Digital Transformation Puts Customer Experience Front and Center

RESEARCH BRIEF

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Introduction

For generations of Americans, interacting with a government agency was a matter of...waiting. Renewing a driver's license at the Department of Motor Vehicles (DMV) or Department of Public Safety (DPS)? You took a number. Eager to receive a tax refund? You made a daily pilgrimage to the mailbox. Calling the local permitting office to straighten out a bureaucratic error? You waited on hold. You were transferred. Then you waited some more.

Government was a waiting game.

In the era of IT modernization, customer/client experience (CX) has improved. Progress, however, has been uneven across levels of government and agencies. Some organizations have embraced digital transformation, reducing wait times, errors and miscommunication. Some have made incremental improvements. Others have barely budged.

That will change.

The COVID-19 pandemic has made clear that business as usual simply won't work. The public won't stand for it — not in line, not on hold and not on poorly performing digital applications. There is an amplified need for rapid response and instant answers, which calls for increased internal agency efficiency.

In 2020, the quality of interactions with government are as important to the public as the end result of those transactions. Agencies' ability to monitor IT events in real time and across the entire business transaction lifecycle has become critical to delivering optimal CX.

"People standing in line or sitting in a state office to receive benefits or services is not going to happen in the foreseeable future," says Matt Smith, Regional Sales Director, State and Local Government, at AppDynamics, a company that optimizes IT operations and application management. "Government organizations have to figure out a way to digitally provide services and information and interact with constituents in a way that's easy for them."

To better understand how agencies are looking to provide better CX, GovLoop partnered with AppDynamics to survey more than 100 public-sector employees, the majority of whom (69%) work in state and local governments. We found that employees value digital services and expect them to become more important, particularly if they are cloud-based and easy to use. Moreover, survey participants expect digital services to drive CX, which itself is becoming more important.

Charts may not add up to 100 due to rounding

Modernization, digital services and the customer experience

IT modernization and the move to cloud-based digital services continue apace in many agencies, yet not all digital transformation is equal. Depending on where you look, change is happening quickly or slowly, smoothly or erratically, effectively or rife with challenges.

How modernization unfolds at any given agency is the result, in part, of system-level transformation, such as going to the cloud. Just as vital, however, is an agency's ground game, the deep-dive attention to granular interactions that occur at the level of systems' nodes. Paying attention to those details — by way of scaling, monitoring, analyzing and optimizing application environments — accelerates and refines agencies' digital transformations and is one of the most impactful changes an agency can make to rapidly improve CX.

Modernization of government agencies' digital services is happening against a backdrop of digital disruption. Online service providers and e-tailers, Amazon chief among them, have diverted large swaths of economic activity away from traditional brick-and-mortar establishments. In doing so, they have rewired consumers' expectations of customer service. Both of those shifts happened because digital companies leveraged the power of transformative technology.
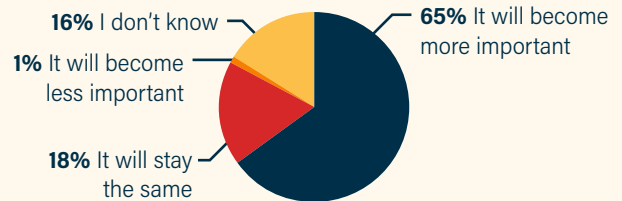
Consumers' online engagements with private-sector organizations have shifted the way they view government agencies. Expectations are higher now, and government employees know it. Nearly three in four survey respondents said agency leaders consider digital services a priority or a top priority, and two-thirds said digital services would become more important in the next year to 18 months (see Figures 1 and 2).

Figure 1: Does your agency's leadership consider digital services a priority?

- **17%** I don't know
- **28%** Yes, a top priority
- **10%** No, a low priority
- **45%** Yes, somewhat
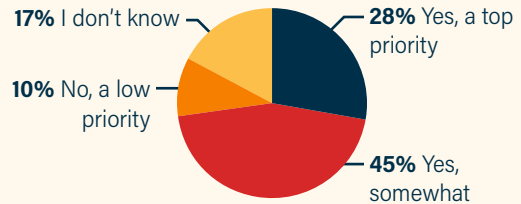
Figure 2: How will the importance of digital services change during the next 12-18 months at your agency?

- **16%** I don't know
- **65%** It will become more important
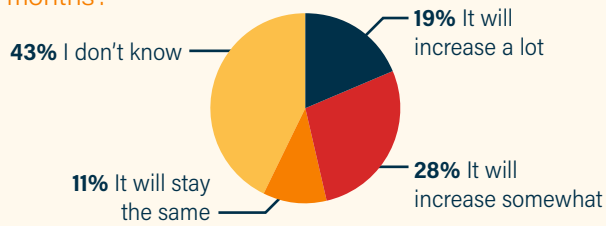- **1%** It will become less important
- **18%** It will stay the same

Many state and local government agencies have one foot in the past and the other in the digital future, a state of ambivalence that the survey's results reflect. Asked about the prevalence of digital services delivered through the cloud, 16% of respondents reported that "many or all" applications were cloud-based, whereas about half said their agency used cloud to deliver some, very few or no applications (see Figure 3). Nonetheless, almost half expect cloud-based digital services to increase somewhat or a lot in the next 18 months (see Figure 4).

Figure 3: To what extent are your agency's digital services delivered through the cloud?

- **32%** I don't know
- **16%** Many or all applications
- **27%** Some applications
- **25%** Very few or none
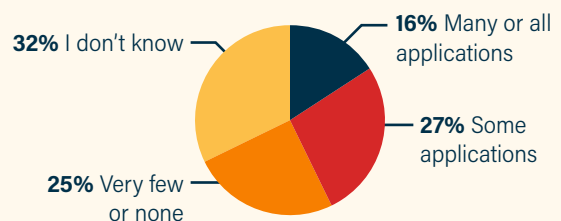
Figure 4: How will your agency's use of cloud-based digital services change during the next 18 months?

- **19%** It will increase a lot
- **28%** It will increase somewhat
- **11%** It will stay the same
- **43%** I don't know

Depending on the organization, the future-forward foot could be dipping a toe to test the waters or lunging ahead to make up for lost time. Historically, the public's experience interacting with government was dictated by agencies, hours of operation, accessibility to offices and limited access of data. That is changing. "Over the last three years or so, the government has been catching up to where the enterprise, financial services and e-commerce industries were five years ago," Smith says.

Yet some government organizations are new to the journey. They may be providing additional services or consolidating services on a single portal, yet they're still in the planning and architectural stage. Other organizations are further along the road to modernization. Some are hitting bumps or approaching unexpected curves, but at either stage, getting a granular view of systems and processes can enable agencies to identify and remediate systemic issues across the business transaction lifecycle, much the way an MRI can help a doctor diagnose and treat a patient.

Without a granular, holistic view of business transactions, some organizations tend toward a patchwork approach to monitoring. They'll deploy a handful of monitoring tools that don't provide a full end-to-end picture of the customer's journey. It's a siloed, limited approach. Precision monitoring can eliminate or drastically curtail scenarios in which IT teams encounter problems and must spend days, weeks or months troubleshooting systems.

The way apps get to cloud matters to end users

Migrating applications to the cloud is a necessary step in the modernization journey, but it isn't a technological panacea. To achieve the best results, applications must be optimized before migration and their performance continuously monitored afterward. In this way, cloud-based apps harness the power, scalability and efficiencies of modern cloud architectures.

For many organizations, the best solution often will be a hybrid environment of cloud and on-premises applications and data configured to optimize performance — and the user experience. Typically, moving to cloud will necessitate a reevaluation of an organization's on-premises operations. Upgrading one part of the system requires ensuring that related pieces are fully supported and capable of full interaction with allied components. Skipping this step can lead to difficult scenarios. The cloud, for example, may be operating well, but the backend, on-premises information it relies on to perform mission-critical functions is underperforming.

Such an outcome can create a drag on the entire business transaction lifecycle — and undercut the value of cloud-based applications. In our survey, 61% of respondents said "ease of use and deployment" drives their agency's interest in cloud-based services. About 40% of survey participants said "ease of management" and "better scalability" also were drivers (see Figure 5).


Figure 5: What is driving agency interest in cloud-based services?

- Ease & speed of deployment: **61%**
- Ease of mangement: **44%**
- Better scalability: **44%**
- Reduced costs: **37%**
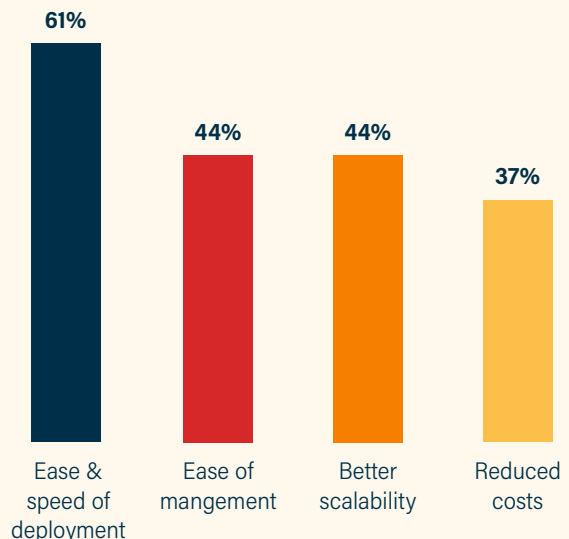
"I think we're really at a tipping point in the government space," Smith says. "How do we create an application environment to support the type of experience and application that citizen users want?"

Ultimately, it's the end user's experience that counts, according to survey participants. More than 70% of respondents said application performance is "very important" or "somewhat important" when evaluating CX, yet only about a third of respondents indicated that their agency's IT leaders regularly review application performance and other CX measures. Almost 40% said they didn't know how often their IT leaders did those reviews. Another 15% indicated that the reviews were done "only occasionally" (see Figures 6 and 7).

Figure 6: How important is application performance considered when evaluating CX?

21% I don't know
7% Little or not at all
18% Somewhat important
54% Very important
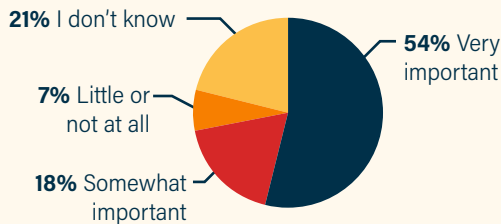
Figure 7: Do your agency's IT leaders regularly review application performance and other CX measures?

38% I don't know
15% No, rarely if ever
15% Only occasionally
35% Yes
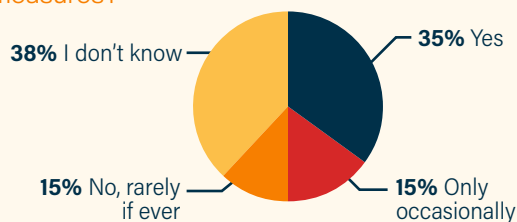
The seeming relative inattention to application performance and CX measures could reflect respondents' poor understanding of IT leaders' activities. Or it could indicate IT leaders' indecision about how best to monitor activities that directly affect CX.

When an organization has an application that is underperforming and compromising user experience, there is often a temptation among IT staff to meet the challenge with additional servers or backend infrastructure resources. It's an approach that in some cases amounts to an expensive Band-Aid. Enlarging system capacity can alleviate symptoms without improving the underlying problem. The cost of quick fixes includes buying and maintaining additional hardware or cloud instances — sometimes for much longer than the original problem.

Alternatively, IT teams can often save resources by considering the problem as part of an overall business transaction, fixing the application and making sure there are no errors that a hardware overprovisioning would offset. Having deep insight into the business transaction lifecycle makes it possible to get at and remediate the heart of systemic problems.

Customer experience rises on the agenda

CX is the benchmark for digital success.

The quality of the public's interactions with government will continue to emerge as a leading metric used by constituents and other stakeholders — agency workers, off-site case workers, business partners, et al. — to assess the effectiveness, value, and mission-worthiness of state and local government organizations.

For some organizations, CX has become the most important variable for calculating the value government agencies provide. To keep digital services running smoothly, they can turn to application monitoring, a smart technology that identifies and remediates problems in real time before they cause performance issues customers notice.

In worst-case scenarios, system failures compromise governments' ability to deliver services and accomplish missions. When that happens, the media and political fallout can be severe. This spring, as tens of millions of people filed for unemployment benefits, some states failed to efficiently process the unprecedented surge in claims.

One of the slowest states was Florida, according to watchdogs. Its unemployment portal has a history of crashes that started soon after its launch in 2013. At the time, state auditors identified multiple system failures that haven't been fixed years later. The result is a massive backup of unemployment claims in Florida — and the ignominy that comes with that distinction.

Illinois' system, built in 2010 to handle the Great Recession's unemployment crisis, also failed when new claims poured in this spring. Workers unable to submit applications for unemployment relief have turned up at state unemployment offices and harassed employees. Responding to criticism, Gov. J.B. Pritzker directly blamed outdated technology for the failure to process claims.

The need for digital transformation and better CX is clear to most people in government IT. Nearly half of respondents to our survey indicated that CX will become

more important in the next 18 months and only 2% said it will become less important (see Figure 8). What's more, 78% agreed that CX is an important or somewhat important priority when developing or updating digital services (see Figure 9).

Figure 8: How will the importance of CX at your agency change during the next 18 months?
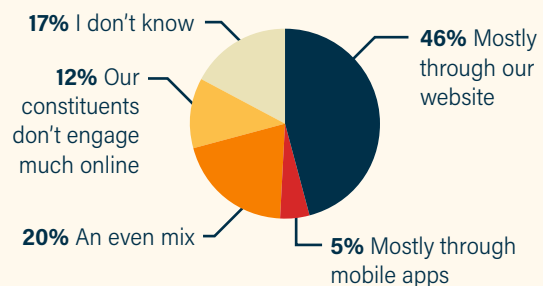
21% I don't know
2% It will become less important
31% It will stay the same
45% It will become more important
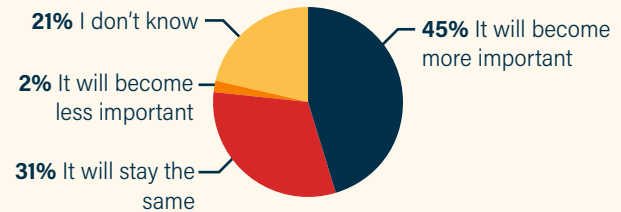
Figure 9: Does your agency consider CX an important priority when developing or updating digital services?

18% I don't know
5% No
31% Somewhat
47% Yes
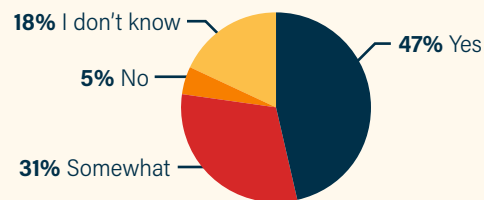
Survey participants also noted that about one in two constituents accesses digital services through a government website. By comparison, mobile access accounted for a fraction of the connections to digital services (see Figure 10).

Figure 10: Through what channels do your constituents access digital services?

17% I don't know
12% Our constituents don't engage much online
20% An even mix
46% Mostly through our website
5% Mostly through mobile apps

The spike in unemployment claims and the inability of many state agencies to process them reflect the dynamic nature of CX. It isn't transactional; it's relational, something that happens on multiple occasions, over time and amid changing circumstances. To deliver a satisfying CX, organizations must be nimble and responsive, qualities that require a high level of system awareness in real time.

"Being able to provide a digital experience is being magnified right now," says Smith of the pandemic and its effect on government. "I think that's going to allow government agencies to get over the hump and start thinking about themselves as digital service providers."

A user's digital experience with a government agency is akin to a journey. Along the way, the user will travel the system's architecture, accessing servers and databases and testing applications' ability to perform as expected.

To consistently perform at a high level, an agency's IT team must be able to walk with the user, see what's happening along the way, capture information, and create a baseline of behavior and performance.

Armed with a deep understanding of user behavior and system performance, the application and its managers will know when something changes, what it means and how to correct it before it causes a serious problem that degrades CX.

The application is the business. The customer is the mission.

Amid the ongoing initiative to achieve IT modernization and bring enterprises into the digital future, government organizations can occasionally lose sight of the most important goal: making government more effective. Modernization succeeds when it enables agencies to perform their missions better, supported by robust digital performance and the ability to quickly remove obstacles that hinder improvement.

Better business outcomes derive from optimizing applications and the business transaction lifecycle. The first step toward understanding complex business transactions is understanding what is happening today, from end user to data pooling, before changing architecture or developing a strategy for reaching digital goals. Without a clear picture of the current state — applications in your environment, dependencies and performance levels, for example — it's difficult to identify where to focus resources for making improvements. Fewer than one in five respondents indicated that their agency has total visibility into the performance of digital services

in real time. About one-third reported that they could identify and remediate performance problems in near-real time (see Figures 11 and 12).

Figure 11: To what extent is your agency able to track the performance of digital services in real time?

39% We have limited visibility

16% We have total visibility

46% We have some visibility
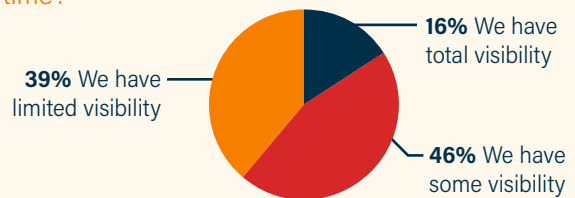
Figure 12: Is your IT team able to identify and address performance problems in near-real time?

26% I don't know

12% Rarely or not at all

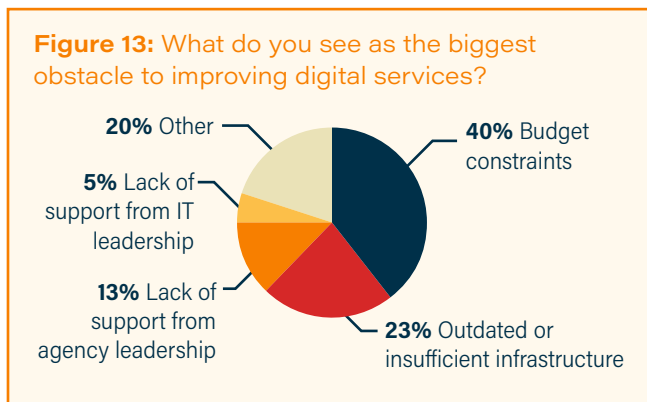36% Yes, most or all of the time

27% Some of the time
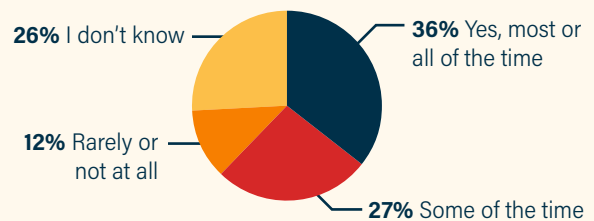
Essentially, agencies want to perform an MRI on applications and the way they interact with customers. Ideally, an organization undergoing such an analysis will get granular detail and deep insight into how performance fluctuates over time. At that point, IT leaders can begin using data to make precise, strategic decisions that will

improve CX and mission attainment. And as the user's journey changes, the IT team can recognize, capture and act on new data.

Dynamic baselining is the starting point that lets organizations shift from traditional management of IT business processes toward a nuanced, more granular way of optimizing the business transaction lifecycle. For government entities, there is an opportunity to become more efficient and effective by getting visibility into their current environments. Armed with credible data, they can optimize delivery of applications and CX.

An alternative approach to granular-level troubleshooting is to deal with challenges more broadly. In response to the COVID-19 pandemic, for example, some states have suggested adding new staff at contact centers that field the public's calls. In most cases, call takers access the same online systems and web interfaces that people can access at home. They process requests on the same systems, too.

Staffing contact centers can be another short-term and expensive solution that accomplishes little in the long run. Reflecting the necessity of efficient approaches, survey respondents reported that the biggest obstacle to improving digital services is budget constraints (see Figure 13).

Figure 13: What do you see as the biggest obstacle to improving digital services?

20% Other
5% Lack of support from IT leadership
13% Lack of support from agency leadership
40% Budget constraints
23% Outdated or insufficient infrastructure

A more financially prudent and targeted approach would be to invest in a web app that advances the user experience without incurring unnecessary costs. As CX improves, the volume of calls to contact centers declines. The user experience Amazon delivers virtually obviates the need for all but a relatively small number of calls to its customer help desk. The experience of shopping at the online retailer is so easy that most customers require no assistance.

Application performance and business performance are tied together to such an extent that they're becoming almost indistinguishable. Understanding the impact of the application on business metrics is critically important.

For a growing number of government organizations, constituents are accessing services online, whether they're applying for a permit or license, renewing a driver's license or vehicle tags, filing for unemployment benefits or other social services. "The application is becoming the business," Smith says. "Everything is done through the application."

How AppDynamics can help

The public expects government to deliver high-quality digital services comparable to those provided by the best online retailers. Eager to fulfill those expectations, state and local governments seek to modernize legacy systems, expand use of cloud resources and advance their organizations' digital transformations.

AppDynamics enables state and local governments to achieve those goals. Its monitoring and optimization solutions illuminate connections linking application performance, CX and agencies' missions. AppDynamics sees an application's entire business transaction lifecycle in real time and at a granular level, including interactions with nodes of an application's support infrastructure. This allows agencies to:

- Visualize the entire application architecture in real-time with detailed architectural Flow Maps.

- Monitor Each & Every Business Transaction through your critical application environment, to ensure optimal user performance and program outcomes.

- Be proactively alerted to critical application degradations, before end users are impacted or critical outages occur.

- Instantly pinpoint the root cause of issues with automated code-level diagnostics.

- Resolve Performance Issues Much Faster. AppDynamics typically reduces the Mean-Time-to-Resolution (MTTR) by ~70%.

Learn more at appdynamics.com/government.

Conclusion

Digital transformation of government is at a tipping point.

Modernization initiatives have hit their stride in recent years, with state and local governments adopting cloud services, doubling down on cybersecurity, making moves to extract value from government databases, and leveraging artificial intelligence, machine learning and other automated tools. In many places, the infrastructure of modernization is largely in place.

At the same time, legacy systems continue to impede modernization goals, financially and programmatically. Most worrisome, the user experience of people who access digital services on government sites continues to lag.

That's why agencies are looking closely at the business transaction lifecycle of applications themselves. Agencies are beginning to understand that applications largely determine the quality of CX and the attainment of mission goals.

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About AppDynamics

AppDynamics, part of Cisco, helps state and local governments proactively manage and optimize their applications' performance in real time to advance critical business and mission objectives. Consistently recognized by Gartner as an industry leader in APM, AppDynamics monitors the end-to-end performance of even the most complex, distributed applications in real time and delivers application mapping, dynamic baselining, and code-level diagnostics.

Learn more at appdynamics.com/government.

About GovLoop

GovLoop's mission is to inspire public sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to the public sector.

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