

Modernizing Medicaid

An Outcomes-Based Roadmap



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Healthcare is changing, and Medicaid is at the center of this transformation. With nearly 60 years of history, the program has adapted and expanded in response to changing beneficiary needs, the evolution of care delivery and payment models, and the availability of new technologies.

These advancements reflect a collective commitment among the program's stakeholders to protect and strengthen the healthcare safety net for the millions of Americans who rely on it. They also necessitate new ways of thinking and adapting technology to support the dynamic nature of public health in the digital age.



The Journey of Innovation

Medicaid modernization is not a new concept. From early efforts to streamline eligibility and claims processing to more recent initiatives promoting modularity and interoperability, the federal government, states and private sector partners have continuously pursued new ways to improve the administration and delivery of health and human services.

Figure 1: Federal Efforts Driving Modernization

Medicaid Information Technology Architecture (MITA) 2.0 (2006)	Seven Standards and Conditions ¹ (2012)	Medicaid Information Technology Architecture (MITA) 3.0 ² (2012)	State Medicaid Director Letters #16-004 and #16-010 (2015/2016)
Expert/industry-recommended approaches to improving the business, information and technical architecture of a Medicaid program structure and supporting systems.	Outlines requirements for enhanced federal match funding for Medicaid technology investments and supports the development and deployment of modernization initiatives.	Laid the foundation for Medicaid enterprise transformation through modularity, interoperability and the adoption of standards to create more efficient and flexible Medicaid IT systems.	CMS-stated objectives to modernize Medicaid systems through modularity, promoting reuse, greater flexibility and cost savings as key drivers.

The Centers for Medicare and Medicaid Services’ (CMS) ideology around modernizing Medicaid technologies and business operations has evolved in recent decades. Since MITA 2.0, which framed recommended Medicaid business, information and technology architectures, the thinking has progressed to more direct expectations of Medicaid system technology and process maturity and evolution.

As of late, modularity has been a common thread across CMS’ modernization efforts. The idea is that dividing complex Medicaid management systems into separate, scalable components that address specific business functions can afford states greater cost savings, flexibility, vendor diversity and efficiency within their programs.

¹ [Enhanced Funding Requirements: Seven Conditions and Standards. Department of Health and Human Services, Centers for Medicare and Medicaid Services.](#)

² [Medicaid Information Technology Architecture Framework.](#)

In response to this notion, early adopters of modularity acted swiftly to modularize their systems and pursue the benefits of timelier service delivery, greater visibility of information across programs and better user experiences, among other desirable outcomes. State approaches to modularizing their systems varied — some focused on modularizing multiple business areas within their MMIS at once, while others chose to start small and modularize slowly by implementing modules one at a time. The varying experiences and challenges faced by these first-mover states provided evidence that modernizing through modular replacement is not the sole answer for states pursuing modernized Medicaid systems, and other approaches to achieving system modernization and key business outcomes emerged.

Modularizing an MMIS is a process that takes significant time, financial investment, technology and operational changes, accompanied by effective organizational change management and capability building.

incorporating modularity into their existing systems. Others are making incremental, in-place enhancements to improve care quality, access and cost while maximizing resources for other priority initiatives that will benefit the long-term health and well-being of their citizens.

Each state Medicaid program is different and, as such, requires a modernization approach that is tailored to meet state-specific business goals. Approaches differ based on the state's ability to effectively support modular replacements of system components, the current effectiveness of the in-place system and the near and long-term business impacts desired by the state.

Modularization and modernization are neither synonymous nor mutually exclusive concepts. States are taking increasingly diverse approaches to evolving their systems for the outcomes they are aiming to achieve today and in the future. Some states are



Challenges to modularity

By modernizing, states can realize greater long-term value from their investments, improve access to vital services, enhance stakeholder experiences and drive better coordination and collaboration within the health and human services ecosystem.

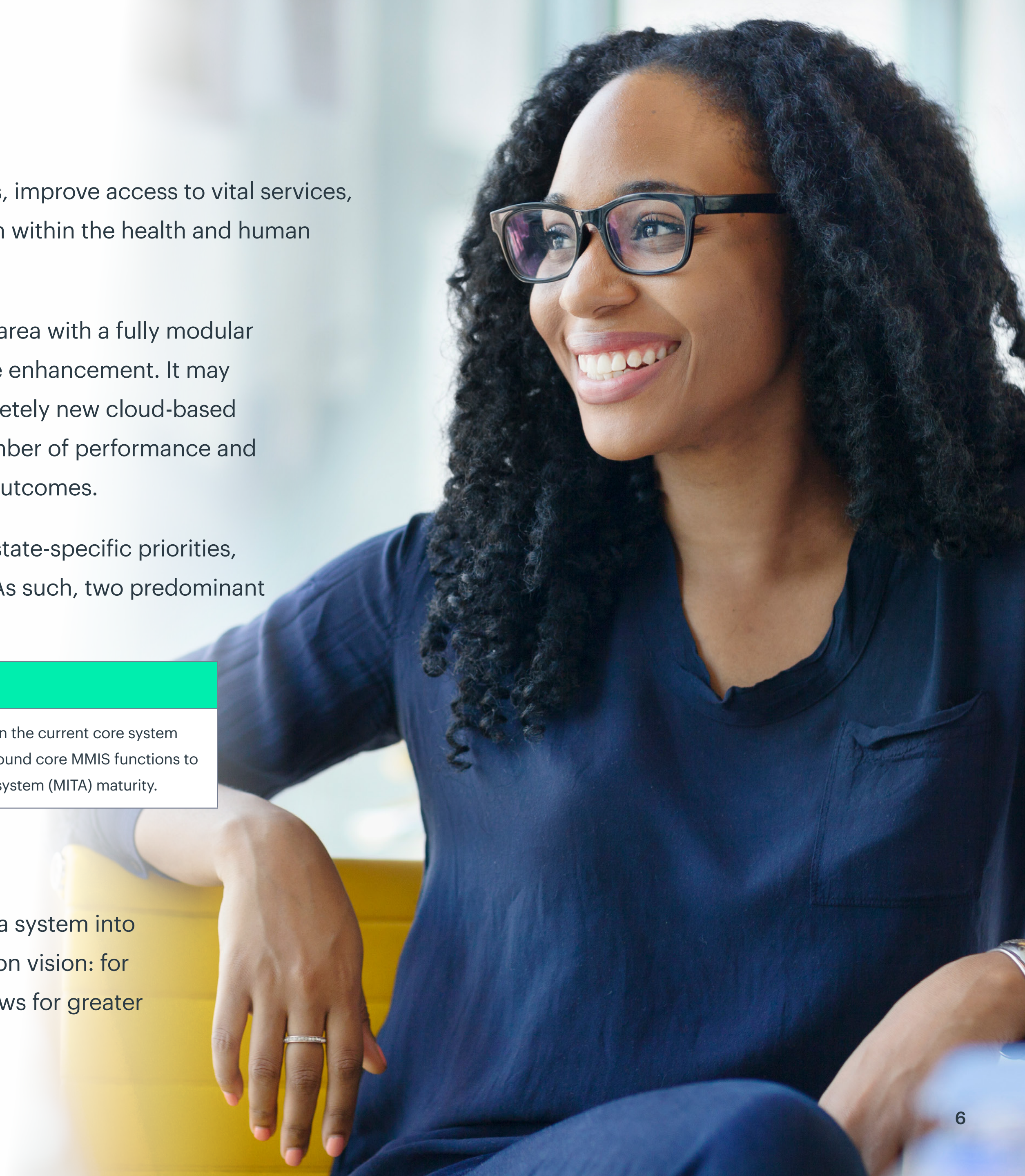
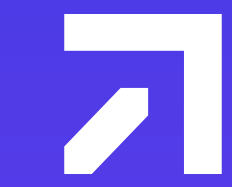
Modernization efforts can be as extensive as a replacement of an MMIS business area with a fully modular solution or as small-scale as a new data interface, rules engine or user experience enhancement. It may include incremental updates to an active, in-place system, the adoption of completely new cloud-based technologies, an investment in advanced analytics and AI capabilities, or any number of performance and efficiency-enhancing measures that propel states toward their desired business outcomes.

Clearly, there is no one-size-fits-all approach. The best path forward depends on state-specific priorities, risk tolerance, state budget and the specific outcomes a state wants to achieve. As such, two predominant modernization approaches have surfaced.

Modernization Through Replacement	Modernization in Place
Replacing existing core MMIS claims, encounter and financial processing functionality with a modular solution and incrementally replacing other adjacent Medicaid business areas/functions.	Performing direct system enhancements on the current core system and/or implementing modular solutions around core MMIS functions to improve business outcomes and increase system (MITA) maturity.

Modernization Through Modular Replacement

Modernization through modular replacement is a strategy that seeks to break up a system into individual, business-specific components to align with CMS’ original modernization vision: for states to move from a single, monolithic system to a modular ecosystem that allows for greater innovation and flexibility in serving Medicaid members.




Modernization through modular replacement consists of a complete replacement of an MMIS claims, encounters and financials processing solution with a modular solution — establishing the foundation for a fully modular Medicaid enterprise ecosystem. This approach may also involve the replacement of other MITA MMIS business areas concurrently or subsequently and allows states to select from multiple vendors with specialized expertise in different Medicaid areas. States can identify specific outcomes they want to achieve by business area and select the vendors that best meet the entirety of their needs by loosely coupling modular systems into one ecosystem. This approach avoids investment in a full monolithic system implementation.

Modularity affords opportunities to create communities where stakeholders from different areas of the industry can come together to share successes, best practices and perspectives.

models. Modernization through replacement can be completed most successfully when states plan carefully and focus on understanding current and desired future business processes, which minimizes risk and supports quicker, more streamlined modular implementations.

Modularity through replacement intends to enable states to implement a modular claims and encounter processing system and other discrete components that work together seamlessly — to support the timely delivery of services, a better user experience and greater visibility of information across programs. The approach enables states to leverage the most modern Medicaid technologies for improved automation, usability, configurability and experience through ever-evolving systems leveraging COTS-based product delivery and management



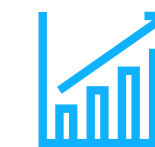


As with any major system overhaul, though, common challenges with data integration, vendor management and contract administration, change management and program governance have emerged during modular core MMIS replacements. For these reasons and more, states must carefully look at their administrative capacity as well as research potential vendors to ensure that each has the appropriate experience, Medicaid knowledge and technical expertise to effectively complete this monumental task. The Medicaid enterprise system will only be as strong as the weakest link in the value chain, so it is critical that states are evaluating vendors on experience and track-record, and not just system functionality. The more integrated the MITA business area, the more impactful the modular system, making the core claims and encounter processing system the most impactful element of the Medicaid enterprise ecosystem.

Benefits to Modernizing Through Modular Replacement



Leverage Software as a Service offerings to always be current on the latest innovation



Gain greater system scalability, adaptability, configurability and usability when compared to monolithic MMIS solutions



Increase flexibility to plug in best-in-class suppliers that best meet state needs in each MITA business area



Reduce reliance on monolithic systems

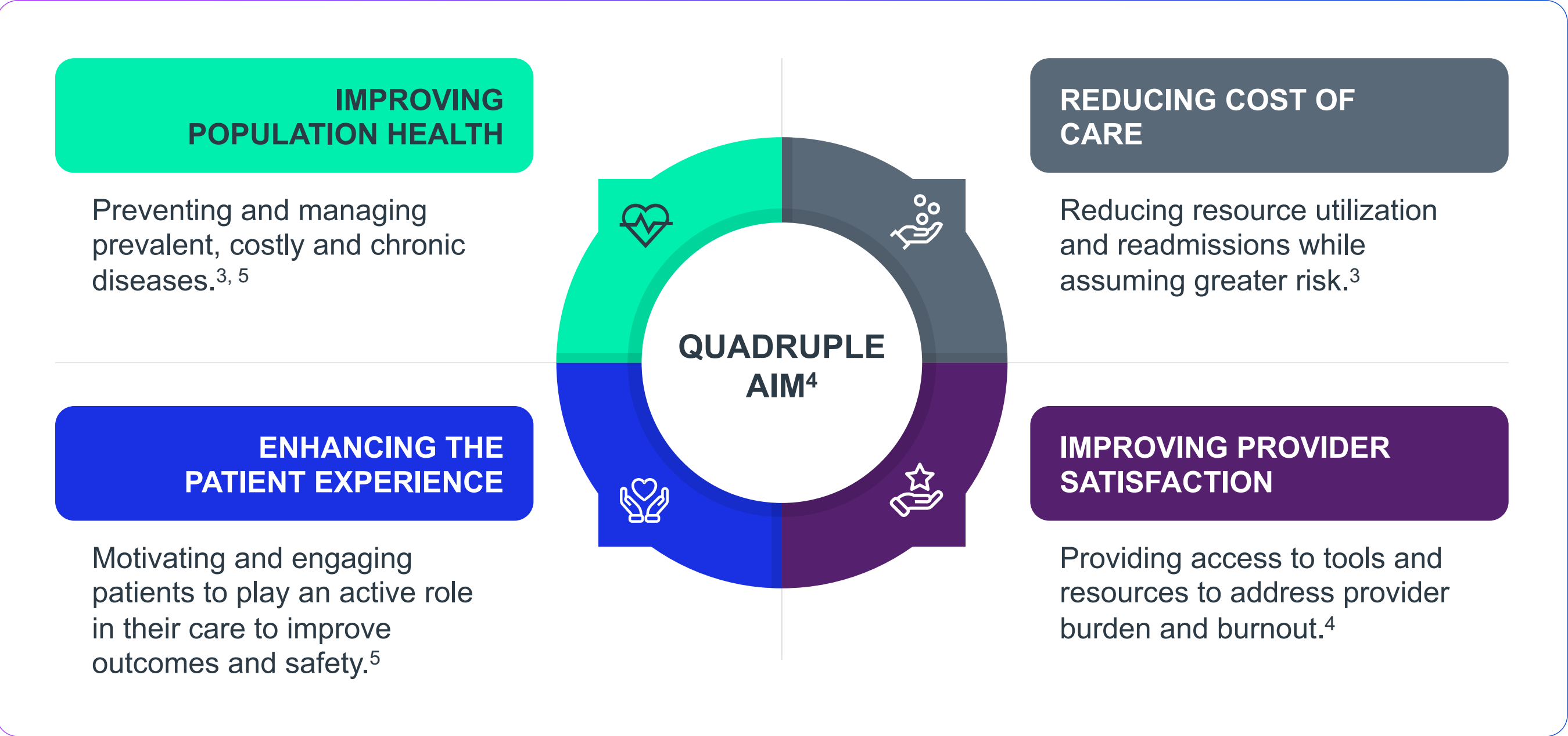
Modernization in Place

Modernizing in place is the act of making moderate enhancements to the foundational core system without replacing the core claims and encounter processing system with a new modular solution. This could include direct enhancements to the in-place claims processing system or modular replacements of business areas adjacent to the core (e.g., provider services systems).

Modernization in place may be an appealing option for states looking to achieve near-term business value while sustaining their core claims and encounter processing operations and building out their long-term technology roadmaps to realize complete modernization goals.

For states considering tools and approaches like population health management, value-based care and other quality initiatives supporting the Quadruple AIM (Figure 2)^{3, 4, 5} modernizing in place offers the opportunity to refocus time, resources and budget while planning for those larger-scale investments. States pursuing modernization in place have emphasized reliability, stability, efficiency and scalability as key benefits.

Figure 2: Quadruple AIM



Modular components can be added to existing systems, meeting states where they are in their modernization journeys while helping them technologically advance in place.

³ Stiefel M, Nolan K. [A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost](#).
⁴ Bodenheimer T, Sinsky C. *From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider*. Ann Fam Med. 2014;12:573-76.
⁵ Raghupathi W, Raghupathi V. *An Empirical Study of Chronic Diseases in the United States: A Visual Analytics Approach to Public Health*. Int J Environ Res Public Health. 2018;15:E431.

Benefits to Modernizing in Place



Achieve desired business outcomes and goals with lower-risk system enhancements, services and solutions that align to MITA requirements and CMS standards



Reduce financial impact by identifying reuse opportunities, simplifying vendor management, increasing staff efficiencies and improving program effectiveness



Promote continuity and flexibility through one core system, technology partner and systems integrator



Focus budget and state resources on established priorities and transformative healthcare initiatives



In-Place System Enhancements

State Examples

States are making a broad range of lower-risk, high-impact, outcomes-focused investments in their existing systems to improve efficiencies and performance. The following are just a few examples of modernization in place activities states are pursuing.*

Enhanced user experience	Elevating human-to-system connections through front-end refreshes, mobile digital experience solutions and intuitive member and provider portals.
Integration and interoperability	Implementing system-to-system interfaces, including system integration, interoperability, enterprise service buses (ESBs) and API services.
Intelligent analytics	Leveraging advanced data analytics and modern data lake approaches to translate disparate data into actionable insights and meaningful reporting.
Rules-engine usability and auditing	Increasing configurability and readability while reducing coding requirements to incorporate new policies and accommodate new audits.
Electronic document management	Streamlining documentation management access and catalogs to improve searchability.

*Reflects modernization in place activities being pursued via Gainwell Technologies’ interChange MMIS; example only.

While modernization in place is an effective strategy to realize near-term value and achieve quick business outcomes, there are some notable considerations. Given they are direct system enhancements, many of these enhancements are supportive of shorter-term business outcomes and mitigation of current challenges. States should be purposeful to plan strategies that support progress toward the same long-term and sustainable value afforded by modular replacements when planning modernization in place enhancements. Because MMIS solutions across states are at different stages of aging, states with decades-old systems will need to consider additional work, and major refactoring that will be required for the technology to support expected enhancement, reuse, configurability and cost avoidance. These systems can remain costlier to maintain and can lack the quick configurability and adaptability when compared to their fully modular counterparts.



Themes and Trends Driving Modernization Decisions

For states, there are many factors influencing the decision to modernize — from system architecture to business objectives to financial and human resources. There are several industry trends and considerations driving the need for technological enhancements and helping states determine where to focus their modernization efforts.

Themes

Shift from fee-for-service to managed care and value-based care.

Transitioning from fee-for-service (FFS) to managed care and value-based care models marks significant change in the healthcare landscape. This shift toward integrated, patient-focused care models, utilizing capitation and incentive-based payments for managed care, has prompted a reevaluation by states of the importance of their claims processing systems. Originally created to handle large volumes of FFS claims, states that are adopting or shifting to managed care may require entirely new technologies or opt to improve their existing systems to support the change.

Business driving technology. States are finding the greatest success aligning their Medicaid IT modernization roadmaps to the end results they desire. Closely examining existing business processes, identifying opportunities for optimization and employing technology as the enabler⁶ ensures systems and operations are aligned toward program outcomes.

Focus on the person. As states work to improve health outcomes at population scale, systems must be equipped to accommodate multi-source data and perform advanced analytics that will allow for the creation of beneficiary longitudinal health records and support preventive, actionable and measurable interventions.

Self-service and user experience. Upgrading existing systems with enhancements to member and provider-facing portals and user interfaces is a moderate-investment, high-impact effort that can transform the digital user experience — driving higher use, greater satisfaction and improved member engagement.

Contract extensions. Some states are exploring options to expand or extend existing, MMIS contracts to align with their long-term technology roadmaps and avoid multiple CMS requests.

⁶ Sharma, Rajesh. Medicaid Enterprise Systems: Five Tips for Minimizing Modernization Risk. Modern Healthcare.

Themes

Fewer modules and module vendors, more technology reuse.

Identifying modular synergies with fewer vendors can achieve the CMS modularity goals with greater speed and efficiency and less risk, while the release of limited modules around the Medicaid enterprise system core can mitigate risk, cost and service disruption.

Modernization and modularity approaches vary across states.

States are accelerating the impact of their efforts by adopting a phased approach and enhancing systems when, where and how it makes the most sense for their programs and members — showing progress toward modularity while mitigating risk and disruption and substantiating the value and impact of their investments.

Finding a Balanced, Sustainable Approach

For Medicaid enterprise systems, modernization is the way of the future, and states are on various paths to getting there. Every state's roadmap is different. Some are completely transforming their systems with replacement modular solutions. Others are modernizing in place by continuing to use and enhance their current core MMIS while adding modules in a sequence that makes sense for them.

Many are pursuing a balanced approach — achieving near-term outcomes through a combination of lower risk modernization tactics while making incremental progress toward modularity.

Regardless of approach, modernizing these complex systems presents challenges, and it is essential that as a modernization roadmap is defined, challenges are mitigated. There are a select number of steps that states should focus on taking to ensure the highest degree of success and mitigation of risk when modernizing their Medicaid systems.



Strategies for Success: Five Key Steps

The most successful modernization projects are those driven by states' objectives for their programs and the populations they serve. Making strategic enhancements to current systems can enable more seamless and productive interactions between patients and providers, streamline and accelerate access to vital services and drive greater connectivity across a state's health and human services agencies and programs. Conversely, complete overhauls of core MMIS functionality may be required or preferred to afford states the benefits of the latest technologies that drive enhanced functionality, configurability, adaptability and usability.

Viewing technology not as the driver, but the enabler of higher quality, more equitable healthcare is moving the needle to true, outcomes-based transformation. Outlining these aspirations at the outset and asking a few strategic questions ensures collective alignment around the bigger-picture goals.

- 1** Define end goals for your end users. Lay out near and long-term goals for your program and population. Ask strategic questions aimed at better serving citizens, improving healthcare interactions, optimizing existing systems and effectively allocating resources — e.g., “What do we want to accomplish for our beneficiaries, and what will get us there?”
- 2** Identify and prioritize outcomes. Identify the highest impact, most attainable outcomes to reduce risk, inform your roadmap and achieve your goals.
- 3** Choose your method. Evaluate approaches to determine the best path to achieve your goals. What business areas are your biggest challenges, and how could new technologies support progress? What is your desired timeline and budget for achieving outcomes? Consider consulting a modernization expert and systems integrator to provide insight, guidance and ongoing support based on industry best practices.
- 4** Map the course. Build or update your modernization roadmap and identify success metrics to track toward established outcomes.
- 5** Start the journey. Execute your state-specific strategy and modernization roadmap.





Meeting You on Your Modernization Journey

Modernizing current systems is essential to the evolution and sustainability of state Medicaid programs and their ability to meet the needs of members today and in the future. How states choose to modernize their systems is a decision that must be predicated on state priorities, desired outcomes, budgetary and resource considerations, and the current and desired technical capabilities of their Medicaid systems. It is critical that these factors are evaluated carefully before a modernization approach is determined and a modernization roadmap is defined. This can be done independently by the state or through partnership with technology vendors or business consultants from the private sector.



Visit us at gainwelltechnologies.com to learn more about how Gainwell Enterprise™ can help modernize your MMIS.

About Gainwell Technologies

Gainwell has supported Medicaid and state government programs for more than 50 years in defining MMIS solution evolution pathways that solve key business needs of states. We are a leading innovator in healthcare technology solutions and have been trusted to help states navigate their modernization journeys across the Medicaid community we serve.

[Gainwell Technologies](https://gainwelltechnologies.com) is the nation's leading provider of **digital and cloud-enabled solutions** across all 50 states, US territories, and the human services and public health ecosystem. With our 13,000 experts, practitioners, and clinicians, we are uniquely positioned at the intersection of technology and healthcare – providing unmatched value through our suite of innovative products and solutions created to solve our clients' most complex challenges. We are mission-driven and outcome-focused, committed to building trusted, lasting relationships, and delivering results beyond the expected. Learn more about our people and capabilities at gainwelltechnologies.com.

