

Th.BSafe.network ?

25/07/2559 BE

Thai Crypto Blockchain Workshop
THNIC and Stock Exchange of Thailand

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Today's Workshop

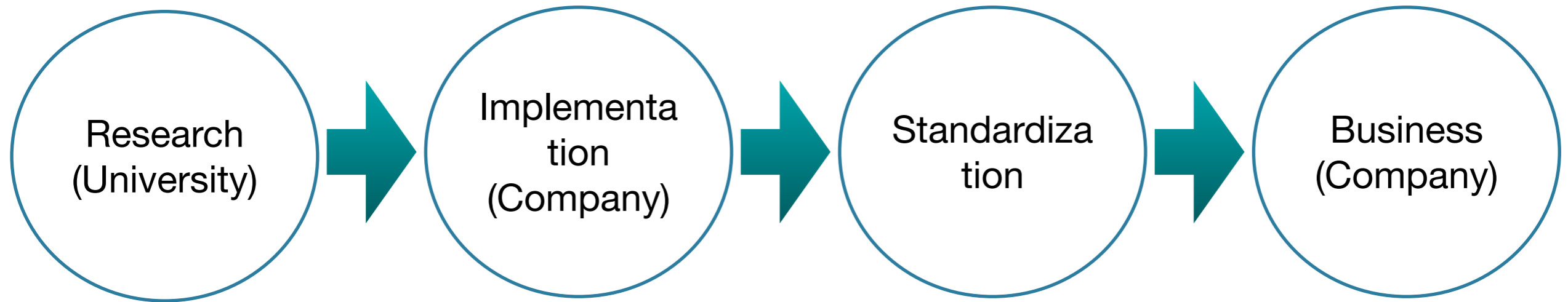
Objectives

Blockchain

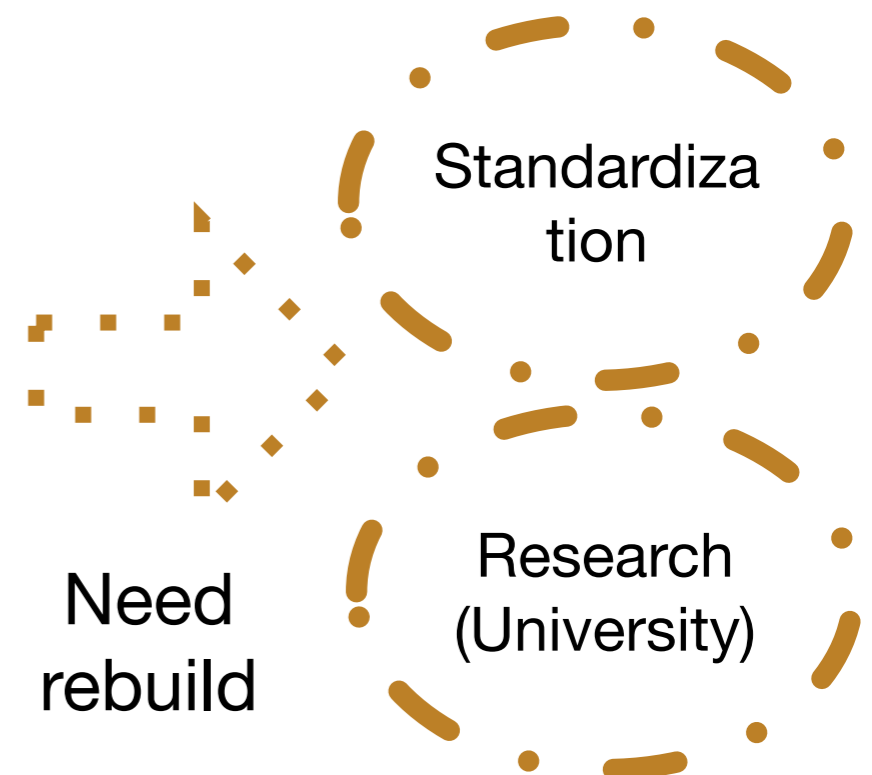
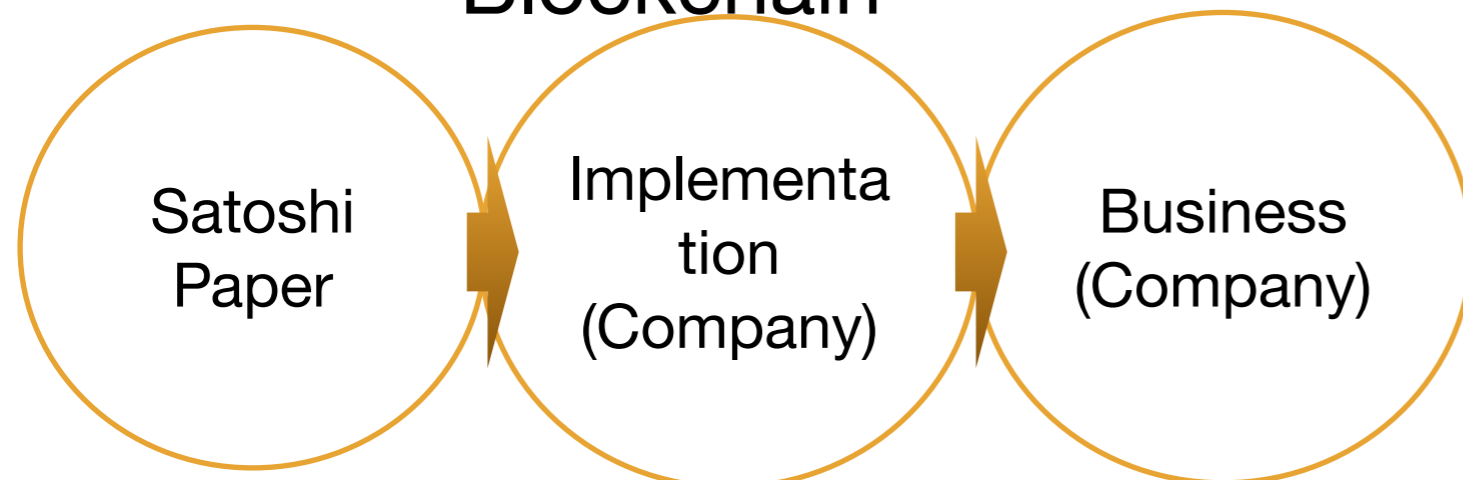
**The Internet of Ecosystem
based on mathematical theory**

Gap between research and real-world

The Case of Internet Technology



The case of Bitcoin and Blockchain



Connecting Academia

- **It is the time for academic researchers to get involved to secure the Blockchain technology!**
 - Establish the reliability of blockchain technology
 - Security, Privacy, Stability and Sustainability
 - Then, build possible applications
- Provide neutral and constructive feedbacks to real-world
 - Same as the early stage of the Internet

Current Bitcoin Network

- **Not uniformly distributed**

GLOBAL BITCOIN NODES DISTRIBUTION

Reachable nodes as of Tue Feb 23 2016
16:16:17 GMT-0800 (PST).

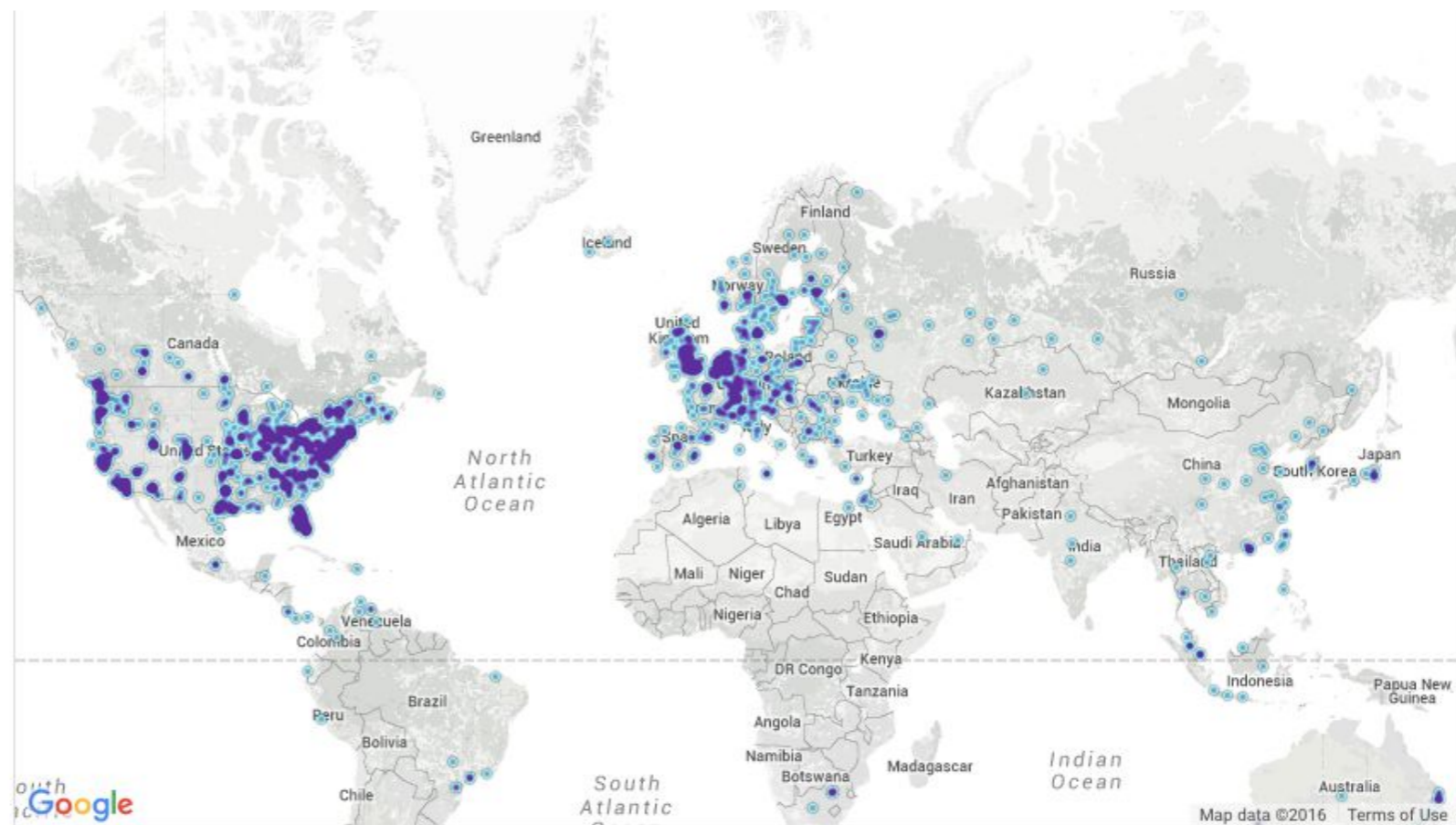
6247 NODES

[24-hour charts »](#)

Top 10 countries with their respective number of reachable nodes are as follow.

RANK	COUNTRY	NODES
1	United States	2177 (34.85%)
2	Germany	803 (12.85%)
3	France	400 (6.40%)
4	Netherlands	338 (5.41%)
5	Canada	297 (4.75%)
6	United Kingdom	296 (4.74%)
7	Russian Federation	148 (2.37%)
8	Australia	143 (2.29%)
9	Sweden	142 (2.27%)
10	China	112 (1.79%)

[More \(83\) »](#)



Map shows concentration of reachable Bitcoin nodes found in countries around the world.

[LIVE MAP](#)

- **Each node is not stable and not sustainable**

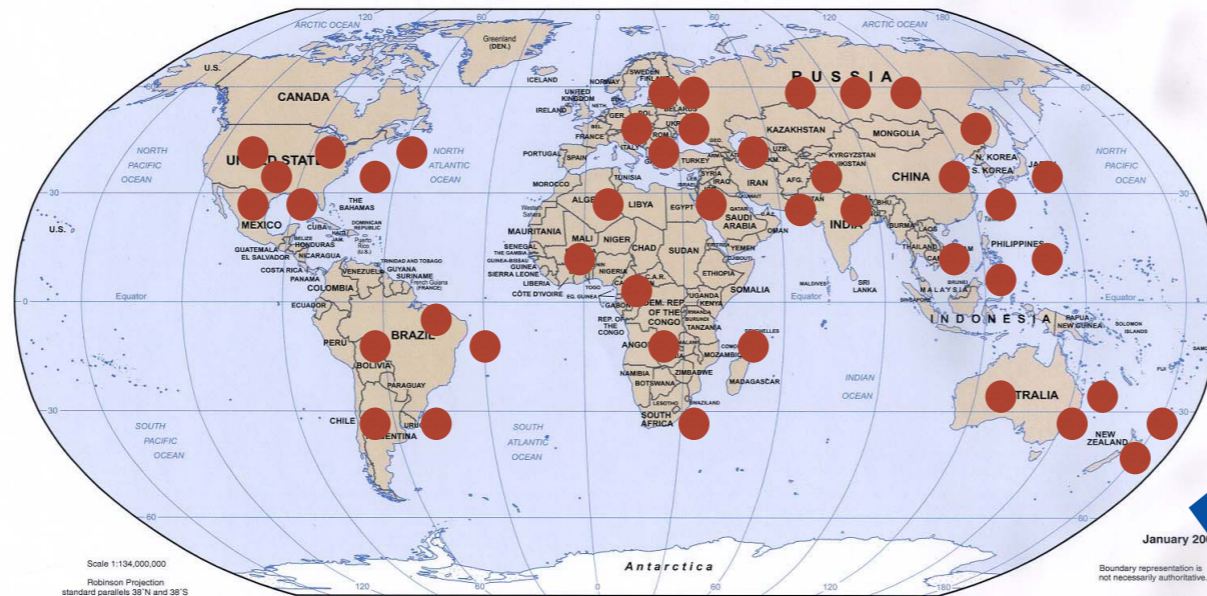
Role of Universities

- Neutral Platform – ‘Academia Scales Better’ - Arvind
- Societal Trust Anchor:
 - Move From Analog -> Digital Trust
 - Early Warning
- Anchoring the Bitcoin Network
 - E.g. Operating Fully Validating Node on the Bitcoin Network
- Empowering Students
 - E.g. MIT Bitcoin Project
- Documentation and Deliberation
- Ethics of Research in Cryptocurrencies
- Patent Non-Aggression Pool: Open Invention Model

BSafe.network

- A neutral, stable and sustainable research test network for **Blockchain technology by international universities.**
- Each university becomes a blockchain node.
- Research on Blockchain and its applications
 - Not only technology but also economics, social, political, ... (WG for economics including central bank)

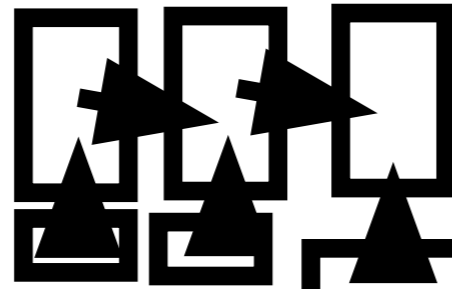
University-level Blockchain Research Network



- Neutral platform
- Trust anchor of Blockchain network
- Expand # of nodes 6247 -> more nodes (with Neutrality)
- Testbed for academic research

Blockchain Research Network and Decentralized Academic Platform

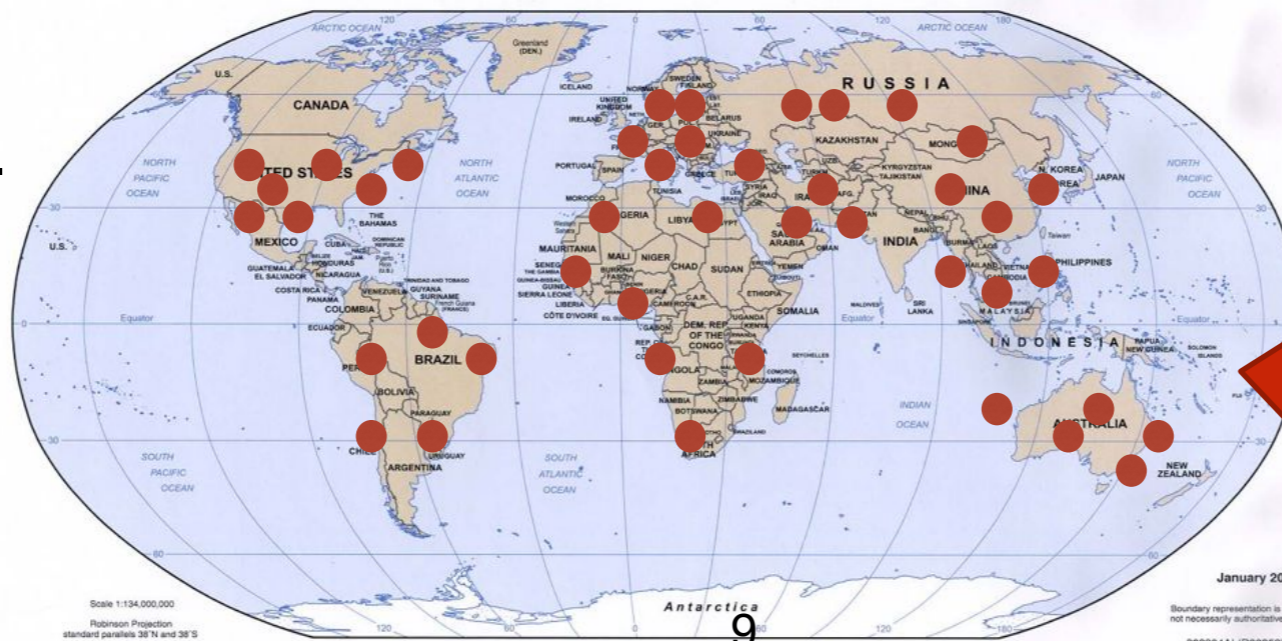
Decentralized Academic Platform



Manage research fundings, papers, discussions, evaluations and patents over blockchain

- Decentralized Reviewing and open collaboration
- Prevent research misconduct
- Incentive to build the research network

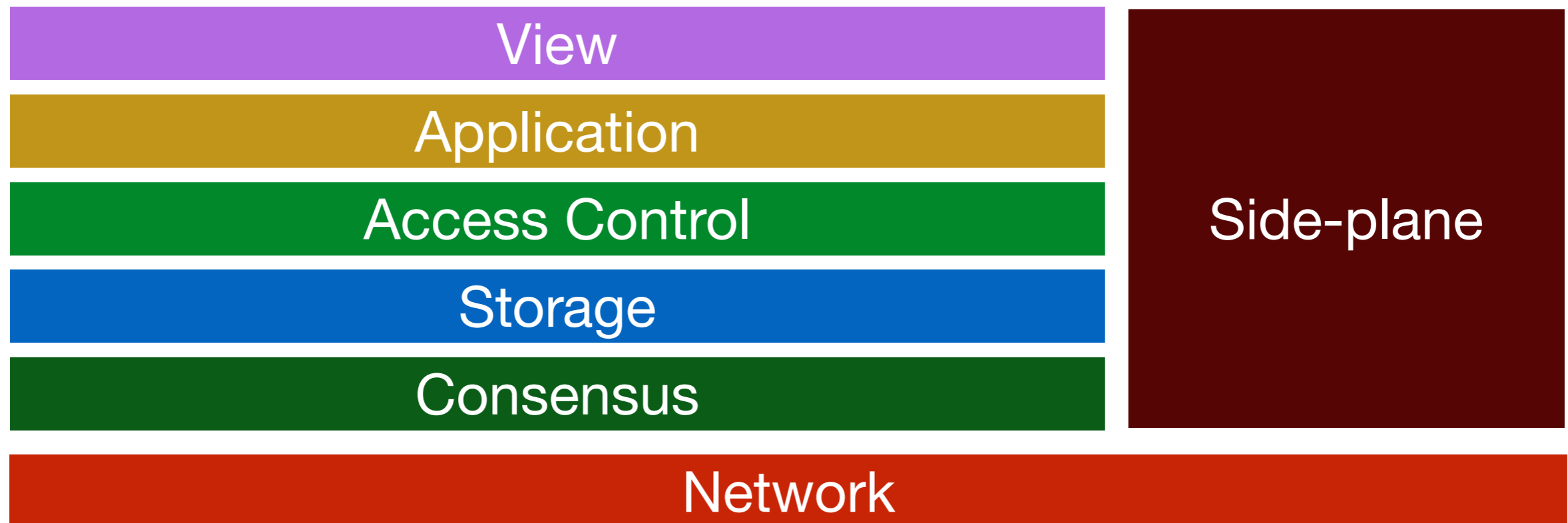
University-level Blockchain Research Network



- Neutral Platform
- Trust Anchor of Bitcoin network
- Expand # of nodes from 6941 to # of univ. (with Neutrality)
- Testbed for academic research

Untangling future scaling approaches

Network:	broadcasting transactions and blocks
Consensus:	the agreement-reaching engine
Storage:	bootstrapping new nodes, storing archival data
Application:	transaction graph, scripting language semantics
Access control	Manage access rights for data
View:	cached summary of the transaction log
Side-plane:	off-chain contracts



Merits

- We can have reliable and neutral blockchain network for academic research.
- Build joint research projects over the BSafe.network
- Provide research result to public easily
 - Technology itself
 - Technical guidelines such as operational conditions
- Build new applications from academic viewpoint
 - ex. ecosystem for academia

Current List* of Participants to BSafe.Network

*Not Fully Confirmed

- **United States**
 - MIT
 - Boston University
 - UC Irvine
 - University of Maryland
- **Europe**
 - TU Darmstadt, Germany
 - University of Cambridge, UK
 - New Castle University, UK
 - KULeuven, Belgium
 - Hebrew University of Jerusalem, Israel
- **Asia**
 - Hong Kong University of Science and Technology, Hong Kong
 - Chinese University of Hong Kong
 - Toho University, Japan
 - Tokyo University of Technology, Japan
 - Meiji University, Japan
- **Africa**
 - University of Ghana, Kwame Nkrumah University of Science and Technology, and University of Cape Coast

Call for Participation!

- **Call for university researchers to become a part of BSafe.network!**
- **Several universities from US, Japan, HK and other countries already agree to join.**
- Schedule
 - Start establishment: April 2016
 - Detail announcement at MIT Bitcoin Expo (3/5@Boston)
- Contact
 - Web: <http://bsafe.network>
 - E-mail: info@bsafe.network