Government Business Council

Meeting the Digital Demand

A Survey of IT Management in the Federal Government

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Overview

Purpose

Technology – in particular, information technology – is at the heart of most government functions today. Government-wide directives such as the Office of Management and Budget's efforts to standardize federal data and Federal CIO Suzette Kent's push for large-scale workforce retraining to accommodate artificial intelligence (AI) developments show that a major technological transition is rapidly approaching. [1, 2]

Pushed on by policy, public relations incentives, and opportunities for cost savings, government leaders in IT and other management roles are increasingly looking to accelerate the pace of modernization and, in particular, application adoption in their agencies.

How quickly have federal agencies seen technology adopted at the organizational and individual team levels? What separates successful efforts from ones less likely to make an impact? To answer these questions, Government Business Council (GBC) surveyed 694 federal government employees in May and June 2019.

Methodology

GBC deployed a survey to a random sample of government respondents in May 2019. 694 federal employees qualified after data cleaning, representing more than 30 civilian and Department of Defense (DoD) departments and agencies. Approximately half (49%) of those surveyed are ranked GS-13 or higher, or hold equivalent military rank. Respondents hold a variety of job functions, with greatest input from technical specialists, program and project managers, and agency leaders.

[1] *Nextgov*: "OMB: How Can We Enhance Federal Data to Boost AI Research?" July 12, 2019. https://www.nextgov.com/analytics-data/2019/07/omb-how-can-we-enhance-federal-data-boost-ai-research/158363/

[2] *Federal News Network*: "Federal CIO Kent: AI pushes need to retrain 'broader swath' of federal employees," July 26, 2019. https://federalnewsnetwork.com/artificial-intelligence/2019/07/federal-cio-kent-ai-pushes-need-to-retrain-broader-swath-of-federal-employees/

Executive Summary

Lack of progress in modernization efforts threatens confidence in workplace IT tools

Sizable shares of federal government respondents indicate that their organization has room for growth in key aspects of IT modernization, including application reliability and employee training. While some in-house and third party applications are rated strongly, respondents still report low levels of confidence in critical future rollouts of IT applications. Numerous large-scale modernization efforts are underway, but respondent testimonies captured in this survey attest to a culture where IT disruptions and service delays are commonplace.

Survey respondents identify lack of training and resource dedication as key operational gaps in existing IT

A chief frustration expressed by survey respondents is the lack of training and empowerment at their organization. Nearly half (49%) of those polled indicate that their organization provides minimal or no training for troubleshooting issues in their organization's applications, and slow load times, application crashes, and software glitches are cited by at least a third of those surveyed. Addressing this can be a key step in developing a more capable and engaged workforce across technical proficiency levels, and can expand the pool of individuals qualified to contribute to agency application security and effectiveness.
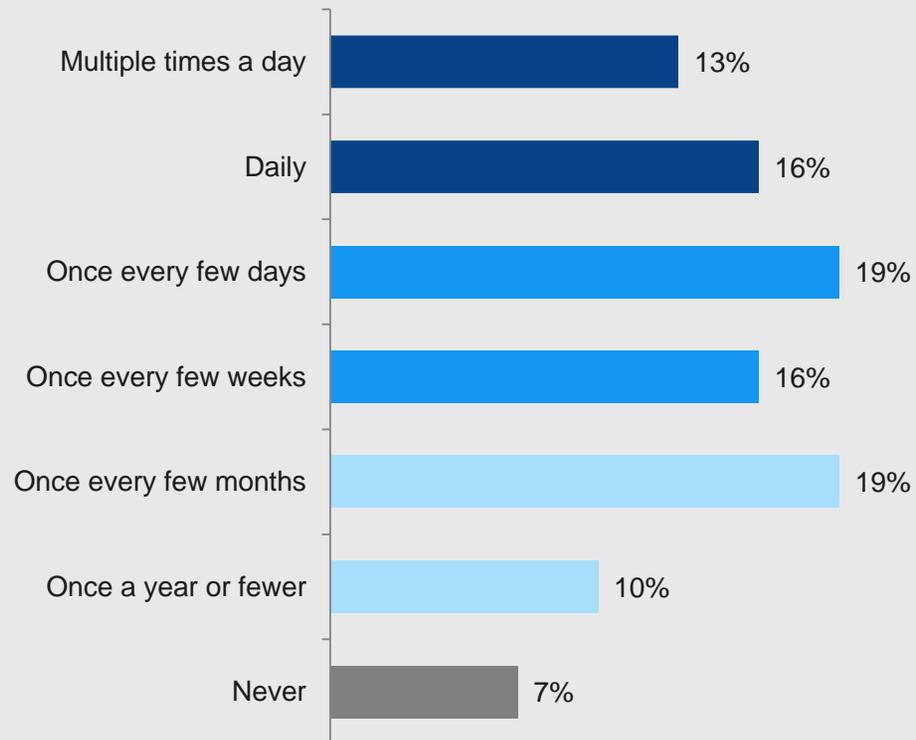
IT deficiencies translate into mission-centric problems

More than one-third (34%) of those polled report that their productivity is "very much" impacted by IT issues – an additional 44% say that their productivity is somewhat impacted. Additionally, sizable portions of federal respondents report confusion about the process by which IT issues are reported and resolved. While federal agencies have opportunities to convert rank-and-file employees into digital security stewards, this must be coupled with clear and effective operational processes. Failing to elevate application modernization as a strategic priority and coming up short in delineating responsibility for broader IT success has the potential to undermine agency's mission priorities.

Research Findings

29% of survey respondents experience IT frustrations once or more per day

"Overall, how often would you say you feel frustrated by the IT applications your agency has provided you to do your job."

Category	Percentage
Multiple times a day	13%
Daily	16%
Once every few days	19%
Once every few weeks	16%
Once every few months	19%
Once a year or fewer	10%
Never	7%

Percentage of respondents, n=648
Note: Percentages may not add up to 100% due to rounding

83%

of respondents report experiencing IT frustration at least once every few months.

Frustration with IT applications remains pervasive in the federal government. In addition to the 29% of survey respondents who experience the problem at least daily, another 54% report frustration once every few months or more frequently.

Respondents are mostly satisfied with MS Office applications, email, and communication tools

Overall, how would you rate the following types of IT applications provided to you by your organization?

■ Not applicable to my work ■ Poor ■ Satisfactory ■ Excellent

Microsoft Office applications (e.g., Word, PowerPoint, Excel) *(n = 577)*

| 1% | 5% | 52% | 42% |

Email *(n = 577)*

| 1% | 11% | 52% | 36% |

Communication tools *(n = 578)*

| 17% | 18% | 45% | 20% |

Percentage of respondents, n varies by question option.
Note: Percentages may not add up to 100% due to rounding

Respondents show higher satisfaction in database applications than in quality of collaboration and CRM tools
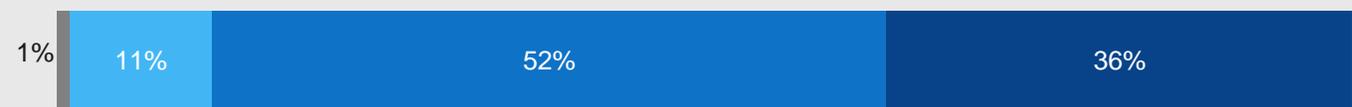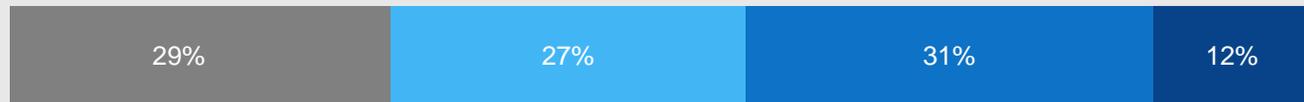
Overall, how would you rate the following types of IT applications provided to you by your organization?

■ Not applicable to my work   ■ Poor   ■ Satisfactory   ■ Excellent

Workplace collaborations tools *(n = 578)*

29%	27%	31%	12%

Customer relationship management/constituent casework tools *(n = 578)*

42%	22%	27%	9%

Database applications *(n = 578)*
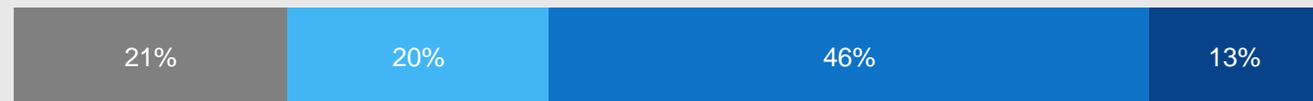
21%	20%	46%	13%

Percentage of respondents, n varies by question option.
Note: Percentages may not add up to 100% due to rounding

Speed/load time and application crashes/freezes are listed as the most common sources of frustration

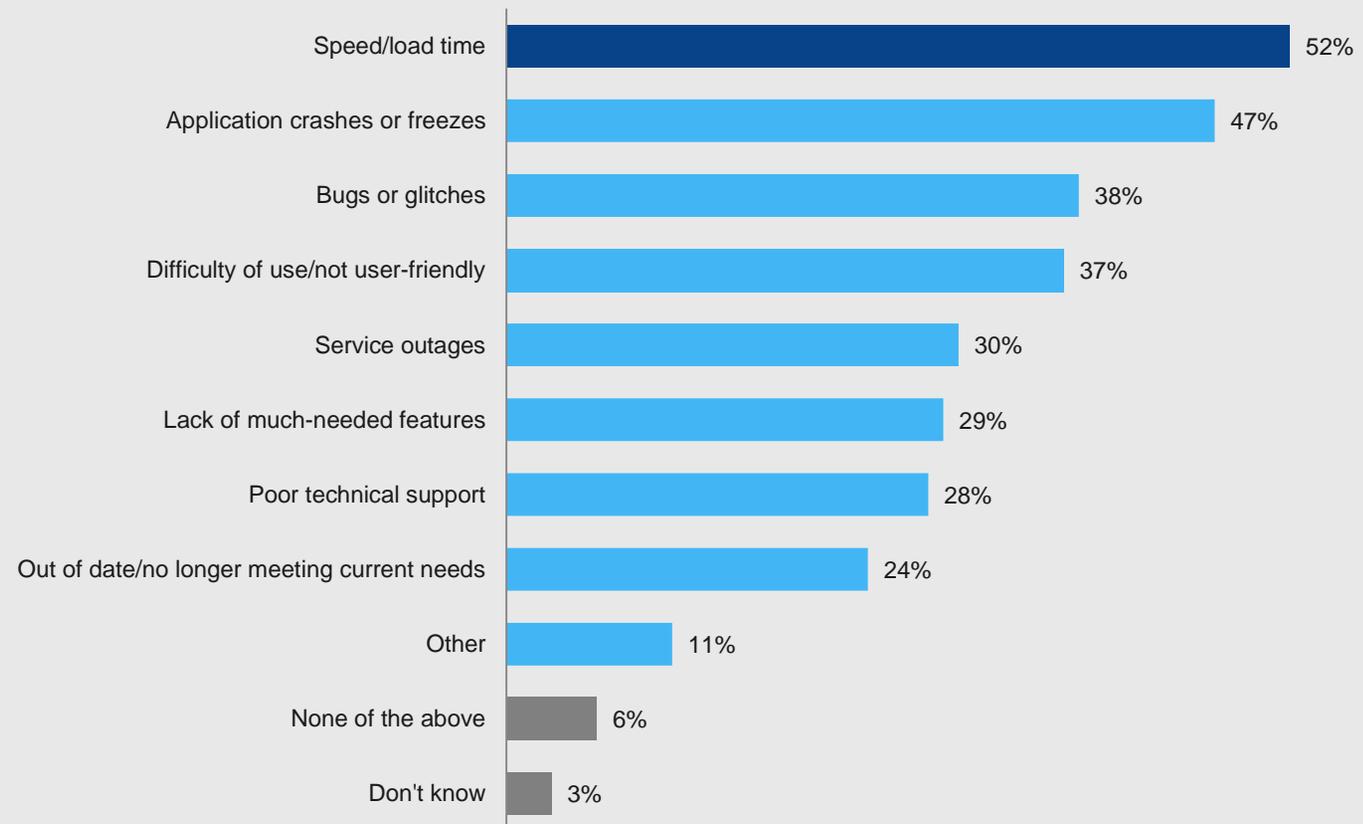*When it comes to IT applications, which of the following do you think are the most common sources of frustration within your agency? Please select all that apply.*

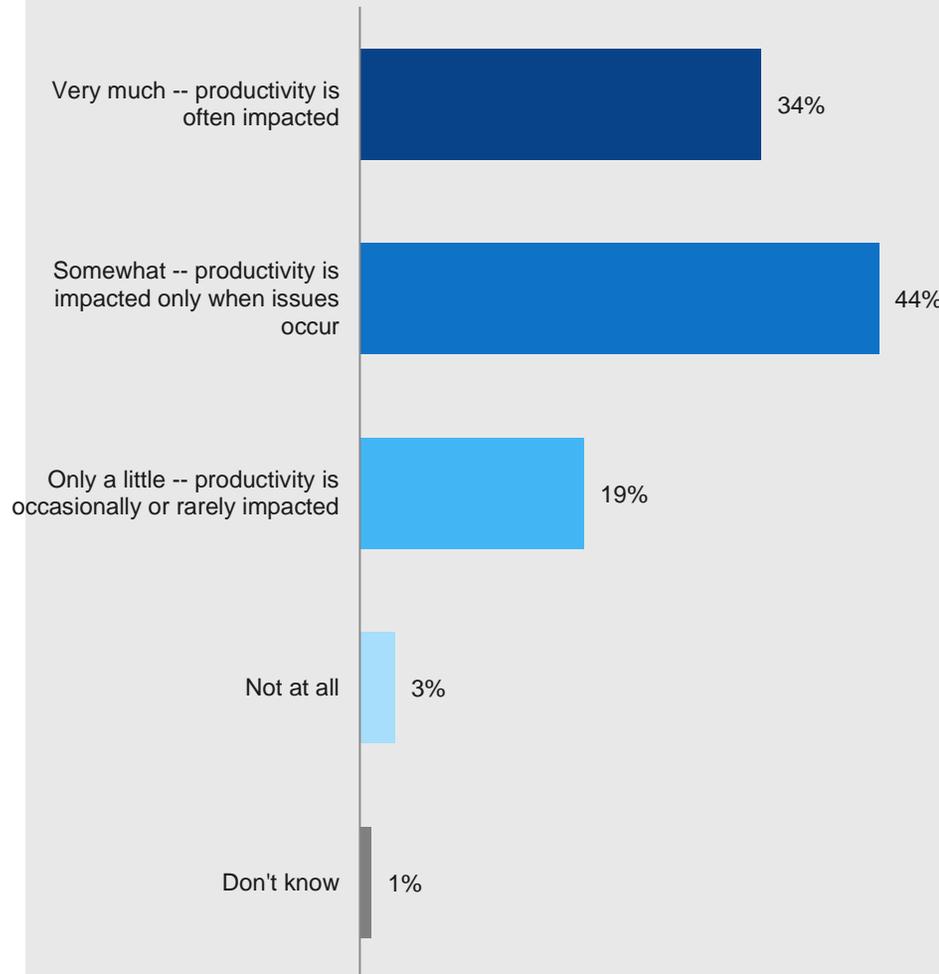| Source	Percentage
Speed/load time	52%
Application crashes or freezes	47%
Bugs or glitches	38%
Difficulty of use/not user-friendly	37%
Service outages	30%
Lack of much-needed features	29%
Poor technical support	28%
Out of date/no longer meeting current needs	24%
Other	11%
None of the above	6%
Don't know	3%

Percentage of respondents, n=581
Respondents were asked to select all that apply

The top three most common source of frustration – speed/load time, application crashes or freezes, and bugs or glitches – are rooted in disruptions of IT operations. Smoothing over discontinuities in the digital aspects of individual workers' experiences can have meaningful impacts on diminishing the burden on employees, and subsequently has the potential to boost overall agency performance.

More than half of those surveyed report speed/load time is the most common source of frustration within their government agency.

According to federal employees, IT issues can present significant barriers to productivity

To what extent do IT issues affect your productivity or the productivity of others around you?

Very much -- productivity is often impacted — 34%

Somewhat -- productivity is impacted only when issues occur — 44%

Only a little -- productivity is occasionally or rarely impacted — 19%

Not at all — 3%

Don't know — 1%

Percentage of all respondents, n=571
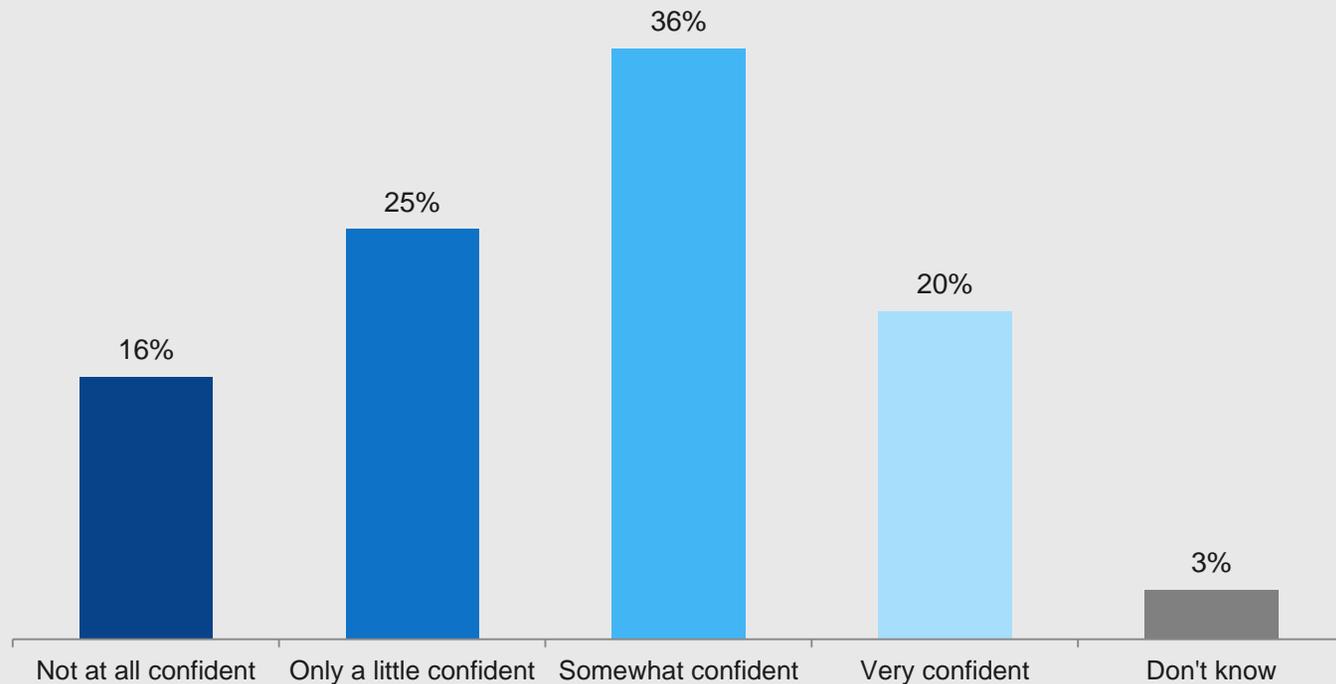Note: Percentages may not add up to 100% due to rounding

34%

of respondents report that their productivity is "very much" impacted by IT issues.

By contrast, just 3% of those surveyed said that their productivity or the productivity of others around them is not affected by IT issues.

Confidence in government organizations' ability to handle IT rollouts is notably lacking

Given your experience with your agency's rollout of new or updated IT applications over the years, how confident are you in your organization's ability to deal with potential technical issues attached to future rollouts (e.g., Census 2020, agency-specific tools)?

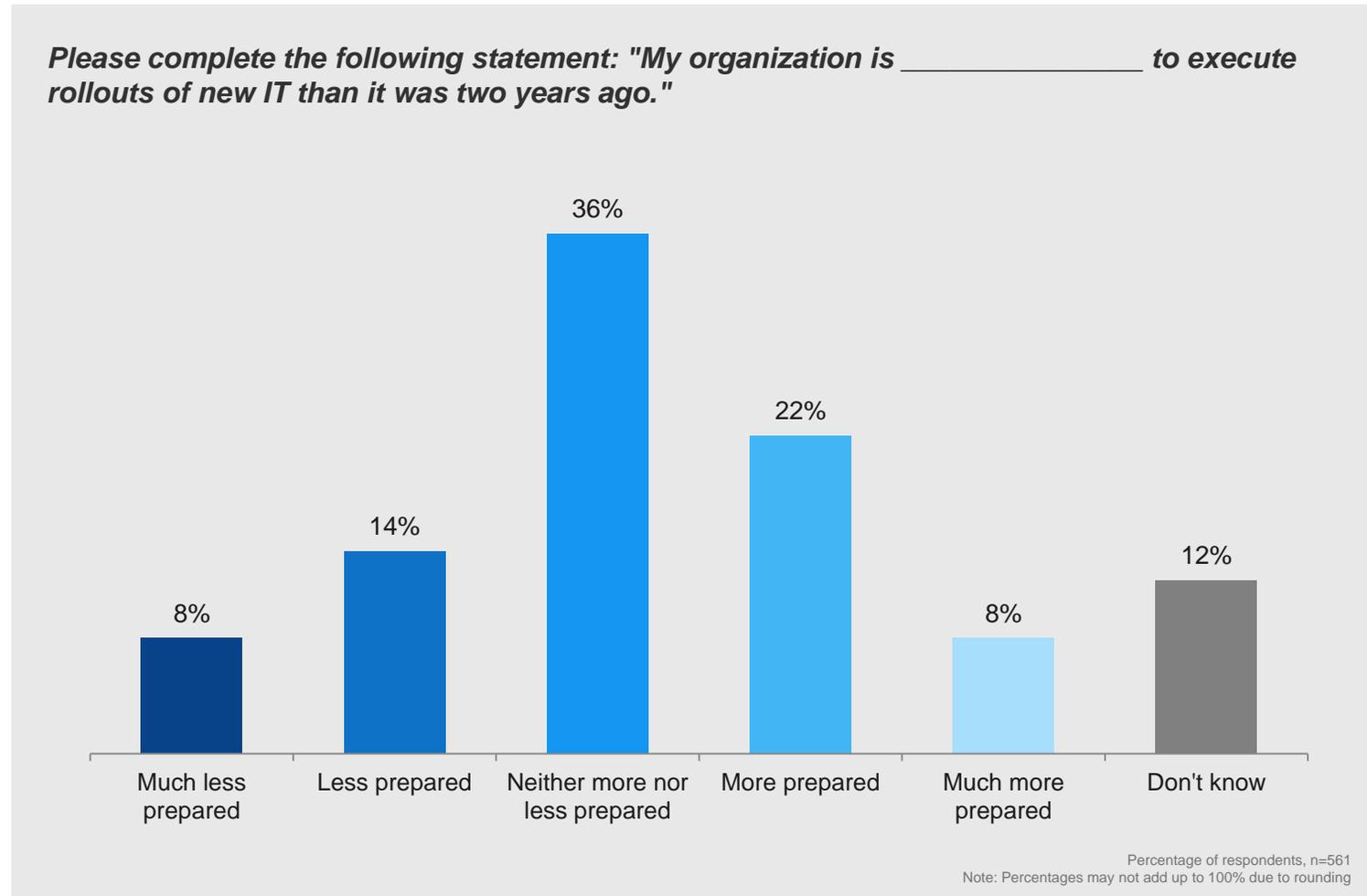| Not at all confident	Only a little confident	Somewhat confident	Very confident	Don't know
16%	25%	36%	20%	3%

Percentage of respondents, n=561
Note: Percentages may not add up to 100% due to rounding

In the run-up to major IT deployments for Census 2020 and other IT-intensive projects in the federal government, confidence at the level of the individual employee remains low. The future of government operations can only be expected to increase in digital complexity, so the lack of rank-and-file confidence can be indicative of important shortcomings in technological capacity.

44%

of survey respondents are not at all or only a little confident in their organization's ability to deal with potential technical issues from future IT tools.

Respondents report a mixed assessment of government's ability to execute IT rollouts

Please complete the following statement: "My organization is _____ to execute rollouts of new IT than it was two years ago."

Much less prepared: 8%
Less prepared: 14%
Neither more nor less prepared: 36%
More prepared: 22%
Much more prepared: 8%
Don't know: 12%

Percentage of respondents, n=561
Note: Percentages may not add up to 100% due to rounding

Federal government respondents generally view their organization as more prepared to execute new IT rollouts than it was two years ago, or believe that the organization is neither more nor less prepared.

Still, the share that believe their organization has made progress (30%) is not much greater than the share who believe their organization is in a weaker position (22%), indicating that the perceived success of modernization has been moderate at best.

36%
believe that their organization is neither more nor less prepared for IT rollouts than it was two years ago.

While budget constraints are frequently cited, multiple factors block IT application improvement

Please rank the following according to the challenge you feel they pose to the improvement of your organization's IT applications.

1st Budget constraints
(1638 points)

2nd Lack of leadership/planning
(1618 points)

3rd Lack of end-user training/support
(1557 points)

4th Lack of in-house technical expertise
(1512 points)

5th Security concerns (e.g., with Cloud adoption)
(1478 points)

6th Inefficient procurement processes
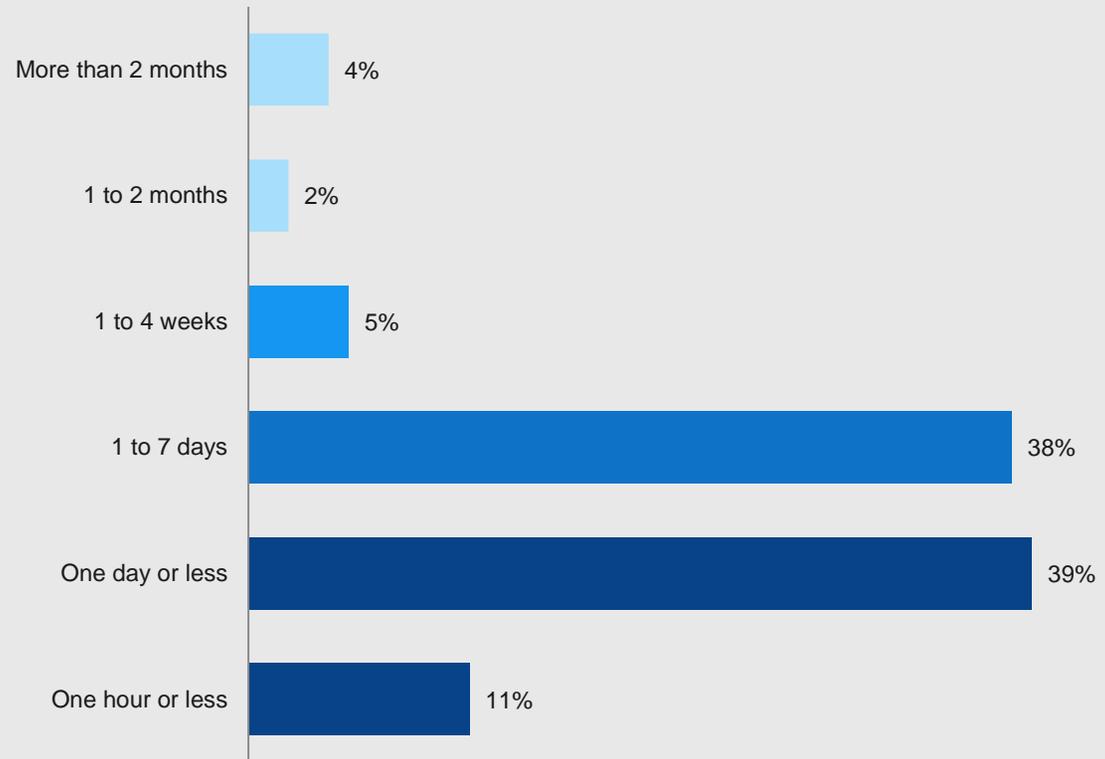(1408 points)

7th Cultural resistance
(1065 points)

Ranked by Borda count, n=218
Note: Rankings and scores are displayed here using the Borda count method, where each answer choice earns points based on the order in which respondents placed them. Please see Appendix for further detail. Results displayed represent the rankings of respondents that qualified based on decision-making status/role with the organization; 102 respondents were removed based on this criterion

Budget constraints were cited as the largest challenge for IT application improvement. A lack of leadership/planning and a lack of end-user training/support followed closely in second or third.

A dearth of technical expertise and security concerns were cited by smaller numbers of respondents, while inefficient procurement processes and cultural resistance were the least frequently cited barriers to improvements.

Government organizations typically take no longer than one day to address critical application failures

On average, how long does it take your organization to address critical application failures (e.g., glitches, outages, security vulnerabilities)?

Category	Percentage
More than 2 months	4%
1 to 2 months	2%
1 to 4 weeks	5%
1 to 7 days	38%
One day or less	39%
One hour or less	11%

Percentage of respondents, n=506
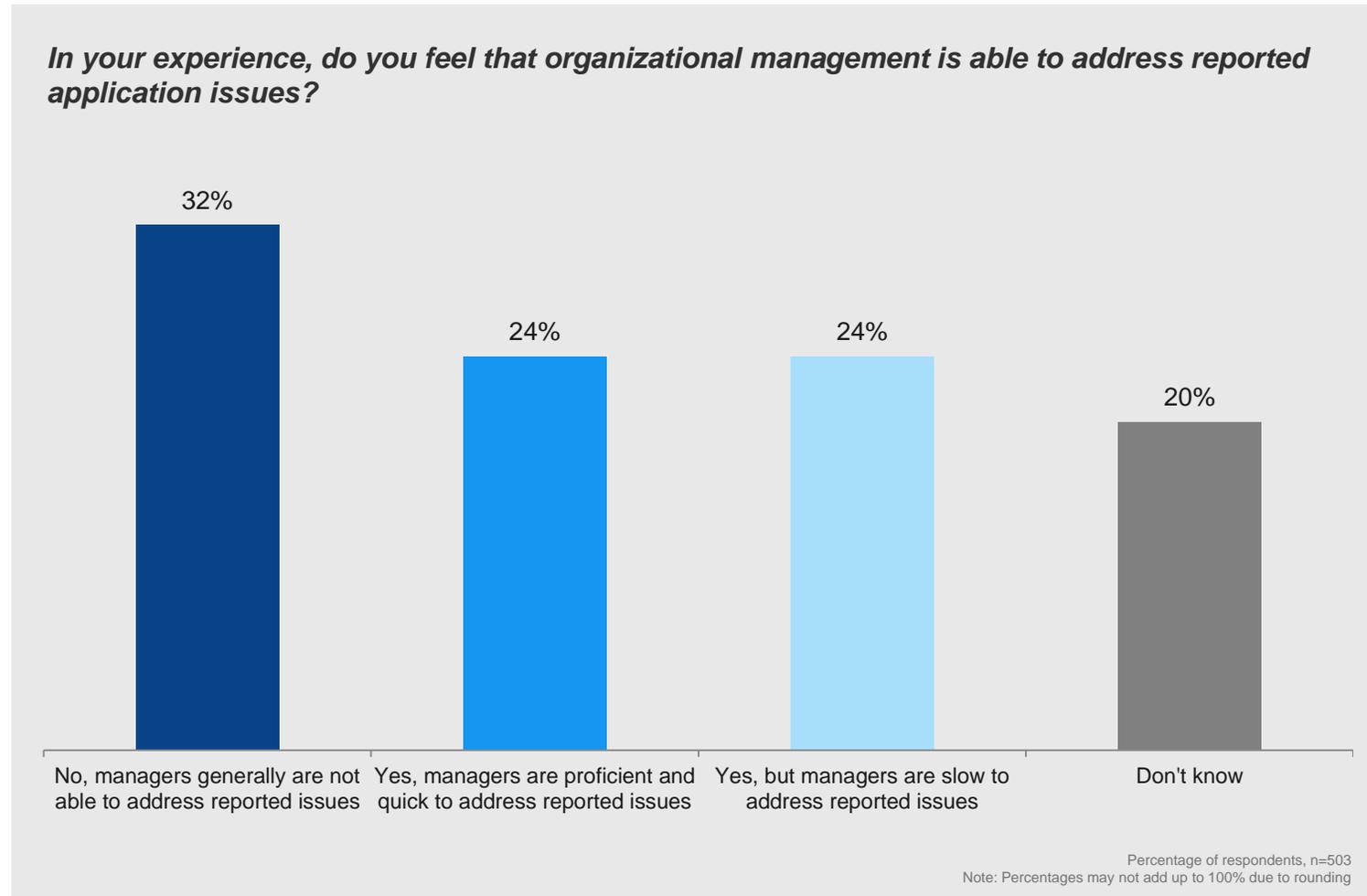Note: Percentages may not add up to 100% due to rounding

In IT response, every moment counts – this is especially true in critical failures of security, citizen services, and financial management systems.

According to federal government respondents, nearly one-half (49%) of public sector organizations take a full day or longer to respond to such failures, with some (6%) taking as long as one month or more.

49%

of respondents report that their organization takes a full day or longer to respond to critical application failures.

Response time continues to be a problem in responding to application issues

In your experience, do you feel that organizational management is able to address reported application issues?

32%	24%	24%	20%
No, managers generally are not able to address reported issues	Yes, managers are proficient and quick to address reported issues	Yes, but managers are slow to address reported issues	Don't know

Percentage of respondents, n=503
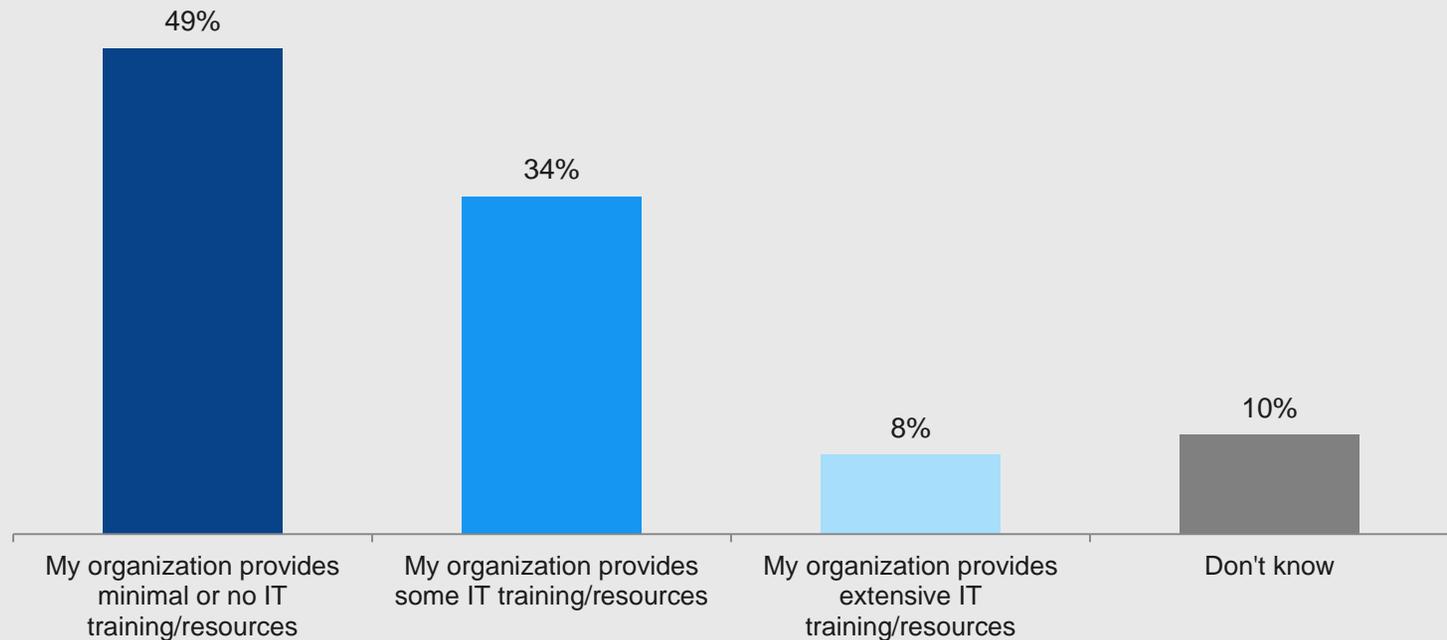Note: Percentages may not add up to 100% due to rounding

While nearly one-quarter (24%) of survey respondents believe managers at their government organization are proficient and quick to address reported application issues, a majority (56%) believe that managers are either not able to address reported issues (32%) or are slow to address these issues (24%).

These delayed response times signal key opportunities for improvement in the internal operations of federal organizations.

56%

of those surveyed believe managers are either not able to address reported application issues or are slow in their response.

Agencies have opportunities to enhance IT skills and training available to their workforce

To what extent does your organization provide employees with the training they need to troubleshoot application issues?
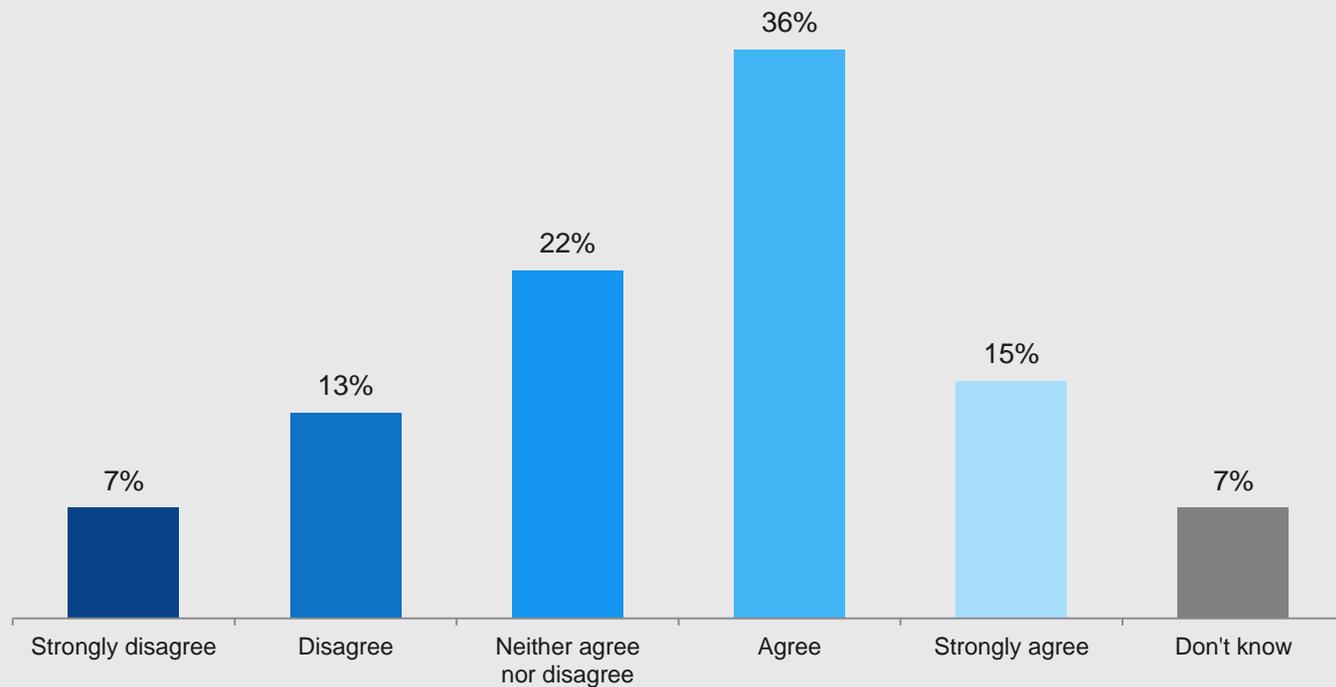

49% — My organization provides minimal or no IT training/resources
34% — My organization provides some IT training/resources
8% — My organization provides extensive IT training/resources
10% — Don't know

Percentage of respondents, n=503
Note: Percentages may not add up to 100% due to rounding

The large majority (83%) of survey respondents indicate that their organization provides either minimal/no resources for troubleshooting application issues, or that their organization provides just some of these resources. Because technical staff alone are not capable of handling all application maintenance and process improvements, elements of this process must be distributed to non-technical employees as well.

Just 8% of federal respondents report that their organization provides extensive IT training/resources to troubleshoot application issues.

Most respondents report that their organization has a clear, defined process for reporting app issues

To what extent do you agree with the following statement: "My organization has a clear, defined process for reporting application issues."
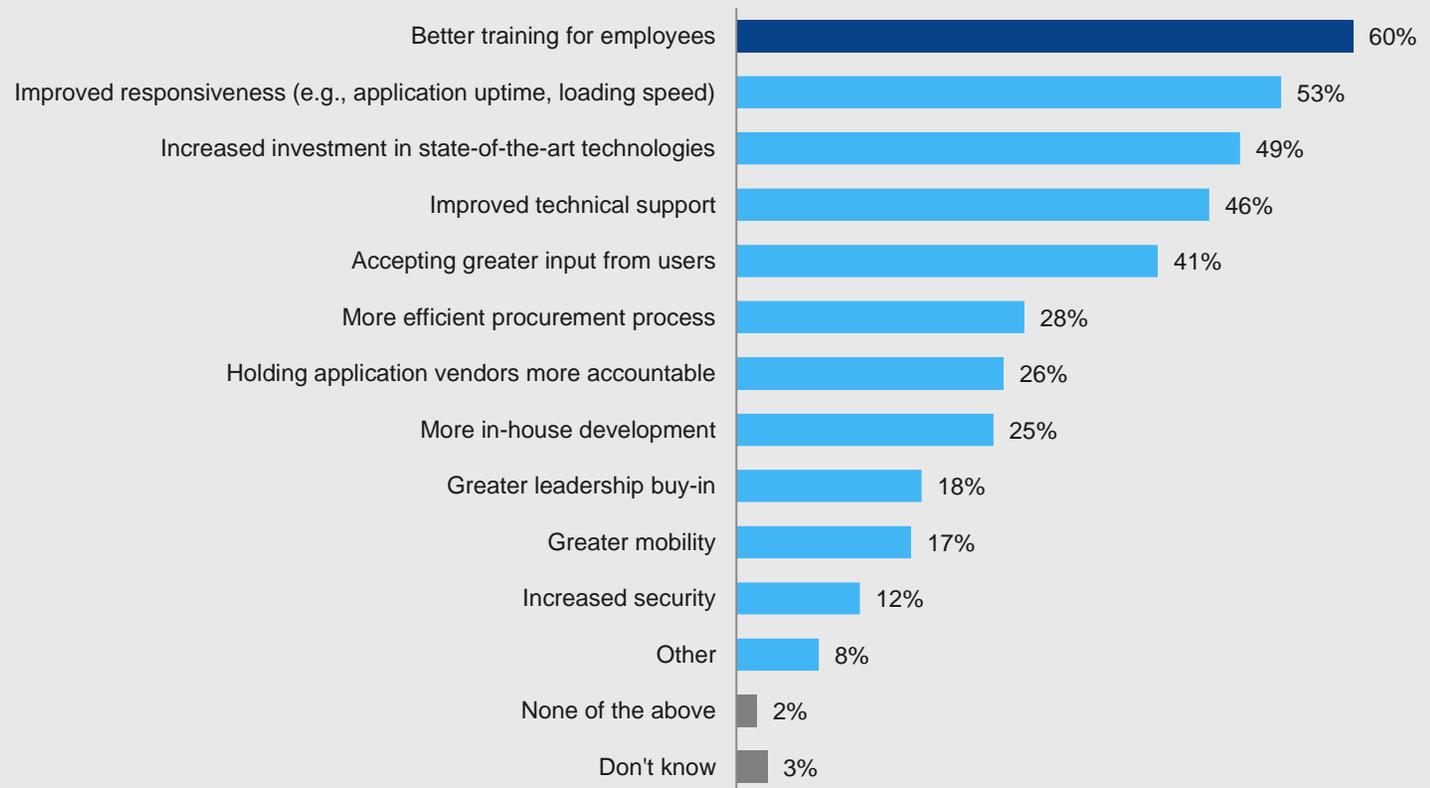

Strongly disagree	7%
Disagree	13%
Neither agree nor disagree	22%
Agree	36%
Strongly agree	15%
Don't know	7%

Percentage of respondents, n=503
Note: Percentages may not add up to 100% due to rounding

For some organizations, the application management issues begin at the reporting level – 20% of those polled believe their organization does not have a clear, defined process for reporting application issues. Still, the majority (51%) indicate that such a process exists at their organization. This baseline step is pivotal in creating the processes necessary for implementing improvements.

51%
of those polled agree or strongly agree that their organization has a clear, defined process for reporting application issues.

Training, investment, and enhanced responsiveness are most cited items for 'improvements wishlist'

If you could put together a wishlist of improvements to your agency's applications, which of the following would you choose?

Better training for employees	60%
Improved responsiveness (e.g., application uptime, loading speed)	53%
Increased investment in state-of-the-art technologies	49%
Improved technical support	46%
Accepting greater input from users	41%
More efficient procurement process	28%
Holding application vendors more accountable	26%
More in-house development	25%
Greater leadership buy-in	18%
Greater mobility	17%
Increased security	12%
Other	8%
None of the above	2%
Don't know	3%

Percentage of respondents, n=489
Respondents were asked to select no more than five choices.

While federal respondents are most often looking for better training opportunities, an investment in technological development is also cited as a key boost to agency applications. Improved responsiveness, increased investment, and improved technical support – in other words, more effective digital tools – are important next steps for government organizations looking to accelerate their mission.

60%
of survey respondents believe that better training for employees should be included in a wishlist for application improvement.

For plurality of respondents, progress stalls on both technical and personnel goals

Within IT modernization, has your organization made more progress in achieving technical goals (e.g., procuring and installing new tools) or personnel-focused goals (e.g., hiring necessary staff, training existing employees)?

Technical goals	Personnel-focused goals	Both equally	Neither technical nor personnel-focused goals have seen progress
22%	9%	31%	38%
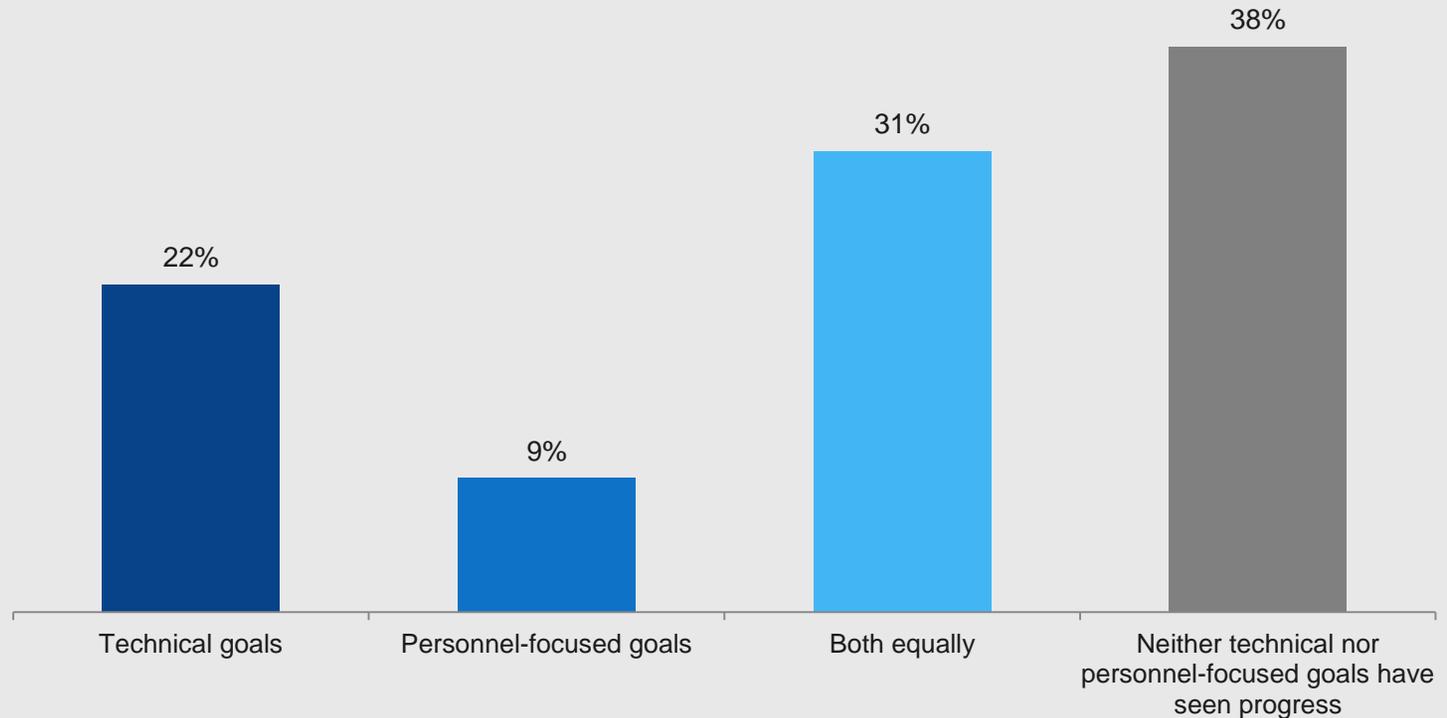
Percentage of respondents, n=476
Note: Percentages may not add up to 100% due to rounding

Among respondents who believe IT modernization progress has been made at their organization, technical goals are cited as having seen more growth than personnel-focused goals – just 9% of those polled believe that progress on personnel-focused goals has surpassed progress in technical goals.

Still, nearly two-fifths of respondents (38%) report that neither area has seen progress at their organization – a noteworthy share at this juncture of some agency's modernization timelines.

38%
of those polled state that neither technical nor personnel-focused goals have seen progress in their organization's IT modernization.

2 out of 3 respondents say their organization has not improved its ability to deliver IT services

Please complete the following statement: "Over the last 2 years, my organization's IT modernization efforts have _____ its ability to effectively deliver services to citizens."

Bar chart:
- Not improved: 27%
- Slightly improved: 39%
- Improved: 28%
- Strongly improved: 6%
- Extremely improved: 1%
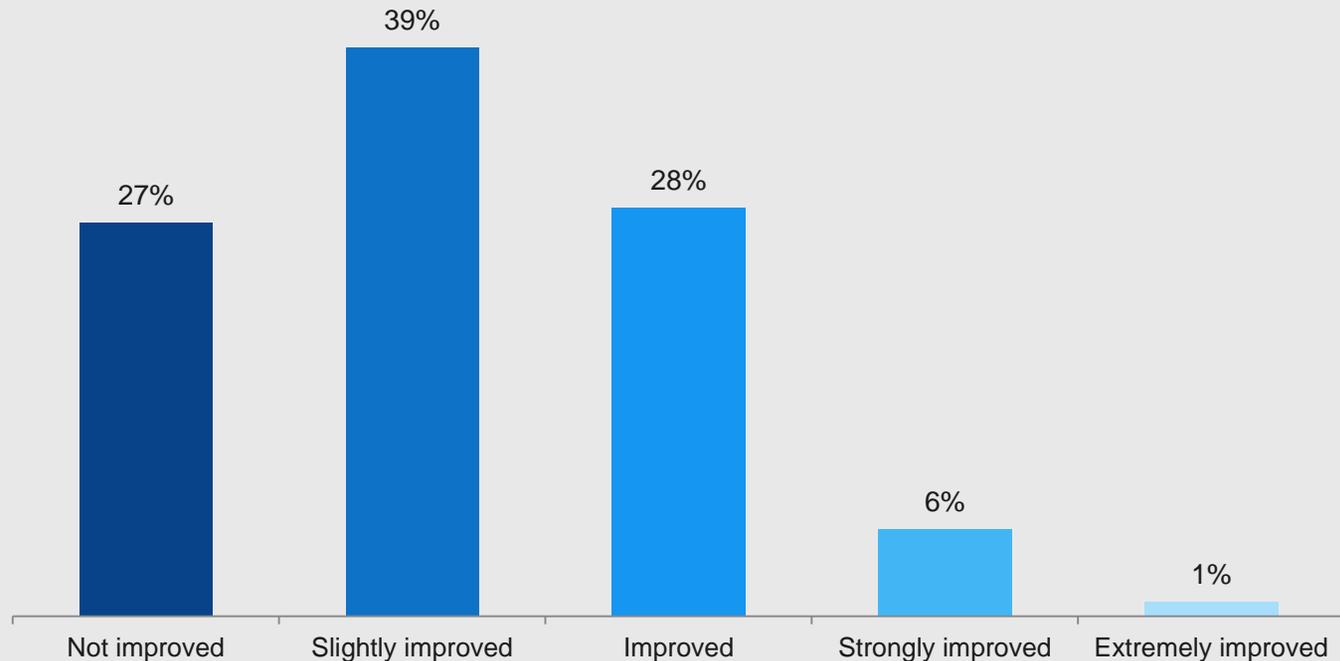
Percentage of respondents, n=483
Note: Percentages may not add up to 100% due to rounding

While 34% of survey respondents indicate that their organization's IT modernization efforts have improved or strongly improved its ability to effectively deliver services to citizens, two-thirds (66%) report that this effect has been slight or nonexistent.

Though not all modernization efforts are intended for external benefit, systems for measuring and assessing quantifiable impacts from modernization efforts is an important step.

66%

indicate that their organization's IT modernization efforts have not improved citizen service delivery, or that they have just slightly improved this facet.

Final Considerations

When seeking to enhance enterprise application functions, federal leaders can…

Look to the demonstrated priorities of their agency's employees

IT success is critical for both internal and external operations. While effective tech is key in delivering timely and accessible citizen services, a modern toolkit also has the ability to increase the efficiency of HR, finance, and administrative functions. Additionally, a successful IT strategy is also a successful retention strategy – government organizations that provide effective digital tools are better able to compete with private sector enterprises for skilled employees.

Distribute organizational skills and know-how

While the tools and processes developed by technical staff are the backstop when it comes to IT modernization, cybersecurity, and application development, non-technical staff can also serve on the frontlines of IT enhancement. Tailoring technical training, learning, and development for teams operating in different organizational areas ensures that IT-centric and non-technical employees alike can partner effectively on application enhancement.
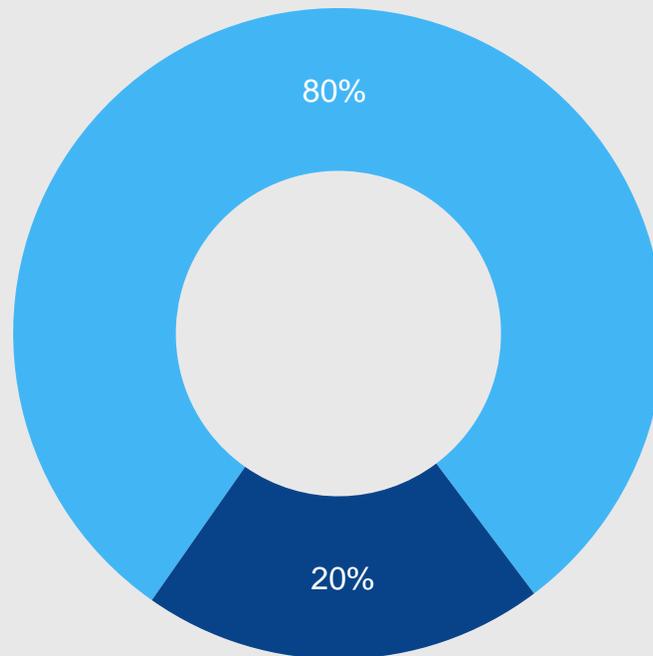
Industry Insights from SwishData and Riverbed

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Respondent Profile

Employment

■ Federal Civilian   ■ DoD Civilian and Active Duty Military

80%

20%

Percentage of respondents, n=694
Note: Percentages may not add up to 100% due to rounding

Grade/Rank

Grade/Rank	Percentage
SES	1%
General/Admiral	0.5%
Colonel/Captain	0.5%
GS/GM-15	10%
GS/GM-14	15%
GS/GM-13	23%
GS/GM-12	18%
GS/GM-11	11%
GS/GM-10 or below	12%
Other	9%

Percentage of respondents, n=487
Note: Percentages may not add up to 100% due to rounding

4 in 5

respondents work in civilian agencies in the Federal Government.
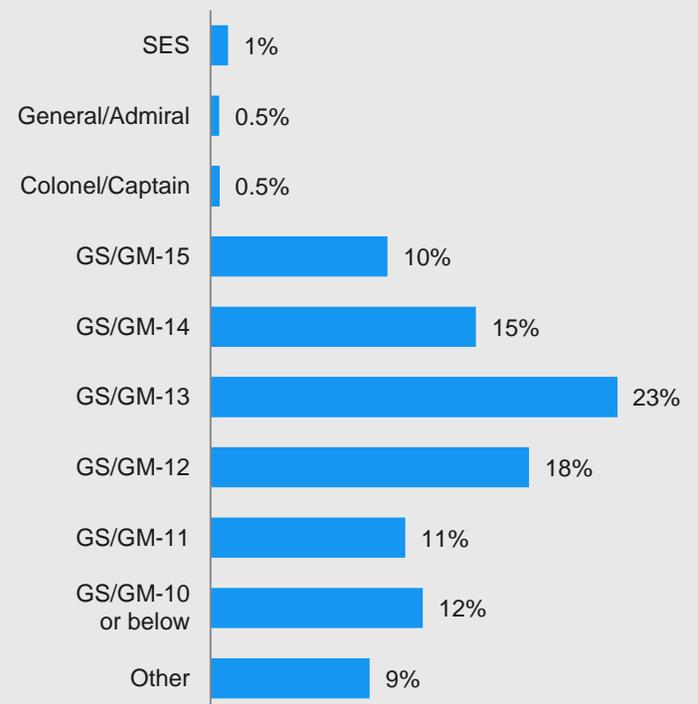
50%

of respondents are ranked GS-13 or higher, or hold equivalent authority in military rank.

Job function

Job function	Percentage
Program/project management	14%
Administrative/office services	11%
Technical/scientific	11%
Human resources	7%
Finance	7%
Customer service	7%
Acquisition/procurement	6%
Information technology	5%
Healthcare professions	4%
Law enforcement/public safety	4%
Agency leadership	3%
Facilities, fleet, and real estate	3%
Policy research/analysis	3%
Audit/inspectors general	2%
Legal	2%
Communications/PR	1%
Other	10%
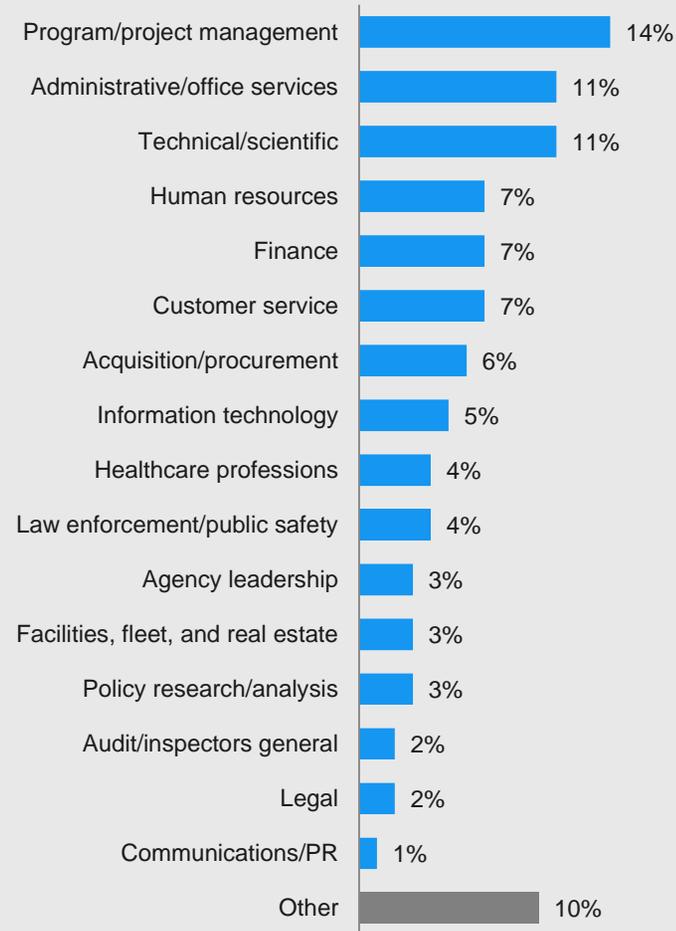
Percentage of respondents, n=487
Note: Percentages may not add up to 100% due to rounding

Departments and agencies represented

Veterans Affairs

Agriculture

Army

Homeland Security

Navy

Air Force

Interior

Treasury

Health & Human Services

General Services Administration

Office of the Sec of Defense

Justice

Transportation

Commerce

Environmental Protection Agency

Housing & Urban Development

Energy

NASA

Social Security

Administration

Labor

State

Marine Corps

Office of Personnel Management

Intelligence Community/ODNI

Small Business Administration

Agency for International Development

Education

Nuclear Regulatory Commission

Government Accountability Office

Combatant Commands

Joint Chiefs of Staff

Executive Office of the President

Other independent agency

Multiple departments/agencies

n=694

Respondents were asked to choose which single response best describes their primary job function.

Departments and agencies are listed in order of frequency.

Appendix

Please rank the following according to the challenge you feel they pose to the improvement of your organization's IT applications.

	Count per rank							Borda count
	1	**2**	**3**	**4**	**5**	**6**	**7**	
Budget constraints	623	342	230	180	129	94	40	1638
Lack of leadership/planning	518	336	290	204	147	88	35	1618
Lack of end-user training/support	378	360	300	220	159	110	30	1557
Lack of in-house technical expertise	273	378	285	272	171	100	33	1512
Security concerns (e.g., with cloud adoption)	406	270	260	204	192	98	48	1478
Inefficient procurement processes	273	342	240	204	171	126	52	1408
Cultural resistance	98	174	230	184	132	118	129	1065

Ranked by Borda count, n=218

Rankings and total scores are displayed here using the Borda count method, where each answer choice earns points based on the order in which respondents placed them. Each respondent's top answer choice receives the maximum score of n points for that respondent, where n is equal to the total number of options. Each subsequent choice receives one less point than the one ranked ahead of it. Unranked answer choices receive zero points.

For instance, if a respondent's ranked choices were 1) Budget constraints, 2) Lack of leadership/planning, and 3) Lack of end-user training/support, those responses would receive 7, 6, and 5 points respectively. These points would be added to Borda count of each answer choice.

With 218 qualified respondents and seven choices, the maximum score possible for any single answer choice (i.e., if every respondent ranked it as their top outcome) is equal to 1,526 points (218 x 7).

About

Government Business Council

As Government Executive Media Group's research division, Government Business Council (GBC) is dedicated to advancing the business of government through analysis, insight, and analytical independence. An extension of *Government Executive's* 40 years of exemplary editorial standards and commitment to the highest ethical values, GBC studies influential decision makers from across government to produce intelligence-based research and analysis.

Report Author: Igor Geyn

About Riverbed

Hundreds of government organizations worldwide turn to Riverbed for help in meeting the most demanding IT goals in serving the needs of the citizens, achieving mission targets, and supporting warfighters. Federal, state, and local agencies of all sizes can optimize the performance of their existing infrastructure and improve productivity with Riverbed's government technology. Civilian, military, and intelligence agencies and departments facing new mandates are able to increase the efficiency of their services and operations. Learn more at riverbed.com.

About Swishdata

We're the cybersecurity and data performance architects. SwishData ensures the performance, affordability, and security of your agency's data infrastructure through both architecture and deployment. That means our solutions perform exactly the way you need them to, through: detailed assessments and requirements definition, planning and design, cost-effective procurement, engineering and deployment, transition and training, and ongoing evaluation and enhancement. SwishData is a veteran owned small business and focuses on partnering with leading suppliers such as NetApp, Riverbed, Syncsort, VMware and others to offer end to end solutions for your data center needs.

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