

Trusted identity

# Decentralized Identity: An alternative to password-based authentication

October 5, 2018 | Written by: [Dan Gisolfi](#)

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Many experts say that a password-based login is an interaction that adds friction to user experiences and that multi-factor schemes add friction to productivity. Obtaining assured authentication of a user's identity in the face of new data privacy laws and regulations presents a major challenge. IBM has realized that two factor authentication is an imperfect alternative for online authentication?

Several organizations within the self-sovereign identity space have come together to collaborate on the validation of decentralized identity approaches to the critical password-based authentication problem. AT&T Financial, [Evernym](#), IBM, the Sovrin Foundation and Workday have come together in a joint mission to incubate working examples of verifiable credentials (VC) for the purposes of awareness and education.

## Job-Creds Phase 1 Overview

IBM Blockchain

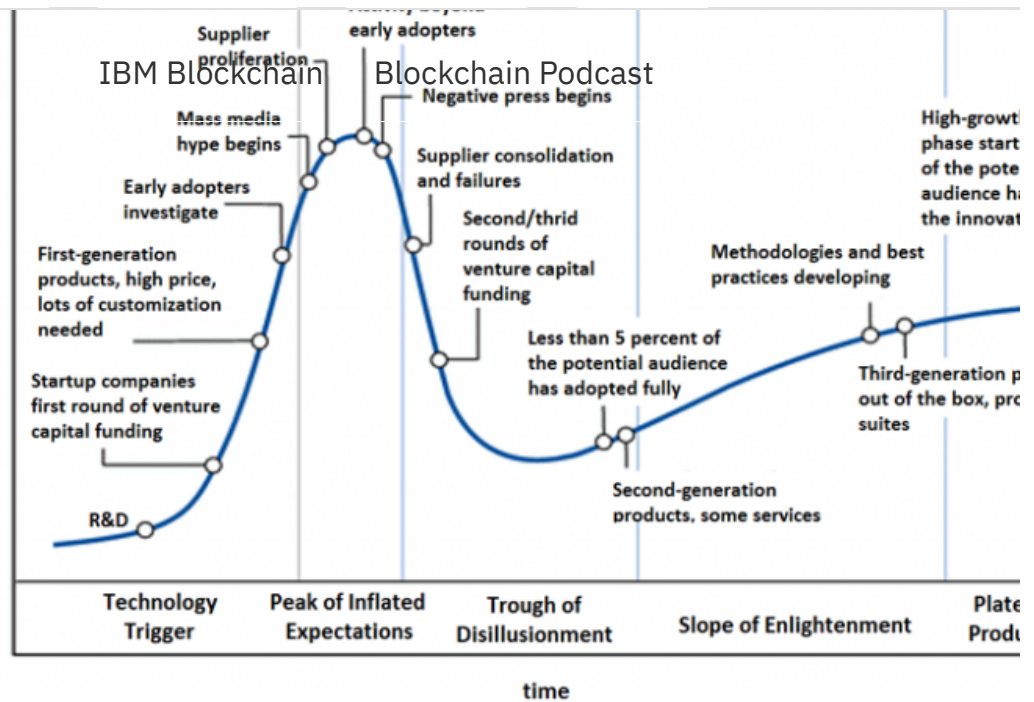
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Transform digital identity into trusted identity with blockchain

## Bootstrapping the adoption of decentralized identity

Until now, the SSI/VC community has been very focused on the principals of [decentralized identity](#) cryptography technologies necessary to support the vision of self-sovereign identity. Missing from are real business validation stories that can create an [innovation trigger](#). Innovation can be defined and/or existing concepts that, when forged together, offer better solutions that meet new requirements. Endeavors follow an iterative journey of trials and errors where lessons are learned and applied to. Expectations are now on the rise for blockchain-based decentralized identity solutions. Through the [Hype Cycle](#), industry chatter surrounding the emerging technologies associated with decentralized identity interest is ripe for breakthrough evidence of business applicability.



Our joint research project, called Job-Creds, explores the business applicability of the self-sovereign domain of Employee Credential Lifecycle Management. The participants in this effort share a common example the self-sovereign identity vision. Our multi-phased project iterates on several scenarios of credentials in online authentication and authorization activities.

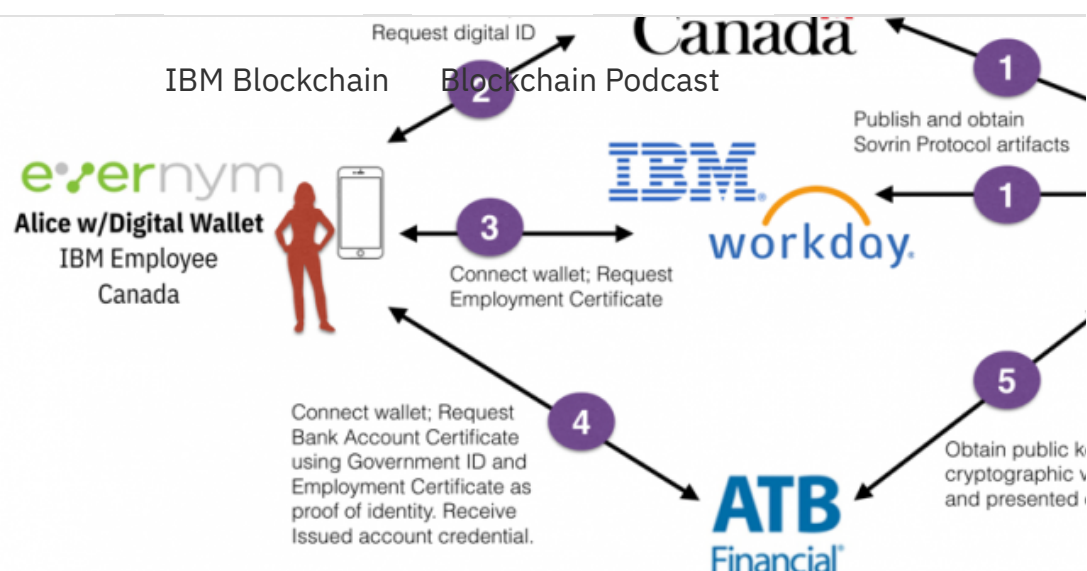
“The [Sovrin Network](#) is designed to support interoperable, secure and private identity management,” Executive Director Heather Dahl explained, “As a global public identity utility for identity, everyone can join the Sovrin Network — and the only limit on innovation is imagination. We are pleased to see to see an outstanding thinking enterprises join together to research and develop a secure alternative to password-based authentication.”

## Tackling critical and costly challenges for businesses

Security experts have long recognized passwords as inadequate, but finally [blockchain technology authentication methods](#) that businesses can explore to keep their data safe.

Interacting with the world around us using identity instruments is part of our daily lives, but today our digital identity are far from secure. However, the world of self-sovereign identity now presents us with the more intuitive digital existence.

Today, you may log into a bank website to access their online services. These services would be provided for authorization. The bank is not going to let you sign in using a third-party credentials from your



Imagine a tomorrow where you can log into the bank's website by presenting a verifiable credential. You have received this credential by proving to the bank that you have met the necessary policy criteria (e.g., employment credentials) to obtain a financial account.

## Working for more secure trusted identity

Phase one of our collaboration demonstrates how verifiable credentials in combination with the Sovrin Network can eliminate the rigidity of passwords, mitigate authentication and privacy risks, and also reduce costs and expenses.

Our research also uncovered something in the codebase of [The Linux Foundation's Hyperledger Identity Framework](#) upon. It is commonplace in today's business settings for an entity to outsource operational tasks to a third party. If an outsourced task pertains to the issuance of credentials, you need a mechanism for the *issuer* (data controller) and the *verifier* (data processor) which public key shall be used to validate issued credentials by the issuer's data processor. A well-defined delegation flow between a data controller and a data processor, such that a properly defined delegation document is agreed upon between the two entities and published to the Sovrin Network, ensures a transparency-preserving workflow is that the verifier need not be aware of the data processor relationship.

"This project has effectively demonstrated both the capabilities and power of the Sovrin Network in streamlining user experiences and enabling organizations to interact with the user via a trusted network," said Michael Ruggiero, Senior Vice President at [ATB Financial](#). "The end-to-end nature of this workflow demonstrates one of many ways in which individuals can streamline the flow of trusted credentials amongst parties, without the organization acting as a central authority directly."

"This know your customer (KYC) proof-of-concept illustrates how self-sovereign identity and distributed ledger technology can be used to strengthen digital trust and privacy," said Jon Ruggiero, Senior Vice President at [Workday](#). "Verifiable credentials, when owned and controlled by an individual, can reduce the time and friction it takes to obtain a financial institution."

Today the landscape of supporting open communities (network, code and standards) to achieve that at a rate whereby early adopters can begin to validate applicability and build that most important adoption lifecycle chasm. The foundational infrastructure empowering this innovation trigger is the global Sovrin Network, and is ready today for your digital identity journey.

We look forward to sharing the results of our ongoing collaboration and if you are interested in incubating a collaborative environment similar to the Job-Creds project, please [reach out to me on LinkedIn](#).

### Get Started with Verifiable Credentials



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decentralized identity

employee credential lifecycle management

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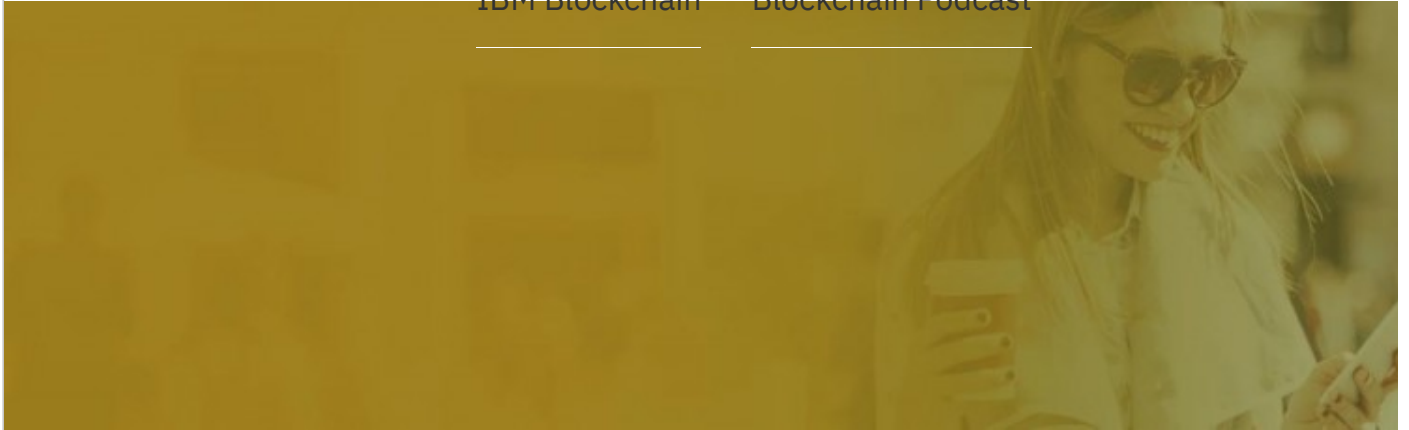
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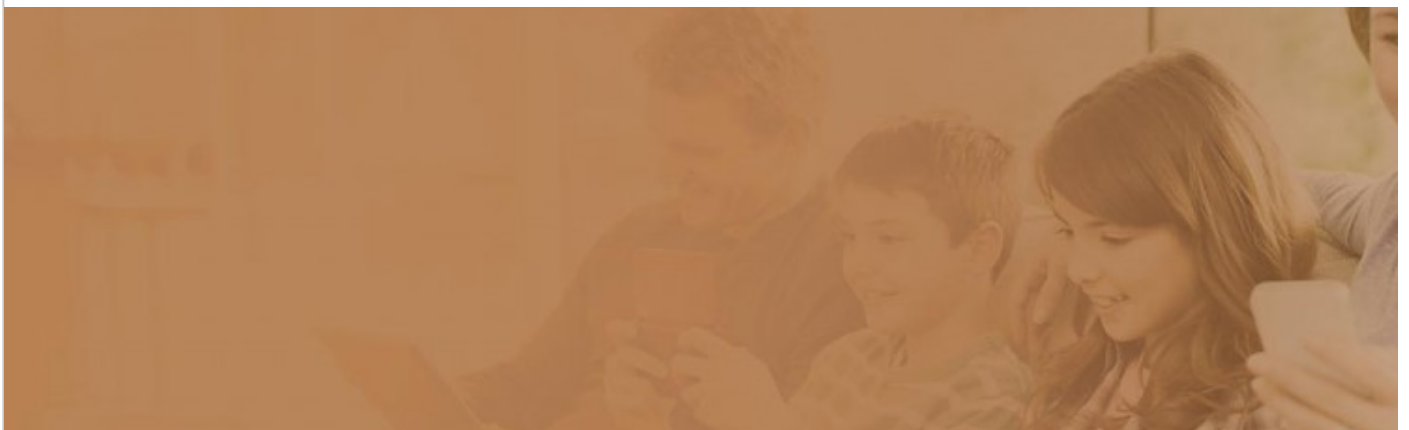
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## How do we start tackling the existing identity problem?

Identity and control of personal identity is top of mind, given recent events as well as the European General Data Protection Regulation (GDPR). A lot of our identity is shared without our explicit consent, gets stolen, and when compromised creates tremendous setbacks. Almost everything we do in



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