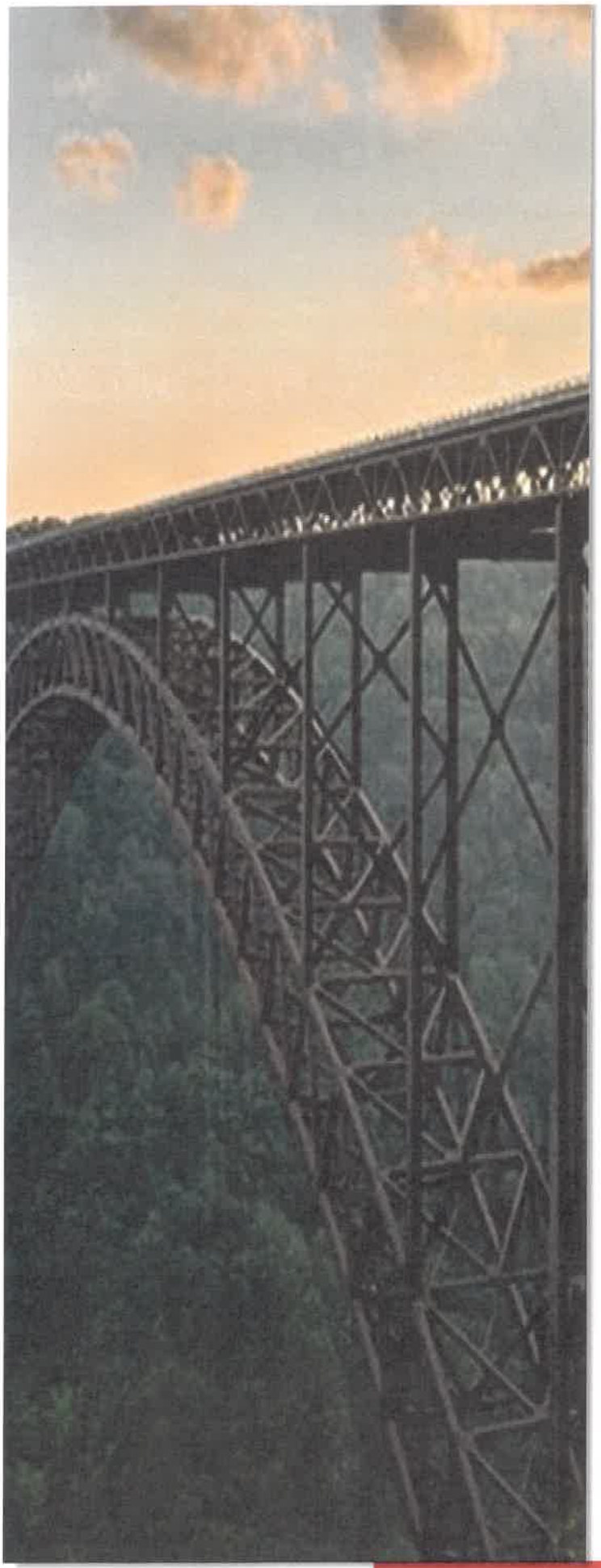

State of West Virginia

Department of Health and Human Resources

Optum Response to Request for Information – Medicaid Enterprise System

Solicitation No.: CRFI 0511 BMS2200000001

DATE
January 7, 2022

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VENDOR SIGNATURE

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January 7, 2022

Crystal G Hustead
Department of Administration
Purchasing Division
2019 Washington St E
Charleston Wv 25305

RE: Optum Response to Request for Information-Medicaid Enterprise System, Solicitation # CRFI 0511 BMS2200000001

Dear Ms. Hustead:

On behalf of Optum, I am pleased to offer the following response to the State of West Virginia Request for Information (RFI) - Medicaid Enterprise System.

Optum began our investments in MES solution modules more than five years ago. We have modular implementation experience in five states including: Wyoming, Montana, South Carolina, Massachusetts, and Virginia. Our modules are built from the ground up not a retrofit from older technologies.

We understand BMS has a unique program. Optum has valuable capabilities that are relevant to the BMS modernization effort. We appreciate the opportunity to respond to your RFI. I am the contact for this response and am happy to answer any related questions. You can reach me by telephone at (508) 308-2085 or by email at **mike.miller@optum.com**.

Best regards,

Mike Miller
Vice President, Business Development

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Attachments

Signed Form WV-PRC-CRFI-002 Version 1

Signed Form WV-PRC-CRFI-002 Version 2

Signed Acknowledgment of Addendum 1

Signed Certification

1. Corporate Overview

In addition to the question responses, Respondents may supply a corporate overview of no more than two pages describing their organization's experience, staffing, ownership, and technical maturity.

As the State of West Virginia's Recipient Automated Payment and Information Data System (RAPIDS) maintenance and operations (M&O) partner since 2016, we work with your MES stakeholders daily and understand how business processes and data flows across your enterprise. Optum is also collaborating with the Department of Health and Human Resources to implement a Software-as-a-Service (SaaS) integrated eligibility solution, giving us insight into your desire for a modern MES. Our familiarity with your systems, people, providers, and members gives unique capabilities to help you transition to an MES focused on reuse, leverage, outcomes, and continuous improvement.

Ownership and experience: Optum was incorporated in Delaware on October 13, 1993. Our parent company is UnitedHealth Group, Inc., a publicly traded Minnesota corporation with shares listed on the New York Stock Exchange (NYSE: UNH). As a global health services company, Optum connects the entire health system, including commercial health plans, managed care, and fee-for-service Medicaid programs. Figure 1 shows the customers we serve.

Figure 1: Optum Connects the Entire Health System.
We connect the entire health system, including commercial health plans and managed care Medicaid programs.

We have woven lessons learned from these engagements, and our knowledge of state and local government needs, into our solutions and services. Optum has been a leader in providing modern, customized health services and health care IT for more than 28 years, including:

- Claims administration
- Provider management
- Electronic Data Interchange (EDI) streamlining
- Member and Supporting Services
- Managed care encounter processing
- Utilization management and prior authorization
- Pharmacy Benefits Management
- Data and Analytics

The modernization strategy we recommend for BMS is to procure a modular Medicaid Management Information Systems (MMIS) like the Optum Medicaid Management Services (OMMS). OMMS supports your vision for a streamlined, secure, and interoperable infrastructure. It groups capabilities into modules that help states manage populations, enabling individuals to live more independently and cost-effectively in their communities. We provide a detailed discussion of OMMS in our response to Question 4.2.3. While there are different ways BMS can begin modernizing your MES, we recommend the following:

- Selecting a service area with discrete functions to carve out of the MMIS, like provider, is a good place to begin. Provider is well-suited for a standalone module that allows one vendor to manage enrollment, eligibility, screening, credentialing, and validation. This could be a provider solution to be used across all bureaus.
- After migrating the service area out of your legacy MMIS, you can perform testing to verify the module runs smoothly and exchanges data effectively with the MMIS. This is also a

good opportunity to build quality into the solution by confirming the module complies with service level agreements (SLAs) and performance standards.

- When the module is performing to BMS expectations, you can select the next service area to migrate, like utilization management. After validating this module is running smoothly, communicating effectively with MMIS, and meeting SLAs and performance standards, you can migrate the next service area, and so on.
- We recommend you migrate claims functionality last because the claims services are the most complex. Claims systems communicate with each of the other modules and cause the most disruption and user abrasion if the claims processing cycle is disrupted.

Using this approach, you can modernize your MES with the least risk or disruption to your users or operations. Figure 2 is our point of view for BMS in migrating from legacy MMIS to modern, services-based integrated solutions.

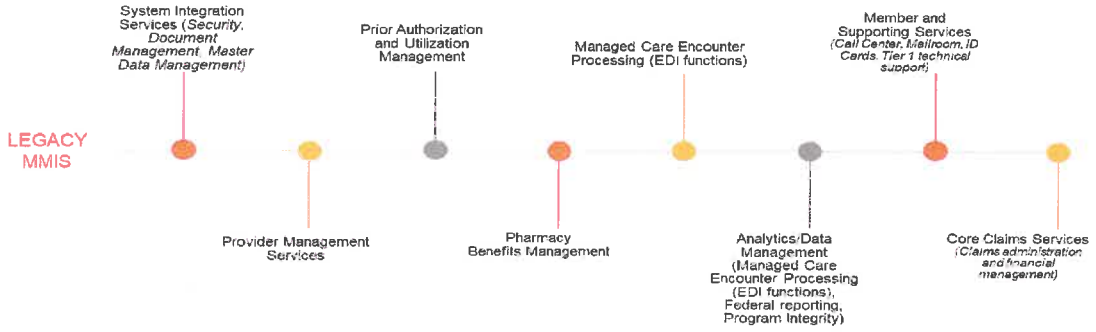

Figure 2: Our Point of View for Migrating to Modern Solutions.
Our recommended approach offers the State a pathway to modernization.

Most vendors who on bid MES modules have an integration layer within their solution, such as the OIL outlined in our response to Question 4.2.2. Because of the new technologies, the role of the SI is slowly becoming obsolete. For BMS modernization perhaps the incumbent MMIS vendor can function as the temporary SI until the modernization is complete.

Responsive, experienced staff: As a health services organization committed to employee engagement, Optum hires the best minds, leaders, and clinicians in the country. We have more than 21,000 health care delivery staff, 13,000 nursing personnel, 10,000 pharmacy staff, and 16,000 medical and clinical operations professionals. Unlike our competitors, who were founded as technology companies, Optum was founded as both a health services and technology company. As a result, we attract staff with long-term backgrounds in utilization management, PBM, direct patient care, and a broad range of clinical disciplines. We carefully select staff who are deeply committed to improving the lives of those we serve. Across our teams, we also have staff who have joined us from our competitors. This gives us a cross-vendor view of practices across the industry to provide BMS with the most skilled, responsive services and support.

Technical maturity: Optum demonstrates a high level of technical maturity across our portfolio of solutions and services. For example, we process more than 2.9 billion claims annually with more than 99.5 accuracy, an accomplishment few vendors can match. This includes Medicaid MCO claims in 26 states for 7 million members, with 313 million calls supported through our virtual contact center. Optum has performed claims processing for more than 20 years and utilization management for more than 30 years. We have matured these and other technical capabilities, and incorporated them into our modular solutions, like OMMS, to provide meaningful and significant improvements in health outcomes across the country.

2. Questions (RFI Section 4.2)

4.2.1 Please describe any elements BMS should consider incorporating into its vision, planning, and implementation for a modernized, modular MES.

Optum recommends you consider incorporating the following elements into your vision, planning, and implementation for a modernized, modular MES.

Modular Implementation

We recommend taking a modular and cloud-first approach to services across your MES. Modules can be configured for your specific requirements to generate your desired business outcomes. As those needs change over time, functionality and capabilities can be added to meet new requirements without requiring significant technical investment.

A modular implementation offers the following benefits:

- You can select the best technology, services, and commercial off-the-shelf (COTS) products available without being locked into a single vendor.
- Modules integrate with any modular Medicaid ecosystem, maximizing your investment in your modern MES.
- BMS can easily adapt to future program and regulatory changes and replace modules without disrupting other MES modules or systems.
- Solution components connect and integrate seamlessly, providing secure, highly efficient data exchange and interoperability.
- Modular solutions offer a unified experience that promotes customer and provider satisfaction, solution adoption, and self-service.

SaaS Approach

We recommend you procure SaaS solutions for your MES. A SaaS approach supports procuring solutions that use the most current technologies, which have the highest levels of security. SaaS solutions stay up to date, speed delivery time, and reduce overall project risk. We can tailor SaaS solutions to meet your specific needs while providing you with meaningful benefits and cost savings.

A SaaS approach offers BMS the following benefits:

- BMS is contractually assured the solution technology is kept updated and compliant.
- Capacity management is simplified. Services are easily scaled up or down to meet BMS-specific program needs.
- SaaS solutions support configuration over custom coding, saving time, costs, and resources for solution delivery.
- New environments can be set up very quickly, saving BMS time. Environment setup is highly automated using scripts to accelerate the process.
- SaaS promotes resiliency by separating production and disaster recovery to different regions of the country, mitigating a disaster's effects on business operations.
- A cloud SaaS approach promotes transportability and helps avoid vendor lock-in.

If BMS proceeds with a SaaS approach, we recommend the RFP requirements reflect the SaaS model. For example, RFPs for SaaS solutions occasionally require the transfer of software licenses to a state during turnover (transition-out) even though that is not applicable to SaaS solutions. Traditional deliverables like data dictionaries and system design documents are also not applicable to SaaS solutions and should not be included in RFPs. Not every component needs to be FedRAMP certified so specifically outlining these security requirements by functionality and environment will reduce overall costs.

Outcomes-Based Certification (SMC/OBC)

We recommend you pursue Streamlined Modular Certification (SMC), also called Outcomes Based Certification, for your MES modules. As the current CMS-preferred certification model, SMC certifies systems based on desired business outcomes instead of IT functionality supporting Medicaid programs.

SMC offers BMS the following benefits over the traditional Medicaid Enterprise Certification Toolkit (MECT):

- SMC represents a move away from technical certification to business process improvements. This perfectly aligns with your goal to transform and improve business processes for your MES.
- SMC reduces administrative burden for BMS because it requires fewer resources and less documentation to achieve certification, for example no checklists.
- SMC reduces the level of effort required to achieve CMS certification.
- Certifying as modules are implemented enables BMS to receive the full Federal Financial Participation (FFP) amount sooner.
- SMC validates that certified systems meet the business needs of BMS, which provides better IT alignment with your goals.

Utilize MES Enterprise Datawarehouse (EDW) for Encounter Claims Processing

Since West Virginia is largely managed care, Optum recommends augmenting the tools and processes inherent in an MES EDW module to collect the encounter data from your managed care organizations (MCOs).

This approach offers BMS the following benefits:

- The same personnel, processes, and tools can be brought to bear in processing your encounter data. This will result in efficiency and operational simplification.
- The libraries necessary for encounter data processing are available as adjunct offerings in modern extract, transform, and load (ETL) toolkits used for data warehousing.
- There is no need to duplicate adjustment logic across your enterprise. Adjustment logic is already inherent in the claims collection process and is adaptable to the encounter data resubmission process you require from your plans.
- There is no need to duplicate data just for encounter processing. Your EDW will already have access to entity data, such as member, provider, and reference.

- The data will be in one place and ready for downstream processing. Collecting and harmonizing your encounter data with your claims data is a necessary step for the calculation of cost, quality, and access measures.
- There is no need to process encounters through a claims processing engine. There is significant cost savings and analytical value in simplifying this process.

We recommend either contracting with existing MCOs to process fee-for-service claims or procure a limited scope SaaS claims processing capability.

4.2.2 In the projects you have been on, what was the optimal configuration of MES modules specific to functionality, integration of other solutions, and management of data?

The optimal configuration of MES modules varies by state. While CMS provides guidelines and rules, each state has their own unique approach to legislation, policy, and rules that make up the program, making modularity choices unique as well. The best approach is to align the modules to the State's business needs and select vendors who specialize in those business areas.

There are benefits to limiting the number of modules, including:

- Reducing the number of contracts for the State to manage
- Gaining economy of scale by consolidating the Project Management Office (PMO), management staff, and facilities costs to a lower number of vendors, rather than the State paying each vendor for these overhead items

There are also benefits to expanding the number of modules, including:

- Choosing vendors who are innovators in their fields, rather than traditionalists who perform many functions
- Increasing competition and diversity means more innovative vendors can compete against the large traditional players in the industry

While the configuration of MES modules may need to vary by state, there are some general modules that seem to fit well together or are better suited to stand alone. These would include the following.

- Claims and financial are so intertwined it makes sense to keep them together under one vendor with modules that are designed to interface with each other or are self-contained in one module. This pairing also requires one set of shared business rules and one set of CMS 64 reporting. While the federal reports will typically be pulled from the Data Warehouse and Analytics module, this pairing creates one owner of the claims and financial data.
- PBM is a good stand-alone option. Pharmacy functions, such pharmacy claims processing, pharmacy encounter claim management, DUR, ProDUR, and Drug Rebate could be handled by one vendor who specializes in this crucial business area. Drug Rebate is an excellent stand-alone module, or it can be rolled into the PBM contract.
- Provider services is a good stand-alone option, allowing one vendor to manage enrollment, eligibility, screening, credentialing, validation/revalidation, and ongoing management.
- The data warehouse module and analytics services should remain together, as the vendor who holds the data is best suited to provide analysis tools and analytic staff. The vendor who creates the data model and data marts would be the most efficient at

retrieving and understanding the data. Federal reporting including T-MSIS, if applicable at the time, and Program integrity/fraud, waste, and abuse detection should be included in the data warehouse module

- Prior authorization and utilization management make another good pairing for one vendor.
- Member services would include working with the eligibility vendor, performing call center service for the entire enterprise, mailroom for the enterprise, ID card production, and Tier 1 technical support for the enterprise, with Tier 2 calls being transferred to the module vendor.

Figure 3 shows a recommended grouping of modules for success in the MES environment.

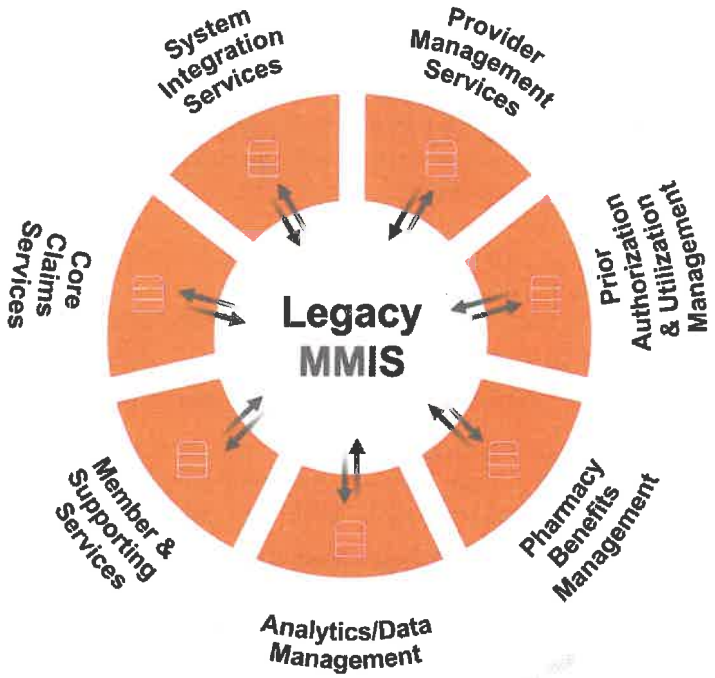

Figure 3: Example Module Grouping.
This grouping provides the right balance of modules and vendors in the MES environment.

The groupings of modules we have recommended promote simplified data management. Each module will need to share data—inbound, outbound, or both—so data governance needs to be decided early in the project, communicated through the RFP, and recommunicated throughout the project. Our approach to maintaining data integrity is to work with you and help you establish data governance, master data management, metadata, and data quality processes. These efforts are designed to positively affect data quality and integrity. These procedures help us to consistently achieve data governance process goals.

This includes addressing the following issues which you may want to define in your RFP:

- Identifying your data assets
- Establishing a data stewardship process
- Understanding the flow of data across your enterprise
- Establishing data standardization rules
- Implementing a master data management strategy
- Identifying data security requirements for data elements
- Establishing enterprise or organizational data models and data dictionaries
- Establishing data stewardship, data quality, and other related working and managerial committees to affect the management of the defined processes

Regardless of the number of modules and vendors, the MES environment and each module need a solid integration layer. The Optum Integration Layer is known as OIL, as it keeps the parts in motion smoothly. Built on industry-leading and proven technologies, OIL facilitates interoperability through loose coupling and abstracted integrations. This level of loose coupling and abstraction enables states to change components as technology innovations occur and business and regulatory requirements change. OIL is one of the key functional elements of our technology approach. It enables our modular solutions to integrate with each other, with third-party vendor systems, and with a legacy MMIS. Modules and components can be easily switched as state needs change. This type of technology is needed for the enterprise to be successful. We include our OIL service as part of our modular deployment.

4.2.3 Describe Medicaid Enterprise solutions your organization provides or is developing that BMS should consider during its roadmap planning. BMS is interested in learning about the following:

We support the BMS taking a modular approach to services across your Medicaid enterprise. This will increase efficiency and flexibility, while minimizing service disruptions in your MES. BMS will also be able to leverage enhanced 90/10 FFP by using this modernization strategy.

In 2015, Optum undertook a comprehensive study of 22 state MMIS deployments. We found that 100 percent were above the originally contracted price and behind the originally contracted schedule. Our commitment to state government programs led us to develop OMMS, a new MMIS approach. OMMS is a comprehensive MMIS solution that is both modular and configurable, enabling states to cost-effectively modernize their legacy MMIS.

OMMS groups necessary MMIS capabilities into major modules that help states manage populations, enabling individuals to live more independently and cost-effectively in the community. Figure 4 shows the OMMS service modules.

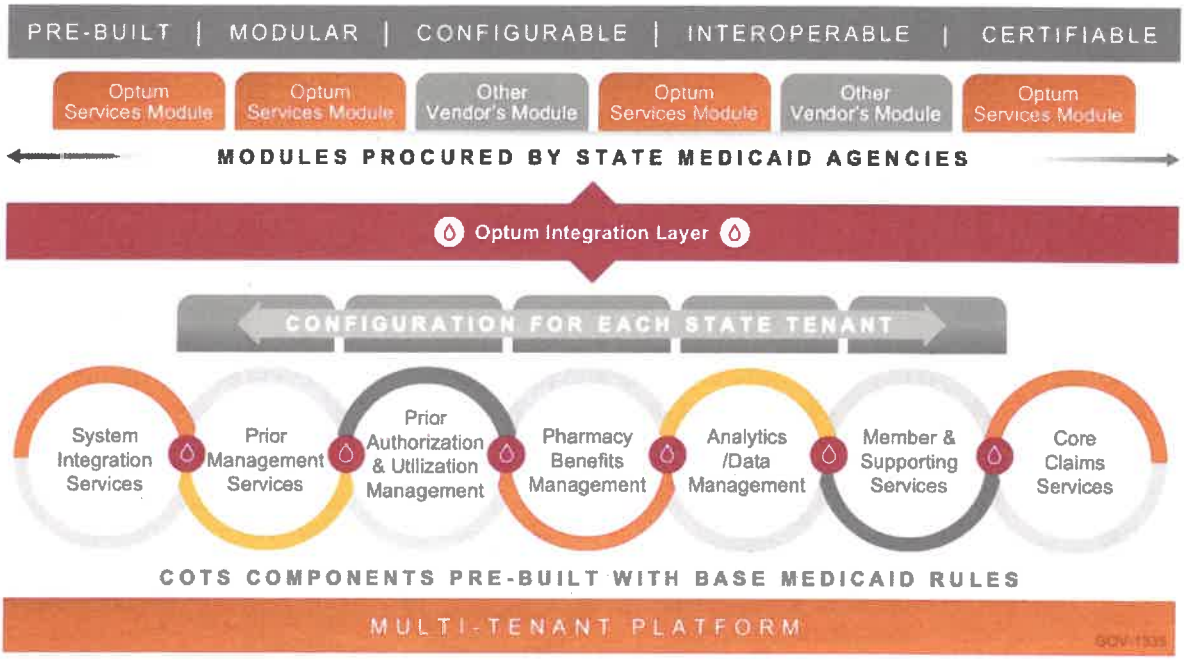

Figure 4: OMMS Service Modules.
OMMS uses flexible COTS components to provide a configurable, interoperable solution to meet the comprehensive needs of BMS.

We built OMMS to align with the CMS Medicaid Information Technology Architecture (MITA) and the CMS Standards and Conditions. OMMS uses scalable COTS software and provides capabilities using a SaaS model. Using COTS and SaaS components is consistent with MITA guidelines. MITA encourages states to move toward standardized, service-oriented COTS products and away from traditional, monolithic, and customized solutions. COTS and SaaS components deliver modularity and flexibility. Open standards and exposed application programming interfaces (APIs) enable modular, flexible component use. APIs allow the implementation of components to meet your program needs in a non-disruptive manner. We can also upgrade the products without affecting daily operations.

OMMS integrates clinical guidelines and nationally recognized care criteria, creating efficient workflows. Optum is URAC and NCQA certified and meets high standards for clinical review workflows. This means a better experience for providers. Real-time operational reporting within the platform enables us to be more responsive to varying workloads. Being configurable is more cost-effective. Modules are easily configured to each state's specific Medicaid requirements. This makes it more cost effective, because there is less need for IT staff to develop a custom platform.

We have developed best practices based on our health care expertise and incorporated them into our solution. We designed the platform as an end-to-end solution, including reporting capabilities. The modules are interoperable with other Medicaid modules. Each OMMS module can function as a stand-alone solution or integrate seamlessly with any other OMMS modules. They can also interoperate with states' existing MMIS platforms and State-specific modules provided by other vendors. The Optum provider portal is a single point of entry for OMMS. OMMS modules use the same Optum portal that providers access for other Medicaid activities like claims submission and provider enrollment. This supports a seamless provider experience.

A balance of technology and human expertise, Optum has decades of experience managing population health. We know how to engage providers and members to achieve better health outcomes and control costs. Our people—clinically trained professionals—provide the human expertise and experience. Our technological capabilities help members receive the appropriate care as quickly as possible.

1. ***The Medicaid Enterprise business processes or discrete functionalities targeted by the Medicaid Enterprise solution.***

Our suite of modules, known as OMMS, targets each business process and function needed in today's Medicaid environment. From ingesting and paying claims to managing the provider network, from program integrity to interoperability and patient access, and from prior authorization to analytics for program and performance, we provide the full gamut of technology, people, and processes to deliver success in your Medicaid enterprise. The following table shows a few of the discrete functionalities of our OMMS solution.

Core Claims Services includes intake, processing, advanced editing, coordination of benefits, appeals, and member and provider support.

Managed Care Encounter Processing bypasses typical claims adjudication to process encounters more efficiently.

Provider Management Services features a self-service portal to facilitate enrollment, maintenance, and renewals for providers participating in the State's Medicaid program.

Prior Authorization and Utilization Management automates the process for clinical determination of utilization requests to facilitate appropriate courses of treatment.

As a company, we have a singular corporate goal: To help make the health system work better for everyone. We offer the right combination of experienced people, successful processes, and mix of technologies to successfully design, develop, and implement the solutions you need in your health care programs.

2. ***How the Medicaid Enterprise solution is packaged (i.e., commercial-off-the- shelf (COTS) or proprietary; modular or tightly integrated; cloud or local).***

OMMS is a highly flexible, evergreen platform designed to conform to the MITA Standards and Conditions. Applications within our modular-based solution can run independently, in combination with, or integrated with external applications. A significant advantage of our system is that the design and development is complete and is a highly configurable evergreen solution.

Sitting at the center of our modular approach is the Optum Integration Layer (OIL) which establishes and maintains interfaces to integrate internal and external applications. OIL facilitates interoperability in the solution and provides loose coupling and abstracted integrations. This level of loose coupling and abstraction allows Optum to quickly change components as technology innovations occur and business and regulatory requirements change. The integration layer sits between every internal and external solution component, supporting MITA and interoperability goals for a modular platform that is centered on loosely coupled services. Figure 5 shows a high-level diagram of OIL.

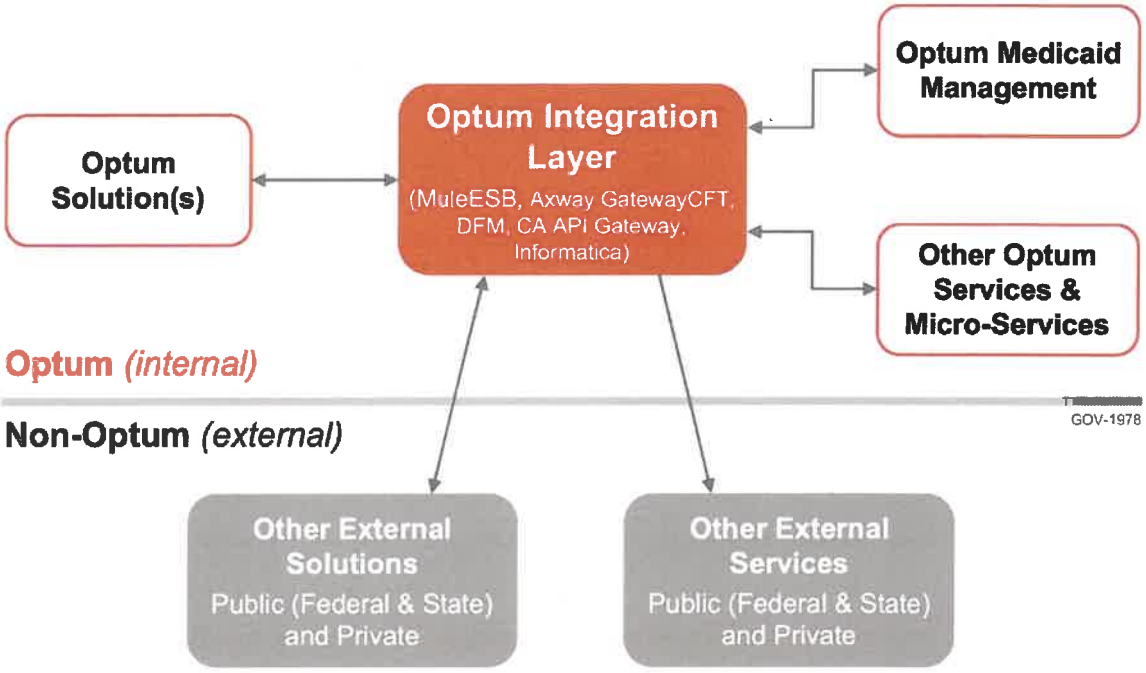

Figure 5: High-Level OIL Diagram.
The integration layer is the key enabler of the integration between the OMMS solution and the client environment. The integration layer standardizes and harmonizes integration points and simplifies adding or removing solution components.

Our solution is made up primarily of COTS/SaaS-based applications. This creates numerous advantages for the State by lowering the cost of implementation and maintenance, while helping standardize processes. Clients who conform their processes to a COTS/SaaS-based approach achieve greater efficiency in their operations and reduce maintenance costs. Our COTS/SaaS-based approach emphasizes configuration over customization, while allowing customization when necessary to meet legal or regulatory standards.

Optum uses a hybrid cloud approach that runs in multiple enclaves aligned with the Federal Information Security Modernization Act (FISMA). This makes sure that our cloud services meet your security and privacy standards. Under our modular structure, the services become flexible to accommodate growth and to enable or disenable system services/features. Additionally, our modular solution has built-in reporting and dashboards.

We designed our system on Medicaid modules. These modules form the base configuration; then we work with you to define and configure the requirements specific to your business needs. We will identify the State and module vendor systems where we are required to exchange data and use our Enterprise Service Bus (ESB) within the OIL, to integrate embedded COTS/SaaS technologies. OIL is already implemented with our OMMS solution to establish and maintain interfaces in collaboration with the systems integrator and other vendors. Figure 6 lists the benefits of our OMMS solution.

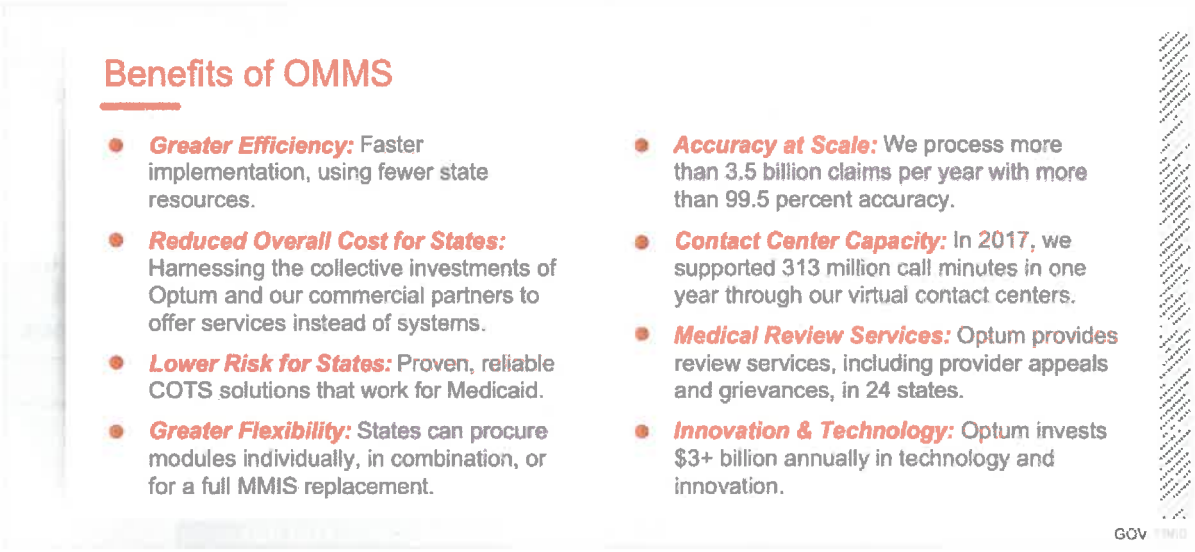

Figure 6: Benefits of OMMS.
The OMMS solution offers states the ability to better manage their programs using a low-risk, service-based solution.

3. How the Medicaid Enterprise solution is priced (please include methodology only, e.g., Per Member per Month, fixed price per year, data usage—please do not provide actual purchase prices).

Optum offers flexible pricing mechanisms, including fixed price, deliverables-based pricing during a design, development, and implementation (DDI) period, fixed or time and material M&O pricing, a combination of hourly rates, and fixed pricing for change request-based work. We offer per member per month (PMPM) and volume transactional pricing structures for several of our solutions as well. Each engagement is unique, and we will work with you to achieve the pricing mechanism that offers the best value to you.

4. In how many states is your Medicaid Enterprise solution currently deployed, or expected to be deployed, and how long has it been in use.

Many of our MES modules, components, and services are currently in production and have been for a few years. We are currently implementing in South Carolina, and we are in full production in Montana since December 10, 2021, Massachusetts since 2017, Wyoming since 2016, Virginia since 2017. Please remember these are not old retrofitted MMIS capabilities we call modules like some of the traditional MMIS vendors. These are all newly architected modules from the ground up.

South Carolina: The OMMS services layer consists of core OMMS business services defined within our enterprise solution. Under our SaaS--based approach, South Carolina has a solution configured with the modules that deliver their business outcomes. We are providing the following core services to South Carolina with our OMMS solution: eligibility and enrollment services; member services; provider services; care and utilization management services; fraud, waste, and abuse services; EDI review with member and provider verification; and claims and operations services. The state is using a step-by-step, modular process to transition from the MMIS to the Replacement Medicaid Management Information System (RMMIS).

The State is conducting planning and business requirements sessions for the design and configuration of the administrative services organization (ASO) module of the RMMIS. The

ASO is responsible for provider management and enrollment, the adjudication of medical (non-pharmacy and non-dental) claims and prior authorizations.

South Carolina has also asked Optum to perform additional Financial Management including fund coding, capitation, gross level adjustments, Medicare buy-in, encounters, and nursing home services. This request includes our full Financial Management solution enhancing their fund code allocation process as well as automating their gross level adjustments.

Montana: The State of Montana is using a modular component/services blend approach to procure solutions and services to support the State's Medicaid modernization effort. This includes procuring modules to replace aging legacy components of the Montana Healthcare Programs enterprise. Through the National Association of State Procurement Officials (NASPO) Provider Services contract vehicle, we implemented (and is currently providing support for) this initiative with our provider management module. The module includes enrollment, screening and monitoring, revalidation, and maintenance for the provider self-service portal.

Wyoming: We provide utilization management and field-based health management services. In the utilization management program, we intake prior authorization requests for inpatient, outpatient and other select services by fax or online portal. This expedites our response to providers and enables them to serve their patients promptly. We also provide retrospective review and random sample post-payment claim reviews.

Massachusetts: Optum serves as the third-party administrator for the program. We support the Commonwealth with Long-Term Services and Supports (LTSS) provider service center and claims inquiries, prior authorization, utilization management, provider enrollment and revalidation, and provider education and training. Our solution includes a provider portal and an analytics workstream.

Virginia: Optum contracted with the Commonwealth of Virginia Department of Medical Assistance Services (DMAS) in 2017 to build and maintain a new enterprise data warehouse as part of the Commonwealth's initiative to modernize their Medicaid system. The goal of DMAS moving to a modular implementation was to align with the CMS goal of moving away from a large, tightly coupled MMIS environment to a more loosely coupled service-oriented architecture (SOA) environment.

Virginia is using our data warehouse and analytics solution that integrates with the Commonwealth's MMIS. We provide Medicaid program administrative functions, implementation, operations, IT services, and support. This includes claims data management, advanced analytics, program performance monitoring, and FADS. During a recent three-month period using FADS:

- 1.4 million claims were reviewed
- $213 million in potential recoveries were identified
- 12,000 providers and members results over the life of the project

Additionally, our EDW and analytics module implementations include Indiana and New York.

5. ***Configurations and customizations typically requested to adapt the product for use in a State Medicaid Program.***

While we encourage states to minimize the level of customization to COTS products and instead focus on configurable changes, we recognize that some state programs and functions require customized solutions. We handle customizations through extensions that don't interfere with the basic code of the COTS applications.

The following are some examples of configurations and customizations that are frequently asked for by other states:

- **Pre-Adjudication Claims Editing:** Erroneous and denied claims can create a major administration burden to Medicaid systems and operations. Having claims editing solutions that are positioned prior to the claims adjudication engine can turn-away bad claims before they reach the claims engine and provide immediate feedback to providers to help them address issues before submission. Optum offers a deck of claims editing and real-time adjudication solutions to streamline the claims submission process.
- **Multiple Benefit Plans for Recipients with Hierarchy:** Recipients are frequently enrolled in one or more federal or state health care plans. The chosen member module and claims solution must be able to support multiple benefit plans and to recognize the hierarchy of those plans. Optum's claims solution is built to handle complex benefit plan structures to help make sure claims are paid accurately and recipients receive the right level of care.
- **Prior Authorization Auto-Decisioning:** As a method of reducing manual effort, many states request automatic approval or denial of prior authorizations meet certain clinical criteria. We frequently see this for clinical criteria with high approval rates. The Optum utilization management module can be configured to auto-decision prior authorizations based on state-defined criteria.
- **Fund Code Allocation:** Each state has a distinct set of fund allocation codes. The chosen financial management solution needs to be able to be configured to handle your distinct set of fund codes. The Optum financial management module is a COTS-based solution that can handle the BMS fund allocation needs.
- **Cross Module Workflow;** In a modular environment, business processes frequently cross applications and vendors. It is important for each vendor to supply a workflow solution that allows the flow of information across modules. The Optum workflow solution can easily integrate with other workflow solutions through a standard set of APIs.

6. Technical architecture and processing capacity/scalability.

Optum's technical architecture is designed to be modular and is scalable to processing capacity as needed. Our solutions are designed for configuration verses customization. Our solution is COTS-based, modular, and multi-tenant. The State will be able to leverage upgrades in a stable environment. States benefit from regular maintenance and modernization of COTS components over time. Because our COTS product vendors invest in continually improving their products, our customers experience the economies of scale and benefits of a shared architecture while operating as independent tenants.

Our flexible, inter-changeable architecture design enables solution components to be replaced or enhanced over time without affecting the integrity of the data and needing to replace expensive hardware.

Where applicable, we use microservices to focus computing resources on a single event. We find that using microservices to balance the workload across the platform increases fault isolation and flexibility to make business and technology changes much quicker. Microservices also enable us to take advantage of commercial cloud services, such as

lambda serverless computing for flexibility and scalability, as well as cost reduction in that you pay only for what you consume.

7. User-facing and self-service capabilities.

Optum's product strategy is to provide a consistent experience across products by leveraging the Optum Government Health Care Platform. The platform's front-end user screens simplify the user experience through seamless workflow processes, built-in user guides, and automation that limits manual and redundant activities.

Our user-facing and-self-service capabilities include easy to use portals that provide a wide array of self-service options empowering members/providers to control their own health care and business needs. Additionally, our highly configurable roles management tool provides the State with an additional layer of content security. Through our experience with our state customers, we recommend user-facing/self-service capabilities that include the following functionalities:

- The ability to verify eligibility and benefits, review coverage details, download ID cards and request a new copy to be mailed or faxed
- The ability to search claims and view prior authorization status
- An interactive provider directory with extensive search options
- The ability to electronically file an appeal, grievance, or complaint
- Quick reference guides, interactive help guides, and FAQs
- E-inquiry and Web chat features for asking questions about the State Medicaid program
- Flexible configuration that enables Web pages to align with state branding standards
- Meet 508 requirements, compatible with standard browsers and mobile technology
- Comprehensive user resources, including configurable links to forms, training modules, and external and internal websites
- The capability to manage responsible parties and dependents
- Include user-facing analytics capabilities so users can create their own customized reports/dashboards with interactive visualizations
- Provide assistance 24 hours a day, seven days a week through AI-powered assistants and chatbots

We recommend when hosting the access point of the self-service portal, that configuration considerations include the following:

- An architecture built on cloud services that adheres to the principles of interoperability, extensibility, security, and usability
- An interoperability platform that uses API and EDI connectivity extensively for real-time processing
- Role-based managed and user-defined capabilities that define allowable content by user
- Validate that solutions meet the WCAG from W3C, as well as Section 508 Amendment to the Rehabilitation Act
- Integrate easy-to-follow workflow steps and guides that simplify the end user experience

- Track usage patterns to determine what data should be more readily available, identify redundant tasks, and streamline workflow processes
- Configure the page skins and color schemes, images, links to state Web pages and documents, tiles, and page-specific content
- Configure the documents available for viewing and/or download, including remittance advices, provider applications, manuals, forms, and provider support materials
- Configure the documents available to upload, including attachments for claims and/or prior authorizations or provider enrollment documents
- Configure the Web-based provider enrollment application pages, hardship waiver page, tracking process, etc.
- Integrate with legacy systems to display information for the provider using OIL
- Configure the inbound and outbound data entry pages for submissions and/or requests based on the OMMS product companion guides

8. Interface support, flexibility, and extensibility to other stakeholders and State agencies.

Our solution is based on a layered architecture and interfaces that follow MITA principles. The solution leverages the CMS conditions and standards to enable the State to meet the demands of MITA, HIPAA, and the State environment.

A key differentiator for OMMS is OIL. It provides the foundation for OMMS modularity across the Medicaid enterprise, the State systems, health information exchange (HIE), health insurance exchange (HIX), and other data-sharing entities. Optum designed OIL to manage variation in system data and communications requirements. We use OIL as the central hub to move data and messages between our solution components with the expectation that the applications will be upgraded, replaced, and re-factored over time. Isolating the applications from unique point-to-point integrations promotes solution flexibility, loose coupling, and evolution. This enables us to add newer technologies, improved process efficiency, and value-add functionality to the solution without significant integration disruption. We designed OIL to be the central data and communication hub between our internal solution components and serve as the central hub between Optum and our partners' system environment.

4.2.4 What do you see as the benefits and risks of including business process outsourcing (BPO) services together with technical services?

The benefit of having one BPO provider using the multi-vendor MES solutions is having consistent service to the member and provider communities. Having the call center unified, for example, provides consistently trained agents operating in consistent manners. Also, having one mailroom, one call center, and other single BPO services can be a better value for the State.

In models where BPO services are performed by the technical services company, there are established communication loops, where feedback can be provided to the technical teams in almost real time. BPO teams have a tolerance for the normal nature of their workload throughout the day. If they encounter an unusual trend, they can provide feedback to the technical team, which could provide proactive troubleshooting opportunities and decrease external user impacts. The risk to this benefit is that the vendor may take care of issues internally, providing less transparency for the State when there are issues.

The largest risk in separating the BPO services from the technical services, for the State, is having too many contracts to oversee. This can put a strain on State staff in terms of time and expense. This can also be expensive for the State, having overhead for more companies worked into the individual contract pricing.

Technical teams are typically working through many projects affecting systems that have an internal or external user interface. Incorporating feedback from the BPO services team could increase the user interface experience based on the feedback that the BPO team members have. The risk to this is that a separate company will not be as willing to tell the technical company how to improve their solution, especially if they are a competitor in the industry.

4.2.5 Describe your experience, if any, with CMS Outcomes-Based Certification or Streamlined Modular Certification.

Optum has the knowledge and expertise to best support BMS throughout the CMS certification process. We have extensive experience across multiple state engagements in CMS MES certification, the Medicaid Enterprise Certification Toolkit (MECT), and OBC/SMC. We have helped the following 11 states and the District of Columbia achieve CMS certification for program integrity, federal reporting, and/or EDW solutions: Alaska, Arkansas, California, Colorado, Georgia, Indiana, Michigan, Mississippi, New Hampshire, North Dakota, and Washington. Our PBM solutions have been certified in Georgia, Indiana, Nevada, South Dakota, Tennessee, and Washington.

Operational Readiness Review

Feedback

"Great presentation. Great presenters and kudos to you and the team! Good job! Great job! We look in very good standing. You guys make a good team, and it shows."

—CMS State Officer

For each client, we have achieved CMS certification on time, the first time, in each implementation where certification was required. The implementations have received certification retroactive to the first day of the month following the go-live date, enabling the states to:

- Receive the full FFP amount available
- Increase their ability to explore other opportunities to maximize federal funding

We have worked extensively with CMS on modernization efforts and CMS MITA maturity, designing our solutions to comply with the most current certification model, preferred by CMS. CMS has recognized Optum multiple times for our certification best practices, including asking for our certification lead's involvement in creating the CMS MES Certification Repository, a new website for states, CMS, and vendors to learn, share, and contribute information about the outcomes-based process and its related artifacts.

Optum continually stays at the forefront of evolving CMS guidelines and certification requirements to make certain our clients are successfully certified with the most current and efficient processes. Our staff served as team members to develop the MECT that was released in 2007, giving us a thorough working understanding of the MECT. When CMS began looking at a certification process that evaluates how well Medicaid systems support desired business outcomes, our leaders were selected to serve on the Medicaid Technology Alliance (MTA) group for their input on OBC/SMC.

As CMS began transitioning certification to OBC/SMC, we have been collaborating with CMS, MITRE, and state agencies:

- Developing Conditions for Enhanced Funding (CEF), CMS-required, and state-specific outcomes
- Developing metrics for ongoing reporting
- Identifying test cases for system demonstrations
- Collecting and assessing operational data to support OBC/SMC

Expertise in OBC/SMC

We are currently working closely with several states to achieve OBC/SMC, giving us expertise to help you navigate certification under the new guidelines for a successful certification. We have participated in OBC/SMC pilots and projects following CMS guidance as new OBC/SMC processes have been refined. Our working knowledge and early experience with the current transitioning certification process will add value to a successful certification effort and enhanced federal funding.

Optum worked with Tennessee Medicaid (TennCare) for the successful pilot of OBC certification of the TennCare PBM, the first successful OBC pilot for pharmacy services. We submitted documentation for the first six months of operations to CMS in July 2020, completing a virtual review the next month to demonstrate and review outcomes with MITRE and CMS. The PBM received final CMS certification in December 2020—with no defects.

We are currently supporting OBC/SMC pilots for our Montana Provider Services Management and the South Carolina ASO projects. Additionally, we are collaborating with the State and will support the transition from the Medicaid Eligibility and Enrollment Toolkit (MEET) to outcomes-based certification. Our centralized certification team has in-depth knowledge of the current OBC/SMC model preferred by CMS. We understand CMS-required outcomes, CMS Standards and Conditions, and state-specific business outcomes that align with MITA 3.0, Codes of Federal Regulation, and industry best practices to best support your modernized, modular MES.

4.2.6 What approaches to supporting consistency in business process functions and data architecture across multiple systems and vendors have you encountered?

Optum's approach to support consistency in business process functions and data architecture across multiple systems and vendors begins by applying proven industry processes and standards, lessons learned, and best practices. Using these fundamentals, we have developed products that are consistent, easy to use, and suitable to perform your business functions in your multi-vendor Medicaid environment. Optum's approach is based on more than 28 years' experience in the government services marketspace, working specifically with state Medicaid agencies and modular transitions, we have a deep understanding of our client's goals and challenges. This understanding includes flexible business processes and a user-driven method to data architecture. Business and architecture approaches as well as considerations and best practices, include the following.

Business Process Approaches, Considerations, and Best Practices

Project Management and Oversight

We recommend that project management processes and procedures be based on industry standards, with qualified PMP certification or equivalent experience. Applying these will reduce risks, along with retaining project control and quality.

A best practice of our schedule strategies is enabling transparency among all stakeholders to make sure that we schedule task impacts wisely to reduce dependencies. For example, we schedule and participate in frequent multi-vendor meetings to remove barriers in communication. In our Arkansas schedules, we allocated enough time with the MMIS vendor and the Independent Verification and Validation vendor to test and confirm that the conversion and load progressed smoothly. This targeted and focused communication approach provided successful certification with minimal findings.

Our team will follow a disciplined approach to developing and managing deliverables, artifacts, and documentation. We encourage use of a deliverable expectation document (DED) for major project deliverables. During planning activities, we will work with you to confirm that we clearly define deliverable expectations and content. The DED outlines expected content, format, and acceptance criteria that may serve as artifacts for other project reviews. After the deliverable is prepared, we will perform a deliverable walkthrough with you so we can address issues and feedback before finalizing the document.

Services-based Approach

To address key cost drivers that can affect a Medicaid Enterprise solution, we recommend a services-based approach to take advantage of technology advancements. This approach eliminates the need for states to build from scratch. COTS-based solutions have made it much easier to obtain effective, proven solutions at more affordable prices. In the following description, we list issues that can drive up costs and provide recommendations to mitigate increased costs.

Areas in a traditional MES that can drive up costs include:

- Excessively long system implementations
- Changing scope from the RFP can cause differences between estimated and actual costs
- System delivered only meets yesterday's requirements
- Changing the system to meet today's requirements takes more time and money and sometimes breaks what was originally built
- Untimely deliverable review and approval cycles
- Require only deliverables that provide important value to the project

Optum also discovered that MES costs increase when implementing too many modules across too many vendors. By limiting the number of vendors and grouping modules in bundles that complement each other, the State's administrative costs are lowered. With several contracts and vendors, the State is charged duplicative overhead costs for each vendor. Optum recommends limiting the number of vendors.

We recommend the following grouping as an example:

- Fiscal agent contract
- Core MES contract for claims, financial, and reporting
- Provider network contract

To provide efficiency in program administration and to promote competition among vendors as requested by CMS, recommendations to further mitigate increased costs include:

- Buy only services and business outcomes instead of costly custom state-owned systems
- Have a core set of service and business outcomes to drive your product configuration
- Limit program-level customizations that add complexities and erodes COTS benefits
- Reduce implementation time
- Use COTS to control costs and maximize commercial reuse
- Speed of delivery addresses today's requirements
- Leverage modularity to create flexibility and maximize competition
- Draw applicable lessons from Medicaid managed care

Data Governance and Conversion

Looking at risks related to conversion identifies potential conversion issues, our corresponding mitigation strategy, and the successful best practices-based tools and techniques we incorporate into our data conversion and load plan to prevent these challenges from becoming problems.

Based on past implementations, our approach toward transitioning from legacy systems is to work collaboratively with the State to transform and load the data from multiple data sources and legacy systems. We work with state teams and stakeholders to perform a thorough analysis before conversion and loading. Teams work to confirm the record layouts, data elements, and valid values. We also verify that the necessary scrubbing and transformation based on the business rules developed align with the approved conversion plan.

Each state is different and requires a specifically configured approach. We have standard, proven approaches for implementations, takeovers, conversions, and other approaches of configuring the SaaS system. While configuring the new system, we will still meet member needs through the old system. We will modify these approaches as needed for each state situation and follow best practices, such as the following.

Conversion Best Practice 1: Our subject matter experts (SMEs) conduct interviews with source system owners and data stewards. We use our data profiling, data modeling and metadata tools to plan for, and handle in-scope data varieties and volumes. This practice helps manage any unexpected high data volumes.

Conversion Best Practice 2: A key practice in modular transitions is to have our data design experts, in coordination with our SMEs, design target data structures to capture all required data to preserve (and in many cases enhance), the source business data. The relationships between source and target data are documented in metadata to establish bidirectional traceability. We capture all operational metadata needed to preserve the bidirectional mapping of source and target data. We do this to help prevent inconsistencies and missing data conditions.

Deployment

An important topic to consider when releasing a module RFP is keeping the old and new systems synchronized. Requirements sessions for the new system should incorporate pending changes and modifications to the old system. BMS should also consider if there will be a code freeze for the old system or if modifications will continue to meet federal or legislative changes during the DDI of the new system. Decisions made regarding code freezes impact testing results and other aspects of the new module.

Legacy code freezes also help prevent implemented system changes/format from changing while other systems are still in flight, as well as freezing old system code changes that might affect new module code.

Business Processes Resulting in Higher Outcomes

In the states where we have implemented MES, supporting these business processes have resulted in higher value outcomes for them, including:

- Improved outcomes for the communities served
- Reduced spending and costs
- Increased savings
- Millions of dollars identified as potential recoveries for fraud, waste, and abuse
- Increased federal funding
- High number of enrollments and claims submissions relative to state populations
- Improved reporting metrics
- Operational efficiencies

Data Architecture Approaches, Considerations, and Best Practices

Our architectural design objectives are based on an evolving set of best practices for delivering a flexible set of COTS components. These are integrated through open standards while remaining agnostic to the hardware selected. A set of logical virtual services support the business functions provided through the COTS components and are configured to enable future growth while protecting and extending your investment. The architecture framework has evolved with each of our implementations. We have incorporated many MITA-driven best practices, including the following best practices.

Design Best Practice 1: The architecture framework comprises commercially available COTS products. This best practice provides the following benefits:

- COTS products come with product roadmaps for planned enhancements to maintain functionality and capability current to industry requirements. New product releases as well as software patches and fixes are provided at no extra cost if software maintenance agreements remain active.
- COTS products have extensive out-of-the-box functionality and capability to support state Medicaid solutions. Tailoring products to perform to state-specific requirements involves configuration, with no expensive coding required.

- COTS products facilitate modular construction and plug-and-play flexibility and adaptability. As State business needs grow, our COTS-based solution will allow you to add data sources, COTS tools, and other functionality to grow easily and cost-effectively in maturity as health care reform continues to evolve.
- COTS products are flexible and expandable to support growth in size (number of years of data retained), data sets (variety of types of data stored), and number of users.

Design Best Practice 2: The architecture framework is designed using SOA design principles. This best practice provides the following benefits.

- SOA uses industry standards and a set of common business processes and data standards. This makes it possible to leverage performance metrics, measurement techniques, and corresponding utility services. You will be able to track changes in programs and policies and evaluate corresponding changes in health outcomes, measuring business performance across the Medicaid enterprise.
- SOA services maintain a relationship that minimizes component-to-component dependencies and only requires that they maintain an awareness of and ability to communicate with each other. This makes our solution technology neutral and leverages the use of existing customer equipment.
- SOA promotes service granularity, providing optimal scope and the right level of the business functionality in a given service operation. This not only facilitates our ability to design and produce summary analytics and reports, but it also enhances our ability to provide point-and-click drill-down capability into the data details for greater understanding of performance drivers.
- SOA facilitates data exchange and data sharing while giving each organization control and ownership of their own data. Data will be described using standard definition formats that map the data to standard data elements where appropriate and provide the data descriptions when the data elements are non-standard.

Design Best Practice 3: The functionality and capability of architecture framework grows and improves every day, through the lessons learned and application of best practice resolutions experienced within each of our projects. By leveraging the architecture framework as the foundation of our modular solutions, the wheel will not be reinvented. The collective experience and best practices that both Optum and our state customers have accumulated will be passed on to BMS through our solutions. This will have a significant positive effect to decrease risk and contribute to our ability to produce the defined deliverables more effectively and efficiently within the timelines for all releases set forth in the RFP. As a result of our ability to deliver best practices across the software development life cycle (SDLC), the State will recognize substantial benefits, including:

- **Reduced labor cost:** Leveraging existing artifacts from the architecture framework reduces the effort to build these elements from scratch. This is especially true in connection with completing the DDI phase of the project, while producing associated DDI deliverables in a time frame that meets State requirements.
- **Shorter DDI time frame:** Incorporating existing architecture framework assets, experiences, and methodologies into the MES will shorten the time required to implement the module. The State will be able to begin operations of the new solution, and begin generating savings, sooner.

- **Enhanced functionality and benefits:** As a result of incorporated learning from our other projects, in the form of implemented best practices, revisions, or updates to the underlying architecture framework, the State will be able to leverage the enhanced functionality and benefits encountered in other state implementations.
- **Cost-effective satisfaction of evolving business needs and requirements:** The architecture framework is centric to our MITA and Standards and Conditions modules. It provides the underlying and necessary infrastructure to support a modular, flexible, adaptable, and open system architecture. Our solution framework promotes interoperability with external exchanges, as well increased adaptability to HIPAA transaction and code set regulations at the transaction level.

Because we have implemented solutions since 1994, we have worked with our state government customers on multi-vendor and iterative implementations. As our customer's needs have increased and as they became more experienced with technologies, they have all added more capabilities. We have worked side-by-side with these customers to recognize and extend the value of lessons learned and established best practices to our technical architecture approach.

Benefits of Optum Approach, Considerations, Best Practices

Our 28 years of experience has taught us that for a program to achieve the full benefit of a modular system, it is essential to establish a framework. The following items are critical to establishing a framework and illustrate the critical areas and the value they bring to a program.

Flexibility: A flexible, interchangeable architecture design enables solution components to be replaced or enhanced over time without affecting the integrity of the data and needing to replace expensive hardware.

Reusability: A reusable and scalable system establishes a standard data model and analysis-ready data that will support predefined needs or analytics and promotes sharing and reuse.

Reporting Capabilities: Establishing a reporting system using COTS products creates value by having a suite of standard reports, ad hoc reporting capabilities, and superior tools.

Audit Trail and Access to History: Establishing an audit trail and access to history aligns the solution with HIPAA requirements. Audit trails are also essential to meet various MARS-E and appeals and grievances requirements. Authorized users will be able to access information to understand the history of data changes.

Workflow Management: We establish workflows around an architecture that supports and promotes SOA design principles. These include independent vendors, products, and technologies. A SOA platform and principles allow configuration of the platform's business rules and workflows to accommodate and automate business processes and services.

Role-based Access to Data: The value of role-based access to data is that users can access only the data, reports, and dashboards needed to support their work, based on your governance process. We enable access control at the modular level and all the way down to the individual data group level.

Financial Management: This function enables insight to general ledger, invoicing, as well as reimbursement functions. The tools facilitate efficient budgeting and forecasting, such as identifying financial trends. We place accountability for budgets starting at the manager level.

Utilization Tracking and Forecasting: This component provides value in that policy analysts can predict the outcome of changes to health care utilization using multiple hypothetical policy

changes. Tools will make utilization tracking, predictive analysis, and forecasting easier to execute and more cost effective.

Electronic Communication Capabilities: This component, once established, is instrumental in supporting, standardizing, and improving communications between users. There are many benefits in sharing accurate and relevant data in a timely fashion among bureaus and divisions as well as key leadership within the State organization.

Key Performance Indicators (KPIs) for Improved Health Outcomes: The key benefit of this critical component is having the ability to measure high-quality care, while simultaneously gaining insights that improve program administration and health care outcomes over time.

Data Quality Guidelines: We benefit from a set of guidelines refined from similar projects to determine the quality of data. As we begin a project, we review these guidelines with each client. This helps us determine transformation rules, workarounds, or mitigations for the data.

Understanding Health Care Data: A strong understanding of health care data is essential in any MES project. We make certain that our staff understand members and their care, and the information on a claim as well as how claims are submitted and processed. For example, not understanding the difference between an ICD-10 surgical procedure code and a Current Procedural Terminology (CPT) procedure code can lead to incorrect assumptions and dissatisfied providers.

Expertise in State-Specific Policies: While data elements on a claim are standard, the policies for processing and adjudicating claims are not. Policies can vary widely from state to state. Assumptions about a claim based on experience with another state's policies can lead to hours of wasted research and analysis. Our close working relationship with CMS and our insights into state policies and programs will give you an unparalleled advantage.

Managed Care Considerations

MCOs are an important part of your program. Our MCO and Medicaid experience gives us a unique perspective. We can understand the challenges states face while operating, managing, and integrating an existing legacy system with a new MES enterprise. We solve these challenges by partnering with some of the most advanced claims and health management product and service companies in the market. We select these technologies and products because they are:

- Proven and used widely in our Medicaid health plan work
- Highly extensible providing the opportunity to add configuration without disrupting the integrity of the core software to ingest new releases and upgrades—a critical capability for which Optum is uniquely experienced and qualified
- Highly configurable offering nearly endless capability to tailor their use to the specific needs of your requirements
- Produced by long-time partners we know and trust

We will take lessons learned from our experiences, combined with advanced and proven technologies, to deliver a solution that supports your future programs.

4.2.7 Please provide your recommended strategy for ongoing compliance with the CMS Interoperability and Patient Access final rule (CMS-9115-F). The rule can be found at the following location: https://www.cms.gov/files/document/cms-9115-f.pdf.

Our recommended strategy for ongoing compliance with the CMS Interoperability and Patient Access final rule is to fully integrate APIs to connect members with their data. The strategy includes two main goals:

- Implement the mandates to share health information—at the direction and approval of enrolled members—with third-party SMART Health IT (SMART) on Fast Health Interoperability Resources (FHIR) applications in an accessible and timely manner
- Support future business requirements and regulatory changes, specifically regarding patient data access and interoperability

We recommend a Software-as-a-Service (SaaS) solution that uses flexible cloud services, advanced API technology, and the Health Level Seven (HL7) International FHIR standard to quickly assist users in managing applications, access, consent, and security so they can make informed health care decisions. The solution should be scalable, reliable, secure, and designed for ongoing compliance with a vision for the future. It achieves the overall goals of the State and CMS to give patients easy access to their health data and moves toward greater interoperability across the health system.

Our strategy includes:

- Scalable and secure cloud infrastructure with stringent security controls
- Long-term vision that extends beyond what small technology vendors can bring, offering a comprehensive member-focused approach, working closely with agencies like CMS and the Office of the National Coordinator for Health Information Technology, using HL7 FHIR standards
- Management of data supporting members and providers
- HL7 FHIR specific expertise working in state health care and commercial health insurance environments
- Out-of-the-box interoperability, requiring less configuration, interfacing with the OIL that will continue to meet CMS compliance as regulations change with minor configuration
- Design that is flexible to support the evolving and multi-phased implementation of future CMS requirements

Managing Interoperability Services

As part of our OMMS offerings, Optum's Interoperability and Patient Access Services solution is serving patients through multiple major health plans. Our strategy includes an efficient, consistent interface for managing which third-party apps can access member health data, and the data the apps can see. Our solution gives members control over their information as active participants in their care.

We recommend starting with the collection of sources for data and management of the data (such as data elements, data standards and/or transformation). We then configure and test the solution to your specific needs. Standard procedures for implementation must be built on experience with this specific interoperability solution, not just other Medicaid modules.

Compliance

Compliance begins with the build of the required West Virginia-specific FHIR repository. With the FHIR repository in place, Optum's cloud-based technology will support API translation, data storage, and access to the data. Third-party app owners can then begin the registration process and testing. After apps are approved, members can register and begin granting consent to those apps. The Member Portal provides an efficient tool for consent management. A patient can grant consent to all their data, or they can select specific types of data to be shared with each application. This process conforms to federal and state regulations on patient privacy.

The Optum solution complies with the CMS Cures Act, and the CMS Interoperability and Patient Access final rule. As new standards emerge, Optum will be engaged to understand, shape, and plan for the implementation of any new requirements. In addition to deploying the technology, Optum offers a team of business experts to support the journey and experience of BMS and your members as you look to take advantage of the benefits CMS Interoperability offers.

SaaS

Our SaaS solution uses cloud services and advanced API technology. It uses the HL7 FHIR standards to quickly assist users in managing applications, access, consent, and security. The solution is scalable, reliable, secure, and designed for ongoing compliance with a vision for the future. It achieves the CMS goal to give patients easy access to their health data and moves toward greater interoperability across the health system.

Solution Recommendations

To meet the CMS Interoperability and Patient Access final rule today and design support for future rule enhancements, we recommend your solution include:

Patient Access API: We provide a compliant solution supporting the CMS interoperability and patient access final rule built on a secure user-friendly platform.

Consent: We provide transparent interfaces to manage member consent to third-party applications, featuring the ability to grant, view, track, modify, and revoke consent.

Identity Management: Our solutions link with your identity management system. The program will benefit from a single identity source that manages the program's members, providers, users, and stakeholders. This gives you the control of who has access to what system modules, including access control rules, identity proofing, and entitlements.

Support for Third-party Applications: Through our App Owner portal, third-party application developers can register for your program and test their product against the client-specific instance of the solution. Registering organizations are required to go through a vetting process to receive approval from the security and compliance team.

Security: Our solution is hosted within the FedRAMP-authorized Microsoft Azure Commercial Cloud. A FedRAMP-authorized cloud solution provides you with the knowledge that the required subset of NIST 800-53 security controls is being met at the infrastructure and platform level. For the cloud infrastructure, you are assured of real-time security visibility and near real-time data for continuous monitoring.

When working within a FedRAMP-authorized cloud environment, Optum understands the shared responsibility of security controls with the cloud service provider as well as Optum's application-specific responsibilities. We will clearly define and determine security control

responsibilities so that you have additional comfort and knowledge the solution is as secure as the platform upon which it is hosted.

Technical Support and Training: Our training and technical support model is designed to make learning a new offering easy. We will provide training during implementation to introduce you to the solution and ongoing during operations. We will provide training as new features and enhancements are implemented. Our technical support team will be there to make sure you and your stakeholders can use the solution efficiently and effectively.

System Maintenance: Ongoing M&O is included in our offering. Our approach to providing M&O services is having our experienced team use repeatable and proven practices through our M&O framework and operating model that we have used in other engagements. A characteristic of our overall approach to service excellence is to establish a purpose-driven team while working together with the stakeholders during service operations in a structured and consistent way.

Implementation and Operations Services: We work with you to prepare and develop a milestone-based project plan and schedule to design, test and operate your system. In cooperation, we will work together as a team to establish a plan backed by industry experience. Our partnership will be based on a strong structure and communication best practices and health care industry knowledge. Our interoperability implementation strategy is structured with a balanced focus on people, processes, and technology.

4.2.8 Provide your strategy for compliance with the Health Insurance Portability and Accountability Act (HIPAA) and Federal Risk and Authorization Management Program (FedRAMP) Requirements. Information about HIPAA compliance can be found at the following location: https://www.hhs.gov/hipaa/for-professionals/privacy/index.html. Information about FedRAMP can be found on www.fedramp.gov.

Optum's information security program is designed to satisfy applicable regulatory requirements, such as the HIPAA Security Rule. The program incorporates different industry-accepted security standards and frameworks, such as ISO 2700x, the NIST 800 series of publications and HITRUST. Optum protects client data using administrative, technical, and physical controls. Our solutions integrate security through our SDLC, enabling identification and verification of regulatory requirements and controls required to achieve compliance. We base our security model on a layered defense strategy that complements SOAs. Security controls and management are integral to our delivery, maintenance, and operations procedures.

Figure 7 illustrates the multi-layered security framework that will protect BMS.

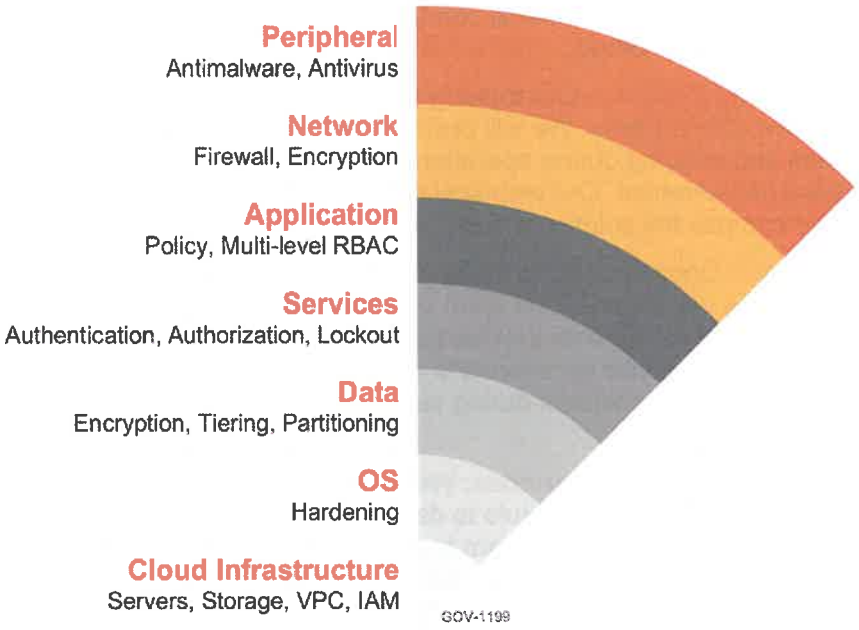

Figure 7: Multiple Layers of Security Control.

Providing a resilient defense should be a key consideration in an approach to security architecture. Using the best practices identified in NIST 800-207 help you determine the security layers your MES will need.

Optum designs the control environment to support technology and service interoperability, resulting in reduced technology sprawl and lower cost of ownership for control maintenance, while maintaining the prescribed compliance posture.

We recognize and prepare for the unique challenges protecting your most critical asset, your data, by using a flexible and open design focused on high availability and the versatility a cloud-based architecture presents. We take our responsibility to protect sensitive, personal, and proprietary information seriously by maintaining the confidentiality, availability, and integrity of our information systems and associated data. Our dedication to data protection and security is integral to the relationships we have with our customers and vendors, especially those who require higher security environments that host federal- and state-protected data. To that end, we often partner with FedRAMP authorized cloud vendors. Partnering with a FedRAMP authorized cloud provider gives BMS the assurance that the base 324 NIST 800-53 controls required by the GSA's Technology Transformation Services are being met at the infrastructure and platform level.

Our goal is to satisfy the requirements of the HIPAA and NIST security controls, tailored to the FedRAMP moderate baseline. This is done to reduce information security risk across the contractor, subcontractor, vendor, and internal enterprise using automation and standardization in a cost-effective manner. Our solutions use cloud native and third-party security controls that are designed based on compliance frameworks so that security is built into the infrastructure. Our toolset includes a combination of advanced data protection, auditing and logging, encryption, identity and access management, infrastructure security, data classification, security incident management, and threat and vulnerability management solutions to protect your data.

Optum's comprehensive approach to meeting security requirements has proven successful with current clients, like Arkansas, Indiana, New York, Montana, South Carolina, Virginia, and California, among others. Effective management of risk, technical security, and privacy requires controls, processes, and an implementation and maintenance life cycle that are consistent

across modules. These are integral to a successful security program. Our business and M&O teams self-assess their control environment (both IT and operational controls, where applicable) through internal assessments, which are spread throughout each year. Several regulatory agencies, as well as our clients, perform audits throughout each year, which include a review of key IT and operational controls. We contract with third-party vendors to perform internal IT security and control assessments on behalf of clients throughout each year.

We apply enterprise governance and standards to establish disciplined architectures and operations. Optum's dedicated Health Care Commercial Cloud organization maintains security and privacy templates to incorporate mandated controls for cloud deployments. Our internal Enterprise Information Systems (EIS) organization additionally reviews controls that will be applied for each client to make certain regulatory goals are met. Controls can be deployed globally across the cloud platform through repeatable processes and are easy to remediate. The enhancements in effectiveness, efficiency, and ease of application for security controls are immeasurable.

4.2.9 Provide your strategy for assisting states in achieving compliance with CMS, and federal rules, regulations, and guidance related to modularity, leverage, reuse, and outcomes achievement.

The Optum strategy for helping states achieve compliance is extensive experience across multiple state engagements in CMS MES certification, the MECT, and OBC/SMC. We recommend proactive inclusion from project initiation through operations and certification. Our strategy includes highly qualified staff with existing certification knowledge as well as forthcoming rules, regulations, and guidance. Vendors must understand the importance of achieving certification retroactive to production and collaborate with you, your partner vendors, CMS, and MITRE to achieve compliance. Our certification process is anchored by a Certification Plan that will define our collaborative CMS certification approach and the processes and procedures the Optum certification team uses to support your project, in complying with federal certification review requirements and manage certification activities. The plan will align with current CMS certification guidelines to verify the module meets applicable federal conditions for enhanced funding, outcomes, and metrics, as well as the business needs of West Virginia and CMS are met.

The CMS MITA Maturity Model defines best practices for business, technical, and health management for Medicaid programs. Our solution framework meets industry standards for HIPAA, 508 compliancy, and Affordable Care Act standards. Additionally, our solution achieves interoperability objectives to exchange information and meets the MITA Standards and Conditions. We support and share your goal of maintaining compliance with MITA to advance in maturity for your business, architecture, and data. We develop our modules to align with the MITA Condition in the business, information, and technology architectures. By making this investment and commitment, we keep our products and services current with emerging technologies and industry standards in the MITA formats. We have supported the MITA vision and guidance since its inception. It drives our services and provides the framework for the systems and processes we produce.

4.2.10 What approaches do you suggest for Disaster Recovery processes in a modular MES that accounts for integration and communication across multiple partners?

Optum's best recommendations for Disaster Recovery in a modular MES environment are two-fold: cloud solutions and a single MES Disaster Recovery Plan.

Cloud Solutions

We recommend an MES architecture built on cloud services that adheres to the principles of interoperability, extensibility, security, and usability. This reduces the probability of a disaster event that will take down the solution. The technical design should include a compliant cloud platform with advanced security and protection. The cloud design should use separate regions and zones, with real-time failover for quick replication across regions during an event in the primary region.

Cloud-based Protection

A cloud-based approach to disaster recovery will protect your data from loss and increase the overall reliability of your enterprise data and associated assets.

Our disaster recovery goals are prevention and protection. We reduce both the probability and impact of a disaster through our cloud hosting solutions.

MES Disaster Recovery Plan

It is essential for each solution vendor to have their own State-approved disaster recovery plan. This plan should provide specificity for their unique solution. However, there is also a need to have a comprehensive MES disaster recovery plan that each vendor participates in and contributes to. This plan should incorporate the recovery aspects of the enterprise. It should outline the disaster declaration process, communication during a disaster, and other shared aspects.

Shared Recovery

An overarching MES Disaster Recovery Plan outlines disaster processes for when an event impacts the entire enterprise.

4.2.11 What organizational change and communications management processes have you seen employed for a modernized, multi-vendor MES implementation? How would you help support the evolution of the Medicaid Enterprise as a whole?

We have delivered many complex MES implementations and recommend a comprehensive Organizational Change Management (OCM) approach to assist in delivering an enterprise solution. This approach provides structure and consistency in the design, development, deployment, and support of a project. A structured OCM approach tightly integrates program stakeholders, providing an understanding of the size and scope of the project.

Our alignment with OCM during the implementation will enable careful planning, strong partnership, and the management of a comprehensive plan that integrates people, processes, and technology. We have experience in working with an OCM team, including working to understand the key phases of a change and mapping to the vision throughout the entire project life cycle beyond implementation.

The structured approach of an OCM program also provides evolution of the project establishing the following balance into the program:

- **Understand the change:** Collaboration helps us understand your organization, your business objectives and goals, and the current state environment.
- **Prepare for the change:** Our teams can analyze and apply the information collected to shape and define the support strategies and determine sequencing in conjunction with the overall project plan.

- **Manage the change:** We will implement the configured change following your OCM process and scaled plans that will move your organization, individuals, and stakeholders through the change.
- **Reinforce the change:** Teams can follow your established OCM process to make sure your organization, individuals, and stakeholders adopt and sustain the change.

Evolution of the Medicaid Enterprise

The stress on the health care system is intense. Chronic diseases now account for 86 percent of the nation's health care costs. Out-of-pocket health care costs add up to 30 percent of household income, and health care spending is at $3.4 trillion a year.

People are needing and demanding more from health care. Expectations are high, not only from individuals, but from governments, employers, and care providers. The system as it exists today is economically unsustainable. Affordability is a pressing challenge. However, the opportunities to help people lead healthier lives have never been greater. Breakthrough treatments and medical advances are redefining health care and opening new possibilities. Data and technology are empowering people to become more engaged in their health and well-being. And people are looking for a simpler, more personal, higher-quality experience. Our modular approach, with nearly $3 billion invested in innovations, combined with clinical experience, data, and technology position us to make a distinct contribution. Optum works across the entire health care system to create a more sustainable model.

4.2.12 How does a multi-vendor environment change how you manage your own Design, Development, and Implementation (DDI) work? How should dependencies be identified, negotiated, and implemented in a multi-vendor environment?

Optum follows standard, repeatable business principles and project methodologies across each engagement. In a multi-vendor environment, it is critical to build partnerships with key stakeholders at the start of the project to adopt consistent methodologies. Therefore, we tailor our standard practices to adapt to the multi-vendor environment. It is also crucial to adopt standard communication and coordination practices across the module vendors. Our standard Communication Plan is modified to outline the principles of collaboration with other vendors and the system integrator (SI).

Project dependencies should be identified across vendors by assigned ownership or co-ownership of requirements, which are discussed and agreed on by the parties during the planning sessions. Each vendor would be responsible for delivering the requirements managed and monitored by BMS.

4.2.13 Describe your experience, if any, with collaboration tool(s) such as or equal to Jira®, Confluence, and IBM® Rational Team Concert (RTC) or other tools to track items, which include, but are not limited to, project milestones, deliverables, and/or implementation testing. Do you recommend any specific approaches or tool(s) for collaboration in a multi-vendor environment? Does your company prefer using its own collaboration tool(s) to support an implementation, or do you prefer using collaboration tool(s) provided by a state and/or a systems integrator (SI)?

Optum project toolsets can vary by scope of the project. For some projects, we use Jira, and other projects, we leverage Application Lifecycle Management (ALM).

We use Jira to guide the end-to-end project management, providing an efficient and cohesive process flow across all phases of the project deliverables as well as a transparent view of all systems and services. By using Jira, you have the flexibility to change tools regardless of development methodology, whereas with large ALM vendors, the project must follow a rigid process because of their tool architecture and integration constraints. In circumstances where

our scope of work includes an SI, we use Jira for specific management collaboration (e.g., change management) that may affect other enterprise modules.

Optum recommends and prefers an agreed-upon single collaboration tool with directives that require all vendors to use. In doing so, however, we also recommend that the State manage and control the tool through state-owned licenses. This allows tool availability to all module vendors. The benefit of a state-provided collaboration tool(s) provides consistency and transparency of common project information to all stakeholders as well as standard comprehensive reporting. The State-provided approach provides clear delineation of the SI's responsibilities and gives a distinct understanding of access control. It also eliminates the burden placed on vendors to navigate through cumbersome proprietary platforms, private networks, and virtual machines. Using a state provided collaboration tool gives your MES a single source or truth that makes sure that everyone in the multi-vendor environment has access to the same information and is aware of business decisions and changes that may affect their module.

4.2.14 What roles and responsibilities have you seen for a system integrator (SI) in a modular systems environment? Was this role fulfilled by a separate vendor, incorporated with other services, or performed by the state Medicaid agency itself? What are the key success factors and risks to success related to using a SI?

The role of SI varies widely in the MES industry today. They range from consulting only, to providing the integration layer to connect the MES modules. Regardless of the SI role, Optum has a history of working collaboratively and cooperatively with them for the success of the State's project.

No Integrator Needed

Most vendors who on bid MES modules have an integration layer within their solution, such as the OIL outlined in our response to Question 4.2.2. Because of the new technologies, the role of the SI is slowly becoming obsolete. The states can avoid the extra contract and extra overhead by eliminating the SI and allowing the module vendors to work together. In this instance, one module vendor would need to be the lead in the integration efforts. We recommend the Claims module vendor be tasked as lead integrator. For BMS modernization perhaps the incumbent MMIS vendor can function as the temporary SI until the modernization is complete.

The claims vendor must integrate with each module in the enterprise, so it makes sense to have them lead the integration effort using their integration layer as the common connector. The claims vendor RFP should contain the responsibility and accountability for integration management activities and tasks as well as the technology. This vendor would work closely and collaboratively with the State's project management lead to provide integration across the modules.

If Integrator is Used

In programs where we work directly with an SI, the SI has established the timeline of the milestones associated with the implementation as well as the PMO. Whether a consultant or technology provider, the SI must have certain qualifications and capabilities to succeed. The following are RFP recommendations for SI services:

- The SI needs to have the State's end-state vision clearly identified, with the ability to articulate this vision at the macro and micro level to other vendors responsible for modules. This vision also allows the SI to articulate the data and processes for each module.

- The SI must understand the interfaces and data exchanges between modules, the dependencies between modules, and the sequence of data exchanges.
- Whether a waterfall or Agile development approach is followed, the SI should define milestones that measure progress for each module and overlay these milestones across modules to identify where interactions between modules will be tested in an iterative and progressive manner.
- The SI should define acceptance criteria for modules.
- The SI should monitor system, security, and performance testing of modules and testing results.
- The SI should facilitate and/or coordinate the execution of system integration testing across modules and review testing results.
- The SI is typically responsible for tracking issues, risks, assumptions, and decisions, and making sure each is considered for each module, so the individual and collective impact is identified.

The choice of using an SI or not depends on the availability of state resources to oversee some of these tasks.

If the State decides to use an SI, the following should be considered:

- A key success factor in using a SI is selecting an entity who understands not just the Medicaid program and requirements, but the requirements for upstream and downstream entities who will interact and/or interface with the Medicaid Enterprise.
- Select an entity who is responsible for delivering one or more modules of the Medicaid solution. This makes sure the SI is fully integrated into the requirements, design, development, and testing cycles as the solution evolves through the SDLC, and the State's vision and expectations are finalized. An SI who is not also responsible for delivering a module may not have a full understanding of the day-to-day evolution of the system through design, development, and testing.
- Select an SI that has an integration framework. Optum's integration framework works very well in that architecture, in fact that is Optum's preference—the use of a federated integration architecture.

4.2.15 Describe your depth, breadth, and frequency recommendations for performing periodic vulnerability scans of production and development environments?

Optum vulnerability scanning processes and procedures facilitate the identification of missing patches, invalid configurations, and other security risks in our solutions. We understand that vulnerabilities can be introduced into a solution at any time. We start assessing solution vulnerabilities during the development process and continue to assess throughout the project. Whether considering vulnerabilities that become inherent from design or those that are introduced from external sources, we have policies and procedures to mitigate these threats as they occur.

Code Vulnerability

Optum uses privileged and non-privileged scans for vulnerabilities in the information system and hosted applications, operating system, Web application, and database scans (as applicable) every 30 days or sooner when new vulnerabilities potentially affecting the system/applications

are identified and reported. Legitimate high-risk vulnerabilities are mitigated within 30 days, and moderate risk vulnerabilities are mitigated within 90 days.

Our developers use DevSecOps practices to validate application security at each step of the SDLC. We align our application vulnerability testing with the Open Web Application Security Project (OWASP).

As part of our Optum Engineer program, we employ best practices for application development. Some of these practices include rigorously testing the application components that process confidential information, validating inputs, parsing file formats, authenticating users, checking for sensitive information exposed in memory and temporary files, maintaining a unit test library, and conducting extensive penetration testing. It's also important to have developers cross check each other's code.

Static Application Security Testing (SAST): Each developer is responsible for source code inspection prior to code deployment. SAST reduces the threat of vulnerabilities when the application is deployed by addressing common application security risks early in the SDLC process. High and critical vulnerabilities must be remediated before code can be promoted. Source code analysis is completed with tools including Sonar, Fortify, and CheckMarx.

Dynamic Application Security Testing (DAST): Dynamic Application Security Testing is employed to detect conditions indicative of a security vulnerability in an application in its running state. Optum breaks DAST into four steps as Figure 8 shows.

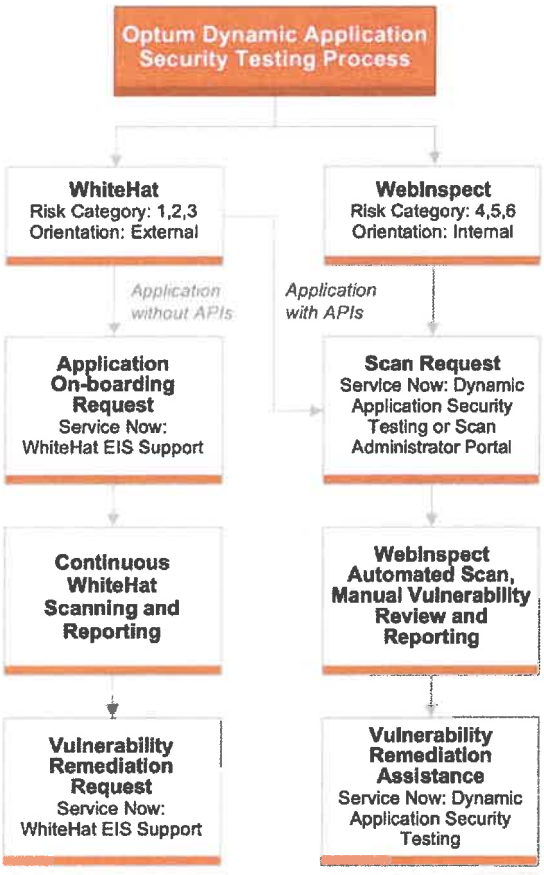

Figure 8: Optum Dynamic Application Security Testing Process.
Optum has a process that developers must follow as part of continuous integration to remediate code vulnerabilities.

Determining a suitable tool: Optum uses WebInspect and WhiteHat for DAST. Applications can be tested by one or both tools before deployment.

Requesting application onboard/scan: The application scanning process occurs prior to code promotion. Application scans are administered through a formal process for audit trails and compliance.

Application scanning process: Internal security teams scan the application. DAST scans are not completed by the originating developers.

Vulnerability remediation process: Any high or critical vulnerabilities will be reported as part of the process. These vulnerabilities will require a formal risk review and remediation process to be completed before the application can be promoted into production.

Interactive Application Security Testing (IAST): IAST is where a development team tests their code after it has been deployed to an environment, such as production. IAST occurs throughout the SDLC. Whereas vulnerability discovery happens on the server side and only includes vulnerabilities identified in the application code that executes on the server where the agent is present, IAST will identify vulnerabilities on any path that is exercised by either a client-side unit test or a manual test of that code path. If a particular code path is not exercised, then no vulnerabilities will be identified in that segment of code.

We test during development, before each new release, and in production to verify application security. Code is not promoted between environments until code testing is complete. Code testing includes not only developer testing, but also customer user acceptance testing and approval. Code is not promoted to production if there are any high or critical vulnerabilities remaining during iterative test phases.

Software Vulnerabilities

Vulnerabilities can be discovered in software at any time. As new risks emerge on the threat horizon, vulnerabilities are introduced to software that may already be in production. To that end, continual vulnerability scanning must occur to protect against new threats to the solution's security posture. Optum scans existing solutions for new threats weekly, at a minimum.

A software vulnerability scan with tools such as Rapid7 Nessus, will produce a list of risks that need to be mitigated. Each vulnerability that is found will have a Common Vulnerabilities and Exposures rating. This rating is assigned from the National Vulnerability Database (NVD) and assesses the threat level called a severity rating. After we review severity rating of vulnerability for each of the released patches, we will communicate the information to BMS. Generally, this happens once per week. We prioritize vulnerabilities and patches that receive a higher priority rating. We subscribe to our software vendors and receive notifications on high priority patches as soon as they are published, and we will communicate these vulnerabilities and patches immediately to BMS, because they demand faster remediation.

We apply security patches for vulnerabilities that could lead to the compromise of a system within 30 days of the release of the patch and upon receiving the necessary change control approvals. For zero-day threats, patches or workarounds are applied as soon as change controls are approved. We perform appropriate testing in a non-production environment before applying patches to the production environment.

Optum publishes vulnerability and security assessment results and mitigations for each customer.

Solution Vulnerabilities

Penetration testing is a type of vulnerability testing that works to determine if there are weaknesses in an infrastructure that could be exploited by external users without credentials or rights to a system. This type of vulnerability test, often just called a penetration test, is conducted prior to a system going into production and at least annually.

The OWASP produces an annual list of the most common threats to Web applications. While developers can test for threats identified by OWASP as part of the IAST process, using an independent auditor can sometimes provide more accurate results for penetration tests. Optum conducts penetration tests annually against any application that has an external interface. Whether the test is conducted by our independently managed Cyber Defense Team or by a third party, we will provide the threat report and any required mitigations to BMS as part of security documentation to make sure your security posture remains stable.

4.2.16 What processes, techniques, and solutions does your organization consider critical for delivering optimal data sharing throughout the MES?

As part of your MES, it is important that you consider not just the module components you need to successfully execute your program, but who needs what data and on what intervals. When you plan your optimal data sharing, you need to identify the data users, the mechanisms that could be employed to share data, data quality concerns, data format concerns, and security and compliance considerations that may arise from data sharing.

The first step BMS should undertake is to determine what types of data sharing the MES is going to accommodate. Common MES functions and questions include:

- **Sharing data with external partners:** Are there external agencies who may need access to data from the MES? For example, should the Department of Justice have access to fraud investigations created in the MES FADS components? To share data with external partners, do you need to create another copy of the data?
- **Sharing data with members, providers, and other program contributors:** What data needs to be accessible to program stakeholders? Is this data available in a single portal interface or multiple interfaces? Can data be shared between stakeholders?
- **Sharing data with the non-Medicaid public:** What program data should be shared with constituents and the legislature? In what format should the data be shared?
- **Sharing data with other users of the solution:** Is there a capability for users to manipulate data, conduct and share analysis in one integrated system?
- **Sharing data with external applications for interoperability:** Does the MES have the functionality to support data sharing with third-party applications based on patient consent?

After you have determined the data sharing types the MES will support, you will need to consider the most efficient tools to enable data sharing. In most cases, deploying an ESB is the most effective tool. With an ESB, you can share data with your partners and modules. Data can be delivered either through data extracts according to a schedule or near real time—as transactions are updated in one module, the data becomes available in another. A common use case would be an eligibility update that is immediately available to the provider.

Optum uses an integration layer on many of projects as a key functional element in the data sharing approach. The OIL is built on SOA principles using a commercially available and proven ESB. Because of its inherent flexibility, loose coupling, and SOA framework, it enables our solution to scale and provides easy integration of new services, vendors, and applications.

OIL provides BMS with the flexibility to modernize over time, while maximizing investments made in existing State assets and capabilities. Changing your program technology to a MES is a project that will require time. You will need to be able to support existing technologies during the transition. Your ESB should be able to span both the current and the new systems while you transition.

You may also want to require an API gateway. Many data sharing interactions do not require large data sets. It is more common to expose a tool for simple queries to the data. For example, if the third-party liability (TPL) team needs to look up a claim, an API is a solution that enables the TPL team to get the targeted data quickly and easily. The FHIR standard for interoperability relies on API transactions to exchange data between stakeholders. Third-party applications can use API calls to access a member's clinical record details with member consent.

Optum's Interoperability solutions already share data with more than 60 million patients nationwide. We use API technologies to share data between members, providers, and third-party apps to put health care decisions in the hands of patients.

As a program, you will also want to share data with citizens and the legislature. You will need to consider whether you want to publish interactive visualizations or static reports. States like California provide deidentified data sets available to everyone. Other states provide interactive Tableau-style visualizations that allow citizens to drill down into statistics or geocoded maps to understand the program better. When you determine the best public communications path, you

need to make sure your MES supports the tools required for the output. Tools like PowerBI and Tableau provide visualizations, but you could also use simpler output, such as a PDF, to reduce risk of data exposure. How you publish your data needs to be a consideration for optimal data sharing.

One last area of consideration that you need to consider for data sharing is what security implications may arise. Some questions you need to address are:

- How do you enforce minimum use?
- Do you need to limit who can share data?
- What deidentification rules need to be enabled? If deidentified data is being shared between module vendors and each vendor has their own rules, this can make testing challenging.
- What requirements are going to be in place to maintain API security?
- Who is going to manage API keys?
- If users share data between one another, what happens if they have different access for protected health information (PHI)?
- How do you manage third-party app security and privacy?
- If you are sharing using data extracts, are you increasing risk to data by having multiple data copies?
- When you share with data extracts are you re-enabling data silos?
- Are data use agreements in place between BMS and external partners?

Data sharing is a key component of the MES. It is important that BMS has a well-defined data governance standard to address different data sharing scenarios.

4.2.17 What standards and practices would you recommend with regards to key data governance, master data management, data stewardship, and data-sharing concerns? What approaches do you recommend for engaging business data owners separately from technical data system managers?

Optum has worked with state government clients who have a variety standards and practices for their data ecosystems. In our experience, the clients who clearly state their existing and desired states of data governance maturity have the most success. Optum recommends that you provide as much information as possible to your prospective vendors regarding your existing data governance program and its key personnel. We mention this because modern data governance tools have evolved to the point where they can target many types of metadata, support a range of user types, and provide data governance for the whole Medicaid enterprise, if not the entire State government. Sharing this information will help your procurement process as you evolve into the new Medicaid enterprise approach.

We recommend the establishment, or continual improvement in standards in areas including, but not limited to, the following:

- Technical metadata such as files, field, table and column names and definitions
- Business metadata such as business entities (e.g., providers, members, and programs)
- Data life cycle and retention policy
- Repository functions for storage of metadata, including technical, business, operational and security

- Interface technologies and formats as well as APIs
- Owner, steward, and consumer assignments for all data
- Approval workflow templates for data governance decisions and changes
- Domains for master data management (member, provider, and reference) as well as the business descriptions of the rules

As you progress in decoupling the business functions in your new Medicaid enterprise, it is important to maintain control of your business definitions and attendant metadata. In our experience, it is important that your vendors regard your data governance as a program consisting of related capabilities, controls, tools and, where necessary, projects. We make this recommendation based on experience, as we see that change is constant and controlling it using project management and data governance disciplines is important. To establish a shared understanding of your baseline, we recommend that you tell your existing and prospective vendors about where you are on your data governance roadmap, the progress made to date, and the challenges still in front of you. Sharing such information in procurement libraries will result in more responsive proposals.

Whenever we are engaged in a project for our clients, we first look for a clear identification of the organization responsible for data governance. This information, complete with the integration points for technical, business, operational, and security metadata, will give your vendors valuable scope boundaries to avoid duplication and omission during requirements analysis work.

Another important area to clearly identify is any existing or emerging technologies that you are using or plan to use for data governance, and if you are filling voids in specific areas in your MES. Inform prospective solution providers of your existing data governance/metadata management tools, complete with any relevant user metrics, target system connectors, and relevant enterprise formats you already support. Knowing whether you are hosting/supplying an enterprise instance of this tool, and whether this capability is in the cloud already, vendors will supply you with more suitable, succinct, efficient, and cost-effective proposals. This is information we recommend that you provide in your RFPs and/or procurement libraries. This technology information should include:

- Physical data storage choices
- Middleware and other application programmer interface providers
- Cloud vendor preference
- Identity and access management services
- Reporting tool preference
- Data catalog and business glossary tools
- Data sharing tools
- Existing member and provider indexes
- Existing reference data available to the MES

Until relatively recently, we have found that data governance has been regarded for too long as a province of IT. We can tell from your question that you are concerned about involving business personnel in data governance. We share that concern since under an IT only outlook, data governance standards tend to be most aligned with data set, file, database, table, and

column definitions. Supported by the advent of less expensive storage, data life cycles become less important and old data persist in data warehouses past intended usefulness.

With the arrival of tools that support data governance as a program, we are excited to be working with our clients as participants in their overall data governance programs and life cycle management. Most modern data governance tools allow data sponsors, owners, stewards, and ultimately data consumers to participate in the formation and use of technical, business, operational, and security metadata. This participation as coordinated and recorded by the tool, allows users from IT, business, enterprise risk management, and other stakeholders to participate according to their interests and roles.

4.2.18 Describe your company's current roles and responsibilities as a fiscal agent, if applicable, in a modular systems environment. Describe how you coordinate with other vendors to incorporate their services in a modular systems environment. What are the key success factors and risks for separating Fiscal Intermediary functions from technical functions?

We process more than 2.9 billion claims annually with more than 99.5 percent accuracy, an accomplishment few vendors can match. This includes Medicaid MCO claims in 26 states for 7 million members, with 313 million calls supported through our virtual contact center. Optum has performed claims processing for more than 20 years and utilization management for more than 30 years.

Many of our engagements include coordination with other vendors. We work as a team to collaborate with all parties. OIL allows the technical components to communicate. We use ALM tools to structure integration and systems testing.

The keys to separating FI and technical functions include:

- SLA normalization based on responsibility
- State or BPO vendor responsibilities compared to technical vendor responsibilities well defined
- Aligned incentives for collaboration

4.2.19 Describe the division of responsibilities on successful projects, in relation to a multi- vendor environment, between vendor and subcontractor Project or Portfolio Management Offices (PMO), and an Enterprise PMO provided by either BMS or a separate vendor?

The division of responsibilities in relation to multi-vendor projects must include strong program-level governance. Establishing program-level governance and strategies at the onset of the project will help you establish responsibilities, standards, policies, and procedures that drive consistency across your programs and throughout the program's organizational changes. We recommend an overarching governance strategy with a project-level governance approach to provide clear lines of responsibilities. The approach includes collaborative and communication processes to make sure your PMO/separate vendor integrates and aligns with individual project management processes and governance structures to support your guidelines and framework.

Execute Strategic and Tactical Directions

Optum collaborates with your PMO/separate vendor to execute strategic and tactical instructions, including any instructions added during contract negotiations. We refine and implement the agreed-upon governance framework and structure that includes documented division of responsibilities, policies, procedures, and standards.

Elements of the structured project governance framework will include:

- Project life cycle approach
- Project success and deliverable acceptance criteria
- Process to identify and manage risks and issues
- Project organization chart that identifies project roles
- Relationship among the project team, multi-vendor organizational groups, and external stakeholders
- Processes and procedures for communicating information
- Project decision-making process
- Guidelines for aligning division of responsibilities, project governance, and organizational strategy
- Process for stage/phase gate reviews
- Process for review, approval, and tracking changes to budget, scope, quality, and schedule

Program governance must include expectations with consideration of time and budget, keeping in mind, the dependencies of other vendors upon completion of their responsibilities for coordination of planning, executing, controlling, and closing the project.

Adhere to the Governance Model

A close partnership across the Optum team, the project management team, and your team will be critical to the success of the project governance model, and ultimately the project. Together, we will achieve a solution that fits with your mission and vision. Beginning with the strategic sessions, we will work together to understand your enterprise, goals, and expectations and begin aligning our governance practices with the governance model. This promotes close cooperation, communications, and active management participation across project activity phases, from strategic planning efforts to the operational-level work tasks.

Strong Relationships

We have a track record of building strong relationships with our State government customers. Our company values of integrity, compassion, innovation, performance, and relationships guide everything we do. We know that a partnership with you will be critical to the success of the project. To facilitate effective collaboration and communication, we recommend strong project leadership who will manage day-to-day project activities and PMO processes. Leadership will be responsible for conducting/participating in regular status meetings and maintain transparency and collaboration with you and other stakeholders, such as your PMO, a multi-vendor integrator, or independent verification and validation contractor.

4.2.20 Describe your recommended approach to addressing the complex relationships between a variety of vendors working on separate parts (or modules) of the overall Medicaid Enterprise System. To what degree do you recommend BMS require these approaches in any RFP(s) it issues?

In a multi-vendor, multi-contract environment like your MES project, a close partnership with the State and other vendors is crucial for meeting program objectives. Active collaboration and communication will enable vendors to meet the project challenges within the context of the overall multi-vendor enterprise environment. MES projects represent a large, complex initiative

with multiple components, each with its own set of goals and objectives. In addition to the specific requirements and objectives of this project, vendors need to understand the clear, unified vision for the overall modernization project. Using this vision, vendors can better collaborate to incrementally build the MES modules and components.

To address complex relationships between vendors, there should be awareness of each vendor's processes and procedures, timelines, and responsibilities. For example, in programs where we work directly with an SI, the SI has established the timeline of the milestones associated with the implementation. There have been cases where modules have been separated, such as provider management, encounters management, and buy-in management. The SI forms a collaborative relationship to design and construct the enterprise platform gaining representation from program stakeholders supporting the enterprise.

- The SI needs to have the client's end-state vision clearly identified, with the ability to articulate this vision at the macro and micro level to other vendors responsible for modules. This vision also enables the SI to articulate the data and processes for each module.
- The SI must understand the interfaces and data exchanges between modules, the dependencies between modules, and the sequence of data exchanges.
- Whether a waterfall or Agile development approach is followed, the SI defines milestones that measure progress for each module and overlays these milestones across modules to identify where interactions between modules will be tested in an iterative and progressive manner.
- The SI should monitor system, security, and performance testing of modules and testing results.
- The SI should facilitate and/or coordinate the execution of system integration testing across modules and review testing results.
- The SI must have a style guide or user interface development guide (or similar) that makes sure the modules that comprise the solution have a common look and feel, including fonts, headers, error messaging, field presentation, footers, and other elements.
- The SI is typically responsible for tracking issues, risks, assumptions, and decisions, and making sure each is considered for each module, so the individual and collective impact is identified.

We recommend the following considerations in RFP(s) to address issues, avoid risk, and to achieve success:

- A flexible, adaptable, and MITA-aligned environment
- Features that comply with and support the CMS Conditions and Standards
- Timely access to accurate, usable data
- A flexible integration framework that easily allows one application to share information with any other application agnostic to technology and adheres to industry standards such as SOAP, REST, JSON, and others
- Adherence to CMS reporting requirements
- Analysis and decision-making tools to drive better health care management and program administration efficiency

- Rapid insights into program evaluation that create opportunities for operational improvements
- Features that support transparency, accountability and allow for continuous quality and process improvement opportunities

4.2.21 What factors (technologies, development methodologies, frameworks, etc.) would you recommend BMS require in an RFP in order to accelerate the DDI of MES modules?

We recommend BMS consider the following areas be captured in the RFP to accelerate the DDI of an MES project:

- **Origins of the Data:** As part of establishing a structure to develop, enhance, or implement an MES, we recommend communicating the origins of the data to include a review of the source data structures, the source data dictionary, and layouts to determine the appropriate data elements that should be available to your SMEs, users, and staff.
- **Data and Security:** We recommend BMS consider a method to safeguard PHI as well as personally identifiable information.
- **Data Transformation:** We recommend that BMS consider a data transformation structure based on data specifications as to what is produced and the frequency. This action will allow for transformation from multiple data sources to occur in a streamlined, consistent manner.
- **Testing and Verification:** Establishing requirements for testing and verification provides controls for the initial and ongoing data transformation and quality assessment processes.
- **Reporting:** Establishing requirements for using reporting, analysis, and extraction tools makes the solution easy and intuitive for authorized data retrieval and analysis.

4.2.22 Describe ways you feel BMS should structure an RFP to encourage competition and innovation from Medicaid Enterprise solution bidders.

To encourage competition among bidders, Optum recommends the following:

Consider varied experience of similar complexity, not just Medicaid experience: Vendors with a commercial background could have solutions and experience that could be the unique solution the State needs.

Consider references from non-Medicaid or state government sources: Vendors with a commercial background could have references regarding projects of similar size and scope. By limiting references to Medicaid experience, you limit your pool of very qualified candidates who can bring unique and fresh ideas to Medicaid.

Outline the goals you wish to achieve, while not being prescriptive about how the vendors achieve those goals: Boxing in specific requirements for tools, approaches, or methodologies could limit vendors with unique solutions that would benefit the State.

Be clear and concise: Include a checklist, so vendors know what you expect to receive. By focusing on the job to be done, it encourages the responder to think creatively.

Provide details about any problems or pain points you are having: The problem you are trying to fix could be quite complicated. The solution or service proposed could be different if the problem is not given detail. Vendors need to know where gaps exist so they can offer solutions.

4.2.23 What recommendations do you have for establishing procurement and implementation timelines that help deliver value sooner, reduce risk, maximize Federal Financial Participation (FFP), and achieve Outcomes-Based Certification or Streamlined Modular Certification?

We recommend adding two rounds of questions and answers to the procurement schedule so bidders can ask clarifying or follow-up questions. Assuming that answers are provided well before the proposal deadline, this practice results in better documented responses that truly meet the State's needs and reduces risk of scope creep later in the project. This also gives the bidders the same understanding of a business need, providing an aligned, consistent objective comparison of the responses.

The procurement schedule should allow enough time for bidders to adequately design a package that meets each need outlined by the State. While modularity has streamlined the product offerings, and they are already built, the bidders still need time to determine the level of configuration needed, determine the staffing to manage the configuration within the implementation timeline, receive staffing commitments for the project, both internal and external as needed, and determine the ancillary systems needed to complement the module. Some states place very short turnaround times on RFP responses, thinking bidders have the module marketing material ready to insert and submit, but that is rarely all that is needed in a comprehensive response. In our experience, 8 to 10 weeks from RFP release to due date allows bidders to design the best cohesive solution that aligns with CMS conditions for enhanced funding as well as CMS-required and state-specific outcomes that will allow the maximum FFP.

Reducing the amount of paperwork in the form of non-value add deliverables and reducing approval processes will reduce cost, drive efficiencies, and aligned with teams to focus on project priorities.

West Virginia may also want to consider the NASPO ValuePoint contact vehicle for MMIS modules. All 50 states and the District of Columbia have executed the Memorandum of Agreement allowing them to use any NASPO ValuePoint cooperative Master Agreement for specific MMIS module: Claims and Provider Management. Optum and other pre-qualified vendors have been awarded NASPO ValuePoint cooperative Master Agreement through a competitive procurement process. Figure 9 highlights benefits of using NASPO.

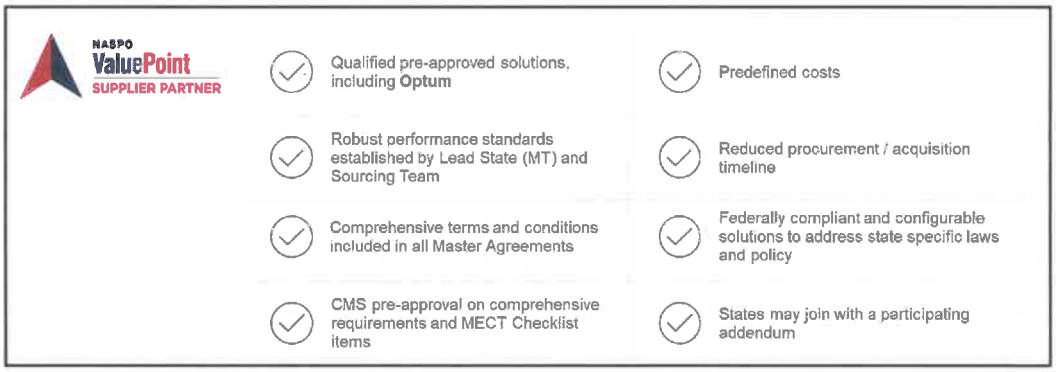

Figure 9: Benefits of using NASPO.
Optum is a ValuePoint Supplier Partner.

4.2.24 Describe the major trends in your Medicaid Enterprise solution category that you believe BMS should be aware of, including any product or approach changes that you believe will come to market within the next 12 – 24 months. How do your Medicaid Enterprise solution roadmaps stay current with such trends? If possible, please be specific regarding how these trends affect Medicaid, WVCHIP, or healthcare IT in West Virginia.

As the Medicaid market continues to evolve through adoption of CMS mandates, state policies, and vendor enhancements, there are solutions gaining traction in the marketplace. Some examples of trends that we are seeing include:

- **Configurability:** States are consistently asking for a greater adoption of solutions that can be configured versus requiring coding changes. COTS-based solutions, like those used in the Optum solution, help to facilitate configurability. The adoption of configurable applications streamlines costs and shortens timelines for changes to the underlying solution.
- **Cloud-based Services:** The use of cloud platforms is gaining popularity across the market. The Optum cloud approach supports each of our Medicaid solutions. Cloud services provide greater flexibility, lower operations costs, and enhanced business continuity and disaster recovery services.
- **Artificial Intelligence (AI) and Automation:** The use of AI within Medicaid technology platforms is increasingly being used to streamline processes to cut costs and improve the user experience. AI and automation recognize redundant activities and common user activities to help customize the user interaction and improve the user experience. We use a set of AI tools across our platforms to generate efficiencies in system design.
- **One-stop Enrollment:** Increasingly, state Medicaid agencies are requiring the enrollment of Medicaid providers (fee-for-service) and MCO through a single, state-controlled portal. This improves provider abrasion by creating a single portal for providers to enroll, rather than having to enroll with the state fiscal agent and MCO separately. We are also seeing the inclusion of CAQH enrollment and screening services, along with the use of CVOs to provide full provider credentialling.
- **Loss of Staff through Attrition:** We have seen a decline in available technical and operational staff over the past five years. This is particularly affecting a state's ability to hire and train new staff. West Virginia should consider these factors, and leverage SaaS based solutions and BPO opportunities in approaching your modernization efforts.

4.2.25 Identify any innovations in your Medicaid Enterprise solution for addressing Medicaid Business Priorities (cost savings, performance efficiencies, improved care outcomes, etc.).

OMMS innovations that may help address your Medicaid business priorities include:

- Using a SaaS approach keeps the solution technology updated and compliant.
- Provision of services are easily scaled up or down to meet BMS-specific program needs.
- Solutions that support configuration over custom coding, saving time, costs, and resources for solution delivery.
- Support for environments that use highly automated builds and use scripts to accelerate the process and performance
- Development of SaaS solutions promote resiliency by separating production and disaster recovery to different regions of the country, mitigating a disaster's effects on business operations.

- Using microservices enable Optum to take advantage of commercial cloud services, such as serverless computer services, for flexibility and scalability as well as cost reduction in that you pay only for what you consume.
- Maintaining cloud native services allowing for the creation and training of models and frameworks to forecast future behaviors, outcomes, and trends while using familiar, low-cost analysis tools.
- Using existing artifacts from the architecture framework reduces the effort to build these elements from scratch.
- Use of an architecture framework is centric to our MITA and Standards and Conditions modules to provide the underlying and necessary infrastructure to support a modular, flexible, adaptable, and open system architecture. Our solution framework promotes interoperability with external exchanges, as well increased adaptability to HIPAA transaction and code set regulations at the transaction level.

4.2.26 Identify any innovations in your Medicaid Enterprise solution for addressing technical risk management.

Our innovations in addressing technical risks begins with a risk management approach that includes a well-documented strategy for issue management, including tracking, impact analysis, mitigation plans, and escalation procedures. We use a model that measures each technical risk against its influence on project timelines and cost with timely updates on key risks reported to all stakeholders through comprehensive reporting mechanisms.

We recommend partnerships that co-manage risks through collaboration between the health care and technology multi-vendor experts and State Medicaid experts. While our solution is more agile than the previous monolithic deployments, there are often challenges with multi-vendor coordination, and disparate contract timings and project plans. Through our experience, we have found that these challenges can be overcome by innovations that include:

- Recognizing the technical risks and identifying them as part of the risk management plan up front
- Developing remediation plans for known challenges that were agreed to by all parties as part of the risk management plan
- Continually reviewing and updating upgrade and patch management processes
- Implementing industry best practices, new technologies, and understanding changes in the threat environment, user habits, and emerging vulnerabilities
- Continuously monitoring all events for unusual user behaviors that might indicate nefarious activities
- Continual review of the National Vulnerability Database for vulnerabilities and patch and upgrade the system to protect against them
- Use of the Product Lifecycle Management (PLM) process to proactively upgrade application and infrastructure software products to keep them up to date
- When new issues are unearthed, immediately determining the extent of the issue, and potential solutions, then reaching back to the client with options to resolve the conflict
- Working with the client to make sure that timelines and deadlines are enforced across all vendors

4.2.27 Describe 1 to 3 use cases where innovations in your Medicaid Enterprise solution would apply and the value your Medicaid Enterprise solution would add when applied to them.

Innovation and customer experience are fundamental components of our success at Optum, and a major focus for our development teams. The best customer experience begins with an understanding of the user. In our iterative, human-centric process, we move from what we know and envision to what we design and build.

The core of the platform is a mobile-first, front-end experience that creates a simple, seamless, and elegant engagement experience for the end user. We continuously validate assumptions and apply new learnings, new insights, and new ideas – each step of the way. The team focuses on holistic transformation with a human-centered design approach to assess end-to-end processes and the steps to create seamless and elegant experiences. Our process enables us to view the holistic customer journey to identify, understand, and optimize each touch point within it, resulting in a better experience for both customers and employees.

The following use cases demonstrate and highlight the impact of our innovations and design expertise.

Use Case 1

Identifying and closing abrasion points and overpayments through service mapping and blueprinting with no structured qualitative or quantitative data, Optum Payment Integrity (OPI) team was unable to determine the true impact recoveries were having on providers. To identify and close provider abrasion points, the Optum design team created a service blueprint highlighting provider touch points and back-office silos that led to service issues and identify opportunities to improve the provider experience.

The team planned a three-month exploratory study using human-centered design methodologies to identify key provider frustrations. We started with mapping how individual teams within OPI Recovery Services operated and how they worked together. The Optum design team also interviewed leaders of various OPI teams to fully understand their issues. The team then created a holistic blueprint of the service detailing how provider and claim information flows from one team to another.

Our next key step was to create a shared alignment across OPI teams. The design team hosted a highly collaborative virtual workshop. Teams were led through a series of design exercises, including affinity mapping and service blueprinting. The outcome of these collaborative exercises included a shared understanding of the provider's experience, which was visualized as a comprehensive service blueprint. The blueprint provided a single view of provider and OPI actions throughout the claim overpayment recovery lifecycle and enabled us to identify areas where ambiguity or inefficiencies existed, and redesign was required.

A critical step in the design process is to verify the team's assumptions with real-world users. To achieve this, we conducted a call center shadowing session to listen to calls between providers and the recovery outbound call team. The design team then interviewed existing providers to identify their key needs and objectives and which pain points they found particularly abrasive. The collected data was shared with the recovery team during a second workshop, where the personas and service blueprint were updated with the newly collected insights.

Through increased and shared understanding of internal processes, the OPI recovery team identified considerable savings. The design team provided a comprehensive report at the end of the engagement that outlined potential areas of improvement and actionable next steps the team plans to take to reduce provider abrasion.

Use Case 2

Our customer, Level2, has a data-driven solution that attacks the root cause of type 2 diabetes and empowers individuals to achieve remission. Level2 asked Optum to design a market-leading mobile application that their members would enjoy using, ultimately enabling them to improve their health outcomes.

Optum integrated human-centered practices into the product and software development process. We worked across three separate channels: mobile apps, enrollment flow, and coaching portal. We used research studies to gather insights from users that informed the new designs.

- **Member Experience:** Optum completely redesigned the iOS and Android apps applying the new Level2 brand with the new app. We utilized user research to learn exactly what the members' goals are and used these insights to inform the new design.
- **Coach Experience:** Working closely with the coaching team, Optum redesigned and improved the usability of the coaching portal. The team conducted an extensive research study with the coaches and clinical staff to identity their pain points and what features would improve their workflow. This included shadowing coaches while they took member calls.

The result of this effort led to improved outcomes and laid the foundations for further growth and expansion of the Level2 ecosystem.

Use Case 3

An example of our OIL framework in use would be our provider services module (PSM). Our provider module is often implemented to replace a provider subsystem in a legacy MMIS. Once the new PSM is implemented all provider data is maintained in the new PSM, but the legacy MMIS still requires an ongoing feed of current provider data to support claims processing, Transformed Medicaid Statistical Information System (T-MSIS) reporting, and other core business functions. These legacy systems typically have data requirements and format that are very different from a modern provider services solution. They often pre-date core data elements like Taxonomy and National Provider Index (NPI), and do not always validate provider enrollments to ensure that all required data is provided during the enrollment process. The transformation required to bring legacy data into the new system often must be reverse engineered to continue supporting the legacy solution. In some cases, the legacy system stores multiple records for the same NPI, and our OIL solution must appropriately split our NPI based records into multiple enrollment records to support the legacy MMIS.

For these clients we have successfully leveraged our OIL layer to provide data managed in our PSM solution in a format that can be consumed by the legacy MMIS system. This approach provides the benefit of a modern PSM built on core CMS requirements and data components, while still supporting the unique data requirements of a legacy MMIS system. Our PSM validation processes ensure that all data required for enrollment is provided and verified and then makes this data available to the existing MMIS through our OIL layer to support core functions. We have been able to not only support the data necessary for claim processing but have also provided the data in a format that allows them to continue providing consistent T-MSIS reporting data to CMS. This is a key milestone, as CMS now requires their approval of T-MSIS extracts generated using data provided by the new PSM prior to their approval to go-live with the new solution.

4.2.28 In the states where you have implemented, what have been some of the higher value outcomes? What performance metrics were you able to provide to substantiate this success?

In the states where we have implemented MES, higher value outcomes are our goal. For example, in one state, taking in encounters through our Advanced Communication Engine (ACE) saves the state PMPM MMIS costs of approximately $20 million per year. ACE enables health care payers, such as the Medicaid program, to strategically insert more than 250 million clinical editing and analytic rules into their existing EDI workflow. This unique Optum solution is a value-added feature that goes beyond standard data validation. It incorporates clinical edits and analytic rules to help providers validate their claim submission at the earliest point, before entering claims adjudication. ACE sits at the front of the EDI stream to address billing issues before entering the adjudication life cycle, while providing a mechanism to collect claims data to reduce time lag and enhance analytic value.

Other high value outcomes for the states we serve include:

- Improved outcomes for the communities served
- Reduced number of patient days and number of patients staying in a facility
- Decreased spending and costs
- Increased savings
- Millions of dollars identified as potential recoveries for fraud, waste, and abuse
- Increased federal funding
- High number of enrollments and claims submitted relative to state populations
- Operational efficiencies

The following sample metrics substantiate our success providing higher value outcomes and measurable results for clients.

Utilization/Care Management

Optum manages more than 260,000 enrollees for one state's Behavioral Health Plan. The plan covers outpatient mental health and substance use disorder services. The services we provide include claims payment, quality management, network development and management, utilization management, and clinical oversight. Over a five-year period, Optum and the plan helped the state reduce spending by $200 million. Most of the savings came from decreased reliance on community-based rehabilitation services.

For one state, Optum serves as the LTSS third-party administrator. We deliver provider service center and claims inquiries support, prior authorization, utilization management, provider enrollment and revalidation, provider portal, provider education and training, and program integrity services. In one year, Optum identified more than $18 million in total savings using our program integrity services. Programmatic savings through a more appropriate Prior Authorization process is approximately $80 million per year, allowing for those resources to be allocated in other areas.

Another state uses our utilization management/health management solution. Optum functions as a Quality Improvement Organization (QIO)-like entity and provides utilization management and field-based health management. We provide prior authorization, contact center, retrospective admission/procedure reviews, and random sample post-payment claims reviews. Our services help states decrease costs through both prior authorization and care management

of persistent super-utilizer members. Over a two-year period, the number of members in a psychiatric residential treatment facility decreased from 113 to 84. Over the same period, the length of stay decreased from 152 days to 83.93 days.

Data Warehousing and Analytics

One state is using our data warehouse and analytics solution that integrates with the state's MMIS. We provide Medicaid program administrative functions, operations, IT services, and support. This includes claims data management, advanced analytics, program performance monitoring, and the Optum FADS. During a recent four-month period using FADS:

- 844,000 claims were reviewed
- $74 million in potential recoveries were identified

Another state is using our data warehouse and analytics solution that integrates with the state's MMIS. We provide Medicaid program administrative functions, operations, IT services, and support. This includes claims data management, advanced analytics, program performance monitoring, and FADS. During a recent five-month period using FADS:

- 2.2 million claims were reviewed
- $519 million in potential recoveries were identified

Another state is using our data warehouse and analytics solution that integrates with the state's MMIS. We provide Medicaid program administrative functions, implementation, operations, IT services, and support. This includes claims data management, advanced analytics, program performance monitoring, and FADS. During a recent three-month period using FADS:

- 1.4 million claims were reviewed
- $213 million in potential recoveries were identified

Consumer Health

Optum hosts and operates a state's HIX. We built the solution on the state's enterprise platform. We provide enrollment data services and have helped the state achieve the following results:

- Multiple capacity changes that saved the state more than $400,000
- 99 percent automatic renewals and partner integrations
- Highest open enrollment success rate on record achieved in 2019

4.2.29 Discuss any experiences you have had integrating your Medicaid Enterprise solution with legacy system management and lessons you have learned for implementing new Medicaid Enterprise solutions. Do you recommend any specific approach for modifying, interfacing with, and managing the legacy system while implementing a new Medicaid Enterprise solution?

Though our experience of DDI and implementations, we have experienced several lessons learned when implementing MES. The following table provides a sample of lessons specifically related to implementation costs, timelines, and quality.

Lesson Learned	Rationale / Recommendation
Minimize factors that negatively affect implementation timelines and costs	Factors that frequently negatively affect implementation timelines and costs include: • Legacy data that does not conform to CMS standards and/or uses local or atypical codes.

Lesson Learned	Rationale / Recommendation
	• Requirements that mandate customization beyond an application's native capabilities, which hampers a vendor's ability to upgrade applications timely and cost efficiently and promotes vendor lock-in (We recommend a phased implementation to separately price and address customizations.) • Overly broad interpretations of requirements beyond what was anticipated by the vendor, which can directly lead to overly broad interpretations and scope creep (To accurately price a solution, we recommend the RFP have clearly defined outcome-based requirements, to allow the vendor to accurately make assumptions about the services being offered.) Focus on the "what" versus the "how". • Modifying new applications to conform to legacy processes, applications, or data (To prevent this factor from occurring, we recommend an Agile approach, which includes sessions with demonstrations that focus on current client processes and how the client's processes will change.)
Minimize the data conversion responsibilities of the new vendor	Data conversion is one of the main drivers for implementation costs and timelines. Accuracy, cleanliness, and standardization to federal guidelines are critical factors. • For provider modules, if legacy data is required to be transformed to interact with the provider enrollment vendor, and an SI or data warehouse vendor is involved, we recommend they be responsible for providing the legacy data in a common format. This will keep the enrollment vendor focused on the implementation, rather than spending unanticipated resources on conversion activities. • We recommend states share their data or data formats with prospective vendors prior to implementation (preferably during the bid response period) to help vendors in anticipating the level of effort for conversion. • Data conversion should be priced on a time and materials (T&M) basis and not part of overall price scoring as it is virtually impossible to scope and estimate.
Use CMS-defined / standardized data elements	Most vendor systems are designed to handle data constructed to align with CMS requirements and data format requirements. We recommend states follow federal guidelines and standards for the structure and hierarchy of required data.
Perform pre-implementation data quality analysis and cleansing	Legacy systems often contain data that is incomplete, inaccurate, or does not follow CMS guidelines. Examples might include providers enrolled with a taxonomy that is not compatible with their enrollment type, inconsistent or incomplete banking or tax information, or missing key data like National Provider Identifier (NPI), Social Security number (SSN)/Employer Identification Number (EIN) or taxonomy. Considerations include: • Correcting data issues in a legacy system often requires outreach and action by outside entities, so attempting to perform data correction during a system implementation can significantly affect project timelines. • We recommend states work directly with a provider data SME and CMS representative to analyze their existing data against CMS

Lesson Learned	Rationale / Recommendation
	guidelines and conduct a data cleansing initiative before starting a system implementation. • Conducting a data quality analysis and cleansing effort to address as many issues as possible prior to attempting a new system implementation can greatly reduce the data conversion effort and risk to project schedule and budget.
Make legacy systems work with new applications, not vice versa	States frequently require new vendors to modify their applications to replicate legacy system functionality or house data not required in the new system. This increases the implementation costs and timelines, and frequently puts the implementation success at risk. • We recommend that states focus on the business requirements met by the legacy system, and work with the vendor to understand how the new solution can meet those business requirements versus assuming the new system must be modified to perform these functions in the same manner as the legacy system. Building a new system on old processes is not worth the investment. Incorporate Organizational Change Management (OCM) as part of the modernization strategy. • We encourage flexibility, because after the learning curve is overcome, the new system approach may align better with the overall solution. • Where possible, we recommend modifying the legacy system or leveraging an SI to transform new system data to conform with legacy formats to bridge any gaps.
Don't stray from an application's native functionality	Requiring new applications to be modified to conform to existing processes often requires customization outside new the applications' core functionality; this increases cost and can create vendor lock-in. We recommend that states limit the number of modifications made to vendor applications and look to modify current processes to maximize application capabilities.
When unable to leverage standard transactions, limit data requirements when integrating new components with a legacy system	Implementing components of a solution may require integrating the new solution with the existing legacy system. For example, a new provider management solution may need to integrate and share updates with the legacy MMIS to support claims processing and other business functions. Considerations include the following. • Most new systems will provide a standard extract of all data in the solution that an SI can use to support this integration. • States will sometimes attempt to re-convert all data housed in the new system back into the legacy system, resulting in an extremely complex and costly full reverse-engineering of the data conversion. • To minimize cost and risk associated with integrations, we recommend that states establish clear requirements for functions that will remain in the legacy system, identify the data required to support those functions, and limit data integration between the systems to only the data required.
Limit the number of required licenses	Rather than require many application licenses that includes infrequent users, we recommend that states provide a discrete list of users by application. Additionally, states should specify if users need only read-only permissions versus read/write.

Lesson Learned	Rationale / Recommendation
Reduce post-submission changes	With respect to provider enrollment functionality, most applications do not allow for changes to an enrollment application once the application has been submitted. We recommend states do not allow changes to applications post-submission. Those changes can create instability in the back-end databases.
Minimize on-site staff requirements	On-site staff requirements reduce the efficiency and cost-effectiveness of vendor staff. We recommend states allow vendors with secure tele-work technologies; and require key staff presence during agreed-upon periodic occurrences.
Review, analyze, and reduce training requirements; promote online training	With today's technologies and solution features, we recommend a streamlined training approach to promote effective training methodology.
Minimize custom reporting	Reporting requirements are frequently based on legacy reports. • We recommend states attempt to adhere as much as possible to the inherent reporting capabilities of each application. • We recommend definitions should be provided to vendors prior to implementation so that the level of effort can be analyzed as well as create opportunities for report reuse.
Verify data conversion through provider maintenance	When converting data from a legacy system there may be incompatibilities between data in the new system that cannot be fully addressed through traditional data transformation means. For example, legacy systems often capture name as a single field that must be parsed into multiple fields in newer systems (first, middle, last, suffix). This type of name parsing is never 100% accurate and often can only be fully validated by that individual. • As a post-implementation activity, states should require that providers conduct provider maintenance post-conversion to verify the quality of their practices' data in the new solution.

4.2.30 What staffing levels, including experience and skillset, are typically required to implement your Medicaid Enterprise solution? What are the suggested state Medicaid agency staffing levels to support DDI and ongoing operations? How do these staffing requirements compare to other offerings in your Medicaid Enterprise solution?

Staffing levels depend upon many factors, including the module, client timelines, and overall size of client scope.

We provide sufficient personnel to administer and execute required project activities, including approvals, during development, implementation, and operations. As a leading provider of health care-related professional services for federal and state departments and agencies, we have a record of accomplishment that demonstrates our ability to recruit, hire, and retain employees with the skills and talent necessary to meet or exceed requirements. We have human capital professionals dedicated to employee services throughout the United States. We position our teams strategically to meet the staffing requirements of each customer engagement.

The management and organization drive success in meeting requirements during all phases of the project. We assemble a team of dynamic individuals experienced with comprehensive knowledge of Medicaid, the health care industry, provider enrollment, credentialing, and

reporting. We will work with you as a long-term partner you can trust. Our staff members will be responsive to your business needs as those needs change over time. They will work with you to provide a solution that supports your requirements and helps you better serve your providers.

Our baseline staffing model include roles such as project manager, contract manager, testing lead, implementation/integration lead, technical manager, security manager, and certification lead. Our baseline staffing model for M&O include roles, such as project manager, contract manager, technical manager, and business operations manager.

We continuously evaluate the effectiveness of our resources and their value to client projects. Part of our success in delivering on-time implementations has been engaging experienced onshore teams of individuals supplemented with offshore or nearshore resources, with the understanding that these resources cannot develop security controls or access production data.

We have developed a time utilization strategy for efficient use of state staff to participate in design validation sessions whereby including specific staff only during times when specific items need to be validated. This dynamic approach has reduced state staff participation times and increased productivity on our projects. This framework is presented and optimized at the beginning of the project.

A SaaS capability will reduce implementation time and staff time. BMS staff would go through an outcomes-based requirements validation process and modules will be configured accordingly. Recognize operation process may change while still accomplishing the fundamental business goal. This will require some additional training and organizational change management (OCM) activities.

4.2.31 Describe the System Development Lifecycle (SDLC) approach that you use for implementing your Medicaid Enterprise solution. Can your SDLC approach be incorporated into an environment that uses a traditional "waterfall" SDLC approach? What about "agile" methodologies to support the implementation of your Medicaid Enterprise solution? If so, how can this be accomplished?

We use the Optum Structured Agile Method (OSAM) SDLC as a framework for product development and release management. OSAM can be incorporated into an environment that uses a traditional waterfall SDLC approach and Agile methodology to support the implementation of your MES.

Optum will use OSAM SDLC to develop and maintain the solution components, including applying the process from execution of DDI activities, to executing change requests for defect fixes and enhancements. Our approach incorporates iterative methods for development, testing of software, security, and training.

Figure 10 demonstrates our iterative OSAM SDLC that promotes efficient delivery and rapid deployment of functionality. The results are faster time to value, shorter delivery cycles, and earlier stakeholder feedback.

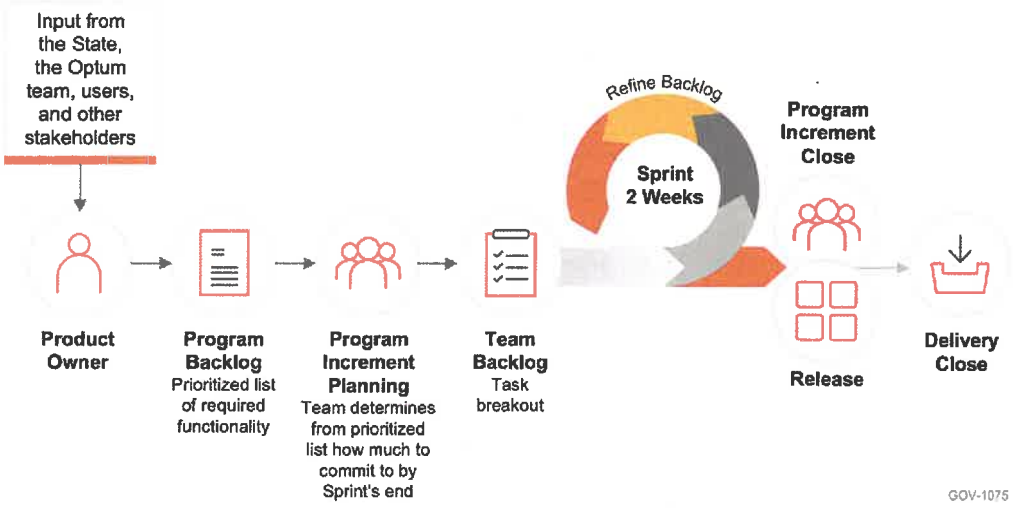

Figure 10: OSAM SDLC.
OSAM will enable us to provide early and continuous delivery of quality, fully tested enhancements and releases.

OSAM incorporates lessons learned, development tools, and templates from our experience delivering Medicaid and human services projects. The methodology provides a roadmap to produce a stable, sustainable system while reducing project risks that affect budget, schedule, and performance.

Our methodology provides the following benefits:

- We follow the strategy of early delivery of high-quality services while gradually building the features and value provided to users. State users will gain access to the information and features they need as they become available, rather than waiting for an all-or-nothing delivery in a single release.
- Using an iterative development model, we can shorten development cycles and provide opportunities for early stakeholder feedback, delivering value quickly and frequently to users.
- Using Agile practices reduce waste by following a continuous improvement cycle for development. We implement discrete, collaborative gate reviews for each release with specific criteria required before the release is promoted or moves into the next phase.
- Collaboration reduces and mitigates communication barriers.

OSAM incorporates lean software development principles and values. It fosters engineering excellence and takes teams and solutions to the next level of Agile maturity. Lean software development emphasizes values, such as eliminating waste, building quality early, delivering quickly, and respecting people. OSAM offers the following key advantages for the State:

- Reduces delivery cycle time
- Raises the quality of developed solutions
- Improves the predictability and quality of the deployed releases
- Increases the productivity of overall development organization
- Provides transparency into our project health for the stakeholders

- Encourages higher resource engagement in deployment processes

OSAM is adaptable. We can integrate OSAM with your current SDLC or your SI's SDLC requirements to deliver success in your MES project.

4.2.32 What is the typical duration of a project to implement your Medicaid Enterprise solution? How does this timeline break down across the planning and DDI phases?

MES modules can vary greatly, from an interoperability and patient access module, to a claims processing and financial module. This variance in module sophistication and maturity can affect timelines greatly. For example, our interoperability module can be implemented and operational in six months. Our COTS-based claims processing module typically requires closer to 24 months. On average, most MES modules require 18 to 24 months from contract execution to go-live.

Figure 11 shows a sample break down across planning and DDI for our entire Provider Management solution, including the Provider Enrollment Portal and workflow, as well as our credentialing subcontractor solution. You can see our provider solution takes approximately 16 months to implement.

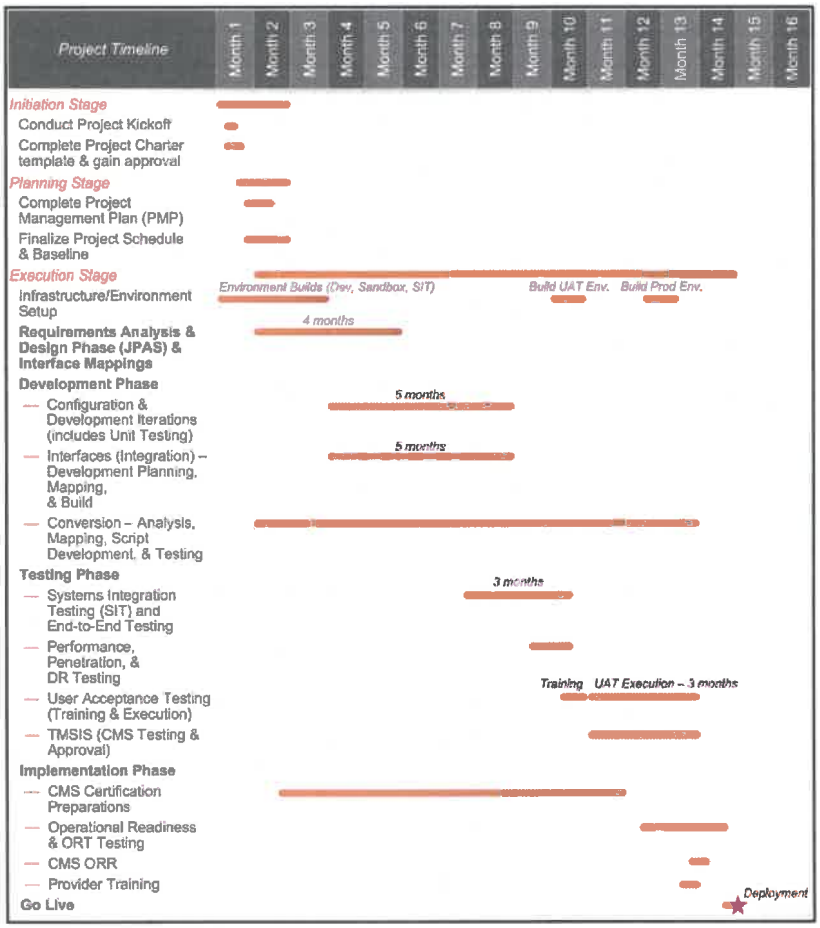

Figure 11: Sample DDI Breakdown.
This timeline reflects a typical Provider Management implementation.

4.2.33 What do you see as the key cost drivers for implementing your Medicaid Enterprise solution? What recommendations do you have for managing MES costs and demonstrating outcomes that mitigate any unnecessary costs of a Medicaid Enterprise solution?

To address key cost drivers that can affect an MES, we recommend a services-based approach to take advantage of technology advancements. This approach eliminates the need for states to build from scratch. COTS-based solutions have made it much easier to obtain effective, proven solutions at more affordable prices. The following are areas in a traditional MES that can drive up costs along with recommendations to mitigate increased costs.

Areas that can drive up costs:

- Excessively long system implementations
- Changing scope from the RFP, which can cause differences between estimated and actual costs
- Requirements that focus on past needs and market philosophies, rather than requirements that are forward looking and anticipate future needs
- Changing the system to meet today's requirements takes more time and money and sometimes breaks what was originally built
- Excessive number of deliverables, untimely deliverable review and approval cycles
- State-specific requirements that require customization to the COTS solution

Recommendations to mitigate increased costs include:

- Buy only services and business outcomes instead of costly custom state-owned systems
- Have a core set of service and business outcomes to drive your product configuration
- Limit program-level customizations that add complexities and erode COTS benefits
- Reduce implementation time
- Use COTS to control costs and maximize commercial reuse
- Consider modifying business processes to conform to COTS processes
- Speed of delivery addresses today's requirements
- Leverage modularity to create flexibility and maximize competition
- Require only deliverables that provide important value to the project

4.2.34 Using your Medicaid Enterprise solution as an example, what guidelines do you recommend for "phasing in" your modules and/or services? How do these guidelines maximize efficiency and/or minimize risk? What constraints would they place on DDI partners and BMS?

Risk reduction in a MES implementation is a key element of a successful project. One of the most effective methods of reducing risk while gaining operational benefit is to phase system components into the enterprise in a logical order and over a reasonable period.

A modern system can be easily segmented into precursor and successor modules. Each module will likely carry common components. These are framework components that each vendor uses, which promote interoperability and provide an abstraction layer, enabling modules to communicate with the legacy system components as well as other vendors modules.

The first module that should be implemented is the provider enrollment and maintenance module. This module represents a cornerstone of data within any MES and is the system of record (SOR) for provider data. Depending on the scope of the provider module implementation, it may include core components that will enable implementation of future modules; components such as the interoperability layers, provider portals, contact center capabilities, inbound mail room, outbound fulfillment, and enrollment appeals. When the provider portals have been enabled, a common user experience platform will be established where most, if not all, Medicaid services will be available from one place. Provider data is also a foundational component of any other data conversion effort. Establishing a reliable and clean SOR for provider data will accelerate conversion efforts in claims and prior authorization. Integrations will need to be made to other modules (legacy MMIS or other vendor components) that require provider data or that will support the data needs of the provider module, specifically the Provider Portal.

As the provider module is being implemented, a determination needs to be made if member data needs to persist in the solution. If so the next component to be deployed would be member supporting modules, which will serve as a source of truth for other components within the MES.

Following the deployment of the provider and member components, other components can be phased in. The next logical module is prior authorization and utilization management. Prior authorization and utilization management generally requires data stores of both provider and member data to perform its authorization functions properly.

EDI capabilities should be fully enabled no less than three months before the scheduled claims go-live. This will allow sufficient time for submitting providers to migrate to the payer. During the post-EDI transfer and before claims go-live, EDI transactions will be forwarded to the legacy operating environment.

The final modules that can and should be deployed concurrently are claims and financial. These two modules will build on the previously deployed modules, leveraging the stable operations of those modules and enabling the vendor to focus 100 percent of their attention on the proper adjudication and payment of claims.

The sequence of deployments establishes an MES operating environment where risk to the whole is minimized. In addition, by taking this approach, the State has a built-in fallback plan if one of the module deployments do not go according to plan. We can simply revert to the prior solution because it will still be available.

The primary constraint that would exist for DDI partners and BMS would be that of data integration with legacy systems and environments. As each module is implemented, data will need to be integrated with the legacy systems so it can continue to provide data for those systems to function. There will likely need to be additional interfaces created that will pull data from legacy systems for proper operations, for example, a provider portal will likely need direct data entry of medical claims; these Web-entered claims will need to be transferred to the legacy claims system, likely by generating a compliant x12 837I/P/D. Similarly, Web service calls or APIs to the legacy system would be required for the portal to present claims status to inquiring physicians.

An additional constraint would center on interoperability between multiple vendors or DDI partners. If there are multiple partners delivering on the various components, you will need to manage your integrations carefully to make sure each partner is delivering on the scope required by the State and on a timeline that supports the overall enterprise delivery schedule.

In a multi-vendor structure, we recommend connecting the Enterprise Service Bus (ESB) to an integration layer rather than having application components connect and communicate directly. We accomplish this through our OIL, which allows us to couple the various COTS and SaaS

components loosely but seamlessly into a stable, flexible, and resilient solution. ESBs promote the interoperability CMS seeks to advance across the Medicaid enterprise. Additionally, ESBs encourage modular components. By connecting components using an integration layer method, we have achieved compliance with CMS' modularity and interoperability principles through ground-up design.

4.2.35 What do you believe would be the optimum duration and the minimum duration for DDI of your Medicaid Enterprise solution?

This would depend on the module or suite of modules procured and implemented concurrently. Factors to consider include:

- Availability of State resources to participate in requirement validation, reviews, and testing: If there are several modules from several vendors being managed concurrently, the calendar needs to include enough time for State resource demands for each module.
- The number of modules from one vendor being implemented concurrently: Multiple modules provide economy of scale in some areas, but also put more demand on vendor staff for specialized tasks. A vendor should be able to deliver one module in 16 to 24 months, but more modules would mean more time.

For a concurrent multi-module implementation, the optimum duration would be 24 to 30 months.

4.2.36 List and describe the documentation developed by your company and/or the state Medicaid agency that is essential to DDI and operations of your Medicaid Enterprise solution.

In a typical MES DDI project, we are asked for, and as a best practice prepare, detailed plans for each phase and process.

States often ask for many deliverables, adding excess work for the vendor to create and the state to approve and review, adding cost and time to the implementation. Consider limiting the number of deliverables, allowing focus to remain on the system configuration during implementation. For example, rather than many sub-plans for the Project Management Plan (PMP), request that there be chapters in the PMP for communication management, conversion management, and so on, rather than full plans for each topic. Similarly, combining the Disaster Recovery and Business Continuity plans into one document streamlines tasks and removes extra approval and review cycles for the State.

The following list contains suggested deliverables:

- Project Management Plan (PMP) with chapters describing:
  - Certification management
  - Change management
  - Communication management
  - Configuration management
  - Conversion management
  - Data management
  - Incident management
  - Integration
  - Release management
  - Staffing management

  - Training
- Disaster Recovery and Business Continuity
- Implementation Plan
- Test Plan, including test cases and scenarios as well as test results
- System Security Plan (SSP)

Typically, we are asked to provide a Turnover Plan during DDI. This adds extra tasks to the implementation for the state and the vendor for creation, review, and approval. Consider eliminating this requirement during DDI and make the Turnover Plan first draft due late in the contract period. This allows BMS and the vendor to focus on those items really needed during DDI.

We prepare a Deliverable Tracker for each project, whether requested by the State or not. This helps us keep deliverables on time based on the contract.

For each project, we prepare and present a detailed Project Work Plan. We use Microsoft Project to develop this plan that details each task, deliverable, milestone, and resource with designated dependencies for each. A viable work plan provides a step-by-step blueprint to accomplishment of individual tasks, integrating those tasks to understand critical path and key inter-relationships to verify overall project success.

We prepare a Requirements Traceability Matrix (RTM) for each project as well. We maintain this in ALM unless the State specifies otherwise.

System documentation that we typically provide includes the following:

- Detailed System Design (DSD)
- Conceptual/Logical Data Model
- Interface Control Document (ICD) for each interface in the solution

However, for a SaaS solution, a DSD is not required. We also typically are asked to provide detailed status meeting agenda and minutes. We also provide a status report at the interval the State specifies. This can be weekly or monthly, depending on the State's business needs.

4.2.37 Detail how your Medicaid Enterprise solution could support BMS in improving data analytics and reporting capabilities, data sharing initiatives, and overall confidence in health data.

Our knowledge of the DHHR data environment provide us important insight on how to make your data analytics and reporting platform finally meet your BMS and enterprise vision. Our MES self-service business intelligence platform makes creating, publishing, and sharing reports/dashboards more streamlined and allows for data discovery and exploration with shorter data-to-insight cycles. The platform capabilities encourage, enable, and empower authorized users with analytical awareness to efficiently move from data to information to knowledge. With our single-source-of-truth platform, the State can foster a collaborative business intelligence and reporting culture, whereby key stakeholders can derive, for example, retrospective and prospective insights on population characteristics and identify members who are at high risk for a condition deterioration and adverse events.

We offer a comprehensive and flexible ad hoc reporting capability with fine-grained access control and a metadata layer to support users of all skill levels. Tools like Power BI can support the most advanced users, such as code developers and those who use machine learning libraries while also supporting business users without advanced SQL skills. To provision the

best cloud baseline, our recommendation is for BMS to include requirements around volume and types of data, business use cases, method and frequency of reports availability and refresh for ad hoc reports, number and types of users, and report response time expectations.

The solution should accommodate your market and its various plans, services, and populations through an extensive data model that enables multi-dimensional analyses. It should also provide flexibility to further configure the model to offer greater tailored views to your classifications as they expand. Our solution's data intake and aggregation abilities help conform data structures and views, either virtually or materially, to the capabilities of our provided user tools and to those your users may bring on their own.

Optum recommends an environment for complex statistical analyses that is secure and supports data export. Platforms like Snowflake inherently allow for creating sandboxes without duplicating data. All data remains secure. Users can use the built-in features of Snowflake worksheets or machine learning (ML) and Power BI for data science activities. Data sharing is multi-directional, so your users can also bring in data from external sources and use as though the data is in the same location as your production reporting data. This is a huge advantage because the pre-cloud paradigm requires multiple extract and load steps, some involving administrators. Empowered to access and use data from many sources, your authorized advanced users can easily create new hybrid data views to meet their analytic and reporting goals. Our platform allows BMS and other Bureaus to self-administer user data sharing access and avoid complex and costly data integration processes.

4.2.38 Describe or illustrate your data visualization capabilities.

We have extensive experience in developing and maintaining data visualization and presentation capabilities. With a cloud offering, it is possible to extend data visualization from the report and application user level to the data sharing and data science user level. In the new paradigm of published data quality standards, user accessible data governance assets and self-service data shopping, data visualization takes on an important role in data management, exploration, and advanced data modeling. In today's solutions, users expect to see data represented in appropriate and meaningful graphs, charts, plots, and maps.

It is important to maintain the traditional role of data visualization for report consumers. These users have become accustomed to seeing data presented appropriate to the subject matter and data set at hand. For example, for geographical data, users must see maps at the appropriate level. For percentages of the whole with high cardinality, pie charts are easy to understand. It is our experience that COTS tools with a high maturity level are essential for providing the widest possible range of data visualization tools, offering all the popular and expected graph, chart, plot, and map types, together with wizards that assist users in choosing and filtering the represented data. In the cloud, we have found Microsoft Power BI to be highly suitable for this need.

The business intelligence platform should provide expansive visual analytics for users at every level of the organization and through any portal and device. The publishing features of the business intelligence platform should enable collaboration with a wide array of business entities across the various digital interfaces used by BMS and stakeholders.

Report content (dashboards and reports) hosted in cloud-based modern business intelligence platforms, such as Power BI, can enable sharing with the state decision makers, business partners, providers, members, and the public. These modern platforms can target reporting specially formatted for laptops, tablets, and handheld mobile devices.

Reporting portals for these platforms support intuitive searching, filtering, and sorting capabilities of report content enabling users to quickly find the related data, recognize patterns

within the data, and access facts and verify decisions faster. These platforms also support integrated authentication options (single sign-on, multi-factor authentication, and more), which provide users with secure and seamless access and platform administrators with access control at the role level. Figure 12 and Figure 13 provide an illustration of the types of visualizations we provide.

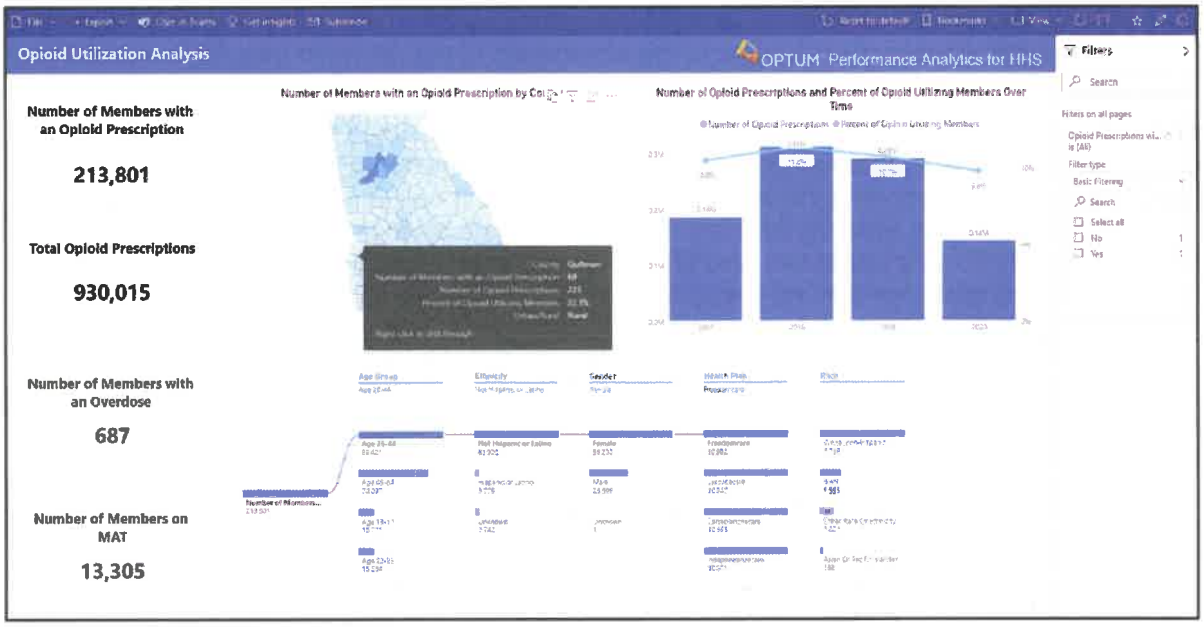

Figure 12: Sample Visualization from Optum Analytics Solution.
This is a sample of an Opioid Utilization dashboard from a member point of view.

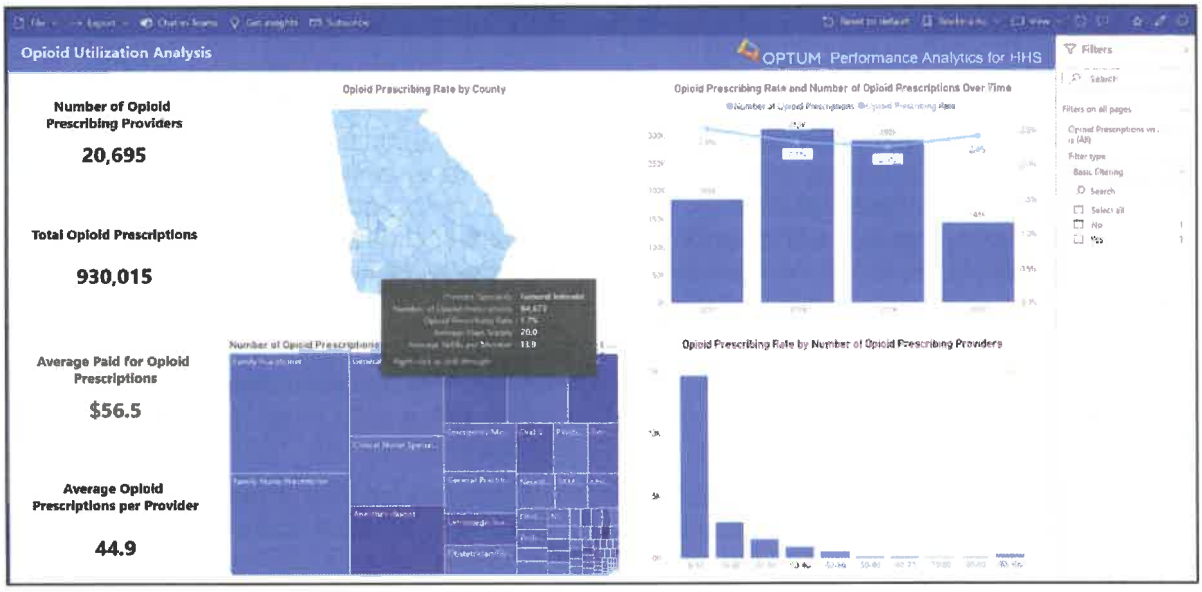

Figure 13: Sample Visualization from Optum Analytics Solution.
This is a sample of an Opioid Utilization dashboard from a provider point of view.

Cloud-native data management tools offer data visualization tools packaged as services, and we recommend training your users on them. Whether your users are going to explore data in a free form manner in the database or pull one of your curated published data sets, viewing this data using a native visualization tool (a bar graph) will provide users knowledge that normally would be a product of downstream preparation and viewing. Using the cloud-native data management embedded visualization tools, your users become more adept and can more quickly assess the suitability of the data they aim to use.

The modern MES data ecosystem demands involvement by data analysts and data scientists. In our experience, no matter how carefully our clients define reports and data sources, there is always something new that comes up that either demands changes to reports or modifications to data extracts, analytics, and/or models. As more clients are involving data scientists and modelers, it is necessary to extend data visualization libraries out to Python, JavaScript, and other development environments. One of the benefits in working with Optum is we are a health and human services company that employs these skills to assist our customers. We recommend that you specifically identify such needs in your RFP and document the specific tools in use in your procurement library.

4.2.39 How does your Medicaid Enterprise solution improve the coordination of care, detect and prevent fraud, waste, and abuse to support Medicaid program integrity, and improve stakeholder access to state Medicaid Enterprise data?

Our teams bring innovative and creative thinking as we serve health industry partners and help solve health system challenges in access, quality, experience, and cost.

Fraud is collusive and complex, requiring multiple data mining methodologies for detection. Optum FADS provides a broad range of program integrity capabilities, including Web-based statistical analytics, focused analytics, predictive models, reports with visualization as well as data for further analysis and case management. FADS reviews your provider, member, claims, and managed care or encounter data with these different methodologies to classify individual members or providers and detect aberrant behaviors for review, follow-up, and corrective action. Figure 14 depicts the Optum MES for coordination of care and for detecting and preventing fraud, waste, and abuse to support Medicaid program integrity.

Figure 14: Optum FADS.
Optum FADS provides a comprehensive solution.

This solution includes the following:

- **Peer Group Profiling (statistical analytics):** Outlier behaviors are detected within the provider or member population when compared to a peer group who should be behaving similarly. Peer group profiling has undergone a technology upgrade. The modernized Web pages include drag and drop, multi-select, auto search, and are compatible with today's Web browsers. The outcome of a statistical study can provide insight for developing focused analytics or models.
- **Focused Analytics:** Comprehensive strategies detect suspect intra-claim and cross-claim situations and complex or collusive health care fraud, waste, and abuse. Focused analytics/algorithms provide a valuable function by monitoring known fraud, waste, and abuse on a schedule. The reports are easy to use.
- **Predictive Lead Scoring:** This model scores professional services claims providing line-level risk scores and supporting data available to reviewers.
- **Optum Symmetry Episode Treatment Groups (ETGs):** ETGs provide a valuable unit of analysis to measure the utilization of health care services directed toward specific clinical conditions.
- **Provider Activity Spike Detection (Spike):** Spike automatically detects providers who have had large increases (or decreases) in billing activity from one data load to the next.
- **Long Term Care (LTC) Review:** The solution monitors billing activity on behalf of the residents of LTC facilities to overcome the difficulty in tracking claims for other services purported to be rendered for LTC residents.

As part of an implementation, we deploy our library of standard analytics comprised of CMS National Correct Coding Initiative (NCCI) edits for Medicaid practitioner, outpatient, and durable medical equipment (DME), as well as statistical analysis by provider types and member categories of eligibility.

After the implementation, we continue to support your staff with analytical ideas based on new or changing fraud, waste, and abuse schemes with new statistical and focused analytics. The number offered is determined as a part of the contract pricing.

Optum FADS includes configurable user role access options to the application that enables communication and coordination with other stakeholders, such as your Medicaid Fraud Control Unit (MFCU), MCOs, or other third parties. Other features include:

- Business labels throughout the system are configurable, providing data transparency and enabling stress-free training for your staff as they transition to a new system.
- User can select their favorite dashboards on the FADS home page.
- A case management system can be configured to be a multi-tenant, enabling multiple authorized users and user groups to store their cases within FADS independently of each other, with a configurable firewall between the groups to allow update access, inquiry only, or no access to each other's cases. Within each user group, roles are defined to separate group-specific valid values, to display or not display individual browser pages, and to grant access (e.g., read/write or read only) to a case.

FADS has received federal certification in 10 states, allowing these states to receive enhanced federal matching funds for their operations.

Part of improving your program and coordinating your response and recovery of fraud, waste and abuse often involves cross-agency collaboration. Optimal data sharing will provide the information needed to the agencies who need to act. Data warehouse technologies also permit direct data sharing that will give external users access to views or data that they require. Creating an enterprise platform allows each agency to have their own data warehouse while providing data to other external agencies through the direct data share feature. When disparate technologies are used, the enterprise often must rely on data extracts or other less secure technologies.

Care Coordination and Specialized Program Support

We are recognized nationwide for bringing clinical and operational excellence to the communities we serve. States choose Optum to implement innovative strategies to coordinate care, expand access to quality services, improve outcomes, increase efficiencies, and promote recovery.

Fraud, Waste and Abuse Expertise

Optum is a national leader in program integrity services, including fraud, waste, and abuse detection and prevention. We are the largest provider of cost-containment solutions for the country's largest MCOs. For more than 20 years, our health care fraud detection and prevention services and solutions have supported state Medicaid programs.

4.2.40 Describe how your Medicaid Enterprise solution increases access and shared use of data with both the State and other vendors, improves healthcare quality management, and increases automation capabilities.

We manage data for operations, analytics, research, and consulting to hospitals, physicians, health plans, governments, and life sciences companies. In our experience, operating cloud-native solutions allow shared data use without traditional data extract and movement. Targeted shares with interface systems, real-time data access for business operations, near real-time snapshots for reporting and analytics, and curated publication of data sets to approved consumers are possible using a single copy of your data accessed by secure APIs. Data

maintained in such a manner keeps your ecosystem under control and provides a much clearer target for protection and governance.

To arrive at this state, we recommend checking and reinforcing your data governance goals as necessary, particularly as they pertain to cloud-native solutions. It is necessary to have shared business definitions, an accurate assessment of the quality of your data, and the uniform treatment of your entities across your enterprise.

In planning your MES procurement, it is important to lay out your vision of where the single sources of truth in your data will reside, such as an operational data store, an enterprise data warehouse, or some combination of both. Determine if your enterprise tends to reduce or increase uniformity of your data quality and if you have multiple clashing systems that can benefit from technical and business data governance and master data management work.

Through stated requirements and standards, tell bidders what you need in terms of maintenance and publication of your data. For example:

- How will they publish data and reports that meet your changing needs?
- Will they foster an environment where self-service users can shop for and request data that will suit their needs?
- Will that data be provided in a way that is cloud native and secure?

Optum recognizes and uses these types of requirements and supporting information in RFPs and procurement libraries.

With a foundation of data, analytics, clinical content, and automation, Optum can help BMS reduce administrative costs, meet compliance mandates, improve clinical performance, and transform and automate operations to succeed under managed care, fee-for-service, value-based care, and new payment models.

In addition to operating your MES, you will also want to measure your progress as you go. Ultimately, we recommend that you engage with vendors like Optum who have the capability to support the integration of clinical and claims data with professional analytics and/or certified health care groupers which lead to quality measurements. When coupled with data reflecting social determinants of health, you will be able to make decisions supportable by evidence and aligned with your priorities. When used to promote and support downstream care management, close gaps in health care work streams, and achieve faster assessment of your effectiveness, you have additional opportunities to improve quality and patient outcomes. Having line of sight to actionable and timely data is critical to efficient processes and workflows to allow your regulators, payers, and clinicians to take appropriate steps to address care gaps.

4.2.41 If applicable, how does your Medicaid Enterprise solution improve access to end- users, such as a user's data or access to additional services?

Our mission at Optum is to transform health care and human services through insight and innovation. As we continually upgrade our roadmap and solutions for Medicaid and human services, we build solutions that focus on the consumer and support the integrity of Medicaid system programs and the people they serve. With a product focus, our goal is to continually transform health care and human services through product upgrades and innovations that benefit health care and the Medicaid program. We share our expertise and continued vision by offering a variety of modular systems and data-oriented services, including member, provider, and state Medicaid agent portals as described under Consumer Portals.

To improve user access and security, any MES should provide full support for role-based access control (RBAC)/application-based access control (ABAC). Properly controlled cloud-

based data sharing and APIs are essential as well. Within our solutions, users fall into one or more roles, with each role corresponding to a discrete set of job functions. For a system with significant and complex protected information, each role should include a set of job functions that must be restricted to the systems and data that role requires based on business needs. Our solution uses role membership to control the additional services a user can access, the data they can see, and the actions the user can take on that data.

Components of the solution should also use an RBAC mechanism to govern personnel in the same class by the same set of security policies. Using this approach, you can implement security driven by your requirements and follow a consistent approach to user-based security controls. Next, we describe how our solution enables a consistent user experience which promotes engagement, secure access, and greater insights for consumers and providers alike.

Consumer Portals

Our user-friendly consumer portal, which we refer to in our modular solution as the member portal, provides a wide array of self-service options empowering members to control their own health care. Through our experience with our state customers, our portals can include the following functionalities and features:

- Verify eligibility and benefits, review coverage details, download ID cards, and request a new copy to be mailed or faxed
- Search claims and view prior authorization status
- An interactive provider directory with comprehensive search options
- Electronically file an appeal, grievance, or complaint
- Quick reference guides, interactive help guides, and FAQs
- E-inquiry and Web chat features for asking questions about the state Medicaid program
- Flexible configuration to align Web pages with State branding standards
- Extensive user resources, including configurable links to forms, training modules, external and internal websites
- Manage responsible parties and dependents
- Compliance with Section 508 guidelines, security, and MECT requirements

Provider Portals

Our mature provider self-service portal is an important gateway for the provider community to interact with the State's Medicaid program. This service-based model enables us to provide comprehensive self-service provider services. Our comprehensive and streamlined approach combines the best practices of both the fee-for-service and managed care models. Our portals can provide the following:

- Self-service member eligibility and limit verification inquiry
- Self-service claim submission, claims adjustments, and status inquiry
- Member claims-based medical history data
- View, upload, and download files

- Online request and status access for appeals, reconsiderations, grievances, or complaint
- Self-service Primary Care Case Management (PCCM) member display
- Mobile-responsive Web pages for mobile access
- Access to export data or print in human readable formats
- Powerful self-help option that includes interactive help menu, configurable navigation Web tiles, help bots and integrated user guides
- Compliance with Section 508 guidelines, security, and MECT requirements

As with our other portals, we are continually building innovation and new features into the solution to deliver greater self-service, more service options, and streamlined business processes for the provider community.

4.2.42 How can your Medicaid Enterprise solution help address gaps in health outcomes? Please provide outcomes from other engagements, if applicable.

Our goal is to design simple, effective, and comprehensive solutions that benefit everyone, encourage clear communication, and empower all people to live their healthiest lives. The insights we uncover and connections we make are aimed at expanding access and closing gaps in quality and care for everyone. Our ability to evaluate millions of data points and adapt emerging technologies is improving the health experience. We uncover clinical health disparities and are taking action to minimize their effects on efforts to stay healthy, coordinate care, manage illness, and pay for services. We enable care providers to deliver better care that is coordinated, predictive and, most importantly, personalized, elevating the health of whole populations.

Optum's commitment to health equity has three main components—access, utilization, and outcomes. Each builds on the other to guide us toward a more equitable future and make it a reality today. Challenges include:

- Lack of insurance coverage
- Financial status
- Cultural differences
- Communication hurdles
- Lack of transportation
- Other issues that disproportionately affect underserved communities

These challenges may create obstacles to health equity and result in preventable health disparities. Optum is working toward identifying and breaking down barriers that prevent people from living their healthiest lives.

The following are some examples of Medicaid-specific outcomes of which we have been a part with our state partners:

- Through our EDW analytics and reporting solution, one state identifies newly pregnant women at risk of a poor birth outcome. Outreach to enroll the women in an early, intensive prenatal case management program is leading to healthier babies and mothers. Through Optum tools, the state has also programmed HEDIS measures to track the outcomes of the program for Medicaid/CHIP recipients.

- By turning data into action, one state improved care coordination for infants with suspected hearing loss identified through in-hospital newborn hearing screening. The data-focused solution expedites time to re-screening, diagnosis, and treatment. In addition to the benefits to the child, the fiscal benefit to the state can be up to an estimated $400,000 in educational savings per child (based on national averages).
- Optum has helped support several states in their pandemic response by providing relevant COVID-specific data, maps, and dashboards to identify populations who may be at high risk for contracting COVID-19.
- Our groupers are providing better outcomes in many states. The multiple levels of DRGs currently go from a very granular to a very high-level grouping. With these tools, states can:
  - Describe health status of individuals in a defined population
  - Define primary chronic conditions driving contact with health care
  - Explain an individual's health care utilization and cost
  - Identify individuals who are at risk for higher resource consumption or need for greater care coordination
- Execution, simplification, and cost management are strategic priorities for states and Optum. We help states achieve this by re-engineering processes and through technology and service delivery. We put this priority into action in one state by integrating key information on 3.1 million Medicaid recipients, including approximately 340,000 dual eligible members. The combined data has empowered health plans to understand the complex health needs of members, so they can provide better care coordination and manage costs.

These are just a few of the many ways our solutions can help states have a real impact on health outcomes. We remain committed to addressing gaps in health outcomes in each state we serve.

4.2.43 Describe your experience with payment milestones during the DDI of your Medicaid Enterprise solution. In other DDI projects, were payments tied to deliverables, acceptance criteria, and/or other DDI milestones?

Payment milestones may vary by module procurement. For DDI, each approved payment milestones constitutes a subset of the design, development, testing, implementation, and certification of the module. There is a delicate balance between obtaining acceptable payments and impeding project progress. Payment milestones should be supported by well-defined criteria, agreed upon during contract negotiations. Typically, no more than five to six major payment milestones should be defined for the DDI. Minimum and maximum percentages of the total consideration are based on successful completion of major phases and must be measurable and meaningful. Typically, invoice submissions follow the approved project schedule upon completion of the milestone with client submitting payment of the invoice within 30 calendar days after receiving an approved invoice.

Additionally, to assure full performance of the duties and responsibilities, the client will typically have a final milestone payment in return for final certification.

4.2.44 Do you have a short demonstration of your approach and/or Medicaid Enterprise solution that you would like to present to BMS? If so, please describe the method of presentation for the demonstration and suggestions for who should attend. If BMS wishes to take part in a demonstration, they will reach out to the Respondent for further information.

Optum would appreciate the opportunity to present our capabilities for helping BMS achieve your vision for a more interoperable, streamlined, and secure technical infrastructure. Our capabilities include advanced technology, processes, and modular approaches. We can adapt the presentation to emphasize BMS priorities, needs, and requests to efficiently present information of the highest relevance to you.

The method of presentation for the demonstration is a combination of:

- A presentation to illustrate our approach and details of our capabilities
- Solution demonstrations of Optum modular components
- Subject matter expert discussion and whiteboard sessions

We have recorded some aspects of the demonstration to efficiently show details like data entry, member and provider service, and behind-the-scenes database structuring. Subject matter experts within each demonstrated area will present during the demonstration, with operational support team members performing the demos.

Optum welcomes any BMS staff who would like to participate to attend. The specific staff would depend on the demonstration content. For example, if a demonstration is covering security, certification, and customer service, BMS staff with expertise in those areas would attend.

We recommend more than one session to cover a smaller set of topics, which can be shorter and drill deeper, as opposed to one longer demonstration that covers more areas at a higher level. However, we can accommodate what best fits BMS' schedule and needs.

4.2.45 Is there additional information you would like to share with BMS related to the topics addressed in this RFI?

Optum presents the following areas for your consideration when finalizing your modularity plans.

Limit the Number of Vendors

Optum discovered that MES costs increase when implementing too many modules across too many vendors. By limiting the number of vendors and grouping modules in bundles that complement each other, the State's administrative costs are lowered. With several contracts and vendors, the State is charged duplicative overhead costs for each vendor. Optum recommends limiting the number of vendors to provide efficiency in program administration and allow competition among vendors as CMS requests.

We Recommend

For a successful implementation, we recommend BMS consider:

- Limiting the number of vendors
- Designing a project that includes a phased approach
- Excluding implementation costs from scoring
- Establishing a pre-adjudication solution for claims

Follow a Phased Approach

Phasing in the MES modules reduces the pressure on the State project management staff and the systems integrator. With several modules and multiple vendors, a big bang approach introduces more risk and reduces the ability to roll back to the legacy system if something goes wrong. A phased approach offers BMS benefits that include:

- The ability to identify and resolve issues, and lay the groundwork to avoid the same issue in subsequent modules more readily
- The ability to introduce more quality into each module with time to focus on one module
- The ability of end users to learn one system at a time, rather than needing to learn several new systems at once

We suggest starting with provider management because it is an obvious part of the business to segregate and stand up. Additionally, having the provider network in place makes the transition to a new Claims module more efficient.

Exclude specific Implementation Costs from Scoring

During the evaluation process, the incumbent vendor usually scores better on pricing. This is because they have no implementation costs that a new vendor would incur. A new vendor must consider standing up a facility, recruiting and staffing the project, and building an infrastructure. For fair scoring during evaluation, these costs should be excluded. A focus only on the price for ongoing operations provides a level playing field and a fair comparison of the bidding vendors.

Vendor Qualifications

Allowing commercial experience and experience of similar size and complexity will enable West Virginia to innovate. Because traditional vendors do not want competition, they will try to convince the State to limit competition by suggesting onerous qualifications only they can meet.

Consider a Pre-Adjudication Solution for Claims

Claims processing lacks standardization, which creates provider confusion and abrasion. Inconsistent application of HIPAA, clinical, and state Medicaid-specific requirements is confusing. We recommend West Virginia consider a pre-adjudication solution, such as our Advanced Communication Engine (ACE).

ACE enables health care payers, such as the Medicaid program, to strategically insert more than 250 million clinical editing and analytic rules into their existing EDI workflow. This unique Optum solution is a value-added feature that goes beyond standard data validation. It incorporates clinical edits and analytic rules to help providers validate their claim submission at the earliest point, before entering claims adjudication. ACE sits at the front of the EDI stream to address billing issues before entering the adjudication life cycle while providing a mechanism to collect claims data to reduce time lag and enhance analytic value.

ACE creates a rapid feedback loop that easily integrates with a provider's existing EDI workflows to improve data quality, billing accuracy, and member outcomes. It empowers providers to fix errors or omissions that cause claim denials. Health care payers avoid paying a high price to fix the same problems downstream. Because the platform leverages existing EDI pathways, it achieves exceptionally high provider adoption rates with no change in claims submission workflows. The submission of "clean claims" helps providers get paid quicker, reducing revenue cycles. A solution like ACE would improve provider satisfaction and add consistency to claims processing for West Virginia.

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

State of West Virginia
Centralized Request for Information
Info Technology

Proc Folder:	964162		Reason for Modification:
Doc Description:	REQUEST FOR INFORMATION-MEDICAID ENTERPRISE SYSTEM (MES)		
Proc Type:	Request for Information		
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2021-11-17	2022-01-07 13:30	CRFI 0511 BMS2200000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code:	000000184667				
Vendor Name :	OptumInsight, Inc.				
Address :	11000				
Street :	Optum Circle				
City :	Eden Prairie				
State :	Minnesota	**Country:**	United States of America	**Zip :**	55344
Principal Contact :	Mike Miller				
Vendor Contact Phone:	(508) 308-2085	**Extension:**	N/A		

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

FOR INFORMATION CONTACT THE BUYER
Crystal G Hustead
(304) 558-2402
crystal.g.hustead@wv.gov

Vendor Signature X  **FEIN#** 41-1858498 **DATE** 01/06/2022

ADDITIONAL INFORMATION

REQUEST FOR INFORMATION:

THE WEST VIRGINIA PURCHASING DIVISION IS ISSUING THIS REQUEST FOR INFORMATION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES (DHHR), BUREAU FOR MEDICAL SERVICES (BMS), FOR THE PURPOSE OF GATHERING INFORMATION TO DEVELOP SPECIFICATIONS FOR A MEDICAID ENTERPRISE SYSTEM (MES) MODERNIZATION. INFORMATION PROVIDED WILL ASSIST THE WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES IN DEVELOPING SPECIFICATIONS AND WILL ASSIST IN THE PROCUREMENT PROCESS.

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 FOR THIS SOLICITATION ARE PROHIBITED

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Medicaid Enterprise System (MES) Modular				

Comm Code	Manufacturer	Specification	Model #
93151507			

Extended Description:
Medicaid Enterprise System (MES) Modular

SCHEDULE OF EVENTS

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2021-12-06

	Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130	State of West Virginia Centralized Request for Information Info Technology

Proc Folder:	964162	**Reason for Modification:**
Doc Description:	REQUEST FOR INFORMATION-MEDICAID ENTERPRISE SYSTEM (MES)	ADDENDUM 1 TO PROVIDE ANSWERS TO VENDOR QUESTIONS
Proc Type:	Request for Information	

Date Issued	Solicitation Closes	Solicitation No	Version
2021-12-13	2022-01-07 13:30	CRFI 0511 BMS2200000001	2

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code:	000000184667				
Vendor Name :	OptumInsight, Inc.				
Address :	11000				
Street :	Optum Circle				
City :	Eden Prairie				
State :	Minnesota	**Country :**	United States of America	**Zip :**	55344
Principal Contact :	Mike Miller				
Vendor Contact Phone:	(508) 308-2085	**Extension:**	N/A		

FOR INFORMATION CONTACT THE BUYER
Crystal G Hustead
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Vendor Signature X  **FEIN#** 41-1858498 **DATE** 01/06/2022

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Extended Description:
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SCHEDULE OF EVENTS

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2021-12-06

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: BMS2200000001

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)

[X]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

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

OptumInsight, Inc.
Company

Authorized Signature

1/10/2022
Date

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

Request for Information
CRFI BMS2200000001
Medicaid Enterprise System (MES)

By signing below, I certify that I have reviewed this Request for Information in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this response for review and consideration on behalf of my organization.

OptumInsight, Inc.
(Company)

Mike Miller, Vice President, Business Development
(Representative Name, Title)

Phone: (508) 308-2085 / Fax: (952) 205-4801
(Contact Phone/Fax Number)

January 6, 2022
(Date)