→ Federal digital transformation report:
The who—and how—of getting it done

ICF

Executive summary

The role of federal CIOs has transformed. Today, CIOs must unite IT and mission leaders and approach digital transformation through a broader cultural lens—for employees and for citizens.

Most agencies have embraced a digital direction, but many still struggle with how to make successful digital transformation a reality.

Agencies face implementation barriers, regular leadership turnover, cultural resistance to change, and a struggle to balance long-term versus short-term wins. Combined with a growing talent gap—a lack of software developers and an aging workforce—public-sector CIOs face unique challenges in their digital initiatives.

How can federal CIOs keep up with emerging technologies, secure their systems, and ensure their modernization efforts are supported by an agile workforce?

To better understand the key concerns and considerations of federal leaders as they drive digital transformation, ICF captured the sentiments of 500 federal full-time employees, with emphasis on target buyers and agency influencers in technology and IT-focused roles. These findings shed light on how federal employees feel about digital transformation and the process of updating outdated infrastructure.
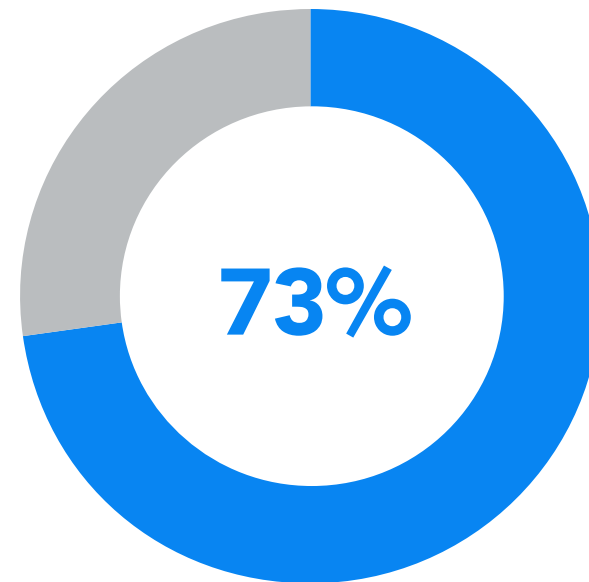
Four focus areas for modern federal CIOs:

1. Unite IT and mission leaders around a common goal

2. Meet evolving citizen and federal employee expectations

3. Develop and retain agile talent

4. Keep sensitive data and systems secure

Align strategy and digital transformation objectives

Digital technologies provide agencies with the opportunity to better address citizens' needs. But CIOs must think beyond local optimization and cultivate an adaptable culture and infrastructure to successfully meet evolving citizen expectations and mission needs.

As with any large-scale change, federal digital transformation cannot succeed without a clear vision. Currently, federal employees say they lack that clarity.
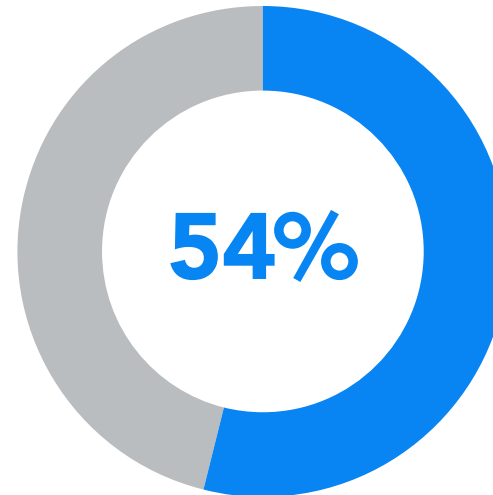
73%

of surveyed federal employees say their agency lacks a clear vision for digital transformation.

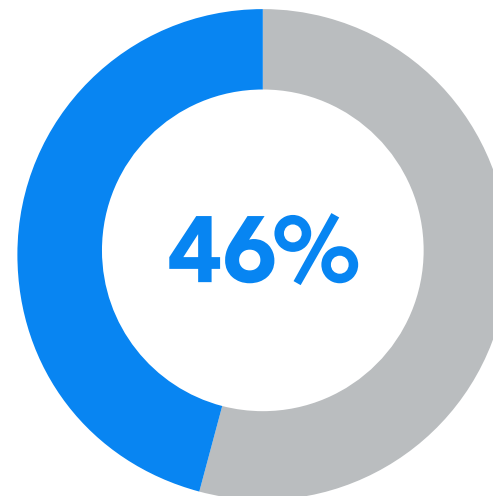## Align strategy and digital transformation objectives

Often CIOs operate at a different pace than their IT and mission leaders—who autonomously implement solutions to meet their specific division goals. Eager to deliver the right solution to their end-users and stakeholders, IT and mission leaders may sidestep CIO involvement. But that disjointed implementation results in local optimization with siloed, vulnerable systems—and can lead to misalignment and friction in the workforce.

Federal employees are divided—54% say the CIO is the functional lead of their agency's digital transformation. While 46% say digital transformation is the responsibility of the mission leader.

Acknowledge that division and the opportunity it presents. CIOs need to get IT and mission leaders on the same page and establish a unified modernization front.

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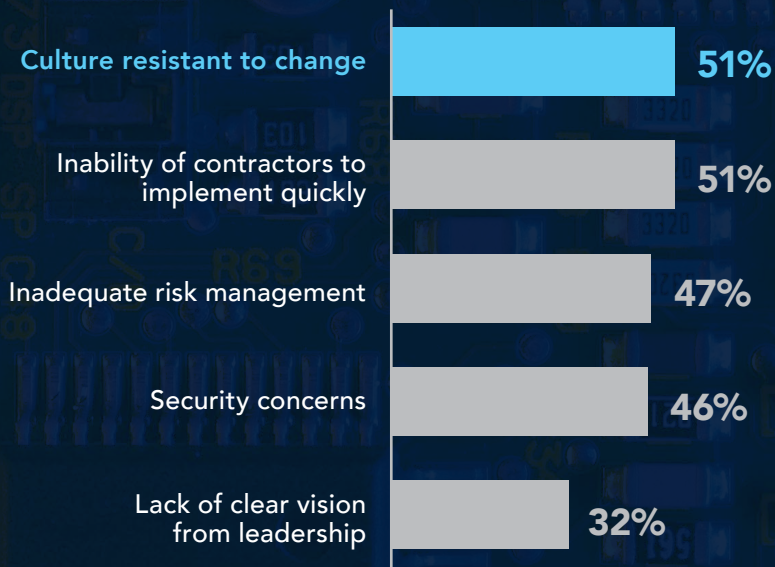
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Address cultural resistance or risk digital transformation failure

A successful digital transformation strategy requires a cultural mindset shift. CIOs need support across the organization, from executive leadership to middle management and front-line workers. CIOs must lead their teams to cultivate a culture that embraces change.

Resistance to change is deeply woven into the federal workplace culture and holds government digital transformation back. 51% of surveyed federal employees say the federal workforce's resistance to change is a top reason why modernization efforts fail.

Federal employees' top reasons for digital transformation failure

Reason	Percentage
Culture resistant to change	51%
Inability of contractors to implement quickly	51%
Inadequate risk management	47%
Security concerns	46%
Lack of clear vision from leadership	32%

Note: Asked among 500 federal employees, employed full-time, working in technology or IT-focused roles
Source: Federal Digital Transformation Survey, Wakefield and ICF, 2021

Federal employees aren't sold on their agency's current digital transformation strategy—**98%** say they have concerns that their agency is unable to execute digital transformation plans in the next 12 months.

What can CIOs do?

- CIOs must understand IT and mission leader motivations and unite their goals. Define those united goals in the context of overarching agency priorities to guide leaders to embrace and reinforce an enterprise-wide technology strategy.

- Get leadership buy-in through relevant digital and business metrics—instead of strictly IT metrics—to sell transformation as a strategic investment that will impact mission outcomes.

- Make the shift from program-to-product thinking to execute IT modernization work. Consider how technology will work across departments and seniority. The unification of IT- and mission-led goals from the start will improve local optimization problems.

- Lean on agile partners to bridge skills gaps. Select partners who are up to speed on the latest technologies, clearly understand your mission, and are fluent in the domain. Effective partners will know the federal space and understand how to orchestrate technologies to achieve success.

- Communicate your transformation vision as a strategic investment that will impact mission outcomes.

- Be clear on why you're asking people to change the way they work. Empower your workforce to figure out the *how* with safe guardrails that encourage innovation and experimentation.

Address cultural resistance or risk digital transformation failure

Middle managers are key change agents to secure workforce technology adoption. Compared to CIOs and executive leadership, team leads or middle managers typically have a stronger grasp on employee motivations and emotional reactions to change.

Management can also derail substantive change if they lack motivation, skills, or clarity on why modernization is valuable. Employees need clarity on why they're asked to change the way they work. That is especially the case with tenured government employees.

CIOs must communicate the "why," or the need for technology adoption, in ways that resonate with management and front-line workers' daily goals.

And motivate and empower middle management to determine the best ways to implement technology adoption within their teams to establish lasting change.

Clarity may boost employee confidence and support as efficiency is a top priority when implementing new technology. Aside from the cost, when implementing new digital technology, 50% of surveyed employees say data application migration is a top priority, 45% value performance analytics, and 44% value speed of implementation.

Digital transformation motivations remain unclear—51% of surveyed federal employees say their agency's technology solutions reflect what the workforce wants, while 49% say it reflects what agency leadership wants.

What can CIOs do?

- Collaborate with managers to educate and encourage employee adoption. There needs to be a shift in mindset to use technology to improve customer experiences and transform operation models.

- Create a digitized culture and flexible workforce of technology adoption champions. Employees need to be willing to train on modern technologies and become agile in technique adoption.
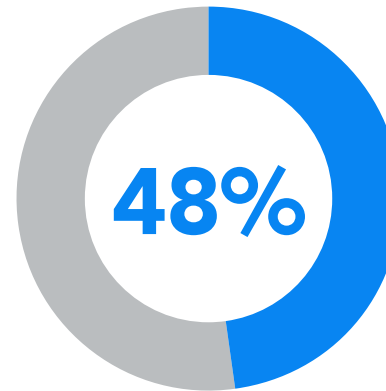
Develop and retain agile talent

Front-line workers are the link between technology and the customer journey. Digital transformation fails when agencies implement technology but don't consider those who directly deliver value to citizens.
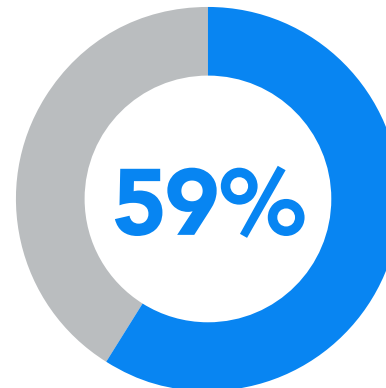
Around half of surveyed federal employees feel unprepared to use new technologies—48% say their agency assesses the IT skills of their workforce "occasionally" or less frequently.

Federal employees are worried about the burden digital transformation failure will have on citizens—59% are concerned failure will impact customer experience and 54% are concerned about increased costs for taxpayers.
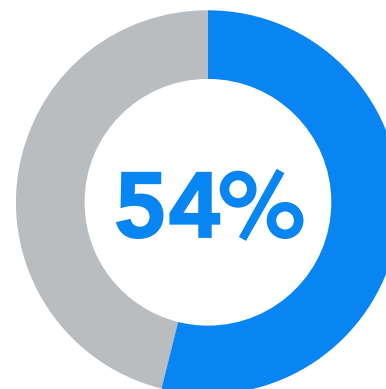
CIOs must prioritize employee development to support the skills and training needed to execute technology adoption. As front-line employees are responsible for delivering value to customers on a daily basis, a skilled workforce is required to address fundamental, outdated government operations, processes, and systems.

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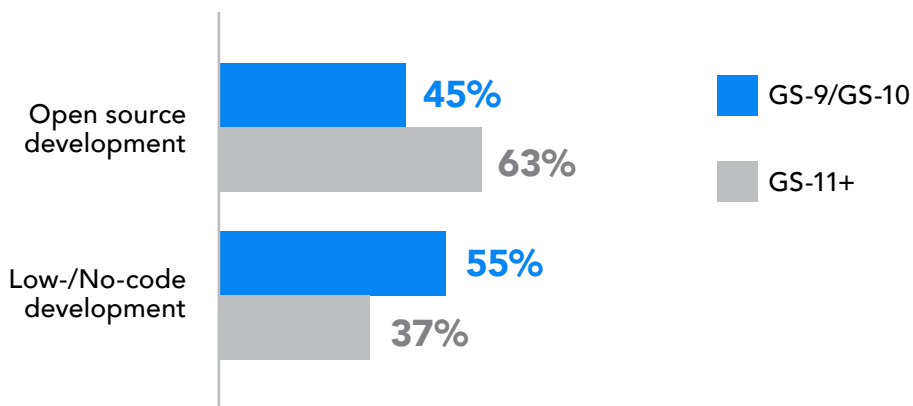
Develop and retain agile talent

Modernizing legacy systems involves an extensive backlog of work. Federal agencies need more applications built—and fast. But CIOs can't deliver solutions because they simply don't have the people with the right expertise.

The growing talent gap—a lack of software developers and an aging workforce—adds pressure on CIOs to prioritize their existing workforce's development and retention. Especially as 80% of surveyed government employees think they'll never have enough talent to fully implement their agency's digital transformation goal. And 51% are concerned about increased employee turnover as a result of failed digital transformation.

For 29% of surveyed employees, a lack of technically skilled staff is a top reason for failed digital transformation.

Federal employees recognize low-/no-code is likely on the rise. An overwhelming 95% of federal employees agree it is more critical to adopt low-/no-code solutions than ever before.

Federal employees split between open-source and low-/no-code solutions

	GS-9/GS-10	GS-11+
Open source development	45%	63%
Low-/No-code development	55%	37%

Note: Asked among 500 federal employees, employed full-time, working in technology or IT-focused roles
Source: Federal Digital Transformation Survey, Wakefield and ICF, 2021

What can CIOs do?

- Have a clear vision of the ideal digital state, but don't get lost in the big picture. Start small and focus on incremental steps that add value.

- Encourage employee feedback and use findings to pivot and optimize implementation and training tactics.

- Train employees on platforms designed to make application software development more accessible—such as low-/no-code solutions—to build essential automated systems with minimal risk and cost.

- Leverage the shift to remote work to establish a wider talent pool. Without geographic limitations, CIOs can recruit talent with varied skill sets from across the country.
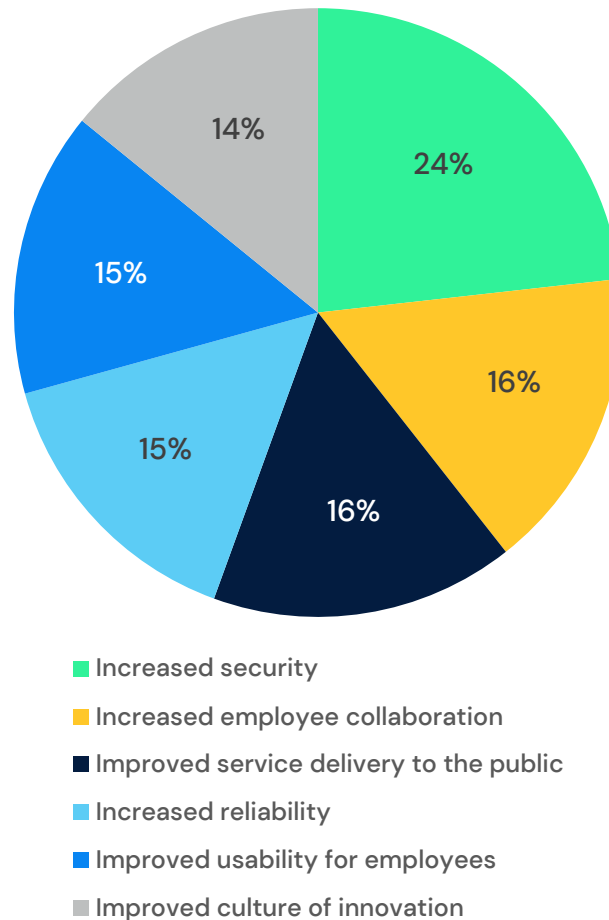
Keep sensitive data and systems secure

Outdated technology—even if currently still reliable—will be the source of downfall for agencies that fail to modernize. Outdated technology cannot be supported in perpetuity, as a majority of the workforce reaches retirement age and takes legacy knowledge with them. And as high-profile ransomware attacks aimed at private sector leaders continue to rise, so does the need for CIOs to modernize IT and keep sensitive data and systems secure.

Cultural resistance is a threat to data security—it's not uncommon for federal employees to still be reluctant to move workloads from on-premises hosting environments to the cloud. Technology can improve data security, but the dissolving network perimeter requires workforce cooperation to keep information secure.

CIOs need to flex their leadership muscles to articulate the need for new technology adoption and provide employees with the autonomy to implement and provide feedback. Federal employees are ready to assist in their agencies' digital transformation—76% have recommended new solutions to leadership. Among those who have made recommendations, 54% say their recommendations have been implemented.

Ranked in order, the most important benefits of modernizing your agency's IT environment.

- Increased security
- Increased employee collaboration
- Improved service delivery to the public
- Increased reliability
- Improved usability for employees
- Improved culture of innovation

What can CIOs do?

- Provide broader context on security trends and the new ways of working.

- Situate employee training within the broader context of security trends and new ways of working. Start with the big picture and then move on to necessary tools and systems.

- Shift security to the left. Incorporate security in all technology development and implementation from the beginning.

- Start implementing Zero Trust security principles. Understand who is using the network, the devices connected to the network, and the workloads that run on the network. As hybrid work increases and employees connect more devices from diverse places, it's important to track data and the variations in how people use and access it.

The future of federal digital transformation

Federal CIOs have the opportunity to instill positive technology advancement and improve employee and citizen experiences, but digital transformation cannot happen all at once.

CIOs must remember the human side—the who—of government digital transformation to ensure true and lasting change.

Key elements CIOs need for the future of federal digital transformation:

- Have a clear vision for the ideal digital state, and don't get lost trying to implement everything at once.

- Focus on the customer journey and use that as a guide to prioritize incremental tasks that provide compound value.

- Unify IT and mission leader goals and carefully select IT partners who are in tune with the mission, emerging technology, and the domain.

- Communicate the "why" behind digital goals as strategic investments toward mission outcomes and tie new tools, technology, processes, and procedures tightly to mission delivery at every point.

- Create a culture of digital transformation champions, from top-down and bottom-up, who are aligned and willing to work with new tools and technologies to achieve mission outcomes.

Digital transformation is a journey that will require varied employee and vendor input and support as it evolves. CIOs need to remain flexible in their digital transformation goals. Agencies that update their digital transformation plan at least every two years are more than five times as likely to have achieved major digital transformation compared to agencies that update less frequently, according to federal employees.

That suggests higher success rates when CIOs place culture at the forefront of their digital transformation strategy and take small steps—with the occasional pivot—rather than large leaps. When CIOs work in collaboration with stakeholders throughout the agency to digitize both culture and systems, they can lead the way to smarter, faster, and better mission delivery.

Methodological notes

The ICF Survey was conducted by Wakefield Research (www.wakefieldresearch.com) among 500 federal employees, employed full-time, working in technology or IT-focused roles, between May 28th and June 10th, 2021, using an email invitation and an online survey. Quotas were set for 250 GS 9 and 10 employees and 250 GS 11+ employees, and a minimum of 100 contract specialists and program managers.

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. For the interviews conducted in this particular study, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 4.4 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.

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