

Item 4:

Forum supporting design exploration (Continued)

9. Recap – where we have got to

- The following areas have been identified by the group:
 1. X
 2. X
 3. X
- Which is most important?
- What should be prioritised if we don't have sufficient time?



10. Proposed design exploration

Proposed draft wording to our supplier to capture the scope of the work:

The CBDC Forum would like to commission the following piece of work:

- *Words*
- *Words*

We would like the supplier team to present these results with us at a future CBDC Forum.



11. Next steps


- Once we have a contracted supplier in place, we will agree scope and timing of the work with them
- We will update you on progress from time to time
- If there is an opportunity for Forum members to participate or provide input to sessions with the supplier we will coordinate that (on a best endeavours basis)
- We will arrange for the results to be shared at an interactive session of the CBDC Forum on 19 July 2023 (or 12 May)



Item 5: Member-led session

Accessibility & Inclusiveness

s 9(2)(g)(i)





quality control practices requirements
standards policies rules
COMPLIANCE
regulations
transparency risk
action legal
business

strategy
laws
security
governance

Item 6: Open discussion

Item 7: Tākai | Wrap up

Robbie Taylor

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ACCESSIBILITY & INCLUSIVENESS

s 9(2)(g)(i)



s 9(2)(g)(i)



Social Model of Disability

Disability is something that happens when people with impairments face barriers in society; in other words it is society that disables us, not our impairments.

Even if we have the same impairment as someone else we will experience different opportunities and barriers.

What is accessibility?

Accessibility is the design of products, devices, services, vehicles, or environments so they can be used by disabled people.

The concept of accessible design and practice of accessible development ensures both "direct access" and "indirect access" (the latter meaning compatibility with a person's assistive technology).

Other ways to think about accessibility

- *the quality of being able to be reached or entered*
- *the quality of being easy to obtain or use, and*
- *the quality of being easily understood or appreciated*

A place that can be easily entered or reached by disabled people despite their disability, is accessible. For example, a universally designed building.

A thing that can be easily obtained by persons with disabilities despite their disability is accessible.

A thing that can be easily used by persons with disabilities is accessible.

Types of accessible needs

Visual

Auditory

Motor/mobility

Learning/Cognitive

Psycho-social

Dual or more

Visual impairments

Vision impairment means that a person's eyesight cannot be corrected to a “normal” level.

Auditory impairments

Hearing impairment means that a person's hearing cannot be corrected to a "normal" level.

Motor/Mobility impairments

Those who use:

Power or Manual wheelchairs

Mobility Scooters

Walking frames

Crutches

Learning/Cognitive impairments

This covers a range of impairments including learning disabilities (intellectual disabilities) called learning disabilities by those who have the condition themselves.

It also refers to those have hidden disabilities such as Autism, ADHD, dyslexia, and those with conditions such as dementia, and so on.

Psycho-social impairments

These cover those with mental health conditions such as schizophrenia, bipolar, depression, anxiety and others.

Dual Impairments

Any disabled person can have more than one impairment

It is common for some impairments to have co-occurring conditions

Solutions to Accessibility Issues

Assistive Technology is one common solution. For example those with visual impairments may use screen readers, those who are Deaf may use NZ Sign Language.

However technology is not enough on its own if accommodations are not made.

5 A's of Accessibility

- Affordability
- Availability
- Accessibility
- Accommodation
- Acceptability

Affordability

Access to digital currency needs to be affordable. What is affordable to one socio economic group in society is often a barrier to others, notably those who are in the low socio-economic band.

Availability

This refers to areas of accessibility such as urban versus rural where both the needs and availability of access may vary

Accessibility

To be accessible, information and communications must be provided in formats and languages that disabled people can access independently, without relying on other people, and is compatible with assistive technology, such as computer screen readers. Essentially, it's free of barriers.

- Accessibility is the measure of how easily people can access and engage with information and communications.

- Information and communications include any printed or online information in pamphlets, brochures, websites, online applications, forms or ways that people access and engage with information and services.
- Having accessible information and communications recognises the diversity of New Zealand. It considers alternate formats (e.g. Easy Read, large print, braille, audio, and New Zealand Sign Language [NZSL]).

Accommodation

- Ability to access digital currency when required
- Communication
- The fit between how resources are organised and the ability of the person to access and use them

Acceptability

Cultural barriers and preferences

This is especially important in considering other languages and Te Ao Maori perspectives

What are the barriers for Disabled People?

The two biggest ones also apply to non-disabled people:

Financial education and technological resources

Statistics estimate around 33% of people worldwide are financially illiterate.

Disabled people would likely be excluded from being able to use digital currencies (or any other innovations related to associated blockchain extensions without accessible user interfaces that allow them to search for blockchains and interpret the result).



Summary

Subject	CBDC Forum 4
Meeting Date	15 March 2023
Meeting Time	10:00am – 3:00pm
Venue	ANZ Tower (Auckland) and Microsoft Teams
Attendees	Members: Adrian Smith, Alexandra Sims, Andrew Dodd, Conrad Morgan, David Corbett, Jane Retimana, Jennifer Ferreira, Joanne Dacombe (JD), Mitchell Pham, Paul Quickenden, Simon Jensen, Brian Bonar, John Warwick, Fran Strajnar, Michelle Kitney, Mitesh Mistry, Lee Timutimu Reserve Bank: Amber Wadsworth (AW), Makoto Seta, Robbie Taylor (RT), Roanna McLeod, Tim Duston (TD), Navina Soondram, Andrew McCallin (AM), JC Somers, Quinn Pooley
Apologies	

1. Welcome & update from the Reserve Bank

RT welcomed the in-person and online members to the fourth meeting of the CBDC Forum. RT introduced Andrew McCallin to the Forum. Also introduced Roanna McLeod and Quinn Pooley who were attending online and are graduates doing their rotation with the RBNZ Money and Cash department. A warm welcome to new Forum members Lee Timutimu from Arataki Systems and Mitesh Mistry from KiwiBank.

RT gave an update on what the team has been up to since the previous Forum. The team are currently in the final stages of finding a provider for their CBCD Explorations work. The RBNZ have found a preferred partner however are working through the procurement process. Policy area finalized the high-level thinking on this with work being done on managed issuance now. Doing some deeper work on inclusion. The size of the team has grown with a legal and a technical specialist joining soon. A cash trial project is about to start shortly. Policy work on private innovation and managed issuance is ongoing.

1. RT and TD went on an exploration trip to visit central banks in Europe and Canada. This was a fact-finding trip to help accelerate RBNZ's understanding of what other central banks/countries are doing in terms of creating a CBDC. This trip has allowed for relationships to be formed which in turn will allow the RBNZ to leverage off some of the work that has already been done. RT and TD provided an overview of their findings from the trip.

2. CBDC policy framework

AW spoke to the purpose of her session and how the Forum's input has helped guide the policy guidelines on the topic that have now been developed. She then spoke to her presentation.

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Members were asked to provide feedback on whether our principles are fit for purpose, with new learnings coming through are they still applicable and do we still agree with them? Herein lies an opportunity for Forum members to be involved in shaping RBNZ's thinking. Some views are captured below:

- Members discussed how to issue CBDC in a way that it doesn't cause undue harm to the current money system, and noted that most other central banks have the position that a CBDC will not be remunerated (i.e. receive interest).
- A Forum member discussed how market demand is impacted by the design of a CBDC. For example, if a CBDC could only be held by natural persons, that would constrain a lot of usage and innovation.
- The Forum discussed the difference between privacy (how data is used and what data is used) and anonymity (no data at all is collected). The Forum concluded that CBDC is not able to be anonymous as its digital so some data is always collected, and there will still need to be AML/CFT compliance requirements. The Forum acknowledged the need for users to feel some control over what is collected and how it is used.
- There will need to be trade-offs and assessments between the principles, i.e., between privacy and AML/CFT compliance requirements. Design principles are not intended to be solutions, but to help articulate outcomes and provide guidance on decisions. Any decisions made cannot be made in isolation with respect to just one principle, as some decisions will touch on, and have a cascading impact across, multiple principles.
- The Forum observed that the principles seem to focus on the movement of money, and they questioned where the idea of 'store of value' sits. The Forum noted that the integrity principle includes the concept of reliability. The Forum also noted that the principles should cover the notion of the utility of a CBDC.
- The question was put forward that if there are limits on the transactions, holdings or number of wallets, what principle would this fall under. AW advised that managed issuance is the principle it comes under, from a financial stability perspective.

AW noted that RBNZ does not yet have a position on all of these issues, and she would capture the feedback themes from these discussions.

3. Forum supporting design exploration

TD and AM gave an overview of the work being done in regards to the design explorations. Expecting to start with the supplier from April. Will work with them between then and end of June. This will work towards the indicative business case. Looking at things from a high level with a short list being created of possible design options for a CBDC model that fits our policy objectives and outcomes.

An invitation was put to the Forum to commission an exploration area and have the supplier run a workshop on that area in a future Forum meeting.

The question was put to the Forum to help define what the supplier is commissioned to do. The Forum discussed the following long list of candidates:

- If we take as an assumption that there's a lot of value to be unlocked in Layer 2¹ (overlay services that are commercial value-add propositions that sit on top of a CBDC Platform), how does that impact our decisions on the design of a CBDC. It was suggested most of the high

¹ Note, that in RBNZ parlance, Layer 2 is described as an overlay service.

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value cases is not in basic payments area, but in extended financial instruments that can be developed. Most impact would be about financial instruments innovation space Layer 2. If this is a belief, what design decisions are needed, i.e., limit on wallets only being held by natural persons would stop or constrain any Layer 2 work being achieved.

- If you want your carbon footprint be offset as you spend your money, would need your CBDC money supply being held by smart contracts.
- Understanding how several large investment, infrastructure and projects can run concurrently, and the dependencies and relationships between them. This included a potential real time payment system, digital ID, open banking etc. The Forum also discussed the need to understand how a CBDC could fit in the wider financial system. CBDC payment use cases, such as P2P, wallet to wallet etc.
- Understanding how a user's CBDC holdings can be funded and defunded from other forms of money such as that held in commercial bank customer accounts. Programmable payment use cases, including smart contracts (this excludes programmable money, being whether the actual representation of money has built-in constraints on how it can be used – on which the Forum noted most central banks are not pursuing)
- The offline payments was considered a very important functionality to explore, particularly in the context of, natural disasters, and considering CBDC from the view of environmental sustainability.
- Designing for how a CBDC and its distribution model can support inclusion and accessibility, including those in underrepresented communities, those affected by the digital divide, and those with challenges accessing banking services. Considering looking at how resilient it can be. Cyclone Gabrielle has shown us that we need to look at resiliency longer than just seven days.
- Regardless of what is commissioned, it would be useful to understand: the "will not vs cannot" dimensions of a CBDC; how to keep it simple; and how to ensure a CBDC remains adaptable and flexible; and how it can underpin equality and equity.

Following the break, TD themes up the commissioning candidates to:

1. Use cases (including: offline; P2P; wallet-to-wallet; funding and defunding CBDC holdings; overlay services; government payments, etc.)
2. Interrelationships and dependencies between CBDC and other financial and digital systems (current and future)
3. How the design and distribution of a CBDC can best achieve inclusive outcomes

Forum members agreed commission #1 above on use cases. The CBDC team will liaise with the supplier in due course, and look to undertake the work necessary to run an interactive session with the Forum on this area.

TD requested that each Forum member think of, from their own perspective, what the top 3 (or more) descriptions of what success looks like for a CBDC, and send back to RBNZ.

4. Member-led session: Accessibility and inclusiveness – s 9(2)(g)(i)

s 9(2)(g)(i) introduced the Social model of disability. Most things are designed for the majority, not the minority that disabled people fall under.

All redactions on this page s 9(2)(g)(i)

When talking about accessibility, there is a concept that items ought to be easily attained. For a disabled person, this often isn't the case. s 9(2) gave the example of shopping for a vibrating alarm clock for blind people. One cannot go and purchase one without having to apply and get funding approval in NZ.

Solutions to accessibility issues: e.g., audio captions for a blind person, preparation and planning needs to be a critical feature of any design process.

There are different types of accessibility needs, including visual, auditory, motor/mobility, learning/cognitive, psycho-social, dual and more. s 9(2) proceeded to give examples of each of these, i.e., visual impairments can include total blindness, low vision, colour blindness, etc.

5 A's:

- Affordability – quite often disabled people are in the lower socio-economic band. Due to lower earning capability.
- Availability;
- Accessibility;
- Accommodation;
- Acceptability.

What are the barriers? Financial education and technological resources. Lack of access and lack of understanding. Many organizations aren't aware of the disabled society or what can be done to ensure the 5 A's are being covered. There are reference guides that help guide people. Companies that have accessibility culture will ensure it's adhered to by everyone.

Designing for disability would enhance the design for all. Shouldn't be seen as a cost drag on what you do but enhancing it for ALL users. It is easier if you have the designs incorporated at the start instead of having to change these retrospectively. This is also more cost effective and efficient in the long run.

Universal Design is the way to go. Should be designed for everyone. Need to look at enabling everyone, regardless of what impediments they may face.

Accessibility doesn't mean universal. Equality doesn't mean equity. s 9(2)(g)(i) said that the challenge would like to put out is that whoever designs the CBDC takes accessibility into account.

5. Open discussion

RT solicited member views on any particular themes they wished to talk about or reflect on.

- To what extent has the conversation been had as to what CBDC will solve? It will not replace cash. Mandate is to meet the needs of the public with bank notes and coins. This remains unchanged.
- Work still needs to be done to work out what it is that we want from CBDC in a New Zealand context.
- Solving known issues with cash and then looking at all the new possibilities that a CBDC will open. What are things that CBDC can do that we can't do with cash or the current payments and money system? One Forum member challenged the group to not be constrained by the characteristics of cash, and to be open minded to the future potential.
- One Forum member questioned what is the primary driver for wanting to have a CBDC? This should form your non-negotiable choices, and to ask "What is the primary reason a CBDC will add value to NZ?".

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- Noted that the work program is planning to complete a business case by the end of December, for a funding commitment to undertake Stage 3 covering a deeper exploration of issues. This includes a design option(s) that best align with our policy outcomes and objectives
- AW summarised the key feedback session.

6. Wrap up

RT reminded the group of the date for the next Forum is 12 May 2023. RT will be on parental leave then but will be back for the July Forum.

Members suggested the following potential issues for the next Forum:

- Members would like a detailed programme timeline and to have a thorough understanding of where things are progressing along it.
- Could have member-led sharing of how things are going in real-time payments.
- Maybe get a guest speaker with someone from ANZ Australia to give an update on their pilot activities underway with the Reserve Bank of Australia.
- Would like some preliminary results being shared from the Future of Money submissions that is closing at the start of April.

RT mentioned the trial adoption of Slack, as it allows for an opportunity to interact more and communicate easier for discussion with Forum members in between the Forum sessions. A one-pager of instructions will be sent out to the Forum members shortly.

RT reminded members that the current T&Cs for this Forum was set up for 12-months. A survey will be sent out asking for some feedback from members, how the format can be improved.

RT thanked everyone for attending and closed the meeting.