



# CREATING THE **ULTIMATE** GOVERNMENT **EXPERIENCE**

HOW TO USE DESIGN THINKING TO PUT CITIZENS  
AT THE CENTER OF PUBLIC SECTOR SERVICES

government  
technology



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# INTRODUCTION

**T**he city of Austin, Texas, has an aggressive environmental goal: reduce the amount of trash sent to landfills by 90 percent and produce zero waste by 2040. A couple of years ago officials at the Austin Resource Recovery department, which oversees the recycling efforts, realized the city wasn't going to meet an important milestone: divert 50 percent of recyclables out of the waste stream and into the recycling stream. Looking for answers, the staff did the dirty work of analyzing the contents of trash cans for clues to disposal trends and launched new marketing campaigns to boost citizen commitment to recycling. When these efforts had little impact, the department turned to the city's Innovation Office for fresh ideas.

"We said, 'Let's try a different problem-solving method that focuses on how end users are experiencing this situation,'"

says Kerry O'Connor, Austin's Chief Innovation Officer.

The method, known as design thinking or human-centered design, uses interviews and qualitative and quantitative research to illuminate end-user perspectives. Government agencies throughout the country are using the approach for a range of initiatives, from designing more informative websites and improving response times for non-emergency 311 calls to eliminating waste and addressing climate change.

To see recycling from citizens' perspectives, Recovery Department representatives asked residents in 53 homes to show them what they would eat for a typical dinner and how they would dispose of packaging and waste. Researchers also gained insights into the pressures of everyday life, such as caring for a new baby or working multiple jobs.

**Austin deployed a user-centered approach to boost citizen commitment to recycling.**

“We started to see clear patterns where people lacked the knowledge, motivation and systemic ability to recycle effectively because of various factors in their homes and lives,” O’Connor says.

These citizen-centric insights, along with input from neighborhood block leaders and environmentalists, inspired scores of ideas to get the zero-waste strategy back on track. They include posters that provide at-a-glance information about how to sort various waste materials and a digital dashboard with recycling data that shows residents how an individual’s recycling actions support the city’s overall zero-waste efforts. These new ideas and other initiatives are now being evaluated for their impact on the city’s ongoing recycling efforts.

User-centered approaches like Austin’s represent a fundamental shift in how

many government organizations design new services and address problems. When government builds a new service, it consists of three layers: infrastructure and data, applications and services, and end-user experience. Traditionally, government has focused on the first two layers — in other words, the solution, rather than the experience. But now public sector organizations throughout the country understand that end-user experiences are key to knowing what new services constituents need, as well as learning how to design and continuously improve them. Design thinking techniques provide a framework that involves the human perspective in all steps of the problem-solving process.

This handbook provides a comprehensive look at how government agencies can use design thinking to optimize the way they deliver services.

# HOW DESIGN THINKING ENABLES BETTER CITIZEN EXPERIENCES

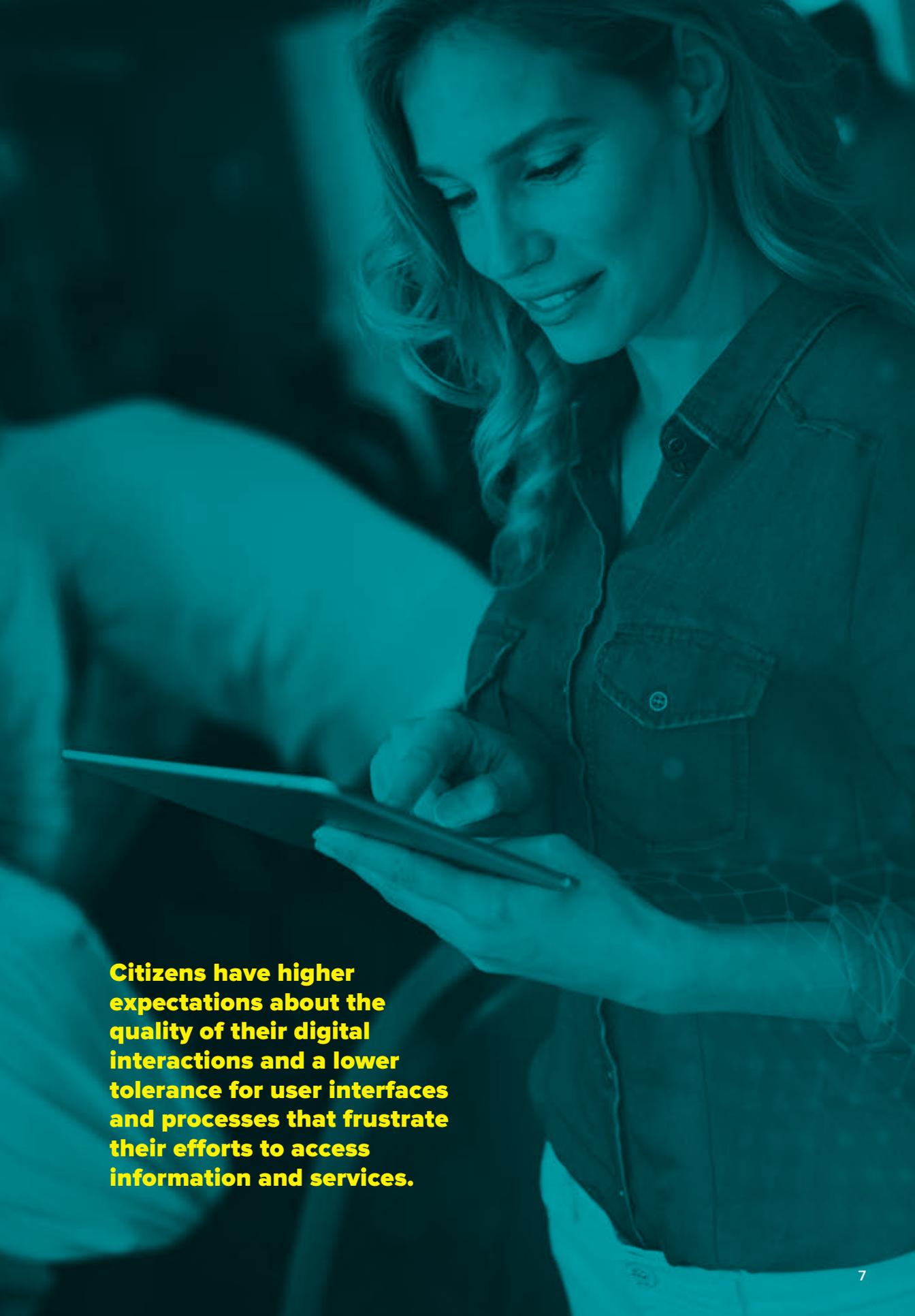
**A**ustin's application of design thinking techniques isn't unique. Government agencies have made major strides in leveraging technology to enhance the relationship between agencies and citizens over the past 20 years. But now, many realize the next generation of service delivery will be built with a focus on the experience of government.

"I've seen many cases where a government organization leads with technology to solve a certain problem — before the problem was clearly defined," says Nikhil Deshpande, Chief Digital Officer for the state of Georgia. "Every possible stakeholder was at the table, except for anyone who was advocating for the user. That's why I'm glad to see user-centered design processes getting the traction they deserve."

Numerous trends are coalescing to raise the profile of design thinking in government today. Citizens have higher expectations about the quality of their digital interactions and a lower tolerance for user interfaces and processes that frustrate their efforts to access information and services. The bar is being set by digitally savvy commercial organizations that compete in part by delivering frictionless customer experiences.

"The last best experience that anyone has anywhere, becomes the minimum expectation for the experience they want everywhere," says Bridget Van Kralingen, Senior Vice President for Industry Platforms at IBM.

Industry statistics illustrate the importance of this new reality. More than two-thirds



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of marketers at commercial organizations say their firms compete primarily on the quality of the customer experiences they provide, according to Gartner.<sup>1</sup> By next year, 81 percent of marketers expect to compete “mostly or completely” through these experiences.<sup>2</sup>

What’s more, the ability to provide high levels of customer experience translates into significant business benefits. One study found that leaders in this area attract higher revenue volumes than competitors that deliver lower quality experiences, in addition to having customers much more likely to provide repeat business and tell others about their positive experiences.

Numerous examples illustrate how design thinking has benefited private sector companies.

**Apple:** A case study by the consulting firm Designorate links Apple’s customer experience focus to its overall success. “Apple is one of the leading companies in the field of innovation and this couldn’t have happened without the company adopting design thinking,” the consultants conclude.<sup>3</sup> Last August, Apple became the first U.S. company to surpass \$1 trillion in market value.

**Uber:** A former designer with the ride-sharing company says an app update based on user perspectives significantly improved customer experiences. In the

first quarter after the updated app’s release, errors in pickup locations dropped 34 percent while driver wait times fell by 20 percent.<sup>4</sup>

**Airbnb:** In a blog, Alex Schleifer, Vice President of Design at Airbnb, describes how a multidisciplinary group of experience specialists, researchers and others design resources that build trust among strangers who provide and reserve places to stay. “Our community is ... incredibly diverse, and making sure everyone feels like they belong on Airbnb is in part the responsibility of our user experience design,” he writes.<sup>5</sup>

Design thinking incorporates three core principles to help organizations deliver better services:

1. **Focus on user outcomes that’s informed by qualitative and quantitative research**
2. **Insights from a cross-section of stakeholders for a broad range of perspectives and solution ideas**
3. **Solutions that are rolled out in a series of small iterations that can be continuously evaluated and improved**

# DESIGN THINKING SHORTENS PROCUREMENT TIMEFRAMES

It's just a little more than a year old, but NYCx — New York City's civic tech initiative where entrepreneurs, technologists and tech professionals participate in challenges to solve a specific problem of urban life and where solutions are presented by startups as well as established companies — is already impacting residents. Based in the Mayor's Office of the CTO, the team uses design thinking and close collaboration with neighborhood partners to identify priorities, and then works with residents, city departments and outside organizations to address these issues.

Current projects include "Moonshots," which address large-scale urban problems, such as internet connectivity and the impact of climate change. Other efforts, known as "Co-Labs," forge partnerships with residents and community groups in neighborhoods throughout the city to tackle local issues, such as zero-waste initiatives and nighttime safety.

"In both our Moonshots and Co-Labs programming, user-centered design is a critical part of our methodology," says Deputy Chief Technology Officer Jeremy M. Goldberg. "It deepens our focus and commitment on providing more responsive government to New Yorkers."

The NYCx team organizes workshops that bring together various stakeholders within and outside of government to define problems and set goals.

"Through a people-first, user-centered approach we may come up with dozens of concerns, and design thinking helps us to

determine themes and ultimately, the topics that receive the highest priority," Goldberg says.

This approach had a positive impact on a recent push to bring broadband connectivity to Governors Island. Design thinking compressed the time needed to scope the problem, brainstorm solutions, and present a challenge to entrepreneurs and technologists, Goldberg explains. Essentially, the Moonshot program methodology helped streamline efforts to publish the challenge, lead to the contracting between the vendor and Governors Island, and schedule the implementation of the chosen solution.

In total, the city received over 25 responses to the Governors Island Connectivity Challenge, more than the replies that were generated by a previous request. The challenge was issued in fall 2017; finalists were notified in February 2018; the winner was selected in April; and the broadband network was in place as of July 1.

"By most measures, in any industry, that was an extremely efficient timeframe, especially given the scale of this initiative," Goldberg says. "And most importantly, it was the type of solution that Governors Island and visitors and residents needed."

NYCx staff members will continue to keep New Yorkers at the center of the strategy for designing impactful, sustainable programs.

"Applying design thinking can be challenging, because it's not the 'traditional' public sector approach," Goldberg says. "But in the end, it ensures we are designing solutions with and not for residents."

# BENEFITS FOR GOVERNMENT

It's now time for government to follow cues like these to adopt its own form of design thinking.

"Government entities have an opportunity to get better at adapting to the pace of change and to the rising expectations of the citizens that we're seeing today," says Jeff Neely, Partner in IBM Services.

What's more, state and local governments become a draw for new business when they develop reputations for being easy for companies to work with, whether that's to more easily find information or obtain permits and licenses, Neely adds.

He also points out that citizens and business owners aren't the only "end users" who benefit from design thinking projects. The approach can help managers pinpoint modern alternatives

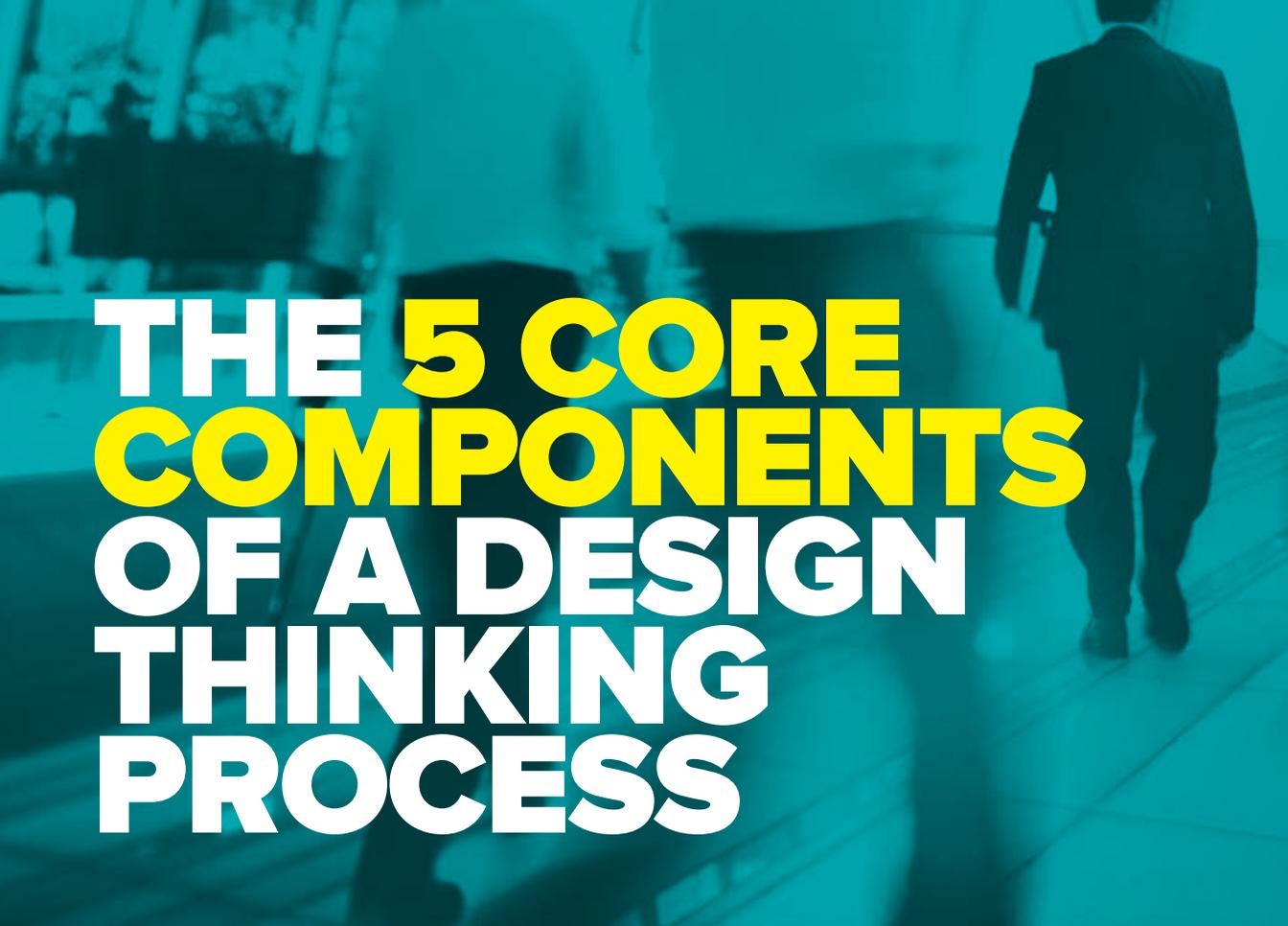
to legacy IT resources and archaic business processes. This helps ward off "shadow IT," where frustrated agency personnel contract for cloud services without IT's approval in an attempt to improve their productivity or capitalize on modern tools.

Design thinking offers additional benefits for government. The approach helps officials manage limited resources by focusing on problems and opportunities that rank highest among citizens or internal users. It also can foster higher rates of citizen engagement. When government solicits ideas and feedback from the user community, citizens feel like their concerns are being heard. "They are more likely to have a sense of ownership in the solution that is ultimately rolled out," Neely says.

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# THE 5 CORE COMPONENTS OF A DESIGN THINKING PROCESS

Practitioners of design thinking typically follow these essential steps to put the framework into action.

## **1** DEFINE CONSTITUENT COMMUNITIES.

Before organizations can understand the needs of end users, they must first develop a clear idea of their various constituents. Creating end-user personas is an important way of doing that. These short profiles summarize the age, socio-economic status and preferred communications channels of different users. They also flesh out any unique concerns or biases associated with each group.

“Design thinking can help crystallize the different personas and what a service must offer for people to quickly find what they need,” IBM’s Neely says.

For example, officials in a state health and human services department may decide to enhance citizen experiences by helping people better understand what resources are available and quickly connect them with the proper personnel. Thus, personas can point officials to the types of people who prefer to access government services via a mobile app versus those who opt to use a website or a call center. Personas also identify the government content that different groups access most frequently, while also helping government understand the messaging that resonates most with various constituents to keep them better informed and engaged with local agencies.



## **2 CAPITALIZE ON QUALITATIVE RESEARCH.**

Design thinking practitioners often organize workshops that bring stakeholders together to identify problems and opportunities within communities, hear the perspectives of various constituencies, analyze internal data about how services are currently being accessed and discuss ideas to address problems.

Workshop participants include government professionals from various disciplines, from website designers and content specialists to department managers and the research staff. Input also comes from community groups, businesses and civic organizations.

“We’re seeing good traction at the local level with cities that are partnering with organizations like Code for America to create solutions that are citizen centric,” Deshpande says. “These groups of civic-minded citizens are making a positive difference in how local government delivers services.”

## **3 TURN IDEAS INTO ACTION.**

Brainstorming sessions will likely produce a core set of ideas ready to be tested through prototypes. To move quickly from ideation to testing, government organizations should consider using agile techniques, which complement design thinking

approaches. Agile methodology breaks up projects into a series of short iterations, so products and services can be delivered incrementally in a regular cadence. This contrasts with more traditional waterfall approaches, which deliver new capabilities in one big implementation after months of development. Agile's incremental approach enables staff to solicit feedback from users and quickly make any required changes in a cycle of continuous improvement.

"Design thinking helps you figure out what to do, and agile helps you do it quickly," Neely says. "The two practices are pretty much inseparable — it's critical to weave both of them together."

#### **4 MEASURE THE IMPACT USING BENCHMARKS TAILORED FOR THE PROBLEM AT HAND.**

The metrics required to assess success vary according to the requirements of each solution or new resource being rolled out. For example, if a government agency updates its website to make it more engaging and easier to navigate, officials can turn to a host of proven tools for quantifying traffic volumes or how many menus users must navigate before they find their desired information. Similarly, the success of a new workflow process, such as generating a purchase order, may be judged by how much more streamlined and automated it is compared to the old way of working — and whether that translates into reduced staffing needs or cost savings.

#### **5 PLAN FOR CONTINUOUS IMPROVEMENT.**

Rather than thinking in terms of "one and done" service releases, use design

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thinking as a framework to make regular improvements and updates based on new information obtained from ongoing stakeholder feedback.

"Constant testing and continuous development are important parts of the design thinking process," Deshpande says. "This helps you see the gaps as they arise over time without having to go back to the drawing board."

Establishing feedback loops by eliciting reactions from users and stakeholders is an essential mechanism for these ongoing discussions.

"The landscape for products or services is changing rapidly," Neely points out. "The design thinking framework offers a way to ensure government meets user needs and provides subsequent enhancements. Organizations that do this well consider every project a kind of prototype — nothing is launched and left alone; each project continues to be iterated and improved. That approach is going to be critical to keeping up with the pace of change we're likely to see in the years ahead."



## AUSTIN TACKLES HIGH-IMPACT PROBLEMS

Upfront research and in-depth conversations with Austin citizens revealed a number of reasons why the city's recycling program wasn't meeting expectations early this decade. Confusion arose over Austin's single-stream recycling strategy, which commingled all recyclable materials in the same bins. People understood that glass, aluminum cans and paper were recyclable, but hesitated when deciding whether other materials were trash or recyclables.

"Understanding those kinds of questions from a user's point of view was critical for devising new ideas to help people improve their recycling efforts," says Austin's Chief Innovation Officer Kerry O'Connor.

The city got creative in finding resources to conduct in-home interviews with 53 citizens, which effectively illuminated underlying problems. Recognizing that Austin has a wellspring of professionals willing to take a sabbatical to work for civic good, O'Connor promoted a one-year fellowship program to attract researchers, content strategists, data analysts and other specialties vital for design research.

Based on the citizen insights gathered by these representatives, Austin developed a series of personas to help understand nuances to the recycling challenges. For example, one persona was the lone recycler — someone who is enthusiastic about proper disposal techniques but lives with roommates or family

members who aren't interested in recycling. Another persona is someone who is coping with new pressures in his or her life, such as caring for a new baby or working multiple jobs.

"These personas helped teams examine a range of challenges and look for new ways to address them," O'Connor says. "Organizations of all types need to think outside their day-to-day operations, take in new perspectives and then learn how to act on those new ways of seeing. We think of the process as co-creation — together we'll unpack the challenge and come up with a new way to solve a problem."

The results seen with the recycling program convinced city officials to transform the fellowship program into a permanent city resource called the Office of Design and Delivery. Its members are now redesigning the city's website to improve digital service delivery. In addition, the group is using a Bloomberg philanthropic grant to apply design thinking and tackle another multifaceted challenge: reducing homelessness in the city.

"For that topic, we're drawing on who understands qualitative research and could do it methodically, as well as frontline professionals from the city's emergency medical services, police department and case managers with our courts," O'Connor explains. "Some of these people are natural designers because they automatically incorporate empathy with end users and the ability to look for new ways to solve problems."



# **BEST PRACTICES** **IN DESIGNING** **FOR THE** **EXPERIENCE**

**W**hile the preceding steps are common to many design thinking initiatives, by themselves they can't guarantee success. To promote positive outcomes, government organizations must develop an effective strategy to implement design thinking. To do that, officials should follow a formula that incorporates the three "Ps" — people, practices and places.

## PEOPLE POWER

Organizations must look top-to-bottom when considering the people who will help drive design thinking success. Starting at the top, executive support is essential. A senior leader must be on board to champion the strategy, articulate what's driving the organization in this direction and then promote the successful results of projects. This commitment shows people throughout the enterprise that design thinking isn't just a new management fad but something that will define how they do their jobs and how their performance will be evaluated.

Executive buy-in is just the start. Design thinking veterans say it is also important to find and promote evangelists — those influential individuals within an organization who are eager adherents to design thinking and can convince peers to consider the approach.

"To put it colloquially, these people make the approach look cool and like something others will want to become associated with," Neely says. "That's important to help change people's behaviors, which, after all, is what design thinking represents."

To promote internal acceptance, the state of Georgia organized workshops that trained staff members in user experience best practices. The series of classes

helped people understand the value of seeing problems and solutions from end users' perspectives.

"A majority of people came out of these workshops very excited about the potential of this approach," Deshpande says. "And now these people are design thinking champions within agencies, which means we won't have to spend as much time in the future convincing others to come on board."

Unfortunately, ingrained resistance to change can sometimes block the best attempts at initially implementing design thinking. What's the answer?

"Persistence and patience," Austin's O'Connor says. "There's really no substitute for these two things."

For example, she says that managers may need to regularly remind staff members of the targets and milestones associated with design thinking projects.

"Many government people are used to working in a waterfall fashion," she explains. "With design thinking we're trying to get people accustomed to going through various periods from discovery and ideation to testing and prototyping. When prototyping is completed, they then meet to determine what's viable moving forward."

Because that's so different from traditional techniques, O'Connor often finds herself acting as a kind of interpreter.

"Organizations need someone who can translate this creative approach to problem solving into a language that conforms to the very administrative and bureaucratic tools that government workers have at their disposal," she says.

## PRACTICES THAT PROMOTE SUCCESS

A well-articulated set of behaviors can create a roadmap to success. Some organizations do this by devising a comprehensive plan that lays out how the approach can be adopted throughout the entire organization. Another option is to focus on small, tightly focused projects chosen to achieve near-term benefits that showcase the potential of design thinking. Sometimes called a “hallmark program,” this approach gradually builds on a series of successes to promote wider adoption in the organization.

Because the eventual success of design thinking is at stake, organizations should be ready to commit adequate resources to these initial hallmark programs. This may involve sending a team of stakeholders and project managers to boot camps that teach design thinking basics. In addition to training, some organizations also ask participants to formally commit to following design thinking principles and supporting the project’s mission goals, all in an attempt to demonstrate that they’re signing on to a new way of working.

# GEORGIA’S ENTREPRENEURS FIND INFORMATION MORE QUICKLY

When the state of Georgia needed to update its flagship website, Georgia.gov, it naturally turned to design thinking methodologies for help.

“The first step in our design thinking process wasn’t to ‘redesign’ the visuals of the website, or add new technology. Instead, we asked ourselves, ‘What is it that our constituents are looking for? How are they being served, and where are the gaps?’” says Nikhil Deshpande, Georgia’s Chief Digital Officer.

This led to the realization that the vast majority of citizens sought only about 10 to 15 percent of the information posted on the version of the website back then.

“Knowing that was important to help us focus our editorial efforts on the highly sought information. We needed to get rid of the rest and curate the important content to ensure we were truly helping our citizens.”

To determine which content was most valuable, Deshpande and his staff used

analytics, heat maps and search data that show traffic patterns and what content items received the highest number of clicks. Content analysis tools revealed how people found the website and what search terms led them there.

Based on the upfront research into constituent behavior, Deshpande’s team created a list of 50 high-priority topics and then closely grouped all the content related to each topic. For example, people who want to register a new business see information consolidated from multiple agency websites. Because the content displays on a single page, entrepreneurs don’t have to click to various destinations to find everything they need.

“We now offer a one-stop shop when it comes to the information people need to transact with the state,” he says.

The efforts are paying off. Dwell times on webpages are growing, which show people spend more time reading information rather than searching for it, Deshpande says.

“Steps like this can help deliver results that get people from other departments lining up to be part of other hallmark programs, so they can sprinkle some of that magic on their most important projects,” Neely says.

The key is to ensure design thinking isn’t seen as something that applies only to a small number of unique projects. Organizations need to find ways to make it something that everyone will want to use. That’s why finding champions at key places in the organization is critical. As new services, solutions and initiatives are formulated, people in all roles should be asking questions pertinent to design thinking: Have we done our research? Do we understand our users well enough? Have we gathered enough feedback to know how end users will react to something we’re planning to implement? When everybody is on the same page, design thinking becomes a natural way to work, rather than an exotic technique promoted by a small number of specialists.

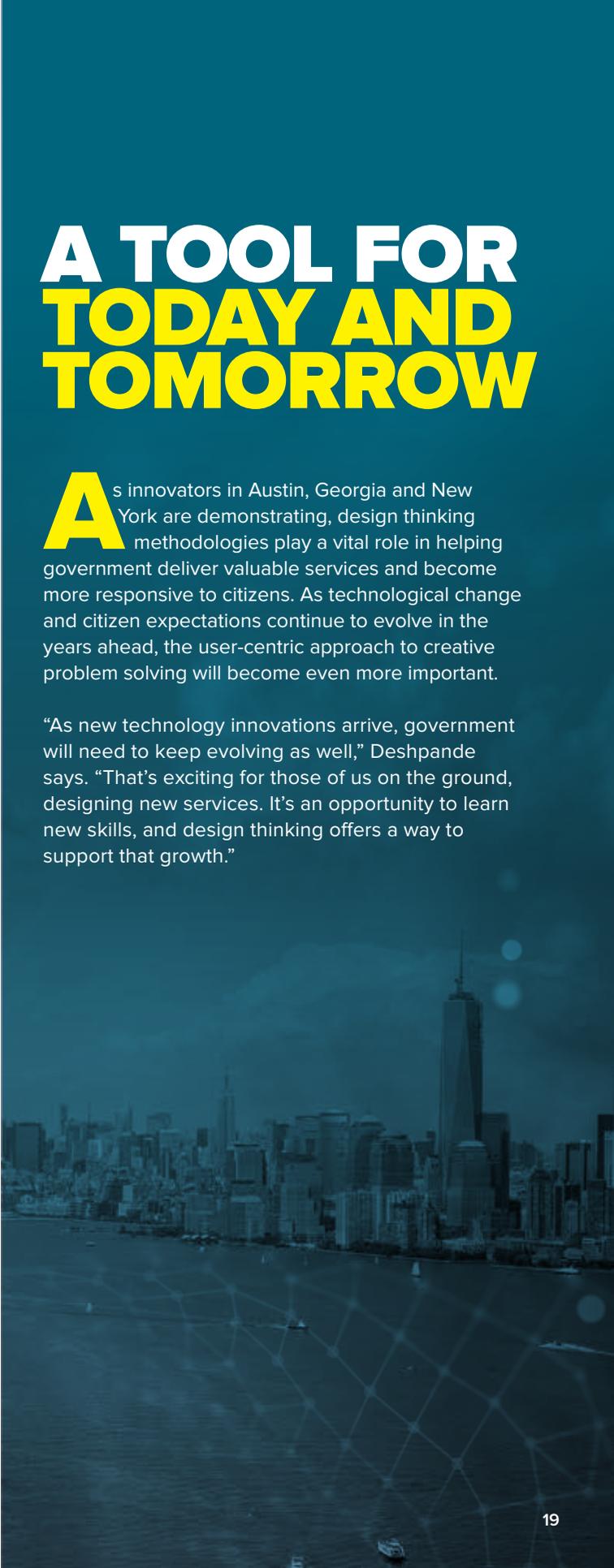
### **PLACES THAT FOSTER COLLABORATION**

Because design thinking relies on open communications and a cross fertilization of ideas, organizations should create workspaces where people can easily gather and engage with each other. Agile practitioners often take down walls to separate departments and create large, open spaces that encourage informal meetings and brainstorming sessions. In addition, whiteboards can be installed in these areas to display project goals, milestones and progress reports so stakeholders can stay up to date on current priorities and where they stand in reaching each project’s ultimate goals.

# **A TOOL FOR TODAY AND TOMORROW**

**A**s innovators in Austin, Georgia and New York are demonstrating, design thinking methodologies play a vital role in helping government deliver valuable services and become more responsive to citizens. As technological change and citizen expectations continue to evolve in the years ahead, the user-centric approach to creative problem solving will become even more important.

“As new technology innovations arrive, government will need to keep evolving as well,” Deshpande says. “That’s exciting for those of us on the ground, designing new services. It’s an opportunity to learn new skills, and design thinking offers a way to support that growth.”



## Endnotes

1. <https://www.gartner.com/smarterwithgartner/key-findings-from-the-gartner-customer-experience-survey/>
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