



Government Agencies Need to Modernize Their Systems — But How Can They Do It Efficiently and Effectively?

Agencies at all levels of government are facing challenges as they attempt to modernize their aging legacy IT environments, including systems, platforms, applications and data. But the risks of not modernizing — or modernizing the wrong way — are high.

Many government entities are operating with decades-old hardware and could face reliability and performance issues as more processes are digitized. Failure to update the infrastructure could result in significant downtime, poor-performing applications, and an inability to deliver an exceptional experience for internal users and constituents.

This paper describes the challenges agencies face and why they need to adopt best practices — including conducting assessments, adopting technology tools to streamline modernization efforts and adjusting their organizational culture — to effectively shift to a modern technology environment.

Modernization Challenges

For many agencies, it is not a question of whether there is a need to modernize IT infrastructures, but rather how soon and to what extent. Systems that agencies deployed decades ago, including older mainframe computers and COBOL-based platforms, are for the most part outmoded in today's cloud-based environment.

But the shift to newer technologies is not easy. Agency leaders might not completely understand what they need to upgrade or replace. Just because a system is older does not mean it lacks usefulness. The typical IT infrastructure has become so complex that the task of modernization can be overwhelming.

A key issue is how to revamp technology infrastructure without interfering with operations and impeding employee productivity. This can be difficult given how much these organizations depend on IT to support day-to-day operations.

Another challenge is that many government entities have limited resources, both financially and in terms of employee skillsets. It takes time and knowledge to orchestrate a move from an older environment to a newer one, and not all agencies have the in-house experience and expertise needed. It requires a thorough understanding of the existing platforms and operating environments — some of which might date from the 1960s — and of the new, cloud-based applications.

Risks of Not Updating Technology

While the challenges of modernization might be daunting, the risks of not updating technology — or doing it poorly — are high. Agency leaders need to consider these risks when weighing the decision to upgrade.

One of the main risks of not modernizing is increasing costs of outdated hardware and software. Maintaining and running queries on mainframes or other legacy hardware platforms can end up being far more expensive than using alternatives such as cloud computing.

In addition, if these older systems are affected by new security vulnerabilities or threats, an agency will likely need to make the necessary changes or deploy new tools to mitigate the risk. With modern, cloud-based services, the cloud provider is often responsible for handling such updates.

Updating operating systems and software applications can also be a problem because many agencies lack the in-house expertise in certain environments such as COBOL. Given the scarcity of resources, agencies might not be able to make needed changes in programs, which could result in failed processes.

In short, many older mainframe-based platforms are not sustainable in today's operating environment, in which agencies need more agility, scalability and efficiency.

Best Practices

Agencies can take several steps to address the challenges of modernizing and optimizing their technology environments to meet current and future demands.

Inventory assets. One of the first things an agency should do is inventory current IT assets to assess what's worth holding onto as is and what they can modernize. Given how many new systems and platforms agencies have likely acquired over the years, this can be a difficult — but necessary — practice for planning a modernization effort.

An outside expert should conduct the assessment because they can evaluate systems objectively and with a knowledge of the latest solutions available in the market. Agency leadership should fight the temptation to rush into a modernization effort without first taking inventory of and assessing their current environment.

Seek outside expertise. Beyond the assessment, agencies should consider bringing in outside expertise for help. Many agencies lack the manpower and skillsets to handle a modernization initiative. Whether it is a consultant, technology vendor or other resource, experts can help with selecting and deploying new platforms and making the switch from old to new.

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Start small. When beginning a modernization plan, it is a good idea to select a single project that can be completed quickly and successfully. This illustrates to high-level decision-makers within the organization that modernization is possible. This can also help build confidence for the team spearheading the overall modernization strategy. Once success has been achieved, an agency can move forward at a faster pace.

Don't forget change management. Aside from the actual work involved in modernizing technology, it's vital for agencies to consider the people and culture issues that could arise. For example, not everyone in the organization might be pleased with the move to new operating environments or applications, especially those who have worked in COBOL environments for decades. Placing importance on change management strategies helps everyone adapt to new ways of doing things.

Modernization is Inevitable

For many government agencies, it's not a question of if they will need to modernize their technology infrastructures, but when.

"Most business today, regardless of industry, is tied to legacy systems that are nearing end of life because they are written in languages that are no longer in vogue," says John Polito, CEO and founder of Enterprise Iron.

True digital transformation can't take place with 40-year-old computing platforms still in place. Among the keys to a successful modernization is to know what needs to be updated, and to bring in the expertise to help shift from the old technology world to the new.

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