BEYOND THE BUZZ
Your Guide to the Reality of IT Modernization
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Executive Summary

IT modernization has long been a buzzed-about phrase across federal, state and local governments, especially in the last few years. But for public servants like you just trying to get through your day to day, all the buzz about IT modernization can seem high-level and inapplicable to the important work you do.

That’s why GovLoop created this guide, Beyond the Buzz: Your Guide to the Reality of IT Modernization, to help you go deeper than the high-level talk and understand what government IT modernization really is and how it directly affects you.

In addition to helping you catch up with the latest news in IT modernization, such as important legislative initiatives and how to implement newer technologies, this guide breaks down mission-critical priorities that impact your job and how IT modernization can help you address those priorities.

We’ve identified five priorities likely to affect some or all public servants, along with corresponding IT modernization trends that can help you achieve those priorities:

1. Enhancing accountability through technology business management
2. Achieving compliance through FITARA
3. Saving costs through shared services
4. Delivering customer service through data analytics
5. Developing the workforce through automation

This guide also features interviews with government leaders from the federal, state and local levels to highlight best practices in government IT modernization.

By reading this guide, you will be able to navigate beyond the buzz to understand how IT modernization initiatives that you read about affect you.
The Latest Buzz in IT Mod

Whether you’re an IT professional or not, you’ve probably heard the names of these pieces of legislation and initiatives being thrown around. Here is a quick breakdown of what’s what in IT modernization.

2018 Legislation

**White House Reform Plan and Reorganization Recommendations**

In June, the White House released a 132-page plan for government reform and reorganization. It includes the merging of the Education and Labor departments and stripping the Office of Personnel Management of its policy functions, while transitioning agencies’ business processes and recordkeeping to a fully electronic state. The plan [called “Delivering Government Solutions in the 21st Century”](#) provides a broad vision, principles and 34 concrete examples of transformational changes that will align executive branch agencies to better meet the needs of the American people in the digital age. Additionally, the plan promotes the use of modern technology to improve service delivery as a central tenet in the 21st century federal government.

**Technology Modernization Fund**

On June 7, the Technology Modernization Fund (TMF) Board announced that money was awarded to proposals from the Energy, Housing and Urban Development and Agriculture departments. “These proposals show the need to update our federal infrastructure and create new operating models that align with aggressive technology transformation,” TMF Board Chair and Federal CIO Suzette Kent said in a news release. “The Board believes these projects deliver citizen benefits, meet the specific technology transformation goals defined in the Modernization Government Technology Act, have agency leadership support, and contain effective cost savings strategy that are at the heart of the TMF model.”

**IT Modernization Centers of Excellence**

In May, the General Services Administration (GSA) announced five awards that will start the first phase of work for each of the five GSA-housed IT Modernization Centers of Excellence (CoE). An integral part of the administration’s governmentwide IT modernization plan, the CoEs provide agencies with consulting and IT engineering services to radically improve the way agencies design services and interact with customers. Each CoE will tackle distinct tasks, beginning with the first lighthouse agency, the Agriculture Department (USDA).

**The President’s Management Agenda**

Announced in March, the key drivers of the Management Agenda are modernizing outdated technology, improving data accountability and transparency and creating a 21st century workforce. At a high level, the president’s management agenda provides a long-term vision for updating antiquated government systems, enabling agencies to make better decisions around data and providing federal managers with the tools to hire top talent, retain employees and deal with poor performers, said Margaret Weichert, Deputy Director for Management at the Office of Management and Budget.

2017 Legislation

**MGT Act**


The centralization fund is a $100 million pot of money that can help agencies improve IT, enhance cybersecurity and fund other technology-related activities over the next two years. To access those funds, agencies will have to submit proposals to a Technology Modernization Board and agree to pay back that money within five years. For many agencies, the MGT Act represents a significant step in the journey to IT modernization. That journey, however, must still be well thought-out by agencies, some of which are maintaining systems that are decades old.

**White House IT Modernization Report**

On Dec. 13, 2017, the White House’s American Technology Council (ATC) released its final “Report to the President on Federal IT Modernization,” highlighting the current and envisioned state of federal IT, along with specific recommendations to jumpstart modernization efforts.

The report focuses on two primary recommendations: network modernization and consolidation and shared services. Network modernization and consolidation allow agencies to “maximize secure use of cloud computing, modernize government-hosted applications and securely maintain legacy systems.” The report also emphasizes consolidating and improving the acquisition of network services by focusing on high-risk value assets and minimizing duplicative investments.
IT Modernization in Government: By the Numbers

What impact can IT modernization have on you? How are agencies faring in their modernization efforts? These stats will help set the context for government IT challenges and progress.

Federal IT

**Challenges**

→ Federal IT spending is categorized as either Operations & Maintenance (O&M) or Development, Modernization and Enhancement (DME). Of the $48.5 billion reported to the IT Dashboard, 78.5 percent ($38.1 billion) is O&M spending.

→ From FY 2015 through FY 2018, federal legacy spending as a percentage of total IT spending rose slightly from 68 percent to 70.3 percent.

→ 59 percent of federal IT executives think their agency’s IT modernization efforts have resulted in an increase in the IT security challenges they face.

→ 47 percent of federal IT executives said that the federal procurement process will add time to and over-complicate the modernization process – the most often-cited concern about the process in the survey.

**Progress**

→ The federal government budget for IT is estimated to be $95.7 billion in FY 2018, an increase of 1.7 percent from FY 2017.

→ 63.8 percent of CIO risk ratings for all major IT investments governmentwide were rated “low risk” for cyberattacks in FY 2016, or 468 of 733 investments.

→ Over half of the 24 agencies participating in OMB’s Data Center Optimization Initiative reported that they had either already met or planned to meet their OMB-assigned goals for closing data centers by September 2018. This would result in the closure of 7,221 of the 12,062 centers agencies reported in August 2017.

→ 20 agencies reported that as of August 2017, they had achieved $1.04 billion in cost savings through data center optimization for fiscal years 2016 and 2017.

State and Local IT

**Challenges**

→ Only 28 percent of state CIOs said their organization has a strategy for migrating legacy applications to the cloud already in place, and 17 percent had no such strategy in place.

→ Only 10 percent of state CIOs said their states have finished moving to an off-premise Mainframe-as-a-Service solution, and 31 percent said there were no plans to do so.

→ Over half of state CIOs said the current status of their state’s digital government is not formally defined; 45 percent said it’s informally defined and 10 percent said it’s undefined.

→ 17 percent of state CIOs say their approach to delivering digital government services is ad hoc or not defined.

**Progress**

→ 74 percent of state and local government IT professionals expect application monitoring to greatly or somewhat increase over the next year or two.

→ 75 percent of state CIOs said their states are observing the benefit of using the cloud for adaptability (with a lowered asset investment threshold and an improved ability to innovate), not far from 78 percent said their states expected to observe such benefits.

→ 63 percent of state CIOs said their states are observing the benefit of using the cloud for reduced risk exposure (service stability, recovery); close to 61 percent said their states expected to see such benefits.

→ 40 percent of state CIOs say their states already have a digital services organization, and 20 percent have plans for their own versions.

Federal CIOs must provide innovative solutions in a challenging budget environment. They are also charged with establishing an agencywide system that ensures information-sharing and maintains effective security and privacy controls.

In a May 2017 event from the Advanced Technology Academic Research Center (ATARC) and Foreign Affairs, participants heard directly from CIOs about the dynamic role they play in federal agencies, their challenges and priorities.

Rod Turk, Acting CIO of the Commerce Department, first stressed the importance of three key words for any federal enterprise team: innovate, lead and serve.

“My people not only need to serve their customers, they also need to serve each other,” he said. “We’re in this as a team sport. It’s about how we make ourselves successful and move the football down the field.”

By channeling Malcolm Gladwell’s “law of the few” (those with a particular and rare set of social gifts), federal agencies can implement the change and innovation needed to drive technology modernization.

“The CIO of the future and the workforce of the future needs to look like those with softer skills like human capital management, project management and finance,” Turk added. “Technology skills will be secondary to those softer skills to move that football down the field.”

In addition to leadership and workforce priorities needed for technology transformation, federal CIOs have a variety of priorities and challenges going forward. Jason Gray, CIO of the Education Department; Vicki Hildebrand, CIO of the Transportation Department; and Chad Sheridan, who recently became IT Director for the Agriculture Department’s Farm Production and Conservation mission area, shared the impact of current legislation. They talked about FITARA, the MGT Act and current priorities.

**Priorities**

For DOT’s Hildebrand, who is fairly new to government from the private sector, she is ready to take on bureaucracy and drive more efficient processes. “After six months of getting exposure to DOT, we have some opportunities around the federation of the department,” she said. “It’s clear we have duplicative spending. We need to shore up a lot of legacy systems. We’ve also started doing business requirements and putting together a prototype in a week, as opposed to the usual years-long process.”

Sheridan at USDA is particularly concerned with improving customer experience. “Our mantra is moving toward a single IT organization and trying to reduce the number of like things to get common investments,” he said. “Our two main thrusts are increasing the opportunity for self-service. We’ve also got to improve the outcomes for the deliverables of our employees that people trust.”

Across the board, the CIOs found legislation like FITARA and the MGT Act to be helpful in forming collaborative relationships and driving efficiencies through shared services.

**Impact of FITARA**

“FITARA helps reinvigorate the idea of a seat at the table,” Sheridan said. “It enforces the idea of transparency spend.”

“FITARA has been great at Department of Education,” Gray added. “It allowed me to establish an IT portfolio from a governance standpoint. When I got to Education, we were at a C+ and we’re at a B+ today. It’s not just a CIO thing, we also need the other leaders like the chief security officer and chief customer officer, as well as the acquisition side, to partner together and move us forward.”
Impact of IT Modernization Report and Respective Efforts

The panel was asked about their thoughts on the recent White House Modernization report, with its emphasis on software-defined networks and shared services. While Hildebrand saw the importance of shared services, Sheridan had reservations.

“We have new networks contracts coming from GSA,” Sheridan said. “The danger with shared services is to make sure providers understand the levels and requirements of the mission need. Often in government we have a race to the bottom because of cost. But we need to look at what the private industry does and make sure they meet the performance levels. The easiest thing to measure is cost and budget, but we need to get better at measuring outcomes.”

At DOT, Hildebrand said improving shared services is vital. “Efficiency and cost savings are an important part of the process. But if I don’t at least slightly improve the experience users get from some of that shared service, it doesn’t matter what else I do, I get an F.”

To better account for IT inventory and spending, more federal agencies, like the Education Department, have been turning to technology business management frameworks (TBM) – a set of best practices to map IT need and inventory directly to spending. “I’m using visualization and TBM to inform my decisions and what we’re doing for modernization,” Gray said.

“Last year, we did an IT visualization roadmap to understand our as-is environment and to-be environment,” he added. “We’re leveraging that with TBM – part of our cross-agency priority goal. It paints my landscape for me and tells me where the systems are that have a bunch of manual processes. TBM showed me I have over 20 cloud service providers and not just on the government side. So it helps me figure out what I’m going to target in terms of strategy.”

For future legislation, the CIOs stressed the need for enabling innovation to keep pace with the rapidly changing technology landscape. “There’s no such thing as a five-year plan in IT,” Hildebrand said. “You have to be able to take this project management framework and apply it to that unique business case. If you force-fit a structure to every business case, you’re just going to delay things. In terms of enablement, I would like to see more support from support functions like procurement, human resources and functions that make it easier and faster to get what you need. We’re falling further and further behind, but we have to find ways to accelerate.”

As for parting wisdom for other federal CIOs, the panel shared that it’s important to go beyond the authority of simply having a seat at the table. “It’s important to have a seat at the table,” Gray concluded. “It’s also what you do with that seat. We started with we have to comply with but then we also have to mature. It’s really maturing that process and making sure all the dots are connected for IT.”

“Efficiency and cost savings are an important part of the process. But if I don’t at least slightly improve the experience users get from some of that shared service, it doesn’t matter what else I do, I get an F.”

Vicki Hildebrand
CIO, Department of Transportation
Why These 5 Priorities Matter

There are many benefits that justify the need for IT modernization in your agency or department. But there are challenges to achieving it.

According to a recent GovLoop poll, the biggest challenges or obstacles to IT modernization include:

- **Lack of funding or financial resources (41 percent)**
- **Difficulty transitioning from legacy systems (37 percent)**
- **Confusion about government requirements & regulations (11 percent)**
- **Concerns about cybersecurity (11 percent)**

With all the headaches these challenges can cause, you may be wondering: Is IT modernization really necessary? Is it applicable to me?

There is a reason for all the buzz: IT modernization is helping agencies empower their workforces to meet the increasing demands and needs of their citizens. There are many ways IT modernization can impact the job you’re doing. Aligning IT modernization with your organization’s mission priorities is key.

This guide focuses on five major government priorities that any member of the government workforce, regardless of level, should focus on:

**Enhancing Accountability Through Technology Business Management**

Every taxpayer dollar must be tracked and accounted for in order to ensure your agency is achieving its mission while maintaining public trust. Technology Business Management frameworks can help you track and account for IT spend by mapping business needs of your agency to the IT tools and funding you need.

**Achieving Compliance Through FITARA**

Cybersecurity is no longer a priority that can be kept on the backburner. You must make sure your tools and technologies are compliant with current regulations in order to tackle the most pernicious cyberthreats in the current landscape. Many agencies scored poorly on the FITARA scorecard, but using this program can help you make the most of your newer cloud technologies while strengthening cyber posture.

**Saving Costs Through Shared Services**

With lean budgets and resources (in terms of time and staff) across government, you can’t afford to throw expensive technologies at every problem. Shared services can help you eliminate redundancies while improving collaboration and saving your agency money.

**Delivering Customer Service Through Data Analytics**

Whether in the public or private sectors, today’s customers demand personalized services delivered quickly on the mediums they prefer. Data analytics is useful for gathering and tracking the information you need to better serve citizens all while improving customer service delivery.

**Developing the Workforce Through Automation**

While many worry about automated technologies replacing humans for government work, there are many ways these solutions can actually help train, recruit and prepare current and future government workforces.
Your Clouds. Now Simplified.


It’s that simple at bmc.com/multicloud
As government continues to expand its reliance on cloud computing for improved, modernized service delivery and increased workforce productivity, federal agencies must ensure that they have complete visibility across their entire enterprise. That's not an easy task when more and more devices are being connected to federal networks every day.

Compounding this challenge, most organizations still predominantly rely on legacy systems to manage the bulk of their workload. That means they will not be able to move everything to the cloud at once, thereby requiring more than one cloud environment. Managing multi-cloud environments — the use of multiple cloud computing services in a single heterogeneous architecture — can come with its own set of challenges such as too many vendors or the lack of integration between systems.

In an interview with GovLoop, Jeremy A. Wilson, Federal Chief Technology Officer at BMC, described why organizations should focus on three critical areas for cloud: security, visibility, and automation. BMC is a global leader in digital enterprise management, helping organizations transform into modern digital workplaces, where people, process and technology converge.

“Many organizations are making the shift to cloud for flexibility, since cloud computing enables businesses to scale up or down as needed and deliver services more securely and efficiently, while requiring fewer resources to manage,” Wilson said.

“By mapping these focus areas to best of breed technology solutions, organizations will gain capabilities such as automated security and compliance remediation, enhanced visibility of assets and dependencies and a better workload automation strategy across the enterprise,” Wilson said. “This will allow for organizations to be more agile and better prepared to adapt to rapidly evolving demands.”

However, there are some business challenges that accompany each of these areas.

First, as organizations accelerate innovation in the cloud, security and compliance become increasingly complex. Decentralized IT spending makes it hard to invest in and track security efforts across their enterprises and various departments. Solutions that automate security and compliance can help agencies consistently manage multi-cloud environments and configurations.

“As cyberthreats become increasingly sophisticated, the need to deploy solutions that automate the remediation of security vulnerabilities and compliance deficiencies is imperative. This will ensure that all systems are managed consistently and securely, as well as provide the ability to maintain a resilient security posture across the enterprise,” Wilson said.

Another challenge in multi-cloud environments is the abundance of tools. Often in private and public cloud environments, many of the tools do not integrate well. Organizations must avoid integration failures and ensure visibility of services, performance and potential cyber threats when pursuing multi-cloud strategies.

In addition to security and compliance, organizations should look at solutions that automate asset discovery and dependency mapping for better visibility into digital services management in on-premises and cloud environments.

“With automated asset discovery, organizations have a clearer view into their enterprises to keep track of these critical components,” Wilson said. “Additionally, dependency mapping helps identify all of their software assets and the primary functions of each one.”

“The end result would be a dynamic, holistic view of the data center and multi-cloud assets, highlighting their relationships and giving IT crucial visibility into how the infrastructure enables the digital business,” Wilson said.

Lastly, the trend toward digitizing and automating everything from applications to services is rooted in a desire for government to become more responsive to citizen demands.

“The foundation must be built on automation across the infrastructure, data and applications, from on-premises to the cloud,” Wilson said. “Whether you are an administrator, developer or line of business manager, your ability to deliver services is directly impacted by time spent on manual tasks and processes.”

By taking a strategic approach to multi-cloud management, federal agencies can achieve success in three critical areas of cloud: security, visibility and automation. Agencies can also ensure that they keep up with rising citizen expectations, delivering faster and better services with fewer resources, and better enabling them to harness the innovation capabilities of cloud.
Priority No. 1
Enhancing Accountability Through Technology Business Management

One of government’s most important jobs is to remain accountable and transparent to the American public. Whether it’s tracking spending, improving technologies or releasing evaluation reports, you have probably worked on a project focused on ensuring your constituents understand what you’re doing and how their taxpayer dollars are being used.

When it comes to IT modernization, one of the most frequently cited challenges is accounting for IT spending.

To improve accountability and transparency surrounding IT modernization, agencies at all levels of government are promoting the Technology Business Management (TBM) framework, in coordination with the CIO Council and OMB.

How TBM Can Help You

TBM is a set of best practices for running IT like a business. The primary goal of TBM is to empower IT and business leaders alike to have data-driven discussions about the cost and value of IT to best support business goals. You can better track agency IT spend and ensure any IT modernization initiatives are directly aligned with your organizational mission.
Who’s Using TBM?

**Federal**

As recently as June, GSA issued a request for information (RFI) seeking feedback from industry on how it can adopt TBM across the federal government. According to GSA, “the TBM taxonomy will provide a standardized view of IT spend and provide greater transparency into how federal government invests in IT products and services.”

This milestone comes as an especially important one for the Cross Agency Priority Goal for Improving Outcomes in Federal IT Spending Transparency. GSA, in partnership with OMB, is seeking information from industry regarding software solutions that can aggregate and analyze data across the federal enterprise; and services that support the preparation and adoption of standard taxonomies to facilitate TBM implementation.

“GSA was one of the first federal agencies to implement TBM and is pleased to co-lead this effort to increase data accountability and transparency governmentwide through the PMA,” said GSA Administrator Emily Murphy. “Increasing transparency on IT spending will empower federal leaders to make better informed, data-driven decisions and provide greater accountability when investing taxpayer dollars on needed IT solutions.”

**State and Local**

The largest public-sector TBM implementation to date is in the Evergreen State: Washington. By implementing TBM, the state improved IT spending data, increased accountability and made a better case for IT modernization.

In 2012, the CIO’s office started a broad IT cost transparency effort to effectively manage the state’s IT services and investments and improve transparency. Initially, the implementation hit roadblocks because of a lack of a standard taxonomy, decentralized reporting and disparate configuration of the enterprise software reporting applications across agencies.

The challenges were so significant that the entire cost transparency initiative had to be re-architected and restarted in 2016. As a result, the state started consolidating its data collection approach, expanding the TBM office within the Office of the CIO and using a single enterprisewide reporting software configuration.

As of 2017, Washington can report IT spending by cost pools and IT towers – the first two levels of the TBM taxonomy. Financial data is collected via the state’s centralized accounting system. This accounting system categorizes IT expenditure data in three ways: IT acquisitions, IT maintenance and operations and data-processing services. Cost pool data is then rolled up for statewide IT spend and IT tower data is provided for 44 state agencies with annual IT spend greater than $250,000.

Best Practices for TBM

**Start small and scale up.**

Don’t try to boil the ocean by picking massive IT modernization endeavors. Start with smaller projects so you can provide quicker turnaround value. That way, you can justify TBM for larger projects later.

**Identify what questions you want to answer.**

What do you want to discover? Who are your audiences? What data are you going to use? Don’t be afraid to discover the “ugly” data that reveals shortcomings in your agency’s IT. Such discoveries can turn into wins when you know what needs correcting.

**Include all stakeholders.**

Talk with private-sector and executive counterparts. Get leaders’ support by clearly laying out the entire vision of your IT modernization project and how TBM will help. Reach out to other agencies to discuss their ideas and best practices. Let all stakeholders know where they fit in the process.
Propelling 21st Century Government

Digital technology can fundamentally transform and modernize the way the public sector operates, supports its employees and delivers services to constituents. Designed for progress in 21st-century government, Infor Public Sector delivers a comprehensive suite of integrated solutions purpose-built for public sector and delivered as a cloud service, on premises, or both.
Industry Spotlight

Pursuing Cloud for Program Success

An interview with Wayne Bobby, Vice President for Federal Government, Infor

Government agencies have big responsibilities, including serving the public and ensuring their cybersecurity posture is strong. But outdated technology systems compounded with the challenge of a dwindling workforce make these missions all the more difficult to achieve.

Moving more of government’s mission-critical operations to the cloud can help mitigate cyber risk and improve employee productivity to overcome these challenges. Such mission-critical operations include human resources management, finance and accounting, as well as supply chain and enterprise asset management.

In an interview with GovLoop, Wayne Bobby, Vice President for Federal Government at Infor, shared how government can successfully move such operations to the cloud. Infor is a software solutions company that prioritizes helping government agencies build their solutions from the ground up to simplify the overall business of managing government.

“Government initially began moving the more basic things, like email, to the cloud,” Bobby said. “Now, cloud is becoming more fundamental to how government agencies get their work done.”

Agencies are now moving more mission-critical solutions that concern cybersecurity, workforce management and finance to cloud. However, Bobby said, some agencies may be reticent to do so over security concerns. Cloud, however, can actually improve cybersecurity through programs like the Federal Risk and Authorization Management Program (FedRAMP), which provides standardized approaches to security.

“With FedRAMP requirements, the data reflects better security from the infrastructure to the platform and application layers of the business. These security features have improved interaction between vendors and agencies to better support the program mission.”

FedRAMP, helps agencies by defining standards for security, as well as policy guidelines for vendors. “They’ve created a lot of discipline that was greatly needed,” Bobby added.

Working with a FedRAMP-approved vendor, agencies can use more streamlined services. Rather than purchasing a different product or monitoring tool for every mission need, agencies can use service-level agreements and a standardized set of fewer technology tools. Because service-level agreements are spelled out contracts between providers and agencies, government can have more control over their cloud services, including quality, availability and responsibilities.

“Organizations have decided to use cloud service-level agreements to address the entire program need as opposed to thousands of different tools,” Bobby said. “This creates an environment with fewer variables and allows for more 24/7 monitoring and uptime and better disaster recovery. There’s much more stability there.”

Cloud is also helping government leverage new capabilities that were more difficult before. “Historically, Government provided solutions through more of a transactional-based nature,” he said. “But as the next generation moves to cloud software, demands are becoming more informational and less transactional.”

Informational services allow agencies to be better prepared to make decisions based on fact.

For example, an agency like the Department of Veterans Affairs could keep track of patients making appointments or coming to the emergency room and define how many clinicians need to be on staff. Or the Defense Department can keep track of major assets like ships, submarines, aircraft and other requirements to support the war fighter and schedule maintenance accordingly.

“Agencies need more information about their workforce, financials and supply chains,” Bobby said. “With an informational approach to problem solving, agencies can be more proactive rather than reactive with transactional-based services.”

Solution providers like Infor are working to help agencies harness the cloud to achieve IT modernization as well as program success. “All applications that we provide, including HR supply chain management, finance/accounting, procurement and asset management can be delivered on solutions in the cloud,” Bobby said. “And you can buy everything from Infor while getting the speed and quality provided from Amazon Web Services.”

With such services, agencies can have 24/7 access and monitoring of their systems, software upgrades completed without having to disrupt services, and security with standardized and approved solutions.

For cloud, one size fits all cannot effectively meet the mission and requirements of the public sector. The needs of an HR manager are not the same as those of a city manager or a 311 call center. By leveraging cloud supported by a comprehensive service level agreement, informational-based decision support and standardized security requirements, agencies across federal, state and local governments can fill their unique roles and achieve program success.
IT modernization is taking the government by storm, but if agencies limit their efforts to replacing or upgrading outdated legacy systems, they will only make limited gains in terms of performance and security. Additionally, they could set themselves up for costlier modernization efforts in the years ahead. Instead of only focusing on modernizing systems, agencies should undergo an agencywide digital transformation.

In a recent June FCW event, Face to Face Digital Services, GovLoop learned from government experts who explained how they implement strategic technological modernization efforts while addressing changes in leadership and agency culture. They included:

- Joseph Klimavicz, Deputy Assistant Attorney General, Chief Information Officer, Justice Department
- Stephen Holden, Associate CIO IT Policy & Oversight, Department of Transportation
- Joan Lillich, Digital Change Management Practice Lead, CGI Federal
- Bridget Roddy, Project Manager, State Department
- Nora Dempsey, Senior Advisor for Innovations, State Department
While digital transformation is key, Klimavicz said that agencies face a lot of barriers to implementing the processes.

“Cyberattacks are more common than ever and budgets are constrained,” he said. “But expectations from customers are very high.” In the face of these expectations, Klimavicz emphasized the importance of continuous improvement in service delivery, especially when it comes to the most basic citizen services.

“We must figure out ways to work together to make sure we’re working on highest priorities and being as efficient as possible,” Klimavicz said. “We need to figure out how to provide common services that are tailored to the individual’s needs.”

While agencies need to consider how modernizing citizen services will affect the end user, digital transformation also means changes for agency employees.

Preparing for the People Side of Change

A recent CGI federal report found that 80 percent of agencies experience culture change management challenges when implementing digital transformation to meet citizen expectations.

“The people side of digital transformation happens at every level,” Lillich explained. “If you’re not thinking about a cultural change within your agency when you’re implementing new IT, what is this going to mean for your organization?”

There are four things agencies should keep in mind in order to properly execute a leadership and culture shift in the midst of digital transformation, Lillich said:

1. Align leaders by holding workshops to break down communication silos and improve team performance. Agencies should also build a success model that outlines the project’s goals and includes a system for monitoring effectiveness.

2. Establish a change network of agency employees and leaders within who want to lead modernization and inspire change.

3. Engage stakeholders by building a case about the modernization project’s importance and potential impact. Informed stakeholders are more likely to accept change, so agencies should encourage two-way communication.

4. Measure the effectiveness of efforts with data. There are advances in data science that allow us to “measure human behavior.”

Additionally, Lillich emphasized the importance of incorporating citizens’ voices into the service delivery modernization process.

“If you think you know what your citizens are thinking, engage them anyway,” she advised.

Embracing and Implementing New Tech

Holden said that now is a better time than ever to move toward modern IT. Citizen expectations have changed, and services need to improve. “We need a technology revolution because we don’t have time for evolution,” Holden said. “We have so many things we want to do with IT that we’re failing to accomplish because of the centralization of old technology and attachment to legacy systems.”

Before implementing the new technology, Holden suggests agencies maintain a few values: “Think about the big picture and mission, act with courage, move together, have fun and remember that the time is now,” he said.

Presenters agreed with Holden’s last sentiment that when it comes to digital transformation, there is no time like the present. Dempsey and Roddy implemented the Virtual Student Federal Service (VSFS) program by taking initiative and immediate action.

The program allows college students to intern for U.S. government agencies virtually and help governments move from analog to digital. The virtual internships were originally offered through the State Department. Now, VSFS is at 60 agencies.

VSFS gained traction as a shared service, an element that Roddy said is crucial to the digitization effort. “The reason why the program works so well is because when other agencies say they want to set up something similar, we let them join our program,” Roddy explained.

Initiating VSFS as a shared service gave Roddy and Dempsey the support they needed to have a successful, well-run program. They were met with little to no resistance from the agency. “Because it was a shared service, it made sense. It was moving the government from analog to digital and it was so obviously needed, that the people involved didn’t need to get a security clearance.”

While VSFS is a model for how digital services can improve government, it took Dempsey and Roddy 10 years to move the program. “Bureaucracies have to be careful,” Dempsey explained. “There have to be rules, limits and barriers when we innovate.” But instead of worrying about possible obstacles, Roddy and Dempsey chose to push forward. “Our motto is we can’t default to no;” Dempsey said. “Because when keeping an open mind, open ears and imagination, the sky is the limit.”
Federal-grade for the most mission-critical.

Deliver better services to your constituents—both inside and outside your organization—all while beating budget pressure and transforming your operations to increase the ability to support a mission focused agenda.
Industry Spotlight

How Secure, Multi-tenant Cloud Supports IT Modernization

An interview with Tim Bock, Dell Public Alliance Manager, Virtustream

Technology is the backbone of nearly everything we do in our personal lives, and we expect to have fast, reliable and updated IT to support our evolving needs.

However, easy access to newer technologies has not always existed in the public sector due to the baggage that comes with having decades-old systems. Plus, managing an enterprise as massive and complex as the federal government creates inherent challenges — many of which require agencies to rethink how they embrace newer technologies and processes to solve those chronic issues.

Those issues include deciding how to replenish the workforce once seasoned professionals retire and ensuring that government services meet or exceed citizens' expectations. Considering these challenges, where do agencies begin?

For a growing number of organizations, the answer has come in the cloud — a crucial part of IT Modernization. GovLoop recently sat down with Tim Bock, Dell Public Alliance Manager at Virtustream. Virtustream, a Dell Technologies business, provides cloud computing infrastructure and services to government agencies and specializes in creating secure public, private or hybrid cloud environments. Bock discussed how moving to the cloud positions agencies to maximize the skills and resources they have in-house for high-level mission tasks.

While cloud isn’t a magic solution to every issue government faces, it helps agencies think more strategically about how to work efficiently, Bock explained. “Cloud is not the end-all, be-all, but it is an enabling technology for changing the way agencies do business.”

If you’re forced to do more with less, you can move some of your workloads into the cloud — freeing up employees to spend more time on their core job functions and less time on mundane tasks or troubleshooting tech issues that cloud providers are better equipped to handle, he said. This means more time for strategic efforts like developing and improving applications, especially those that support citizens’ interactions with government agencies.

From a cost and capacity standpoint, clouds with consumption-based pricing enable agencies to only pay for what they use and buy scalable services that can meet changing capacity needs, rather than widgets and physical infrastructure that cannot quickly accommodate increased capacity and storage requirements. A secure, multi-tenant cloud environment provides even greater economies of scale because agencies can benefit from sharing the cost of the supporting infrastructure.

However, cost alone isn’t the only driving force behind government’s cloud adoption. With a move to the cloud comes an added level of security and monitoring from cloud service providers, particularly those that have met the government’s rigorous security and compliance standards.

For agencies that are understaffed or do not have automated tools to enhance their security efforts, cloud service providers like Virtustream can help to fill in those gaps, Bock said. They have the staff and tools to monitor their data centers 24/7 and ensure that service level agreements (SLAs) are met, whether it’s meeting expectations for uptime or performance-based SLAs.

Performance-based SLAs are especially important for maintaining the enterprise applications that agencies depend on because they detail how an app should function. “Building a platform that’s tailored to provide performance-based SLAs for enterprise apps is really where Virtustream shines,” Bock said.

To guarantee that applications will run the way they are intended, vendors must understand the nuances of applications built for a specific platform or device, he added. Once an agency migrates to the cloud with Virtustream, they can decide whether to leave their applications as is or make any changes.

Government agencies often assume they can lift and shift their applications into any large vendor’s cloud environment, but that is not always the case. Agencies must often significantly transform the way their applications are written to truly take advantage of what cloud environments offer. With Virtustream, agencies have more flexibility to maintain existing app architectures or transform them. They can also take advantage of full encryption across their entire platform and leverage Intel’s Trusted Execution Technology, which helps protect against vulnerabilities that threaten virtual machines.

The reality is that cloud and security can co-exist. The maturity of cloud computing has made offerings such as multi-tenancy a secure and cost-effective option to support government’s modernization journey.
Priority No. 2
Achieving Compliance Through FITARA

FITARA may sound like old news, but the most recent FITARA federal scorecard shows agencies are still having difficulty achieving compliance with this important piece of legislation. But understanding FITARA can help you ensure your agency is managing all the mishaps that can occur when implementing new technologies.

What Is FITARA?

There are always new developments to keep up with in federal IT, which is why so many federal agencies are prone to oversights when implementing new technology. FITARA was passed in 2014 to address common missteps and miscommunications in the management of federal technology.

FITARA, which was the government’s most recent revamp of federal IT in 20 years, was designed to empower federal CIOs to respond to common agency IT challenges, including lack of visibility into IT spending, inefficient acquisition and management processes and difficulty measuring the performance of IT investments.

FITARA Scorecard: How it Works

The federal government has an overwhelming number of IT objectives and goals, so it can be difficult to track agency progress on FITARA. To ensure compliance, the House Oversight and Government Reform (OGR) committee uses a FITARA scorecard to evaluate agency compliance in seven different categories. And to increase transparency between the public sector and citizens, the scorecard makes agency’s IT progress, or lack thereof, accessible to the public.

Agencies receive grades from A to F based on their performance in specified IT categories. The grades are averaged into one final grade that represents the agency’s overall IT prowess.

Categories in the May 2018 scorecard are:
- Agency CIO authority enhancement
- Transparency and risk management
- Portfolio review
- Data center optimization initiative
- Software licensing
- Modernizing government technology*
- Cyber*

* Category new to scorecard in May 2018

May 2018 FITARA Scorecard: Dismal Results

The first FITARA scorecard for the top 24 federal agencies was released in 2015, and the low scores did not inspire confidence in federal IT. Most agencies received failing grades across multiple categories. In fact, 70 percent of agencies received an overall grade of D or lower.

FITARA was passed only a year prior to the first scorecard, so it was expected that agencies would have room to improve. Most agencies have achieved better results over the years and the average score is now in the C range. But the May 2018 scorecard marks the third consecutive drop in FITARA scores. Public opinion is that agencies are failing to be transparent in their IT operations. But the scorecards only provide a glimpse into the progress that is being made behind the scenes in federal IT.
Quick Look: May 2018 Scorecard

→ 10 agencies received overall grades of D or lower
→ 6 agencies improved their scores between November 2017 and May 2018, and 11 agencies received worse scores
→ 15 agencies received an A grade in the agency CIO authority enhancement category
→ 14 agencies received an F grade in the software licensing category

Why Agencies Didn’t Do Well

In the May 2018 FITARA scorecard, nine agencies received a D grade or lower, and there were numerous categories where almost all 24 agencies scored poorly.

The introduction of the MEGABYTE Act’s corresponding software licensing category in 2016 made it difficult for agencies to score well. The MEGABYTE Act was passed to reduce considerable waste in software licensing by requiring that CIOs inventory software license spending. Fourteen agencies failed this category entirely as a result of having no inventory of their software licenses.

One other requirement caused 11 agencies to receive a score that was lower than their November grades. OGR is beginning to crack down on agencies that lack a direct reporting structure from the CIO to the department head. Agencies that failed to comply were docked a full letter grade this year.

What This Means for You

Whether your agency scored well or is struggling with FITARA compliance, it’s important to note how FITARA can improve your management and procurement of newer technologies.

Agency enterprises have a tendency to grow ad hoc. The problem with this is that over time, it becomes difficult to keep track of resources as new hardware and software are acquired while legacy systems continue to run. Multiple licenses for the same software might be acquired by different organizations throughout the agency, creating waste. Software can be inappropriately shared, putting agencies at risk of violating licensing agreements. Multiple licenses can result in underuse of software if only a small percentage of the allotted seats under each license is being used.

Ultimately, you’ll have no clear idea of how many seats are actually being used, making any duplication hard to spot. But FITARA compliance can help avoid these situations by ensuring your agency has a clear view of what software and technologies are being used. That way, CIOs, administrators and staff alike can ensure everyone has the software they need, are complying with regulations and licensing agreements, and are not spending extra on technologies not being used.
Tackling IT Modernization
End to End

» Harness the power of Splunk for event management
» Monitor your data in real time
» Support a hybrid environment
» Migrate workloads to the cloud
» Manage endpoints and security tools

Agencies across the federal space work with August Schell to achieve high-level automation, meet their security needs using cloud, and train their workforces.

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www.augustschell.com/services
Regardless of mission, government agencies cannot afford to stay stagnant when it comes to IT modernization. Budgets are getting leaner, citizens are increasingly demanding streamlined services through technology mediums of their choice, and employees are requiring new ways of empowerment through technology.

Despite its proven ability to advance IT modernization and reduce costs in the long run, cloud remains the biggest goliath for agencies looking to modernize their enterprise. Without the right strategy, security standards, and capabilities, it will remain difficult for government to fully reap the benefits of cloud and IT modernization.

Fortunately, there is a way agencies can become cloud-capable to meet their modernization goals. In an interview with GovLoop, Cory Conway, Director of Big Data Solutions and Services at August Schell shared how agencies can leverage the cloud to meet mission priorities and stay connected to the fast-moving market of IT modernization. August Schell is a cybersecurity company that provides innovative systems, products, and solutions to government.

According to Conway, becoming cloud-capable starts with empowering the workforce. He identified two main challenges with empowering employees today. First, there are too many IT products in government that require years of hands-on experience. According to Conway, “Cloud readiness allows you to hire a diversity of skillsets instead of having a bunch of generalists.” Rather than hiring new IT professionals for every new product acquired, or having in-house built software solutions that require on-the-job training time or niche skills, agencies can use outside expertise and consulting to train the staff they already have, saving time, costs, and labor.

The second challenge Conway identified was the misplaced fear of automation replacing humans. “With cloud or any form of automation, people fear for their jobs,” he said. “But if you’re part of the efforts, you’re not only empowering yourself, you’re securing yourself for the long-term. In government, you’re never going to eliminate the need for IT staff or on-premise solutions, no matter how far we modernize with the private sector.”

Conway stressed that the only way for employees to get left behind is failure to embrace the change that comes with cloud. That’s why agencies need to position themselves to adapt for the long term.

To prepare for the cloud, Conway relayed the importance of staying connected to the emerging technologies market. Agencies can get cloud-ready by investing in platforms that meet security compliance and communicate easily with other legacy systems in government. This means seeking platforms that are already Federal Risk and Authorization Management Program-approved as well as platforms that easily export and integrate data into other systems.

“Cloud readiness means there may be multiple vendors involved,” Conway said. “Using a consolidated, shared platform as opposed to several one-off solutions makes it easier to transition to the cloud.”

While some say investing in cloud is expensive, Conway said it depends on which systems agencies choose to transition to the cloud. “Too often, organizations take the approach of lift and shift, which means taking old systems and moving them from on-premise data centers to cloud, replacing the old with the new,” he said. “This approach is more expensive and doesn’t take advantage of the benefits cloud offers like better resource utilization, scaling, DevOps, etc. The key is starting small to create a more elastic environment or using some of the soft services (like a database in the cloud) to reduce workload. A better approach is to maintain existing systems, but for anything new think cloud-native, and take advantage of cloud features and capabilities.”

While the prioritization around what to move is difficult to do in cloud environments, there are many private organizations that can help. Companies such as August Schell help federal agencies achieve high-level automation, understand how cloud can meet their security needs, all while training workforces to adjust to new systems and procedures. Specifically, August Schell harnesses cybersecurity solutions to help agencies move their data from on-premise environments to cloud-capable ones, ensuring data integrates in a secure and seamless manner.

“A lot of people fear moving to the cloud,” Conway said. “But it’s an evolution, and we’re here to help shepherd them through that process.”

Irrespective of public or private-sector, IT modernization is not slowing down. Getting your agency cloud-capable and ready can seem like a daunting challenge. But using secure, innovative cloud solutions that can integrate with other systems can save agencies time and worry over performance, compatibility and security.
Priority No. 3
Saving Costs Through Shared Services

What's All the Buzz About Shared Services?

On Dec. 13, 2017, the White House’s American Technology Council released its final “Report to the President on Federal IT Modernization,” highlighting the current and envisioned state of federal IT along with specific recommendations to jumpstart modernization efforts.

In addition to network modernization and consolidation, the report emphasized shared services. Shared services have been identified as a way to help support the future of networks with “a consolidated IT model by adopting centralized offerings for commodity IT.” Shared services can help agencies increase efficiency by reducing duplication and data center and IT infrastructure costs while standardizing IT capabilities.

In May, GSA Agency Administrator Emily Murphy shared that the agency is taking the “long view on shared services,” using the transition model of its big next-generation telecommunications contract as a guide. The process will start with the agency’s Unified Shared Services Management Office identifying requirements and obtaining consensus on those requirements from agencies.

Murphy explained that those requirements will be turned over to a service management office inside GSA or another agency to put together a solution.

How Shared Services Can Help You Save Costs and Increase Efficiencies

Agencies like yours can save costs on data services by consolidating them into fewer common platforms to increase efficiency and savings. With fewer platforms to manage, you can use your resources to focus on mission-specific and mission-critical items that are specific to your agency.

The MGT Act even promises a new shared services model that would let agencies collaborate on and deploy a set of shared IT infrastructure and services. Agencies can then save costs while deploying improved services to their citizens and achieving improved goals.

Budgets are continuing to tighten, and the new administration is looking to reform business processes. Migrating to a shared services model is an effective way for agencies to save money, increase efficiency and streamline financial management, acquisition and other processes. Although agencies may face challenges along the way, by focusing on end state vision and building strong relationships, agency leaders can transform how they serve internal and external customers.
New Ways Agencies Are Applying Shared Services

In addition to payroll processing, there are newer, more innovative ways that agencies are leveraging shared services. Specifically, the Treasury and Agriculture departments are leveraging the Invoice Processing Platform (IPP). This platform is a secure web-based service that efficiently manages government invoicing from purchase orders through payment notifications at no cost to federal agencies and their vendors.

Imagine going from receiving calls from vendors all the time – trying to find the status of their invoices and payments – to using a portal that allows them to access the information on their own.

USDA has used IPP successfully since 2015. The agency reported call volumes falling by approximately 95 percent. Vendors can access the IPP portal and immediately see the status of their invoice. They know where the payment is and what it’s for without having to call the agency.

Treasury launched the IPP in 2008 and has been expanding and improving the system each year — with over 200 new capabilities over the last 10 years. Overall, IPP has 85 total agencies and 122,000 vendors using the platform. Treasury’s shared services provider, the Administrative Resource Center, said by using IPP, it has saved 50 percent of the cost of processing a vendor invoice.
Accelerate Modernization With an Adaptive Network

Secure and reliable network connections are the foundation of IT modernization—but static networks are difficult to maintain and require lots of time, money and manpower to keep up with ever-changing mission needs. Analytic-driven Adaptive Networks, the next evolution in networks developed by Ciena and CenturyLink, ease this burden because they configure, monitor and maintain themselves. Innovative IT directors are investing in Adaptive Networks to accelerate network modernization while reducing maintenance and operating costs.

Adaptive Networks are built on three key foundational elements:

**Programmable Infrastructure**
Securely manage a pool of virtual and physical network resources that can be dynamically configured to increase service velocity, provide network performance insights and scale to meet the demands of most applications.

**Analytics and Intelligence**
Apply data analytics and machine learning to accurately predict network problems and threats while anticipating utilization—the result is a self-learning, self-optimizing network that adapts to proactively support your agency objectives.

**Software Control and Automation**
Leveraging software-centric network technologies and multi-domain service orchestration simplifies the end-to-end management and automation of services across multi-vendor, multi-domain hybrid networks.

Adaptive Network solutions are available on select best-in-class government contracts, so no matter what your IT modernization strategy demands, CenturyLink and Ciena have your connections.

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Crafting the right strategy is only half the battle when it comes to IT modernization. In addition to working toward the best possible state of IT, agency leaders face the challenge of keeping track of what systems and technologies they already have. This can make it especially difficult to ensure that new technologies can operate alongside old services or infrastructure – and even more difficult to adequately secure networks. Compound such challenges with antiquated acquisition processes, and federal IT modernization seems like an insurmountable challenge.

But pace-layered transformation – using scenarios and trials to break IT modernization into smaller, more manageable steps – is helping agencies better understand their baseline IT technologies and carve viable paths toward IT transformation. Gartner defines pace-layering as categorizing applications and systems according to the rate at which they need to change, as opposed to applying the same, tedious method to every IT project.

In an interview with GovLoop, Dave Young, Senior Vice President for Strategic Government at CenturyLink and Jim Westdorp, Chief Technology Officer of Ciena Government Solutions, discussed how the federal government can couple pace-layered change with smarter contracting vehicles to make IT modernization more achievable. CenturyLink specializes in helping federal agencies enable innovation and maximize their resources to attain IT modernization. Ciena specializes in software-defined technologies and helps agencies unlock the value of their IT. Both companies focus on understanding mission goals, solution alternatives and risk assessments.

CenturyLink and Ciena work together to support different IT models and allow agencies to manage and own more of their new systems. CenturyLink’s portfolio utilizes a number of Ciena technologies. “Our corporate relationship underpins our ability to be more effective for the government customer,” Young said.

In November 2017, CenturyLink won a sought-after spot on the General Services Administration’s 10-year, $50 billion Alliant 2 program. Alliant 2 is a multiple-award program that federal agencies can use to buy customizable hardware, software and IT solutions that can be purchased as a package.

The GSA contract helps federal agencies consider different methods for IT modernization bundled in a number of options. “GSA architected a portfolio of contracts with common and overlapping scope,” Young said. “The Enterprise Infrastructure Solutions contract is geared toward buyers who think about buying out of legacy telecom services. Alliant 2 appeals to users who think of themselves as buying simple solutions.”

Federal agencies can decide which services and solutions they need from a wide set of choices that are already vetted and meet government security standards. This leads to easier purchasing and deployment with assurance of secured networks. Not only can agencies plan for immediate IT modernization needs, but they can also better plan for the future.

“The beauty of these contracts is that they anticipate evolving products and services to be added and made available over time,” Young said. “So that means these contracts are not just meant for the moment and existing technology, but also for the evolving capabilities over the time.”

Adding a pace-layering strategy allows agencies to be more agile in the procurement and deployment of apps and technologies. Agencies can move quickly on smaller projects that can be implemented easily and take the time they need on bigger projects without having to delay IT modernization.

“Chief information officers actually segment their IT portfolio into layers,” Young said. For example, the bottom layer could be common, low-risk applications that can easily be standardized across the organization. The next layer is systems that are more mission-oriented and geared toward citizen services. The last layer Young described was innovation in terms of new capabilities and IT transformation.

To provide this flexibility across these layers, the federal government should consider software-defined networks for better performance. “A lot of the requirements that are needed for networks call for significantly greater capacities because new services are more data centric,” Westdorp said. “Software-defined networking gives government agencies the flexibility to manage more of their network with tools that are standard-based and easier to maintain, and which can be moved as needed within the network.”

Ultimately, with a pace-layered strategy for smarter deployments, innovative contracts for easier procurement and flexibility in managing networks, federal agencies can truly begin to tackle IT modernization.
Many state and local governments can easily fall into the trap of thinking that IT modernization is as simple as buying newer technologies to improve citizen services. While technology modernization can certainly improve service delivery, the end goal of any state, local or municipal program or service should be an enhanced experience for end users.

That’s the approach applied by Susanna Ronalds-Hannon, Project Manager in Boston’s Department of Innovation and Technology (DoIT). GovLoop sat down with Ronalds-Hannon to learn more about the city’s approach to IT modernization and improved service delivery through digital channels.

Ronalds-Hannon works with customer-facing departments to streamline transactional processes, such as permitting, licensing and 311 service requests and work orders. She also prepares staff for the process changes that accompany digitization.

“Our philosophy for service delivery-driven government is that technology is a means, not an end,” Ronalds-Hannon said.

For Ronalds-Hannon and her team, defining a problem statement and focusing on process improvement is central to overcoming many of the challenges they face. These challenges include complex procedures governed by manifold legislation and multiple stakeholders.
What makes these challenges especially difficult for the IT team is the temptation to focus on technology as an end goal, rather than address needed process improvements.

“People often view process failures as technology failures, because the technology is more tangible,” Ronalds-Hannon said. “There is this knee-jerk reaction to scrap old technology for new, partly because organizational change is hard and partly because improvements to legacy technology is harder to hang your hat on.”

Many customer or citizen pain points are exacerbated when new technology systems are implemented on top of ambiguous processes. Ronalds-Hannon cited the department’s efforts to digitize the construction permitting process as an example. “Prior efforts suffered from insufficient thought behind how interdepartmental workflows must change to accommodate online form submission and new review channels not driven by in-person interactions,” she said.

Ronalds-Hannon said that later projects have benefited from these lessons. In 2016, Ronalds-Hannon and her team were tasked with partnering with the Inspectional Services Department to fix the digital process for rental registration. “It was a process redesign and clean-up,” she said. “We kept the existing technology but redesigned the workflow so historic annual data was saved, staff had better control over alterations to records and data integrity and registrations could be reviewed easily.”

This engagement, while finite, led to a stronger support relationship between DoIT and the Housing Division at the Inspectional Services Department. “Our continued engagement with the Housing Division of the Inspectional Services Department is much stronger and more sustainable,” Ronalds-Hannon said. “They reach out to us for assistance during the heavier renewal season, and we draw on resources from multiple teams in DoIT to help them with their digital service delivery.”

These supportive relationships are buoyed by organizational changes made within DoIT in recent years. The department has built up a digital and an analytics team, which complement existing functions to better round out the department’s suite of services and tools to offer constituent-facing departments.

In March, Boston’s Department of Innovation and Technology released its short-term rental software request for information to learn more from software companies and cities on existing products and solutions and how they could address rental registration and renewal portal digitization.

They define the optimal solution as one that would “minimize staff review by using workflow constraints wherever possible to encode the conditions of short-term rental use; provide a secure, easy-to-use and dependable experience for applicants and staff; and an interface with existing city-owned data sources and potentially booking platforms to perform consistent identification of rental listings; as well as add value on top of existing city-owned workflow software tools.”

Ronalds-Hannon and her team chose to pursue an RFI as a best practice. Rather than wait for legislation to pass and then release the request for projects, she and her team used the RFI as a framework for thinking through data needs. The RFI also informs an ideal application workflow, and helps determine whether her team could build a solution in-house or whether it would have to go to bid.

Rather than rip out and replace legacy technologies, Ronalds-Hannon advises that state and local IT departments focus first on defining a problem statement and high-level objectives, and get consensus from stakeholders around shared processes.

“You might find that the problem doesn’t originate with the technology after all,” she said. “Partner with internal stakeholders to understand and document the gaps. Then you can improve on technology.”

Additionally, Ronalds-Hannon recommends conducting evaluations after the close of a project, and ensuring that there are processes in place for continuous feedback from both constituents and internal staff. “Create channels for feedback after a project’s close because the product development cycle shouldn’t ever end.”

Boston residents have many new digital tools for interacting with their state and local government agencies. But all of that would not have been possible through technology modernization alone. As Ronalds-Hannon has experienced, state and local governments must first modernize their workflows and processes before using technologies to improve service delivery through digital channels.

“Our philosophy for service delivery-driven government is that technology is a means, not an end.”

Susanna Ronalds-Hannon
Project Manager, Boston’s Department of Innovation & Technology
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Industry Spotlight

5 Steps to Seeing the Benefits of IT Modernization

An interview with Paul Parker, Chief Technologist, Federal and National Government, SolarWinds

Agencies today understand the need and the drive for IT modernization and consolidation – and now, they can start to reap the benefits. In fact, agencies that modernize and consolidate IT experience a variety of advantages, including lower costs, more efficiency, greater availability, and improved compliance and security.

But that doesn’t mean the process is easy. In fact, as agencies move through the process, the complexity of IT environments increases significantly and the responsibility of managing both legacy infrastructure and upgraded systems creates burdens.

So how can agencies successfully modernize and consolidate their IT? To learn how, GovLoop sat down with Paul Parker, Chief Technologist, Federal and National Government, SolarWinds, a leader in IT management. SolarWinds works with DLT, SolarWinds’ federal distributor, and other federal partners to offer IT management and monitoring solutions for networks, applications and servers, cybersecurity and more.

According to Parker, there are five steps that can help agencies better navigate challenges and benefit from IT modernization and consolidation.

First, Parker said having a solid definition of scope is critical to a successful modernization process. “Defining the scope requires figuring out what challenges we want to solve and why, as well as the timeline and budget,” he explained. Doing so can help organizations understand the constraints of a project, so agencies can better avoid underestimating its complexity.

Next, “You absolutely need to know where you are starting from,” Parker said. Parker compared the process to building a home. “Is the foundation of the house already established, are the walls up and you just have to add the roof? Or, have you not even done a site survey to identify where you will build the home?” Find the baseline of your agency’s IT resources. Take the time to find what you already have in place, specifically regarding tools, policies, and procedures.

After the inventory, conduct a needs analysis. Does your agency have everything it needs to move forward with modernization and consolidation? Look for tools that can drive the most efficiency in your agency’s modernization project based on the inventory’s findings.

In your fourth step, survey the market. Research market standards regarding tools and services. Consider hybrid cloud infrastructures of different products for shared services. Who are the players and what are the differentiators between IT solutions? In addition to government, DLT also examines commercial market segments such as finance and that are focused on modernization projects of similar size, complexity, and level of importance.

Lastly, move forward. “As you’re picking through each of these steps, you should be getting closer and closer to what you’re hoping to accomplish,” Parker said. At this point, identify what can be achieved most quickly from the first four steps. Then, it’s all about focusing on one thing at a time and building on that.

SolarWinds works in conjunction with these five steps by helping eliminate complexity from IT processes like network operations, resource consolidation, legacy product migration, continuous monitoring, cybersecurity, data center operations and compliance.

Parker also noted that along with complexity, IT modernization initiatives can present security challenges. But, with the right tools and planning, they can be addressed ahead of time. It’s also important to realize the abilities of automation in managing government networks when working on IT modernization.

DLT and SolarWinds can improve the security of networks by proactively highlighting security issues. Their software is designed to deliver actionable intelligence to proactively identify threats, take automated action to quarantine and mitigate damage and analyze data to prevent future attacks.

But, adhering to security protocol can be more complicated than identifying the weak spots. According to Parker, there are often communication silos between people who work in IT and those who work in information security. “The relationship can sometimes be more adversarial than symbiotic,” Parker said. “People need to learn how to embrace the needs of security practitioners and understand why it’s important to them.”

Embracing automation can improve these processes. “With automation we can take repeatable tasks and remove the interaction portion of that,” Parker said. “Those are cycles that may be better spent on more important and complex things.”

Ultimately, agencies can improve modernization efforts with the help of the five steps above, as well as a focus on security and an understanding of automation. This can help them to reap the benefits and meet missions.
Priority No. 4
Delivering Customer Service Through Data Analytics

Organizations large and small are using analytics to deliver improved customer service and build stronger customer loyalties. Modern analytics tools are built with the user in mind, helping agencies personalize interactions with customers, speed up transactions and ensure employees have the right information to effectively respond to requests or inquiries.

What Data Analytics Can Do for Your Customer Service

Whether you’re on the front lines interacting with the public or indirectly serving citizens, customer service must be a priority to ensure you are delivering the best experiences possible for your constituents. Data analytics enable you to deliver better customer service by harnessing citizen data to meet constituent demands for modernized and speedier services on their preferred devices/communication channels.

Use Cases for Improving Customer Service in Government

This chart by Oracle demonstrates how agencies can put data analytics to use to improve customer experience and services:

<table>
<thead>
<tr>
<th>Public-Sector Segment</th>
<th>Use Case</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Administration</td>
<td>Back Office (Finance, HR)</td>
<td>Data analytics helps identify sick leave taken by an individual; query data to find which employees still need training and reach out; personalize responses to employee or potential candidate inquiries.</td>
</tr>
<tr>
<td>Public Works</td>
<td>Fleet Management</td>
<td>Data analytics can take all the information about a vehicle, maintenance requirements, warranty dates and known issues from that or similar vehicles and times of least use so that vehicle downtime has minimal impact on customers.</td>
</tr>
<tr>
<td>Transportation</td>
<td>Airports</td>
<td>Predictive analytics help enhance customer experience and reduce costs by anticipating long lines to assign TSA staff accordingly.</td>
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</table>
Best Practices for Implementing Data Analytics

**Step 1: Define your technical requirements.**

The technical requirements phase involves examining the data available for your project and determining the quality of the data. You also need to take inventory of the tools your agency currently uses and outline your agency’s current architecture, i.e., hybrid cloud, on-premise data center or virtual data systems.

Consider the data sources you’ll need to choose from, such as transactional data, survey data or web log-ins. If your agency uses purchased data, consider if your organization uses supplemental data, like demographics. If not, analytics from social media or news streams may complement your current data to create additional project value.

**Step 2: Choose your tools and technologies.**

Decide what parts of the project you’ll need to do manually with your team and what parts you can automate. For automation technologies, there are a variety of tools that leverage artificial intelligence, application program interfaces (API), as well as business intelligence to help you produce tables, charts and other visualization elements. These may include visualization software. You may also consider statistical tools like SPSS or SAS.

**Step 3: Implement your analytics project.**

If you’re in the federal government, GSA hosts a Digital Analytics Program (DAP) through its Technology Transformation Service that can help you get started. DAP javascript code is required for all federal public-facing websites and consists of web analytics tools, trainings on YouTube, implementation support and instructions and ongoing desk help.

For state and local governments, in addition to using DAP, define the service change you want to address. For example, this may entail upgrading a program your agency offers to citizens or improving employee productivity through a new technology. Defining a service change is preferable to producing a simple white paper or report, as it will deliver real impact for customers.
Granicus provides technology that empowers government organizations to create better lives for the people they serve. By offering the industry’s leading cloud-based solutions for communications, content management, meeting and agenda management, and digital services to over 4,000 public sector organizations, Granicus helps turn government missions into quantifiable realities. In connecting over 160 million people, Granicus strives to help government see better outcomes and a greater impact for the citizens they serve.

4,000 ORGANIZATIONS across the globe use Granicus every day to improve government transparency and engage citizens.

5 MILLION+ government legislative media files are being accessed by citizens.

160 MILLION citizens in the GovDelivery Network: subscribed to receive targeted government communications.

40 OF THE 50 most populous U.S. cities use Granicus tools including New York, Chicago & Los Angeles.

Take the first step. Contact us to set up a meeting at info@granicus.com.
Citizens expect government services to keep pace with the technology they use daily.

To meet these growing expectations, agencies are investing in digital services and cloud computing solutions that improve how they serve and communicate with citizens. Governments that fail to embrace the evolution of apps, devices and digital tools will quickly fall behind both the private sector and their peers.

“The recurring theme in this area is that the expectations of citizens are rising every day,” said Bob Ainsbury, Chief Product Officer at Granicus. “You’re already late to the party and the party’s likely getting more and more advanced,” he added of failing to quickly modernize IT.

Granicus has become a leading cloud software provider that works with more than 4,000 entities across special districts, federal, state and local governments. These partners use Granicus’ secure, cloud-based solutions to boost their connections with citizens and modernize operations.

Take, for example, Granicus’ govDelivery Communications Cloud. It’s a FedRAMP-certified marketing-automation platform that aids government organizations in delivering successful engagement campaigns and programs. Organizations use it to collaborate and share information more easily with citizens.

With govDelivery, citizens get timelier access to crucial information, thanks to the solution’s ability to automate processes using custom-built and branded templates across email, social media, text and web communication channels.

The ultimate benefit for government employees is the ability to deliver more to citizens while spending less time and money. “At the end of the day, the cloud allows you to connect more quickly to a broader range of people,” Ainsbury said. “And that ultimately improves the citizen experience.”

Another benefit of moving to the cloud with tools like govDelivery? The ability to let citizens decide the information they’re interested in receiving, target them with the most relevant content and then take stock of metrics to constantly refine strategy and processes.

“Digital is, by its very nature, measurable,” Ainsbury noted. “In the old days, a mayor might measure the communications team by how many press releases they did. Nowadays, it’s how much engagement there is. It’s not just if you performed a specific task, but if that task led to engagement and action.”

The Maryland Department of Natural Resources (DNR) offers an example of how digital communications can dramatically improve an agency’s constituent services.

The DNR had an unwieldy communication strategy where every office sent their own emails using different tools, which meant nobody was on the same page or delivering a consistent message. In 2014, the organization decided to embrace modern digital government by using govDelivery.

The change allowed the agency’s communications department to finally centralize its messaging. Because of the umbrella structure of administrative privileges, the communications team was able to act as a gatekeeper to ensure that any message being sent out met the DNR’s style guide and brand. Additionally, the govDelivery platform allows the DNR’s programs to exist under a single communication vendor, which saves them thousands of dollars annually.

The DNR utilized the govDelivery Network to attract new subscriptions, and its communications team used insights on how subscribers were engaging with its newsletters to better tailor email content and topics to them.

Since switching to govDelivery, the DNR’s number of subscribers exploded by over 1,300 percent. While they only had about 24,000 subscribers in 2014, today they have over 341,000. Those subscribers aren’t passive ones, either. During the last twelve months, the agency sent 440 bulletins, and had a 51 percent engagement rate.

“When you deliver top-notch digital content, people will engage,” Ainsbury said.

Cloud-based messaging platforms help agencies operate more efficiently and reduce costs by offering a scalable infrastructure that is flexible to the needs of its users. Valuable time and resources are saved by communicating across multiple formats simultaneously and organizations are better equipped to respond to their constituents. It’s this sort of engagement that brings both parties closer together.
Priority No. 5
Developing the Workforce Through Automation

The concerns for automated technologies like robots replacing human workers are warranted. It’s important, however, to go beyond the hype and pay attention to how this new innovative technology can also help the workforce.

While many worry about automated technologies replacing humans for government work, there are several ways this technology can actually help train, recruit and prepare current and future government workforces.

Here are a few myth-busters about automation:

**Myth 1: Automation will shift the economy and the workforce.**

Fact: History demonstrates that it’s true: Rapid industrialization can dramatically shift economies and impact the workforce. But while economists predict different outcomes for automation’s impact on the workforce, such industrializations and improvements in technology have not caused higher long-term unemployment in the past.

**Myth 2: Robots will replace all humans in the workforce.**

Fact: While robots are not replacing everybody’s job anytime soon, employees with more administrative and manual work are more likely to compete with automated technologies. A 2013 Oxford University study examined U.S. jobs, predicting that about 47 percent of total employment in both government and the private sector are “at risk” of computerization. Roles such as library workers, clerks and transportation inspectors – all positions with highly repetitive tasks – are most at risk.

**Myth 3: Automation will result in massive job loss.**

Fact: Workforces across industries won’t be experiencing cuts so much as they will be experiencing significant shifts. Employees in administrative roles and those that require more manual labor or repetitive tasks will need to learn new digital skills and brush up on their technological savvy in order to be shifted into higher-level strategic work.

A recent Brookings Institution report evaluated digitization, or the degree of computer skills and related knowledge required of various occupations. Many jobs that required few digital skills back in 2002 now require at least mid-level proficiency of computers and other devices.

**Myth 4: Automated technologies will be very expensive, especially for government.**

Fact: New technologies may cost more upfront. But in many ways, automating various aspects of jobs could help government save more on costs. Automation can increase productivity and efficiency by decreasing employee time and labor on manual paperwork and other tedious tasks, allowing them to focus on more important mission priorities. In some jurisdictions, automated processes or technologies could enable governments to provide services that otherwise wouldn’t be available.

What Does This Mean for You?

As the Brookings report alludes to, computers and digitization are more responsible for redefining today’s government workforce than automation. Whether you work in a more strategic role or something administrative, armies of robots are not coming to take your job anytime soon.

But if you want to leverage the most that automation can offer while staying ahead of the trend, it’s important to brush up on digital skills. Take courses on automation and improve your technology know-how.
To the left is the degree of computer skills and related knowledge required of various occupations in government, spanning from 2002 to 2016. Digital skills across the board have jumped considerably.

Ultimately, automation can help save employees time that would have been wasted on tedious paperwork; improve speed and delivery of customer services; or even save lives by working in the most dangerous elements. Automation can streamline tasks and improve productivity while allowing employees like you to focus more on innovation, strategy and complex tasks.

Like it or not, automation is rapidly expanding. But while concerns about job replacement are legitimate, this new industrial and technological revolution does not necessarily spell doom and gloom. If you equip yourself with the necessary digital skills and technological know-how, then automation holds much promise in advancing the government workforce.
The digital world is built on a new set of standards and integration approaches that are not supported by the aging IT infrastructures many agencies have in place. Yet legacy systems are still necessary to meet today’s critical mission needs.

Here are 3 ways to tap into the systems of the past to build the modern IT infrastructure of the future:

1. **Full lifecycle API Management**
   Free and open data from legacy systems to improve efficiency and speed innovation. Learn 10 ways to modernize your API strategy.

2. **Integration as a Service**
   Empower developers and departments with API-enabled integration services.

3. **Content Collaboration / EFSS**
   Drive the digital workplace with secure file collaboration, sync, and sharing on any device. Follow these 7 guidelines when choosing a solution.

It’s time to bridge the gap between old and new.

axway.com/modernize
Beyond the Buzz: Your Guide to the Reality of IT Modernization

It’s no secret that most agencies today still rely on legacy infrastructure that was designed and deployed 20 years ago or more — long before cloud, mobile, or the Internet of Things were buzzwords. Why is it, then, that so many legacy systems live on instead of being replaced?

It’s simple, really. Existing infrastructure continues to support integral agency missions. As long as critical data and processes remain trapped there, it’s not going away.

The good news is, legacy technology hasn’t necessarily outlived its usefulness. In fact, the systems of the past are often the very thing you need to meet critical mission obligations on-time and deliver services to citizens effectively. You must bridge the gap between old and new.

To learn how IT modernization can be that bridge, GovLoop sat down with Shawn Ryan, Vice President, Product Marketing Digital as a Service, at Axway, a company that helps agencies modernize and adapt their technology.

“While IT modernization might seem daunting, it doesn’t have to be,” Ryan said. According to him, there are three quick wins an agency can tackle to make any IT modernization challenge seamless: leveraging an API first strategy; offering Integration-as-a-Service to empower both developers and department organizations; and enabling the digital workplace with a content collaboration platform.

“API management is critical to focus on because APIs simplify the connection and reuse of services between existing IT infrastructure and modern applications.

This frees data trapped in legacy systems and provides a flexible and cost-effective integration layer on top of older architectures to enable new citizen experiences that meet business and mission goals.

“Managing the full lifecycle of APIs is a key step towards opening up legacy infrastructures and to overcome the pace barrier for innovation,” Ryan explained.

Offering Integration-as-a-Service is a strategy to integration that is also critically important. This strategy refers to IT offering centrally governed integration capabilities to support application, data and process integration projects.

“By offering Integration-as-a-Service, you are now enabling different departments to access and to create their own integrations,” Ryan said. “You’re allowing them to do integration work themselves with IT overseeing and governing. This achieves economies of scale and economies of pace.”

Finally, Ryan explained that enabling the digital workplace with a content collaboration platform is essential when it comes modernization. “A modern content collaboration platform allows users to be productive no matter how the users want to work. Many of today’s solutions force users to the web, but users need the freedom to work the way they want; on any desktop, device or browser.”

While empowering the end user, a modern collaboration platform needs to have strong data governance capabilities – including the ability to leverage cloud, on-premise, private cloud storage or any combination – based on security and data protection requirements. “One size does not fit all, and government IT executives need the flexibility to adapt to change without disrupting end users.”

An easy-to-use and easy-to-manage file sharing and content collaboration solution will help you improve data agility and workforce productivity while lowering costs and protecting data across your entire digital ecosystem.

Axway offers AMPLIFY, a hybrid integration platform, that can help any agency with these IT modernization quick wins. AMPLIFY unifies employees, partners and developers to create a powerful network to meet ever-changing citizen demands. AMPLIFY provides a rapid microservices and API creation tool, a governance layer to secure APIs and manage their lifecycles, a self-service developer portal to drive API adoption and embedded analytics to identify abnormal situations and usage trends.

AMPLIFY unified by the above supports key integration disciplines including Managed File Transfer, B2B/EDI integration and API-led integration along with an API enabled hybrid-cloud content collaboration solution.

“Innovation is not always going be just accessing data from existing legacy systems,” Ryan pointed out. “Innovation will often require new services to be built fast. AMPLIFY and Axway can help in the building of and managing of new APIs and Microservices while providing a common secure policy-based service layer for the old and the new.”

It’s true that a significant shift to cloud, mobile and IoT technologies is taking place in the public sector, and it’s redefining how agencies must collaborate, innovate and compete. But you don’t need to change everything all at once. These three quick win approaches will help move your agency into a modern infrastructure for the future.
Conclusion

It’s easy to get lost in all the buzz about IT modernization in government headlines. But even if you don’t work directly in IT, technology modernization will have significant impacts on government employees like you. It’s important to stay aware of the trends and how you can leverage IT modernization to achieve your mission priorities. Whether it’s one of the five priorities: enhancing accountability through TBM, achieving compliance through FITARA, saving costs through shared services, delivering customer service through data analytics or developing the workforce through automation, there are many ways you can go beyond the hype and make the most of all public-sector modernization has to offer.

About GovLoop

GovLoop’s mission is to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 270,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to the public sector.

For more information about this report, please reach out to info@govloop.com.

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