The 2017 Public Sector for the Future Summit:

Citizen-Driven by Design

Harvard University, Cambridge, Mass.
June 13 – 15, 2017

LEADERSHIP FOR A
NETWORKED WORLD

2017 Public Sector for the Future Summit:
Citizen-Driven by Design

Citizens around the world are demanding more responsive, more impactful, and less costly government. From the 2016 U.S. elections, to "Brexit," to growing populist movements in Europe and across the globe, the central challenge for leaders now is making government better, faster, cheaper, and ultimately—citizen-driven by design.

Surging to the top of citizen-driven solutions is the intersection of behavioral economics, analytics, and design-thinking. When combined, these emerging strategies position leaders to better understand the needs of citizens, design better services, and leverage "nudge"[1] solutions that have been proven to not only make services more beneficial for citizens, but also generate improved outcomes and public value.

Savvy leaders are already finding that nudge-based strategies increase the likelihood of accomplishing programmatic objectives more cost-efficiently and effectively than other strategies. Initiatives such as the U.K. Behavioral Insights Team, the U.S. Social and Behavioral Sciences Team, the Qatari Nudge Unit, and an array of state, local, and regional efforts around the globe are using simple tools to reduce costs and improve results in services such as education, consumer protection, tax collection, transportation, health, and beyond. Adding nudge-based strategies to the excutive toolkit is becoming an imperative as governments face resource constraints and citizens demand better outcomes.

Yet even with this progress by early adopters, most public sector organizations looking to implement nudge-based strategies find themselves grappling with challenging questions:

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[1]   "Nudges" are a method of augmenting the design of the environment in which people make decisions in order to improve individual and societal outcomes. Nudge strategies shift behaviors that maintain freedom of choice, but have the potential to make people healthier, wealthier and happier. For additional information please visit: https://dash.harvard.edu/handle/1/16205305

Where and how can citizen-driven design and nudge concepts be readily applied to policy development, citizen-facing services, and administrative functions?

How can analytics be leveraged to better understand not only where behavioral insights can be applied, but also how to redesign public services?

What are the cultural and political implications and effects of nudge solutions on an organization, and how should leaders prepare their stakeholders?

To address these critical questions and to help public sector leaders move forward, Leadership for a Networked World, the Technology and Entrepreneurship Center at Harvard, and Accenture, convened the ***2017 Public Sector for the Future Summit: Citizen-Driven by Design*** from June 13 – 15 at Harvard University in Cambridge, Massachusetts. This eleventh-annual Summit brought together innovative government and higher education leaders, along with leading academics and industry experts, to learn and share ideas.

This report distills the key findings from the Summit. In particular, it features insights developed in partnership with Summit attendees that highlight how leaders can harness data and analytics, capitalize on lessons learned from behavioral economics, and understand and apply design thinking concepts. It also contains three practical examples—one on Illinois' Innovation Incubator, one on Georgia's Department of Administrative Services and statewide procurement, and another on California's Department of General Services and greening fleet vehicles—that highlight how public sector organizations have embraced nudges, data and analytics, and design thinking as part of broader initiatives to improve citizen services and back-office operations.

We hope this report offers new ideas, strategies, and inspiration to public sector leaders, their organizations, and their partners around the world as they respond to changing citizen expectations and strive to improve the outcomes and impact of public institutions.
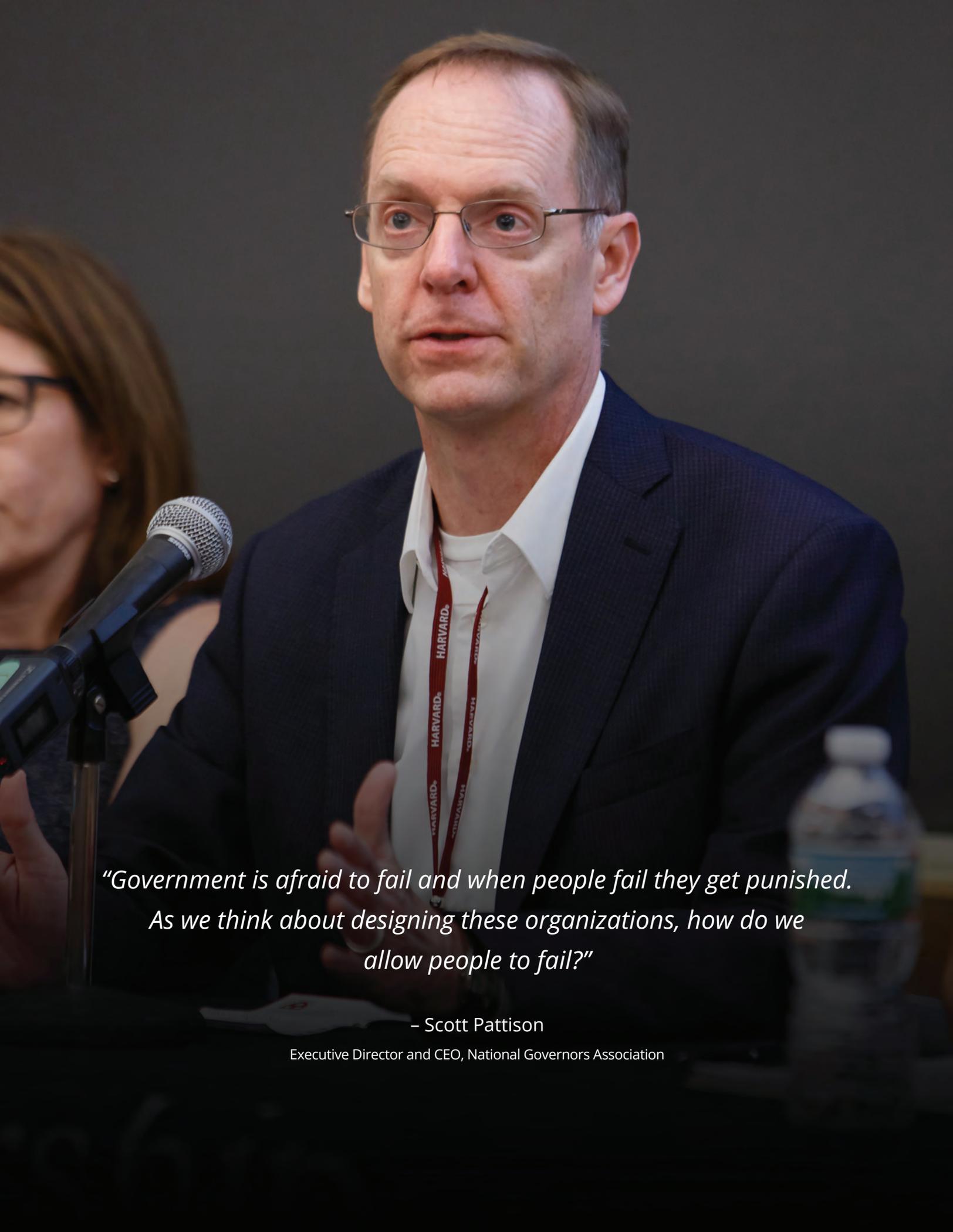
"Government is afraid to fail and when people fail they get punished. As we think about designing these organizations, how do we allow people to fail?"

– Scott Pattison
Executive Director and CEO, National Governors Association

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Reflections from the Executive Director

Dear Colleagues,

"Organizations are perfectly designed to get the results they get," noted Bob McDonald, the past chief executive officer of Procter & Gamble and past secretary of the United States Department of Veterans Affairs. "If you don't the like the results you are getting, then you need to change the design of the organization."

McDonald's quote carried a lot of weight for the leaders at the Public Sector for the Future Summit. In fact, at this year's Summit, 73% of attendees said they have faced "significant or extreme change" in demand for better outcomes over the past five years, and 75% anticipate even more change over the next five years. Needless to say, the world urgently needs new strategies and tools to move the needle on outcomes in government.

To help leaders in the public sector with this outcomes challenge, this year's Summit focused on "nudge" strategies that can transform not only how government interacts with the public, but also how agencies can improve internal operations and capacity. And importantly, we also went strides further, as we looked at nudge-based strategies in a new light – illuminating how **the most powerful nudges are driven by the *convergence* of design thinking, data and analytics, and behavioral economics.**

What emerged from the Summit was an entirely new way of thinking about innovation and transformation in government, and the growth of public outcomes and value. The convergence of behavioral economics, design thinking, and data and analytics provides policy makers and government agencies a strategy they didn't have before – in that nudges don't require new regulation, taxation, or financial incentives. This is a win for government, taxpayers, and the general public.

This year, I would like to deeply thank the Summit Executive Leadership Group – who gave their vital ideas, time, and energy to building the framework for this year's Summit. And as always, on behalf of the Harvard team, the Executive Leadership Group, and Summit attendees, I would like to thank Accenture Public Service – as without their global insights, collaboration, and resources – this Summit would not have been possible. And last but not least, thank you for investing your time and energy into this Summit report. I'm certain the insights will prove valuable and actionable for you.

Now, let's get to work!

Dr. Antonio M. Oftelie

Fellow, Technology and
Entrepreneurship Center at Harvard

Executive Director, Leadership for a Networked World
Harvard John A. Paulson School of Engineering and Applied Sciences

Citizen-Driven by Design – Achieving New Outcomes though the Fusion of Behavioral Economics, Analytics, and Design Thinking

The 2017 Public Sector for the Future Summit focused on how to make government better, faster, cheaper, and ultimately – citizen-driven by design. And in today's political economy, strategies to achieve these new levels of innovation in government must not only deliver results quickly, but also with minimal impact on legislation, taxation, or regulation.

A vital new strategy for achieving this new level of innovation is the utilization of "nudges" in government operations and services. "Nudges," per Nobel Prize-winning-economist Richard Thaler and Harvard Law School Professor Cass Sunstein, are "methods of augmenting the design of the environment in which people make decisions in order to improve individual and societal outcomes." Nudges**,** per Thaler and Sunstein, "*shift behaviors that maintain freedom of choice, but have the potential to make people healthier, wealthier and happier."[2]*

At the Summit, participants explored the growing use of nudges for improved societal outcomes, and in particular, the underlying levers of behavioral economics, analytics, and design thinking. While each of these levers provide tremendous opportunity for innovation in government in their own right, it's the convergence of all three that has the power to dramatically reshape societal outcomes – and most importantly – create services that are citizen-driven by design.

Levers of Transformation: Behavioral Economics, Analytics, and Design Thinking

To better understand how to not only adopt nudges in government, but also increase their ability to produce results, defining the underlying concepts of behavioral economics, analytics, and design thinking is our first step. We can define these concepts, or levers, generally as follows:

Behavioral Economics applies the consideration of psychological, social, and emotional factors, to the economic decisions of people and organizations. Traditional economics suggests that people and organizations will always make decisions that maximize beneficial outcomes, but reality shows that decisions are often heavily influenced by social norms, cognitive bias, framing of choices, the "ease" of decision-making, and simplifying (reducing complexity and increasing access) information. Understanding and rigorously using behavioral economics can help government

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[2]   Thaler RH and Sunstein CR. 2008. *Nudge: Improving Decisions about Health, Wealth, and Happiness.* New Haven, CT: Yale Univ. Press

not only better understand what programs and services may or may not work, or work better, but also help inform better overall design of the policies driving those services.

A key to applying behavioral economics in operations and services is a concept Thaler and Sunstein call "Choice Architecture" – the application of behavioral economics to the design of a decision-making environment. A decision-making environment is any product, service, or place where a customer is interacting to make a choice (whether consciously or subconsciously) and determining their next action. There are three broad strategies for employing choice architecture for nudges: Increasing Information, Improving Efficiency, and Leveraging Social Norms. (See chart below adapted from "*Nudging: A Very Short Guide*."[3]) Applying choice architecture helps alleviate some of the challenges to optimal decision-making for people (and collectively for organizations), as well as helps increase the potential for socially optimal outcomes.

For example, Pennsylvania used principles from choice architecture to develop an automated text messaging system that sends reminders for upcoming appointments, missed payments, and other events related to child support enforcement. Using texts, Pennsylvania's Department of Human Services doubled the success rate of its previous phone messaging and increased monthly child support collections by more than $1 million per month. The texts provide more privacy than phone messages and improve the Department's customer service.

STRATEGIES FOR EMPLOYING CHOICE ARCHITECTURE FOR NUDGES

Increasing Information	Improving Efficiency	Leveraging Social Norms
Disclosure: Make citizens aware of the economic or environmental costs associated with an action, such as with energy use or the full cost of a loan	**Default Rules:** Set the default of programs to achieve the result you want: opt-in, automatic enrollment, or double-sided printing	**Use Social Norms:** Emphasize what people normally do, e.g. most people pay their taxes on time, most people don't cheat on unemployment. Make examples local and specific
Warnings: Use graphic pictures or large fonts with bright colors to warn of negative impact, e.g. warnings on cigarette packaging	**Simplification:** Complexity causes confusion: design programs so they are intuitive and easy to navigate	**Pre-Commitment Strategies:** Have people commit to a certain action, such as smoking cessation or reporting truthful information. This works best with a specific item and action
Reminders: Provide reminders by email or text message for overdue bills and other obligations	**Increase Ease and Convenience:** Reduce barriers and make the intended outcome easy to achieve: put the healthy food first, highlight the low-cost option	**Eliciting Implementation Intentions:** Ask if citizens plan to do a certain action, such as do you plan to vaccinate your child? Do you plan to vote? Emphasizing a specific identity helps
		Informing People of the Consequences of Past Actions: Share information on the cost of medical bills, or note energy use on electrical bills

[3]   Sunstein CR. 2014. "Nudging: A Very Short Guide," *37 J. Consumer Pol'y 583.* Available for free download at: https://dash.harvard.edu/handle/1/16205305

Analytics are critical building blocks in designing and implementing nudges. Generally, data and analytics is the use of technological platforms, social networks, environmental sensors, inexpensive data storage, and data analysis methods that allow better measurement across the entire enterprise of inputs, outputs, and outcomes. Using analytics, public sector leaders can quickly assess the performance of a system from a wider perspective (e.g. across departments, agencies or jurisdictions), and even drill down to programs and operating units. This analysis can then drive innovation in the design and delivery of services.

Analytics also underpins evidence-based approaches[4] to not only understanding outcomes, but also identifying nudge-type interventions that may improve outcomes. Evidence-based approaches use rigorous analysis of program investment, outputs, and impact relative to outcomes in order to quantify return-on-investment and other financial metrics. One application of evidence-based government is the randomized-control trial, which compares metrics of one program (via data on its outcomes and impact) to a control group or program. An important component of the scientific process, the use of randomized-control trials is rapidly gaining acceptance in social programs and initiatives that produce streams of data. This form of analysis provides an unequaled measure or "evidence" of a program's results.

As a case in point, the U.S. Department of Agriculture's Food and Nutrition Service (USDA) used a randomized-control trial to test a simple, low-cost intervention using insights from behavioral economics and choice architecture. The USDA found that fruit placed in a colorful bowl in a convenient part of the school lunch line led to a 102 percent increase in fruit consumption. Based on these findings, officials can confidently scale up this type of choice-architecture intervention in school lunchrooms across the country. This is just one example where applying an understanding of human behavior enables the government to evaluate cost-effectively a program's impact before committing resources towards a program or service.

Design Thinking is a human-centered approach to building solutions to complex challenges. As opposed to the traditional approach of developing government programs and services (which generally entails government agencies and contractors building a service that they think solves legislative mandates), design thinking uses a creative and iterative approach to put the broader customer (constituent/citizen) experience at the center of the development and delivery of programs and services. As defined by Leadership for a Networked World, design thinking is a solutions-focused approach to solving complex problems. Typically, it incorporates "tools" from designers, anthropologists, and others, and helps to reframe difficult problems, brainstorm solutions, develop prototypes, and quickly test ideas to achieve human-centered innovations.

For example, Lutheran Social Services of Illinois (LSSI) realized that outcomes of their services could be improved if they could better integrate their network of programs, track a client's journey as they accessed programs, and knit together a more tailored approach for select clients. To address this challenge, LSSI partnered with Accenture and Fjord to implement a design thinking approach with real clients, which enabled them to better understand the interaction point between clients and services and how services could be better designed and aligned with outcomes.[5]

Design thinking, when combined with behavioral economics and analytics, also enables more advanced methods such as behavioral design. By leveraging "evidence" from empirical insights and impact evaluation (such as fast-cycle randomized-control trials), behavioral design helps assess program or service impact and iteratively builds those human-centered insights back into the design process, thereby improving the service design, impact, and outcomes over time. As a case in point, the U.S. Department of Veterans Affairs has used a version of behavioral design to improve access to services for veterans. The VA, in collaboration with veterans, developed a customer journey map to better understand and measure veterans' interactions, decision points, and barriers and enablers to needed services. This behavioral design not only helped improve veterans' services, but also guided the VA in its overall transformation.[6]

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[4] 2014 Economic Report of the President, Council of Economic Advisors. Accessed at https://obamawhitehouse.archives.gov/administration/eop/cea/economic-report-of-the-President/2014

[5] https://www.fjordnet.com/workdetail/putting-design-at-the-heart-of-social-service-delivery/

[6] https://www.innovation.va.gov/docs/Toward_A_Veteran_Centered_VA_JULY2014.pdf

Summary

The convergence of behavioral economics, analytics, and design thinking is a catalyst for making government better, faster, and cheaper. This new formula for innovation not only enables, but also accelerates, the power of nudges in public sector programs and services. Going forward, the implication is that if policy makers and government executives can leverage principles from behavioral economics, analytics, and design thinking continuously into the design and delivery of government programs, constituents will be able to interact with government better, improving their decision making, and society will achieve more socially optimal outcomes.

The Nudge Loop: Five Steps to Improving Public Value and Outcomes

The convergence of behavioral economics, data and analytics, and design thinking enables leaders to create a "nudge loop" that helps inform the innovation needed to improve citizen-centric public value and outcomes. Start by picking a policy, program, or service and probing the following questions:

1. **Public Value and Outcomes:** What drives public value? What is the policy, program, and service goal and objective? What types of outcomes are needed and how are they currently being measured? What is the variance between optimal outcomes and current outcomes?

2. **Behavioral Economics:** What are the influencing factors and interaction points that frame and compel how decisions and choices are made by individuals and as organizations? Do current policies, programs, and services help or hinder people in making optimal choices?

3. **Choice Architecture:** How can framing and the decision-making environment be improved to produce better choices and outcomes? What choice architecture can be applied where people or an organization interact with a service to improve decision-making?

4. **Design Thinking:** From the perspective of the consumer, are current services built well? How can the design of front-office and back-office services, structures, systems, and processes be improved to enable better program and service delivery?

5. **Outcome Measures:** What new outcomes are being generated? What data and analytics can be leveraged to assess program and service design and the effect of nudges? How do those measures and metrics inform the next version of policy, public value, and outcome goals?

A New Cycle of Value Creation

ANALYTICS

01 Public Value and Outcomes
02 Behavioral Economics
03 Choice Architecture
04 Design Thinking
05 Outcome Measures

Citizen-Centric

ANALYTICS

"Think of a nudge, if you would, as like a GPS device.... If you can decrease the cost of navigability, you can often turn lives around. And the GPS has two virtues. First is it preserves freedom of choice and second is it respects people's own ends. It doesn't tell you where to go. You decide that. It makes it clear for you how you can get to where you want to go, though if you wanted to take a different route, you're perfectly able to."

– Cass Sunstein

Robert Walmsley University Professor, Harvard Law School

To Learn More About Behavioral Economics and Best Practices, We Suggest the Following:

Accenture Consulting, *"Citizen-Driven by Design: Public Sector Nudges"* **Card Deck.** Developed for the 2017 Public Sector for the Future Summit from Sunstein 2014. Access at: https://lnwprogram.org/sites/default/files/Public_Sector_Nudge_Cards.pdf

Cass R. Sunstein, *Nudging: A Very Short Guide, 37 J. Consumer Pol'y 583 (2014).* Access at: *https://dash.harvard.edu/handle/1/16205305*

Cass R. Sunstein, *Presentation at the 2013 Human Services Summit at Harvard University.* Videos available at: *https://lnwprogram.org/content/report-2013-human-services-summit*

Cass R. Sunstein*, Presentation at the 2017 Public Sector for the Future Summit at Harvard University.* Videos available at: lnw.io/sunstein

Cass R. Sunstein, *Simpler: The Future of Government, (2013).* Available on Amazon at: *https://www.amazon.com/Simpler-Government-Cass-R-Sunstein-ebook/dp/B00ADMQZRC*

John P. Holdren, *Implementation Guidance for Executive Order 13707: Using Behavioral Insights to Better Serve the American People. Memorandum to the heads of Executive Departments and Agencies.* Access at: https://www.whitehouse.gov/sites/whitehouse.gov/files/images/EO%2013707%20Implementation%20Guidance.pdf

William J. Congdon and Maya Shankar, *The White House Social and Behavioral Sciences Team: Lessons learned from year one.* Access at: https://behavioralpolicy.org/wp-content/uploads/2016/1-2/BSP_vol1no2_Shankar_final.pdf

Jon Kolko, *Design Thinking Comes of Age. Harvard Business Review, September 2015.* Access at: https://hbr.org/2015/09/design-thinking-comes-of-age

Piyush Tantia, The New Science of Designing for Humans. *Stanford Social Innovation Review, Spring 2017*. Access at: https://ssir.org/articles/entry/the_new_science_of_designing_for_humans

Antonio M. Oftelie, *Changing the Game: A New Playbook for Government Financial Management.* Access at: https://lnwprogram.org/sites/default/files/A_New_Playbook.pdf

Antonio M. Oftelie, *Presentation at the 2017 Public Sector for the Future Summit* **at Harvard University.** Videos available at: https://vimeo.com/251241895; https://vimeo.com/251240975; https://vimeo.com/251240171

Transformation in Action: Illinois' Innovation Incubators

In March 2015 when Hardik Bhatt became the Chief Information Officer for the State of Illinois, he faced significant challenges.[7] The state was spending approximately $1 billion annually on Information Technology (IT), yet it ranked in the bottom quartile nationally among state information technology departments. This spending was especially concerning because Illinois had been slow to recover from the Great Recession; in fact, it was one of the few states in the country experiencing population outflow. Finally, there was a sense of urgency. Bhatt estimated that Illinois' IT system was 45 years behind where it should have been, but with the next gubernatorial election approaching in November 2018, he was only guaranteed a narrow window to pursue reform. Bhatt summarized, "We had to do an overall transformation of 45 years in four years."

Bhatt—who had previously served as Cisco's Internet of Everything expert for local government—and Governor Bruce Rauner—who had founded and led a private equity firm before running for governor in 2014—set out to reposition Illinois' IT setup to thrive in the 21st century.[8] The effort, as Bhatt explained, revolved around a critical, complex question: "How do we enable the redesign and restructuring of government operations using data and evidence to drive more efficient, effective, and customer-focused service delivery?"

"A data-driven government is at the center of public policy and service delivery."

– Hardik Bhatt
Chief Digital Officer and Acting Secretary
Illinois Department of Innovation & Technology

Bhatt envisioned IT transformation that would eventually position the state to thrive in the digital economy, a critical priority because of the job losses projected to result from automation. Nonetheless, he recognized that to position the state to pursue far-reaching reform, he first needed to establish a foundation. Thus, in his first ten months, Bhatt prioritized consolidating Illinois' IT infrastructure—which had previously consisted of myriad siloed systems scattered

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[7] Steve Towns, "For Illinois CIO Hardik Bhatt, the Future is Now," *Government Technology*, August 27, 2015, available at http://www.govtech.com/state/For-Illinois-CIO-Hardik-Bhatt-the-Future-is-Now.html (accessed on July 30, 2017); and "From Vision To Action: Illinois' innovation incubators (i2)," Presentation by Hardik Bhatt, Chief Digital Officer and Acting Secretary, Innovation & Technology, State of Illinois, at The 2017 Public Sector for the Future Summit: Citizen-Driven by Design," at Harvard University in Cambridge, MA in June 2017. Hereafter cited as Bhatt presentation. Unless noted, the data in the remainder of this case comes from this presentation.

[8] Towns, "For Illinois CIO Hardik Bhatt, the Future is Now."

across different agencies—in a newly created Department of Innovation & Technology. What's more, Bhatt, who was named the Secretary-designate of that agency (and therefore joined the governor's cabinet), designed the organization like a business.[9] This included establishing key performance indicators for agency functions, clustering the state's agencies into seven verticals determined by focus area (e.g., Health and Human Services, Public Safety, and Regulatory), and creating quarterly business reviews.

Having established the Department of Innovation & Technology, Bhatt hoped to build on this initial reform by pursuing a more ambitious effort to leverage data, behavioral economics, and design thinking to improve customer service and citizen outcomes. "All of this means nothing," Bhatt emphasized, "if you're not thinking about how do we transform the government to be a digital government? How do we use technology so that we can improve customer service and improve employee efficiency?"

Thus, Bhatt began pursuing other techniques to transform Illinois' approach to IT. One was nearly quintupling the state's mobile applications, an effort to create a more customer-centric environment. Another top priority was leveraging data to understand and solve customer problems and enhance the customer experience. As Bhatt explained, this reflected his belief that "a data-driven government is at the center of public policy and service delivery."

Bhatt initially chose to focus data-driven reform on health and human services, which accounts for the majority of state spending and therefore was the area where he and his colleagues could generate the most "bang for [their] buck." Specifically, in summer 2015, the state convened leaders from all nine health and human services-related agencies as well as representatives of the governor's office and the budget office. Bhatt attended the meeting and paid careful heed to the problems that health and human services leaders identified with the existing systems; he also collaborated with them to develop a list of 150 questions that they hoped to answer, many of which revolved around data.

"How do we enable the redesign and restructuring of government operations using data and evidence to drive more efficient, effective, and customer-focused service delivery?"

– Hardik Bhatt
Chief Digital Officer and Acting Secretary
Illinois Department of Innovation & Technology

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[9]   Bhatt presentation; and Stephen Goldsmith, "Q&A: Stephen Goldsmith Discusses Importance of Data Sharing with Illinois CIO Hardik Bhatt," Data-Smart City Solutions, Ash Center, Harvard Kennedy School, February 21, 2017, available at http://datasmart.ash.harvard.edu/news/article/qa-stephen-goldsmith-discusses-importance-of-data-sharing-with-illinois-cio (accessed on July 31, 2017).

Bhatt then worked with state leaders to create an Innovation Incubator (i2) that would develop the infrastructure to help answer the questions they had posed, resolve challenges, and enhance citizen experiences and outcomes. Unlike the existing environment, which involved dozens of siloed systems for capturing data, i2 would establish a unified digital services platform that leveraged interoperable processes, systems, people, and data. This would make it easier for state officials to develop a 360-degree view of their clients, leverage predictive processes and prescriptive analyses to inform policymaking, and optimize business practices to maximize efficiency. With this objective in mind, Bhatt worked with health and human services officials to create a governance structure and charter for i2 and execute an enterprise memorandum of understanding (EMOU) for data sharing. Critically, the EMOU altered the default setting in health and human services agencies in favor of data sharing. Bhatt elaborated, "The previous answer was, 'No, we're not going to share the data, and don't ask us why.' Now, we have agencies trying to figure out…why they should share the data."

"We had to do an overall transformation of 45 years in four years."

– Hardik Bhatt
Chief Digital Officer and Acting Secretary
Illinois Department of Innovation & Technology

i2 has made an enormous impact. A case in point is that it has positioned the state to create a 360-degree view of children in the foster care system; this has dramatically decreased the amount of time investigators spend gathering data. Buoyed by the success of this program, the state recently received over $50 million from the Centers for Medicare & Medicaid Services to scale the i2 initiative. What's more, the state has partnered with the Institute of Design at the Illinois Institute of Technology to develop a peer-to-peer platform that allows families in the foster care system to share resources. Most importantly, the progress in health and human services has contributed to a broader shift in norms in other realms, including public safety, which has begun to create its own i2.

A little over two years into his journey, Bhatt still sees room for progress. For example, he would like to see the culture surrounding data sharing begin to spread to the lower levels of agencies. Nonetheless, in a narrow window, he has consolidated Illinois' IT systems, moved Illinois from the bottom fourth to the top third of state IT rankings, and introduced and secured funding for a template that has begun to transform the state's approach to data. More broadly, he is demonstrating how shifting social norms and default settings for data sharing, leveraging design thinking, and creating a sense of urgency can jumpstart a stagnant environment.

"Changing the behavior requires three things… capability, motivation and license model. But, you need to think about whether you're capable. Have you actually made the organization able to change? Have you educated them enough? Have you done the things that allow them to change? Because if you haven't done that, change isn't going to happen."

– Dr. Robert Huckman

Albert J. Weatherhead III Professor of Business Administration, Harvard Business School

Building the "Back Office" for New Outcomes: Nudge Solutions at the Georgia Department of Administrative Services

In 2016, the Georgia Department of Administrative Services (DOAS) encountered what then-DOAS Commissioner Sid Johnson characterized as a "crisis situation."[10, 11] That August, news broke that a senior official from the Georgia Bureau of Investigations (GBI) had used an agency credit card to make over $87,000 in personal purchases; at least some of the purchases were made via Amazon.[12] A subsequent investigation revealed a breakdown of internal controls, inadequate management oversight, and a broader sense that something had gone seriously awry. "The GBI routinely conducts investigations of misuse of purchasing cards. In this case, it was one of its own employees," said GBI Director Vernon Keenan. "I [was] totally mortified that this occurred."[13]

As distressing as the situation was, it provided DOAS—which is responsible for managing the state's purchasing card program and its approximately $330 million in annual transactions—an opportunity to review and improve its policies and internal controls for state purchasing cards. The analysis revealed new problems, trends, and opportunities. These included that a large amount of money (approximately $18 million over two years) was being spent through Amazon; that there were other compliance issues, including agencies not making purchases outside of statewide contracts; and that there were broader procedural inefficiencies. At the same time, DOAS believed that the state could seize an

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[10] Presentation by Sid Johnson, former Commissioner, Georgia Department of Administrative Services at The 2017 Public Sector for the Future Summit: Citizen-Driven by Design, at Harvard University in Cambridge, MA in June 2017. Unless noted, the data in the remainder of this case comes from this presentation and a telephone interview conducted by Leadership for a Networked World personnel prior to the Summit.

[11] In April 2017, Johnson transitioned from his post as DOAS Commissioner to a new position at the Carl Vinson Institute of Government at the University of Georgia. "Deal Appoints Department of Administrative Services Commissioner," Office of the Governor, State of Georgia, March 17, 2017, available at https://gov.georgia.gov/press-releases/2017-03-17/deal-appoints-department-administrative-services-commissioner (accessed on August 4, 2017); and "Sid Johnson," Carl Vinson Institute of Government, University of Georgia, available at http://cviog.uga.edu/about-us/faculty-staff/sid-johnson.html (accessed on August 4, 2017).

[12] Larry Stanford, "Former GBI Inspector Sandra Putnam Charged in P-Card Investigation," *Rockdale Newton Citizen*, September 3, 2016, available at http://www.rockdalenewtoncitizen.com/news/public_safety/former-gbi-inspector-sandra-putnam-charged-in-p-card-investigation/article_8177e255-489e-5859-bf5d-7b3e1ffe1c06.html (accessed on August 4, 2017).

[13] Rhonda Cook, "Ranking GBI Agent Resigns Amid Purchasing-Card Investigation," *The Atlanta Journal-Constitution*, August 18, 2016, available at http://www.myajc.com/news/local/ranking-gbi-agent-resigns-amid-purchasing-card-investigation/lNoNK8ALl5RoVbRBV4y6qM/ (accessed on August 4, 2017).

opportunity by beginning to make more purchases from local small businesses, a move that would support the Governor's Small Business Initiative. "All of that," Johnson explained, "came together at one time in reaction to this fraud case."

Thus, in late 2016 and early 2017, DOAS implemented a series of reforms to correct deficiencies in and leverage opportunities surrounding the purchasing card system. The most immediate change was a significant decrease in the number of people with procurement cards. In addition, DOAS changed the design of its system by establishing a partnership with Amazon that integrated the company's catalog into the state's procurement system. This created an extra security layer because one needed a credential to log into the system, which meant that the state could more easily track who was making purchases. What's more, the system—which went live in January 2017—provided DOAS an opportunity to create a series of nudges and capture data as part of an effort to enhance security further and help the state realize other efficiencies and enterprise-wide objectives.

The new system employs a diverse set of nudges. One involves shifting default settings. Specifically, the system requires that all purchases receive two approvals; it also creates a default shipping address that cannot be changed, eliminating the possibility that an employee will inappropriately ship an order to his/her home. In addition, the system contains a series of warnings and reminders that alert an employee three times if an item he/she is purchasing is part of an existing statewide contract. (Statewide contracts often have the best prices and terms due to their scale and scope.) The state does not require the officials to purchase the item from the contract, but the reminders are designed to increase the likelihood that purchasers are fully compliant with state policies. Finally, the new setup simplifies and increases the ease and convenience of the process by making it unnecessary for subscribers to have an Amazon PRIME account, removing taxes, and eliminating the need for purchasers to move back and forth between state catalogs and Amazon's website.

"Once we get this data and do the analysis, that gives us an opportunity to see what other nudges we can build into the system. So, it just kind of builds upon itself as we move forward."

– Sid Johnson
Former Commissioner
Georgia Department of Administrative Services

Along with incorporating numerous nudges, the system is designed to help the state enhance its data and analytics capabilities so that it can continue to strengthen its purchasing card and procurement systems. For example, the state is analyzing data on spending patterns, which may reveal opportunities for new statewide contracts and the savings that accompany them. State officials are also evaluating whether existing purchases are compliant with statewide contracts and rules and regulations. Finally, they are working with vendors with hopes of acquiring level three data (which provides detailed spending information). This information—and the system's data and analytics capabilities in general—is invaluable because it can help the state discern which nudges are working and at the same time develop new techniques. "Once we get this data and do the analysis," Johnson said, "then that gives us an opportunity to see what other nudges we can build into the system. So, it just kind of builds upon itself as we move forward."

Less than one year after the creation of the new integrated procurement system, DOAS and its partners are still working to address challenges with the system and evaluate its effectiveness. For example, the price of products sometimes changes between the time a staff member requests and receives approval for a purchase. Similarly, the state is determining how to address shipping costs that are separate from the price of the item. The state is also working toward integrating Amazon algorithms to promote preferred vendors, such as small businesses. Finally, having only introduced the joint catalog in January and then implemented new purchasing card restrictions in April, DOAS is still awaiting increased participation so that it can gather more data to analyze and increase impact. Specifically, as of June, 423 individuals in 32 agencies had joined the integrated procurement system, resulting in 721 orders and a total of $170,000 in spending. As a result, they have been able to acquire some data, including the volume of purchases and what was bought with a warning. However, they are still awaiting additional information, including what purchases the warning prevented.

Still, even as they refine the system, DOAS officials can take pride in the fact that, in less than a year, they have improved security procedures and introduced a system that leverages design thinking, nudge principles, and data and analytics. The path forward may continue to involve challenges, but they are building a system that can help them navigate those difficulties intelligently and deftly.

"One of the things I want to do is to use nudge theories to both try to help demonstrate how agencies can not only do the right thing and do a better thing, but also save money."

– Matt Massman

Commissioner, State of Minnesota Department of Administration

"Relentlessly Incremental": Greening California's Fleet

In 2011 and 2012, California Governor Jerry Brown issued a pair of executive orders that created both an opportunity and a dilemma for the Office of Fleet and Asset Management (OFAM) in the state's Department of General Services (DGS). Brown directed OFAM—which oversees the state's 50,000 vehicles—to reduce its fleet by 7,000 vehicles, increase the proportion of light duty fleet purchases that are Zero Emission Vehicles (ZEV) to 25 percent by 2020, and cut statewide petroleum use by 50 percent by 2030. On the one hand, this meant that OFAM had the chance to make a significant contribution to the mission of reducing greenhouse gas emissions. On the other hand, it raised difficult questions. How would OFAM balance "green goals" and departmental needs (e.g., public safety vehicles with special performance requirements)? In addition, how would the division remain competitive with other suppliers (e.g., rental car agencies)? "If we just have a green fleet and vehicles that people don't like at a higher cost, they're not going to go to us," said DGS Director Daniel Kim. "Our costs escalate and then that's just a vicious cycle."[14, 15]

"It doesn't take a lot of big ideas. It could be a bunch of small ideas done simultaneously that can make a difference."

– Daniel Kim
Director
California Department of General Services

DGS responded to these directives with a multifaceted strategy that blends data and analytics, nudge principles, design thinking, and shifts in human capital to help OFAM maximize the environmental rewards while minimizing financial risk. "It doesn't take a lot of big ideas," said Kim of the agency's approach. "It could be a bunch of small ideas done simultaneously that can make a difference."

In crucial respects, the foundation for DGS's response to Brown's directives began to take shape years prior when the agency faced a very different kind of challenge: *The Sacramento Bee* reported that OFAM could not locate 30,000

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[14] "Greening California's State Fleet: Applying Data Analytics and Nudge Principles To Inform Policy and Achieve Governor Brown's Petroleum and Greenhouse Gas Reduction Goals," Presentation by Daniel Kim, Director, Department of General Services, State of California, at The 2017 Public Sector for the Future Summit: Citizen-Driven by Design, at Harvard University in Cambridge, MA in June 2017. Hereafter cited as Kim presentation. Unless noted, the data in the remainder of this case comes from this presentation.

[15] Kim became DGS's Director in 2015. "Daniel C. Kim, Director," California Department of General Services, 2016, available at https://www.dgs.ca.gov/dgs/About/Director.aspx (accessed on August 3, 2017).

of its 70,000 assets. "It was true," Kim reflected. "It's not like they were stolen. We didn't know where they were at any given time." DGS swung into action by creating a Fleet and Asset Management System (FAMS) that required all state departments to submit data on their vehicles (e.g., vehicle identification numbers, fuel type, mileage, and purchase date). Looking back, Kim suggested that the "crisis was a good thing because it forced us to recognize [that] we need some kind of system."

In 2011 and 2012, OFAM began leveraging FAMS to gather and analyze data that would help the agency determine how best to achieve the goals identified in Brown's executive orders. A case in point was that DGS employed this data to evaluate whether each asset in the state's fleet was "mission critical" and "cost effective." The analysis yielded valuable information, such as that the California Department of Transportation (CALTRANS) deployed two trucks to respond to every freeway accident. This was not because they needed two vehicles to clear most accidents; instead, one truck typically provided protection so that the other did not get hit. To remedy this inefficiency, CALTRANS created a mobile barrier to protect the truck that was required. This eliminated the need for the second vehicle and dramatically reduced the size of their fleet and the environmental impact of the crews' response to freeway accidents.

This data and analysis has also informed the application of a series of nudges to help OFAM reduce greenhouse gas emissions. One set of nudges involves creating pre-commitment goals. These include the targets established in Brown's executive orders as well as a subsequent directive that state agencies submit three-year ZEV purchasing plans to DGS. DGS has also begun altering default settings by making ZEVs the default selection for all light-duty fleet purchases; furthermore, the agency is considering eliminating internal combustion engine sedans as a purchasing option. More broadly, Kim emphasizes that data and analytics are the foundation for all nudges that the agency uses. "Data really informs nudge," Kim explained. "We had to do the data collection and analysis to figure out where we wanted to target our various nudge policies."

To increase the likelihood that other agencies will respond to these nudges, DGS has leveraged both design thinking and shifts in human capital. The most important design change involves creating more charge stations for electric vehicles. Specifically, the governor's 2016 ZEV action plan called for the electrification of five percent of all workplace parking spaces at state-owned facilities as well as the construction of 1,500 additional vehicle powering stations over the next five years. At the same time, Kim has tried to prime the workforce to promote and embrace change. This includes disseminating knowledge about electric vehicles through marketing materials and demonstrations, encouraging his team to become more comfortable taking risks to develop best practices and strategies, and even experimenting with incentives that appeal to human nature, such as popular rims. Kim explained, "This is harder than it seems because you can make the data say what you want it to say…. So, I think we have to create a safe environment for our staff to be intellectually honest and figure out what we can do about this."

DGS still has a long way to go to achieve the ambitious, long-term goals outlined in Governor Brown's executive orders. Nonetheless, the agency has already made significant progress. The state has decreased its total sedan purchases from over 800 in 2013 to fewer than 200 in 2016, and the proportion of the acquired vehicles that are ZEV has increased dramatically. What's more, compared to 2003, total petroleum consumption has decreased by over 19 percent and was projected to decline significantly further by the time the final data from 2016 was calculated. Finally, the fleet's total greenhouse gas emissions have fallen from well over 700 million pounds of carbon dioxide in 2003 to a little more than 600 million pounds in 2015.

More broadly, Kim and his colleagues can point to a deeper lesson about how to integrate data, nudges, and design thinking to generate impact: it is imperative to be "relentlessly incremental." "Cover all of the angles," Kim said. "Look at data, come up with goals, set different rates, look at different policies, review the data, and continuously monitor what you're doing."

Summary

Expectations for government services, programs, and outcomes have shifted. This has created a disparity between what public sector organizations were designed to accomplish, and what constituents and citizens now want them to achieve. As a result, the old operating models are no longer sufficient to build legitimacy and trust. Citizens are questioning the value derived from their taxes and from their investments in public institutions. While this shift creates new challenges, it can also serve as a catalyst for making governments better, faster, and cheaper.

To drive enterprise-wide transformations, leaders are now relying on a new set of tools—strategies that create a pull rather than a push. Across the country and around the world, public sector visionaries are harnessing data, analytics, nudges and design thinking. The discussions at *The 2017 Public Sector for the Future Summit: Citizen-Driven by Design* pointed to three critical steps that public sector leaders can take to capitalize on these approaches:

Position Your Organization to Thrive with Data and Analytics: First, leaders must work across agencies and sectors to lay a foundation that will enable their organizations to thrive in a digital world. As a case in point, Illinois took steps to redesign and reconstruct government operations to use data and evidence to gather citizen-insights that could inform service delivery. This required a new governance model, strong collaboration, clear metrics, common platforms, and outsiders' perspectives.

Experiment with Nudge Strategies: With data and analytics to draw on, public institutions can begin to experiment with nudge strategies. With clear and compelling goals in place, the Georgia Department of Administration was able to learn from private sector partners at Amazon, and redesign procurement systems to lead users towards better decisions with strategies such as default settings and warnings.

As You Redesign, Create Effective Feedback Loops: Once new approaches are in place, organizations must establish continual feedback loops to measure progress, assess impact, and identify new opportunities to create sustainable change. In California, the Department of General Services had to ensure people felt comfortable speaking up, sharing quirky ideas, and disagreeing, to accurately assess what strategies were working and what opportunities still existed.

While the world is still learning about the application of data, analytics, behavioral economics, and design thinking to the public sector, it's clear that these approaches can yield powerful results. We hope the success stories, lessons learned, and insights from early adopters found in this report inspire you to adopt these strategies, and we're looking forward to hearing about your journey to become more citizen-centric!

"I think that we can use behavioral economics as a tool to make the customer experience for citizens world-class and aligned with that of the best private businesses."

– Sean Vinck

CIO, Commonwealth of Massachusetts Office of Information Technology

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