

Queue-it

How to ensure your website is prepared for the surge in voter registrations

PUBLISHED 20/11/2024



Every election cycle for the past decade has brought with it high-profile crashes of registration sites at critical moments. Not every reporting so much traffic, is no longer an excuse either or the media will accept. Discover how major public sector organizations prepare their websites for surging traffic with a virtual waiting room.

As the November general election approaches, is your voter registration website prepared to handle demand?

Last election, voter registration surges crashed websites in Florida, Virginia, Minnesota, and Pennsylvania. These crashes not only frustrated citizens looking to fulfill their democratic duty, they also led to lawsuits, emergency extensions of voting periods, and countless social media complaints and negative headlines. And the voter registration site crashes are tempting us again. In May of this year, voter registration for just the primary elections [crashed Georgia's My Voter Page site](#).

"In the years I've been doing this I've never seen it be down for this long," said Stephanie Ali, policy director with the New Georgia Project. "So we have to have our confidence that this is getting fixed, that this is going to be stronger and that this is going to handle a higher volume going into November and frankly beyond."

Discover why public sector organizations in New Hampshire, Minnesota, and Oregon use virtual waiting rooms to handle demand during surging traffic, how these solutions work, and why it's so hard to keep your site online during large spikes in activity.

How to ensure your website is prepared for the surge in voter registrations

Blog

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6 proven strategies to improve your digital public services

EBOOK



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Introduction

For citizens around the world, websites are now the face of the public sector. We file our taxes, apply for unemployment, book vaccines, register changes of address, apply for visas and citizenship, and renew our passports and ID cards, all online.

This digital transformation has been growing steadily for decades. In many nations, it's already saving governments time and money while giving citizens a fairer and smoother citizen experience.

The spread of COVID-19 accelerated and stress-tested digital public service delivery. With billions of vaccines given worldwide, the rollout of vaccinations may well be the most wide-scale service delivery in history.

And while vaccination registrations showed the potential of digital services at scale, they've also revealed the many challenges the public sector faces in its inevitable shift to digital.

In this guide, we draw upon surveys, reports, academic papers, and real-world examples to explore these challenges and the lessons they teach us about creating cost-effective, functional, and citizen-centric digital services.

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What are citizen-centric services?

Citizen-centric services put citizens at the center of everything an organization does. A citizen-centric approach first relies on an in-depth understanding of citizens' needs, expectations, and experiences. And second, it uses that understanding to implement strategies to make services as efficient, reliable, and straightforward as possible.

The focus on citizen-centric services is not unlike the focus on customer experience design in the private sector. It's a telling sign that an improved federal "customer experience" is one of the three core objectives in the U.S. Biden-Harris administration's **Management Agenda Vision**.

But governments' scope is unparalleled. They're the world's largest service providers, meaning improvements to their digital services can touch millions of lives. By understanding and catering to citizen needs and expectations, governments can design services that encourage adoption, save money, and improve citizen satisfaction.

And importantly, the movement toward citizen-centricity in government is an essentially democratic one. Service delivery becomes a two-way relationship that's organized around citizens. Key to this relationship is simple, reliable, fair, and effective service delivery.

Why are citizen-centric services important?

The impacts of citizen-centric service delivery are many.

For citizens, interactions with the public sector become smoother, easier, and more enjoyable. And for governments, service delivery becomes more efficient and effective.

Citizen-centric services help build trust and save resources, two key benefits that are driving the movement towards citizen-centric service design.

Building trust

The **latest research** on trust in government breaks trust into two categories: trust in intentions and trust in competence.

Trust in intentions is concerned with values like integrity and transparency. Trust in competence is about outcomes—about how well governments deliver on expectations and perform their perceived role.

The hard truth is governments typically score terribly for competence of service delivery and customer satisfaction. In 2020, the U.S. Federal Government scored lower than utilities companies, car rental companies, and airlines.

These results mirror a 2018 **report** that found U.S. government websites scored below average (in the 45th percentile) for user experience. And in 2019, 80% of federal agencies scored “poor” or “very poor” on Forrester’s U.S. Federal Customer Experience Index, compared with only 14% of brands in the private sector.

It’s no wonder Google autocomplete results for “government websites are” look like this:

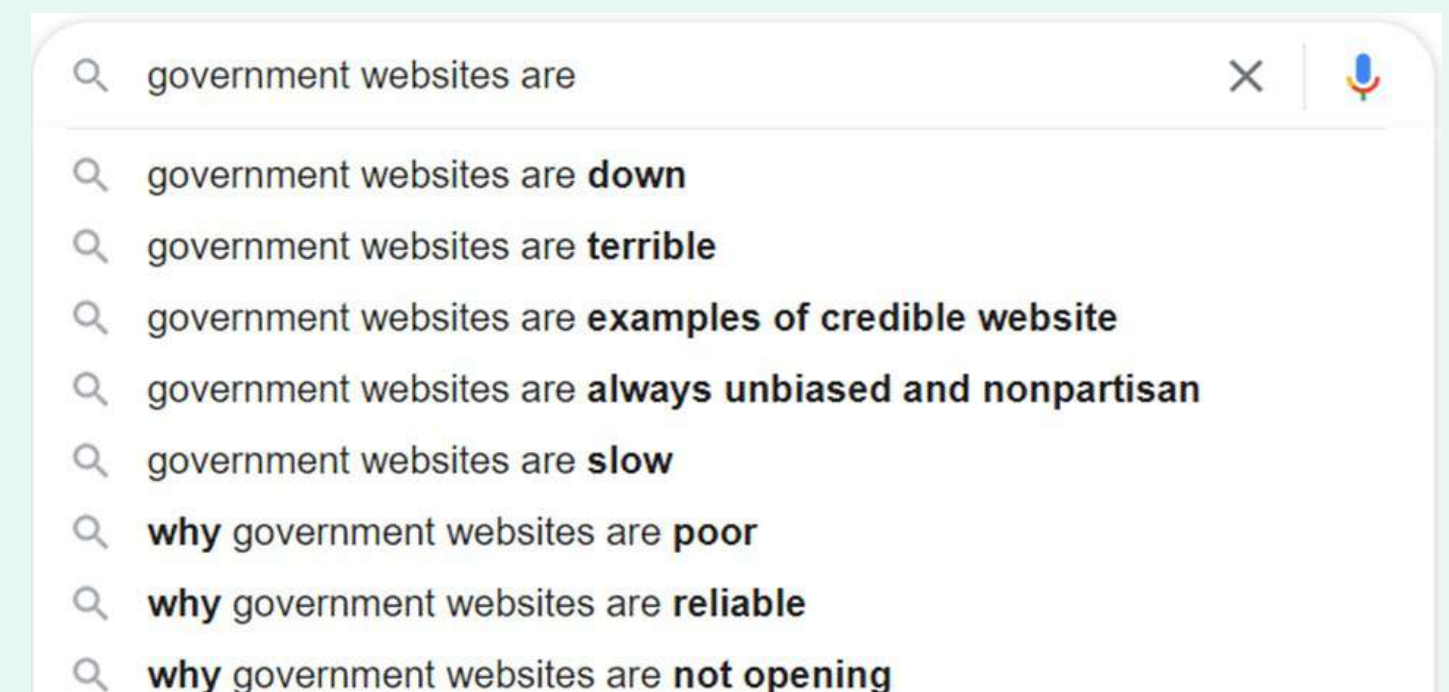


Fig 2. Google autocomplete results for “government websites are”



Fig. 1: 2020 Customer Satisfaction scores across industries
Source: **U.S. Federal Government**

Service delivery is when citizens are exposed to and evaluate the competence of government. Voting, taxes, vaccines—these are all services provided by governments to citizens.

A poor service experience causes frustration among citizens, **impacts trust** and **credibility**, and builds a negative perception of government. Failed digital government projects fill up Twitter feeds and **news headlines**, and they contribute to the general sense that public services are difficult and behind the times. Among the 38 OECD countries, only **51% of citizens** reported trusting their government in 2020. In the U.S. that **number is 24%**.

Citizen-centric service delivery offers an opportunity to improve this. Citizens who are satisfied with public services are **nine times more** likely to trust their government than those who are not.

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Figure 3 shows the OECD's five key drivers of trust in public institutions. These concepts are embedded throughout the recommendations in this guide and provide a set of values and guidelines for developing service delivery that inspires trust.

<i>Policy Dimension</i>	<i>Responsiveness</i>	<i>Reliability</i>
<i>Public institutions role leading to trust</i>	1 ----- <i>Provide or regulate public services</i>	2 ----- <i>Anticipate change, protect citizens</i>
	<i>Integrity</i>	<i>Openness</i>
3 ----- <i>Use power and public resources ethically</i>	4 ----- <i>Listen, consult, engage, & explain to citizens</i>	5 ----- <i>Improve living conditions for all</i>

Fig. 3: Public institutions' role leading to trust (Source: **OECD**)

Saving resources

Building trust and improving citizen satisfaction are key objectives for the public sector at all levels. But unlike many large private sector businesses that invest massive sums in customer experience design, the public sector runs on tight departmental budgets and faces many hurdles to digital transformation.

The upside is that digital service delivery consistently delivers an impressive return on investment. Unlike service centers, websites are open to the public 24/7 and require less ongoing maintenance and staffing costs. Digital service delivery is less time-consuming both for citizens, who don't have to travel or take time off work, and public servants, for whom information is streamlined. And automation increases efficiency and saves costs on case-handling, data entry, and record-keeping.

In 2015 alone, the U.K. reported that its digital transformation efforts had saved £1.7 billion (\$2.3 billion USD). These are the three key areas they reported led to these savings:

- **98%+ of driving tests being booked online**
- **85% of self assessment filing performed through online channels**
- **12 million people registering to vote using a new digital service**

Each of these changes involves allowing citizens digital, flexible, self-service methods of engaging with the public sector. They are all examples of citizen-centric service delivery that show huge return on investment.

Citizen-centric digital service delivery offers massive potential for governments across the globe. By putting citizens at the center of public service design, governments can boost trust, save time and money, and increase citizen satisfaction.

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Fig. 4: Digital public services have enormous potential for efficient service delivery. (Source: McKinsey & Company)

The COVID-19 pandemic has shown that digital service delivery is not only an important development, but in many cases the only available option. When services needed to scale fast, and local and federal governments faced public health regulations, it was digital service delivery that carried them through.

The following guide provides 6 clear considerations and lessons learned from digital service delivery and registrations before and

during the pandemic. Using vaccination registrations as a representative example of what digital service delivery looks like at scale, these recommendations show a path forward to improve registrations and develop citizen-centric public services.

6 Steps to Improving Digital Public Services

1. Prioritize clear, open communication

First and foremost, citizen-centric service delivery is about communication—in both directions. It's about communicating with citizens and letting them communicate with you.

Openness is one of the OECD's five key drivers of trust. It involves listening, consulting, engaging, and explaining things to citizens.

For citizen-centric service delivery, two-way communication enables:

- **Deeper understanding of the needs of citizens**
- **Expectation setting**
- **Increased participation and engagement opportunities**
- **Preparing citizens for service delivery to boost efficacy and efficiency**
- **Better public understanding of what the government is doing and why**

We see the importance of clear and effective communication in all forms of registrations and public services. From unemployment claims, to voting, to vaccination registrations, there are countless cases of citizen frustration, confusion, and bad PR that could've been avoided with testing, optimization, and effective communication.

In New York, for example, during the first stage of the vaccine rollout, **people couldn't figure** out where to book a vaccination.

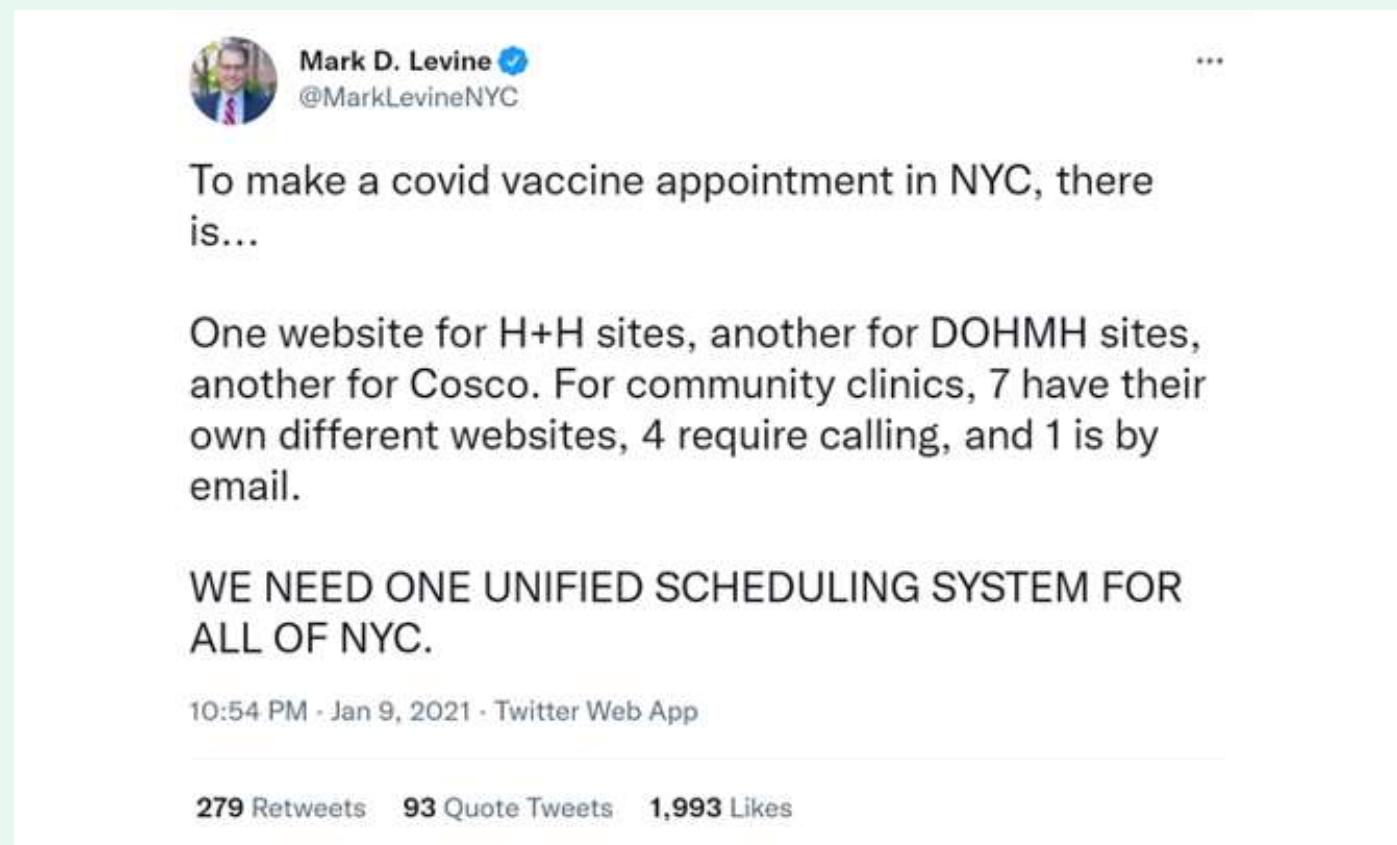


Fig. 5: Tweet highlighting citizen confusion over vaccination registrations.

Communication issues during vaccination registrations weren't limited to the booking stage, says Lorrin Pang, the district health officer in Maui, Hawaii. She told the **MIT Technology Review** :

"When people signed up with VAMS [a vaccine management system], I couldn't send specific instructions about the drive-through: Eat before you come, use the bathroom. Elderly guys who didn't get the message—a lot of them had to get out of their cars and be helped to the bathroom."

The lack of capacity for communication during and after the booking process left citizens unprepared and frustrated. This creates a worse experience both for those getting vaccinated, and those administering vaccines.

The same issues have plagued voter registrations. Five years earlier in New York, 125,000 Brooklyn voters were removed from voter polls, and many more were forbidden from voting for not meeting convoluted criteria. The Guardian **interviewed** one of these individuals, who said:

"I'm one of the many Brooklynites who found his name inexplicably taken off the rolls when I tried to vote. Prior to today, I never felt the need to check my eligibility, as I have voted in Democratic primaries before as far back as when Hillary Clinton and Barack Obama were campaigning. I am outraged by this situation and feel that this really undermines the credibility of our government."

In both examples, citizens are trying to fulfill their civic duty. They're striving to contribute to democracy and public health yet are left frustrated and dismayed because of unclear communication and a misapprehension of requirements.

The paths to the use of public services need to be simple and clearly communicated if governments want citizens to engage with and use them. Governments need to set expectations, prepare citizens, and follow through.

Communication is key to creating a great citizen experience. And a great experience is key to ensuring people return to use public services year after year.

2. Design for everyone

Government websites have never been famous for their flashy or intuitive design. But web design is critical when there are millions of people from all ages and backgrounds visiting public sector sites for access to critical information and services. For citizen-centric service delivery, high-quality web design is a must.

When citizens access digital services, they are no longer just citizens, they become users, and users have certain needs. User experience (UX) designer Aaron Walter's Hierarchy of User needs suggests that to satisfy citizens, digital services should be functional, reliable, usable, and pleasurable—in that order.



Fig. 6: Aaron Walter's hierarchy of user needs

Functional

A functional service is one that works to help citizens meet their goal and needs. Functionality is the foundational element of citizen experience design because services are useless if they don't function.

In a **2021 survey** of over 20,000 Latin American and Caribbean citizens, 39% described completing a government transaction online as "difficult" or "very difficult". Their top complaints? Technical difficulties, unclear information, slow processing speeds, and pages being unavailable on mobile.

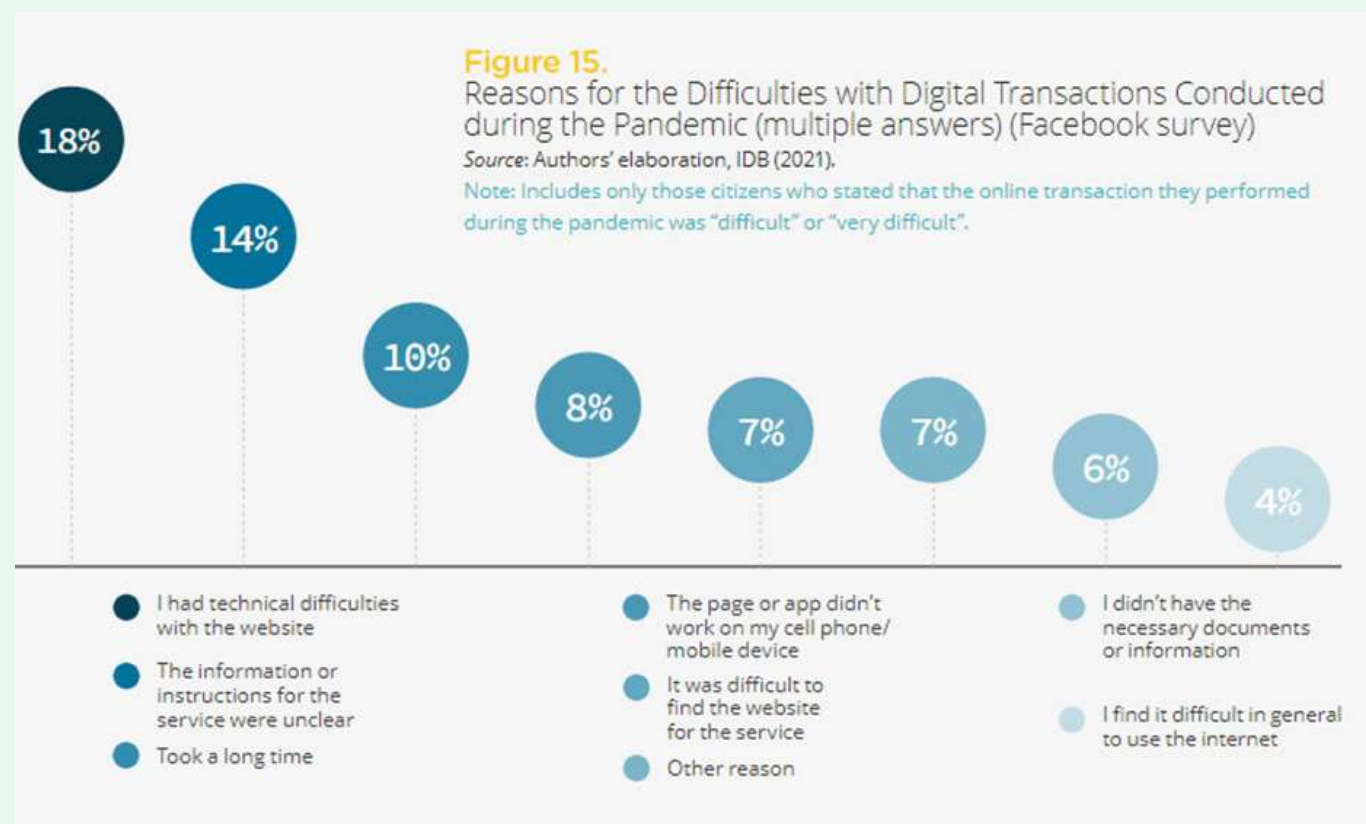


Fig. 7: Survey of citizens' difficulties with digital transactions (Source: **IADB**)

In short, the websites didn't function as they should have.

A 2020 survey conducted by the **Economic Policy Institute** reached similar conclusions for citizens applying for unemployment benefits in the U.S. It found that for every 10 citizens who successfully applied, there were 3.7 who tried but couldn't get through, and 2 that avoided applying altogether because it was too difficult.

When you're designing digital services, their function should always be top of mind. Probe the purpose of every website or page:

- **Why do users visit it?**
- **What are their needs once there?**
- **What do they hope to find or achieve?**
- **Can they complete their goals?**

To answer these questions, you need to listen to citizens. You need to test and retest your website, track how people are using it, and constantly monitor it for issues.

Reliable

A reliable service is one citizens can count on to fulfill its purpose consistently. Citizens turn to governments for essential services—they need to trust these services to be available and reliable. Reliability is a key driver of trust, and digital services that falter and fail impact the perceived competence of government. Creating reliable services is complex. It involves creating services that can scale, testing them to keep them bug-free, and ensuring they perform quickly and smoothly. And all this must be true 24 hours a day, 7 days a week, 365 days a year.

It's particularly **tricky to scale systems** to match spikes in demand, as they're often hard to predict. Legislative changes, world events, and big announcements out of CIOs' and IT professionals' control can unexpectedly drive citizens to public sector websites, causing them to crash when they're at their most visible.

Here's a behind-the-scenes look at web traffic to a vaccination website we work with. At 13:00 (1PM) on this day, a press conference was held where it was announced that booster shots would be available for a certain age group.

Within minutes, web traffic rose from a couple hundred to 2,500 people. If the website did not have a **virtual waiting room** in place, the press conference traffic spike could have brought it crashing down.



Fig. 8: Behind-the-scenes of a website traffic spike caused by a press conference. (Source: **Queue-it**)

Providing reliable digital services is no small task. It requires qualified vendors to deliver glitch-free services and specialized resources to monitor, flag, and fix issues when they arise. And it requires **web traffic management** solutions to keep systems online and serve citizens no matter the demand. But it's a critical building block for delivering the dependable digital services citizens deserve.

Useable

Usability is the ease with which a user interacts with a service. Sure, the website works for the people who created it, but what about the average person? Can they find what they're looking for? Do they understand the steps needed to complete their goal?

Digital public services, arguably more so than private sector services, need to be usable and accessible by all. This is not only **because high usability is associated with higher perceived credibility** of government websites, but also because government websites need to cater to all citizens as a core part of their mission.

Pew Research Center found that 30% of American adults have low tech readiness, with significant disparities related to age, race, education level, and income.

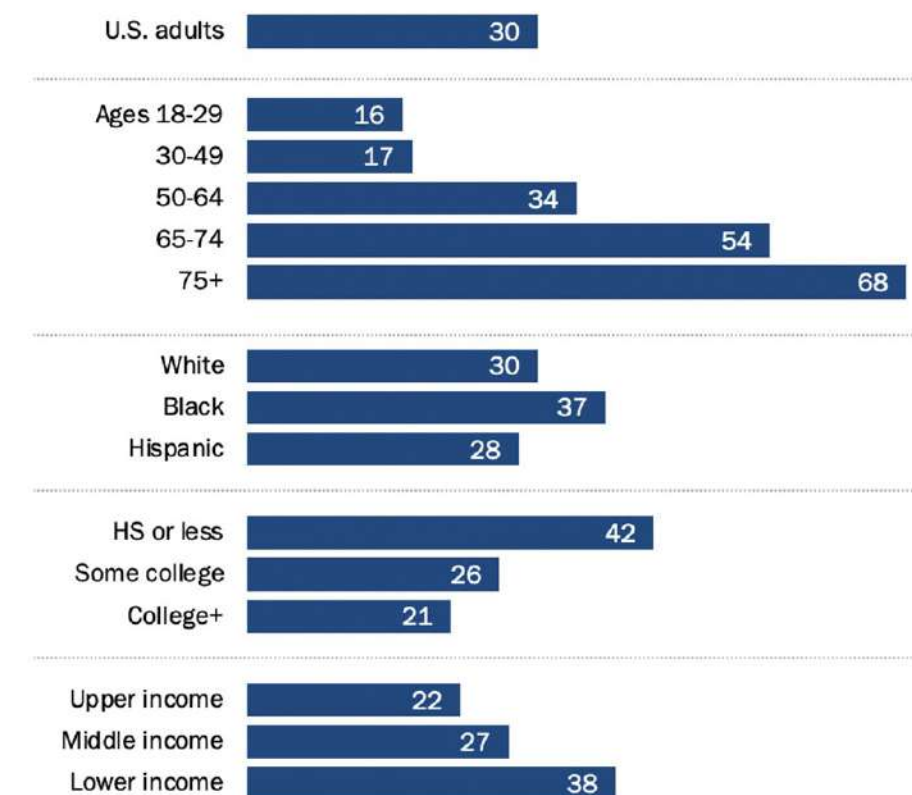
Improving usability is no easy feat. It takes user interface (UI) and UX designers, repeated tests with people of all backgrounds, and continued monitoring for issues after launch. But it's an essential step in improving the citizen experience and boosting the credibility of digital public services.

The public sector exists for all citizens. So, it's crucial government digital transformation doesn't leave behind groups without tech skills.

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30% of Americans have lower tech readiness, which varies by age, educational attainment and income

*% of U.S. adults who have lower tech readiness**



*Those with lower tech readiness say they either are not at all or only a little confident using their computers, smartphones or other electronic devices to do the things they need to do online, or they usually need someone else to set up or show them how to use a new computer, smartphone or other electronic device when they get it.

Note: White and Black adults include those who report being only one race and are not Hispanic. Hispanics are of any race. Family income tiers are based on adjusted 2019 earnings. Those who did not give an answer are not shown.

Source: Survey of U.S. adults conducted April 12-18, 2021. "The Internet and the Pandemic"

PEW RESEARCH CENTER

Fig. 9: Tech readiness of Americans by demographic groups (Source: **Pew Research Center**)

Pleasurable

Pleasurable services are services that are a pleasure to use. This can only be achieved once all the above criteria are filled.

You want service centers to be clean and professional looking, and public servants to be polite and understanding when interacting with citizens. Why should your website be any different?

What exactly makes digital citizen experience pleasurable will vary, but let's look at a case study that recently won the **2021 annual Government Experience Awards**, the state of Michigan.

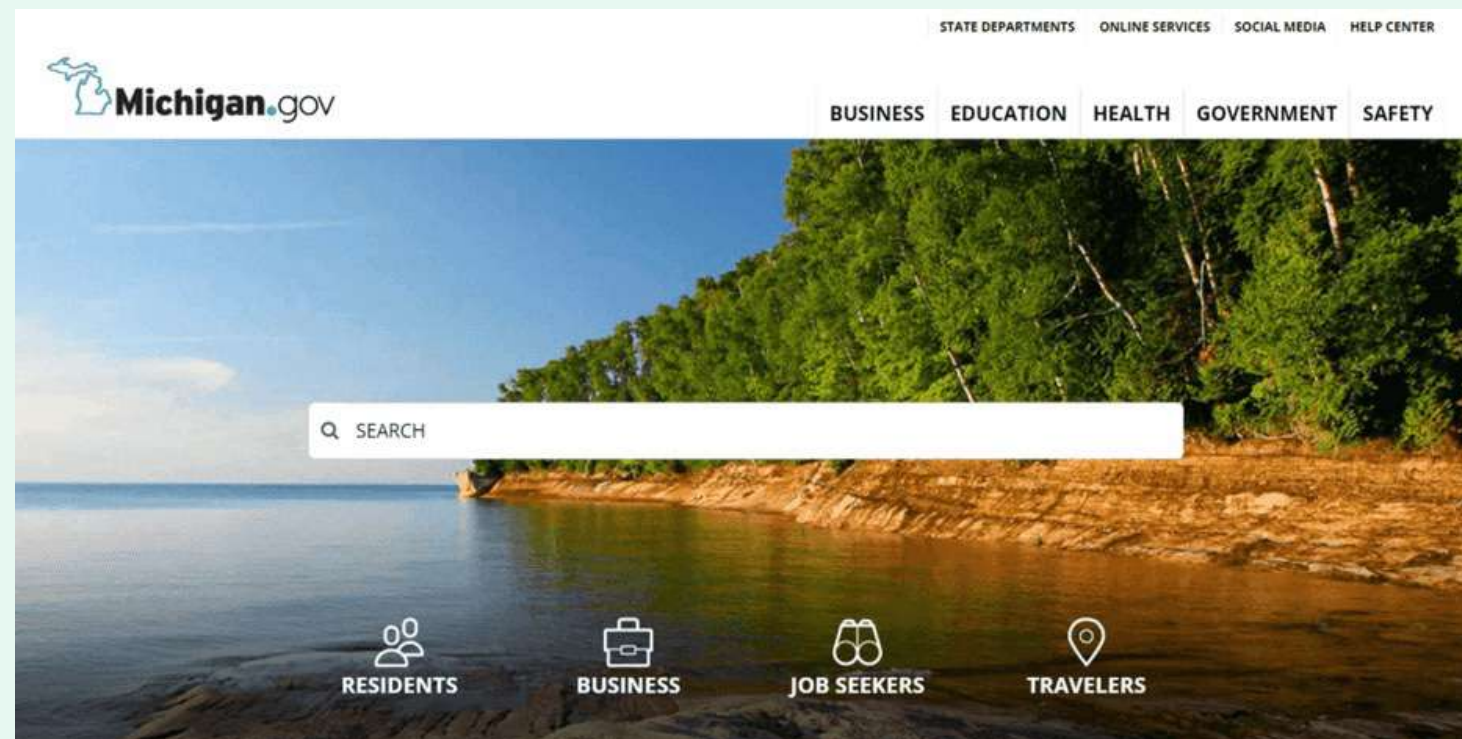


Fig. 10: Michigan.gov's home page.

With clean visuals and navigation, a simple user flow, an intuitive search feature, and a focus on accessibility for all, Michigan.gov isn't your typical public sector website.

"The focus for us has been on improving the digital experience through what we are calling our 'unified branding' or 'overall digital experience' for the state," **said eMichigan Director Suzanne Pauley**. "It should feel very seamless to people as they traverse our digital environment ... We have put a huge focus on making sure that our services can be used by everyone."

The most successful companies in the world invest big in user experience research and design because they know their customers are at the heart of everything they do. Websites like Michigan.gov and programs like the U.K.'s **Government Digital Service** are taking notice and are working to put citizens at the heart of their digital public services.

Best practices for improving usability:

- Seek universal usability by recognizing citizens' diverse needs
- Ensure the service is fair for all citizens
- Strive for consistency to make processes more intuitive
- Design to make errors difficult or impossible
- Allow easy reversal of actions
- Reduce short-term memory load

These UX insights should be incorporated into the public service delivery to reduce confusion, anxiety, and disappointment among citizens trying to get register for essential services.

3. Manage high demand

During the 1918 Spanish Flu, a newly popularized service called the telephone provided comfort to millions of people separated from friends, family, and loved ones.

But as the Spanish Flu spread and phone usage skyrocketed, telephone **companies couldn't keep up with the demand**. Phone lines were swamped, and telecom companies implored people to only use their phones in case of emergency.

Acting on UX expertise and research will facilitate easier and more satisfying registrations for citizens. Services that leave little to no room for error and confusion are services that reduce the load on case-handling, citizen-service centers, and citizens' time. This not only drives trust in the competency of government, but also improves the accessibility of digital services and saves resources.

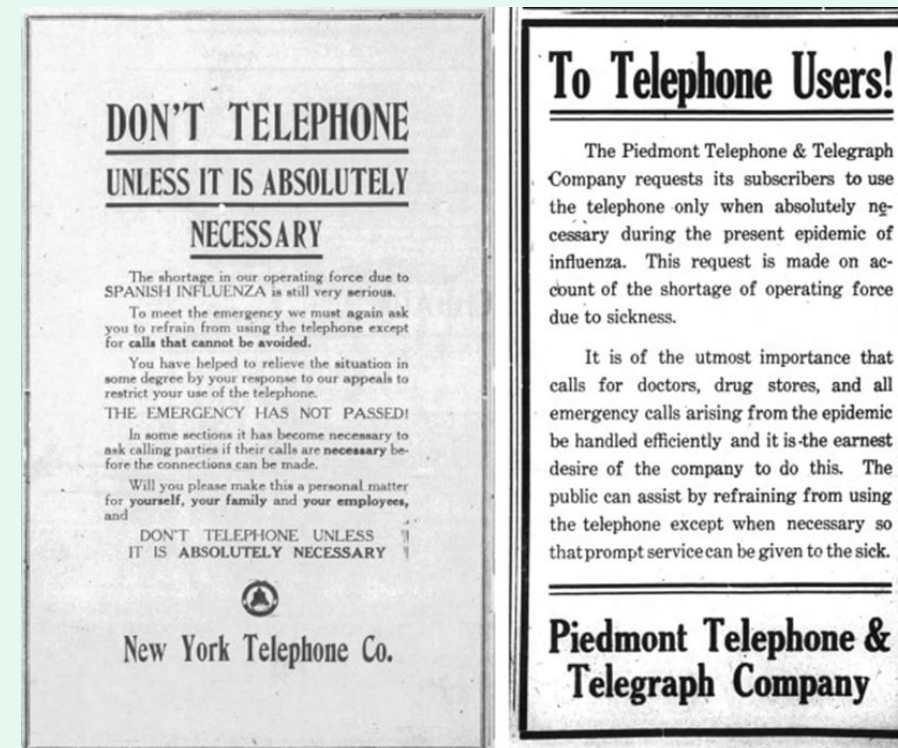


Fig. 11: Flyers from the Spanish Flu of 1918 imploring citizens to only use the telephone for emergencies (Source: [Fast Company](#))

In 2021, as vaccines rolled out across the globe, history repeated itself. Vaccination phone lines were flooded with calls and **operators couldn't keep up with demand**. Websites and servers from **Europe** to the **Americas** to **India** crashed as users flooded them to get vaccination bookings.

The issue now, as it was 100 years ago, is one of scalability.

Public sector websites that were accustomed to a few visitors seeking administrative information or submitting documents were suddenly responsible for hosting the booking systems for millions of vaccinations. This, of course, led to website crashes across the globe.

For ecommerce and ticketing sites, a crash harms sales, brand image, customer satisfaction and more. But when it comes to distributing life-saving vaccines, a website crash has much graver implications.

For ecommerce and ticketing sites, a crash harms sales, brand image, customer satisfaction and more. But when it comes to distributing life-saving vaccines, a website crash has much graver implications.

Public sector website crashes and errors are far from exclusive to vaccination registrations. They occur in all cases of high demand, from the launch of new services, to tax time, to government press conferences. What's especially tricky is traffic spikes are often caused by events and announcements out of CIOs' and IT professionals' control. Legislative changes, world events, and big announcements can unexpectedly drive citizens to public sector websites, causing them to crash when they're at their most visible.

There was the **infamous failed launch** in 2013 of the Obama Administration's healthcare.gov, where high demand saw 250,000 citizens access the site on the day it went live. After a long day of crashes and technical errors, only six people had completed their application.

The Digital Analytics Program (DAP) **reports** that when the first and second round of stimulus checks were released, traffic to the IRS website skyrocketed. It was these massive inflows of citizens which caused the website to **crash**.



Fig. 12: Graphs of traffic to the IRS website, showing spikes related to COVID-19 relief. (Source: **DAP**)

And as more digital services move online and uptake of digital services rises, demand will only rise.

This is one area where public-private partnerships (PPPs) have proved useful. Many vaccine providers are now coordinating vaccination registrations using experienced content delivery networks like **Akamai**. And we at Queue-it have had success working with the **Tokyo Metropolitan Government** and **InnovaPuglia** in Italy, implementing virtual vaccine waiting rooms to ensure their websites stay operational while rolling out this crucial service.

Those hosting registrations need to understand their system capacity and bottlenecks by **load testing** their site before systems go live. Doing this ahead of time, and implementing a **traffic management system**, can prevent frustrated citizens, wasted resources, and public outrage.

4. Create online fairness

Fairness is one of the key OECD drivers of trust. Particularly in public service delivery, citizens expect processes to be consistent, accessible, and fair. And governments have a responsibility to meet these expectations.

In many ways, digital service delivery makes life fairer for citizens. Citizens in regional areas, citizens working long hours, and citizens with disabilities all gain access to information, services, and benefits that were once difficult or impossible for them to come by. Tax offices, libraries, even medical services, have all been brought into the comfort of the home for millions of citizens through access to the internet.

Things are far from perfect—access to the Web **remains skewed** to first-world countries and the upper-class—but the internet has made them fairer than ever before. More people now have access to more services on more equal terms.

But in situations where demand exceeds supply—immigration applications, vaccination registrations, housing grants, food assistance—the scale of the internet creates competition for access to these services. And in such competitions, it's the young and technically savvy that often prevail.

The vaccine rollout, in particular, has shown how digital services are often vulnerable to disparities and inequalities. It's shown that digital transformation requires a reevaluation of concepts of fairness.

No one should have an advantage, and everyone should have access.

Everyone agrees the rollout of vaccines should be fair, and governments across the globe have taken many steps to ensure that this is the case. The staggered rollout, prioritising at-risk populations and front-line workers, has been an important step in creating fairness in the vaccination registration process.

But in many cases, as head of the Alliance for Better Health Dr. Jacob Reider **told Fortune Magazine**, vaccine booking systems give unfair advantages to people with the digital skills or free time to monitor websites for available slots.

The set-up for vaccination registrations disadvantages the groups who are most vulnerable to COVID-19: the elderly and essential workers.

In 2021, there were stories of tech-savvy individuals creating **websites to aggregate and monitor vaccination availability**, finding **backdoors to online vaccination bookings**, and bots

doing the public service of **notifying people of vaccination appointments**.

There were groups of **vaccine hunter** volunteers, who monitored websites and contacted vaccine providers to help people find bookings, as well as **Facebook groups** designed for the same purpose.

For the most part, these people are looking to make the vaccination registration process easier for themselves and other citizens. They've shown impressive initiative and are providing a valuable service to their communities.

The issue is that citizens shouldn't have to develop these solutions. Software developers shouldn't have an advantage over regular folk. Those with flexible working hours shouldn't have an advantage over people working 10-hour shifts. Those savvy enough to Google "vaccine bot" or join a Facebook group shouldn't have an advantage over the millions who don't even know what a bot is.

Those savvy enough to Google "vaccine bot" or join a Facebook group shouldn't have an advantage over the millions who don't even know what a bot is.

Governments have a responsibility to distribute public services fairly. But during the first round of vaccinations, this hasn't always been the case. To encourage uptake of digital services and inspire trust through them, fairness needs to be a key consideration and aim of projects. **No one should have an advantage, and everyone should have access.** This applies to all forms of digital services, but is particularly crucial in situations where demand exceeds supply.



Fig. 13: People waiting for a COVID-19 vaccination
(Source: [WKTV Journal](#))

Some best practices for **creating online fairness** for high-demand digital services are:

- **Establish fixed times when bookings are made available, so citizens know when they need to visit the site**
- **Allow citizens to register their information ahead of time, so slower users aren't disadvantaged**
- **Give everyone an equal chance using a **randomized queue** when registrations go live, then create fairness with a first-in, first-out system for those who join later**
- **Use **bot mitigation tools** to prevent unfair advantages for the tech-savvy**
- **Offer those who missed out the option to sign up for email or phone notifications of available bookings in the event of cancellations**
- **Offer non-digital systems for registrations, such as phone lines and walk-in clinics, so those without internet or phones still have access to public services**
- **Work on centralized systems for registrations to make service delivery more accessible and easier to navigate**

5. Bolster cybersecurity to protect citizen data

With the public and medical sectors undergoing massive digital transformations, cybersecurity has never been so important. But securing and protecting citizen data is difficult, especially with services like vaccination bookings and voter registration being parsed out between governments, pharmacies, community centers, health clinics, grocery stores, and other private enterprises. It's crucial that service providers and their partners implement safeguards in registration processes to ensure citizens' personal information is secure.

Cybersecurity feeds into integrity and reliability as key drivers of trust. An honest and secure government, free from cyber-attacks, data-leaks, and abuse of citizen data, is one citizens put their faith in and feel confident trusting.

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The U.S. Department of Health and Human Services devised a **list of recommendations** for implementing such safeguards in vaccination registrations, which provide some key lessons that apply to all forms of public sector registrations:

- **Use and disclose only the minimum amount of personal health information necessary for vaccination registration (e.g. individuals may only need to provide their name and phone number to book a vaccination)**
- **Use encryption technology to protect personal health information**
- **Enable additional privacy settings on web-based scheduling applications (this could include displaying only initials on shared calendars, or limiting access to selected parties)**
- **Ensure the storage of personal health information and data is temporary, and is destroyed once the information has been registered with the national health services**
- **Ensure web-based scheduling applications do not store, use, or disclose personal health data (e.g. that vaccination data is not sold on to third parties)**
- **Devise a notice of privacy practices and ensure the information is salient and accessible to patients looking to register**

6. Bring all hands on deck

Governments undertake activities that can be categorized in two ways: sovereign and non-core. Sovereign activities are those that can only be performed by government, such as defense and foreign affairs, policy development, and regulation. Non-core activities are those the government is responsible for, but that could be coordinated by third parties, such as healthcare and education. It's with non-core activities that governments typically collaborate with the private sector. And the COVID-19 pandemic showed just how crucial cooperation this collaboration is.

When the crisis hit, governments suddenly needed PPE, ventilators, testing and quarantine facilities, vaccines, and medical staff. They needed to ensure operational efficiency, attract talented professionals, and secure manufacturing and distribution chains. And no government body had the resources or expertise to produce these goods and services quick enough.

This is where the private sector came in.

Public-private partnerships (PPPs) are arrangements between the public and private sector. Also referred to as shared service delivery, PPPs involve public-sector entities working together with private firms or non-profits to deliver services to citizens. Some of the key benefits of PPPs can be seen in the infographic below.

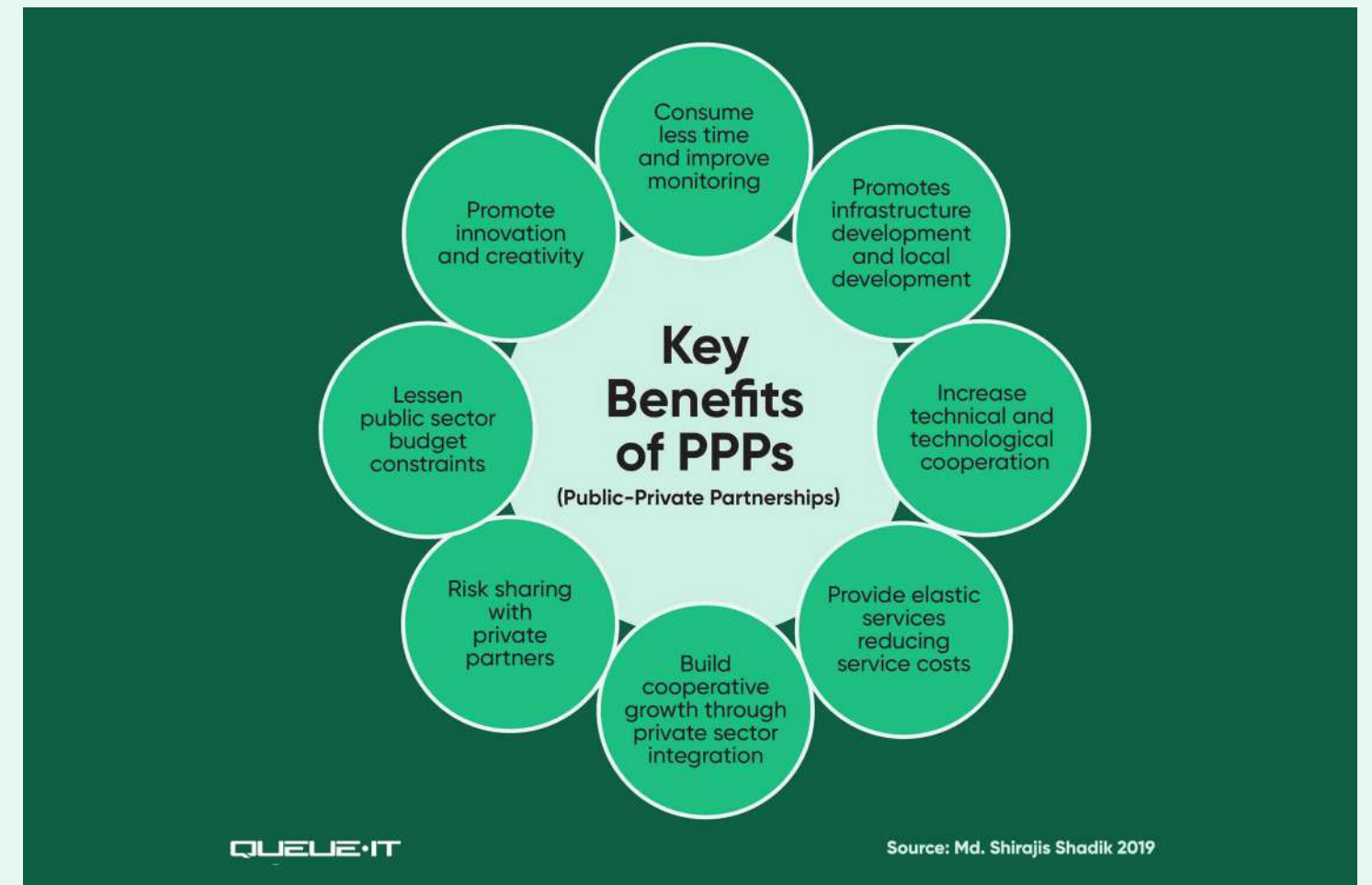


Fig. 14: Key benefits of public-private partnerships
(Source: [Md. Shirajis Shadik](#))

Responsiveness is a key driver of trust in institutions, as citizens place their trust in governments that respond efficiently and effectively to issues and adversities. PPPs enabled governments to act fast to respond to the challenges posed by the spread of COVID-19.

Responsiveness is a key driver of trust in institutions, as citizens place their trust in governments that respond efficiently and effectively to issues and adversities.

PPPs offer opportunities to improve the responsiveness of governments and the satisfaction of citizens. The World Health Organization's **pandemic readiness strategy** includes a "whole-of-society" response plan for a reason—in times of crisis, everyone has a role to play.

PPPs formed in response to COVID-19 include:

- **Operation Warp Speed**, the U.S. Government's \$18 billion investment in fast-tracking vaccines, which facilitated the quickest development and approval of vaccines in history
- In Denmark, authorities used PPPs to bolster their testing facilities, offering **far more daily tests** than the government could have supplied on its own
- **Akamai** has partnered with several public bodies to provide vaccine management systems, bolstering security, resilience, and user experience on vaccine booking sites
- **Columbia** has expedited the vaccine rollout by allowing **private companies to purchase and import vaccines**
- **Queue-it** has **partnered** with multiple public organizations to keep vaccine booking sites online and ensure fairness in the registration process

- In the U.K., private sector services fast-tracked the development of seven **Nightingale hospitals** in a matter of weeks, ensuring hospital capacities were never exceeded
- **Salesforce** has partnered with vaccine providers to simplify and streamline vaccination administration

In times of crisis, everyone has a role to play.

Peter Sands, executive director of The Global Fund, **stresses** that PPPs enabled The Global Fund to **save approximately 32 million lives** and reduce the annual death toll from HIV, malaria, and tuberculosis by half during the past 18 years.

The pandemic has shown PPP's potential to deliver digital services at scale. As the internet grows, governments undergo digital transformations, and citizen expectations change, collaboration between the public and private sectors will remain a key strategic tool deserving of governments' focus.

How a virtual waiting room can help

Citizens need their governments—sometimes all at once. Virtual waiting rooms prevent websites and apps from becoming overloaded, keeping systems functional and operations efficient. This helps public sector organizations deliver a superior citizen experience even when faced with overwhelming online demand.

When website traffic exceeds a public sector organization's site or app's capacity, citizens are redirected to a waiting room and then redirected back to the public sector website or app in a first-come, first-served order. The service compliments scaling to ensure infrastructure stays online.

Governments have used Queue-it to smoothly run high-demand events like vaccine registrations, unemployment claims, tax filings, and immigration applications. Instead of frustrating crashes or slowdowns, citizens are met with a transparent, informed wait. Clear and consistent communication during stressful events eases demand on support staff and helps build trust in public sector institutions.

Queue-it's virtual waiting room also lets governments prevent bots and fraudulent traffic from hitting their websites with a powerful bot and abuse mitigation toolkit. Queue-it's services keep public sector websites secure and citizen data private since no sensitive data goes through our system.

Queue-it has spent 10+ years in the business of creating online reliability. We work behind-the-scenes to keep the lights on for some of the world's biggest companies. And throughout the pandemic, we've been working with the public sector to help them keep pace with the shift to digital.

Citizens need their governments—sometimes all at once. Virtual waiting rooms help public sector organizations deliver a superior citizen experience, no matter the online demand.

We worked with the **Tokyo Metropolitan Government** to run vaccination registrations in the world's largest city, ensuring the website stayed operational in the face of hundreds of thousands of users.

And working with Queue-it allowed **InnovaPuglia** to effectively distribute vaccination bookings to over 4 million residents in the Italian region of Puglia.

Queue-it implementation is straightforward for public sector organizations. We're listed on the **Salesforce** Commerce Cloud, **Amazon** Web Services Marketplace, and are on NASPO Cloud Contract (AR2472) with **Carahsoft Technology Corp.**

“

Now it's unthinkable to launch a booking site without Queue-it.

*Masanobu Tenjin, Director for Digital Shift Promotion,
Tokyo Metropolitan Government's Bureau of Digital Service*

”

“

We could save our system thanks to the queue system we implemented.

Alessandro Di Bello, General Manager, InnovaPuglia

”

“

We installed the system in a few days, and we're very happy with Queue-it's technical support. We've reached our goal.

Fausto Mancini, Key Account Manager, Minsait

”

Summing up

COVID-19 vaccinations have accelerated and stress-tested digital transformations in government.

The lessons we've learned throughout the pandemic give us insight not only into improving vaccination registrations, but also into optimizing digital public sector services like e-health, digital identification, online taxation, unemployment registration, and much more.

To create citizen-centric services, governments should take into consideration 6 steps moving forward:

1. Establish the proper channels for communication, and provide accurate and transparent information to build trust and set expectations

2. Focus on UI and UX to simplify services and make them more intuitive

3. Ensure public sector websites are scalable can manage high-demand

4. Take steps to make digital services fair and accessible to all

5. Ensure citizens' data and personal information is secure

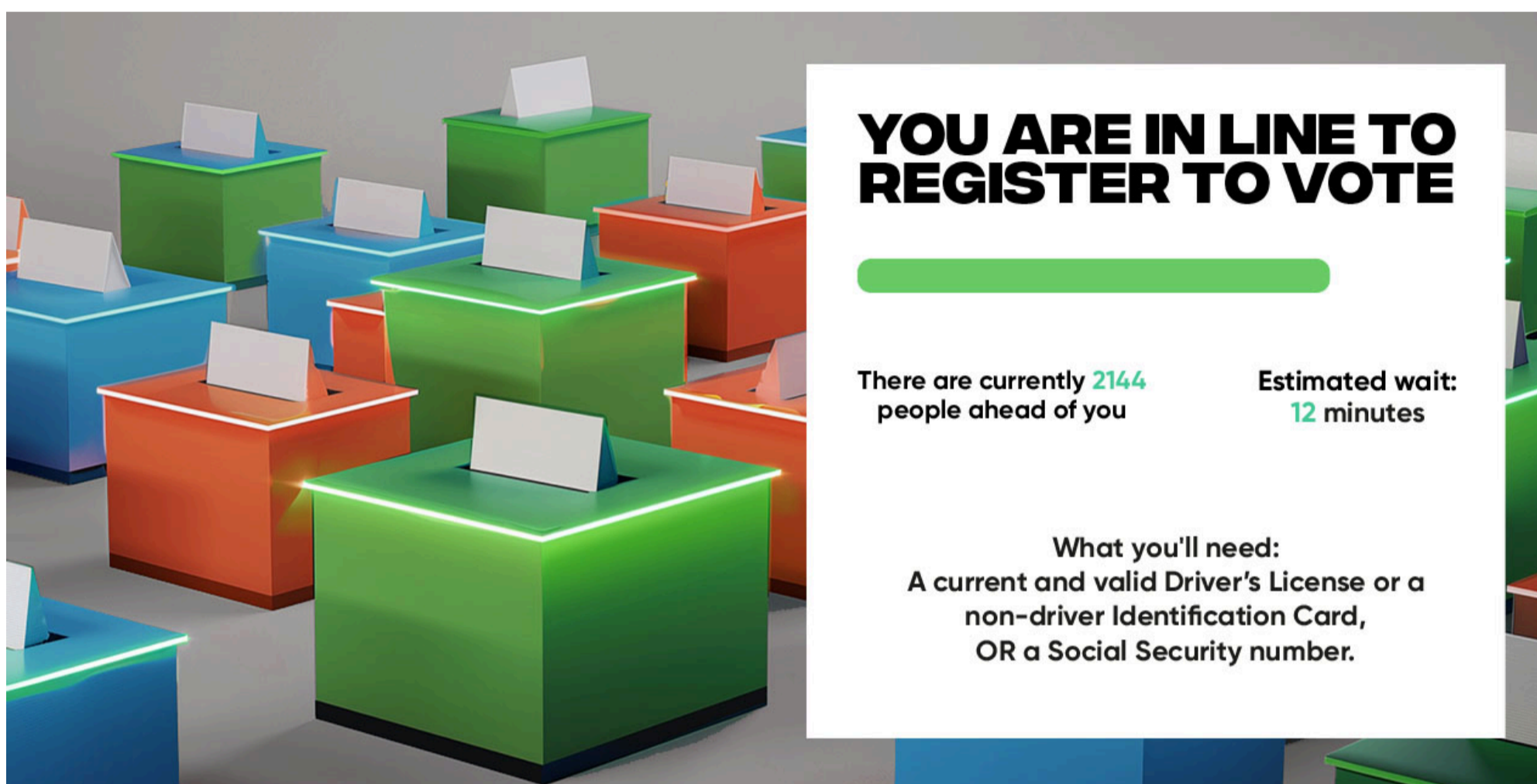
6. Carefully consider the value and utility of public-private partnerships

**Deliver a citizen experience
you can be proud of, no matter
the demand**

Find out how

How to ensure your website is prepared for the surge in voter registrations

Published: 24 Jul 2024



Every election cycle for the past decade has brought with it high-profile crashes of registrations sites at critical moments. "We weren't expecting so much traffic," is no longer an excuse citizens or the media will accept. Discover how major public sector organizations prepare their websites for surging traffic with a virtual waiting room.

As the November general election approaches, is your voter registration website prepared to handle demand?

Last election, voter registration surges crashed websites in Florida, Virginia, Minnesota, and Pennsylvania. These crashes not only frustrated citizens looking to fulfil their democratic duty, they also lead to lawsuits, emergency extensions of voting periods, and countless social media complaints and negative headlines.

And the voter registration site crashes are ramping up again. In May of this year, voter registration for just the *primary* elections [crashed Georgia's My Voter Page site](#).

"In the years I've been doing this I've never seen it be down for this long," said Stephanie Ali, policy director with the New Georgia Project. "So we have to have our confidence that this is getting fixed, that this is going to be stronger and that this is going to handle a higher volume going into November and frankly beyond."

Discover why public sector organizations in New Hampshire, Minnesota, and Oregon use virtual waiting rooms to handle demand during surging traffic, how these solutions work, and why it's so hard to keep your site online during large spikes in activity.

Why do governments use virtual waiting rooms for voter registration?

Public sector organizations across the globe use virtual waiting rooms to protect their websites from surging traffic and ensure a fair and reliable online experience during high-demand registrations.

Many public sector orgs have learned the hard way that website traffic is unpredictable and can spike suddenly. Voters rush your website in the thousands if it's mentioned on primetime news, linked to on a major news site, or even posted on Instagram by a public figure.

A spokesperson for the Florida Department of State, for example, [told The Markup](#) that "an unprecedented 1.1 million requests per hour" had taken down their registration site.

And when Taylor Swift [posted about vote.org](#) on Instagram, the site reported a 1,226% increase in traffic within an hour. Andrea Hailey, their CEO, said, "Our site was averaging 13,000 users every 30 minutes."

Web traffic surges cause sites to slow down, produce errors, and crash altogether. These site problems:

Frustrate citizens: voters who've set aside time to register are met with slow, buggy, and crashed sites, causing frustration and harming trust in government.

Damage reputation: frustrated citizens turn to social media to complain, journalists write news articles about the failure, tarnishing your reputation.

Drain resources: IT teams work frantically to restore the site, while service and marketing teams work on crisis management.

Impact democracy: voters who try to register and can't because of a crashed site may never return. "If you're not maintaining critical infrastructure and it results in people not being able to vote, that's voter suppression by inaction," [says](#) Ryan Snow from the Lawyer's Committee for Civil Rights under Law.



Source: [Sam Morris, The Markup](#)



“If you go down, it's the worst thing in the world. Because it's part of your profession, it's the service you have stewardship for. We're held to having a worldwide 24-hour available service. And solutions like Queue-it help you ensure that's maintained.”

SIMON WATSON, TECHNICAL LEAD

[READ THE FULL STORY](#)

That's why, when faced with unprecedented demand, public sector orgs like The State of New Hampshire's Department of Information Technology, ID.me, The Minnesota Department of Revenue and Minnesota IT Services, and the U.K.'s national passport office use a virtual waiting room.

By giving you control over online traffic, a virtual waiting room lets you:

Ensure website performance: The virtual waiting room captures sudden surges in web traffic before they hit your site and allows you to control the rate at which visitors get access, ensuring you never exceed the technical capacity of your systems.

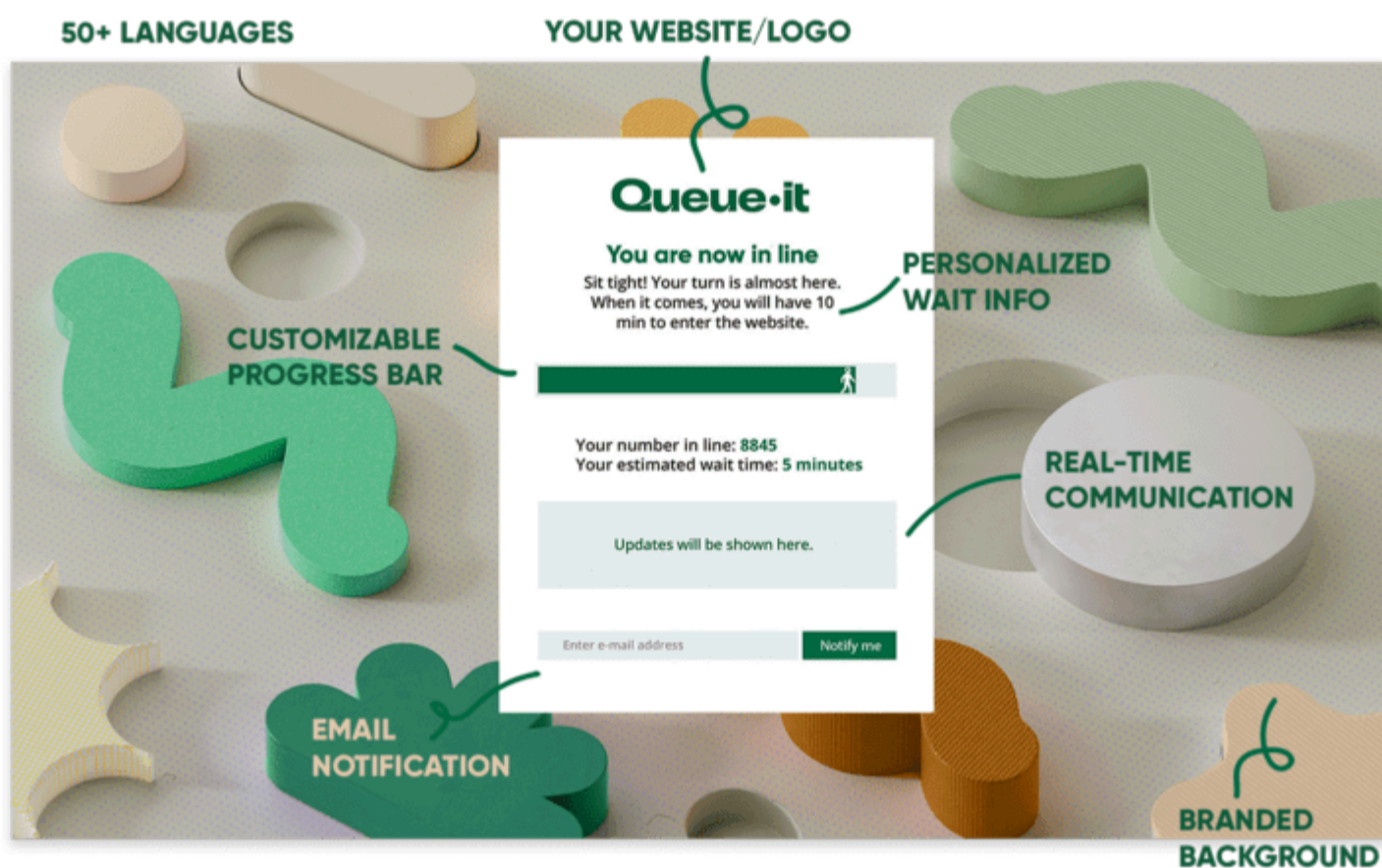
Improve citizen experience: Virtual waiting rooms replace the frustrating experience of a website crash or slowdown with transparent and controlled access, including detailed wait information on a branded page that can feature important info like registration deadlines and necessary documentation.

Deliver fair access: virtual waiting rooms provide sophisticated fairness mechanisms by ensuring first-come-first-served site access and allowing visitors to get notified when it's their turn.

How does a virtual waiting room work?

Virtual waiting rooms work by automatically redirecting online visitors to a waiting room when they enter a protected part of the user journey, for example visiting a landing page or proceeding to a registration form.

Visitors are seamlessly flowed from the site or page to a branded waiting room like the one below, where they see their number in line, their estimated wait time, and a progress bar. They experience a short, informed wait, then are flowed back to your site at the rate it can handle in a fair, controlled order.



While organizations often customize their waiting rooms both in style and in URL to look like the original site, the visitors in them are hosted on the virtual waiting room provider's servers. This means no strain is placed on the target website's servers while visitors wait for access.

Controlling the flow of traffic not only keeps your site online, it can also save you time and money. In [a recent survey](#), Queue-it customers reported a 35% decrease in server scaling costs and a 50% decrease in the number of staff needed on-call during registrations.

Queue-it customers report a 35% decrease in server scaling costs and 50% decrease in the number of staff needed on-call during registrations.

Let's look at some real-world examples that show how virtual waiting rooms protects government websites during large spikes in activity like voter registrations.

Case study: New Hampshire's State CIO Delivers Reliable Digital Services at Scale

When the New Hampshire Department of Information Technology (DoIT) initially launched vaccination registrations to citizens, "it just wasn't a good citizen service experience," says Denis Goulet, New Hampshire's CIO. "People were having trouble with the system. We had partial transactions, data issues, and a not-so-elegant throttling system. Call center traffic skyrocketed."

These issues incited immediate and immense pressure from both citizens and the media to get the next round of registrations right—which is why Goulet and his team implemented Queue-it.

New Hampshire's DoIT knew their site could handle up to 1,000 visitors arriving per minute. What they didn't know was when (or if) traffic would exceed this threshold. The team set up Queue-it's virtual waiting room to monitor traffic to the registration page 24/7, and only activate if traffic exceeded 1,000 visitors per minute.

When traffic exceeded this amount, instead of the site crashing, visitors were automatically redirected to a customized waiting room. They experienced a short wait, then were flowed straight back to the website to register for their vaccinations in fair, first-come, first-served order.

New Hampshire
COVID-19 Vaccine



Welcome To The State of NH COVID-19 Registration Site

We're so excited that you've chosen to register for your Covid vaccine here in New Hampshire. It's comforting to know that so many other folks have chosen to do the same.

Our system can handle over 1000 registrations per minute, but during these high-volume times we appreciate your patience. When it is your turn, you will have 10 minutes to begin processing your registration.

Thank you for being such an important part of New Hampshire's Covid success.

Let's make it a great summer in The 603!



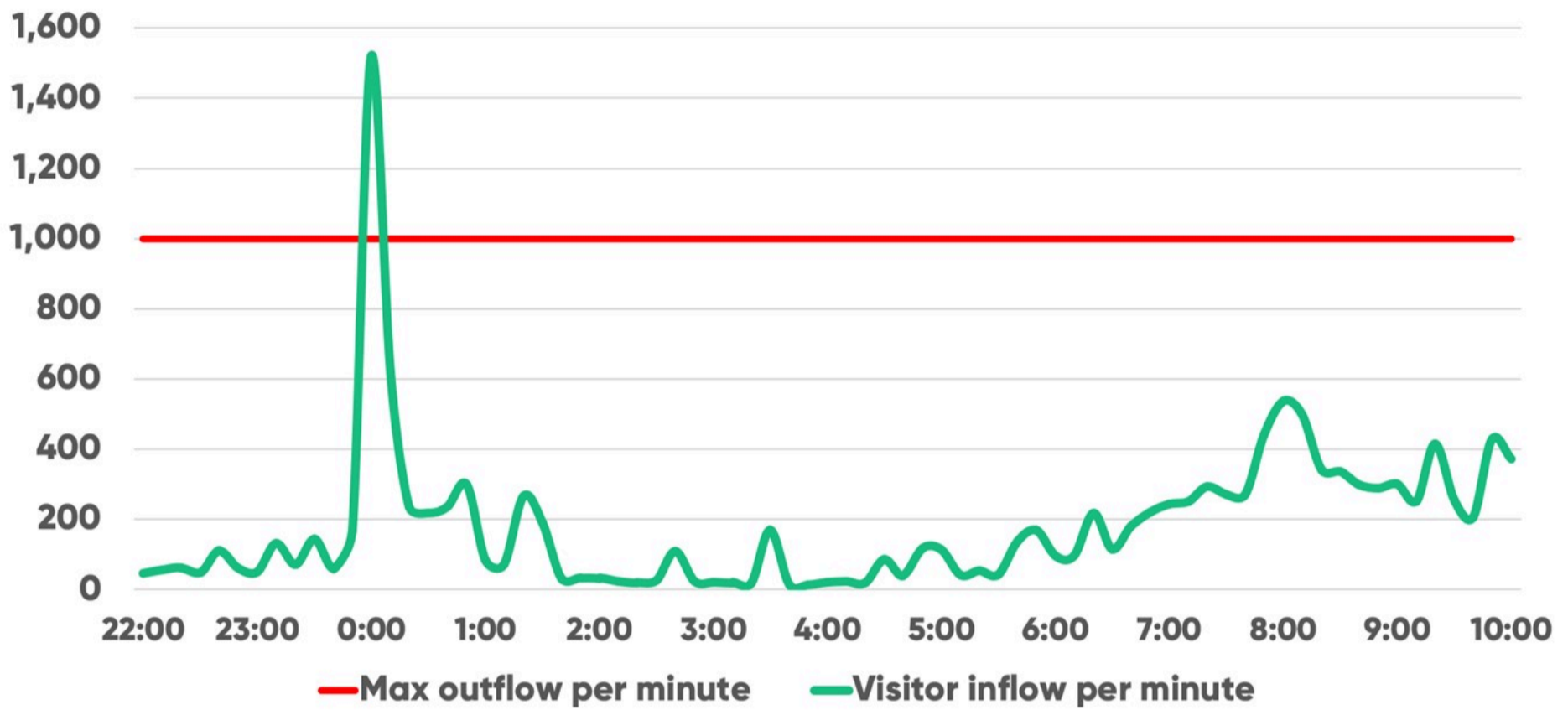
Your estimated wait time is: **4 minutes**

Status last updated: 4:44:46 AM GMT

Queue ID: 5c102236-1657-4305-8b3d-4c140388f755

As the chart below shows, web traffic remained mostly below the threshold the site could handle, but it was unpredictable. At around midnight on April 2nd, traffic suddenly spiked to over 1,500 visitors per minute. With Queue-it in place, the waiting room activated automatically, protecting the site and ensuring a seamless service experience for citizens.

Web traffic to vaccines.nh.gov (10 p.m. - 10 a.m. April 1-2, 2021)



“I loved the peace of mind Queue-it gave us—the knowledge that our systems weren’t going to crash ... I can count on one hand the number of times in my career I’ve implemented a new technology and it exceeded my expectations. Queue-it is one of those times, both in how easy it is to implement, and in how well it works.”

DENIS GOULET, NEW HAMPSHIRE STATE CIO

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Public sector virtual waiting room registration examples

The virtual waiting room isn't just used for voter and vaccination registration. It's used by governments across the globe for a wide variety of digital services that are at risk of crashing due to spikes in traffic.

[The Minnesota Department of Revenue](#) and Minnesota IT Services use a virtual waiting room to control traffic surges during popular rebate registrations.

ID.me uses Queue-it to protect against activity spikes on their digital identification network, which serves over 130 million members across the U.S.

The [U.K. Government's national passport service](#) uses Queue-it 24/7 to protect against surges in traffic caused by news mentions.

An [Oregon Parks & Recreation organization](#) uses Queue-it to handle the 800% traffic spikes they get during recreational activity registrations.

The Catalan Government has Queue-it's virtual waiting room running on 10 distinct digital public services.

The screenshot shows a web page titled "Apply for a passport". At the top, there is a blue banner with the text "This is a test message." and "Message last updated: 14:37 GMT". Below this, the main heading is "You're in a queue". The text explains that the service is busy and that users will be redirected to the website when it's their turn. It also mentions that users can still apply using the "standard service" if they need to, but that it costs more. A progress bar is shown with a blue bar and a white arrow pointing right. Below the progress bar, the "Estimated wait time" is "4 minutes" and the "Status last updated" is "14:37:53 GMT". There is a section for users to close the page and keep their place in the queue by entering an email address and clicking a green "Notify me by email" button. At the bottom left, there is a "Queue ID" field with the value "66e0bf04-3fb-43ed-9c65-ea9d1e7162f1".

[Home Office U.K.'s](#) virtual waiting room for passport applications

Why don't websites just scale for voter registration traffic spikes?

They do. But at scale, every system breaks.

There is no “too big to fail” in the world of websites. Amazon, Walmart, Apple, the IRS—surging web traffic has taken all of them offline.

As Governor DeSantis [said](#) after Florida’s voter registration crash: “You can have the best site in the world, but sometimes there are hiccups ... If 500,000 people descend at the same time, it creates a bottleneck.”

If you’re preparing for a surge in traffic during voter registration, you’ll want to [optimize your website](#) in many ways, including scaling your systems.

But scaling alone is expensive at best, and risky at worst. It can be:

Expensive: Most websites are built to perform under their usual amount of traffic. Building a website that can handle huge traffic peaks that only come a few times a year is like buying a house with 10 extra bedrooms and bathrooms because your family comes to visit sometimes—it’s expensive, impractical, and unnecessary.

Reactive: Because traffic levels are hard to predict and [autoscaling](#) takes time to kick in, your systems likely won’t be ready in the critical moment they’re needed.

Risky: Even if autoscaling or pre-scaling could handle these surges, bottlenecks almost always emerge. As Gabriel Sterling, chief operating officer of the Georgia Secretary of State’s Office said of Georgia’s voter registration crash, “It’s not just the user, it’s the things they’re requesting. When you’re requesting to download a sample ballot, it’s a lot more capacity than it is if you’re just looking at your polling location.”

A virtual waiting room complements your autoscaling approach and gives you confidence your site will perform by controlling what other crash-prevention tactics can't: the flow of traffic to the site.

“Paying for super scaled up infrastructure is pointless when we don't need it most of the time. Queue-it offered that extra level of security and the ability to control the traffic spikes. It’s a very cost-effective way of managing demand.”

KEVIN LEWIS, PRODUCT MANAGER, HIS MAJESTY’S PASSPORT OFFICE

[READ THE FULL STORY](#)



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KEVIN LEWIS, PRODUCT MANAGER, HIS MAJESTY'S PASSPORT OFFICE

[READ THE FULL STORY](#)

Failing to prepare means preparing to fail

Every election cycle for the past decade has brought with it high-profile crashes of registrations sites at critical moments. "We weren't expecting so much traffic," is no longer an excuse citizens or the media will accept.

If you want to preserve citizen's trust and stay out of the news this election cycle, you need to prepare your site for the fast-approaching surge in voter registrations.

With a virtual waiting room solution like Queue-it, you get confidence and peace of mind knowing this surge won't turn into a technical crisis. You can keep your site online, control your scaling costs, and save your reputation and your resources.