

Interoperability & Integration Maturity Assessment Overview



65% PRIORITIZE MODERNIZING THEIR TECH STACKS

In a recent survey, 65 of 100 healthcare executives list modernizing systems and processes with a digital first or cloud strategy/consolidating IT systems, assets, and infrastructure as one of their top 2 key challenges.¹

InterSystems is pleased to offer a unique opportunity for a comprehensive evaluation of your organization's interoperability and integration maturity via our **Interoperability & Integration Maturity Assessment**.

Healthcare demonstrates a "legacy-modernization paradox." It's common to find a state-of-the-art, multimillion-dollar imaging device a few doors down from a fax machine used to receive referrals. Clinical information sharing is another instance of this paradox, where HL7[®] Version 2 (HL7 V2), in its fourth decade, continues to thrive. Meanwhile, the HL7[®] Fast Health Interoperability Resources (FHIR[®]) standard leverages every modern web-based bell and whistle imaginable to drive innovation, with limited adoption. Against this backdrop, healthcare IT departments are asked to ensure that they are covering a wide gamut of technologies, and this has led to as many different approaches as there are healthcare organizations, not all of which position their organizations for future success.

Today thought-leading healthcare organizations are prioritizing investment in streamlined, modernized tech stacks from cloud adoption and data security all the way through to the end-user interfaces. Those investments include in-house integration - connecting all internal systems - and interoperability - delivering a foundational, longitudinal, health record for all patients across the enterprise. When properly implemented, integration and interoperability solutions help deliver on the promise of serving "the right data, at the right time, to the right person," and providing the optimized outcomes that are the reason for IT investment in the first place.

The InterSystems Interoperability & Integration Maturity Assessment benchmarks your IT organization against those of industry leaders. You'll learn from industry best practices and understand the potential return on healthcare data sharing at scale. More importantly, you'll be able to assess your own organization's approach to interoperability & integration and explore opportunities for improvement.

¹ InterSystems market study

Maturity Assessment Process



Through the Assessment, you'll have an opportunity to understand how your organization's current interoperability & integration infrastructure - people, processes and technologies - compare to industry best practices and recognized leaders. We understand that every client's needs are unique, and we are committed to providing customized solutions that address their specific requirements. That is why we offer two options for the assessment process. With the basic option, you will receive a comprehensive report as soon as you complete the evaluation. This report offers a detailed analysis of your current situation and provides recommendations on the necessary steps to take to address your challenges and keep up with your strengths. The advanced assessment, includes a follow-up workshop with a strategic session conducted in person. During this session, our experts will work closely with your team to identify the root causes of your challenges and develop a tailored plan to leapfrog your competition and leverage interoperability & integration for all its potential.

Assessment participants should include those decision makers or influencers within your organization who are focused on technologies, use cases, or business value derived from interoperability and integration. Ideally this will include a mix of Senior Leadership, Directors/Managers, and solo contributors such as engineers, project managers, analysts, etc.

The process:

- You: Identify assessment participants and complete the assessment questionnaire
- InterSystems: Compiles results and benchmarks
- Together: We review findings and best practices and develop an optimization roadmap

We've found that the output of this assessment can dramatically influence short, medium and long-term roadmaps for its participants. The resulting report can be circulated to other decision makers within your organization as a means to improve overall buy-in for accelerating the adoption of modern practices and technologies as it relates to interoperability and integration.

A recent Bain & Company/KLAS Research report notes that "lack of cross-solution interoperability and poor EMR integration with existing tech stacks" are top pain points to be addressed.²

² <https://www.bain.com/insights/2022-healthcare-provider-it-report-post-pandemic-investment-priorities/>

Maturity Assessment Topics

As reported by Bain & Company in their 2022 Healthcare Provider IT Report, interoperability and electronic medical record integration with existing third-party tech stacks are currently top pain points for providers. Progressive care delivery organizations have shown that a successful approach to deriving meaningful business value from interoperability and integration use cases starts with the organization's leadership culture and their promotion of healthy, positive change throughout the IT organization. From there, ensuring that all regulatory and security requirements are met starts at the hardware level and ends at the user interface, incorporating advancements in technologies as wide-ranging as encryption to auditing, from TLS to data provenance.

Having a solid cloud strategy and the personnel equipped to ensure your organization optimizes its return on cloud investments is no longer optional. The most recent research from analyst firm IDC finds that around 50% of core IT spend is directed to cloud technologies, yet 82% of a survey group are still stuck with data silos. IDC sees savvy organizations moving from simple cloud adoption to sustainable cloud economics, data logistics, and control. A hybrid hardware architectural pattern encompassing cloud, on-prem, containers, Kubernetes, VMs, etc. is the new normal in health IT today. On top of this hybrid infrastructure, we see clinical, financial, and operational systems deployed to power the entire organization. These are massive, complex systems and tend to be the focus of the organization, yet they will not deliver full value if they are not well connected.

InterSystems customers and partners have demonstrated that there are typically hundreds, if not thousands of integration points required across these enterprise systems and that devices are increasingly important as well. Additionally, we've found that moving to a single EHR across the enterprise does not remove that need for integration and interoperability, but rather, somewhat surprising, that need is actually increased. Similarly, as care is increasingly delivered outside the walls of the hospital, the need for integration and interoperability is further accelerated.

The Healthcare Interoperability and Integration Maturity Assessment will allow you to examine your organizational maturity with regard to all these domains and more, and will thus inform the roadmap that is the final deliverable of the workshop. Topics examined include "Culture", "Integration", "Interoperability", and "Operations". More specifically:

Culture

Leading Integrated Delivery Networks (IDNs) and health plans have a culture of innovation and evolution that is pervasive at all levels and extends to their advancement of technology used within the organization. Data availability – be it to clinicians, analysts, data scientists, marketing department leads, etc. – is at the heart of much of this advancement. Together we will assess how your healthcare enterprise is leveraging and promoting interoperability and integration to improve clinical and financial outcomes, increase patient satisfaction, and attract new patients/consumers.

Integration

Legacy Interface Support

"Legacy Interface" is a term commonly used to describe HL7 V2 interfaces; yet what we see in the market is that HL7 V2 interfaces are just as prevalent in 2023 as they were in the past. In a time of scant resources, there is little appetite to fix or replace what isn't broken, so you can expect those legacy interfaces from the past to remain for the future. During the assessment, we will discuss your organization's tooling for rapidly spinning up and supporting HL7 V2 interfaces.



82% STUCK
WITH DATA SILOS IN
THE CLOUD³



³ IDC Directions, Cloud's Next Stage: The Foundation for Digital Business, Doc #DR2023_GS3_RV, March 2023

Data Fabric

Especially given the outsized role that the cost of data storage plays in the economics of enterprise software architecture, the architectural pattern that is emerging fastest in healthcare today is that of the Data Fabric that can “play data where it lies” and deliver insights and analytics while avoiding the costly duplication of data to multiple environments. In this assessment workshop we will help you uncover opportunities to lead within your organization by introducing and/or accelerating this architectural pattern and delivering clear and concise business value for doing so.

API Management

APIs of all shapes and sizes are spun up by leading health systems’ IT departments. These run the gamut from standards-based APIs, most notably FHIR and IHE Profiles, to custom/proprietary APIs that benefit your internal and external data suppliers and consumers. We’ll explore your readiness to leverage and govern APIs across your technology stack: API Management, API Client capabilities, API Server capabilities, and speed of development.

Business Continuity

“Four Nines” or even “Five Nines” are the expectation for availability of mission critical applications in healthcare today, requiring investments in technology that enables rapid failovers in either planned or unplanned outage scenarios. We will assess the hardware, software and cloud solutions that are being adopted within your organization to ensure that your integration services are never interrupted.

Integration Deployment

Minimizing downtime while continuously rolling out new integration features/updates has become the expectation in modern healthcare IT. Knowledge of Containers, Kubernetes, etc. has proliferated in recent years and has become must-have at enterprises across all lines of business. We will assess your organization’s adoption of modern CI/CD pipelines and processes, as well as the underlying technologies that support them.

85% SAY
REAL-TIME AND
HARMONIZED
DATA IS VITAL FOR
STAKEHOLDERS TO
MAKE INFORMED
OPERATIONAL
DECISIONS⁴

⁴ <https://www.intersystems.com/sage-data-report/>

Interoperability

360-Degree View of Patients and Health Consumers

Industry research on health IT best practices shows that healthcare organizations are ready to move beyond siloed care delivery and claims data and would like to harmonize a multitude of additional data domains spanning CRM, digital touchpoints/web activity, patient satisfaction, patient-uploaded, medical device, (M)IoT, images, social determinants, retail, state registries, and genomics, to name a few. Yet a recent IDC survey found that only 12% of enterprises connect customer data across departments.⁵ Together we will assess your maturity level with regards to providing a longitudinal view of your patients and consumers.



Identity Management

Today's leading healthcare organizations have deployed a combination of probabilistic, deterministic, and heuristic algorithms – across a wide variety of data sources – to ensure the highest degree of accuracy possible when matching patient, member, and provider identities across disparate domains. Web-based worklists for resolving discrepancies, “Golden Records” and API access have all become standard offerings, and as-a-service deployment options make these solutions far more attainable than in years past. We will assess your organization's data quality approach as it relates to identity management.

FHIR Enablement

Spanning use cases from regulatory to innovation, FHIR has evolved substantially over the past decade, and we are now deep into the adoption curve in healthcare. Virtually all new HIT regulatory initiatives require FHIR, with the goal of promoting an open app marketplace powered by APIs and fostering innovation. Ye older systems and data streams are still powered by HL7 V2, and newer data types are not yet covered by the FHIR standard, so you need the agility to move between and across formats to make full use of all your data assets. The assessment will help you understand your organization's FHIR maturity as FHIR itself proliferates through the healthcare industry and powers many of the digital touchpoints your patients and providers use every day.

6% OF PROVIDERS
SAY THEIR PROVIDER
DATA MEETS ALL
THEIR BUSINESS
GOALS⁶

⁵ IDC Directions, The Five Levers Required to Scale a Digital Business, Doc #DR2023_GS2_MW

⁶ <https://www.intersystems.com/resources/provider-data-management-meeting-business-goals-himss-report/>

Operations



User Management/Security

User Management/Security requirements (authentication and authorization) evolve on a near-daily basis, and leading organizations have well-defined practices for ensuring sufficient infrastructure and technology to protect their business's data. We will assess your user management technologies and processes in the context of regulatory requirements.

Cloud

The first major cloud-hosted EMR deployments went live in 2022, marking a turning point in the industry. At the same time, continued healthcare data breaches have convinced many previously skeptical healthcare IT leaders that AWS, Microsoft Azure, and other cloud vendors now offer them greater data protection than do their own premise environments. HIT teams are now increasingly comfortable with integrating cloud-native products into their solution stacks. But this requires new skillsets to ensure optimization of cloud investments. We will assess how well your organization is prepared to take advantage of the many compelling assets of the Cloud.

Consolidation and Centralization

We've found that many health systems have multiple integration engines and/or interoperability solutions scattered across the enterprise, and that consolidation, whether on-prem or in the cloud, delivers substantial return-on-investment across many domains including:

- Optimization of human capital and employee retention
- Profound acceleration of time-to-deployment for interfaces/ interoperability solutions
- State-of-the-art alerting and interface status monitoring across the enterprise and rapid response to close support tickets

As part of the assessment we will help you identify any opportunities for consolidating and centralizing integration and interoperability technologies, as well as identify how to achieve and document the return on investment.

Innovation

Healthcare IT is constantly evolving, and organizations are often relying on innovation platforms to keep up with the demands of healthcare IT. As part of this assessment, we will work with you to clarify the scope and nature of your innovation ambitions, and how these goals can be supported by integration and interoperability. We will work to understand your appetite for in-house innovation and suggest any investments that you might make to accelerate your progress towards achieving your innovation goals.

Summary

InterSystems is proud to have relationships with many of the most prestigious innovators in U.S. Healthcare, and we're in a unique position to analyze and summarize what they have achieved with respect to interoperability and integration.

The **InterSystems Interoperability & Integration Maturity Assessment** will highlight the strengths and opportunities for growth of your own organization's approach to integration and interoperability. Informed by that perspective we will work with you to define an integration and interoperability roadmap with short-to-long term improvements that are proven to work at scale and deliver clinical and business value to ensure your organization can thrive today and in the future.

Learn More

To learn more and/or to request access to the assessment, please visit <https://www.intersystems.com/integration-assessment/>



