

Licensing 2030

Insight paper
March 2018



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Licensing 2030

In today's digital economy, consumers and businesses increasingly expect services to be available when and where it suits them. Almost every task and transaction can be completed online, with real-time updates and a seamless, intuitive experience.

By June 2016,

94%

of adults used the internet to conduct banking, pay bills, or buy and/or sell goods and services.¹ We're also increasingly storing flight boarding passes or event tickets in mobile wallets.

But there are still parts of our economy yet to deliver on digital's promise of convenience, cost-savings and consumer control. In our previous paper, A frictionless future for identity management, we looked at how a single digital identity framework could unlock up to \$11billion in friction from Australia's economy.

In this follow-up report, we investigate how that framework could also form the foundation for digital licensing – re-imagining the way we issue, verify and manage the many credentials we need to hold in today's society.

How can we reduce the cost of managing our complex, siloed licensing systems, while reducing the risk of fraud and improving convenience for users?



¹ ACMA Communications report 2015–16

The role of licensing in a digital economy

Our identity proves who we are. Licences prove what we can do – that we have the right (and capability) to perform a specific task. However, in countries without national identity cards (like Australia), a licence has also become the basis for proving identity.

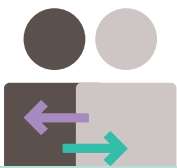
Licences are a currency of trust; from driver, boating and Fishing Licences and Working with Children Checks, to workplace health and safety licences.

There are hundreds of different licences or credentials we may need to apply for in our personal lives and careers. And unlike our identity, our abilities and knowledge may change over time. Licences can be revoked amended or expanded, and this makes managing our fragmented (often state-based or privately -issued) physical licensing system complex to manage.

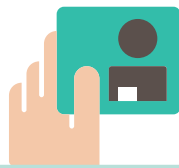
The digital economy is the economy: our digital and physical activities are increasingly interdependent and

new technology has fundamentally changed the way we interact. As industry lines blur and the basis of competition changes, we don't always have physical contact with the people we do business with. So these 'currencies of trust' have never been more important.

Taxi licensing is just one example: for Uber to be successful as a ride-sharing platform, users need to have confidence that its driver accreditations are equivalent to taxi service standards.



“Licences require trust in two things: trust in the individual, and trust in whoever issues the licence,” comments Dr Christopher Betts, Australia Post’s Senior Identity Specialist. “This has implications across the sharing economy. If it can all be done online seamlessly, it works so well, people barely notice it.”



Identity and licences are linked – but they are very different in one key way.

“An identity belongs to the holder, it is yours from the moment you are born,” explains Régis Bauchié, Australia Post’s GM Identity Services. “But a licence is owned by the issuer. They have a responsibility to manage its validity.”

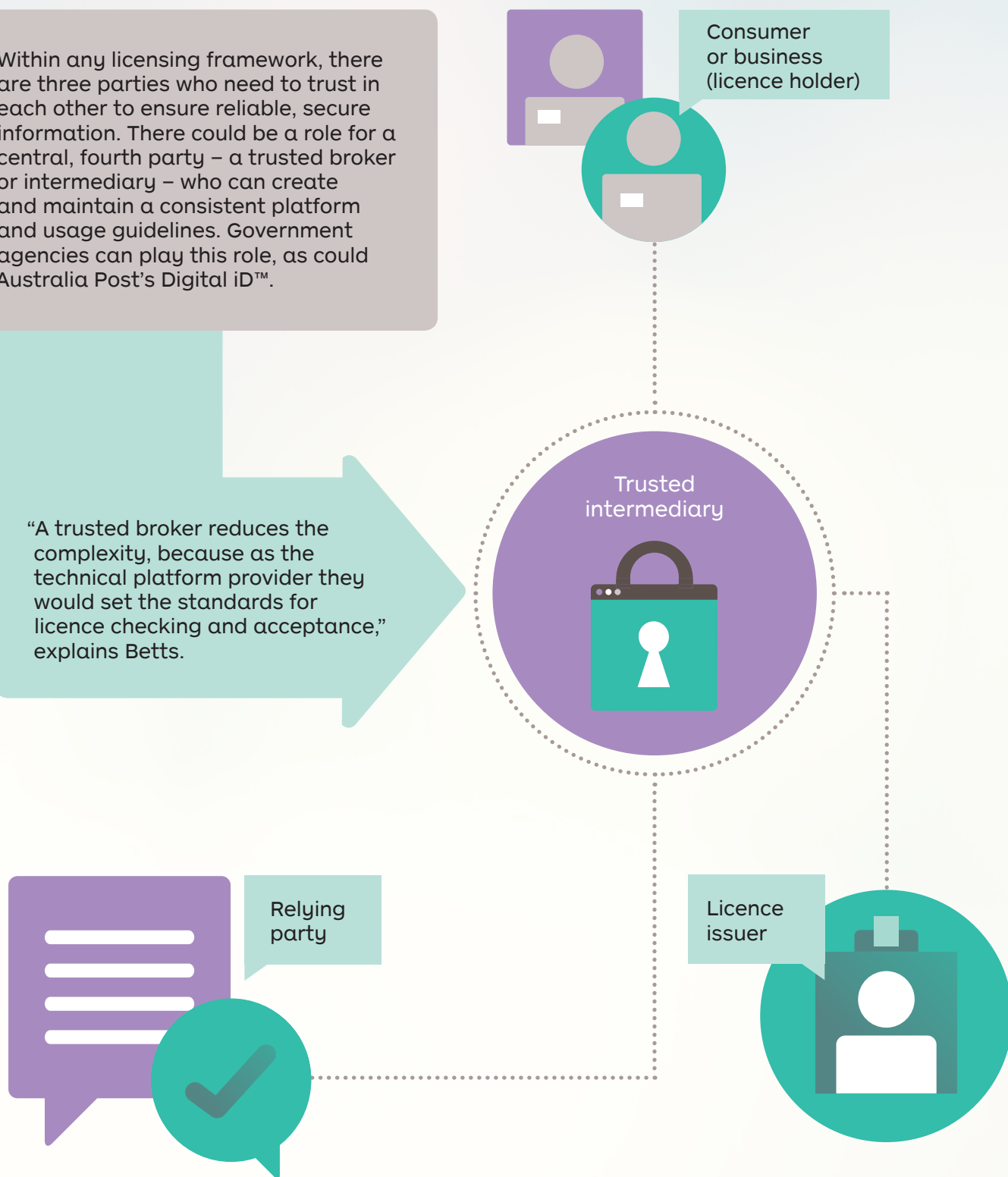


Betts says the scope of licensing could be much broader in the future. “Licensing is not a black-and-white or binary thing; there are many types of government credentials which say something about you or give you certain rights or authority in society.” Similarly, other organisations may grant some type of credential – such as university qualification or professional accreditation.

Layers of trust

Within any licensing framework, there are three parties who need to trust in each other to ensure reliable, secure information. There could be a role for a central, fourth party – a trusted broker or intermediary – who can create and maintain a consistent platform and usage guidelines. Government agencies can play this role, as could Australia Post's Digital ID™.

“A trusted broker reduces the complexity, because as the technical platform provider they would set the standards for licence checking and acceptance,” explains Betts.



Flipping our thinking on physical licences

A digital licence overcomes many limitations of physical licences.

“Physical licences are easily forged – Driver Licences are readily available on the ‘dark web,” notes Cameron Gough, General Manager Digital iD™ at Australia Post. “Once issued, a physical licence cannot easily be revoked, and checking validity with the issuer is often impractical. It’s slower to update changes – such as an address or additional condition.”



Benefits to issuers

Both government agencies and private sector organisations manage different types of licences and credentials. Re-thinking licensing processes and platforms is an important part of their ongoing digitisation.²

A digital licence offers many potential benefits to issuers, including:

- Reduced costs of issuing and maintaining licences
- Remote, real-time revocation or update
- Audit trail of how licences are being used and checked
- Potential to remove expiry dates and the need for renewal (photos could be updated remotely through biometric techniques)
- Increased security features and significantly less risk of fraud, tampering or forgery.



Benefits to users

Being able to access our licences and credentials with a swipe sounds appealing – but it may also be more secure than carrying different paper documentation.

A digital licence framework could enable:

- More convenience – no need to carry your wallet, easily accessible
- Improved privacy protection and data security, including PIN or fingerprint verification
- More control over who accesses specific personal information
- Micro-licensing payments (monthly rather than annual)
- Easier portability across state or international borders.

“Trust is an essential element of licensing: in the issuer and in what they say the holder can do.”

Cameron Gough, General Manager – Digital iD™ at Australia Post

² The Digital Economy: opening up the conversation, industry.gov.au 2017

According to Australia Post data, every year in Australia there are around:

1m

Working with Children Checks

3m

Driver Licence renewals

1.5m

new Driver Licences

1.8m

regulatory permits or licences, such as fishing, boating or hunting

245k

occupational licences.

Other types of licences include:

Safety and security

- Health and Safety licences, such as WorkSafe
- Firearms Licences
- Private Security Licence.

Professional

- Teacher licences
- Health professional
- Aviation Security ID card
- Maritime Security ID card
- Gaming Industry Employee Licence.

Business licences

- Taxi Licence
- Ride-share accreditation and licensing
- Liquor / on-premise licence.

Memberships

- Sports club registrations
- Industry bodies
- Recreational clubs.

Identity-related

- Passport
- University student ID card
- Proof of age card.

Licence versus identity

As we often use our Driver Licence as a proof of identity, the two may be confused. However, there's no logical reason why our ability to prove our identity should be linked to our ability to drive a car. And in a future that promises driverless cars, we may not even need a Driver Licence.

“One need not serve as a proxy for the other. Your identity is who you are, it doesn't change (much) over your lifetime and you own it. A licence is given to you as a qualification, right or authorisation, and the issuer owns it,” says Betts.

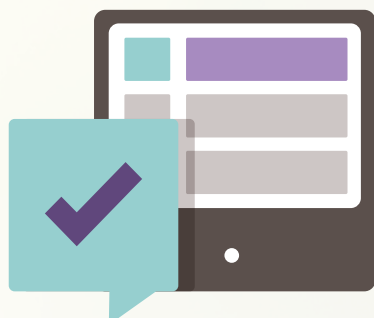
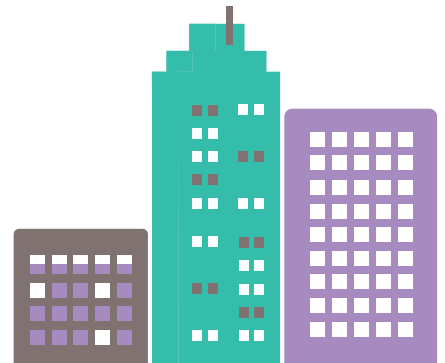


The digital licensing state of play

Australia is already exploring the role of digital Driver Licences and other digital credentials through various state initiatives. Citizens increasingly want and expect to access government services online, and research shows many people are comfortable using digital channels to interact with federal government agencies.

In fact, more than a third have said it was most preferred, or one of their preferred, options. This was even higher for small businesses, at 45%.³

The Digital Transformation Agency (DTA) is responsible for building the capabilities needed across Australia's public service, and federal, state and territory governments, who are working together under the National Business Simplification Initiative (NBSI) to make it easier for business to get things done with government.⁴



45%

of small businesses prefer using digital channels to interact with government agencies

³ How do Australians really feel about digital government services? DTA, August 2015

⁴ National Business Simplification Initiative

Driving change across the states

South Australia commenced a state-wide roll-out of digital Driver Licences in October 2017. These digital licences can also be used for Police Checks and to verify age for entry to venues.⁵ The mySA GOV app is able to store proof of age cards, Boat Licences and land agent credentials, and has built-in security (via a single-use barcode) to help prevent use of fake licences.⁶

Through its app, Service NSW made digital Recreational Fishing Fee (Fishing Licence), Responsible Service of Alcohol (RSA) and Responsible Conduct of Gambling (RCG) Competency Cards available in 2016 – heralding the My Licences digital wallet as an ‘Australian first’. These digital licences act just like the physical versions, and authorities check validity and any conditions using a purpose-built checker app.⁷

NSW plans to add digital Driver Licences by 2019, with a trial currently under way in Dubbo. The licence can be viewed, updated and renewed via the app, but a physical licence will still be issued.



Service NSW has also announced it will plug into the Federal Government's new Business Registration Service, providing a ‘one stop shop’ for business permits and licences – opening the door to digital versions of those credentials.⁸

Victoria's Working with Children Check (co-developed with Australia Post) proved high-level security checks can be managed seamlessly with options for physical and electronic verification. The omnichannel application process has saved the Department in processing costs, and improved turnaround time.

Western Australia and Queensland Police have also partnered with Australia Post to deliver a fully digital application process for police certificates. In WA, Electronic National Police Certificates (NPC) are now delivered (in most cases) in just 10 minutes, with an embedded QR code enabling employers to check if the certificate has been revoked since issue. This option has proved popular, with 40% of applications made online within just two months of launch.

At a Federal level, the DTA is working towards ‘paperless’ identity verification – making physical Driver Licences or Medicare cards unnecessary. Govpass will begin its work by streamlining the tax file number application process – cutting turnaround time from 30 days to just four minutes, according to former Digital Transformation Minister Angus Taylor.⁹

“It’s exciting to see the shift into digital licensing under way in some states,” says Bauchiere. “It will build awareness about new ways of delivering service, and we’ll learn how convenient it is for users, by how quickly it’s adopted – for example, how easy it is to use a digital Driver Licence rather than the physical one to prove your age. We’ll also understand any implications for legislation and regulations.”

However, there are limitations to the different models being trialled across the states, and citizens are still currently required to hold their physical licence. It’s up to verifying agencies to accept a digital licence as valid proof of identity – or not.



5 Digital Driver Licences pit-stop on road to licence-free identity checks, Intermedium, October 2017

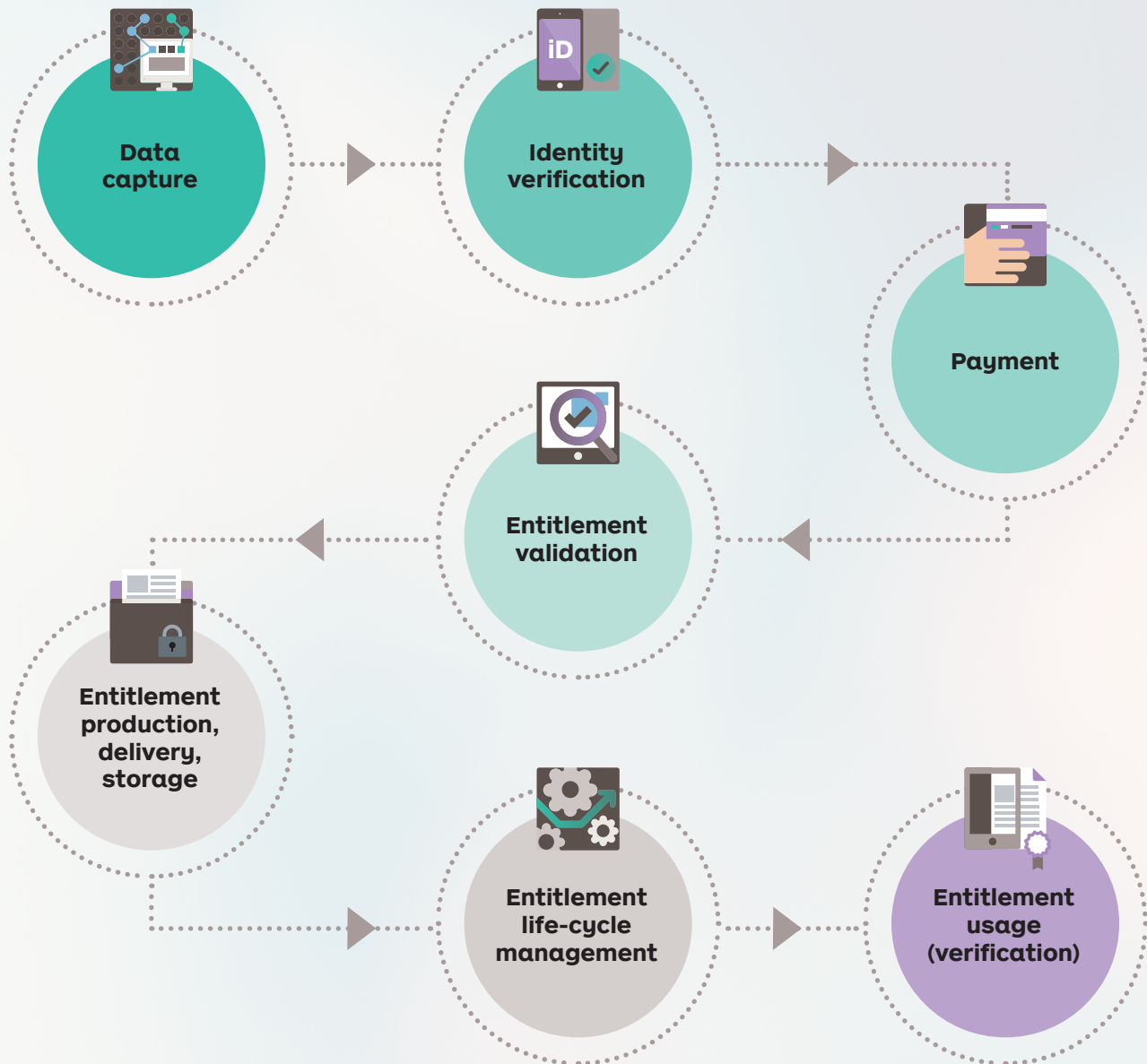
6 Smartphone app to securely store SA driver's licence and other credentials, ABC News, May 2017

7 Digital licences are now available, Service NSW, November 2016

8 NSW deepens digital partnership with Feds, Intermedium, May 2017

9 Govpass to use technology to relegate your Drivers Licence and Medicare card to history, Courier Mail, October 2017

The digital licensing process



Global insights and trends

Globally, experiments with digital licensing tend to be driven by a need for a standard proof of identity. Many countries have a Government national ID card, and once that is digitised, other layers of licensing and credentials can be added.

Estonia

Named 'the most advanced digital society in the world' by Wired magazine, Estonia allows its citizens to conduct almost every government service via a PIN-enabled digital ID card.¹⁰

United States

Similar to Australia, US Driver Licences are managed by each state, with no central ID card. So the current digital Driver Licence pilots underway in Idaho, Maryland, Colorado, Wyoming and Washington DC will be interesting to watch.

It provides digital versions (mobile Driver Licences) that look the same as the physical, with name, address, date of birth and photo displayed. According to pilot program managers Gemalto, the smartphone-based credential will act as a secure companion to the physical ID.

It has been tested in multiple uses, including airport security, age verification (such as at liquor stores and casinos) and law enforcement verification through simulated traffic stops.

87% of pilot users said they were very interested in having a digital Driver Licence option – across all age groups.¹¹

India

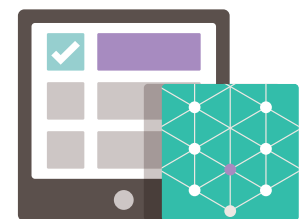
India's Aadhaar identity system is the world's largest biometric database, with over 1 billion unique identities.¹² This has enabled them to connect rights and eligibilities (including licences), to their identity.

"In India, you only need to prove your identity. Then you can connect to the licence owner or regulatory agency to check your rights," explains Bauchiere. "So in many scenarios, they no longer need to issue a licence at all – this is a potential future model for other countries."

Exploring new options

Other countries are experimenting with mobile app versions of a Driver Licence (such as The Netherlands and Brazil), and smartphone storage of licences (Great Britain).¹³

While there are currently no interoperable standards between countries, the ISO SC17 WG10 Task Force 14 Mobile Driving Licence, has started working on verification standards for Mobile Driver Licences.



10 Concerned about Brexit? Why not become an e-resident of Estonia, Wired, March 2017

11 What can we learn from the first multi-state DDL Pilot, Gemalto

12 A frictionless future for identity management, Australia Post, December 2016

13 Digital driver's license – your ID in your smartphone, Gemalto, November 2017

Challenges of a digital licensing framework

As these initial trials demonstrate, introducing a successful digital licensing framework requires the cooperation of multiple parties – all with different needs.

Interoperability is a key concern: if a digital Driver Licence is issued in NSW, will it be accepted as proof of driving ability when hiring a car in Victoria, or if pulled over for speeding in the Northern Territory? Will every counterparty be willing to accept it as valid identity – from the local liquor store to the major banks?

Other potential roadblocks could include:

- Use of a physical version of the same licence even if the digital version is revoked
- Lack of ability for relying parties to confiscate fraudulent licences or ID if it is stored on a smartphone.

From local to global

The digital economy makes us more connected than ever before, and we increasingly expect to be able to move seamlessly across borders.

In 2015–16,

366,400

Australians moved to another state (up 8.1% on the previous year), while almost half a million people migrated to Australia from overseas, and another

300,500

moved abroad.¹⁴

Interoperability is a key requirement for seamless credential checks – whether that's passport control, tertiary qualifications or licences to operate heavy machinery. And this means we need common standards between issuing and verifying authorities.

Betts believes this is where a trusted intermediary can play a role.

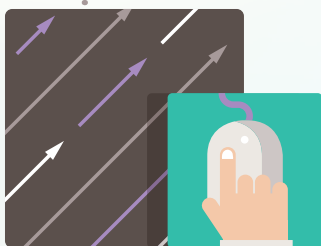
“They can connect multiple issuers with multiple relying parties and consumers, as Australia Post's Digital ID™ now has the capability of doing.”



¹⁴ ABS 3412.0 – Migration, Australia, 2015–16

Success factors for digital licensing

To build trust in a digital credential between the issuing party and relying party, the following principles could be explored.



Common standards

Interoperable standards and system integration underpin effective digital solutions – as digital health care, mobile phone platforms and fintech have demonstrated. Efficiency, productivity and opportunities for growth all depend on our ability to work across different jurisdictions.

Meanwhile, outdated or inconsistent regulation can stifle innovation. Digital licensing could operate within a regulatory ‘grey area’ and legislation will need to consider new risks.

Australia Post’s Gough believes Australia’s Federal Government could play an important role here, by facilitating a framework and standard for interoperability.

“The current model is issuer-centric, with each issuer creating their own model for how digital licences will operate. These models aren’t open – forcing consumers to manage different licence formats, inconsistent expiries and issuance or renewal platforms.”

Betts also believes a consumer-centric approach requires space for innovation. “Set the bar high for security and privacy, but allow intermediaries to create an open, and standards-based framework.”

These standards could also provide greater global interoperability. As a small, open economy, Australia needs to support its participation in global supply chains.

“As we digitise more of our economy, any physical boundaries, including country boundaries, disappear,” says Gough. “For example, if I’m a student in Australia wanting to buy discounted student software from the US online, how do I prove my student credentials?”

Use of new technology

Biometrics will play an important role in verifying the owner of a digital licence. Bauchiari believes this is a technology that is already ‘democratised’.

Biometrics is also a powerful tool for users who want to protect their privacy and identity. “It raises the bar in terms of security – as you can’t disclose information or access to your entitlements without proving your biometrics,” he adds.

How could digital licensing work?

As a smartphone app with PIN security and touch/face ID, Australia Post's Digital iD™ could potentially provide a platform for digital licensing.



- Could use APIs to issue a digital licence to the consumer, and also easily suspend, renew, change or expire the licence
- See where and how the licence is used, subject to user permission.



- Can digitally check licence validity online, over the phone, or in person
- Have an automated audit trail for compliance and issue investigation
- Can automatically be notified if licence conditions change, subject to user permission.

For example, if you applied for a surf lifesaving job online, the Working with Children Check could be conducted at the same time. You could scan your Digital iD™ against a QR code on the screen, and potentially agree to share your Working with Children Check and identity details with that site.

Towards 2030: The future of licensing

Just as the convenience and security of online and mobile payments increases our acceptance, consumers and businesses will naturally adopt this option if available – but an open, standards-based framework will be key. Will we reach a digital licence tipping point in 2018?

“Licensing will become an additional attribute of a digital identity system,” predicts Betts. “By 2030, wallets will have disappeared, and physical licences will no longer be trusted. Everything you now reach for in your wallet will become the equivalent of ‘tap and go.’”

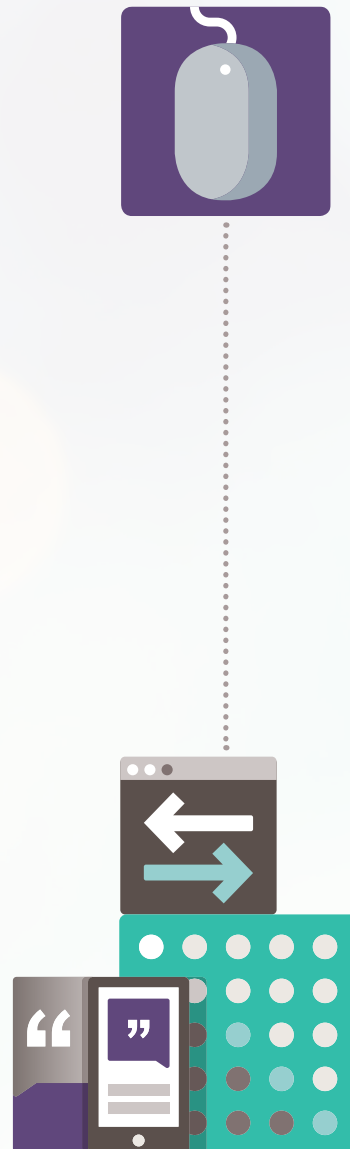
Betts says we can already see the transition in credit cards and passports (which now need a micro-chip to be digitally read before they are trusted).

One unintended consequence is that we may check our licences and credentials more than we do today – adding more value to them as a currency of trust – but we won't notice, as it will be seamless.

“The ultimate step is that licensing falls into the background. For example, your car is un-driveable unless you have a valid Driver Licence sitting in your phone – and your car is able to continually check that,” says Betts. “You will be unable to walk onto a building site without the proper licences – but it's all seamlessly checked every day.”

By 2030, the notion of a physical Driver Licence to prove who we are, may have disappeared. We will have other, more secure, digital means to prove our identity.

The more logical model is therefore to put digital identity at the core, with ‘add on attributes’ to our identity that are verified by issuers. These rights: to drive a car, to work on site, to perform a professional function, to travel across borders, all wrap around identity. And by 2030, managing and proving any credential may be as simple as a swipe or click – no matter where we are in the world.



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