



Opportunities
and implications
of blockchain
in Australia
Workshop playback

April 2016



WORLD
ECONOMIC
FORUM

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How will
you

The growing realisation that blockchain technology has the potential to completely transform the structure of financial services has created significant global interest, and we envision exciting times ahead for Australia's potential to assume a global leadership role.

In the following pages, we are delighted to playback the conversations from a recent workshop held with 40 leading representatives from Australia's regulators, incumbents, government, and technology community. It was an excellent event facilitated by Jesse McWaters from the World Economic Forum and myself on behalf of Deloitte.

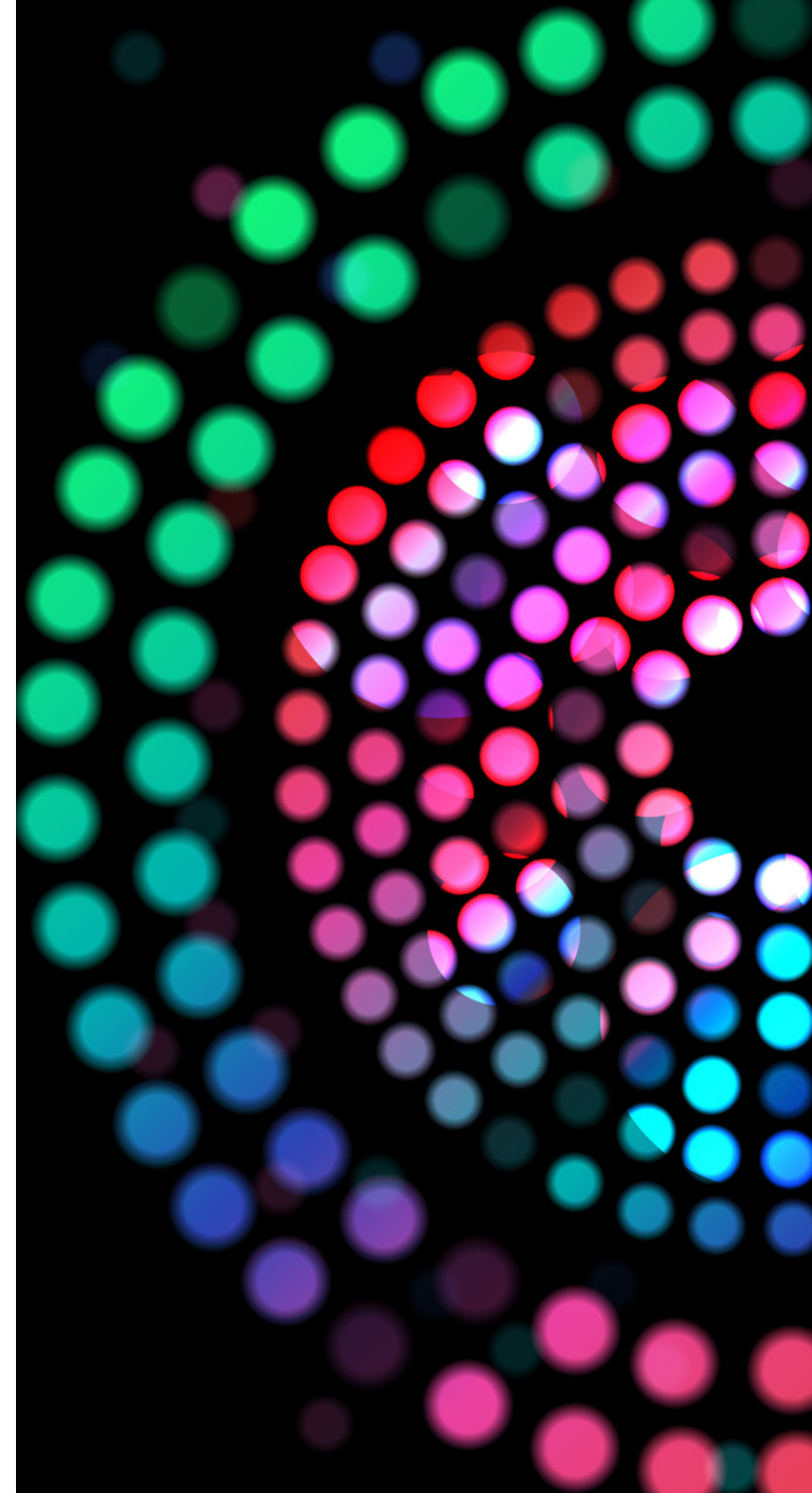
Our starting point was the World Economic Forum report on the *The Future of Financial Services – How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed* and our focus was to better understand the Australian and global efforts around distributed ledger technology, highlighting next steps as Australia pioneers this space. In Australia we have a unique opportunity to collaborate, and both Jesse and I are keen to make ourselves available to ensure we facilitate further exchanges.


We trust you find this summary useful and thought provoking and if you have any suggestions as to how best we can continue to progress we look forward to hearing them.

Kindest regards,

A handwritten signature in black ink, reading "Joel Lipman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Joel Lipman
FSI Innovation Leader
Deloitte





The World Economic Forum has been working for more than two years to understand how new innovations are transforming financial services. Working closely with Deloitte, and compiling research from the private sector, regulators, supervisors, innovative companies and incumbents, we tried to understand the breadth of the impact of the innovations on the sector, creating a taxonomy to help do that.

Following the release of *The Future of Financial Services – How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed* in June 2015, there were two areas identified by the participants where we believed we could really make a difference. One was Digital Identity, the other was blockchain or distributed ledger technology.

What is Distributed Ledger Technology?

Distributed Ledger Technology provides financial institutions with the ability to exchange assets, store critical transaction records and automate complex contracts without intermediaries. Distributed ledger technology is a solution where all of the following conditions are met:

- Shared repository of information
- Multiple entities / writers
- Mistrust or absence of trust
- No trusted intermediary
- Transaction interaction.

Can Australia become the global blockchain leader?

Australia has now been positioned in the centre of this, with a large amount of attention crystallised by the deal with DAH and ASX.

Blockchain is now seen as one of the technologies that can radically transform businesses.

Jesse McWaters, World Economic Forum.

Banks in Australia are taking a pragmatic view and making sure the costs of using blockchain are justified. Three of the four major banks are working with Ripple and exploring what blockchain will mean for them.

We are no longer experimenting. In 2016 you will see a cluster of banks moving real money on the blockchain.

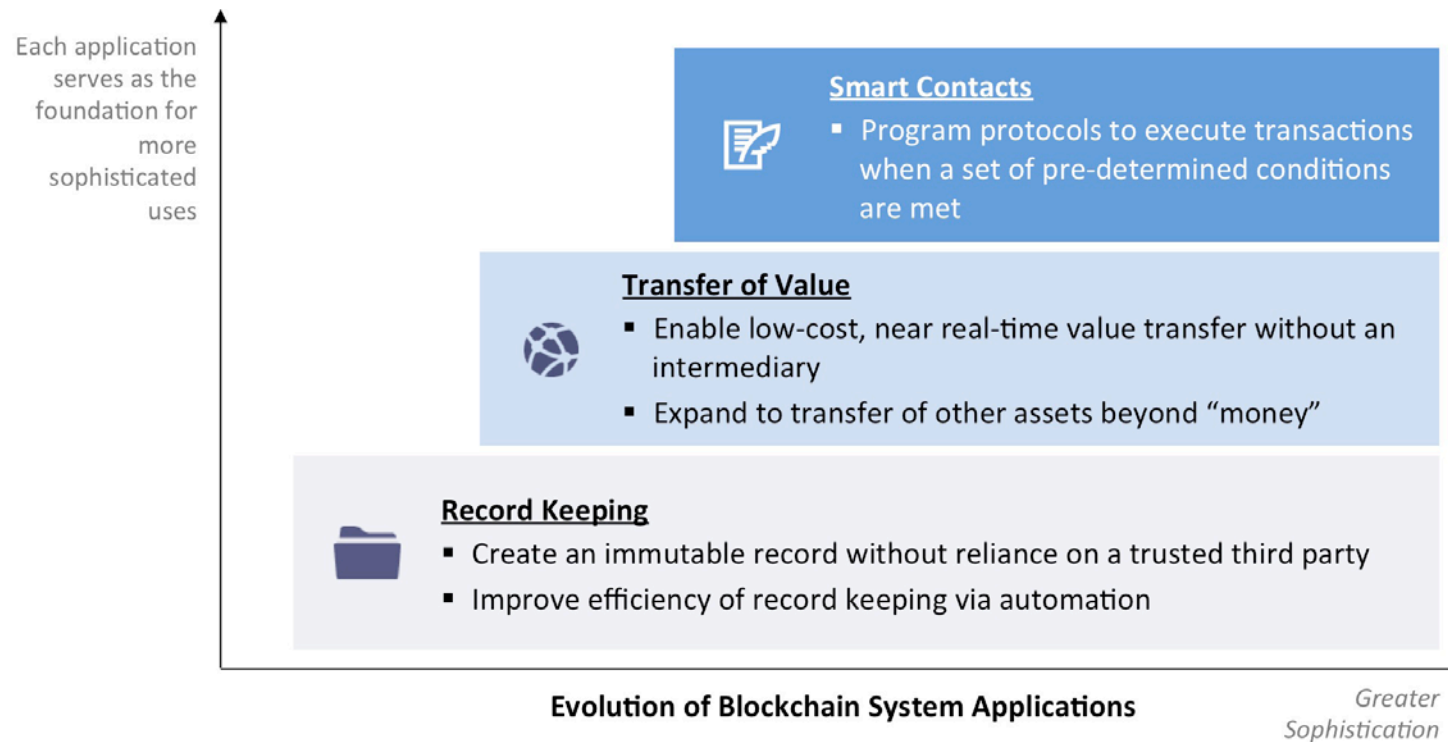
However it is much harder to change business models. Blockchain works well where there is lack of trust, lack of obvious shared authority, and high fragmentation of networks.

Where there are homogenous players trusting themselves and working well, the cost of distributed ledgers will not be justified. There needs to be a case for cost savings, speed and improved service to justify the investment.

Dilip Rao, Ripple.

Three core applications of blockchain creating a universe of use

From property transfer to trade finance, to global payments to sophisticated financial instruments like cocoa bonds. These transactions could be completely reinvented.





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How will
you lead?

on the road to

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Olive Harnay
ASAC

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Jerry Yohannan
SocietyOne

Breakout group #1
Corporate Responsibility

Deloitte

Dan Rajanathan
CSA

OPPORTUNITIES



RISKS



LACK OF CONTROL



LACK OF UNDERSTANDING

Comments from the floor

Regulator

On a domestic level as regulators we are in dialogue, identifying, monitoring and engaging with stakeholders. We are also in dialogue with international regulators to understand the issues they are facing.

Bank

Disrupting technology is important to experiment with; this can often lead to increased learning as opposed to just planning. It is also important to do that with partners.

Researcher

From an organisational perspective we are considering not just how to redraw the process, but how to redraw the space and work with technology advisers to re-integrate distributed ledger technology into the technology stack.

Industry Utility

Distributed Ledger Technology is not so much about technology, but about structural changes in the industry. We need to make sure we are doing no harm, and considering business problems to try and solve them. We need to consider what markets are underserved for instance. Collectively we take the view that coordinated efforts are critical. We must not have fragmented technologies.

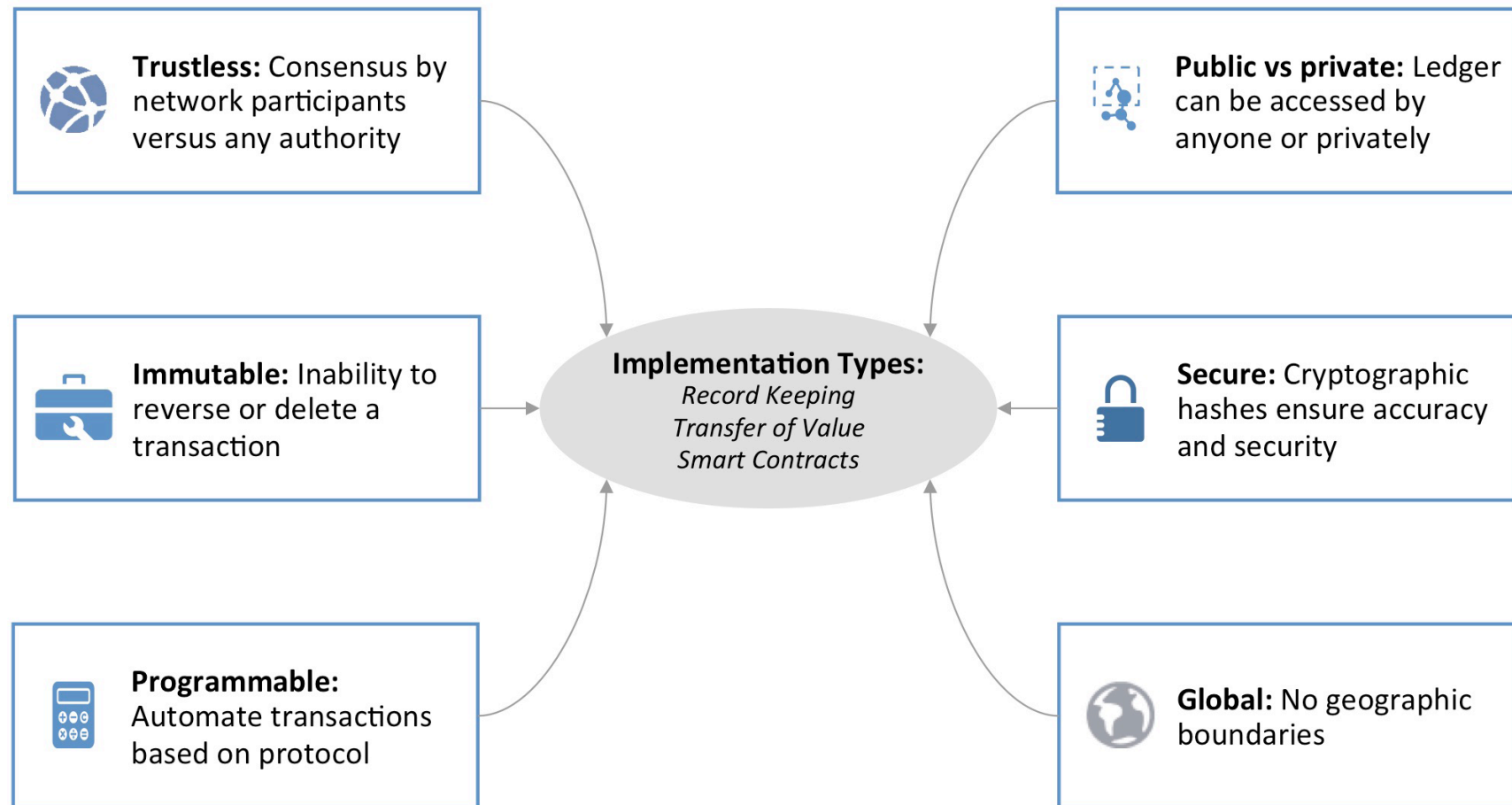
Regulator

We will not just understand how we can regulate, but how we can use the technology better, so that customers don't have a huge regulatory impact. Entities wanting to use open source code with consumers today raise challenges within both their front-end and back-end systems.

Researcher

We are looking at syndicated lending that is currently complex, slow and expensive and how to use Distributed Ledger Technology to streamline it.

Design principles and implementation types



Potential distributed ledger technology use cases in financial services

OTC Derivatives

P&C Insurance

Records Management

Contingent Convertible Bonds

Remittance

Clearing & Settlement

Re-purchase (Repo) Market

Proxy Voting

Continuous Auditing

AML / KYC

Trade Finance

Wealth Management

Syndicated Loans

Trading & Settlement

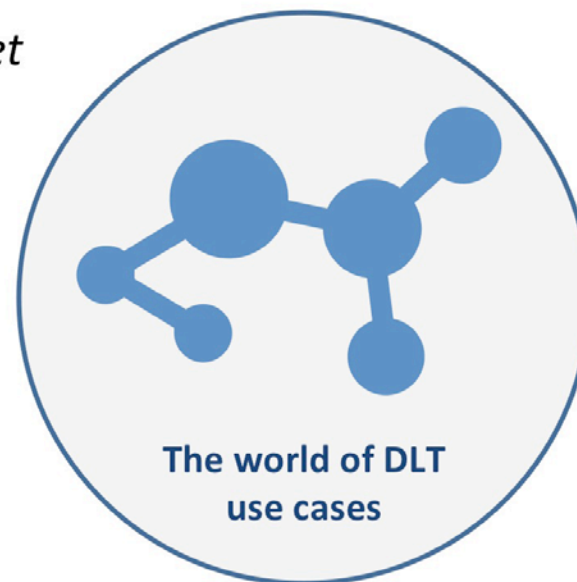
Cross-border Payments

Life Insurance

Automated Insurance

Real Estate

Loyalty Management



Australia has been identified as being at the vanguard of distributed ledger technology

The reasons are both historical and current.

- Australia has a fully dematerialised and fairly centralised set of capital markets. This simply means that the set of challenges facing the US or the European Union are more manageable here
- Australia's financial services industry came through the global financial crisis in a better condition than almost any other place in the world, resourcing its relatively healthy bank sector with available capital to make investments and bets on the future of the industry.

Jesse McWaters, Project Lead, Disruptive Innovation in Financial Services, World Economic Forum USA, noted that over the last 15 or so months, as the technology moved out of the lab and into production, the very first of those future use cases are emerging in Australia.

- These include Australia's leading banks working with Ripple and its applications
- The partnership between Blythe Master's Group Digital Asset Holdings and the Australian Stock Exchange
- On a pragmatic level, the legacy ASX CHESS infrastructure also needs replacement with a new automated clearing house
- In addition, Australia's leading regulators are exploring the opportunities that can come from distributed ledger technologies themselves. They are considering how regulation can become less intrusive and a more efficient way of adding to systemic stability.

It is easy to envision a world in which a shared replicated ledger exists that could give macro prudential regulators better visibility into the distribution of challenging or distressed assets, and help them plot a strategy for addressing those situations.

These 'antipodean' developments are fueling the world's imagination that Australia could in fact lead the region in distributed ledger infrastructure.

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OPPORTUNITY

RISK

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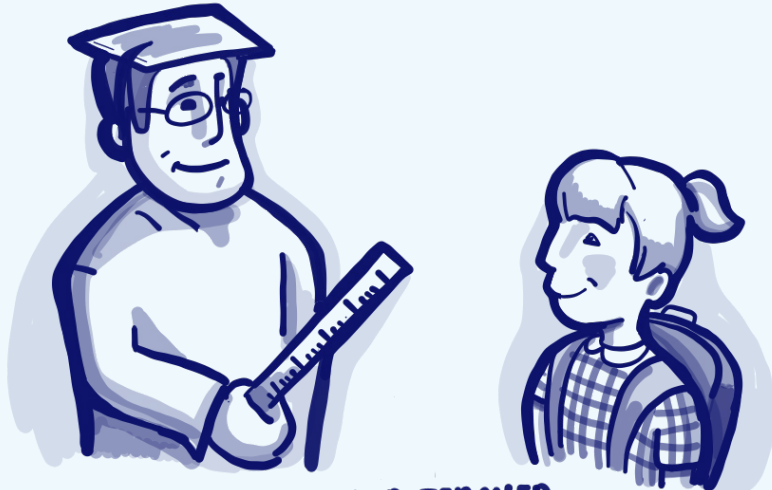
Breakouts

A diversified group of participants joined one of the following breakout groups to discuss the opportunities and challenges in:

1. Technological interactions
2. Internal Business
3. External Business
4. Regulatory

TECHNOLOGY INTERACTIONS

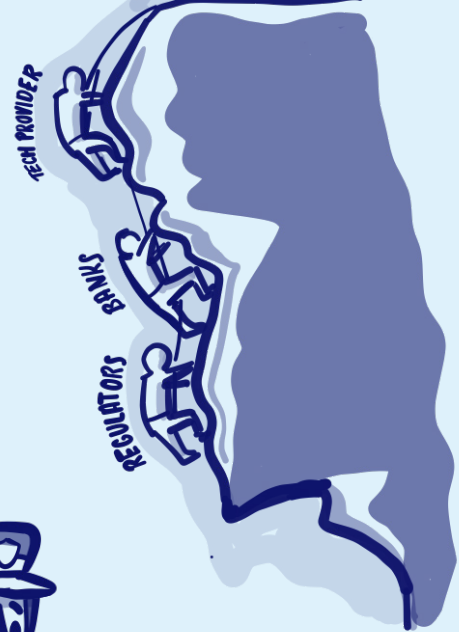
Agreed



NEED FOR TEACHER



POWER



Further investigations

Technology – where there is friction, there are opportunities

Agreed

90% of people still don't understand how use cases around Blockchain will work.

- How can we harness this conversation nationally?
- Governments must coordinate efforts between businesses, regulators, innovators and academia
- Rather than describing the features, highlight the benefits.

Digital identity – The foundational elements of the industry remains unchanged; privacy is central to that and how you manage it is critical. It should deliver much greater degrees of integrity. Trust is moving from the individual to technology.

Blockchain increases integrity of financial transactions

Blockchain increases permanence

Blockchain increases transparency

....which should result in a lower compliance burden.

Further investigations

Need for collaboration between banks – In order for banks to work well together, the stakeholders – the CIOs/CFOs/CEOs – need to understand the benefits, not just the features, although there is a need to see how technology will make the use case.

Tomorrow's arbitrage – How can you best unpick the opacity of global markets?

- Building something unique – how can it be used without having to be proprietary?
- Ripple suggested XRP currency as a standard, although it doesn't have to be XRP it could be universal like Google and Facebook.

Opportunities beyond financial services – If the Reserve Bank of Australia can see an integrated data set that is visible to the client, where the baseline is defined, the world will open up beyond the financial sector.

With a baseline around standards in Australia, market transparency will be one of the most fundamental shifts – deriving enormous value from a purview of macro markets.

Overall

1. Do not underestimate the challenges of collaboration and co-opitition
2. Incentivising the first movement is important
3. The entrepreneurs are going to cause a shift – let's encourage that!
4. This is a global technology so let us ensure we do not create a unique rail but one that is universal
5. We need to push the envelope and share what we are doing, rather than just independently creating
6. We can lead the way!

INTERNAL BUSINESS INTERACTIONS

Agreed



Further investigations

Internal business – time to collaborate

Agreed

Financial institutions generally trust each other but where there is fierce competition such as at a trade level we do not trust each other. Blockchain has the potential to get us closer and collaborate.

There is potential to incentivise efforts to increase transparency. There is general consensus to seek a 'teacher' in this space as opposed to regulators giving the green light to go out there and pursue it.

Further investigations

One size does not fit all – Given the broad scope in this area, there needs to be a broad agreement e.g. surrounding identity. A consortium of banks would be able to agree how data standards need to happen, but may not need technology standards.

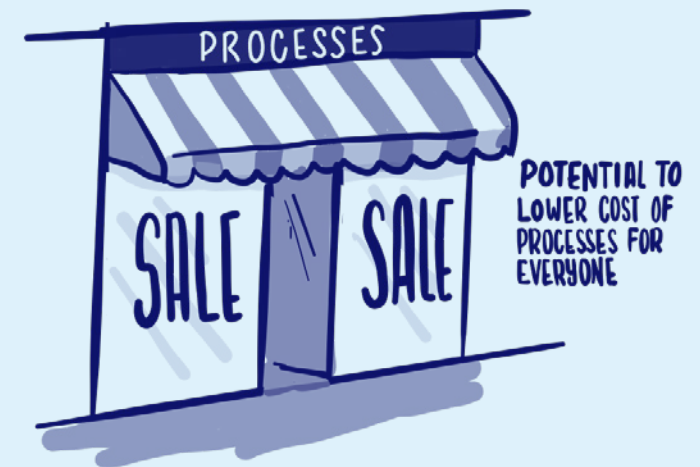
How do we attract critical mass? Internet is a governance model and like all standards' bodies, it can be painful at times. Much has come from a very substantial investment. The question is how do we get to the critical mass for blockchain?

Overall

1. Should blockchain be mandated?
2. Or should we let it develop?
3. How do we get to the critical mass for blockchain?
4. How do we manage competition?
5. Blockchain has the potential to drive collaboration.

EXTERNAL BUSINESS INTERACTIONS

Agreed



Further investigations

External business – increasing competition

Agreed

Willingness to trust certain systems – If systems like payments, can deliver very low costs in infrastructure, you can create more value-added services. The focus then becomes the customer value proposition and experience.

Permission vs permissionless – We need to address the issues and implications that inevitably surface as a result of working individually and together, along with the commensurate fear of sharing information from both an organisational and customer perspective.

Further investigations

Intensifying consumer choice – Providing data transparency could show the consumer what each institution is doing and the costs they are charging. This would provide additional choice.

Collaboration – Organisations working together make for interesting dynamics. It is essential, and necessitates thinking through the impact of working with a competitor.

The risk of solution fragmentation – We need to understand who is using what and to what end. Is it to have a divergence of purpose with multiple systems doing the same functions? Or to have different national systems and connect them? Regulators may have to intervene to direct a particular registry or method.

Reframing the ecosystem – we are in a world that is dealing with information being used by multiple parties in multiple ways. We can't solve all the complexities up front, we will need to experiment. This may end up solving higher order problems.

Overall

If you are going to sail into the future you need to let go of the shore.

REGULATORY INTERACTIONS

Agreed



NEED FOR NATIONAL
STATEMENT OF INTENT



Further investigations

Regulatory – redefining the ecosystem

Agreed

Local vs global – There isn't just one governance approach that works. There is significant interest in technology and data incentives. This has created a need for a teacher role to drive standards with a domestic and global view.

Industry guidance – Regulators need to think about what could go wrong and how it could be prevented, and subsequently build in constraints and legislative tools to protect people and ensure responsible entities are still fulfilling their roles.

People seek guidance and the industry wants to meet the regulatory requirements. Are our regulators up to speed with the necessary authority? We may have the world's most progressive regulators, but if they don't have the authority, it could stifle activity.

Further investigations

Policy should be technology neutral – We need to consider the current regulations and what may be needed to achieve standardisation, interoperability, access (with permission groups to be established), and competition.

Threat of new technology – Efficiencies through new technology will mean business models will come under threat, which brings in a political sphere, similar to taxis and Uber. Tensions will arise and we need to understand the implications and how potential businesses may need to pivot.

Overall

Collaboration must continue and grow and at the same time be cognisant that some will want to push the envelope to be competitive and look opportunistically for the gaps.

Group consensus:

*Blockchain increases integrity of financial transactions;
it increases permanence and transparency.
It could also result in lower compliance costs.*

Richard Miller, Payments Practice Leader, Deloitte Australia:
"The question is not could we use blockchain but should we?"

Next steps

1

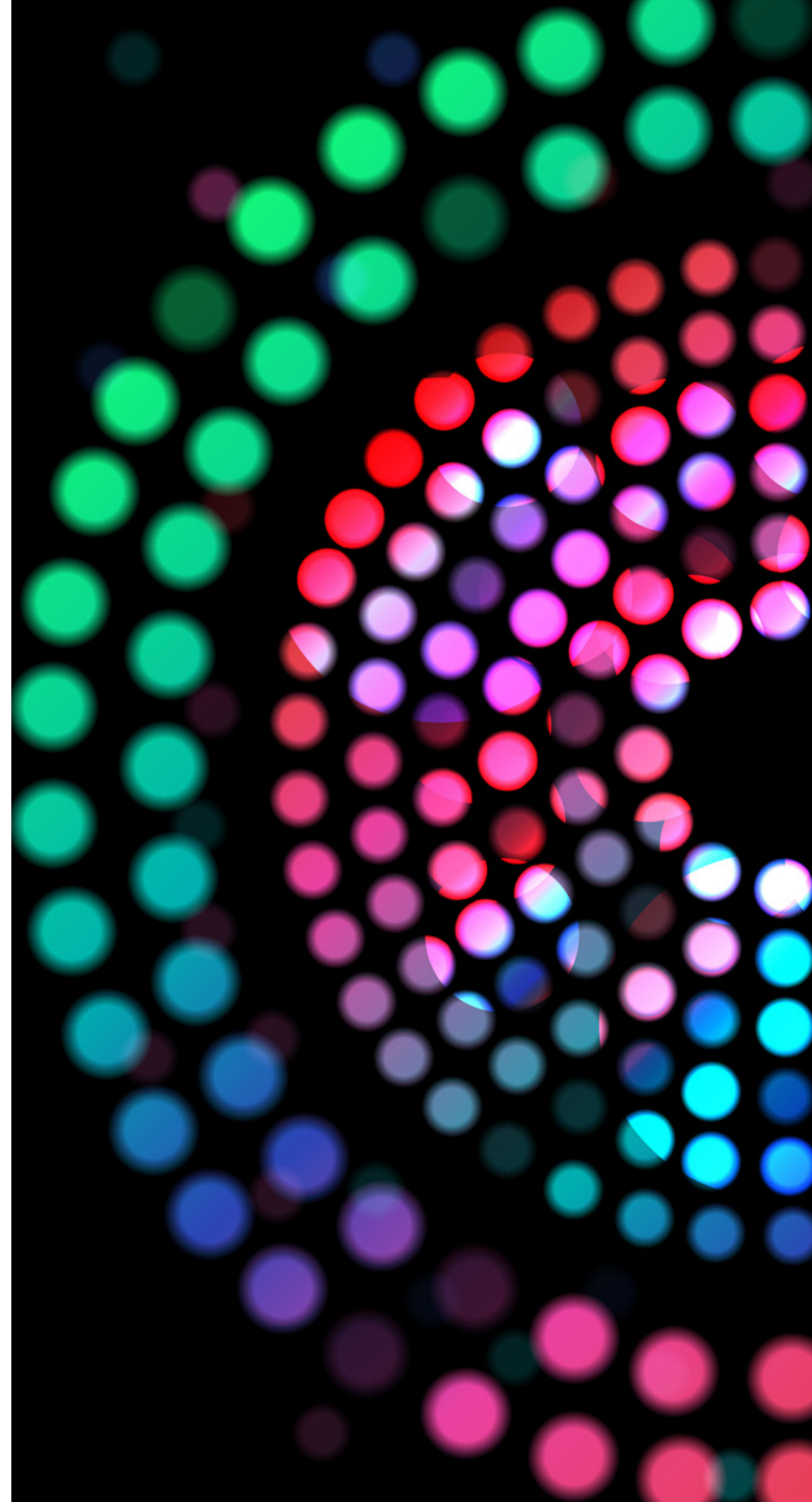
A very clear national statement of intent is required, not just around innovation and fintechs, but around the purposes of blockchain and how Australia can take a global leader position.

2

Continuing the forums for collaboration with the regulators, incumbents, innovators and technologists is essential.

3

Let us demystify the language of blockchain. Once the jargon is removed its value can extend beyond financial services to the rest of the economy, so Australia as a whole, can discover how blockchain will benefit the nation.



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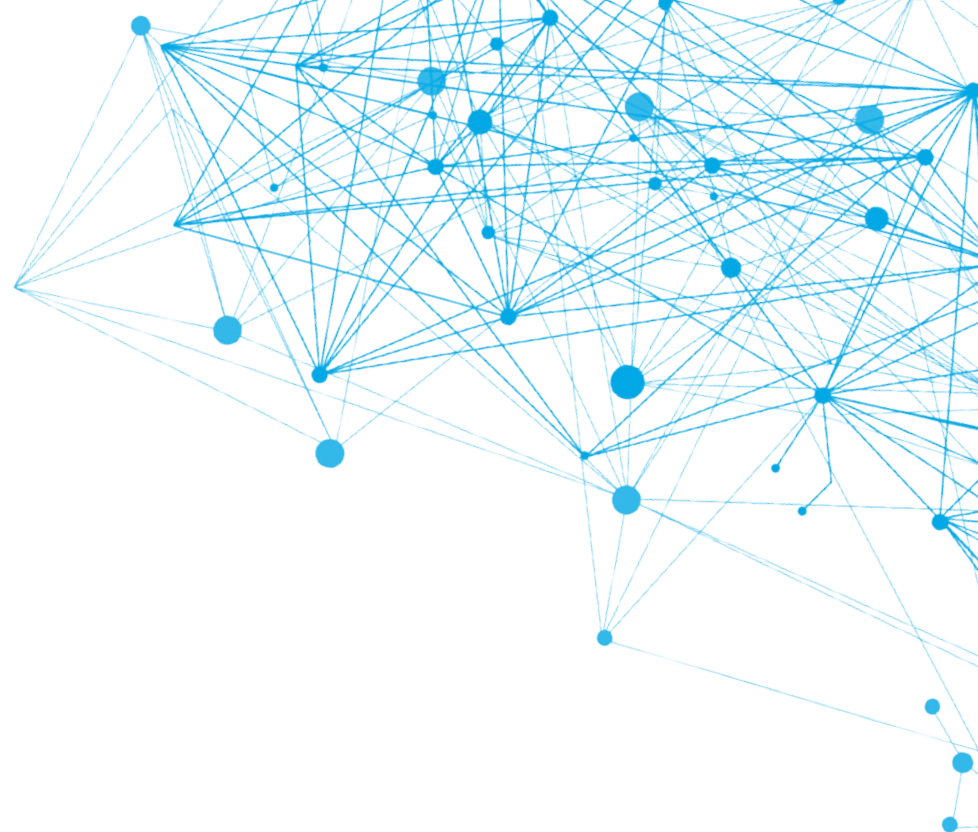
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In the new era

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Breakout Group #1
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