

Systems Integration & Interoperability

From monolithic to modular

A modernization roadmap for
state Medicaid agencies





The evolving needs of Medicaid

According to global management consulting firm McKinsey & Company, the expectations and needs of state Medicaid agencies are evolving, particularly in terms of modernizing technology and operations, improving program oversight, managing costs and addressing social determinants of health. Propelled by new regulations, enhanced funding and improved data availability, state Medicaid agencies are shifting away from monolithic systems in favor of modularity as part of their modernization journeys.¹

To achieve these modular goals, agencies may require significant technology and operational changes, accompanied by effective organizational change management and capability building. Additionally, new entrants—both well-capitalized technology players and investor-backed startups—are actively pursuing opportunities to disrupt traditional business models and win the hearts of Medicaid stakeholders.



Challenges in modernization

These evolving needs and trends present both opportunities and challenges for Medicaid agencies. Modernizing technology to transition states from monolithic, legacy Medicaid Management Information Systems (MMIS) to modular Medicaid Enterprise Systems (MES) presents significant and inherent risks due to the criticality of agencies' business processes.

Thus, it is imperative for states and technology partners to use all the necessary tools and aids to identify, mitigate and minimize potential risks in such

large-scale implementations. It is equally important for states to lay a solid technological foundation for their Medicaid systems to function for many years before they are inevitably replaced by newer technological advancements.

Devising enduring technology solutions that extend the life of Medicaid systems and finding low-risk implementation paths for their modernization projects remain two of the most critical challenges for today's Medicaid agencies.



Modernization journey checklist

As a strategic Medicaid Management partner to more than 29 state clients, we've spoken with senior healthcare leaders and other sector stakeholders about this topic. This checklist provides key strategies for unlocking success in your state's modernization journey.



Address your most significant modularization risk: Mitigate your highest risks by having the system integrator and the Claims, Encounters and Financial module under the same vendor.



Be conscious of the number of module vendors in your new MES: Adopt a pragmatic approach to limit the number of module vendors in your quest to modularize.



Become cloud-agnostic: Unlock new possibilities and avoid cloud vendor lock-in by choosing a solution compatible with any cloud infrastructure.

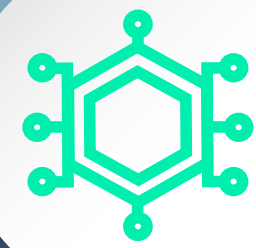


Adopt a true software-as-a-service (SaaS) model: Take advantage of economies of scale by adopting multitenancy that limits the cost of ownership, maintenance and waste.



Develop solutions that align with industry-standard architecture: Promote industry standards for information exchange such as Fast Healthcare Interoperability Resources (FHIR) and electronic data interchange (EDI) while complying with state and federal regulations.

Let's dive into each of these in greater detail.



Addressing the most significant modularization risk

As more and more state agencies embark on modularization journeys, the need for state-specific strategies is becoming increasingly clear and accepted. Similarly, a consensus among state agencies now exists on the role of a systems integrator and the need for systems integration to be the first module onboarded as the foundation of the modernization journey.

However, the elephant in the room is vendor selection and the timing of critical Claims, Encounters and Financial module implementations. Due to their extreme complexity, implementing these modules poses the most significant risk to stakeholders. Therefore, it is recommended states implement these modules as part of the last wave of the modularization journey.

While system integration efforts are technology-heavy implementations, business processes are at the heart of them. Some early-adopting states have made the mistake of selecting implementation partners with limited Medicaid domain expertise and are experiencing the challenges of additional burdens and costs. States should look to experienced implementation partners with profound domain expertise and proven thought leadership to modernize these core Medicaid modules. By choosing a partner that can handle both systems integration and modularization of the Claims, Encounters and Financial module, state agencies reduce much of the risk associated with this complexity and are better equipped to unlock modularization success.





Does the number matter? We hear a resounding “Yes.”

Attempting to implement MES modules using multiple vendors trades the risk of large, monolithic go-lives for the complexities of partnering with vendors with varying maturity levels in business, technical and operational alignment. This can result in the “weakest link” conundrum where successful vendors can be delayed by struggling vendors when there are integration points and dependencies among modules. Costs increase due to prolonged design, development and implementation (DDI) efforts.

Modularization projects inherently involve numerous integration handoffs among implementation vendors, creating many points of failure for business processes. As the number of vendors within the MES modular ecosystem grows, these points of failure increase exponentially, exposing agencies to numerous risk points. While one of the cornerstone objectives of MES modularity is to avoid vendor lock-ins, it would certainly be prudent for states to engage multiple vendors but be cautious in keeping this number to the single digits to avoid any integration delays and failures.



Embrace the power of agnostic cloud platforms

In today's modernization landscape, cloud consumers seek to avoid vendor lock-ins, negotiate prices and adopt new capabilities as they become available from different cloud providers. Thus, a multicloud approach is becoming increasingly popular and a critical advantage for clients in the digital transformation ecosystem.

A key strategy is to consider enterprise-grade agnostic cloud management platforms. These platforms not only enable state agencies to implement their systems on the cloud and move workloads to different cloud platforms, but also offer critical foundational aspects such as security, governance, scalability, reliability and unified management as a one-stop solution for increased operational efficiencies.



Gain flexibility and control with the right cloud architecture

As state agencies digitally transform their Medicaid systems to the cloud, the burning question is whether they need to adopt a single-tenant or multitenant architecture. This is a significantly relevant question for a domain where agencies are required to safeguard their clients' protected health information (PHI) and keep an extremely close watch on their operational costs.

Single-tenant models provide advantages such as superior processing power and better customization, as resources are not shared and clients have more control over their environment.

However, crucial drawbacks include higher costs and lower efficiencies as resources may not always be maximized.

Another critical strategy for state agencies to consider is that SaaS models typically thrive in a multitenant architecture, offering clients varying advantages such as lower costs, advanced efficiencies in resource use and smoother deployments. As the number of tenants grows, multitenancy will also deliver substantial economies of scale to cloud consumers, providing increased flexibility when needed.



Forward-thinking with industry-standard architecture solutions

The Centers for Medicare & Medicaid Services' (CMS) Interoperability Condition requires modular systems to possess seamless coordination and integration across state and federal systems—including eligibility, Medicaid systems, health insurance marketplaces and health information exchanges. Systems must be interoperable with public health agencies, human service programs and community organizations providing outreach and enrollment assistance services. This creates the need to build systems with the appropriate architecture as well as use standardized messaging and communication protocols to exchange data efficiently with other participants in the healthcare ecosystem.

As in the case of legacy MMIS, modularized Medicaid systems will be expected to stand the test of time for an extremely long period. So, it is imperative that a modularized MES has interoperable open standards-based access channels that use web services, APIs, batch interfaces and other emerging concepts as a key strategy for unlocking Medicaid success. This includes using interoperability solutions such as FHIR and EDI that allow each stakeholder to access MES functions using new and widely accepted standards.



Ensuring modularization success for Medicaid programs

Listed below are six critical success factors and takeaways Gainwell has learned from our proven experience in modularity:

- 1)** The utmost risk in the modularization journey is onboarding Claims, Encounters and Financial module. Mitigate this significant risk by selecting the same vendor used for Systems Integration (SI).
- 2)** Avoid the “weakest link” conundrum where successful vendors are delayed by struggling vendors as they work on the integration points and dependencies among modules. Minimize cost and schedule overruns by consciously keeping the number of vendors to the single digits to control such delays.
- 3)** It is important to note while system integration is technology-centric, business processes are at the heart of it. Choose vendors with rich Medicaid domain expertise and thought leadership in modernization for proven results.

- 4) Embrace the idea of moving to agnostic cloud platforms to avoid vendor lock-ins, negotiate prices and, most importantly, adopt new capabilities. These platforms will allow state agencies to implement systems on the cloud and efficiently move workloads to different cloud platforms at will.
- 5) Move to multitenant architecture to enjoy lower costs, higher efficiencies in usage and easier deployments. Reap the benefits of significant economies of scale in a multitenant model.
- 6) Plan for the future by building a modular MES solution that will withstand the test of time. Design systems with the appropriate architecture and promote the use of industry standards for information exchange, such as FHIR and EDI, to comply with state and federal regulations.





Unlock key outcomes with solutions built on experience

Systems integration has long been a crucial component of Gainwell's proven suite of solutions. Our modular intelligent integration platform is a cloud-based, SaaS solution born from our deep Medicaid expertise and lessons learned from past implementations to address key Medicaid needs. It provides state agencies an agile, modern and interoperable standards-based platform to help transform legacy MMIS and integrate new MES modules. As a cloud-agnostic solution, it allows states to deploy workloads on any cloud platform, providing superior user performance and the flexibility to change platforms without the disadvantages of vendor lock-in.

As a highly configurable solution that uses industry-standard architecture, our integration platform minimizes coding changes while supporting state-specific business rules and interoperability with other modules. With the close integration of Gainwell's robust Claims, Encounters and Financials solution with Systems Integration, the implementation timeline is exponentially reduced when the two solutions are procured together. This approach can also significantly reduce the risk associated with the most complex integration within the modernization roadmap.



With a well-planned and forward-looking approach to modularization and modernization, state agencies can discover the flexibility they need to navigate change, manage costs and gain efficiency. It's a journey that can lead to business outcomes that contribute to healthier communities.

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Sources

¹ <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/five-trends-shaping-the-future-of-medicaid>

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