

# Current Government Technology Priorities

The top ten technological priorities of  
2018-2019 for CIO government agencies

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White Paper



## Current Government Technology Priorities

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### Introduction

The amount of data collected, maintained and stored by local, state and federal government agencies requires significant time and attention. It only makes sense that government policies and initiatives have reflected a prioritization of technology. Not only does this aid in ease of accessing and updating data but it also significantly increases productivity, efficiency and safety while reducing costs.

In this white paper we summarize the current ten technology priorities for local, state, and federal government institutions. Topics covered are:

- **Security**
- **Cloud Services**
- **Consolidation and Optimization**
- **Digital Government**
- **Budget and Cost Control**
- **Shared Services**
- **Broadband and Wireless Connectivity**
- **Data Management and Analytics**
- **Enterprise IT Governance**
- **Agile and Incremental Software Delivery**

### Ten Priorities of State Chief Information Officers

According to The National Association of State Chief Information Officers government agencies have the following technological priorities for 2018-2019.

### Security

Security is always a priority. Data breaches get smarter so the technology must remain one step ahead, or at least in stride. State governments are moving in the right direction when it comes to increasing security. Currently, nearly all state's government agencies have adopted cybersecurity frameworks based on national frameworks and guidelines ([National Association of State Chief Information Officers](#)). However, where they need to improve is evident.

First, states must explore and obtain insurance against cybersecurity breaches. The public sector lags behind the private sector by about ten percent when it comes to cyber insurance ([govtech.com](#)). In fact, only about nineteen percent of states carried such insurance in late 2017. While it might not be surprising that the government is behind in securing insurance, it's not for lack of trying. The roadblock to gaining insurance is a sign of how much work government needs when it comes to tech. Insurers cite that states don't have policies for myriad reasons but one major one is that they cannot adequately supply a description of how data is handled. The other is that they are viewed as too much of a risk ([Government Technology](#)).

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Next, there is a lack of protocol. This lends itself to governments being viewed as unsafe by insurers. Only fifty-seven percent of state CIO have “documented the effectiveness of [their] cybersecurity program with metrics and testing” ([NASCIO](#)). Without self-assessment and accountability it is unlikely security will improve or that cyber insurance policies will be secured. CIOs must break the cycle by analyzing their systems or bringing in third parties who can do this work.

It’s time for bureaucracies to stop putting together tech plans with pipe cleaners and duct tape and prioritize these areas of cyber security that experience huge gaps. They must instead approach their security with vigilance and a cohesive plan to execute security, assess risk and create fixes where they are needed in a perpetual cycle of improvement.

### Cloud Services

Another priority of government agencies is increasing use of the cloud. This is an area where the [government is excelling](#). Government has adopted cloud computing at an equal and even faster rate than industry. This can be traced to two Obama-era policies: 2011’s Cloud First policy, and the later Open Government Initiative.

Government has seen drastic improvement thanks to moving to cloud-based operations. The five major improvements are in speed, manageability, searchability, safety and recovery, and cost savings. The cloud has streamlined a system that has been overtaxed and rife with duplicates and clumsy infrastructure. It speeds up processes and allows money to be spent on more important resources than hardware and software.

About thirty percent of states currently have a plan to migrate to the cloud while fifty-five per cent are developing that strategy ([NASCIO](#)).



### Consolidation and Optimization

A major priority of government is to consolidate and optimize technology. Optimization improves IT infrastructure by transforming it into an automated, proactive process. The scalability consolidation and optimization yield tremendous benefits ([RSM](#)).

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In Ohio, at the end of 2015, consolidation and optimization led to a cumulative savings of \$103.5 M. The savings were seen across several line items: infrastructure professionals, hardware purchases, hardware repairs and maintenance, mainframe, software and software repairs and maintenance. In 2015 alone the savings were nearly \$40 M ([NASCIO](#)).

Consolidation and optimization lead to savings in a variety of ways but the rewards are far more substantial. They also provide better access to data storage and backup, ease operations thanks to standardization, keep government ahead of the tech curve, and allow for efficiency ([RSM](#)).

### Digital Government

Governments must digitize operations but not in the same way as other institutions. Legacy software is a block to one of the biggest priorities: consolidation and optimization. Legacy software instead keeps data separate and drives costs by requiring updates and fixes within the software versus what Nebraska found works.

In Nebraska, moving to a digitized government meant consolidating all of the networks and servers of the state IT Infrastructure and data centers into one. This eliminated more than 200 servers and saved Nebraska more than \$100 M in operating costs ([Government Loop](#)). Moving to Software as a Service eliminates legacy costs and, like all other trends, allows scalability and paying simply for the services that are needed. Consolidation means having one fix, not multiple, across an entire state.

### Budget and Cost Control

Reducing costs is always a priority and there are many ways to do this by upgrading technology. The biggest way local, state and federal governments save is through outsourcing IT. In-house IT is expensive and wasteful.

In-house IT requires establishing infrastructure. Hardware, software and staffing are costly. Using managed services, agencies only use the services they need. Little new hardware is required. Instead, software applications and data are stored on the cloud and agencies only pay for what is needed.



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In addition to saving money on hardware and software, outsourcing IT staff by using a [managed service provider drives savings](#) for government agencies. Rather than paying IT staff who are full- or even part-time, agencies pay a contract amount for services or an hourly rate when outside help is needed. Instead of in-house IT staff paid for downtime, services are charged and paid as needed. Outside experts are quick and become an extension of the agency without the excessive expense.

Outsourcing IT staff may not seem like that much of a savings, but this also eliminates the need for costly managerial positions. When IT is contracted there does not need to be upper-level management overseeing the IT staff.

### Shared Services

Government agencies are prioritizing technology both for the sake of simplicity and for cost-saving measures. That's why unified communication systems are trending up. These communication systems are built by a vendor in order to combine the necessary channels (computing, voice/text/visual communications, network and data storage and management) in the most efficient way.

These systems reduce cabling, are available in a matter of minutes, and reduce capital outlay significantly. Cisco claims to reduce cabling by up to eighty-six percent and expenses by forty percent ([Techopedia](#)).

Unified communications and shared services are not necessarily new, but as government realizes the benefits and has prioritized better use of technology agencies are taking advantage of condensing their communication architecture.

Another benefit of this trend is Voice Over Internet Protocol (VoIP). This technology allows the type of analog voice calls that would normally transmit over a phone line to be digitized and sent over the internet which is free. There are three main forms of VoIP.

Three Main Types of VoIP	
Analog Telephone Adapter (ATA)	This plug-and-play technology connects a traditional phone to a computer and digitizes voice for transmission over the internet. At the enterprise level, like those used by government agencies, this tech is generally included in the bundle.
IP Phones	This hardware looks like a traditional phone—the difference is, it plugs into a router instead of a phone jack using an Ethernet cable. With WiFi, these phones can be used with any hotspot.
Computer-to-computer	This is the simplest form of VoIP and are calls made using software like Skype, Google Hangout or other messaging software.

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### Broadband and Wireless Connectivity

The government prioritizes broadband and wireless connectivity and bringing these services to all citizens, including those in rural areas where access to fast, secure Internet is sometimes impossible. At the federal level, the [Federal Communications Commission](#) (FCC) is focused on “bridging the digital divide for all Americans”.

In addition to focusing on creating a more swift, safer, cheaper internet, the FCC is also focused on issues of accessibility. The Accessible Communications for Everyone (ACE) initiative strives to break down communication barriers for those with disabilities.

### Data Management and Analytics

For nearly a decade the government has focused mainly on data and analytics. 2010’s Government Performance and Results Modernization Act (GPRA) requires advancing government data analytics ([SaS](#)).

Machine learning, AI, the Internet of Things and analytics work in tandem to provide better, and quicker insight than traditional methods of getting information, like surveys and manual analysis. Using analytics, governments can discover areas where help is needed. They can also mine data to discover trends and patterns pointing them toward the projects to prioritize, and potential staffing and resource issues.



Machine Learning



Artificial Intelligence



Analytics



Internet of Things

Safely tracking data allows government to identify problems, assess data readiness, scope the project, pilot the project, and implement and scale the project. One such example, in New Orleans, involved using analytics to improve fire safety.

The New Orleans Fire Department (NOFD) partnered with the Office of Performance and Accountability (OPA), which is New Orleans’ data team. Using a predictive analytics model, the houses in the city that were least likely to have a smoke alarm and most likely to have fire-related fatalities were targeted. The OPA used data from both the U.S. Census Bureau’s American Housing Survey and American Community Survey to develop an algorithm for predicting homes that likely do not have a fire alarm and also have a high risk for fatalities in the event of a house fire. The analytics and data enabled NOFD to develop a targeted list of homes where they could distribute and install 8,000 smoke detectors. There are plans to replicate the study nationwide because the data is available for the entire country ([Harvard University](#)).

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### Enterprise IT Governance

Enterprise IT governance is a “structured decision-making framework for identifying, selecting, prioritizing, tracking all IT investments and initiatives...[it] integrates new business-driving approaches to investment evaluation and selection with existing agency activities and programs” ([U.S. General Services Administration](#)).

Prioritizing enterprise IT governance means aligning all IT investments to decrease spending and maximize efficiency by making sure only investments that support a business’s objectives are acquired. Additionally, this type of organization and structure helps decrease fraud and deception cases because anomalies are easier to spot when everyone uses the same system ([IDG Communications](#)).

### Agile and Incremental Software Delivery

The government is prioritizing Agile and incremental software delivery. Similar to blockchain, Agile allows for constant monitoring. Code is fully integrated and and constantly tested. When a new feature is ready, tests are run, and must be passed, before the feature is released. These tests are automated and when a failure is noted everything stops, development is notified, and the issue must be fixed before it can disrupt operations.

Traditional software delivery methods involve manual testing. This is costly because increasing numbers of paid testers is required as the software and its features grow and change. In addition to payment costs, productivity dips as staff attends to glitches in software. The continuous testing leads to a product that is far more solid and only requires minor fixes ([Government Digital Services](#)). AI and machine learning streamline systems and increase productivity and are likely to drive trends into 2019.

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