HCLTech | Supercharging Progress™

Next-generation core platform modernization

A game-changer for healthcare payers

Table of contents

Executive summary

Healthcare payer CIOs are making major investments in upgrading their legacy platforms. They are investing $22.8 billion in the IT services market and approximately 21% of those investments ($4.8 billion) are devoted to digital platforms technologies[1]. Digital platform modernizations focus on core administrative business processes such as:

- Risk adjustment
- Member management
- Provider management
- Network management
- Claims management
- Financial management
- Appeals and grievances
- Third-party liability

Most core platforms have been tied to legacy architecture on mainframe platforms that use COBOL, VB6, etc. The restrictive nature of hierarchical databases has been a significant obstacle for payers, with the inflexibility of such applications proving inadequate for managing dynamically shifting business environments. In the past, healthcare payers continuously attempted to prolong the lifecycles of these dated systems through tactical modernization, striving to adapt them to meet evolving business requirements.

The COVID-19 pandemic highlighted existing technology shortfalls and sparked a keen focus on strategic digital transformations. Healthcare payers are undergoing a paradigm shift in digitization by making their platforms more robust with a complete rewrite that leverages next-generation technologies. They are also making underlying platforms more configurable for maximum flexibility. For example, claims payment models are shifting from fee-for-service care to value-based care. The industry is trending toward rethinking provider management—including onboarding, credentialing, network management — as a centralized service rather than duplicating efforts across multiple platforms.

Factors driving the paradigm shift

Multiple elements are driving the transformation of legacy platforms to next-generation architecture.

End of support for legacy technologies

As outlined by the Everest Group, "For enterprise modernization, healthcare plans should think of changing their legacy architectures or technical debt via an integrated core administration platform approach to help payers address the siloed, multi-vendor and multi-technology challenges, that create interoperability issues, poor data quality and limited business agility." Most platforms written in the 1980s through the early 2000s are based on legacy technologies such as mainframes that use COBOL or VB6. Microsoft is replacing support for these platforms with the .NET framework and hierarchical databases (like IMS at end-of-life support), so payers must modernize their platforms to overcome the lack of support.

An evolving business model

The business model was straightforward when the legacy platforms were written; front-, middle- and back-office structures all had defined lines.

However, when payers focused on an outside-in approach to understand and transform the customer experience, the silos between the front and back offices broke down. Patient journeys were cut across front and back offices and brought some traditional back-office functions to member-facing operations. The legacy technology landscape either can't offer those capabilities or is too expensive to remediate. For example, these end-of-life technologies can't accomplish workflow orchestration, use data to build a layer of intelligence or drive personalization at the point of interaction. Hence, it is time for payers to make fresh investments in next-generation platforms.

Cloud adoption

Healthcare organizations must catch up regarding cloud adoption, partly due to data security and privacy concerns about cloud infrastructures versus on-premises data centers. However, with the advent of conversion tools and the increasing credibility of cloud service providers, there is a broad consensus among healthcare payers that cloud technologies could unlock digital and analytical capabilities across the spectrum. Because value realization from cloud migration can take up to three years, leaders are incentivized to invest in next-generation, cloud-native platforms to gain a competitive advantage in the market.

Mergers and acquisitions

The healthcare payers market has been undergoing multiple mergers and acquisitions as part of the industry's consolidation strategy, resulting in opportunities for platform consolidation. Industry-wide initiatives such as fast healthcare interoperability resources (FHIR) will result in heavy investments in all platforms. Payers will gain synergy by minimizing the number of platforms and they need to modernize them for the next generation to accommodate variations in lines of business and geographies.

Regulations and reforms

The healthcare industry has been governed by the constant introduction of regulations and reforms that result in significant IT implications. The corresponding platform changes need to be compliant. However, the scale of recently introduced reforms requires more than traditional upgrades; instead, it requires a complete reimagining of platforms. One such major reform is FHIR-driven interoperability between payers and providers to access medical records for care delivery. FHIR is a catalyst in how payers will handle prior authorizations, claims processing, appeals and grievances, resulting in the need for significant modernization for next-generation solutions.

Hyperscalers changing the competitive landscape

Digital hyperscalers have long been exploring the healthcare industry for entry points to digitize essential customer journeys. Multiple, quick-win use cases can rapidly transform the industry with the power of AI and ML. To compete meaningfully with hyperscalers and retain their market share, payers need to modernize platforms by making them more member-centric. They also must address multiple challenges in their core products, including the inability to interact with front-end customers and drive personalization.

Payer value chain imperatives

Priorities emerge across the payer value chain in provider management, network management, appeals or grievances and prior authorization. Provider management particularly stood out during the pandemic, as providers had to be quickly onboarded across states. However, traditional provider platforms are tightly coupled with network management, resulting in a window of more than three months to recruit, validate and onboard a provider.

Sales and Underwriting	Member Enrollment	Provider and Networks	Product Management	Claims and Financials	Utilization Management	Customer Service
Prospect management	Membership enrollment	Provider network	Group/Plan setup	Claim intake	Health assessment and care plan	Member service
Guided sales	Member maintenance	Credentialing	Product implementation	Claim pre-processing	Care and disease management	Provider service
Rating and underwriting	ID cards	Network pricing and scheduling	Business rules configuration	Claim adjudication	Prior authorization	Medical outreach service
Customer relationship	Premium billing	Provider reimbursement	Pharmacy Benefit Management (PBM)	Claim payment	Appeals and grievances	Customer service training
	Communication schedule and calculations			Payment integrity	Supplemental health services	Workforce management
				Third-party liability		Performance and quality control

Emerging Priorities

Figure 1: Emerging priorities for payers

Provider management data quality could have been much higher across the industry. Some industry estimates put data accuracy as low as 50% due to errors in payer systems. The 'no surprise act' has made provider data updates a quarterly requirement Additionally, the pandemic highlighted the need for a comprehensive overhaul of provider management processes. Similarly, CMS interoperability requirements with providers will drive the need for a complete rewrite of prior authorization and appeals or grievances platforms, where decisions must be made using members' electronic medical records (EMRs). Once the priority items are addressed, payers can modernize claims platforms, where there is a long-emerging trend of shifting from fee-for-service to value-based care models.

Next-generation platform solution tenets

Every payer's core administration platform will be unique, depending on the nature of its evolution and if it is homegrown or acquired or through acquisition. However, when it comes to next-generation platforms, the following key features should be incorporated to make the platform nimble and more efficient at accommodating future business needs while driving down the cost of ownership.

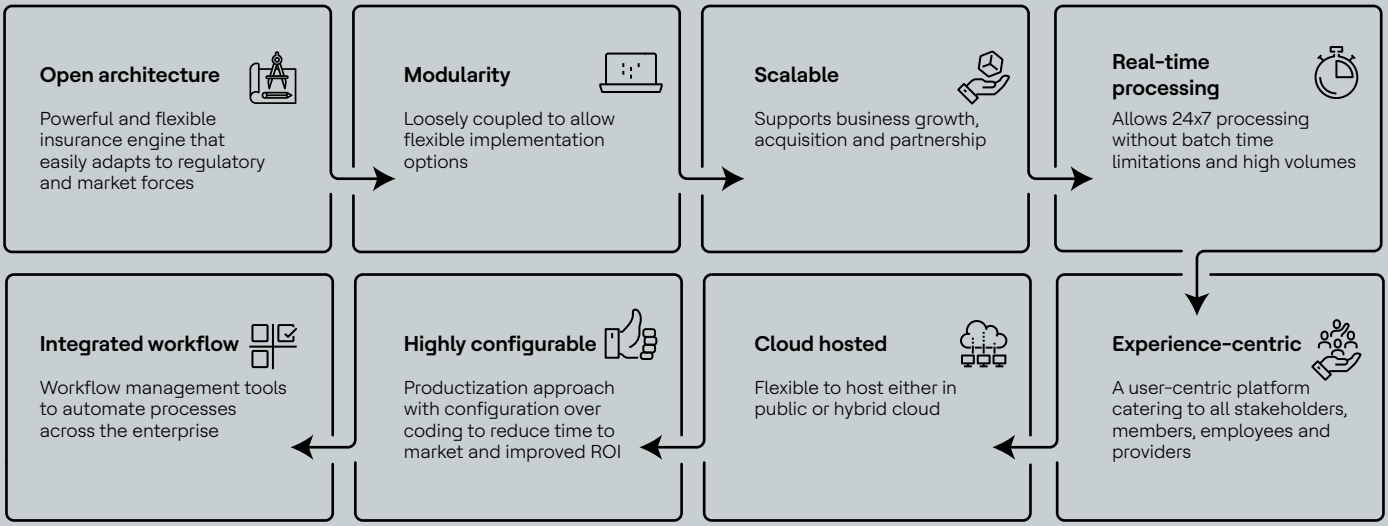

Figure 2: Next-generation platform solution tenets

Open architecture

An open architecture allows payers to move from a monolithic infrastructure to an enterprise-scale micro-services approach that adheres to modern security standards. An open architecture platform will enable digital transformation to shift business models to capture new revenue streams.

Modularity

Payers need to break down the development effort into specific functionality modules, as that will allow them to take a phased approach. Modularity will also provide greater freedom in developing functionalities that match their market needs, which is especially true in the Medicaid market. With Medicaid information technology architecture (MITA) 3.0, standards mandate that each Medicaid management information system (MMIS) organization must break down the entire platform into modules.

Scalability

When architecting next-generation platforms, payers should ensure high scalability to accommodate seamless growth, even in the face of unprecedented transaction volume growth.

The system should have decentralized governance, infrastructure automation and failure isolation at the core.

Real-time processing

One of the critical challenges in the current landscape of claim modules is the lack of real-time processing for claims data. Instead, data is processed in batches, which can cause delays and hinder timely processing. Batch processing constrains real-time system availability, a critical component of next-generation solutions. Real-time processing will improve performance and decrease the cost of business operations by making decisions on pending transactions during their availability.

Experience-centric design

A major aspect of the next-generation platform should be a more user-friendly experience for all stakeholders—payers, members, employees and providers. An experience-centric design will provide an omnichannel experience, improve the net promoter score by simplifying member and provider enrollment and provide quick resolutions to billing, claims and coverage queries.

Integrated workflow

An integrated business process management (BPM) workflow solution enables the automation of processes by integrating disparate systems and making the business process more transparent. BPM brings more accountability to both teams and individuals, and an escalation matrix will reveal work items pending action outside the configured time limit.

Configurability

Since the next-generation platform will be highly complex and scalable, it should accommodate multiple process variations such as member management, benefits management, provider management and claims management for various lines of business. Implementing a centralized configuration module that encompasses all variations in business rules will make the system more robust and enable the consolidation of multiple books of business onto a single platform. This will reduce operations costs for day-to-day IT systems and onboarding new businesses.

Cloud hosting

The next-generation platform will be a cloud-native solution, which offers better security and scalability to accommodate more computational power. Cloud hosting will bring down IT platforms' operating expenditure (OpEx) and unleash capital expenditure (CapEx) potential for the next set of modules.

AI and ML infusion

The infusion of AI and ML will make the core administration platform a powerful tool, especially for the use cases of provider credentialing, prior authorization of services based on EMRs, fraudulent and abuse claims identification, third-party liability and utilization management for appeals and grievances.

Strategic considerations

As healthcare payer organizations embark on modernization, they must take specific strategic actions to make their programs successful.

Top management buy-in

Any new platform development or modernization project will have a long development lifecycle. Therefore, IT organizations must have top management buy-in on the platform and maintain budgetary allocations throughout the lifecycle.

A phased development approach

A phased, module-based approach is essential to ensure that a workable product is available for business users. This approach ensures that business users understand the value the delivery team provides and allows for continuous delivery of business value throughout the modernization project. The team needs a mitigation plan to integrate old legacy applications and a modernized version of the same module. Additionally, the phased approach guarantees a continuous budget for the value delivered.

Agile methodology

Platform modernization should be done using a scaled, agile model that fits the organization and the vendor models involved in the program. By standardizing all modules on the same technology stack, the technology architecture can evolve and grow, allowing for the simultaneous handling of multiple modules. Moreover, this approach offers the flexibility to transfer delivery pods between different modules as needed.

Organizational change management

Implementing new platforms can improve efficiency but often requires that the entire organization undergo skillset retraining. To address this, it is recommended that you initiate organizational change management at an early stage to facilitate a smoother transition.

The road ahead for next-generation core platforms

The healthcare industry's unique challenges, coupled with the impact of the pandemic, are driving the need to modernize core healthcare payer platforms. This shift towards next-generation platforms aims to achieve growth and reduce the maintenance costs associated with legacy applications. Healthcare payer CIOs must take a calibrated approach that aligns with business objectives and priorities to transform their core administration platforms digitally.

References

1. Markets Insider – Big Tech Enters Healthcare Payer Space

About the author

Selvakumar is a leader with over 19 years of experience in IT delivery, consulting and business development. He has delivered many innovative solutions across healthcare payer functions including claims, membership, provider and network management, analytics and care management.

Selvakumar Chinnasamy
General Manager

For more information, write to us at **cs_marketing@hcltech.com**

HCLTech | Supercharging Progress™

hcltech.com

HCLTech is a global technology company, home to more than 227,000 people across 60 countries, delivering industry-leading capabilities centered around digital, engineering, cloud and AI, powered by a broad portfolio of technology services and products. We work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences and Healthcare, Technology and Services, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of 12 months ending March 2024 totaled $13.3 billion. To learn how we can supercharge progress for you,