

STAND-ALONE DOCUMENTATION

progressing towards **personalization**

KB&A
08.01.17 - 10.31.17

01 **Precedent Research** (August presentation)

- a. International Precedent
- b. Identity & Trust
- c. Portal & Platform
- d. Health Case Success

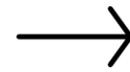
02 **Citizen Interview**

- a. Hank
- b. Ben
- c. Dylan
- d. Jane
- e. Clara

03 **Persona**

- a. Angela
- b. Ben
- c. Elisa
- d. Hank

What would a good
Personalized Digital
Government Service
look like ?



What would a good
Personalized Digital
Government Service
Feel like ?

The Vancouver team (KB&A) began the project working on Personalized Government Digital Services for BC in August 2017. The team's first insights began by following the industry-wide shifts in Interaction Design from design for visual perceptions (graphic design) to design for user experiences (UX).

1a



International Precedent of
Personalized Digital Government Services



German Service Portal



South Korean military app

The team started with a precedent research phase. The diverse countries of origin and language capabilities of the team allowed us to look at international examples. In negotiating these tools, and others like them, we began to develop a spectrum approach to the question of what does personalisation feels like.

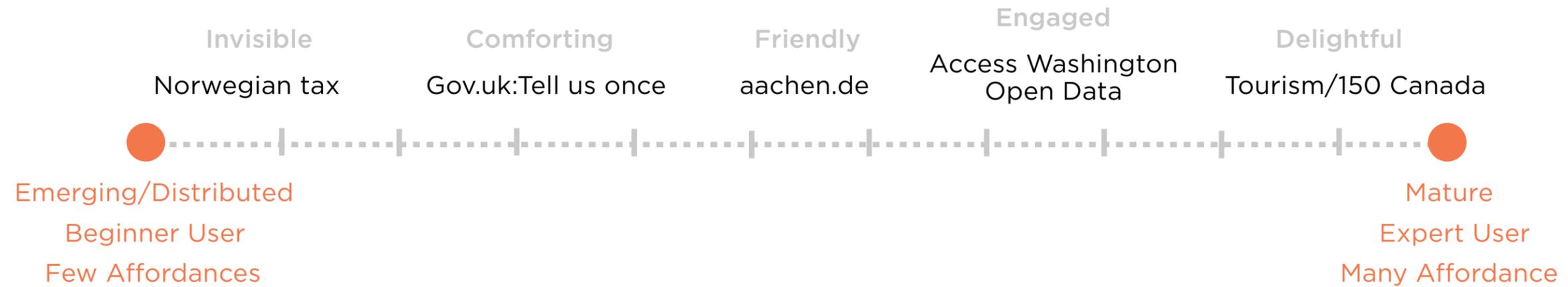
When comparing services design precedents, we discovered personalisation might be less about using AI to predict what individual users need, and instead it may reflect the way in which a person feels when accessing the service.

The examples on the far left shows a friendly, and unthreatening government service portal, marked by welcoming illustration style, representing the German city of Aachen. The centre example is the South Korean military service enrollment app, marked by direct and reassuring layout and userflow.

Aachen.de website [Main page]. (n.d.). Retrieved from <http://aachen.de>

Korean military [Military app]. (n.d.). Retrieved from <https://www.mma.go.kr/index.do>

Appropriate
Desired User Experience



The KB&A team began to develop the above diagram, outlining the spectrum approach to appropriate personalization. The precedent research showed that digital service design could be measured as successful with respect to design criteria determined by the user context.

In the first example, research shows a taxpayer prefers a minimal interaction with a government revenue agency. The Norwegian tax service is a robustly integrated data set which creates an invisible user experience.

The second example, in which the user must apply for death certificates for a family member, comfort is the design cue. Gov.UK's "Tell us once" service is an empathic in its design, recognizing that having to repeatedly notify government that a loved one has died is deeply upsetting; users are able to input the details of a death in one location, and the "system" does the heavy lifting of ensuring that the various government silos update their information on the deceased.

The third example, as discussed on the previous page, gives a welcoming interaction to a moderately engaged user.

Fourth, Access Washington Open Data is designed for highly motivated scientists and data designers who are supportive in creative work by a complex and intricate interface, with many options.

Finally, the federal government's landing page for Canada 150 uses video, music and custom branding to create a sense of delight and excitement in their government service. While most people would dispute delight as a design criteria in digital government services, clearly tourism is an economic sector for many Canadian provinces that can celebrate the delight in encountering Canada's natural beauty.

1b



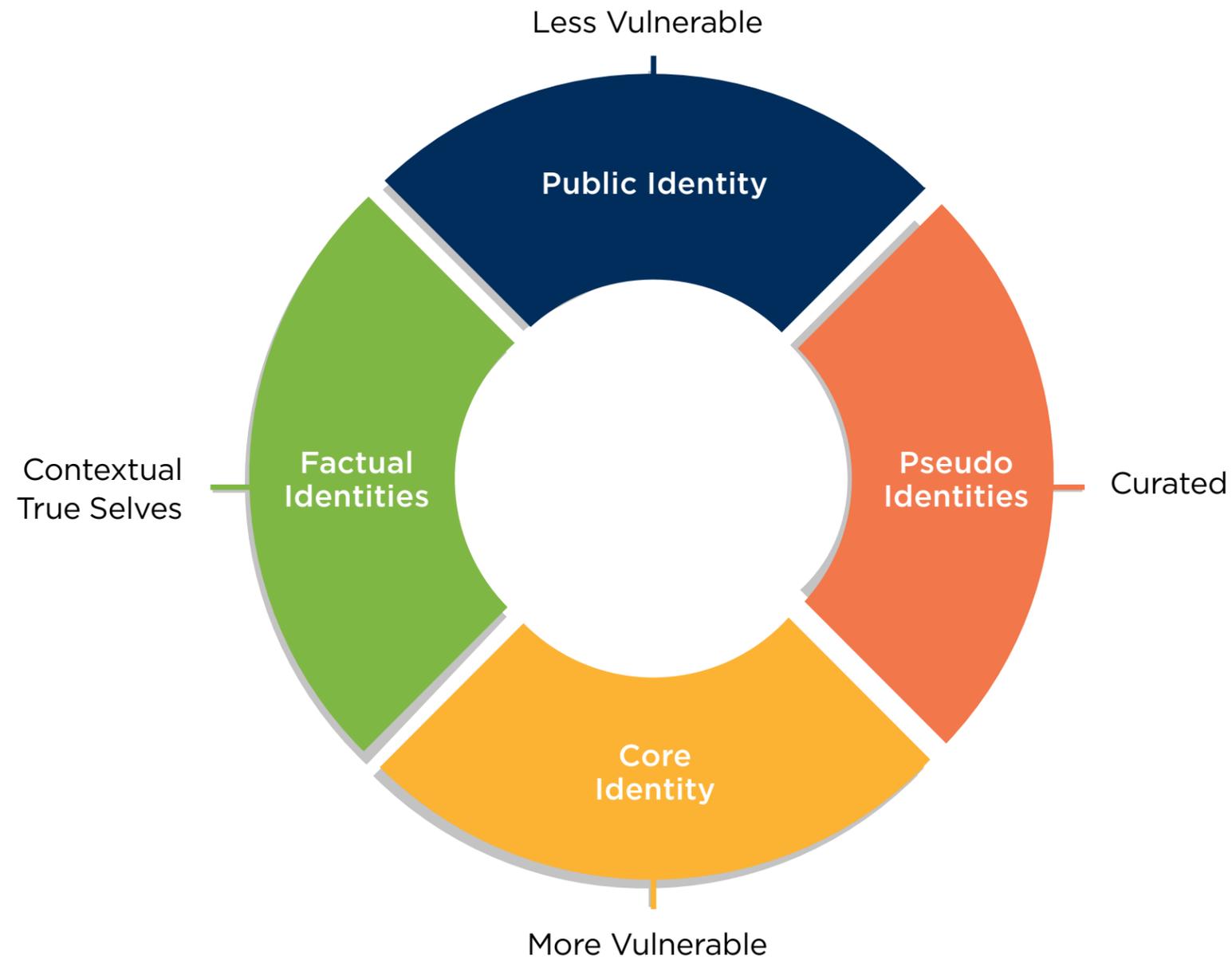
Identity & Trust

SOLITUDE	privacy of individuals
INTIMACY	privacy of groups
ANONYMITY	unidentifiability in public
RESERVE	(psychological) barriers/ resilience
<hr/>	
PSEUDONYMITY	choice of identification

Issues around designing for trust and privacy issues is particularly important in government digital service design. Westin (1970) and Schmitt (2017) developed this schematic that illustrates a spectrum approach in privacy criteria, as well. The design insight here is to allow citizens to engage with government services anonymously or pseudonomously as appropriate.

States of Identity & Pseudonymity

by Lutz Schmitt, extended by K.Benjamin, E.Bertulis, R.Kim



In this schematic developed by Schmitt, we see another configuration in current user engagement with digital services. Citizens today curate their internet presences. This human-centred design approach can be helpful in building trust with government services by allowing appropriate contextual design choices. For example, a parking ticket payment service might allow for payment without log-in.

Privacy & Security first,
Personalization later



Barclays



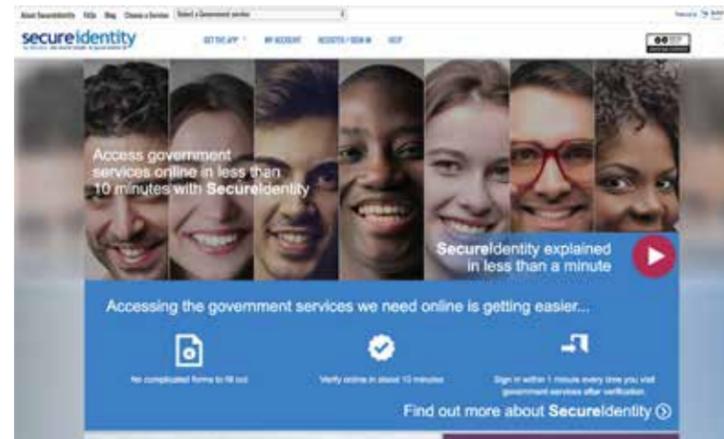
CitizenSafe



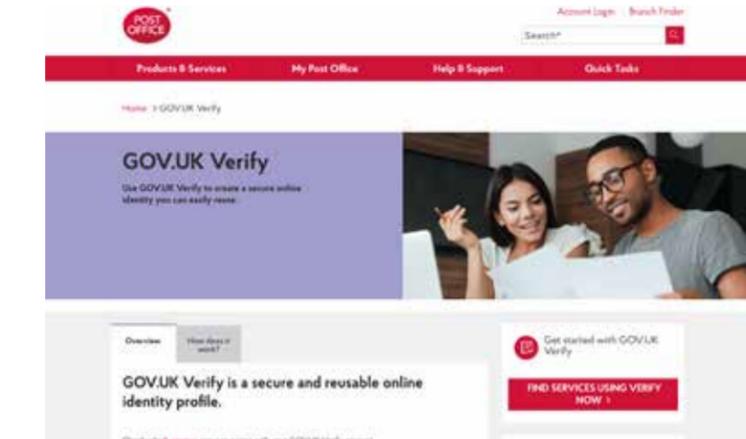
Digidentity



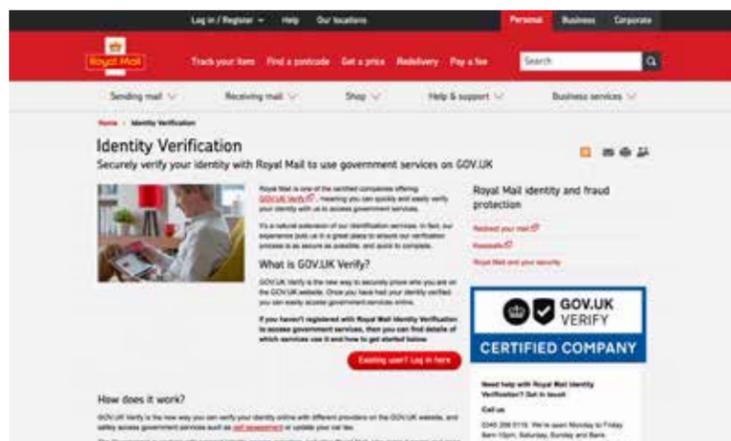
Experian



Secure Identity

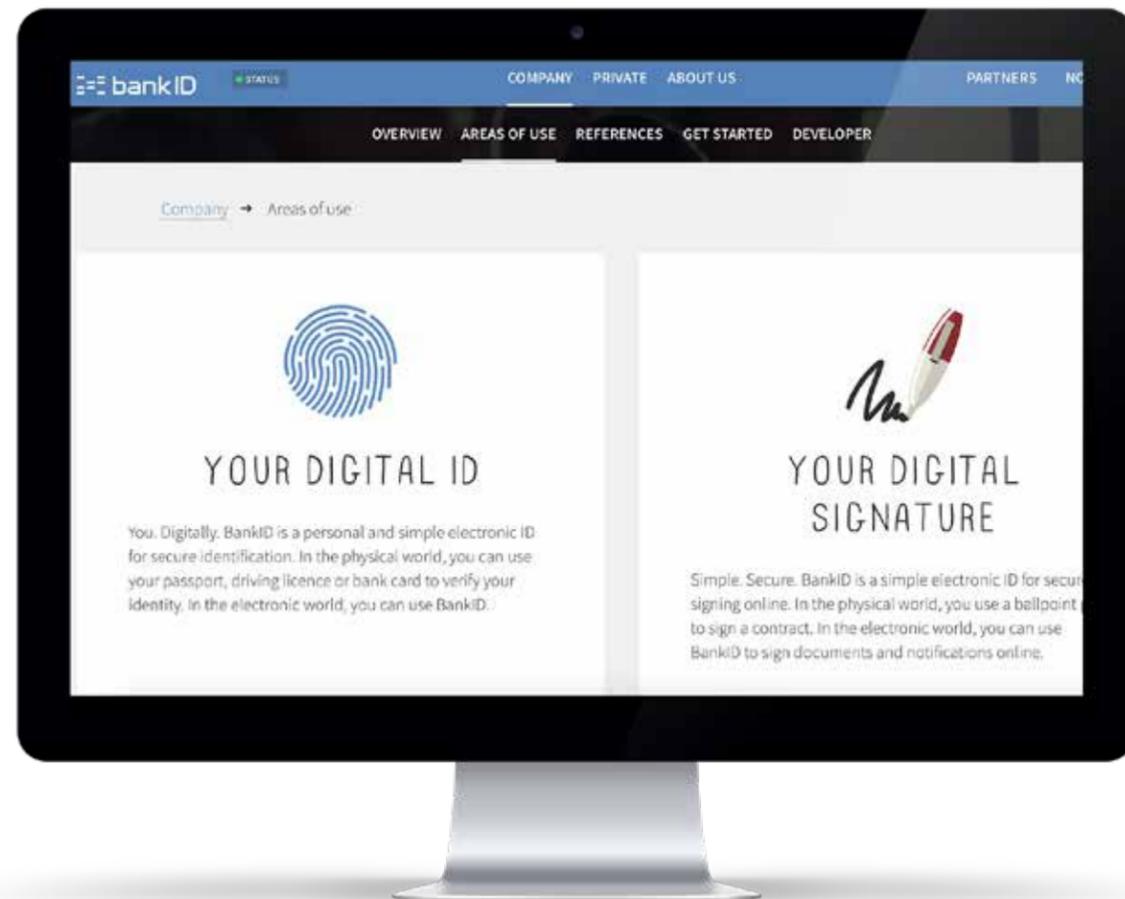


Post Office



Royal Mail

One insight that the PDGS team uncovered was the importance of including corporate enablers as stakeholders in the design process. The example of the UK Government's verification service is provided by third parties who apply to be part of the government's network of suppliers who can verify identities. This government as a platform model enables citizens to verify their identity for more than thirteen services using one of the seven providers for identity assurance for the UK Government.



Norwegian BankID

As an example of a very successful single log-in to government services, 3.7 million Norwegians have the BankID service. The service is used by all banks and government digital public services. While at face-to-face service counters, citizens can use their passport or other identity documents to provide identity assurance, for online service, people must use BankID.

1c



Portal & Platform



Another important point to consider is the user's point of entry into service. Our precedent research showed that any government digital services often consider landing pages, portals or one-stop shops as the only way for citizens to access services. While this can be effective for highly publicised or mandatory transactions, for instance, paying tax, it can often lead to poor service uptake.

One common challenge is that people tend to start their journey with a Google search, so unless the service has excellent search engine optimisation, strong service branding (e.g. BankID),

or other levers (Norway), users may struggle in the face of too much choice to be directed to the service they needed.

While this poses challenges that are not unique to government, there are additional points of entry for citizens that provide an opportunity for a personalised experience.



Digitales Service Design: Als ich via Twitter einen Flug buchte

Von Philipp Brunner



8. Februar 2016

#Customer Experience #Service Design #Social Media #Twitter

Ich habe einen Fehler gemacht.

Ich habe vorschnell einen Flug gebucht. Für 2 Personen. Ein halbes Jahr im Voraus. Dabei habe ich unterschätzt, wie sehr unsere Tochter ein halbes Jahr später noch auf unsere allabendliche Anwesenheit angewiesen sein wird.

Kurz gesprochen: Ich musste nachträglich ein Ticket zu meiner Buchung hinzufügen.

Einfacher gesagt als getan.

Helpdesk? Kein Anschluss unter dieser Nummer

Als Digital Native und webaffine Person war die Website der Airline airfrance.com meine erste Anlaufstelle. Ich habe mit digitalen Self-Service-Prozessen kein Problem, im Gegenteil, ich kümmere mich gern selbst um meine Angelegenheiten und Erledigungen.

Bei der zusätzlichen Buchung eines „halben Flugtickets“ für eine Eineinhalbjährige wirts aber kompliziert. Es wäre ein Leichtes gewesen, ein zusätzliches Ticket zu meiner Buchung online zu kaufen. Die Option, ein kostenloses Ticket (ohne Sitzplatz, daher sind nur Flughafensteuern und Bearbeitungsgebühr zu zahlen) hinzuzufügen, gibt es aber im Self-Service-Bereich der Website nicht.

Nächster Gedanke: Auf altmodisch zum Hörer greifen und mit einer Person im Helpdesk sprechen. Vermeide ich, wenn's sich vermeiden lässt. In diesem Fall sah ich keine andere Möglichkeit.



Philipp Brunner @augmatic May 8, 2015
 @airfrance Hello. Can I add a ticket for an infant (no seat required) to my reservation via airfrance.com? Can't find anything.

Air France @airfrance
 @augmatic Hello Philipp, please DM us your booking reference so we can look into it and advise. Thanks!
 10:42 AM - May 8, 2015

Air France @airfrance May 8, 2015
 Replying to @augmatic
 @augmatic >> let us know if there is anything else we can do to assist you today. Thanks!

Philipp Brunner @augmatic
 @airfrance Thank you so much! Very much appreciated!
 1:33 PM - May 8, 2015

Philipp Brunner @augmatic
 Outstanding #service experience provided by @airfrance 's twitter team. No need to call helpdesk, all solved via Twitter. #CX #UX #AirFrance
 2:13 PM - May 8, 2015



Brunner's (2016) description of access to Air France services in the face of a complicated family travel booking change alerted the researchers to the pluralization of media channels that different types of users and citizens are starting to use to access services.



Stickdorn and Schneider (2011), in their seminal text “This is Service Design Thinking” (2011) point out that twitter can be an egalitarian mode of access for citizens who have a contentious history with particular government services such as the police. The use of Twitter is notable for providing transparency and the security of communicating in a public sphere. Here, while users may or may not represent their factual, true identities in their online engagement, there is a redistribution of power between the police, and citizens. For vulnerable groups who may have experienced negative interactions with police, particularly behind closed doors at police stations, the ability to engage with police via twitter, permits a level of transparency and accountability. For vulnerable, hard-to-reach and excluded populations, Twitter may elicit feeling of security, meaning that citizens who may not otherwise engage with police may feel more confident in doing so. More broadly, positive interactions with police via a Twitter platform provide the opportunity to “ladder up” to other forms of engagement. In other words, excluded group may seek great participation with police, supported by platforms like Twitter.

Columbia
Potholepalooza

Like the two previous example of Air France and the police using Twitter, one of the most frequently cited examples of social media as a tool for citizen engagement is related to reporting potholes. Here, people are able to report potholes when they see them via Twitter or Facebook.

1d
Health Case Success

Which? Birth Choice

2 Your personal information

What is your age?
28

Is this your first birth?
 Yes
 No

Do you know of any conditions that put you at a higher risk of complications?
 Yes
 No

What is your postcode?
NW3 3DY

Based on your answers we'll suggest the local options most suited to you.

Get results

Explanation
Your results may be different depending on how old you are

Explanation
Your results may be different depending on whether you've given birth before

Explanation
For example: are you expecting more than one baby or have an existing health condition?

Explanation
We can show your local options if you tell us your postcode

“Which” is a particularly successful example of a “wizard” tool, designed by the UK’s Consumer Advocacy Group (CAG).

CAG drew upon data from the UK’s National Health Service (NHS) and created an ultra personalised experience through customisation. Here, users input two data sources (age and postcode). Then, based on a series of self-assessments on the person’s values (“how important is it for you to give birth without any sort of intervention?”) users are given guidance on where in their community they should choose to give birth, and which birth options align with their values.

1 Your birth experience

✓ Do you think you will want to use a birthing pool during labour? Change answer

✓ Do you think you will want an epidural? Change answer

How do you see birth?

As a natural event that should take place in a relaxed and private setting

As a clinical event that needs medical equipment and staff on hand

Explanation
Do you view birth as a natural event, and want to be supported to give birth using your body's own resources?
Or would feel more relaxed with medical staff and equipment immediately available?

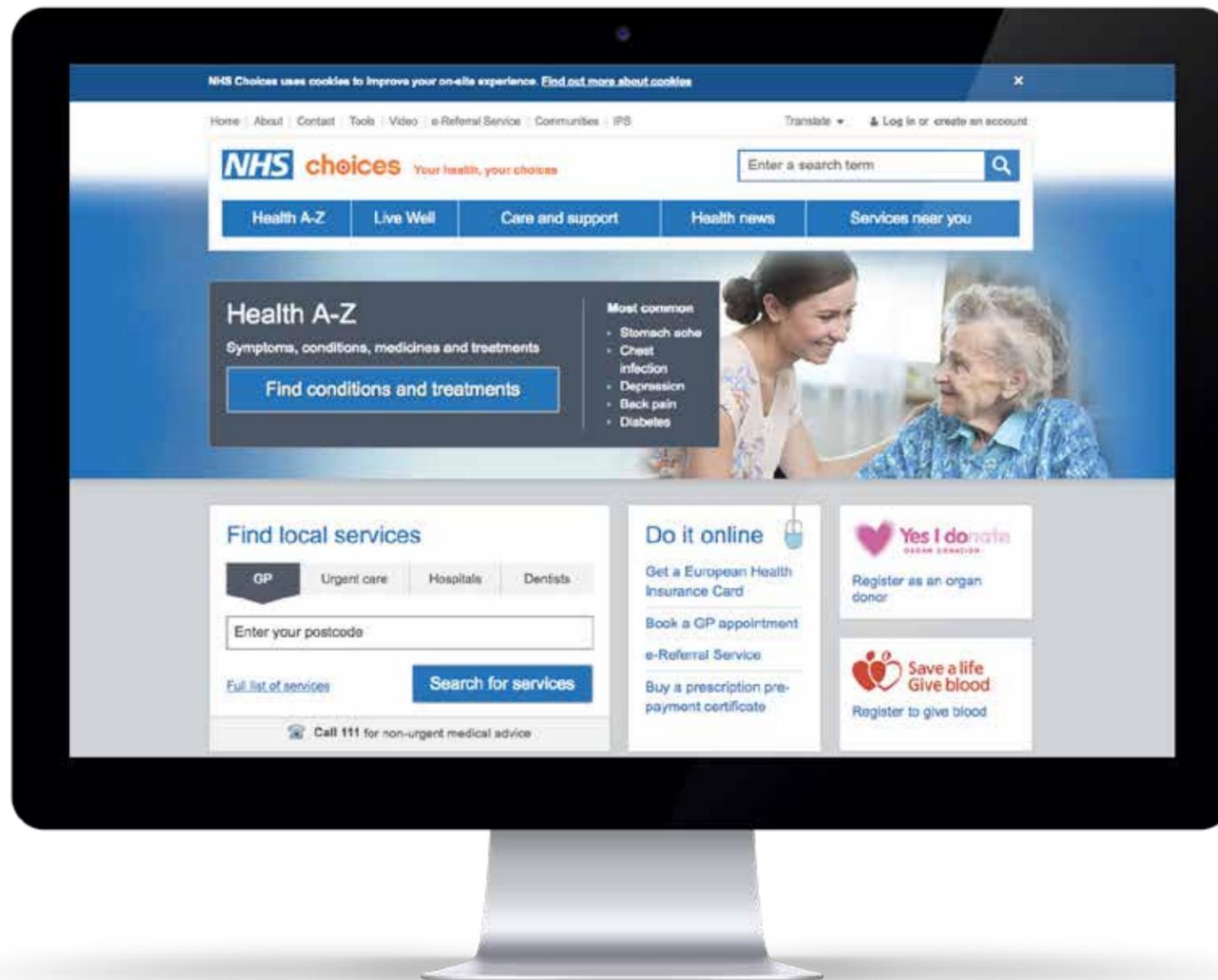
Next question

Are you willing to plan for the possibility of transfer during labour?

2 Your personal information

Your results

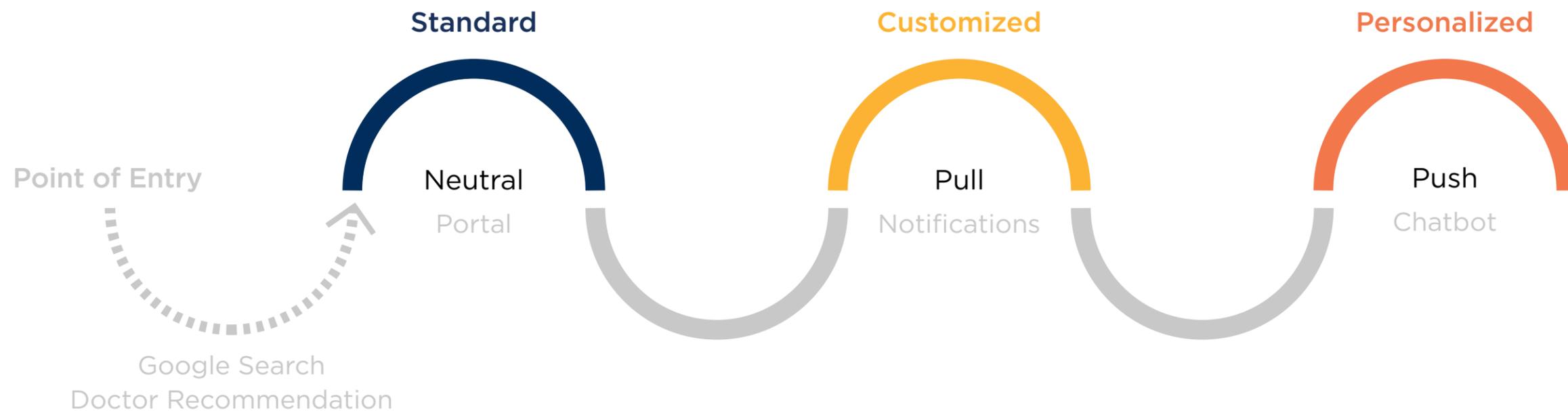
This tool is particularly notable because it uses value-driven feedback to help curate complex information for expectant parents in ways that are highly actionable. Like many healthcare examples, this model has relevance for any complex decision making or consultative experience where citizens engage with government, at providing information appropriate to the context.



Given that, according to Google, one in twenty Google search are health related, the NHS Choices website makes for a fascinating case study in government digital services.

To provide the broader context, the NHS Choices website is funded by the UK NHS, which is the world's 5th largest employer, and world's largest single-payer health system. The NHS Choices website is the largest health and care website in Europe. With more than 55 million monthly visits, excellent brand recognition, and strong search engine optimisation, analytics on the website demonstrate that the NHS Choices website is often the first place citizens of the UK go to for health information online.

[Proposed]
Hierarchy of Design
for personalized digital
government service



This diagram illustrates an initial conceptualisation for stages of progressive personalisation. Starting at the left, the point of entry is highlighted. As highlighted earlier, it is necessary to consider where the user is coming from, and how they might find a service. From that point, a service could be “neutral” in nature, meaning that there is no element of customisation or personalisation, it appears the same to everyone who uses it. For instance, a one-stop-shop landing page or portal without login function would be an identical experience for all users.

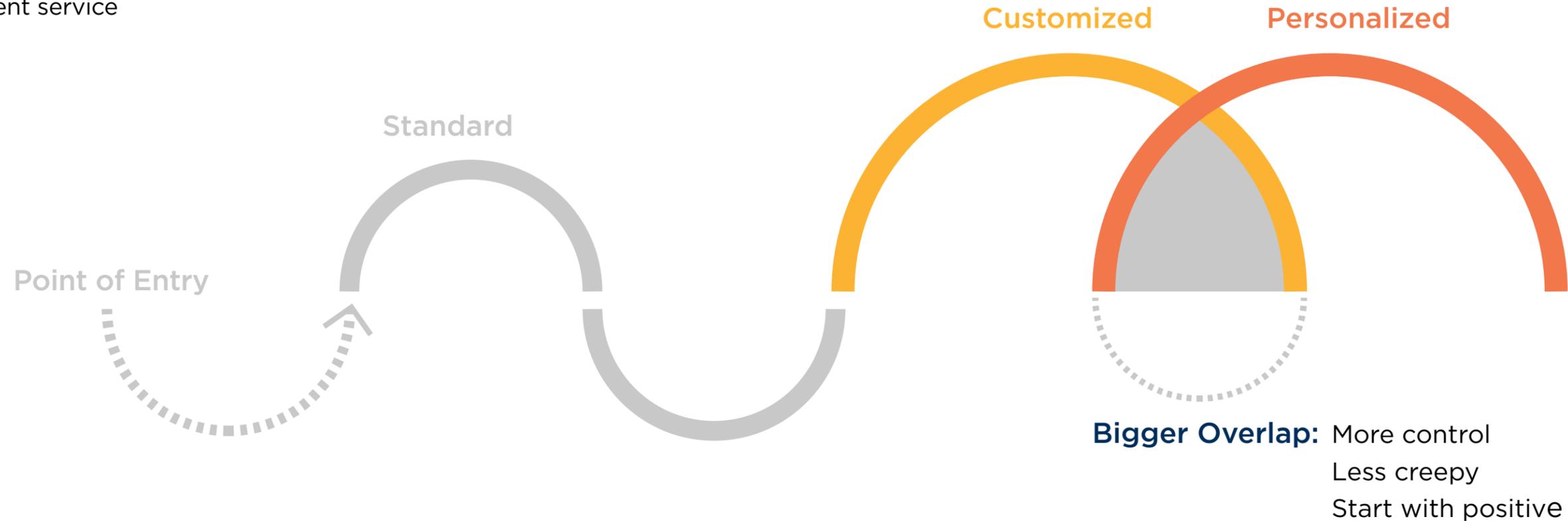
Building on a neutral service, elements of customisation can be offered to a user. Here, and as per the definitions outlined on page 8, a customised experience is when a user sets a preference that helps the service provider tailor information in a way that makes the user’s experience feel curated. For instance, if a user receives notifications that a document needs to be renewed, trust is built if the notification has been requested or pulled by the user.

Finally, a service that is personalised using AI is might be a Chatbot service which uses analytics on past behaviours to predict how a user might behave in future.

[Proposed]

Hierarchy of Design

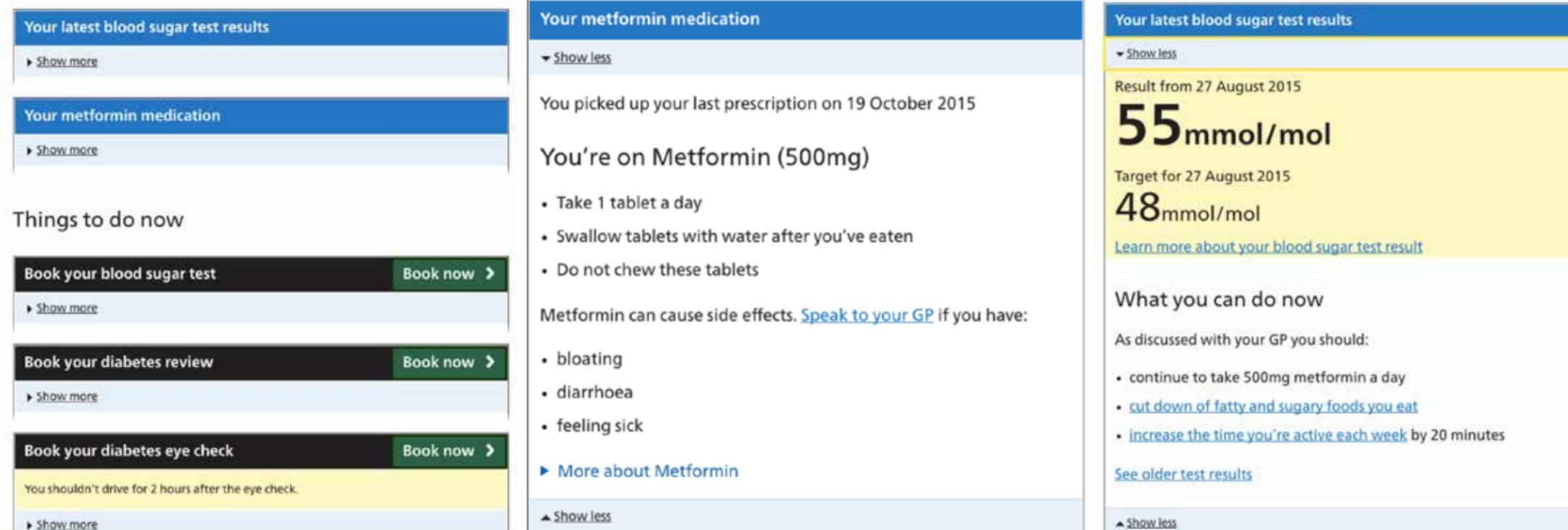
for personalized digital government service



A more refined conceptualisation may actually view customisation and personalisation as intercepting, overlapping, and fluid. For instance, it may be that though user-initiated pull customisation, a Chatbot is able to provide a more personalised service.

A citizen's perception of personalisation may change depending on context. For instance, a user might be utterly delighted if automation made it so they no longer had to file their tax, but like Norway, it was processed by the system, and the citizens only role was to confirm the information was accurate.

In this instance, the Norwegian tax example of a personalised experience removes work for the citizen, which feels good. However, if the same process was used to inform the citizen that they owed the government thousands of dollars in back taxes, the citizen might feel that the service was intrusive, rather than delightful. In other words, citizens may be more responsive to personalisation when it makes for a positive service experience, rather than when it is used as a tool for enforcement. Again, success criteria for well-designed personalized government digital services must be evaluated in response to changing user contexts.



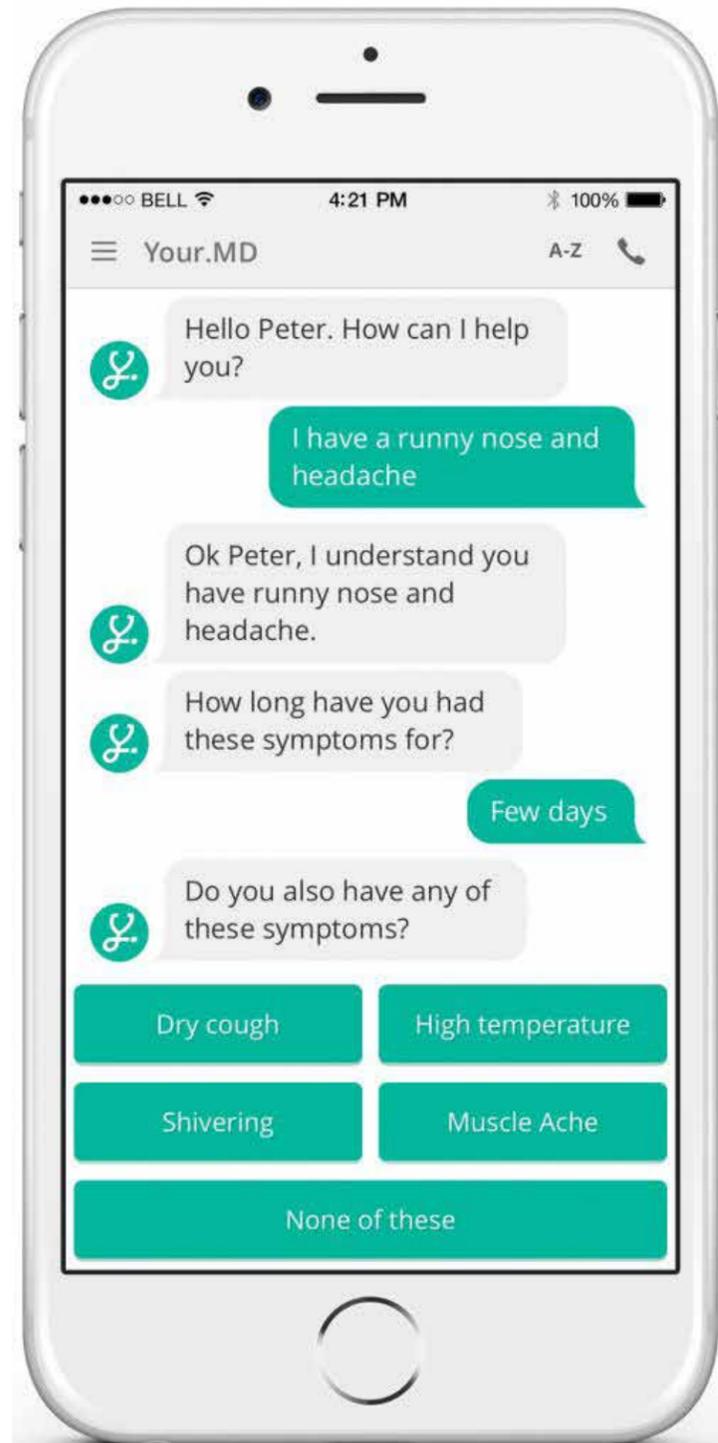
To consider progressive personalisation in action, the NHS provides several other notable case studies.

The NHS Alpha project is a transformation initiative currently in beta testing stages. The Alpha project is designed to harness the power of the 55 million monthly visitors to the NHS Choices website, and support them into more substantial health and care transactions, particularly around self-care at home.

At its inception in 2015, the team worked for 12 weeks to create alignment. A case study was developed to model needed collaboration tools. While there were many competing demands, the team narrowed its scope to focus on type two diabetes, which accounts for 10% of the annual NHS budget.

Starting at the generative user research phase, a prototype was developed in direct response to the articulated needs of people living with type two diabetes. The type two diabetes planner was a lighthouse project. The lighthouse demonstrated how existing NHS Choices content (of which there are 80,000 pages), as well as individual level health information (which is accessed via the NHS spine) could be surfaced together in a user friendly format.

More specifically, visual insights were created in response to the evidence that health information without context failed to achieve the strategy outcomes the NHS was trying to achieve. By position calls to action alongside plain-language instructions, it was easier for people with diabetes to adhere to care plans.



Your.MD used the existing 80,000 pages of clinically assured NHS Choices content, like the NHS Alpha type two diabetes planner. This content is available to for free by API, and provides a personalised experience via Chabot interface. The more users engage with the tool, the more accurate and personalised the experience becomes. If content alone is insufficient to address the user concerns, then Your.MD refers users to online medical clinics where real humans can answer questions.

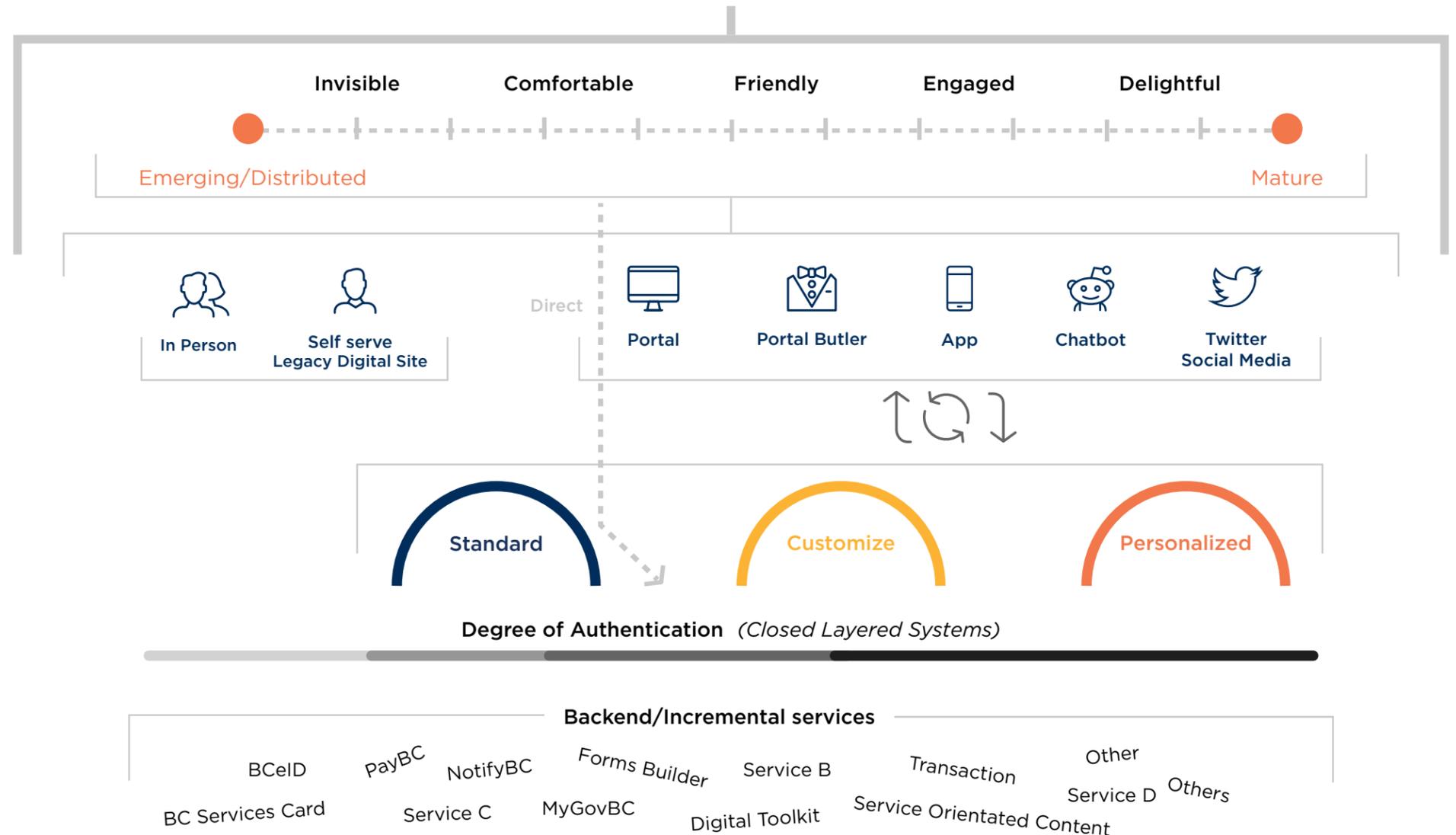
The particular insight of the Your.MD service is that it is available on a range of platforms, not unlike the concept of “Government as a Service”. Here, we see that users can select the medium they like to use, including Slack, Kik, Skype, or Facebook Messenger.

Government as a Platform (GaaP) is another precedent framework. GaaP is the idea that components, data, hosting, platforms, tools and other services ought to be built once, and used in a range of different combinations. For instance, NHS Choices built a world leading content hub, which is makes available to over 500 service providers ranging from Your.MD to Microsoft, to small start ups. The idea here is that, so long as citizens get health-enhancing information, the NHS doesn't care where or how users get that information. Industry and other providers will build wildly progressive services, like Chatbots, and the NHS can devote its resources to focusing on user centred products that align with organisational strategic objectives.

Government as a Platform challenges the notion that there should be "one single front door" to digital services, and instead proposes that their may be a multitude of doors, based on the user's own preference. In other words, some people may seek out of a government landing page, while others may wish to access services through a third party social media platform.

PERSONALIZED

I feel my voice has been heard, and I have been treated like a valued individual, with dignity and empathy when assessing government digital services



Citizen / User
Research Insights

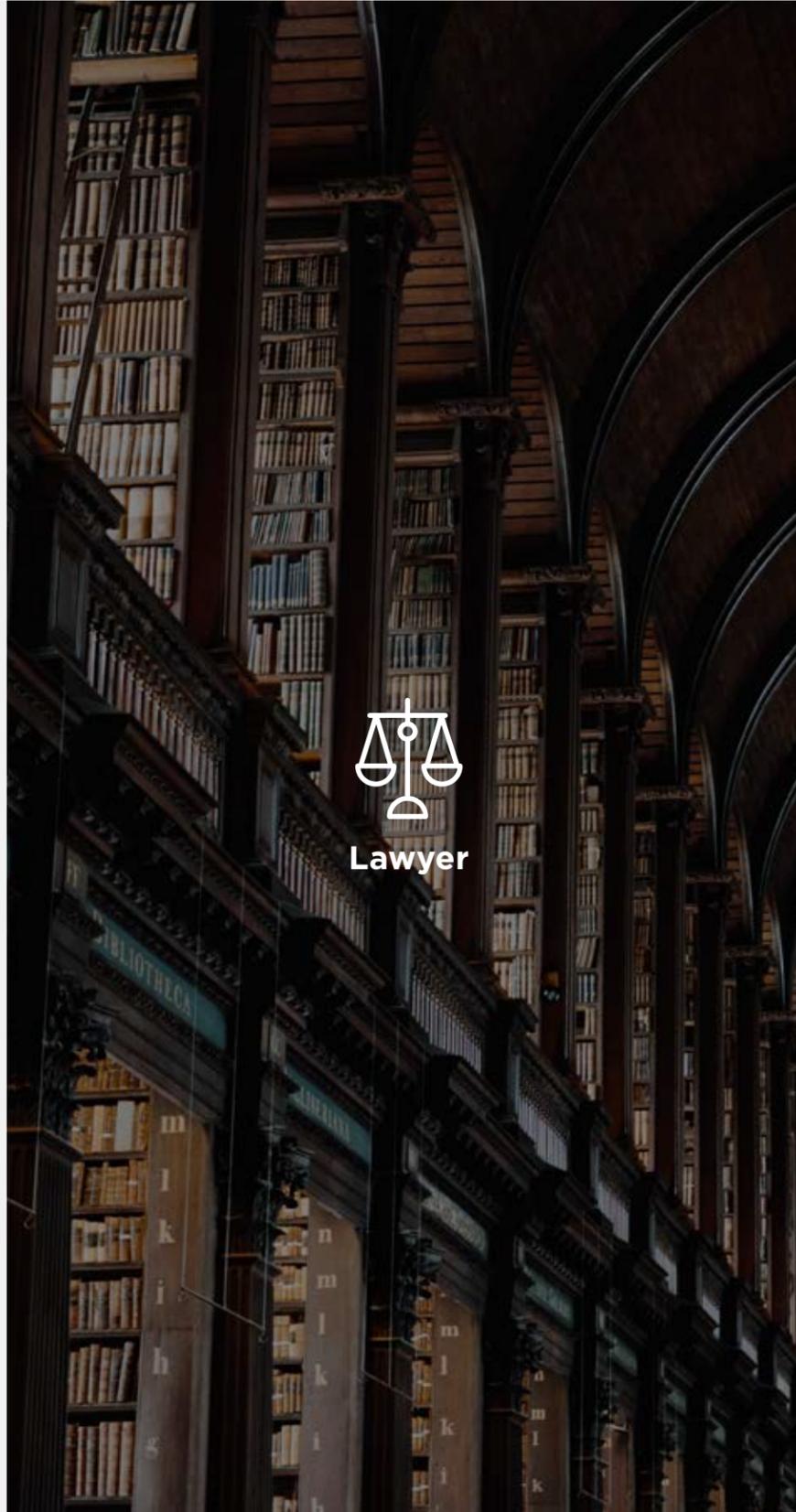
One important principle of design research, especially generative human-centred research methods, is to have the designers and UX specialists listen for insights in the interviews and participatory research activities for insights, rather than collect quotations. Such research includes ideation activities such as sketching and visualizing prototypes, rather than generating transcriptions of audio files bereft of context.

Typically, after filtering collected qualitative insights and visualizations against strategic quantitative sources, the design team would generate medium and high fidelity prototypes to be validated in further cycles of user testing.

The following visual insights are sketched outputs generated by research interviews.



Research **Interview 1**



Lawyer



Hank



Overall

This service meets this lawyer's needs, as they exclusively use the BC Online tools for straight-forward transactions. This lawyer spends the majority of his workday using the Thomson Reuters platform, which has simple and quick search functions.

Work

Lawyer

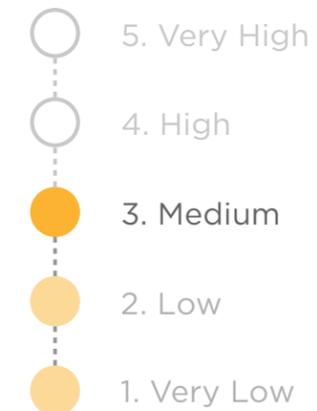
Websites

BC Online, Corporate Online

Notes

1. Mainly uses Thomson Reuters
2. Uses BC online and corporate BC to track/gain history materials related to trail
3. Will call legal assistant for help (legal assistant, paralegal is the main user)
4. Billing transactions are done in one login so when he moved legal firms, he billed his past firm.
5. Could see daily court list, but not regularly
6. Doesn't know what other functions BC online carries

Interaction with Websites



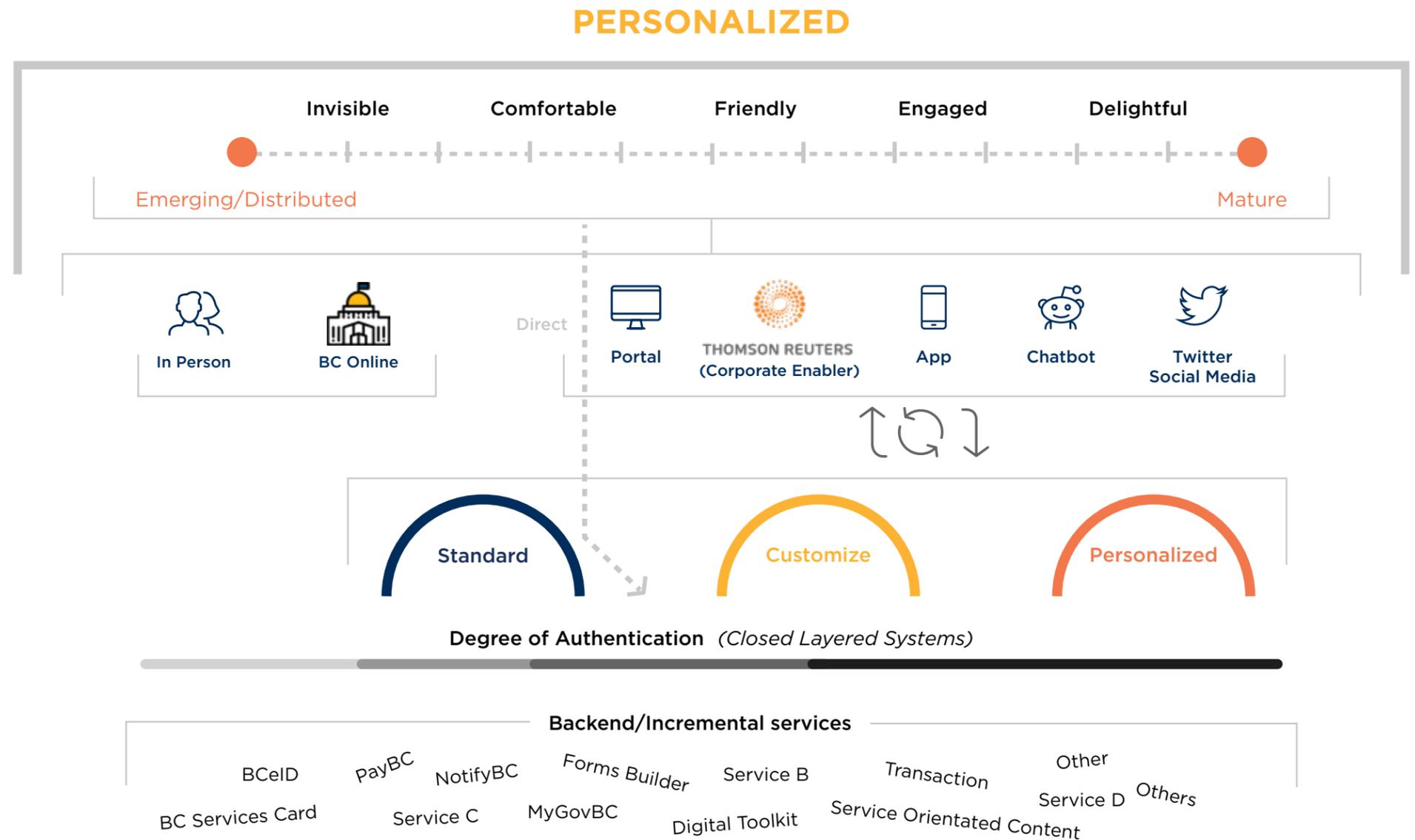
Key Topics

Thomson Reuters, Uses BC Online for legal research purposes, Simple Navigation

- 1.** There is an opportunity to integrate BC Online into Thomson Reuters. Lawyers often spent the majority of their workday within their digital software system. Drawing upon Government as a Platform concept, if the preferred workplace interface is a third party (in this case, Thomson Reuters), then the best user experience of lawyers may be to have software integration between the BC Online services they need, and the software platforms they prefer to use in their workday.
- 2.** Legal professionals, including paralegals and legal assistants are using BC online for broader research: BC Online enabled lawyers to run other searches, such as querying previous trials to locate mailing addresses of an individual involved in court proceedings, in order to issue a subpoena.
- 3.** This user needs simple and quick search system. Changing platforms and having to login to multiple services to search for things was slow, and could be easier.
- 4.** This is potential to digitize legal industry by adding educational background cases. While not within the government's remit, this lawyer highlighted the way in which integrating other types of digital law resources was ideal from the lawyer perspective. In an ideal work, putting all legal resources, including BC Online service, in one spot make the lawyer's job easier.

This map conveys insight 1 from the previous page, whereby instead of accessing BC Online through a BC Online website, the service is surfaced on a Thomson Reuters platform.

The advantage of this approach is that users are able to access the services they need, through the platform they are already using. In this model, we can see parallel to products like Your.MD (page21), or GOV.UK Verify (page10), where users have a range of preferred platforms that can select in order to use the service. The model illustrates how a service can be platform agnostic, and be accessed through a range of mediums. In doing so, a level of personalization can be achieved.

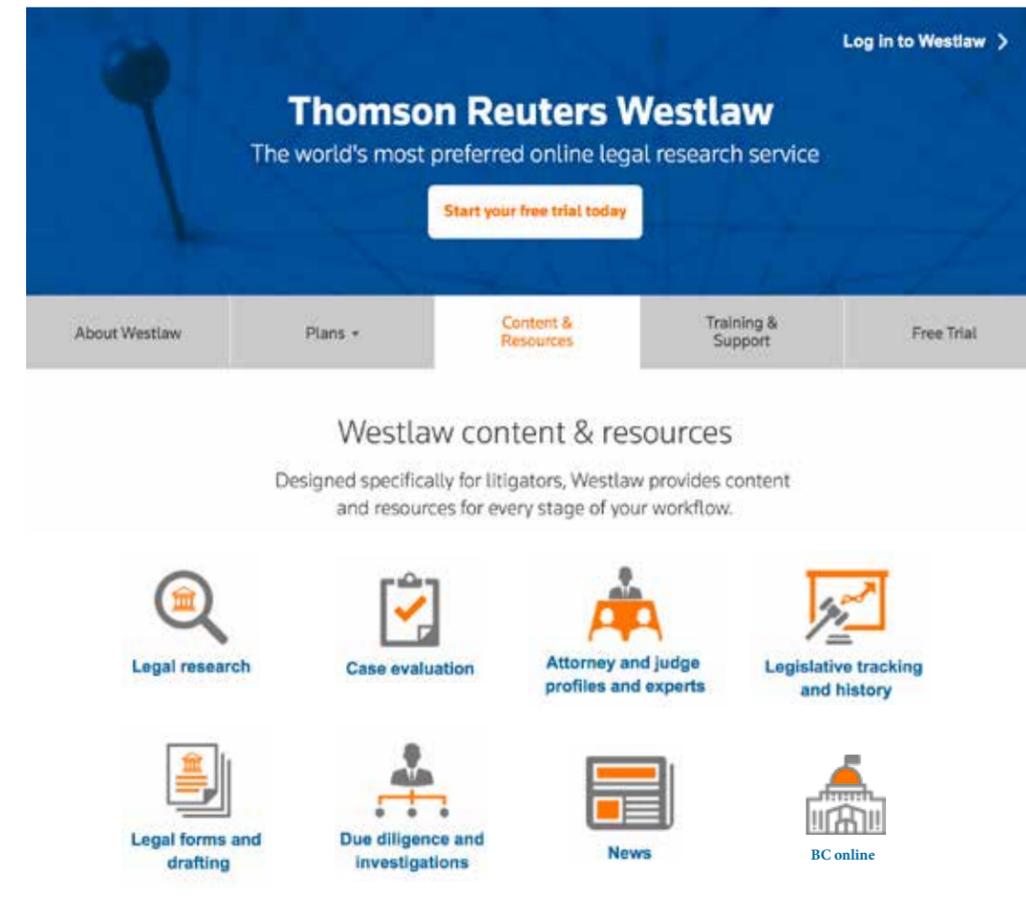


Visual Insights

Thomson Reuter + BC online



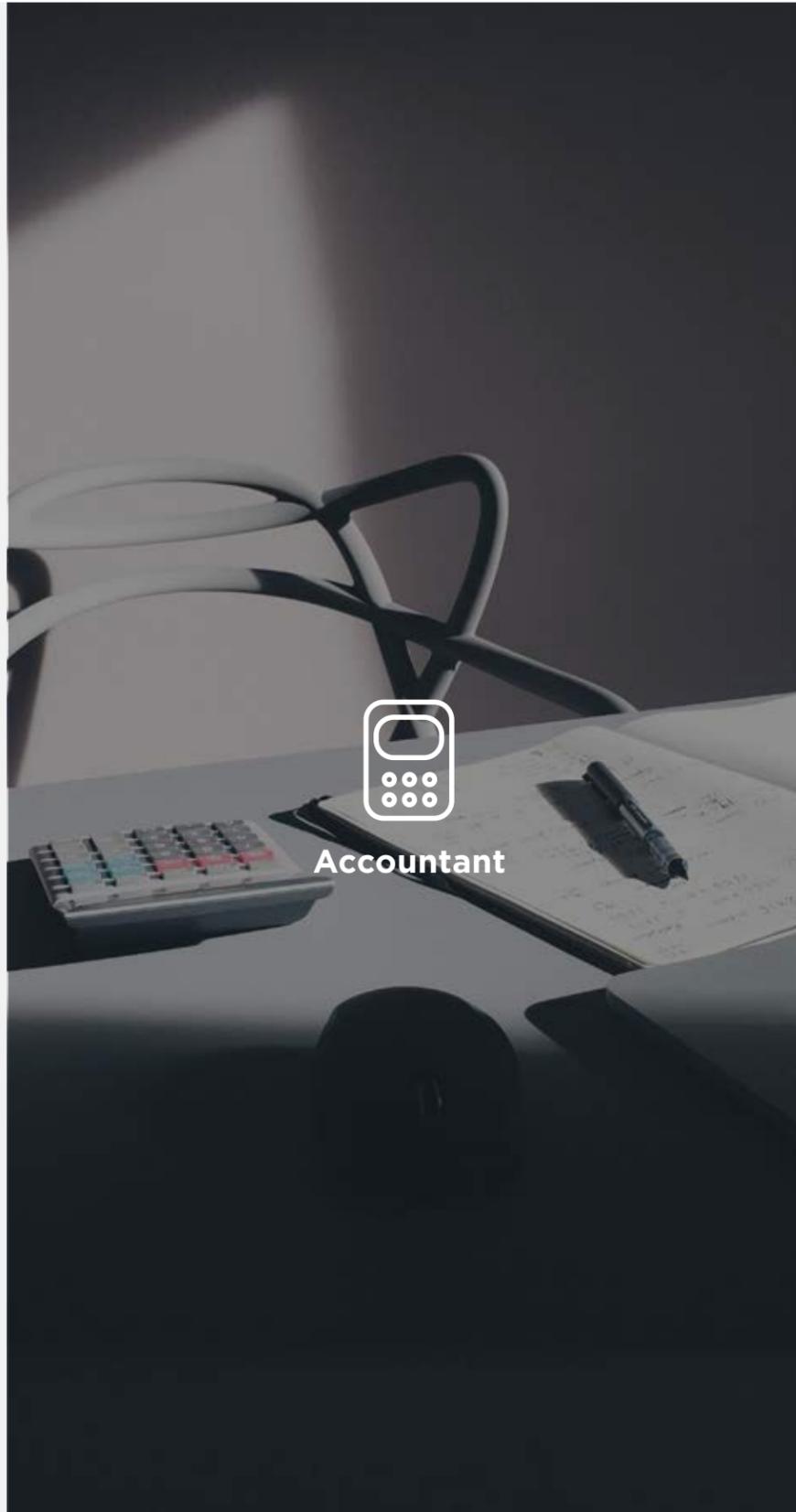
BC Online + Thomson Reuters



Thomson Reuters + BC Online

The mockup above is a simple visualization to convey the points of entry users might negotiate between BC Online, and an Thomson Reuters interface. Specifically, this mockup illustrates cross promotion of each product.

Research **Interview 2**



Accountant



Ben



Overall

This user needs accurate and simple search functions, and is somewhat of a power user, creating innovative custom integrations.

Work Accountant

Websites Onestop BC

Notes

- 1.Registers business to USA
2. Prefers to use live chat to gain personal support when help-seeking online
- 3.Could use links to API to insert it in excel spread sheet
- 4.Rather than going into BC online or government websites daily, he writes macro to pop up automatically
- 5.Uses search engine to navigate through
- 6.Use bank of Canada since it gains clear simple information hierarchy

Interaction with Websites



Key Topics

Uses Excel macros functions, Search function, Information hierarchy, Personalization, Live chat,

- 1.** UDesign targets want the right information, in the right context, at the right time. In this way, information hierarchy should be constructed with end users in mind. From the perspective of the accountant, there are key government data sources which are high priority, for instance, currency rates. While this specific example of currency rates is federally provided, the notable feedback was that critical information like deadlines or key policy documents are not always easy to find on government websites, which left user feeling frustrated and anxious. (see page 37 and 38)
- 2.** Real-time, personalised support would help many people get right information, when they need it. It was highlighted that many BC Online transactions have huge ramifications for businesses. While the literal transaction, in isolation, may function adequately, users of these transactions may have unique, context specific questions that ought to be address before proceeded. To this end, live chat as a service was mentioned as a means to have personalized questions address in a manner that was preferred to telephone-based support. (See page 38 and 39)
- 3.** Search functions on the site would ideally not online provide plain language answers, but also links to supporting documents that give users certainty that they are abiding by rules. As per above, this accountant observed that some people may still need added assurance they have understood complex processes accurately, and to this end, accurate and easy navigating search engine function can help people identify the rules, regulations and deadlines relevant to the issue they are searching for (see pages 41 and 42)
- 4.** Macros could be promoted to support ease of use among high volume and power users users. While the macro the accountant created was not using BC Government data, and instead federal data, the use of a macro was an interesting value-adding service. Here, the accountant had created automatically populating Excel sheets with update currency rates in real time. While building macros may not be the highest priority for BC Government, one way to improve experiences for regular users would be to highlight blogs, tricks and tips that help people further customize BC Government data. These tips could be linked to via government webpages (see page 40)

Bank Of Canada

Understanding user's need.

Clear & simple information hierarchy

Notes: Ben likes the Bank of Canada website, and uses it daily. He found it easy to get information on their site.

Looking at the site, we see the "information that fluctuates the most is higher up on the page, as well as the information users may need more frequently.

This makes it easy for people to find what they need, quickly.

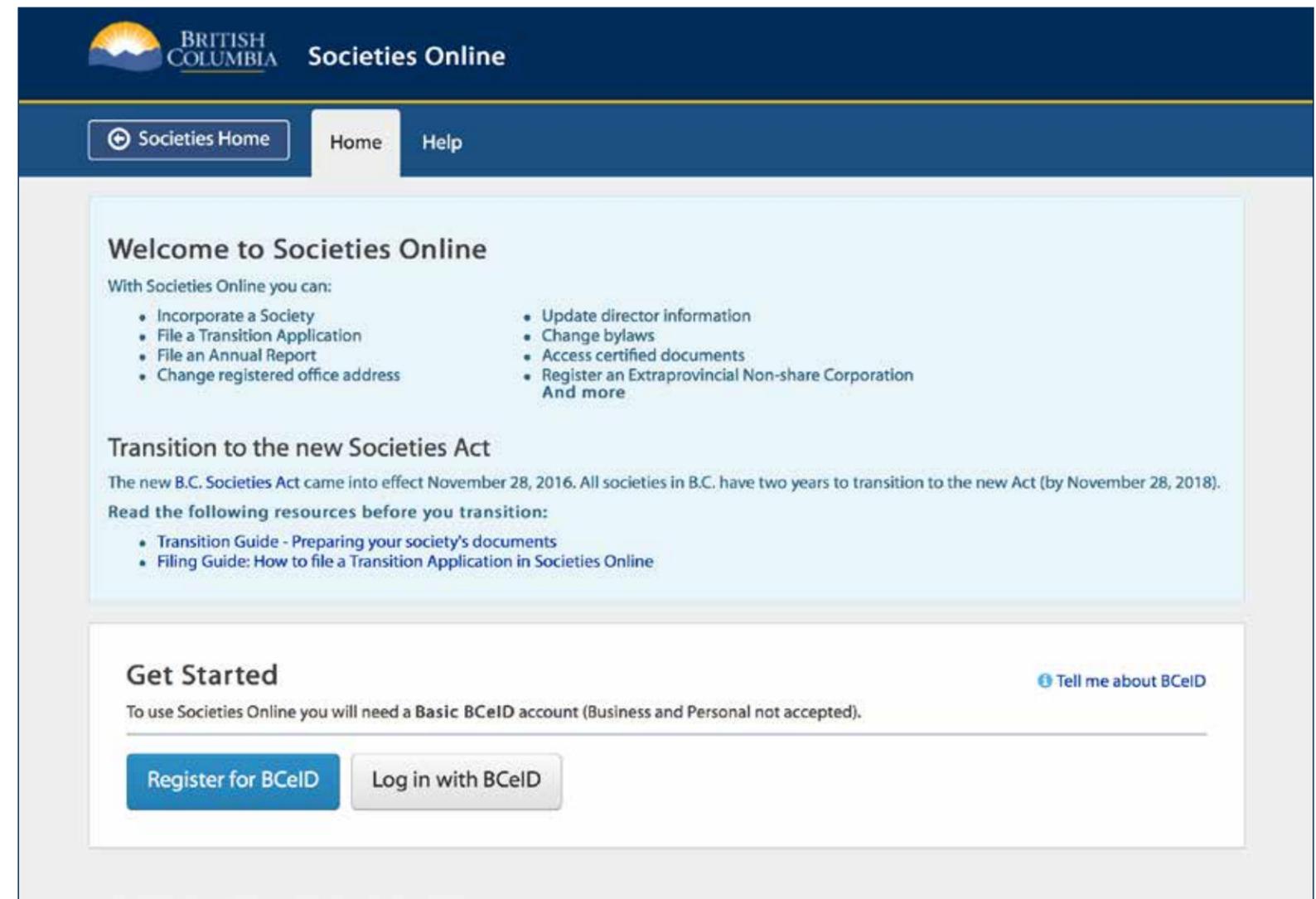
The screenshot shows the Bank of Canada homepage with the following elements:

- Navigation:** ABOUT THE BANK, CORE FUNCTIONS, MARKETS, BANK NOTES, PUBLICATIONS, RESEARCH, PRESS, STATISTICS.
- Quote:** "We are Canada's central bank. We work to preserve the value of money by keeping inflation low and stable."
- Key Statistics (highlighted in red):**
 - Policy Interest Rate: 1.00% (Sep 6, 2017)
 - Total CPI Inflation: 1.4% (Aug 2017)
 - CPI-trim: 1.4% (Aug 2017)
 - CPI-median: 1.7% (Aug 2017)
 - CPI-common: 1.5% (Aug 2017)
- Financial System Review - June 2017:** A hand holding a tablet displaying the review cover.
- News (highlighted in red):**
 - The Meaning of "Data Dependence": An Economic Progress Report** (September 27, 2017) - Remarks by Stephen S. Poloz.
 - Monetary policy data dependent given unknowns in inflation outlook, Bank of Canada Governor Poloz says** (September 27, 2017) - Media Relations.
 - How Canada's International Trade is Changing with the Times** (September 18, 2017) - Remarks by Timothy Lane.
 - Bank of Canada begins publishing daily data for new Canadian effective exchange rate (CEER) index** (September 18, 2017) - Press Announcements.
- Exchange Rates (highlighted in red):**
 - 1.00 Canadian dollar = 0.81 US dollar
 - 1 CAD = 0.8057 USD (Latest Data: 2017-09-27)
 - Line chart showing the exchange rate trend.
- Schedule of Key Interest Rate Announcements and Monetary Policy Report:** Eight times a year, the Bank announces its decision on...

Societies Online

Understanding design target
Clear information

Notes: Ben felt supported and clear on Societies Online website. Again, in the main first page, all the information was clearly stated by offering user's expected needs. Personalization can happen by understating different user's needs and clustering the links that can navigate users to the right place. Need further research in different users' needs

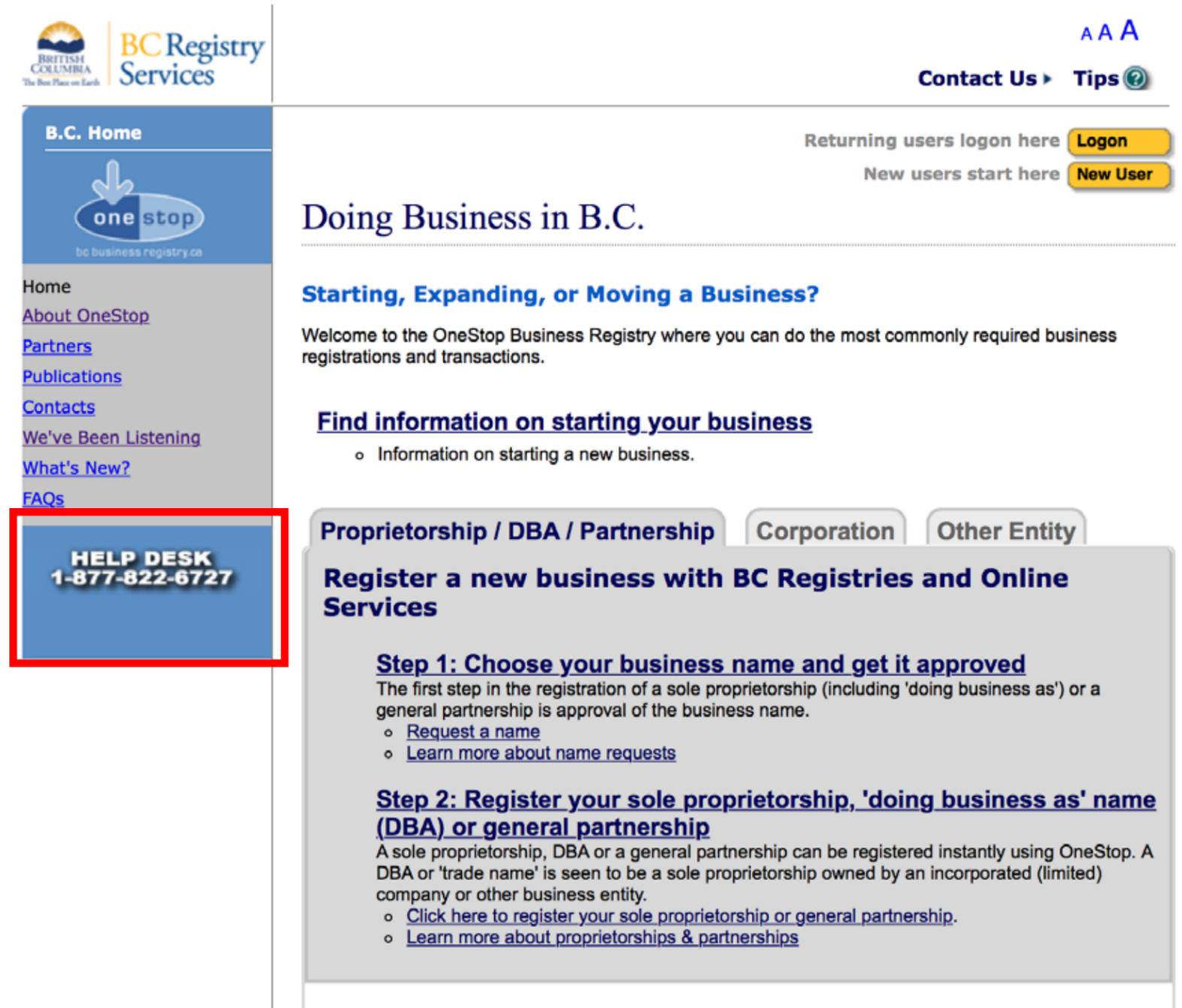


Getting Help

Personalized Support

Notes: This service assumes the user knows what they need to do in starting a business. For many, this may not be the case, and it would be advisable to understand options before completing a transaction.

What could a BC government site feel like, overall? Friendly, like Aahen or invisible like Norway taxes?



Current BC Registry Services

Getting Help

Live Chat

Notes: Ben felt that live chat was more personalized, and had a feeling that the government provided more attention and focus on his problem.

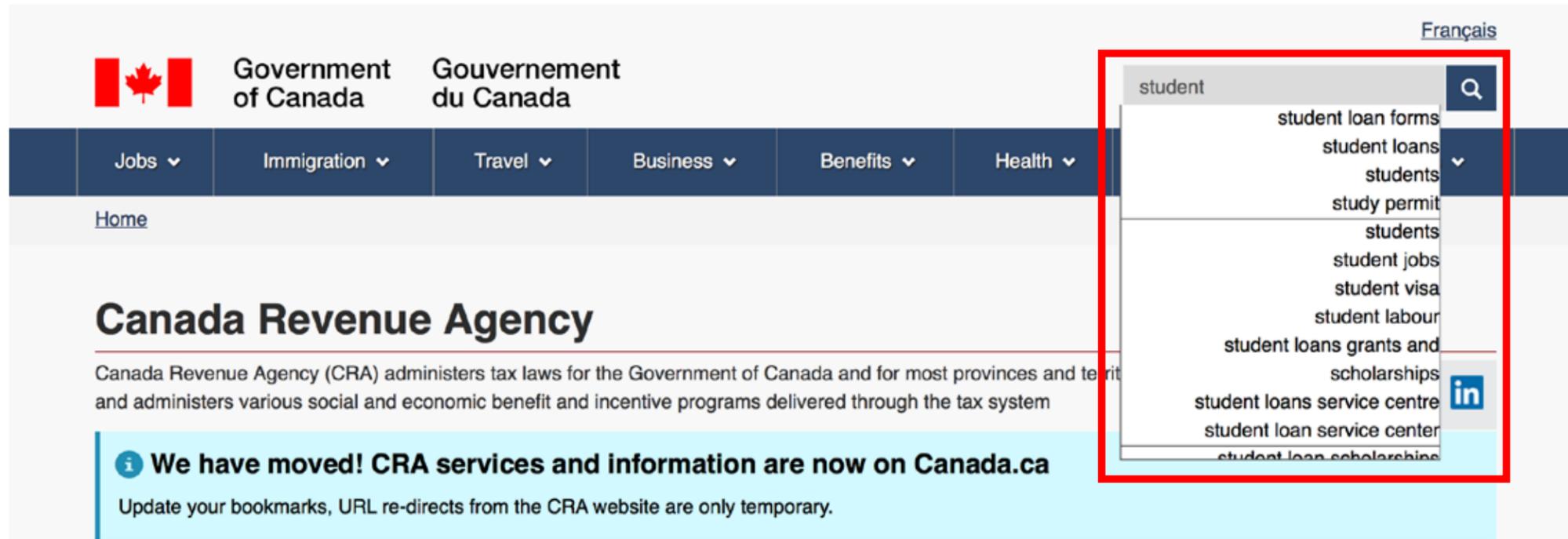
The screenshot shows the BC Registry Services website. At the top left is the logo for British Columbia, 'The Best Place on Earth', and 'BC Registry Services'. At the top right are links for 'Contact Us' and 'Tips', along with font size controls (A A A). Below the logo is a 'B.C. Home' section with a 'one stop' logo and the URL 'bc.businessregistry.ca'. A sidebar on the left contains a list of links: Home, About OneStop, Partners, Publications, Contacts, We've Been Listening, What's New?, and FAQs. At the bottom of the sidebar is a blue button labeled 'Live Chat Support' with a mouse cursor pointing to it. The main content area is titled 'Doing Business in B.C.' and includes a sub-header 'Starting, Expanding, or Moving a Business?'. Below this is a welcome message: 'Welcome to the OneStop Business Registry where you can do the most commonly required business registrations and transactions.' There are also links for 'Find information on starting your business' and 'Information on starting a new business'. A live chat window is overlaid on the right side of the page, titled 'Live Chat Support 24/7'. It shows a conversation between a service provider named John Silver and a visitor. The chat history includes: John Silver: 'Welcome, how can I help you?'; Visitor: 'Hi, do you accept PayPal?'; John Silver: 'Why sure, we accept both PayPal and Credit Cards!'; Visitor: 'Great! Expect a new order :)'. A settings gear icon is visible in the bottom right corner of the chat window.

Excel Spread Sheet

Notes: Macros are shortcuts that automate things tasks that people do all the time. Rather than constantly checking and re-checking a government website, this user wrote a macro that automatically updated this excel working document.

Here, we see an interesting opportunity to promote citizen innovations and work-arounds that enhance the user's experience.

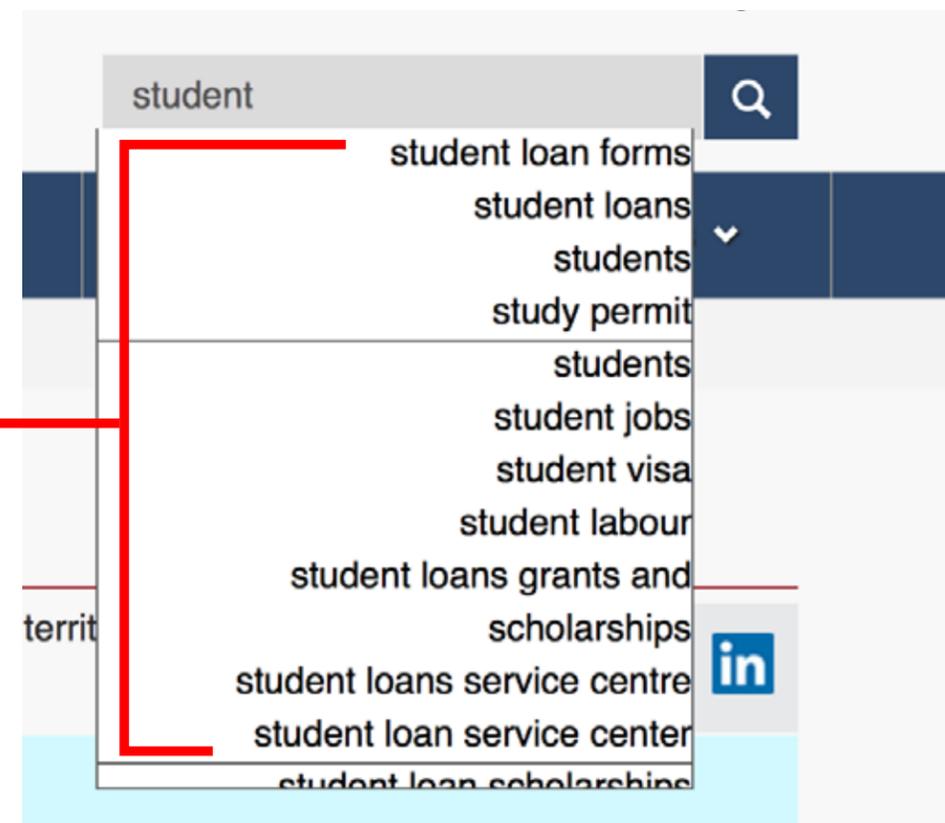
Test Name	Target URL	HTTP VERB	JSON Document (HTTP POST Only)	Expected Name	Expected Value	Actual Value	Pass/Fail	Last Ran	Actual Response from API	Actual Response Time (In seconds)
Test Exchange Rate API Success Element	https://www.vineos.io/api/currency/convert?source=USD&target=MXN	GET	[{"name1":"value1","name2":"value2"}]	success	TRUE	TRUE	PASS	9/22/2015 22:27	{"success":"TRUE", "currency_code":"MXN",	0.8
Test Exchange Rate API Currency				currency_code	MXN	MXN	PASS	9/22/2015 22:27		
Landed Cost API Test	https://www.vineos.io/api/landedcost	POST	{ "user_id":"Av743WFjU3YE7", "password":"jMj6Qfmk83A8Y", "access_license_number":"YQYramuUdWUtsGc", "country":"CA", "icc_session_id":"SC200146", "currency_code":"CAD", "region":"AB", "shipping_costs":"15.00", "discount":"0", "language":"en", "merchant":"demo_merchant", "cart": { "name":"Boys Shirt", "sku":"731056", "product_id":"731056", "price":"23.99", "quantity":"1", "category":"Button-Up", "department":"Kid's Casual Shirt", "attributes":"Cotton", "weight":"1", "country_of_origin":"US" }, { "name":"Kid's Backpack", "sku":"1171547", "product_id":"1171547", "price":"20.39", "quantity":"1", "category":"Backpacks", "department":"Street Gear Bags", "attributes":"Nylon", }}	sub_total	44.38	44.38	PASS	9/22/2015 22:27	{ "country":"CA", "exchange_rate":1.2242, "currency_code":"CAD", "country_name":"canada", "language":"en-ca", "duties":"0.00", "taxes_and_fees":"2.22", "vat":"0.00", "brokerage_fees":"0.00", "brokerage_fees_details": [], "sub_total":"44.38", "discount":"0.00", "brokerage_fees_formatted":"0.00", "shipping":"15.00", "cart": { "sku":"731056", "product_id":"731056", "category":"Button-Up", "department":"Kid's Casual Shirt", "name":"Boys Shirt", "price":"23.99", "quantity":"1", "weight":"1",	0.623
Shipping Costs				shipping	15.00	15.00	PASS	9/22/2015 22:27		
Taxes and Fees				taxes_and_fees	2.22	2.22	PASS	9/22/2015 22:27		
Test Cart Array Sku				cart[0].["sku"]	731056	731056	PASS	9/22/2015 22:27		
Element										



CRA

Accurate completed search tool

Notes: Ben felt CRA had a good search engine since it was accurate and links to other needs which felt personalized in the process of searching. This navigation suggestion made them feel less lost.



CRA's Search Engine

Accurate completed search tool

Notes: Ben liked the idea of integrating CRA's search engine. Search engine needs to be accurate and completed but also should suggest and navigate users.

The screenshot shows the BC Registry Services website. At the top left is the logo for British Columbia, 'The Best Place on Earth', and 'BC Registry Services'. At the top right are links for 'Contact Us' and 'Tips', and a font size selector 'A A A'. Below the logo is a 'B.C. Home' section with a 'one stop' logo and the URL 'bc business registry.ca'. A navigation menu includes links for Home, About OneStop, Partners, Publications, Contacts, We've Been Listening, What's New?, and FAQs. A 'HELP DESK 1-877-822-6727' button is also present. The main content area is titled 'Doing Business in B.C.' and features a section for 'Starting, Expanding, or Moving a Business'. Below this is a search bar with the text 'business' and a dropdown menu listing various business-related terms such as 'business risk management', 'business number', 'business and industry', 'business grants and financing', 'business login', 'business plans', 'business expenses', 'business development', 'business opportunities', and 'business plans'. A red circle highlights the search bar area. The main content area also includes a section for 'Proprietorship / DBA / Partnership' and 'Register a new business with BC Services', with two steps: 'Step 1: Choose your business name and get it approved' and 'Step 2: Register your sole proprietorship, 'doing business as' name (DBA) or general partnership'.

The research on Small Business BC was a light-touch action research piece we conducted on our own experiences. In order to not needlessly waste a service's time, we approached this work by documenting real questions we had about businesses and work as freelancers in BC, and documented our experiences and observations interacting with this service.

Research **Interview 3**





Overall

“Small Business BC is not part of BC Online, but it may have a role in supporting harder-to-reach or less experienced users negotiate BC Online services. As a service, they can help guide users to make decisions, such as how to start a business. The service is feels friendly and accessible by phone, online and in person

Work

Business Advisor

Websites

Corporate Online, Onestop BC

Notes

1. Google small business BC, lack of links in websites
2. Call and reserve 30 min free consultation
3. Can further reserve 1 hour professional consultation with advance booking
4. Not a clear way to book appointments through BC online
5. Arm's length body with government, though that is not necessarily clear to the user.

Interaction with Websites



Key Topics

Booking system, 3rd party support for the websites, Personalized experience

- 1.** Make a clear call to action indicating that Small Business BC lets you talk to an advisor who can quickly help clarify areas of confusion on BC Online transactions, such as registering a business. While there are existing links on BC Online promoting Small Business BC, the fact that Small Business BC offers free consultations where citizens can get personalised advice that relates to their unique circumstances ought to be more clearly promoted.
- 2.** A more seamless users experience could be achieved by inserting Small Business BC's online booking function into the BC Online interface. Small Business BC offers both free consultations, and affordable paid consultations with experts (tax specialists, HR specialists, etc). Particularly for the free consultations, seamlessly integrating these services as critical junctures (e.g. alongside important transactions, such as registering a business) would be a way to position the right information, in the right context, at the right time. In other words, provide an ideal service experience. a. (see page 19 and 20)
- 3.** A final mechanism to provide personalized experience could be including live chat functionality with Small Business BC within BC Online. As highlighted by other respondents, a live chat function is one way to immediately answer complex questions, and crucially, provide reassurance. Some BC Online transactions, such as how to register a business, have significant long term consequences. Making new users to BC Online feel confident that they are making the "right" choice for their circumstance that may be a valuable addition for people accessing business related services. (see page 21)

Integrating API

Booking

Notes: This point of entry assumes users have a nuanced understanding of the transaction they need to make, and the implications to them, and their business.

While Small Business BC is linked to within the site, users may have a more positive experience conducting the BC Online transactions related to starting a business if they had more personalised support upstream.

More seamless integration of the personalised and free services available to people could create a more empowering experience for people embarking on a new business venture.



Small Business BC

Booking Calendar View

Notes: Practical tools, such as the ability to book in a free consultation with Small Business BC within the BC Online platform could create a more curated end-to-end experience.

The screenshot shows the BC Registry Services website interface. At the top left is the logo for British Columbia, 'The Best Place on Earth', and 'BC Registry Services'. On the right, there are links for 'Contact Us' and 'Tips', and a font size selector 'A A A'. Below the logo is a navigation menu with 'B.C. Home' and a 'one stop' logo with the URL 'bc business registry.ca'. A sidebar on the left contains links for 'Home', 'About OneStop', 'Partners', 'Publications', 'Contacts', 'We've Been Listening', 'What's New?', and 'FAQs'. A prominent blue button in the sidebar says 'Book "Small Business BC" free 30min consultation'. The main content area is titled 'Doing Business in B.C.' and features a red circular icon. Below this is a navigation bar with 'Appointments' selected, and other options: 'Overview', 'Calendar', 'Clients', 'Online Booking', 'Services', 'Staff', and 'Business'. A 'Create Appointment' button is visible, along with a 'Staff' dropdown and a date range selector for 'July 20-24, 2015' with a '5-day' view dropdown. The calendar grid shows appointments for Monday through Friday. A red L-shaped bracket highlights the left side of the calendar grid. A mouse cursor is hovering over the 9:30 AM appointment on Wednesday, July 22nd, for Valerie E.

	Mon 7/20	Tue 7/21	Wed 7/22	Thu 7/23	Fri 7/24
8 AM					
9 AM		9:00 Timothy Rhodes		9:00 Ryan Nakamura	
9:30	9:30 Reiko Maruyama		9:30 Valerie E.		9:30 Simon Morin
10 AM		10:30 Erin Hills		10:30 Prateek Geharji ?	10:30 Adam Cortez ?
11 AM	11:00 Jake Anderson		11:00 Cliff Bowman ?		
12 PM	12:00 Lunch	12:00 Lunch	12:00 Lunch w/ sister	12:00 Lunch	12:00 Lunch
1 PM		1:00 Lauren Noble		Open	1:00 Jaclyn R. ?
2 PM	1:30 Kaitlyn Spindel		2:00 Martine Beaulieu		2:00 Pick up Aunt Sharon from airport
3 PM	3:00 Justin Keller				
4 PM	4:00 Abdul K.	3:30 Spencer's soccer practice	4:00 Claudis N. ?	3:30 Jonathan Savard	
5 PM					
6 PM					

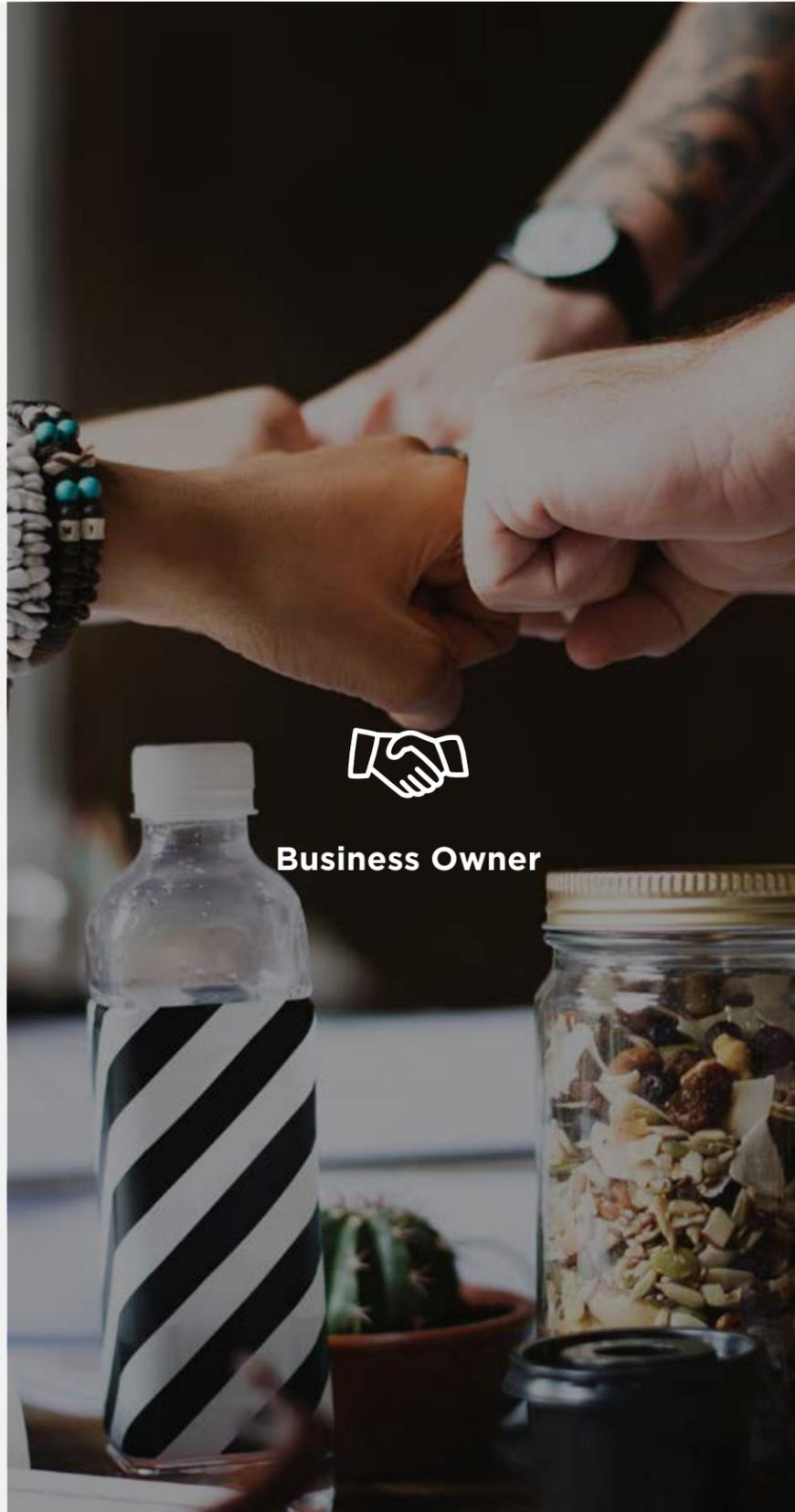
Small Business BC

Live Chat

Notes: Planting a live chat system with Small Business BC personalizes support. Users can book or ask simple questions during the process of starting business in government website, with Small business BC.

The screenshot shows the BC Registry Services website. At the top left is the logo for British Columbia, 'The Best Place on Earth', and 'BC Registry Services'. At the top right are links for 'Contact Us' and 'Tips', along with font size controls (A A A). Below the logo is a navigation menu with 'B.C. Home' and 'one stop bc business registry.ca'. A list of links includes 'Home', 'About OneStop', 'Partners', 'Publications', 'Contacts', 'We've Been Listening', 'What's New?', and 'FAQs'. A red circle highlights the 'Live Chat Support' button at the bottom of the menu. On the right side of the page, there are buttons for 'Logon' (for returning users) and 'New User' (for new users). The main content area is titled 'Doing Business in B.C.' and 'Starting, Expanding, or Moving a Business?'. It includes a welcome message and a section for 'Find information on starting your business'. A red circle highlights a link in this section. Overlaid on the right is a 'Live Chat Support 24/7' window. The chat window shows a service provider named John Silver and a visitor asking questions about PayPal and new orders. A red circle highlights the chat window's title bar.

Research **Interview 4**



Business Owner



Jane



Overall

This user had been supported through years of experience running business through mentorship

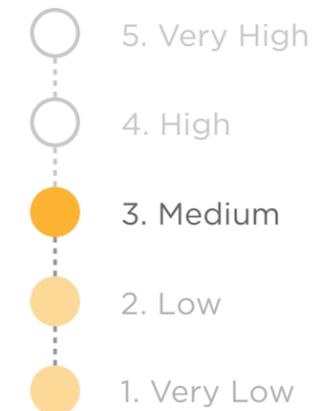
Work Business owner

Websites BC Online, Corporate Online

Notes

1. Goes to Small Business BC for consulting
2. Check availability with names in BC online and website domain in other websites at the same time with different tabs
3. Go through to process of BC online
4. Prefers a more personalized support than a call during the process
5. Trying to incorporate but still learning how
6. Need a quick way to get educated

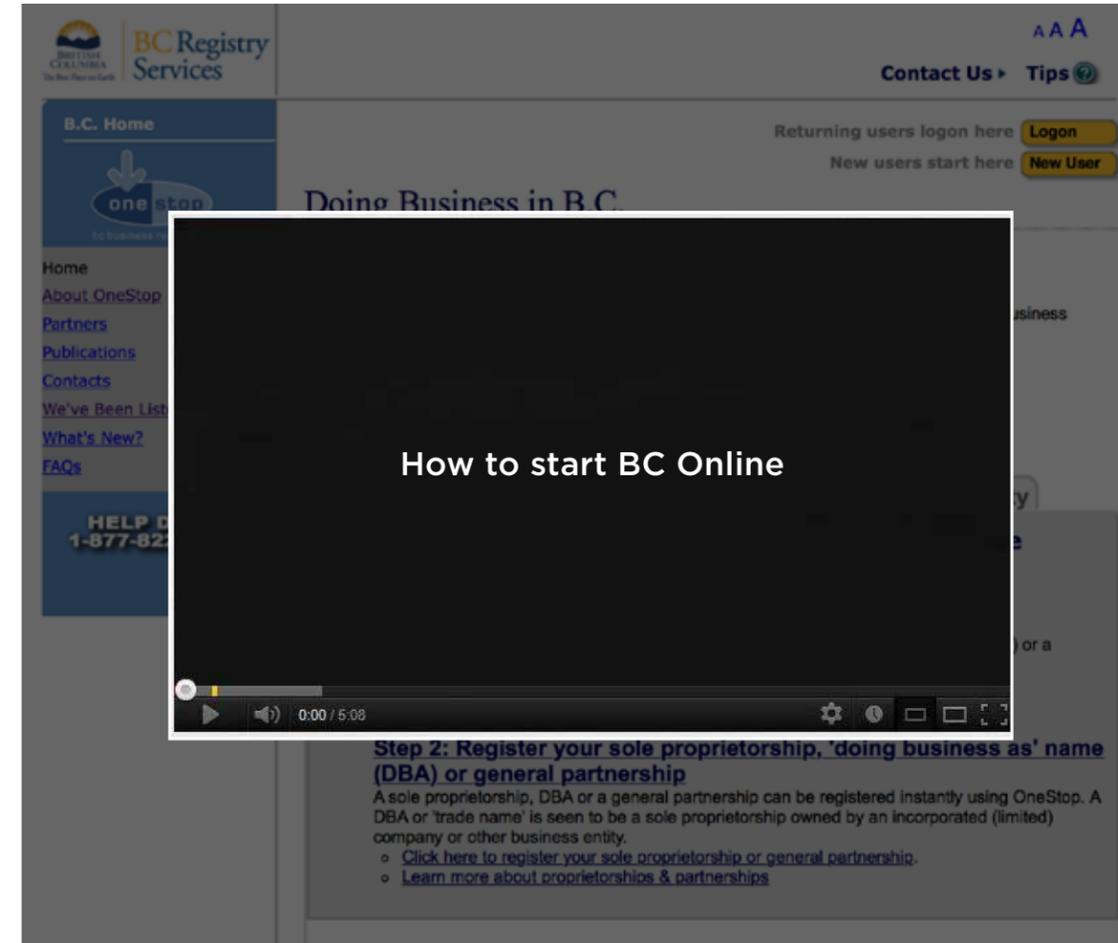
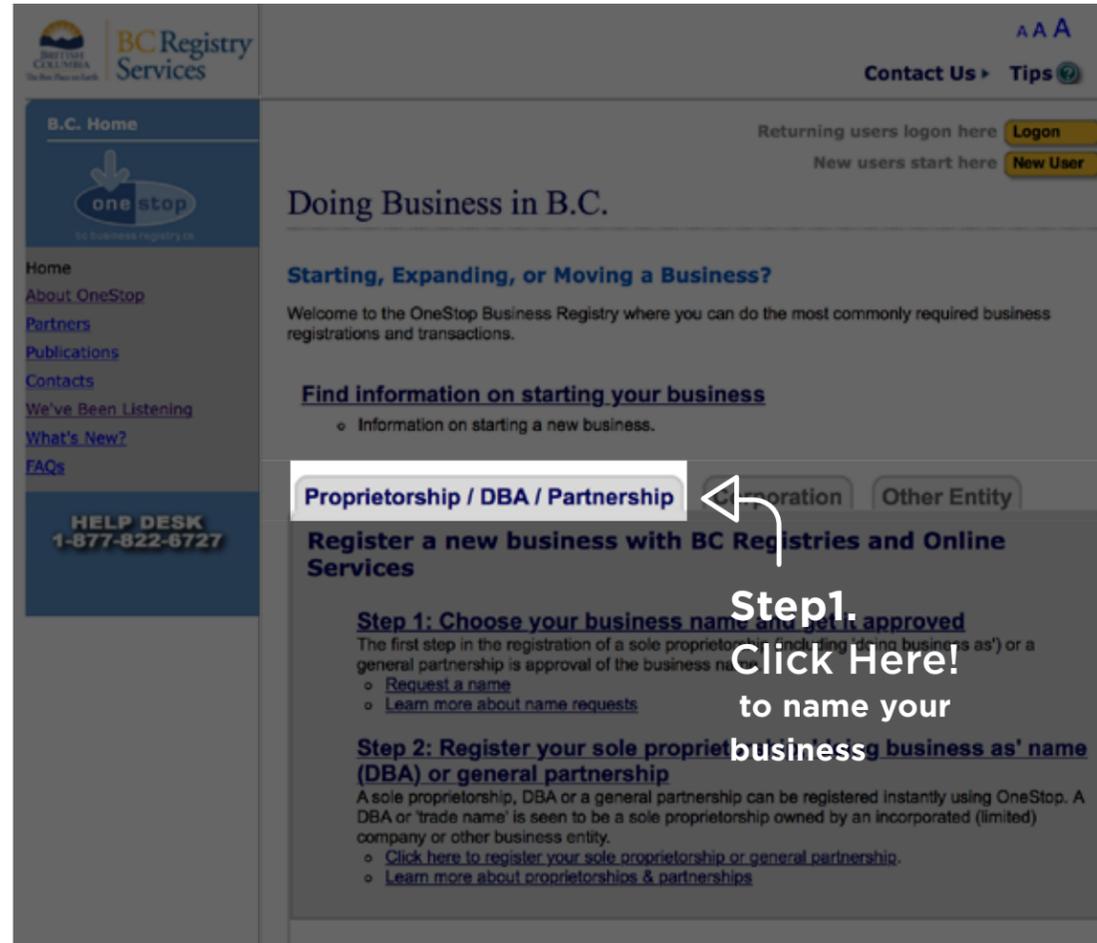
Interaction with Websites



Key Topics

Need help while doing (processing) BC online stuff, Need more education (ex: words, reasons, comparison on different services), Education, Training, Simple and quick.

1. Creating onboarding and training moments in the user flow for young and first-time entrepreneurs would help support new users to the system. (education purpose)
2. Jane revealed a preference for live chat (apple model) to chatbot or phone calls. Contextual support would improve digital service design.
3. An interlink to Small Business BC (as a corporate enabler) and other related sites would improve support for this user.
4. A domain registration search function and a checklist of materials needed for the application would let this user complete their application in one step.



Notes: Government websites can support first time users with an on board step by step training system. This system will not be mandatory, however first time users or users with more needs will gain more guidance. And this step by step training system can have different versions. (ex: training for “general first time user”, training for “how to register name”, training for “how to report my files”).

For many, this is an intimidating and new first step towards starting their business. A revised end-to-end experience could be better developed to empower and support new business owners, leaving users feeling confident and excited about their new venture, rather than confused and anxious.

Live Chat

Notes: Some users will want phone support, and some a chat bot, but this user found a text/IM Interface to be the most seamless

The screenshot shows the BC Registry Services website. The top navigation bar includes the BC Registry Services logo, a search icon, and links for 'Contact Us' and 'Tips'. A sidebar on the left contains a 'B.C. Home' section with a 'one stop' logo and a list of links: Home, About OneStop, Partners, Publications, Contacts, We've Been Listening, What's New?, and FAQs. A 'Live Chat Support' button is highlighted with a red circle and a mouse cursor. The main content area is titled 'Doing Business in B.C.' and features a section 'Starting, Expanding, or Moving a Business?' with a welcome message. Below this is a section 'Find information on starting your business' with a sub-link 'Information on starting a new business'. A live chat window is overlaid on the right side of the page, titled 'Live Chat Support 24/7'. The chat window shows a conversation between a service provider named John Silver and a visitor. The chat history includes: John Silver: 'Welcome, how can I help you?'; Visitor: 'Hi, do you accept PayPal?'; John Silver: 'Why sure, we accept both PayPal and Credit Cards!'; Visitor: 'Great! Expect a new order :)'. A settings gear icon is visible in the bottom right corner of the chat window.

Notes: Placing 3rd party or corporate enablers' links in government websites will support users not by directly helping but guiding users to the right place where they can find support. Government websites can act as various point of entries to helpful websites for users.

The screenshot shows the BC Registry Services website. At the top left is the logo for British Columbia, 'The Best Place on Earth', and 'BC Registry Services'. At the top right are links for 'Contact Us' and 'Tips', along with font size controls (A A A). Below the logo is a blue box labeled 'B.C. Home' containing a 'one stop' button with a downward arrow and the URL 'bc.businessregistry.ca'. To the right of this box are buttons for 'Logon' (for returning users) and 'New User' (for new users). Below the 'one stop' box is a list of navigation links: Home, About OneStop, Partners, Publications, Contacts, We've Been Listening, What's New?, and FAQs. Below these links is a blue box with the text 'Book "Small Business BC" free 30min consultation'. At the bottom of this box is a graphic with three colored squares: a purple square with 'SMALL', a blue square with 'BUSINESS', and a green square with 'BC'. A red circle highlights this graphic, and a mouse cursor is pointing at it. To the right of the navigation links is the main content area with the heading 'Doing Business in B.C.' and a sub-heading 'Starting, Expanding, or Moving a Business?'. Below this is a welcome message and a link to 'Find information on starting your business', which includes a bullet point: 'Information on starting a new business.' Below this is a section with three tabs: 'Proprietorship / DBA / Partnership', 'Corporation', and 'Other Entity'. The 'Proprietorship / DBA / Partnership' tab is selected, and the content below it is titled 'Register a new business with BC Registries and Online Services'. This content includes two steps: 'Step 1: Choose your business name and get it approved' and 'Step 2: Register your sole proprietorship, 'doing business as' name (DBA) or general partnership'. Each step includes a brief description and a list of links for more information.

Notes: Adding a checklist and international domain checking function will help small business owners during in the process of checking availability with business names.

The screenshot shows the BC Registry Services website. The top left features the logo for British Columbia and BC Registry Services. The top right has navigation links for 'Contact Us' and 'Tips', along with font size controls (A A A). Below the logo is a 'B.C. Home' section with a 'one stop' logo and the URL 'bc business registry.ca'. A sidebar on the left lists various links: Home, About OneStop, Partners, Publications, Contacts, We've Been Listening, What's New?, and FAQs. At the bottom of the sidebar is a 'HELP DESK 1-877-822-6727' button. The main content area is titled 'Domain Checker' and includes a search form with a text input field containing 'eg. yourdomain.com', a 'Check Availability' button, a 'Transfer' button, and an 'Order Hosting Only' button. Above the search form are links for 'Bulk Domain Search' and 'Bulk Domain Transfer'. Below the search form are tabs for 'Proprietorship / DBA / Partnership', 'Corporation', and 'Other Entity'. The 'Proprietorship / DBA / Partnership' tab is selected, and the content below it is titled 'Register a new business with BC Registries and Online Services'. This content includes two steps: 'Step 1: Choose your business name and get it approved' and 'Step 2: Register your sole proprietorship, 'doing business as' name (DBA) or general partnership'. Each step includes a brief description and a list of links for further information.

BC Registry Services

Returning users logon here **Logon**
New users start here **New User**

Domain Checker Start your web hosting search here by checking if your domain is available...

Bulk Domain Search | Bulk Domain Transfer

Start your web hosting experience with us by entering the domain name you want to register, transfer or simply purchase hosting for below...

eg. yourdomain.com Search Multiple TLDs »

Check Availability Transfer Order Hosting Only

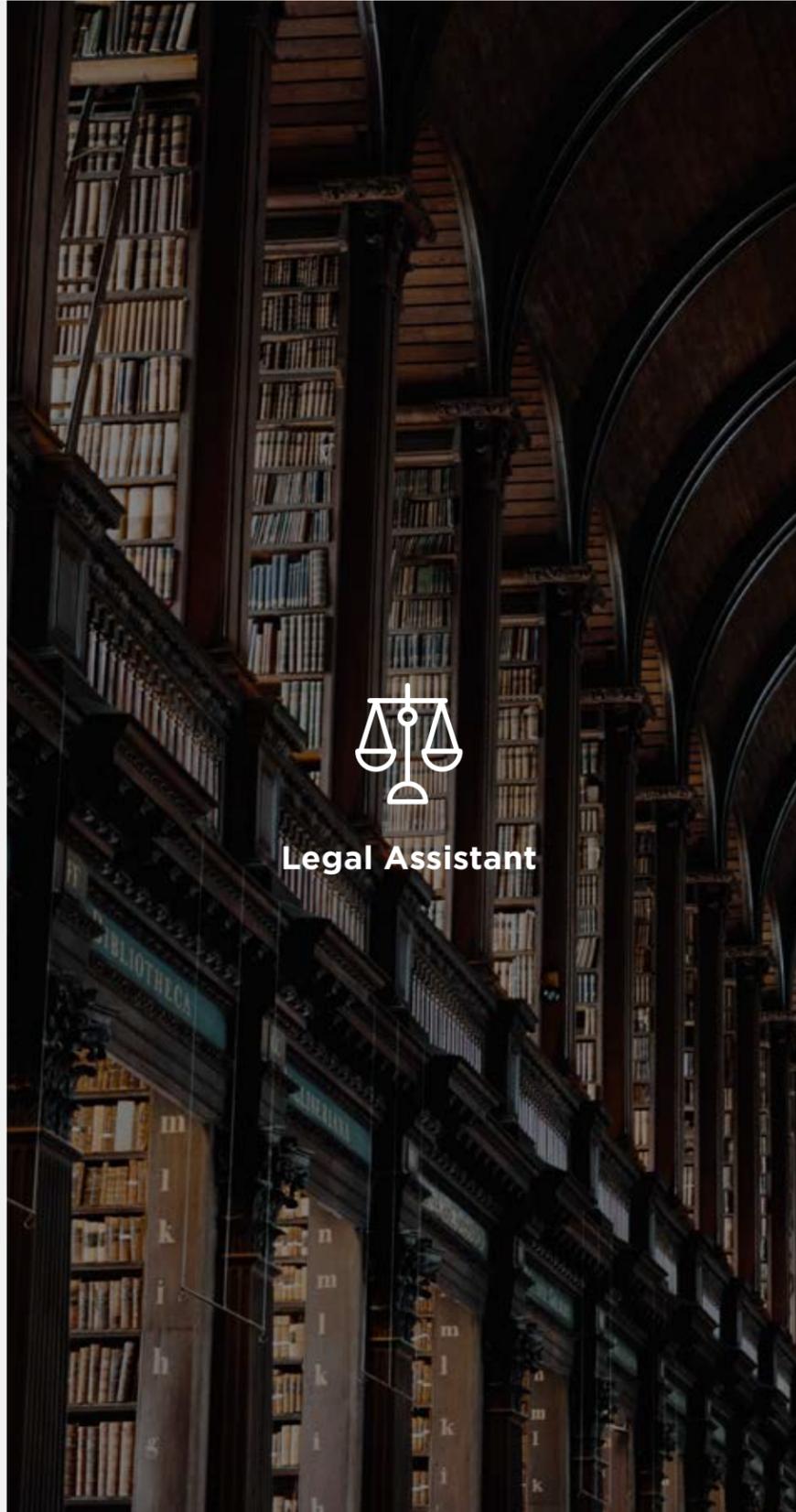
Proprietorship / DBA / Partnership Corporation Other Entity

Register a new business with BC Registries and Online Services

Step 1: Choose your business name and get it approved
The first step in the registration of a sole proprietorship (including 'doing business as') or a general partnership is approval of the business name.
o [Request a name](#)
o [Learn more about name requests](#)

Step 2: Register your sole proprietorship, 'doing business as' name (DBA) or general partnership
A sole proprietorship, DBA or a general partnership can be registered instantly using OneStop. A DBA or 'trade name' is seen to be a sole proprietorship owned by an incorporated (limited) company or other business entity.
o [Click here to register your sole proprietorship or general partnership.](#)
o [Learn more about proprietorships & partnerships](#)

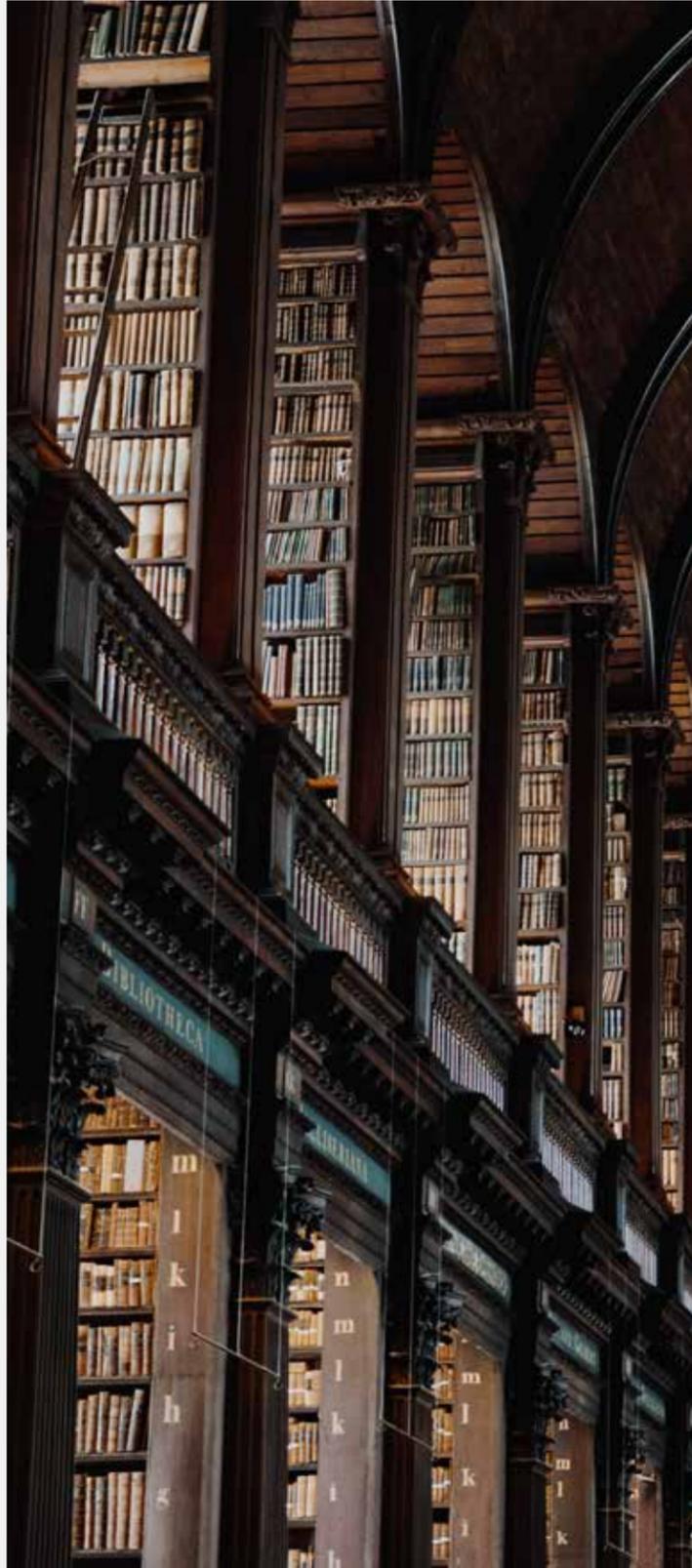
Research **Interview 5**



Legal Assistant



Clara



Overall

Legal assistants interact with BC online to send files, and to change or search cases. Lawyers do not have a BC online login ID, so lawyers will contact legal assistant for BC online related work. Legal assistants get frustrated with BC online crashing during work.

Work

Legal Assistant

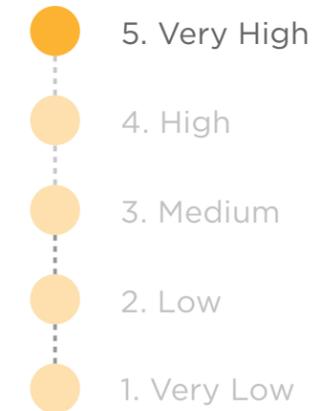
Websites

BC Online

Notes

1. Sends/upload files on BC online
- 2.Quick “in and out” journey with BC online (less than 10min work)
- 3.Will call legal assistant for help (legal assistant, paralegal is the main user)
- 4.Lawyers sometimes contact legal assistant during court for urgent BC online related work
- 5.When BC online crashes, legal assistant will use another 3rd party law service website

Interaction with Websites

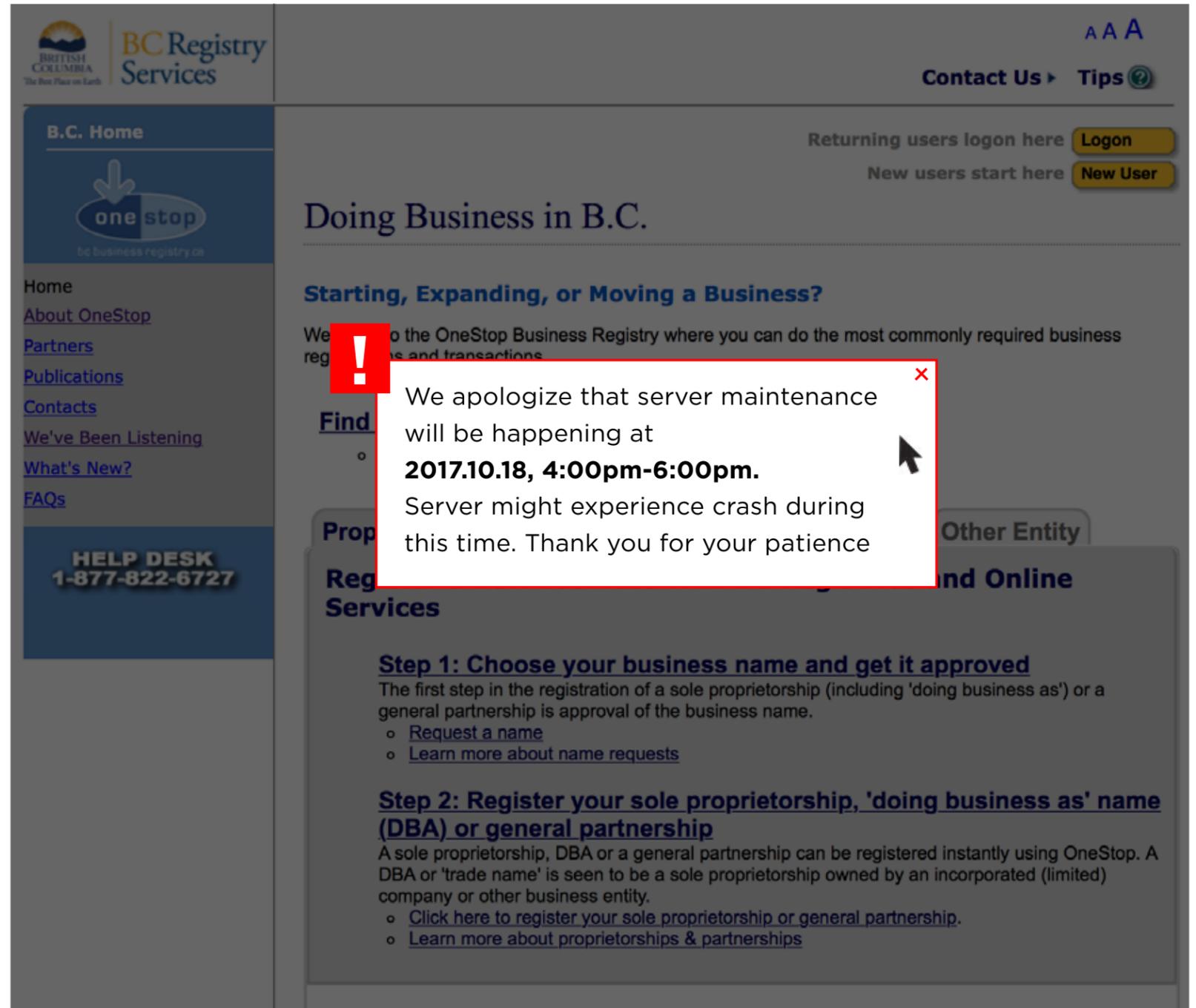


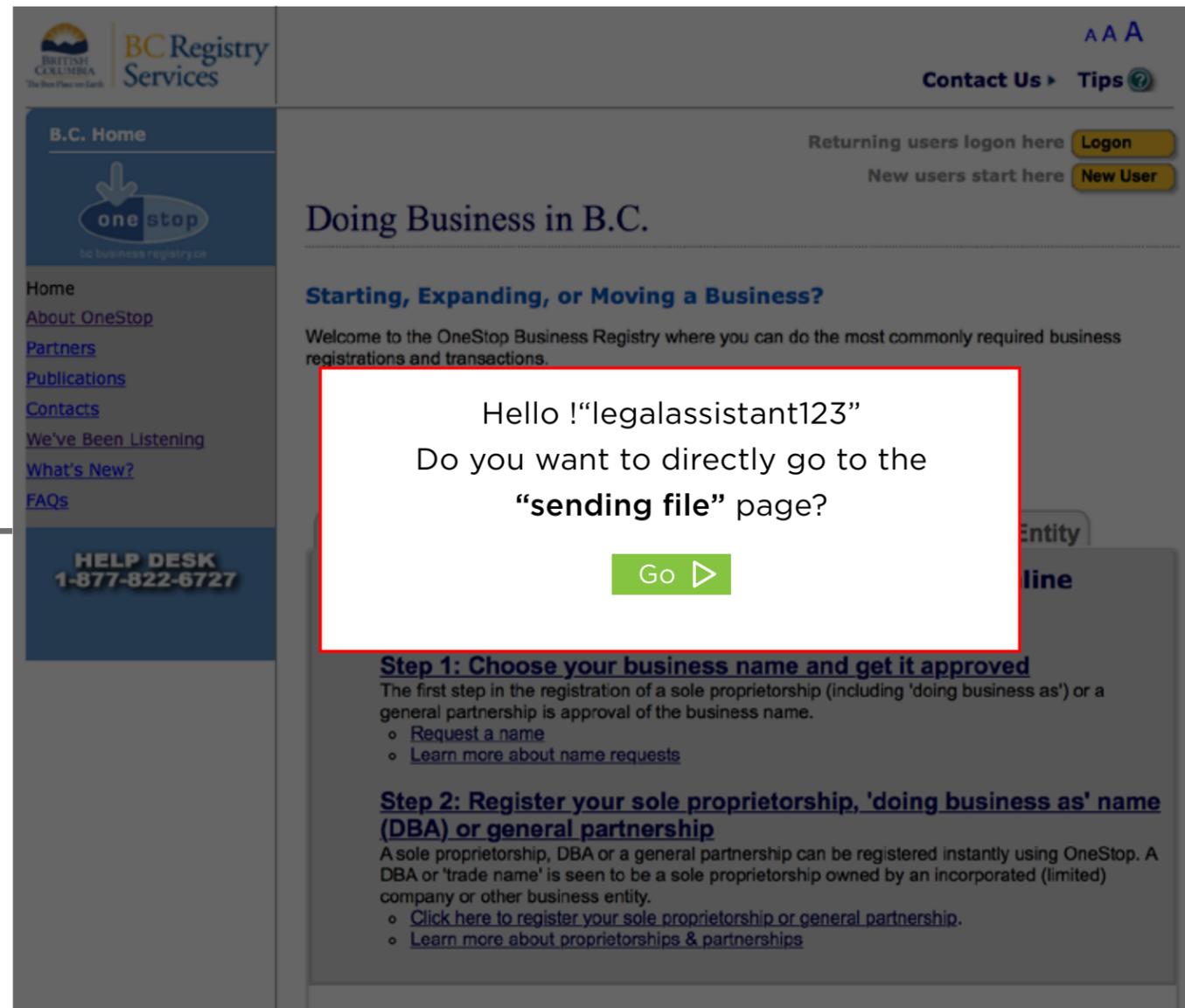
Key Topics

Legal professionals work with BC online in urgent scenarios but it crashes a lot. BC online, or government website should update or maintain their server after work hours.

- 1.** Notify users with a clear schedule of government website's server update: user described with great frustration the experience of attempting to access a digital service that was unavailable due to a server update. Site reliability was crucial to gain users confidence in the service (see page 57)
- 2.** Optimizing user's experience: directly guiding users to their needed page (see page 58)

Notes: Clear notification about the website's maintenance will help users to schedule their work with out any surprise crash.





Notes: Government websites can directly guide users to their urgent page after users log in, for faster and optimized interaction.

—
Citizen
Persona

Personas are archetypes of users, based on research with real people.

There are many benefits to using Personas, for example as a practical activity unifying the strategic direction of a design and development team.

The following personas are four key citizen perspectives, but not meant to be outcomes, rather examples of the type of artifacts that are generated by a team unifying research insights done with real people.



“Since I have many urgent situations with cases, I need a stable well maintained website. I need a service that I can rely on.”

About

Age: 29
Residence: Apartment
Location: Vancouver
Tech level: High tech proficiency

- 5years experience
- she had a job before in various law firms
- high pressure situation
- busy, barely gets a lunch break through out her day

Interaction with Government website

- 5. Very High
- 4. High
- 3. Medium
- 2. Low
- 1. Very Low

Goals

- Sends and upload case files on BC online
- Quickly needs to file and upload case files for lawyers in urgent situations during court.
- Provides BC online login to lawyers
- Information ASAP to lawyers! And ASAP upload file(no lunch break? Busy!)

Core needs

Clara needs a stable server in order to send and upload case files quickly. Lawyers will require needs during court so speed is a crucial point for Clara. When BC online website down for maintenance, Clara needs advance notice on dates and time so Clara could use third party websites to complete the job on time. Clara needs to interact BC online anytime during work hour, so website maintenance should happen after work hours.

- speed
- getting job done fast

Key Topics

Legal professionals interact with BC online in urgent scenarios but the website crashes a lot, which pushes legal professionals to third party websites. BC online should notify Clara advance when the website is down for maintenance.



“Government websites would feel personalized if the website understands my needs by providing a clear simple information hierarchy”

About

Age: 49
Residence: Home
Location: West Vancouver
Tech level: High tech proficiency

- 15years experience
- High degree of responsibility, highly specialized expertise
- 10 years with a firm
- Relies on other specialist teams for any specific provincial compliance issues

Interaction with Government website

- 5. Very High
- 4. High
- 3. Medium
- 2. Low**
- 1. Very Low

Goals

- Needs a central place to access “official” sources of information, for instance policy changes related to tax legislation, or daily Bank of Canada currency rates.
- Has little interface with BC financial regulation because of international work

Core needs

Ben needs a government website that understands design target users with clear and simple information hierarchy. Ben wants an easier navigation, in order to find information related to his work. Ben needs a personalized supporting system so he can have more attention and focus on his problems

Key Topics

- Understanding user’s need and providing clear and simple information hierarchy will enhance user’s experience.
- Finding information was a struggle for Ben, so rather than going into government website daily, he writes macros to pop up automatically.
- Government websites should carry a personalized helping system to provide more attention and focus on Ben’s problem.



“I want to learn more educational information to enhance and develop my business”

About

Age: 40
Residence: Apartment
Location: Vancouver
Tech level: Medium tech proficiency

- Learned how to start her own business at 18years old
- Kitchen table start-up
- New parent to infant

Interaction with Government website

- 5. Very High
- 4. High
- 3. Medium**
- 2. Low
- 1. Very Low

Goals

- Grow and develop her business
- Using government funded tool, like Small Business BC to help inform her growth strategy
- Trying to understand process for incorporating, and how small business tax changes could impact her
- Considering starting a new business, and is looking up names for businesses on BC Registry Services, while running domain name searches through another platform

Core needs

Elisa needs a training system where she can get educated to process a new business. Rather than long lists of words, she needs an easier user friendly approach to get informed. Since Elisa interacts with Small Business BC a lot, she would want to book a schedule from government websites. While she checks her business name on BC Registry services, she wants an international domain checking function to align her business name and her website.

Key Topics

- An on board step by step training system or a video training will provide easier guidance, and will empower and support new business owners.
- Integrating 3rd party enablers (Small Business BC) links in government websites will guide users to the right place where they can gain additional support.
- Adding an international domain checking function will help Elisa during the process of checking business names to align it with business website's domain.



Hank 44,
Lawyer



“I need a simple easy navigation experience to go in and out fast online”

About

Age: 44
Residence: Apartment
Location: Vancouver
Tech level: Medium tech proficiency

Hank is diligent in his law practice and committed to the profession. With 10 years of experience, Hank protects the rights of women in Vancouver and focuses on women’s civil rights. In the past couple of years.

Interaction with Government website

- 5. Very High
- 4. High
- 3. Medium**
- 2. Low
- 1. Very Low

Goals

- Track/Gain history materials related to court trials
- Legal research
- Send billings and files through BC online
- Change case information

Core needs

Hank needs a fast search function in order to quickly go in and out from different cases. Also, since Hank does a lot of legal research, Hank needs a simple navigation layout or tool to make the research experience faster and easier.

Key Topics

Hank uses Thomson Reuter since it has a larger data base and better navigation experience. Hank only uses BC online through legal assistance’s login and password if needed. Communicates with legal assistance when need to send files through BC online. Billing transactions are done in one login so when Hank moved legal firms, Hanks billed his past firm.

Thank **You**

STAND-ALONE **DOCUMENTATION**

progressing towards **personalization**

KB&A

Contact: kb@katherinebenjamin.info