Medicaid Enterprise System (MES) Modernization Assessment

Future State Assessment Summary Report

July 2024
Version: 1.0
Engagement: 330083417
Prepared for: SC Department of Health and Human Services (SCDHHS)

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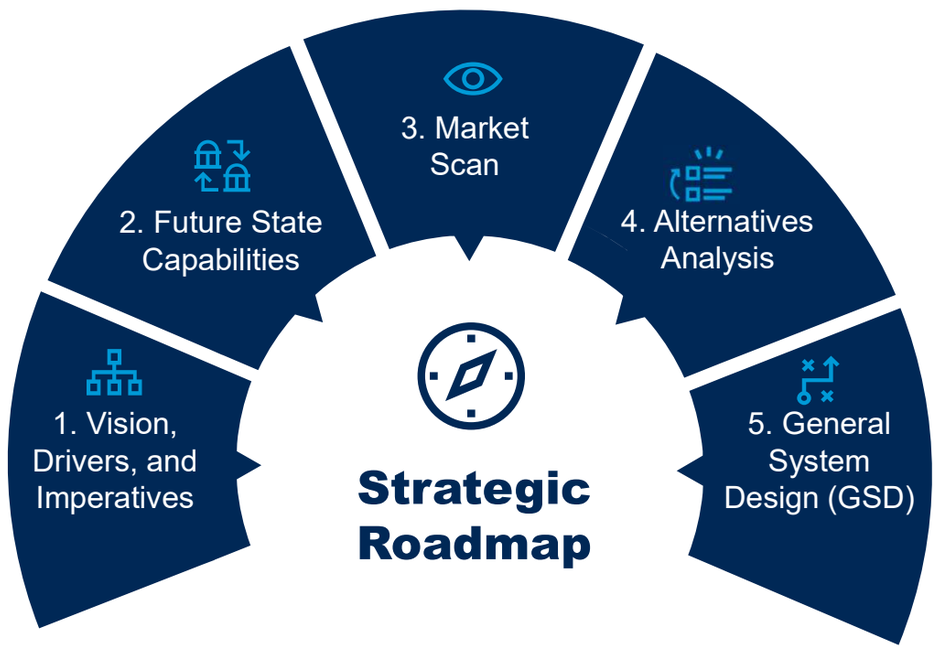
Executive Summary

Executive Summary

Overview

Phase 2 included several work products, summarized below. Collectively, they helped establish the future state vision for SCDHHS, which **will be prioritized and plotted in the strategic roadmap.**



Purpose

- Phase 2 complements and extends the work of Phase 1 which extensively documents the current state processes, technology, and supporting resources.
- Hence **the purpose of Phase 2 is to document a comprehensive vision of SCDHHS' future state MES Modernization.**
- To articulate the future state, **it was essential to capture SCDHHS' goals and objectives**. This helped Gartner **to create the necessary architecture to support the business processes and help SCDHHS understand the options available** for it to pursue its MES Modernization process.
- Phase 2 is an essential part of the project as its a precursor, and directly identifies the activities that need to be prioritized and laid out in the strategic roadmap

This Future State Assessment establishes a vision and the potential transformation of Medicaid systems and business processes

YOU ARE HERE

Ensure project has a solid foundation by establishing **project management processes and controls**, and engaging with key stakeholders

0

Initiate Project (✓)

1

Establish MES Modernization Strategic Context (✓)

Conduct a **current state assessment** to provide SCDHHS with detailed insight into the **technologies, processes, and organization/ staffing for the MES Modernization**

Develop a **Future State Vision** for Medicaid systems and operations and the associated goals and objectives. Identify alternatives for key systems and processes

2

Define Target State Vision and Operating Model

3

Develop Go Forward Strategy and Roadmap

Explore the **alternatives** for achieving the **MES Modernization Vision**. Conduct a gap analysis and develop a **Strategic Roadmap** to achieve the desired future state vision

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The Future State Assessment, established the MES Modernization vision, provided market insights, and outlined the ideal target state

Step 1: Vision, Drivers, and Imperatives

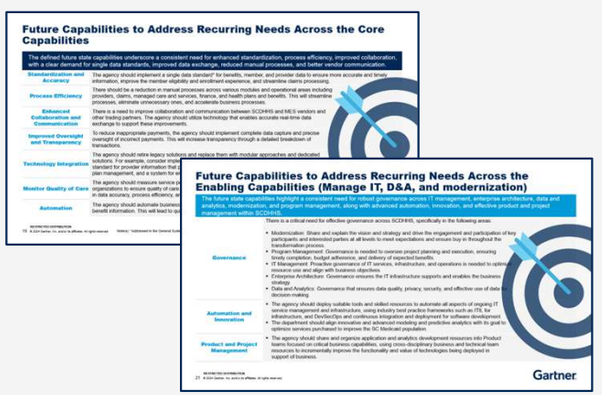
- Agree with SCDHHS leadership on a succinct and unambiguous statement of the future state vision and strategic goals for MES Modernization that will be widely used to communicate the many impacted parties and serve as a benchmark for progress and success during the program's life.
- This work product identifies and documents prioritized decisions, actions, and changes SCDHHS must execute (Imperatives) to successfully accomplish the goals and envisioned future state.

Step 2: Market Scan

- With DASH's support, provide SCDHHS with an overview of the MES market, including solutions, providers, and lessons learned from peer states undergoing modernization initiatives.
- This work product provides SCDHHS with a comprehensive understanding of current market trends and insights into effective solutions implemented by other states. This information will subsequently assist the agency in making informed decisions when selecting a MES vendor in the future.

Step 3: Future State Capabilities

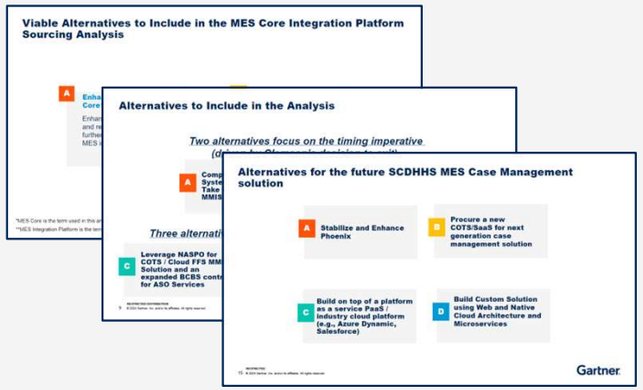
- Using business process information gathered from the Current State Assessment Gartner defined future state high-level data flow diagrams and business processes to support and increase efficiencies in business operations.
- This work product analyzes the business activities needed for future MES Modernization and identifies process improvements, focusing on systematic examination and identification of improvements to processes, with an emphasis on improving data flow, reducing manual processes, and governance, among others.



To inform Phase 3 and achieve the target state, Gartner identified alternative paths and provided a system design blueprint

Step 4: Alternatives Analysis

- Gartner and SCDHHS worked collaboratively to identify viable alternatives for three systems (i.e., MES Core, MMIS, and Phoenix), with the aim of either enhancing or replacing the current setup. A scoring system, based on SCDHHS-approved criteria, was used to evaluate system alternatives followed by strategic recommendations for future operations.
- This work product recommends SCDHHS' optimal path, considering strategic goals and resource usage. It highlights options that best align with SCDHHS' business needs, future vision, and strategy.



Step 5: General Systems Design

- The Generalized System Design (GSD) is a blueprint for the envisioned approach to modernize South Carolina's Medicaid Enterprise Systems. It provides a high-level architectural overview of the infrastructure necessary for the success of the envisioned solutions.
- This work product encompasses the design approach, preferences, and critical best practices that will guide the construction, deployment, ongoing operations, and continuous improvement of the capabilities being developed.

Phase 3: Gap Analysis & Roadmap

- The five work products that make up this Future State Assessment provide a holistic view of the technology and business changes to target in the future state which will inform the development of the Gap Analysis and MES Modernization Strategy and Roadmap.
- Upon completion of the Current State Assessment and Future State Vision, it will be possible to clearly identify gaps that exist between each assessment and provide action plans to address the gaps, dependencies, and any risks.
- The development of a vision, strategy, market research, target capabilities, systems alternatives, and general system design lays a foundation for SCDHHS to create its future goals and milestones and assess its needs for future resources and operational changes that will be defined in the Roadmap.

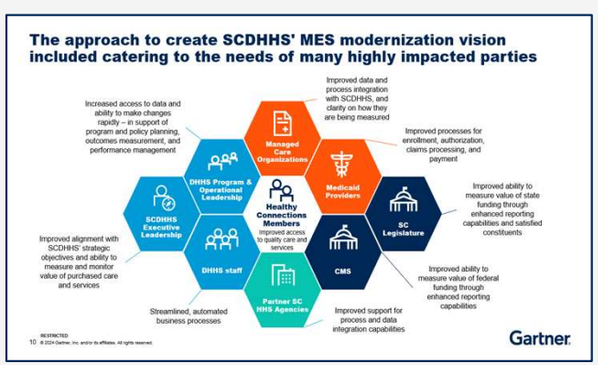
Vision, Drivers, and Imperatives

The Vision, Drivers, and Imperatives mark a clear path toward SCDHHS' future state vision for MES Modernization

Approach & Methodology

Step 1: Discovery

- During the discovery phase of the Current State Assessment, Gartner interviewed key SCDHHS stakeholders to understand their diverse views and priorities for MES Modernization.
- Common themes were identified from the interviews, providing an understanding of shared viewpoints and mutual objectives.
- Based on the information gathered and the agency's strategic goals, SCDHHS was able to articulate its 'North Star' that provides guidance for the MES Modernization journey.

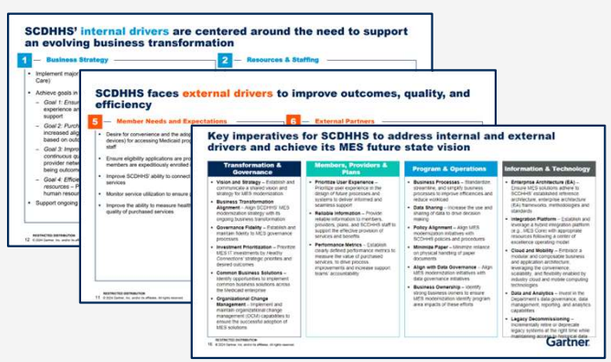


Step 2: Achieve consensus on the MES Modernization Vision and Goals

- The Gartner team held executive and stakeholder workshops to draft a clear vision along with strategic goals for the MES Modernization project. To support this vision, drivers were identified and drafted to understand the internal and external business forces prompting the MES Modernization, providing context for the changes.
- Lastly, we outlined business and technical imperatives, detailing essential actions and technical capabilities required for successful modernization.

Step 3: Establish SCDHHS' Vision, Drivers, and Imperatives

- The finalized vision and drivers establish a clear vision and aligned enterprise governance. This will be important in coordinating decision-making efforts as the agency begins to modernize.
- The imperatives serve as key inputs for analyzing alternatives and will guide the development of the modernization strategy and roadmap.



Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: Future State Vision, Drivers & Imperatives"

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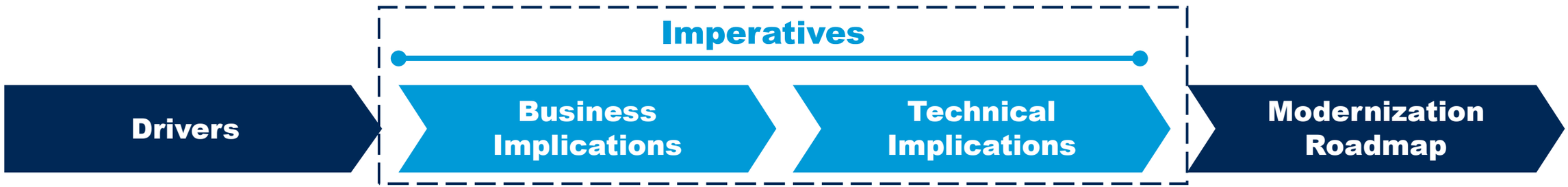
SCDHHS MES Modernization Vision and Goals are to ensure the value of services purchased will improve quality of life for SC

> **Manage *Healthy Connections* using technologies that ensure the maximum value of care and services purchased, with a focus on improving the health and quality of life for South Carolinians.**

Optimize Member Experience	Support Effective Service Delivery	Improve Operational Efficiencies	Provide Data-Driven Insights	Respond to Changing Needs
End-user focused and easily usable technologies that enable a responsive experience for those seeking access to Medicaid care and services	Technologies that improve processes, and provide ability to switch between processes, for member and provider enrollment, prior authorization, claims processing, and payment	Reduce manual efforts and complexity with technologies that accurately model and align with the key business processes and maximize opportunities for automation	Data management, analytics and reporting technologies that extract intelligence and insights, enabling SCDHHS to: ▪ Measure value and quality of services and identify trends to improve performance at each touchpoint ▪ Monitor member access to covered services and resulting health outcomes	Modern, agile technologies that enable SCDHHS to pivot efficiently, aligning administrative and technological resources with evolving DHHS, state and federal needs and requirements

A future state environment must account for *why* SCDHHS needs to embark on a MES Modernization and *what* steps the organization must take to be successful



"Why Are We Doing This?"

These are the **internal and external business forces** that provide both the impetus for system modernization and challenges to its accomplishment.

"What Must We Do to Be Successful"

Imperatives are **prioritized decisions, actions, and changes** SCDHHS must execute on to respond to the drivers and be successful. Imperatives have both **business and technical implications** — tangible outcomes resulting from action related to the imperative.

"How Do We Get There?"

The **identified imperatives become important considerations** for the analysis of alternatives and resultant Modernization Strategy and Roadmap

Drivers and Imperatives guide SCDHHS towards achieving its desired MES Modernization outcomes

The development of the Vision, Drivers, and Imperatives is a highly interactive process where:

- Ideas on future state vision and business forces that provide both the impetus for system modernization and challenges to its accomplishment (drivers) are synthesized from interviews and document review
- Resulting synthesis of vision, goals, and drivers are validated in facilitated focus sessions
- Validated vision and drivers, along with best practices, are used to formulate imperatives, considering both business and technical aspects
- Resulting imperatives are validated and finalized in further facilitated focus sessions

Drivers

SCDHHS' internal drivers are centered around the need to support an evolving business transformation

1. Business Strategy
2. Resources & Staffing
3. Business Processes
4. Technology

SCDHHS faces external drivers to improve outcomes, quality, and efficiency

1. Member Needs and Expectations
2. External Partners
3. Legislative and Regulatory
4. Industry Trends and Best Practices

Imperatives

Key imperatives for SCDHHS to address internal and external drivers and achieve its MES future state vision include:

1. Transformation and Governance
2. Members, Providers, and Plans
3. Program and Operations
4. Information and Technology

Vendor Market Scan & Peer State Scan

The Market Scan included an analysis of other state programs, delivery models, vendor offerings, and trends

Approach & Methodology

Phase 1: Vendor Market

- Gartner used primary and secondary research to conduct a focused vendor market scan of active MMIS vendors and the status of their work supporting state Medicaid agencies' MES Modernization efforts
- Gartner searched the marketplace for vendors offering MMIS or MES products or services and gathered and synthesized publicly available information on these vendors. Gartner developed vendor profiles for these vendors and developed a summary of the MMIS marketplace.
- Sources of information included:
  - Primary research: Gartner research, written responses from vendors, phone calls with vendors, and Medicaid Enterprise Systems Conference (MESC) information.
  - Secondary research: Information that is publicly available (e.g., CMS's Medicaid Enterprise System (MES) Contract Status Report, APDs, annual budgets, RFPs/bid documents, vendor's websites and marketing material etc.)

Phase 2: Peer State Scan

- Gartner used primary and secondary research to conduct a focused state market scan in interviews with states identified by the DASH team.
- DASH, with Gartner's support, performed initial outreach to states via email, with a standard list of questions to be answered in interviews lasting from 30 minutes to 1 hour. DASH and Gartner participated in the interview and Gartner synthesized the information gathered to produce profiles for each of the seven states.
- Sources of information included:
  - Primary research: Gartner research, interviews / phone calls with states, and Medicaid Enterprise Systems Conference (MESC) information.
  - Secondary research: Information that is publicly available (e.g., CMS's Medicaid Enterprise System (MES) Contract Status Report, APDs, annual budgets, RFPs/bid documents, state's websites).

[redacted]

Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: Vendor & Peer State Scan"

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Key vendor and peer state market trends / observations

Vendor Market Trends

Major Industry Trends

- MMIS solutions are transitioning to flexible, cloud-based, data-driven platforms.
- Vendors are using cloud computing and virtualization for scalable infrastructure.
- APIs are enhancing system integration and interoperability.
- Tools are being developed for performance tracking in value-based care models.
- Increasing consumer needs are driving the use of data in healthcare decisions.

Major Vendor Trends

[redacted]

systems.

Peer State Trends

Supporting Legacy MMIS

- States often support legacy MMIS with new technology due to the complexity and cost of full replacement, while aiming to follow CMS modularity guidance.
- States that began their modernization journeys within the last 2-5 years are maintaining current processes while adopting phased procurements.
- States use vendor contracts [redacted] for specific modules to mitigate risk and costs.

Approaches to Modularity

- Modularity approaches focus on subsystems supporting members and providers, with some agencies using integration platforms for seamless module interaction.
- Often, agencies maintain legacy systems while investing in support functions for new modules, such as integration platforms.
- States are transitioning from single-vendor legacy systems to multi-vendor modular systems.
- In a multi-vendor environment, vendor management, data retention, and contract planning are key considerations.

Procurement

- States are considering both NASPO and traditional procurement approaches, but many find NASPO to be too restrictive due to challenges in negotiating state-specific requirements.
- When certain solutions or modules are not available through third-party procurement platforms like GSA, states are open to forming partnerships with other states to meet their needs.

Future State Capabilities

Gartner divided the future state capabilities into foundational and enabling categories to focus on their distinct strategic objectives

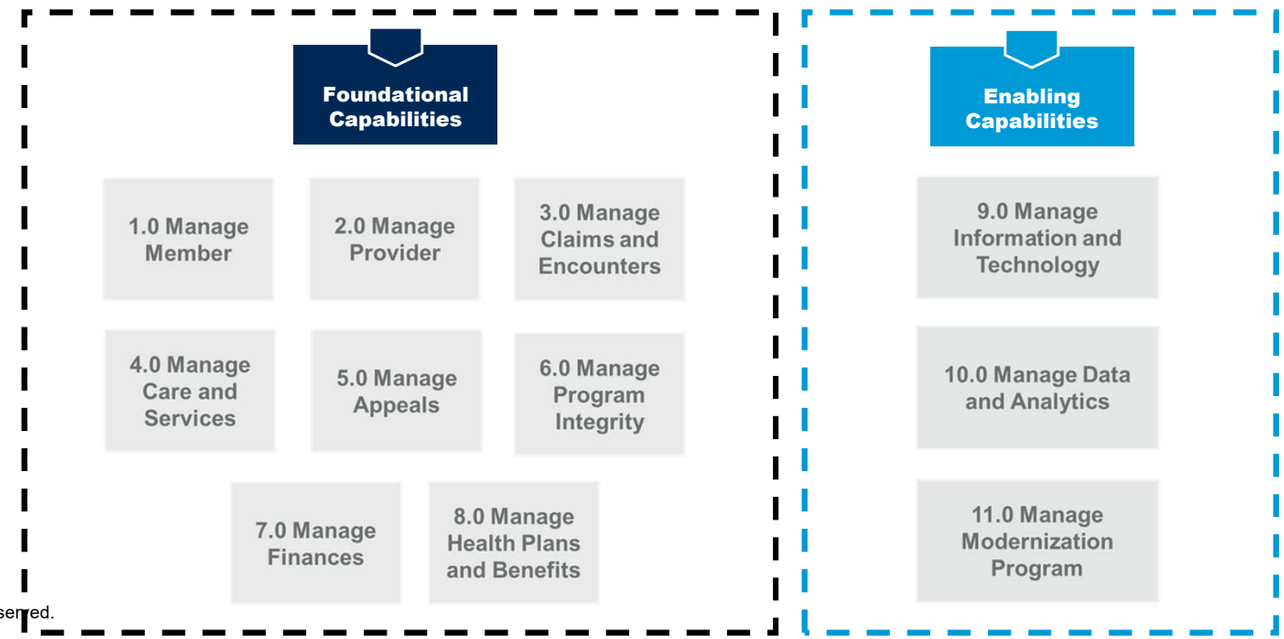
Approach & Methodology

The functional and enabling capabilities, while interconnected, serve distinct strategic objectives within the SCDHHS. This required the application of slightly different approaches in addressing each set of capabilities.

Functional capabilities are the essential operations or services that SCDHHS can perform, which are crucial for its effective operation.

Enabling capabilities are the tools, resources, or conditions that support and enhance functional capabilities. They provide the necessary support or environment for the functional capabilities to operate effectively.

The nuances of these approaches are highlighted in the subsequent sections, as denoted by the marker below.



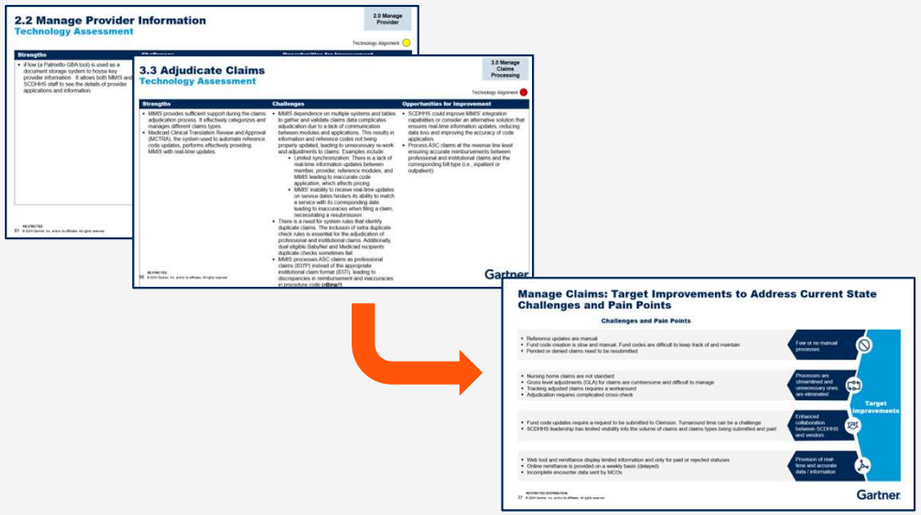
To define the future state capabilities, Gartner focused on addressing the SCDHHS' key current state challenges

Approach & Methodology — Foundational Capabilities

Foundational Capabilities

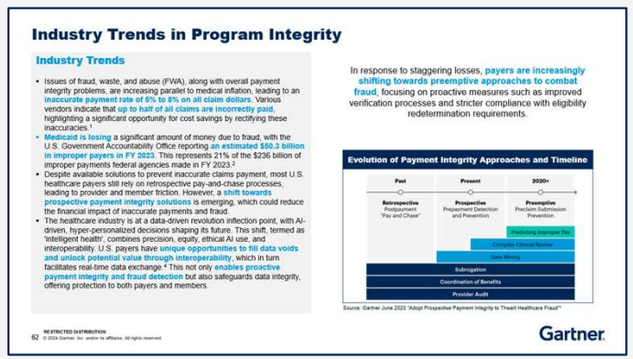
Step 1: Identify targeted improvements to address current state pain points and challenges

- Gartner started by reviewing the Current State Assessment Report and identifying current gaps, pain points, manual solutions, and workarounds.
- Gartner developed a set of target improvements based on current SCDHHS pain points that directly address the Agency's unique challenges to guide the future state.



Step 2: Research industry trends and best practices

- Gartner Research tracks trends in healthcare core admin systems that can be leveraged to identify key functionality for SCDHHS.
- Gartner's experience with previous clients has provided insights into solutions and their effectiveness for Medicaid organizations.
- Gartner also conducted a market scan specific to the needs of this project with state Medicaid agencies and vendors in the space.



Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: Future State Capabilities"

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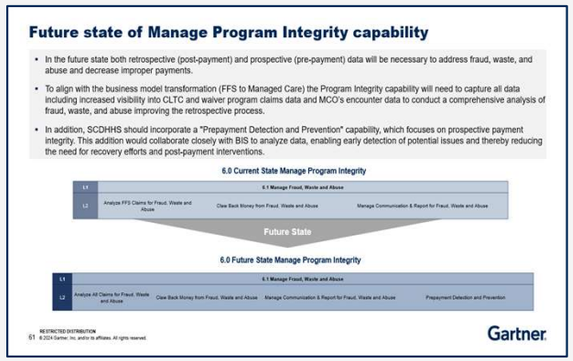
Gartner then leveraged industry trends and best practices to shape a streamlined BCM and inform future state capabilities

Foundational Capabilities

Approach & Methodology — Foundational Capabilities

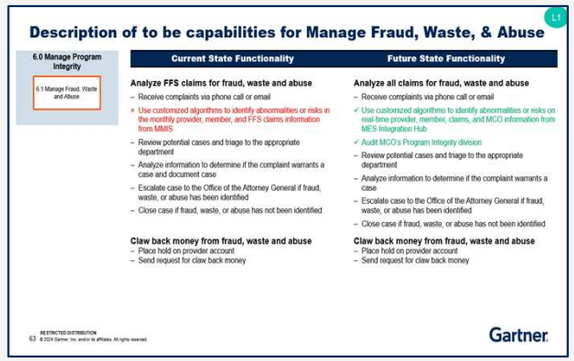
Step 3: Streamline SCDHHS's Medicaid BCM

- Gartner revisited to the Business Capability Model (BCM) it had created in the current state Current State Assessment
- Gartner revised and restructured the BCM at the L0 level to suggest opportunities for SCDHHS to enhance its business capabilities.



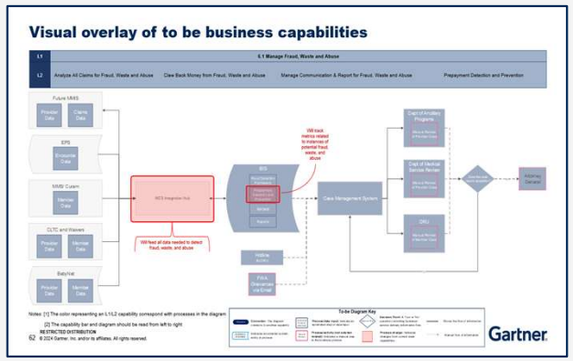
Step 4: Define the Future State Capabilities

- Gartner further elaborated on proposed changes via detailed descriptions of BCM L1 level capabilities.
- These descriptions outline current state functionality and recommended future state functionality, focusing on achieving CMS and state-specific outcomes.



Step 5: Define the Future State Data Flow

- Finally, as part of the envisioned future state, Gartner developed a recommended data flow model at the L0 level to support the future state capabilities.
- These models illustrate a more streamlined interaction between systems and processes, highlighting changes from the current state.



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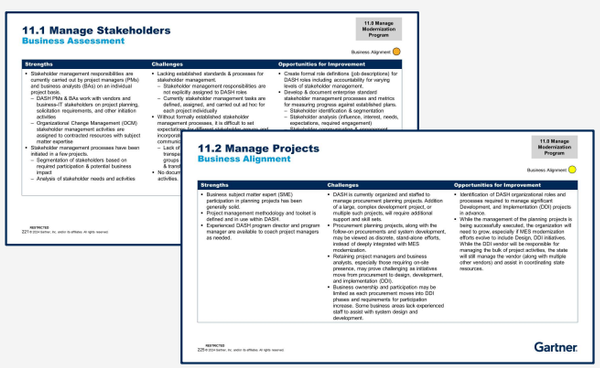
Gartner addressed current challenges by developing best practice models and leveraging Gartner research

Enabling Capabilities

Approach & Methodology — Enabling Capabilities

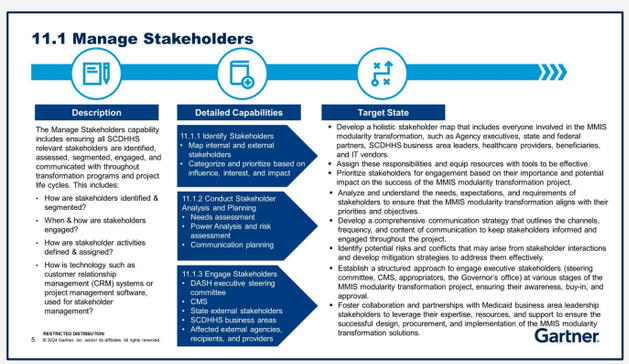
1: Opportunities for improvement identified in the Current State Report

- Gartner identified:
  - Options to address current gaps, pain points, manual solutions, and workarounds.
  - How processes can be improved in the future state.
  - How systems can provide additional or improved support to meet SCDHHS' future needs.



2: Future State

- As part of the envisioned future state, Gartner developed a best practice model for each of the enabling capabilities
- Envisioned changes and target capabilities for the future operating model are described in the future state capability diagrams as highlighted in the example below.



3: Industry trends and best practices

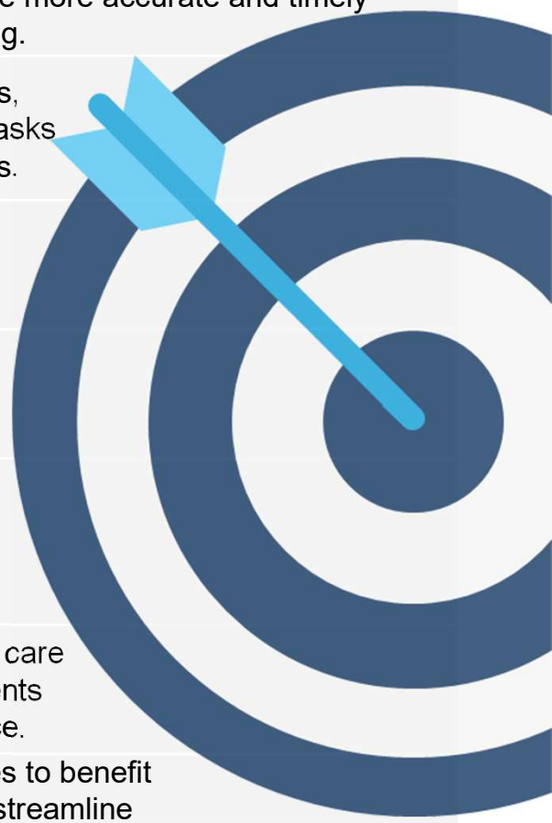
- Gartner research tracks trends in IT best practices that can be leveraged by SCDHHS to help increase IT effectiveness.
- Gartner's experience with previous clients has provided insights into models, approaches and their effectiveness for Medicaid organizations.
- As stated elsewhere in this summary report, Gartner conducted a market scan specific to the needs of this project with state Medicaid agencies and vendors in the space.

Future Foundational Business Capabilities to Address Common Needs

Foundational Capabilities

The defined future state capabilities underscore a consistent need for foundational capabilities, including enhanced standardization, process efficiency, improved collaboration, with a clear demand for single data standards, improved data exchange, reduced manual processes, and better vendor communication.

Standardization and Accuracy	The agency should implement a single data standard* for benefits, member, and provider data to ensure more accurate and timely information, improve the member eligibility and enrollment experience, and streamline claims processing.
Process Efficiency	Manual processes should be reduced across various modules and operational areas including providers, claims, managed care and services, finance, and health plans and benefits. Focusing on refining how tasks are performed will streamline processes, eliminate unnecessary ones, and optimize business processes.
Enhanced Collaboration and Communication	There is a need to improve collaboration and communication between SCDHHS and MES vendors and other trading partners. The agency should utilize technology that enables accurate real-time data exchange to support these improvements.
Improved Oversight and Transparency	To reduce inappropriate payments, the agency should implement complete data capture and comprehensive oversight of incorrect payments. This will increase transparency through a detailed breakdown of transactions.
Technology Integration	The agency should retire legacy solutions and replace them with modular approaches and dedicated solutions. For example, consider implementing an independent provider module as the single data standard for provider information that provides communication, a benefits module for improved benefit plan management, and a system for enhanced automated capitation rate adjustments.
Monitor Quality of Care	The agency should measure service performance and value, as well as monitor provider and managed care organizations to ensure quality of care. This can be achieved more effectively by leveraging improvements in data accuracy, process efficiency, and communication, which in turn improves the member experience.
Automation	The agency should automate end-to-end business processes, such as the appeals process and updates to benefit information, where human intervention is not required. This will expedite enrollment determination and streamline appeals business processes.



Note(s): *Addressed in the General System Design (GSD) as a part of SCDHHS' Data and Analytics Strategy

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Future Enabling Capabilities to Address Common Needs

Enabling Capabilities

The future state capabilities highlight a consistent need for enabling capabilities including robust governance across IT management, enterprise architecture, data and analytics, and program management, along with advanced automation, innovation, and effective analytics product and project management within SCDHHS.

Governance	There is a critical need for effective governance across SCDHHS, specifically in the following areas: ▪ Vision and Objective Alignment: Share and explain the vision and strategy and drive the engagement and participation of key participants and interested parties at all levels to meet expectations and ensure buy-in throughout the transformation process. ▪ Transformation Governance: A formal Governance program is needed to engage executives and business stakeholders to oversee transformation planning and execution, ensure timely completion, monitor budget adherence and deliver expected benefits. ▪ IT Management: Proactive governance of IT services, infrastructure, and operations is needed to optimize resource use and align with business objectives. ▪ Enterprise Architecture: Governance ensures the IT infrastructure supports and enables the business strategy by adhering to architecture standards. ▪ Data and Analytics: Governance that ensures data quality, privacy, security, and effective use of data for decision-making across the solutions delivered by the modernization.
Automation and Innovation	▪ The agency should deploy suitable tools and skilled resources to automate all aspects of ongoing IT service management and infrastructure, using industry best practice frameworks such as information technology infrastructure library (ITIL) for infrastructure, and DevSecOps and continuous integration and deployment for software development. ▪ The department should align innovative and advanced modeling and predictive analytics with its goal to optimize services purchased to improve the SC Medicaid population.
Product and Project Management	▪ The agency should share and organize application and analytics development resources into product teams focused on critical business capabilities, using cross-disciplinary business and technical team resources to incrementally improve the functionality and value of technologies being deployed in support of business processes.

Future Enabling Capabilities to Address Common Needs Cont'd

Enabling Capabilities

The future state capabilities highlight a need for enabling capabilities including effective project management, modern enterprise architecture, clear strategic vision, and efficient vendor management within SCDHHS.

Product and Project Management (cont'd)	▪ The agency should identify project management roles and onboard the appropriate resources to scale DASH appropriately from current procurement planning to the complex development and implementation work that will begin in the next few years. ▪ A standardized project management framework that includes hybrid waterfall/agile standards and a toolkit of preferred templates should be used to define the key processes and guidelines to be followed across all transformation projects for both vendors and project teams.
Enterprise Architecture and Integration	▪ A modern data and analytics architecture should facilitate preferred analytics tools and multi-level self-service, integrated with Data Lakehouse technology. ▪ SCDHHS should define a centralized integration platform and team empowering IT and non-IT personas to integrate across modules, supporting a variety of integration styles, patterns, and technologies to streamline operations.
Organizational Change Strategy and Management	▪ The agency should start with a cohesive change management strategy. Within this strategy, a key component is Business Process Re-Engineering (BPR). This involves defining current business processes and collaborating with solution vendors to develop future state processes. These steps are essential for vendors to design and implement a targeted and effective change management plan.
Vendor Management	▪ Vendor management initiatives should incorporate architectural, solution, and implementation standards into the MMIS procurement process. This will ensure effective management of procurement, contracts, and contract compliance and renewal. ▪ KPIs and SLAs should represent the basis for compliance monitoring activities and should be communicated through weekly or monthly project dashboards.

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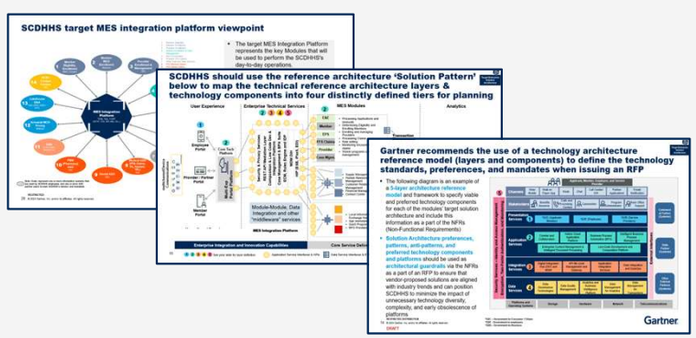
General System Design

Gartner identified key domains, recommendations, and a framework to steer SCDHHS toward its desired systems future state

Approach & Methodology

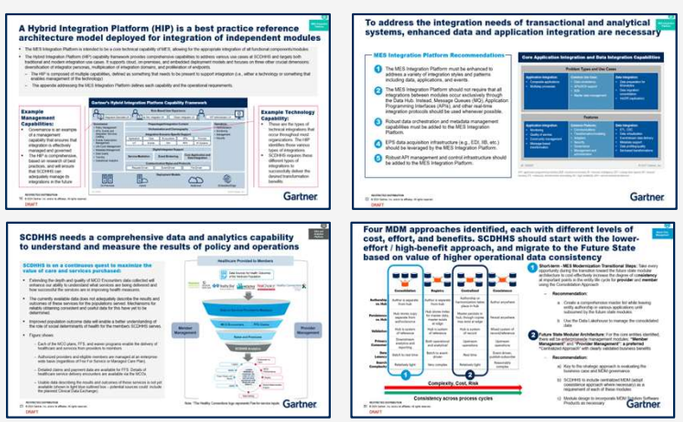
Step 1: Discovery

- The existing SCDHHS Enterprise Architecture (EA) team developed a set of architecture principles and patterns. These guide the selection and implementation of modern technologies and solutions to support the current IT investment evaluation process.
- The Gartner team analyzed SCDHHS's business context, key drivers, current active and completed projects, and industry best practices.
- The team identified three key technology architecture domains that can benefit from a deeper review of available solutions and implementation options in the IT industry.



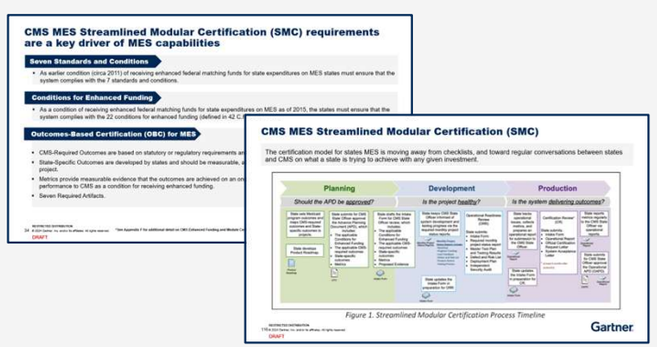
Step 2: GSD Detailed Analysis

- Gartner performed an analysis of the three key technology domains (i.e., MES Integration Capabilities, Strategic Data & Analytics Architecture, and Master Data Management) and crafted draft recommendations for consideration by SCDHHS IT leadership.
- The team analyzed the use of current architecture standards and reference architecture artifacts in guiding and evaluating new solution proposals.
- Reviewed and analyzed existing RFP development activities.



Step 3: Define a Future Blueprint in Adherence with CMS

- To guide the blueprint for MES Modernization Gartner offered a framework of SCDHHS-specific technology and platform "Mandates" and "Preferences" to be incorporated as a part of all new module and solution procurements.
- Finally, as alignment with the CMS enhanced funding and module certification process requirements play a critical role in the success of the overall MES Modernization initiative, all recommendations have been crafted to ensure full compliance with all CMS conditions in both strategy development and execution approach.



Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: General Systems Design"

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The Generalized System Design (GSD) is a blueprint for MES Modernization outlining the design approach, preferences, and key best practices for system development and deployment

- SCDHHS' vision for modernized Medicaid Enterprise Systems (MES) and CMS' direction for Streamlined Modular Certification drives the enterprise architecture approach used to create **the General System Design (GSD). This serves as a reference architecture for MES that helps guide the non-functional requirements of each of the MES modules** being procured.

- The Detailed Analysis Section covers:
  1. A **target MES enterprise reference solution architecture**
  2. A **framework for defining SCDHHS' preferred and mandated technology components** for module procurements
  3. An overview of **the refined MES Integration Platform architecture and technologies**
  4. An overview of a strategic and expanded **enterprise data services (EDS) and data & analytics infrastructure and application environment** to meet the long-term vision of SCDHHS
  5. An overview of the **Master Data Management (MDM) architecture and technology options** to meet SCDHHS needs

- The appendices to the GSD provide additional context and research material in support of the target enterprise solution architecture defined in this draft report.

- The **GSD report will inform the target operating models and the desired future state** MES support capabilities and implementation roadmap.

Major Technology and Architecture Recommendations Themes

01 Use Architecture Reference Models to Enforce Technology Mandates and Preferences via RFPs

1. Establish technology mandates and preferences and include them in module procurements
2. Ensure that these technology mandates and preferences do not inappropriately constrain the vendors' ability to propose creative solutions to the business needs

02 Enhance the MES Integration Capabilities

1. The MES Integration Platform must be enhanced to address a variety of integration styles and patterns including data, application, and event integration
2. Robust data orchestration and metadata management capabilities must be added to the MES Integration Platform.
3. EPS data acquisition infrastructure (e.g., EDI, IIB, etc.) should be leveraged by the MES Integration Platform.

03 Define the Data & Analytics Strategic Architecture and Platform

1. Enable SAS to help maximize the value of care and services purchased, manage plans, fight waste, and produce reports.
2. Include, consolidate, aggregate, and manage essential data from many vital sources to feed diagnostic and predictive analytics models.
3. Implement a Data Lakehouse architecture to organize the data acquired via the MES Integration Platform and deliver via SAS Viya / Power BI.

04 Increase Data Consistency via Application of Master Data Management Architecture and Tools

1. Focus efforts on the consistency of providers and members.
2. During the transition to the future state, improve the ability to manage consistency and provide analytics using a downstream consolidated approach.
3. Move toward a centralized approach as new systems are implemented to provide operational consistency.

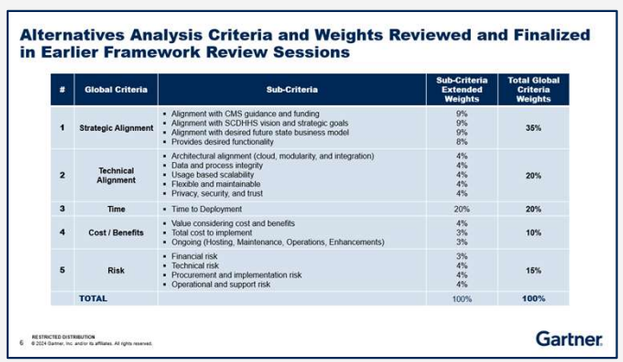
Alternatives Analysis

Through a disciplined analysis, Gartner evaluated alternatives for three systems, recommending the best future path for SCDHHS

Approach & Methodology

Step 1: Establish Evaluation Criteria

- Gartner and SCDHHS established mutually agreed-upon criteria to evaluate the alternatives for all three systems.
- The criteria are specific to SCDHHS and based on its strategic priorities.



Alternatives Analysis Criteria and Weights Reviewed and Finalized in Earlier Framework Review Sessions

#	Global Criteria	Sub-Criteria	Sub-Criteria Extended Weights	Total Global Criteria Weights
1	Strategic Alignment	• Alignment with CMS guidance and funding • Alignment with SCDHHS vision and strategic goals • Alignment with desired future state business model • Provides desired functionality	9% 9% 9% 8%	35%
2	Technical Alignment	• Architectural alignment (cloud, modularity, and integration) • Data and process integrity • Usage based scalability • Flexible and maintainable • Privacy, security, and trust	4% 4% 4% 4% 4%	20%
3	Time	• Time to Deployment	20%	20%
4	Cost / Benefits	• Value considering cost and benefits • Total cost to implement • Ongoing (Hosting, Maintenance, Operations, Enhancements)	4% 3% 3%	10%
5	Risk	• Financial risk • Technical risk • Procurement and implementation risk • Operational and support risk	3% 4% 4% 4%	15%
	TOTAL		100%	100%

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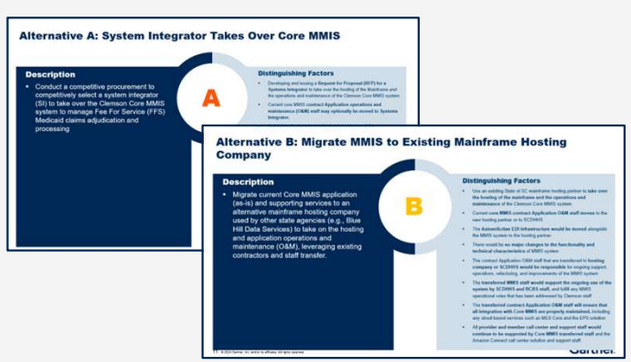
Step 2: Identify and Evaluate Potential Alternatives

- For each system, alternatives were identified for consideration.
- The alternatives were scored based on the criteria and were ranked against each other.
- DASH reviewed the alternatives, their scores, and provided feedback as necessary.



Alternative A: System Integrator Takes Over Core MMIS

Description
- Conduct a competitive procurement to competitively select a system integrator (SI) to take over the Clemson Core MMIS system to manage Fee For Service (FFS) Medicaid claims adjudication and processing

A

Distinguishing Factors
- Developing and issuing a Request for Proposal (RFP) for a Systems Integrator to take over the hosting of the Mainframe and the operations and maintenance of the Clemson Core MMIS system.
- Current core MMIS contract Application Operations and maintenance (O&M) staff may optionally be moved to Systems Integrator.

Alternative B: Migrate MMIS to Existing Mainframe Hosting Company

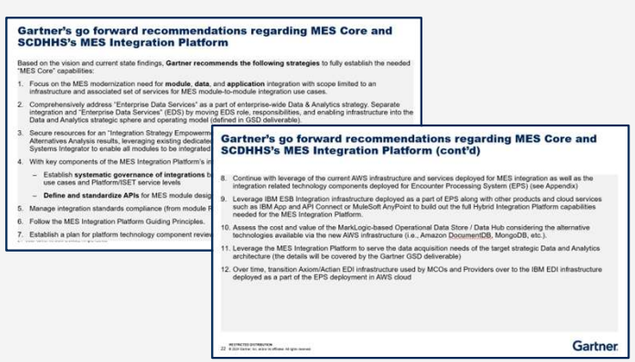
Description
- Migrate current Core MMIS application (as-is) and supporting services to an alternative mainframe hosting company used by other state agencies (e.g., Blue Hill Data Services) to take on the hosting and application operations and maintenance (O&M), leveraging existing contractors and staff transfer.

B

Distinguishing Factors
- Use an existing State of SC mainframe hosting partner to take over the hosting of the mainframe and the operations and maintenance of the Clemson Core MMIS system.
- Current core MMIS contract Application O&M staff moves to the new hosting partner or to SCDHHS
- The AutoAmbulate EDI infrastructure would be moved alongside the MMIS system to the hosting partner
- There would be no major changes to the functionality and technical characteristics of MMIS system
- The contract Application O&M staff that are transferred to hosting company or SCDHHS would be responsible for ongoing support, operations, refactoring, and improvements of the MMIS system
- The transferred MMIS staff would support the ongoing use of the system by SCDHHS and BCBS staff, and fulfill any MMIS operational roles that has been addressed by Clemson staff
- The transferred contract Application O&M staff will ensure that all integration with Core MMIS are properly maintained, including any cloud-based services such as MCS Core and the EPS solution
- All provider and member call center and support staff would continue to be supported by Core MMIS transferred staff and the Amazon Connect call center solution and support staff.

Step 3: Finalize Conclusions

- Based on the outcome of the scores, Gartner provided recommendations on the appropriate path forward for SCDHHS.



Gartner's go forward recommendations regarding MES Core and SCDHHS's MES Integration Platform

Based on the vision and current state findings, **Gartner recommends the following strategies** to fully establish the needed "MES Core" capabilities:

1. Focus on the MES modernization need for **module**, **data**, and **application** integration with scope limited to an infrastructure and associated set of services for MES module-to-module integration use cases.
2. Comprehensively address "Enterprise Data Services" as a part of enterprise-wide Data & Analytics strategy. Separate integration and "Enterprise Data Services" (EDS) by moving EDS role, responsibilities, and enabling infrastructure into the Data and Analytics strategic sphere and operating model (defined in GSD deliverable).
3. Secure resources for an "Integration Strategy Empowerment
Alternatives Analysis results, leveraging existing dedicate
Systems Integrator to enable all modules to be integrated
4. With key components of the MES Integration Platform's in
   - Establish **systematic governance of integrations** b
   use cases and Platform/ISET service levels
   - **Define and standardize APIs** for MES module desig
5. Manage integration standards compliance (from module P
6. Follow the MES Integration Platform Guiding Principles.
7. Establish a plan for platform technology component revie

Gartner's go forward recommendations regarding MES Core and SCDHHS's MES Integration Platform (cont'd)

8. Continue with leverage of the current AWS infrastructure and services deployed for MES integration as well as the integration related technology components deployed for Encounter Processing System (EPS) (see Appendix)
9. Leverage IBM ESB Integration infrastructure deployed as a part of EPS along with other products and cloud services such as IBM App and API Connect or MuleSoft AnyPoint to build out the full Hybrid Integration Platform capabilities needed for the MES Integration Platform.
10. Assess the cost and value of the MarkLogic-based Operational Data Store / Data Hub considering the alternative technologies available via the new AWS infrastructure (i.e., Amazon DocumentDB, MongoDB, etc.).
11. Leverage the MES Integration Platform to serve the data acquisition needs of the target strategic Data and Analytics architecture (the details will be covered by the Gartner OSD deliverable)
12. Over time, transition Axiom/Actian EDI infrastructure used by MCOs and Providers over to the IBM EDI infrastructure deployed as a part of the EPS deployment in AWS cloud

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Highlights from MES Core Alternatives Analysis

For the MES Core Alternatives Analysis, two alternatives were identified and evaluated for SCDHHS to move forward with an integration platform to support its business modules.

MES Core Alternatives include:

A. Enhance the Existing MES Core Approach

B. Procure for a System Integrator (SI) to Support the MES Integration Platform

- Before the alternatives were identified and scored, Gartner provided an analysis of the MES Integration Platform Strategy and the Technology and Resourcing Approach to support it.
- Gartner provided recommendations on the MES Integration Platform approach, guiding principles, integration styles, framework, administering team, and governance.
- **Alternative B**: **Procure for a System Integrator to Support the MES Integration Platform scored higher** than Alternative A and was Gartner's recommendation for SCDHHS.

Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: Alternatives Analysis – MES Core". There are two documents for MES Core one provides the final analysis and the other additional context.

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Highlights from MMIS Alternatives Analysis

The MMIS Alternatives Analysis considered five alternatives for replacing SCDHHS's current MMIS system that is administered by Clemson University. The five options were scored based on criteria agreed on between SCDHHS and Gartner.

MMIS Alternatives include:

A. System Integrator to Take Over Clemson MMIS for FFS Claims

B. Migrate Clemson MMIS to an Existing State Mainframe Hosting Services Company for FFS Claims

C. Leverage NASPO for COTS/Cloud Solution and BCBS for ASO Services

D. Traditional Procurement for COTS/Cloud FFS MMIS Solution and ASO Services

E. Leverage a State Consortium for a COTS/Cloud Medicaid MMIS Solution and Procure for ASO Services

Alternatives Analysis Scoring Results:

- Alternatives A and B were identified as stronger options for SCDHHS to consider if it needs to move quickly. That is, they provided a considerably faster timeline for implementation compared to the other three alternatives. Gartner conducted an analysis and validated it with SCDHHS stakeholders. The highest-scored alternative is **Alternative B: Migrate MMIS to a Hosting Company.** This alternative scored better in Gartner's model.
- Alternatives C, D, and E were identified as better strategic options for SCDHHS. Of those three, Gartner recommended **Alternative C: Leverage NASPO for a COTS/Cloud Solution and BCBS for ASO Services**. This alternative **scored best** overall in Gartner's model.

Note: For the comprehensive report see "Medicaid Enterprise System (MES) Modernization Assessment: Alternatives Analysis – MMIS"

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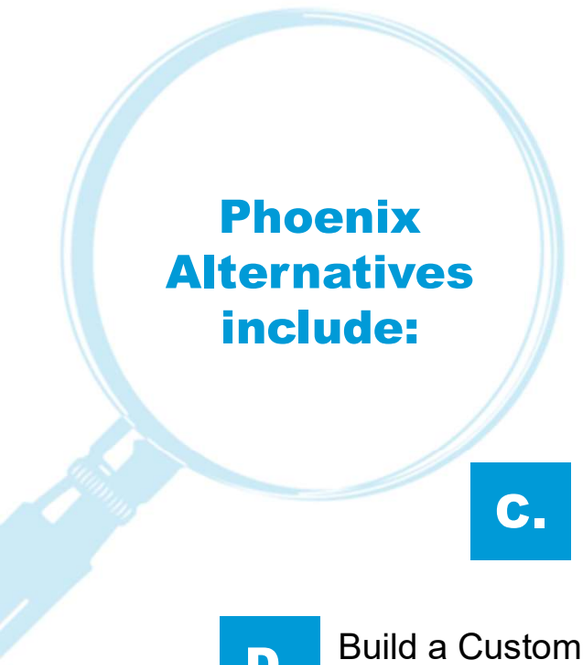
Highlights from Phoenix Alternatives Analysis

For the Phoenix case management system, four alternatives were identified as options for SCDHHS. The four options were scored based on criteria agreed on between SCDHHS and Gartner.



Phoenix Alternatives include:

A. Establish and Enhance Phoenix

B. Procure for a new COTS/SaaS Solution

C. Build on a PaaS/Industry Cloud Platform

D. Build a Custom Solution Using Web and Native Cloud Architecture and Microservices

Alternatives Analysis Scoring Results:

- Based on the mutually agreed upon criteria established between Gartner and SCDHHS, **Alternative A scored best**.
- Gartner conducted an analysis and validated it with SCDHHS stakeholders. The highest-scored alternative is to enhance Phoenix system and continue to de-risk it. Enhancing the existing system provided SCDHHS with some key advantages including cost savings, desired functionality, and allowing SCDHHS to prioritize efforts for other procurements.

Note: For the comprehensive report see “Medicaid Enterprise System (MES) Modernization Assessment: Alternatives Analysis – Phoenix System”

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