What is Blockchain technology and Distributed Infrastructure?

**Database & Network**
Blockchain is a database and a network which means it can store and transmit data.

**Synchronised**
All activity on the blockchain is automatically reflected across the network.

**Secure**
Data cannot be changed once committed to the system.

**Smart transactions**
Code can be added to transactions that allows autonomous execution of functions under predefined conditions, known as ‘smart contracts’.
The value of distributed infrastructure is seen in its attributes.

**Distributed** technology allows distribution of trusted value transfer and execution without requiring intermediaries: the network is the intermediary.

**Characteristics of Distributed Infrastructure**

- **Digital Identity**: Participating party can be uniquely identified digitally.
- **Provable Transactions**: All transactions can be proven to have taken place at particular times.
- **Autonomous Executions**: Transactions occur automatically on predefined conditions/smart contracts.
- **Immutable Golden Source**: One version of data which cannot be altered.
- **Transparent**: Visibility into historical transactions by permissioned parties.
- **Rapidly Scalable**: Nodes (clients) can rapidly be added.

**Characteristics specific to blockchain technology**

- **Digital Identity**
- **Provable Transactions**
- **Autonomous Executions**
- **Immutable Golden Source**
- **Transparent**
- **Rapidly Scalable**
View of competitor financial services investment ecosystem 2010-2016*

Cryptocurrency (Bitcoin)
- Digital Asset Holdings
- X

Payments
- GOPAGO
- Square
- clearXchange
- Tapjoy

Risk & Security
- Derivix

Insurance
- digital insurance

Capital Markets
- chi-x CODE Advisors

Payments – E-Commerce
- LAZADA
- seamless
- JUMIA
- NAMSHI
- home24
- zalando
- LINIO
- dafiti
- zalora
- lamoda
- THE ICONIC
## Leading global initiatives and Blockchain providers in payments

Banks are evaluating/experimenting and participating in multiple options for Blockchain use cases in cross border payments

<table>
<thead>
<tr>
<th>Vendor / Initiative</th>
<th>Level of Blockchain Coverage</th>
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<tr>
<td>R3 CEV</td>
<td>🌐 🐝</td>
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Implementation Challenges and Considerations

<table>
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<th>Internal Factors</th>
<th>External Factors</th>
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<tbody>
<tr>
<td>The technology is not the solution, but an enabler</td>
<td>The transparency paradox</td>
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<tr>
<td>Industry wide standardization of protocols</td>
<td>Acceptance by regulatory authorities</td>
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<td>Technical complexity</td>
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