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The State of Blockchain—Rhode Island Leverages Blockchain to Streamline Identity Validation

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Sam Duncan, Associate Practice Leader
Saurabh Gupta, President-Research and Advisory Services

If you follow our research or have a mild interest in the blockchain market, you probably already know that blockchain continues to gain considerable momentum, and a growing number of engagements are reaching the production environment. This is great news. After years of obstructive blockchain hype, businesses are finally realizing real value from the technology, and it's embedding itself in our daily lives, whether we realize it or not If we look at Exhibit 1, we can see that banking and financial services (BFS) has emerged as the leading industry for blockchain adoption, however, other industries are aggressively investing in the technology – and we can see the public sector grabbing a larger market share in 2021. Investing industries include the public sector, which has historically lagged in adopting emerging technologies thanks to its uniquely complex regulatory environment—but could that be set to change?

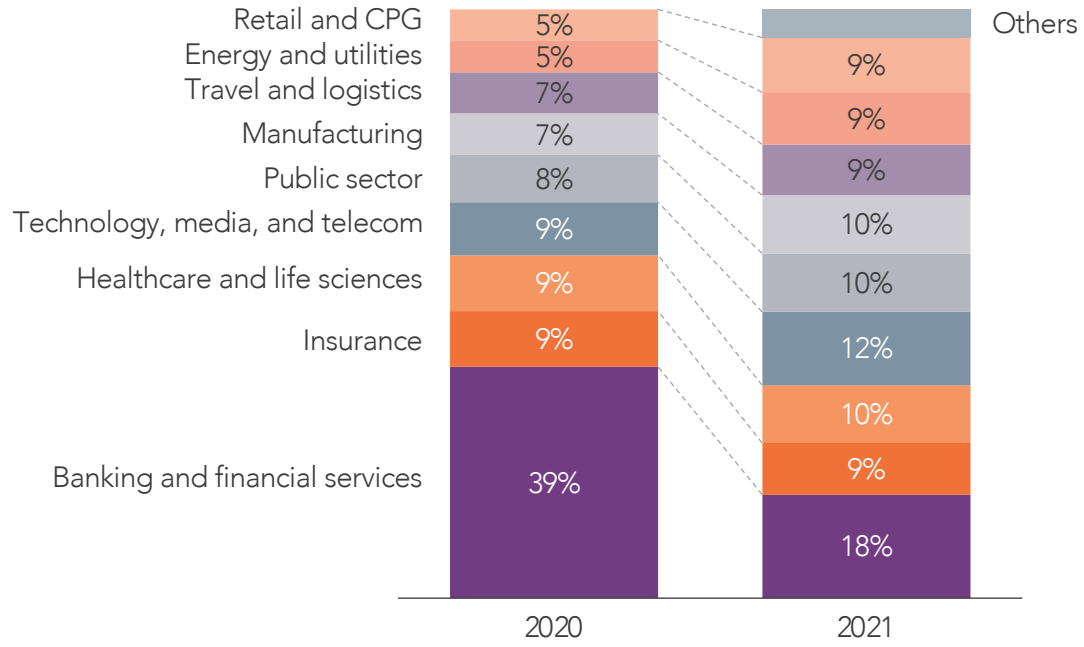
To help us understand more about blockchain adoption in the public sector, we connected with Infosys' blockchain leadership and one of its clients in the space to discuss their recent engagements. The conversation should be of interest to any public services executive with a blockchain interest.

The State of Rhode Island faced challenges with manually processing license applications, but was blockchain the right solution?

Here at HFS, we're well known for our candid conversations with enterprise clients, and they give us raw insight into the challenges they face, their business goals, and how they hope to achieve them. To that end, Infosys Public Services, a US-headquartered subsidiary of Infosys, connected us with one of its blockchain clients, The State of Rhode Island, which is investing heavily in a range of blockchain solutions. Early in our conversation, a representative from The State of Rhode Island told us they had been considering blockchain for some time now, even introducing the Rhode Island Economic Growth Blockchain Act earlier this year.

Exhibit 1: While BFS dominates blockchain adoption, the public sector is another leading industry, with 8% of engagements

Number of blockchain engagements by industry



Sample: Engagement details of 12 providers assessed in this report
Source: HFS Research, 2021

However, their unique challenges made it a difficult technology to adopt. In fact, Bijay explained it perfectly himself:

> We can't even roll out a mobile application without thinking about the fact that half of our residents might not have a smartphone.
>
> — Bijay Kumar, Chief Information Officer and Chief Digital Officer, The State of Rhode Island

This means that if The State of Rhode Island (The State) were to invest in technology as complex as blockchain, it would have to solve a significant challenge and provide real value to The State and its citizens.

After lengthy investigations, The State identified the Department of Business Regulation (DBR) as the ideal candidate. Bijay and his team explained that the department issues approximately 200,000 licenses annually, such as driving licenses and certified published accountant (CPA) licenses. However, over half of these applications are paper based, which means they are inefficient, require time-consuming manual processing, provide a poor citizen experience, and increase operating costs and the financial burden on citizens. To put it simply, it was an area The State must address. Bijay and his team realized it was an excellent opportunity to deploy blockchain technology, thanks to its ability to provide a single source of information that could completely overhaul the existing lengthy manual process.

The State of Rhode Island worked with Infosys to streamline licensing processes with a blockchain-based identity validation solution

Once The State's team recognized a potential use case for blockchain, it embarked on the proof-of-concept journey. After a rigorous selection process, Bijay explained that the team chose to partner with Infosys Public Services thanks to its speed-to-execution, thought leadership in the space, and overall responsiveness. While brainstorming how to best approach the engagement, the team quickly realized that identity validation was at the core of its licensing challenges, making it the ideal candidate for disruption. Bijay explained this:

> Once we have blockchain identity validation, we can really start to look at which departments can benefit from that. We can simplify many licensing processes.
>
> – Bijay Kumar, Chief Information Officer and Chief Digital Officer, The State of Rhode Island

In response, Infosys developed a blockchain-powered identity and credential management solution. By leveraging blockchain technology, Infosys streamlined the identity validation process, allowing The State's Department of Business Regulations to quickly and securely validate individuals' credentials. If we look at Exhibit 2, we can see how that small change completely overhauled existing licensing processes and systems, replacing them with a streamlined version with distributed ledger technologies at the core.

Infosys streamlined the licensing process by creating a single source of information for identity validation, with citizens placed at the center of the data exchange, allowing government departments to accurately verify citizens' identities quickly. Critically, no personal data will be stored on the blockchain, ensuring the process remains safe and secure, a top priority for any government initiative. Instead, personal information will be stored on citizens' mobile wallets while a decentralized unique identifier will be stored on the blockchain, allowing the citizen to choose who they share their information with.

Now we ask the crucial question for any use case—why blockchain? And were there any challenges?

We all know that blockchain experienced an unprecedented hype journey and was touted as the solution to endless business challenges, even without any tangible benefits. Because of this, it's crucial that we delve deeper into the use of the technology and whether it was essential in The State's quest for a streamlined identity validation process.

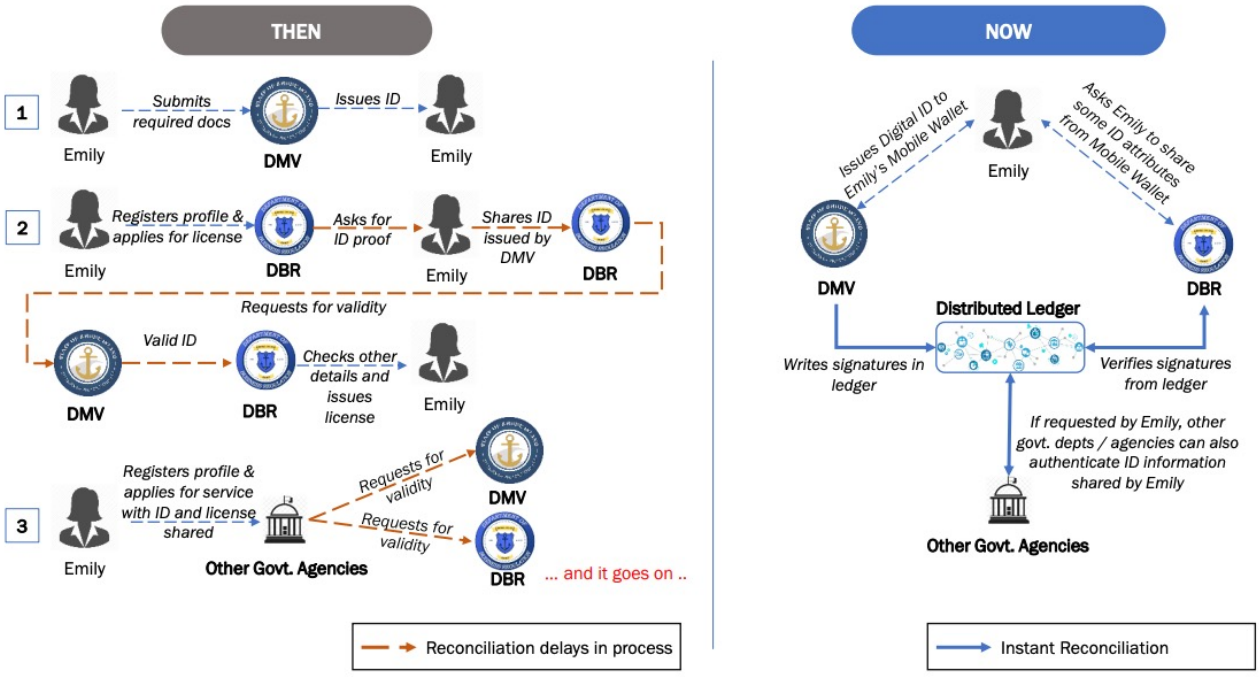
Blockchain's leading characteristics make it a great candidate for The State's identity validation challenge. Every piece of information stored on the blockchain is time-stamped and has a unique signature, meaning it can be verified easily and any counterfeiting attempts identified swiftly. Furthermore, thanks to blockchain's decentralized nature, citizens are the guardians of their data and placed at the center of the exchange, while authorized government departments can access information quickly and easily. But one of the leading benefits of underpinning their solution with blockchain is that it becomes easily transferable to different state departments or even different states. The team explained that this was a leading driver behind their decision; once it had proven its value in a small use case, such as CPA applications, they could scale it easily into new areas.

However, leveraging the technology didn't come without its challenges, as Bijay explained:

> "The technology is difficult to understand, and if you don't understand something, you naturally reject it. So how do we demystify blockchain?
>
> — Bijay Kumar, Chief Information Officer and Chief Digital Officer, The State of Rhode Island

While The State's team agreed that the identity validation process required improvement, many remained unsure that blockchain was the right technology for the solution. In response, Infosys completed a wide range of awareness sessions to help key stakeholders increase their understanding of blockchain, dispel any misconceptions about the technology, and explain how its identity validation solution would work.

Exhibit 2: Infosys and The State of Rhode Island re-imagined the licensing process by streamlining identity validation



Source: Infosys, 2021

The Bottom Line: Infosys and The State of Rhode Island have proven that blockchain can provide genuine value in the public sector, and governments should take notice

Public sector executives must ensure they look beyond the years of hype and recognize that blockchain is already adding genuine value to businesses globally, and it can do the same for them. Infosys and The State of Rhode Island's collaboration to develop a blockchain-fueled identity validation solution is a testament to the technology's potential in the space, and public sector executives should take notice of it and replicate it to drive efficiency in their operations.

HFS Research author

Sam Duncan

Associate Practice Leader

Sam Duncan is Associate Director of Research at HFS, based in Cambridge UK. He graduated from Bournemouth University with a degree in economics, throughout which he took a particular interest in macroeconomics, mainly how the evolution of technology accelerated globalization. Throughout his education he also spent some time studying law, accounting, and investment management.

Since joining HFS, Sam has developed his understanding of blockchain and continues to explore the latest applications of the technology across a range of industries. He has applied his economics background to keep on top of the latest trends on the banking and financial services industry, and has taken a keen interest in insurance. On top of this, he contributes to the HFS Market Index, a quarterly report breaking down the performance and key events of the leading service providers throughout the previous quarter.

Saurabh Gupta

President - Research and Advisory Services

Saurabh Gupta is President, Research and Advisory Services at HFS. He oversees HFS' global research function managing the global team of analysts and operations across US, Europe, and Asia-Pac. He works closely with the CEO to set the strategic research focus and agenda for HFS Research, understanding and predicting the needs of the industry and ensuring that HFS maintains its position as the strongest impact thought leader for business operations and services research.

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