CONSUMER
DATA
STANDARDS

Greater
Than
Experience

ThoughtWorks®

Consumer Data Standards: Manage and revoke

Phase 2 CX Stream 2 Report

June 2019

Executive summary

Empower individuals. Foster innovation and competition. This is the purpose of Consumer Data Right (CDR).

The initiative is timely.

Trust is at an all time low. The Big 4 Banks are amongst the least trusted organisations in Australia. The Royal Commission Report highlighted systemic issues that must be overcome.

This matters not just because trust disproportionately impacts bottom line business outcomes, but also because the relationship between data sharing and trust is becoming clearer. People want and expect control of their data. It's no longer accepted that limited value is assigned to privacy. There is a tradeoff fallacy.

Our societies and economies are increasingly information driven. Information asymmetry, power imbalances and monopolies are threatening our ways of living. Individuals face increasing risk of manipulation, along with a variety of other harms that aren't yet well understood. The ineffectiveness of the current model, particularly the lack of active participation from individuals, is resulting in billions of unrealised economic benefit.

With this as our backdrop, the question becomes: ***How might we design a trustworthy, highly competitive and humanity-centric information society that truly benefits the Australian people?***

This program of work cannot possibly answer such a broad and important question in its entirety. However, we trust it provides additional evidence to support key decision-makers and ecosystem participants in making progress towards effective early implementation. We also trust it helps further perspectives about what our future might hold.

This report

As part of the Consumer Data Standards CX Workstream, Greater Than X and our partner, ThoughtWorks, were engaged to deliver one of three programs of work. The insights and outputs are intended to help Data61 and other relevant parties develop evidenced Consumer Experience Guidelines that inform the early implementation of the CDR framework.

In addition to this we were engaged to deliver pre-program outputs (the early stages of a consent-based data sharing design system) that increased the quality and consistency of the prototypes used throughout the two rounds of exploratory research across all three program streams.

The duration of the program was approximately 8 weeks.This allowed for pre-work, design and prototyping, research preparation and execution, along with time to synthesise and develop actionable and evidenced recommendations. This report is the final output.

The CX of Consent Management and Revocation, Early CDR Implementation

This report hones in on our process, the insights we've surfaced and specific recommendations for the CDR's early implementation. It builds upon Greater Than X's empirical body of evidence and Data Trust by Design toolkit to showcase how effective, verifiable consent-based data sharing experiences (specifically Consent Management and Revocation experiences) can empower individuals and support the development of new and unique service offerings that create value for organisations.

This report is designed to inform CX Guidelines and early implementation decisions. We trust the outputs of our work catalyse meaningful progress. Specifically, we trust they enable a broad group of aligned stakeholders to define, design and progressively implement the rules, standards, protections, benchmarks and guidelines that lead to a prosperous information economy.

The CX of Consent Management and Revocation

Early CDR Implementation

Our response to Data61’s Request for Proposal

Greater Than X responded to each of Data61’s three RFPs individually. We were successful in Stream 2: Manage and Revoke.

In our response we proposed a specific approach to the program that utilised Data Trust by Design and behavioural design methods. We proposed this to ensure we developed prototypes for the two rounds of exploratory research that would enable us to simulate context and learn more about the motivational forces impacting people’s attitudes and behaviours. We also proposed this approach to ensure this research was situated within broader bodies of established evidence domestically and globally.

We called out a series of risks along with clear mitigation tactics.

We also proposed deprioritising certain aspects of the RFP (i.e. revoking consent physically, energy sector, multi-party etc.) to ensure the highest quality of delivery given time constraints.

Throughout this research our approach has been clearly communicated.

As was expected, this program was anything but linear. Scope and timelines changed on the fly. New considerations were communicated with teams on a regular basis. As far as we can tell, each stream has adapted to this uncertainty and variability effectively.

For further detail, our full response to the Consent Management and Revocation RFP is available as an appendix item.

Defining terms

Before progressing, it's worth defining terms.

What is consent?

In our experience, consent is one of the least understood concepts in data protection globally. Part of the problem relates to various definitions and thus room for a variety of interpretations. This is frequently observed through poor organisational practices. Part of the problem is an accelerated pace of technological change, where the appropriateness of informed consent is being questioned.

Regardless of the challenges the global market faces, we believe that defining and designing for the best possible consent-based data sharing experience really matters. After all, it's a huge part of how individual consumers will interact with the CDR ecosystem.

"The ACCC proposes to make rules requiring consumer ***consent to be voluntarily given, express, informed, specific as to purpose, time limited and easily withdrawn***. In particular, the ACCC proposes to make rules to the effect that:

1. Accredited data recipients ***cannot make consent to share data a precondition to obtaining other services*** not related to, or dependent on, the sharing of CDR data.
2. Consent ***must be unbundled*** with other directions, permissions, consents or agreements, and
3. Must ***not rely on default settings***, pre-selected options, inactivity or silence.
4. Accredited data recipients ***must provide specified information*** to consumers as part of the consent process.
5. Consent be obtained using language and/or visual aids and a process that is ***concise and easy for consumers to understand***, and that, as part of the standards-setting process, the consent process should be ***tested for consumer comprehension***.

Accordingly, the ACCC:

1. Does not propose to make a rule requiring all information to be displayed on a single screen.
2. Specifies that accredited data recipients must disclose, in an unambiguous way at the time of seeking the consumer's consent, the uses to which data will be put. And;
3. Accredited data recipients may only use data in line with the uses to which the consumer has consented, and should only seek consent to access the minimum data necessary for the uses agreed to.

The ACCC proposes to make a range of rules which will help provide consumers with a straightforward withdrawal process. "

This is not how consent-based data sharing works in Australia today. Today, consent is bundled. It's often a precondition of services. Non-consent often results in detriment. And most of all, ***consent-based data sharing is verifiably uninformed***.

It's also worth noting that there are a variety of risks associated with consent being the sole lawful basis for data processing within the CDR ecosystem. This has the potential to challenge key aspects of consent. Specifically, that consent is:

1. Truly ***voluntary***
2. Verifiably ***informed***
3. ***Current*** and time bound, and
4. ***Specific*** and limited to a distinct purpose

Perhaps more importantly, it challenges the notion that meaningful choice will be available to consumer participants. If consent is a pre-condition of CDR enabled service offerings, are people actually empowered with meaningful choice?

Part of the CDR challenge is ***making consent*** - the rules, the tools and technologies enabling it, and the consumer experience - ***simple, safe and effective for all ecosystem participants***.

What is consent management?

Consent management is the process through which an individual (or group) exercises control of data they have previously consented to share.

By control we refer to the power an individual (or group) has to influence the outcome of an experience (enabled by consent-based data sharing) through the assertion of an active and informed choice (i.e. revoking consent).

Building upon this, there are two additional terms that need to be highlighted:

1. De-identification, and
2. Deletion

Throughout our program of research these terms confused participants. They were concerned and wanted the ability to verify that the data they had revoked access to was actually being deleted.

To better understand the potential implications of this we sought the assistance of Dr. Chris Culnane from the University of Melbourne. The following page contains Dr. Culnane's perspective on this topical issue.

De-identification versus Deletion

The inclusion of de-identification as an alternative to deletion fundamentally changes the nature of the contract between the consumer and data recipient. The ACCC rules were supposed to enable consumer consent that was “specific as to purpose, time limited and easily withdrawn”, however, that will not be achievable in the presence of de-identification. If we look at de-identification at a high-level, putting aside the specifics of any particular technique, the objective is to remove the identifying information and leave behind the remaining, supposedly non-identifiable data. If we compare that to deletion, which is the eradication of all data, the two are clearly not equivalent, some data will remain with de-identification, and therefore some value will remain.

The lack of equivalence between deletion and de-identification causes a shift in power within the contractual agreement due to the data recipient receiving a perpetual benefit, in the form of the de-identified data. Whilst the value of the de-identified data will be lower than that of identifiable data, it will retain value for modelling and profiling even if the de-identification is robust.

The problem is compounded by the de-identified data not being bounded by same usage restrictions as the identifiable data. This will permit a data recipient to use de-identification as a way to move data outside of the purpose restrictions, whilst still retaining some of its value.

As a result, the CDR contract is not truly time or scope limited, nor can consent be fully withdrawn. Such a contract is counter to how most commercial contracts are written that involve temporary exchanges of data, which contain strict deletion requirements at the termination of the contract. Those same strict requirements should have been the foundation of the CDR contract. As it stands, it is essential that consumers are informed that when they enter into a CDR contract they have control over the identifiable data, but are agreeing to a perpetual, unbounded, usage of their de-identified data.

Practicality of De-Identification

The CDR rules recommend Data61’s De-identification decision-making (DDM) framework, but this is not a scientifically tested or a rigorously reviewed standard for de-identification.

More fundamentally, de-identification - if it is meaningful at all - is inherently based on the notion of being lost in a crowd. De-identification methods require multiple individuals to be in the dataset to work, if they work at all. In the situation where the consumer revokes consent and requests deletion, the dataset to be de-identified will consist of just that single consumer’s
data. If that crowd, as in this case, consisted of only one person, then it is impossible to be lost in it.

The misunderstanding could stem from the DDM framework’s incorrect definition of k-anonymity, the method on which many de-identification techniques are based. The DDM framework incorrectly defines k-anonymity in terms of records instead of correctly defining it in terms of individuals.

To correctly apply the technique would require the pre-processing of the dataset to render all records related to one individual into a single tuple or row. If this had been correctly specified in the DDM framework it would be immediately obvious that de-identification cannot be performed, since the dataset would contain only a single row and therefore k can never grow to being more than 1. Finally, k-anonymity is not regarded as best practice by privacy experts.

Verification of de-identification or deletion

A greater challenge is whether it is possible to verify compliance with either deletion or de-identification. The ease with which data can be replicated presents an almost impossible challenge in verifying compliance, particularly for organisations that are actively trying to subvert the rules. The lack of robust standards for de-identification presents further problems. There have been numerous examples of datasets that have been claimed to be de-identified, but which have subsequently been found to be identifiable. It is far from clear whether the regulators are sufficiently resourced to be able to evaluate the effectiveness of claimed de-identification techniques. Even in the case of deletion, verification is a challenge. A regulator could audit a company looking for remnants of data which it claims to have deleted, but that will be incredibly disruptive to the organisation, and will not prevent an active adversary who can easily move data offsite. Inherently it is a trust based process, and the ever growing spread of surveillance capitalism calls into question whether sufficient trust currently exists.

Dr. Chris Culnane
Lecturer in Cyber Security and Privacy, School of Computing and Information Systems, University of Melbourne


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Research approach

We conducted two rounds of exploratory research with a total of 20 participants. Our primary objective was to ***explore the potential efficacy of prototypes that brought the CDR rules to life.***

We designed hybrid research sessions led by outcome focused usability. We supported the usability component of each session with contextual inquiry. This enabled us to situate consent-based data sharing experiences in a more realistic setting.

We also prioritised designing a value proposition (first inspired by UK startup, First Home Coach and later adapted for specificity and impact, Goal Mate) that helped people achieve a high value life event. Helping individuals or families achieve this outcome created value within the CDR ecosystem (mortgage acquisition and related 'life services').

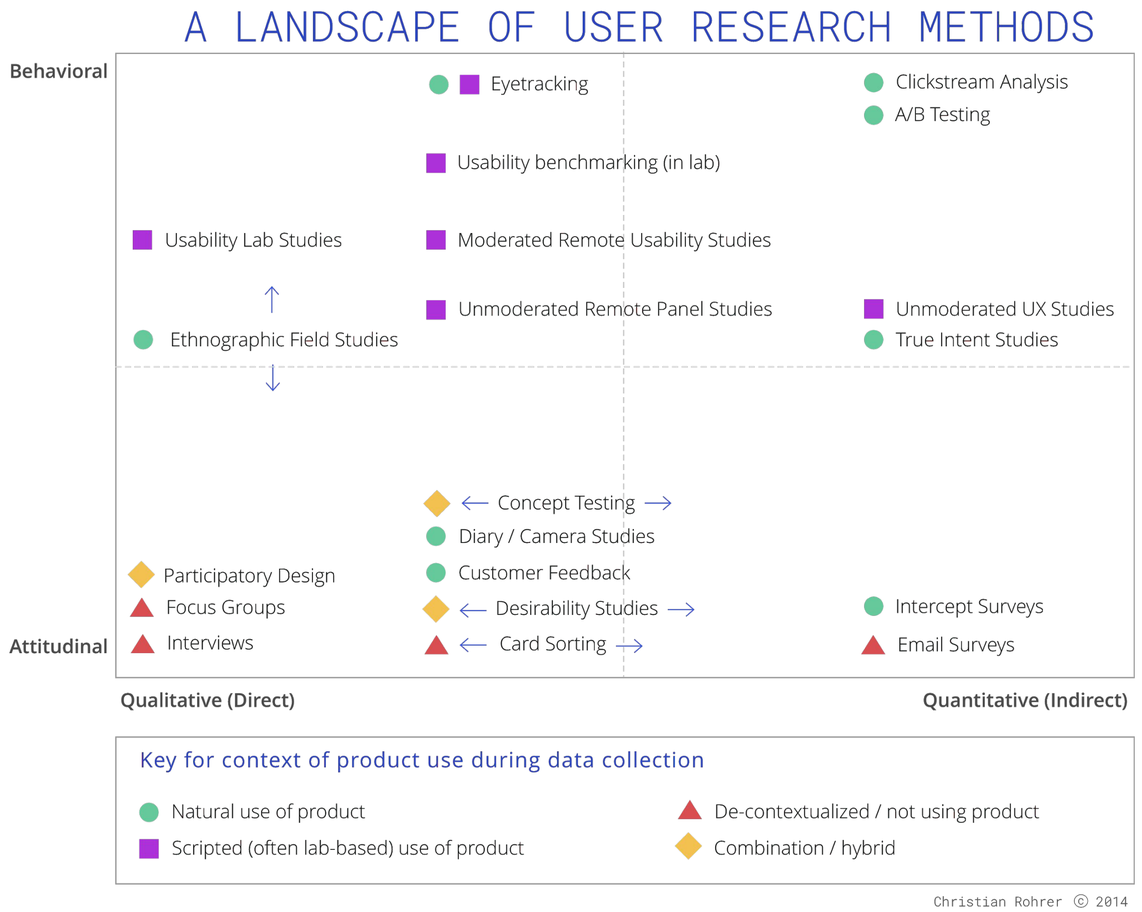
We did this because propensity to willingly share (consent) data is largely the result of expected value. ***Without a clear, compelling and timely value proposition, there is no reason to consent***. We also did this because more effective, participatory data sharing has the potential to create new economic and societal value.

We added to this a specific behavioural design focus. This enabled us to surface practical and actionable insights relating to the consumer change pathways (adoption and sustained use) that have the potential to make CDR a success.

A landscape of user research methods: Understanding our approach

A variety of user research methods exist to help researchers ask and answer questions. This diagram, inspired by Christian Rohrer's 2014 work, showcases 20 popular user research methods. It visualises them using a three dimensional framework that covers:

1. Attitudinal vs Behavioural
2. Qualitative vs Quantitative, and
3. Context of use

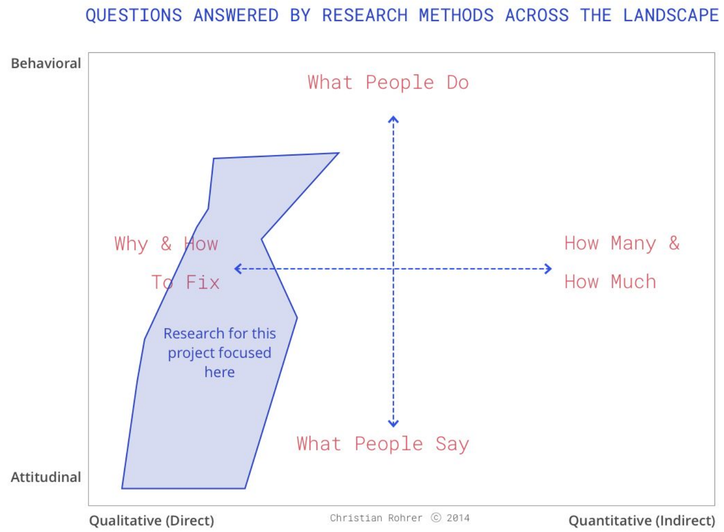


Questions Answered

Questions answered

Given constraints, this program focused largely on qualitative research across the attitudinal dimension (face to face exploratory research).

We ***recruited for specific behavioural characteristics*** (i.e. current use of FinTech apps, purchased crypto currency, invested in equity crowdfunding, use of Privacy Enhancing Technologies) ***that may increase the likelihood of early Open Banking adoption***. We simulated motivations and context. We executed the sessions in alignment to our focus on the forces that might encourage or inhibit behaviour change.



This enabled us to define 'proxy' behavioural characteristics. When combined with established bodies of evidence, this deepened our perspective of the forces that might encourage or inhibit sustainable behavioural change (adoption and active use of CDR enabled data sharing).

Bringing all of this together, we designed 90 minute research sessions.

Round One Research Participants

10 participants exhibiting existing behaviours that 'may' lead to Open Banking early adoption

Behavioural

1. Looking for a home loan or had recently acquired one
2. Use banking apps at least once per week
3. Use finance platforms such as Poketbook/PokitPal/MoneyMe (*non-mandatory*)
4. Considered investing in equity crowdfunding in the past 24 months (*non-mandatory*)
5. Bought bitcoin or other cryptocurrency in the past 36 months (*non-mandatory*)
6. Used a VPN in the past 18 months (*non-mandatory*)
7. Preferred browser and search engine (*non-mandatory*)

Demographic

1. 5 x Male, 5 x Female
2. Aged 23 to 33
3. Bachelor qualified at minimum
4. In full time employment
5. In a defacto relationship or married
6. Earn at least $86,000 AUD (Gross) annually

Geographic

1. Residing in Sydney

Rationale behind criteria

1. To develop an early point of view of the types of people that might be ***more likely*** to ***actively adopt*** this new way of data sharing
2. Conduct research with people that had characteristics ***relevant*** to the use case and ***value proposition***

Anthony

- Age 31
- Business Analyst
- Married with 7 month old
- 3 bank accounts
- Weekly online banking
- Has considered investing in business via equity crowdfunding

Chris

- Age 27
- Police Officer
- Defacto
- 2 bank accounts
- Weekly online banking
- Has considered investing in business via equity crowdfunding

Sue

- Age 28
- Risk Manager
- Law & Finance background
- Expecting a baby
- Weekly online banking
- Has bought cryptocurrency

Kate

- Age 30
- IT Analyst
- Married with 8 month old
- 3 bank accounts
- Weekly online banking
- Uses MoneyMe
- Tried PocketBook

Ian

- Age 26
- Business Analyst
- 4 bank accounts
- Has shares
- Weekly online banking
- Worked in cyber security and privacy areas in prior professional role

Keith

- Age 23
- Finance Procurement
- 2 bank accounts
- Looking to purcahse property for investment
- Weekly online banking
- Downloaded Pocketbook but not using it

Nina

- Age 31
- Nurse
- Law & Finance background
- 3 bank account
- Weekly online banking
- Has used Pocketbook
- Uses VPN

Jim

- Age 31
- Business Compliance
- Married with 19 month old
- 2 bank accounts
- Weekly online banking
- Owns 3 properties and looking for another investment property

Claire

- Age 33
- Manager
- Married with 18 month old
- 2 bank accounts
- Weekly online banking

Edith

- Age 26
- Chartered Accountant
- Married (planning family)
- 2 bank accounts
- Had GDPR training
- Has used Pocketbook
- Interested in accounting standards and rules

Round One: Data Recipient and Data Holder Dashboards

Scope of prototype

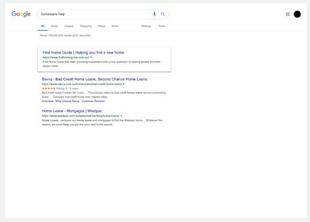
The prototype developed for Round 1 exploratory research focused on the Data Recipient and Data Holder Dashboard model. We added to this an upfront value proposition (First Home Guide) and also incorporated consent, authentication and authorisation into the flow.

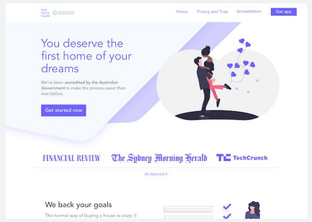
Value proposition, consent, authentication and authorisation was a guided walkthrough (conducted by the lead researcher). It helped participants understand the purpose, duration and value exchange associated with the data sharing. It showcased one pathway through which people could actively consent to sharing their data with a Data Recipient (First Home Guide).

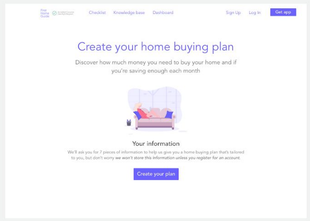
This flow was designed using the Consent-Based Data Sharing Design System (v.01) from pre-phase work.

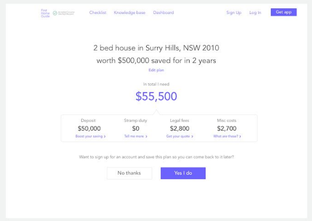
This is the experience we presented

Scenario and Value Proposition

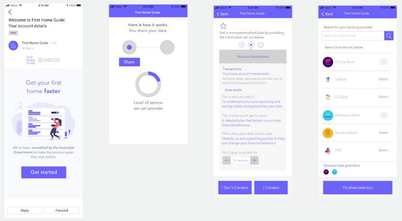


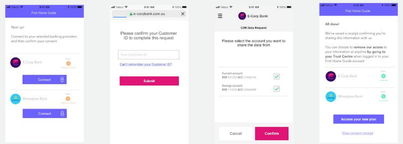




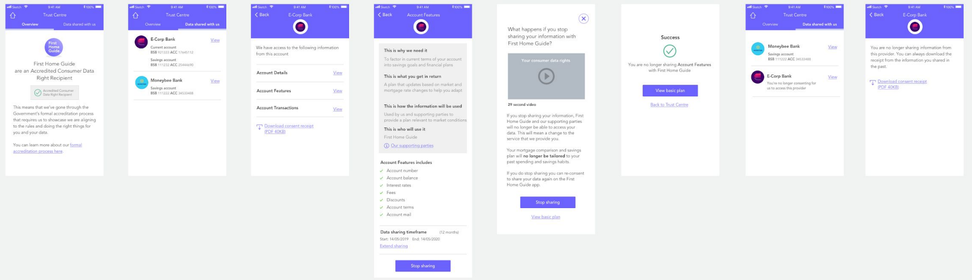


Consent and Connect

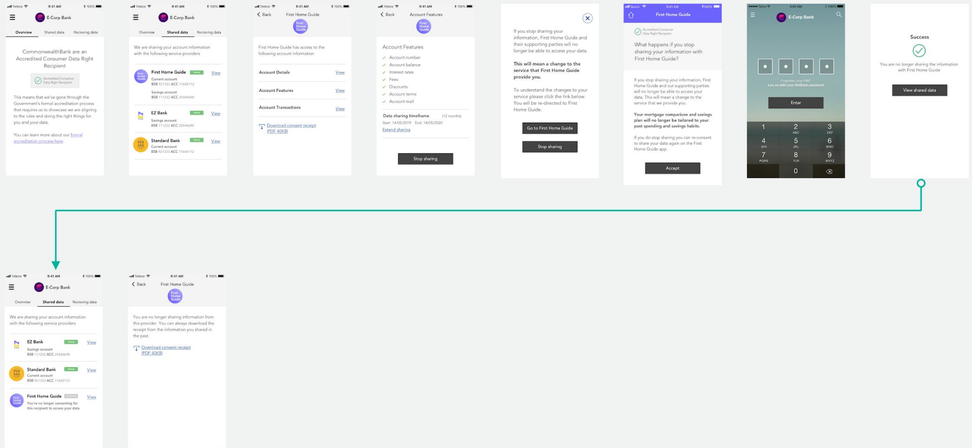




Data Recipient



Data Holder



Round Two Research Participants

10 participants exhibiting existing behaviours that 'may' lead to Open Banking early adoption

Behavioural

1. Looking for a home loan or had recently acquired one
2. Use banking apps at least once per week
3. Use finance platforms such as Poketbook/PokitPal/MoneyMe (*non-mandatory*)
4. Considered investing in equity crowdfunding in the past 24 months (*non-mandatory*)
5. Bought bitcoin or other cryptocurrency in the past 36 months (*non-mandatory*)
6. Used a VPN in the past 18 months (*non-mandatory*)
7. Preferred browser and search engine (*non-mandatory*)

Demographic

1. 7 x Male, 3 x Female
2. Aged 23 to 33
3. Bachelor qualified at minimum
4. 8 full time employment 2 Self Employed
5. In a defacto relationship or married
6. Earn at least $86,000 AUD (Gross) annually

Geographic

1. 8 Residing in Sydney, 2 residing in Bathurst NSW

Rationale behind criteria

1. To develop an early point of view of the types of people that might be ***more likely*** to ***actively adopt*** this new way of data sharing
2. Conduct research with people that had characteristics ***relevant*** to the use case and ***value proposition***

Georgie

- Age 25
- Executive Assistant
- Married with 7 month old
- 3 bank accounts
- Weekly online banking
- Has used Finch, MoneyMe and EasyShare

Tim

- Age 32
- Art Teacher
- Defacto
- 3 bank accounts
- Weekly online banking
- Has bought bitcoin and interested in cryptocurrency

Sally

- Age 30
- Social Media Manager (Own Business)
- 1 bank account (loyal)
- Married (planning family)
- Weekly online banking
- Actively manages her privacy permissions on phone

Bob

- Age 35
- Software Engineer
- Married with 6 year old and expecting second child
- 2 bank accounts
- Weekly online banking
- Uses Beemit and Apple Pay

Harry

- Age 34
- Business Analyst in IT
- 2 bank accounts
- Subscribes to investment newsletters
- Weekly online banking
- Bought bitcoin and other cryptocurrencies

Mark

- Age 33
- Compliance
- 5 bank accounts
- Looking to purcahse property for investment
- Weekly online banking
- Uses Stockspy and interested in stockmarket

Trent

- Age 30
- Sports Coach (Own Business)
- 3 bank accounts
- Bought crypto out of fear of missing out
- Has used Pocketbook
- Uses VPN

Luke

- Age 25
- Human Resources
- Married (planning family)
- 4 bank accounts
- Weekly online banking
- Has used many fintech apps but never found one useful

Richard

- Age 40
- Salesperson
- Married (planning family
- 1 bank account plus 1 joint account
- Weekly online banking
- Leaves financial management to wife

Lisa

- Age 34
- Retail Management
- Married (expecting)
- 2 bank accounts
- Interested in investing and portfolio management

Round Two: Consumer Centric Consent Management

Scope of prototype

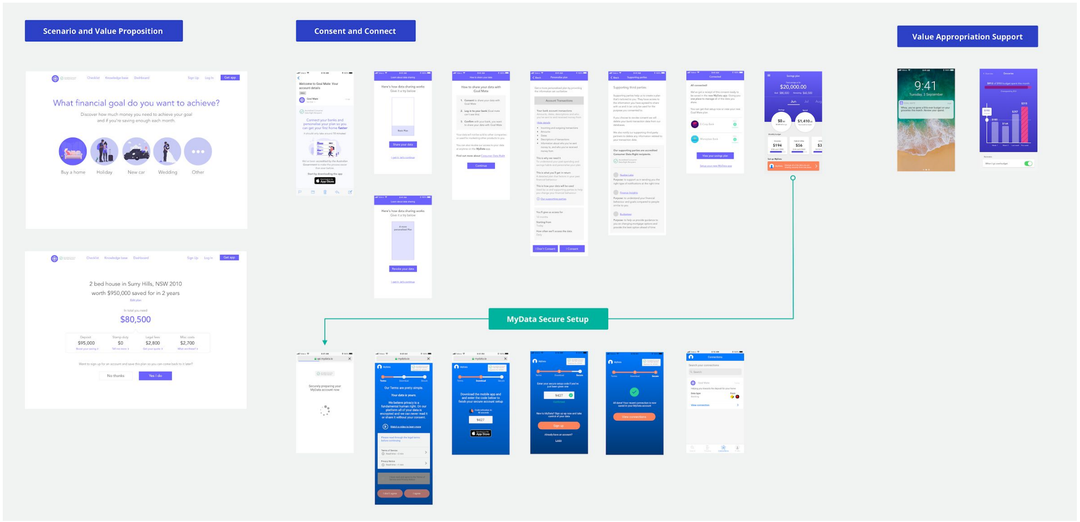
The prototype developed for Round 2 exploratory research focused on a single view consent management dashboard called MyData. We added to this an upfront value proposition (Goal Mate) and also incorporated consent, authentication and authorisation into the flow.

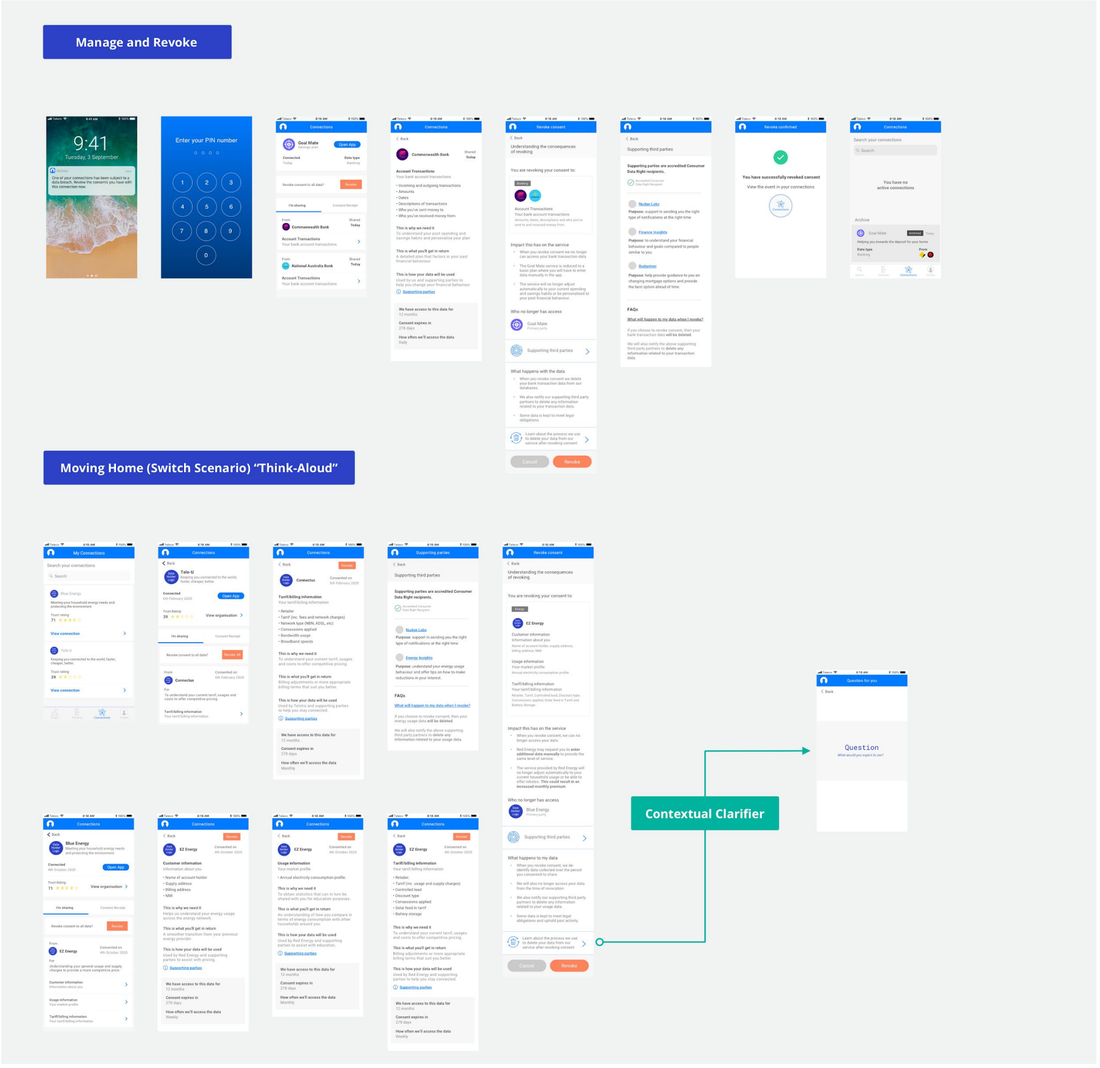
The value proposition, consent, authentication and authorisation components were guided walkthroughs (conducted by the lead researcher). This helped participants understand the purpose, duration and value exchange associated with the data sharing activity. It showcased an alternative pathway through which people could actively consent to sharing their data with a Data Recipient (Goal Mate). Secure setup to MyData and a secondary interaction with the Data Recipient (Goal Mate) was also guided. This was followed up with unimpeded outcome focused usability. It was then supported by contextual inquiry.

Later in the session participants engaged in a “Think-Aloud” activity. This activity simulated a moving home and switching provider (Telco and Energy) scenario. It concluded with participants interacting with a potential future version of the MyData app (cross-sector, economy wide). Both activities were supported by visual aids to enhance conceptual understanding.

As with Round One, this flow was designed using the Consent-Based Data Sharing Design System (v.01) from pre-phase work.

This is the experience we presented





Research findings

Round 1

Key findings 1 of 2

Theme 1: I have limited choice and power

Participants were asked to describe how much control they felt they have when sharing their data. On a scale of 1 - 7 (1 being “no control at all” and 7 being “complete control”), the average was 4 (surprisingly high).

Through further contextual inquiry, it became apparent that participants rationalised the current state of information sharing. In other research this ***continual disempowerment has been described as leading to a state of apathy*** and indifference. As a result, contextual inquiry revealed a feeling of limited power and minimal choice (a tradeoff fallacy).

“I've probably given out all of my personal life to a random website already. So I think how much control I have is probably minimal.”
Keith

“I probably would like to have a little bit more to feel like you're not being spied on all the time, it would be nice. But, I guess, that's, once again, just gonna happen. You can't stop it.”
Chris

“If I read deep enough about data confidentiality, I would have more of an answer. But at this point I'm not that aware.”
Ian

“You can choose not to give away your data, but you can't choose to take your data back once someone has it.”
Nina

Theme 2: It’s just how it is...

Some participants felt they weren’t sharing much about themselves online. Further clarification, whilst discussing products and services like Facebook or a home loan application, ***revealed an ‘Aha!’ moment about the extent of data sharing*** participants weren't previously conscious of.

As described on the previous page, early discussions revealed minimal concern and ‘passive acceptance’, “... it’s just the way things are”.

Participants (to an extent) sympathised with the organisations processing their information. This, as above, was in recognition to the way things work today.

“I think I should be more aware of the information I give out. But I think in today's day and age it's pretty easy to actually get information because you just fill it up and you don't think about it anymore.”
Claire

“For me personally I don't think it's a big concern showing my data. I think it's already out there for everyone to see. So I'm not that fussed.”
Keith

“That's the way society has gone, so you just gotta roll with it and accept it, and that's the way it's going to be.”
Chris

“I guess I asked more questions in my head, and said them out loud, than I thought I would in a situation like that because I do care about how my data is used.”
Edith

Key findings 1 of 2

Theme 3: I don’t understand why

Participants explained their understanding of the need to share information in exchange for services. Yet the extent of data sharing was questioned regularly, “why do they need to know so much about me?”

“It's a bit annoying - you can't just order a pizza... you have to log in, create an account, enter your birthday, your phone number... Why do they need all this information for just simple things? They want to know everything about you and everything you do. It's a bit of a turnoff.”

Nina

“You need to share so much if you're buying something online. You need to share your address, your full name, your date of birth...”

Keith

“There's things like this Cambridge Analytica with Facebook and everything like that, and even just social type of data or who you're connected to or what you're interested in. It's not necessarily just your finances. It's everything about you.”

Jim

Theme 4: It’s just how it is...

Imagining a different way is challenging. Participants, both actively and when guided by contextual enquiry, struggled to articulate a clear view of how things could change.

The ideal state - a humanity centric information society - is not something that will be defined explicitly by consumer populations.

Why?

Most people think in terms of linear progression. They overestimate the impact of short term change and underestimate the impact of long term change. This makes an exponential growth curve (enabled by compounding effects) hard to envisage.

Throughout the research, participants were asked to clarify their ‘ideal state’ for data sharing. Indifference, second guessing and disbelief was not explicit in dialogue. It was, however, implicit in responses and body language.

This ‘feeling’ towards the extent of data sharing activities is supported by existing bodies of research globally.

Metrics

Throughout this program, we focused on two distinct metrics:

1. ***Time to Manage:*** The time it takes someone to navigate, understand and act on a management function, and
2. ***Time to (Informed) Revocation:*** The time it takes someone to navigate from their home screen, understand the consequences of their action, act upon their intent and receive a confirmation that revocation has been successful

These 'metrics' are considered 'proxy metrics'. We did, wherever possible, simulate situational context and real life use. But, this was a simulated activity. The confidence interval of results should be discounted appropriately. This program helped us learn. It is not enough to define what should be. Further research is required. ***Hypotheses need to be framed and tested in a more effective setting*** that enables qualitative and quantitative evidence across attitudinal and behavioural dimensions to be established.

These metrics were established using a consistent process where each participant engaged in outcome focused, unimpeded usability using a mobile device. 5 participants used the data recipient dashboard and the other 5 used the data holder dashboard.

It's important to note that comprehension is largely subjective. We determined comprehension (accuracy of information recall) using the following parameters:

1. The consequence of revoking consent
    a. Service changes from First Home Guide
2. The data that participants stopped sharing
    a. Cluster level and granular detail
3. The parties that no longer have access
    a. Primary party
    b. Supporting parties
4. What happens to the data once consent is revoked
    a. Expectations of process

Results

The outcome in focus

"After hearing of the First Home Guide Data Breach, you decide you want to remove First Home Guides access to your data."

6 participants had the task below: *Remove First Home Guide's access to your Commonwealth Bank Data.*

	Time to manage (all 3 clusters)	Time to informed revocation
Anthony	0:00:30	0:02:12
Chris	0:00:28	0:02:17
Sue	0:00:34	0:02:06
Kate	0:01:45	0:02:24
Ian	0:01:03	0:02:38
Keith	0:01:14	0:03:02
Median	0:00:48	0:02:20

4 participants had the task below: *Remove First home Guide's access to your Commonwealth Bank Data and understand the consequences of doing that.*

	Time to manage (all 3 clusters)	Time to informed revocation
Nina	0:00:50	-
Jim	0:00:53	0:01:46
Claire	0:02:20	0:03:07
Edith	0:01:07	0:01:48
Median	0:01:00	0:01:48

As a result of the framing for the first 6 participants, we observed a rushed approach to stop sharing, which resulted in participant's backtracking to better understand consequence. This phenomenon is known as "inattentional blindness". It is observed consistently in social sciences research globally.

For the remaining 4 participants, the lead researcher reframed the description of the tasks. This served the purpose of highlighting the ***importance of consequence****. As a result, we observed* ***increased time to manage*** *yet* ***decreased time to informed revocation****. This is a significant insight worth exploring in further research.*

This also highlights a key challenge and opportunity for the CDR ecosystem: How to define and support consumer understanding of consequence. Without this, an informed and empowered consumer population is unlikely.

Behavioural Design: B=MAP

To better understand the likelihood of sustained behaviour change, we employed the BJ Fogg Behaviour Model.

Specifically, we asked:

1. On a scale of 0 - 7 (0 being the lowest and 7 being the highest), how motivated were you to stop sharing your data with First Home Guide? And
2. On a scale of 0 - 7 (0 being the lowest and 7 being the highest), how capable did you feel to stop sharing your data with First Home Guide?

Using the BJ Fogg model, we're trying to develop an understanding of:

1. People's motivation
2. People's current abilities, and
3. How effectively the prompt worked

The results? Both motivation and ability was high. The prompt worked.

What this meant was that the idea of a data breach (as an external prompt) was highly motivating to participants.

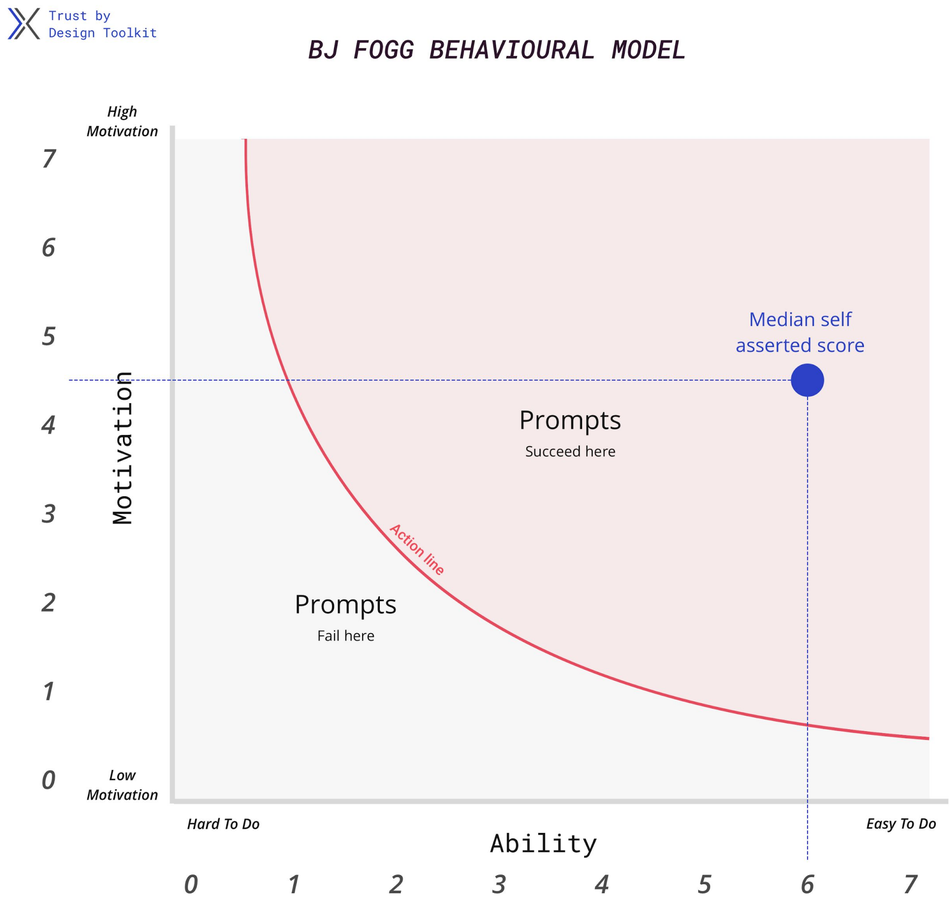
However, the inference that people are highly motivated (intrinsically and by the prompt) and able to complete the task with relative ease (i.e high ability) should not be directly transferred to all aspects of the CDR ecosystem.

Our participants were adept technology users. They were all university educated. This was a simulated environment in which people were paid for their participation.

The ecosystem should be designed to be successful, even when consumer motivation is low, external prompts are somewhat ineffective and people feel less than able to complete tasks with ease.

Given this, we advocate that behavioural design factor into the ongoing development of the CDR Ecosystem. Specifically, it should factor into the systematic approach to collaboration and experimentation.

This matters because we do not want a repeat of something like GOV.UK Verify. This initiative was costly and has achieved little in terms of positive impact to date (when compared to its ambition of 20m users). We want to develop an ecosystem that positively contributes to society and our economy. We want to develop propositions that help people realise valuable, meaningful and engaging lifestyle outcomes. We want to help people live their best possible life in more effective, technology supported ways.



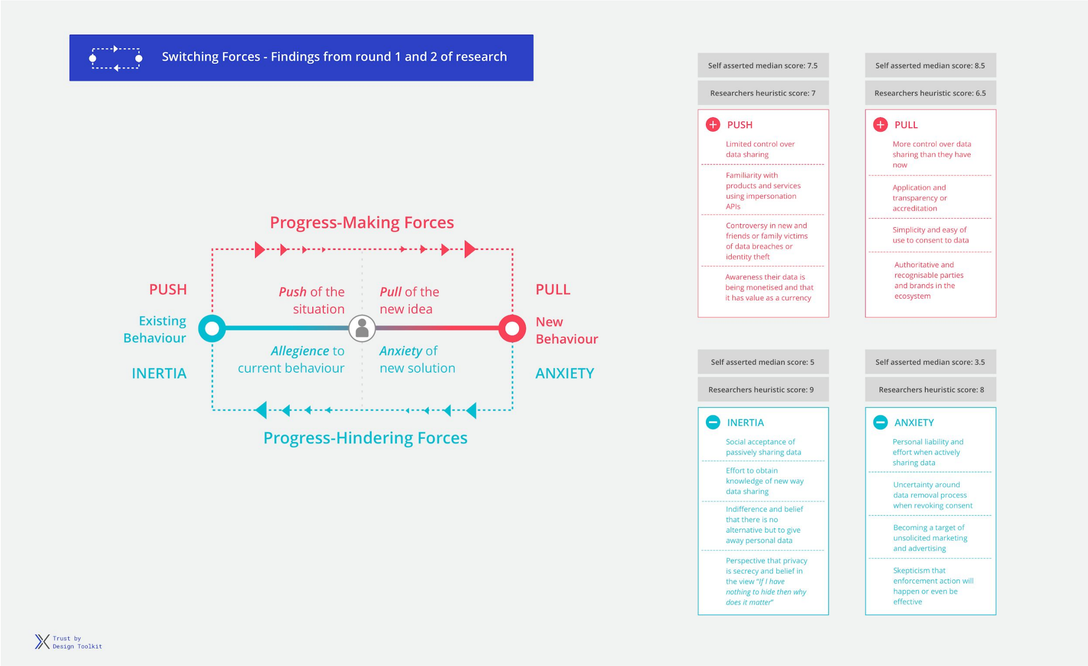
Behavioural Design: Switching Forces

The CDR Ecosystem is not agnostic. It intends to empower individuals, whilst fostering meaningful innovation and competition. ***To achieve these outcomes, people will need to change their behaviour***.

Given the sociopolitical context and prevailing consumer behaviours, we employed the Switching Formula and Switching Canvas from our Trust by Design Toolkit. We did this for two reasons:

1. To deepen our understanding of the forces impacting people's willingness to do something new, and
2. To begin framing hypotheses about how the CDR Ecosystem might amplify the progress making forces and counter the progress hindering forces

Our qualitative analysis revealed distinct forces. These forces can be amplified or countered.

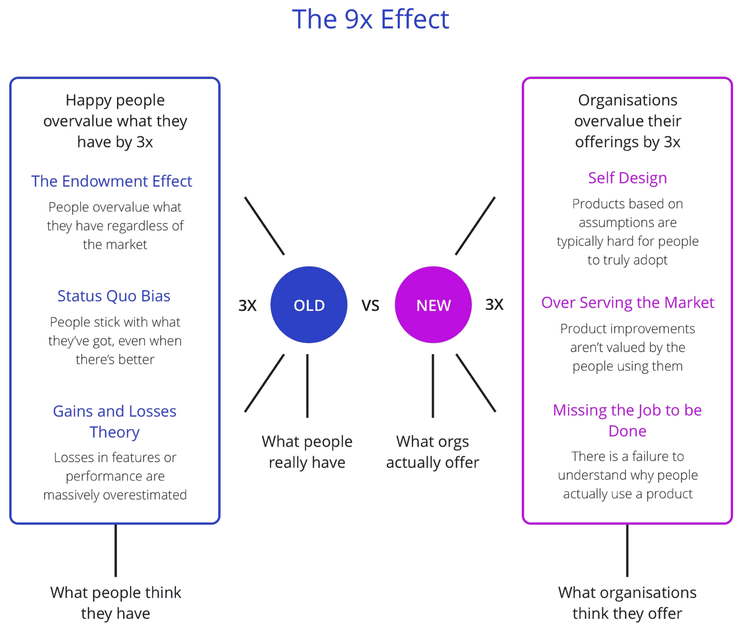


It's important to note the distinction between self asserted scores and the researchers scores. To develop the researchers scores we situated the self asserted score into a broader context.

Specifically:

1. Participants body language
2. Distinct pauses and lines of questioning
3. Specific commentary
4. Further revealed preference, and
5. Our experience and other bodies of established evidence globally

At present, ***the way things are*** and the way many data sharing initiatives are being designed, ***results in progress-hindering forces overcoming progress-making forces***. People aren't willing to switch. In fact, the behavioural economics theory, the 9x Effect, does a decent job of articulating why.



This is a critical perspective. For the CDR ecosystem to empower people and foster innovation and competition, it must design to amplify progress-making forces and effectively counter progress-hindering forces.

Lessons learned

Lessons Learned

Lesson 1

Anxiety forces were the most prevalent of the four switching force quadrants. As a result, we wanted to explore how evolved design patterns and specific messaging might amplify progress making forces and counter progress hindering forces.

Our success metric: ***Increase self asserted median difference score to >4***.

Lesson 2

We also learned that people became ‘caught up’ on the idea that First Home Guide was all about mortgages (rather than helping an individual or family achieve a highly valued life goal). Although this didn’t accurately reflect the intent of the proposition, it made value appropriation harder than it should have been.

Lesson 3

After reviewing the first ten research session in depth, we realised there was an opportunity to deepen our contextual inquiry to learn more about the attitudinal and behavioural dimensions likely to impact adoption and sustained use.

Lesson 4

Without visual prompts and deep guidance, participants struggled to understand how CDR might evolve beyond banking. This made it difficult to understand how participants felt about the potential future of the Australian Digital Economy and how they might desire to participate in it.

Lesson 5

More tactically, we chose to refine our research script to ensure focus metrics were measured as consistently as possible. We also challenged ourselves to mitigate specific logistical (i.e. slow Wifi, switching between devices etc.) risks wherever possible.

Research findings

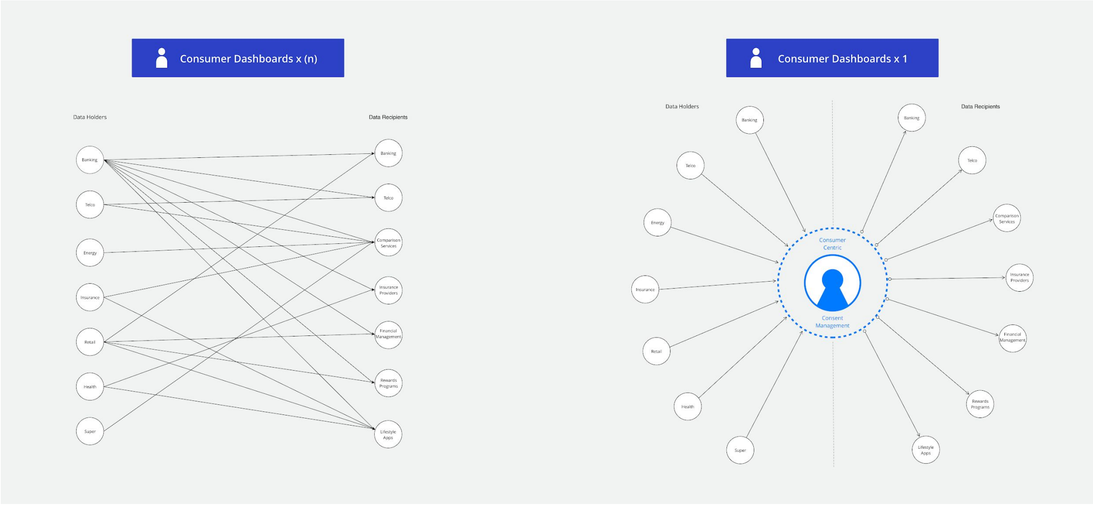
Round 2

Round Two: A (future state) dashboard that is centrally accessible to consumers

Scope of prototype

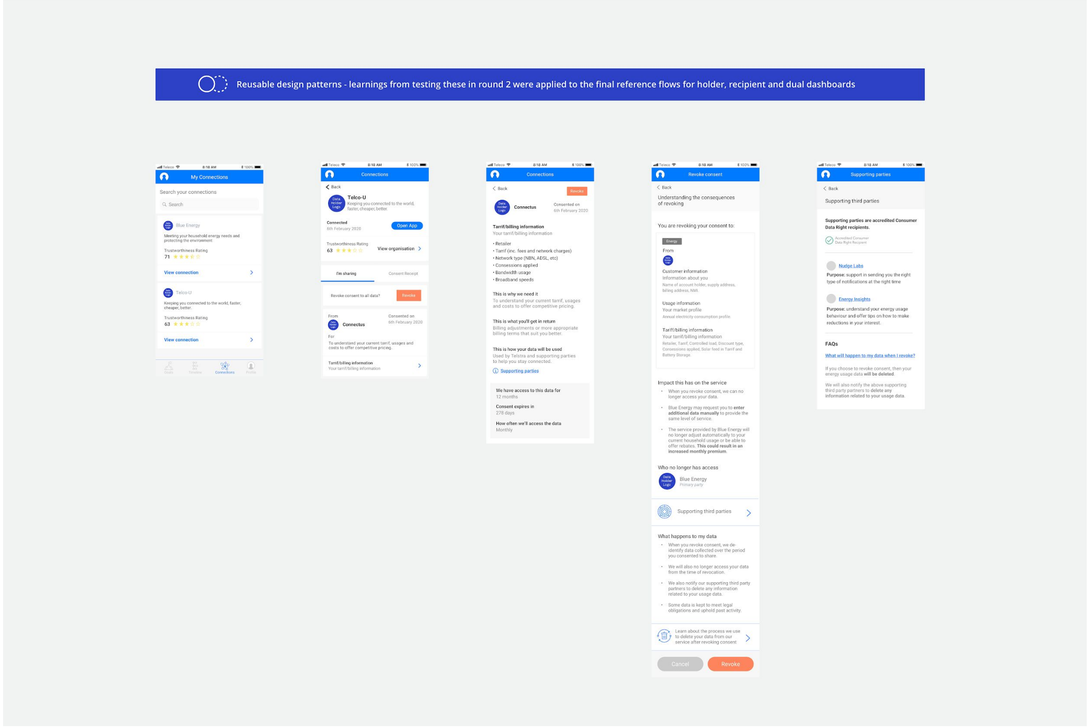
Existing bodies of research consistently demonstrate that individuals manage hundreds of online accounts. Although not all of these are 'active' or 'meaningful' brand relationships, this is a significant cost (time, attention, opportunity etc.) for individuals.

When looking to the cross-sector, economy wide future scope of CDR, individuals will have the opportunity to manage consent-based data sharing interactions with tens, or potentially even hundreds of organisations. Doing this via a Data Recipient and Data Holder dashboard model does not scale. The burden being pushed to the consumer is significant.



With this as our backdrop, we designed a prototype that simulated a potential future state. In this future consumers have access to a mobile app that enables them to manage multiple value exchange and data sharing relationships from the one interface. We referred to this app as MyData.

Not that we're a brand agency, but participants really like this ;)



Although we focused on the types of applications that might support a more mature CDR Ecosystem, the User Experience Design Patterns used to develop the MyData experience can be applied to different architectural contexts. More simply put, the UX remains relevant to the Data Recipient and Data Holder Dashboard model. The final prototypes and flows reflect this.

In addition to designing a prototype that simulated a potential future model, we focused our efforts on value proposition design. First Home Coach, the proposition from Round 1 research, resulted in research participants becoming too focused on the home loan aspect of the experience and outcome. For Round 2 we developed Goal Mate, a service that helps individuals set, track the progress of and realise their lifestyle goals. These are the types of new and competitive propositions the CDR ecosystem can enable.

Key findings 1 of 3

Insight Themes: The state of data sharing today

Throughout Round Two research, the same core themes emerged.

1. I have limited choice and power
2. It's just how it is
3. I don't understand why, and
4. I can't imagine that

These themes are consistent across different geographies. However, given the simulated context and future state prototype presented to participants, additional and potentially more nuanced themes emerged.

Theme 5: Empower me...? I'll believe it when I experience it

CDR proposes to empower individuals with new rules, protections and tools to control how their data is accessed and used. However, given the current state of the information economy, this is met with a dose of healthy skepticism and genuine curiosity. There is a desire to be shown, not just told. Participants expressed the desire for genuine control.

Specifically, when presented with a more mature CDR ecosystem (where a consumer might be engaged in many data sharing relationships across industries), participants became concerned that the parameters of data sharing (defined via the ecosystem rules and technical standards) weren't actually within their control.

"I don't feel that's empowering at all. I feel that's more like stalking."
Lisa

Through further contextual inquiry, Lisa in this case, was asked how she'd feel if she was able to define the terms (specifying a specific data processing duration as an example) of the consent-based data sharing experience herself.

"I think that's empowering, and that makes me feel like I'm the priority, as opposed to the company trying to get as much information as possible. Because sometimes I honestly doubt whether they're putting my best interest first, or is it so they can make an extra dollar."
Lisa

Theme 6: This is a lot to take in. I'd appreciate help

A visual aid was used to show the progressive and complete rollout of CDR across sectors. Participants were adamant this would be complex and overwhelming to participate in. The prospect of managing many data sharing relationships via numerous interfaces was too much work. Participants expressed concern they'd even remember who they were sharing data with and how to manage that relationship.

The single view concept of MyData seemed to be an obvious solution to all participants.

"It looked very confronting when you had all the kind of lines going everywhere, but then the fact that My Data app is meant to help with those logistics like to any old person that would just seem so confusing. Like thinking of my parents, they would have no idea how to control their own data. So something like that would help dramatically."
Luke

"I don't know, because it doesn't really exist at the moment, so it seems quite complicated, that is maybe because I haven't got to think. I have never used an app that deals with this kind of thing in the first place anyway. I like the idea of it and it does seem like it is in my interests, not the company's interests."
Tim

"MyData being basically my hub where I sit there and go okay I've given Commbank access or I've given NAB, ING et cetera. And I can revoke that at anytime, I like the idea that it's all there in one place and I can sit there and go oh you know, NAB's had a data breach scandal or you know Commonwealth is being done for something and I'm a bit off them. I don't trust that organisation anymore I'm going to pull everything from them because I don't think they're particularly safe, that's a good idea in that regard."
Mark

"I think the fact that it is in one place is good because it's very easy to manage, it makes it easy."
Mark

"If it is as I see it and it's as I see it be a piece of cake, six or a seven [out of 7] easy, it's all there. It takes the effort of jumping on to someone's website and going, okay log into the account and having to go find this part and if it's all there and it's a click of a button yeah it's pretty straightforward... It certainly gives the, the way it's illustrated it certainly gives the impression that you are in control. So I'd say that'd be like if everything works as it's supposed to, yeah absolutely, it looks like a slam dunk."
Mark

Key findings 2 of 3

Theme 6: This is a lot to take in. I'd appreciate help (Cont...)

Interestingly, during Round 1 research (Data Recipient and Data Holder model) participants expressed concern relating to the difficulty of managing multiple data sharing relationships. They didn't get to experience a MyData prototype, however, the stated preference for managing such relationships via one interface became clear, even intellectually.

We've called this out to highlight the overwhelming preference towards this model.

"I guess I would not have any idea where to start if it was the case that telcos, and energy companies, and you know, doctors, and you know everyone sharing information, I wouldn't really know where the source of truth was if I needed to update something. Whether it was an inaccuracy being reported between two different bodies...I guess in an ideal world that would be nice to see where I've given consent for things that I probably don't even realise I've given consent for in the past. And it would be nice to think that, yeah in the future there would be somewhere where I could manage those relationships."
Edith

"Well hopefully it's just an app or something that you can see like that, who you shared with, or who's receiving or sending data. I mean you can just change it through the app... One central point like a 1Password."
Keith

"I guess everyone's just busy and I guess that's probably one of the last things on their mind at the end of the day, who I've shared my data with, and when you can just go to a one-stop shop, and you can see in front of you for an app. Everyone's on their phone, always. It's a control."
Keith

Theme 7: Who can I trust?

Confidence that ecosystem actors would act lawfully and in the best interest of consumers was questioned. In fact, the recent Royal Banking Commission was referenced by participants a number of times to illustrate this point. There was even skepticism that regulators would deliver appropriate enforcement.

"Yeah I mean they're [APRA and ASIC] two fairly useless organisations in reality but yes, I mean there has to be some sort of implicit trust in somebody, I'm going to entrust a government of this country more than a private organisation that could be owned out of Korea"
Mark

"Because if you can't trust the government who the heck are you going to trust?"
Sally

"I think things like the Royal Commission only solidify that [shareholder primacy]. Yeah. There are major issues, and customers aren't put first."
Lisa

Key findings 3 of 3

Theme 8: The Aha! Moment

Aha! Moments are a beautiful thing. However, we didn't approach this research expecting to consistently experience them. Instead, they unexpectedly surfaced close to the end of each of the first three research sessions during Round 2. After observing this trend, we altered the session design with the intent of arriving at this moment faster.

This Aha! Moment came about as a result of the simulated situational context. People were concerned by the complexity of actively managing so many relationships. They understood this would take unnecessary time and effort.

We're defining this as the moment participants realised why the MyData app existed. It was to empower them and make their participation in the CDR ecosystem safer, simpler and more effective.

"Well then, we need the MyData app for that."
Sally

"Now I understand [why] the MyData app [exists]."
Anthony

"Very confident. I love it."
Harry

"Because it's perfect transparency that I want to have in terms of who and how my data is used, and the value I get out of it. Yeah. So that's the transparency and control that you have. So, if you see something that you don't like, and you forgot that you gave them access or anything, so you can... Yeah, and it actually helps you manage your life as well. You can see how your data is being used and how it is helping you. Yeah."
Harry

From here we were able to deepen our understanding (through contextual inquiry) of the preference people associated with such a potential future model. Although far different from today, participants clearly preferred this model. This is evidenced through the self asserted switching scores (see below) and inferred through specific comments (as above).

Theme 9: I want to be in control

Consumers ability to control how they participate in the CDR ecosystem is critical. It's a determinant of success.

At the start of each research session we asked every participant a series of questions about data sharing:

1. What does data sharing mean to you?
2. Who do you currently share your data with?
3. How much control do you have over how and with whom your data is shared?

For the most part participants articulated that data sharing related to information they explicitly shared, like entering information into forms. They also clearly expressed they lacked control over these activities.

To deepen our understanding of this we used a Likert Scale (1 - 7). We asked, "How much control do you think you currently have when sharing your personal data?"

For both rounds of research, the ***median was 3 (out of 7)***.

"I've probably given out all of my personal life to a random website already. So I think how much control I have is probably minimal."
Keith

I could say I have no control at all. Because it's very hard to demand and have an evidence, even if you ask to delete your data, it's... I would say it's almost impossible to receive a new evidence that they have delivered your data."
Harry

Then, at the end of each session we asked the same question again. Only this time the question and answer related to the prototype the participant had engaged with throughout the session.

In Round 1 (Data Recipient and Data Holder model) the median was 5 (out of 7). This showcased clear uplift. Participants felt like they had more control.

"I'd probably still give it a 5, though. So it's like I'm not really fussed about what kind of information gets out there, but I'm also ... I would really love to actually have a little bit of control over it."
Anthony

In Round 2 (MyData model) the ***median was 7 (out of 7)***.

"Very confident. I love it."
Harry

Metrics & Results

As with Round One, we focused on two distinct metrics:

1. ***Time to Manage:*** The time it takes someone to navigate, understand and act on a management function, and
2. ***Time to (Informed) Revocation:*** The time it takes someone to navigate from their home screen, understand the consequences of their action, act upon their intent and receive a confirmation that revocation has been successful

These 'metrics' are considered 'proxy metrics'. We did, wherever possible, simulate situational context and real life use. But this was a simulated activity. The confidence interval of results should be discounted appropriately. More specifically, they should serve the purpose of furthering the discussion amongst key CDR stakeholders. They should not be considered final or immediately implementable.

These metrics were established using a consistent process where each participant engaged in outcome focused, unimpeded usability using a mobile device. All participants were presented with the same task focus and prototype.

It's important to note that comprehension is largely subjective. We determined comprehension (accuracy of information recall) using the following parameters:

1. The consequence of revoking consent
    a. Service changes from Goal Mate
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Behavioural Design: B=MAP

To better understand the likelihood of sustained behaviour change, we employed the BJ Fogg Behaviour Model.

Specifically, we asked:

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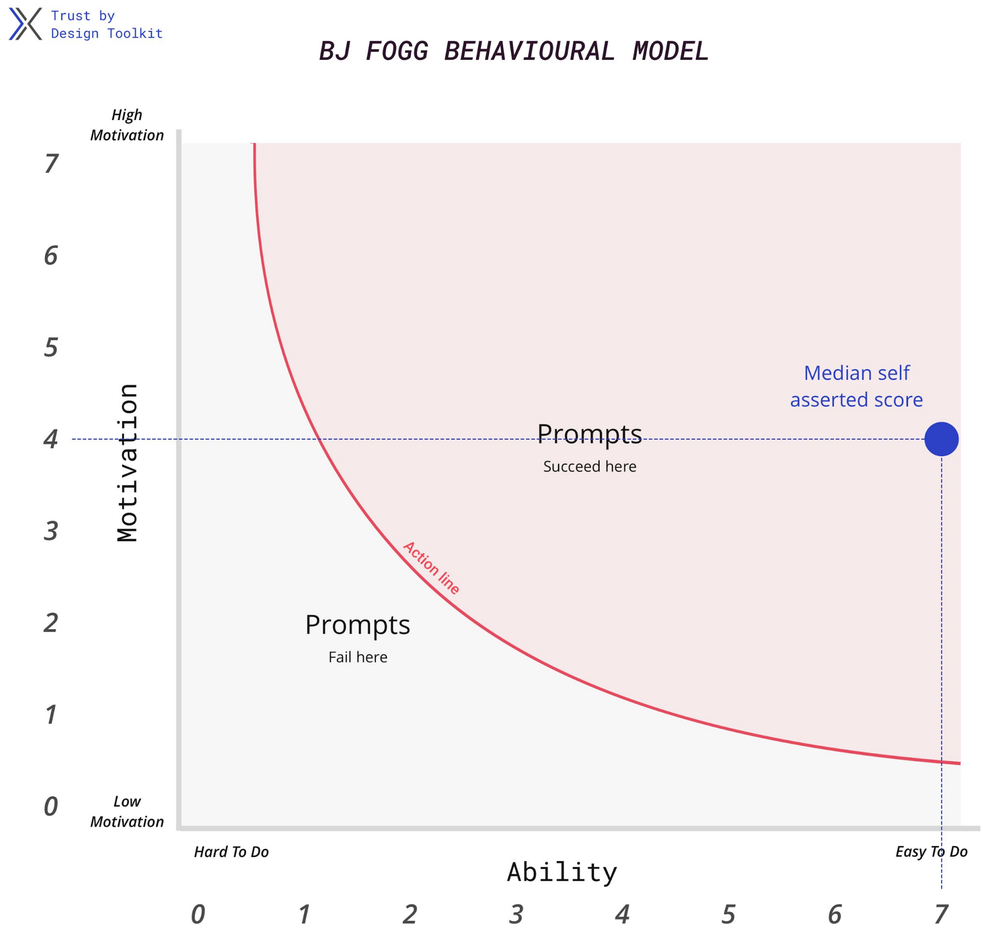
Using the BJ Fogg model, we're trying to develop an understanding of:

1. People's motivation
2. People's current abilities, and
3. How effectively the prompt worked

The results? Both motivation and ability was high. The prompt worked.

However, as was articulated above in relation to Round One research, this needs to be put to the test in a variety of different ways. The ecosystem cannot be designed based on assumptions that people are highly motivated and easily able to participate.

As referenced earlier, we believe that specific behavioural design methods can be included in the iterative ecosystem design process. They can help frame hypotheses that can be put to the test in larger, more robust research programs.



Behavioural Design: Switching Forces

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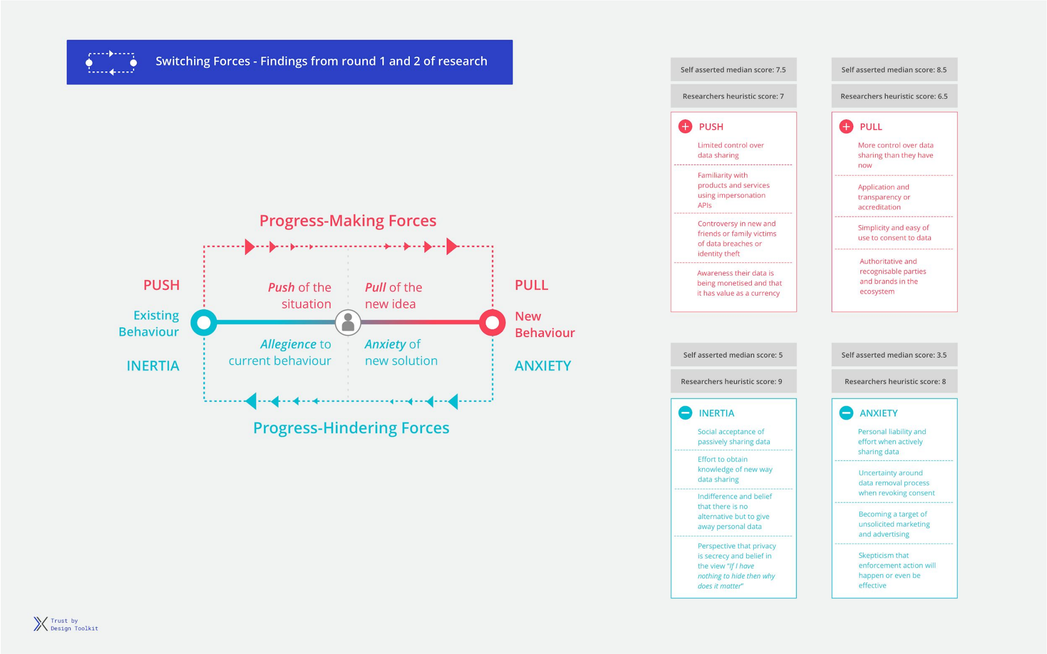

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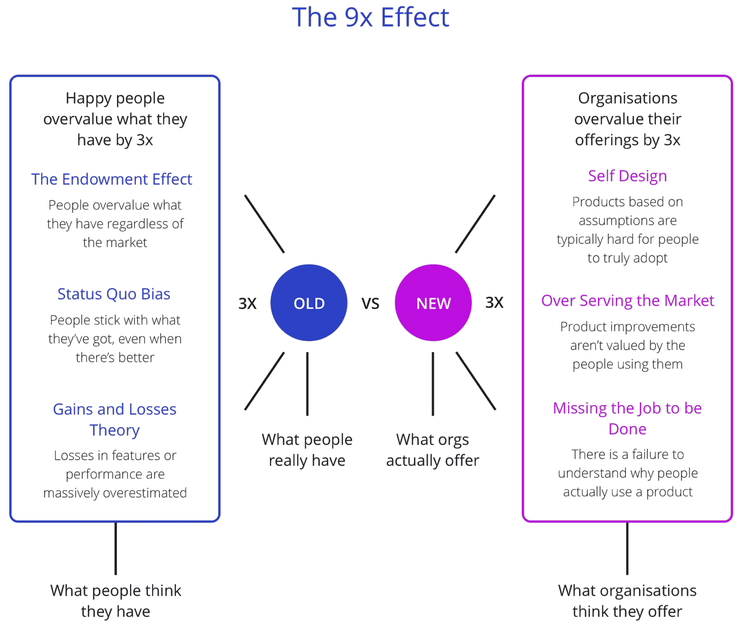


This is a critical perspective. For the CDR ecosystem to empower people and foster innovation and competition, it must design to amplify progress-making forces and effectively counter progress-hindering forces.

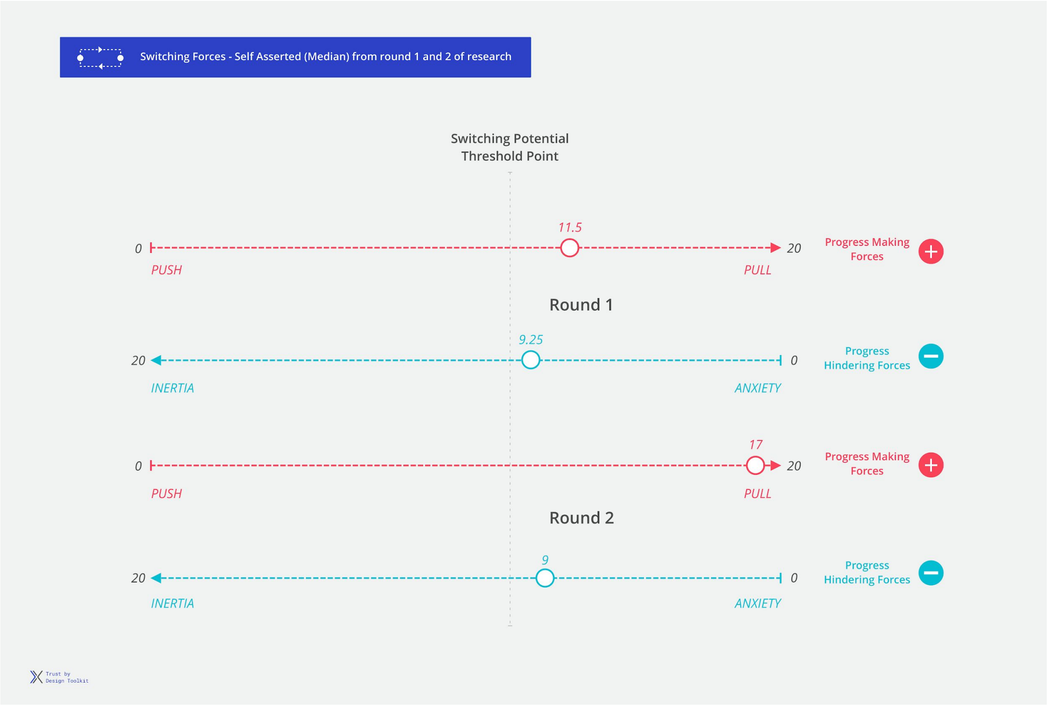
Comparing the dashboards

Comparing the dashboards

"Well then, we need the MyData app for that."
Sally

This quote from (pseudonym) Sally succinctly summarises the perspective shared by participants throughout the second round of exploratory research. When projecting out into the future, and imagining the ways in which they will interact with different organisations requesting access to their data, participants felt overwhelmed. It became 'obvious' that a single access point for consumers to actively manage their participation in the CDR ecosystem was needed.

This can also be evidenced through the self asserted switching scores.



Building upon this further, there are a variety of arguments that can be made to support dashboard a model that is more empowering for consumers. This could come in the form of:

1. ***Productivity:*** Less time spent thinking about and managing data sharing relationships
2. ***Wellness:*** More time spent realising the benefits of an innovative information society, or
3. ***Any other highly valued outcome*** or experience we decide to 'measure'.

Recommendations

For early CDR implementation

Recommendations Overview

We recognise the entire ecosystem intends to move quickly towards implementation of the CDR framework. Given this, we've specified a series of recommendations that have the potential to increase the positive impact of CDR for early participants (individuals and organisations).

Gaps and Limitations

In our initial response to Data61's RFP, we called out the challenges associated with such a program of work. Namely:

1. The breadth and depth of scope, particularly given time constraints
2. The sociopolitical context including elections and other initiatives, such as the highly controversial Access and Assistance Bill
3. The accelerated pathway to implementation, and
4. The limited reusability of previous CX related work

Wherever possible we applied mitigation tactics to ensure this program of work produced useful and actionable outputs.

To dive into the specific details, we've provided this Sketch file here. It contains a variety of relevant flows, Data Trust by Design metric testing processes and specific annotations to support the rationale behind design components and atomic symbols. It builds upon the report with further tactical details.

The outputs and perspective shared throughout this document do not necessarily represent the views held by the Data Standards Body or any government agency. The contents of this report will need to be reviewed and as such represent a range of possibilities and not the intended direction of the Consumer Data Right.

Recommendation 1

Make value appropriation possible (and easy)

As highlighted in our response to the RFP, value appropriation is crucial to the success of the CDR ecosystem.

Consent, as a lawful basis for data processing, is purpose driven. It requires organisations to clearly specify their purpose and limit their processing activities to the purpose that's been specified.

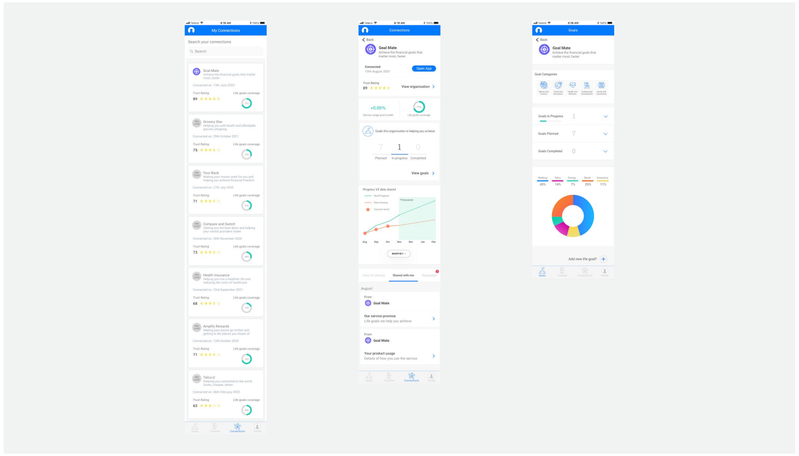
This raises an obvious question: ***Does the purpose of the data processing deliver value*** (a desired outcome), meaning (an outcome people assign high priority to at a given point in time) and engagement (fun throughout the process of attaining the outcome)?

Most 'consent notices' or consent-based data sharing requests today fall short of this objective. What we learned throughout this program, which is supported by our empirical body of evidence and existing academic research globally, is that people's willingness to actively share information is tied directly to the value they expect to receive in return. This is not the only force that influences a decision to willingly share information (when an actual choice is available). It is, however, the strongest.

Value appropriation, particularly from a consumer's perspective, needs to become both possible and easy. People need to:

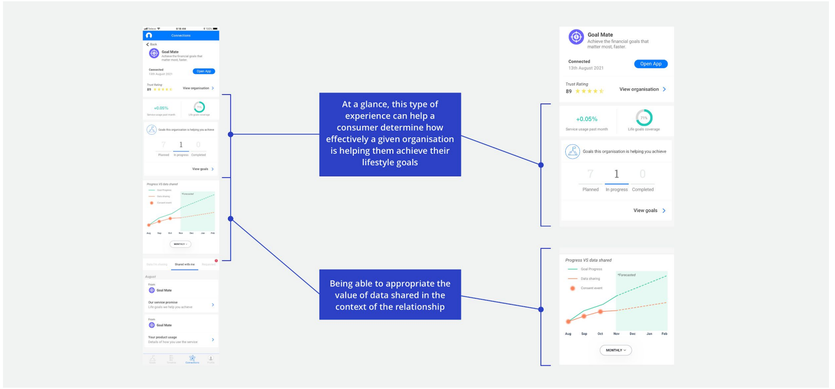
1. Understand the value proposal
2. Understand the activities (and thus, the effort) that are likely to lead to the value they seek being realised, and
3. Gain a dynamic view of the progress that has been made.

For the CDR ecosystem to thrive, value appropriation must be effective. ***Organisations must become adept at designing compelling value propositions that are enabled by this new form of data sharing***. They must be able to showcase how the data they are requesting is being used to deliver the value they promise.



This is a challenge and opportunity for organisations. It will require them to transition away from product and service design towards outcome design. They need to become adept at knowing what their customers care about and why. They need to focus their organisational structures on delivering these customer outcomes.

There were some interesting discoveries during Round 2 research that supports this perspective. Specifically, when participants were presented with a graph (within the UI) showing data shared vs goals achieved (a way to appropriate the value of data sharing activities at a glance), they became confused.



People were skeptical. They couldn't imagine organisations partnering with them to help achieve the things that matter most. This perspective felt strange and unfamiliar.

We dove deeper into contextual inquiry, really encouraging participants to imagine their preferred future state. In the end, participants agreed that, if it was actually possible for organisations to shift their focus towards lifestyle outcomes, they would feel supported and empowered. They felt companies could be held accountable. Their ability to control the information they shared would reinforce this new consumer power.

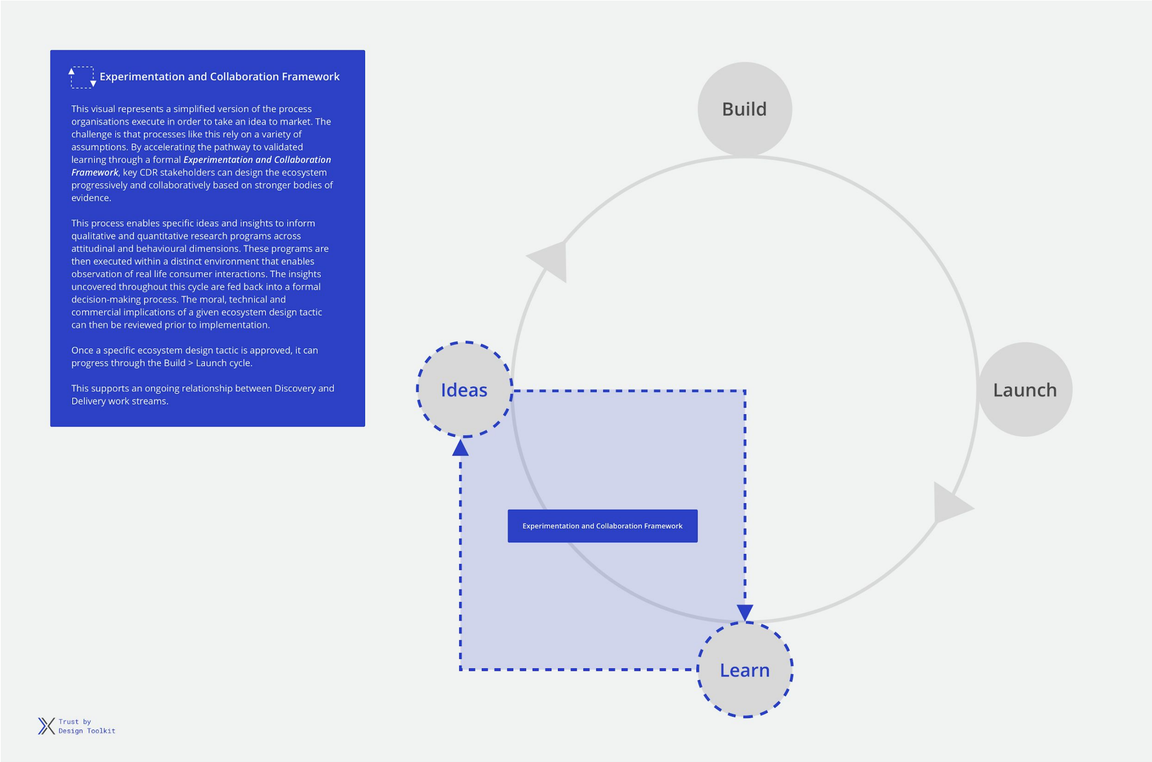
With an ability to easily switch providers, participants could "take their money elsewhere". This is a prospect that got people excited.

Recommendation 2

Progressively design the ecosystem through an experimentation and collaboration framework

Regulatory ‘sandboxes’ are common globally. They enable participants of new initiatives to learn, mitigate risk and prepare for formal market participation. A recent example of this is the Data Mobility Sandbox run by Ctrl-Shift in the UK. MIT’s ‘Living abs’ are another.

We are proposing a formal Experimentation and Collaboration Framework be developed.



This framework serves multiple purposes:

1. To evidence decisions with qualitative and quantitative data across attitudinal and behavioural dimensions
2. To support meaningful collaboration amongst ecosystem participants
3. To mitigate the inherent risks associated with new information sharing initiatives
4. To support the standards body and other regulators in actively observing participation dynamics and responding accordingly
5. To support a more effective pathway towards cost effective accreditation
6. To support organisations in working directly with consumers to define the types of ambitious propositions that will encourage switching and active consumer participation
7. To put specific tactics to the test, like CDR referrals that support consumers in encouraging their friends and family to learn more and potentially participate

Most importantly, such a framework will support active and diverse participation across the entire ecosystem. It will enable early adopters on both sides of the market (organisations and consumers) to practically experience new and unique propositions, whilst tackling some of the toughest challenges, like how to empower and protect the most vulnerable consumer segments.

Recommendation 3

Design the entire ecosystem for verifiable trust

Trust can be thought of rather simply as ***high confidence in the unknown***.

It's played a pivotal role in societal and economic development. But it's changing. Trust is at an all time low. In fact, people feel they have validated reasons to distrust. They've lost faith in the system.

In light of the Royal Commission, heightened awareness of privacy and data protection, and the broader sociopolitical context, the plot has thickened.

As we introduce something new, we are asking people to place their trust, not in the providers per se, but in the ecosystem (the rules, the standards, the protections and the guidelines that are collaboratively developed, tested/verified and iteratively implemented).

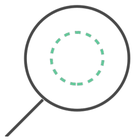
We're calling this out because trust in Consumer Data Right is far broader than Experience Design. Utilising patterns (components and atomic symbols) from a Consent-Based Data Sharing Design System will not guarantee high trust.

To design a high trust ecosystem, we need to design incentive structures that encourage ethical, verifiably (cryptographically and otherwise) trustworthy behaviours from participants. ***This requires active cross-functional collaboration from Government, industry, SMEs and the Australian people***. This requires meaningful public discourse.

Although not described explicitly this way by research participants, trust in the ecosystem consistently surfaced as a key barrier or enabler of active participation.

As described in the previous section, we recommend designing this ecosystem progressively and collaboratively. It is not possible to do this on paper. We must lead with an ambitious vision, frame hypotheses, put them to the test, learn and then implement our learnings together.

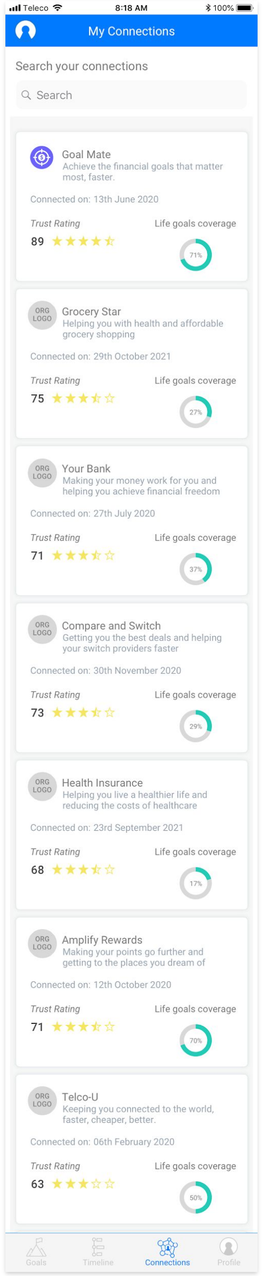
What's important to note is that, although trust matters and is a worthy pursuit, it may not be the outcome the ecosystem is designing for. Much of what used to require a 'trust leap' can now be verified. The ecosystem needs to prioritise designing for verifiable trust.



Verifiable trust is an ***independent, well evidenced (cryptographically and otherwise) and easily understood demonstration*** that organisations are:

1. Transparent in communicating their intent
2. Consistently delivering the value they promise, and
3. Willing to own the consequences (positive and negative) of their actions.

For the ecosystem to inspire confidence and catalyse active participation, this focus should be prioritised.



Recommendation 4 1 of 2

Develop CX benchmarks and shared ecosystem assets

Privacy related enforcement actions - in the sense of what's known as 'own motion inquiries or investigations' - are rare in Australia. This matters because, without appropriate consequence (both positive and negative), the status quo may continue.

Given the purpose of CDR - to empower individuals and foster innovation and competition - it's clear that we must design for change.

Our recommendation is to focus on benchmarking over (not instead of) enforcement. This serves multiple purposes:

1. It establishing a minimum baseline for 'good' and 'fair' practice
2. It gives power to individual consumers by supporting them in making active choices about which organisations they choose to engage with and why, and
3. It enables enforcement agencies to work alongside a variety of ecosystem participants to progressively develop a clear and actionable perspective of appropriate enforcement action, and
4. It supports organisations in exploring new endeavours (like consumer centric consent-based data sharing) with more confidence and less effort

This can be achieved by designing a series of key metrics that enable, as the ACCC's Consent Rules specify, comprehension and usability to be tested with consumers.

Design patterns and consumer experiences can then be put to the test against these metrics within the Experimentation and Collaboration Framework. Doing this will highlight the efficacy of the experience. It will enable the ecosystem to define and ambitiously design for 'good'.

Although this raises a variety of questions, consistency of the criteria that enables ecosystem CX benchmarking is crucial.

The Data Trust by Design metrics Greater Than X developed, which have been included in this program of work, are:

1. Comprehension
2. Time to Comprehension, and
3. Propensity to willingly share

Organisations can ***test comprehension*** by:

1. Defining the key parameters of the consent-based data sharing agreement
2. Documenting these parameters explicitly
3. Prioritising these parameters in the user experience design, and
4. Asking participants to recall (at the point of affirmative action) key details of the agreement they're entering into
5. Documenting a participants recall, and
6. Assessing the details (and accuracy) of recall versus actual

This provides a strong proxy metric for comprehension.

Additionally, organisations should ensure ***all content reads at Grade 5 readability or simpler***. This serves the dual purpose of comprehension and accessibility.

Organisations can ***test Time to Comprehension*** by:

1. Conducting (unimpeded) outcome focused usability at the start of each research session
2. Beginning a timer at the start of the first interaction, and
3. Ending the time when a participant takes an affirmative action

This will help deepen an organisation (and the markets) understanding of how much effort individuals are willing to invest in the process before dropping off.

Organisations can ***test Propensity to Share*** by:

1. Conducting outcome focused, unimpeded usability sessions, and
2. Directly post an affirmative action being taken, embed a contextual clarifier relating to trust in the activity and willingness to share using a Likert Scale (0 - 7, with 0 being "extremely unwilling" and 7 being "extremely willing")

This, as above, offers a proxy measure for the attitudinal and behavioural trust people place in the activity, its intent and its potential consequences. It encourages organisations to design compelling value propositions. It encourages these propositions, and thus the purpose of data processing activities, to be communicated succinctly and effectively via a variety of different form factors.

Recommendation 4 2 of 2

Develop CX benchmarks and shared ecosystem assets

In addition, specifically in the context of consent management and revocation, the ecosystem can focus on:

1. Time to Manage, and
2. Time to (Informed) Revocation

Organisations can ***test Time to Manage*** by:

1. Designing observational studies (direct and/or indirect)
2. Simulating a situation in which consumers may be motivated to actively manage their data, like revoking access or reviewing which parties have access, and
3. Timing exactly how long each category of interaction takes

It's important to note here that a management action could mean many things to many people. For the purpose of this report, we are referring to our Consent Management definition.

Organisations can test ***Time to (Informed) Revocation*** by:

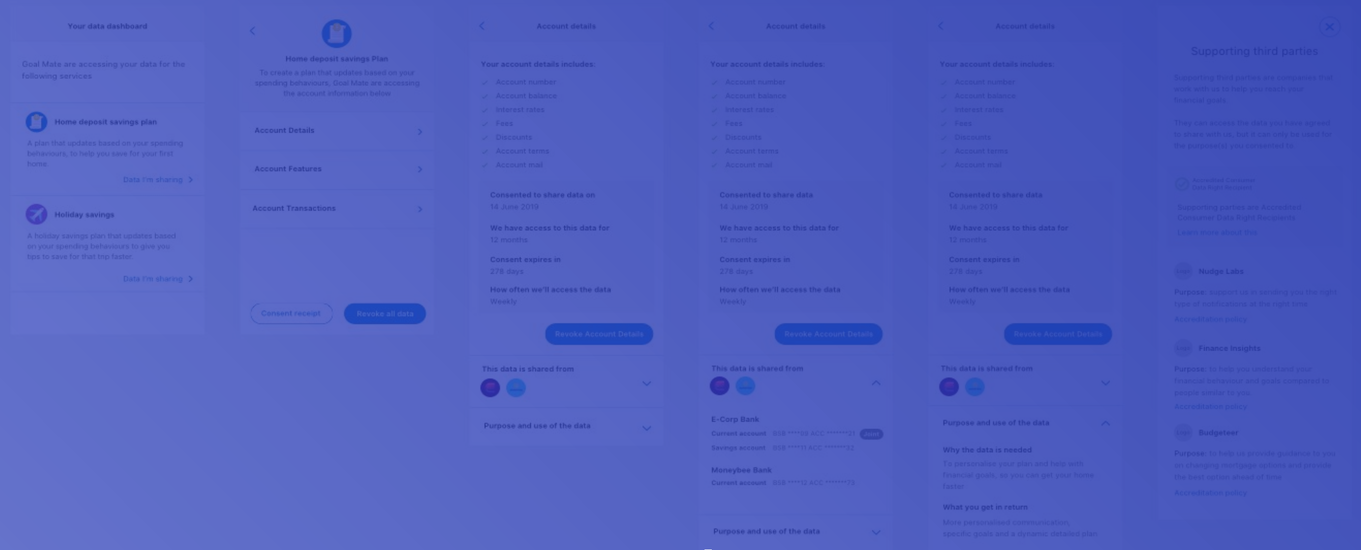
1. Designing observational studies (direct and/or indirect)
2. Simulating a situation in which consumers may be motivated to actively revoke consent
3. Testing accuracy of recall against set parameters (i.e. primary and secondary parties, categories of data and the specific consequences of these parties no longer processing that data), and
4. Timing exactly how the outcome - from first interaction through to successful revocation - actually takes

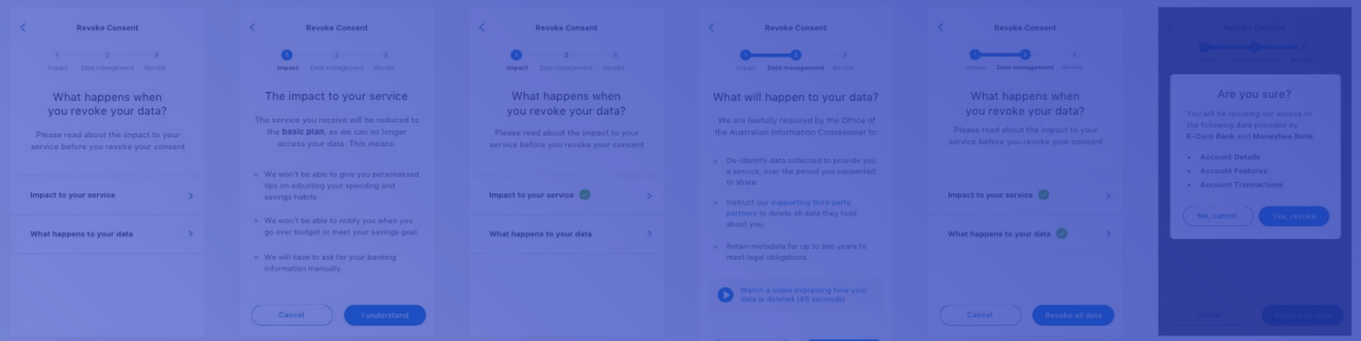
These metrics can also be supported by experience principles and specific research and design practices. This consistent foundation can support the ecosystem in moving faster, fairer and more effectively towards a compelling and empowering future.

In addition, we specifically propose that a Consent-Based Data Sharing Design system be developed and 'open sourced' via Creative Commons licensing. This will require a simple governance structure (ideally enabled by Data61 as the Consumer Data Standards Body). It will also require execution leadership.

By doing this, a version controlled asset for the entire ecosystem can become readily available for organisations, large and small. This design system can help increase the efficacy, consistency and value of the consent-based data sharing experiences organisations design for their customers.

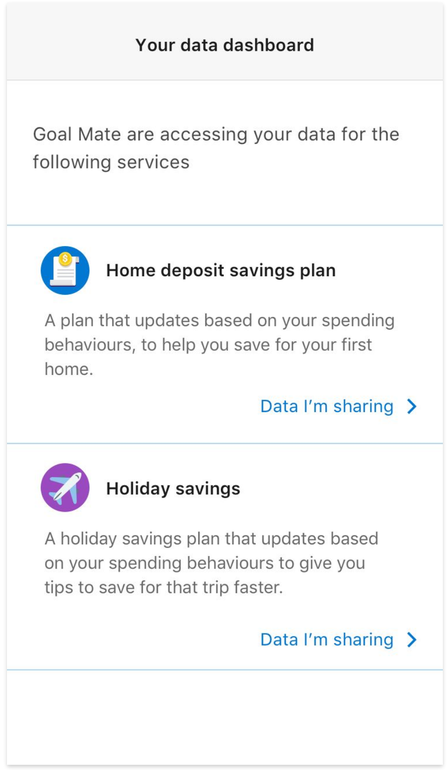
Final Prototypes and Annotated CX Flows





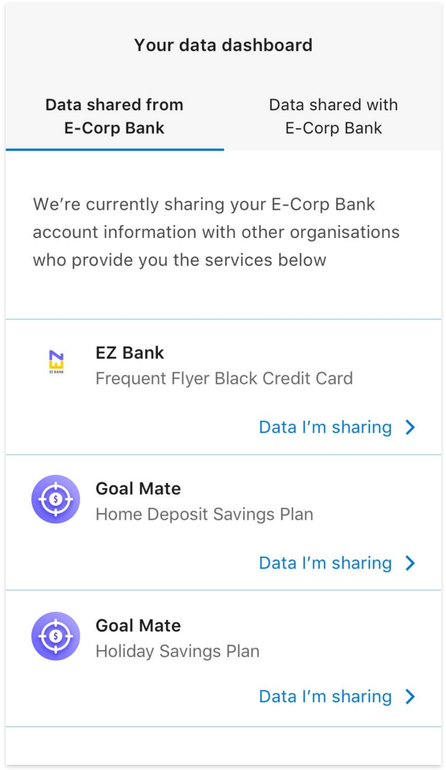
Reference Prototypes

Recipient Dashboard



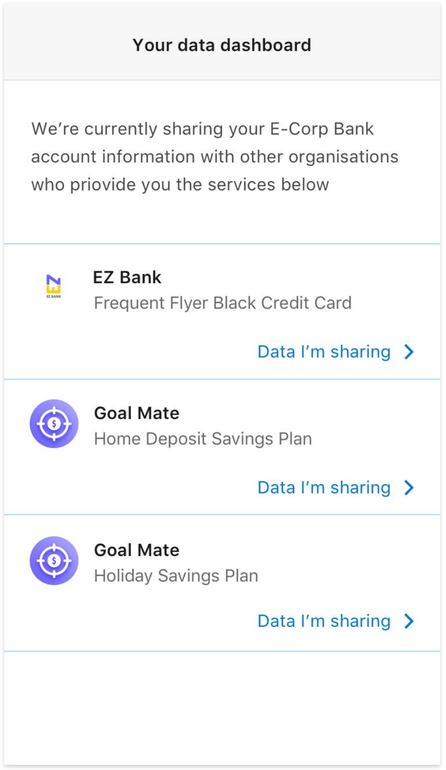
View Prototype

Dual Dashboard



View Prototype

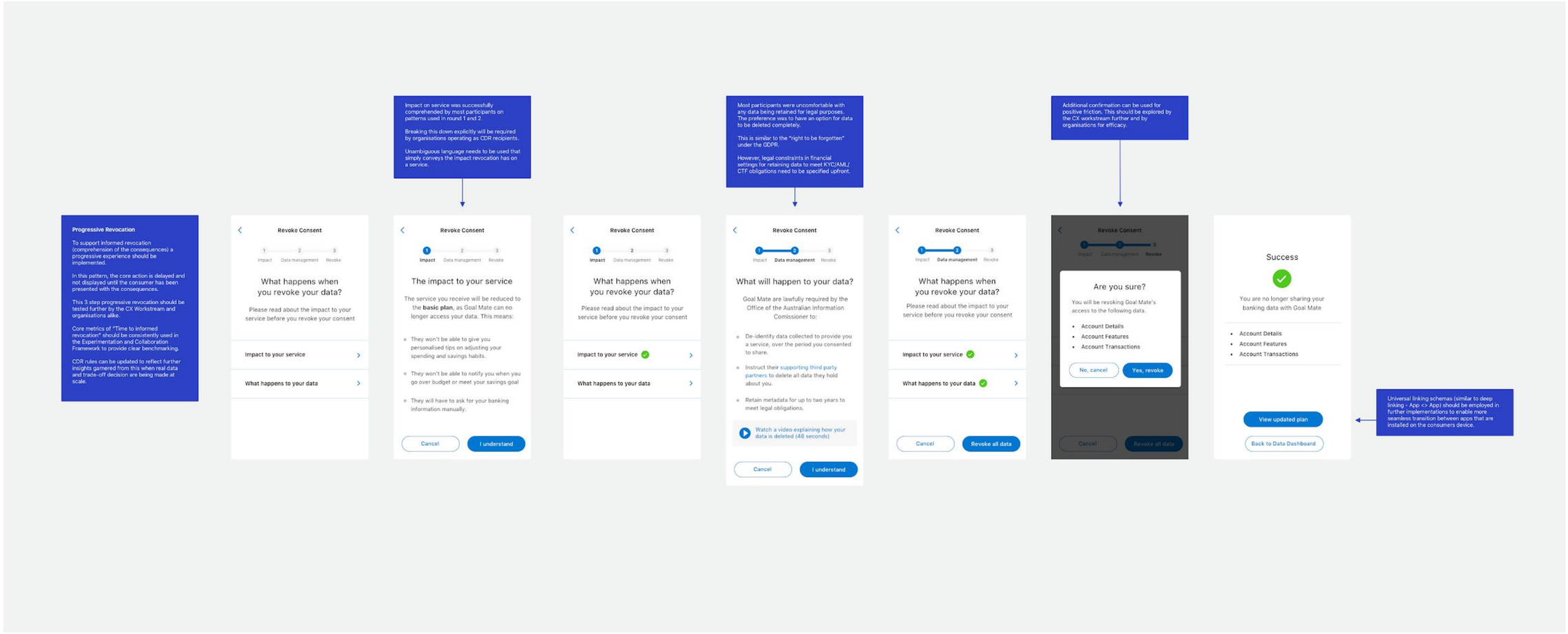
Holder Dashboard



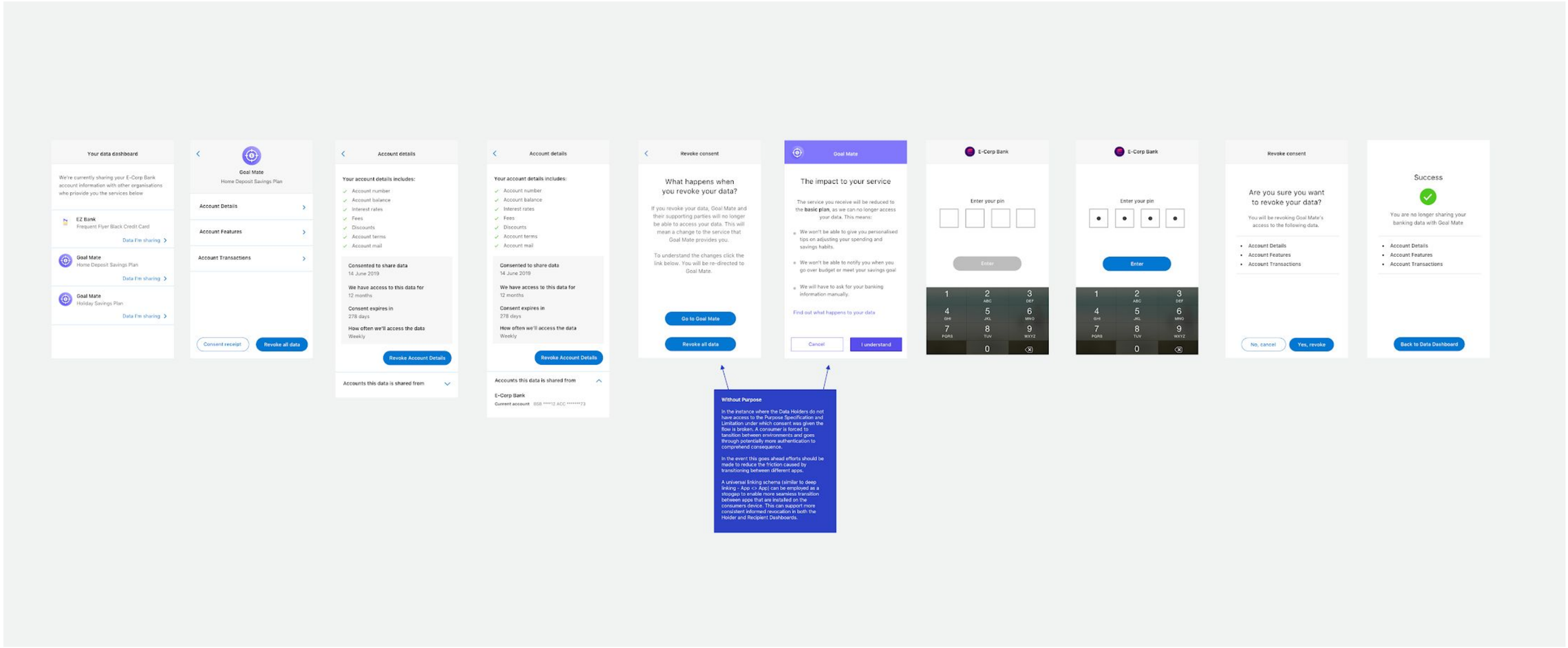
View Prototype

Progressive Revocation

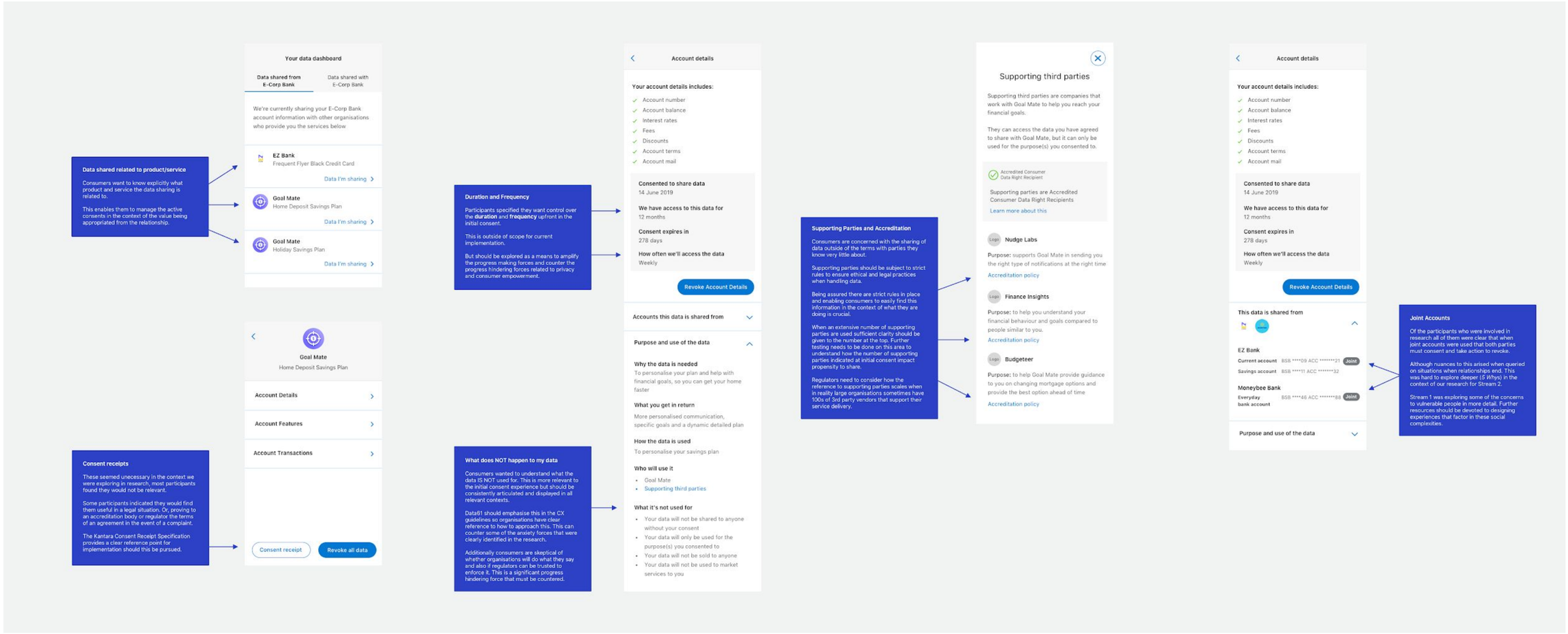
(With Purpose Specification and Limitation Present)



Without Purpose



Areas for consideration



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THANK YOU

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t +61 2 9490 5722
e cdr-data61@csiro.au
w consumerdatastandards.org.au

www.consumerdatastandards.org.au