

Central Bank Digital Currency (CBDC)

Aparangi ā Te Pūtea Matua

CBDC Forum Session 6

Wednesday 19 July 2023

Nau mai, haere mai Welcome

Robbie Taylor

Housekeeping

Robbie Taylor



Relationship Charter.

The Reserve Bank aspires to build and maintain the best 'regulator/regulated' supervisory relationships possible, with all the different regulated entities. This Charter represents a mutual undertaking of how the parties will work together to achieve this aspiration. We will regularly measure our performance against the commitments set out in the Charter and share the lessons.

Our mutual commitments

Our behaviours will be

Honest

positions are openly stated, constructively, freely and frankly

Diligent

provide clear expectations and deliver on them

Achievement focused

work together to achieve sound and efficient outcomes

Open-minded

each other's perspective is constructively sought and understood

Professional

disagreements can happen on issues, not people

Our communication will be

Clear

easily understood, with decisions explained

Targeted

made to the right people in governance and management

Consistent

one organisation, one message, one tone

Timely

communication with no surprises

Ground rules

Relationship charter

- Respecting diversity of background, thought and expression
- Encouraging participation and fun
- Chatham House rules

Probity

- No anti-competitive behaviour (price-setting, division of markets, agreements lessening competition, cartels etc), and raise a hand if concerned
- This is a “sales pitch free zone”
- Mis/representing CBDC Forum membership or its work



CBDC Forum members

Name	Organisation	Name	Organisation
Adrian Smith	BlinkPay	Alexandra Sims	University of Auckland
Brian Bonar	ANZ	Conrad Morgan	Worldline
David Corbett	A2B Money Limited	Fran Strajnar	Techemy
Chad Haighmark	Payments NZ	Jennifer Ferreira	Victoria University
Joanne Dacombe	Disabled Persons Assembly	John Warwick	Foodstuffs
Michelle Kitney	Volunteering NZ	Mitchell Pham	FintechNZ
Paul Quickenden	EasyCrypto	Simon Jensen	Buddle Findlay
Andrew Dodd	ASB	Mitesh Mistry	Kiwibank
Lee Timutimu	Arataki Systems		

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Agenda for today

Time	#	Item	Presenters
10:00am	1.	Welcome & update from Reserve Bank	Robbie Taylor
10:30am	2.	CBDC policy work - Use cases, synergies & strategic narrative	Tim Duston
11:30am		Break	
11:40am	3.	CBDC policy work - Inclusion workshop	Quinn Pooley
12:40pm		Lunch	
1:10pm	4.	Member-led session - What about a pilot?	s 9(2)(g)(i)
1:55pm		Break	
2:10pm	5.	Open discussion	
2:50pm	6.	Wrap up	Robbie Taylor
3:00pm		Close	



Item 1:

Update from Reserve Bank

Robbie Taylor

Item 2:

Use cases, synergies & strategic narrative

Tim Duston

Overview of agenda item

RBNZ recap our exploration with Accenture

RBNZ recap of developed use cases

Forum discussion on our unique opportunity to harness synergies across Aotearoa's digital ecosystem

Forum discussion on what a compelling CBDC strategic narrative looks like



Recap Accenture

The brief

- 10-week surge
- Be ambitious
- Apply 80/20 rule
- Set RBNZ up for 'design options'
- Focus on use cases

Delivered

- Insights dossier
- Indicative use cases (4)
- User journey maps (4)
- Resulting design options/choices
- CBDC Forum session

Next steps

- Update use cases personas to align with new market research
- Use findings to input into our early stage 2 design options and indicative business case
- Use findings to inform Stage 3 activities



Use cases & unique CBDC attributes

Use cases can draw from a CBDC's unique and differentiating attributes. These include:

- Design depending - tokenised digital representation of NZD backed by government
- Programmable payments and smart contracts can be supported
- Atomic settlement for definitive confirmation of payment (i.e., no settlement risk)
- Capable of offline value transfer
- Can be held in digital wallets. Synergy benefits with other tokens (e.g., digital ID, payment cards, loyalty cards...)
- Cryptographic proof of transaction history - provenance establishment
- Bank accounts not necessarily required



Developed use cases

Four sampler uses cases were developed. They demonstrate versatility across a range of interactions and user types. They illustrate how a CBDC could meet a range of policy outcomes

<p>Resilience through offline payments</p> <p>P2P P2B</p>	<ul style="list-style-type: none"> • Description: Payment option when other types of payment are not/less available • Outcome: Improved resilience • Supporting Functionality: Offline payments • Persona: Digitally savvy. Digital payments when outage or in remote/no internet access Low value payments in certain social settings
<p>New payment options for SMEs & small orgs</p> <p>P2B</p>	<ul style="list-style-type: none"> • Description: New payment options to small orgs that support their unique needs • Outcomes: Efficiency. Competition. Te Ao Māori sovereignty • Supporting Functionality: Real time payments. Proxy/Alias. PoS acceptance • Persona: Māori SME. Remote area. Challenges accessing payment & banking services
<p>Making digital payments more accessible</p> <p>P2P</p>	<ul style="list-style-type: none"> • Description: New digital payment support options from friends, family or services • Outcome: Financial inclusion. Meaningful choice. Enhanced autonomy • Supporting Functionality: Consent/permissions. Joint control options. Cash/CBDC Interaction • Persona: Banked but not confident making digital payments
<p>Improved cashflow from supply chain</p> <p>B2B</p>	<ul style="list-style-type: none"> • Description: Conditional payment linked to delivery and inspection of sold goods • Outcome: Supporting innovation. Efficiency & productivity gains. Cashflow benefits • Supporting Functionality: Conditional (programmable) payments. Smart contracts • Persona: Small agricultural manufacturer. Cashflow constraints/risks from payment timeliness

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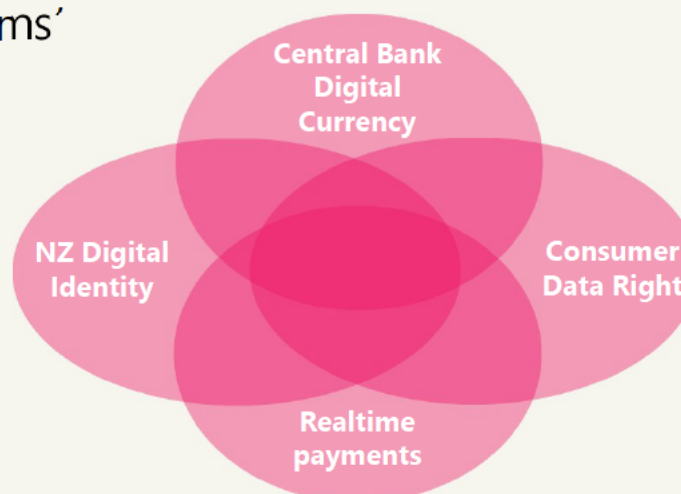


Unique NZ CBDC Opportunity

Convergence of NZ-wide Initiatives – a “system of systems”

Several New Zealand initiatives, such as Customer Data Right, real time payments and NZ Digital Identity align well with RBNZ’s CBDC goals and intended outcomes. As these ‘systems’ are all being developed concurrently, New Zealand has a unique opportunity here to explore how these initiatives might be designed to align better and enable a self-reinforcing loosely coupled ‘system of systems’

The NZ Digital Identity Services Trust Framework will design a safe framework for sharing digital identity information, which could help achieve RBNZ’s CBDC goals



The removal of barriers that prevent consumers from being able to share and access their data in a CDR framework can help to drive RBNZ’s CBDC outcomes

Modern real-time systems provide improvements in payment efficiency and speed. Interoperability with a CBDC system may lead to synergies to help develop a vibrant, open digital economy

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Synergies discussion

Forum members are invited to discuss:

1. What are the specific synergies that exist between key parts of the wider Aotearoa digital ecosystem (including a potential CBDC)?
2. How could a well-designed CBDC contribute and offer benefits to Aotearoa's wider wider digital ecosystem?
3. What is the Forum's practical advice for how a CBDC can make the most of any synergies with the wider Aotearoa digital ecosystem?

CBDC strategic narrative

We would also like to discuss with the Forum the framing of our CBDC strategic narrative for our Stage 2. Supporting context is:

- While there is a strong rationale for a CBDC, framing this into a cohesive strategic narrative (i.e., the 'why') is a global challenge
- RBNZ's view is that there is a comparatively compelling case for a CBDC in Aotearoa
- We welcome the Forum's feedback on how to construct a compelling, unifying story

Narrative Backbone (1 of 3)

RBNZ Purpose...

Enable economic wellbeing and prosperity for all NZers

About money...

Money systems are changing – digitalisation, new money forms

Public money vital role in economy

Money goals...

Protecting public trust in the NZ dollar

Ensuring money meets our evolving needs



Narrative Backbone (2 of 3)

What is it...

NZ digital dollar would be a digital form of the cash in your wallet

Another secure and reliable option for you to pay and save

It will...

Be designed to thrive in a digital world

Help safeguard NZ's monetary sovereignty

Special features...

Offline capability improves our money and payments resilience

Supports digital financial inclusion – new options for you



Narrative Backbone (3 of 3)

Over time...

Medium term:

unique attributes
enable new
innovation &
competition

Long term: hard to
predict - beneficial
role in the daily life
of NZers & society

By NZ for NZ...

NZ designed for NZ
needs

We are...

Doing preparatory
work on a future
proofed money with
public interest at its
heart



Item 3:
**CBDC policy work -
Inclusion workshop**

Quinn Pooley

IN CONFIDENCE



Inclusion Workshop

Promoting 'inclusion' in New Zealand payments
with a Central Bank Digital Currency

19 July 2023 - Quinn Pooley

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Workshop Objectives

'Who' is included?

- Snapshot of the M&C inclusion framework and how we are thinking about inclusion.

'What' is the problem?

- Discuss the NZ context for digital and financial inclusion.

'How' can a CBDC help?

- Discuss how a CBDC might address and capture digital financial inclusion needs.

Informing CBDC design

- How does our inclusion work inform CBDC design and our CBDC principles.





Who is included?

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Framing Inclusion

At the highest level, inclusion is about maximising wellbeing...

Rather than propose a restricted definition, we use a **two-part framework** to holistically consider inclusion

1. Meaningful Choice

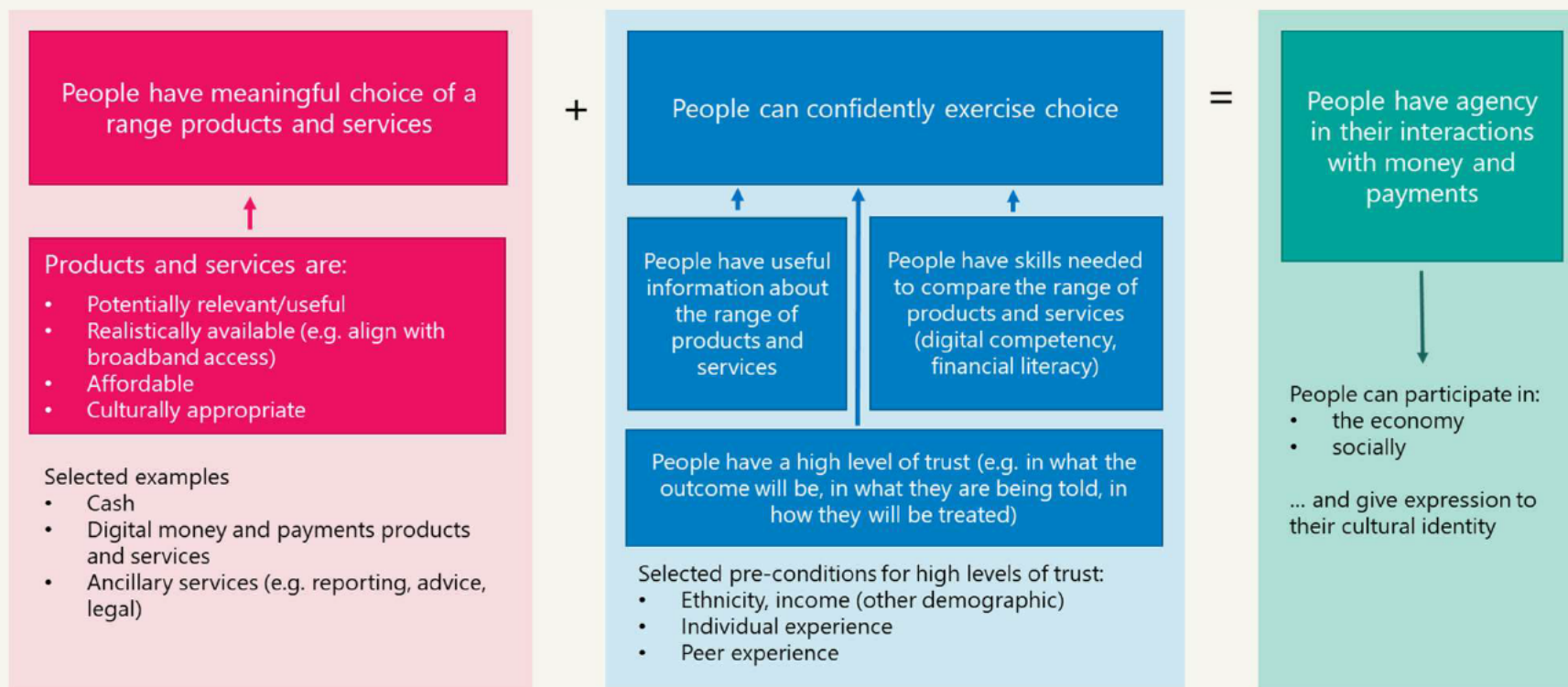
Inclusion is reliant on people having **genuine choice** and **reasonable access** to a range of products and services

2. Confidence to Exercise Choice

We want people to be able to **meaningfully interact** or **exercise agency** with these options



M&C Inclusion Framework



- Agency over people's interactions with money and payments is a function of 'meaningful choice' and the 'confidence to exercise' this choice



What is the problem?

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Inclusion Needs in NZ

Kiwi's lack **Meaningful Choice** ...

- 14% of households have no internet access (2018 Census)
- Approximately 51,000 people are 'unbanked'
- Some people are still highly cash reliant and lack alternatives when they need to make online payments
- Device access continues to be a barrier reducing the choice of payment products (CAB)
- 39% of Kiwis cannot access \$5,000 of emergency funds within a week (without going into debt)

... **and Confidence to Exercise Choice**

- Only 60% of Kiwis have borrowed and only 69% have saved at a financial institution
- Trust in banks sits at only 67%
- 37% of Kiwis are merely 'treading water' in their financial situation and a further 15% felt they were 'sinking' financially
- Health and physical factors (disabilities, illnesses or age) affect day-to-day transactions
- People living rurally or of Pacific/Māori descent are more exposed to financial and digital barriers



Where can a CBDC Help?

To promote 'inclusion' a CBDC could cater to New Zealander's who:

1. Do not use or have very little interaction with digital payments
2. Have minimal to zero engagement with financial services
3. Cannot access the internet and digital services given their circumstances
4. Are part of the unbanked minority
5. Do not have the skills to actually engage with digital and or financial services
6. Lack enough information and trust to use these services
7. Have low levels of confidence and motivation for this interaction





How can a CBDC help?

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1. Add Meaningful Choice

A CBDC gives consumers a new choice of central bank money enabling...

- Money management services such as budgeting and automatic reminders
- Access to loans from financial providers by providing a record of transactions
- Participation in ecommerce and digital 'upskilling'
- Low costs and high security (avoiding physical loss and or theft)

Requirements for a CBDC to be a 'meaningful choice':

1. Inclusive interfaces

2. Multi-tiered CBDC ecosystem

3. Complement to cash

4. Offline functionality



2. Onramp to Broader Inclusion

A CBDC can be an entry point to digital money and payments by...

- Incentivising users to overcome barriers such as identity verification and device access
- Increasing user confidence with digital payments
- Connecting consumers to wider products and services (such as loans and insurance) through a wrap-around CBDC ecosystem

Requirements for a CBDC to be an effective 'onramp':

1. High interoperability between the CBDC platform and wider financial sector
2. Good data governance
3. Wrap around support services



3. Māori and Pacific Led Design

A CBDC requires 'people-first' design for community driven use cases to...

- Be accessible and meet all consumers needs in the first instance
- Embed cultural community perspectives/values and be culturally bound
- Involve community at all levels of CBDC design as users, designers and top-table decision makers to truly support inclusion

Requirements for a CBDC to be 'people-led':

1. Interfaces take into account the five A's of accessibility (focus on digital barriers)
2. Early engagement to design use cases around specific social and cultural needs





Informing CBDC design

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'Updated' Universal Principle

Design principles and supporting criteria

Universal

CBDC provides basic payments and saving to all

Inclusive

CBDC enables people to use and store their money however they choose

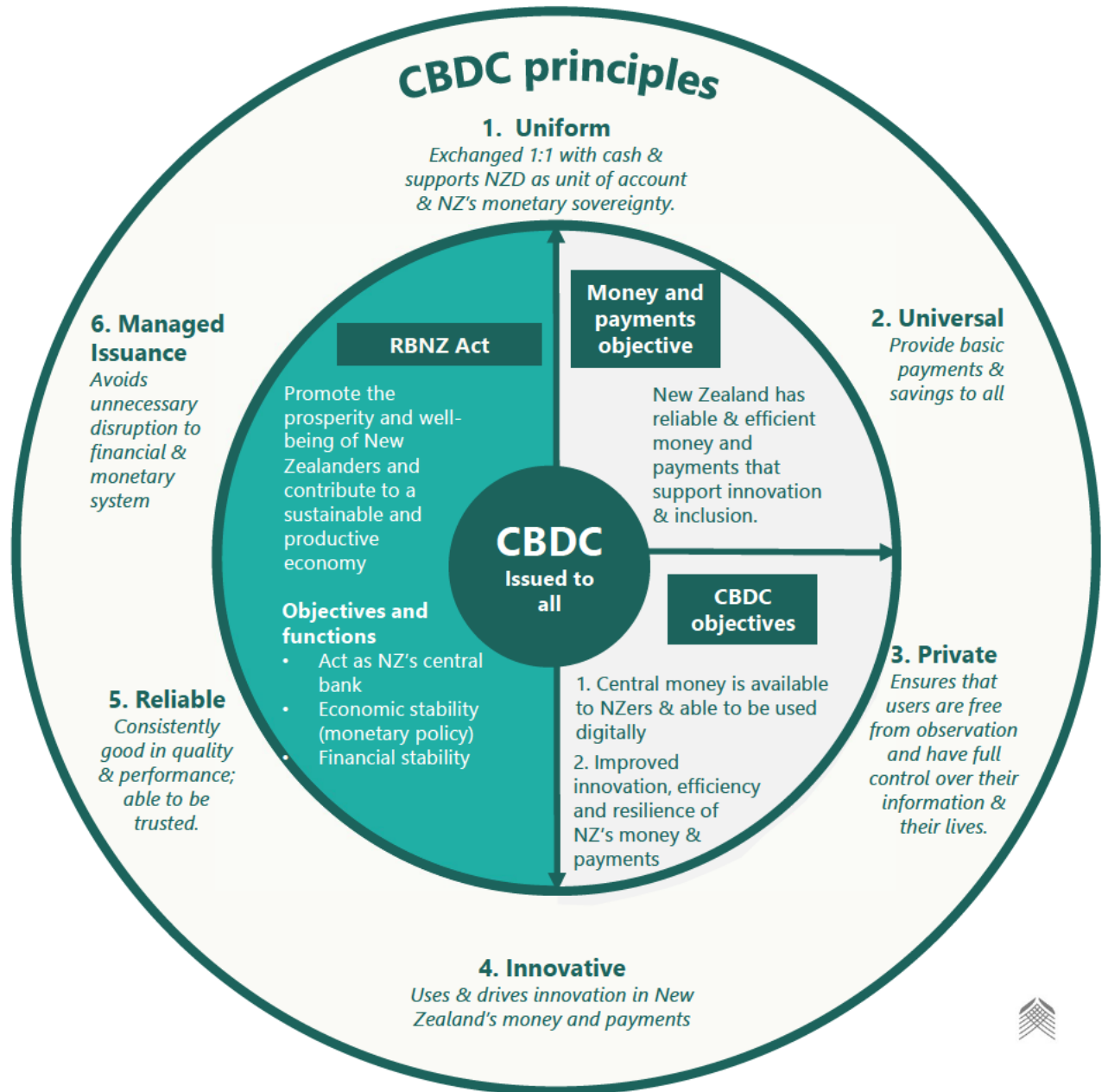
Meaningful choice

There is a range of money and payments products and services provided in the CBDC ecosystem (cash is supported)

Autonomy

CBDC is trusted and able to be confidently used. Products and services are accessible and information is easy to access and understand







Market research (teaser...)

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Market Research Context

Purpose: To explore the user needs of money and payments and unpack a set of user personas around these interactions

Individual Interviews

- 50+ individual interviews across consumers, charities and sole traders
 - Approx 40 consumer interviews with a mixture of demographics and 'vulnerable consumers'
-

User Workshops

- Three workshops conducted in three locations (Auckland, Rotorua and Christchurch)
 - Roughly 20 participants per session spread across 5 tables of 4 persons. Each table represented a specific demographic to form common themes
-



Consumer Attitudes

Two key dimensions that reflect the consumer attitudes and behaviours towards money and payments

Feel in control:

Know how their current money systems works for them and are on top of their money management



Feeling of control with money management system
(not wealth or financial security)

Feel less in control:

Don't fully understand their own system and don't feel on top of their money management

Open to new money systems

Always looking for new ways to improve their current system



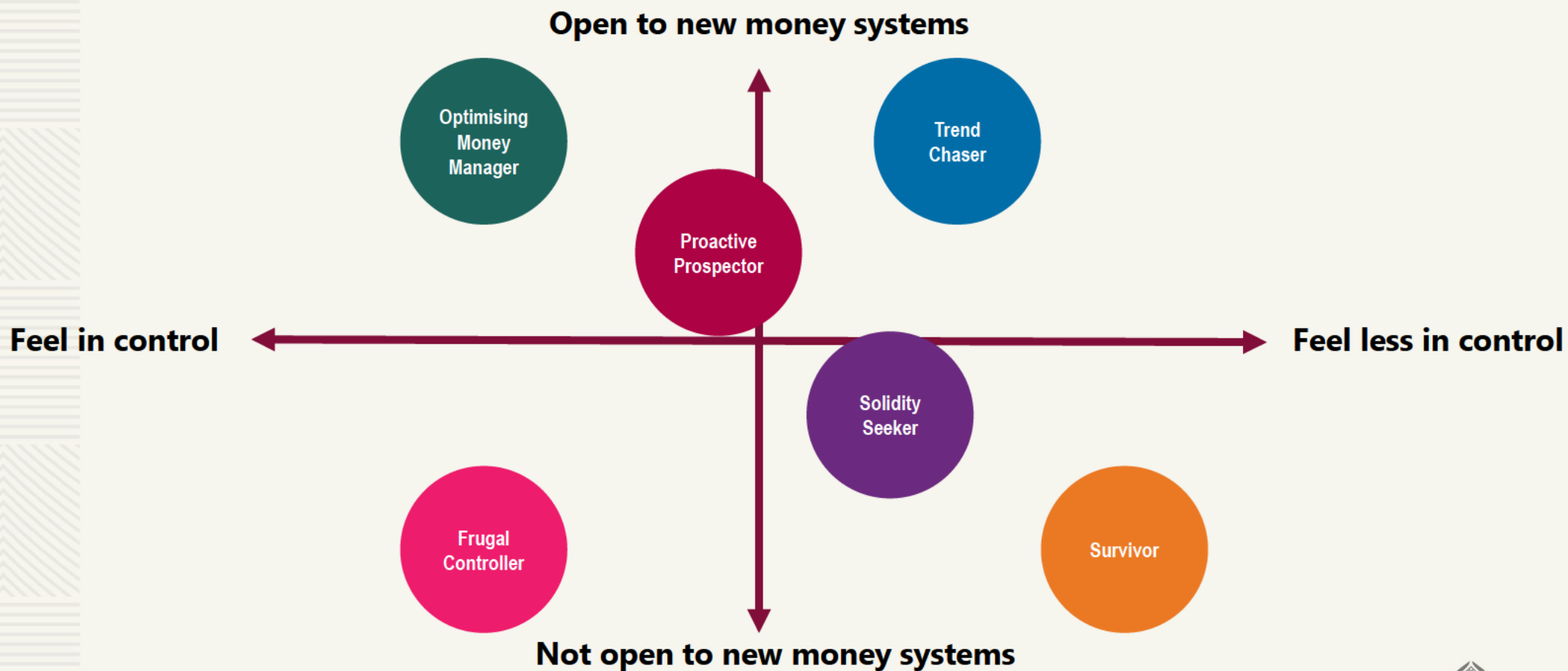
Level of openness to new money systems

Not open to new money systems

Unlikely to change and want to keep their current system as it



The Consumer Personas...



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Break for lunch

Item 4: Member-led session

What About a Pilot?

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Item 5: Open discussion

Item 6:
Tā kai | Wrap up

Robbie Taylor