

WHITEPAPER

Rethinking large-scale Federal technology programs in the age of AI

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By Keyur Patel, Caitlin Guzman Hartman, Kyle Durfee, Ganga Kannan, and Rajive Mathur

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Federal Technology At An Inflection Point

The current administration has outlined an ambitious technology agenda across the US government's civilian and defense agencies: system modernization, customer experience improvement, AI adoption, and the direct infusion of private sector technical talent into government. This will require rapid digital transformation and a different approach to how the federal government manages more than $100 billion in technology investments each year.

Agencies now face a strategic challenge when allocating investment dollars: balancing the ongoing need to sustain current technology and systems with the ambition to modernize and adapt for the future. Rapid advances in AI are expanding the possibilities for modernization, creating new opportunities for agencies to enhance what their technology can deliver and the mission outcomes it can enable.

Key Takeaways

Federal technology leaders face growing pressure to modernize faster, deliver measurable mission impact, and rethink how they deliver complex technology programs.

- **Traditional delivery models are no longer enough.** AI, cyber threats, legacy technology, fragmented accountability, and changing contracting expectations call for a new approach.
- **Five attributes underpin successful transformation.** These span integrated strategy and technology, outcome-based delivery, change management, vendor orchestration, and strategic objectivity.
- **Strategy before contracting.** Define mission ambition and technology needs first, then align contracts and vendors to deliver them.
- **Mission outcomes anchor execution.** Clear outcomes and accountability can connect strategic priorities to technology decisions, vendor performance, and delivery.

The administration has acted quickly to propel its technology agenda and drive efficiencies. In December 2025, OPM launched the U.S. Tech Force[1] to recruit 1,000 technologists and embed them directly inside agencies on two-year assignments, with partners including AWS, Microsoft, Nvidia, OpenAI, and Palantir. In April 2026, President Trump signed an Executive Order[2] making fixed-price, performance-based contracts the new default, requiring agencies to renegotiate their 10 largest non-fixed-price contracts within 90 days. At the same time, the pace of technological innovation, driven by rapidly advancing AI and increasingly sophisticated AI-enabled cyber threats, has outrun traditional government technology delivery models.

In response, agencies can rethink how they structure, govern, and drive accountability for achieving their technology ambitions. This will likely require a measured approach to building, scaling, and delivering applied AI solutions in a new contracting landscape. This paper outlines what that shift looks like and what it takes to make it work.

UNIQUE CHALLENGES FACED BY FEDERAL TECHNOLOGY LEADERS TODAY

Structural Delivery Challenges	Legacy Tech Burden
• Ambiguous requirements and fragmented accountability • Multi-vendor ecosystems dilute ownership	• Most of the $100B+ annual tech spend maintains legacy systems • Deferred modernization driving increased technical debt, cyber risk, and operating costs; as of February 2025, agencies reportedly completed just 43% of modernizations[3]

A New Model for Federal Technology Programs

Federal technology programs have long trailed the leading edge of commercial innovation. But agencies have an opportunity to tap private sector best practices and technical depth and adapt them to the unique demands of public sector delivery. This includes expertise across the end-to-end technology stack, particularly at the integration points where failures most commonly occur.

More broadly, addressing today's challenges requires a new model for structuring, governing, and delivering large federal technology programs: one that connects strategy to technology decisions, aligns delivery to measurable mission outcomes, and effectively coordinates the multiple stakeholders involved in execution. BCG's transformation work across federal agencies demonstrates the progress that is possible:

- System Integration & Sustainment for a Defense Agency: Accelerated document-heavy workflows with automated metadata generation across 40 systems, resulting in five-times faster throughput compared to previous manual processes.

- Testing Strategy Development for a Defense Agency: Designed and deployed a testing automation approach to reduce delivery risk and increased speed to delivery, unlocking ~19,000 hours of resource capacity and yielding ~$3.7 million in avoided manual effort.

- Digital Front Door for a Civilian Healthcare Agency: Assessed and reconfigured the core software intake platform to streamline requests with a singular "front door," decreasing the overall cycle time by 75% during the first 1.5 years of the pilot phase.

Across this work, five attributes consistently emerge as critical to successful program delivery:

1. OPM.gov. "OPM Launches US Tech Force to Implement President Trump's Vision for Technology Leadership".
2. White House Executive Order. "Promoting Efficiency, Accountability, And Performance In Federal Contracting" (2026).
3. U.S. Government Accountability Office. "Information Technology: Agencies Need to Plan for Modernizing Critical Decades-Old Legacy Systems" (2025).

ATTRIBUTES OF SUCCESSFUL FEDERAL TECHNOLOGY PROGRAM DELIVERY



Integrated strategy & technology

Connect strategy to tech decisions and enterprise priorities



Mission outcomes, not bodies

Define measurable outcomes upfront and track through delivery



Change management as a core discipline

Embed adoption throughout the transformation



Vendor ecosystem orchestration

Coordinate vendors and drive shared goals & accountability



Strategic objectivity & independence

Keep technology decisions aligned to mission needs, not products

1. Integrated strategy and technology

Vendors can evaluate every technology decision against public value, not just technical compliance or contractual scope. Agency leadership needs real-time visibility into whether execution is tracking to mission outcomes and risks surface early enough to act on. This means maintaining a direct line between strategic priorities and delivery decisions, so that when tradeoffs arise, they are resolved in favor of mission impact. By staying involved from strategy through delivery, the link between intent and execution stays intact.

2. Mission outcomes, not bodies

To realize value and not merely complete activities, it's important to anchor every engagement on measurable business and mission outcomes. This means defining success upfront in terms agencies care about: service levels, processing times, cost reductions, or mission-specific targets. Agree on measures of success before work begins and track them through execution, creating a shared language of accountability across all stakeholders. At one agency, BCG worked to achieve discrete outcomes on back-office functions that were formally served on a headcount/time & materials basis. This outcome focus contributed to a 15% year-over-year reduction in cost while achieving all mission milestones. The goal is to deliver results that matter, efficiently and sustainably, within the budget constraints agencies are working under.

3. Change management as a core discipline

Technology programs that succeed technically but fail to drive adoption fall short of their mission potential. To help drive adoption, embed change management from day one as a continuous discipline, not a phase that begins after delivery is complete. This means engaging users and stakeholders early, building organizational readiness alongside technical delivery, and ensuring that when systems go live, the people who depend on them are prepared and supported.

4. Vendor ecosystem orchestration

Managing a multi-vendor ecosystem requires more than coordination. It requires a governing authority with both the mandate and the capability to drive cross-vendor accountability. Prime contractors can take an activist Program Management Office (PMO) role, deploying tailored governance and active coordination to resolve interdependencies, manage risk, and maintain delivery momentum. By owning the governance architecture, prime contractors can ensure the seams between vendors, historically the most common source of integration failures, are actively managed.

5. Strategic objectivity and independence

A trustworthy vendor builds its business on client outcomes, not technology products. Its guidance serves the mission, with no preference for specific products, platforms, or vendor relationships. As a result, the vendor's incentives stay fully aligned with the government throughout every engagement. Agencies get strategic and management guidance they can trust to be objective, regardless of which technology or vendor best serves their needs.

Federal Technology for a New Era

For federal technology leaders the question is not whether to modernize services but how to do so successfully. Before selecting technologies, awarding contracts, or launching programs, agency leaders can establish the strategic, governance, and delivery foundations that enable mission outcomes.

Reset strategy before resetting contracts

The biggest risk in responding to AI-driven changes in the tech landscape is treating it as a procurement exercise. Fixed-price, performance-based contracting only works when agencies provide vendors with clarity on the outcomes they are seeking. That clarity starts with mission strategy: what does success look like in three to five years, and what technology capabilities are required to get there?

Leading technology organizations have long used Objectives and Key Results (OKRs) to bridge this gap, cascading strategic intent into measurable delivery targets that keep programs honest about whether they are moving the needle on what matters. Agencies with that strategic clarity can act now to align contracts directly to it. For those still developing it, this period of rapid change is a useful forcing function. Define outcomes first, then structure contracts around delivering them.

Foundations for what comes next

Every agency faces a different starting point, a different vendor landscape, and a different set of mission priorities. There is no single path forward, but the foundations are consistent: clarity on outcomes, accountability across the delivery ecosystem, and the organizational readiness to sustain change over time. By aligning these elements, agencies can position themselves to deliver durable, measurable mission value.

About the Authors

Keyur Patel
Managing Director and Partner
Philadelphia
Patel.Keyur@bcg.com

Caitlin Guzman Hartman
Managing Director and Partner
Washington, D.C.
GuzmanHartman.Caitlin@bcg.com

Kyle Durfee
Partner
Washington, D.C.
Durfee.Kyle@bcg.com

Ganga Kannan
Managing Director and Senior Partner
New York
Kannan.Ganga@bcg.com

Rajive Mathur
Partner and Director
Washington, D.C.
Mathur.Rajive@bcg.com



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