



THE FUTURE OF
**CITIZEN
ENGAGEMENT**

Five Trends Transforming Government

FOREWORD



Involving citizens with their government is nothing new. It's been conducted in one form or another since the dawn of democracy: citizens and their elected leaders have met in a variety of ways to exchange ideas and thoughts on policies, processes and more.

Until recently, however, this engagement happened in relatively few ways: Town hall meetings, printed fliers, telephone calls and in-person discussions.

While those citizen engagement methods are still valid today, we all know the landscape of engagement has drastically changed.

The evolution of technology has radically disrupted citizen engagement, and it's often a struggle for agencies and government employees to keep up with the multitude of ways they can interact with the public. What do you need to be doing?

To help you keep pace with this evolving landscape, we've partnered with GovLoop to create this guide on the latest and greatest trends in citizen engagement.

It's imperative that government agencies be aware of all of the most recent and innovative possibilities, and be able to conduct digital citizen engagement easily and quickly. And we're committed to helping government agencies approach the future with bold confidence.

Craig P. Abod

President, Carahsoft Technology Corp.

CONTENTS

THE EVOLUTION OF CITIZEN ENGAGEMENT	THE RISE OF THE CHIEF CUSTOMER OFFICER
4	7
TRANSFORMING CITIZEN ENGAGEMENTS	8
TREND #1: THE CITIZEN AS A CUSTOMER	11
SET YOURSELF UP FOR SUCCESS: ADOBE'S 3 TIPS FOR CITIZEN ENGAGEMENT	12
TREND #2: MOBILITY OF GOVERNMENT SERVICES	15
MASTERING THE ART OF THE CITIZEN EXPERIENCE	TREND #4: CONNECTING PEOPLE & THE INTERNET OF THINGS
19	20
TREND #3: ENGAGING WITH OPEN DATA	24
CONCLUSION	
27	30
TREND #5: SECURING CITIZEN ENGAGEMENT	31
	ACKNOWLEDGMENTS



Introduction

THE EVOLUTION OF CITIZEN ENGAGEMENT

The way citizens interact with the government is changing faster than you can compose a tweet. This guide will dive into five of the most important citizen engagement trends that you need to know about.

Every year, citizen engagement seems to improve. New technologies are born; new innovations connect citizens with the government; new ideas start to take root.

It's 2015, and citizen engagement has gone far beyond basic social media and town halls. As we make our way through the 21st century, citizen engagement is continuing to evolve. New platforms and concepts such as geographic information systems (GIS), GitHub, open data, human-centered design and novel uses of social media have challenged the traditional notions of citizen engagement and pushed government into uncharted territories. As citizens become more tech-savvy, this growth is only continuing.

To discuss and learn more about the latest frontiers of citizen engagement, GovLoop surveyed 689 public-sector professionals about what they think are the latest trends in the field and how they are experimenting with those trends in their organizations.

Far and away, the survey respondents felt that "the citizen as a customer" was the No. 1 trend in 2015 for citizen engagement, with 70 percent citing it as the top issue they are seeing. Open data and better mobile apps/mobility were close behind.

Survey respondents also told us about a variety of projects they're working on that address these trends.

"As a County Manager my department is going to put the largest property data set online in just the next few weeks. In my other role as a Councilwoman our City is about to launch Open Data and merge our city's several apps into one."

"I am part of an open data team in my gov — and we are in the process of designing a civic engagement program for our city around open data. The design process is interesting in and of itself and includes: i) define business model, including identifying customers and partners; ii) ideate around engagement solutions, iii) oversee testing of selected solutions and iv) roll out initiatives."

"Our county developed a Mobile Voter Line Wait app that allows voters to scan a QR Code to see other polling locations with less of a line wait and route to a chosen location via mobile GIS."

"We are implementing a feature in our customer queuing and routing system that will ask for instant customer service feedback whenever a citizen waits in line for one of our permits/licenses."

This GovLoop guide will dive into five of the latest and newest trends in citizen engagement. From the customer experience to the Internet of Things, we'll highlight the most innovative ways federal, state and local governments are connecting with citizens.

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TRANSFORMING CITIZEN ENGAGEMENTS

An interview with Mark Bloom, Senior Director, Service Cloud, Salesforce

Citizen engagement is paramount. It improves access to fundamental services, increases transparency, and allows government to be more responsive to its residents. For further insights, we spoke with Mark Bloom, Senior Director of Service Cloud at Salesforce. He shared how the company is helping government drive citizen engagement.

Salesforce views customer experience as the “next big differentiator.” For government, the citizen is the customer, so engaging them is not just important, it’s essential.

“First of all, and most importantly, citizen engagement is a foundational aspect of democracy,” said Bloom. “It drives activism, participation, confidence in government, and insures a grasp of the issues that impact government at all levels.”

To drive this engagement, the public sector is taking a page from the private sector playbook and turning to technology to connect citizens in brand new ways.

“Citizens need access to information or services in the way that’s most accessible to them. If we rewound to say 10 years ago or 20 years ago, that access was basically in written form or the phone,” said Bloom. “In our current environment, however, citizens want access to benefits and services on their mobile phone and through social networks.”

Accessibility and flexibility reduces the effort needed for citizens to engage with their government, which provides a greater level of access to services. Such engagement also drives government transparency, which Bloom calls the “new currency for governments.”

Transparency requires a flow of information and feedback between government and its constituents. “Salesforce and Service Cloud provides the ability for citizens to communicate through channels they’re most comfortable with, or ones that provide the quickest avenue to resolving their concerns,” said Bloom.

The Service Cloud, a market-leading application for customer service and engagement according to Gartner, drives transparency by enabling government to listen and respond to citizens in real time.

“More importantly, these technologies provide the ability to respond and solve for the concerns and questions of constituents,” said Bloom. “So, the communication doesn’t just flow one way.”

Data is also critical in meeting the needs of citizens. By increasing the number of data inputs, government begins to build measurable history. This information can be used to identify common patterns, understand the drivers behind those patterns, develop new services that demonstrate actionable innovation, and improve customer engagement in data-driven ways.

“This is especially true if we’re able to employ the right data, and context,” Bloom said. “It lets us know who a citizen is, where they’re connecting from, and what’s needed to resolve their problem.”

This kind of data-driven strategy helps government respond faster to questions, solve systemic problems, and mitigate future issues. However, these strategies are not without their own set of challenges.

According to Bloom, the technology gap is the biggest barrier facing citizen engagement. “This

gap exists between the technologies that many agencies currently employ and the expectations and needs of their constituents,” said Bloom. “We see many organizations that are using platforms that were deployed decades ago. These legacy platforms aren’t mobile or social and weren’t designed to consider collaboration and community as a part of their solution. They aren’t responsive enough to meet the growing expectations of today’s citizen.”

However, Salesforce has helped organizations, both private and public, bridge this gap. For example, the City of Philadelphia utilizes the Salesforce One Platform and Service Cloud to power their 311 contact center. Agents in the center now have access to vital information that lets them promptly assist their citizens. And citizens are empowered by reporting graffiti or filing a noise complaint and seeing the change.

“The new Philly 311 has been revolutionary for the city. Folks can use Philly 311 however they choose, whether it be phone, email, Facebook, Twitter, or the 311 mobile app,” Bloom said. “This customer transformation is something that’s been going on in the commercial world for years, and we’re starting to see it really take off and provide results in the public sector.”

Today, Bloom sees an inflection point with cloud technologies that is transforming the nature of government work and the way government is engaging its citizens.

“At Salesforce,” Bloom stated, “we are excited about the growing number of public sector organizations that are turning the customer success platform of Salesforce into a citizen success platform.”



Perspective

THE RISE OF THE CHIEF CUSTOMER OFFICER

An Interview with GSA's
Phaedra Chrousos

Public expectations of government today are at an all-time high. In contrast, public perception of the government is near one of its lowest points ever. The crux of the issue? Citizens often find their interactions with government slow, muddled and unintuitive, and they expect the same experiences they get in the private sector.

Government is aware of this issue and officials are working on ways to improve the customer experience. One remedy that's appearing more frequently throughout government is the creation of a Chief Customer Officer (CCO) role.

To learn more about why this job is becoming more prominent, GovLoop interviewed Phaedra Chrousos, the General Services Administration's first CCO.

GovLoop: Why are Chief Customer Officers just now appearing in government when they've been in the private sector much longer?

Chrousos: I think it's been a trend in the private sector because you could see market share drop

if customers in the private sector are not happy. About a decade ago, companies started really listening to their customer, because they realized that the customer needs and desires were changing quickly and that was affecting their market share. But in the government, the customer's really captive, because where else can you go to get your passport or where else can you go to get certain services? There are no competitors. And because it's a captive audience, there is no market share indication to inspire you to look at the customer sentiment. So it's only in today's day and age that customers have a voice over social media. So now the sentiment is appearing and agencies are able to react to it.

GL: What has your experience at GSA been like?

Chrousos: What I did when I first came in is a deep dive to say, "What's going on here that's not making the customers happy? Where are the pain points and where are the levers we can push to make it better?" I came in, personally, with a misguided impression that culture was causing



these issues, but I was really happily surprised to see that it's absolutely not culture. GSA folks are really focused on the customer; they're very customer-centric as people. They've come to government in a very mission-driven way. So then I was wondering, if it's not culture, then what is it? And what I realized is that we haven't empowered our employees with information around the customer so that they can make really good data-driven decisions. So, the primary role of our customer team in the first six months was to do a really deep data dive into our customer program, so that we could employ our employees with data around the customer to help those interactions, and that's worked out very well.

GL: Do you have any advice or tips for agencies or local organizations to help them become more customer-centric?

Chrousos: The first thing to do is to get a good idea of who your customers are, whether it's through a user persona or journey map, whether

it's informed through surveys or interviews. Just get a scrappy team together to get a better idea of what you're looking for.

A journey map is basically a big visualization of a customer's emotional experience as they interact with you, and they are often informed by interviews. So, for example, for the Federal Acquisition Service, we did 150 interviews in about two and a half months where we talked to contracting officers across government about their acquisition experience with GSA. And then we bucketed those experiences along what their journey was like. So at first they think about what they need to buy, then they learn about how to buy it, then they buy it, then they have the experience with the vendor, and so on and so forth. And we literally map out the experience on the positive. Then you literally can see a visualization of the highs and low, and the lows and highs of an emotional journey. From there, you can pick the low-hanging fruit to help improve a customer's experience with you.

GL: What's next in your role as CCO at GSA?

Chrousos: I recently took on responsibility for a group in the Office of Citizen Services and Innovative Technologies (OCSIT) called 18F and through this group we're actually creating shared services that agencies can use to become more customer-centric. One thing we're developing is called the Federal Feedback Button. That's going to be a free shared service that any agency can use to collect data around customer sentiment, whether it's online or offline or over the phone. So we're trying to develop things, we're thinking of our own experience and saying, "OK, when we were starting out, what are the things we needed?" And if those things are scalable and good for government, we can offer them here at GSA. So that's one thing we're going to do — to try and scale this customer-centric movement across government faster.



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SET YOURSELF UP FOR SUCCESS: ADOBE'S 3 TIPS FOR CITIZEN ENGAGEMENT

An interview with Brian Paget, Technical Director of Content and Analytics, Adobe

Government agencies looking to improve their citizen engagement need to leverage high-tech platforms to better serve their external users. However, these platforms can't always be invented in-house, and government agencies often need to coordinate with big names in the tech industry to keep up with the private sector. In light of this fact, we sat down with Brian Paget, Technical Director of Public Sector at Adobe for his insight into IT development and what it means for citizen engagement.

According to Paget, the first thing a government agency needs to do is ask itself what the business problem is. This is a valuable piece of information that will shape the path of an agency's digital strategy for citizen engagement. Then, what is the goal in working to solve this business problem? According to Paget, it's useful to approach informed goal setting through the lens of the customer journey. If you build customer orientation into the objectives right from the start that will ensure that your customer experience is top-notch.

Additionally, focusing on the customer from the beginning helps make it a cohesive journey, rather than a disjointed process. "You need to look at how the customer or citizen engages in every point in that process, and solve that process in whole. It might be across different systems, but it will help to make that experience really unified, and solve the problem that you're trying to address," said Paget.

1. PRIORITIZE FUNCTIONALITY AND DURABILITY

In progressing down the line of achieving pre-ordained goals, it's important to prioritize developing IT systems that are durable and functional, rather than visually appealing. Pretty mobile

apps and platforms are great in that they're eye-catching, but they probably don't make sense in terms of efficiency, according to Paget.

"Oftentimes, what people are doing is they're taking something and making it look better, but they're not solving the underlying problem as to why it isn't up to date, or doesn't look as good as it could," he said.

Always err on the side of effectiveness and efficiency. "It's a little bit of art and a little bit of science, and to have those two things out of balance makes for an ineffective experience long-term," he explained.

2. MAKE DATA-DRIVEN DECISIONS

In revising your applications, it's important to rely on data when deciding how to improve. It's no longer acceptable to make important decisions based upon qualitative data or people's general sense of what's been going right and wrong.

To make data-driven decisions, you must set yourself up for success right from the beginning. In the original development, build in data measurement tools into the software, a process that Adobe specializes in.

Adobe develops platforms where you don't have to worry about scraping to find the data to guide your decisions. One of their main concerns in mobile development is "embedding analytics into mobile applications, so that you can understand how your applications are performing," said Paget. "Are they crashing? If they installed it, how often are they opening it? Are we losing people, or are we gaining them? ... That can help drive where you're going to go with the app, what you invest in it, and what changes you make."

When you plan for data capture right from the beginning, your data sets are a given. Then it becomes "less about collecting more data, and more about consolidating it, to get that single view of the customer across that journey," said Paget.

3. CONSOLIDATE MOBILITY

Adobe has a unique approach to mobile application development. There is no denying that applications will need to be constantly revised and improved – that's part of IT services. However, Adobe's services aim to ensure that making those changes are as painless as possible for government IT professionals.

First of all, Adobe consolidates mobile platforms, making everything easier by synthesizing iOS, Android, and Windows platforms in a unique, multi-pronged approach. "[Adobe] provides a platform that allows you to build an application one time and deploy it to those different devices. Right off the bat, it cuts down your development cost for cross-platform apps," explained Paget.

Adobe also makes the development of new apps as simple as possible by creating a template that can be replicated. These templates "allow business users to be able to click a button and create new versions of that app," said Paget. Basically, they've streamlined the entire process and made mobile app development a formulaic system.

By using Adobe systems that help ensure your success from the first stages of your efforts, your government agency will be on the path towards an effective strategy for citizen engagement.



Trend #1:

THE CITIZEN AS A CUSTOMER

Providing excellent services to citizens is at the core of most federal agencies' missions. But customer satisfaction with government services is low and declining. How can agencies design and deliver digital services to best meet their customers' needs?

Americans like to consume — there is no denying that. We're great customers. In our culture, we're encouraged to shop often, and heavily. To capitalize on these tendencies, big corporations have streamlined the customer experience to make shopping as easy and enjoyable as possible to encourage people to spend more, especially online. Online customer experiences have been so carefully perfected that the only barrier to shopping is, well, having the money.

As a result, Americans have come to expect the royal treatment as they interact with large organizations or companies. And this expectation has transferred to their dealings with the government, too. But how can the government keep up?

Often, citizens feel frustrated with the government customer experience. Mailing a box at the post office or changing your address, for instance, can be harrowing tasks. Compared to the cushy treatment American consumers receive from large companies such as Uber or Amazon, government-related transactions can seem especially vexing.

To make things easier, government agencies are focusing on providing great customer service. And more and more, that means enabling customers (citizens) to interact with the government online. Which also means that the government must make websites very user-friendly.

However, it's certainly hard for the government to compete with the private sector. Funding is always a strained resource in government, but the private sector has much more capital with which to innovate, experiment and provide cutting-edge customer experiences.

A big focus for governments that want to make the customer experience better is to make the design human-centric, or focused on the user, not the provider. Government officials need to put themselves in the shoes of the user because what seems obvious to a federal employee is not always so apparent to the average American citizen.

To promote this new approach, more federal and local governments are naming CCOs. The private sector has been hiring CCOs solely to

ensure the customer experience is as good as possible for some time, and now the public sector is catching up. There are currently only four federal CCOs, but that number is expected to increase, and it's a good deal higher in state and local government organizations.

With Americans' new demand for perfect customer service, the government has to step up to the bat and deliver a seamless consumer experience. Now, let's take a look at a few examples of how the government has innovated to meet those demands.



CASE STUDY #1: TSA PRECHECK

A Transportation Security Administration (TSA) program has worked to prioritize the customer experience of airport security. The PreCheck program, rolled out in 2011 and made more widely available in 2013, now has more than 1 million users. Despite minor setbacks, it's been a popular initiative that has made airline travel less painful for frequent flyers.

Waiting in line at security can be brutal and can sometimes even cause you to miss your flight due to long delays. TSA developed a program that allows frequent travelers to apply for special clearance that gets them through security checkpoints much faster. For a fee, customers get clearance that lasts for five years. They must apply in person at an application center and be fingerprinted. For many travelers, it's worth the one-time hassle.

The program shortens the airport security screening process by having a designated track for PreCheck travelers and not requiring them to remove their shoes, jackets, laptops, etc. When PreCheck customers arrive at the security checkpoint, they can proceed to their gates rapidly, saving time and energy.

In some ways, it's like a loyalty or VIP program in the private sector. TSA PreCheck is somewhat akin to My Starbucks Rewards — invest a little, receive better service. Truly, the government is trying to make its patrons feel special and taken care of.

CASE STUDY #2: IMPROVING THE EDUCATION DEPARTMENT'S APPLICATION EXPERIENCE

Based on 2014 findings from the Center for Plain Language, the Education Department is one of the worst agencies in terms of communicating in clear language with its customers.

One of Education's most customer-facing portals is the application for education funding. Applying for scholarships is already a confusing, nitpicky task, but the department's clunky language was preventing applicants from successfully applying for and receiving funding.

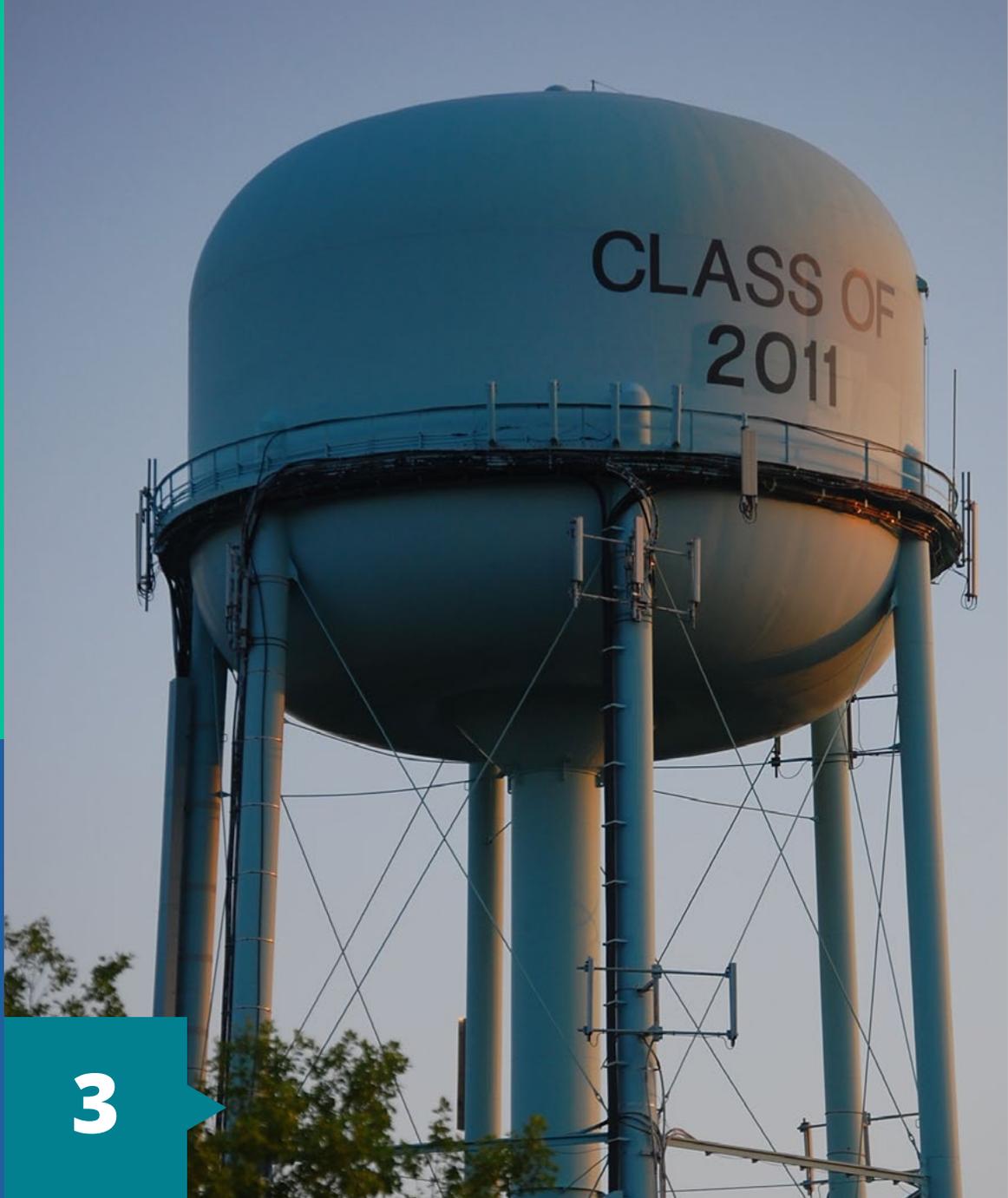
So, as detailed in this DigitalGov.gov case study, Education officials decided to do a little reworking and rewording of the application portal to make it more user-friendly and customer-centric. After all, not all students have the same technical vocabulary that a department employee would have.

So, what did they change? First, they reorganized the website's arrangement based on what people would likely look for first and with greatest priority. That was generally the "How To Apply" link, so they put that right at the top. The "How To Apply" page gives customers the exact steps in the application procedure that they need to take.

For the application itself, they improved the language with a focus on plain-language techniques (e.g., active voice, simple words and shorter sentences). They found that this drastically decreased the number of inquiries and troubleshooting contact requests they received.

Additionally, they consolidated the site with Grants.gov, because previously, an applicant needed to maneuver between the two sites during the application process, which was tricky and cumbersome. The merger expedited the application process and much improved the customer experience.

So post-facelift, users could more easily access the application for scholarships and funding for education. The challenge in applying for an education grant shouldn't be in understanding the application. It should be in qualifying for government money for your education.



3

CASE STUDY #3: HELPING CARY, N.C., CUSTOMERS SAVE WATER

We should all be cutting back on our water consumption for environmental reasons, but it has the added benefit of saving money. Monthly water bills are notoriously difficult to understand or predict. To encourage customers to reduce their water consumption and to keep them up-to-date on how much they've been using, the town of Cary, N.C., set up a revolutionary new customer experience for water services, called Aquastar.

As reported in this GovExec article, the Aquastar program uses long-life, battery-operated meters to collect hourly data and immediately relay it

back to an online customer website. That way, customers can track how much they're consuming, monitor for sudden spikes and make sure they don't have any unnoticed leaks. The website is also tied to a mobile system that will alert customers to any significant changes in their consumption rates.

If officials notice a particularly damaging spike, they'll either alert the customer or send someone to check on the situation. They've been able to spare customers — and the environment — the burden of mistakes such as accidentally leaving the garden hose on all day.

As a result of this program, Cary has found a significant drop in customer calls about their water bills. Customers used the online system to stay

informed throughout the month, instead of being dumped with the total once or twice a month. Additionally, if a bill is higher than usual, customers can see exactly what time the heavy water usage happened, which helps clue them into the cause of the increase.

In addition to improving the customer experience and conserving water, Aquastar has been saving Cary vast sums of money. The city has been able to reduce sewer costs and personnel because this water system requires less in-person measuring and maintenance. It's an incredibly revolutionary system, and it's helped Cary save money, time and the environment.



Trend #2:

MOBILITY OF GOVERNMENT SERVICES

Mobility is no longer just about getting e-mail on your phone. You can do everything from request a permit to tag a pothole for repair. Plenty of mobile apps and sites for citizen engagement have been around for a while — but the next generation is delivering even better service.

There are few things in life we can't live without. Food and water are givens. But not too far behind these basic necessities is a manmade creation that many people swear they need to survive: the smartphone.

For 46 percent of Americans, these powerful, handheld devices are essential to their lives and something "they couldn't live without," according to a recent Pew Research Center report. Although this degree of smartphone dependency seems trivial, these devices do put the Internet at our fingertips and have been used to save lives.

Today, 64 percent of American adults own a smartphone, up from 35 percent in 2011. And people aren't using their smartphones to just make calls, send text messages and update their social media accounts. They're using them to track their health, receive emergency alerts, and virtually connect with friends, family and coworkers. Additionally, some 40 percent of Americans use their

smartphones to look up government services or information — and agencies are taking notice.

The 2012 Digital Government Strategy required agencies to optimize at least two priority, customer-facing services for mobile use and publish a plan for improving other existing services. "New expectations require the federal government to be ready to deliver and receive digital information and services anytime, anywhere and on any device," the strategy acknowledged.

Four years ago, agencies weren't heavily focused on launching mobile-friendly websites, but that's not the case anymore, said Jacob Parcell, Manager of Mobile Programs within GSA's OCSIT. Agencies have "gone from, 'I just want to build an app,' to a very strategic way of thinking about mobile citizen services," Parcell said.

What began as a modest repository of about 15 citizen mobile apps in 2010 has grown to a gallery

of more than 250 federal apps and mobile sites with endless capabilities. With these apps, citizens can submit claims of housing discrimination to the Department of Housing and Urban Development, access self-assessments for post-traumatic stress disorder, and view the safety performance of motor coach and bus companies.

The National Association of State Chief Information Officers (NASCIO) launched a State Mobile Apps Catalog in 2013 with more than 160 native mobile apps. Many of them focus on location-based services, but those capabilities are expected to evolve.

"Today the majority of the apps are finding aids or spatial apps," Doug Robinson, Executive Director of NASCIO, told TucsonSentinel.com. "They are 'Where can I find farmers markets in Delaware?' But I think we're going to see more and more complex business transactions broadening the discovery of state services."



CASE STUDY #1: DENVER BRINGS GOVERNMENT SERVICES TO YOUR POCKET

Navigating government websites can be a daunting task, especially if you're not sure where to go. Many cities instruct citizens to call their 311 help centers for non-emergency services, but those types of government-to-citizen interactions require a considerable amount of time and money compared to online transactions.

Officials in Denver want to change that paradigm through a new mobile web app called pocketgov. The app launched in January 2015 and does exactly what the name implies: It puts access to government services and information in your pocket. Although pocketgov can't be downloaded in an app store, there is a feature to add the site as a shortcut on a mobile device that gives it the look and feel of a traditional app. People can use pocketgov to report potholes or graffiti and upload photos of the issue, check the status of a request, sign up for e-mail notifications about recycling and street sweeping schedules, find Denver property values, and more.

"The app is about giving citizens an easy way to find information and know what is going on in the city," said Chris Binnicker, Denver's Deputy CIO.

The goal is to drive 25 percent of the city's interactions with citizens online. "We recognize it's a lofty goal," Binnicker said, noting that only 8 percent of citizen engagement comes through online channels. The move to boost online services is expected to save the city \$250,000 a year in potential staff time because those employees would be reassigned to other areas.

Boosting the mobile experience for citizens and employees is an integral part of the city's information technology strategic plan, Binnicker said. "We don't do anything anymore that is not mobile-friendly."

Her team has set an ambitious goal to roll out at least one new feature for pocketgov each month. The new feature for April is a function that allows residents to pay parking citations.

"It's not a heavy hitter," Binnicker admits. "People don't get a lot of parking citations, but there are some. So what we're doing is trying to ease into the payment world and make sure that we have everything working properly before we roll out big-ticket items, like paying your property taxes."

Other scheduled pocketgov capabilities include an interface with the state's Department of Motor Vehicles system for citizens to renew their license plates online. Another capability will provide pocketgov users with updates about jobs in the area. There's also an upcoming virtual wallet feature for users to store library, parks and recreation, and loyalty cards.

Binnicker made clear that the shift to online services doesn't mean an end to call centers. Like any city, Denver has residents who will never be fully comfortable with online interactions, and some complex transactions are not conducive to online environments at this time.

The good news is pocketgov's popularity is growing. More than 800 people registered for the app when it launched in January. That number grew to 1,479 in February, and by the end of March 2,243 people had created pocketgov accounts. The city's 311 help center site includes a plug for pocketgov and touts a feature where citizens can enter their phone numbers and receive a text to get the app. As more people use pocketgov, that should reduce the number of phone calls and improve the customer experience for citizens who opt to call the city.

But Denver's vision for pocketgov goes far beyond city and county lines.

"Our ultimate goal is that this is something in line with our vision of being the nation's model," Binnicker said. "We can share this with other jurisdictions and cities."

CASE STUDY #2: THE EVOLUTION OF FEDERAL MOBILE SERVICES

In the first three months of the year, there were 1.4 billion visits to federal websites, according to analytics.usa.gov, a new site that shows web traffic for nearly 300 .gov domains — and counting. More than a third of those visits came from phones and tablets, compared with 24 percent during the same period last year.

"User habits are changing," GSA's Parcell said. "We're getting people who don't go back to the website because it's not mobile-friendly."

Appeasing a growing mobile audience is critical for agencies as they seek to improve citizen services and reduce the time and costs associated with labor-intensive methods, such as fielding requests via phone.

The 2010 launch of a federal mobile apps gallery on USA.gov was a major catalyst in driving the government's adoption of mobile services, Parcell said. Some of the initial apps include My TSA, which provides airport security information, and apps from the White House, NASA and FBI. The gallery has grown to more than 250 mobile apps, including newer ones that rely on crowdsourcing data from the public. Parcell highlighted the Energy Department's Lantern Live app as an example. The app, which launched in November 2014, allows users to find and report the operational status of nearby gas stations and access power outage maps from local utilities and other useful data during emergencies.

The National Oceanic and Atmospheric Administration (NOAA) is harnessing the power of crowdsourcing to track the Earth's changing magnetic field. Through the Crowdmag app, NOAA can receive anonymous data directly from users' smartphones to help the agency verify and improve its magnetic models. For those who aren't citizen scientists, NOAA explains why this work is a big deal:



"The Earth's magnetic field has been used for navigation since ancient times. Magnetic navigation has continued to improve alongside transportation technologies so that now magnetic models are used in planes, ships and even in your smartphones. To improve magnetic navigation, NOAA scientists at the National Geophysical Data Center (NGDC) in Boulder, Colorado, have tracked the changing magnetic field using satellites to provide the most accurate and reliable models so that users can navigate their world with ease and precision."

Parcell remembers when agencies were building static mobile websites and doing little responsive design work. Now, they're ramping up development of native mobile apps and ensuring all users, regardless of the device or screen size, have an optimal experience.

That effort is still a work in progress. A recent GovFresh article pointed out that the top four most-visited federal government websites in a recent 30-day period — IRS.gov, Weather.gov, USA-JOBS.gov and the National Park Service's NPS.gov — are not optimized for mobile devices.

Some agencies are farther ahead than others, and they're working through legal and procurement challenges to make their data mobile-friendly, Parcell said. "Specifically, they're structuring their content in ways that can be shared easily with application programming interfaces, and they're starting to think about how they're going [to] analyze data, and they're being more strategic in the ways they're analyzing performance on the mobile applications," he said.

Parcell is part of a federal mobile crowdsourcing testing program. Under the program, experts collaborate to test agencies' mobile websites and share best practices for implementing those sites governmentwide.

"They're not anytime, anywhere at this point," Parcell said of the accessibility of government data. "But I think we're going to see the anytime, anywhere [availability of information] is going to change."

CASE STUDY #3: GOVERNMENT SERVICES GO MOBILE IN NORTH CAROLINA

A year from now, North Carolina residents looking to apply for the state's Food and Nutrition Services (FNS) program won't have to wait in line at county departments for social services.

At least, that's the vision for a government-funded pilot program set to launch in early 2016. The collaborative effort is a public/private partnership among several entities, including the North Carolina departments of Transportation and Health and Human Services (DHHS), Massachusetts-based MorphoTrust USA, and a handful of partners from the private sector and academia.

The goal is to test the feasibility and benefits of a secure, electronic ID that would serve as the equivalent of a U.S. driver's license for online transactions, according to MorphoTrust, which specializes in providing solutions for motor vehicle agencies.

"We want that person to be able to apply from wherever they are and do so in a way that they can be trusted from an identity perspective," said Mark DiFraia, Senior Director of Solutions Strategy at MorphoTrust. "The key factor has been that it is difficult to have a high enough level of trust.. By plugging that gap with this solution, [it] should open up the window for many more transactions to be executed in an online setting."

Rather than going to a government building to apply for benefits, people will have the option of doing so online. FNS applicants will be directed to download an app from the DHHS website. Instead of creating a username and password, people can opt to use their MorphoTrust eID to securely login when applying. Once they select that option, a visual QR code will appear for them to scan with the app on their phone before they can apply for benefits.

"We link the real person all the way back to the identity proofing process they did at the NC Department of Transportation to receive their driver license or ID," DiFraia said.

When the mobile app is downloaded, users are required to scan their license, front and back, with their phone camera to prove its authenticity. The app pulls data from the license, including name, date of birth and issue date. Applicants also use their phone camera to take a picture of themselves, and MorphoTrust routes that packet of information to the state's DOT to verify the data and photo match the agency's records. Once the data has been verified, eID users will receive a push notification that the app is ready for use. There are safeguards in place to ensure fraudsters can't pose as someone else.

"Our goal is for this to be something that users show an appetite for," DiFraia said. "No one is mandated to [use] this."

The target audience for the pilot is 1,500 people. For the entities involved in the test, privacy was a big concern.

"We're not building big databases of user information in the sky," DiFraia said. The company will not collect and hold personally identifiable information (PII) in a central location, but rather leave the users in control of their data.

The pilot is one of several funded by National Strategy for Trusted Identities in Cyberspace (NSTIC) grants aimed at making online identity protections more private, secure and convenient.

President Barack Obama launched the NSTIC initiative in 2011 with the goal of creating "a marketplace where all of us, within a few years, can choose from a variety of solutions to replace passwords and conduct transactions," said Jeremy Grant, Senior Executive Adviser for Identity Management and head of the NSTIC National Program Office.

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MASTERING THE ART OF THE CITIZEN EXPERIENCE

An interview with Natalie Fedie, Vice President of Client Success, GovDelivery

In today's fast-paced digital world, citizen expectations are rising. They want their digital experiences with public sector organizations to mirror their experiences in the private sector.

To discuss how government can achieve success in a world with these heightened expectations, GovLoop sat down with Natalie Fedie, Vice President of Client Success at GovDelivery, a company that empowers over 1,000 government organizations worldwide to create better lives for more people through communications.

Fedie explained that these heightened expectations for government interactions have been a long time in the making.

"Companies that are focused on generating revenue and profit have to make sure that they're differentiating themselves amongst their competitors. For many years, customer service has been key to that differentiation. They spend millions of dollars in building world-class customer service experiences. As a result, customers now expect a high level of satisfaction from all of their product and service providers - including government."

And according to Fedie, the future of public sector citizen engagement – and the ability to meet these heightened expectations – is predicated upon mastering the art of enhancing the citizen experience.

Effective, proactive outreach drives the citizen experience, Fedie explained, but it's not just about distributing news. You can only change behavior and perception if you reach people at the scale and time that matters. Done right, you can then change how people live in the world and how they leverage the information you provide.

This is achieved with a customer-centric communications strategy focused on reaching the

targeted audiences, driving more audience engagement, and converting that engagement to action in a way that empowers the work you do for citizens.

The best way to get there? Digital. A unified, collaborative, customer-centric digital communications strategy helps government organizations align internally to connect externally with their citizens, provide critical information and services, and improve the lives of millions of people every day.

"With today's technology and the ability to reach more people when, where, and how they want access to information, whether that be online or via mobile, I think people's preferred method of communications is changing," Fedie said. "Don't make the customer take time off of their workday to wait in line or fill out a paper form. Let them do these necessary tasks with customer-centric technology in a variety of channels."

Fedie went on to explain that GovDelivery has been working with government organizations to help them master the enhanced citizen experience by implementing a customer-centric communication strategy.

So what does that look like?

"Start with data. Citizens are speaking to you through the data. Step one is to listen. This is especially important for public sector organizations where scarcity of resources is a challenge. The private sector may spend billions of dollars to accomplish the same thing the public sector can do with data. Listen," Fedie said.

"You also need to perform the task of identifying your customer's touch points with your organization along the entirety of their 'customer journey' – yet another buzz word from the private sector

being applied to government. Then take any data you have around those touch points to help you analyze whether or not there are certain areas where you can improve the customer journey," Fedie said. "It's all about creating a holistic view of all of the touch points and interactions you have with citizens."

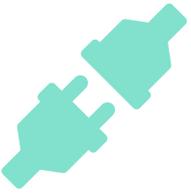
Once you can identify how citizen wants to access your information and services, you can more effectively drive them to those access points through a multi-channel digital communications crafted to engage the citizen.

"Don't be afraid to learn from your mistakes," Fedie said. "Self-evaluate."

By analyzing the data from the way your citizens are interacting with your services, Fedie continued, your organization can gain a bigger picture of how citizens are (or aren't) engaging with your communications, and thereby, their level of satisfaction with your organization. You can also track insights like how citizens are reaching you and through what devices. Or, how website visitors engage with your content; what gets them interested and what motivates them to take action.

Fedie pointed out that customer satisfaction levels along their journey needs to be an incredibly high priority for agencies. "Satisfied citizens are engaged. Engaged citizens take action," she explained. "They vote. They volunteer. They apply for permits and licenses online. They subscribe to emails, pay attention to health, safety and regulatory updates, and respond to surveys."

Put simply, mastering the art of the citizen experience will create engaged citizens for your organization. It's how government can make lives better for more people.



Trend #3:

ENGAGING WITH OPEN DATA

More governments are using open data and open data portals to engage citizens in transparency efforts — and in some cases, they’re using that data to transform government.

Governments worldwide are getting on board with open data. Using open data and open data portals can engage citizens in transparency efforts and, in some cases, even transform government. For example, Data.gov — the Obama administration’s flagship open government initiative — is a treasure trove of more than 445,000 raw and geospatial datasets ranging from coal production to broadband Internet.

According to Socrata’s 2014 Open Data Benchmark Report, 80 percent of public-sector respondents said their investment and spending on open data initiatives will be consistent or increase in the near future. Simply put, any government

not participating in open data is behind the curve.

So, what does this mean for citizens?

If someone is a techie or an entrepreneur — or both — opening government data could allow him or her to create a useful application with that data. Valuable apps could promote citizen engagement, increase standards of living and more. Additionally — and more simply — as taxpayers, citizens might feel it is only right that public data is put to good use. We pay for this data, so it might as well be useful to my community and me, some could say.

At the same time, however accessibility is just part of open data. Dumping hundreds of pages of text and spreadsheets is not useful for citizens. Making that data understandable and relevant, on the other hand, creates significant value for citizens.

In this section, we examine how three government organizations are partaking in open data strategies that both benefit and engage citizens.



“Unleashing the power of NOAA’s data will take creative and unconventional thinking, and it’s a challenge we can’t tackle alone.”

2

CASE STUDY #1: NOAA PARTNERSHIP MAKES BIG DATA OPEN DATA

With vast amounts of data collected every day, NOAA has the resources to make only a small percentage available to the public. Through a big data partnership, NOAA looks to open its data and the opportunities that lie within it.

David McClure Jr., a Data Analyst at NOAA, said the agency collects 20 to 40 terabytes of satellite and other Earth data every day. For context, the entire printed collection of the Library of Congress is about 10 terabytes of data. Talk about big data.

“Our vast network of radars, satellites, buoys, ships, aircraft, tide gauges and supercomputers keep tabs on the condition of our planet’s health,” said Kathryn Sullivan, acting NOAA Administrator, on the agency’s website. “As we continue to witness changes on this dynamic planet we call home, the demand for NOAA’s data is only increasing.”

New York University’s Governance Lab estimates that NOAA’s open, machine-readable data alone has generated several billion-dollar industries and saves the United States more than \$30 billion annually. However, this is a tiny portion of NOAA’s data in aggregate. Only about 10 percent of the agency’s daily 20 terabytes of data is easily accessible by the public.

“Imagine the economic potential if more of these data could be released,” said Joe Klimavicz, NOAA’s CIO, on the agency website. “Unleashing the power of NOAA’s data will take creative and unconventional thinking, and it’s a challenge we can’t tackle alone.”

As a result, NOAA released two requests for information seeking solutions from the private sector that would put its data in users’ hands quickly and at scale, turning untapped information into usable products or services.

A solution began to take shape in the form of a big data partnership between NOAA and the private sector. The arrangement would help finance the creation of a cloud-based repository of NOAA data, wrote Wyatt Kash of FedScoop. Importantly, this project would provide free public access to original NOAA data.

To support the repository, there would be a small public fee for accessing the data to defray cloud startup and certain operating costs. McClure likened the fee to what the public pays to enter national parks.

Policy and technical questions remain, but NOAA plans to initiate a research and prototyping phase soon. Partners will work with NOAA to form data alliances that include broad communities of interested companies and will demonstrate the value proposition and self-sustainability of the project.

CASE STUDY #2: BEYOND OPEN: HAWAII IS MAKING DATA UNDERSTANDABLE

Sometimes open data alone isn’t enough. The more important part is making that information useful and understandable to the public. The state of Hawaii is aiming to do just that by informing the electorate and encouraging voter turnout with open data visualizations.

Despite having a hometown hero in the race, the state of Hawaii reported the lowest turnout of any state during the 2008 presidential election of Obama. Less than 50 percent of all registered, eligible voters showed up at the polls.

As voter turnout hit new lows in Hawaii, Americans’ perception of the adverse effect of money in politics had reached new peaks. This still lingers today: A 2014 Global Strategy Group poll shows that 90 percent of Americans believe the influence of money in politics must be reduced.

Two questions entered the minds of Hawaii officials: Is there a correlation between low voter turnout and high frustration with the system? If so, can government transparency and open data alleviate voter angst and encourage a return to the polls?

To test this hypothesis, Hawaii’s Campaign Spending Commission released its political campaign income and expenditure data through two data visualization applications in an effort to generate greater confidence in the electoral process.

According to the commission’s website, its mission is to maintain the integrity and transparency of the campaign finance process, and one of the ways it does that is by educating the public. The commission was transparent, posting its datasets to the state’s open data portal in early 2013. This format, however, didn’t appear to enlighten Hawaii’s electorate.

To make the data more digestible, the commission partnered with the state Office of Information Management and Technology, the Information and Communication Services, and Socrata



to develop a Candidate Data Visualization and a Noncandidate Committee Data Visualization. Both apps are easily accessible from the commission's website and are populated in real time.

Instructions on the website inform users that they can select a candidate and election period to view a pie chart of the candidate's contributions. This chart illustrates how much and what percentage of the person's contributions come from individuals, non-candidate committees, political parties, immediate family members, etc. There is also a visual chart showing how much and what percentage of a candidate's contributions are more or less than \$1,000.

Furthermore, by using the data the commission made available, coders from organizations such as Common Cause Hawaii and Hawaii Open Data have also created publically usable apps.

"We are already seeing the benefits of the apps," said the commission's Associate Director, Tony Baldomero. "For example, fewer phone calls are coming in from the public. And we are seeing a real uptick in the number of journalists reporting on this data. An increase in news articles on the data the Campaign Spending Commission collects means we are achieving our goal to better inform the voters of Hawaii."

By opening data and transforming it into a more visually attractive and user-friendly format, Hawaii is increasing citizen engagement and political accountability, and making it easier for citizens to participate in elections as informed voters.

CASE STUDY #3: SURVEY SAYS: BETTER UNDERSTAND CITIZENS TO BETTER SERVE CITIZENS

Already a leader in transparency and data-driven government Kansas City, Mo., is at it again. The city government is known for its performance measurement tool, KCStat and its open data portal, but it's looking to further enhance its data-driven strategy. By incorporating 311 call center data with citizen survey data, city officials look to more efficiently and effectively address resident needs.

As with all governments, Kansas City's primary objectives are to improve city services and enhance residents' lives. Citizen surveys are one way to measure government performance and track progress toward goals. These surveys may ask people to rate different services or to list the services that need the most improvement, said Kate Bender, Deputy Performance Officer in the Office of Performance Management in the City Manager's Office. They may also ask if the city is a good place to live.

Surveys can provide valuable insight into citizen perceptions and needs but they are often "shelved" and left unutilized. "In my opinion, this is unfortunate — and it's a wasted opportunity to get critical and actionable performance feedback," Bender said.

To maximize the usage and relevance of the survey data, the city is analyzing citizen survey data in tandem with open data from the city's 311 call center. Combining survey results with the 100,000-plus annual 311 requests provides greater context when the city is evaluating its performance, she said. And greater context can lead to better, more targeted solutions.

For example, citizen survey data may tell city officials that street maintenance and infrastructure issues are top concerns for taxpayers. But what specifically about these issues should be addressed?

If the city places the traceable 311 open data side-by-side with the survey data, officials may notice, for instance, that some neighborhood residents are lodging complaints about particular potholes. By gaining a deeper picture of citizen concerns, the city avoided a potentially misdirected response. Now, officials can optimize crew management and process scheduling for more efficient and effective service.

In reality, the process doesn't always work so smoothly. Citizen perception and customer service calls can sometimes be mutually reinforcing, Bender said. If the public feels there is a lack of action regarding water leaks, seeing data from 311 calls with similar concerns may just bolster that sentiment, regardless of any actual changes in water leak conditions.

Ultimately, the combination of citizen survey data with open data on city service levels will help Kansas City officials make more informed, data-driven decisions, which will improve results for taxpayers and increase citizen satisfaction.

"We want our citizens to be happy with their government, and their perceptions and opinions about government's effectiveness truly matter," Bender said. "Combining this crucial data on their perspectives with hard facts that can be extracted from open data will go a long way toward helping us build and sustain high-quality and prosperous communities."

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Trend #4:

CONNECTING PEOPLE AND THE INTERNET OF THINGS

The Internet of Things and more connected, “smart” cities mean that more citizens will become engaged in the technology and services that IoT supports.

On Nov. 19, 1863, standing atop Soldiers’ National Cemetery on the grounds of the bloodiest battle in U.S. history, Abraham Lincoln delivered the Gettysburg Address. In just under three minutes, the president promised a broken nation that to ensure the survival of America’s representative democracy, our nation needed a “government of the people, by the people and for the people.”

Now, 150 years later, Lincoln’s words still echo, but even he couldn’t have predicted how citizens of the 21st century would affect the republic. Smartphones and other Internet-connected devices are changing the way the government and the public relate. A driver in Boston can alert city officials to a pothole with the swipe of a finger. In San Francisco a commuter can reserve an open parking spot with a few clicks. And Philadelphia city park officials can maintain the urban forest with tech-savvy residents’ help.

When Lincoln remarked that the most powerful and successful democracies were “by the people,” he couldn’t have known that those people could influence democracy from the palms of their hands.

Connecting to the Internet has become easier than ever with the emergence of IoT. Business Insider estimates that by 2020 there will be more than 75 billion devices connected to the Internet. To put that number in perspective, that’s more than 10 times the number of humans on the planet. And that number will only continue to grow.

However, to effectively take advantage of IoT, government has to create robust standards so that the technologies can work together.

The National Institute of Standards and Technology (NIST) recently posted a preliminary discus-



sion draft of its forthcoming Framework for Cyber-Physical Systems, a.k.a. IoT. “The framework’s purpose is to provide a foundation for companies and government entities to safely and securely build interconnected smart systems,” the draft states. And that makes sense. You wouldn’t want a health care system that infringed on your privacy or an electrical grid giving incorrect data to the Energy Department.

While NIST continues to finalize IoT standards, there are some early pioneers in the world of government IoT. In this section, we examine three government organizations that are taking inventive approaches to ensuring citizen engagement efforts can connect people to devices.



2

CASE STUDY #1: PITTSBURGH SNOW TRACKER

Winter 2014 was the 10th snowiest winter on record in Pittsburgh, Pa. With more than 5 feet of snow covering the ground for much of the winter, residents were literally shoveling day and night — all the while wondering when the city's snowplows were going to come to clear their street.

Officials knew they needed a more transparent solution. One winter later, they had it. On Jan. 15, Mayor William Peduto, the Department of Innovation and Performance, and the Department of Public Works announced the launch of the Pittsburgh Snow Plow Tracker.

The tracker is designed to give residents a real-time update on the current location and travel history of Public Works vehicles during a winter weather event. Just think: Pittsburgh residents will no longer have to wonder if their path to the grocery store is clear. The map-based tracker gives residents the ability to search by address to find if a plow has come by whenever there is more than a half-inch of snow on the ground.

Although the tracker is a big help to make sure critical roads are clear and safe to use, it's also having a huge impact on the internal operations in the Public Works Department. By showing digitally where each truck is at any given moment, officials are better able to ensure that no streets are missed and create more efficient routes. With more than 1,200 miles of streets, every winter weather event provides an opportunity for city officials to learn more about the performance of each and every snowplow on the road.

Lee Haller, Deputy Director of Public Works, described to GovTech how the Snow Plow Tracker was developed. "Pittsburgh made use of GPS sensors already in place for tracking the health of its truck fleet to follow about 120 vehicles outfitted with plows and computerized salt spreaders, whose sensors feed into the map on the track-

er. About 170 public works vehicles are outfitted with the sensors to track travel, engine and idle times. The city pays around \$31,700 annually for the ability to monitor the public works vehicles for snow and ice, or \$22 per device per month."

So far reaction to the tracker has been very positive "Before, we were basically waiting for somebody to call and complain, because there wasn't an easy way for us to identify that there were still streets that needed to be treated," Haller said.

The city is working to make the tracker more intuitive and update the user interface. Other cities and states that also host snowplow-tracking apps include Chicago, New York, Maryland and Virginia.

CASE STUDY #2: SAN FRANCISCO ENERGY DATA STREAMS

In San Francisco, buildings are responsible for 52 percent of the city's carbon emissions, according to the U.S. Green Building Council. Additionally, 75 percent of the city's largest 2,000 commercial buildings fall within the boundaries of 2.2 square miles. To put a price tag on those numbers, San Francisco expects to incur an estimated \$62 billion in climate-related infrastructure damage by the middle of the 21st century.

The city needed a green solution. But it lacked a key piece of information. San Francisco-area green developers needed to know "granular, actionable data about the specific energy efficiency opportunities and solutions waiting to be tapped at the level of individual buildings and tenant spaces," city officials explained in an action statement to US Ignite, a nonprofit with ties to the White House's Office of Science and Technology.

Enter the 5D Smart San Francisco 2030 District project, a joint undertaking of the city of San Francisco, Software-as-a-Service platform provider Cityzenith and Lawrence Berkeley National Lab.

The project, which launched March 2014, is now in the development stage. The idea is simple: Create a platform that allows builders to truly understand their environmental impact — a Lorax for green buildings. Dr. Seuss would be a fan.

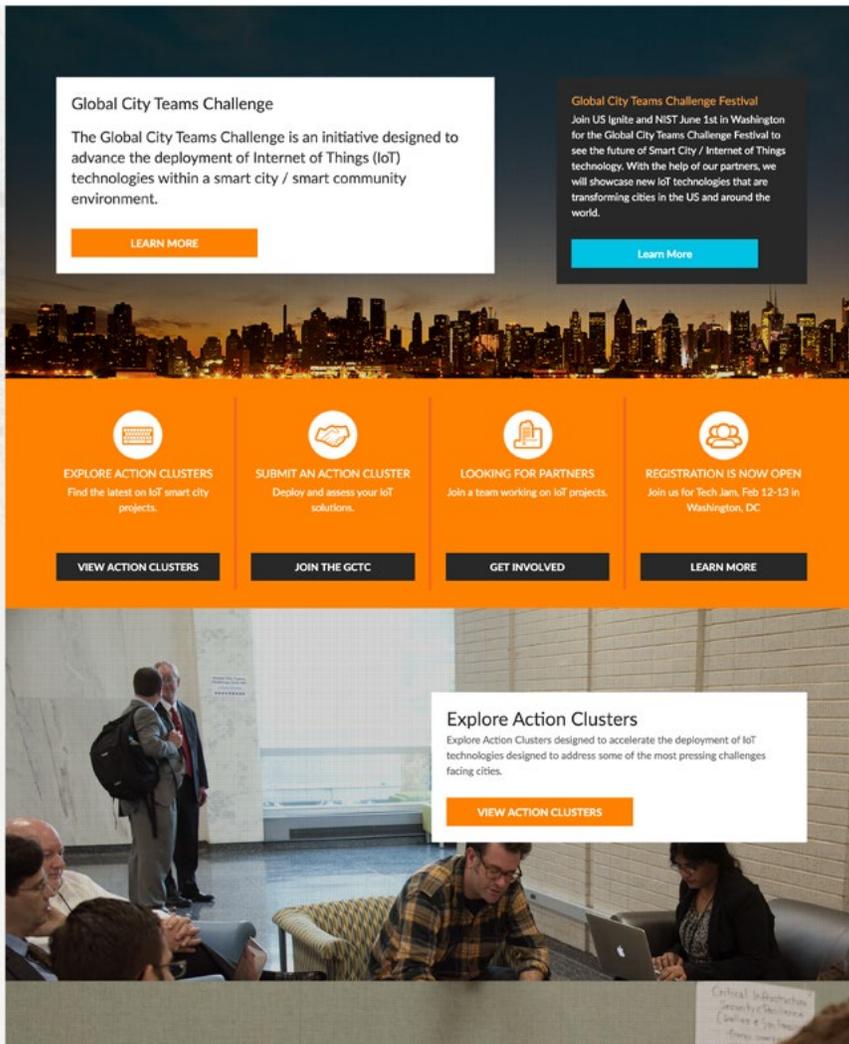
The team has already created data and analytics tools to chart local energy consumption and conservation. "Our original goal was to work with the Department of the Environment to visualize compliance with the city's green building ordinance," said Michael Jansen, Chief Executive Officer of Cityzenith told Government Computer News. But the group's plans quickly grew to include other information, including real-time data. "Now we're starting to layer additional sets of relevant data to create a more complex and dynamic understanding of the scope and breadth of the problems as well as the scope and breadth of the available solutions to the problems," Jansen said.

The platform hub will make the necessary data and information easily available to building owners in the city in order to accelerate and expand the investment in energy-efficiency retrofits in a 3-D map. The map looks like a traffic light, sorting carbon emissions and energy usage. Buildings with high-energy efficiency are colored green; buildings with low energy efficiency are red.

The team is pulling energy usage data from StreetLightData. The data provider "combines and analyzes data streams from real-time traffic monitors and wireless mobile devices and Helios, which offers an integrated suite of building analytics related to energy retrofits," GCN reported.

In 1974, Dr. Seuss wrote, "Unless someone like you cares a whole awful lot,

nothing is going to get better. It's not." The city of San Francisco cares and is showing it by using 21st-century technology and connected data streams to clean up the air.



CASE STUDY #3: NIST GLOBAL CITY TEAMS CHALLENGE

NIST literally wrote the book on IoT. Well, technically, it wrote the standards framework from cyber physical systems, more commonly known as IoT, but still.

So it makes sense that the brains behind the framework would also be the muscle behind the Global City Teams Challenge. The challenge is a yearlong program that works sort of like Shark Tank for IoT projects, with NIST acting as both supporter and coach and the cities acting as idea pitchers.

The idea is to build sustainable IoT projects that can be shared nationwide. “Many smart community efforts are one-off projects with heavy emphasis on customization and inadequate consideration for future upgradability and extensibility, which end up causing increased cost and inefficiency. As a result, many smart city/community deployments are isolated and do not enjoy the economy of scale,” said Sokwoo Rhee, NIST’s lead on the challenge. “With this challenge we want to change that.”

This new challenge will leverage the success of the SmartAmerica Challenge in 2013. The original challenge brought together more than 100 companies, universities and other organizations to form teams that developed and applied networked technologies. “SmartAmerica demonstrated that these technologies have the potential to create jobs and business opportunities and provide socioeconomic benefits,” NIST wrote.

In September 2014, the Global City Teams Challenge matched up more than 250 city planners, technology companies, academic institutions and nonprofits around major community issues such as air quality, traffic management and emergency services coordination.

The teams, or clusters, were assembled in a similar fashion as a dating game. Each city or community presented an “elevator pitch” issue and technologists from industry could partner with the city to help leverage an existing system or allow a company to better refine an existing program.

“The Global City Teams Challenge was a good opportunity for public chief technology officers and private industry innovators to come together,” said Chris Greer, Director of NIST’s Smart

Grid and Cyber-Physical Systems Program Office. “Participating helped cities and innovators use IoT and cyber-physical systems concepts in ways that improve quality of life in urban centers and also bring improvements to agriculture, manufacturing, transportation and more.”

By March 2015, the 250-plus participants had been organized into 34 specific action clusters, each dedicated to a slightly different city challenge such as Healthy Smart Cities and Smarter Sockets. NIST held a Tech Jam at its Gaithersburg, Md., campus as a midpoint check-in. Each team presented to the group, highlighting progress, areas of concern and any need for additional partners. NIST used the Tech Jam as a way to assess progress and act as a coach to each of the 34 teams.

In June 2015, all 34 teams will reassemble and present their final projects to NIST. You can track each project’s progress here.



Trend #5:

SECURING CITIZEN ENGAGEMENT

Many citizen engagement initiatives take place via innovative technology platforms. How can government offer individualized services without decreasing citizens' privacy? And when government does require sensitive information, how does it protect it?

More frequently, citizen engagement is moving online. Innovative digital services allow government agencies to reach citizens anytime, anywhere with fewer resources. That sounds great, right?

In many ways, digital services have drastically improved governments' to reach citizens. However, these portals and tools also expose agency systems to greater cyber risk because they create new network endpoints and increase the traffic of sensitive information online. That fact in and of itself is concerning for government because the reputational and financial cost of a breach is exceptionally high.

But even more concerning is the potential to actually deteriorate public trust and engagement

by ineffectively securing interactions. Think about it: Digital services can foster engagement only insofar as citizens are willing to use them, and people are going to use them only if they trust them. That means that government services must be secure, reliable and transparent.

Recognizing this imperative, the executive branch has been clear in its mandate to secure. Executive Order 13681, "Improving the Security of Consumer Financial Transactions," and the U.S. Digital Services Playbook's Play 11, "Manage security and privacy through reusable processes," both offer guidance on enhancing cybersecurity. But ultimately, it's up to individual agencies and departments to ensure that these recommendations are developed and applied.

This is more easily said than done, because security for engagement is a complex and ever-evolving goal. Obviously, agencies must protect their systems from hackers by enhancing firewalls, establishing real-time monitoring and segmenting their networks. But that's just one piece of the puzzle. Organizations also have to consider the usability of their secure systems, the education of their end users and the necessity to innovate as consumer technologies evolve.

In this section, we examine three government organizations that are taking inventive approaches to ensuring citizen engagement can securely flourish online.



2

1



CASE STUDY #1: NATIONAL STRATEGY FOR TRUSTED IDENTITIES IN CYBERSPACE PILOT PROGRAM

When you access a secure government system, you're most often asked to provide a username and password. NSTIC, part of NIST, wants to change that.

Why? NSTIC's goal is to "promote secure, privacy-enhancing, and user-friendly ways to give individuals and organizations convenience in their online interactions." Ultimately, the strategy envisions creating an "identity ecosystem" in which different online communities can interact, "with a baseline of privacy, interoperability, and security." Passwords hinder these objectives because they are easily hacked, often misused and difficult to manage for both the user and government entity.

First launched in 2012, the NSTIC pilot program provides a structured process for discovering, funding and developing the solutions to create this ecosystem and enhance security. Each year, the program calls for creative ideas and technologies from public and private-sector organizations that provide strong, non-password authentication without hindering citizen usability and access. Selected solutions must also be easily deployable and cost-effective, so that new practices can be replicated across sectors and agencies.

Successful projects have included a partnership with the North Carolina departments of Transportation and Health and Human Services and MorphoTrust to leverage pre-existing data from state-issued driver's licenses to create certifiable digital credentials that allow citizens to apply for benefits online. (See page x.) Another project focused on leveraging "derived credentials" stored in the SIM card of mobile devices or wearable devices to create various identity verifications for the Defense Department.

In addition to addressing the pitfalls of password-based identify verification systems, the pilot also seeks solutions that provide greater clarity and transparency to individual users regarding the security of government systems. Hopefully, these measures will encourage citizens to put greater trust in online government transactions and ultimately engage with more digital services.

To date, the program has provided about \$30 million for innovative identity projects. It is currently in its fourth round of funding.

CASE STUDY #2: A BLUE BUTTON FOR SECURING HEALTH DATA

The Patient Protection and Affordable Care Act, more commonly known as ACA or ObamaCare, has been a matter of contention among political

parties, sectors and individuals. Nevertheless, most agree that one goal of the program is a worthy priority: engaging citizens in their health and with the providers who support it.

But how do we do that? With today's technology, it seems logical to expect that patient data should be available online and accessible to any relevant provider or individual. Yet that accessibility brings its own security concerns, as the 2014 Health-Care.gov breach highlighted.

The Blue Button is one way that the White House and Health and Human Services Department are working to retain online accessibility of new government health services without risking the security of personally identifiable information (PII) or citizens' trust.

The tool has two primary benefits. First, it functions as an aggregator of your health records by pulling your information from disparate electronic health records and consolidating them in a single online portal. Blue Button also allows you to share those health records with your physicians — whether existing or new — and relevant family members. It can even plug your health information into other apps and tools that set personalized health goals.

As a result, citizens can make informed decisions about their care and health policies. For instance, people can download their full health report



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Protecting citizen information is certainly the job of government, but it's not government's job alone.



from Blue Button before determining which plan on HealthCare.gov would best suit their medical needs and habits.

However, these health and engagement benefits will be realized only if citizens are confident that using the tool won't risk the confidentiality of their PII. Thus, the second component of Blue Button focuses on security. HHS secures the portal, and Blue Button pulls information only from certified medical practices, which are required by law to comply with the Health Insurance Portability and Accountability Act. Finally, Blue Button Plus, a sister developer site to the initiatives, also provides detailed standards, FAQs and "trust bundle" software for providers and third-party applications.

Blue Button is still in the early stages of deployment, though a Blue Button Movement seeks to enlist more organizations in the program. Additionally, Blue Button has also been deployed on the Veterans Affairs Department's MyHealthVet website to allow veterans access to their health information and VA records. Similarly, Medicare's Blue Button allows Medicare participants to view their previous claims.

Ultimately, the goal is to deploy the program across enough agencies and providers to provide all citizens secure access to their health records, allowing them to better engage with their health and federal care options.

CASE STUDY #3: COLORADO'S CYBER SECURITY AWARENESS CAMPAIGN

Protecting citizen information is certainly the job of government, but it's not government's job alone. In fact, many breaches are the direct result of inappropriate system use by end users.

To decrease the risk of citizens inadvertently exposing government systems, the state of Colorado launched a campaign — Cyber Security Awareness — in October 2014 to educate its users. It completed the campaign in partnership with Regis University and the Colorado National Guard, and also leveraged external guidance of the National Cyber Security Alliance and the Stop.Think.Connect website.

The campaign was multifaceted. Events, such as a daylong security advice call-in service and presentations at local middle schools, offered citizens an opportunity to directly interact with state personnel while learning better cybersecurity practices.

Other resources were provided on an ongoing basis, to be viewed remotely at any time. For example, multiple state departments offered security tips via their Twitter feeds, using #cocyber-help. The state National Guard also produced a series of educational videos that were posted on

the state's website. And although the campaign was relegated to October — officially Cyber Security Awareness Month in the state — the Colorado Governor's Office of IT continues to offer help and tips to users on its web page.

Just as the campaign used a variety of media to reach citizens, it also covered a diverse range of cybersecurity topics. Tips to spot phishing attacks — incidents in which a hacker poses as a government body or other accredited source to solicit sensitive information — were of paramount importance to increasing the security of citizen/state online interactions. By educating users to identify legitimate dealings with the state, Colorado can protect its networks from inadvertent breaches while simultaneously fostering greater citizen trust in its digital services.

However, the campaign also covered many topics that weren't directly related to state network security. Issues such as safe social media use, cyber bullying and personal computer hygiene addressed citizen needs. Moreover, by providing these security tools, the campaign encouraged citizens to see government as a partner in their online interactions, even those not directly tied to state business.

CONCLUSION

Citizen engagement is nothing new.

It's been conducted in one form or another since the dawn of democracy: Citizens and their elected leaders have met to exchange ideas and thoughts on policies, processes and more. Until recently, however, this engagement happened in a relatively few ways: town hall meetings, printed fliers, telephone calls and in-person discussions.

Those citizen engagement methods are still valid today. But we all know the landscape of engagement has drastically changed. The evolution of technology has radically disrupted citizen engagement, and it's up to government to keep pace with the new face of citizen engagement. By focusing on the trends discussed in this guide, your strategies can evolve — and your interactions with your citizens will become better than ever.

ABOUT GOVLOOP

GovLoop's mission is to "connect government to improve government." We aim to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 150,000 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 connect and improve government.

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