NEW AMERICA

July 2018

Bellagio Blockchain Summit: Outcomes and Insights

Bretton Woods II

Last edited on June 29, 2018 at 2:39 p.m. EDT

About the Author(s)

About New America

We are dedicated to renewing America by continuing the quest to realize our nation's highest ideals, honestly confronting the challenges caused by rapid technological and social change, and seizing the opportunities those changes create.

About Bretton Woods II

Bretton Woods II is engaging sovereign wealth funds, pension funds, endowments and family offices to build a new business model for social finance. The initiative is harnessing analytics, advocacy, and financial tools to channel part of the $25 trillion controlled by long-term asset holders into strategic investments in social impact that address the root causes of volatility. The effort aims to help close the gap in financing for the Sustainable Development Goals while increasing investors risk-adjusted returns.

About Blockchain Trust Accelerator

Connecting Blockchain-based pilot concepts with the right technologists, jurisdictions, and funders to achieve better governance outcomes.

Contents

Our Findings

Most technologies are invented to help people complete existing tasks more efficiently. Occasionally, a tool emerges that prompts new ways of envisioning the tasks themselves. While still early in its development, blockchain appears to fall into the latter category. At its core, blockchain is a record-keeping system. However, its distributed structure, permanence, and transparency have the potential to redefine the work of institutions in the public, private and social sectors. The technology could provide a new mechanism for codifying the facts, transactions, and information that form the basis of our lives.

In spite of—or because of—this potential, blockchain is notoriously difficult to understand. Those that do grasp its nuances have focused the preponderance of their expertise on developing applications for use in the private sector, primarily in financial services, giving rise to an almost $1 trillion industry over the last decade. Notwithstanding the heavy focus on fintech, many of the most compelling potential use cases for the technology are in the fields of governance and social impact.

It was against this backdrop that the Blockchain Trust Accelerator, a project of New America, convened the first blockchain summit held at the Rockefeller Foundation's Bellagio Center. The participants came together to develop a grand strategy for deploying blockchain solutions that address governance and social impact challenges. Participants included leaders from many of the largest blockchain companies and consortia along with world-class authorities on government, policy, philanthropy, and humanitarian assistance.

At its core, blockchain is a record-keeping system. However, its distributed structure, permanence, and transparency have the potential to redefine the work of institutions in the public, private and social sectors.

Many of the participants arrived at the summit with an appreciation of blockchain's potential to transform how institutions and organizations deliver results for the citizens they serve. However, there was also a recognition that, as with any new technology, blockchain's impact may not be evenly distributed or

universally positive. Achieving shared gains, especially for groups on the margins of society, will depend on whether actors in the private, public, and social sectors adopt strategies, principles, and protocols to ensure that blockchain benefits humanity at large and not just technologically adroit early adopters.

This report outlines key outcomes and insights from the convening, which took place on May 7-11, 2018.

The group agreed to collaborate in developing frameworks, partnerships, and pilot projects over the next year with the goal of advancing the future deployment of blockchain solutions to public challenges.

Key priorities:

- Develop the framework for a blockchain-based government stack and social stack
- Map the key risks associated with the deployment of blockchain projects and identify strategies to mitigate those risks
- Publish a blueprint for government and social impact organizations considering the use of blockchain technology
- Create a global registry of projects using blockchain to address governance and social impact challenges
- Establish norms for the blockchain community around ethics, interoperability, privacy, and diversity
- Define a shared lexicon of terms to support communications, narrative building, and messaging efforts across the blockchain ecosystem

Summary of Objectives

1. Develop the framework for a blockchain-based government stack and social stack

To paraphrase Madeleine Albright, many countries are relying on institutions designed in the 18th and 19th centuries and technology from the 20th century to solve the challenges of the 21st century. The results are predictable. The 2017 Edelman Trust Barometer survey showed that 85 percent of citizens around the world felt the system in their country was not working for them. Growing frustration with the seeming inability of government institutions to meet the needs of citizens is emerging as a potent driver of popular anger.

Governments run on operating systems, and blockchain has the potential to provide a long overdue upgrade. Summit participants honed in on the concept of a modular, interoperable blockchain-based stack of software solutions that could

address key government functions. Adoption of the system could help increase efficiency, limit corruption, and reduce the frequency of costly mistakes.

The foundational element of a civic tech stack would be a strong identity solution. Other likely layers in the stack would include:

1. Land titling
2. Registries (businesses, etc.)
3. Procurement
4. Financial management
5. Democratic participation
6. Data collection to aid in program monitoring and evaluation
7. Tools for managing hard assets, energy and infrastructure

Participants committed to working together over the next 12 months in the following areas to develop a framework for a government stack and a social stack with analogous functionality:

- **Principles -** Defining the parameters of the system and key guidelines around interoperability, ethics, and privacy
- **Partnerships -** Forging coalitions to bring more voices to the table
- **Pilots -** Deploying pilot projects that cover at least four layers of the stack

Ultimately, successful deployment of a government stack and social stack could provide critical tools for achieving the Sustainable Development Goals (SDGs).

2. Map key risks associated with the deployment of blockchain projects and identify strategies to mitigate those risks

The group agreed to develop and release a strategy outlining how to identify, and hopefully mitigate, common risks associated with the deployment of blockchain projects. As a first step, participants identified over two dozen real or perceived risks surrounding the deployment of blockchain solutions. These include technical risks such as interoperability, the availability of good data, decisions surrounding the use of open-source solutions, and platform selection. The group also identified risks associated with scaling, readiness, and impact. A more comprehensive compendium of risks will be completed as part of this mapping project.

Without a strategy to identify and mitigate risks, too many potential proofs of concept will fail to realize their potential. The group plans to make this report public to share findings with the blockchain community.

3. Publish a blueprint for government and social impact organizations considering the use of blockchain technology

Creating 21st century infrastructure for governments and the social sector will only be possible with a roadmap outlining the steps and questions to be answered along the way. Several participants expressed their belief that the blockchain-related components of this effort may prove to be among the simplest elements of a complex process.

Attendees discussed the requirements for successful proofs of concept. The group agreed to publish a blueprint within the next 12 months to help organizations and governments develop and deploy new blockchain projects. This effort would cover a range of structural, procedural, and technical questions with the goal of simplifying the process for organizations considering whether to, and how to, apply blockchain to their work.

Additional insights:

- The use of different blockchains and blockchain applications have the potential to create silos in the future if systems are not designed with interoperability in mind. Thinking about a solution in terms of both existing legacy systems and emerging technologies, including blockchain, AI, and IoT as it relates to a governance or social impact project, is also important for success.
- There was broad recognition that blockchain solutions are only as good as the digital data that supports them. Early adopters need to ensure their data is accurate or they will suffer from the phenomenon of "garbage in; garbage forever," which is a risk of distributed ledger technology. There must be good data to hash, or there isn't much purpose in utilizing blockchain.
- The group also highlighted the need for better linkages between the investor community, the philanthropic community, and those building blockchain solutions that address social and governance needs.

4. Create a global registry of projects using blockchain to address governance and social impact challenges

Others have attempted to assemble lists of blockchain pilots. However, many of these efforts are disjointed and incomplete or one-time efforts that become quickly outdated. Participants agreed to define parameters for, establish and manage a comprehensive registry of blockchain projects in the governance and social impact space over the next 12 months. The goal would be to help organizations and governments learn what has been attempted, examine what has been successful, and assess whether these solutions could apply at scale.

Participants also noted that it is difficult to persuade organizations to share information and would like to work on encouraging the community to engage in more collective learning around both successes and failures. Participants committed to working together to better communicate the technology's potential

through best practices and engage with key stakeholders who can help contribute to the success of future blockchain projects.

5. Establish norms for the blockchain community around ethics, interoperability, privacy, and diversity

Creating common principles or a Good Housekeeping Seal of Approval would go a long way toward taming the Wild West mentality that defines too many blockchain projects. It would also help advance successful solutions with greater confidence and less risk. The group agreed to assess how to create systems for validating blockchain solutions that apply best practices, similar to the systems used for LEED certified buildings or diamonds verified by the Kimberley Process.

Another issue that emerged repeatedly was the need for more programmers that are proficient in working on blockchain solutions, and the need to ensure that, as the field grows, this talent reflects the diversity of a global user base. Participants explored options to get more people involved in the blockchain community, ranging from cross-sector blockchain projects, startup-in-residence programs, hackathons, and accelerators.

6. Define a shared lexicon of terms to support communications, narrative building, and messaging efforts across the blockchain ecosystem

A decade after it came into existence, the blockchain community still hasn't done enough to demystify blockchain technology and articulate how blockchain can be best applied to a global challenge. The blockchain community needs a deliberate strategy to identify and share innovations in the field with the wider community. Storytelling is a critical component to advancing the field and fostering support from the public. For example, how can we add to the narrative of what is possible with blockchain while also being mindful of the risks and ethical considerations around the movement of data? Creating a shared lexicon to support communication within the blockchain community and with the broader public would help alleviate some of the confusion at the root of any emerging technology, reduce unintended backlash, and help bolster the field overall.

Areas for Additional Research and Consideration

There are two topic areas that participants spent time discussing that have not been included in the immediate deliverables. Both are worth exploring at greater lengths:

- **Combatting disinformation with blockchain**. This is a timely, fraught topic in the context of current events. Time-stamping and geolocation tools may be a good application of blockchain tools to combat disinformation. Why is a company like Facebook creating a new blockchain team? What will they work on? The group was intrigued by

these developments and urged additional monitoring of this space to track future advances.

- **Countering the increasing centralization of machine learning capabilities.** Participants began discussing how blockchain works in conjunction with other emerging technologies, such as AI, IoT, and quantum computing, to address social impact and governance challenges. The strategic deployment of blockchain technology has the potential to shape the future of artificial intelligence and help counter the increasing centralization of machine learning capabilities. Tech companies are beginning to think through how these technologies will interact. Governments and the social sector should consider the implications of these trends as well.

Moving Forward

Participants at the summit comprised a unique fellowship of changemakers. The group represents a cross section of outstanding leaders from government, civil society, and the technology sector. Together, the group hopes to hasten development of the plans, programs, and technologies needed to power the digital state and the next generation of governance and social impact solutions. Over the next 12 months the BTA will work with this coalition to fine tune the objectives listed above and prioritize action items that will guide the groups' efforts.

Blockchain has shown great promise in the civil and social sectors—it is already being used to address challenges in areas such as digital identity, anti-corruption measures, property rights, and financial inclusion. Harnessed strategically, it can help restore the public's trust in governments, philanthropies, and non-profit and civil society organizations and support critical and innovative interventions that improve people's lives.

Summit Participants List

Brian Behlendorf || Hyperledger, Executive Director

E. David Burt || Government of Bermuda, Premier

Chris Doten || National Democratic Institute, Chief Innovation Officer

John Paul Farmer || Microsoft, Director of Technology & Civic Innovation

Veronica Garcia || Bitlumens, Executive Director

Dahna Goldstein || Bretton Woods II, Fellow

Vanessa Grellet || ConsenSys, Executive Director

Fuzz Hogan || New America, Managing Editor

Zia Khan || Rockefeller Foundation, Vice President of Initiatives and Strategy

Cara LaPointe || Georgetown University, Beeck Center Senior Fellow

Jens Molbak || WinWin, Founder

Robert Opp || UN World Food Programme, Director of Innovation & Change Management

Allison Price || BTA, Executive Director

Nakul Saran || Tata Trusts, Senior Advisor

Laura Shin || Host of the crypto podcasts Unchained and Unconfirmed

Tomicah Tillemann || BTA, Co-founder

Sheila Warren || World Economic Forum, Head of Blockchain and DLTs

Participant Bios: https://drive.google.com/file/d/1z4l--KizG3QP0pBGc2cxpWu1F9kLohCL/view

Notes

NEW AMERICA