

# Accelerating IT Modernization in Government

By Daniel Chenok

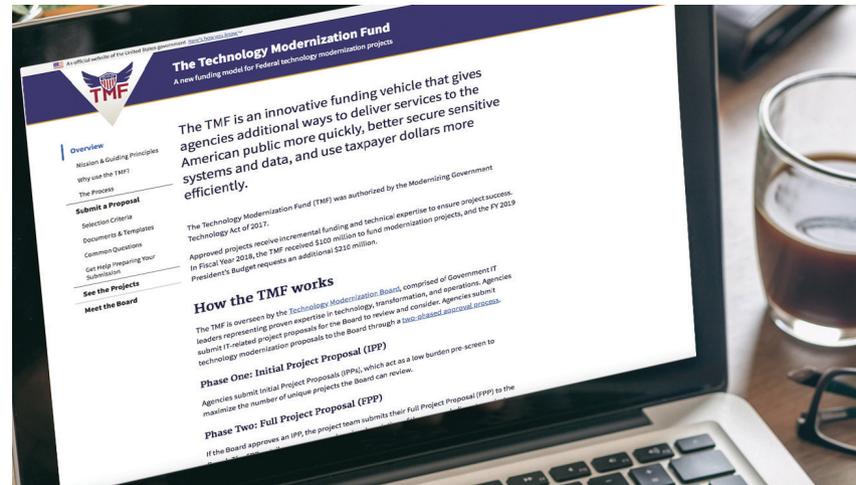
*The Office of Management and Budget (OMB) controls a fund that the General Services Administration (GSA) administers for bringing technology innovation to help modernize government, where the funds spent are overseen by a group of Federal Chief Information Officers. The funds are spent on multiple projects based on agency requests and spent via GSA multi-year budget accounts, though the return on investment (ROI) metrics are not yet clear. Congress requests more information about how the funds are being spent, and authorizes less than the initial request—and points to potential further reductions to the subsequent year request from the administration.*

This scenario could be an accurate description of the current implementation and oversight for the Technology Modernization Fund (TMF), implemented as part of last year's Modernizing Government Technology (MGT) Act. It also generally describes events surrounding the initial implementation of the E-Government Fund that was authorized under the E-Government Act of 2002. And it bears similarity to the process and review surrounding the Innovation Fund that was authorized for spending through the Federal CIO Council under the General Government Appropriations Laws of the late 1990s.

Given the declines in funding support that both of those prior technology funds encountered, what are the prospects for the TMF especially when Congress continues to ask questions about ROI as a condition of future funding? There is reason for optimism, because OMB and the agencies continue to build on lessons learned from those experiences, and have added new components of modernization governance that can help to sustain momentum over time.

## Key Success Factors for IT Modernization

The TMF program elements—purpose, principles, processes, people, and more—are clearly displayed on the Federal CIO Council website at <https://tmf.cio.gov/>. And OMB and the CIO Council have held multiple industry briefings and



interactive discussions to learn about effective practice, including “reserve industry days” where industry briefs government about options for a successful path forward. Over time, agencies, Congress and industry stakeholders will be able to leverage this transparency in improving fund operation and oversight. Congress has legitimate questions about how these funds are being spent to build successful modernization activities in agencies. Given the experience from past administrations, similar transparency about results will help OMB secure additional TMF resources in the 2019 budget and beyond.

The TMF criteria reflect best practice in modernization, including:

- A digital services approach that embodies agile and iterative development methods, continuous testing and user feedback, and the incremental introduction of emerging technologies including AI, blockchain, IOT, and mobile in a manner tied to agency mission goals
- A focus on the data that agencies collect over modern technology infrastructure and applications—reflected in the Data Strategy Cross-Agency Priority (CAP) goal under



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the President’s Management Agenda (PMA) that is tightly linked to the counterpart goal for IT modernization

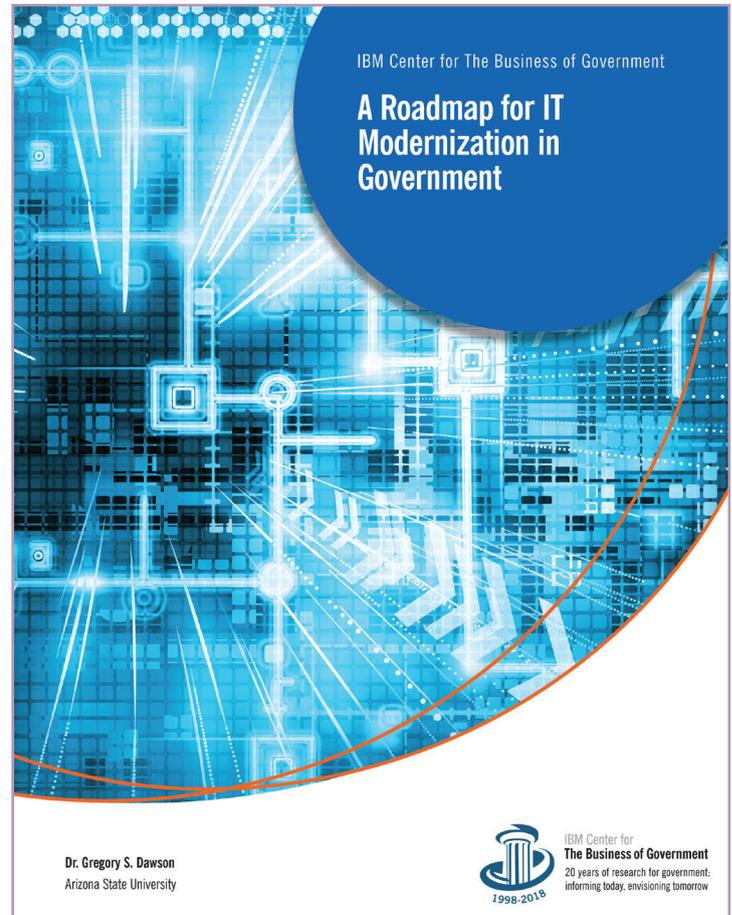
- Integrating security into the modernization lifecycle, from the onset of planning to the scale of delivery—rather than having security be bolted onto applications after development, which has been the cause of many IT failures in both the public and private sectors
- Driving innovation as a practice by the government workforce supported by industry stakeholders, which will promote a culture of innovation while building governance norms that reward risk taking

Moreover, GSA has advanced the practice of IT modernization for adoption by agencies through its five Centers of Excellence that reflect private sector best practice in cloud migration, infrastructure optimization, data and analytics, customer experience, and call center efficiency—with security embedded as a key element throughout. GSA is working with the Department of Agriculture as a lead agency; scale success will come when multiple agencies can leverage these Centers, as multiple agencies do now with GSA functions like acquisition support and property management.

In this advance, agencies and overseers will need to recognize that modernization will not occur in the short term. Just as industry’s continuing journey to adopt 21st century approaches relies on discovery and planning to migrate applications over a period of years, government will achieve positive results by recognizing that a “hybrid” environment is necessary for continued delivery of services that rely on legacy systems while introducing cloud-based applications.

## How Can Industry Help?

Agencies can learn from private sector practice in taking the next steps toward a modernized IT environment. Industry has experience with commercial investment models that capture ROI across years. As this year’s IBM Center report *A Roadmap for IT Modernization in Government* by Dr. Gregory S. Dawson of Arizona State University notes, industry uses a full cost model where benefits are measured and recognized over time, and an understanding of the full costs can be identified and applied. However, government rules generally do not allow budgetary recognition of

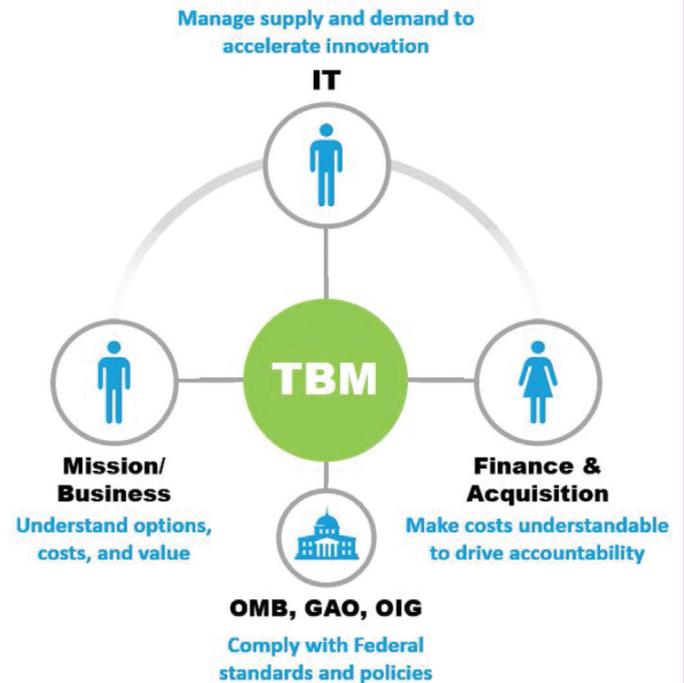


## What is TBM?

- TBM defines a **business model and decision-making framework** which enables IT to run as a business.
- TBM provides IT organizations with the solutions—strategies, methodologies, and tools—to **manage the cost, quality, and value of their IT services.**
- TBM was instituted by CIOs, CTOs, CFOs, and other technology leaders. **Founded on transparency of costs, consumption, and performance,** TBM gives technology leaders and their business partners the **facts they need to collaborate on business-aligned decisions.**

### TBM Benefits

- **Optimize:** Continuously **improve the unit cost of technologies** and services while keeping cost and quality in proper balance
- **Rationalize:** Better **focus of time and resources** on the services, applications, technologies and vendors that drive the most value
- **Innovate:** Mission/business and IT **partnership that ensures maximum value** from technology investments
- **Transform:** Provide **mission/business partners with agility** to “pivot” more quickly to exploit innovation and capitalize on new opportunities



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the outyear benefits and ROI. The MGT Act has enabled some movement in this direction by authorizing multi-year funding that addresses ROI recognition over time. However, Dawson’s report notes that this “does not solve the cross-accounts problem. Hence, spending rules may still inhibit an enterprise view of technology and force a more myopic (and costly) view.”

The Technology Business Management (TBM) Framework, introduced in the last administration and captured as another PMA CAP goal, also provides agencies with an industry benchmark for IT cost allocation. Ideally, TBM could also help agencies adapt such financial estimation to the procurement process in re-introducing gain sharing and share-in-savings approaches to contracting. This category of acquisition initiatives was authorized for technology modernization as part of the E-Government Act, but the provision expired in 2007 with no actual project implementation. Government could look to adapt similar models used for energy savings performance contracts, which have received an exemption from annual budget scoring rules to promote multi-year ROI capture.

Industry can also help by bringing forward commercial experience, both small scale start-up innovation and enterprise transformation. However, current government

procurement rules do not often reward commercial qualifications. Agencies that lean forward to incentivize companies that can show how private sector practice can be adapted will likely drive greater innovation, and do so more rapidly. Agencies can also promote capacity for companies to bring forward ideas and prototypes in a way that does not rule out their ability to compete for downstream work because of a conflict of interest.

## Next Steps: Findings From Research on Modernization

The Center’s IT Modernization report by Dr. Gregory S. Dawson recommends a modernization roadmap based on research into past experiences in IT modernization at the federal and state level, as well as in industry. The report draws lessons from his research and extensive case interviews with federal and state chief information officers (CIOs). Using these lessons, the author frames impediments to modernization and risks for agencies that do not modernize, including continued cybersecurity weaknesses. The report uses this framing to develop eight key lessons for government leaders at various stages of IT modernization, and concludes by setting out a roadmap for implementation that agencies can adapt to address these key lessons.

This report provides a resource for agencies to understand how best to develop a modernization business case, establish and implement a change management strategy, and put in place both a long-term initiative and short-term steps that can help agencies measure real progress. The report examines the status of IT modernization in the public sector, and identifies key lessons from private industry and government agencies that include:

- Understand the organizational drivers for modernization.
- Plan at the enterprise level, implement at the local level.
- Communicate value to citizens and shareholders.
- Focus on people, then address processes, and only then technology.
- Make modernization as a long-term commitment.

Based on these key lessons, the roadmap below illustrates how successful IT modernization can take place in government, in a manner consistent with the MGT Act. Major points from the roadmap include:

- Modernize as an on-going process rather than a single standalone event, to allow for continuous improvement rather than costlier sporadic “catch ups.”
- Seek feedback throughout the process to capture lessons learned and act accordingly.
- Focus on how technology is supporting mission goals.
- Identify stakeholders for each step, making leadership and operational staff aware of their requirements and empowering them to act.
- Ensure check-ins with agency leadership, functional leadership, technical leadership, and key users must take place throughout the process.
- Blend a strong execution strategy, technical approach, and the right team.
- Provide 360-degree communications to foster knowledge and buy-in.
- Measurement results both inside and outside the organization.



If the government embraces these lessons, agencies can reduce operating costs, lower the risk of cybersecurity attacks, and position themselves to take advantage of new technologies, including cloud, analytics, mobile, and artificial intelligence.

The report concludes with a recommendation that government make key investments in IT modernization, identifying and prioritizing the necessary initiatives for maximum effectiveness. Priority investments should be integrated into the budget planning cycle, to provide a foundation for continuous innovation and improvement. With recent statutory and agency progress, the federal government is well-positioned to move forward with effective IT modernizations that improve mission performance.