

How to Take Cloud to the Next Level to Improve the Delivery of Health and Human Services

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State and local health and human services (HHS) agencies

are under constant pressure to cut costs, increase efficiencies and improve outcomes for citizens. Unprecedented health and housing crises, increased demand for user-centric services and new opportunities presented by emerging technologies are driving agencies to seek modern solutions that can better meet immediate needs while also keeping pace with rapid program change.

Often, the answer can be found in cloud technology, which provides the scalability, availability and processing power that can be difficult and costly for agencies to replicate in house. But true HHS transformation occurs when cloud is taken to the next level through business process-as-a-service (BPaaS).

BPaaS gives agencies all the benefits of cloud, while also layering in deep expertise in the HHS domain and processes based on proven best practices. It provides a platform for lasting change by shifting the focus away from the tools and technology used to perform functions and instead looks at achieving specific outcomes. Using this approach, agencies can overcome the common challenges associated with maintaining or modernizing monolithic HHS systems while also gaining advanced capabilities for customer service, coordinated care, data protection, fraud prevention, accountability and more.



Insufficient data management — specifically a lack of access to adjudicated claims data — leads to providers missing **39 percent to 62 percent** of patients with chronic diseases.¹



Moving from Monolithic to Modern

BPaaS can help HHS organizations overcome the following obstacles involved with delivering services and modernizing legacy systems:

Heightened expectations for user-centric experiences.

Clients and workers expect today's agencies to deliver the same quality of user experience that the private sector provides. Citizens want to use online portals, mobile devices, text messaging, interactive voice response (IVR) phone systems and other technology to access information, apply for services, submit and digitally sign documentation, receive electronic notifications and more. Workers expect to use these technologies to simplify workflows, ease the change management process, access and share information in the field, and provide better service.

Inadequate data sharing capabilities. Many organizations are daunted by data sharing challenges related to data silos, lack of system interoperability, and disparate data sources and formats. In addition, organizations lack experience in developing data governance procedures — or in implementing security controls — that address the need to share data and leverage it for strategic cross-departmental activities or advanced processes such as machine learning and artificial intelligence. These challenges have real consequences. According to one source, "insufficient data management — specifically a lack of access to adjudicated claims data — leads to providers missing 39 percent to 62 percent of patients with chronic diseases."² This may create missed opportunities for coordinated and preventive care.

Concerns about data security, confidentiality and compliance. HHS organizations collect, transmit, process and store vast volumes of health records, financial information and other sensitive data about citizens and employees. Much of this data resides in siloed legacy systems, making it more difficult to manage and protect. As data breaches and cyber attacks increase in number and impact, organizations are under intense pressure to protect data and systems, comply with a range of regulations and maintain the public's trust.

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Manual, redundant and in-person business processes.

Manual processes for data entry, data matching, application processing and other key activities raise per-transaction costs, delay service delivery and weaken employee morale. Paper-based documentation can be similarly frustrating and time-consuming for citizens.

Monolithic legacy systems. Medicaid and other HHS organizations are steeped in a history of building monolithic systems. These systems are complex, risky and expensive to maintain. Instead of taking on the risk and cost of ripping out and replacing these systems in their entirety, organizations that want to modernize will need more agile, modular approaches that allow them to develop, implement and share smaller chunks of functionality, as needed.

Cloud Evolution: Using a Services-Based Approach to Modernize and Improve Outcomes

When implemented as part of a cohesive, comprehensive strategy, cloud-based infrastructure and platform solutions allow HHS organizations to move away from managing nuts-and-bolts technology components so they can focus on their core expertise. Software-as-a-service (SaaS) is another vital technology, allowing organizations to quickly and easily take advantage of application functionality that would take months, if not years, to develop and implement on their own.

Importantly, cloud solutions have evolved in recent years to include more than just infrastructure, platforms and software. The secret to successfully modernizing HHS services is a BPaaS approach that takes cloud capabilities to the next level by incorporating human expertise and best practices from the HHS domain. Besides providing a

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Cloud Misperceptions That Impede Progress and Innovation

Misperceptions about the cloud often prevent agencies from adopting it to improve program performance and further their missions. In a CDG survey, 76 percent of state government respondents had migrated only 20 percent or less of their current systems/applications to the cloud — even though 66 percent said more than 50 percent of their state’s systems/applications could be migrated to the cloud.³ Once IT and business leaders overcome these concerns, they can embrace cloud-based solutions like BPaaS for HHS modernization.

Misperception: The cloud is less secure than an on-premises data center and technology.

Data in the cloud is often more secure than in on-premises data centers for a number of reasons:

- The core business of cloud service providers (CSPs) is infrastructure, platforms or applications, so they can focus their expertise and financial resources on building security — and redundant controls — into their technology and processes from the ground up. Even if criminals can overcome one security control, other controls are in place to prevent further progress.
 - CSPs take a single data source and split it into multiple areas, making it difficult for criminals to “re-assemble” the data for theft or tampering.
 - CSPs can partition (i.e., wall off) a shared/public cloud so the organization’s assets are insulated from malicious activity directed at another tenant.
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Misperception: Lack of customization in cloud-based solutions limits our options.

From a security and compliance point of view, certain policies and controls that run underneath a cloud-based solution may be fixed, but that’s because the service provider has already customized and optimized the solution for the best possible security configurations. In addition, some workflow processes may be fixed to reflect HHS-related best practices. Although these workflows could conceivably be customized, costs, complexity and deployment time would increase. Part of the advantage of cloud-based, pre-packaged services is organizations do not have to re-invent the wheel. It’s often best to avoid excessive customization and instead adapt to the best practices inherent in the service.

Misperception: The true costs associated with the cloud are unclear, including the costs of migrating to the cloud and the cost of getting data back if we change vendors.

These costs are becoming clearer as the cloud market matures. While different cloud providers are developing tiered service models with premium pricing for various infrastructure and platform services, there is also increasing commoditization. With commoditization, costs are becoming more transparent and leveling out, making it easier for organizations to determine costs and understand what they’re actually getting with a service.



Misperception:
Data sharing with other states or agencies is difficult.

Data sharing challenges are often related to conflicting security and compliance requirements for different organizations. The key to inter-departmental and inter-agency collaboration is defining the efficiencies and outcomes that organizations want to achieve overall, and then coming up with a collaboration approach that incorporates compliance. This may require working with legal and legislative teams to help them understand the overall picture and adjust policies without compromising compliance or security.

Misperception:
We don't have the staff expertise to move to the cloud.

Cloud-based services come with a new set of challenges and considerations that may have been invisible when hosted in the organization's own data center. Many service providers have personnel and processes to help guide staff through transitions, instill best practices and minimize risk. In addition, many vendors have encapsulated migration, upgrade and deployment processes into their services to automatically handle these tasks and minimize the impact on organizations.

Misperception:
The cloud is evolving every day; what happens today is not applicable tomorrow.

The same could be said of on-premises technology, but when an organization owns the technology, it may get locked into a single vendor or old ways of doing things. The marketplace will always push toward lower costs and more functionality. The important thing is to determine whether the organization will obtain real, impactful operational gains in terms of both business and technology. If a cloud-based solution can meaningfully shift costs or operations, it makes a compelling investment.

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platform and basic functionality, BPaaS layers on industry process knowledge, built-in analytics and various forms of business process automation that HHS organizations can tap into to extend and improve their services. It goes beyond the typical benefits of the cloud (or even on-premises solutions) to provide a complete turnkey solution that is adapted to HHS-specific needs. In doing so, it helps organizations manage change, reduce the burden on developers and modernize more quickly and effectively.

Modularity. BPaaS breaks processes into discrete modules that focus on specific aspects of health and human services. This modular approach allows organizations to bring in new capabilities while still interacting with and leveraging legacy systems. Unlike an “all or nothing” approach, where requirements change before the system is even fully implemented, BPaaS lets organizations deploy only the processes they need and thereby potentially save millions of dollars.

Benefits of BPaaS

Maximizes the change management opportunity

Expands the depth and breadth of services

Lowers deployment costs and operational expenditures

Speeds implementation time

Reduces risk

Increases flexibility

Enables access to best-of-breed solutions

The secret to successfully modernizing HHS services is a **BPaaS approach** that shifts focus from the tools and technology used to perform functions and instead looks at **achieving specific outcomes.**

Examples of typical BPaaS modules for HHS include:


- Integrated eligibility services that consolidate benefit management and provide a single, streamlined process for clients and staff
- Analytics and data warehousing that take multiple data sets from across the HHS organization, and then validate and enhance them to create a single source of truth
- Medicaid business operations and health care services that streamline administrative operations and customize care for recipients

Emerging technologies. According to CDG’s Digital States Survey, state and local governments are moving slowly but steadily toward IoT/edge computing, artificial intelligence, blockchain and other emerging technologies that will likely revolutionize the provision of services and care.⁴ These technologies are meant to deal with an immense scale of information to drive insight and reduce complexity. A services-based approach allows organizations to think about these technologies in terms of larger business processes instead of discrete components, so organizations can integrate them in a more effective way that solves more complex scenarios.

Best Practices for Getting Started with BPaaS

To make the most of investments in BPaaS, agencies should consider the following practices.

Define desired outcomes. In many cases, the people writing an RFP are not the people who use the system. They may not fully understand workflows, data sharing requirements or other aspects, so what appears in the RFP may not align with what organizations actually



need. To improve alignment between what's needed and what's asked for, it's important to identify existing challenges, goals and opportunities and define the outcomes you expect to achieve. In order for investments to be grounded in real-life needs, base purchasing decisions on these desired outcomes, not on a laundry list of system specifications that can become an exercise in "technology for technology's sake."

Create a more open RFP process with a flexible framework from which organizations and vendors can work. Many government RFPs have restrictions that prevent a better understanding of potential solutions and vendors. For example, if an organization's procurement process relies solely on comparisons of features, benefits and costs rather than close, active engagement with vendors, it may prevent the organization from truly understanding its options and crafting the best possible solution. This is especially true when potential vendors can share deep expertise in health and human services and have built in best practices and processes that could create additional efficiencies or higher satisfaction among members, workers and other end users.

Focus on your end user, not your organizational structure. For service recipients, a user-centric approach helps permit technology to act as a pathway, not as a barrier, to obtaining services. For service providers, a user-centric approach helps permit case managers and other employees to do their work quickly and easily, whether in the office or in the field. To better understand user needs, organizations can conduct surveys and focus groups to solicit input from the communities that will most likely use the technology. Look at the existing system as a whole, including current policies and workflows. For example, if enrollment applications are frequently delayed or abandoned for failure to provide documentation, determine where policies could be revised to simplify the verification process or enable the acceptance of online documentation versus paper-based documentation. Work with solution vendors to devise workflows that account for organizational structure while making processes as easy as possible for all users.

Provide continuity of sponsorship across agency/administration changes. Enlist a change management expert/program manager who acts as an active champion for the project and understands how to translate

desired outcomes into technology requirements. The ideal champion has influence at both the legislative and departmental level and can work with various groups to articulate requirements and gain buy-in from all parties. They assign accountability for implementation to senior staff and communications teams; in doing so they get things done more quickly and see that the vision for an initiative survives and positive changes are sustained — even if the state or local government administration changes.

Beware of building past technology and workforce limitations into new procurement requirements. Although organizations like the Centers for Medicare & Medicaid Services (CMS) are advocating for more scalability, modularity and flexibility in solutions, some organizations are relying on traditional RFPs that reflect outdated requirements and strategies. Requirements based on previous technology or workforce limitations may show up in an RFP, even though those limitations wouldn't even exist in a modern solution. It's important to focus on current objectives and challenge both procurement teams and solution providers to look through a new lens that moves the organization forward instead of reinforcing the status quo.

Adding Value by Improving Outcomes

State and local governments expect to spend a total of \$28 billion on HHS-related IT in 2019,⁵ with cloud computing a top priority at all levels of government. As organizations decide where to invest hard-won funding, they'll need to consider solutions that allow them to modernize at their own pace, continue to leverage legacy systems, as needed, and maximize the value of every dollar. BPaaS solutions represent the next evolution of cloud-based services. Besides allowing organizations to gain the scale, flexibility, performance, availability and other technology advantages of cloud solutions, these modular services incorporate best practices and human expertise from the HHS domain, as well as HHS-specific analytics tools and automated business processes. By improving client outcomes and reducing costs, BPaaS can add tremendous value to an organization's investment in HHS solutions.

This piece was developed and written by the Governing Institute Content Studio, with information and input from Optum.



Endnotes:

- ¹ Frost & Sullivan. Optum: 2018 North American Population Health Management Company of the Year Award. <https://www.slideshare.net/ClaudiaToscano6/optum-award-write-up-122335533>
- ² Ibid.
- ³ Center for Digital Government. 2018 Digital States Survey.
- ⁴ Ibid.
- ⁵ Government Technology Navigator. 2019 State and Local Government Health and Human Services IT Spend. Accessed August 2019. https://www.govtech.com/navigator/numbers/2019-health--human-services-it-spend_193.html

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