

## **Blockchain technology “Down Under”**

*An Australian perspective on current trends, developments and challenges*

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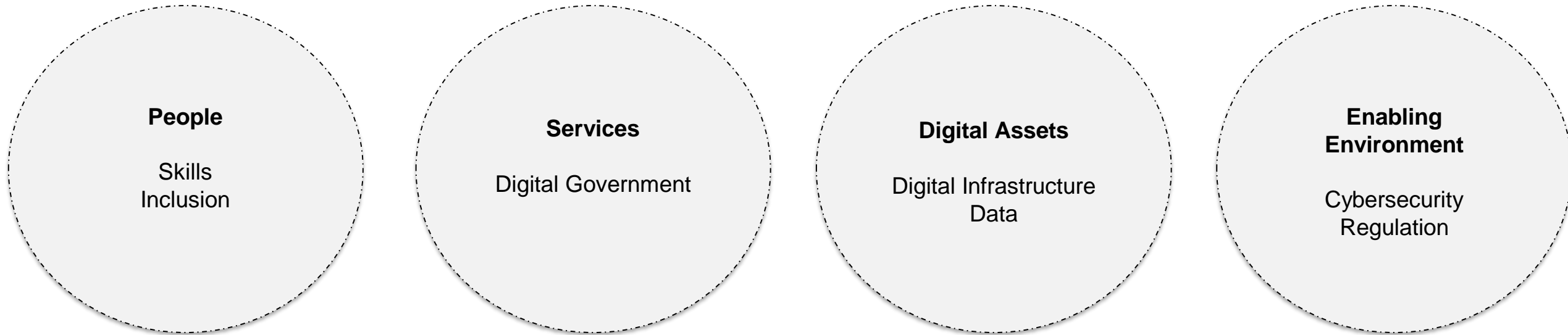
# Agenda

- Australia and digital economy.
- Australia's activities and approach to Blockchain technology.
- National Blockchain Roadmap.
- Current developments.
- Regulatory provisions.
- Future outlook and points of consideration.



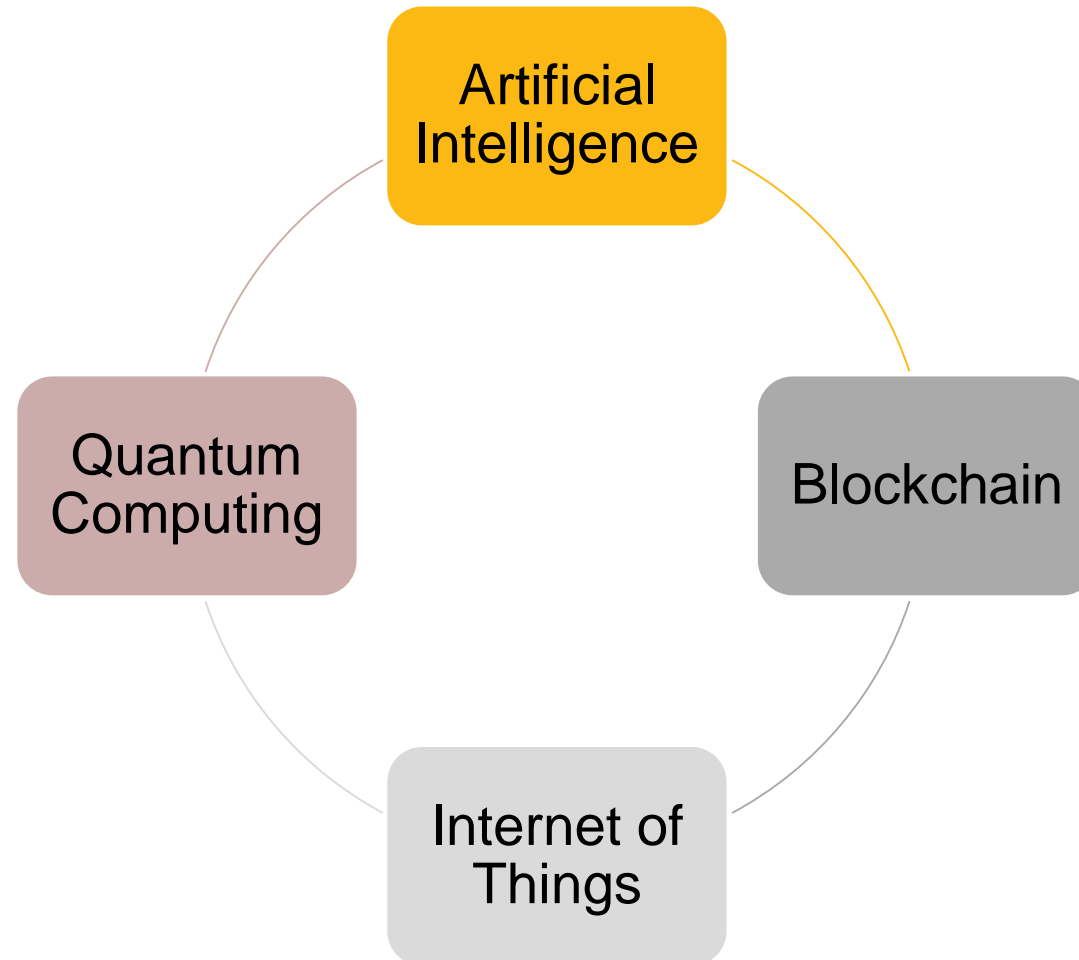
## Participating in the digital economy

# Digital Economy Strategy: Australia's Tech Future



Sets clear outcomes, identifies opportunities and areas that need further focus and outlines government focus

# Digital Economy Strategy: Key Technologies





## Blockchain activity in Australia

## Australian perspective

- Increase since 2010.
- 50% undertaken by Blockchain firms and startups or larger companies being active in Blockchain projects and/or trials. Collaborative projects grounded on consortia are also present.
- Single application product (50.7%), greater productization (18.1%), provision of Blockchain-related services (31.2%).
- Most activities are in capital cities (Sydney and Melbourne) vs regional.
- Leading industry is financial and insurance services.

**Source:** Bratanova, A., Devaraj, D., Horton, J., Naughtin, C., Kloester, B., Trinh, K., Weber, I., Dawson, D. (2019) Blockchain 2030: A Look at the Future of Blockchain in Australia. CSIRO Data61: Brisbane, Australia.





## Strategic value: Australia's perspective

## The future is technology by Blockchain

- “It may well be the solution to one-touch government with international transactions in real-time. It will eliminate our time zone problem, which has been a problem for Australia over the long run ... Blockchain technology can streamline regulatory processes, reduce fraud and reduce costs to regulatory compliance and administration [...] it can help Australia rebuild confidence and trust in financial services in a post-Hayne Royal Commission world”.



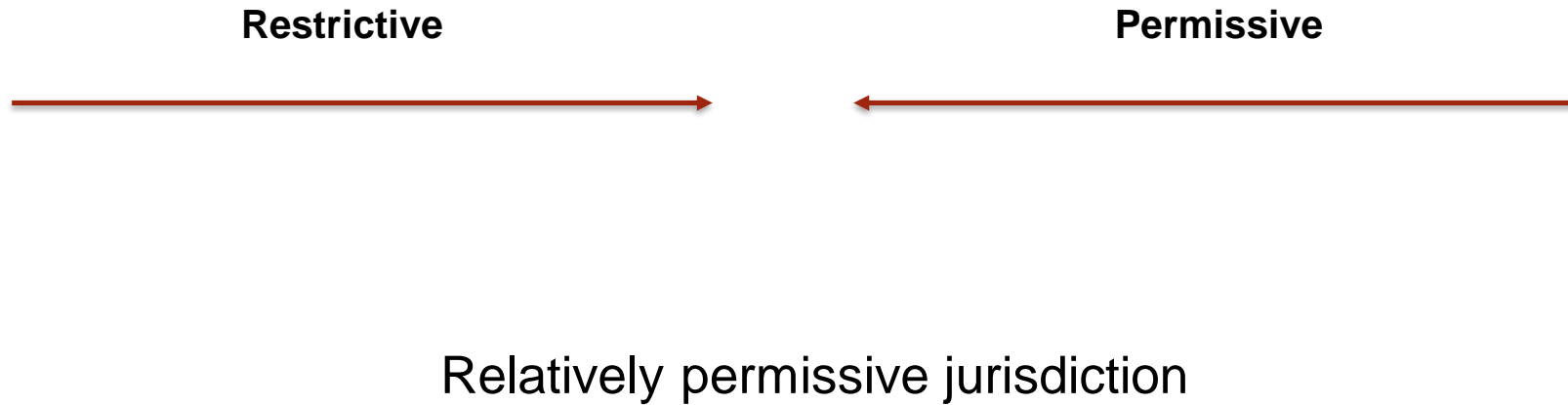
**Senator Andrew Bragg**  
Chair, Senate Select  
Committee on Financial  
Technology and  
Regulatory Technology



PARLIAMENT of AUSTRALIA

Source: [Australian FinTech](#)

# Developing a strategy for Australia





# National Blockchain Roadmap

## Background and aims

- February 7<sup>th</sup> 2020.
- Australian Government, Department of Industry, Science, Energy and Resources.
- Developed **in conjunction with** industry, universities and government representatives.
- **Definition on the ways** Blockchain technology can benefit the Australian economy within the next five (5) years.
- Creation of **new economic growth** and improvement of **productivity**.
- Consultation document and **not obligatory as a regulatory framework**.

## Blockchain Australia

- “The promise of the Blockchain industry is extraordinarily expansive. **Before we build out that capability we need a renewed focus on establishing confidence.** Confidence in our vision, confidence in the regulatory frameworks that underpin this emergent technology and confidence in the people and organizations that will drive the uptake in this space.”



**Steve Vallas**  
Chief Executive Officer



Source: [BraveNewCoin](#)

## Key sectors

### **Agriculture**

Inventory tracking,  
automated payments,  
provenance  
traceability

### **Education**

Credentialing,  
management and  
sharing, recording  
and referencing

### **Financial Services**

KYC procedures,  
sharing KYC  
information securely  
and at speed

## Steering committee

- Steering Committee.
- Responsible for **overseeing** the **implementation** of the roadmap.
- Representatives and experts from **government, academia** and **industry**.

*Establish a **collaborative model** comprising working groups of industry, the research sector and government to progress analysis on the next use cases.*



## Four working groups (cont.)

Working Group	Aim and Objective
Supply chains	<ul style="list-style-type: none"><li>• Established in August 2020.</li><li>• Investigate the potential of Blockchain technology to support trusted supply chains.</li><li>• Initial focus on the agriculture sector.</li></ul>
Credentialing	<ul style="list-style-type: none"><li>• Established in August 2020.</li><li>• Investigate the potential of Blockchain technology to support credentialing in the education sector.</li></ul>
Cybersecurity	<ul style="list-style-type: none"><li>• Established in October 2020.</li><li>• Investigate the potential of Blockchain technology to bolster cybersecurity.</li></ul>
RegTech	<ul style="list-style-type: none"><li>• Established in October 2020.</li><li>• Investigate the potential of Blockchain technology to aid businesses in meeting their regulatory compliance obligations in more secure and efficient ways.</li></ul>

## Australian Public Sector (APS) Blockchain Network

- Community of practice.
- Building **capacity** in Blockchain within the government.
- Open to **public servants** interested in Blockchain technology at any level in the Australian Government.



## Current developments

## Governmental support

- The Federal Government has set aside approximately **A\$800** million to invest in digital technologies.
- This investment is part of Australia's **COVID-19 recovery plan**.
- Blockchain technology has been specifically mentioned under a **A\$6.9 million** initiative for two industry-led pilot programs aiming at **reducing regulatory compliance costs** and supporting **broader usage** by Australian businesses.

## Governmental Support

- “A strong FinTech ecosystem means a more **competitive** financial market landscape-one that is consumer-driven, efficient and among the world’s leaders. As a **mature, diverse and internationally** connected ecosystem, Australia is an **attractive** destination for FinTech investment globally. The Morrison government is seizing this valuable opportunity to **grow the sector even further**”



**Senator Jane Hume**  
Assistant Minister for  
Superannuation,  
Financial Services  
and Financial  
Technology



**Australian Government**

Source: [Finextra](#)

## Central Bank Digital Currency

- The Reserve Bank of Australia has **partnered** with Commonwealth Bank, National Australia Bank, Perpetual and ConsenSys Software (November 1<sup>st</sup> 2020).
- **Collaborative project** on the exploration of the possible use and the effects of a wholesale form of CBDC by means of distributed ledger technology.
- Development of a **Proof-of-Concept** for the issuance of the tokenized form of CBDC.
- The form can be issued for **funding, settlement and repayment** of a tokenized syndicated loan on an Ethereum-based DLT platform dedicated to wholesale participants.
- Exploring the **implications** of “atomic” delivery vs payment settlement.
- Explore potential **programmability** and **automation** features of tokenized CBDC and financial assets.

## Reserve Bank of Australia and CBDCs

- “With this project we are aiming to explore the implications of a CBDC for **efficiency, risk management and innovation** in wholesale financial markets transactions [...] While the case for the use of a CBDC in these markets **remains an open question**, we are pleased to be **collaborating** with industry partners to explore if there is a future role for a wholesale CBDC in the Australian payments system”.



**Michele Bullock**  
Assistant Governor  
(Financial System)



Source: [ITWire](#)

## Australian Securities Exchange



- Utilization of Blockchain in order to **clear** and **settle trades** in Australian equities.
- **Replacement** of the 25-year old Clearing House Electronic Subregister System (CHES) with a **permissioned** DLT infrastructure.
- Positioning Australia at the forefront of **digital innovation in financial markets**.
- **Enabler of innovation** for business, customers, issuers and investors.
- Project has been pushed back due to concerns raised by stakeholders, along with, the foreseen impact of COVID-19. **Revised target date is April 2023**.
- Technical, operational and regulatory information **still blurry**.
- Lack of a **solid governance framework**.

Sources: [The Financial Times](#), [The Australian Financial Review](#), [The Trade News](#) and [Ledger Insights](#)



## Australian Securities Exchange (cont.)

- “Replacing CHES is an important and innovative project, with significant long-term benefits for Australia’s financial market users. It is ASX’s responsibility to deliver it in a **safe and timely manner**, and to consider the feedback from all our stakeholders [...] COVID-19 continues to impact some participants in the industry. This includes the effect on collaboration and productivity, the importance of digitising processes and the desire to further reduce cut-over risk for the new system”.
- A really critical piece of Australia’s financial market infrastructure.



**Dominic Stevens**  
Chief Executive Officer



Sources: [The Financial Times](#), [The Australian Financial Review](#), [The Trade News](#) and [Ledger Insights](#)

## Blockchain and cross-border trading



- **Australian** Border Force (ABF).
- **Singapore** Customs and the Singapore Infocomm Media Development Authority (IMDA).
- Blockchain trail on testing **digital-verification systems**.
- United Nations Centre for Trade Facilitation and Electronic Business.
- Blockchain for **inter-government document exchange**.
- Paperless trading, secure digital exchange of trade information
- Intergovernmental Ledger (IGL) by ABF and TradeTrust by IMDA.
- **Australia-Singapore Digital Economy Agreement**.

## Blockchain and cross-border trading (cont.)

- “This leads to the importing regulator to rely upon physical documents-supported by signatures and wet stamps-to validate the claim or information on that document, rather than being able to use digitised data. Moving these paper documents adds costs and delays to the international trade process [...] The IGL aims to assess the viability of replacing paper documents with high-integrity digital processes. IGL involves a Blockchain solution that will help **streamline the process, reduce costs and reduce compliance issues at the border by creating a ledger of electronically verifiable digital documents**, suitable for all trading partners” (p. 28).



National Blockchain  
Roadmap

## Australian Dairy Farmers

- Blockchain and Federal's Government **Traceability** Framework
- Real-time **dairy payment system** and supply chain information sharing capacity.
- Data structure, which holds transactional records.
- **Phase 1:** Education.
- **Phase 2:** Field trial aiming at quantifying benefits and setting up for a more digitalized future.
- Incentives: competitiveness of prices, trading practices, supply chain optimization.
- Perceived benefits: optimal information management, new forms of contractual relationships, trust building, transparency and efficiency.
- GS1 Australia, Data61|CSIRO and the dairy industry.

## Australian Dairy Farmers

- “All sides know they are all looking at the same records and the history of their business relationship [...] **open, transparent and trustworthy systems are important for long-term sustainability and global competitiveness** [...] building on standards already used in transport and logistics, warehousing, distribution, retailing and eCommerce ensures Australian producers and processors can participate efficiently and effectively in global markets”.



**David Littleproud**  
Minister for Agriculture, Drought and  
Emergency Management



**Australian Government**  
**Department of Agriculture,  
Water and the Environment**

Source: [Technology Decisions](#)

## Blockchain-based livestock traceability



- A world-first livestock traceability platform for the **Australian beef**.
- Trial-tracked beef from a New South Wales farm via Brisbane to Shanghai China.
- **Tracking** of frozen beef products to ensure that they were kept under safe conditions.
- Internet-of-Things devices to **record temperature** and **location data**.
- Data recorded to a **private** version of Ethereum.
- Platform uses an electronic National Vendor Declaration (eNVD) app.
- App is able to integrate farm accreditation and management data into one system.
- A “**product-to-plate**” solution within future expansion plans.



## Regulatory provisions

## Regulatory Sandbox

- Treasury Laws Amendment (2018 Measures No. 2) Bill 2019: will establish the framework to allow testing of financial products without holding a financial services or credit licence in Australia (enhanced regulatory sandbox).
- Australia's regulatory sandbox framework is comprised of **three broad options** for testing a new product or service without a licence. Those options are:
  - relying on existing statutory exemptions or flexibility in the law-such as by acting on behalf of an existing licensee.
  - relying on Australian Securities and Investments Commission (ASIC)'s 'FinTech licensing exemption' for the testing of certain specified products and services; and.
  - for other services, relying on individual relief from ASIC.



# Landing pads: innovate, accelerate, go global



Australian Government

Australian Trade and Investment Commission



## Cryptocurrency regulation

- 2020.
- Council of Financial Regulators.
- Recommendations to the Treasurer.
- A new regulatory model “**stored-value facilities**” that would regulate funds held in digital wallets, which are not bank deposits.
- Calibra, Facebook's suggested wallet for Diem (f.k.a. Libra), and other large digital wallets would be regulated by the Australian Prudential Regulation Authority (APRA), and smaller players regulated by ASIC.

Source: [The Australian Financial Review](#)

## Cryptocurrency regulation

- 2019.
- Australian Taxation Office.
- **Guidance framework** on the taxation on cryptocurrencies.
- Bitcoin and other cryptocurrencies are defined as **forms of property** that are **taxable**.

Source: [Global Legal Insights](#)

## Cryptocurrency regulation (cont.)

- April 2018.
- Regulation of cryptocurrencies in the context of digital asset trading.
- Australian Transaction Reports and Analysis Centre.
- Regulations for digital currency exchange operators (DCEs) in Australia.

Australia is among the first countries globally to introduce AML/CFT regulation

DCEs are required to **register with the authorities** and maintain a **compliant AML/KYC** policy

Improving trust in the cryptocurrencies space

Source: [Global Legal Insights](#)

## Cryptocurrency regulation (cont.)

- 2018.
- Initial Coin Offerings and cryptoassets.
- Regulated by the Australian Securities and Investments Commission.
- Oversees them under the Corporations Act 2001 and the Australian Securities and Investment Commissions Act 2001.
- Cryptocurrency with similar features to existing financial products or securities **will trigger the relevant regulatory obligations.**
- 2019 Treasury consultation.
- Relevant regulatory frameworks to be determined.

Source: [Global Legal Insights](#)

## Cryptocurrency regulation (cont.)

- July 2017.
- Department of Treasury.
- Removing the **double taxation** of good and services tax on digital currencies.

Prior cryptocurrency users had to pay GST twice a) when purchasing digital currency and b) when purchasing goods and services subject to the GST

## Cryptocurrency regulation (cont.)

- 2017.
- Australian government.
- Anti-Money Laundering and Counter-Terrorism Financing Amendment Act.

Cryptocurrencies and tokens fall under the scope of Australia's **anti-money laundering regime**.

Source: [Global Legal Insights](#)



## Future outlook and points of consideration



## Positioning Blockchain within the Australian economy

- Large companies are taking a very close look at Blockchain.
- Main reasons include the gradual maturity of the space and the emergence of problems that could be tackled by Blockchain, especially in light of the COVID-19 pandemic.
- Supply chain safety, digital identity, and distributed computing are considered as the most promising areas of exploring the application of Blockchain.

## Insights and vibes from the ecosystem

- Transformative potential of Blockchain innovation.
- Long-term implications are not yet fully understood.
- Clear standards and expectations.
- Continuous evolution of applications.
- Governance mechanisms.
- Regulatory clarity and harmonisation.
- Greater inclusivity and technology resilience.
- Cybersecurity issues and privacy concerns.

## My opinion

- Interconnectivity with other technologies (AI/ML, IoT, Cloud).
- Geopolitical opportunities and competition - global reach and international competitiveness as a FinTech hub.
- Cross-collaboration across industry domains, disciplines and sectors.
- Increased demand for talent and Blockchain-related skills (not only technical). Currently a lack is observed that could impact future developments.
- Responsibility of key ecosystem players.
- Pragmatic entrepreneurship and innovation.
- Ecosystem orchestration and coordination.
- Philosophical conundrum.

Thank you very much for your kind  
attention!



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