Centre for the Fourth Industrial Revolution Network

WORLD
ECONOMIC
FORUM

Redesigning Trust: Blockchain for Supply Chains

PROJECT CASE STUDY
OCTOBER 2020

Project overview

Blockchain is an emerging technology that requires new approaches and mindsets. To maximize the benefits of blockchain, it is important to think holistically, long term and in a cooperative manner.

The World Economic Forum's Platform for Shaping the Future of Technology Governance: Blockchain and Digital Assets created an interactive toolkit to help organizations pursue responsible, interoperable and inclusive deployments of blockchain technology. Drawing on lessons from 40+ use cases and 50+ countries, the toolkit helps organizations embed best practices and avoid costly mistakes with blockchain technology. The toolkit is being used by a range of stakeholders – from large enterprises to international organizations and development banks – as a "gold standard" for informing their approaches to blockchain deployments.

The toolkit presents the findings of seven white papers and input from 100+ organizations in a user-friendly manner. Prior to its publication, it was piloted by the Abu Dhabi Digital Authority, Saudi Aramco, and in workshops around the world. The result is a comprehensive deployment guide, complete with interactive tools and checklists that have been used by global ports, multinational development banks and private sector entities – from Fortune 500 companies to small and medium-sized enterprises – to inform their blockchain deployments.

Project phases

Assess (6 months)

Scoping a product that addressed the governance gap required a thorough six-month process that included literature review, more than 100 interviews with industry experts, five workshops hosted with partners and participation in leading industry events.

Key guiding questions for those interviews and workshops, including the questions below, helped refine the governance gap and shape the toolkit:

– What is the emerging tech driver?

– Why has this problem not been solved?

– What has been tried before and what were the results?

– Who is already working on this problem?

– What impact could the Forum have if involved?

– What is the policy hook?

– What change will the project enable – now and over time?

Design and develop (12-14 months)

There were two major components of this project: a series of seven white papers and a holistic, interactive toolkit. The topics for both came out of the scoping phase.

White papers
The seven white papers served as "deep dives" into key topics within blockchain for supply chains:

– Part 1 – Introduction

– Part 2 – Trustworthy verification of digital identities

– Part 3 – Public or Private Blockchains – Which One Is Right for You?

– Part 4 – Protecting Your Data

– Part 5 – A Framework for Blockchain Cybersecurity

– Part 6 – A Framework for Blockchain Interoperability

– Case Studies and Learnings from the United Arab Emirates

The white papers and toolkit were developed in close collaboration with the project community of 100+ organizations, and consisted of lead authors (those who worked with the team to author the content), contributors (those who reviewed the content and provided detailed feedback) and commentators (those who provided feedback on specific sections/portions of the paper).

In addition to providing deep dives on content, white papers provided an opportunity to enhance the subject matter expertise of the team and provide visibility to key partners, including the United Arab Emirates (Case Studies), Hitachi (Cybersecurity) and Deloitte (Interoperability). Forum fellows played a key role in this process by leading white paper development and associated agenda articles. They also solicited feedback on the white papers, then consolidated and incorporated it into subsequent drafts.

Toolkit
The white papers were incorporated into the toolkit and presented in a user-friendly and interactive format. The toolkit was then developed through written collaboration with the project community. Core authors assisted in content development, followed by several review periods with the project community. This process included the input of several experts and review sessions for specific sections.

Similar to the white papers, contributors were sorted according to what they contributed. Several global workshops at the Forum's San Francisco office, Blockchain Governance Accelerator, and sessions alongside Forum and industry events around the world, helped shape the final product. Fellows led specific sections of the toolkit, including the design and digitization of the content. They also piloted activities within host institutions.

Deploy and Iterate (4-6 months – in parallel with framework development)

During the pilots, the designated entities used the toolkit to inform their blockchain deployments. They used them in a combination of interactive sessions and working through the material independently. The pilot entities used the "print-friendly" version of the toolkit – not the digitized version – so that they could make comments on the content that could be incorporated into the final version. Though it was not fully formatted, it did include the tools that were ultimately available in both versions of the toolkit. Yingli Wang, Professor, Cardiff University, United Kingdom, helped evaluate the pilots and capture key learnings and impact stories.

The Abu Dhabi Digital Authority was identified as a pilot partner in collaboration with the UAE Affiliate Centre, once the draft of the toolkit was available. As part of the process of identifying and securing the government pilot partner, the UAE Affiliate Centre hosted a Blockchain Governance Accelerator, which brought together actors from the public and private sectors in the UAE. The pilot partnership with Saudi Aramco was scoped in collaboration with the blockchain team's Fellow from Saudi Aramco. In addition, this work engaged a project community of 100+ organizations across the supply chain, including Fellows from Hitachi and Deloitte. A full list of contributors is available here.

Monitoring and evaluation

Toolkit impact was evaluated based on the following:

– Impact stories shared and collected by the team, co-hosted workshops for the adoption of the toolkit, endorsements that have come from adoption (ex: "gold standard" of blockchain deployments, "…a tour de force resource on #blockchain and #supplychains", "… bible of blockchain deployments", etc. Sharing the toolkit with the network and getting positive reviews")

– Whitepaper access traffic: number of times accessed, time spent within the toolkit, etc.

– Social media mentions: following #BlockchainToolkit and capturing volume; key actors adopting and endorsing the toolkit.

A high-level "impact deck" is available here.

Key learnings

– Scoping and community building are key aspects of the project; do not shortcut these aspects, as everything comes from these foundations.

– Find ways to continue the momentum throughout the lifespan of the project; it can be easy for people to lose sight of the finish line in an 18-month project, so it may help to incorporate intermediate deliverables and "quick wins" for the community.

– Test the "product" in real-life settings as much as possible. By offering something, you will learn a lot about organizations' core challenges, failures and obstacles – the content that organizations are often not willing or able to share.

Next steps and scale

Several webinars around the deployment of blockchain have taken place and more workshops are planned, including exploring the possibility of a "train the trainer" model for those who can lead the use of the toolkit. Next, we will translate the toolkit content into new languages, adapt it to other use cases, as well as seek to scale via the COVID Action Platform.