

Notice
18.02.2021

Dear Senators,

This is to address raised questions in the hearing of the Select Committee of the Australian Senate about my proposal to launch a research and development (pilot) with state land registries to introduce the first in the world **Blockchain Estate Registry**.

[In Submission 186](#) I presented a concept of a new generation of a land registry on blockchain that was developed within the international research program (LAST-JD) funded by the EU, coordinated by the University of Bologna with the participation of RMIT University (Melbourne).

The new registry enables digitization of property rights through so-called **Title Tokens** governed by automated procedures - **Smart Laws** and **Smart Contracts**.

As to the questions asked in the hearing, I would like to specify the following.

- 1. If this were to be progressed, it would have to be progressed through the state legal regime. Have you given any thought to how this could be implemented?**

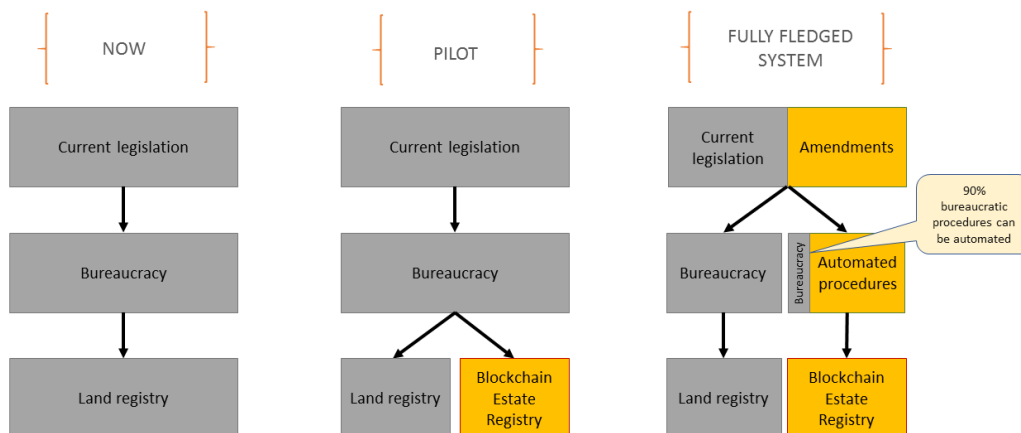
The legislation of the states in the Commonwealth defines that the land registry can be kept in “any form or combination of forms.” Blockchain is a type of electronic database. Therefore, there are no legislative restrictions for this technology. Though the legislation assumes a lot of manual work of registrars, and hence, automation can be introduced through amendments.

Blockchain Estate Registry can and should run as an alternative to the conventional [bureaucratic] system of the land registry. So, it will be a matter of individual **choice** of proprietors to stay with the old system or to digitize their property rights and manage them through the new system that enables the full power of blockchains and smart contracts.

The **R&D pilot** can include the following phases:

- 1) Early R&D phase** aimed to develop a viable plan, define a budget. Based on the existing academic research, the task is to tailor it to the specifics of a state, organizational structure, scale and scope of the project. Introduce some demo applications.
- 2) Implementation.** Based on the developed plan, pilot the project under the supervision of the parliament, government, and land authorities. This phase can work either within the existing legislation or within a **regulatory sandbox**. The latter is preferable as in early stages it will be possible to introduce automated procedures (“smart laws”) to reduce manual work of registrars which is required within the current legislation.
- 3) Adjust the project and amend the legislation.** Based on the results of the pilot decide about its future.

The following diagram shows the project shape now and in the future.



2. *Can you explain what sorts of inefficiencies this sort of model would sweep away? Wouldn't it sweep away unnecessary, inefficient intermediaries and the like?*

To my estimation within the new generation of the estate registry, it is possible to **reduce bureaucratic procedures by 90%**. The problem of the current system that it is centralized and closed (a closed type of database) where users are not admitted to managing their property rights directly in the system. Blockchain is fundamentally different – it is open by default. Proprietors will be able to perform transactions on their own directly on the blockchain, while specifically designed algorithms (smart laws and smart contracts) will not allow them carry out incompliant transactions. And even when some legal mistakes or disputes happen, public bodies (digital authorities) will have an instrument to address any legal issues.

Automation of typical and highly formalized procedures is the call of new technologies. It is meant to reduce transaction costs for proprietors and other interested parties, **reduce costs on public administration** (land authorities).

Peer-to-peer interaction of interested parties also **reduces costs on commercial intermediaries** – agents, brokers, lawyers, etc. Though I do not believe they will become redundant at all. Good legal advice or an expert opinion of a professional on the market is always valuable. And someone eventually will still be designing smart contracts.

The major advantage of the new system is that it allows a free flow of capitals, as on the blockchain with smart contracts it is much easier to manage them. I anticipate that the first country to introduce the blockchain estate registry will attract a lot of investments into the national economy. The phenomenon of ICO (2016-17) showed how fintech crowdfunding could become a powerful instrument as it mobilizes investment resources from all over the world. What makes a difference here is that investments into real estate development will be a significant step compared to unregulated ICOs with bad reputation. It can be done through digital platforms with legally recognized tokenized property rights.

3. *How would the state governments maintain integrity and privacy in this new world?*

There are some fallacies about the blockchain. One is that it “decentralises everything” and the “blockchain can do this and that.” No, people need trusted third parties and governments, and they will be present in blockchain applications in one or another form. The difference here is that their work will become more transparent and accountable. And blockchain is only one of the required instruments. It is like a hammer; nobody can build a house with just one hammer; one needs other tools and materials.

In the introduced [research](#), I developed a set of technical protocols of cross-blockchain interoperability to enable the use of multiple blockchains in one bundle for the registry, protocols to enable smart laws and digital authorities to govern the system and address all types of legal issues and protocols to manage digital identities with privacy-by-design (Digital Identity on Blockchain was presented to the Senate Committee in the additional Submission 186.1).

Yours faithfully,
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