RHODE ISLAND DIGITAL SERVICE STANDARD

Department of Administration
Division of Information Technology

INTRODUCTION

"To the people of Rhode Island: If it doesn't work for you, it doesn't work." -RI.gov

- The following **Rhode Island Digital Service Standard** ('the Standard') was created to assist us provide convenient, intuitive, and straightforward government digital services through an energizing and engaging digital ecosystem for all Rhode Islanders: RI.gov.

- We have developed the following framework to be equal parts welcoming and practical for developer and citizen alike.

- Using the Standard will:
  - Help you design, build, and lead improved digital services
  - Help citizens navigate Rhode Island's digital neighborhood in search of solutions
  - Help our state transition into a digital future

- The State of Rhode Island is dedicated to better serving and engaging its residents, businesses, and visitors. As such, we will require all new or redesigned Rhode Island digital government information and services to follow the Standard. Doing so will allow us to test methodologies, gather citizen feedback, and improve upon Rhode Island's digital ecosystem as our journey moves forward.

--

'Citizen-Centered Design' is the process of improving the usability, accessibility, and accountability of a government's digital service for the benefit of enhancing a citizen's interaction with the service.

TABLE OF CONTENTS

(Pages and page numbers are clickable)

WHAT IS '*DIGITAL*'?

For many, the term '**digital**' is unclear. Sometimes vague and sometimes overly-specific, the term means many things to many people. Regarding government, most definitions include the ongoing digitization and transformation of the public sector and related administrative services.

Here in Rhode Island, 'digital' means 'the process of making government more welcoming, accessible, and safe by shifting services from analog to digital delivery systems.'

Digital transformation encompasses a wider range of work than solely improving information technology (IT) systems and processes. In the broadest sense possible, it means putting people first in an increasingly connected world. Growing our capacity to use new mindsets, skillsets, technologies, and data will benefit people, government, and our economy.

Digital means putting citizens first. Digital means systemic change. Digital means a brighter future for all Rhode Islanders.

WHY A DIGITAL SERVICE FOR RHODE ISLAND?

We want all Rhode Islanders to thrive in the digital world.
To achieve our goal, we are focusing on Rhode Islanders' specific needs though accepting citizen-centric design and development processes within our state government's digital transformation. Doing so will help us develop websites for people accessing personalized services, engaging online, and developing trust in our open, transparent, and inclusive government.

We also want our government to quickly adapt to the rapidly-changing times.
To achieve our goal, we will use citizen feedback and Agile development to reduce risk, save money, and solve the right problems. Making the effort to understand citizens and investigate underlying issues before building a solution will focus our efforts on designing a digital service to meet our government's policy goals as well as Rhode Islanders' needs moving forward.

COMMON MYTHS

Myth: *What citizens need is already known.*
Citizens and website design teams experience digital services differently. Our new Digital Standard replaces assumptions with observation and evidence.

Myth: *Citizen-centered design is too expensive.*
Designing or re-designing services for citizens does not have to be expensive. Citizen interviews, usability testing, prototyping, and other design activities can happen for little-to-no cost. Often, all one needs is a piece of paper, a pencil, and some creativity.

Myth: *Service design is not worth the effort.*
Taking the time to understand citizens' needs adds significant value to the project. Feedback will validate or correct assumptions, helping inform programmatic decision-making and avoid expensive fixes.

FURTHER READING

Most of government is mostly service design most of the time – Matt Edgar
How digital can support participation in democracy – Vernon McCarthy; GOVT.NZ
Government as a public service – Suzanne Maxted; GOVT.NZ
When You Assume… – Katie Johnston; GOVT.NZ
Trust as a two-way street between the government and the people it serves – Colin MacArthur, Carolyn Dew, Michelle Chronister, John Yuda, Brad Nunnally; 18F

WHY A DIGITAL SERVICE FOR RHODE ISLANDERS?

TO HELP,
we are growing state government's capacity to innovate digitally.

Digital transformation is broader than simply improving websites.

#1

It means putting citizens **FIRST.**

Citizen-centric design will focus on Rhode Islander's specific needs and help guide us to modern digital services.

New mindsets and skillsets, methods and services, tech and data will benefit real people.

FOR ALL RHODE ISLANDERS.

As we transform, the Digital Service will ***strengthen*** *privacy,* ***open*** *access,* ***save*** *money,* ***improve*** *transparency, and* ***solve*** *problems.*

DIGITAL FRAMEWORK

The initiatives of Rhode Island's Digital Service transformation include:

DESIGNING

- Citizen-centered Design
- Intuitive Design
- Accessible Design
- Privacy & Security Concerns
- Omni-Channel Service Delivery

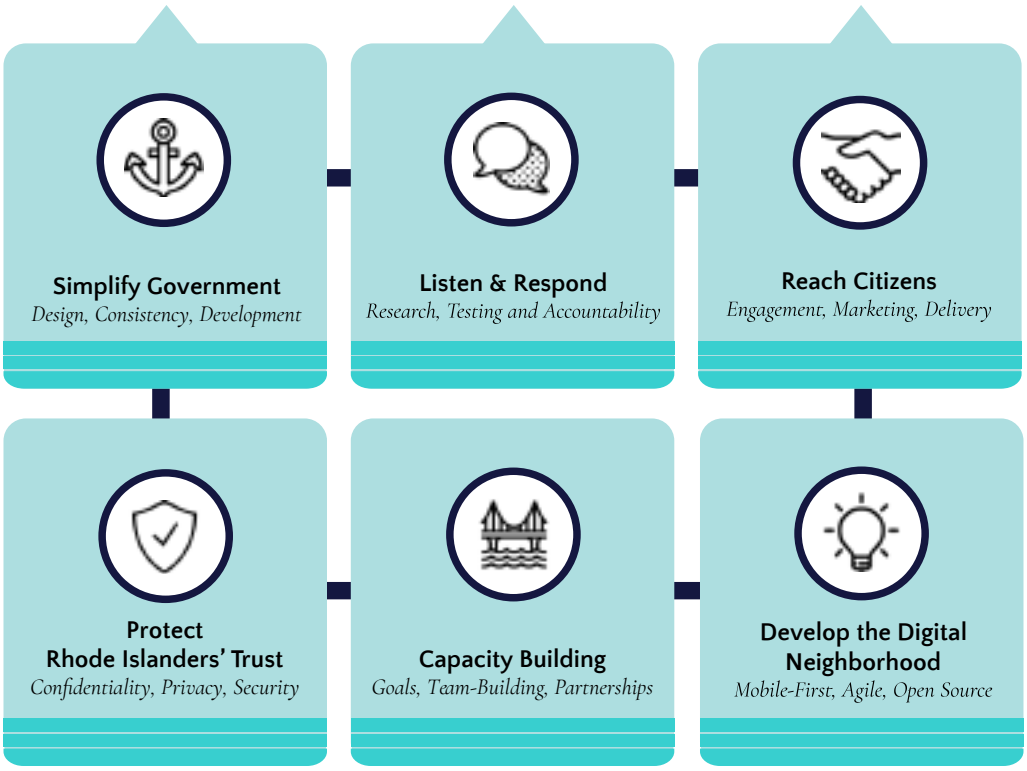
BUILDING

- Mobile-First Development
- Agile Development
- Open- Source Preference
- Iterative Testing
- Performance Accountability
- Technology

LEADING

- Planning for Success
- Team-building
- Community Outreach
- Partnerships

The initiatives within each family incorporate the following strategies:



RELEASE STAGES

A roadmap of our journey to excellence.

1 DISCOVERY

- **MAP** the broader service landscape.
- **RESEARCH** your users' real needs and problems.
- **UNDERSTAND** the policy intent and your constraints.

2 ALPHA

- **TEST** your hypotheses by prototyping in code to explore different ways you might meet your users' needs.
- **EXPLORE** multiple ideas.
- **RESEARCH** users to learn which approach works best and iterate your solution with your discoveries.

3 BETA

- **DEFINE** a minimum viable product from the successful prototype in Alpha.
- **BUILD** prototype as an accessible and secure service.
- **ALLOW** the public to trial the Beta alongside the existing service.
- **USE** feedback to improve the service.

4 LIVE

- **FORM** the team and processes in place to continue operating and improving the service.
- **PHASE** out the old services.
- **CONSOLIDATE** existing non-digital channels.

2018 2019

DESIGNING

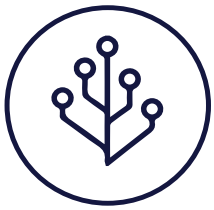
Digital Services for Rhode Island

"The word digital is misleading. It makes one think of technology, when we should be thinking of people." – Paul Boag; Author

RHODE ISLANDERS

DESIGNING digital government services proficiently will benefit **all Rhode Islanders** through:

- Increased accessibility
- Easier to use and understand services
- An improved understanding of government services
- Evolving services responsive to citizen needs
- Security and confidentiality of private data



OUR AGENCY / DEPARTMENT

DESIGNING digital government services proficiently will benefit **our agency or department** through:

- Wider uptake of lower-cost digital channels
- More effective service delivery
- Easier content management and maintenance
- Increasing program efficiency and cost effectiveness
- Improved uptake, satisfaction, and reputation of our fine-tuned services
- Advanced managing of reputational or service delivery risk
- The alignment of service projects to clear, actionable goals

RHODE ISLAND GOVERNMENT

DESIGNING digital government services proficiently will benefit **Rhode Island's government** through:

- Increased government efficiency and reduced service duplication
- Improved public confidence in and uptake of digital government services
- Minimized legal and reputational risk
- Improved public confidence and government trust

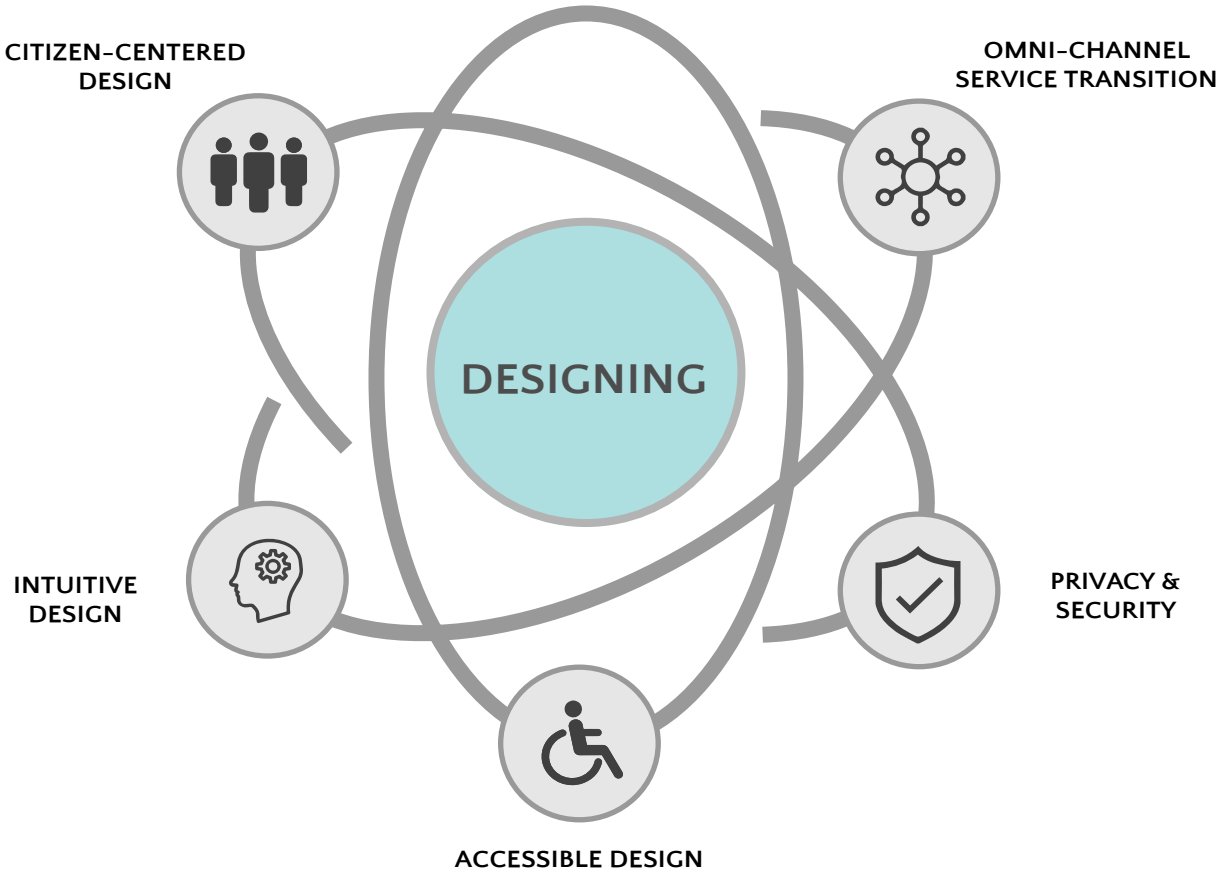
SECTIONS

- Citizen-Centered Design
- Intuitive Design
- Accessible Design
- Privacy & Security Concerns
- Omni-Channel Service Delivery

DESIGNING

Digital Services for Rhode Island

Creating a more useful and usable digital government service starts with us and our team understanding and designing for the needs of all Rhode Islanders.



CITIZEN-CENTERED DESIGN
We will research citizens to build a useful service, avoid future mistakes, and start iterative testing and improvement.

INTUITIVE DESIGN
We will use clear design, content, and usability standards to create consistent services.

ACCESSIBLE DESIGN
We will design and test with the widest range of people to ensure dignified access to government services.

PRIVACY AND SECURITY
We will prioritize privacy and security to protect sensitive information and keep systems secure.

OMNI-CHANNEL SERVICE TRANSITION
We will build consistency between methods of delivery to encourage confidence and uptake in digital services.

WHY CITIZEN-CENTERED DESIGN MATTERS

The poor usability and functionality of the Defense Personal Property System (DPS) hindered personal shipments of more than 1.3 million servicemembers and 700,000 civilians. After the Defense Digital Service 2007 remediation, DPS users reported significantly reduced latency rates and allowing for the most concurrent users DPS has ever supported. Most importantly, successful shipment requests and scheduling increased from 16% to more than 99%. – USDS

Starting design with researching the needs of citizens uncovers broad and nuanced insights, allowing us to build a useful service, avoid future mistakes, and start the process of iterative testing and improvement.

Additionally, Rhode Islanders find it difficult to complete the task the first time, they may contact our organization to get help or avoid using our service altogether. Also, ensuring all digital and non-digital services are intuitive and use plain language will help Rhode Islanders understand which services are relevant to their lives.

KEY QUESTIONS TO ANSWER

- **Who** are our primary users?
- **Who** are our primary internal stakeholders?
- **What** citizen needs will our service address?
- **Why** does the citizen want or need our service?
- **Which** people will have the most difficulty with the service?
- **What** are the internal stakeholders' pain points with the service?
- **Which** research methods did we use?
- **What** were the key findings?
- **How** were the findings documented?
- **Where** can future team members access the documentation?
- **How** is citizen feedback used to improve the service?
- **How** are we documenting ongoing improvement?
- **What** primary tasks is the user trying to accomplish?
- **If** a citizen needs help while using the service, how do they go about getting it?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Demonstrate** how our new service minimizes effort for citizens.
- **Describe** how our service would meet citizen's needs.
- **Structure** services around Rhode Islanders' interests or preferences and not by government departments or initiatives.
- **Plan** options to streamline or automate our service, if beneficial for the citizen.
- **Research** and **understand** our citizens' demographics, abilities and disabilities, motivations, attitudes, literacy and digital capability, and cultural considerations.
- **Research** and **understand** the abilities and disabilities, motivations, attitudes, literacy and digital capability, and cultural considerations of internal stakeholders all the way up to the Governor.
- **Describe** our processes for identifying and prioritizing insights from user research.
- **Analyze** user research and use it to improve our service.
- **Pinpoint** current channels best supportive of our citizens' needs, and describe the incorporation of new channels in the future.

- **Analyze** other service providers (government or private sector) to identify opportunities to stream line how real people accomplish real life tasks.
- **Evolve** the service in response to citizen behaviors.
- **Define** how our service fits into the broader landscape of related services.

Low-Level Task Framework

- ☐ **Create** “user stories”, a prioritized list of tasks the citizen is trying to accomplish, for typical and atypical personas.
- ☐ **Develop** user goals written in the following format: As a [user type], I want [goal] so that [reason].
- ☐ **Group** citizen personas based on habits, personality, attitudes, abilities, and motives.
- ☐ **Group** citizen profiles based on demographics such as gender, age, location, income, and family size.
- ☐ **Spend time** with current and prospective citizens of the service early in the project.
- ☐ **Use** a range of qualitative and quantitative research methods to determine and document citizen’s goals, needs, behaviors, and preferences.
- ☐ **Share** citizen research with our team and agency leadership.
- ☐ **Invest** in collecting and applying behavioral insights to develop, test, and refine digital services offered by Rhode Island.
- ☐ **Compile** a list of “Useful Apps and Tools” and include third-party applications and websites.
- ☐ **Explore** citizen benefits of using existing payment application technology providers to complete government transactions.
- ☐ **Review** existing web content.
- ☐ **Reorganize** key services using simple, yet descriptive, names encompassing the audience’s needs (e.g., housing, food, children, etc.).
- ☐ For cross-agency services, **work together** to identify the most important information and ensure we present the data in a user-centric way.
- ☐ **Improve and simplify** online bill payment options for residents and businesses.
- ☐ **Give** citizens clear process information, and where they are in it.
- ☐ **Provide** citizens with a way to exit the service and return later to complete the process.
- ☐ **Use** easy to understand language familiar to the citizen.
- ☐ **Assemble** a task force of agency staff to conduct plain language workshops for their colleagues.
- ☐ **Design** the service to rely more on FAQs, tutorials, and educational graphics than personal contact to answer citizens questions regarding service usability.
- ☐ **Automate** responses whenever possible.

FURTHER READING

Understanding the needs of service data users – Tingting Zhao, Chris Thomas, Katie John; GOV.UK
Understanding users and their needs – Digital Transformation Agency; GOV.AU
User Research Basics – Usability.gov

INTUITIVE DESIGN

"The true ideal is not just simplicity, but when a [government's digital] service transcends and doesn't require work on my part—when I may even forget it exists." – David Eaves; Tech President

Making something look simple is easy. Making something simple to use is much harder, especially when the underlying systems are complex. But that is what we will be doing, as every digital encounter should move the citizen closer towards success.

WHY INTUITIVE DESIGN MATTERS

People aren't here to enjoy themselves; they're here to find information. – User quote; GOVT.NZ

Government digital services should be recognizable and reliable across all agencies, channels, and platforms. Clear standards for digital design elements, technical options, as well as data sharing and collection will help agencies create and implement consistent and familiar services for Rhode Islanders. Using the same language and design patterns as the rest of RI.gov will allow us to save time and focus on showcasing the unique aspects of our services.

KEY QUESTIONS TO ANSWER

- **Where** are citizen pain points in the current way people accomplish the task?
- **How** do citizens interact with our service online and off-line?
- **How** does the service's design visually relate to other government services?
- **How** does our service utilize the statewide branding and style guidelines?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Identify** pain points in the current way citizens interact with our service.
- **Develop** metrics to measure how well the service is meeting citizen needs along each step of the service.
- **Refer** to statewide branding and style guidelines for visual design guidance.
- **Demonstrate** that the service is responsive, with the same content and functionality on all devices, and works on mobile devices.

Low-Level Task Framework

- ☐ **Establish** a statewide photo-sharing resource to incorporate imagery into digital services.
- ☐ **Create** a simple and flexible design style guide and templated designs for related digital services.
- ☐ **Add** new content to RI.gov, rather than create any new websites or mobile applications.
- ☐ **Use** RI.gov/keyword subdomains for websites and marketing, rather than register any new public-facing domain names (e.g., RI.gov/digitalservice instead of ridigitalservice.com).
- ☐ **Migrate** high-demand, priority web content to RI.gov.
- ☐ **Use** RI.gov as the front door for all transactional applications on other platforms.
- ☐ **Demonstrate** how the service has used the RI.gov design standards.
- ☐ **Apply** RI.gov content standards to maintain the tone and voice of government content.
- ☐ **Ensure** core content on RI.gov is easy to find, understand, and use.
- ☐ **Register** the domain name through domain.registration@RI.gov, if needed.
- ☐ **Decommission** redundant properties or outdated channels.
- ☐ **Replace** text with audio, video, or graphics to describe services whenever possible.
- ☐ **Develop and expand** iconography and usage guidelines.
- ☐ **Use** a simple and flexible design style guide and templated designs for related digital services.

FURTHER READING

Doing the hard work to make things simple – Mike Bracken; GOV.UK
NASA's journey with the U.S. Web Design Standards – Julia Elman; 18F
A design system for the federal government – U.S. Web Design System, 18F

ACCESSIBLE DESIGN

"Accessibility means that people can do what they need to do in a similar amount of time and effort as someone that does not have a disability. It means that people are empowered, can be independent, and will not be frustrated by something that is poorly designed or implemented."
– Alistair Duggin; GOV.UK

In short, accessible design is good design. All citizens deserve dignified access to government services, whatever their abilities or language preferences. But we must not assume everybody will be able to use our services. To be accessible, we will design and test our digital services with the widest possible range of people, including people with disabilities, individuals using diverse devices and technologies, and those without internet access. Everything we build should be as inclusive, legible, and readable as possible.

WHY ACCESSIBLE DESIGN MATTERS

13.4% of all Rhode Islanders live with a disability, including 11.7% of persons ages 21 to 64, 21.5% of persons ages 65 to 74, and 45.2% of persons ages 75+. – Cornell University's Yang Tan Institute on Employment and Disability

The people who need our services the most are often the people who find them the hardest to use. Let us create easy to use interfaces, offer services in multiple languages, and design to meet or exceed accessibility standards so all can partake in Rhode Island's digital government services.

KEY QUESTIONS TO ANSWER

- **What** are the needs of Rhode Islanders living with disabilities?
- **Is** the digital asset compatible with assistive technology?
- **Is** our language as plain and universal as possible?
- **In what** languages is our service offered?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

Ensure all people can use the service by following accessibility best practices.
Write content to meet broad and specific citizen needs.
Offer assets, including extensions and customizations, meeting the accessibility standards outlined in Section 508 and Web Content Accessibility Guidelines (WCAG) 2.0.
Ensure inclusiveness regarding official languages, disability, technological or access constraints.
Continually identify, consider, and mitigate personal, cultural, situational, and environmental limitations affecting a citizen's ability to access our service.
Support people unable to use, or struggling with, the service due to lack of digital access or low digital literacy.
Make it easy for people with disabilities to reach out to the appropriate team to address any problems.

- **Use** plain, concise, and consistent language.
- **Plan for** any digital or non-digital assistance needed to support citizens (e.g., web chat, telephone assistance, service intermediaries, face-to-face, etc.).
- **Use** standard, embeddable language and visual components from the state toolkit and style guide, when possible.
- **Test** prototypes with citizens from different backgrounds, languages, abilities and disabilities.
- **Ensure** our team has the skills necessary to understand and create accessible services.
- **Contribute** to the development of best practices and publish approaches the state has used to implement the RI Accessibility Policy.
- **Maintain** a holistic understanding of the design and creation process, so any written piece of information can work in the context of the whole.

Low-Level Task Framework

- ◊ **Create and disseminate** state language and visual design toolkit and style guides.
- □ **Ensure** that all text is machine-readable and machine-translatable, including documents in PDF format.
- □ **Use** HTML or Markdown text instead of PDFs or Word documents whenever possible.
- □ **Review** reading level of service-oriented prose, including content in languages other than English.
- □ **Include** results of accessibility reviews in analytics reports.
- □ **Human translate** the most heavily trafficked web pages into the languages most commonly used by the populations we serve.
- □ **Enable** machine translation tools, even if they are less than 100% accurate, on existing websites before new sites go live.
- □ **Use** human translation to pre-write emergency messaging in the languages most commonly used by the population our agency serves.
- □ In an emergency, **immediately deploy** automated machine translation tools, then update with more accurate human translation as necessary.
- □ **Design** translation solutions to be flexible and responsive to evolving needs and technologies.
- □ **Simplify** the navigation between languages on Rhode Island websites.
- □ **Regularly** review and use best-in-class translation tools.
- □ **Create** a pool of citizens which agencies may contact to test and improve accessibility standards.
- □ **Train** content creators in accessibility guidelines, best practices, and tools for accessibility review.
- □ **Follow** all applicable laws and rules, including:
    - State of Rhode Island Accessibility Policy
    - ADA State and Local Governments (Title II)
    - ADA Public Accommodations and Commercial Facilities (Title III)
    - Section 508 Standards
    - Web Content Accessibility Guidelines (WCAG) 2.0

FURTHER READING

Consider the range of people that will use your product or service – Alistair Duggin; GOV.UK
Hope, inspiration and inclusion - Steven Mark; GOV.UK
Plain English, put plainly – Joanna Mcleod; GOVT.NZ

PRIVACY & SECURITY

"We shouldn't ask our customers to make a tradeoff between privacy and security. We need to offer them the best of both. Ultimately, protecting someone else's data protects all of us."
– Tim Cook; Apple Inc.

Citizens expect to interact safely with government and, in turn, expect the government will protect any shared personal information. We will build privacy and security, both fundamental requirements, into services throughout all stages of the digital lifecycle. Rhode Island's digital services must protect sensitive information and keep systems secure.

At the start of designing a new service or feature, the team will evaluate what user data and information the digital service will be providing or storing before addressing the security level, legal responsibilities, privacy issues, and risks associated with the service.

The lead will engage the appropriate privacy, security, compliance, and legal officer(s) to discuss the type of information collected, how to secure data, how long to keep records, and parameters surrounding the usage and sharing of personal identifiers. The sustained engagement of a privacy specialist helps ensure personal data is properly managed.

Additionally, a key process to building a secure service is comprehensively testing and certifying the components in each layer of the technology stack for security vulnerabilities, and then to re-use these same pre-certified components for multiple services. Consider the citizen, evaluate security risk as well as privacy obligations, and apply necessary treatments.

WHY PRIVACY & SECURITY MATTERS

18F and USDS developers work on an ongoing basis to adhere to emerging standards in privacy-protecting authentication on login.gov. USDS estimates that the Federal Government has the potential to save hundreds of millions of dollars by consolidating consumer identity under login.gov, while improving access and usability for all Americans. – USDS

People hold an expectation of privacy while online, and hold similar expectations for government websites. Breaking privacy expectations not only breaks a public trust in digital services, in general, but also in the Government of the State of Rhode Island. In short, unless we guarantee the confidentiality and safe accessibility of personal information on government websites, Rhode Islanders will not use your service.

KEY QUESTIONS TO ANSWER

- **Does** the service collect personal information from the citizen?
- **How** is the citizen notified of the collection of personal information?
- **Does** the service collect more information than necessary?
- **Are** our guarantees of privacy and security citizen-friendly?
- **Could** we utilize collected data in ways an average citizen would not expect?
- **How** does a citizen access, correct, delete, or remove personal information?
- **Will** we share any personal information stored in the system with other agencies, services, people, or partners?
- **How and how often** is the service tested for security vulnerabilities?
- **How** can someone from the public report a security issue?
- **What** data, either individually or in aggregate, does the public have a right to access or have published?
- **How** does our privacy and security measures comply with laws, regulations, and law enforcement?
- **What** security measures does law enforcement need?
- **What** are the citizen impacts of a potential partial or full breach of data?
- **What** are the state impacts of a potential partial or full breach of data?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Ensure** our service's security and privacy measures are robust.
- **Consider** whether the citizen should be able to access, delete, or remove their information from the service.
- **Design and enforce** standards for the protection of sensitive and personal data in accordance with relevant laws, rules, and regulations.
- **Plan and test** procedures for reporting and quickly responding to privacy breaches.
- **Be aware** of what data our citizens want and respond accordingly.
- **Preserve** the confidentiality, availability, and integrity of our service according to our citizens' needs.
- **Allow** residents to access as much information and as many services as possible while allowing them to remain anonymous.
- **Have knowledge** of what information is available through our service, and how to access or change the records.
- **Involve** privacy, security, compliance, and legal advisers, as needed.
- **Adapt** services to follow market trends, incorporate best citizen privacy practices, and provide immunity from attack.
- **Maintain** an inventory of the information and data the service might involve and relevant security classifications.
- **Perform** proportionate risk analysis and act as necessary based on our analysis.
- **Consider and prepare** for all law enforcement needs such as searchability, audit trail, documentation of probable cause, etc.

Low-Level Task Framework

- □ **Review** the applicability of the Privacy Act of 1974 to our service, and the steps we have taken to ensure we have embedded legal requirements within our service.
- □ **Contact** the appropriate privacy or legal officer of the department or agency to determine whether we should conduct a System of Records Notice (SORN), Privacy Impact Assessment, or other review
- □ **Determine**, in consultation with a records officer, what data our service should collect; why the service collects, uses, and shares data; as well as how and how long the service stores and secures data.
- □ **Determine**, in consultation with a privacy specialist, whether and how to notify citizens regarding the collection and usage of personal information, whether our service needs a privacy policy and where it should appear, as well as how to notify citizens in the event of a security breach.
- □ **"Pre-certify"** the hosting infrastructure used for the project.
- □ **Use** deployment scripts to ensure configuration of production environment remains consistent and controllable.
- □ **Monitor** the data dictionaries and descriptions relevant to our work to ensure usability.
- □ **Ask** residents for information required to move an application or process forward; do not ask for unnecessary information.
- □ **Communicate** guarantees of privacy and security in citizen-friendly and accessible manner.
- □ **Determine** total possible liability and discuss assessment with agency leadership (find total cost-per-breach-per-user; multiply by number of users).
- □ **Follow** all applicable laws and rules, including:
    - Rhode Island Freedom of Information and Protection of Privacy Act
    - Archives and Recordkeeping Act
    - Personal Health Information Protection Act
    - Personal Information Protection and Electronic Documents Act.

FURTHER READING

How-to guide: Protect Privacy – VIC.GOV.AU
New Zealand Government Web Toolkit: Information and Data Management – GOVT.NZ
Privacy and Website Policies – Data.gov

OMNI-CHANNEL SERVICE TRANSITION

"Tradition is a very powerful force." – John Kotter, Author

A channel is the method of physical or digital interaction between a person and an organization. People access channels based on their comfort levels, access to technology, schedule, and personal preference. Either by choice or not, people are often bound by what they can afford. Some people rely only on brick and mortar, in-person, mobile-only, or over-the-phone offerings. As such, our digital strategy needs to consider the population new or adverse to digital channels, and serve everyone the same information across all channels as in-person and phone-centric services transition to digital delivery.

Overall, we endeavor to design each project for citizens to seamlessly and naturally adopt the newly-designed service. Yet, we must remember late-adopters and non-adopters will always exist (by choice or otherwise), and thus must accommodate to serve all citizens equally.

WHY OMNI-CHANNEL SERVICE TRANSITION MATTERS

The United Kingdom's Digital Efficiency Report suggests that transactions online can already be 20 times cheaper than by phone, 30 times cheaper than postal, and as much as 50 times cheaper than face-to-face. By going digital by default, the UK government could save between £1.7 and £1.8 billion each year. – GOV.UK

Understanding context and planning service delivery around restrictive, needs-focused parameters is a critical part of our digital strategy. As an organization, we need to ensure people have a consistent experience regardless of the channel chosen to interact with us as we transition to a more accessible digital service delivery. Conflicting information between offline and online channels will create confusion and erode trust. Alternately, a carefully planned, designed, and executed multi-channel consistency will enforce confidence via a reliable online experience, and will encourage future uptake in newly developed digital services.

KEY QUESTIONS TO ANSWER

- **What** are the different ways (both online and offline) people currently accomplish tasks designed with in the digital service?
- **Where** does this specific project fit into the larger way people currently obtain the offered service?
- **Do any** legal or regulatory requirements prevent your agency from offering the service purely online?
- **What** are the design and logistical needs for the transition?
- **Where** do transactions overlap or repeat between different channels?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Ensure** alternate methods are available to those who prefer to access services through person-to-person interaction instead of through digital channels.
- **Remember** all citizens hold different levels of understanding and acceptance of the digital services created for their use.
- **Keep** omnichannel service needs in mind during the design process.
- **Understand** the different points at which people will interact with our service both online and in person.

Low-Level Task Framework

- ☐ **Plan** for a transition without service gaps for any population.
- ☐ **Integrate** digital parts of our service with the offline touch points people use to interact with the service.
- ☐ **Accommodate** for face-to-face or analog transactions required by law.
- ☐ **Plan** for the analog practicalities of complying with the law (e.g. scanners, queuing lanes in offices, desk coverage, etc.).
- ☐ **Grow** stakeholder buy-in for service transition.
- ☐ **Detail** the channels required to support all users.
- ☐ **Test** how a citizen would change between channels without repetition.
- ☐ **Plan** how to retire redundant services and channels.

FURTHER READING

Government approach to assisted digital – GOV.UK
Be inclusive, and provide ethical and equitable services – GOVT.NZ
The right place to do rural research – Emily Ball; GOV.UK

BUILDING

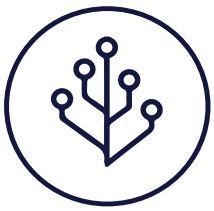
Digital Services for Rhode Island

"It's far, far cheaper and more efficient for government to provide services digitally than over the phone, so if digital services are successful we end up saving money for the government and for taxpayers. It's common sense." – Mike Bracken, GOV.UK

RHODE ISLANDERS

BUILDING digital government services proficiently will benefit **all Rhode Islanders** through:

- A better online experience
- More timely, authoritative information
- Increased knowledge about services
- Continually optimized services to meet needs
- Improved public collaboration



OUR AGENCY / DEPARTMENT

BUILDING digital government services proficiently will benefit **our agency or department** through:

- Realized savings and efficiencies
- Optimization for value-added work activities
- Increased flexibility to evolve services
- Improved performance accountability
- Reduced levels of risk
- Strengthened relationships with the public
- Collaborative efforts and partnerships

RHODE ISLAND GOVERNMENT

BUILDING digital government services proficiently will benefit **Rhode Island's government** through:

- Expanded return on investment
- Broader context for future investment decision-making
- Greater government transparency
- Improved public trust in government
- Grown system-wide digital capabilities
- Increased service integration

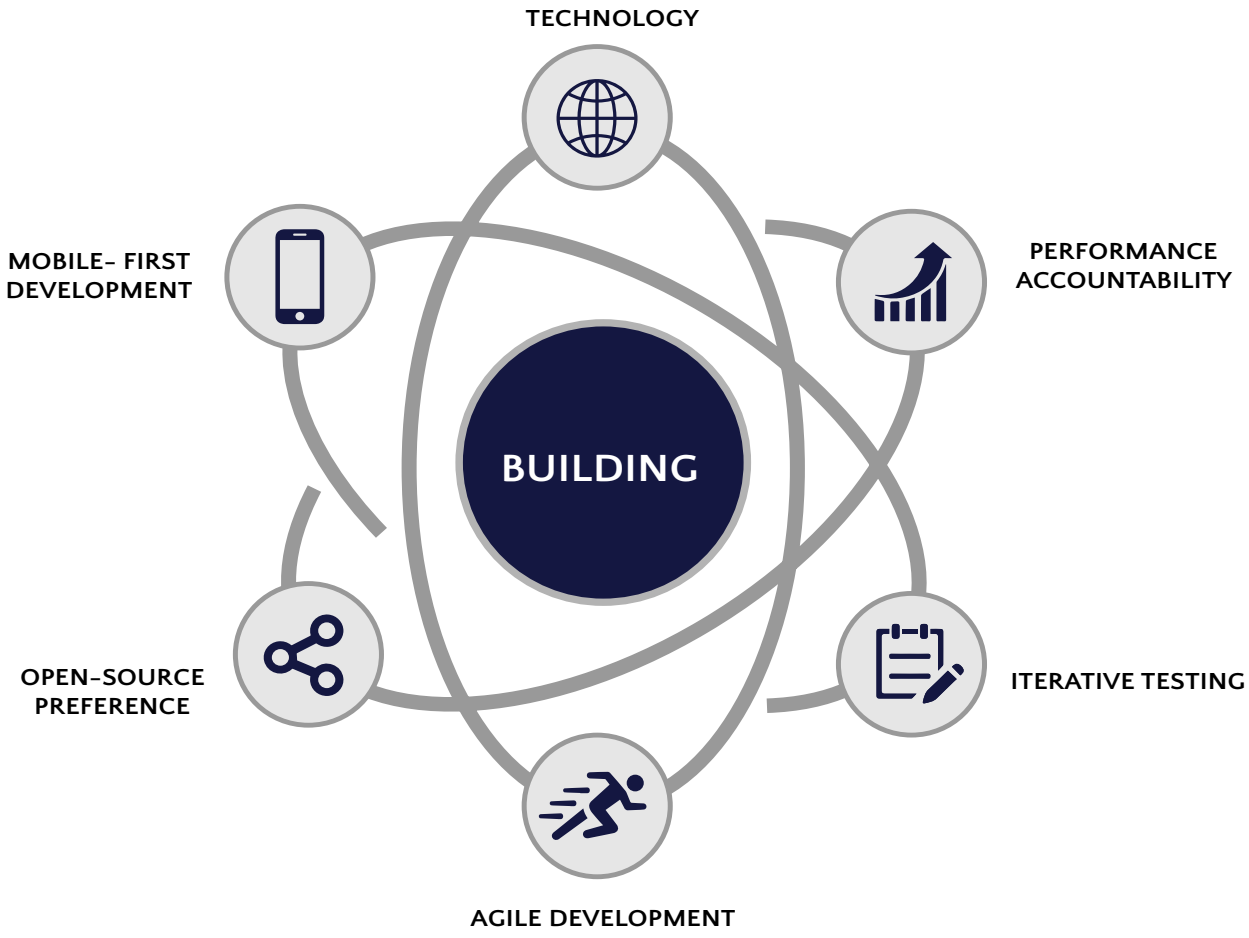
SECTIONS

- Mobile- First Development
- Agile Development
- Open- Source Preference
- Iterative Testing
- Performance Accountability
- Technology

BUILDING

Digital Services for Rhode Island

- Creating a more useful and usable digital government service requires us and our team to match the latest industry standards of digital service delivery.



- **MOBILE-FIRST DEVELOPMENT**
  We will pursue mobile-first development to prepare for an increasingly connected future.
- **OPEN-SOURCE PREFERENCE**
  We will share our work to save time and money, remain flexible, grow transparency, and build public trust.
- **AGILE DEVELOPMENT**
  We will use incremental, fast-paced development to produce services faster, iterate dynamically, and avoid risk.
- **ITERATIVE TESTING**
  We will test to double-check usability and accessibility, find problems, and build a working product for all our citizens.
- **PERFORMANCE ACCOUNTABILITY**
  We will measure performance and publish metrics to continue meeting citizen's changing needs.
- **TECHNOLOGY**
  We will use cost-effective technology to encourage efficiency and scale services.

MOBILE-FIRST DEVELOPMENT

"Mobile is not the future, it is the now. Meet your customers in the environment of their choice, not where it is convenient for you." – Cyndie Shaffstall; Spider Trainers

Residents increasingly use mobile devices as their primary tool to access key services. Many, if not most, Rhode Islanders have strong relationships with social media networks, search engines, and other third-party sites and applications.

To reach the greatest number of residents and prepare for an increasingly digital future, Rhode Island's government services will recognize what works well for Rhode Islanders, take advantage of the tools residents already use, and prioritize development of mobile online services and SMS communications.

A mobile-first strategy starts with designing for mobile devices before tablets and desktops and focuses design on critical content before moving to non-critical content.

WHY MOBILE-FIRST DEVELOPMENT MATTERS

On average, people check their phones more than 150 times a day, and more searches occur on mobile phones than computers. But if a potential customer is on a phone, and a site isn't easy to use, they're five times more likely to leave. – Google.com

The process of designing for mobile devices, also known as 'progressive advancement', naturally creates a hierarchical scale for content with a prioritization for essential content. After careful consideration, we can add visual elements to support and enhance content to larger screens, but starting small helps prioritization.

To empower the mobile-first approach, we can use responsive design to automatically adjust content based on browser width. Combining mobile-first with responsive design will give us the benefit of designing for the constraints of a smaller screen before progressively enhancing for larger screens.

KEY QUESTIONS TO ANSWER

- **Which** citizen communities rely on mobile-forward solutions?
- **How** will mobile-first design improve my service?
- **What** are the downside of mobile-first development?
- **Does** my team have the skills to develop mobile-first?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Optimize** new digital tools for mobile devices.
- **Implement and enforce** a mobile-first strategy.
- **Include** standards for making services accessible on mobile devices within our strategy.

Low-Level Task Framework

◊ **Develop** technical standards for Rhode Island's technology workforce to follow when building digital tools.
◊ **Develop** a cross-agency working group for mobile application, design, and research to share best practices and updates on ongoing projects.
◊ **Describe** the features of various social media platforms and their most effective use.
□ **Describe** how your service utilized various social media platforms.

- ☐ **Review and improve** on existing social media standards.
- ☐ **Reevaluate and reduce** requirements for printing applications and other forms.
- ☐ **Increase** capacity to accept digital submissions.
- ☐ **Identify** opportunities to replace signature requirements with electronic signatures.
- ☐ **Inventory** current non-digital licensing, permitting, applications, and enrollment forms.

FURTHER READING

Five Reasons to Consider Adopting a Mobile-First Web Strategy – Alex Baker, Salted Stone
What is Mobile First Design? Why It's Important & How To Make It? – Vincent Xia
Design principles – United States Web Design System, GSA

OPEN-SOURCE PREFERENCE

"*Thou shalt open-source your technologies." – [Copyleft GPL Quote]*

We will share code and designs, ideas and intentions, successes and failures whenever we can with colleagues, Rhode Islanders, and the world. When we place more eyes on a service, we can spot more mistakes, create better solutions, and improve the service overall. If we have found a sustainable solution, we will make it reusable and shareable instead of reinventing the wheel every time. To do so, we will use platforms others can, and have, built upon; provide resources (like APIs) for use; and link to the work of others' successes.

Reuse supports agility, flexibility, efficiency, and security. Using open-source technologies also contributes to the broader service delivery system. It helps by enabling other agencies, and the private and community sectors, to deliver public value by building on or extending our work.

WHY OPEN-SOURCE PREFERENCE MATTERS

According to a 2015 survey of open-source users, vendors, and business professionals across industry with a large concentration of IT and Consulting respondents, use of open source increased or remained the same in the past year: 64% of companies participate in open source projects (up from 50% in 2014) and 88% were expected to increase contributions to open source projects over the following three years. – North Bridge, Black Duck

Using open standards and common government platforms means we can save time and money through reuse, easily move between different technologies, quickly change our service when necessary, and build trust with our citizens by showcasing a transparent service. Working in the open builds public trust, encourages ongoing peer review and collaboration, identifies issues or incorrect assumptions early, as well as taps into the expertise, skills, and experience of the broader community.

Internally, we should not burden teams with recreating basic components and patterns for every new needed product. Utilizing best practices, code, and designs will enable teams to focus on the unique aspects of their own product, ensuring the public receives the best possible service. Likewise, opening our source code allows other services to reuse our creation, build upon our success, and reduce costs in government.

We can improve government together by collaborating, building open services, and publishing. By doing so, we simplify the public's access to government services and information; allow the public to contribute; and enable reuse by entrepreneurs, nonprofits, and the public.

Having others evaluate our tools and systems helps us to mitigate associated risks or constraints, avoid harmful contracts, and build a sustainable and manageable digital system. Also, open-source work naturally incentivizes teams to produce high-quality, high-integrity outcomes on an ongoing basis.

KEY QUESTIONS TO ANSWER

- **How** are we collecting citizen feedback for bugs and issues?
- **What** open-source license is most appropriate for this project?
- **Have we** briefed leadership on developing in the open?
- **Do** API specifications exist and, if so, are they publicly accessible?
- **What** components have we released as open-source?
- **What** datasets are available to the public?
- **How** will we deal with pull requests from citizens or any community to develop around our project?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Create** a culture of open-source design and development.
- **Share** our work, decision making, evidence and insights and invited others to provide constructive criticism.
- **Consider** keeping data, information, and transactional schemas as simple and modular as possible.
- **Exclude** any secret information, like passwords, from public repositories.
- **Understand** the potential benefits or caveats to the reuse of commonly-accepted methods, tools, platforms, or components or processes.
- **Promote** your project as being open to pull requests from interested members of the public.
- **Consider** open-sourcing our work.
- **Open and share** our evidence base, decision-making, knowledge, research, software, and code.
- **Consider** where and when it is not appropriate to openly release the data, information, transactions, and rules we have created during our service delivery.
- **Open** data, transactions, and rules underpinning our services as Application Programming Interfaces (API's).
- **Reuse** our own and others' APIs.
- **Evaluate and procure** the tools and systems needed to build, host, operate, and measure the service.
- **Use** open-source standards, best practices, and common government platforms to ensure interoperability and prevent dependency on a single vendor.
- **Guarantee** the sharing of Intellectual Property (IP) artifacts, including documents, insights, graphs or visualizations, and code in all contracts.
- **Use** open standards, open-source, and public cloud offerings that have a strong developer community support.

Low-Level Task Framework

- □ **Establish** "Code Coverage" contributions thresholds to ensure your codebase has automated reliability and functional testing built-in from the start.
- □ **Automatically generate** documentation with internal and external developers' detailed comments required of any code contribution.
- □ **Utilize** the default statewide open-source licensing policy.
- □ **Offer** citizens a mechanism to report bugs and issues, and be responsive to these reports.
- □ **Follow** style and branding guidelines, including the use of open fonts.
- □ **Designate** which data from the service is explicitly within the public domain.
- □ **Discuss** the globally waiving of rights via an international public domain dedication such as the "Creative Commons Zero" waiver.
- □ **Catalog** data in the agency's enterprise data inventory and add any public datasets to the agency's public data listing.
- □ **Maintain** the rights to all data developed by third parties in a manner that is releasable and reusable at no cost to the public.
- □ **Maintain** contractual rights to all custom software developed by third parties in a manner that is publishable and reusable at no cost.
- □ **Explain** why our team has not released the codebase under an open-source license, if applicable.

- ☐ **Publish** source code of projects or components online, when appropriate.
- ☐ **Share** our development process and progress publicly, when appropriate.
- ☐ **Follow** all applicable laws and rules, including:
  - Rhode Island's Open Data Directive
  - Web publishing standards - RI.gov
  - News standards - Rhode Island Newsroom
  - Open data standards - Data catalogue

FURTHER READING

How sharing helps us improve digital services – Mike Bracken; GOV.UK
The Case for Open Source Software – Ian Lee; Lawrence Livermore National Laboratory
Be open and use open source – GOV.UK

AGILE DEVELOPMENT

"Fail fast, iterate, explore. This isn't construction or rocket science." – 37signals

The best way to build good digital services is to use an incremental, fast-paced style of software development called Agile to start small and iterate dynamically after the Discovery Stage. Release minimum viable products (MVPs) early, test with actual users, and move from Alpha Stage to Beta Stage to Live Stage while adding features, deleting what does not work, and refining based on gathered citizen feedback and data. If a prototype is not working, do not be afraid to scrap it and start again.

WHY AGILE DEVELOPMENT MATTERS

By using agile development processes to speed up the development and minimize risk, U.S. Customs and Border Protection and the United States Digital Service worked together to completely redesign the frontend, deliver a scalable, modernized backend, and move the application to the cloud in nine months—half the time of the original estimate. – USDS

The digital environment is rapidly and continually changing, marked with shifting opportunity and threat landscapes, and subject to increasing expectations. Using Agile methods will help us build services meeting the needs of our users, are convenient for people to use, easily changeable, improvable, less costly, and more accountable.

Using Agile development allows us to reduce the risk of failure, get working websites and services into citizens' hands as early as possible, and give our design and development teams opportunities to adjust in real-time. Iteration reduces risk, makes big failures unlikely, and turns small failures into lessons. Agile development can also allow us to test and deploy our service while producing and adding new features.

KEY QUESTIONS TO ANSWER

- **How long** did it take to ship the MVP?
- **If** the MVP has not shipped yet, when will it?
- **How long** does it take for a production deployment?
- **How many** days or weeks are in each iteration/sprint?
- **Which** version control system is being used?
- **How** are bugs tracked and tickets issued?
- **What** tool do we use to track bugs?
- **How** is the feature backlog managed?
- **What** tool do we use to manage backlog?
- **How often** do we review and reprioritize the feature and bug backlog?
- **Do** citizens have input on roadmap priorities?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Provide** the capacity, resources, and technical flexibility to build a frequently improvable and iterative service.
- **Ensure** adequate operational support, ongoing budget, and procurement arrangements to enable Agile development.
- **Show how** the technology we are using is sustainable and how risks to its sustainability are being minimized.
- **Provide** examples of the team's ability to deploy software frequently with minimal disruption to citizens.
- **Describe** how long we expect our service to be in each stage of development and why.
- **Develop** our process for deploying software.
- **Use** proven deployment processes, such as Blue / Green Deployment, allowing for frequent releases that do not interrupt citizens' usage of the service.

Low-Level Task Framework

- ☐ **Develop** examples of user stories moving quickly from citizen research to deployment.
- ☐ **Ship** a functioning MVP that solves a core citizen need as soon as possible, no longer than three months from the project's start.
- ☐ **Use** a "beta" or "test" development period, if needed.
- ☐ **Run** usability tests frequently to check how well the service works and to identify necessary improvements.
- ☐ **Ensure** the individuals building the service communicate closely using techniques such as launch meetings, war rooms, daily standups, and team chat tools.
- ☐ **Utilize** small and focused delivery teams.
- ☐ **Limit** organizational layers separating sprint teams from the business owners.
- ☐ **Release** features and improvements multiple times each month.
- ☐ **Utilize** prioritized "feature backlog" and "bug backlog" lists.
- ☐ **Use** a source code version control system such as Git or Fossil.
- ☐ **Give** the entire project team, including stakeholders, access to the issue tracker and version control system.
- ☐ **Use** code reviews to ensure quality.

FURTHER READING

Best agile training? Just do it! – Emily Webber; GOV.UK
What we've learnt about scaling agile – Jamie Arnold; GOV.UK
Getting stakeholder buy in for agile development – Kaitlin Devine; 18F

ITERATIVE TESTING

"I have not failed. I've just found 10,000 ways that won't work." – Thomas Edison

Iterative design is a recurring process of testing and examining before refining a service or process to improve the functionality and quality of the studied design. Human-centered research and evaluation, as well as the involvement of Rhode Islanders in the building process, are powerful design methods to iterate for creating services to satisfy both citizens and front-line service providers. We must make sure our service can perform the tasks Rhode Islanders need, even under high levels of traffic. If our service cannot handle all levels of traffic, it may slow down or completely stop working, creating a negative citizen experience.

WHY ITERATIVE TESTING MATTERS

…We had 94 possible testers through what would soon become our standard process for recruiting and segmenting. We determined the service met expectations by engaging with people over email, home delivery, and a web form. The system worked, but we knew we had to get people together in a room to start delivering on the promise of community engagement… *– CUTGroup Chicago*

We will not know how good our product is until we test it in simulations of both normal and unusual conditions (e.g., when visitors or attackers inundate our website). Testing the end-to-end service allows us to double-check usability and accessibility, find problems, and build a working product for all our citizens. Also, testing with the public and managers accountable for content will build buy-in and uptake to the digital service and its ongoing resourcing.

KEY QUESTIONS TO ANSWER

- **How often** are we testing with real people?
- **Were** any gaps uncovered while addressing citizen needs at each stage of usability testing?
- **Is** the service more difficult to use for certain user personas or demographic groups?
- **What** metrics will best indicate how well the service is working for Rhode Islanders?
- **What** test tools do we use?
- **Are** we testing on all browsers and platforms?
- **What** methodology should we use?
- **What** partners can help us achieve our testing goals?
- **How** do we collect citizen feedback during development?
- **Does** our testing hold statistical significance for our uses?
- **Are** we using test-driven development (TDD)?
- **How** do we iterate our testing?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Test** the end-to-end service in an environment identical to the live version, using dummy accounts and a representative sample of Rhode Islanders.
- **Test** on all common browsers and devices, including accessibility devices.
- **Test** the service with a wide range of citizens throughout the design, prototyping, and delivery stages to ensure people's needs are being met.
- **Test** key service language with residents to ensure clarity and understandability.
- **Use and share** data collected from citizen research, usability testing, and service analytics.
- **Cultivate** a culture embracing, and even celebrating, iteration and "fails".

Low-Level Task Framework

- ◊ **Create** a space to test digital and non-digital services safely and transparently.
- ◊ **Create** a service design group to share best practices and "fails" in research and service delivery as well as to workshop design challenges and solutions.
- ◊ **Support** additional capacity and invest in tools helping government staff monitor and respond to Rhode Islanders' feedback.
- □ **Test** the digital service from beginning to end with the manager or department lead responsible for the content and service.
- □ **Set up** infrastructure to test two or more versions of a new service or webpage before utilizing the best version, a practice known as A/B Testing.
- □ **Field test** prototypes of solutions with enough real people to provide real data.
- □ **Collaborate** with community-based organizations and elected officials to develop and test key services with residents.
- □ **Set up** "pop-up hubs" in libraries, public housing, and other community-based organizations to test and refine proposed services with residents.

- ☐ **Encourage** Rhode Islanders to submit feedback about all digital services.
- ☐ **Update** testers when we make significant changes based on their input.
- ☐ **Review and respond** to Rhode Islanders' inquiries on digital channels in a timely fashion.
- ☐ **Record and share** learned lessons from the team's "fails".

FURTHER READING

6 case studies: using research and data to improve a live service – Ben Holliday; GOV.UK
The CUTGroup Book, Examples – CUTGroup, Chicago
Quality assurance: testing your service regularly – GOV.UK

PERFORMANCE ACCOUNTABILITY

"It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts." – Sherlock Holmes

In most cases, we can learn from real world behavior by looking at how Rhode Islanders utilize existing services. To let data drive design decision-making, we need to understand the different ways Rhode Islanders will interact with our digital services and, likewise, the service's impact on people's interaction with government. We will measure how well our service is working for our citizens, including system performance and real-time user interaction, at every stage of a project. Measuring performance will provide insights about how to improve and evolve the service to meet changing citizen needs.

WHY PERFORMANCE ACCOUNTABILITY MATTERS

The U.S. Digital Analytics Program (DAP) officially launched on 2012 with a release of its first version of the government-wide web analytics code. Within three years, 45 agencies had implemented the common code across more than 4,000 public-facing websites, counting 1.5 billion pageviews each month. – 18F

Collecting performance data and setting performance indicators allows us to continuously improve our service by evaluating strengths and weaknesses while making data-driven decisions.

Analyzing and publishing metrics will also assist us compare data across multiple government services and be open, transparent, and accountable to the public regarding our service's performance.

Rhode Islanders will be more willing to share personal information with a government prioritizing accountability and transparency. Lastly, publicly demonstrating how, and to whom, our service adds value helps justify the investment in developing and operating the service.

KEY QUESTIONS TO ANSWER

- **What** are the key metrics for the service?
- **How** have these metrics performed over the life of the service?
- **Which** system monitoring tools (RUM or otherwise) are in place?
- **What** is the targeted average response time for our service?
- **What** percent of requests take more than 1 second, 2 seconds, 4 seconds, and 8 seconds?
- **What** is the average response time and percentile breakdown (percent of requests taking more than 1s, 2s, 4s, and 8s) for the top 10 transactions?
- **What** is the volume of each of our service's top 10 transactions?
- **What** is the percentage of transactions started vs. completed?
- **What** is our service's monthly uptime target?
- **What** is our service's monthly uptime percentage, including scheduled maintenance or excluding scheduled maintenance?

- **How** does our team receive automated alerts when incidents occur?
- **How** does our team respond to incidents?
- **What** is our post-mortem RCA process?
- **Which** tools are in place to measure citizen behavior?
- **Which** A/B testing tools or technologies are we using?
- **How** do we measure customer satisfaction?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Create** technical, data, and design standards for services.
- **Baseline, measure, continually monitor, and publicly report** how our service contributes to an overarching outcome or purpose.
- **Use** citizen research and prototype testing to identify the value of our service to our users.
- **Map** the experience of a citizen trying to access information we provide or use a service we oversee.
- **Consider** what, if any, metrics are available to measure against current means of delivering the service.
- **Understand** the potential effects of our service on other government services, including where we source the data and the limitations thereof.
- **Use** goals and planned milestones to communicate status updates and an estimated timeline with Rhode Islanders.
- **Identify** influences external to our service that may impact its measures of success.
- **Adhere to** statewide technical, data, design, and social media standards, and check back frequently to ensure compliance with updated guidelines.
- **Meet** Open Data reporting requirements.
- **Build in and keep on** easy-to-understand analytics.

Low-Level Task Framework

- ☐ **Watch** collected metrics to identify and prioritize bug fixes and improvements.
- ☐ **Use** tools for analysis to collect performance data.
- ☐ **Use** data to analyze the success of the service, and translate analysis into features and tasks for the next phase of development.
- ☐ **Create and maintain** a feedback mechanism for people to directly report issues.
- ☐ **Identify** performance indicators for the service, establish benchmarks for each metric, and plan to enable improvements.
- ☐ **Monitor** system-level resource utilization in real time.
- ☐ **Monitor** system performance in real-time (e.g., response time, latency, throughput, and error rates).
- ☐ **Ensure** monitoring can measure median, 95th percentile, and 98th percentile performance.
- ☐ **Create** automated alerts based on this monitoring.
- ☐ **Track** concurrent citizens in real-time, and monitor user behaviors in the aggregate to determine how well the service meets the needs of Rhode Islanders.
- ☐ **Publish** metrics internally.
- ☐ **Digitally publish** metrics and testing results externally.
- ☐ **Use** an experimentation tool supportive of multivariate testing in production.

FURTHER READING

Find performance data of government services – GOV.UK
Analytics in government, where we're at – Lana Gibson; GOVT.NZ
Measure how content performs – VIC.GOV.AU

TECHNOLOGY

“Every once in a while, a new technology, an old problem, and a big idea turn into an innovation.” – Dean Kamen, Inventor

Our technology needs to encourage development teams to work efficiently and enable services to scale easily and cost-effectively. Our choices for hosting infrastructure, databases, software frameworks, programming languages, and the rest of the technology stack should seek to avoid vendor lock-in and match the choices of successful modern consumer and enterprise software companies.

To do so, digital services teams should consider using open-source, cloud-based, and commodity solutions across the technology stack. We cripple our digital services when we use data centers marketed as “cloud hosting,” yet require the local management and maintenance of hardware. Instead, we will deploy our services on flexible infrastructure, enabling us to provision resources in real-time to meet spikes in web traffic and demand.

WHY TECHNOLOGY MATTERS

The previous U.S. Customs and Border Protection (CBP) Global Online Enrollment System (GOES) web application was antiquated, limiting, and provided a poor user experience for the 6 million people it was serving. This new application was CBP’s first system to move to the cloud, and has resulted in lower costs while increasing scalability and reliability. In the month after its release, over 50 changes were made to enhance the system without any downtime to the service. – USDS

Our stack is the base of our system. Choose wisely.

Using non-flexible infrastructure is an outdated practice and wastes time, weakens our disaster recovery plans, and results in significantly higher costs.While manual tests and quality assurance are still necessary, automated tests provide consistent and reliable protection, and make it possible for developers to confidently release frequent updates to the service.

KEY QUESTIONS TO ANSWER

- **What** is our development stack and why did we choose it?
- **Which** databases are we using and why did we choose them?
- **How long** does it take for a new team member to start developing?
- **Where** is our service hosted?
- **If** there is an API, what capabilities does it provide?
- **Who** uses the API?
- **What** transaction components should we construct as API calls as part of a Service-Oriented Architecture (SOA)?
- **Can** we use API framework generation tools such as OpenAPI, RAML, or Swagger?
- **What** are the security and networking considerations for internal service API’s?
- **What** hardware or content delivery system does our service use to run?
- **What** is the demand or usage pattern for our service?
- **What** happens to our service when it experiences a surge in traffic or load?
- **How much** capacity is available in our hosting environment?
- **How long** does it take us to provision a new resource, like an application server?
- **How have** we designed our service to scale based on demand?
- **How are** we paying for our hosting infrastructure (e.g., by the minute, hourly, daily, monthly, fixed)?
- **Is** our service hosted in multiple regions, availability zones, or data centers?
- **How long** will it take to have the service operational in the event of a catastrophic disaster to a datacenter?
- **Will** data migration be necessary, and if so, how will we complete it?
- **What** would be the impact of a prolonged downtime window?

- **What data** redundancy do we have built into the system, and what would be the impact of a catastrophic data loss?
- **If** we use Cloud Service Provider (CSP)-specific technology, how easy is it to move to a comparable offering with our technology and different CSP technology?
- **How often** do we need to contact a person from our hosting provider to get resources or to fix an issue?
- **What** percentage of the codebase will we cover by automated tests?
- **How long** does it take to build, test, and deploy a typical bug fix?
- **How long** does it take to build, test, and deploy a new feature into production?
- **How frequently** are builds created?
- **Which** deployment automation or continuous integration tools do we use?
- **What** is the estimated maximum number of concurrent citizens who will want to use the system?
- **How many** simultaneous users could the system handle, according to the most recent capacity test?
- **How does** the service perform when we exceed the expected target usage volume? Does it degrade gracefully or catastrophically?
- **What** is our scaling strategy when demand increases suddenly?
- **How** are we using Docker and Kubernetes/container strategies?
- **Can** we fragment the system into functions such as Amazon Web Services, “Lambda” functions, or Microsoft Azure’s “Functions-as-a-Service”?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Quickly add or remove** team members to meet the need of the moment.
- **Deploy** software on a variety of commodity hardware types, whenever possible.
- **Consider** open-source software solutions cloud-independent at every layer of the stack.
- **Build** “cloud first”.
- **Build** fast and cheap using public cloud and open-source.
- **Follow** best data migration practices.

Low-Level Task Framework

- □ **Choose** software frameworks commonly used by private-sector companies creating similar services.
- □ **Design** transactions and transaction components as modular, separate API calls in a “Service-Oriented Architecture” style.
- □ **Use** an API generation tool such as OpenAPI or Swagger to design, document, and construct your API proto-code.
- □ **Create** clear, understandable instructions for projects setting up a local development environment.
- □ **Create** an API for third parties and internal citizens to interact with the service directly, when appropriate.
- □ **Provide** datasets to the public, in their entirety, through bulk downloads and APIs (application programming interfaces).
- □ **Provision resources on demand**, through an API, and in multiple regions based on real-time citizen demand.
- □ **Do not pay** for resources we will not use.
- □ **Evaluate** data complexity, establish standards, define current and future roles, perform quality data assessments, gather migration requirements, and identify the proper migration tool before testing your data migration, applying risk and change management, and performing the migration.
- □ **Serve** static assets through a content delivery network.
- □ **Host** our application on commodity hardware.
- □ **Create** automated tests that verify all user-facing functionality.
- □ **Create** unit and integration tests to verify modules and components.
- □ **Automatically run** tests as part of the build process.

- ☐ **Perform** deployments automatically with deployment scripts, continuous delivery services, or similar techniques.
- ☐ **Conduct** load and performance tests at regular intervals, including before public launch.
- ☐ **Consider** usage of a Kubernetes cluster orchestration system.
- ☐ **Utilize** budget calculators to determine costs per performance ratios.

FURTHER READING

Choosing technology: an introduction – GOV.UK
LabPlus: The value of open data infrastructure for service delivery – Pia Andrews; GOVT.NZ
Integrate and adapt technology – GOV.UK

LEADING

Digital Services for Rhode Island

"The reality is that the only way change comes is when you lead by example." – Anne Wojcicki, 23andMe

RHODE ISLANDERS

LEADING digital government services proficiently will benefit **all Rhode Islanders** through:

- Multiplied network effect of positive externalities
- Higher quality of service received
- Improved government transparency
- Flourished service familiarity

OUR AGENCY / DEPARTMENT

LEADING digital government services proficiently will benefit **our agency or department** through:

- Greater service uptake
- More effective use of resources
- Better team and individual outcomes
- Higher accountability
- Healthier workplace culture
- Higher productivity
- Improved talent attraction and retention

RHODE ISLAND GOVERNMENT

LEADING digital government services proficiently will benefit **Rhode Island's government** through:

- Strengthened communication
- Grown culture of accountability
- Increased inter- and intra-government collaboration
- Higher capacity for leadership potential
- More systematic development processes

SECTIONS

- Planning for Success
- Team-building
- Community Outreach
- Partnerships

LEADING

Digital Services for Rhode Island

Creating a more useful and usable digital government service requires us and our team to lead the design and building process with purpose, administrative prowess, and community engagement.

PLANNING FOR SUCCESS
Planning is a crucial part of the feedback loop and important to optimize the team's reaction time to project complications.

TEAMBUILDING
We will invest in diverse teams to represent, engage with, and develop for Rhode Islanders' varied perspectives.

COMMUNITY OUTREACH
We will reach out to citizens to gather feedback, increase uptake, and tailor services for varied communities.

PARTNERSHIPS
We will join forces with public-minded partners to optimize service delivery and grow the digital community of practice.

PLANNING FOR SUCCESS

"By failing to prepare, you are preparing to fail." – Benjamin Franklin

Government must provide value to Rhode Islanders and the broader community while clearly focusing on ways to achieve well defined and measurable outcomes. If we build for the sake of building, without clearly understanding the purpose at each stage of a project, we can miss our intended impact. Instead, we will develop actionable goals, benchmarks, and plans to inform and focus each stage of our thinking and planning.

Additionally, while we endeavor to craft digital services intuitive and efficient enough to naturally encourage citizen adoption, late-adopters and non-adopters will always exist (by choice or otherwise). To continue serving all equally, our service goals must adopt a reality defined by 'continual improvement' in addition to specific task and benchmark-oriented 'destinations'.

Regarding back-up plans, Rhode Islanders may expect digital services online and available 24 hours a day, 365 days a year. Plan for the event of a digital service going temporarily offline. Also plan for service operation during an emergency or national disaster scenario.

WHY PLANNING FOR SUCCESS MATTERS

Change happens all the time at GDS, with everything from priorities and resources, to the things people want and need. [Planning] works to minimise the impact of changes as much as possible. We let people know about the impact of any changes as early as we can, and if any decisions need to be made. – GOV.UK

Planning is a crucial part of the feedback loop. While we cannot predict everything, it is important to optimize the team's reaction time to project complications. Planning will help the team decide where and when to iterate, pivot, or shut down individual parts of a project or program. Leaders must not view iterations, pivots, or shut-downs as failures of the original design or team, but as intelligent cost-avoidance for the future.

Clear and actionable goals will help measure the value of our effort, gauge the progress of our work, and demonstrate ongoing value. Alternately, our team may lose trust in the project's direction and may not deliver ongoing value if our projects and products lack clear planning.

Planning will protect the entire transformation process and future iterations; guard against the under-utilization or under-prioritization of various aspects of the design, build, and leading processes; and ensure we receive a full return on investment. Lastly, back-up plans are essential to getting our service back online after a service failure, and are useful to understand the effect of an outage on Rhode Islanders.

KEY QUESTIONS TO ANSWER

- **What** is the project's scope?
- **Is** the scope of the project's scope too narrow or too broad considering outside context?
- **What** about the status quo makes the project difficult?
- **What** are the key deliverables?
- **How are** we planning for organizational and cultural change?
- **Do we have** the internal resources to handle or facilitate organizational or cultural change?
- **Are** our goals actionable?
- **Do** the project's goals align with agency's strategic plan and the governor's strategic priorities?
- **How can** we leverage outside plans or priorities to give the project extra momentum or importance?
- **If** the project falls outside of the agency's strategic plan or the governor's strategic priorities, how will you make your case for starting or continuing the project?

- **What are** the project's milestones?
- **How frequent** are the milestones?
- **Who** holds ownership of performance?
- **Who** will be accountable for the production and approval of content?
- **What** would make you decide to spin down the service?
- **Is** the project a stepping stone to another project?
- **What** does a holistic service look like?
- **How are** we using the state archives?
- **Which** data will we need to migrate, and how will we migrate the data?
- **How** would the project interface with other internal and external projects?
- **How** do we plan for a potential partial or full breach of data?
- **What** legislation or regulations enable or support, restrict or counter the project?
- **How** can supporting or opposing legislation or regulations change to improve project outcomes?
- **How** do we prevent the short-changing of any one part of design, build, or leadership activities?

HOW TO CREATE SOLUTIONS

High-Level Task Framework


Plan to shut down or pivot relevant services when benchmarked goals are not met, and how our team will monitor for the trigger.


Describe how we will use an evidence-based and peer-reviewed approach throughout the project's lifetime.


Work with state legal resources to identify legislation and regulations which may impact the service's design, creation, or implementation.


Define success and the service's relevant outcome or purpose.


Plan to complete and iterate all aspects of the design, build, and lead processes.


Plan to ensure project visibility and grow buy-in with agency and government leadership all the way up to the Governor.


Plan to manage the organizational and cultural change surrounding your project.

Low-Level Task Framework

- ☐ **Use** mapped "user journeys" to establish clear milestones for Rhode Island's transaction and process.
- ☐ **Be thoughtful** about time spent on research.
- ☐ **Research** existing tools helpful in accomplishing our goal before developing a new service or application.
- ☐ **Budget and resource** for the measurement of ongoing value.
- ☐ **Design and adequately resource** our project to ensure our team can continually improve the service to meet people's needs.
- ☐ **Ensure** time is available for staff to complete both day-to-day activities and new redesign-focused activities.
- ☐ **Budget** for ongoing training and educational experiences for team and individual growth.
- ☐ **Create** a plan for data storage and recovery in case of data loss.
- ☐ **Document and update** a record detailing how our team built the service.
- ☐ **Prioritize** the development of digital services based on a ranked list of which government services Rhode Islanders use and care about the most.
- ☐ **Map out** your process to communicate and create buy-in with necessary internal stakeholders, both hold-outs and adopters.
- ☐ **Plan to communicate** the project's progress and celebrate wins, externally and internally.
- ☐ **Research** laws and regulations which may have an impact upon the designing or building of the service.
- ☐ **Plan how and when** to retire redundant services and scale up useful services.

FURTHER READING

Set goals and measure success – Digital Transformation Agency; GOV.AU
Identify business needs – Digital Transformation Agency; GOV.AU
Be clear about what you are trying to change and why – GOVT.NZ

TEAMBUILDING

“Alone we can do so little; together we can do so much.” – Helen Keller

To bring together the policy, design, and delivery skills needed to represent and engage with Rhode Islanders’ varied perspectives, we must invest in demographically and experientially diverse, multidisciplinary teams that can design, build, and operate digital government services. The team may include talent with experience creating modern digital services, but the makeup and experience requirements of the team will vary depending on the project scope.

Team culture curation is important as a catalyst for innovation and success. We will build adaptive, service-oriented, positive, and collaborative team cultures to successfully lead and implement modern methods such as Agile, co-design, and service design. Additionally, we must empower government staff with the necessary tools, resources, training, coverage, time, and authority to continually improve the team’s skills; build the capacity of government staff to deliver best-in-class services; as well as design and implement excellent, innovative services for Rhode Islanders.

A suitably-skilled and senior service owner with decision-making responsibility will hold the authority to assign tasks and work elements; make business, product, and technical decisions; and be accountable for the success or failure of the overall service. This product owner is ultimately responsible for how well the service meets needs of its citizens. The product owner is responsible for ensuring the building of features and managing backlogs.

The design team should also be working alongside people representing agencies’ business, legal, and policy perspectives. Additionally, each team should be wary of knowledge or expertise gaps in their team and work to fill the gaps with external engagement or advisors. No single team can represent all areas of diversity, but active team self-awareness and mitigation can help ensure diversity of perspectives are well represented.

In cases where we use third parties to help build a service, a well-defined contract can facilitate good development practices. When our team needs outside assistance, we should work with contracting officers to understand how to evaluate third-party technical competency in both building and delivering effective digital services.

WHY TEAMBUILDING MATTERS

I was inspired by the passionate, skilled cohort I saw working on projects with huge potential for impact. In my experience, interacting with government services often leaves people feeling frustrated and disempowered. I wanted to design services that effectively meet the needs of their users, while helping to build a design culture in government.
– Erica Deahl; 18F

We need good people to build good services.

Likewise, having a great team is the first step to building great services, improving the system, and making quicker decisions. Once team members are in place, foster an ongoing positive culture within the design and delivery team to benefit the project, community, and services we develop.

KEY QUESTIONS TO ANSWER

- **What** are the performance metrics defined in the contract (e.g., response time, system uptime, pace of development, time to address priority issues)?
- **Who** is the product owner?
- **What** organizational changes will we make to ensure the product owner has authority over and support for the project?
- **What** does it take for the product owner to add or remove a feature from the service?
- **What** features do leadership, stakeholders, or citizen groups consider non-negotiable?
- **What** do we do if we find a non-negotiable feature to be ill-conceived, inefficient, unnecessary?

HOW TO CREATE SOLUTIONS

High-Level Task Framework


Build team principles and ethos, including a strong commitment to citizens.
Describe our team culture and how our team works together to design, deliver, and support the service.
Strengthen decision making and approval processes.
Evaluate the team's approach to support processes like pairing and peer review.
Understand how citizens, stakeholders, cultural advisors, and business or policy experts engage and collaborate with the team.
Identify and resolve gaps in team capability or capacity.
Improve processes the internal team uses to transfer knowledge and skills from any external team members.
Explore how the team members access and contribute to knowledge transfer and skills development across the public sector.
Support the team's working practices (such as stand-ups, demos, sprint planning sessions, and retrospectives) and demonstrated ability to adapt.
Guide how the team applies modern methods such as Agile, co-design, and service design.

Low-Level Task Framework

◊ **Ensure** every digital service has one service owner with bottom-line and cross-agency responsibility to support testing, service and technology evolution, and digital information about that service.
◊ **Ensure** department or agency partnership with appropriate privacy, civil liberties, and/or legal advisor.
◊ **Emphasize** customer service and create rewards for excellent customer service within state government.
□ **Follow** the State of Rhode Island Website Governance and Management Policy.
□ **Budget** for research, discovery, and prototyping activities.
□ **Structure** contracts to request frequent deliverables, not multi-month or year milestones.
□ **Structure** contracts to hold vendors accountable to deliverables.
□ **Give** government delivery team contracts enough flexibility to adjust feature prioritization and delivery schedule as the project evolves.
□ **Require** within contracts the evaluation of open-source solutions when making technology choices.
□ **Retain** contractual control of software and data generated by third parties, as well as the reuse and release of products to the public as appropriate and in accordance with the law.
□ **Ensure** contracts allow the use of tools, services, and hosting from vendors with a variety of pricing models, including fixed fees and variable models like "pay-for-what-we-use" services.
□ **Ensure** contracts specify a warranty period where the vendor must address any defects at no additional cost to the State.
□ **Ensure** contracts include a transition of services period and transition-out plan replete with non-proprietary data export.

- ☐ **Identify** a product owner.
- ☐ **Ensure** the product owner is either trained or has access to enough training to complete the job.
- ☐ **Confirm** the product owner can utilize product management methodologies to assess alternatives and weigh tradeoffs.
- ☐ **Instill** the product owner with the authority to assign tasks and make decisions about features and technical implementation details.
- ☐ **Be clear** with all stakeholders regarding the product owner's authority to assign tasks and make decisions about features and technical implementation details.
- ☐ **Ensure** the product owner has a work plan which includes budget estimates and identifies funding sources.
- ☐ **Ensure** the product owner holds a strong relationship with the contracting officer.
- ☐ **Ensure** the team holds experience building popular, high-traffic digital services.
- ☐ **Ensure** the team holds experience designing mobile and web applications.
- ☐ **Ensure** the team holds experience using automated testing frameworks.
- ☐ **Ensure** the team holds experience with modern development and operations (DevOps) techniques like continuous integration and continuous deployment.
- ☐ **Provide** our team with access to all the skills and perspectives needed to deliver a service.
- ☐ **Provide** our team with access to a product manager and delivery manager with decision-making authority.
- ☐ **Provide** our team with access to service design, citizen research, and user experience skills.
- ☐ **Provide** our team with access to content designers and developers.
- ☐ **Provide** our team with access to creative technical architecture and development expertise.
- ☐ **Provide** our team with access to expertise in analytics, security, and accessibility.
- ☐ **Provide** our team with access to knowledge about relevant cultural, language, gender, or other considerations for the service.
- ☐ **Ensure** the team holds experience securing digital services.
- ☐ **Budget** for ongoing training and educational experiences for team and individual growth.
- ☐ **Utilize** a contracting officer when using a third party for development work.
- ☐ **Enlist** a budget officer as either a partner or internal team member.

FURTHER READING

I fought the law and the users won: delivering online voter registration – Peter Herlihy; GOV.UK
Digital Leadership and The Team – Kit Collingwood-Richardson
Starting a Team – AU.GOV

COMMUNITY OUTREACH

"Civic technologists should be in communion with the people they seek to serve."
– Dan O'Neil; CUTGroup, Chicago

Rhode Islanders spend valuable time finding and accessing government services. We should reach out and invite residents to use digital services, tailor information to specific needs, and get feedback on services.

Successful services combine digital offerings with access points within neighborhoods and communities across the state. Integrated services will empower Rhode Islanders with access to information and strengthen online and in-person bonds between a diverse array of residents.

WHY COMMUNITY OUTREACH MATTERS

The Canadian Federal Government heavily invests in sponsored social media across many of its departments, reaching audiences at scale and with pinpoint accuracy. A spokesperson described the move as connecting 'with Canadians on platforms with which they are increasingly familiar.' And it's also saving the taxpayer money—in fact, overall federal advertising spending is down 39% in one year from 2017. – Hootsuite

Beyond immediate benefits tied to testing outreach, actively encouraging people to use our digital service allows us to save money by reducing the number of people using non-digital channels through helping Rhode Islanders develop digital skills. Outreach allows state developers focus on value-added activities by giving assisted digital support to those who cannot use digital services on their own. Also, meeting Rhode Islanders in their own community helps proliferate citizen-centered design, improve buy-in to programmatic goals, and increase citizen uptake of the service.

KEY QUESTIONS TO ANSWER

- **How** can we reach out to citizen and practice communities?
- **Which** citizen and practice communities interact with our service?
- **What** are the strengths of our service?
- **What** story does our service tell?
- **How** can we tell our service's story?
- **Where** is the most need for our service?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

- **Enlist** influencers in the community as champions of Rhode Island digital services.
- **Use** social media to show or explain government services.
- **Engage** each Rhode Islander with a question or information about government services.
- **Simplify** the process for residents to discover and register for public Rhode Island-sponsored events.
- **Prototype** tools enabling residents to view and manage their complete relationship with Rhode Island in one place, like a single sign-on portal: login.RI.gov
- **Create** a digital toolkit for community-based organizations.
- **Provide** digital training to service providers and representatives from community-based organizations.
- **Train** all agencies to use a single platform to distribute information about key services.

Low-Level Task Framework

- ◊ **Create and utilize** a web-based data platform showing the state of Rhode Island broadband connectivity, initiatives to improve connectivity, and the projected impact of projects.
- □ **Use** available technology and platforms to distribute community-specific information, connect Rhode Islanders to each other, and refer residents to resources in their neighborhood.
- □ **Join and contribute** useful information on platforms where residents connect with each other regarding digital governmental services.
- □ **Leverage** partnerships with libraries and other community hubs that provide digital access.
- □ **Use** anonymous and aggregated search data consistent with applicable laws and policies to understand Rhode Islanders' inquiries and interests.
- □ **Respond** to search data conclusions by disseminating additional and appropriate resources.
- □ **Establish** a single citizen ID system for all government services, giving users the option to enter key information only once.
- □ **Enable** Rhode Islanders to receive timely updates and information tailored to their preferences.

- ☐ **Tailor** images and text for social media channels, invest in targeted posts highlighting government services, and cross-promote services offered by other agencies.
- ☐ **Consider** allowing Rhode Islanders to vote on a public roadmap.
- ☐ **Maintain** a list of all digital properties and conduct an annual audit of social media, web content, and mobile applications.
- ☐ **Allow** residents to opt-in to appropriate and practical pre-populated forms with basic information.
- ☐ **Utilize** insights gained from citizen research to support people with low digital access or digital literacy.

FURTHER READING

How we recruited people with low/no digital skills on Carer's Allowance – Simon Hurst; GOV.UK
How we use Instagram at GDS – Louise Mullan, GOV.UK
How to develop an online engagement strategy – GOVT.NZ

PARTNERSHIPS

"If you want to lift yourself up, lift up someone else." – Booker T. Washington, Educator

Rhode Island's government does not have to do it all on its own. Community, education, and technology partners are ready to help develop and implement effective digital services. Together, we are building a people-centered approach to the design and delivery of government services, programs, and policy.

WHY PARTNERSHIPS MATTER

"Strip away policy details and the user needs over here end up looking very similar to the user needs over there, I'm not suggesting that there will be a single one-size-fits-all solution to each of [government's] problems. What I am saying is that the more our teams share what they're doing and how they're doing it, the easier it will be for each team to meet their users' needs." – Mike Bracken; GOV.UK

Joining forces with public-minded partners will make service delivery more effective for Rhode Islanders and more efficient for government. Building partnerships will grow our brand visibility, help ensure our community of practice remains on the same page, and identify outside interference quickly.

KEY QUESTIONS TO ANSWER

- **What** Rhode Island organizations, schools, or industry partners strengthen Rhode Island's digital community?
- **What** national organizations and community of practices utilize and evangelize citizen-centric design?
- **How** can we benefit from a potential partnership?

HOW TO CREATE SOLUTIONS

High-Level Task Framework

Utilize the Rhode Island Digital Service to help find a great partner(s).
Establish and publish data collection and distribution standards consistent with local laws.

- **Consider** opportunities to ask Rhode Island's design and technology community to help us solve a problem, build a better tool, or improve an existing digital service.
- **Develop** both informal and formal mechanisms to partner with the civic technology community.

Low-Level Task Framework

- ☐ **Partner** with private search and directory sites to optimize search results for content.
- ☐ **Collect, format, and share** data, as well as data we collect from external sources, consistent with law and policy, so partners can use and help improve the gathered data.
- ☐ **Explore** procurement methods for acquiring digital services, particularly new ways to engage smaller and M/WBE vendors.
- ☐ **Establish** a method to allow agencies to acquire design services from a pool of vendors in service, digital, and communication design.

FURTHER READING

GDS, USDS and sharing expertise – Mike Bracken, Liam Maxwell; GOV.UK
Innovation Is as Much About Finding Partners as Building Products – Chandra Gnanasambandam, Michael Uhl; Harvard Business Review
Turning learning up to 11: Knowledge sharing – Mike Bland; 18F

APPENDIX

ADDITIONAL RESOURCES

United Kingdom's Government Design Principles & Service Toolkit
United States' Digital Services Playbook & Web Design System
Australia's Digital Service Standard
New Zealand's Government Web Toolkit & Digital Service Design Standard

Victoria, Australia's Digital Standards
Ontario, Canada's Service Design Playbook & Digital Service Standard
British Columbia, Canada's Service Design Playbook
New York City, USA's Digital Playbook
Boston, USA's Smart City Playbook
Georgia, USA's Digital Standards and Guidelines
San Francisco, USA's Digital Services Strategy
CUTGroup Chicago, USA's Playbook

CONTRIBUTING TO THE STANDARD

We are serious about improving the Standard, so please share your thoughts and ideas!

You can do so by:

- Forking our GitHub repository
- Emailing us at digital.standard@RI.gov

For the best feedback, please:

- ☐ **Send** plain text on formats like text files, Word documents, and Google docs.
- ☐ **Do not send** HTML, PDF, printed paper, or handwritten notes.
- ☐ **Use** Markdown for code suggestions.
- ☐ **Note** to what section(s) the suggestions apply.
- ☐ **Include** the original text for reference with our proposed changes.
- ☐ **Use** 'Track Changes' or 'Suggest Mode' if sending Word or Google documents.
- ☐ **Share** the reason behind the suggestion, and the benefit it will bring.
- ☐ **Pull** the related request after sending feedback.

AUTHOR'S NOTE

The Rhode Island Digital Service Standard was developed in the summer of 2018 by
Maxwell Gigle, Julie Joo, Robert Martin, and Brian McGuirk of the Rhode Island Digital Service.

The Standard draws examples and inspiration from best practices and case studies exemplified within the work of the United Kingdom's Government Digital Service; the United States' Digital Service and 18F; New Zealand's Government Digital Services; Australia's Digital Transformation Agency; Estonia's e-governance; Ontario, Canada's Digital Government; Victoria, Australia's Digital Government Services; Georgia, USA's Digital Services; CUTGroup, Chicago; and others.

The Rhode Island Digital Service Standard is meant to evolve as we learn and grow.
Your feedback and lessons learned will inform future iterations. Go **explore** and **improve**!

2018