Federal IT Applications: Assessing Government's Core Drivers

A Candid Survey of Federal Leaders

Table of Contents

Overview

Purpose

Email, PowerPoint, Skype, SharePoint…the list goes on. These essential IT applications power the federal government — so what happens when they go down? In order to better understand the current state of external and internal-facing agency workplace applications, Government Business Council (GBC) and Riverbed undertook an in-depth research study of federal employees. Overall, survey findings indicate that federal IT applications still face a gamut of challenges with regard to quality, reliability, and performance management.

Methodology

Government Business Council and Riverbed released a survey on September 7, 2016 to a random sample of *Government Executive, Nextgov,* and *Defense One* subscribers. 336 federal employees completed the survey, including those at the GS/GM 11 to 15 grade levels and members of the Senior Executive Service. 68% of respondents are GS/GM-12 and above. Respondents include representatives from over 30 defense and civilian agencies.

"

You can imagine my surprise when I got here to the federal government and found that we still have a ton of [outdated technologies] sitting around…they didn't break, so they weren't upgraded or replaced. I believe that in today's world, that's the wrong way to think about things. We need to move to a model of continuous upgrade, continuous replacement.

Tony Scott
Federal Chief Information Officer of the United States

Keynote given at the 2016 Institute for Critical Infrastructure Technology (ICIT) Forum. April 25, 2016.

Executive Summary

Unreliable IT applications may impede agency effectiveness

Slow, glitch-prone IT applications are negatively impacting federal employees' ability to fulfill mission objectives: a large majority of respondents note that frequent agency application issues are a frustrating impediment to their own productivity and the productivity of those around them.

Organizations are inconsistent in addressing application issues

Federal employees are critical of their organization's ability to successfully troubleshoot and resolve IT application issues. Nearly 1 in 3 survey-takers report that it takes over 24 hours for their agency to respond to critical application failures; furthermore, nearly 60% lack full confidence in their organizational management's ability to effectively address reported issues. As a result of these demonstrated gaps, many respondents are uncertain about their agency's ability to handle technical issues that may arise with future application rollouts.
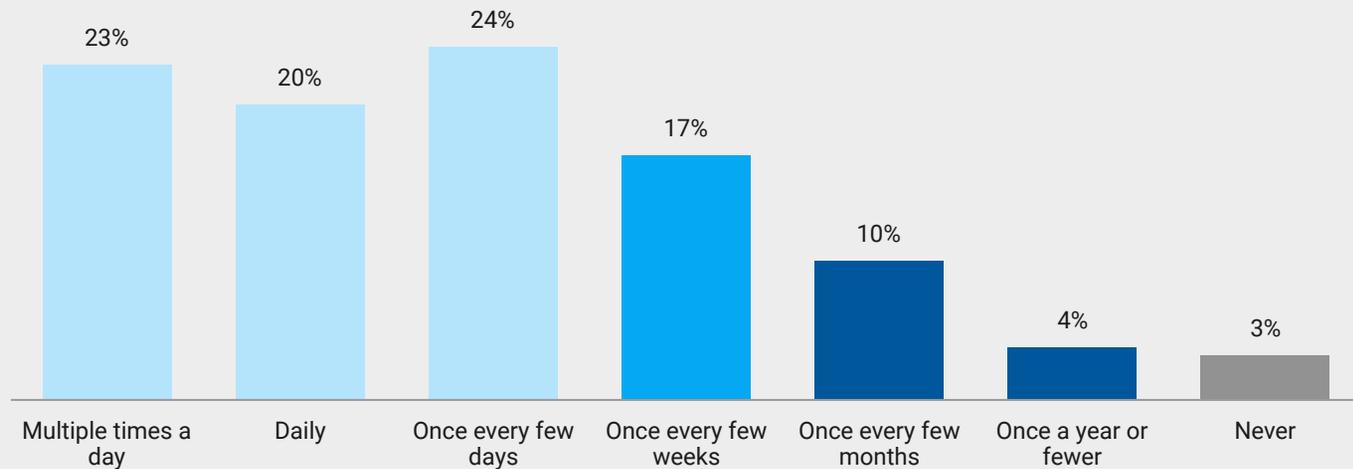
Agencies face various barriers in improving applications

Lack of progress in streamlining agency applications appears to stem more from bureaucratic and resource constraints than from lack of agency buy-in: respondents identify budget constraints, lack of leadership/planning, and lack of in-house technical expertise as the top barriers to improving IT applications; cultural resistance is ranked the least salient challenge. In addition, 80% of respondents report room for improvement in agency-provided IT training and resources.

Perception of IT Applications

Federal employees are often frustrated by their organization's applications

Overall, how often would you say you feel frustrated (e.g., due to quality, limitations, outages, glitches, etc.) by the IT applications your agency has provided you to do your job?

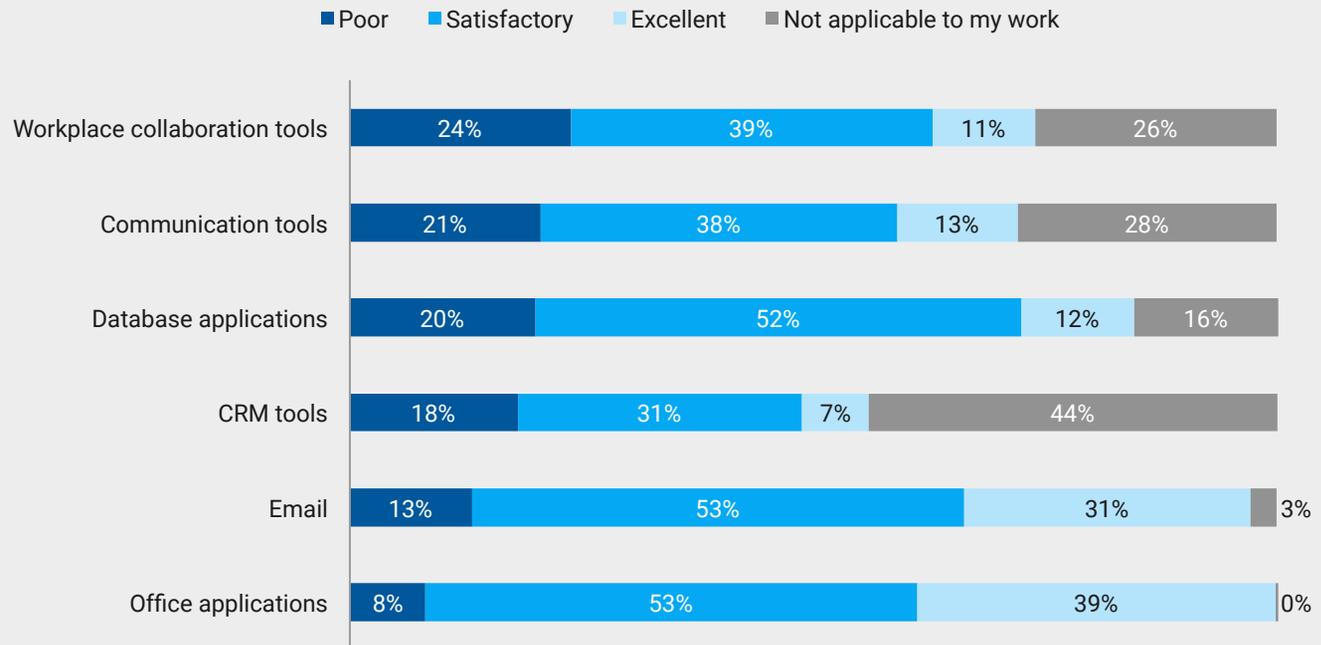| Multiple times a day	Daily	Once every few days	Once every few weeks	Once every few months	Once a year or fewer	Never
23%	20%	24%	17%	10%	4%	3%

Percentage of respondents, n=336
Note: Percentages may not add up to 100% due to rounding

A majority of respondents report feeling frustrated by their agency's applications at least once every few days (67%); 43% are frustrated daily or multiple times a day, and only 14% are frustrated once every few months or less. Some survey-takers note that outages occur most frequently during high usage periods — in other words, when deadlines are approaching — thus exacerbating the overall costs of application issues.

67%
of federal employees are frustrated by their agency's applications at least once every few days

Agency IT applications vary in quality / Perception of IT Applications

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

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

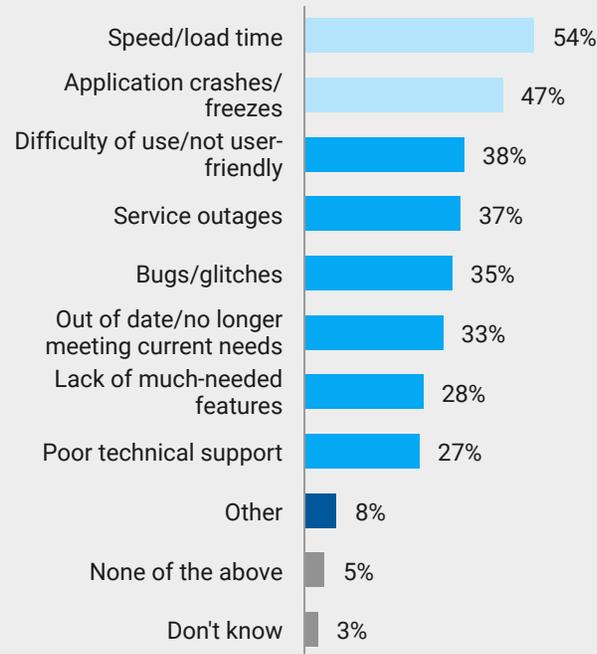| Application	Poor	Satisfactory	Excellent	Not applicable to my work
Workplace collaboration tools	24%	39%	11%	26%
Communication tools	21%	38%	13%	28%
Database applications	20%	52%	12%	16%
CRM tools	18%	31%	7%	44%
Email	13%	53%	31%	3%
Office applications	8%	53%	39%	0%

Percentage of respondents, n varies, 311-320
Note: Percentages may not add up to 100% due to rounding

Federal employees are largely satisfied with many of their organization's basic IT applications: a substantial majority rate office applications (92%), email (84%), and database applications (64%) as "excellent" or "satisfactory." However, respondents note room for improvement in business-critical applications such as workplace collaboration tools, communication tools, and customer relationship management tools.

Federal agencies are hindered by various IT issues / Perception of IT Applications

Sources of IT-Related Frustration

Source	Percentage
Speed/load time	54%
Application crashes/freezes	47%
Difficulty of use/not user-friendly	38%
Service outages	37%
Bugs/glitches	35%
Out of date/no longer meeting current needs	33%
Lack of much-needed features	28%
Poor technical support	27%
Other	8%
None of the above	5%
Don't know	3%

Percentage of respondents, n=320
Respondents were asked to select all that apply

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

Response	Percentage
Very much	38%
Somewhat	54%
Only a little	8%
Not at all	1%
Don't know	0%
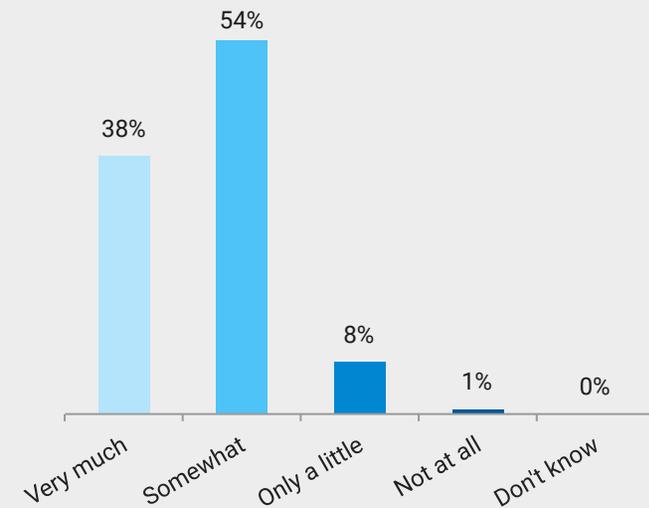
Percentage of respondents, n=291
Note: Percentages may not add up to 100% due to rounding

When asked to identify the primary sources of IT application-related frustration within their agency, respondents most commonly highlight speed/load time (54%) and crashes/freezes (47%). Other oft-cited challenges include difficulty of use, service outages, bugs/glitches, and outdated applications. In addition, one survey respondent notes that there is "no time within the agency to institutionalize and take advantage of benefits," suggesting that organizations might further prioritize change management. Virtually all survey-takers feel that these issues affect their productivity or the productivity of those around them.
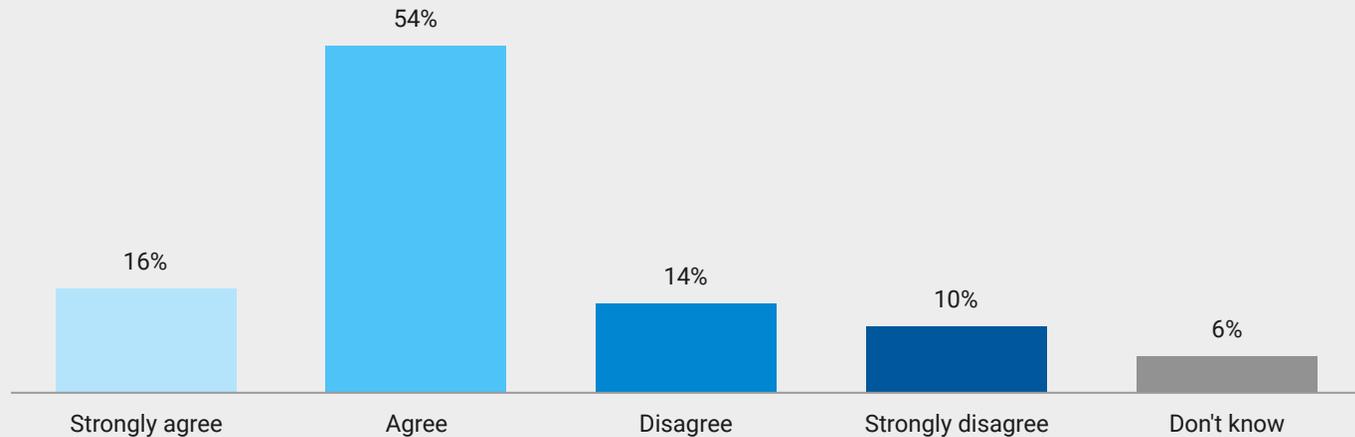
Nearly 100%
of respondents say that IT issues negatively impact agency productivity

IT Performance Management

Agencies need to implement clear processes for reporting IT issues

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

54%

16%

14%

10%

6%

Strongly agree | Agree | Disagree | Strongly disagree | Don't know

Percentage of respondents, n=302
Note: Percentages may not add up to 100% due to rounding

24% of respondents disagree or strongly disagree that their organization has a clear, defined process for reporting IT application issues.

Nearly 1 in 4

respondents say that their agency has yet to define a process for reporting application issues

## Respondents note gaps in agency responsiveness / IT Performance Management

On average, how long does it take your organization to address critical application failures?

Response	Percentage
Within an hour	10%
Between 1 to 24 hours	59%
Between 1 to 7 days	21%
Between 1 to 4 weeks	4%
Between 1 to 2 months	3%
2 months or longer	4%

Percentage of respondents, n=303
Note: Percentages may not add up to 100% due to rounding

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

- Yes, managers are proficient/quick to address reported issues — 27%
- Yes, but managers are slow to address reported issues — 30%
- No, managers generally are not able to address reported issues — 29%
- Don't know — 15%
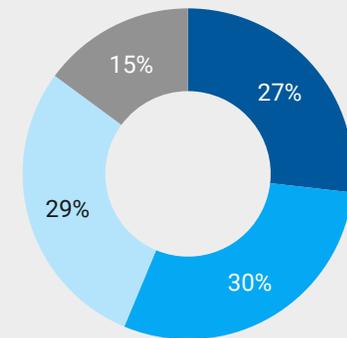
Percentage of respondents, n=302
Note: Percentages may not add up to 100% due to rounding

Federal agencies still have room for improvement in responding to IT problems — nearly 1 in 3 respondents report that it takes their agen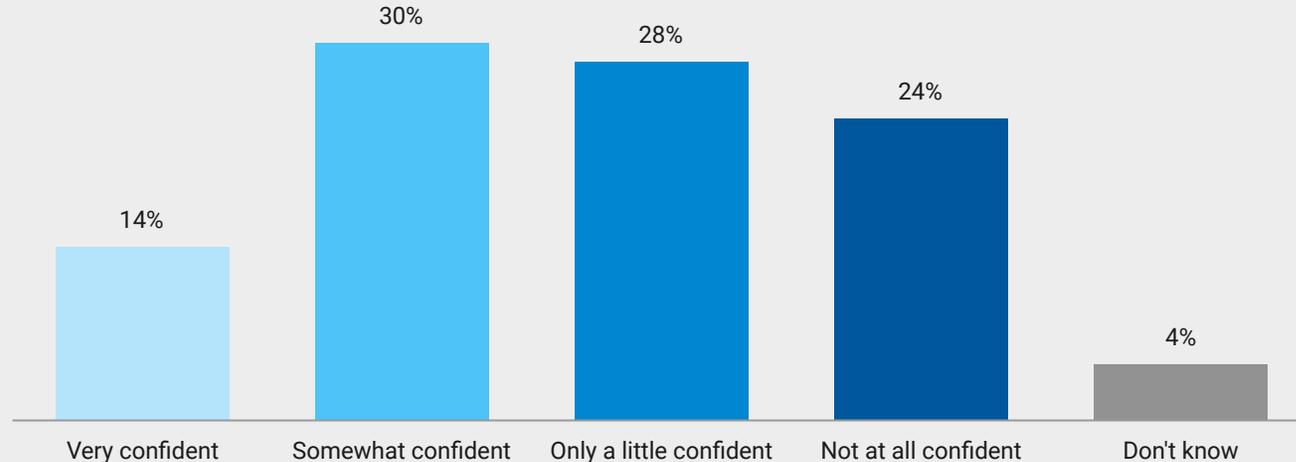cy over 24 hours to address critical application failures. Moreover, many federal employees are not fully satisfied with the ability of organizational management to address reported application issues: nearly 60% say that managers are slow or unable to address issues.

Nearly 1 in 3

respondents report that it takes over 24 hours for their organization to address critical application failures

Federal employees are uncertain about the success of future IT rollouts / IT Performance Management

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)?

Very confident	Somewhat confident	Only a little confident	Not at all confident	Don't know
14%	30%	28%	24%	4%

Percentage of respondents, n=315
Note: Percentages may not add up to 100% due to rounding

Agencies have demonstrated a lack of consistency in ensuring a smooth implementation process for IT applications; as a result, over half of respondents are ambivalent about their organization's capacity to address potential issues that may arise with future rollouts.
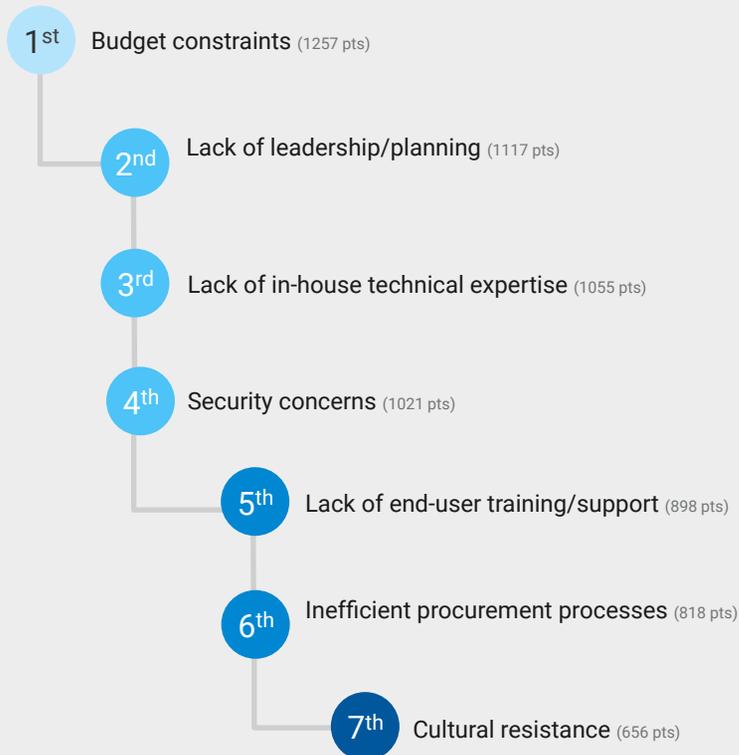
82%
of respondents lack full confidence in their agency's technical ability to handle future rollouts

Budget constraints pose the greatest challenge to improving IT applications /
IT Performance Management

Improving IT Applications: Challenges
Ranked by respondents according to the challenge they pose to the improvement of their organization's IT applications

1st Budget constraints (1257 pts)

2nd Lack of leadership/planning (1117 pts)

3rd Lack of in-house technical expertise (1055 pts)

4th Security concerns (1021 pts)

5th Lack of end-user training/support (898 pts)

6th Inefficient procurement processes (818 pts)

7th Cultural resistance (656 pts)

Ranked by Borda count, n=307

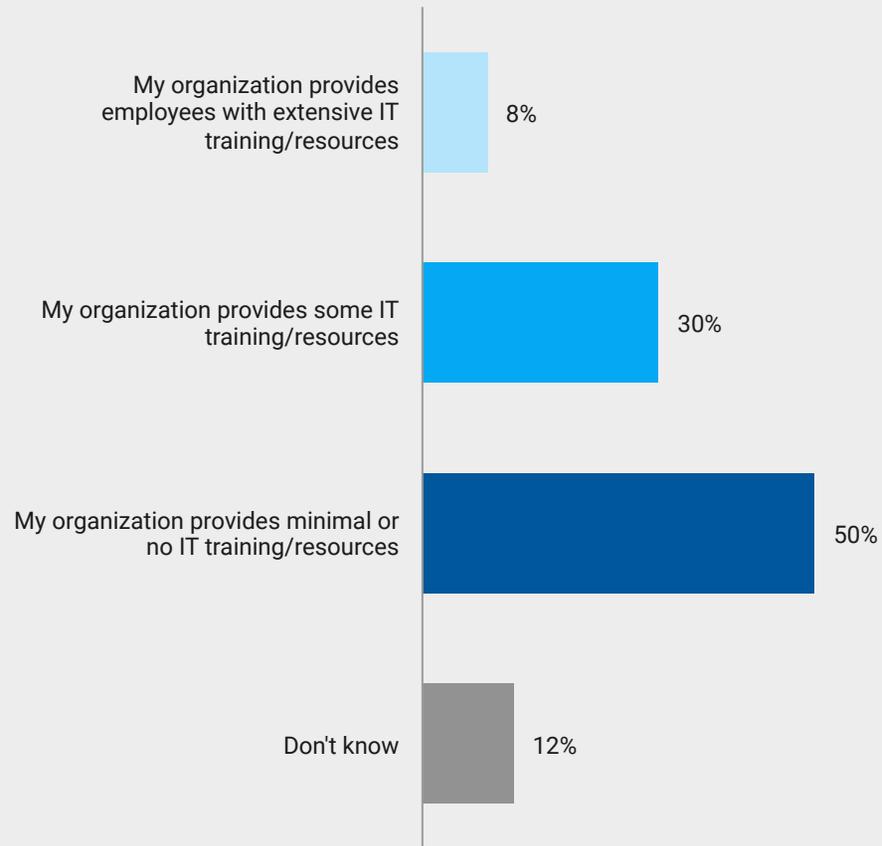Organizations face a variety of potential roadblocks when it comes to enhancing IT applications.

When asked to rank barriers according to the challenge they pose to the improvement of agency applications, most respondents select budget constraints as the top challenge, followed by lack of leadership/ planning, lack of in-house technical expertise, security concerns, lack of end-user training/support, and inefficient procurement processes. Cultural resistance is ranked least challenging, suggesting that progress is hampered more by bureaucratic resource constraints than by lack of buy-in.

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

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 1 less point than the one ranked ahead of it. Unranked answer choices receive zero points. Please see Appendix for further detail.

Federal employees report gaps in IT training and resources / IT Performance Management

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

My organization provides employees with extensive IT training/resources — 8%

My organization provides some IT training/resources — 30%

My organization provides minimal or no IT training/resources — 50%

Don't know — 12%

Percentage of respondents, n=302
Respondents were asked to select all that apply

80%
of respondents report room for improvement in agency-provided IT training/resources

Federal employees want to see a host of IT application improvements /
IT Performance Management

IT Application Wish List

Item	Percentage
Improved responsiveness	50%
Increased investment in state-of-the-art technologies	47%
Better training for employees	46%
Improved technical support	42%
Speedier resolution time for glitches/errors	38%
Accepting greater input from users	34%
Holding application vendors more accountable	26%
More efficient procurement process	24%
Greater mobility	19%
Empowering middle managers	19%
More in-house development	16%
Increased security	13%
Greater leadership buy-in	12%
Other	6%
None of the above	1%
Don't know	2%

Percentage of respondents, n=304
Respondents were asked to select all that apply

50%

of respondents want improved responsiveness in their agency's applications.

Other "wish list" items include increased investment in state-of-the-art technologies (47%), better training for employees (46%), improved technical support (42%), and speedier resolution time for glitches/errors (38%).

Final Considerations

When seeking to enhance IT applications, agencies should:

Focus on improving IT performance management

Organizations depend on robust IT performance management to ensure that applications run smoothly and consistently. However, many federal employees lack confidence in their agency's ability to quickly and efficiently address problems, and nearly a quarter of respondents note lack of a clear, defined process within their organization for reporting application issues. Federal agencies need to continue to focus on streamlining performance management capabilities; in this capacity, agencies should also ensure that employees are able to troubleshoot smaller technical issues themselves — the vast majority of survey-takers note that their organization does not provide employees with the training and resources they need to address IT problems.
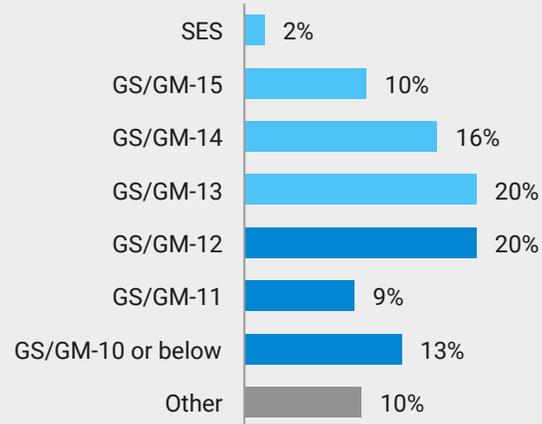
Devote greater attention to enhancing IT applications

Federal employees highlight a multitude of application enhancements they'd like their organization to implement, including improved responsiveness, increased investment in state-of-the-art technologies, better employee training, improved technical support, and other technical and non-technical upgrades. However, agencies face various challenges in executing improvements: federal respondents rank bureaucratic obstacles such as budget constraints, lack of leadership/planning, and lack of in-house expertise as the most salient impediments to agency efforts. Moving forward, organizations might consider placing a greater emphasis on maintaining and enhancing IT applications in order to ensure that the requisite resources, personnel, and planning are devoted to their upkeep.

Respondent Profile

Survey respondents are largely senior federal leaders

Job grade

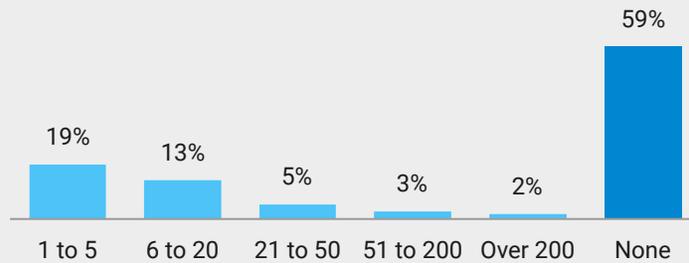| Grade	Percentage
SES	2%
GS/GM-15	10%
GS/GM-14	16%
GS/GM-13	20%
GS/GM-12	20%
GS/GM-11	9%
GS/GM-10 or below	13%
Other	10%

Percentage of respondents, n=301
Note: Percentages may not add up to 100% due to rounding

68%

of respondents rank GS/GM-12 or above, including members of the Senior Executive Service (SES).

"Other" includes those employed under other pay scales or ranking systems (e.g., Military, Foreign Service, Federal Wage System, Executive Schedule, etc.)

Reports/oversees

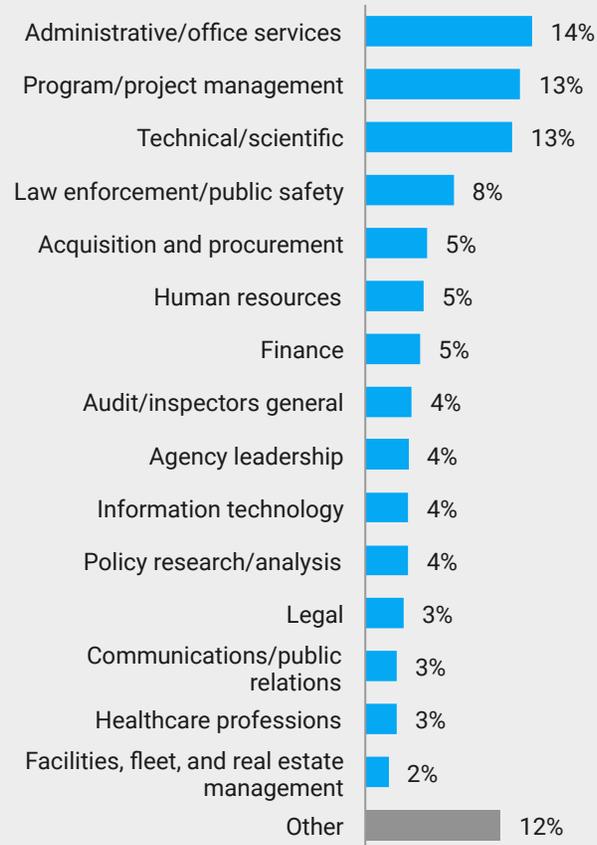| Category	Percentage
1 to 5	19%
6 to 20	13%
21 to 50	5%
51 to 200	3%
Over 200	2%
None	59%

Percentage of respondents, n=301
Note: Percentages may not add up to 100% due to rounding

42%

of respondents are supervisors who oversee at least one employee, either directly or through direct reports.

Respondents represent a wide range of federal agencies and job functions / Respondent Profile

Job function

Job function	Percentage
Administrative/office services	14%
Program/project management	13%
Technical/scientific	13%
Law enforcement/public safety	8%
Acquisition and procurement	5%
Human resources	5%
Finance	5%
Audit/inspectors general	4%
Agency leadership	4%
Information technology	4%
Policy research/analysis	4%
Legal	3%
Communications/public relations	3%
Healthcare professions	3%
Facilities, fleet, and real estate management	2%
Other	12%

Percentage of respondents, n=301
Note: Percentages may not add up to 100% due to rounding

Departments and agencies represented

Agriculture

Homeland Security

Navy

Army

Interior

Transportation

Office of the Secretary of Defense

Air Force

Justice

Housing and Urban Development

Health and Human Services

General Services Administration

Veterans Affairs

Treasury

Commerce

Energy

Marine Corps

Environmental Protection Agency

Labor

State

National Aeronautics and Space Administration

Office of Personnel Management

Social Security Administration

Agency for International Development

Congress/Legislative Branch

Education

Executive Office of the President

Government Accountability Office

Small Business Administration

Other Independent Agencies

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. You do not need to rank every choice.

	Count per rank							Total	Borda count
	1	**2**	**3**	**4**	**5**	**6**	**7**		
Budget constraints	77	56	42	23	15	8	19	240	1257
Lack of leadership/planning	58	50	41	28	19	12	13	221	1117
Lack of in-house technical expertise	51	46	37	24	27	23	14	222	1055
Security concerns	52	38	30	36	24	26	11	217	1021
Lack of end-user training/support	33	34	37	24	34	28	24	214	898
Inefficient procurement processes	23	38	36	34	19	19	18	187	818
Cultural resistance	13	25	29	31	22	24	32	176	656
Number of respondents	**307**	287	252	200	160	140	131	-	-

Ranked by Borda count, n=306

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 1 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 in-house technical expertise, those responses would receive 7,6, and 5 points respectively. These points would be added to Borda count of each answer choice.

With 307 respondents and 7 choices, the maximum score possible for any single answer choice (i.e., if every respondent ranked it as their top outcome) is equal to 2,149 points (307 x 7).

About

Government Business Council

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Riverbed

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