RESEARCH REPORT:

DIGITAL GOVERNMENT STRATEGIES:
A NEW ERA OF DIGITAL SERVICES

THE STATE OF DIGITAL SERVICES

Providing digital services has become a strategic necessity for government agencies.

D igital services are here to stay. They will only become more ubiquitous and full-featured over time, according to a new survey of federal and state agencies by the 1105 Public Sector Media Group. The survey, conducted by Beacon Technology Partners, found seven in 10 agencies currently offer customer-facing digital services.

These services provide information, help citizens apply for permits and programs, and answer questions. Most agencies see digital services as a strategic necessity, agreeing that without robust customer-facing digital services, they will have more trouble meeting their agency's mission.

That is indeed true, says Kevin Noonan, lead government analyst for Ovum, a global technology research firm. "They really have no choice," he says. "If they fail to move toward digital government, they will be out of sync with citizens' needs and fall further behind the curve."

Citizens are clearly in favor of government's push to increase digital services. A 2015 survey from Accenture found while many citizens already use government digital services when offered, 86 percent wanted to increase those interactions. That means government agencies have their work cut out for them. The Accenture survey revealed that only 27 percent of citizens were satisfied with current government digital offerings; and 28 percent were dissatisfied.
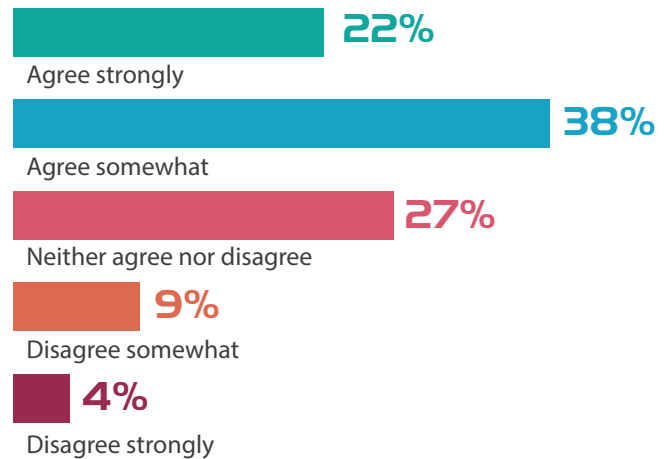
Besides improving citizen service, increasing digital services provides many other benefits. One of the most important is improving the quality and speed of getting services to citizens or government workers. Both are gaining importance as citizens demand greater speed, more transparency, and better quality in their government interactions.

The 1105 Public Sector Media Group survey found 64 percent understand digital services will improve internal process efficiency. That is a key attribute, both for reasons of cost and citizen satisfaction.

Meeting compliance requirements, reducing costs and enabling more innovative government services were other important benefits cited by survey participants. Innovation

Digital services go mission-critical

Many respondents agree that it will be difficult for their agencies to achieve their missions without implementing more robust digital services.

Agree strongly	22%
Agree somewhat	38%
Neither agree nor disagree	27%
Disagree somewhat	9%
Disagree strongly	4%

Source: 1105 Public Sector Media Group

is particularly important. "Digital government involves a lot more than just taking manual paper-based services and making them digital, which just turns inefficient old processes into bad new processes," says Noonan.

The 1105 Public Sector Media Group survey also found most agencies are eager to learn from their citizen "customers" and agency peers about how to effectively deploy next-generation services. Noonan takes that notion one step further, recommending agencies look inward for innovation in an area that has often been shunned—shadow IT.

"Rather than trying to suppress groups that have gone off and developed applications and processes on their own, look at it as innovation that can be adopted by the agency on a larger scale," he says.

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THE PATH TO DIGITAL SERVICES IS THROUGH THE CLOUD

The continued migration to the cloud will help support expanded digital services.

Agencies at all levels of government want to provide better services to their citizens. They know the way to do so is through digitization. While many have made great strides toward providing digital services, however, they often find themselves up against the limits of their existing IT infrastructure.

Whether those limitations are scalability, network speed or staff, these constraints hamper agencies' attempts to make greater progress toward the end goal. And that goal is to transform government into a digital enterprise that helps citizens communicate and do business with government faster and more efficiently.

Government IT leaders understand cloud computing infrastructure would largely eliminate these bottlenecks, but relatively few have jumped on board. According to a recent survey of federal and state IT leaders by the 1105 Public Sector Media Group, only 38 percent of government services are being delivered through the cloud today. The 1105 Public Sector Media Group survey was conducted by Beacon Technology Partners.

Agencies clearly understand the benefits of cloud computing for reasons of economy, flexibility and scalability. Other benefits cited by respondents include on-demand access, resource-sharing, speed, cost and future-proofing. When done right, agencies can realize these benefits and then some.

The state of Georgia, for example, replaced its aging CMS system with a cloud-based digital government platform. That increased usability and site availability, and is projected to save $4.7 million over five years. FEMA made a similar move, transitioning to a cloud-based digital platform. In the process, it improved site performance by 93 percent, reduce the time to find information to one minute or less, and increased user satisfaction scores by 35 percent.
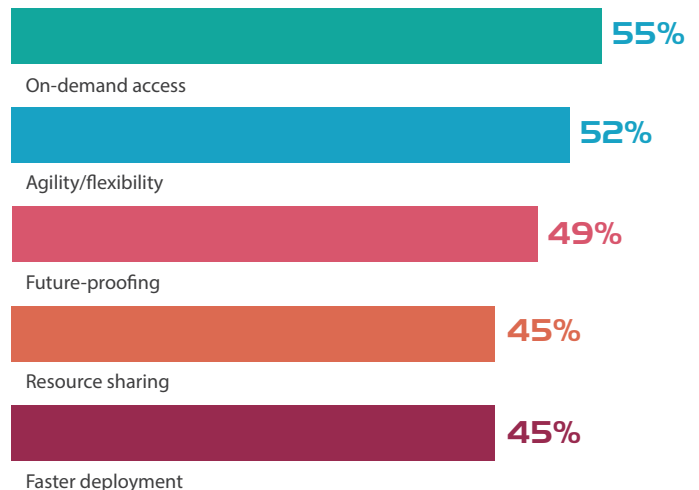
So why are agencies still hesitant to embrace the cloud for digital government? According to the 1105 Public Sector Media Group survey, the top reason is perceived security risk. While there is always some security risk in every IT-related endeavor, cloud security has improved significantly.

Even Federal CIO Tony Scott says he believes cloud computing is secure. "I see the big cloud providers in the same way I see a bank," he says in a recent Google for Work Webcast. "They have the incentive, they have skills and abilities, and they have the motivation to do a much better job of security than any one company or any one organization can probably do."

The Case for the Cloud

Agencies have a wide range of goals for improving their digital services. Here are the top five for which cloud is seen as a good option (as cited by % of respondents).

Goal	%
On-demand access	55%
Agility/flexibility	52%
Future-proofing	49%
Resource sharing	45%
Faster deployment	45%

Source: 1105 Public Sector Media Group

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Other industry analysts agree. "In many cases, cloud security from enterprise vendors is more robust than can be delivered by the average cash-strapped government agency," says Al Blake, principal analyst for public sector at Ovum. "Risks are more perceived that real in most cases, and of course it's important to realize that legacy, monolithic implementations have their own security risks. The question is which risks are acceptable for the potential benefits available?"

The 1105 Public Sector Media Group study found cost and infrastructure constraints are two of the biggest issues agencies believed were hindering fuller adoption of digital government. Cloud is a big part of the answer, says Kevin Noonan, Ovum's lead government analyst. "Cloud equals agility," he says. "With cloud, it's much easier to start a project and, if it's not going well, bail quickly. It's also easy to scale quickly if it succeeds."
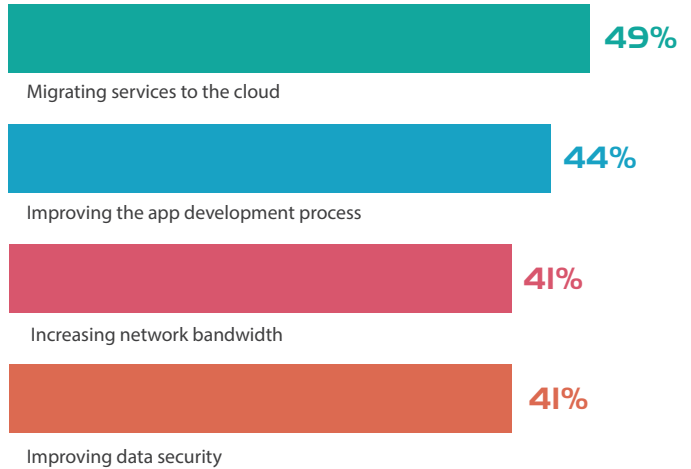
Using the cloud construct is a sound financial move, he says, more so than spending a lot of money upfront on equipment that locks agencies into processes, capacity, and the equipment itself. "The trouble with aging the assets is that old assets end up hindering you," says Noonan. "They slow development, and at some point they will break, which means you're on the hook for a large replacement cost."

Over time, agencies seem to be getting the message the cloud is the way to go. A report from IDC Government Insights found federal government agencies alone will spend $6.7 billion in the current fiscal year on cloud initiatives. By 2019, that number is expected to reach $11.5 billion.

The same is true on the state and local side. A 2015 survey from the National Association of State CIOs (NASCIO) found that almost all states are planning some type of cloud service migration. So government agencies are realizing the path to digital services is truly through the cloud.

Agencies look to the cloud

Here are the top four spending priorities for agencies increasing their investment in digital services (as cited by % of respondents):

Migrating services to the cloud	49%
Improving the app development process	44%
Increasing network bandwidth	41%
Improving data security	41%

Source: 1105 Public Sector Media Group

MOBILITY IS KEY FOR DIGITAL GOVERNMENT

The increase in digital services is driven by the increased use of mobile devices.

In today's mobile-first environment, ensuring citizen-facing applications are optimized for mobile devices makes good business sense. State and federal agencies have made significant progress toward that goal. The time is right for government to adopt a mobile-first approach to digital government. According to Gartner, more than 50 percent of U.S. citizens will want to use mobile devices to access government services by 2017.

Throughout state and local government, there are hundreds of mobile apps including requests and applications for a variety of services and permits, reporting dangerous situations, and accessing traffic and weather conditions. Federal examples run the gamut from benefits eligibility and tax refund status to federal job searches and PTSD assessment.

Indeed, citizens are increasingly looking to access government services with their mobile devices. According to a recent survey on digital government strategy by the 1105 Public Sector Media Group, citizens who access government services through mobile devices mainly use standard notebooks, laptop computers or smartphones. More than half also use tablets. The survey was conducted by Beacon Technology Partners on behalf of Acquia.

Despite the relative progress agencies have made in developing mobile apps, there is much more work to be done. According to a 2015 article in GCN, only 36 of the 50 states' main portals are mobile-friendly. That's despite the fact more than half of state CIOs consider mobile apps strategically essential or high priority, according to a 2014 NASCIO survey.

The problem doesn't stop at the state and local level. According to the General Services Administration, the top four most-visited federal government Web sites over the past 30 days didn't use responsive Web design standards that permit clean access on mobile devices. The GSA noted over the past 90 days, about one-third of all traffic to its sites came from citizens using mobile phones and tablets, compared to 24 percent the previous year.
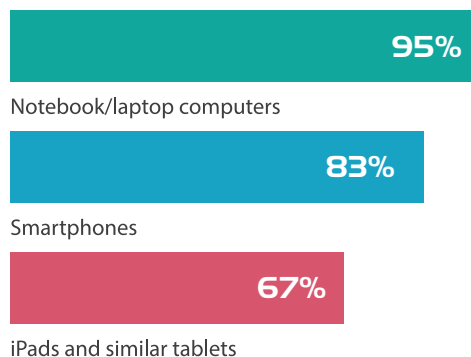
Many of today's state and federal mobile apps don't meet Google's standards for mobile-friendliness. Problems include links placed too close together, text too small to be legible, and content that can't scale down to fit an average-width mobile screen. Part of the issue is many of these apps were designed for PCs and not for mobile devices, says Ray Wang, principal analyst for Constellation Research. That's an important point.

"The first generation of mobile developers just redeveloped the same content to appear on mobile devices, but that doesn't take advantage of the platform, and it doesn't work very well," says Wang. "What they really need to do is take 30 percent of the functionality and make it 70 percent important, because the user's needs are different on mobile platforms."

When retrofitting apps for mobile devices, Wang stressed agencies should take advantage of the interactivity mobile devices can provide, such as the ability to share information and communicate in real time. Ideally, he says, agencies should start over with a mobile-first responsive design approach.

Mobility on the Move

Agencies report that their constituents are accessing their services using numerous mobile platforms.

95%
Notebook/laptop computers

83%
Smartphones

67%
iPads and similar tablets

Source: 1105 Public Sector Media Group

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WITH DIGITAL TRANSFORMATION, CHANGE IS NOT ALWAYS EASY

Agencies often find adopting digital services puts new demands on the organization.

Government agencies have certainly made progress toward achieving digital transformation. However, for most it is still very much a work in progress. At the federal level, for example, most agencies have either complied with or are working toward meeting the White House's Digital Government Strategy requirements. Many haven't gotten much further than developing a few applications.

Some of the biggest hurdles agencies face as they move toward digital government are perceived security risks, cost, concerns whether existing infrastructure can keep up, and inability to demonstrate return on investment, according to a study of federal, state and local agencies by the 1105 Public Sector Media Group.

In a 2015 study on digital government, Deloitte referred to agencies with concerns like these as developing—neither fully behind the curve or fully mature in their move to digital government. The Deloitte study characterizes most government agencies in this category.

PERCEPTION AND REALITY

One of the biggest concerns about digital government voiced by agency leaders in the 1105 Public Sector Media Group, conducted by Beacon Technology Partners, survey was security. Half of respondents were very concerned about security risks related to digital services, while another 33 percent reported being somewhat concerned.

While security should never be taken lightly, many believe the most pressing security hurdles have been overcome. This is especially true if agencies base their digital government platforms on cloud technology. "At this point, most cloud-based capabilities have better security than any individual agency could do on their own," says Ray Wang, principal and founder of Constellation Research.
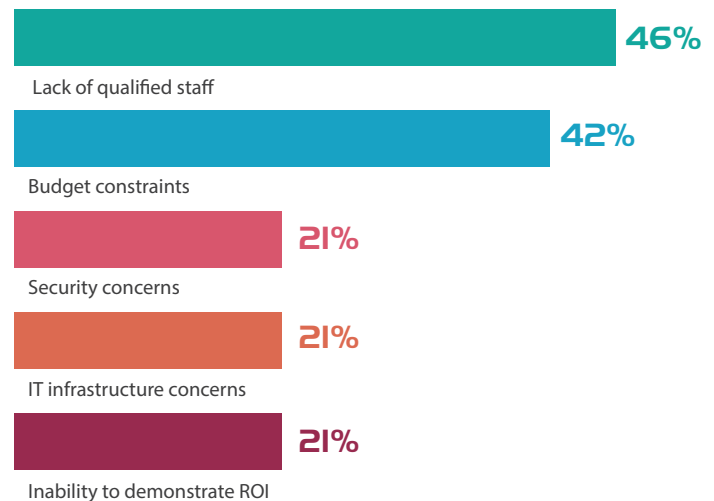
Other experts agree. In a January, 2016 statement, Gartner predicted more government agencies will move to the cloud because of its security. It also predicted that by 2018,

improved cloud security will become the primary reason for government's move to the cloud, displacing cost and agility.

According to the 1105 Public Sector Media Group survey, 82 percent of government IT leaders also worry that their existing IT infrastructure won't support digital service delivery. Cloud is a solution to not only security, but also infrastructure.

Organizational hurdles to digital services

For agencies not offering significant digital services, here are the top five obstacles preventing them from doing so (as cited by % of respondents):

Obstacle	Percent
Lack of qualified staff	46%
Budget constraints	42%
Security concerns	21%
IT infrastructure concerns	21%
Inability to demonstrate ROI	21%

Source: 1105 Public Sector Media Group

Gartner supports this idea. One of its Top 10 strategic technology trends for government is hybrid cloud. Gartner believes hybrid cloud provides agencies with a more sustainable operating model that can help deliver a more manageable, secure and scalable environment. Cloud architecture provides other benefits as well, such as the ability

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to test new applications without spending money on hardware that might be too limiting or too much, and avoiding technology lock-in.

And there is plenty of room for growth. The Professional Services Council's 2015 survey of federal CIOs found only 8 percent report being satisfied with their current level of cloud adoption.

MONEY TALKS

Agencies worry about the cost of digital service development and maintenance, despite evidence it's not materially more expensive than other types of IT. One of the problems, according to the 1105 Public Sector Media Group survey, is it can be difficult to demonstrate value or Return on Investment (ROI).
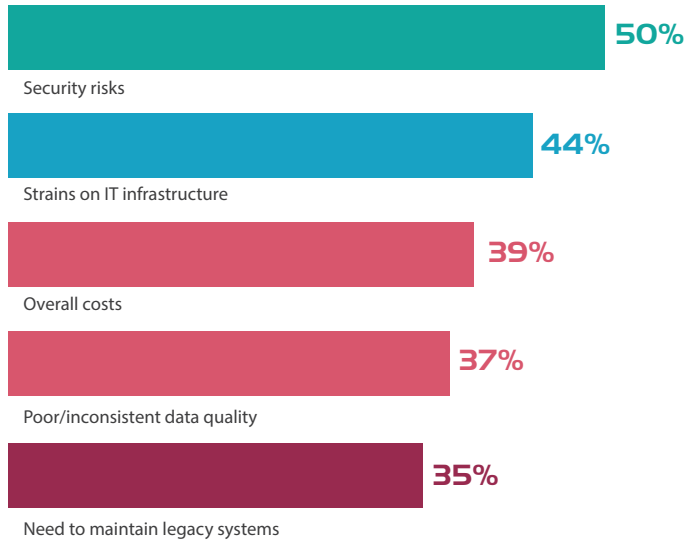
There are many soft and hard metrics agencies can use to help demonstrate ROI, such as the number of man-hours saved by tasks that are no longer repetitive, faster response times, higher availability and transparency. More importantly, demonstrating value takes strategy, says Kevin Noonan, lead government analyst at Ovum.

"Often, agencies try to do too much, and then fail," he says. "It's better to take small steps that make a real difference, such as creating a service that allows citizens to submit change of address once instead of notifying multiple agencies. It's a simple service, but its value is larger than the effort involved. It's transformational, and it's a good way to demonstrate success."

Despite both real and perceived hurdles to achieving true digital transformation, it's entirely possible with the right combination of technology and innovation. There is proof of success in every agency at every level of government.

Concerns to be addressed

For agencies offering or planning to offer digital services, here are the top five concerns (as rated "very concerned" by % of respondents):

Concern	%
Security risks	50%
Strains on IT infrastructure	44%
Overall costs	39%
Poor/inconsistent data quality	37%
Need to maintain legacy systems	35%

Source: 1105 Public Sector Media Group

DIGITAL GOVERNMENT: THE ROAD AHEAD

While funding is on the rise for digital services, cultural and procedural shifts must also follow.

Government agencies are clearly on board with expanding their array of digital services. Funding to support digital services is on the rise. According to a survey of federal and state IT leaders by the 1105 Public Sector Media Group, more than half of agencies have seen budgets increase for customer-facing services.

While budget is an important part of making digital government a reality, though, it can't happen to the extent necessary without the right cultural shifts, the right processes and technology, and skilled personnel. The shift from manual or semi-automated processes to digital services is significant. It requires changes in mindset, processes, technology and ways of evaluating success. In other words, it's not just about transitioning infrastructure from legacy to the cloud. It's about changing the way government works so it becomes more like the private sector.
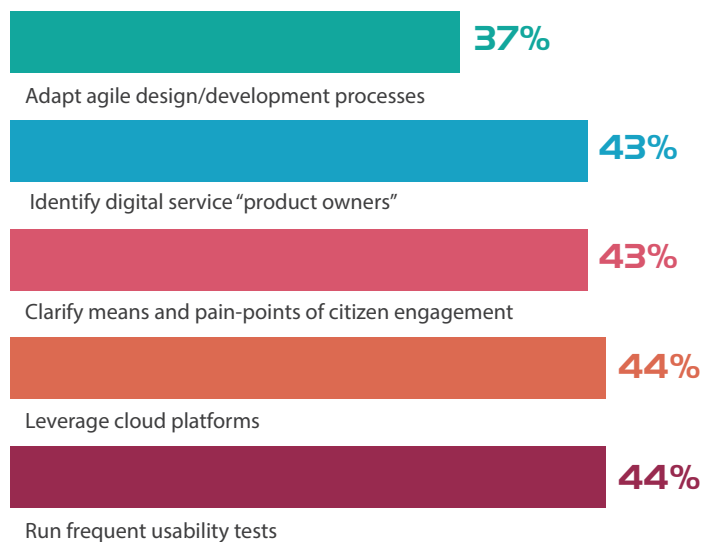
People-related cultural shifts include spending more time understanding customer and citizen needs and pain points, and using that information to determine how they will interact with digital services. Process- and technology-related cultural shifts include moving toward commodity hardware, open source software and the cloud, and adopting and following agile and flexible application design and development processes.

Although a necessity, these changes can be disruptive. A 2015 global digital government survey by Deloitte found more than 85 percent of government organizations find culture to be a challenging aspect of managing the digital transition. The survey also found organizations with a clear and coherent digital strategy are more likely to have a culture that fosters innovation and collaboration.

"Changing the culture starts with government employees, and you have to attack it on different levels, because different generations of workers have different levels of digital proficiency," says Ray Wang, principal analyst and founder of Constellation Research. "It's about finding a way to both get people comfortable with the new way of doing things

A work in progress

Here are five ways in which at least half of all agencies could help their cultures and processes become mature enough to deliver digital services (based on % of respondents saying their agency did not fully embrace the practice):

Practice	Percentage
Adapt agile design/development processes	37%
Identify digital service "product owners"	43%
Clarify means and pain-points of citizen engagement	43%
Leverage cloud platforms	44%
Run frequent usability tests	44%

Source: 1105 Public Sector Media Group

and then developing a framework to help them make the transformation."

Another important shift that will make digital government more effective is moving toward commodity hardware and open source software solutions. Using open source software helps ensure that agencies won't be locked into proprietary solutions or formats, making it much easier to adapt to changing needs without starting over. It also makes customization easier, tends to be more secure, is reusable, and is much less expensive than proprietary solutions.

Government agencies are increasingly using open source software. This is partly in response to recommendations in many government policies and memorandums. For example,

the White House in 2014 issued the Digital Services Playbook, which encourages agencies to use modern technology stacks such as open source, cloud-based, commodity solutions. Along the same lines, the GSA created 18F, also known as Digital Services Delivery. The 18F group is a government-owned digital delivery team that bases its work on free and open source software.
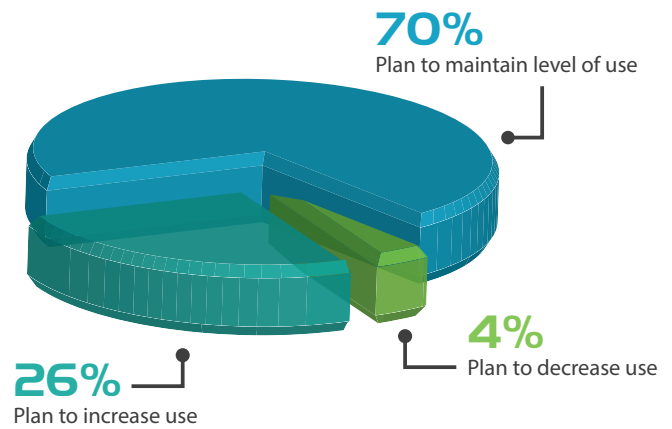
SKILLS SHORTAGE

Digital government can't reach its potential without the breadth of skills necessary to rework the infrastructure and manage it on an ongoing basis. Yet many agencies don't have the skill set to accomplish that goal. In fact, the 1105 Public Sector Media Group survey found lack of qualified staffers is one of the main reasons government departments don't offer digital services. The Deloitte survey found much the same thing. Only 34 percent say their organization has sufficient skills to execute its digital strategy.

That's probably the reason so many agencies plan to increase use of third-party service providers to develop and deliver digital services to constituents, either completely or as a way to supplement in-house IT staff resources. When engaging a third party, though, Wang warns agencies to seek a balance and have a solid services contract. "The best SLAs aren't just cost-driven," he says, "but have an innovation component."

Help Wanted

A growing number of agencies plan to rely on outside service-providers to develop and deliver digital services (as cited by % of respondents):

70%
Plan to maintain level of use

4%
Plan to decrease use

26%
Plan to increase use

Source: 1105 Public Sector Media Group