INNOVATION IN GOVERNMENT



To keep pace with today's digital citizens, agencies need a cohesive and sustainable strategy for delivering information and services to the public.



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4 KEYS TO TRANSFORMING CITIZEN ENGAGEMENT

VER THE LAST several years, the field of digital services has emerged as an essential aspect of much-needed efforts to transform how agencies provide information and services to the public. That need for transformation is being driven by public expectations. Digital citizens take it for granted that services will be available at any time, from any device, and through multiple channels. They expect those services to be user-centric, flexible and constantly evolving.

Ultimately, it's not about technology; it's about engagement. The challenge now is to build on that early work to develop a cohesive and sustainable approach to citizen engagement.

Here are some lessons learned during the last year that could help agencies shift their citizen engagement initiatives from experimentation to transformation.

1. Change the Procurement Culture

Citizen engagement requires a different mindset than traditional IT services. To move beyond those initial forays in digital services, agencies need to help their employees think in new ways about how they develop and deliver services—beginning with the procurement process.

The Defense Innovation Unit Experimental (DIUx) was launched to identify, procure and test innovative commercial technology. It's ultimately focused on resetting expectations for how long it takes to get contracts done. The mission of DIUx "is to do agile culture change," says Raj Shah, managing partner of DIUx, speaking earlier this year at the New America Foundation Future of War summit in Washington.

Tradition-bound contracting is a common obstacle, says David Wennergren, executive vice president for operations and technology at the Professional Services Council and former Deputy Assistant Secretary of Defense and Deputy CIO.

"Access to innovation is a top priority for federal tech leaders, yet speed and innovation rank low as priorities for federal contracting officials," Wennergren wrote in a recent column in FCW.

2. Ramp It Up

Most agencies have taken a measured approach to citizen engagement, developing proofs of concept and looking for small victories. No one can fault them for taking that approach. But experts say to see real payoff, agencies need to deepen their investments.

IT modernization should be at the top of the agenda. Too often, agencies are unable to take advantage of emerging solutions because of their aging IT infrastructure. "Digital solutions will fundamentally change the way agencies deliver services, if those agencies can accelerate digitization efforts, move off outdated legacy infrastructure and embrace mobile solutions and applications," Wennergren writes.

Some agencies have found it helpful to assemble a central team to support citizen engagement initiatives across the organization. The White House led the way by creating the U.S. Digital Service in August 2014, followed by the Pentagon launching the Defense Digital Service in November 2015.

Individual agencies and services have been spinning off their own teams, including both the Army and Air Force during the last year.

3. Question Conventional Wisdom

Beyond the rules and regulations that shape how agencies buy, manage and use IT, there are conventions about how things are done. Rules and regulations require compliance; conventions do not. That's something a growing number of agencies are coming to realize as they undertake citizen engagement initiatives.

Case in point: the "Hack the Pentagon" program. During this program, the Defense Department invited members of the public to identify potential security vulnerabilities in the department's public-facing websites. The program, overseen by the Defense Digital Service, turned up 138 actionable bugs. The Army followed suit late last year, which helped to identify 118 vulnerabilities.

Citizen engagement is also spurring an interest in DevOps and Agile, as agencies look to accelerate new services delivery. The Department of Homeland Security put its stake in the ground late last year by awarding contracts to 13 vendors under the \$1.5 billion Flexible Agile Support for the Homeland (FLASH) program.

4. But Don't Forget the Basics

Although citizen engagement demands new ways of thinking, some conventional wisdom—and existing rules and regulations—still apply. Among other concerns is the e-records

management mandate. Agency tweets and Facebook posts might not resemble traditional electronic records, but they count just the same. The National Archives and Records Administration has provided agencies with guidelines on managing social media, making it clear agencies will be held accountable.

Likewise, although agencies would do well to develop new processes and methodologies for delivering services, they shouldn't lose sight of old-fashioned IT management principles. Last September, the Government Accountability Office dinged the U.S. Digital Service and the General Services Administration's 18F for not developing adequate, outcome-oriented performance measures for their programs.

But such discussions of federal IT fundamentals should not be seen as obstacles intended to block progress. Instead, they are simply reminders that citizen engagement is a serious undertaking — one that is quickly becoming an essential aspect of government agency operations.



ENGAGE DIGITAL CITIZENS WITH DIGITAL SERVICES

Today's citizens have an entirely different set of expectations and demands from their interactions with government agencies than the previous generation. Being part of the digital age and being accustomed to instant seamless service from wherever they may be, on whatever device they choose, citizens must be engaged in today's digital world. That requires an arsenal of digital tools.



DIGITAL FORMS: Citizens' expectations have risen as their use of interactive technology has increased. No longer are static forms suitable for gathering information. Citizens are looking for interactive form templates that include prepopulated fields; while agency personnel are looking for digital templates that afford data analytics.



DIGITAL COMMUNICATIONS: Agencies need to inform and engage their citizens through a variety of digital means. Managing data and communications via an integrated platform can help agencies engage citizens and meet their needs and expectations.



DATA VISUALIZATION: Data drives business activities in this digital age. Agencies need to better serve their citizens with interactive self-service technology. By accurately and efficiently gathering data in a usable open format, that data becomes that much more valuable to the agency.



DATA ANALYSIS: Gathering, viewing and sharing data is important. But truly deriving value from that data requires detailed analysis. Examining data and presenting the findings and correlations via a single data management dashboard can help agency executives use that data to engage their citizens.



DIGITAL ID: Citizens and agencies alike need simple, accurate ways of ensuring a citizen is indeed who they claim to be, whether that individual is inquiring about tax information or applying for a driver's license. Automating identity management can help ensure seamless security and efficiency



COGNITIVE TECHNOLOGIES: Employing artificial intelligence (AI), digital assistants and other cognitive technologies is cutting edge, disruptive technology. At the leading edge of agency operations, cognitive technologies can automate manual processes to free up agency staff for higher level, more innovative operations.

THE NEW GOVERNMENT EXPERIENCE

New technologies such as digital services and data analytics are changing the face of agency interactions.



JOHN LANDWEHR VICE PRESIDENT AND PUBLIC SECTOR CTO, ADOBE SYSTEMS INCORPORATED

OVERNMENT AGENCIES have made considerable progress in recent years to provide improved digital experiences for the people they serve. From digitized forms to real-time travel updates, a variety of agencies have implemented citizen-centric technologies to modernize the way they provide information and services to the public. Yet citizens' growing expectations for digital government interactions – available at any time, from anywhere, from any device – continue to drive the need for all government agencies to transform their means of digital citizen engagement.

As found in our Adobe Digital Government Survey last year, citizens feel that government digital services are years behind private sector services. It's no wonder that citizens sense this immense gap, when 92 percent of U.S. federal government websites have been found to be lacking when measured against basic standards for speed, mobile-friendliness, security and accessibility. The private sector model for customer engagement sets a good benchmark for agencies to work toward to close this gap, particularly in terms of accessibility and efficiency of online tools.

Leveraging technology already being used across the private sector, agencies can adapt to keep up with evolving citizen needs. A balance between off-the-shelf commercial tools and custom integration is key for efficiently and successfully achieving government missions. Agencies can innovate by leveraging open standards and tools such as Adobe's Digital Design Templates for Government, an open source package that enables public sector website managers to quickly deploy U.S. Digital Service and 18F draft U.S. Web Design Standards.

Agencies also have a huge opportunity to improve citizen engagement by employing analytics. Just as the private sector uses analytics to provide consumers with easier

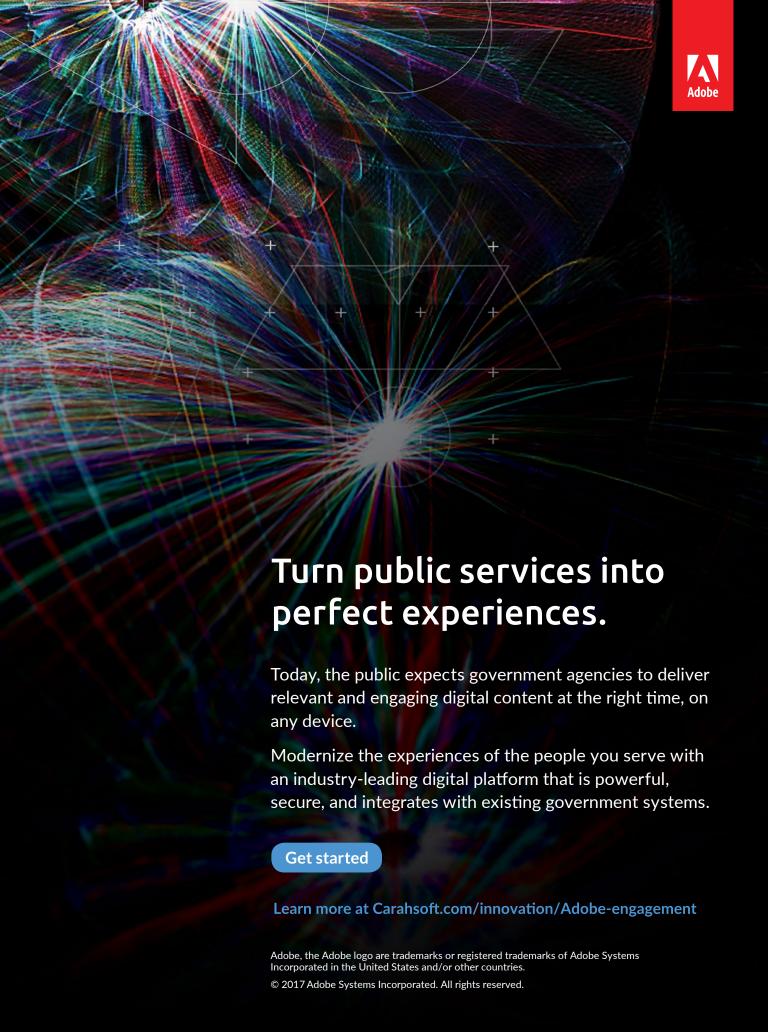
access to pages that are most relevant to their needs, government agencies can minimize the number of clicks that it takes for a user of government services to access the information they need. Agencies can also provide digital, prepopulated forms, not just for the enhanced, convenient, streamlined experience they provide, but also to minimize risk of errors in forms and to increase the likelihood that forms will be fully completed.

Alongside these types of technical updates that government agencies can make, cultural and operational changes within agencies would go a long way toward improving digital offerings. For example, incentivizing agencies to maintain modernized digital tools, and establishing resources for agencies that fall behind in their ability to meet certain standards for online tools, would spur agencies to prioritize online citizen experiences. From a policy standpoint, passing the Modernizing Government Technology Act would also be an important step in updating U.S. federal IT systems and ensuring that agencies dedicate resources appropriately to better meet public needs.

While there should be available means of interacting with government agencies via phone or in person to ensure accessibility for all users of government services, agencies should take into account that the average online digital transaction costs about 10 cents, while an in-person transaction may cost \$35 or more. Looking at the longer-term cost benefits, day-to-day efficiencies and quality of experience, combined with citizens' growing preference for digital government interactions, it's clear where agencies should focus.

The technology for better digital engagement is already here. Let's put it to work for everyone who uses government services.

John Landwehr is Vice President and Public Sector CTO at Adobe Systems Incorporated.



THE AI REVOLUTION

Cognitive technology can enhance citizen services and unleash employees' creativity.



BOB BECK VICE PRESIDENT AND GENERAL MANAGER, IPSOFT GOVERNMENT SOLUTIONS

ITIZENS EXPECT government services to be delivered like those in retail — fast, easy, convenient. With artificial intelligence and cognitive technologies, governments are able to deliver fast, easy, convenient services without having to change all their back-end systems.

Computational speed, machine learning and natural user interfaces have advanced to the point where computers can do jobs previously only done by humans. This means government agencies can redeploy current human resources and dedicate them to higher-value tasks.

Widespread use of artificial intelligence in government is both imminent and inevitable. And that's good news for citizen engagement. Artificial intelligence can make citizens' self-services much more powerful. Finding the right information with just one click on a government website can be a challenge. Too often people abandon their search and call in to a help desk, which takes longer and is more labor intensive. If agencies use cognitive technologies to support their website's primary interface, people can simply tell a virtual customer assistant what they need, and that assistant will help them.

The typical person can handle maybe two or three activities in parallel. A virtual cognitive assistant can handle hundreds of simultaneous engagements with citizens and do so on a 24/7, 365-day basis. Automating routine tasks with these virtual assistants increases the government's effectiveness and frees up employees for more creative, complex tasks.

Beyond increasing efficiency, cognitive technology will help agencies introduce new services that were previously not feasible. Indeed, imagination is the only limitation in terms of the ways artificial intelligence can transform the citizen experience.

That is particularly relevant in the current government environment. Agency and citizen needs continue to grow as government

agencies face budget constraints. By embracing automation, agencies can redefine the cost-and-quality equation they offer citizens.

In the future, government agencies and contractors will form a digital workforce that balances human and virtual employees. However, artificial intelligence is a highly disruptive technology. Its introduction into government agencies will likely raise some concerns among employees. Agencies should stress the fact that artificial intelligence tools will unleash the potential for human creativity by redirecting employees from low-level, repetitive tasks to higher-value work.

To successfully prepare for the shift, agencies need to rethink how they deliver their services. They must rethink how they teach and train employees so people can step into higher-value roles where creativity, innovation and curiosity reign. In much the same way that machines transformed manufacturing and agriculture during the Industrial Revolution, artificial intelligence technology will elevate people's roles and free them to focus on more creative endeavors and innovation.

Artificial intelligence and digital labor technologies are game changers. Implemented properly, those and other new technologies, such as big-data analysis, can empower citizens to find the right services and make use of them much faster and cost-effectively. Such tools can also help agencies quickly identify customer needs and respond in a more cost-efficient manner. For humans to do the same thing would require three daily shifts, and the cost would be beyond most agency budgets.

Digital assistants can provide citizens with fast, easy and convenient access to information specific to their needs. Every government agency, department or bureau can benefit from embracing artificial intelligence, both internally and externally.

Bob Beck is Vice President and General Manager of IPsoft Government Solutions.



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NEW SOLUTIONS TO OLD PROBLEMS

With the public's help, agencies can revitalize their approach to tackling challenges.



SEAN BROPHY
REGIONAL VICE PRESIDENT
OF PUBLIC SECTOR SALES,
TABLEAU SOFTWARE

HE GOVERNMENT is now light-years ahead of where it used to be in recognizing the value of data as an asset and embracing the importance of citizen engagement. Agencies have come to realize that by asking for the public's help, they are bound to find new and interesting ways to solve problems they haven't been able to solve before.

Clearly, the old way of doing things doesn't generate results. PDFs of static reports — or worse yet, XML data files — are not engaging. Citizens might be able to answer one or two basic questions based on a static document. However, interactive, self-service technology evolved from the realization that magic happens in that second, third or fourth layer of questions. When we allow the general public to ask those questions, they can truly become change agents.

There is tremendous value in specialistoriented hackathons and approaches that do not require participants to have a particular skill set. For instance, you don't have to understand the analytics behind an infographic in USA Today to grasp the story it's telling. It's so intuitive readers can easily glean a lot of information.

Agencies can take that same concept and put it into something more interactive. To succeed, they must keep in mind that data should be:

- ► Accessible: Can people easily find the data, or is it buried someplace on a website? And once people find it, is it in a format they can actually use?
- ► Engaging: The information should spark an interest or encourage creative thinking. Topics that affect people's daily lives such as health care, education, transportation, and family and child care tend to generate more feedback and interactivity.
- ► Intuitive: The dataset should not require people to follow a complex set of instructions or have a deep underlying knowledge of the

topic. When we design for the analytic-minded individual, we're missing an opportunity to engage more citizens on a more frequent basis.

For example, officials at the State of Ohio created an interactive budget portal to help interested citizens easily understand how the state is spending its money. By doing so, officials have given citizens the ability to start with a high-level question and hone in on an answer as their findings lead them to more specific questions.

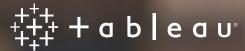
None of that interactivity can happen, though, if agencies are holding onto outdated policies, legacy technology and warring opinions on data access. Agencies must strive for a culture that fosters collaboration and trust between the business and IT teams.

Likewise, industry partnerships should be based on collaboration and trust. Agencies should seek out companies that are conducting research and development around data and analytics because those providers are driving innovation.

Government agencies should also not forget to tap resources closer to home. In these budget-constrained times, employees are a powerful, often overlooked resource. Some of them fell into roles as data scientists or analysts because they were curious and passionate about a topic. Agencies should make the most of those employees' energy and motivation. Their efforts can contribute to timely service delivery and better outcomes.

Digital engagement offers important opportunities for agencies and citizens alike. Ultimately, open portals, bidirectional communication and sharing ideas will lead to policy recommendations, program improvements and a better overall experience for citizens and employees.

Sean Brophy is Regional Vice President of Public Sector Sales at Tableau Software.



Partnering to serve the people who serve The People



STRATEGIC CUSTOMER SERVICE

Citizen engagement is at the heart of agencies' overall mission success.



NATALIE FEDIE VICE PRESIDENT OF CUSTOMER SUCCESS, GRANICUS

OVERNMENT AGENCIES are realizing citizen engagement is essential to their ability to achieve their larger goals and objectives. Fortunately, that realization comes at a time when the technology is becoming more sophisticated and automated. The ability to measure success in those areas continues to evolve.

To have the most impact, officials should align their digital engagement initiatives with their agency's strategic priorities. And this process must involve anyone who's responsible for citizen engagement at the agency, including the communications team.

Whether agencies are just starting out with digital engagement or want to increase their efforts, they must first define their desired outcomes and then identify the relevant audiences. They also need to ensure they have the right tools to reach that audience and the skills to use them. Software as a Service and other cloud-based technologies help agencies test new tools without committing to a huge procurement. They require less effort to implement. Finally, agencies should use data to measure their success and report on that success.

All About the Journey

Successful engagement starts with mapping the citizen journey. That involves identifying all the ways citizens interact with an agency or service. The first part of the journey might be a visit to the agency's website or office to receive information about a program or service. It also includes ways the agency reaches out to citizens through traditional media. The goal is to map the journey from beginning to end and determine the type of experience you want citizens to have.

Complex internal workflows often result in frustrating processes for citizens. So once an agency has mapped its customer journey, it must streamline its back-end workflows to enhance collaboration and improve the citizen experience. Agency employees need to think outside their

own offices and agencies. Providing services in a customer-focused way often involves centralizing information by subject area so people can access a service without having to first know the government entity from which it is offered.

Identifying opportunities to cross-promote initiatives or events can be especially important when it comes to collaborating on educational awareness projects. For example, if an agency's mission is to combat human trafficking, it should ensure it's working with other agencies to reach potential stakeholders. Once again, the process involves identifying the audience and thinking about where and how that audience interacts with government services.

Many of these activities represent a new undertaking for agencies, but they don't have to go it alone. The government has a wealth of online resources for networking and sharing best practices. Agencies should encourage their employees to take advantage of them.

Many agencies also provide educational webinars and user groups to assemble employees working in the same field. In the private sector, those types of groups compete against one another for an audience, but government agencies thrive when they share experiences and ideas. Indeed, the more agencies collaborate, the more efficient they can be.

Furthermore, enterprise software systems that can scale and integrate with other systems give agencies the ability to share data with one another and further improve the customer's experience. As budgets tighten and priorities evolve, the public sector is becoming increasingly results-oriented. Citizen engagement offers unparalleled opportunities to measure and improve outcomes and help agencies achieve their strategic goals.

Natalie Fedie is Vice President of Customer Success at Granicus.



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EARNING PUBLIC TRUST IN THE EXPERIENCE ECONOMY

Better service delivery hinges on truly understanding citizen experiences with government.



TREVOR DELEW HEAD OF FEDERAL, QUALTRICS



BOBBIE BROWNINGCHIEF FEDERAL STRATEGIST,
QUALTRICS

HINK ABOUT the world's most successful companies like Apple, Amazon, Airbnb, and JetBlue, and think about their loyal customer bases. What sets them apart?

These organizations have closed the "Experience Gap" that few organizations even know exists. The Experience Gap is a rift between the superior experiences executives *think* their brand is providing and the reality of customer ambivalence or dissatisfaction. Market leaders thrive because they *know* they provide consumers with delightful products, branding, and employee interactions, culminating in exemplary consumer experiences. They have earned their customers' trust.

It's no secret that federal agencies have fallen short of cultivating experiences that rival those of the private sector – consumers accustomed to one-click ordering do not take kindly to passport wait times, confusing websites, and black box application processes. However, goals to improve critical public services need not feel out of reach.

Public Perception and Feedback

Knowing how the public perceives your agency is key to correctly interpreting citizen feedback. Just as Coca-Cola invests in its brand to impact the bottom line, so too, should agencies recognize the role their reputation plays in mission achievement.

In recent years, agencies have significantly bolstered their intent and infrastructure for collecting feedback from the public, most often by way of survey (a cost-efficient medium for millions of two-way conversations). Citizen and employee satisfaction benchmarks are two such improvements. While they are a step in the right direction, asking, "are you satisfied" is only half of the question. Every time someone interacts with the government, it's essential to understand in that moment whether or

not they were successful. What specifically hindered success – and if successful, which experiences fell short? How are these shortcomings correlated?

Agency Experience Data

These questions can only be answered at the enterprise level, after aggregating data about agency reputation, services, employee engagement, and overall citizen experience.

This is difficult for our government because agencies do not have access to an enterprise Experience Management Platform™ that provides a single source of truth for all experience information contextualized by operational evidence of improvement.

Furthermore, gathering and analyzing this data needs to happen quickly, which rarely happens due to cumbersome and fragmented systems.

Taking corrective action on months old data – as agencies often do – is akin to buying tickets for a ship that has already sailed.

Citizen Experiences

Prioritizing citizen experiences is particularly important as budgets are reduced, and many agencies will face difficult choices about where to allocate limited resources. Marrying stores of existing operational data to new experiential data will offer a transparent view of which agency initiatives contribute most to the mission. Agencies can fund programs that deliver, and cut those that don't. Effective measurement is the only way to ensure investments in critical services will have the intended yield.

Consistently engaged citizens will drive positive change within your agency. The power to succeed lies in having real-time access to what they are experiencing.

Trevor DeLew is Head of Federal and Bobbie Browning is Chief Federal Strategist, Qualtrics.



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INTRODUCING



TRANSFORMING INDIVIDUALS' LIVES

Automation, single IDs and millennials can revolutionize the delivery of government services.



MARY LOU PREVOST VICE PRESIDENT OF STATE AND LOCAL GOVERNMENT AND EDUCATION, CA TECHNOLOGIES

HERE IS a fundamental shift underway to deliver government services on mobile devices. Individuals in many states can now access government benefits from their smartphones and see all the programs for which they're eligible, personalized in a single dashboard. Some states are working to deliver social services on mobile devices with access to truancy records, health visits and status of the benefits for which they are eligible.

The linchpin to all these efforts is a single citizen ID across all of the services the state delivers. This approach can help ensure when foster children are moved from one county to another, for example, their medical records follow them so tests and procedures are not needlessly redone.

Having unique identifiers statewide can also reduce fraud. Many services are state-run, but county-administered. Without a single ID, people can apply for the same benefits in multiple counties. In other words, single IDs combined with automation can increase efficiency, reduce costs and create a stronger safety net for the individuals who need it most.

A single ID, when combined with advanced authentication and privileged-access management, protects citizen data from both internal and external threats. When agencies need to share citizen data electronically, having a robust API gateway provides privacy controls without the cost of creating a data warehouse. As an example of data sharing, a state's child welfare application could access the DMV photos for identity proofing while using an API gateway to secure the interaction. This model scales to allow inter-agency information sharing while automatically redacting data which is private.

Instead of building massive, monolithic applications, agencies can develop and deploy new services faster than ever using agile methodology. That also helps agencies "fail fast," so they can shift to another path if necessary. However, it

also means changing procurement rules that currently favor waterfall development and fixed bids.

Any application can have multiple stakeholders, so agencies will need to break down the internal walls between operations. And even though agencies are moving more services to the cloud, some components will remain on premises. The only way to manage all those components is by blurring the lines between activities.

Another key to successful citizen engagement is to put individuals in control by employing a diverse workforce. As states try new approaches to attract younger workers, jobs in digital government can offer transformative career opportunities that are attractive to millenial workers seeking greater purpose and meaning in their work.

The Future Workforce

Officials know millennials might not commit to a lifelong career in government, however, if agencies can capture some of that energy for a while, everyone benefits.

In many states, 50 percent of the IT workforce is eligible to retire. That represents a huge opportunity for millennials to come in and move up quickly. As states are actively modernizing the way services are delivered, the government can entice the very millennial innovators it needs to transform its culture and the lives of the people it serves.

To get started, states can follow **the example** at the State of Louisiana by creating a digital identity foundation for individual services that multiple agencies can use.

Mary Lou Prevost is Vice President of State and Local Government and Education at CA Technologies.

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Executive Viewpoint

A CONVERSATION WITH RICK DELAPPE

DeLappe discusses how Recreation.gov continues to transform itself to meet ever-changing user needs.



RICK DELAPPE PROGRAM MANAGER, RECREATION.GOV

How has the field of digital services evolved since the launch of Recreation.gov?

Obviously, technology has evolved significantly since the early 2000s. We didn't even have smartphones then, so we weren't thinking of things like apps and all the tools now available through tablets and phones. Back then, government had the mindset that we had to figure out what we were going to deliver to the public and what they would need from a digital experience.

Now we're much more focused on finding out from the public what they want and what they need, instead of us trying to decide for them. So a significant change in the delivery of digital services is first looking at it from a different perspective.

How is Recreation.gov changing to meet new user expectations?

We've had a long-term contract with a provider of reservation services and trip planning, which is what you see on Recreation.gov today. That contract is nearing its end, so we've had to develop a new request for proposals to get a service provider to deliver reservation services and all the associated trip planning. That RFP really took a different shape from the original to incorporate tenets from the U.S. Digital Service's playbook, such

as focusing on user experience, more open and sharable data, and a variety of new technology that supports what people expect today.

The first playbook tenet is we will strive to understand what people need first. We'll do that through a number of forums and approaches, considering things like focus groups, on-site user testing, user observation and continuous feedback. As we evolve through this development process, we will learn a lot. We'll also be able to incorporate new things we learn along the way.

What do you see as the keys to effective online engagement?

We've always accepted user feedback through online surveys and open-ended comments. We recently added facility ratings and reviews. We listen to calls coming into our call center and provide feedback to the agents to continually improve those interactions. We closely look at customer satisfaction surveys and see how we can continue to improve. We get feedback through e-mail and social media, along with analytics on how the site is performing. We'll continue to do all those things and try to be a little more robust in that kind of customer engagement.

What we didn't have was an efficient or effective way to make changes in feedback response. It was challenging to respond in a

"Recreation.gov has the potential to be an interagency resource that doesn't take the place of the agency websites or information portals, but actually supports and complements them."

"User expectations change all the time; as does technology. We want to evolve along with it and keep pace."

quick and meaningful way. User expectations change all the time; as does technology. We want to evolve along with it and keep pace.

We want to move to an agile software development process, which will help us evolve the user experience more rapidly. When we receive feedback that needs to be addressed quickly, it'll be much easier to do that by inserting it into an upcoming sprint, instead of a year's planning process to develop the documentation and everything else needed to make changes.

What policy or governance issues are essential to address?

In terms of governance, we've been fortunate to have a strong leadership commitment to the program and to this approach. Our partner agencies have been very supportive of the work we have done and in developing the new contract we will be working on soon.

It's also critical for us to stay in sync with our fee programs. Reservation services are always generally attached to the fee programs of all our federal recreation partners in some way. Being aware of their needs and requirements is essential in delivering a system that complies with their policies and procedures and helps them manage their programs.

Also, we want to do our best to remain aligned with the USDS playbook. That addresses the entire digital experience and the management of programs like this. When the playbook came out, I read through it then read through it again. We were looking for advice in a lot of those areas, so I was very happy to see this helpful tool. It also led to direct personal engagement with folks from the USDS and the General Services Administration's 18F program. It was helpful to have that kind of expertise involved in writing requirements and evolving our vision.

What are the most challenging aspects of delivering services online?

Where we might have campgrounds managed by the U.S. Army Corps of Engineers, Forest Service, Bureau of Land Management, and the National Park Service, the business rules supporting those services are similar. In more complex areas such as permitting, the rules, regulations, policies and management decisions for how they provide natural resource and visitor protection evolve on separate paths.

To support those policies and regulations, we have to design custom software. Often, the software can't be repurposed because it's unique to that one location. For example, one of our partners manages river access in Oregon. The river flows through federal land and state land and is adjacent to tribal land. There's a lot of interest from commercial outfitters that support recreation on the river. Their management plan is like nothing I've ever seen. They have a custom solution that works for them, but so far, we've had no opportunities to repurpose the custom development elsewhere.

The challenge in delivering services is meeting the unique needs of so many places. There are a lot of good reasons they have unique needs. They evolve out of local circumstances, and they're often built with the community. They're not decisions a land manager and agency can just change overnight.

By using a more flexible, configurable and agile approach in developing a new platform, we hope to support a much broader range of individual needs without complete redevelopment and extend our support services to more programs within our partner agencies.

What is your vision for the future of Recreation.gov?

Recreation.gov is the place where people can get excited about their next vacation. We hope our content inspires visitors to explore America's public lands and waters. And most importantly, our service makes it easy and fun to plan their adventures. To achieve this, we must understand what people want and expect in a trip planning tool.

Recreation.gov has the potential to be an interagency resource that doesn't take the place of the agency websites or information portals, but actually supports and complements them. We're committed to open data and sharing as much as possible through an API-centric architecture to let the system ingest a variety of data from different sources and share data so we can meet people where they are. If you want to reserve a campsite and you're on Facebook, there's a way of integrating that so people don't have to go to more than one website.

Almost everything we do these days with our phones, tablets and computers ties into "where is it?" and "how do I get there?" So we definitely want robust search and advanced geospatial capabilities. Finally, information security will obviously be of the utmost importance. It always has been. We don't talk about it, but we're very much involved in making sure our customers are protected.