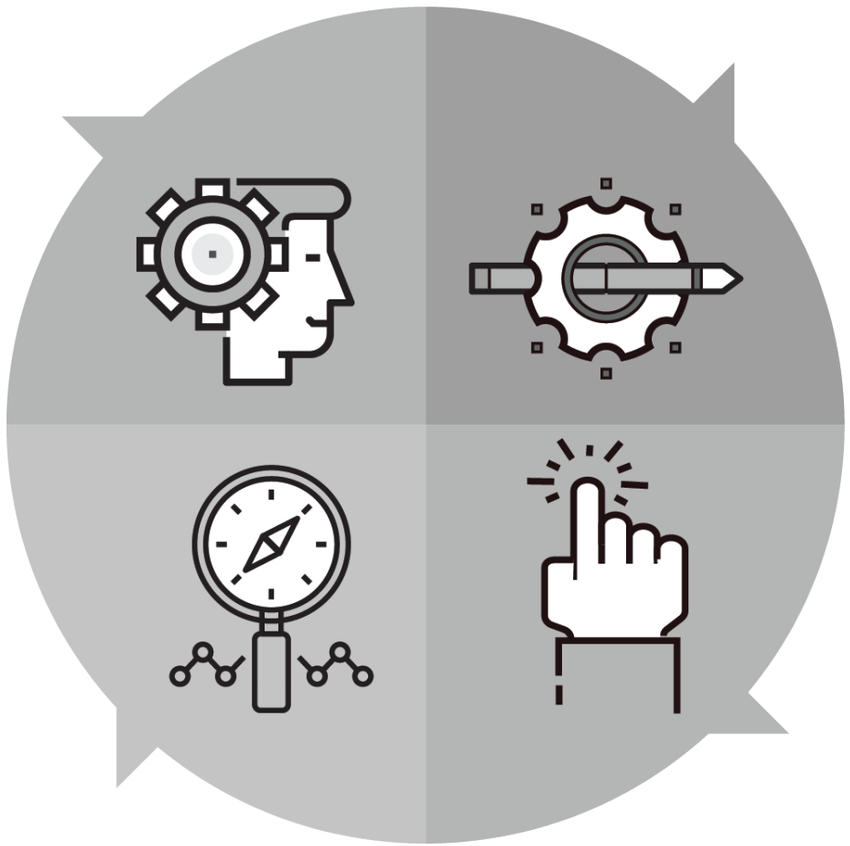
Digital Services Design Playbook – version 2.0



About the Playbook

Innovation, Science and Economic Development Canada (ISED) offers services that impact every part of the Canadian economy. To be productive and competitive, companies must be able to access government services quickly and easily. For this to happen, services need to be designed around clients and delivered in the client's preferred channel(s).

Businesses are asking for convenient, simple digital government services (e.g., services that can be accessed via the web, mobile devices, etc.). To do this right, service providers must redesign front-end services and back-end processes to reduce the burden on the client. Services also need to be developed collaboratively with data about clients being shared across ISED. When services are developed in a silo, or when client information is not shared, the client experience can be negatively impacted (e.g., clients have to log-in separately to each service or have to update their information with multiple services lines rather than "telling us once"). To help with this process, we have developed the Digital Services Design Playbook. It serves as a guide to managers and employees to apply a more client-centric approach to designing a new digital service or to improving an already existing digital service. The Playbook helps build a structure around the key elements of serving people:

- Connect with people's needs
- Answer those needs
- Do it in a way that is efficient for the organization and outstanding for the client

Why use the Playbook?

Whether you are a service provider or a manager responsible for leading a team of service providers, it is important to understand your clients, their needs, their motivations and their goals when using a service. In this Playbook, you will find useful practices, information related to better understanding clients and tools to design client-centric services.

Using this Playbook will result in benefits for clients and for ISED:

- **Improve client satisfaction by helping service designers to:**
    - Identify and understand client needs
    - Improve the design of front-end services and back-end processes
    - Co-create services with clients, service providers and key stakeholders
    - Deliver simplified and convenient services based on user needs and designed for the digital channel

- **Create Departmental efficiencies by encouraging services to:**
    - Re-use, improve and share technology solutions (including code) to have a common approach to the design, development, delivery and assessment of services
    - Enhance client relationships to enable service improvements
    - Implement tools to support employees deliver service excellence

Overall, the Digital Services Design Playbook will provide the following outcomes:

- **Placing clients first and at the centre of ISED's services**
- **A consistent and better overall user experience**
- **Increased uptake in digital services**

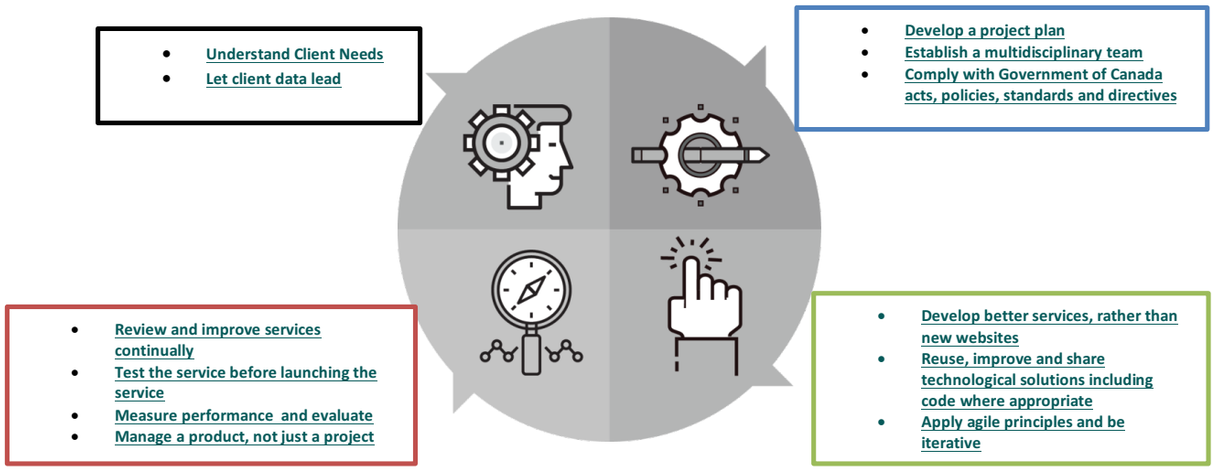
As an evergreen document, the Playbook will be reviewed and improved regularly based on user feedback. As such, please use the GCconnex page to provide your ideas for improving the content included in the Playbook.

How to use the Playbook

The Playbook starts with six general design principles:

- ✓ **Services designed with clients, for client needs**
- ✓ **Do the hard work to make it easy**
- ✓ **Iterate. Then iterate again for ongoing service improvement**
- ✓ **A consistent client experience when using services is key**
- ✓ **Digital by design, optimized for mobile**
- ✓ **Data and code is default to open**

Digital Design Plays are key steps to follow when designing digital services. You can follow the phases in sequence – Think → Plan → Do → Assess; but the service design process is non-linear, so there will likely be instances where you find yourself going from one step back to a previous one.



What is Service Design

"**The activity of planning and organizing people, infrastructure, communication and material components of a service in order to improve its quality and the interaction between service provider and customers. The purpose of service design methodologies is to design according to the needs of customers or participants, so that the service is user-friendly, competitive and relevant to the customers."**
– The Service Design Network

Service Design offers a set of principles (e.g., start with user needs, build prototypes to test ideas, iterate, involve users in the process, etc.) and methods (e.g., user journey maps, service blueprints, personas, mind mapping, etc.) that can help you create and manage services that are effective, efficient and improve the client experience.

In the context of government, Service Design is about developing and designing services ***with people, not just for them.*** It entails the following:

- defining a problem from the perspective of those who experience it and having empathy for clients
- observing your clients as they use your service to understand what works well and where there are points of frustration
- applying these insights to brainstorm new ideas and approaches for problem solving
- prototyping and iterating in order to assess validity and reduce risks

"Service design is all about making the service you deliver useful, usable, efficient, effective and desirable." – *UK Design Council: Design methods for developing services*

Please contact ISED's Service Lab (email: ic.servicelab-labodeservice.ic@canada.ca) to learn more about service design and design principles

Think: Conception and Initiation of Digital Service Design

This section includes two Digital Design Plays:

- **Understand client needs**
- **Let client data lead**

Each Play includes a brief overview about its importance and why having an understanding of client needs and using client feedback and data are key to a successful service design process. Also included are a checklist of best practices and key decision making questions to keep in mind throughout the Plays, tools to help you apply the Plays to your work and examples from other jurisdictions that demonstrate how the Plays can help you design client-centric services.

• Understand client needs.

A service (delivered digitally or through other channels) must be designed in response to the needs of your clients. The team creating the service will require in-depth knowledge regarding the clients' experience. Dedicate a specific period of time (e.g., several weeks or a few months) to conduct client research to challenge assumptions that you may have about clients or the service. Throughout this Play, have empathy for the users of the service. Be open to new ways of thinking and be willing to collaborate with clients, service providers and colleagues across the Department, the

Government of Canada, and other levels of government as you address problems and identify solutions.

CHECKLIST:

- **Diagnose the problem.**
  - Separate the problem from the symptom.
  - Do user research in order to identify the problem from the user/client perspective.
  - Experiment with different approaches for diagnosing the problem. Look for dependencies and interrelationships that may contribute to the problem.

- **Engage directly with clients and co-design services with your clients (where possible).**
  - Take time to identify and understand your clients. Collect and analyze data related to the client (i.e., if it is a business client, this could include size of a business, the frequency with which the client uses a service, preferred channels and other key information).
  - Develop client segments and use this information to gather additional insights and tailor services to client behaviours and needs. This information can also be useful for creating User Personas that describe a client's behaviour patterns, goals, skills, attitudes and environment. This helps make a realistic character that will guide decisions about how a service will be used and delivered.
  - Recruit a diverse group of clients (e.g., very familiar with your service, use the service infrequently, occasional users, etc.) for co-design sessions.
  - Observe clients/users as they use the service. This helps the service designer to see things that the client may not tell you, but are important.
  - Visualize/Map the service experience journey from the client's perspective and the perspective of the various parts involved in how the service is delivered.
    - Use the User Journey Map to see the entire client journey when using a service and to identify points of happiness and points of frustration with the service.
    - Use the Service Blueprint to have a holistic picture of all the parts involved in delivering the service. Service Blueprints provide a "behind-the-scenes" view of what is involved in shaping the client experience. Being aware of the underlying actors, systems, touchpoints and policies involved in service delivery is a key step for improving government services.

- **Understand and appreciate context.**
  - Services are not websites. Websites are platforms for delivering a service. Design your service for people and the context in which they will use the service. Your goal should be to develop and deliver services that meet client needs.

- **Be inclusive. Design services that are accessible for everyone.**
  - Services for business need to be inclusive and accessible by everyone.
  - Accessible design is good design.
  - Make services that are simple and easy to use so that clients want to use it.

DECISION MAKING QUESTIONS:

- How will you conduct user research?
- Who uses the service? Do you have data about client behaviours and expectations? Who are the current clients / target audience for the service? Do you have personas to include key details about your clients?
- Are you aware of the challenges clients face when accessing or using the service? How do these challenges affect the overall user experience?
- What are the work-arounds that clients and service providers have devised to address challenges with the service? Can you incorporate the work-arounds in the new service design?

- Have you considered the unique needs of some client groups? Is the service designed to be as inclusive as possible?
- Is the service delivered in non-digital channels (e.g., in-person, telephone)?

RESOURCES:

User Research and user-centred design

- Standards and Guidelines for Data Collection
- Introduction to User-centred Design
- User Research Skills
- How Users Read
- Designing government services

Understanding user needs

- Start by understanding user needs
- Practical Guide to Service Blueprints
- Creating personas - http://www.gcpedia.gc.ca/wiki/Personas ; http://www.gcpedia.gc.ca/wiki/Personas/Personas_Workshop_Workshop ; https://webtoolkit.govt.nz/guidance/service-design/tools/personas/
- Creating user journey maps - http://uxmastery.com/how-to-create-a-customer-journey-map/ ; http://www.servicedesigntools.org/tools/8
- 101 Design Methods

Accessible and Inclusive Design

- Standard on Web Accessibility
- Standard on Web Usability
- Web Experience Toolkit (WET)
- Canada.ca Content and Information Architecture Specification
- Gender-Based Analysis Plus - http://wiki.ic.gc.ca/pages/viewpage.action?pageId=136052841 and http://www.swc-cfc.gc.ca/gba-acs/index-en.html
- Inclusive Design at Microsoft

Inspiration Examples

- The journey to government's digital transformation
- 6 case studies: using research and data to improve a live service
- What we mean when we talk about accessibility
- Consider the range of people that will use your product or service
- Building for inclusion

• Let client data lead: act on and adapt to feedback.

The absence of the client voice leads to assumptions that may be incorrect and costly. One way to challenge assumptions is to have quality qualitative and quantitative data. Data informed by client behaviours and needs will help you make the right decisions when designing and redesigning digital services. Service and digital performance and usage must be continuously monitored and measured in order to effectively direct transformation efforts. Client feedback should be collected and analyzed on an ongoing basis. Measurement and data analysis must remain integral to your service throughout its lifecycle.

CHECKLIST:

- **Research what data is available.**
  - Start with existing data before collecting new data. For example, use ISED data sources such as AWESOME and Client Enquiry Reporting Tool (CERT) to collect information on website usage and understanding ISED website, how clients interact with it, as well as their user experience.

- **Define what data types should be collected and collect data in a consistent manner (e.g., client experience related to tasks or problems, client feedback and usability testing).**
  - Collecting data about your service allows you to measure its performance. You can use data to validate the following:
    - The service is meeting user needs including those requiring accessible services (such as TTY or screen readers).
    - The service allows users to easily complete the task it provides.
    - People know about the service and are choosing to use it.

- **Ensure data completeness and quality.**
  - Understand the limitations of data and use data appropriately. You need to analyse the data in its context to draw the right conclusions.
  - To ensure the completeness and quality of data, consult with the Chief Information Officer (CIO), the Results and Delivery Unit and other internal data experts.

- **Evaluate data quality by methods, such as certification or validation or studies of the sources of error.**
  - Consult with the CIO and internal experts about data to develop or select a suitable methodology to validate and certify your data.

- **Continuously measure client experience and use this information to inform future service redesigns and service improvements.**
  - Measure the service attributes (e.g., timeliness, completeness, usability, etc.) that matter to the client. Focus on customers' success metrics to drive priorities.
    - Use ISED's Service Management Strategy Key Performance Indicators, KPIs, (e.g., client satisfaction, increase in digital service uptake and service standards met) and the Canada.ca performance indicators.
    - Have a mechanism in place for clients to provide feedback and to address client service issues in a timely manner. This is a requirement under the Policy on Service.

DECISION MAKING QUESTIONS:

Data

- What are the existing sources of data?
- Is there an opportunity to collect data and what tools can be used?

- Can the team analyze the data? Does the team need assistance?
- How will data be shared across ISED?
- Have the clients been profiled (including segmentation)?
- Have KPIs been identified, in addition to the mandatory KPIs (i.e. client satisfaction, increase in digital services uptake, service standards met)?

Acting on Feedback

- How will the feedback mechanism be implemented and delivered?
- What tools are available for collecting feedback?
- At what point during the process will feedback be collected?
- How will clients know that their feedback has been received and is being used to inform service improvements? How often will service improvements take place?
- What improvements can be made to the tools for collecting feedback and performance data to enhance the client experience?

RESOURCES:

- Quality Services Guide II - Measuring Client Satisfaction
- Data quality evaluation
- 2003 April Report of the Auditor General of Canada
- TBS Performance Monitoring and Reporting Standard
- Key Performance Indicators
- Statistics Canada Data Collection, Capture and Coding
- Standards and Guidelines for Data Collection

Inspiration Examples

- Using data to improve your service: an introduction
- 18F Dashboard
- City of Edmonton's Citizen Dashboard

PLAN

This section includes three Digital Design Plays:

- Develop a project plan
- Establish a multidisciplinary team
- Comply with Government of Canada acts, policies, standards and directives

Each Play includes a brief overview about its importance and why having a sound project plan with the right team in place is key to a successful service design process. Also included are a checklist of best practices and key decision making question to keep in mind throughout the Plays, tools to help you apply the Plays to your work and examples from other jurisdictions that demonstrate how the Plays can help you design client-centric services

• Develop a project plan.

As you begin to plan your service design project, consider key deliverable dates, resources (available and required), challenges and desired outcomes. Be realistic with timelines. The project team needs permission, support and planning to succeed in its deliverables so ensure that your senior leadership is supportive of the project. Plans also need to adapt to a changing context and new information. Be willing to change your plans or to reprioritize objectives.

CHECKLIST:

- **Before you start your own project, do an environmental scan to see how other programs and services are embracing digital service delivery.**
- **Liaise with the Departmental Project Management Office.**
  - Be aware of the stage-gate process and requirements to get through the stage-gate process.
- **Develop your plan - it is vital to the success of any service design project.**
  - Planning allows everyone to understand: vision and objectives, what needs to be done to achieve objectives and indicators for knowing when objectives have been met.
- **Make an agile plan:**
  - Decide on a vision: Every product or service benefits from a vision - a simple statement explaining what you're trying to achieve. It is important that people working on your service and its stakeholders understand the vision and that they be involved in developing it. This creates a collective sense of ownership.

- Make objectives: You should define some objectives that you want to achieve and have a system for checking when you've achieved these objectives. One way you can do this is by tracking results you can measure for each objective. For example, start by defining a few main objectives. For each objective, define 3 results you can measure using quantitative data. You should also set your objectives in advance, though they are likely to change as the project progresses and as you learn more about the service, adapt your approach for measuring success.
- Make a roadmap: You should create a roadmap of the main features you need to build to achieve your objectives. Work with senior executives and project management teams to develop the roadmap. The roadmap sets out your plans in advance. The roadmap should include fixed deadlines, for example ministerial deadlines, and focus on achieving objectives within these deadlines. Revisit your roadmap regularly to re-prioritize work plans for the near future. Make your roadmap visible to the team and ensure it is shared with other teams that you are collaborating with to achieve project goals.

DECISION-MAKING QUESTIONS:

- Is there a GCconnex group or GCpedia group exploring a similar service challenge or innovative approach to service delivery?
- Have you reached out to other digital government teams or researched case studies that document the journey of other services?

RESOURCES:

- Designing for Public Services - Planning your project worksheet
- Goals, cycles and people: running an agile, complex programme in government
- Agile Outside of Software
- Methodology 90 Day Pilot-in-a-Box

• Establish a multidisciplinary team.

Where possible, establish a project team that includes a broad mix of skills, experiences and roles. Strive to include members who are open to collaborating, experimenting with new ways of problem solving and applying service design principles such as empathy and a focus on client needs. Your team should be bringing perspectives to the table from across the organization and a willingness to work directly with clients where appropriate in the design process.

You may also need to explore the TB Contracting Policy in order to procure expertise or services from a third party or a contractor. Your team should include at least the following: a service manager, user researchers, content designers, web developers, a user experience designer and a performance management analyst.

CHECKLIST:

- **Clearly define roles and team capacity**
  - Who are the subject matter experts?
  - Who is the project lead?
  - Who is responsible for doing user research and then analyzing the findings?

- Who will recruit participants for the various project phases (e.g., user research, prototype testing, etc.)?
- Who is responsible for decision-making?
- Have you considered courses from the Canada School of Public Service or workshops from ISED's Service Lab to build your team's capacity to apply agile and service design methods?
- Does the team communicate frequently and openly?
- Is the team resourced to implement continuous improvements of the service after it goes live?

- **Know the rules! Consult the TB Contracting Policy**
  - The TB Contracting Policy sets out requirements to meet the objectives of acquiring goods and services in a manner that enhances access, competition and fairness, and that result in the best value or, if appropriate, the optimal balance of overall benefits to the Crown and the Canadian people.

DECISION MAKING QUESTIONS:

- Are there team members familiar with the policy as well as the service that is being designed or redesigned?
- Do the team members have diverse yet complimentary skill sets?
- Are there plans in place to build team capacity and enhance skills where needed?
- Have you considered other organizational demands that may result in competing deliverables for team members?
- Have you clearly assigned roles to avoid team members duplicating each other's efforts?

RESOURCES:

- The Digital Delivery Team
- The teams, they are changing
- Set up a service team at each phase
- Community of Practice - Contracting and Procurement

• Comply with Government of Canada acts, policies, standards and directives.

The design and delivery of client-centric services must incorporate the legal and policy requirements of the Government of Canada (GC). The policies, acts, standards and directives support public sector values, including respect for Parliament, people, integrity and stewardship, as well as other management values such as sound governance, transparency and value for money.

While the entire list may not always apply, it is important to be familiar with the following list of common acts, policies, standards and directives as they contain rules for management in the federal public service and include guidance for officials to undertake a specific activity or task that collectively supports the instrument's objectives and expected results. Being familiar with these policies, acts, standards and directives will help ensure that services you design or redesign meet client needs while also adhering to GC rules.

CHECKLIST:

Related to Information technology and information management including websites and online GC services

- **Policy on Information Management**: Aims to achieve efficient and effective information management to support program and service delivery; foster informed decision making, facilitate accountability transparency and collaboration; and preserve and ensure access to information and records for the benefit of present and future generations.
- **Standard on Web Accessibility**: Ensures the uniform application of a high level of web accessibility across GC websites and web applications.
- **Standard on Web Interoperability**: Improves Canadians' web experience by using technologies that support mobile devices and by making information technology easier to use in order to find government information.
- **Standard on Web Usability**: Describes the usability requirements for Government of Canada websites, including requirements for domain names, terms, conditions and archiving online web content, as well as common page layouts and visual design elements.
- **Standard on Privacy and Web Analytics**: Aims to facilitate the use of web analytics in accordance with sound privacy practices that safeguard the privacy of visitors to GC websites.
- **Standard on Optimizing Websites and Applications for Mobile Devices**: Sets out requirements for ensuring the optimization of GC websites and applications with respect to mobile devices, and permits only the justifiable use of device-based mobile applications.
- **Technical specifications for the Web and mobile presence**: Companion document to the ***Standard on Web Usability*** and to the ***Standard on Optimizing Websites and Applications for Mobile Devices***. It describes how to optimize websites and Web applications for mobile devices, as well as the layout and design specifications for websites, Web applications and device-based mobile applications.
- **Canada.ca Content Style Guide**: establishes the rules you must use to develop and edit web content published on the Canada.ca website. It sets out writing rules that are different from practices adapted to print in order to support the writing principles for Canada.ca.
- **Canada.ca Content and Information Architecture Specification**: contains templates and rules that show how content on Canada.ca needs to look and be organized. It ensures that we publish web content consistently. It is a requirement under the Directive on the Management of Communications.

Government Communications and Official Languages

- **Directive on the Implementation of the Official Languages (Communications with and Services to the Public) Regulations**: Enables the GC to minimize the risks of applications for remedy before the courts because of an institutions' violation of the public's rights to communicate with that institutions and receive services from it in the official language of their choice.
- **Directive on the Management of Communications**: Provides rules for managing and coordinating communications, including procedures for advertising, public opinion research, social media and web communications.

- **Directive on Official Languages for Communications and Services:** Gives sound and consistent practices and procedures for deputy heads (or their delegates) in the area of communications with the public and employees, as well as the services provided to them.

- **Policy on Communications and Federal Identity**: Gives context and rules for how GC enables communication with the public about policies, programs, services and initiatives, including the administration of the GC official symbols.

- **Policy on Official Languages**: Facilitates institutions' compliance with and ensures effective implementation of the Official Languages Act and its regulations.

Service Delivery

- **Policy on Service:** Establishes a strategic and coherent approach to the design and delivery of GC external and internal enterprise services.

- **Guideline on Service Management (October 2016 - Draft):** Provides guidance to departments on managing their services and implementing the Treasury Board *Policy on Service*.

Privacy

- **Personal Information Protection and Electronic Documents Act (PIPEDA):** the federal privacy law for private-sector organizations. It sets out the ground rules for how businesses must handle personal information in the course of commercial activity.

- **Privacy Act:** to extend the present laws of Canada that protect the privacy of individuals with respect to personal information about themselves held by a government institution and that provide individuals with a right of access to that information.

Open Government

- **Directive on Open Government**: Promotes information management practices that enable the proactive and ongoing release of government information.

Other

- **Introduction to Gender-Based Analysis Plus (GBA+):** Provides essential information on GBA+ and its related concepts, the knowledge and tools to use GBA+ to enhance your work.

DECISION MAKING QUESTIONS:

- Have you considered the relevant TB Policies, Standards and or Directives?
- Have you considered privacy implications?
- Is the service available in both official languages?

- Are you adhering to the best practices outlined in the Canada.ca style guide?

RESOURCES:

- Beyond the tools and selected policies listed above, you may wish to also consult with the Treasury Board policies, directives, standards and guidelines for a full list.

DO

This section includes four Digital Design Plays:

- **Develop better services, rather than new websites**
- **Reuse, improve and share technological solutions including code where appropriate**
- **Applying agile principles and be iterative**
- **Share best practices**

Each Play includes a brief overview about its importance and why doing the right things (e.g., focusing on service improvement or policy changes before creating a new website, applying an iterative approach and sharing best practices) are key steps to a successful service design process. Also included are a checklist of best practices and key decision making question to keep in mind throughout the Play, tools to help you apply the Play to your work and examples from other jurisdictions that demonstrate how the Play can help you design client-centric services.

• Develop better services rather than new websites. Optimize business processes before designing technological solutions.

It is essential that business processes be reviewed to identify opportunities to improve service delivery. A website is not a service; it is just one channel for accessing or delivering a service. Designing new or redesigning existing digital services should also facilitate service delivery best practices (e.g., open data and joined-up services).

CHECKLIST:

- **Uncover user needs and confirm with clients their understanding of the desired result.**
- **Look for opportunities to integrate with other relevant or similar services (i.e. joined-up services) to simplify the client experience**
- **Look for opportunities to use business intelligence and analytics (BI/BA) to improve the client experience.**

- **Identify policy constraints.**
- **Identify opportunities for improving processes and reducing complexity.**
- **Improve the service first and consider if a policy change or update might be needed. Second, build the digital platform/website.**
- **Consider back-end/business processes optimization that may improve client experience without any visual changes to the service from the client's vantage point.**

DECISION MAKING QUESTIONS:

- Has client feedback been solicited and have you incorporated client feedback in the service design/redesign?
- What service delivery models have been adopted elsewhere?
- What are the opportunities for efficiencies and improvement across business processes supporting the delivery of services?
- Have new or revised IM/IT approaches been considered?
- Have you tested prototypes with clients before launching the new website?

RESOURCES:

- Understanding the problem is key to fixing it
- Six Sigma - An Overview

• Reuse, improve and share technological solutions including code where appropriate.

In order to limit costs, avoid duplication of effort and provide a consistent client experience when using various services, the reuse and adaptation of existing technological solutions is encouraged, where appropriate. If the development of new solutions is required, consider the ability of others to reuse and adapt your work as this will provide additional value on an organizational level.

CHECKLIST:

- **Use departmental/GC standards.**
  - Adopt the business number as the client identifier - do not create other unique identifiers. This enables data sharing across service lines, departments and jurisdictions.
  - Authenticated services must use only the federated credentials (e.g., Secure Key, GCKey). This enables a single login so clients do not need to re-authenticate their identity for each ISED service.
  - Build in client relationship management (e.g., MS Dynamics). This enables many capabilities such as the "Tell-me-once" feature, real-time status updates and omni-channel service delivery.
  - Utilize resources offered by the Chief Information Office (e.g., Master Data Management) to retrieve information that can help you have a holistic view of clients across the department.
  - Follow the Canada.ca Content Style Guide

- For services that receive payments, adopt the departmental standard e-payment system. This provides a consistent client experience across ISED services.
- Build in real-time status updates to your services, where appropriate.

- **Use device-agnostic and modular technology.**
  - Use technology that allows your service to function regardless of the device or operating system. Make sure mobile apps can function on all devices.
  - Modular technology can be reused, in part or in whole to innovate new solutions and uses for it. It also allows you to add new capabilities and capacities to your technology in response to changing operational environments.

- **Choose solutions or parts thereof that are re-usable in another service context.**
  - Use technology solutions that other business lines can reuse or adapt to their needs. This is both economical and practical as it permits future interoperability, and reduces the overall cost of follow-on digital transformation initiatives.

- **Consider open source where feasible.**
  - Open source refers to practices that allow other software developers to have access via a free license to another product's programming code, thereby allowing others to make subsequent improvements or develop new products that work with the product (e.g., being able to incorporate Twitter into another service or product).
  - Open-source code is typically a collaborative effort where programmers improve upon the source code and share the changes within the community so that other members can help improve it further. Use the GC's open source code library (Web Experience Toolkit) available on **GitHub**. On GitHub you can find other useful sources of code for improving your service or website.

- **Consider open data and opportunities to share data or business capabilities to the extent possible.**
  - Open data is structured data that is machine-readable, is freely shared and can be used and/or built on without restrictions. It relies on three things: a permissive licensing model that encourages reuse, data discoverability and data accessibility. It also requires anonymization of data when involving potentially private information.
  - Open data increases transparency.
  - Open data leverages public sector information to develop consumer and commercial products.
  - Utilize the GC's and ISED's Application Programming Interface (API) Store to share business capabilities.

DECISION MAKING QUESTIONS:

- Does website design adhere to principles and best practices in the Canada.ca Content Style Guide?
- Is the service accessible and functional on any mobile device (i.e. does it use device-agnostic and modular technology?)
- Are there opportunities to better integrate technology?
- Is the code open and shareable?
- Can other software developers use the code to make improvements or to build apps that work with the service?
- How have partners, other GC entities and other digital government teams used open data and technology to improve services?

RESOURCES:

- Principles Guiding Information Structure Design Decisions

- GCpedia Open Source Community of Practice
- Open Data 101
- **Standard on Optimizing Websites and Applications for Mobile Devices**: Sets out requirements for ensuring the optimization of GC websites and applications with respect to mobile devices, and permits only the justifiable use of device-based mobile applications.
- **Technical specifications for the Web and mobile presence**: Companion document to the ***Standard on Web Usability*** and to the ***Standard on Optimizing Websites and Applications for Mobile Devices***. It describes how to optimize websites and Web applications for mobile devices, as well as the layout and design specifications for websites, Web applications and device-based mobile applications.
- Web Experience Toolkit (WET) on GitHub: A collaborative open source project led by the GC, WET is an open source code library for building innovative websites that are accessible, usable, interoperable, mobile-friendly and multilingual.

Inspiration Examples

- GDS, USDS and sharing expertise
- Open Data App Gallery

• Apply agile principles and be iterative.

Applying agile involves continuous improvement by analyzing data, making adjustments and iterating to identify and test improvements. Core principles of agile include defining a measurable goal; sharing ownership of the problem; taking small steps with visible impact; validating ideas/solutions with the target audience (e.g., the client); measuring success; reflecting, adjusting and iterating.

Start with a representation or prototype of the solution that will be tested and revised based on feedback and insights. Each iteration improves on the previous version. Your understanding of a problem and how to address it evolves each time you refine an idea and re-craft potential solutions. Taking an iterative approach also helps you reduce risks. It makes big failures less likely and turns mistakes into learning opportunities.

CHECKLIST:

- **Start with a prototype**
  - Create a minimum viable product, that is, a version of the service with just enough features to gather insights, test assumptions and inform future improvements. Use the prototype to capture client feedback and then make improvements until you have a version that really meets client needs.

- **When iterating, focus on workable solutions over comprehensive documentation.**
  - Having a workable solution that can be tested and validated will give you useful information for improving your service. Whenever possible, focus on results rather than unnecessary documentation and reporting (while staying within policy and regulatory limits).

- **When you can, use agile tools and techniques.**
  - Techniques can include daily stand ups, issue trackers, code reviews, rapid prototyping, design sprints, usability testing, user stories and retrospective meetings.

- **Build and release a core-function oriented product that meets client needs.**
    - Focus on developing a product that takes care of the client's task(s). Additional capacities and new features to service can be added later as long as these add-ons do not result in the service/product losing effectiveness at core functions.

DECISION MAKING QUESTIONS:

- How are service problems tracked and prioritized?
- How often are clients problems reviewed and features assessed for effectiveness?
- What process is in place for clients to provide ongoing feedback?
- How is feedback used to improve the service?
- What is the scope of the project? What can be achieved in the first iteration or design sprint?
- At what point after the initial release will planning/development of future releases take place?
- How long are iterations and sprints?

RESOURCES:

- Agile tools and techniques
- Agile Principles & Practices
- **Examples of Agile Methods:**
    - Scrum
    - Lean
    - Kanban

- GCpedia Community of Practice Agile Methods
- CRA Agile Framework
- Treasury Board Secretariat (TBS) – Management Accountability Framework (MAF) - http://www.tbs-sct.gc.ca/hgw-cgf/oversight-surveillance/maf-crg/index-eng.asp and http://www.tbs-sct.gc.ca/hgw-cgf/oversight-surveillance/maf-crg/ap-pe-eng.asp

Inspiration Examples

- Is your project using "agilefall"?
- Agile Manifesto

• Share best practices.

Share your experiences with colleagues across the GC, other levels of government, clients and service providers. Sharing experiences and best practices helps to raise the overall service quality. It helps

to reduce duplication of effort and save costs. So share ideas, share intentions, share failures and learn together.

CHECKLIST:

- **Document and show your work.**
- **If you are redesigning a service document the changes and show how these changes will enhance the client experience when using the service.**
- **Embrace sharing platforms (e.g., GCconnex, GCpedia, Twitter, etc.) to get inspiration and feedback on your ideas.**
- **Identify lessons learned throughout the project and not just at the end.**
- **Make it easier to share data across ISED by collecting service and client information in a consistent manner and following best practices (e.g., the business number as a common identifier and practices related to Identity Management (IDM)).**

DECISION MAKING QUESTIONS:

- How can the team share what was learned during this project?
- Can the lessons-learned from this experience contribute to better service delivery for other ISED services or services offered by other departments or governments?
- Is there a valid reason not to share? If you cannot share everything, what can you share without breaching privacy, security and information management rules?
- Have you researched other services for business to identify other approaches to digital services and service delivery?

RESOURCES:

Inspiration Examples

- How sharing helps us improve digital services
- There's nothing wrong with being unoriginal

ASSESS

This section includes four Digital Design Plays:

- **Review and improve services continually**
- **Test the service before launching the service**
- **Measure performance and evaluate**
- **Manage a product, not just a project**

Each Play includes a brief overview about its importance and why regularly assessing a service and testing it with clients as it is being developed and after it is launched are key steps in successful service design. Also included are a checklist of best practices and key decision making question to keep in mind throughout the Play, tools to help you apply the Play to your work and examples from other jurisdictions that demonstrate how the Play can help you design client-centric services.

1. Review and improve services continually.

The TBS Policy on Service and the TBS Management Accountability Framework (MAF) require regular reviews of priority services in order to identify opportunities for service redesign. By reviewing services regularly, service providers can ensure that services continue to be relevant, effective and efficient, and deliver best value to clients.

Use quantitative and qualitative data to help with regular reviews of your service. User needs and technology evolve. There will always be room for improvement.

CHECKLIST:

- **Explore opportunities for improved usability of service.**
- **Review how other departments and governments approach service delivery and adapt/incorporate best practices where appropriate.**
- **Explore interdepartmental and/or interjurisdictional partnership arrangements to identify opportunities for joined-up services.**
- **Design the website or web application iteratively; the process should start with low-fidelity methods, such as quick sketches, and progressively moves to higher-fidelity methods, such as prototypes.**
- **Evaluate the design of the website or web application regularly and improve it throughout its life cycle through various methods (e.g., observing users completing tasks while using the service).**

- **Consider other service channels, such as telephone and in-person, used to obtain information and services from the GC.**

- **Explore opportunities for channel integration and mobile optimization.**

- **Consult the TBS Technical Specifications for the Web and Mobile Presence.**

- **Websites and web applications are optimized for mobile devices by:**
    - Using the Web Experience Toolkit (WET) for adapting the layout and design of websites and web applications for small, medium and large screen sizes, and for different input methods, such as touch input, and keyboard and mouse input.
    - Designing the content and interface of websites and web applications for small, medium and large screen sizes and for different input methods, such as touch input and keyboard and mouse input.

DECISION MAKING QUESTIONS:

- Is there a persistent issue identified by several clients?
- Are there any clear improvements that are possible that clients may not have identified yet?
- Have there been any recommendations from audits or evaluations that require services to be redesigned?
- Has technology evolved to permit new capabilities that would enhance the client experience?

RESOURCES:

- 247 different checklists for usability testing
- Technical Specifications for Web and Mobile Presence (optimization)
- TBS Standard on Web Usability
- Canada.ca Content Style Guide

2. Test the service before launching the service.

Services should be simple, inclusive and easy to use. Services should help clients achieve the outcomes that matter most. Assessing prototypes while the service is being designed will help you discover shortcomings that may deter clients from using the service or glitches that may affect the user experience. Assessing the service before it is officially launched will also help you make improvements that can go a long way in ensuring clients are satisfied when using the service. Rigorously and comprehensively testing the service from end-to-end is part of good service design.

CHECKLIST:

- **Don't wait for a fully developed service to start testing.**
    - Develop a prototype of the service and test it to validate ideas, to challenge assumptions and to identify opportunities for improvement.

- **Define your testing objective.**
  - Define the purpose of the test and what you want to learn? The purpose of the test is often determined by your business goals and user needs identified through feedback, analytics and other sources.
  - Identify top or critical tasks to test. Main outcomes and features your clients want to achieve should be prioritized.

- **Test with clients and others.**
  - You need to ensure that the service works from technical perspective and from the perspective of the user and the service provider (including the help desk agent who assists clients when they face challenges using the service). By testing with a diverse group and different type of users, you can capture a more comprehensive understanding of how your service is working.
  - Make sure the participants are representative of your clients.
  - Utilize user experience testing services offered by the Chief Information Office and the Communications team

- **Plan and deliver client testing cycles.**
  - Pilot your test: Make sure it all works and flows before participants use it.
  - Implement the test.
  - Test often (e.g., six month or yearly intervals), apply the findings and keep on testing.

- **Test under realistic conditions.**
  - Create realistic scenarios that reflect the context and environment in which clients would use the service.

- **Use different types of tests to assess the service.**
  - Identify the best testing method based on your needs. Examples of tests include:
    - Tree Testing - A test in which participants are asked to find a resource based on a series of menus.
    - Card Sorting Testing - A reverse tree test where participants sort through items and group them together in a hierarchal manner.
    - First Click Testing - A test that observes the first item that a participant clicks on and uses the selection as an indication as to whether users are directed as intended.

DECISION MAKING QUESTIONS:

- Is the service stable, secure and responsive, regardless of how many people are using it?
- Is the service **accessible**?
- How will you recruit clients for user testing?
- What method(s) will you use to test the service?
- How frequently will you test the service?
- Where will the testing take place?
- Did you test for user experience in addition to testing for technical aspects (e.g., does the code work)?
- How will you apply the findings from user testing to improve the service?

RESOURCES:

- Gov.UK Test your service's performance
- Gov.UK Testing your service regularly
- Gov.UK Exploratory Testing
- 18F Testing Cookbook
- TBITS 26: Software Product Evaluation, Quality Characteristics and Guidelines for their Use
- **User centric design GC community of practice -** http://www.gcpedia.gc.ca/wiki/How_to_Set_Up_User_Testing/Comment_d%C3%A9finir_les_essais_par_les_utilisateurs and http://www.gcpedia.gc.ca/wiki/The_UXWG_guide_to_Usability_Testing

3. Measure performance and evaluate

Client-centric, digital services should aim for continuous improvement. Measuring performance and evaluating the service regularly is an important starting point for determining the potential strengths and shortcomings of a service. By identifying and capturing the right metrics - with the right tools - you can make sure all your decisions to improve the service are supported by data. At a minimum, the service should be evaluated against the three key performance indicators: **client satisfaction**, **increase in digital service uptake** and **service standards met**.

You should also be familiar with the services offered by your department's evaluation branch. Work with colleagues in this area to develop an approach for assessing and evaluating the service's performance and use this information to determine whether a service achieves outcomes desired by clients and the department. You may also wish to develop a performance measurement strategy (if one does not already exist). The Performance Measurement Strategy can help you do the following activities:

- continuously monitor and assess the results of program or service as well as the economy and efficiency of their management
- make informed decisions and take appropriate, timely action with respect to programs or services
- provide effective and relevant departmental reporting on programs and services
- ensure that credible and reliable performance data are being collected to effectively support evaluation

CHECKLIST:

- **Have you reviewed TBS' Guide to Developing Performance Measurement Strategies?**
- **Have you consulted with your department's Evaluations team?**
- **Are you using a variety of data analytics tools to capture the service's performance data?**
- **Are you sharing the evaluation results with clients and making service improvements based on the evaluation findings?**

RESOURCES:

- Performance Measurement Strategy Review Template and Self-Assessment Tool

4. Manage a product, not just a project.

Once you have designed and launched a service, there is still work to do. Treat the service as a product; it requires regular reviews, usability tests and improvements. Unlike a project that has pre-determined start and end date, a product has a life cycle that goes far beyond the launching of the service. Regularly assessing the service and welcoming opportunities for improvement will help to ensure that the service keeps pace with evolving client needs and benefits from new or improved technology.

CHECKLIST:

- **Continuously measure client experience and create a customer-prioritized improvement plan.**
- **Commit to regular service reviews.**
- **Identify opportunities to improve the service based on the results of regular test.**

RESOURCES:

- TBS Guideline on Service Management – Priority Service Review Tool (page 58)

Annex A: Examples of delivering better public services using Service Design

Example 1: Patchwork, Futuregov[1]

In response to a series of child-care failures in the UK, design agency FutureGov came up with the idea of a social network for public services. Having identified a lack of shared, coordinated communication between government agencies as a key issue, the team brought together children's and social services, teachers, police, health workers, technologists, designers and funders to discuss what could be done. They then built a prototype for a service called Patchwork — a secure web tool that connects professionals from different organisations and allows them to access the contact details of others working with their clients.

"Design research was fundamental to articulating the problem accurately, and the involvement of those at the sharp end of social care was invaluable."

FutureGov spent six months building and testing with Staffordshire County Council. The result was a minimum viable product which could then be tested and scaled with wider practitioners. Design research was fundamental to articulating the problem accurately, and the involvement of those at the sharp end of social care was invaluable. Involving for example, police and social workers during the UX design phase, really helped them understand what functionality was essential and what might simply get in their way. Following a pilot of the project in Staffordshire, FutureGov expanded the

[1] Designing for Public Services: a practical guide (2016) http://www.designforeurope.eu/news-opinion/designing-public-services-practical-guide

process, going on to develop the live version of Patchwork with backing from Brighton and Surrey local authorities. Today, 1,894 professionals across the UK and Australia are currently supporting 5,375 clients through Patchwork, enabling a higher quality of care.

Example 2: The Danish Ministry of Employment, MindLab[2]

Since 2013, Danish public innovation lab MindLab has been working with Denmark's Ministry of Employment to reform a number of employment services —many looking at radically new ways of dealing with long-term unemployment and vulnerable citizens. One of the main elements has been to create a shift from a focus on activity to a focus on outcomes for citizens. This has been done by exploring how to best invest in creating positive change in the citizens' situation

0s through interdisciplinary collaboration and greater professional freedom in case processing. To enable this shift, MindLab began a process of merging development and implementation: using ethnographic methods to explore how employment processes really worked for citizens, in job centres and in the everyday practice of frontline staff. They then used this research to engage national decision-makers and local practitioners in collectively analysing insights, co-creating new ideas and co-designing a number of activities in order to productively put the new reforms into practice.

"One of the main elements has been to create a shift from a focus on activity to a focus on outcomes for citizens. This has been done by exploring how to best invest in creating positive change in the citizens' situations"

The project has since evolved into a strategic partnership between the ministry and MindLab where human-centred design is being applied and experimented with in other phases of the policymaking cycle. This is resulting in various new ways of connecting policy and practice — including mandatory internships for policymakers alongside local case workers, and practice-oriented preventive units focusing on quick adaptation of failing reforms.

Example 3: Starting a Restaurant in British Columbia, Strategic Design and Transformation Branch[3]

The B.C. government is working to help entrepreneurs easily and quickly start businesses by reducing regulatory red tape and improving business services and processes. Given the complex nature of starting a restaurant business in B.C. and to help facilitate this process, the "How to Start a Restaurant in B.C." project was launched in 2014.

The key objective of the project was to develop an "online roadmap" that clearly explained the process and steps required to start and maintain a restaurant in B.C.

The Strategic Design and Transformation Branch worked with the project team to understand the challenges and pain points faced by business owners when setting up a restaurant in B.C. The team interviewed restaurant owners who had recently opened businesses, or were in the process of opening restaurants, in cities across the province. The research findings helped identify what resources restaurant owners used to help them set up their business – and what missing resources could have been useful during the process.

The Strategic Design and Transformation Branch then helped develop a roadmap of the process to set up a restaurant in B.C., as well as prototypes and content for online resources for business owners. The project team tested prototypes of an online website and quick reference guide with users, including local health authorities, restaurant associations and municipalities, to ensure a range of stakeholder voices were incorporated into the final resources.

In January 2015, the B.C. government launched new resources to support entrepreneurs starting a restaurant in B.C.

[2] Designing for Public Services: a practical guide (2016) http://www.designforeurope.eu/news-opinion/designing-public-services-practical-guide
[3] Service Design in BC (Case Studies) http://www2.gov.bc.ca/gov/content/about-gov-bc-ca/service-design/case-studies/starting-a-restaurant

- Online guide helps potential restauranteurs find info – News Release – January 22, 2015
- Starting a Restaurant in B.C.