

Provider lifecycle management





Table of **contents**

Introduction	1
Industry challenges	2
Key solution trends	4
Solution vision	6
Solution approach	8
Conclusion	10
About the author	11
References	12



Introduction

The healthcare industry is on the brink of a significant transformation, driven by the vision of creating a member-centric and holistic health ecosystem. This groundbreaking model aims to optimize not only the care experience and outcomes but also the overall healthcare costs. However, this undertaking is no small feat considering the current state of the industry with its outdated and fragmented processes, technology and data silos among the key players - payers and providers.

Historically, there has been a trust gap between payers and providers that limits effective care navigation for members. The lifecycle of events that providers go through, from the contracting phase to the enrollment phase (which can sometimes take 90 days or more), creates a poor first impression about the payer organization. Manually intensive, non-transparent business processes, lack of communication, poor data quality and outdated technology platforms result in high administrative costs, long revenue cycles, compliance issues and a subpar experience for all stakeholders involved.

It must be noted that the inefficiencies exist on both sides of the aisle, and payers and providers must recognize provider lifecycle management issues as a collective problem impacting their businesses. The lack of industry standards and inadequate compliance measures pose significant challenges that hinder the adoption of a holistic approach towards transformation. Additionally, the constant evolution of the business and technology landscape further exacerbates these bottlenecks.

For the industry to move towards a holistic health ecosystem, the fault lines between payers and providers must be addressed first. Provider lifecycle management is the foundation where trust and transparency need to be established. The payer-provider ecosystem must be built on the foundation of technology stacks that blend business processes with data across the healthcare ecosystem via interconnected and interoperable platforms in real-time. Unfortunately, no silver bullet exists that could solve the problems associated with the provider lifecycle. This has led to a proliferation of many avoidable and throwaway point solutions, which both increase the complexity of the IT landscape and the cost of maintenance.

The ideal solution would be to create a one-stop shop for all providers and payers where providers submit their universe of data to be consumed by payers and other consumers in a standard format. The goal will be to establish an industry-level single source of truth that is maintained in real-time, is centrally governed and interoperable.

This whitepaper examines alternative industry solutions and primarily focuses on the immediate actions that payers can take to set the right foundations within their enterprise to solve immediate problems and be future-ready. The vision is an end-to-end digital Provider Lifecycle Management (PLM) solution that can create trust between payers and providers and, consequently, transform the care experience for members.

Industry challenges

The PLM process

The payer-provider relationship serves as the foundation for delivering exceptional care to members and patients. It all begins with the prospecting process, where either the payer or provider expresses their intent to contract and collaborate. During the contracting phase, the provider organization shares crucial details about their business entities, groups, facilities, locations and affiliated individual providers, supplemented by necessary supporting documents. However, before being enrolled as participating providers within payer operations, each facility and provider must undergo a credentialing process to ensure compliance and quality standards.

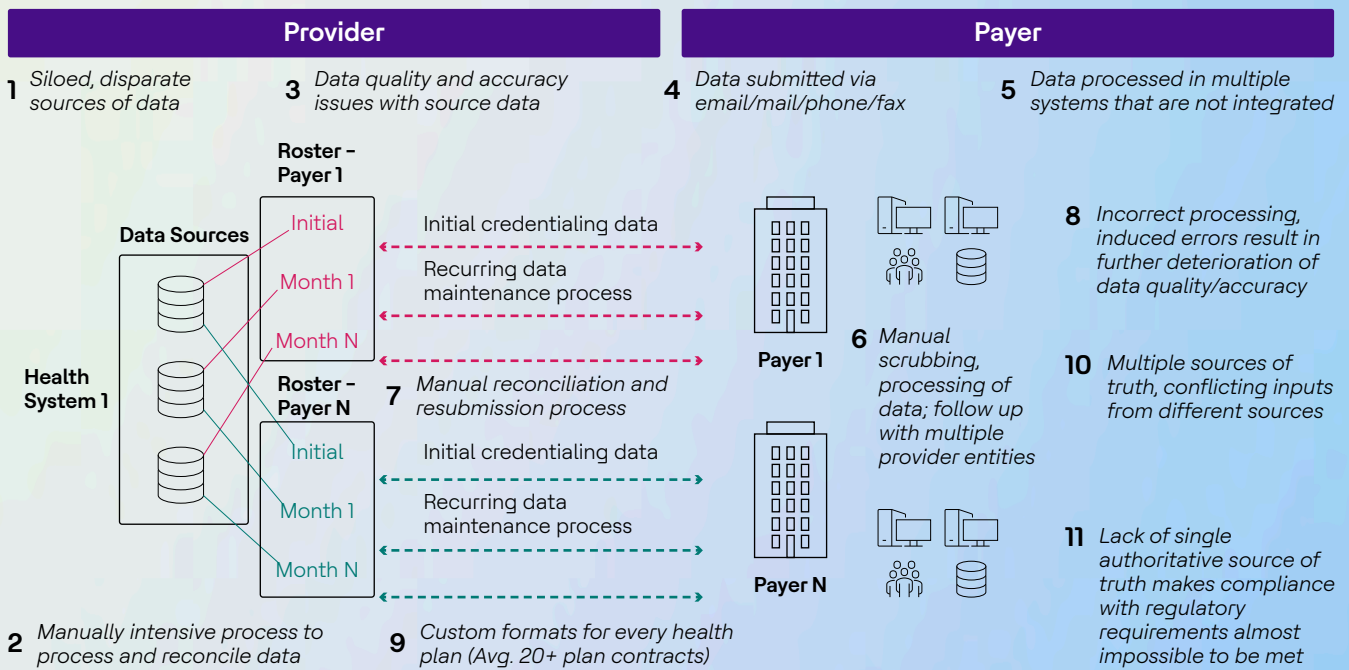
These intricate business processes across the provider lifecycle form a complex web of transactions and data exchange between payers and providers. It is essential to have a comprehensive understanding of these data exchange processes across all business transactions to effectively address the associated challenges and bottlenecks.



Current state of the provider-payer data exchange process

Provider organizations face the challenge of managing contracts with over 20 payers, each with its own unique onboarding processes and roster template formats. The absence of standardization complicates the sharing of data, which is typically extracted and aggregated from disparate systems that lack connectivity. As a result, data is populated into different output formats, making the extraction process laborious, time-consuming and prone to errors. Moreover, these systems often lack real-time updates, leading to data quality, latency and accuracy issues right from the source. The data is commonly shared with payers through various channels such as emails, mail, phone or fax using spreadsheets, PDFs or other paper-based formats.

Additionally, the provider data is very dynamic in nature as practitioners move or change their demographics, education or affiliations, or if businesses get acquired or consolidated. In the absence of real-time updates, proper governance processes and technology foundations, data quality and accuracy levels go down dramatically.



This process of data sharing is not just limited to the initial contracting and onboarding process. Typically, a monthly roster is submitted to each payer with either only the updates or the entire set of files. Changes in data are often difficult to identify, and it becomes the responsibility of payers to comprehend this inbound data. To keep their system of record for provider data up-to-date, payers must carry out the necessary scrubbing, manual validation and processing of the data received.

Throughout this data translation process, there is a possibility of encountering incomplete, invalid or inaccurate data. This can lead to the need for repeated reconciliations and resubmission of data. Moreover, incorrect processing within payer systems can further compromise the quality of the data. Consequently, payers may struggle with managing multiple providers for similar requirements, resulting in their system of records falling below satisfactory quality levels.

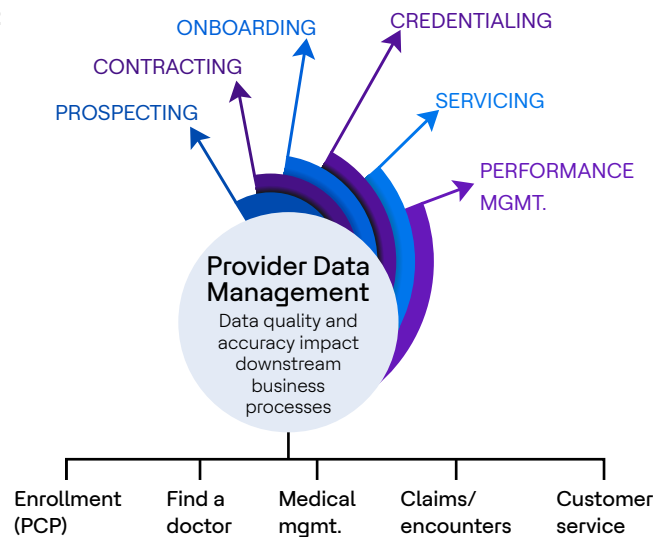
According to industry research, provider data undergoes an average change of 25% per year.¹ To maintain and update this data, the healthcare industry spends approximately \$2.8 billion annually.² Surprisingly, only 18% of organizations have dedicated data governance departments that are responsible for managing and providing data. This situation clearly points to a significant gap in data management and ownership.

While the issues arising out of the payer and provider data exchange process are a byproduct of inefficiencies of both payer and provider systems, many payers lack the vision to orchestrate an end-to-end provider lifecycle with an integrated and cohesive data strategy.



The key areas of addressable gaps are illustrated below:

Intrinsic factors	
Siloed, disjointed, manual business processes across provider lifecycle Resulting in high TAT to onboard providers and creating a foundation that amplifies errors and data quality/accuracy issues	
Data strategy and management issues Multiple sources of truth, poor governance processes and lack of real-time integrations have led to reactive processes and unmanageable data quality	
Lack of digitization, automation Data intake channels and outbound communications are paper heavy; digital channels have poor adoption/experience; vast opportunities to automate business processes	
Operating model and architecture issues Different teams manage intertwined processes and data, resulting in gaps in understanding and misalignment between the business and the technical and data architectures	
Lack of foundational technology Most health plans operate on legacy foundations that lack scalability and flexibility to meet new requirements, increase time to market and/or create compliance risks	
Provider data consumption by downstream	Provider data is generated during network management activities and holds the key to ensuring the right level of service is provided to customers during their journeys to find, manage and get paid for the care delivered



Business impact on downstream processes

Provider data is generated during network management activities. It plays a vital role in ensuring that customers receive the appropriate level of service throughout their journeys of finding, managing and receiving payment for their care. The impact of accurate and reliable provider data is significant, benefiting members, providers, employees and the payer organization as a whole.

Poor data quality from providers can create issues across the spectrum, including challenges with PCP (primary care provider) assignments, inaccurate 'Find a Doctor' directories, authorization denials, claims, process fallouts and customer service problems. This has a ripple effect on downstream business processes that consume provider data, resulting in high cost of operations, non-compliance risks and poor member and provider experience, ultimately leading to attrition.



Key industry trends

The market dynamics require health plans to innovate, adapt, scale and respond at lightning speed, even as the industry struggles to fix the foundational problems. This creates an uncertain environment with a continuously moving target.



Market consolidation

Heavy M&A activity is creating a need for platform consolidation and changes to business and operating models. At a tactical level, changes on the provider side could also result in changes to source data like affiliation changes, operating hours, contact details, etc., which could create data maintenance overheads and reconciliations.



New business models

New initiatives like value-based care, telehealth, social determinants of health (SDOH) and COVID-19-initiated pandemic determinants of health are witnessing mainstream adoption across both payer and provider organizations. This will require the provider data model to be enriched with new attributes, establish new business processes and interfaces and make updates to governance and analytics. Legacy systems with rigid processes will find it challenging to scale and respond promptly and at an optimal cost. This creates a need to build foundations that are agile, scalable and support low-code/no-code maintenance that a citizen developer can handle.



Payer-Provider collaboration

To deliver a holistic health ecosystem, payers and providers need to come together to view the member journey as one common value stream and align their business processes accordingly. This also means having a connected ecosystem between the two entities that is truly digital, responsive and transparent at every step of the care navigation process. This creates a need to deeply entrench payer-provider collaboration into the PLM processes.



Tightening regulation

Poor provider data quality had drawn scrutiny from government agencies when GAO (Government Accountability Office) first audited and reported a dismally low provider directory accuracy of approximately 50 % across the industry in 2017³. The scores did not improve much over the last five years despite the threat of penalties and promises of corrective actions. Many regulations, like the No Surprise Act, California's SB 137, etc., have gone into effect, putting additional pressure on both payers and providers to improve data quality. However, data accuracy requires providers and payers to act together, creating a need for standardization and an authoritative, central source of truth.



Digital revolution

COVID-19 exposed the fault lines of the healthcare system and accelerated the trend toward adopting digital transformation. Encouraging signs can be seen in the market, as digital investments reach record highs. Across the industry, PLM systems have long needed an overhaul and technological modernization given that much of the work was traditionally carried out manually as a back-office function.



Interoperability

The current scope of CMS interoperability requirements has a minimal effect on core PLM processes as they focus mostly on clinical data exchange and payer-provider directory processes. This is expected to evolve over the long term to include payer-provider communications that can bring them together during the administrative processes involved in the provider lifecycle. A simple and readily achievable solution is to establish a standard FHIR-based API for exchanging provider rosters between health plans.



Customer experience

With technological advancements in the last decade, the Amazon-like experience is now an expectation to be met instead of benchmarking the industry leaders alone. The end goal is now to serve the ultimate customers – the patient or the members – and model inhouse processes around their journeys and needs. Creating personalized and intuitive experiences at every interaction, no matter the channel used, is required to transform the experience of both providers and members. This would drive investments in portal solutions, building a 'Provider 360' solution to drive omnichannel customer experience and derive insights that could manage member and provider interaction more proactively.

Solution vision

The ideal solution

Provider organizations will benefit from reduced effort in creating customized feeds, portal-based updates and reconciliation processes tailored to payer organizations. Similarly, payers will benefit by receiving data in a single standardized format instead of hundreds of different formats, drastically reducing the complexity of the process and maintaining the provider data. This will result in architectural simplification and reduced administrative and maintenance overheads, making data exchange real-time and data quality consistent across the industry.

To address waste and complexity in provider lifecycle processes, the industry aims to establish a centralized, authoritative source of truth for provider data. This can be achieved by creating a centralized repository that serves as the reliable source of provider data for all stakeholders. Similar to the Medicare beneficiary database on AWS Cloud, this data can be shared through a secure API gateway. The master provider repository should be maintained through primary sources, provider self-reporting and applying master data management and governance for data hygiene.

This approach offers several benefits. Provider organizations will experience reduced effort in creating customized feeds, portal-based updates and reconciliation processes. Payers will benefit from receiving data in a standardized format, simplifying the process and ensuring consistent data quality. This will lead to architectural simplification, reduced administrative and maintenance overheads, real-time data exchange and improved data quality across the industry.

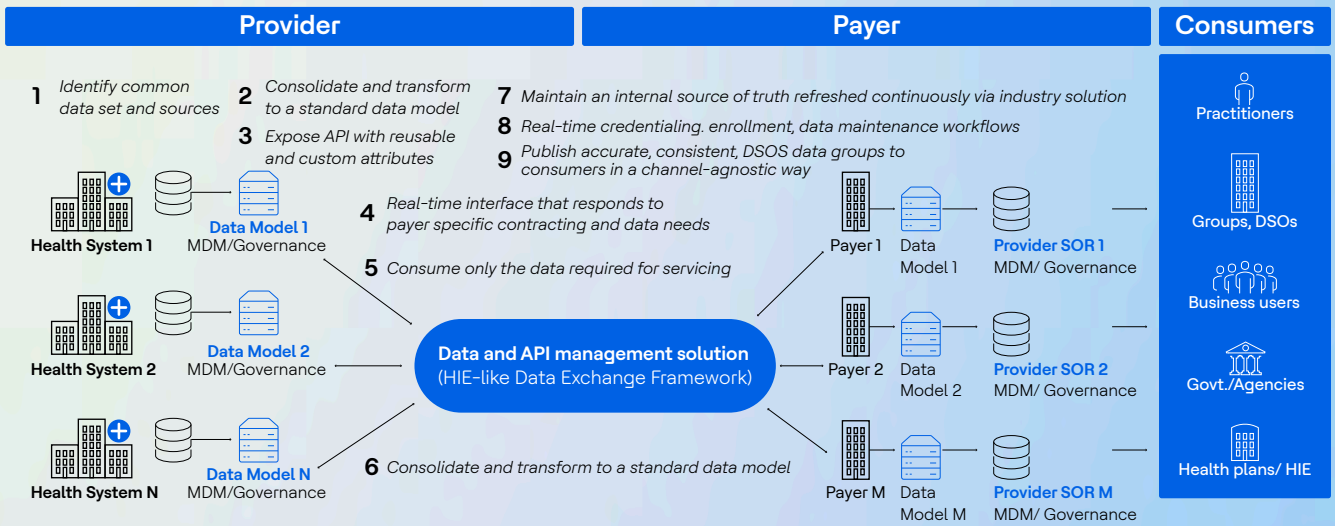
Unfortunately, the lack of government standards and alignment of payers and providers towards a standardized format makes this solution a distant dream. While initiatives like California's statewide provider directory (Symphony) are steps in the right direction, they have not been widely adopted enough to drive industry transformation. One key limitation is that a standard solution may not cover all the data attributes required by different payers, leading them to rely on existing processes and invest in additional innovative solutions to meet their specific needs.



Alternative PLM solution: A point of view

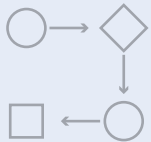
To address the need for additional custom data, a potential solution is to create a customization layer on top of the standardized solution provided by other industry players. This can be achieved by identifying the provider data requirements across different payers and extracting the necessary data from provider data models using an API solution. The custom data can then be maintained in a separate layer, following similar governance principles, and transformed and shared through an API solution based on the specific needs of each payer. By catering to custom needs, this approach is more likely to encourage greater adoption of the standard solution by payers.





Payer enterprise PLM solution

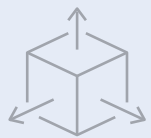
PLM is a vast domain with many complex layers that cut across business, technology and operating models. A holistic strategy is required to address the many aspects of PLM. There are five primary solution areas to transform payer enterprises' PLM as illustrated below:



Workflow Automation

Journey orchestration and adaptive automation

End-to-end provider lifecycle workflow automation and interaction management, AI/ML-enabled



Connected Ecosystem

Data orchestration and Intelligence engine

Coherent data strategy, insight infusion for decisioning, API-based connectivity and reporting



Customer Experience

Digital-first approach for customer engagement

Establish a Digital Front Door with digitized intake and outreach to provide omnichannel experience to providers



Modular Architecture

Design thinking and productization for agility

Application microservices architecture, modular and configurable application design, contextualized data governance



Foundation of Future

Next-gen technology stack to future proof business

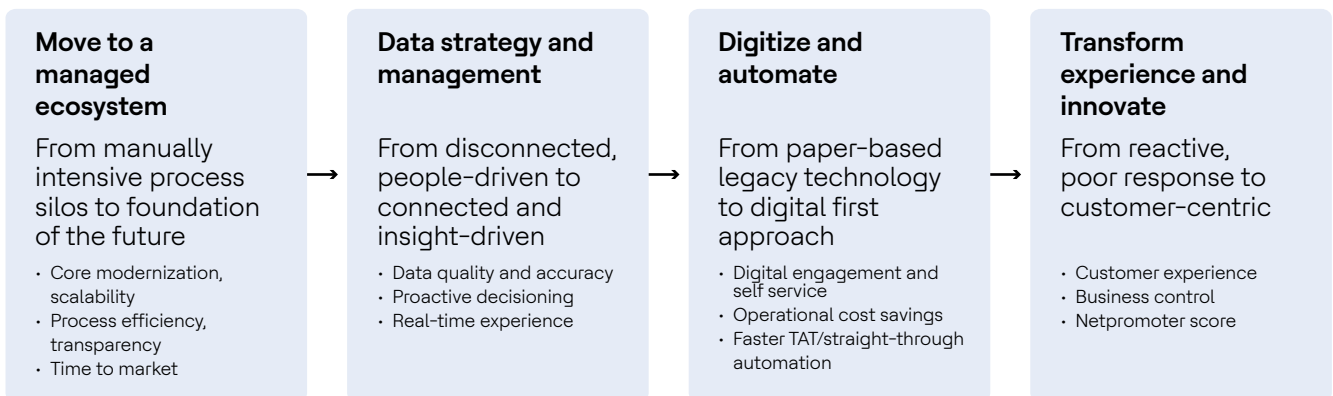
Infrastructure engineering (cloud-enabled), BPM/CRM-capable, AI/ML-driven, Data-driven, user-friendly, low-code/no-code

Solution approach

The ideal solution

An end-to-end PLM solution for payer enterprises must maximize the business value while ensuring that the right foundations are built at the right time. This will ensure that there are minimal throwaway efforts and rework. Many organizations have learned the hard way that excessive focus on opportunistic automation and digital investments that are not coherent with a broader data strategy result in technical debt and maintenance issues, which forces them to go back to the starting point. For example, let's suppose the business architecture of a workflow system built to handle the credentialing process is not well aligned with the provider data model and streamlined process architecture. In that case, it could result in duplication of processes, generate rework and create data maintenance issues. Therefore, a calibrated approach towards transformation is required to ensure an optimal product build.

While many payers are in the middle of their transformation journeys, an organization looking to begin its PLM journey or benchmark against the right approach could adopt the transformation approach recommended below.



The prerequisite is to define the business vision, strategy, technology blueprint and data model for a digital PLM solution before initiating a major investment. From a business perspective, future-state process architecture should have been defined for key journeys and use cases through Business Process Management (BPM) or Lean Six Sigma workshops.



Move to a managed ecosystem with next-gen digital foundations

Moving to a managed ecosystem is about changing the way business is done by transitioning from a manually intensive, siloed ecosystem to embracing next-gen technology platforms. The focus here is to target the business users who have traditionally worked in an unmanaged environment with no transparency of business processes or ways to track SLAs, high effort on report-based reconciliations and an inability to manage communications. Examples include users working through emails instead of work queues, using manual data entry spreadsheets and local databases heavily, performing manual reporting with high dependency on IT, using legacy applications, etc.

- 1 Select next-gen technology stack that provides modular architecture and drives agility
- 2 Achieve scalability through foundational investments like cloud enablement, API management
- 3 Build provider 360 view with knowledge of provider data model
- 4 Define and configure provider lifecycle workflow through customer journey orchestration
- 5 Ease of configuration with low-code/no-code to respond faster to new and emerging needs
- 6 Enable transparency of business processes and self-service for reporting
- 7 Provide business control through dashboards and SLA management
- 8 Operating model changes to encourage design thinking and agile delivery

Moving the end-to-end PLM processes to a BPM/CRM-capable platform typically helps increase process efficiency by over 25% within a year. The business processes can be built incrementally using agile methodology by prioritizing the highest effort/priority areas. At this stage, digitization and automation are opportunistic and target quick wins.

A digital maturity assessment of the current landscape is recommended to evaluate the gaps and incorporate them into the next-gen technology stack with a thorough environmental analysis.

Build a data strategy to sustain data quality and accuracy

Orchestrating the data needs of a digital-age health plan requires a multi-faceted data strategy that enables the foundational architecture to manage real-time data processing and exchange in a reactive, concurrent and proactive manner.

Data Diagnostics

- To address poor data quality and accuracy, it is essential to diagnose the health of current inhouse data in the provider SOR by comparing against external reference sources of benchmark quality.
- A regular cadence can be established to calibrate provider data quality on an ongoing basis.
- Bad data should be identified and analyzed using root cause analysis framework like Pareto analysis and Lean Six Sigma methods like DMAIC frameworks for corrective/preventive measures.

Master Data Management

- As provider data goes stale very fast (approximately 25% deterioration in data quality in a year if left unchecked), governance processes need to be established to sustain the level of data quality and accuracy at an optimum level once the data diagnostics measures yield desirable results.
- Master data management should be considered where multiple sources exist to establish single source of truth before sharing the data to downstream systems for further consumption.

Data Foundation

As industry focus shifts toward cloud-based data storage, the foundational data architecture needs to be revisited to support analytics and bulk exchange of data in real time. This means establishing data pipeline, data lakes, data management services, security frameworks, Microservices-based API management to be infused in the technology architecture.

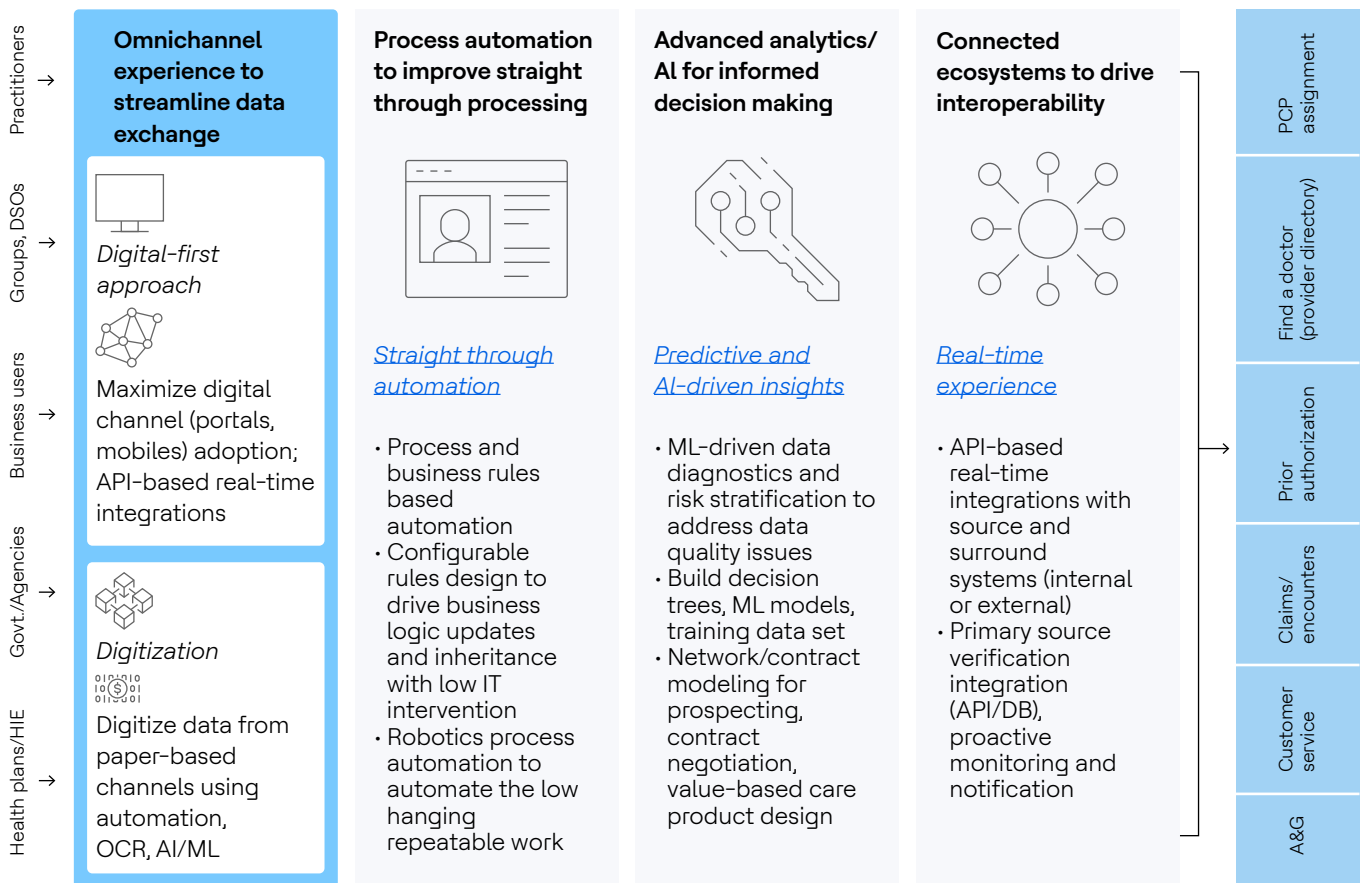
Intelligence Engine

- A layer of intelligence can help health plans proactively identify data quality deterioration. Many analytics use cases can be applied to predict the health of data before bad data starts creating a ripple effect in downstream applications.
- The intelligence engine could also integrate with various internal systems to form a feedback loop that initiates a corrective action either in an automated fashion or via guided processing through workflow-based systems.

Together these four approaches to data management will help create a strong data foundation with the ability to self-cleanse data across health plan ecosystems and proactively report to the stakeholders for decision making.

Drive digitization and automation through front and back-office

Many payers still use paper-based inputs and rely heavily on manual processes that offer a significant opportunity to transform the front-and-back office through digitization and automation. The key technology levers available to health plans are illustrated below:



These measures will help improve self-service, engagement and operational costs and deliver a faster turnaround time for processing transactions like provider onboarding. The end goal is also to reduce the downstream impact of poor data quality through a business value-driven approach. An industry solution that integrates the payer and provider back offices with API/FHIR-based data exchange will tremendously reduce the administrative burden for both payers and providers and pave the way for real-time experiences.

Transform experience with a digital front door and innovations

Transform provider experience by adopting a customer-centric philosophy to continuously improve and align processes to an outcome-driven engagement model. This is the stage where payers seek to attain the highest level of maturity with an end goal of becoming the trusted advisors of providers, have more business control over their processes and promote citizen development within the enterprise. Below are the key areas of focus at this stage:



Digital adoption – Provider portals are a gateway of communication between payers and providers that should be used as a foundation to build trust through real-time and accurate communications. However, their adoption has been slowed significantly by the existence of multiple platforms and design issues. The content, navigation, simplicity, ease of use and intuitive experience should be assessed to ensure product limitation is not a factor in adoption.



Orchestrate experience – Building on 'Provider 360,' payers can drive marketing campaigns and personalization using the 'Next Best Action' model for contextual and proactive engagement.



Citizen development – Enable business users with platforms and training to promote self-service for maintaining business rules and reporting. This will give more control to business operations and reduce the reliance on IT.



Support healthcare innovations – Healthcare is a fast-evolving space, and the demand for new services will continue to put pressure on payers. As value-based care, telehealth and social determinants of health become mainstream, their assimilation into 'Provider 360' and workflow integration is an immediate opportunity.

Payer organizations need to have all the foundations in place to provide an integrated experience in a holistic health ecosystem. While future requirements may not be apparent now, a foundation that promotes scalability, agility and time to market will help build a competitive advantage.

The way forward

PLM modernization is required to transform the payer-provider relationship so that the healthcare ecosystem can become more efficient and focused on members' care needs. The healthcare industry faces shared data management challenges that remain ungoverned without regulations and standards. The changing industry landscape has created a perfect storm for innovation and modernization. However, many health plans struggle to address compliance requirements due to legacy platforms, siloed and manual business processes and a lack of data management strategies. Organizations that can transform PLM through digital solutions will gain a competitive edge owing to improved provider collaboration. The path to transformation can be accomplished using four broad digital themes to approach a holistic PLM solution to gain a competitive advantage:

Move to a managed ecosystem with next-gen digital foundations

Build a data strategy to sustain data quality and accuracy

Drive digitization and automation through back-office

Create a digital front door to transform the provider experience



About the author

Shashank Singh is an Industry Principal with HCLTech healthcare practice for the payer market segment. He has over 15 years of industry experience in product management and consulting. He has led several large-scale transformational programs for leading payer organizations in the core administration area. Shashank has authored many industry frameworks, points of view and solution offerings in the PLM space and other areas of the payer value chain.

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