

# BUILDING AND INTERNET OF TRUST ON A TRUSTLESS INTERNET

**Are Blockchains the Missing Link?**

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# Trustless Internet

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# On a Trustless Internet

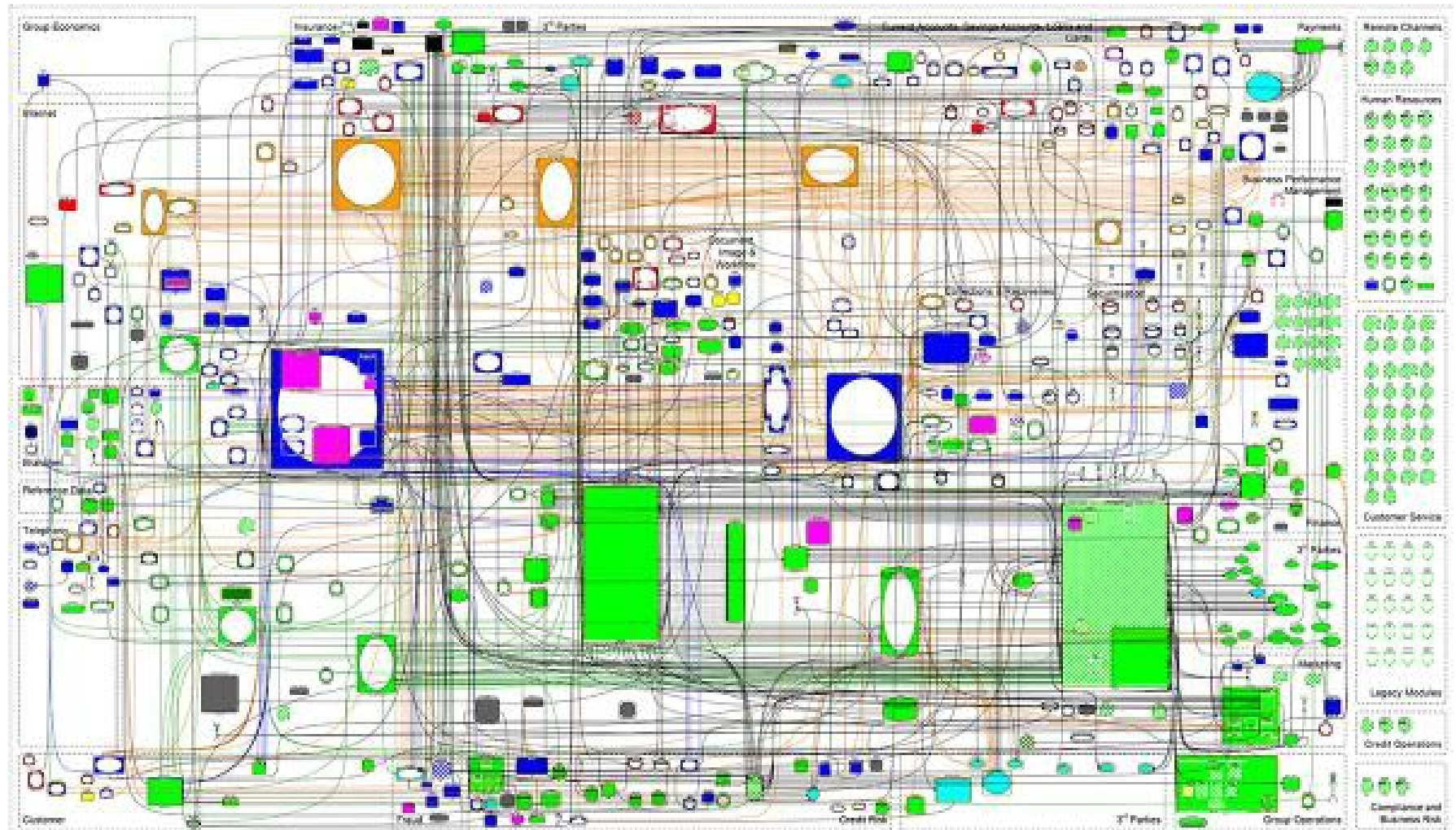


WHY?

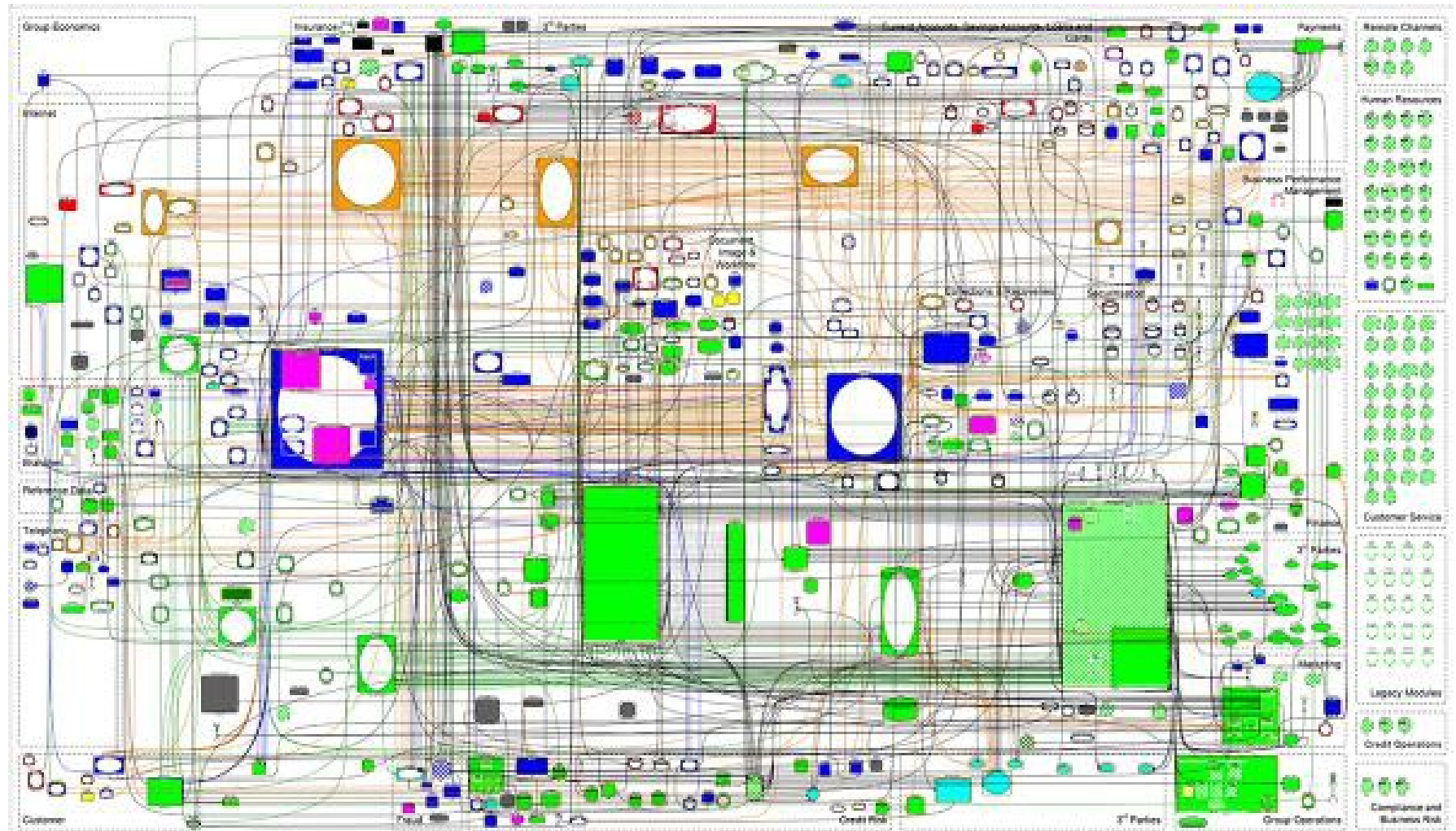
# Telecom vs. Internet

DISTANCE = COST

# The Cost of Complexity – What is this?



# IT complexity in a single mortgage system at a bank

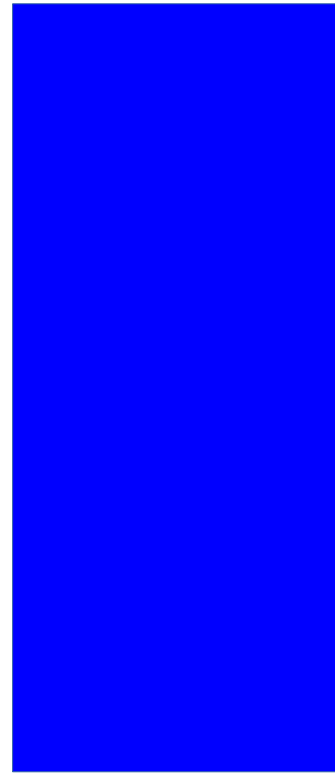
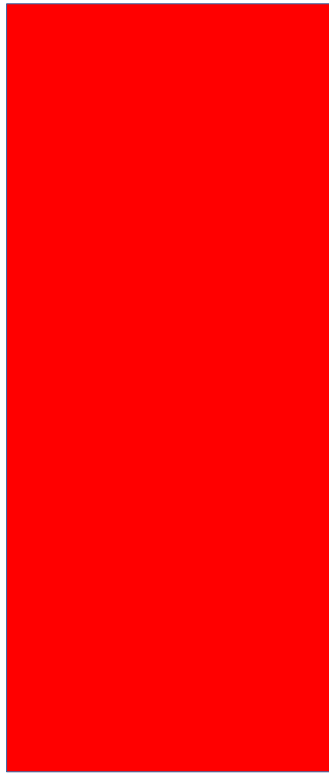
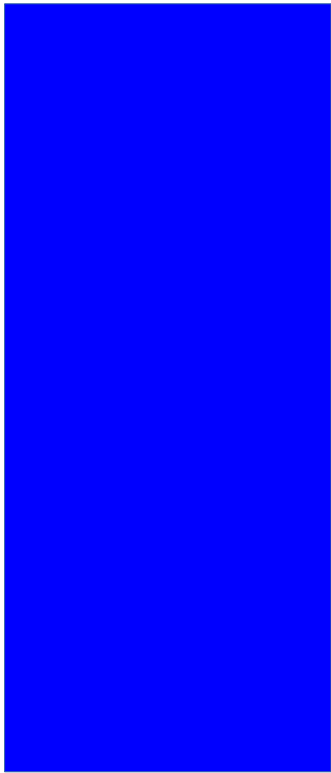


# Social Good = Digital Trust

- Encryption in Binary but Trust is Not: Depends on Context
- Money: [The Greatest Ever Sapiens Story](#) - Yuval Noah Harari
  - How does the next chapter in our story begin? With Blockchains ☺
- Global Commission On Internet Governance: 'One Internet' Out Today!
- Change in Architecture: Centralized → Decentralized = Opportunity
  - e.g. Green Finance: Blockchains + Big Data (Nutrient + Energy Flows)
- Examples of **Centralized Analog** Fiduciary Trust Structures
  - Backed by the State: Central Public Registries
  - Backed by Community: Regional Internet Registries (RIPE-NCC)
  - Rule of Law vs Consensus Policy Processes
  - Periodicity: Daily, Monthly, Yearly
- Evolution to **Decentralized Digital** Fiduciary Trust Structures
  - Backed by Mathematics: Decentralized Public Ledgers
  - Rule of Code vs. Consensus Policy Processes
  - Criticality of Consensus Code -> Importance of Thorough testing
  - Periodicity: Real-Time



**Too Big to Fail, Too Big to Jail or Too Free to Fail?**



## From Pillars to Platforms



# Building An Internet For Trust on a Trustless Internet\*

Smart Contract(s)  
Interoperable  
Programmable Trust Logic

Distributed Ledger Technology / Blockchain  
Interoperable Crypto-Protocols  
Digital Value Exchange Network  
(Permissionless Monetization)

Virtual Collectable Commodities  
Globally Unique  
Cryptographic Tokens/Coins

## Brokerage

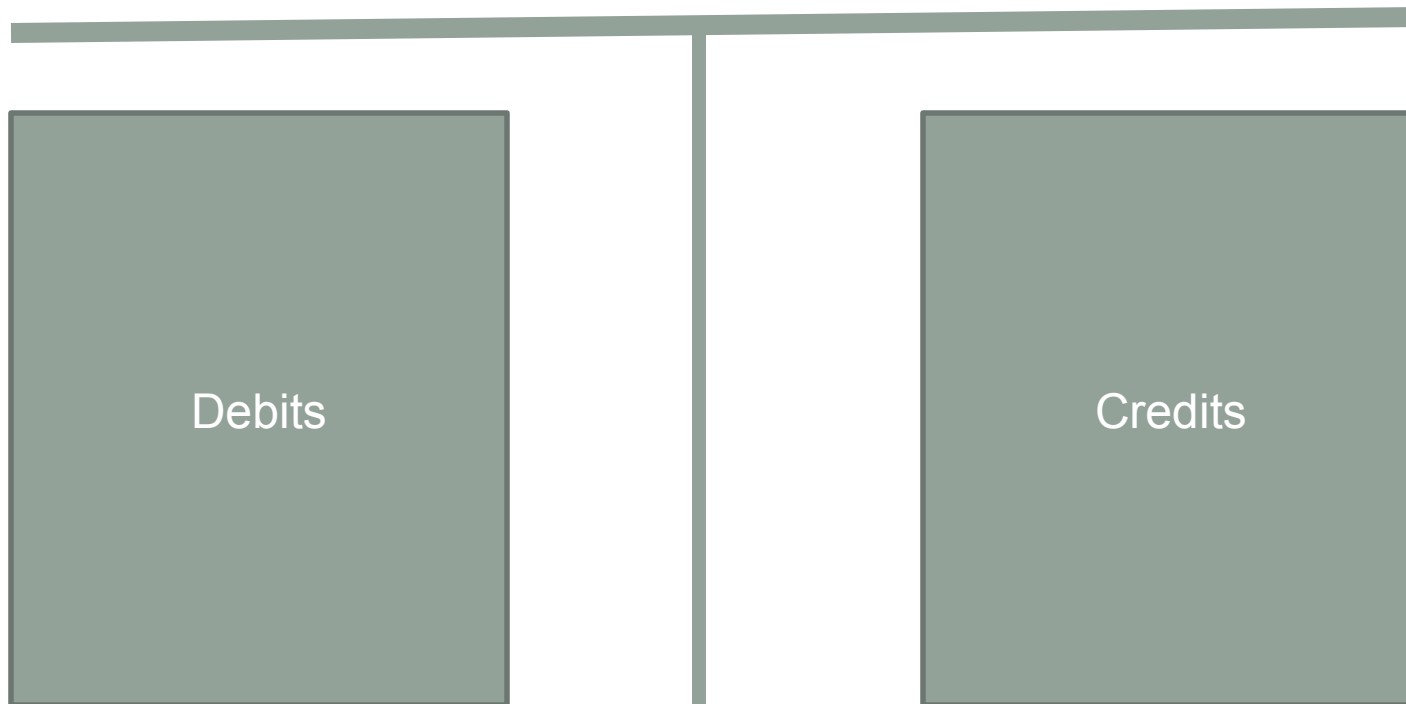


# What We've Learnt: Major Internet Trends

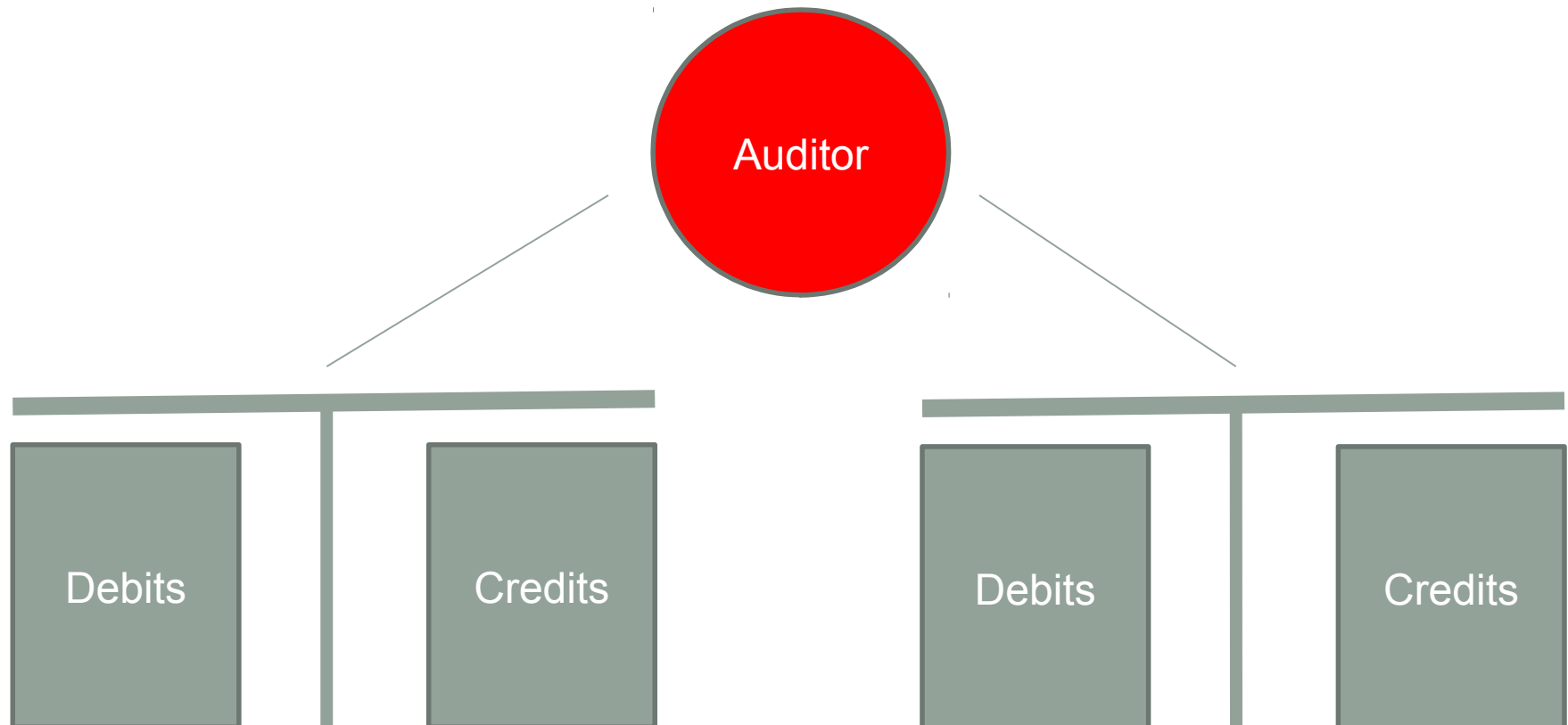
- Coordination Not Regulation
  - Don't Regulate what you can't control
  - Complexity is the Enemy: Diversity, Granularity, Cross-Border
  - Velocity makes small wins/errors big :
    - Rate of Innovation and Information
- Cooperation without Coordination
- Identity – still the major issue (multi-level KYC)
- Security
  - Push Payments vs Pull Payments – Changing the Direction
  - Tokenization - Digitalization of Assets

# Accounting: The Language of Business

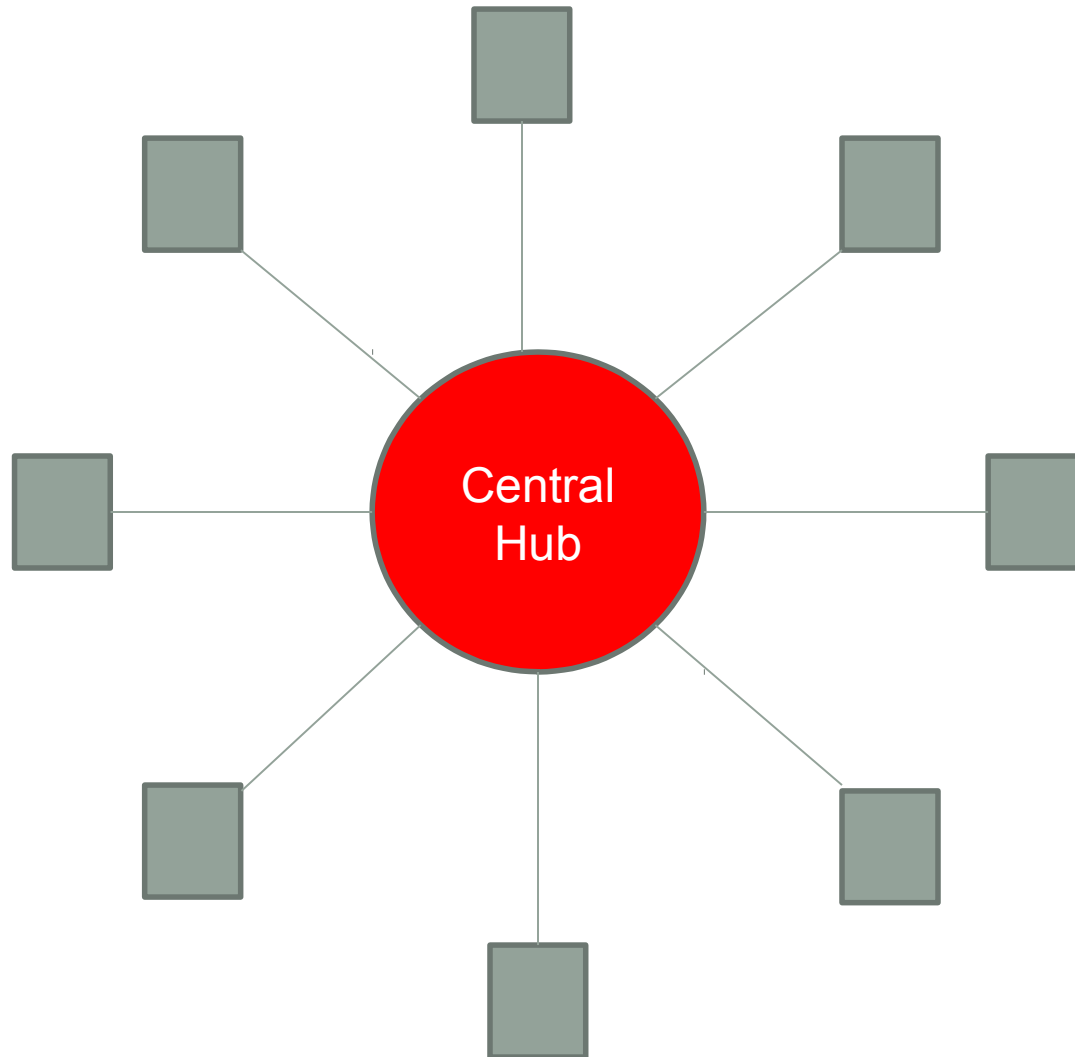
- Cooking the Books: Existence, Completeness, Valuation, Rights and Obligations, Presentation and Disclosure
- International Trade: Renaissance Innovation Due to International Trade
- Double Entry Booking Innovation



# Double Entry Bookkeeping

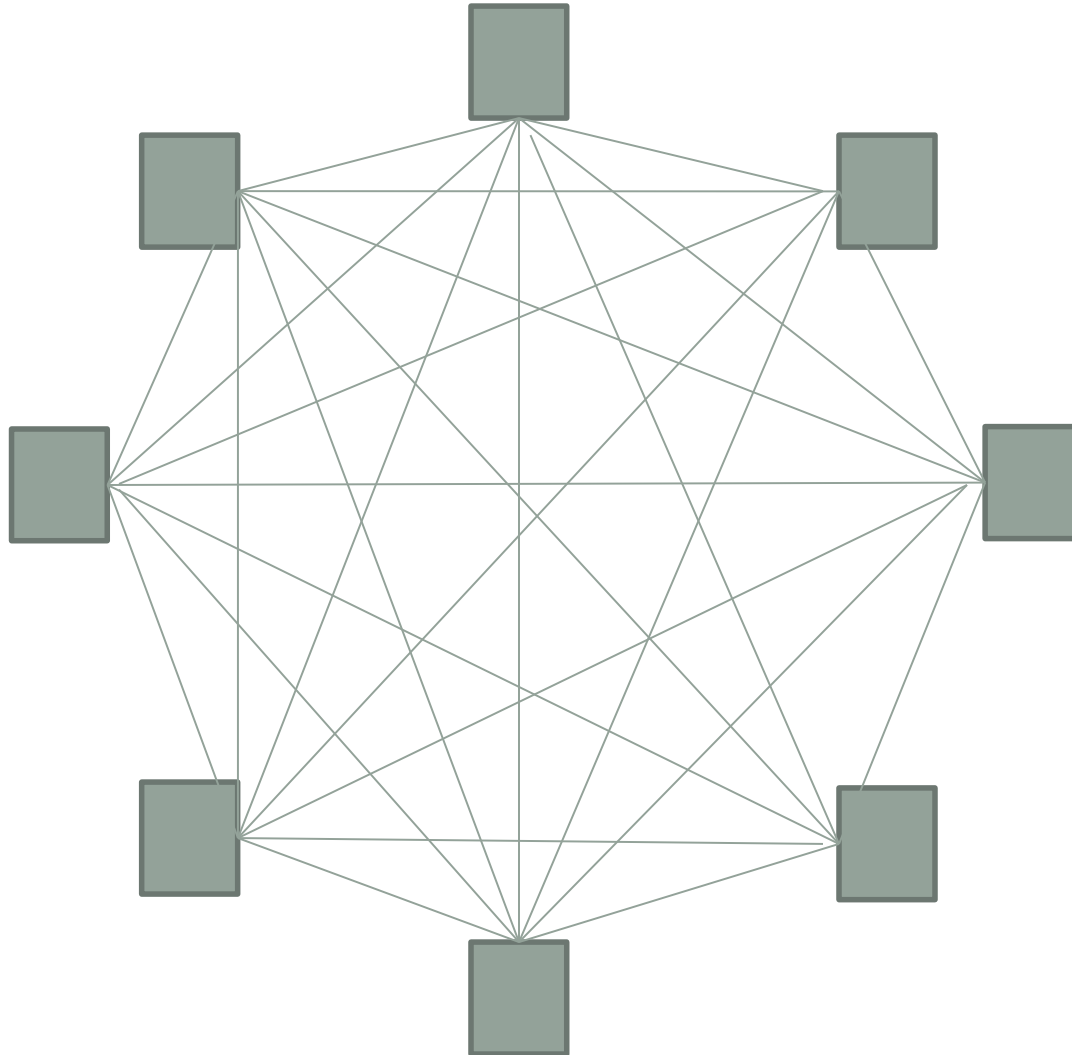


# Centralized Coordination and Control

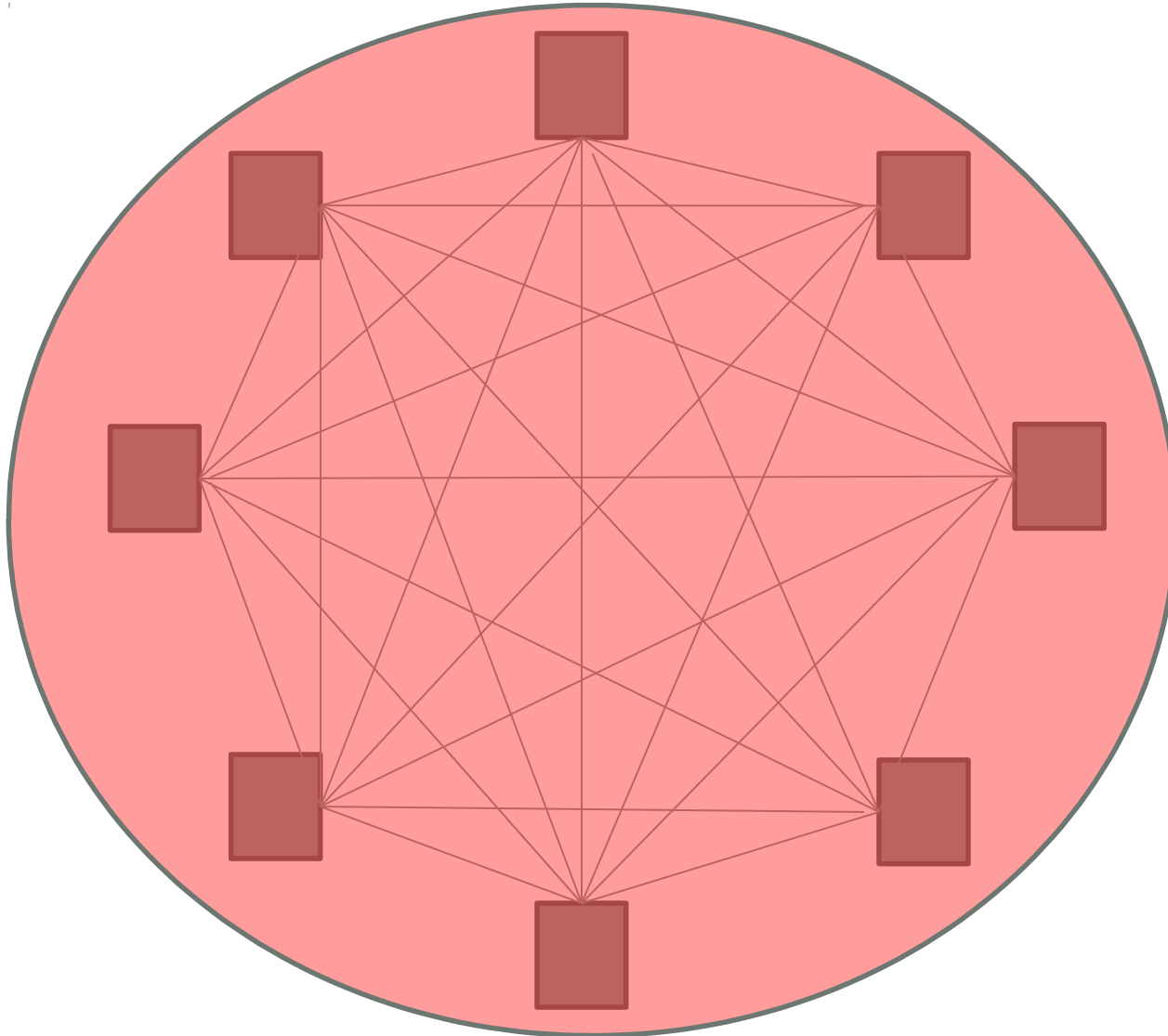




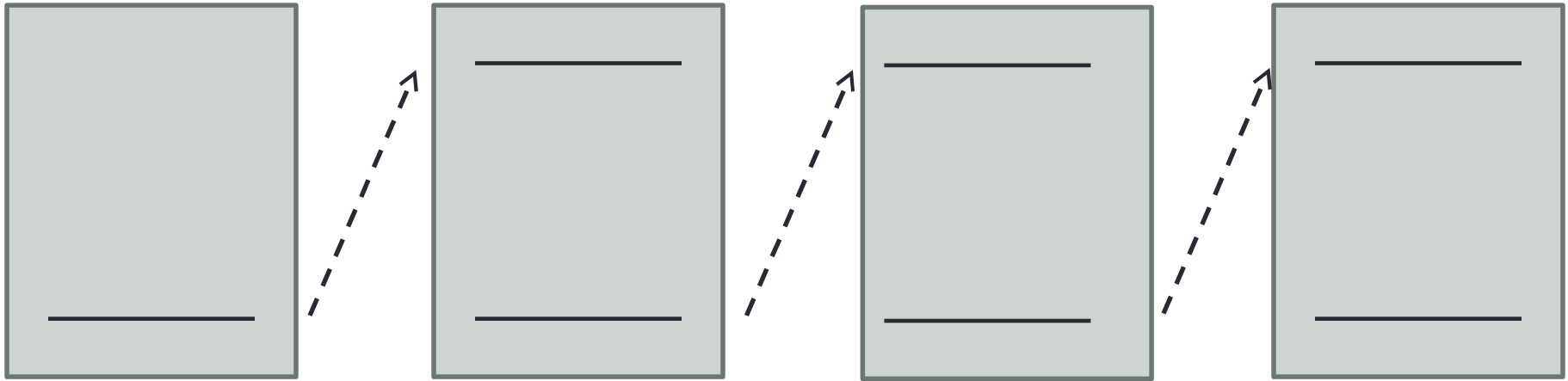
# Decentralized Peer-To-Peer Mesh



# Peer-To-Peer (Distributed) Real-Time Audit



# The Blockchain



Like Your Monthly Bank Statements

# The New Accounting Revolution

- A General Purpose Technology. Too big to Fail → You have the wrong Architecture
  - What is the right architecture to transition to? Bitcoin ;)
- Change in Accounting Architecture from 'Pillars to Platforms' provides huge opportunity for efficiency and innovation improvements for FI's
  - e.g. implement 'Green Finance' architecture (Simon Zadek – UNEP Inquiry)
- Old Accounting Golden Rule:  $\text{Asset} = \text{Liability} + \text{Equity}$
- New Account Rules: A transaction is always fully spent.  $\text{Inputs} = \text{Outputs} + \text{Transaction Fee}$
- Blockchain innovation is an advance in Inefficient Distributed Double Entry Bookkeeping using a Distributed Ledger.
- Building an 'Internet For Trust on a Trustless Internet'
- Auditor = Independent Guarantor of Financial Information
  - The Problem of Agency – Who do they really work for?
- Blockchain: Evolution of Double Entry – Distributed Networked Accounting
- There is no concept of Account of Currency!
  - Instead of an Account Holder having a balance of a currency
  - The virtual collectable commodity has a history of Holders from which an account is calculated and continuously verified in real-time.
    - Payment = Receipt, Direct with no intermediaries. (Reduces Friction but may introduce new liquidity problems for FIs)
    - Possession(key) is not 9/10ths of the law ... it's 10/10<sup>th</sup> of the Law – 'Rule of Code vs Rule of Law'

PAYMENT = RECEIPT

## **E.g. Belt and Road Blockchain – July 28<sup>th</sup> in Hong Kong**

- Letter of Credit
- Trade Finance
- Trade Facilitation