

WHITEPAPER

Singapore healthcare providers: How to optimize workflows and turbocharge DX

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A piecemeal approach to healthcare DX doesn't deliver value

The pandemic has exposed the need for end-to-end digital transformation (DX) in the Singapore healthcare industry. According to The Future Health Index 2021 Study,¹ the immediate DX priorities in Singapore are partnerships and investments to simultaneously benefit from basic digital health technologies such as telehealth and advanced ones such as Artificial Intelligence (AI). As the use of digital health technologies gathers scale there is also a premium on investing heavily to ensure complete data privacy and security.

Singapore's healthcare professionals should be able to leverage integrated digitized workflows to streamline healthcare delivery as work pressure increases. Helping professionals maximize their flexibility at work and increasing the useful information at their disposal are at the core of all efficiency enhancing transformations in healthcare.

AI is the digital technology that more than 70 percent of healthcare leaders in Singapore are investing in. Two thirds² of Singapore healthcare leaders are investing their AI dollars to automate routine documentation, enhance workflows, and improve workforce efficiency. But this intense focus on AI means internal IT platforms need upgrading to be more robust, adaptive, and

secure than they are now. Such platforms are essential to managing and analyzing large volumes of data from different sources, as well as digitally optimizing workflows.

Healthcare organizations in Singapore are also increasingly caring for a rising number of patients online. According to the survey,³ 20 percent of the routine healthcare delivery is already happening outside the walls of the hospitals or healthcare centers. Local organizations expect more than a fourth of the patients to be treated outside healthcare facilities using digital technologies in three years. This demands further optimization, digitization, and integration of workflows and data. Empowering staff with technologies such as interactive virtual assistants, bots, voice recognition, and augmented reality (AR), along with AI; and leveraging robust internal IT platforms to ensure these technologies deliver value together are key.

Along with seamless real-time data monitoring, the ability of internal healthcare platforms to predict and help workers react to potential outages before they occur are crucial to connected healthcare delivery and data privacy. In summary, today's healthcare industry in Singapore is now very dependent on robust internal IT platforms.

Optimizing workflows: Five key IT challenges for Singapore healthcare firms

The demands of the modern consumer mean that current workflows in healthcare need to be made more efficient. To redesign workflows and achieve end-to-end DX, the IT infrastructure deployed at most Singapore healthcare organizations faces five key challenges:

Isolated and under-utilized technologies break down workflows

Fragmented middle and back-office workflows are

immensely frustrating for patients and medical professionals alike. The IT infrastructure supporting the middle and back offices is typically saturated with disconnected, underused technologies leading to broken workflows. Because of fragmented workflows, neither healthcare professionals can provide optimal care, nor patients can enjoy a seamless user experience. The workflows end up being neither simple nor easy to use for both patients and caregivers.

Disparate technologies mean too many administrative tasks

Using disparate technologies for different interconnected tasks results in higher staff workloads, which in many cases takes time away from providing care to patients. Documentation and compliance data management are part and parcel of the healthcare industry. They become challenges to healthcare professional efficiency and patient experiences when scheduling and billing staff, clinicians, and customer service representatives are using disparate technologies to take a patient from connecting with the healthcare center to completing a procedure to finally settling the bill.

Disparate technologies lead to key processes running in siloes. Healthcare organizations need robust internal IT platforms to break down siloes and integrate workflows.

Siloed data hampers unified experiences

Timely and accurate decisions are key to the best outcomes in healthcare, and data is the lynchpin of such outcomes. But data comes in multiple formats and from different sources.

Therefore, healthcare organizations need systems that can organize, consolidate, and orchestrate data from various sources to help healthcare practitioners deliver value-based care. Current platforms lack the ability to build information bridges between historical data (patient records, claims, research, and so on) and new data streams (wearables, medical devices, sensors, and so on). These information bridges are important to complete the information loop for healthcare professionals.

Platforms that support workflow redesign and provide a unified, comprehensive view of the patient on a single screen is what's needed. Supporting specific end-user needs, preferences, patient characteristics, and specialties, all while delivering a unified user experience for professionals across different care settings, electronic medical records, and interfaces is the fulcrum of the data strategy for optimizing workflows.

Legacy systems put compliance and data security at risk

Always securing patient data when healthcare staff handle and transmit it is essential to maintaining trust between providers and consumers. Healthcare professionals need to be confident that the data they are managing will not be compromised externally or internally. As such, keeping up with evolving cybersecurity threats is an overwhelming challenge for IT staff.

While IT security resources struggle to keep up with the challenges, legacy IT systems further complicate threat management. This is because legacy systems diminish the visibility of the flaws that create security lapses. Prioritizing remedial actions then becomes difficult.

Internal systems should enable healthcare workers to react quickly to evolving challenges by helping them take pre-emptive actions before aggravating security issues occur. Healthcare professionals require systems that support streamlined ways to identify and react to security challenges, to ensure complete data security and compliance.

Integrating futuristic technologies is a major challenge

The healthcare industry is gradually adopting intuitive electronic prescriptions, and anytime, anywhere access to patient data on any device, as well as real-time surveillance and monitoring. To enable such functions and features, healthcare organizations need to create unified digital care settings on internal IT platforms.

Only by integrating internal systems on a flexible, adaptive, and intelligent platform can they build a foundation for future innovations. This means the platform should be able to support enhanced personalization features, role-based capabilities, and intuitive interfaces to enable intelligent collaboration that respects the time and effort of healthcare professionals.

Achieving end-to-end healthcare DX in Singapore: Where to start?

The DX efforts by Singapore healthcare providers should focus on achieving the 21st century IT architecture that can be customized for ever-changing IT environments while ensuring protection from sudden disruptions. While firmly keeping an eye on short-term IT challenges, IT leaders should ensure the level of DX required for the future, today.

To meet current and future business challenges, existing systems need to quickly adapt to changes, drive

higher workforce efficiency and productivity, support user experiences like that of modern consumer software, and enable innovation at scale. Only by deploying an intelligent cloud-based platform to integrate all departments, processes, and existing systems can you deliver such value. Relying on a piecemeal approach to DX hampers the delivery of true value.

How ServiceNow helps accelerate end-to-end DX

ServiceNow's Now Platform® was built for the cloud from the ground up, using a single data model and a unified scalable architecture. It helps data flow seamlessly across all healthcare applications and existing systems, and enables workflow automation and re-design at scale, so that healthcare professionals can achieve higher efficiency and productivity. Here is how the Now Platform® can help turbocharge DX:

Drive digitized and connected workflows throughout the enterprise

With ServiceNow's cloud platform, your organization's IT team can connect siloed systems, processes, and departments to achieve end-to-end digital workflow automation. By orchestrating all workflows on a single platform, customer service representatives can see the status of each process in a single pane while patients can obtain a clear, unified view of what is happening.

Healthcare professionals can easily sign, exchange, and store forms online. To eliminate process bottlenecks, the platform automatically routes all information among relevant stakeholders, while most of the communications with patients also happen online. Purpose-built AI

capabilities help automate routine tasks while helping resolve issues faster, to avoid frustration among healthcare professionals and patients alike.

The platform also helps professionals visualize healthcare process workflows in a simple, task-oriented view, making healthcare delivery much easier for teams.

Integrate data to deliver unified user experiences

The Now Platform® delivers intuitive user experiences that ultimately enhance healthcare professional efficiency and productivity by unifying web, mobile, and conversational experiences as well as seamlessly integrating data from multiple sources. More importantly, for smart healthcare delivery, you can associate skills with individuals or groups and accordingly prioritize the allotment of projects or tasks to them.

Healthcare professionals without coding skills can also customize reports and dashboards to flexibly avail the most accurate information at their fingertips. The Now Platform® also helps deliver targeted personalized experiences with all resources that healthcare teams

need to accomplish their tasks.

ServiceNow's data model is specific to the healthcare industry and conforms to FHIR HL7, an industry standard that empowers healthcare providers to follow a proven set of standards, architecture, and methodologies to facilitate interoperability of patient and health (EMR) data.

Ensure faster time to value for innovative healthcare projects

The ServiceNow platform helps healthcare companies target faster innovation and return on investment (ROI) with out-of-the-box applications and integrations. Low-code tools help healthcare teams develop apps faster than ever before.

To enable more automated and futuristic workflows, the platform helps integrate niche digital technologies such as AI, ambient interfaces, AR, and virtual reality (VR), intelligent bots and virtual assistants, voice recognition software, and gesture-based controls faster and with greater control. ServiceNow's specialized healthcare data model reduces duplication and provides faster time to value for innovation projects.

Provide the highest levels of data security and compliance

ServiceNow's secure, cloud-based environment is built with your organization's need for the highest levels of data security, privacy and regulatory compliance, and its end-to-end DX goals in mind. The Now Platform® integrates all the systems and tools deployed to monitor incidents across the organization in one place. To provide a centralized view of what's happening, it uses a single cloud-based system of action.

Crucially, for healthcare organizations, the platform also ensures that tasks are automatically delegated to the right persons at the right time. Everyone stays on the same page with the availability of real-time information on their screens.

In addition, Now Platform® helps reduce the total cost of compliance by digitally recording every action in the healthcare organization's online environment to make reporting and auditing as easy as possible. Using multiple flexible encryption options, healthcare organizations can meet the exact individual and corporate healthcare compliance levels that they require. They can also meet all regional and global healthcare regulatory requirements with flexible service options.

Case study: How ServiceNow optimizes COVID care workflows

As the COVID workload peaked at a Phoenix, Arizona-based healthcare organization in the United States, its nurse call lines were overwhelmed with patient requests. While the organization had been using ServiceNow to automate internal services, they struggled to bring enough healthcare professionals to attend to the requests. To address the issue, the organization utilized ServiceNow's low-code platform to add a chatbot to answer the bulk of the COVID Calls.⁴

Now, when patients visit the organization's website with COVID-related concerns, they are met with a banner that directs them to a page that collects more information. The platform then helps patients fill a symptom self-checker or converse with a nurse on live chat.

Visitors with COVID are encouraged to contact a nurse; otherwise, the chatbot informs them what they could do if conditions change. The platform ensures that patients get the answers they need whenever they call, while clinicians can address other critical tasks like caring for admitted patients.

⁴ How ServiceNow Supports Automation in Healthcare, [Healthtechmagazine.net](https://healthtechmagazine.net/article/2020/10/how-service-now-supports-automation-health-care), October 12, 2020, <https://healthtechmagazine.net/article/2020/10/how-service-now-supports-automation-health-care>

Why ServiceNow? Deliver sustainable change faster with end-to-end DX

ServiceNow provides leaders at healthcare organizations a powerful, born-in-the-cloud platform to digitally transform all healthcare workflows from end to end. By unifying systems used by different teams across the entire healthcare value chain, including EHR, billing, and compliance, the Now Platform® provides accurate information on the status of patients with deep visibility of their conditions and treatments. Healthcare professionals can respond to patients more quickly with enhanced access to patient data at their fingertips.

Moreover, your staff can scale services quickly through patient self-service portals and virtual agents that help gather detailed information while routing queries to the most appropriate persons. In short, ServiceNow provides a digital solution that enhances patient care experiences comprehensively and increases the productivity and efficiency of healthcare staff by powering end-to-end DX. This way, ServiceNow ensures truly sustainable change faster than the typical piecemeal approach to DX.

Find out more about the Now Platform: www.servicenow.com/now-platform.html

Find out more about ServiceNow healthcare solutions: www.servicenow.com/healthcare

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Jicara Media
135 Middle Road, Bylands
Building, #05-03,
Singapore 188975

+65 9026 0649
+65 6815 2996

contact@jicaramedia.com
www.jicaramedia.com

