Cloud-based IT service management system — including a new asset management function — saves state millions of dollars, boosts department revenues and keeps technology running for thousands of state workers.
In 2006, the state of Utah started to consolidate its IT services under the newly formed Department of Technology Services (DTS). Since then, DTS has been working to provide better service to its agency customers, while also operating more efficiently and reducing costs.

As part of that effort, in 2013 DTS began moving its IT service management (ITSM) operations to a cloud-based platform from ServiceNow of Santa Clara, Calif. More recently, the department implemented the ServiceNow Asset Management system to gain better control over hardware devices employed throughout the state, and to improve billing to the agencies that use those assets.

Together, those projects have saved Utah millions of dollars, streamlined processes for managing services, provided better security and increased DTS’s revenue, to name just a few of the benefits the agency has gained.

**ITSM in the Cloud**

In its early years, although DTS moved many of its management functions to a centralized IT support platform, it still relied on separate solutions for certain functions, including portfolio management, configuration management and IT procurement. Those multiple platforms presented key challenges.

“We had to do quite a bit of customization to each of them to meet our needs,” said Dave Fletcher, chief technology officer at DTS.

The development work, including ongoing maintenance, consumed resources that DTS might otherwise have used for other activities. Largely to solve that problem, officials at DTS decided to replace the array of management tools with a single service management platform.

As DTS started the search for its new solution, officials identified three major criteria.

“First, we wanted to move to the cloud, where the service provider would maintain our underlying architecture, so that updates happened seamlessly,” Fletcher said.

Second, they wanted to integrate as many functions and users as possible on a single platform.

Finally, they wanted to be able to scale the system easily to match changing demand.

“This way, we wouldn’t always have to be dealing with infrastructure and other issues underlying the system itself,” Fletcher said.

After an extensive procurement, in 2013 DTS chose the cloud-based ITSM solution offered by ServiceNow. In just six weeks, DTS had implemented the system, integrated it with Utah’s single sign-on portal and completed training for all users — including about 100 agency procurement personnel and 725 DTS employees.

The new system incorporates an array of functions, including:

- Incident and problem management (service desk)
- Hardware and software procurement
- Self service/request fulfillment
- IT knowledge management
- Reporting and SLA management
- Asset management
- Portfolio management
- Configuration management

“Getting all of that onto a single platform was critical, especially a platform that could integrate with our real-time support system,” Fletcher said.

The platform was quickly embraced by the organization’s employees and the agencies it supports. In the first year of operation, DTS used the system to manage more than 190,000 service requests. (It now uses the system to manage about 120,000 service requests per year.)

Among other improvements, it gave end users more options to report problems. For example, users now can create requests through an online portal or from a mobile device. Tracking and notification allows DTS employees to ensure a request gets resolved as quickly as possible. Hardware and software procurement has also moved online.

“People know where to go for all their issues associated with IT support, whether it’s purchasing a new laptop, or getting help with a password or buying software. And since it’s all cloud-based, it’s accessible online and through mobile devices.”

— Dave Fletcher, Chief Technology Officer, Utah DTS

**Realizing Significant Improvements**

Migrating its service operation to ITSM in the cloud has helped DTS realize major financial benefits, including a one-time cost reduction of $3 million and more than $1.2 million in annual savings. The upfront benefit came from not having to replace some of the agency’s older management systems, since the integrated platform included those functions.

The system’s cloud-based architecture is responsible for the operational savings: DTS no longer needs internal resources to maintain on-premises technology for service management.

“We were able to reduce some support staff and reassign them to other issues,” Fletcher said.

By integrating the ServiceNow solution with the department’s business intelligence platform, DTS gained valuable insights, helping technicians get to the root of persistent problems that once created extra work. For example, end users kept creating requests to help reset their passwords.
“We identified where the issues were and automated those processes,” Fletcher said. “We saved a lot in that area by reducing the number of requests and support calls by about 80 percent.”

ITSM in the cloud has also improved the way agencies procure new technology. Automating the approval process and associated workflow has cut the process in half, from eight days to four days.

“It’s a lot simpler and quicker now, and people can do it from their mobile devices,” Fletcher said.

Another benefit is simplified billing for IT services. In the past, DTS used several separate billing systems. State agencies had to aggregate data from multiple sources to understand which services DTS had provided them, and what they were paying for those services.

“Now they can find information about all their services, including the associated costs, in one place,” Fletcher said.

Finally, migrating to an integrated platform has given agencies a one-stop shop for IT services.

“People know where to go for all their issues associated with IT support, whether it’s purchasing a new laptop, or getting help with a password or buying software,” Fletcher said. “And since it’s all cloud-based, it’s accessible online and through mobile devices.”

Going Further with Asset Management

Another big change Utah has seen since it implemented ITSM in the cloud is the advent of a new asset management capability. DTS started implementing ServiceNow’s Asset Management module, part of the ITSM solution, in June 2015. The goal was to better manage and track the state’s desktop computers, laptops and thin clients.

In Utah, each agency buys its own computer hardware, but DTS maintains the records on those machines. Because it bases its service billing on the number of machines an agency has in house, it’s important to keep an accurate inventory. DTS formerly used spreadsheets to monitor computer assets throughout the state, assigning technicians to record new machines as they installed them, moved them or took them out of service. Unfortunately, those spreadsheets were never entirely accurate.

“It was kind of a patchwork,” said Dan Frei, chief financial officer (CFO) at DTS. “Some people were using one spreadsheet; some were using another.”

Even when technicians tried to consolidate their information in a single document, the numbers never quite reflected reality.

That got DTS in trouble with agencies, where auditors were counting machines on their premises, making spreadsheets of their own and then asserting that DTS’s billing was wrong.

“We didn’t want 23 agencies going around counting,” Frei says. “We wanted a single source of truth.”

DTS found it especially hard to track computers after they were entered into inventory.

“Agencies complained to us, ‘We have these computers we bought, but we don’t know where they are,’” Frei said. “‘Are they still being used? Have they been taken? Have they been retired?’”

Imprecise asset management in Utah also raised security issues. According to standards established by the National Institute of Standards and Technology (NIST), keeping an accurate inventory of physical devices is an important security measure. Among other benefits, it helps technicians respond faster to security alerts, since they know where each machine is and how it’s configured, and it ensures that techs install the necessary security patches on every machine.

Over the years, DTS tried several times to improve its asset management processes. In one instance, it sent technicians out to canvass the state, counting machines and putting the information into a single inventory spreadsheet.

“We didn’t have the right tools, and we didn’t have a good process,” Frei said.

For example, there was no bar code scanning software to capture serial numbers. DTS obtained an accurate, one-time snapshot of its computer assets, but it had no sure way to update the spreadsheet as machines were moved or retired.

That all changed after DTS implemented its new ITSM platform. Now, the organization had tools that were up to the challenge. Other elements also fell into line.

“We had the right team in place, and we got buy-in from senior leadership,” Frei said.

Using the ServiceNow platform, DTS inventoried and tagged more than 30,000 computers, including both billable and non-billable equipment. Technicians use bar code scanners to capture a serial number from each asset, immediately making that computer billable. A technician also scans the machine again each time it’s moved and when it’s taken out of service. This practice ensures the system always has an accurate count and knows the status of each asset.

The asset tracking system generates a list of devices to be billed and transmits that information to Utah’s billing system. It also automatically generates information for agencies to review, either directly in the console, or in a PDF file that DTS distributes monthly. At any time, an agency

BY INTEGRATING THE SERVICENOW SOLUTION WITH THE DEPARTMENT’S BUSINESS INTELLIGENCE PLATFORM, DTS GAINED VALUABLE INSIGHTS, HELPING TECHNICIANS GET TO THE ROOT OF PERSISTENT PROBLEMS THAT ONCE CREATED EXTRA WORK.
employee or DTS technician can query the system to find information on a device, such as its service history, warranty status and who it is assigned to.

The system starts monitoring an asset the moment an agency initiates a purchase. “We can track how long it takes to get approvals, how long it takes the vendor to ship to us, how long it takes us to inventory it and get it out to the location where it’s going to be installed, and how long it takes the techs to install the computer,” Frei said.

Early on, some service technicians resisted the project. “I’d hear things like, ‘I work on tickets; I don’t do inventory,” Frei said.

However, as employees discovered the valuable information the system could generate from inventory data, they got behind the project.

**Better Security, More Revenue**

With a real-time, highly accurate view into inventory, DTS now complies with NIST’s asset management standards aimed at security. The department knows where every desktop computer, laptop and thin client is located and to whom that machine is assigned. That knowledge is invaluable, for instance, to ensure laptops carrying sensitive material don’t fall into the wrong hands.

Also, if DTS becomes concerned about certain security vulnerabilities, the asset management system can help pinpoint which machines technicians should check first.

“We can run reports and see if we have machines that could be susceptible to those vulnerabilities,” Frei said.

The asset management system has also increased the accuracy of DTS’s billing. With better inventory processes, DTS has increased the number of billable assets it’s tracking by more than 1,000.

DTS has used the extra money to buy more bandwidth for the state’s network, replace network gear and add much-needed staff, among other initiatives.

DTS now has an accurate count of all devices deployed across the state. The agency’s leaders trust the data in the asset management system, especially since they can see it for themselves at any time.

“They wanted to be billed correctly, and they weren’t in the past,” Frei said.

**Conclusion**

By putting all its service functions onto one management platform in the cloud, and gaining a single, accurate view of devices across the state, DTS has significantly boosted the quality of its service. It’s also operating more efficiently, cutting costs and bringing in more revenue.

Frei said he ranks the asset management portion of the ITSM initiative among the top five projects at DTS in the dozen years since Utah formed the department.

“We’ve never had a project with such far-reaching effects. It’s quite an amazing feat.”