



Assessing Digital Maturity: The DigiM™ Digital Maturity Model for Health Systems

WHITEPAPER

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Introduction

One of the key drivers of digital transformation is patients' expectations of online experiences at various engagement touchpoints in accessing and receiving healthcare services. Success with digital health programs requires patients, physicians, and caregivers to interact with each other at multiple online touchpoints facilitated by digital technology. It also involves transforming the IT infrastructure and investing in robust data management and advanced analytics capabilities.

The shift to virtual care models has also forced healthcare enterprises to review their organizational models to drive healthcare digital transformation in the post-COVID-19 era. Digital health is an IT-enabled capability; however, it is not necessarily IT-led. Digital transformation requires a deep appreciation of consumer experience journeys, cross-functional collaboration to enable seamless workflows, and robust technology architecture to implement digital roadmaps and priorities. Healthcare enterprises are at varying levels of maturity today in their digital transformation journeys.

Damo Consulting provides a well designed digital transformation model that is used to assess organizational status for digital capabilities. Model assessments allow the firm to establish effective road maps, digital strategies, and governance frameworks.

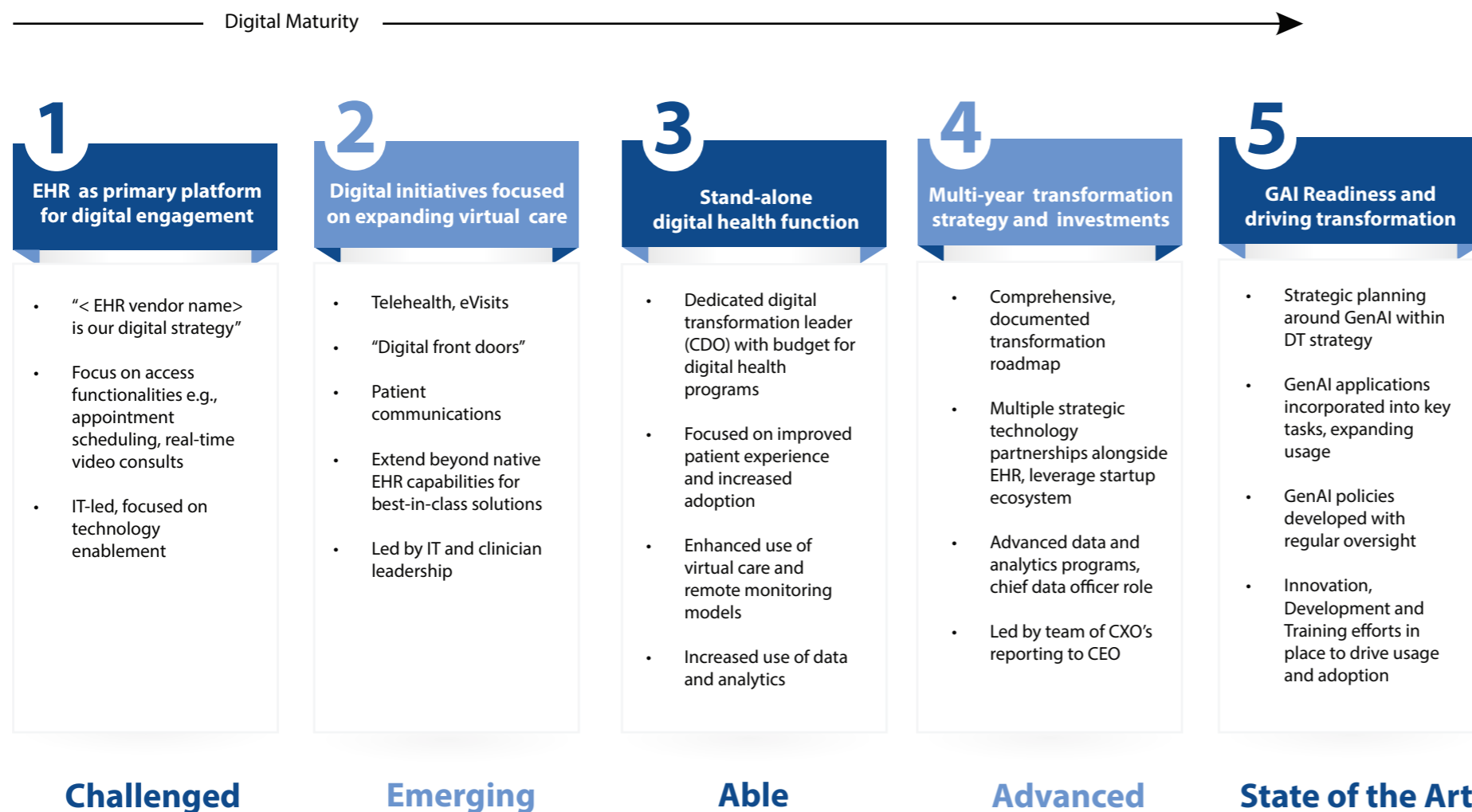


[Download the KLAS report](#)

The DigiM™ Model for Digital Maturity in Health Systems

Damo Consulting's DigiM™ Digital Maturity Model is a framework that describes the different stages of digital maturity in the specific context of health systems. The framework is supported by an online evaluation tool that scores individual health system's digital programs and provides benchmarks to drive incremental investments and roadmap execution priorities.

DigiM™ DIGITAL MATURITY MODEL FOR HEALTH SYSTEMS



The DigiM™ framework is also a useful guide for health IT and digital health technology firms to segment their target markets and identify their target customers. The demand environment for healthcare services now favors "digital-first" enterprises. Based on the digital maturity scores and benchmarking analysis of the leading providers, health systems and their technology partners can accelerate digital transformation in the current competitive environment and position themselves for success in a digital future.

The DigiM™ Digital Maturity Model is a 5-stage model, with Model 5 being the highest level of maturity. It is important to note that each stage in the Maturity Model builds on the previous one. To illustrate the point, it would be tough for an entity to operate successfully in Model 2 if the foundational EHR platform is not adequately optimized to support and integrate seamlessly with standalone best-in-class digital health tools. The following section describes the DigiM™ framework and the core attributes of entities in each maturity model stage.

Figure: Digital Maturity Model for Health Systems

Model 1: Health systems in Model 1 are focused on maximizing the value of their EHR investments. An example is improving patient access through a simple scheduling functionality in an EHR system. Health systems that embrace this model also prefer to rely on their EHR vendor's product roadmap to guide their digital roadmaps. Many regional or community hospitals that rely primarily on core EHR platforms for digital health initiatives fall in Model 1.

Model 2: Health systems in this model have committed themselves to virtualize their care delivery through telehealth, remote monitoring, and online self-service tools. The key attribute for health systems in Model 2 is that they look beyond the core EHR platform to identify best-in-class standalone tools for digital enablement. Model 2 health systems design online experiences for healthcare consumers that increase convenience, improve the overall experience, and offer multiple communication channels between patients and their caregivers. In the wake of the COVID-19 pandemic, health systems across the board have invested heavily in telehealth and digital front door initiatives, often tapping into emerging technologies such as voice and harnessing digital health innovation from big tech firms and startups. Model 2 health systems tend to drive digital initiatives as part of an IT or telehealth program within the enterprise.

Model 3: Digital transformation programs are governed by a dedicated digital function in Model 3 entities. The digital function may be driven by individuals with additional responsibilities for other organizational functions. Digital leaders in Model 3 entities are often practicing clinicians focused primarily on the enablement of online access and communication for ambulatory care to improve utilization and broader telehealth adoption by patients and caregivers. Internal innovation groups drive digital initiatives in some health systems, responding to internal demand on a case-by-case basis. Digital executives in Model 3 entities typically do not have ownership for technology architecture and infrastructure needs at the enterprise level. Instead, they tend to focus more on workflow, training, and user experience to increase the adoption of digital health tools.

Model 4: Health systems in Model 4 are the most mature enterprises in the DigiM™ framework. Health systems at this level have a comprehensive enterprise-level digital strategy that considers stakeholder priorities across functions and departments. Digital transformation leaders in Model 4 organizations look beyond standalone digital front door applications and consider digitalization opportunities across the front and back-end functions, including administrative operations. They evaluate strategic IT enablers at the infrastructure and application levels needed to support digital health programs, all of which go into securing funding commitments for multi-year digital transformation roadmaps in line with enterprise priorities. Health systems in Model 4 typically commit to a handful of strategic technology platform partnerships in addition to EHR. They also have structured internal programs to evaluate and onboard innovative startups for driving enhanced experiences with digital health.

Model 5: Health systems in Model 5 aim to build state-of-the-art facilities by designing digital solutions and patient experiences built with artificial intelligence or generative AI. Generative AI is a key strategic enabler. Innovation, development, and training efforts are mostly in place to drive usage and adoption. GenAI policies are developed with regular oversight. Strategic planning around GenAI is a conscious effort within their DT strategy.



Nick Patel
Former CDO
Prisma Health

Using Damo Consulting's DigiM™ maturity model framework and assessment tool, Prisma conducted a detailed evaluation of its digital maturity relative to peer health systems across the nation. The assessment provided valuable insights to help drive near-term priorities and investment needs to accelerate the transformation journey at Prisma.

Digital Maturity Assessment

The DigiM™ Maturity Assessment tool is an online questionnaire tool that evaluates health systems based on responses to questions covering four dimensions as described below. Each answer is assigned a numerical score. There are multiple response choices for a question in some cases, with each option assigned a different score.

Digital Engagement: Patient and Provider

A well-executed digital experience strategy improves a patient's access to care with experiences similar to what they are already accustomed to in other industries such as banking and travel. Digital "front doors" enable digital patient journeys with tools such as online self-scheduling, find-a-doctor, chatbots, online registration and check-in, and more. Digital experiences must include the needs of providers and caregivers as well. The maturity assessment evaluates health systems based on the choice of tools for enabling patients, providers and caregivers.



Figure : Key Dimensions of DigiM™ Online Self-Assessment Tool

The tools can be native EHR features or standalone platforms; often, health systems deploy multiple tools for the same functionality.

Maturity levels also consider whether the online experiences are seamless and integrated with other digital tools such as appointment reminders, payment gateways, and ride-sharing services. Health systems can also improve access by implementing tools such as slot utilization management to avoid revenue losses due to missed and canceled appointments. One major factor that defines the success of all digital front door applications is their integration into the overall workflows of the health system using standards such as FHIR and HL7.



Tarun Kapoor, M.D.
Chief Digital Transformation Officer
Virtua Health

"We are grateful for the DigiM Honor Roll recognition. Firstly, it's a moment to celebrate the accomplishments across our organization over the past 18 months. Additionally, it's an opportunity to benchmark ourselves amongst the best of the best, and that allows us to focus on how to become even better."



Care management

Care delivery models are rapidly transforming to embrace a “hybrid” care model wherein the in-person experience is complemented by virtual care modalities such as remote monitoring and home health. Inpatient care has also evolved over the years, with nurses and other caregivers taking advantage of camera-mounted and ambient sensing devices deploying voice- recognition and other technologies. Tele- ICU and Telestroke technologies allow for peer- to-peer communications between regional or community medical centers with experts anywhere. Many regional centers do not have neurologists on call available for emergency stroke management. Telestroke capabilities use the hub and spoke model to connect rural and urban centers to manage neurological emergencies. Similarly, a Tele- ICU can leverage advanced centers to communicate with physicians and nurses to enter orders or capture vitals at the bedside rather than entering them after returning to the nurse station after completing the rounds.

Other tools such as patient flow management allow for bed capacity management, managing the supply and demand of inpatient services (like phlebotomy, respiratory therapy), transfers to and from inpatient units, and coordinating case management. Though not directly related to a patient’s clinical care, Wayfinding solutions help enhance the experience of the patient’s family when patients in distant ICUs. With advanced cardiac telemetry devices, remote monitoring of cardiac patients becomes feasible. Some hospitals also use visiting their loved ones.

Digitally mature health systems invest in telehealth programs for inpatient care that improve caregiver productivity and patient experience and outcomes.

As the virtualization of health care accelerates, health systems are looking at digital tools for routine care management. Remote patient digital rounding applications to facilitate.

Enabling technologies

As the adoption of telehealth and virtual care models of health care accelerates, health systems are looking at the foundational technology infrastructure that will enable to scale the operations to meet growing demands for remote patient monitoring (RPM) programs and multi-channel patient communication through SMS/Chat/mobile are among the high-impact initiatives in this area. Chronic disease management is a significant component of healthcare services. Leading healthcare facilities have invested in structured programs and tools to enable remote care for patients with chronic conditions, often involving patients directly in their care management initiatives.

Many health systems are implementing cloud transformation programs to increase agility, flexibility, and scalability to their technology infrastructure. They are also looking at enterprise-class platforms such as CRM to enhance patient interactions in contact center operations and implementing ERP platforms to automate and streamline back-end processes and workflows. Automation technologies such as RPA are moving beyond administrative functions, driven by talent shortages and workload burdens.

Org model and governance

An essential factor in success with digital transformation is how a health system is set up to implement digital initiatives. The DigiM™ Maturity Assessment tool considers various indicators such as a dedicated Chief Digital Officer role, a separately allocated budget for digital initiatives, and a documented approach to implementing enterprise digital roadmaps. Some health systems are setting up digital transformation offices (DTO) to drive enterprise-wide digital transformation initiatives. A DTO is distinct from a Chief Digital Officer role in that it is a standalone function tasked with actively enabling healthcare digital transformation initiatives across the enterprise. A senior leader typically leads the DTO in the organization with significant influence across functions and the authority and empowerment to make critical decisions related to investment priorities, among other things.

Artificial Intelligence

The DigiM™ Assessment evaluates AI adoption and governance in a healthcare organization. The assessment aims to assess how AI-based solutions (e.g., Machine Learning, Image recognition, etc.) have been implemented or piloted in organizations, and to what extent organizations are integrating AI in their technology roadmap and overall business, clinical, operational, and financial objectives. The assessment also aims to understand the governance structures in place, including the existence of AI steering committees and policies guiding AI-related decisions at the enterprise level. In addition, the assessment explores the adoption of Generative Artificial Intelligence (Gen AI) within your organization, examining its applications in patient communication, clinical documentation, administrative tasks, and revenue cycle management. The assessment also investigates an organization's readiness for AI, including the presence of required data models and IT infrastructure.



Digital Maturity – Analysis of Select Health Systems

Several leading healthcare systems have leveraged the DigiM™ Maturity Assessment tool to assess their digital maturity. The tool evaluates the relative maturity of select health systems in the U.S by assigning numerical scores to individual digital programs implemented by health systems. There is a significant variation in the scores of the health systems, as is to be expected. The larger health systems have invested more in foundational IT infrastructure and data/analytics, suggesting a more comprehensive approach to transformation that positions them better for building seamless digital experiences for consumers. Smaller health systems have focused more on enabling digital front doors to address near-term priorities. In the longer term, entities that do not invest in IT modernization and adopt emerging technologies such as the cloud may find themselves at a competitive disadvantage. Very few health systems covered in our assessment are at Model 4 maturity level, indicating that most health systems are yet to develop or implement a comprehensive transformation.

Maturity Benchmarks: Patient Engagement

Section	Digital Initiative	Provider 1	Provider 2	Provider 3	Provider 4	Provider 5	Provider 6
Patient Engagement	Patient mobile app	●	●	▲●	▲	▲	●
	Real time video visits	▲●	●	▲●	▲	▲	▲
	Symptom triage	▲		▲●	●	▲	●
	Find-a-Doc	▲	▲●	▲		▲	
	Online registration	▲●	●	▲●	▲	▲	
	Online self-scheduling	▲●	●	▲●	▲	▲	
	Wait-time estimator	▲	●	▲			●
	Online check-in	▲●	●	▲●	▲		▲
	Chatbot	▲		▲		▲	
	Online payment	▲	●	▲●	▲	▲	
	Single / Unified patient portal	●	●	▲●	▲	▲	▲
	Digital patient education	▲	▲	▲	▲	▲	▲
	Secure patient communication	●	●	▲●	▲	▲	▲

Source: Damo DigiM™ Digital Maturity Model Benchmarks



Figure : Digital Front Door Initiatives at Select Health Systems*

There are significant differences in maturity levels across health systems, Benchmarks from our database of digital assessment across more than 30 health systems indicates the variations in how each health system is approaching digital engagement for patients and providers. While many health systems have implemented their digital experience platforms using mainly native features in their EHR platforms, leading health systems have chosen to implement standalone best-in-class solutions with out-of-the- box FHIR/ HL7 integration capabilities. The DigiM™ maturity assessment enables health systems to benchmark their current state against industry-wide benchmarks using a standardized approach. It must be stated that, the maturity assessment is not meant to be prescriptive.. What may seem a strategic priority for one health system may be relatively unimportant for another in a different market with an entirely different set of competitive factors.

Health systems leaders, who have taken the DigiM™ Maturity Assessment Survey, have used the analysis to review and revisit their investment priorities and develop multi-year digital roadmaps. By using the maturity assessment health system executives drive priorities for implementing new use cases, identifying solution providers to partner with, and benchmarking their progress against industry peers.



Tim Skeen
SVP & Enterprise Chief
Information Officer, Sentara Health



"We are pleased to be recognized in the Damo Digital Maturity Awards program. Digital transformation is a complex, multi-year effort that requires leadership commitment and a coordinated effort among several stakeholder groups. At Sentara, we have built a strong technology foundation for the transformation and are on our way to build best-in-class experiences for our members and patients. We have benefited from the peer group evaluation provided by the maturity assessment, and the benchmarks will enable us to set our digital priorities for the coming year."*



*DigiM™ Digital Maturity Momentum Awards

Every year, Damo organizes the DigiM™ Digital Maturity Momentum Awards to recognize the accomplishments of digital transformation in health systems. [Learn more](#)

How to Use the DigiM™ Maturity Assessment

Health systems executives may use the DigiM™ Maturity Assessment in a couple of ways:

- Compare and benchmark their maturity relative to competitors in their markets. Our analysis of the highly competitive New York City market for one of our clients enabled them to develop a highly focused roadmap with a clear set of near-term priorities.
- Engage in further discovery and exploration to validate their relative maturity levels and accelerate their transformation journey with focused investments and technology partnerships. At a large regional health system, the maturity assessment was supplemented with executive interviews and an internal survey to identify the enterprise's most important digital experience priorities.

Research and client interviews conducted by Damo Consulting suggest that very few health systems are at Model 5 maturity today. Our research indicates that half or more of the roughly 5500 hospitals in the U.S. are today in Model 1. Many of these systems are moving to Model 2, where a large majority of mid-tier health systems exist. In these systems, digital investments are guided by departmental or functional priorities and implemented under a CIO's leadership. Health systems in Model 3 are taking the next step towards providing the required focus for digital initiatives by appointing a dedicated leader to the role.

Organization models for digital transformation are evolving. In some cases, the leader is a clinician with additional responsibilities; in others, it is an individual with responsibilities for marketing and patient communications. Many CIOs are de facto digital leaders in their organizations today. However, among the more mature health systems, the front and back end of digital transformation is led by separate leaders.



Edward Marx
Ex-CIO, Cleveland Clinic



"For those seeking deep insights into digital transformation and innovation, the DigiM™ maturity assessment tool offers a robust analysis of health systems' digital programs and delivers benchmarks to inform strategic investments and prioritize roadmap execution. I highly recommend everyone to take this assessment to gain valuable insights and drive your digital transformation initiatives to the next level."

The DigiM™ Digital Maturity Model is a starting point that provides an objective assessment of the current state. Health systems will benefit from an additional validation of internal priorities to develop a roadmap for achieving their digital transformation goals.

Turning Insights to Actionable Roadmaps

The DigiM™ Digital Maturity Model is a starting point for careful benchmarking of a health system in its competitive landscape and against the industry's overall state. The scoring ranges, and the detailed commentary accompanying the scores, provide individual data points from which the health system can help reprioritize investments and accelerate progress.

The DigiM™ Maturity Assessment tool emphasizes the importance of online access or digital front doors in a health system's digital transformation roadmap, a high priority area of focus today. Health systems leaders can use the assessment scores to identify gaps in their roadmaps and prioritize/reprioritize investments as necessary.

Since the scores are based on self- assessment, health systems leaders will benefit from an additional level of validation that explores the degree of progress with individual initiatives and compares it with the progress made by other health systems.

Damo Consulting offers a 6–8- week consulting offering that can turn the maturity assessment scores into actionable inputs and will achieve the following:

1. Validate self-assessment based on detailed benchmark data and further evaluation of ongoing initiatives.
2. Discover organizational needs with internal surveys, focus groups, and 1:1 leadership interviews to identify priorities and dependencies.
3. Benchmark the DigiM™ score against industry peers at the level of individual digital health programs.
4. Develop competitive intelligence and use it to drive investment priorities and partner selection.
5. Identify key technology partnerships to achieve digital objectives using our one-of-a-kind DamoIntel™ database of digital health initiatives across health systems and technology partners, enabling the programs.

Damo Consulting has vast expertise in developing digital roadmaps for some of the nation's largest health systems. We have helped health systems direct hundreds of millions of dollars in digital health investments using a structured playbook for digital transformation. Our approach has saved tens of millions of dollars, helped digital leaders make the right partner decisions, and accelerated their transformation journeys.



DigiM™ Digital Maturity Assessment: \$9,900

Turning insights into action - a 5-step process



Figure : Turning insights into action - a 5-step process



Damo Consulting provides digital transformation advisory services to enable healthcare organizations to navigate the technology-enabled transition to telehealth and virtual care. We bring deep industry knowledge, market insights and technology skills to help develop and implement enterprise digital roadmaps.



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