GovernmentNews

Five ways blockchain will transform the public sector

by Guest Contributor on May 18, 2017 in Federal, Finance, ICT, International, Sector, Security

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We are entering a new phase of human evolution. However, it is not one comprising new limbs or larger eyes. Rather, it involves the pursuit of ultimate control, despite human error, through technological innovation. The robotic automation of society alluded to in the science fiction of our past is finally becoming a reality – one technological advancement at a time.

Human involvement, paper-heavy administration and room for error are exponentially decreasing as technologies like blockchain digitise and automate entire processes and interactions. What started as a platform for the transaction of Bitcoin and other cryptocurrencies now has the potential to span industries and verticals across the globe. There has been much hype about blockchain, with banks reporting annual savings of US$8-12 billion after its implementation1, but seemingly little understanding about what exactly it is and how it can be put to valuable use in different sectors.

What is blockchain?

Transactions – financial or otherwise – occur across networks every second. With blockchain, each time a transaction occurs, a network of computers carry out a series of algorithms, identifying the originating device and its user, and validating the transaction. This transaction is then added to a digital ledger (public or private) and attached to an irreversible chain of transactional "blocks". Verified transactions are permanently recorded, traceable and updated across the entire network every 10 minutes. Blockchain is decentralised – it does not have a central server or administrator, but rather exists on and is managed by the network itself. Unimaginable computational processing power is needed to override the network. There are no singular points of vulnerability and the corruption of any one bit of data results in its network-wide corruption. Ultimate visibility and control makes unauthorised actions impossible. **Consequently, blockchain is almost entirely secure in the face of human-led threats.**

It's not just about security

Blockchain's automation makes paper trails redundant, exponentially decreasing lost documents or delayed payments. Imagine a future where financial transactions within governments are automatically and irreversibly recorded, or citizens can transact confidentially without physical presence at a government office. Costs are reduced, efficiency is improved and the way for ultimate transparency is paved. Governments and organizations alike can achieve a true competitive advantage with blockchain (and its accompanying applications and digital technologies).

So, for those working in government, scratching your head about how to leverage this new technology, here's **five ways that I see blockchain being used in the public sector:**

1. **Identification**

Gone are the days of a 100 point ID checks. With digitised birth certificates and ID documents, blockchain enables a single personal identifier. It is an entirely new and reliable way of identifying members of an ecosystem – from citizens to government agencies – enabling everything from digital voting (which is in the works for Australia's 2017 elections) to confidential legal disputes.

2. **Registries**

Blockchain enables the digitization of property titles, car registrations, medical records and more. Once recorded, documents become digital proof, available – for example – for trusted use in legal battles. Printing and tracking costs decrease and smart contracts can automate actions when conditions are met. For example, a digital driver's license can notify its owner of expiration, or simply auto-renew by triggering a debit off the owner's account.

3. **Payments**

There is room for (and talk of) the use of blockchain and cryptocurrencies in place of existing financial institutions. But blockchain technologies also have immense potential to eliminate fraud and tax avoidance, thanks to built-in transparency and trust protocols. Social benefits, grants, compensation, tax returns and inter-government payments can be automated, recorded and possibly even accessed by the public.

4. **Accountability**

On that note, blockchain makes ultimate accountability in all spheres possible. Financial movements can be permanently recorded and traced, or voting results can be updated on a public network, keeping voters in the loop. Each time a change is made to a law recorded on the ledger, the public has full visibility. Public services can be delivered with ease to a trusting population, thanks to this layer of transparency.

5. Automation

The processes of filing applications, making and receiving payments or benefits, getting visas and transferring permissions or titles can all be streamlined beyond what was previously possible – making blockchain particularly beneficial to developing markets whose existing infrastructure cannot otherwise accommodate such radical change.
As with most innovations, the possible use cases of technological advancements like Blockchain are often only discovered much later in their lifecycle. Preconceived notions should not hinder the exploration of evolutionary innovations in new and unique contexts. **The true power of technology is only truly realised when it evolves outside its original borders. Only when we colour outside our existing lines can we truly evolve.** We believe that Blockchain has the potential to truly evolve the way our governments, organisations and society functions.