contract terms contained in the document entitled “REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS (2 C.F.R. § 200.317)” have been added.

## **FEDERAL FUNDS ADDENDUM**

### **REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS (2 C.F.R. § 200.317):**

The State of West Virginia Department of Administration, Purchasing Division, and the Vendor awarded this Contract intend that this Contract be compliant with the requirements of the Procurement Standards contained in the Uniform Administrative Requirements, Cost Principles, and Audit Requirements found in 2 C.F.R. § 200.317, et seq. for procurements conducted by a Non-Federal Entity. Accordingly, the Parties agree that the following provisions are included in the Contract.

**1. MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS:  
(2 C.F.R. § 200.321)**

- a. The State confirms that it has taken all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Those affirmative steps include:
  - (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
  - (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
  - (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
  - (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
  - (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
  - (6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (1) through (5) above.
- b. Vendor confirms that if it utilizes subcontractors, it will take the same affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

**2. DOMESTIC PREFERENCES:  
(2 C.F.R. § 200.322)**

- a. The State confirms that as appropriate and to the extent consistent with law, it has, to the greatest extent practicable under a Federal award, provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United



States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

b. Vendor confirms that will include the requirements of this Section 2. Domestic Preference in all subawards including all contracts and purchase orders for work or products under this award.

c. Definitions: For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

**3. BREACH OF CONTRACT REMEDIES AND PENALTIES:**

(2 C.F.R. § 200.327 and Appendix II)

(a) The provisions of West Virginia Code of State Rules § 148-1-5 provide for breach of contract remedies, and penalties. A copy of that rule is attached hereto as Exhibit A and expressly incorporated herein by reference.

**4. TERMINATION FOR CAUSE AND CONVENIENCE:**

(2 C.F.R. § 200.327 and Appendix II)

(a) The provisions of West Virginia Code of State Rules § 148-1-5 govern Contract termination. A copy of that rule is attached hereto as Exhibit A and expressly incorporated herein by reference.

**5. EQUAL EMPLOYMENT OPPORTUNITY:**

(2 C.F.R. § 200.327 and Appendix II)

Except as otherwise provided under 41 CFR Part 60, and if this contract meets the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3, this contract includes the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

**6. DAVIS-BACON WAGE RATES:**

(2 C.F.R. § 200.327 and Appendix II)

Vendor agrees that if this Contract includes construction, all construction work in excess of \$2,000 will be completed and paid for in compliance with the Davis–Bacon Act (40 U.S.C. 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must:

- (a) pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.
- (b) pay wages not less than once a week.

A copy of the current prevailing wage determination issued by the Department of Labor is attached hereto as Exhibit B. The decision to award a contract or subcontract is conditioned upon the acceptance of the wage determination. The State will report all suspected or reported violations to the Federal awarding agency.

**7. ANTI-KICKBACK ACT:**  
(2 C.F.R. § 200.327 and Appendix II)

Vendor agrees that it will comply with the Copeland Anti-KickBack Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). Accordingly, Vendor, Subcontractors, and anyone performing under this contract are prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The State must report all suspected or reported violations to the Federal awarding agency.

**8. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**  
(2 C.F.R. § 200.327 and Appendix II)

Where applicable, and only for contracts awarded by the State in excess of \$100,000 that involve the employment of mechanics or laborers, Vendor agrees to comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, Vendor is required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

**9. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT.**  
(2 C.F.R. § 200.327 and Appendix II)

If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

**10. CLEAN AIR ACT**  
(2 C.F.R. § 200.327 and Appendix II)

Vendor agrees that if this contract exceeds \$150,000, Vendor is to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

**11. DEBARMENT AND SUSPENSION**  
(2 C.F.R. § 200.327 and Appendix II)

The State will not award to any vendor that is listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

**12. BYRD ANTI-LOBBYING AMENDMENT**  
(2 C.F.R. § 200.327 and Appendix II)

Vendors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

**13. PROCUREMENT OF RECOVERED MATERIALS**  
(2 C.F.R. § 200.327 and Appendix II; 2 C.F.R. § 200.323)

Vendor agrees that it and the State must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the

Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

**14. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT.**

(2 C.F.R. § 200.327 and Appendix II; 2 CFR § 200.216)

Vendor and State agree that both are prohibited from obligating or expending funds under this Contract to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or
- (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
  - (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
  - (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
  - (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

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

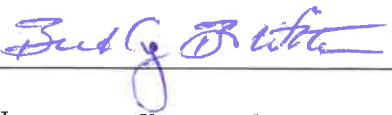
By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Vendor Name: HHS Technology Group, LLC

By: 

Printed Name: Bradley B. White

Title: Chief Executive Officer

Date: 9-23-22

EXHIBIT A To:  
REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY  
CONTRACTS UNDER FEDERAL AWARDS (2 C.F.R. § 200.317):

W. Va. CSR § 148-1-5

West Virginia Code of State Rules  
Title 148. Department of Administration  
Legislative Rule (Ser. 1)  
Series 1. Purchasing

W. Va. Code St. R. § 148-1-5  
§ 148-1-5. Remedies.

Currentness

5.1. The Director may require that the spending unit attempt to resolve any issues that it may have with the vendor prior to pursuing a remedy contained herein. The spending unit must document any resolution efforts and provide copies of those documents to the Purchasing Division.

5.2. Contract Cancellation.

5.2.1. Cancellation. The Director may cancel a purchase or contract immediately under any one of the following conditions including, but not limited to:

5.2.1.a. The vendor agrees to the cancellation;

5.2.1.b. The vendor has obtained the contract by fraud, collusion, conspiracy, or is in conflict with any statutory or constitutional provision of the State of West Virginia;

5.2.1.c. Failure to honor any contractual term or condition or to honor standard commercial practices;

5.2.1.d. The existence of an organizational conflict of interest is identified;

5.2.1.e. Funds are not appropriated or an appropriation is discontinued by the legislature for the acquisition;

5.2.1.f. Violation of any federal, state, or local law, regulation, or ordinance, and

5.2.1.g. The contract was awarded in error.

5.2.2. The Director may cancel a purchase or contract for any reason or no reason, upon providing the vendor with 30 days' notice of the cancellation.

5.2.3. Opportunity to Cure. In the event that a vendor fails to honor any contractual term or condition, or violates any provision of federal, state, or local law, regulation, or ordinance, the Director may request that the vendor remedy the contract breach or legal violation within a time frame the Director determines to be appropriate. If the vendor fails to remedy the contract breach or legal violation or the Director determines, at his or her sole discretion, that such a request is unlikely to yield a satisfactory result, then he or she may cancel immediately without providing the vendor an opportunity to perform a remedy.

5.2.4. Re-Award. The Director may award the cancelled contract to the next lowest responsible bidder (or next highest scoring bidder if best value procurement) without a subsequent solicitation if the following conditions are met:

5.2.4.a. The next lowest responsible bidder (or next highest scoring bidder if best value procurement) is able to perform at the price contained in its original bid submission, and

5.2.4.b. The contract is an open-end contract, a one-time purchase contract, or a contract for work which has not yet commenced.

Award to the next lowest responsible bidder (or next highest scoring bidder if best value procurement) will not be an option if the vendor's failure has in any way increased or significantly changed the scope of the original contract. The vendor failing to honor contractual and legal obligations is responsible for any increase in cost the state incurs as a result of the re-award.

5.3. Non-Responsible. If the Director believes that a vendor may be non-responsible, the Director may request that a vendor or spending unit provide evidence that the vendor either does or does not have the capability to fully perform the contract requirements, and the integrity and reliability necessary to assure good faith performance. If the Director determines that the vendor is non-responsible, the Director shall reject that vendor's bid and shall not award the contract to that vendor. A determination of non-responsibility must be evaluated on a case-by-case basis and can only be made after the vendor in question has submitted a bid. A determination of non-responsibility will only extend to the contract for which the vendor has submitted a bid and does not operate as a bar against submitting future bids.

5.4. Suspension.



5.4.1. The Director may suspend, for a period not to exceed 1 year, the right of a vendor to bid on procurements issued by the Purchasing Division or any state spending unit under its authority if:

5.4.1.a. The vendor has submitted a bid and then requested that its bid be withdrawn after bids have been publicly opened.

5.4.1.b. The vendor has exhibited poor performance in fulfilling his or her contractual obligations to the State. Poor performance includes, but is not limited to any of the following: violations of law, regulation, or ordinance; failure to deliver timely; failure to deliver quantities ordered; poor performance reports; or failure to deliver commodities, services, or printing at the quality level required by the contract.

5.4.1.c. The vendor has breached a contract issued by the Purchasing Division or any state spending unit under its authority and refuses to remedy that breach.

5.4.1.d. The vendor's actions have given rise to one or more of the grounds for debarment listed in [W. Va. Code § 5A-3-33d](#).

5.4.2. Vendor suspension for the reasons listed in section 5.4 above shall occur as follows:

5.4.2.a. Upon a determination by the Director that a suspension is warranted, the Director will serve a notice of suspension to the vendor.

5.4.2.b. A notice of suspension must inform the vendor:

5.4.2.b.1. Of the grounds for the suspension;

5.4.2.b.2. Of the duration of the suspension;

5.4.2.b.3. Of the right to request a hearing contesting the suspension;

5.4.2.b.4. That a request for a hearing must be served on the Director no later than 5 working days of the vendor's receipt of the notice of suspension;

5.4.2.b.5. That the vendor's failure to request a hearing no later than 5 working days of the receipt of the notice of suspension will be deemed a waiver of the right to a hearing and result in the automatic enforcement of the suspension without further notice or an opportunity to respond; and

5.4.2.b.6. That a request for a hearing must include an explanation of why the vendor believes the Director's asserted grounds for suspension do not apply and why the vendor should not be suspended.

5.4.2.c. A vendor's failure to serve a request for hearing on the Director no later than 5 working days of the vendor's receipt of the notice of suspension will be deemed a waiver of the right to a hearing and may result in the automatic enforcement of the suspension without further notice or an opportunity to respond.

5.4.2.d. A vendor who files a timely request for hearing but nevertheless fails to provide an explanation of why the asserted grounds for suspension are inapplicable or should not result in a suspension, may result in a denial of the vendor's hearing request.

5.4.2.e. Within 5 working days of receiving the vendor's request for a hearing, the Director will serve on the vendor a notice of hearing that includes the date, time and place of the hearing.

5.4.2.f. The hearing will be recorded and an official record prepared. Within 10 working days of the conclusion of the hearing, the Director will issue and serve on the vendor, a written decision either confirming or reversing the suspension.

5.4.3. A vendor may appeal a decision of the Director to the Secretary of the Department of Administration. The appeal must be in writing and served on the Secretary no later than 5 working days of receipt of the Director's decision.

5.4.4. The Secretary, or his or her designee, will schedule an appeal hearing and serve on the vendor, a notice of hearing that includes the date, time and place of the hearing. The appeal hearing will be recorded and an official record prepared. Within 10 working days of the conclusion of the appeal hearing, the Secretary will issue and serve on the vendor a written decision either confirming or reversing the suspension.

5.4.5. Any notice or service related to suspension actions or proceedings must be provided by certified mail, return receipt requested.

5.5. Vendor Debarment. The Director may debar a vendor on the basis of one or more of the grounds for debarment contained in [W. Va. Code § 5A-3-33d](#) or if the vendor has been declared ineligible to participate in procurement related activities under federal laws and regulation.

5.5.1. Debarment proceedings shall be conducted in accordance with [W. Va. Code § 5A-3-33e](#) and these rules. A vendor that has received notice of the proposed debarment by certified mail, return receipt requested, must respond to the proposed debarment within 30 working days after receipt of notice or the debarment will be instituted without further notice. A vendor is deemed to have received notice, notwithstanding the vendor's failure to accept the certified mail, if the letter is addressed to the vendor at its last known address. After considering the matter and reaching a decision, the Director shall notify the vendor of his or her decision by certified mail, return receipt requested.

5.5.2. Any vendor, other than a vendor prohibited from participating in federal procurement, undergoing debarment proceedings is permitted to continue participating in the state's procurement process until a final debarment decision has been reached. Any contract that a debarred vendor obtains prior to a final debarment decision shall remain in effect for the current term, but may not be extended or renewed. Notwithstanding the foregoing, the Director may cancel a contract held by a debarred vendor if the Director determines, in his or her sole discretion, that doing so is in the best interest of the State. A vendor prohibited from participating in federal procurement will not be permitted to participate in the state's procurement process during debarment proceedings.

5.5.3. If the Director's final debarment decision is that debarment is warranted and notice of the final debarment decision is mailed, the Purchasing Division shall reject any bid submitted by the debarred vendor, including any bid submitted prior to the final debarment decision if that bid has not yet been accepted and a contract consummated.

5.5.4. Pursuant to [W.Va. Code § 5A-3-33e\(e\)](#), the length of the debarment period will be specified in the debarment decision and will be for a period of time that the Director finds necessary and proper to protect the public from an irresponsible vendor.

5.5.5. List of Debarred Vendors. The Director shall maintain and publicly post a list of debarred vendors on the Purchasing Division's website.

5.5.6. Related Party Debarment. The Director may pursue debarment of a related party at the

same time that debarment of the original vendor is proceeding or at any time thereafter that the Director determines a related party debarment is warranted. Any entity that fails to provide the Director with full, complete, and accurate information requested by the Director to determine related party status will be presumed to be a related party subject to debarment.

#### 5.6. Damages.

5.6.1. A vendor who fails to perform as required under a contract shall be liable for actual damages and costs incurred by the state.

5.6.2. If any commodities delivered under a contract have been used or consumed by a spending unit and on testing the commodities are found not to comply with specifications, no payment may be approved by the Spending Unit for the merchandise until the amount of actual damages incurred has been determined.

5.6.3. The Spending Unit shall seek to collect damages by following the procedures established by the Office of the Attorney General for the collection of delinquent obligations.

#### **Credits**

History: Filed 4-1-19, eff. 4-1-19; Filed 4-16-21, eff. 5-1-21.

Current through register dated May 7, 2021. Some sections may be more current. See credits for details.

W. Va. C.S.R. § 148-1-5, WV ADC § 148-1-5

End of Document

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Government Works.



EXHIBIT B To:  
REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY  
CONTRACTS UNDER FEDERAL AWARDS (2 C.F.R. § 200.317):

Prevailing Wage Determination

☒ – Not Applicable Because Contract Not for Construction

☐ – Federal Prevailing Wage Determination on Next Page

**Contract Administrator Contact and Certification**

Please see the following page for our completed Contract Administrator information and our signed accompanying Certification and Signature required.

**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) Susie Bird, Director of Business Development

(Printed Name and Title) same as above

(Address) 6600 North Andrews Avenue, Suite 570 Fort Lauderdale, FL 33309

(Phone Number) / (Fax Number) (916) 612-0804 / Please use email in lieu of fax.

(email address) susie.bird@hhstechgroup.com

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, 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.

HHS Technology Group, LLC

(Company)

  
(Authorized Signature) (Representative Name, Title)

Bradley B. White, Chief Executive Officer 9-23-22

(Printed Name and Title of Authorized Representative) (Date)

(754) 300-3366 / (954) 239-1405

(Phone Number) (Fax Number)

bradley.white@hhstechgroup.com

(Email Address)

**Addendum Acknowledgment Form**

Please see the following page for our completed Addendum Acknowledgment Form.



ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.: CRFP 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 checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input checked="" 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.

HHS Technology Group, LLC  
Company

  
Authorized Signature

9-23-22  
Date

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

## **Signed Bid Forms and Addendums**

Please see the following pages for our completed bid form signatures for the initial RFP released (Version 1) followed by all updated versions released with Addendums 1 through 4.



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

<b>Proc Folder:</b> 1090427			<b>Reason for Modification:</b>
<b>Doc Description:</b> REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/ SERVICES			
<b>Proc Type:</b> Central Master Agreement			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-08-18	2022-09-13 13:30	CRFP 0506 MIS2300000001	1

**BID RECEIVING LOCATION**

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

**VENDOR**

**Vendor Customer Code:** VS0000014579  
**Vendor Name :** HHS Technology Group, LLC  
**Address :** Headquarters  
**Street :** 6600 North Andrews Avenue, Suite 570  
**City :** Fort Lauderdale  
**State :** FL **Country :** U.S. **Zip :** 33309  
**Principal Contact :** Susie Bird, Director of Business Development  
**Vendor Contact Phone:** (916) 612-0804 **Extension:** N/A

**FOR INFORMATION CONTACT THE BUYER**

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

Vendor  
Signature X

FEIN# 82-1847143

DATE 9-23-22

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

**ADDITIONAL INFORMATION**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING PROPOSALS TO ESTABLISH A CONTRACT FOR PREDICATIVE ANALYTICS SOFTWARE AND SERVICES PER THE ATTACHED DOCUMENTS.

\*\*\*QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS\*\*\*

\*\*\*ONLINE RESPONSES ARE PROHIBITED FOR THIS SOLICITATION\*\*\*

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE ONE DAVIS SQUARE, RM 211 CHARLESTON WV 25301 US	HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE 321 CAPITOL ST, STE 200 CHARLESTON WV 25301 US

Line	Comm Ln Desc	Qty	Unit of Measure	Unit Price	Total Price
1	Predictive Analytics Software and Services				

Comm Code	Manufacturer	Specification	Model #
232305			

**Extended Description:**

PRICING SHALL BE INCLUDED ON ATTACHMENT A COST SHEET

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2022-09-13

	Document Phase	Document Description	Page 3
MIS2300000001	Final	REQUEST FOR PROPOSAL- PREDICTIVE ANALYTICS SOFTWARE/SERVICES	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions





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

<b>Proc Folder:</b> 1090427	<b>Reason for Modification:</b>		
<b>Doc Description:</b> REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/ SERVICES	ADDENDUM 1 TO CORRECT QUESTION DEADLINE DATE ON PAGE 2 OF SOLICITATION DOCUMENTS		
<b>Proc Type:</b> Central Master Agreement			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-08-22	2022-09-13 13:30	CRFP 0506 MIS2300000001	2

**BID RECEIVING LOCATION**

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

**VENDOR**

**Vendor Customer Code:** VS0000014579  
**Vendor Name :** HHS Technology Group, LLC  
**Address :** Headquarters  
**Street :** 6600 North Andrews Avenue, Suite 570  
**City :** Fort Lauderdale  
**State :** FL **Country :** U.S. **Zip :** 33309  
**Principal Contact :** Susie Bird, Director of Business Development  
**Vendor Contact Phone:** (916) 612-0804 **Extension:** N/A

**FOR INFORMATION CONTACT THE BUYER**

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

Vendor  
Signature X 

FEIN# 82-1847143

DATE 9-23-22

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

**ADDITIONAL INFORMATION**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING PROPOSALS TO ESTABLISH A CONTRACT FOR PREDICATIVE ANALYTICS SOFTWARE AND SERVICES PER THE ATTACHED DOCUMENTS.

\*\*\*QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS\*\*\*

\*\*\*ONLINE RESPONSES ARE PROHIBITED FOR THIS SOLICITATION\*\*\*

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE ONE DAVIS SQUARE, RM 211 CHARLESTON WV 25301 US	HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE 321 CAPITOL ST, STE 200 CHARLESTON WV 25301 US

Line	Comm Ln Desc	Qty	Unit of Measure	Unit Price	Total Price
1	Predictive Analytics Software and Services				

Comm Code	Manufacturer	Specification	Model #
232305			

**Extended Description:**

PRICING SHALL BE INCLUDED ON ATTACHMENT A COST SHEET

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2022-08-31

	Document Phase	Document Description	Page 3
MIS2300000001	Final	REQUEST FOR PROPOSAL- PREDICTIVE ANALYTICS SOFTWARE/SERVICES	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**SOLICITATION NUMBER: CRFP MIS2300000001**

**Addendum Number: 1**

---

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

**Applicable Addendum Category:**

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☐ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☒ Correction of error
- ☐ Other

**Description of Modification to Solicitation:**

1. To correct the question deadline date on page 2 of the solicitation documents to 08/31/2022

Question Deadline: August 31, 2022 at 10:00 AM ET

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.

# ATTACHMENT A





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

**Doc Description:** REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/  
SERVICES

**Reason for Modification:**

ADDENDUM 2  
TO EXTEND THE PROPOSAL  
DUE DATE

**Proc Type:** Central Master Agreement

**Date Issued**

**Solicitation Closes**

**Solicitation No**

**Version**

2022-09-07

2022-09-28 13:30

CRFP 0506 MIS2300000001

3

**BID RECEIVING LOCATION**

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

**VENDOR**

**Vendor Customer Code:** VS0000014579

**Vendor Name :** HHS Technology Group, LLC

**Address :** Headquarters

**Street :** 6600 North Andrews Avenue, Suite 570

**City :** Fort Lauderdale

**State :** FL

**Country :** U.S.

**Zip :** 33309

**Principal Contact :** Susie Bird, Director of Business Development

**Vendor Contact Phone:** (916) 612-0804

**Extension:** N/A

**FOR INFORMATION CONTACT THE BUYER**

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

Vendor  
Signature X

**FEIN#** 82-1847143

**DATE** 9-23-22

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

**ADDITIONAL INFORMATION**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING PROPOSALS TO ESTABLISH A CONTRACT FOR PREDICATIVE ANALYTICS SOFTWARE AND SERVICES PER THE ATTACHED DOCUMENTS.

\*\*\*QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS\*\*\*

\*\*\*ONLINE RESPONSES ARE PROHIBITED FOR THIS SOLICITATION\*\*\*

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE ONE DAVIS SQUARE, RM 211 CHARLESTON WV 25301 US	HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE 321 CAPITOL ST, STE 200 CHARLESTON WV 25301 US

Line	Comm Ln Desc	Qty	Unit of Measure	Unit Price	Total Price
1	Predictive Analytics Software and Services				

Comm Code	Manufacturer	Specification	Model #
0232305			

**Extended Description:**

PRICING SHALL BE INCLUDED ON ATTACHMENT A COST SHEET

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2022-08-31

	Document Phase	Document Description	Page 3
MIS2300000001	Final	REQUEST FOR PROPOSAL- PREDICTIVE ANALYTICS SOFTWARE/SERVICES	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**SOLICITATION NUMBER:** CRFP MIS2300000001

**Addendum Number: 2**

---

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

**Applicable Addendum Category:**

- ☒ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☐ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☐ Other

**Description of Modification to Solicitation:**

1. To extend the proposal close date to September 28, 2022 at 1:30 PM ET

\*\*\*The answers to vendor questions will be provided in a forthcoming addendum\*\*\*

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.

## ATTACHMENT A





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

<b>Proc Folder:</b> 1090427	<b>Reason for Modification:</b>		
<b>Doc Description:</b> REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/ SERVICES	ADDENDUM 3 TO PROVIDE ANSWERS TO VENDOR QUESTIONS AND REVISED COST SHEET		
<b>Proc Type:</b> Central Master Agreement			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-09-20	2022-09-28 13:30	CRFP 0506 MIS2300000001	4

**BID RECEIVING LOCATION**

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

**VENDOR**

**Vendor Customer Code:** VS0000014579  
**Vendor Name :** HHS Technology Group, LLC  
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**Principal Contact :** Susie Bird, Director of Business Development  
**Vendor Contact Phone:** (916) 612-0804 **Extension:** N/A

**FOR INFORMATION CONTACT THE BUYER**

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

Vendor  
Signature X

FEIN# 82-1847143

DATE 9-23-22

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

**ADDITIONAL INFORMATION**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING PROPOSALS TO ESTABLISH A CONTRACT FOR PREDICATIVE ANALYTICS SOFTWARE AND SERVICES PER THE ATTACHED DOCUMENTS.

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\*\*\*ONLINE RESPONSES ARE PROHIBITED FOR THIS SOLICITATION\*\*\*

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE ONE DAVIS SQUARE, RM 211 CHARLESTON WV 25301 US	HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE 321 CAPITOL ST, STE 200 CHARLESTON WV 25301 US

Line	Comm Ln Desc	Qty	Unit of Measure	Unit Price	Total Price
1	Predictive Analytics Software and Services				

Comm Code	Manufacturer	Specification	Model #
0232305			

**Extended Description:**

PRICING SHALL BE INCLUDED ON ATTACHMENT A COST SHEET

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2022-08-31

	Document Phase	Document Description	Page 3
MIS2300000001	Final	REQUEST FOR PROPOSAL- PREDICTIVE ANALYTICS SOFTWARE/SERVICES	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

# **SOLICITATION NUMBER: CRFP MIS2300000001**

## **Addendum Number: 3**

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The purpose of this addendum is to modify the solicitation identified as CRFP MIS2300000001 ("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 answer Vendor questions.

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith 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 Acknowledgement, 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.

**SOLICITATION NUMBER: CRFP MIS2300000001**  
**Addendum Number: 3**

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**Question 1: What are the storage requirements (rounded up to nearest TB) for data repository?**

**Answer 1:** We would expect the requirement to be less than 2 TB. If we go above the 2TB level, additional storage (Per TB) above the required base solution, with a per-unit cost (see 4.2.2.2 (Includes 4.2.2.2.1 thru 4.2.2.2.10.3)) Additionally, the State may elect to move data to off-line storage on a State server and reduce the storage requirements.

"The Cost Sheet has been revised to allow vendors to propose incremental increases for storage and compute resources. The per unit, incremental increases may be requested by the state and added to the monthly costs for Data Repository Hosting if it is determined that additional resources are required to optimize performance of the solution. Conversely, if demands on the environment decrease, the State reserves the right to ask for reductions in compute resources in these same increments but never decreasing below the base configuration of the proposed solution."

**Question 2: Are there any CPU processing requirements sizing done for data repository?**

**Answer 2:** This is an analytical tool, which is not used in real time. CPU resources should be able to complete analysis within a reasonable time frame. If additional computational resources are needed, we can add resources. That is also covered in 4.2.2.2.

"The Cost Sheet has been revised to allow vendors to propose incremental increases for storage and compute resources. The per unit, incremental increases may be requested by the state and added to the monthly costs for Data Repository Hosting if it is determined that additional resources are required to optimize performance of the solution. Conversely, if demands on the environment decrease, the State reserves the right to ask for reductions in compute resources in these same increments but never decreasing below the base configuration of the proposed solution."

**Question 3: If data needs to be backed up and kept for longer than 60 days, what are the storage requirements (rounded up to nearest TB) for data backups?**

**Answer 3:** The initial storage requirement is 2 TB.

"The Cost Sheet has been revised to allow vendors to propose incremental increases for storage and compute resources. The per unit, incremental increases may be requested by the state and added to the monthly costs for Data Repository Hosting if it is determined that additional resources are required to optimize performance of the solution. Conversely, if demands on the environment decrease, the State reserves the right to ask for reductions in compute resources in these same increments but never decreasing below the base configuration of the proposed solution."



**SOLICITATION NUMBER: CRFP MIS2300000001**

**Addendum Number: 3**

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**Question 4: Are any other users needing read-only type access accounts beyond the 10 users mentioned: 5 predictive analytics and modeling users and 5 view only data models and visualization users?**

**Answer 4: No**

**Question 5: Most of this RFP seems to indicate the vendor can pick the cloud hosting platform but following statement is contradicting that approach. Please clarify vendor choice of cloud platform – “State reserves the right to utilize their own data visualization product such as Microsoft Power BI or Tableaux); data modeling services; a hosted, secure Cloud repository; and training and technical support”.**

**Answer 5:** The vendor is required to provide a hosted, secure Cloud repository where data modeling, data analysis, and data visualization can be conducted. The vendor must allow for data export from the repository in the formats already mentioned should the State elect to utilize our own data visualization tools. Training and technical support must be available for the vendor's data visualization solution. The state will be responsible for user training and support when/if utilizing our own data visualization tools.

**Question 6: How should we account for project management or consulting? This includes tracking of hours, billing, scoping, software outages, etc. outside of data science work.**

**Answer 6:** Vendor quotes should include the necessary overhead in the data repository hosting fee. (4.2.2.2)

**Question 7: How should we account for data engineering support for projects (separate from data scientist support)?**

**Answer 7:** No data engineering support is requested in the RFP.

**Question 8: Does technical support include hands-on data science support only or does it also include infrastructure/installation support and/or project management?**

**Answer 8:** The vendor is responsible for infrastructure/installation support as this is a hosted solution.

**SOLICITATION NUMBER: CRFP MIS2300000001**

**Addendum Number: 3**

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**Question 9: Is there an expectation that data will need to be transformed by vendor in some way before agency staff performs preliminary modeling (including but not limited to table joining, matching, etc.)?**

**Answer 9: No.**

**Question 10: 4.2.1.4 states hours may not exceed 5 hours of data science work per week per project - do these hours include project management or data engineering support?**

**Answer 10: No.**

**Question 11: Is there a target timeframe after submission that the Award will be completed and work started?**

**Answer 11: Refer to General Terms and Conditions, Section 4 - Authority to Proceed. The award and encumbrance date on the front page of the contract award is the start date.**

**Question 12: 4.2.2.2.1.1: does "additional resources" mean team members, or computer ('workers'/compute)?**

**Answer 12: This specification deals with the processing environment.**

**Question 13: If multiple vendors team together to respond, can team collectively meet past performance requirements?**

**Answer 13: The use of sub-contractor is not prohibited in the RFP. The primary vendor must meet all mandatory requirements.**

**Question 14: Are any of the 18 projects currently scoped? If yes, can you describe any of the projects scoped?**

**Answer 14: No.**

**Question 15: How much data preparation work is estimated to be required for the initial 2-3 projects?**

**Answer 15: Any data preparation work requested of the vendor will be included in the maximum 5 hours per week.**

**SOLICITATION NUMBER: CRFP MIS2300000001**  
**Addendum Number: 3**

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**Question 16: 4.2.2.2.6: Can the scanning of Personally Identifiable Information (PII) or other sensitive data types be done manually by an employee on the project?**

**Answer 16:** Yes, any combination of automated or manual processes is acceptable to the State. The vendor remains responsible for verifying no sensitive data is included.

**Question 17: What is the expectation of an automated solution or product to scan and filter out PII before it is uploaded to the AI Catalog or are you open to a manual process?**

**Answer 17:** Any combination of automated or manual processes is acceptable to the State. The vendor remains responsible for verifying no sensitive data is included.

**Question 18: Is there an exception to providing contact info in this public response for clients who want to maintain their privacy?**

**Answer 18:** No. See Instructions to Vendors Submitting Bids - Item 21.

**Question 19: What is the budget identified for the Initial Contract Term (i.e., year one)? What is the budget identified for each of the three years of the optional Renewal Term?**

**Answer 19:** West Virginia does not disclose budget information prior to contract award.

**Question 20: What federal grant(s) and/or other federal fund sources will be used to fund this procurement?**

**Answer 20:** The State intends to use a combination of State and Federal funds.

**Question 21: Since no PII or other sensitive data will be included per Section 4.2.2.2.6 and given that MARS-E privacy controls are highly stringent and intended to protect PII and/or Restricted data, would the Agency accept an alternative security standard to MARS-E?**

**Answer 21:** No.

**Question 22: How does the Agency define Personally Identifiable Information (PII)? How does the Agency define "other sensitive data types?" Do you not anticipate doing any data integration and entity resolution for your analytics if PII is removed?**

**Answer 22:** The State uses the definition found in 2 CR § 200.79.

**SOLICITATION NUMBER: CRFP MIS2300000001**  
**Addendum Number: 3**

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**Question 23: What is the anticipated size of the environment required to host Agency data? What is the anticipated volume of Agency data that will be processed through the hosted environment? What is the size of what will be in storage and what will pass through the system?**

**Answer 23:** 2 TB, as stated in Answer to question 1.

**Question 24: Is it acceptable for the Vendor to submit our proposal only through wvOASIS? Does WV ODCP require a physical submission of the proposal?**

**Answer 24:** Additional Information on page 2 of the RFP states that online responses are prohibited for an RFP solicitation.

**Question 25: Due to the limited time frame between the response to vendor clarification questions due 8/31/22 and the solicitation due date of 9/13/22, and the holiday, would the state please grant a 2-week extension for the solicitation response so as to permit bidders to provide even more responsive bids to the clarified solicitation responses?**

**Answer 25:** The bid opening has been extended to 09/28/2022

**Question 26: The General Terms and Conditions found in Section 3 specify that after the first year, any renewal of the contract is subject to mutual agreement. The Cost Sheet found in Attachment A appears to ask for only one year of pricing. Can the Department clarify whether bidders only have to provide one year of pricing for the scope of work required or will they be required and evaluated upon pricing for both the initial one year term and the three (3) optional renewal terms?**

**Answer 26:** The cost sheet has been revised to include the option years.

**Question 27: Based on the instructions provided in Section 2 it indicates vendors can submit on the WVOasis portal, however, when you log into the portal, it indicates "Online responses are prohibited for this response". Please clarify if vendors are able to submit through WVOasis. If not, please indicate how many hard copies of the technical and cost are required to be sent to the address provided under section 2.**

**Answer 27:** Section 2 of the RFP also states that online responses are prohibited for RFP solicitations. Also, refer to Section 5 Vendor Proposal - Item 5.3.1 which states this is a two part submission process.

# **SOLICITATION NUMBER: CRFP MIS2300000001**

## **Addendum Number: 3**

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**Question 28:** The second sentence of this Section states that following the opening of the bid, Vendor's entire response to the Solicitation "will be disclosed to the public ... as required by the Freedom of Information Act, West Virginia Code §§ 29B-1-1 et seq." §29B-1-4 of the West Virginia Freedom of Information Act exempts from disclosure any information in a bid or proposal that meets the definition of a "Trade Secret".

The next to last sentence of Section 21 says the exact opposite, i.e., that DHHR will disclose even information that meets the definition of a "Trade Secret". This next to last sentence states: "The Purchasing Division will disclose any document labeled 'confidential', 'proprietary', 'trade secret', 'private', or labeled with any other claim against public disclosure of the documents to include any 'trade secrets' as defined by West Virginia Code § 47-22-1 et seq."

If DHHR permits bidders to include 'trade secret' information in their proposal with the assurance that such information will not be publicly disclosed, DHHR will benefit from more detailed bidder information germane to its overall procurement goal: awarding a contract based on best value. If it does not permit trade secrets to be redacted, bidders will refrain from including information that would be highly germane to the Department's evaluation.

In light of the above inconsistency and in order to permit trade secret information that is part of a proposal to be redacted in a manner permitted under West Virginia law, would DHHR clarify the Solicitation such that bidders can include information that meets the definition of a Trade Secret under West Virginia law and have that information not disclosed to the public as long it is appropriately marked?

**Answer 28:** See Item 21 of Instructions to Vendors Submitting Bids and Item 31 in the General Terms and Conditions. Bids will be released to the public per the Freedom of Information Act, however, submission of any bid, proposal, or other document to the West Virginia Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal or document. The West Virginia Purchasing Division will disclose any document labeled "confidential", "proprietary", "trade secret", "private", or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined in *WVa Code* § 47-22-1, et. seq.

All submissions are subject to public disclosure without notice.

**Question 29:** Can the state provide an example of a typical project that illustrates relative size and complexity?

**Answer 29:** No

**Question 30:** The State asks for a "a hosted, secure Cloud repository", does this imply that the state wishes the data scientist workbench capabilities would be entirely housed within a secure enclave or does the state wish that State data scientists be able to connect from their secure State desktops to perform work? If the state does wish to have a secure enclave hosted entirely within the vendor environment, please reconcile

## **SOLICITATION NUMBER: CRFP MIS2300000001**

### **Addendum Number: 3**

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**this requirement with the State right to use its own software “State reserves the right to utilize their own data visualization product such as Microsoft Power BI or Tableau);”.**

**Answer 30:** The vendor is required to provide a hosted, secure Cloud repository where data modeling, data analysis, and data visualization can be conducted. The vendor must allow for data export from the repository in the formats already mentioned should the State elect to utilize our own data visualization tools. Training and technical support must be available for the vendor's data visualization solution. The state will be responsible for user training and support when/if utilizing our own data visualization tools.

**Question 31:** Does the state desire to have a relational database management system to store structured data (e.g., Redshift, Synapse, Azure SQL DB, Snowflake, Big Query) or are state data scientists more comfortable working with files in blob storage?

**Answer 31:** State data scientists are not familiar with blob storage, if not using traditional structured data formats vendor will be responsible for providing additional training.

**Question 32:** Please confirm that vendors are required to connect to the state's identity system. If so, what protocols are supported by the identity platform?

**Answer 32:** Vendor is not required to connect to the state's identity system.

**Question 33:** The RFP clearly states that all data will be de-identified. There are only two references in the RFP to MARS-E 2.2 compliance; one with respect to the cloud hosting environment and the other to storage devices being sanitized in accordance with MARS-E 2.2. Given the nature of the data and in order for WV to benefit from a lower cost solution, please confirm that the only scope of MARS-E Compliance applicable to the Vendor are those two references. If so, please confirm vendors can port logs back to the state to meet logging requirements for data access under MARS-E.

**Answer 33:** Yes

**Question 34:** Given requirement 4.2.2.2.6 that any incoming data that includes PII or sensitive data should be rejected, please confirm all data hosted in the solution is expected to be deidentified.

**Answer 34:** Yes

**Question 35:** Regarding cloud storage, please provide an estimate of the total amount of storage required for potential peak usage of data sets for concurrent projects.



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**Addendum Number: 3**

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**Answer 35:** Please refer to the answer to Question 1.

**Question 36:** Our state Medicaid and Health and Human Services customers have only recently implemented cloud-based solutions in data science, machine learning, and development of resulting predictive analytics, especially when compared to commercial customers, making the two year prior experience requirement more challenging. In light of this market reality, while at the same time wanting to increase competition with equally valuable commercial experience, would the state consider amending the RFP so as to permit bidders to submit bids if they have equivalent experience with non-(federal, State, or local) customers to meet the mandatory experience and reference requirements?

**Answer 36:** No.

**Question 37:** The total amount for Data Modeling Technical Support is calculated by multiplying hourly rate times Project length (weeks) time number of projects. Should the total amount also include number of hours such that the total amount is calculated by multiplying hourly rate times number of hours times Project length (weeks) times the number of projects?

**Answer 37:** The cost sheet assumes the maximum 5 hours per week.

**Questions 38:** Please confirm that vendors can add rows for hourly rates to the pricing sheets for the staffing positions under Data Modeling Technical Support.

**Answer 38:** Vendor should provide a single not to exceed hourly rate for data scientist support.

**Question 39:** Do you have a preference on Cloud provider?

**Answer 39:** No, any secure Cloud provider.

**Question 40:** What tools are you currently using to perform Data Science and Predictive Analytics activities?

**Answer 40:** None.

**Question 41:** What tools are you currently using to perform data cleansing and ETL?

**SOLICITATION NUMBER: CRFP MIS2300000001**  
**Addendum Number: 3**

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**Answer 41:** For ETL SSIS is used, for data cleansing we use manual processes including Excel.

**Question 42:** Do you have a preference for the user interface of data cleansing and Predictive Analytics tools (i.e. GUI, code-based, both)?

**Answer 42:** GUI

**Question 43:** Of the 10 users, what is the breakdown of roles (e.g. data engineer, data scientist, business analyst, etc.)?

**Answer 43:** The final breakdown is not yet known, however the State anticipates Epidemiologists and business analysts.

**Question 44:** What are some of the use cases that comprise the 18 anticipated projects?

**Answer 44:** None

**Question 45:** What is the volume of data that will need to be initially loaded into the Cloud repository?

**Answer 45:** 2 TB

**Question 46:** What is the anticipated annual data volume that will incrementally be loaded into the Cloud repository?

**Answer 46:** 2 TB

**Question 47:** What is the proportion of data that are unstructured vs. structured?

**Answer 47:** Most or all data will come from relational database systems. Data imported into the system will be via agreed upon file format.

**Question 48:** Is the intention to use data cleansing and predictive analytics software on-premise, in the cloud (i.e. software-as-a-service), or a hybrid approach (i.e. data cleansing on-premise and predictive analytics as SaaS)?

**Answer 48:** In the cloud.

**SOLICITATION NUMBER: CRFP MIS2300000001**  
**Addendum Number: 3**

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**Question 49: How many consumers/viewers do you anticipate for data visualization?**

**Answer 49:** Not defined.

**Question 50: Does the Agency prefer perpetual or subscription-based software licensing?**

**Answer 50:** No preference.

**Question 51: The RFP states that the vendor provided Data Scientist will support all prospective 18 projects. What will responsibilities include (i.e. assisting with tuning and expanding on preliminary model, preparing for deployment, operationalizing results, etc.)?**

**Answer 51:** They will help create and validate the primary model, help prepare for deployment and operationalization and provide other duties as required.

**Question 52: Is it expected that the vendor provided Data Scientist will provide a maximum of 5 hours per week total, 5 hours per week per project, or can more hours be allocated based on individual project requirements and estimates?**

**Answer 52:** 5 hours per week per project with no option for allocating more hours.

**Question 53: What is the Agency team's level of expertise with data cleansing and Predictive Analytics?**

**Answer 53:** Minimal

**Question 54: Is the intention to enable Agency staff to become self-sufficient in the end-to-end data and modeling lifecycle?**

**Answer 54:** That is not a requirement of the RFP.

**Question 55: Do you have a proposed budget that you can share (e.g. not-to-exceed amount)?**

**Answer 55:** No.

REVISED Attachment A: Cost Sheet												
Specification	Category											
4.2.2.1 (includes 4.2.2.1.1 thru 4.2.2.1.4)	TRAINING		Requirement is a firm, fixed price that covers all training material and delivery of training. Vendor to invoice for the training after delivery of training sessions and recordings.	Firm, fixed		Months	Hours/Week	Per Unit	Project Length in Weeks (Assumption for Evaluation Purpose Only)	Total Number of Projects (Assumption for Evaluation Purpose Only)	Totals	
4.2.2.2 (includes 4.2.2.2.1 thru 4.2.2.2.10.3)	DATA REPOSITORY HOSTING FEE		Requirement is a monthly cost to cover hosting, storage, and compute resources meeting the requirements in 4.2.2.2.1 through 4.2.2.2.10.3	Monthly								\$0.00
						12						\$0.00
	Additional Storage (Per TB) above the required base solution. May be added throughout the life of the contract at the request of the State. The State may elect to move data to off-line storage on a State server and reduce the storage requirements in the same increments throughout the life of the contract.											
	CPU, provide per unit pricing for incremental increases in the processor speed (GHz) available for the solution. CPU may be upgraded throughout the life of the contract at the request of the State.											
	CPU cores, provide per unit pricing for incremental increases in the number of cores available for the solution. Cores may be added throughout the life of the contract at the request of the State.											
	RAM, provide the per unit pricing for incremental increase in RAM available for the solution. RAM may be upgraded throughout the life of the contract at the request of the State.											
4.2.2.3 (includes 4.2.2.3.1 thru 4.2.2.3.6)	DATA MODELING TECHNICAL SUPPORT		Requirement is an hourly rate for the services of data scientists providing support as outlined in the RFP.		Hourly Rate							
	Data Scientists							5	18	18		\$0.00
4.2.2.4	REQUIRED SOFTWARE			(annualized)	# of Licenses							
	Predictive Analytics SW (ML access)											\$0.00
	Predictive Analytics (view only if applicable)											\$0.00
			If third party SW is required to provide all required functionality, enter the name/version of the required SW below. Pricing should be based on a published price or a quote from authorized distributor. Agency reserves the right to procure SW from other sources but verifiable costs are required to calculate total project cost.	Per License (annualized basis)	# of Licenses							
	Third Party SW, (if applicable)											\$0.00
	Third Party SW											\$0.00
	Third Party SW											\$0.00
	Third Party SW											\$0.00
	Third Party SW											\$0.00
	Third Party SW											\$0.00
												\$0.00 Grand Total SW and Services



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

**Doc Description:** REQUEST FOR PROPOSAL-PREDICTIVE ANALYTICS SOFTWARE/  
SERVICES

**Reason for Modification:**

ADDENDUM 4  
TO PROVIDE REVISED COST  
SHEET AND SAAS ADDENDUM

**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:** VS0000014579

**Vendor Name :** HHS Technology Group, LLC

**Address :** Headquarters

**Street :** 6600 North Andrews Avenue, Suite 570

**City :** Fort Lauderdale

**State :** FL

**Country :** U.S.

**Zip :** 33309

**Principal Contact :** Susie Bird, Director of Business Development

**Vendor Contact Phone:** (916) 612-0804

**Extension:** N/A

**FOR INFORMATION CONTACT THE BUYER**

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

Vendor  
Signature X

**FEIN#** 82-1847143

**DATE** 9-23-22

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

**ADDITIONAL INFORMATION**

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING PROPOSALS TO ESTABLISH A CONTRACT FOR PREDICATIVE ANALYTICS SOFTWARE AND SERVICES PER THE ATTACHED DOCUMENTS.

\*\*\*QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS\*\*\*

\*\*\*ONLINE RESPONSES ARE PROHIBITED FOR THIS SOLICITATION\*\*\*

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE ONE DAVIS SQUARE, RM 211 CHARLESTON WV 25301 US	HEALTH AND HUMAN RESOURCES MANAGEMENT INFORMATION SERVICE 321 CAPITOL ST, STE 200 CHARLESTON WV 25301 US

Line	Comm Ln Desc	Qty	Unit of Measure	Unit Price	Total Price
1	Predictive Analytics Software and Services				

Comm Code	Manufacturer	Specification	Model #
0232305			

**Extended Description:**

PRICING SHALL BE INCLUDED ON ATTACHMENT A COST SHEET

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2022-08-31



	Document Phase	Document Description	Page 3
MIS2300000001	Final	REQUEST FOR PROPOSAL- PREDICTIVE ANALYTICS SOFTWARE/SERVICES	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**SOLICITATION NUMBER: CRFP MIS2300000001**

**Addendum Number: 4**

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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:**

1. To provide corrected Attachment A Cost Sheet
2. To provide Software as a Service Addendum

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.

## ATTACHMENT A

## Addendum 4 REVISED\_Attachment A Cost Sheet

INITIAL 12 Month Term											
Specification	Category	Requirement is a firm, fixed price that covers all training material and delivery of training. Vendor to invoice for the training after delivery of training sessions and recordings.	Per Firm, fixed	Months	Hours/ Week	Per Unit	Project Length in Weeks (Assumption for Evaluation Purpose Only)	Total Number of Projects (Assumption for Evaluation Purpose Only)	Totals		
4.2.2.1 (Includes 4.2.2.1.1 thru 4.2.2.1.4)	TRAINING										
4.2.2.2 (Includes 4.2.2.2.1 thru 4.2.2.2.10.3)	DATA REPOSITORY HOSTING FEE	Requirement is a monthly cost to cover hosting, storage, and compute resources meeting the requirements in 4.2.2.2.1 through 4.2.2.2.10.3	Monthly	12							
	Additional Storage (Per TB) above the required base solution. May be added throughout the life of the contract at the request of the State. The State may elect to move data to off-line storage on a State server and reduce the storage requirements in the same increments throughout the life of the contract.										
	CPU, provide per unit pricing for incremental increases in the processor speed (GHz) available for the solution. CPU may be upgraded throughout the life of the contract at the request of the State										
	CPU cores, provide per unit pricing for incremental increases in the number of cores available for the solution. Cores may be added throughout the life of the contract at the request of the State										
	RAM, provide the per unit pricing for incremental increases in RAM available for the solution. RAM may be upgraded throughout the life of the contract at the request of the State.										
4.2.2.3 (Includes 4.2.2.3.1 thru 4.2.2.3.8)	DATA MODELING TECHNICAL SUPPORT	Requirement is an hourly rate for the services of data scientists providing support as outlined in the RFP.	Hourly Rate	5			16	16			
	Data Scientists										
4.2.2.4	REQUIRED SOFTWARE		Per License (annualized)	Number of Licenses							
	Predictive Analytics SW (full access)										
	Predictive Analytics (New only if applicable)										
	Third Party SW (if applicable)	8 Third party SW is required to provide all required functionality, unless the nonversion of the required SW Online Pricing should be based on a published price or a quote from authorized distributor. Agency reserves the right to procure SW from other sources but verifiable costs are required to calculate total project cost.	Per License (annualized)	Number of Licenses							
	Third Party SW										
	Third Party SW										
	Third Party SW										
	Third Party SW										
	Third Party SW										
OPTION YEAR 1											
Specification	Category	Requirement is a firm, fixed price that covers all training material and delivery of training. Vendor to invoice for the training after delivery of training sessions and recordings.	Per Firm, fixed	Months	Hours/ Week	Per Unit	Project Length in Weeks (Assumption for Evaluation Purpose Only)	Total Number of Projects (Assumption for Evaluation Purpose Only)	Totals		
4.2.2.1 (Includes 4.2.2.1.1 thru 4.2.2.1.4)	TRAINING										
4.2.2.2 (Includes 4.2.2.2.1 thru 4.2.2.2.10.3)	DATA REPOSITORY HOSTING FEE	Requirement is a monthly cost to cover hosting, storage, and compute resources meeting the requirements in 4.2.2.2.1 through 4.2.2.2.10.3.	Monthly	12							
	Additional Storage (Per TB) above the required base solution. May be added throughout the life of the contract at the request of the State. The State may elect to move data to off-line storage on a State server and reduce the storage requirements in the same increments throughout the life of the contract.										
	CPU, provide per unit pricing for incremental increases in the processor speed (GHz) available for the solution. CPU may be upgraded throughout the life of the contract at the request of the State										
	CPU cores, provide per unit pricing for incremental increases in the number of cores available for the solution. Cores may be added throughout the life of the contract at the request of the State										
	RAM, provide the per unit pricing for incremental increases in RAM available for the solution. RAM may be upgraded throughout the life of the contract at the request of the State.										
4.2.2.3 (Includes 4.2.2.3.1 thru 4.2.2.3.8)	DATA MODELING TECHNICAL SUPPORT	Requirement is an hourly rate for the services of data scientists providing support as outlined in the RFP.	Hourly Rate	5			16	16			
	Data Scientists										
4.2.2.4	REQUIRED SOFTWARE		Per License (annualized)	Number of Licenses							
	Predictive Analytics SW (full access)										
	Predictive Analytics (New only if applicable)										

Initial 12 Month Term Total Software and Services Costs

## Addendum 4 REVISED\_Attachment A Cost Sheet

		<p>If third party SW is required to provide all required functionality, enter the name/version of the required SW below. Pricing should be based on a published price or a quote from authorized distributor. Agency reserves the right to procure SW from other sources but verifiable units are required to calculate total project cost.</p>		Per License (annualized fee)	Number of Licenses					
Third Party SW (if applicable)										
Third Party SW										
Third Party SW										
Third Party SW										
Third Party SW										
<div style="text-align: right; border: 1px solid black; padding: 2px;">OPTION YEAR 1 Total Software and Services Cost</div>										
OPTION YEAR 1										
Specification	Category	Requirement is a firm, fixed price that covers all training material and delivery of training. Vendor to invoice for the training after delivery of training sessions and recordings.	Per License (annualized fee)	Number of Licenses	Project Length in Weeks (Assumption for Evaluation Purposes Only)	Total Number of Projects (Assumption for Evaluation Purposes Only)	Totals			
4.2.2.1 (Includes 4.2.2.1.1 thru 4.2.2.1.4)	TRAINING		Firm, fixed		Months	Hours/Week	Per Unit			
4.2.2.2 (Includes 4.2.2.2.1 thru 4.2.2.2.10.3)	DATA REPOSITORY HOSTING FEE	Requirement is a monthly cost to cover hosting, storage, and compute resources meeting the requirements in 4.2.2.2.1 through 4.2.2.2.10.3.	Monthly		Months					
<p>Additional Storage (Per TB) above the required base solution. May be added throughout the life of the contract at the request of the State. The State may elect to move data to off-line storage on a State server and reduce the storage requirements in the same increments throughout the life of the contract.</p> <p>CPU, provide per unit pricing for incremental increases in the processor speed (GHz) available for the solution. CPU may be upgraded throughout the life of the contract at the request of the State.</p> <p>CPU cores, provide per unit pricing for incremental increases in the number of cores available for the solution. Cores may be added throughout the life of the contract at the request of the State.</p> <p>RAM, provide the per unit pricing for incremental increases in RAM available for the solution. RAM may be upgraded throughout the life of the contract at the request of the State.</p>										
4.2.2.3 (Includes 4.2.2.3.1 thru 4.2.2.3.5)	DATA MODELING TECHNICAL SUPPORT	Requirement is an hourly rate for the services of data scientists providing support as outlined in the RFP.			Hourly Rate					
Data Scientists					5			10	18	
4.2.2.4	REQUIRED SOFTWARE									
Predictive Analytics SW (all access)										
Predictive Analytics (Non only if applicable)										
<p>If third party SW is required to provide all required functionality, enter the name/version of the required SW below. Pricing should be based on a published price or a quote from authorized distributor. Agency reserves the right to procure SW from other sources but verifiable units are required to calculate total project cost.</p>										
Third Party SW (if applicable)										
Third Party SW										
Third Party SW										
Third Party SW										
Third Party SW										
<div style="text-align: right; border: 1px solid black; padding: 2px;">OPTION YEAR 2 Total Software and Services Cost</div>										
OPTION YEAR 2										
Specification	Category	Requirement is a firm, fixed price that covers all training material and delivery of training. Vendor to invoice for the training after delivery of training sessions and recordings.	Per License (annualized fee)	Number of Licenses	Project Length in Weeks (Assumption for Evaluation Purposes Only)	Total Number of Projects (Assumption for Evaluation Purposes Only)	Totals			
4.2.2.1 (Includes 4.2.2.1.1 thru 4.2.2.1.4)	TRAINING		Firm, fixed		Months	Hours/Week	Per Unit			
4.2.2.2 (Includes 4.2.2.2.1 thru 4.2.2.2.10.3)	DATA REPOSITORY HOSTING FEE	Requirement is a monthly cost to cover hosting, storage, and compute resources meeting the requirements in 4.2.2.2.1 through 4.2.2.2.10.3.	Monthly		Months					
<p>Additional Storage (Per TB) above the required base solution. May be added throughout the life of the contract at the request of the State. The State may elect to move data to off-line storage on a State server and reduce the storage requirements in the same increments throughout the life of the contract.</p> <p>CPU, provide per unit pricing for incremental increases in the processor speed (GHz) available for the solution. CPU may be upgraded throughout the life of the contract at the request of the State.</p> <p>CPU cores, provide per unit pricing for incremental increases in the number of cores available for the solution. Cores may be added throughout the life of the contract at the request of the State.</p> <p>RAM, provide the per unit pricing for incremental increases in RAM available for the solution. RAM may be upgraded throughout the life of the contract at the request of the State.</p>										

4.2.2.3 (includes 4.2.2.3.1 thru 4.2.2.3.4)		DATA MODELING TECHNICAL SUPPORT		Requirement is an hourly rate for the services of data scientists providing support as outlined in the RFP.		Hourly Rate	
	Data Scientists					5	10
4.2.2.4		REQUIRED SOFTWARE		Per License (annualized)		Number of Licenses	
	Predictive Analytics SW (full access)						
	Predictive Analytics (view only & applicable)						
	<p>If third party SW is required to provide all required functionality, enter the name/version of the required SW below. Pricing should be based on a published price or a quote from authorized distributor. Agency reserves the right to procure SW from other sources but vendor(s) must be required to calculate total project cost.</p>			Per License (annualized basis)	Number of Licenses		
	Third Party SW (if applicable)						
	Third Party SW						
	Third Party SW						
	Third Party SW						
	Third Party SW						

OPTION YEAR 3  
 Total Software  
 and Services Cost



## Software as a Service Addendum

### 1. Definitions:

Acceptable alternative data center location means a country that is identified as providing equivalent or stronger data protection than the United States, in terms of both regulation and enforcement. DLA Piper's Privacy Heatmap shall be utilized for this analysis and may be found at <https://www.dlapiperdataprotection.com/index.html?t=world-map&c=US&c2=IN>.

Authorized Persons means the service provider's employees, contractors, subcontractors or other agents who have responsibility in protecting or have access to the public jurisdiction's personal data and non-public data to enable the service provider to perform the services required.

Data Breach means the unauthorized access and acquisition of unencrypted and unredacted personal data that compromises the security or confidentiality of a public jurisdiction's personal information and that causes the service provider or public jurisdiction to reasonably believe that the data breach has caused or will cause identity theft or other fraud.

Individually Identifiable Health Information means information that is a subset of health information, including demographic information collected from an individual, and (1) is created or received by a health care provider, health plan, employer or health care clearinghouse; and (2) relates to the past, present or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present or future payment for the provision of health care to an individual; and (a) that identifies the individual; or (b) with respect to which there is a reasonable basis to believe the information can be used to identify the individual.

Non-Public Data means data, other than personal data, that is not subject to distribution to the public as public information. It is deemed to be sensitive and confidential by the public jurisdiction because it contains information that is exempt by statute, ordinance or administrative rule from access by the general public as public information.

Personal Data means data that includes information relating to a person that identifies the person by first name or first initial, and last name, and has any of the following personally identifiable information (PII): government-issued identification numbers (e.g., Social Security, driver's license, state identification card); financial account information, including account number, credit or debit card numbers; or protected health information (PHI).

Protected Health Information (PHI) means individually identifiable health information transmitted by electronic media, maintained in electronic media, or transmitted or maintained in any other form or medium. PHI excludes education records covered by the Family Educational Rights and Privacy Act (FERPA), as amended, 20 U.S.C. 1232g, records described at 20 U.S.C. 1232g(a)(4)(B)(iv) and employment records held by a covered entity in its role as employer.

Public Jurisdiction means any government or government agency that uses these terms and conditions. The term is a placeholder for the government or government agency.

Public Jurisdiction Data means all data created or in any way originating with the public jurisdiction, and all data that is the output of computer processing or other electronic manipulation of any data that was created by or in any way originated with the public jurisdiction, whether such data or output is stored on the public jurisdiction's hardware, the service provider's hardware or exists in any system owned, maintained or otherwise controlled by the public jurisdiction or by the service provider.

Public Jurisdiction Identified Contact means the person or persons designated in writing by the public jurisdiction to receive security incident or breach notification.

Restricted data means personal data and non-public data.

Security Incident means the actual unauthorized access to personal data or non-public data the service provider believes could reasonably result in the use, disclosure or theft of a public jurisdiction's unencrypted personal data or non-public data within the possession or control of the service provider. A security incident may or may not turn into a data breach.

Service Provider means the contractor and its employees, subcontractors, agents and affiliates who are providing the services agreed to under the contract.

Software-as-a-Service (SaaS) means the capability provided to the consumer to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin-client interface such as a Web browser (e.g., Web-based email) or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

**2. Data Ownership:** The public jurisdiction will own all right, title and interest in its data that is related to the services provided by this contract. The service provider shall not access public jurisdiction user accounts or public jurisdiction data, except (1) in the course of data center operations, (2) in response to service or technical issues, (3) as required by the express terms of this contract or (4) at the public jurisdiction's written request.

**3. Data Protection and Privacy:** Protection of personal privacy and data shall be an integral part of the business activities of the service provider to ensure there is no inappropriate or unauthorized use of public jurisdiction information at any time. To this end, the service provider shall safeguard the confidentiality, integrity and availability of public jurisdiction information and comply with the following conditions:

- a) The service provider shall implement and maintain appropriate administrative, technical and physical security measures to safeguard against unauthorized access, disclosure or theft of personal data and non-public data. In Appendix A,

the public jurisdiction shall indicate whether restricted information will be processed by the service provider. Such security measures shall be in accordance with recognized industry practice and not less stringent than the measures the service provider applies to its own personal data and non-public data of similar kind. The service provider shall ensure that all such measures, including the manner in which personal data and non-public data are collected, accessed, used, stored, processed, disposed of and disclosed, comply with applicable data protection and privacy laws, as well as the terms and conditions of this Addendum and shall survive termination of the underlying contract.

- b) The service provider represents and warrants that its collection, access, use, storage, disposal and disclosure of personal data and non-public data do and will comply with all applicable federal and state privacy and data protection laws, as well as all other applicable regulations, policies and directives.
- c) The service provider shall support third-party multi-factor authentication integration with the public jurisdiction third-party identity provider to safeguard personal data and non-public data.
- d) If, in the course of its engagement by the public jurisdiction, the service provider has access to or will collect, access, use, store, process, dispose of or disclose credit, debit or other payment cardholder information, the service provider shall at all times remain in compliance with the Payment Card Industry Data Security Standard ("PCI DSS") requirements, including remaining aware at all times of changes to the PCI DSS and promptly implementing all procedures and practices as may be necessary to remain in compliance with the PCI DSS, in each case, at the service provider's sole cost and expense. All data obtained by the service provider in the performance of this contract shall become and remain the property of the public jurisdiction.
- e) All personal data shall be encrypted at rest and in transit with controlled access. Unless otherwise stipulated, the service provider is responsible for encryption of the personal data.
- f) Unless otherwise stipulated, the service provider shall encrypt all non-public data at rest and in transit, in accordance with recognized industry practice. The public jurisdiction shall identify data it deems as non-public data to the service provider.
- g) At no time shall any data or process – that either belong to or are intended for the use of a public jurisdiction or its officers, agents or employees — be copied, disclosed or retained by the service provider or any party related to the service provider for subsequent use in any transaction that does not include the public jurisdiction.
- h) The service provider shall not use or disclose any information collected in connection with the service issued from this proposal for any purpose other than fulfilling the service.
- i) Data Location. For non-public data and personal data, the service provider shall provide its data center services to the public jurisdiction and its end users solely from data centers in the U.S. Storage of public jurisdiction data at rest shall be located solely in data centers in the U.S. The service provider shall not allow its personnel or contractors to store public jurisdiction data on portable devices, including personal computers, except for devices that are used and kept only at its

U.S. data centers. With agreement from the public jurisdiction, this term may be met by the service provider providing its services from an acceptable alternative data center location, which agreement shall be stated in Appendix A. The Service Provider may also request permission to utilize an acceptable alternative data center location during a procurement's question and answer period by submitting a question to that effect. The service provider shall permit its personnel and contractors to access public jurisdiction data remotely only as required to provide technical support.

**4. Security Incident or Data Breach Notification:** The service provider shall inform the public jurisdiction of any confirmed security incident or data breach.

- a) Incident Response: The service provider may need to communicate with outside parties regarding a security incident, which may include contacting law enforcement, fielding media inquiries and seeking external expertise as defined by law or contained in the contract. Discussing security incidents with the public jurisdiction shall be handled on an urgent as-needed basis, as part of service provider communication and mitigation processes defined by law or contained in the contract.
- b) Security Incident Reporting Requirements: The service provider shall report a confirmed Security Incident as soon as practicable, but no later than twenty-four (24) hours after the service provider becomes aware of it, to: (1) the department privacy officer, by email, with a read receipt, identified in Appendix A; and, (2) unless otherwise directed by the public jurisdiction in the underlying contract, the WVOT Online Computer Security and Privacy Incident Reporting System at <https://apps.wv.gov/ot/ir/Default.aspx>, and (3) the public jurisdiction point of contact for general contract oversight/administration. The following information shall be shared with the public jurisdiction: (1) incident phase (detection and analysis; containment, eradication and recovery; or post-incident activity), (2) projected business impact, and, (3) attack source information.
- c) Breach Reporting Requirements: Upon the discovery of a data breach or unauthorized access to non-public data, the service provider shall immediately report to: (1) the department privacy officer, by email, with a read receipt, identified in Appendix A; and, (2) unless otherwise directed by the public jurisdiction in the underlying contract, the WVOT Online Computer Security and Privacy Incident Reporting System at <https://apps.wv.gov/ot/ir/Default.aspx>, and the public jurisdiction point of contact for general contract oversight/administration.

**5. Breach Responsibilities:** This section only applies when a data breach occurs with respect to personal data within the possession or control of the service provider.

- a) Immediately after being awarded a contract, the service provider shall provide the public jurisdiction with the name and contact information for an employee of service provider who shall serve as the public jurisdiction's primary security contact and shall be available to assist the public jurisdiction twenty-four (24) hours per day, seven (7) days per week as a contact in resolving obligations associated with a data breach. The service provider may provide this information in Appendix A.

- b) Immediately following the service provider's notification to the public jurisdiction of a data breach, the parties shall coordinate cooperate with each other to investigate the data breach. The service provider agrees to fully cooperate with the public jurisdiction in the public jurisdiction's handling of the matter, including, without limitation, at the public jurisdiction's request, making available all relevant records, logs, files, data reporting and other materials required to comply with applicable law and regulation.
- c) Within 72 hours of the discovery, the service provider shall notify the parties listed in 4(c) above, to the extent known: (1) date of discovery; (2) list of data elements and the number of individual records; (3) description of the unauthorized persons known or reasonably believed to have improperly used or disclosed the personal data; (4) description of where the personal data is believed to have been improperly transmitted, sent, or utilized; and, (5) description of the probable causes of the improper use or disclosure.
- d) The service provider shall (1) cooperate with the public jurisdiction as reasonably requested by the public jurisdiction to investigate and resolve the data breach, (2) promptly implement necessary remedial measures, if necessary, and prevent any further data breach at the service provider's expense in accordance with applicable privacy rights, laws and regulations and (3) document responsive actions taken related to the data breach, including any post-incident review of events and actions taken to make changes in business practices in providing the services, if necessary.
- e) If a data breach is a direct result of the service provider's breach of its contract obligation to encrypt personal data or otherwise prevent its release, the service provider shall bear the costs associated with (1) the investigation and resolution of the data breach; (2) notifications to individuals, regulators or others required by state or federal law; (3) a credit monitoring service (4) a website or a toll-free number and call center for affected individuals required by state law — all not to exceed the average per record per person cost calculated for data breaches in the United States in the most recent Cost of Data Breach Study: Global Analysis published by the Ponemon Institute at the time of the data breach (or other similar publication if the named publication has not issued an updated average per record per cost in the last 5 years at the time of the data breach); and (5) complete all corrective actions as reasonably determined by service provider based on root cause. The service provider agrees that it shall not inform any third party of any data breach without first obtaining the public jurisdiction's prior written consent, other than to inform a complainant that the matter has been forwarded to the public jurisdiction's legal counsel and/or engage a third party with appropriate expertise and confidentiality protections for any reason connected to the data breach. Except with respect to where the service provider has an independent legal obligation to report a data breach, the service provider agrees that the public jurisdiction shall have the sole right to determine: (1) whether notice of the data breach is to be provided to any individuals, regulators, law enforcement agencies, consumer reporting agencies or others, as required by law or regulation, or otherwise in the public jurisdiction's discretion; and (2) the contents of such notice, whether any

type of remediation may be offered to affected persons, and the nature and extent of any such remediation. The service provider retains the right to report activity to law enforcement.

**6. Notification of Legal Requests:** The service provider shall contact the public jurisdiction upon receipt of any electronic discovery, litigation holds, discovery searches and expert testimonies related to the public jurisdiction's data under this contract, or which in any way might reasonably require access to the data of the public jurisdiction. The service provider shall not respond to subpoenas, service of process and other legal requests related to the public jurisdiction without first notifying the public jurisdiction, unless prohibited by law from providing such notice.

**7. Termination and Suspension of Service:**

- a) In the event of a termination of the contract, the service provider shall implement an orderly return of public jurisdiction data within the time period and format specified in the contract (or in the absence of a specified time and format, a mutually agreeable time and format) and after the data has been successfully returned, securely and permanently dispose of public jurisdiction data.
- b) During any period of service suspension, the service provider shall not take any action to intentionally erase any public jurisdiction data.
- c) In the event the contract does not specify a time or format for return of the public jurisdiction's data and an agreement has not been reached, in the event of termination of any services or agreement in entirety, the service provider shall not take any action to intentionally erase any public jurisdiction data for a period of:
  - 10 days after the effective date of termination, if the termination is in accordance with the contract period
  - 30 days after the effective date of termination, if the termination is for convenience
  - 60 days after the effective date of termination, if the termination is for cause

After such period, the service provider shall have no obligation to maintain or provide any public jurisdiction data and shall thereafter, unless legally prohibited, delete all public jurisdiction data in its systems or otherwise in its possession or under its control.

- d) The public jurisdiction shall be entitled to any post-termination assistance generally made available with respect to the services, unless a unique data retrieval arrangement has been established as part of the Contract.
- e) The service provider shall securely dispose of all requested data in all of its forms, such as disk, CD/ DVD, backup tape and paper, when requested by the public jurisdiction. Data shall be permanently deleted and shall not be recoverable, according to National Institute of Standards and Technology (NIST)-approved methods. Certificates of destruction shall be provided to the public jurisdiction.

**8. Background Checks:** The service provider shall conduct criminal background checks in compliance with W.Va. Code §15-2D-3 and not utilize any staff to fulfill the obligations



of the contract, including subcontractors, who have been convicted of any crime of dishonesty, including but not limited to criminal fraud, or otherwise convicted of any felony or misdemeanor offense for which incarceration for up to 1 year is an authorized penalty. The service provider shall promote and maintain an awareness of the importance of securing the public jurisdiction's information among the service provider's employees and agents.

**9. Oversight of Authorized Persons:** During the term of each authorized person's employment or engagement by service provider, service provider shall at all times cause such persons to abide strictly by service provider's obligations under this Agreement and service provider's standard policies and procedures. The service provider further agrees that it shall maintain a disciplinary process to address any unauthorized access, use or disclosure of personal data by any of service provider's officers, partners, principals, employees, agents or contractors.

**10. Access to Security Logs and Reports:** The service provider shall provide reports to the public jurisdiction in CSV format agreed to by both the service provider and the public jurisdiction. Reports shall include user access (successful and failed attempts), user access IP address, user access history and security logs for all public jurisdiction files and accounts related to this contract.

**11. Data Protection Self-Assessment:** The service provider shall perform a Cloud Security Alliance STAR Self-Assessment by completing and submitting the "Consensus Assessments Initiative Questionnaire" to the Public Jurisdiction Identified Contact. The service provider shall submit its self-assessment to the public jurisdiction prior to contract award and, upon request, annually thereafter, on the anniversary of the date of contract execution. Any deficiencies identified in the assessment will entitle the public jurisdiction to disqualify the bid or terminate the contract for cause.

**12. Data Center Audit:** The service provider shall perform an audit of its data center(s) at least annually at its expense and provide a redacted version of the audit report upon request. The service provider may remove its proprietary information from the redacted version. A Service Organization Control (SOC) 2 audit report or approved equivalent sets the minimum level of a third-party audit. Any deficiencies identified in the report or approved equivalent will entitle the public jurisdiction to disqualify the bid or terminate the contract for cause.

**13. Change Control and Advance Notice:** The service provider shall give 30 days, advance notice (to the public jurisdiction of any upgrades (e.g., major upgrades, minor upgrades, system changes) that may impact service availability and performance. A major upgrade is a replacement of hardware, software or firmware with a newer or better version in order to bring the system up to date or to improve its characteristics.

**14. Security:**

- a) At a minimum, the service provider's safeguards for the protection of data shall include: (1) securing business facilities, data centers, paper files, servers, back-up

systems and computing equipment, including, but not limited to, all mobile devices and other equipment with information storage capability; (2) implementing network, device application, database and platform security; 3) securing information transmission, storage and disposal; (4) implementing authentication and access controls within media, applications, operating systems and equipment; (5) implementing appropriate personnel security and integrity procedures and practices, including, but not limited to, conducting background checks consistent with applicable law; and (6) providing appropriate privacy and information security training to service provider's employees.

- b) The service provider shall execute well-defined recurring action steps that identify and monitor vulnerabilities and provide remediation or corrective measures. Where the service provider's technology or the public jurisdiction's required dependence on a third-party application to interface with the technology creates a critical or high risk, the service provider shall remediate the vulnerability as soon as possible. The service provider must ensure that applications used to interface with the service provider's technology remain operationally compatible with software updates.
- c) Upon the public jurisdiction's written request, the service provider shall provide a high-level network diagram with respect to connectivity to the public jurisdiction's network that illustrates the service provider's information technology network infrastructure.

**15. Non-disclosure and Separation of Duties:** The service provider shall enforce separation of job duties, require commercially reasonable non-disclosure agreements, and limit staff knowledge of public jurisdiction data to that which is absolutely necessary to perform job duties.

**16. Import and Export of Data:** The public jurisdiction shall have the ability to securely import, export or dispose of data in standard format in piecemeal or in entirety at its discretion without interference from the service provider. This includes the ability for the public jurisdiction to import or export data to/from other service providers identified in the contract (or in the absence of an identified format, a mutually agreeable format).

**17. Responsibilities:** The service provider shall be responsible for the acquisition and operation of all hardware, software and network support related to the cloud services being provided. The technical and professional activities required for establishing, managing and maintaining the environments are the responsibilities of the service provider.

**18. Subcontractor Compliance:** The service provider shall ensure that any of its subcontractors to whom it provides any of the personal data or non-public data it receives hereunder, or to whom it provides any personal data or non-public data which the service provider creates or receives on behalf of the public jurisdiction, agree to the restrictions, terms and conditions which apply to the service provider hereunder.

**19. Right to Remove Individuals:** The public jurisdiction shall have the right at any time to require that the service provider remove from interaction with public jurisdiction any

service provider representative who the public jurisdiction believes is detrimental to its working relationship with the service provider. The public jurisdiction shall provide the service provider with notice of its determination, and the reasons it requests the removal. If the public jurisdiction signifies that a potential security violation exists with respect to the request, the service provider shall immediately remove such individual. The service provider shall not assign the person to any aspect of the contract without the public jurisdiction's consent.

**20. Business Continuity and Disaster Recovery:** The service provider shall provide a business continuity and disaster recovery plan executive summary upon request. Lack of a plan will entitle the public jurisdiction to terminate this contract for cause.

**21. Compliance with Accessibility Standards:** The service provider shall comply with and adhere to Accessibility Standards of Section 508 Amendment to the Rehabilitation Act of 1973.

**22. Web Services:** The service provider shall use web services exclusively to interface with the public jurisdiction's data in near real time when possible.

**23. Encryption of Data at Rest:** The service provider shall ensure hard drive encryption consistent with validated cryptography standards as referenced in FIPS 140-2, Security Requirements for Cryptographic Modules for all personal data.

**24. Subscription Terms:** Service provider grants to a public jurisdiction a license to:

- a. Access and use the service for its business purposes;
- b. For SaaS, use underlying software as embodied or used in the service; and
- c. View, copy, upload, download (where applicable), and use service provider's documentation.

**25. Equitable Relief:** Service provider acknowledges that any breach of its covenants or obligations set forth in Addendum may cause the public jurisdiction irreparable harm for which monetary damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the public jurisdiction is entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance and any other relief that may be available from any court, in addition to any other remedy to which the public jurisdiction may be entitled at law or in equity. Such remedies shall not be deemed to be exclusive but shall be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Addendum to the contrary.

AGREED:

Name of Agency: \_\_\_\_\_

Name of Vendor: HHS Technology Group, LLC

Signature: \_\_\_\_\_

Signature: Budgy B. White

Title: \_\_\_\_\_

Title: Chief Executive Officer

Date: \_\_\_\_\_

Date: 9-23-22

## Appendix A

(To be completed by the Agency's Procurement Officer prior to the execution of the Addendum, and shall be made a part of the Addendum. Required information not identified prior to execution of the Addendum may only be added by amending Appendix A and the Addendum, via Change Order.)

Name of Service Provider/Vendor: HHS Technology Group, LLC

Name of Agency: WV DHHR - Management Information Services

Agency/public jurisdiction's required information:

1. Will restricted information be processed by the service provider?  
Yes ☐  
No ☒
2. If yes to #1, does the restricted information include personal data?  
Yes ☐  
No ☒
3. If yes to #1, does the restricted information include non-public data?  
Yes ☐  
No ☒
4. If yes to #1, may the service provider store public jurisdiction data in a data center in an acceptable alternative data center location, which is a country that is not the U.S.?  
Yes ☐  
No ☒
5. Provide name and email address for the Department privacy officer:  
Name: Chris Snyder  
Email address: Chris.S.Snyder@wv.gov

Vendor/Service Provider's required information:

6. Provide name and contact information for vendor's employee who shall serve as the public jurisdiction's primary security contact:  
Name: Faiyaz Shikari, Chief Technology Officer  
Email address: faiyaz.shikari@hhstechgroup.com  
Phone Number: (404) 279-0801

**Thank you for taking the time to review our response.  
We look forward to hearing from you soon.**

**Should you have any questions, please contact us at the  
information provided below.**



**Contact Information:**

**Susie Bird**

Director of Business Development  
(916) 612-0804  
[susie.bird@hhstechgroup.com](mailto:susie.bird@hhstechgroup.com)

**Bradley B. White**

Chief Executive Officer  
(754) 300-3366  
[bradley.white@hhstechgroup.com](mailto:bradley.white@hhstechgroup.com)



**HHS Tech Group**