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A unified workflow platform can improve employee, clinical staff, and patient experiences by reducing the friction associated with healthcare's complex and often disjointed workflows. A marketplace of certified applications enables healthcare organizations to leverage best practices across the industry.

Transforming the Healthcare Experience Through Improved Workflows

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Introduction

Healthcare organizations are transforming themselves to be more digital-first enterprises to meet clinicians and patients where they are — online. Despite the digital transformation initiatives that are underway, many processes are still manual and cumbersome and require access to information stored in siloed systems across the organization. Communication along the way consists of facsimiles, emails, spreadsheets, forms, messaging, telephone calls, and even interoffice envelopes. To reduce this process friction, healthcare organizations are moving certain workloads to the cloud, which enables improved access to information and better collaboration among colleagues. According to IDC's April 2018 *CloudView Survey,* 60% of healthcare providers are moving custom workflows and business process management workloads to a public cloud.

AT A GLANCE

KEY STAT

60% of healthcare organizations are moving custom workflows and business process management workloads to public cloud environments.

Workflow platforms, in addition to helping IT improve service levels, can help healthcare organizations streamline HR, customer service, and custom workflows by improving access to critical information to complete a wide variety of processes efficiently.

Benefits of Improved Workflows

The healthcare ecosystem, by its very nature, is inherently complex. Multidisciplinary teams of healthcare providers care for patients across the continuum of care. Workflows are often disjointed because patient health information is stored in disparate systems or parts of a process are still paper based despite the widespread adoption of healthcare IT systems. Healthcare IT can span entire organizations, and IT, HR, patient, and clinical processes all benefit from digitized workflows. When properly deployed, service management and workflow solutions can provide the following benefits:

» **Make a great first impression with prospective and new patients.** In the United States, patients are paying more out-of-pocket expenses under today's high deductible health plans, compelling them to more carefully evaluate where they will receive the highest-quality care at a cost-effective price. Positive first impressions will be made when customer service representatives can address their questions, help them easily navigate the organization, and even book appointments. Patient satisfaction plays a vital role in influencing retention, increasing reimbursement, and creating brand loyalty. Similarly, in countries with national health systems, there is a growing focus on consumer experience and engagement to encourage patients to participate in health and wellness programs and demonstrate the value of healthcare services provided.

- **Make a great first impression with new employees and clinical staff.** HR organizations are similarly resource constrained as healthcare organizations look to reduce administrative costs. However, there are peak volume hiring periods when recently graduated nurses and doctors are seeking further training and employment opportunities. Onboarding processes span HR, IT, facilities legal, compliance, and finance.
  The multiple points of contact to be coordinated for new clinicians and employees can be frustrating for medical staff, hiring managers, and new employees alike. A platform solution streamlines the onboarding process by facilitating handoffs between departments because everyone has access to the information they need to complete their step in the hiring process. In turn, new staff can become productive members of the workforce sooner, which leads to both positive financial outcomes and higher levels of employee satisfaction.
- **Optimize workflows to get employees and clinical staff back to work faster.** Most healthcare IT organizations are challenged by legacy IT and resource constraints. However, digital transformation initiatives require investments in more modern agile infrastructure. Consequently, healthcare organizations are beginning to move critical workloads to a multicloud environment. A unified platform and service management solutions enable healthcare IT organizations to improve their service levels regardless of whether the application is on-premise or in a private or public cloud environment. Resolving system issues efficiently helps not only identify and fix escalating IT issues before they result in system outages but also improves IT and end-user satisfaction because caregivers can get back to work faster and care for their patients.
- **Reduce the cost of IT ownership.** The ability to track licenses for technology provided on an as-a-service basis is essential in the multicloud environment. Reducing the number of unused licenses — for both on-premise and cloud-based solutions — leads to lower cost of IT ownership.
- **Create workflows to automate repetitive tasks.** A platform approach enables healthcare organizations to automate repetitive tasks to build their own custom-defined and flexible workflows across the enterprise, thus improving productivity, efficiency, and experience for staff and patients through workflow automation.
- **Leverage best practices from other healthcare organizations.** A platform architecture enables customers to develop their own workflows and applications to make available in the platform's marketplace for free or for a fee. Leveraging these workflows to glean best practices, healthcare organizations can either use the workflows directly or modify the workflows to meet their unique requirements.

Reducing Process Friction to Achieve Value-Based Health

Across the globe, healthcare organizations are intently focused on achieving the following objectives:

- **Reduce costs.** Eliminating waste and improving employee efficiency and productivity through workflow automation of repetitive tasks are critical to reducing healthcare and associated costs.
- **Improve quality.** Poor communication, handoffs between caregivers and allied staff, and lack of access to information contribute to adverse medical events. Collaboration between caregivers across the enterprise can be greatly enhanced when they have a common platform to access information and manage their workflows.
- **Improve patient and clinician experiences.** Cumbersome healthcare processes lead to lower levels of patient and clinician satisfaction. This is also true for nonclinical staff members who often must combine digital and manual processes to perform their operational and administrative roles.

Removing friction between each step of an IT, clinical, operational, or administrative process will help healthcare organizations in their quest for value-based health.

Considering ServiceNow in Healthcare

ServiceNow was started in 2004 with the belief that getting simple stuff done at work can be easy and getting complex multistep tasks completed can be painless. From the beginning, ServiceNow had a mission of creating powerful workflows to get enterprise work done. ServiceNow cloud services are designed to automate, predict, digitize, and optimize business processes and tasks — such as IT, customer service, security operations, HR — to create better experiences for employees, users, and customers while transforming the enterprise. At the core of ServiceNow is the ability to digitize unstructured workflows. These workflows often consist of manual handoffs between steps. While many healthcare customers start with ServiceNow to manage IT service tickets and IT operations, they often expand their use of ServiceNow to enable more diverse IT, administrative, and clinical workflows across the enterprise. Key examples include the following:

- **Electronic health record (EHR) help button.** ServiceNow is integrated with several major EHR systems. At the click of a button, clinicians can report an EHR issue without having to log out of the EHR and log in to another system. Information about the issue is sent to ServiceNow to automatically open and categorize a service ticket that is routed to the clinical informatics team. Customers using this feature have seen a reduction in the number of unreported issues and help desk calls and an increase in satisfaction among clinicians because they are able to log EHR issues more quickly.
- **Medical device management and security.** Connected medical devices, especially those with older embedded operating systems with known security vulnerabilities and uneven patching practices, put healthcare organizations at risk. ServiceNow's configuration management database (CMDB) and discovery tools are designed to make it easier for healthcare organizations to inventory medical devices and track their patching history as well as identify and locate which devices need to be patched, thus mitigating the risk of a network breach via a connected endpoint.
- **HR workflows.** Efficient onboarding of clinicians is critical in a competitive job market. This is especially true for clinicians with highly specialized skill sets and training. If the recruiting process takes too long, healthcare organizations run the risk of a competitor hiring away a strong candidate for a hard-to-fill position.

- **Customer service.** Increasingly, healthcare organizations are thinking about their patients as customers or consumers who have a choice of where they seek care. The quality of the care and the patient experience will influence whether the patient will be loyal to the institution or seek care elsewhere. The ability to combine information from multiple systems of record to be accessible from a service portal creates a system of engagement. When patients call with questions about a bill or to schedule an appointment, the customer service representative can easily respond to other questions, remind them of referrals that need to be scheduled, or share relevant news announcements (e.g., flu shots, health and wellness classes) without having to access multiple systems.
- **Clinical workflows.** Throughout a patient's care, there are numerous touch points between patients and clinicians and between care team members collaborating on a patient's case and coordinating care. Reducing the friction between process handoffs improves communication and collaboration, resulting in not only better patient and staff experiences but also better care for the patients.

The Now Platform, ServiceNow's platform-as-a-service (PaaS) offering, enables partners to develop and monetize their workflow applications. ServiceNow is working with partners to build out capabilities that the company then makes available to customers through the ServiceNow App Store either for free or for a fee. Workflow applications are certified by ServiceNow to ensure that they work as stated. Customers can download certified applications from the ServiceNow App Store and modify them to meet their unique requirements, thus accelerating the development of new capabilities.

Two such partner examples are Deloitte and Nuvolo:

- DeloitteASSIST is an application that is integrated with Alexa to optimize the nurse call function. Alexa's natural language processing is used to route patients' verbal requests to the appropriate staff via the Now Platform. For example, a request for a blanket would go to a patient care assistant, while a request for pain relief would be routed to the patient's nurse. Automating the routing of service requests to the appropriate staff to fulfill them has significantly reduced the number of times a nurse has to respond to a nurse call request. Responses for nonclinical requests such as blankets, temperature changes, or menus are expedited because the requests are routed directly to the staff who will fulfill them. Consequently, satisfaction rates increase for both nurses and patients. Improving patient satisfaction scores translates into higher reimbursement rates for healthcare organizations. This Alexa-integrated nurse call function is currently in production in hospitals in Australia and has received a user satisfaction rating of 92%.
- Nuvolo's Medical Device Cyber Security Platform utilizes process improvement, supply chain optimization, and modern enterprise asset management (EAM) technology to reduce cyber security risk associated with network-connected medical devices. Modern health systems operate everything from Internet of Things (IoT)–enabled medical devices to complex medical systems of interconnected equipment. A robust cyber security management strategy that encompasses people and processes as well as automation, intelligent correlation, and monitoring technologies is needed to secure medical devices on the network. Many health systems are struggling with medical device cyber security as a result of disparate procurement and onboarding processes; old, nonstandardized computerized maintenance management systems; and inadequate or untrusted medical device inventories. Integrated with ServiceNow Security Operations, Nuvolo's Medical Device Cyber Security Platform addresses these challenges.

Challenges and Opportunities

The market issues that healthcare organizations and ServiceNow face present opportunities for a vendor, such as ServiceNow, with a broad set of service management and workflow capabilities.

- **Continuous operations.** Many healthcare settings are 24 x 7 operations requiring round-the-clock access to mission-critical clinical applications. In extreme situations, lack of access to essential patient health information could mean the difference between life and death. Thus, uptime, computing performance, access to vital clinical and operational data, and reliability are critical considerations when evaluating technology to be used in a healthcare setting, especially for clinical workflows.
- **Healthcare environment that is inherently more complex.** Healthcare processes — especially those involving clinical care — typically involve multiple departments and disciplines that not only can span the enterprise but also can extend beyond the institution's borders to include other providers and payers. The ability to conduct processes with trading partners is growing increasingly important in value-based health.
- **Mindshare as IT service management vendor.** ServiceNow is well known as an IT service management vendor, which is both a strength and a challenge as it expands its offerings from passive routing of work to enabling more active and clinically focused processes. ServiceNow has expanded beyond IT service ticketing to encompass IT transformation as well as transforming employer and customer workflows that will improve clinician and patient experiences.
- **Competitive portfolios.** ServiceNow's competitors are also focused on expanding their solution portfolios in terms of breadth and depth of product capabilities. Competitors range from other IT service management vendors to business process management and customer relationship management vendors. ServiceNow needs to continue to demonstrate healthcare customer success across three product areas: IT (IoT, IT operations management, IT service management, security), business process (HR, customer service), and platform. ServiceNow also needs to provide healthcare organizations with the ability to customize their own workflows (e.g., clinical, operational).

Conclusion

Until healthcare organizations start to think differently about how to improve their processes, they will not be able to meet the rising expectations of patients and staff who are now accustomed to using a mobile application to "get things done" easily in their personal lives. A service management platform that is integrated with clinical, financial, and operational systems is essential for achieving the goals of value-based healthcare. IDC recommends that healthcare organizations start with classic IT service management or HR functions before deploying workflow capabilities to other functions such as customer care. Healthcare organizations should focus their initial service redesign efforts on services supported by one or two processes before tackling more complex clinical processes that involve multidisciplinary care teams.

IDC believes the IT service management and workflow market will continue to be important, and to the extent that ServiceNow can address the challenges described in this paper, the company has a significant opportunity for success.

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Lynne A. Dunbrack is a nationally recognized thought leader in the application of information technology to the business problems of the health industry. Her understanding of the needs of the health industry is grounded in experience over the past 25-plus years working as a consultant and in the field. She also served as the Director of HIPAA Compliance at NaviMedix Inc. (now NaviNet). As research vice president for IDC Health Insights, Ms. Dunbrack provides research-based advisory and consulting services that will enable health payer and provider executives to maximize the business value of their technology investments and minimize technology risk through accurate planning.

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