



# EMBRACING SUBSCRIPTION-BASED TECHNOLOGY MODELS to Support Personalized Care

**W**hen people sign in to their Netflix account, they are quickly presented with an array of movies and TV shows that resonate with their personal preferences — and many then wind up binge-watching for hours. The success of the on-demand streaming media company hinges on its ability to leverage data and analytics to provide a personalized experience to its customers. In this age of consumerism, healthcare providers are trying to do the same by providing personalized medical experiences to their patients. This means delivering care that is customized to each individual's needs and preferences.

“In the post-EHR era, the primary focus of healthcare organizations is on personalizing medicine and healthcare as a whole,” said Erik Wagner, Senior Director of Global Provider Strategy, Healthcare, and Life Sciences at Salesforce. “Now that nearly all healthcare organizations have completed their EHR implementations, the focus has shifted to personalizing the patient experience, making it easier, more convenient, and more effective for everyone involved.”

To achieve this goal, healthcare provider organizations need to know exactly what each patient wants and needs. “It is all about getting the right treatment to the patient as quickly and effectively as possible,” said Todd Donzelli, VP for Program Management, SaaS Transformation, at GE Healthcare. “With personalized medicine, patients ideally are receiving faster assessments of their conditions, which allows them to be put on the correct treatment path more quickly. It is not only important to identify treatments that will work but also treatment plans that each individual patient will adhere to.”

The good news is that the healthcare professionals and leaders who participated in *Perspectives on Personalized Medicine and Software as a Service*, a recent HIMSS Media survey,\* expressed a fairly high level of confidence when asked about their organizations' ability to deliver personalized care.

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Erik Wagner | Senior Director of Global Provider Strategy, Healthcare, and Life Sciences | Salesforce

In fact, just 5% of the healthcare professionals and leaders surveyed characterized their organizations as not very effective at delivering personalized care, while 32% said their organizations are somewhat effective, 43% very effective, and 21% extremely effective.

### Turning to technology

Delivering personalized care, however, is not without obstacles. Healthcare clinicians and leaders identified a variety of challenges, such as demonstrating the clinical value of personalized medicine to enable reimbursement, achieving the needed level of data integration/interoperability, and maintaining compliance with industry regulations (Figure 1).

Clearly, to meet these challenges, healthcare organizations need to focus on the optimal utilization of technology. “Success at delivering personalized care is widely perceived to be dependent on having the right technology in place,” said Janet King, Senior Director for Market Insights at HIMSS Media. “Organizations need to have technology that enables them to collect, integrate, access, and finally analyze patient data so they can deliver care interventions that meet each individual patient’s very unique needs.”

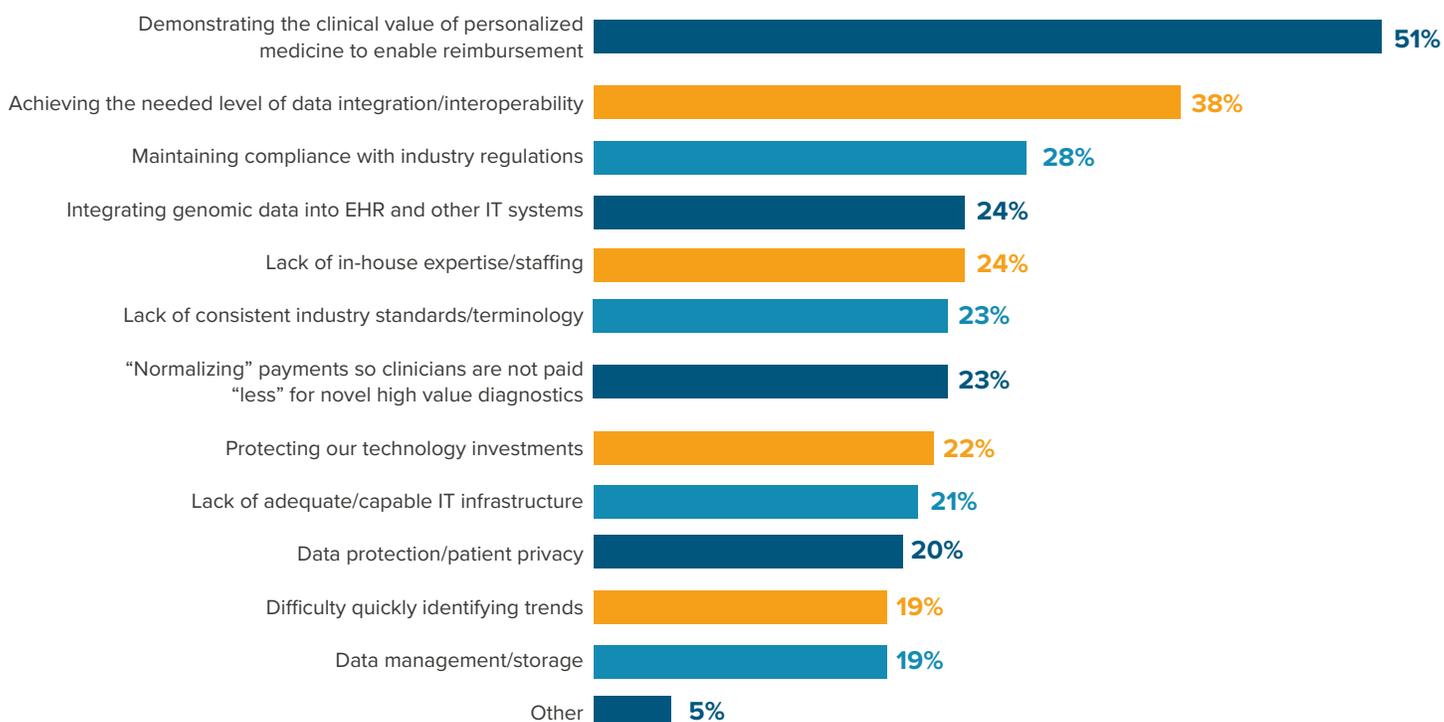
As such, providers need to work with more than just clinical information. “In addition to what’s in the chart in the EHR, providers need personal information that is relevant to the complete well-being of the patient,” Wagner noted. “Technology that can provide access to social determinants of health data, for instance, can help providers create a more complete picture of each patient and, therefore, a more personalized experience.” By leveraging information to enable such experiences, providers can meet patient expectations and improve outcomes, important elements of success as the industry is becoming more consumer-centered than ever before.

### Leveraging subscriptions

To get this technology in place, many healthcare organizations have turned to subscription-based models. In fact, according to survey respondents, nearly 9 of every 10 organizations are already using software as a service (SaaS) models for at least one use case — with 45% reporting current or future use of SaaS for EHR systems, 40% for clinical information systems, and 38% for telemedicine/patient monitoring (Figure 2).

Embracing this model comes as no surprise to Wagner, as the “model really now permeates all aspects of our lives,” he said.

FIGURE 1. CHALLENGES TO DELIVERING A PERSONALIZED CARE EXPERIENCE





*“While the idea of ‘hardware as a service’ is not familiar to most, interest in applying the same benefits around agility and scalability reaped from SaaS to hardware investments was relatively high, suggesting it is a concept worth further exploration.”*

Janet King | Senior Director for Market Insights | HIMSS Media

“It’s not a new concept to people. This is how we pay for our cell phones. This is how we pay for many digital services, such as TV or music streaming services, and an increasing number of nondigital products, such as meals and self-care items.”

Not surprisingly, then, healthcare organizations are now considering subscription models, not only for software but for bringing needed hardware into their organizations as well. Indeed, 8% of survey participants said their organizations are extremely interested in using a subscription-based service for hardware, 24% are very interested, and 46% are somewhat interested, while just 13% are not very interested, and 8% not at all interested.

“While the idea of ‘hardware as a service’ is not familiar to most, interest in applying the same benefits around agility and scalability reaped from SaaS to hardware investments was relatively high, suggesting it is a concept worth further exploration,” King said.

Indeed, subscription models can deliver a variety of benefits to organizations — especially those seeking to support personalized medicine programs. Survey respondents pointed to simplifying/modernizing IT, gaining greater flexibility and ability to adapt to changing business

needs, and accelerating or driving transformation or innovation in care delivery as the advantages that most appeal to them as they move toward SaaS (Figure 3).

With subscription-based models, healthcare organizations don’t have to worry about the need to replace outdated technologies. “Upgrades, updates, and new technologies are automatically built in and baked into the products,” Wagner said. “So, customers can continue to innovate, as they’re always on the latest and greatest version that’s available.”

Perhaps even more important, subscription models ensure that software and hardware vendors stay on top of their game. “Under these models, vendors are only as good as how the software or hardware products perform on a month-to-month, week-to-week, or day-to-day basis,” Wagner said. “So, if healthcare providers or customers aren’t happy, they can walk away with a minimal investment upfront because this is a pay-as-you-go model. The vendor has to ensure that customers always receive the best support, the best care, the best uptime.”

As such, the relationship with a vendor becomes especially important. When offering imaging hardware via a subscription model, for example, GE Healthcare doesn’t merely supply products but also forms close partnerships with providers to improve the overall imaging process.

“The biggest problem in radiology departments is efficiency and scheduling,” Donzelli said. “And so by working directly with providers to make the imaging process more efficient, by improving scheduling and making it easier to get the right patient to the right scan at the right time, and ultimately empowering the clinician to make the right diagnosis, we are solving one of the biggest problems that providers are dealing with. We also help to ensure the provider organization is cost-effectively utilizing the hardware — and does not have half of its MRI fleet sitting idle.”

Subscription models also make the budgeting process more predictable for healthcare organizations. “Typically, hospitals look at technology as a moment-in-time purchase or something that is only acquired every seven to 10 years. And then they use that equipment until it is no longer usable and have to make another large purchase to replace it,” Donzelli said. “With a subscription model, hospitals are not looking at massive expenditures every seven to 10 years. So, they have a more predictable approach to what their costs are going to be.”

FIGURE 2. **CURRENT OR PLANNED SAAS USE CASES**

SaaS use case	Percent using or planning to use
EHR Systems	45%
Clinical information systems	40%
Telemedicine/remote patient monitoring systems	38%
Storage/archiving/backup	35%
Imaging/PACS	28%
Population health management	28%
Revenue cycle management	28%
Business intelligence/analytics	24%
Patient-facing web or mobile applications	23%
Supply chain management	22%
Business continuity/disaster recovery	14%
Genomics/precision medicine	12%
Other	1%



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Todd Donzelli | VP for Program Management, SaaS Transformation | GE Healthcare

FIGURE 3. PRIMARY FACTORS DRIVING USE OF SAAS

Simplify/Modernize IT	32%
Gain greater flexibility and ability to adapt to changing business needs	27%
Accelerate or drive transformation or innovation in care delivery	26%
Improve our competitive edge	26%
Choose best performance, privacy, security fit for each application/workload	25%
Facilitate inter-organizational data sharing/analytics	20%
Drive improved ROI from investments	18%
Meet evolving data protection/privacy challenges	17%
Avoid single points of failure/downtime	15%
Overcome skills shortages	14%
Harness the power of cloud compute engines to advance analytics, AI	14%
Gain more granular control of costs	11%
Avoid vendor lock-in	5%
Consume best-of-breed innovations from several providers	5%
Other	1%

## Focusing on innovation

Simplifying processes is just a start. Healthcare organizations could also empower consumers to become more fully engaged in their care by following the lead of the financial services industry, where consumers now take care of just about all their financial needs from their computer or mobile phone, eliminating the need to interact with a financial professional.

Because organizations don’t have to make significant upfront investments, they can more keenly focus on innovation. “With subscription-based, pay-as-you-go models, healthcare organizations can kick the tires because they don’t have to worry about making massive capital investments,” Wagner concluded. “Instead, they can freely experiment with technology and say, ‘Yes, this is going to work for us,’ or, ‘No, this isn’t going to work for us.’ It will allow organizations to continually innovate and support evolving personalized care initiatives.”

In the final analysis, as healthcare providers move toward delivering personalized care, they will increasingly need to rely on both software and hardware solutions to support these initiatives. Subscription-based models can make it possible for healthcare organizations to continually leverage up-to-date technologies without having to experience the disruption associated with replacing outdated solutions and starting from square one every few years.

\* HIMSS Media Survey: *Perspectives on Personalized Medicine and Software as a Service*, July 2019, conducted among 120 IT, business, and clinical professionals and leaders at U.S. hospitals and health systems (multihospital systems, integrated delivery networks, academic medical centers, stand-alone specialty hospitals, and outpatient practices.) GE Healthcare was not identified as the survey sponsor.

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