Blockchain and Crypto Currencies – Broadband Taskforce

Stephanie Stoudt-Hansen
Blockchain will unlock value of $176B by 2025.

Will you own the gold mine?

Or be undermined?

Key Issues

1. What is blockchain and what is its disruptive
2. What is cryptocurrency and why is it important?
3. Industries are exploring blockchain and why?
Key Issues

1. What is blockchain and what is its disruptive potential?
2. What is cryptocurrency and why is it important?
3. Industries are exploring blockchain and why?

Understand the Only Successful Blockchain: Bitcoin

Decentralized Ledger

Encrypted and Interlinked
These Features Make Blockchain Disruptive

Disintermediation

Immutability

Move Beyond Bitcoin: The Next Generation of Blockchain

Explosion of Interest

New Platforms: Hyperledger, Ethereum, Ripple

New Capabilities: Consensus, Permissioning, Smart Contracts

Investments by Enterprises and Startups
Stay Grounded: See the Weak Links Beyond the Hype

- Blockchain technology is not yet mature
- The eventual market leader has not yet emerged

Key Issues

1. What is blockchain and what is its disruptive potential
2. What is cryptocurrency and why is it important?
3. Industries are exploring blockchain and why?
Cryptocurrency

Digital currency that uses cryptography for security, generally anonymous – not issued by any central banking authority

Transactions transact directly without third party

- No processing fees
- No bank or government control
- Transactions are computationally impractical to reverse (fraud protection)
- Difficult and expensive to hack – 10 minutes = half a billion USD
Cryptocurrency

3 Ways to Get Bitcoins

- Bitcoin mining
- Selling products directly online
- Buy Bitcoins outright at Bitcoin exchange markets

Cryptocurrency

- Stored in a digital wallet, electronic signal is added, transaction is verified
- Bitcoin users have a 34 character address
- Transaction is added to log of each Bitcoin user across the globe

Introduced in 2008 by pseudonymous developer “Satoshi Nakamoto”
Key Issues

1. What is blockchain and what is its disruptive potential?
2. What is cryptocurrency and why is it important?
3. Industries are exploring blockchain and why?

Globally, Every Vertical Is Testing Blockchain

<table>
<thead>
<tr>
<th>Vertical</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment/Capital Markets</td>
<td>48</td>
</tr>
<tr>
<td>Banking</td>
<td>38</td>
</tr>
<tr>
<td>Insurance</td>
<td>8</td>
</tr>
<tr>
<td>High Tech</td>
<td>5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>Professional Services</td>
<td>3</td>
</tr>
<tr>
<td>Retail &amp; Wholesale</td>
<td>3</td>
</tr>
<tr>
<td>Gaming</td>
<td>2</td>
</tr>
<tr>
<td>NGO</td>
<td>2</td>
</tr>
<tr>
<td>Energy &amp; Utilities</td>
<td>1</td>
</tr>
<tr>
<td>Healthcare</td>
<td>1</td>
</tr>
<tr>
<td>Travel and Transportation</td>
<td>1</td>
</tr>
</tbody>
</table>
Corda use grows significantly, while Ripple and proprietary solutions decline.
<table>
<thead>
<tr>
<th>Digital Asset Market</th>
<th>New markets based on digital assets formed from nondigital ones (physical and virtual).</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYIAX</td>
<td>Advertising Contracts</td>
</tr>
<tr>
<td>The Royal Mint</td>
<td>Digital Gold</td>
</tr>
<tr>
<td>Energy Blockchain Labs</td>
<td>Carbon Credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency Play</th>
<th>Efficiency improvements in transactions, interactions and tracking provenance of assets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>Supply Chain</td>
</tr>
<tr>
<td>Maersk Line</td>
<td>Container Shipment</td>
</tr>
<tr>
<td>DTCC</td>
<td>Clearing and Settlement</td>
</tr>
</tbody>
</table>
Records management by one entity, for self or for a community.

Digital Identity
Shareholder Lists
Land Titles

1.1 billion people worldwide live without an officially recognized identity
Immediate FOI request results
Tracking of government expenditures
Paying taxes and registering land titles
Arizona – smart contracts and electronic signatures
Delaware – transfer securities and communicate with stockholders

ID2020
AN ALLIANCE COMMITTED TO IMPROVING LIVES THROUGH DIGITAL IDENTITY
State of Illinois
- 6 state and local agencies:
  - Pollution Control Board
  - Commerce & Econ Opp
  - Innovation and Technology
  - Financial & Prof Regulation
  - Insurance
  - Cook Cty Record of Deeds

- 3 goals:
  - Thoughtful & Light Touch
  - Support Blockchain Ecosystem
  - Government Integration

Recommended Gartner Research

- **Blockchain Trials Across Industries Show the Pulse of a Rapidly Moving Professional Services Market**
  David Groombridge, Jacqueline Heng and Rajesh Kandaswamy (G00322046)

- **Market Guide for Blockchain Consulting and Proof-of-Concept Development Services**
  Jacqueline Heng, Rajesh Kandaswamy, Neil Barton and David Groombridge (G00317612)

- **Toolkit: Overview of Blockchain Use Cases**
  David Furlonger (G00302283)

- **How to Make the Most of a 'Pointless' Blockchain Project**
  Ray Valdes and David Furlonger (G00315764)

- **How to Determine If You Need a Blockchain Project, and If So, What Kind?**
  Rajesh Kandaswamy and Fabio Chesini (G00320247)

- **How to Develop a Business Case for Blockchain Projects**
  Rajesh Kandaswamy and David Furlonger (G00323011)