

區塊鏈之價值－ 重塑企業生態系統及經濟

Steve Chuang

IBM TW

Oct 1st, 2021

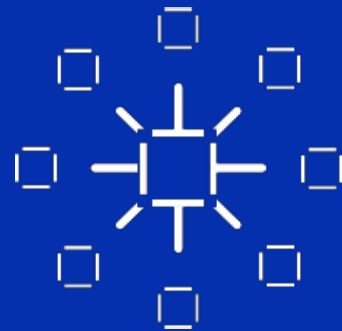
Agenda

Section 1



Why Blockchain?

Section 2



What has been done
with Blockchain?

Section 3



Enterprise Scenario &
Use Case

Section 4



Q&A?

Blockchain

What will we
solve together?



Why Blockchain?

Business Networks, Wealth, and Markets



Business networks benefit from connectivity:

- Participants are customers, suppliers, banks, partners
- Across geographical and regulatory boundaries

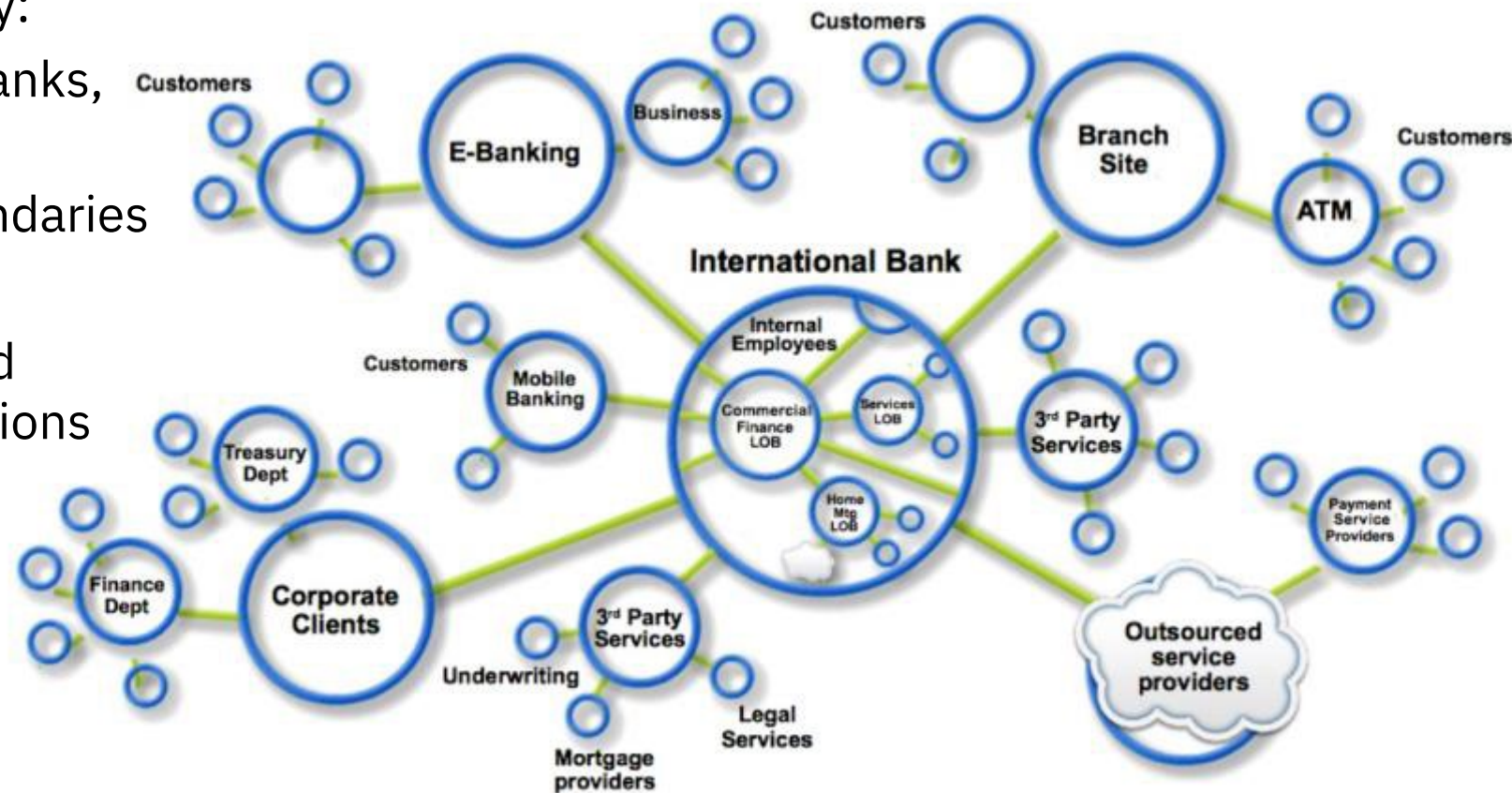


Wealth is generated by the flow of goods and services across business network in transactions and contracts.

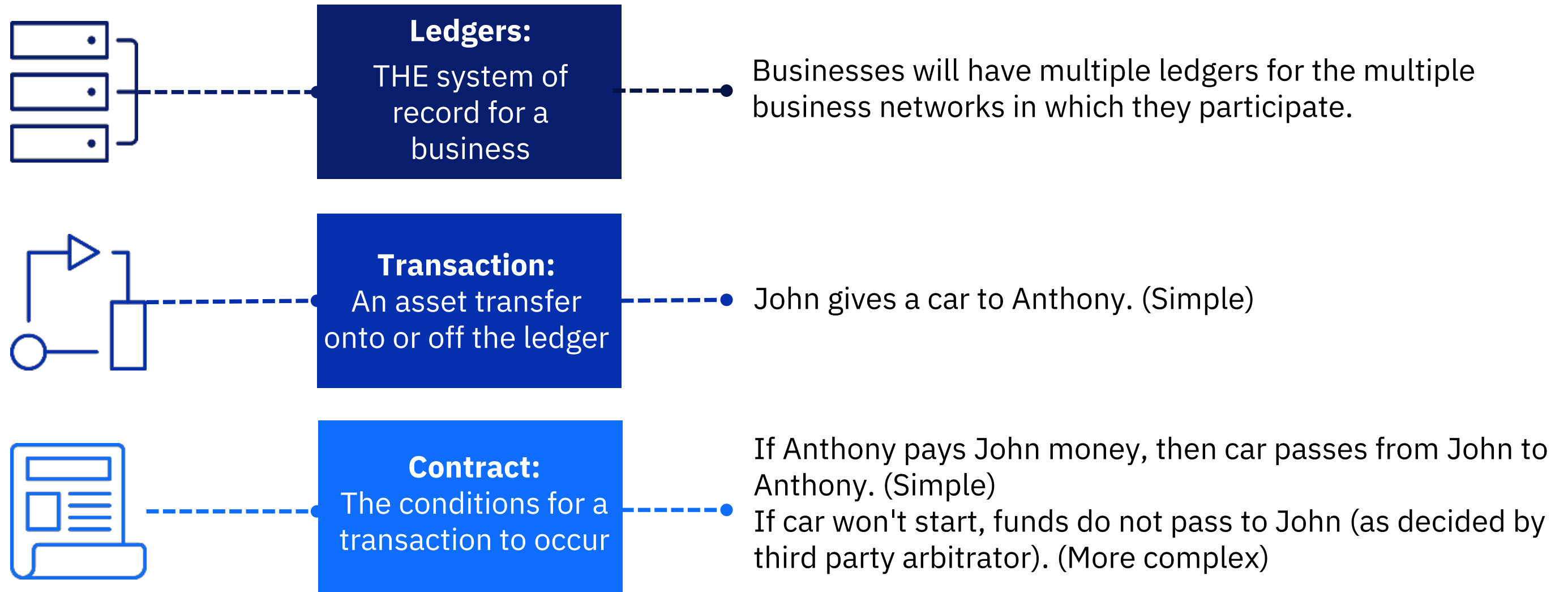


Markets are central to this process:

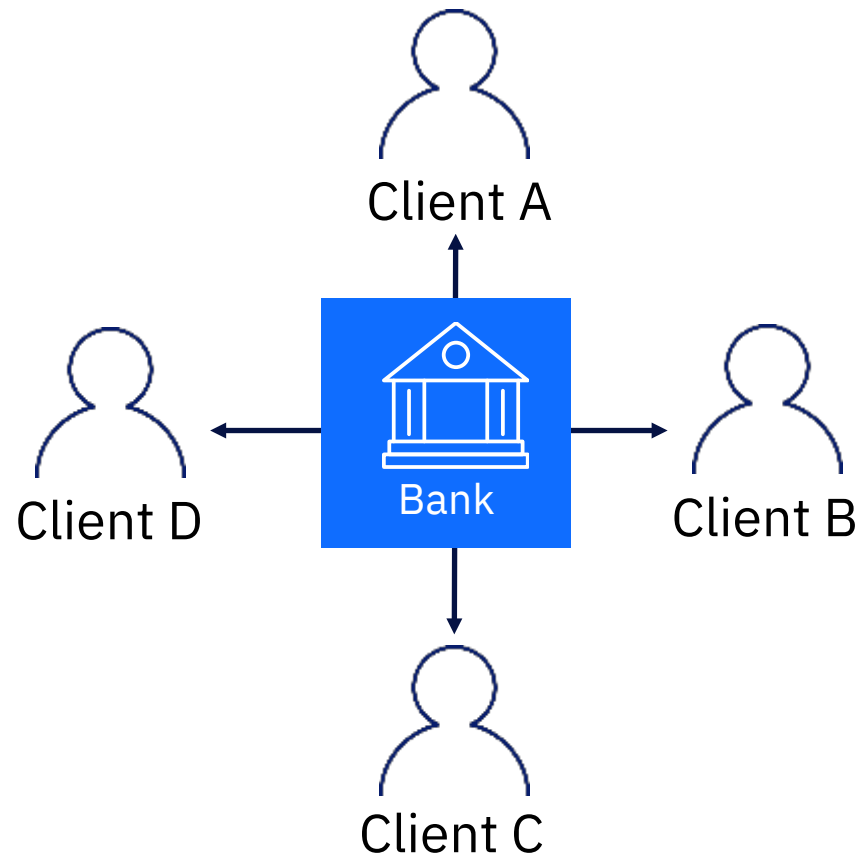
- Public (fruit market, car auction), or
- Private (supply chain financing, bonds)



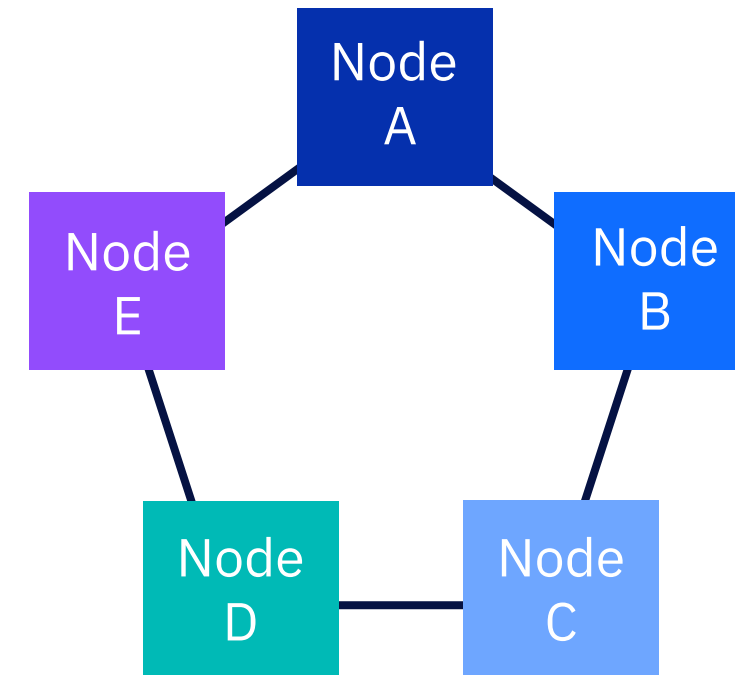
Ledgers Are Key



Problem With Central Ledgers...



- Multiple ledger but the bank's record is 'golden'
- Onus on client to convince the bank in case of discrepancies



- One ledger and all nodes have access to it
- All nodes agree to a protocol (achieving consensus) that determines the 'true state' of the ledger at any point in time

...and blockchain's solution

Requirements of Blockchain for Business



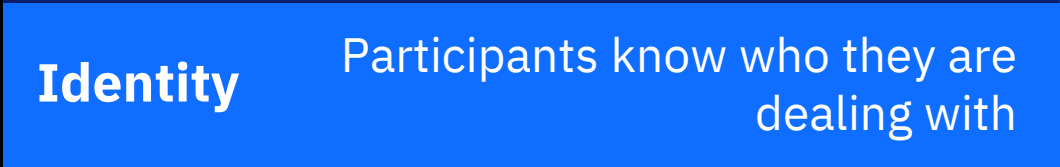
**Choosing
What to Share**

Participants decide which
assets to share



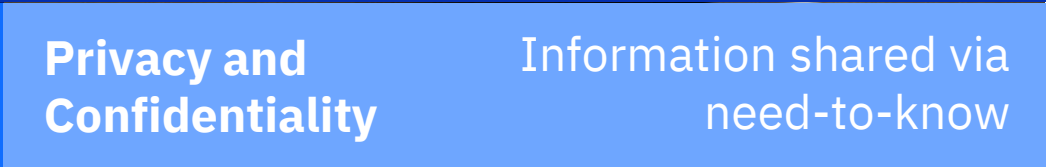
**Transaction
Endorsement**

Participants give *provable*
endorsement



Identity

Participants know who they are
dealing with

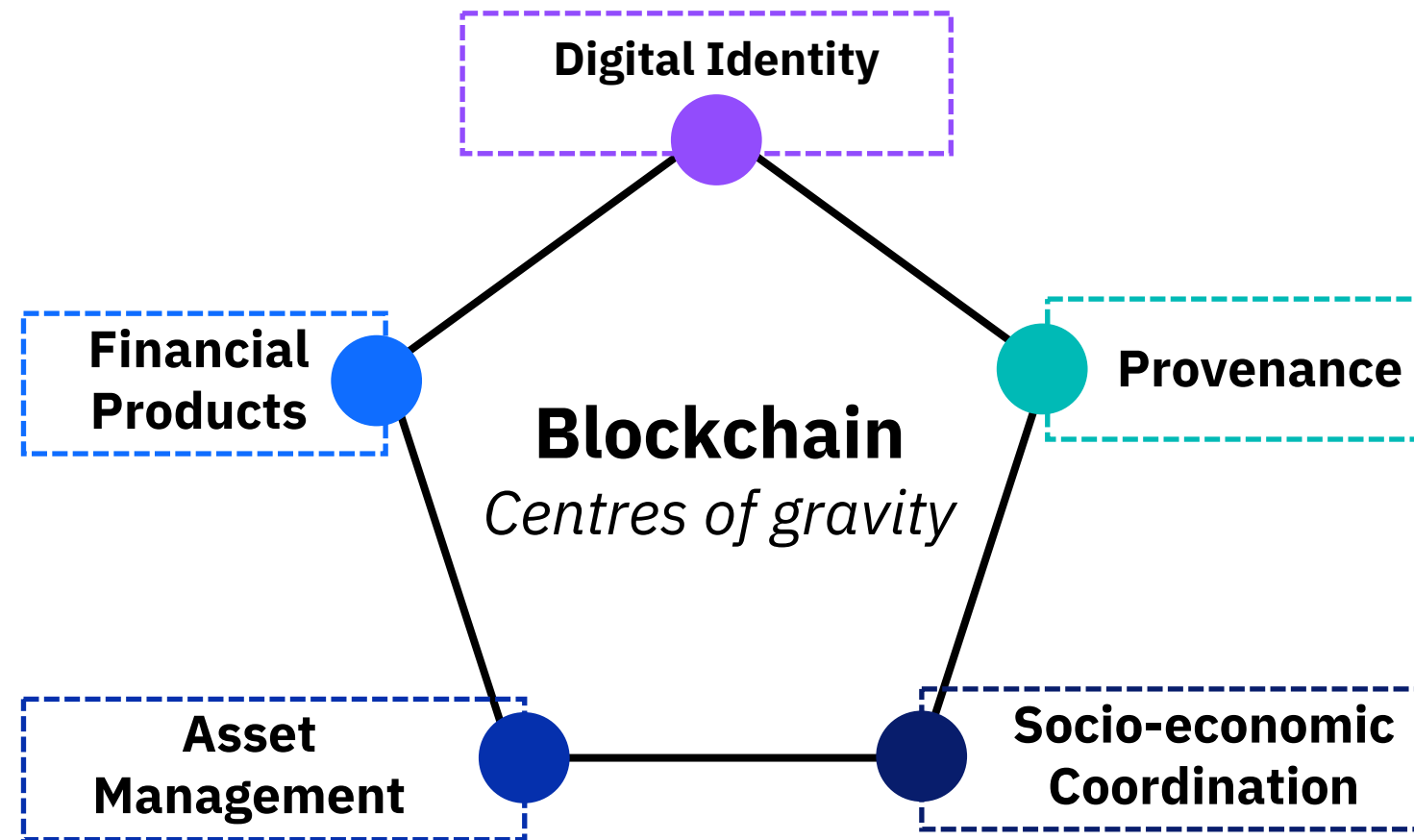


**Privacy and
Confidentiality**

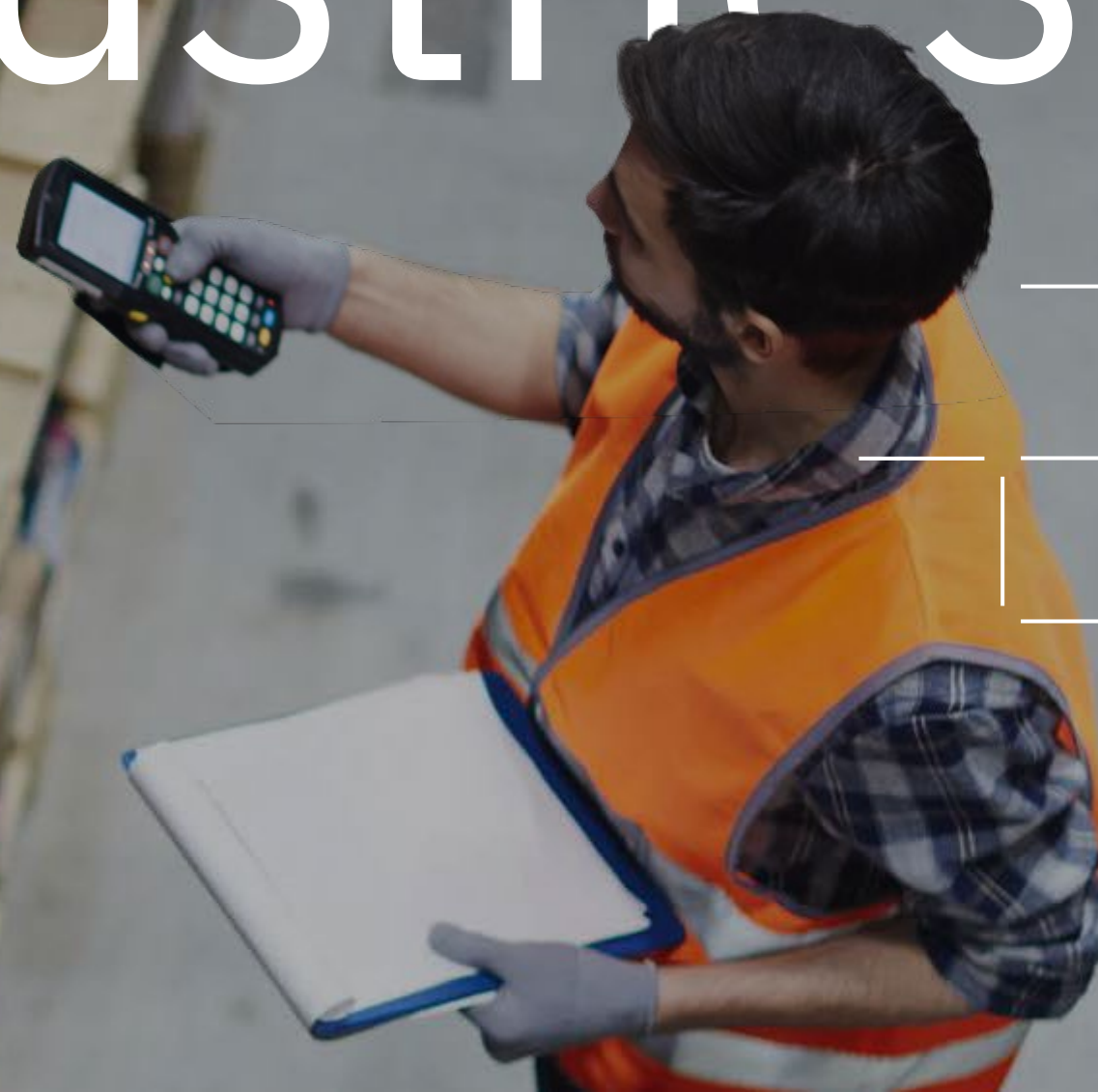
Information shared via
need-to-know

What has been done with Blockchain?

Centres of Gravity



Industries



Automotive

Drive innovative mobility services, supply chain traceability and secure financial transactions.

ibm.com/blockchain

Financial Services

Bring trust, simplicity and enhanced customer experience to financial services.

Government

Ensure data stewardship to protect citizen information, maintain trust and ensure the accuracy of public records.

Healthcare

Streamline clinical data across organizations and enable patients to control their medical data to increase the quality of care.

Insurance

Revolutionize the trust that powers the insurance industry with an immutable foundation of transparency and shared purpose.

Media

Build an ecosystem of trust around digital content usage—music, movies, television, advertising, loyalty points and more.













Retail

Harness blockchain to reinvent product authenticity, operational excellence and the consumer experience.













Transportation











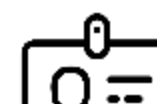







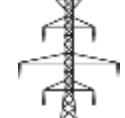






















Speed transactions, reduce fraud and streamline operations to move passengers, personnel and parcels more efficiently.

Travel & transport

											
Accommodation/hotel inventory	Counterfeit parts	Ownership transfer	Car maintenance	Warranty	Auto financing	EV charging infrastructure	Supply chain tracking	E-wallet	Trusted identity	Insurance claim processing	Loyalty based micro transactions

Financial Services

											
Identity and KYC	Reference data	Clearing and settlements	Retail/wholesale payments	Trade finance	Corporate/syndicated lending	Equity and debt issuance	Deposit taking	Claim handling & settlement	Risk transfer & trading	Collateral management	Fraud management

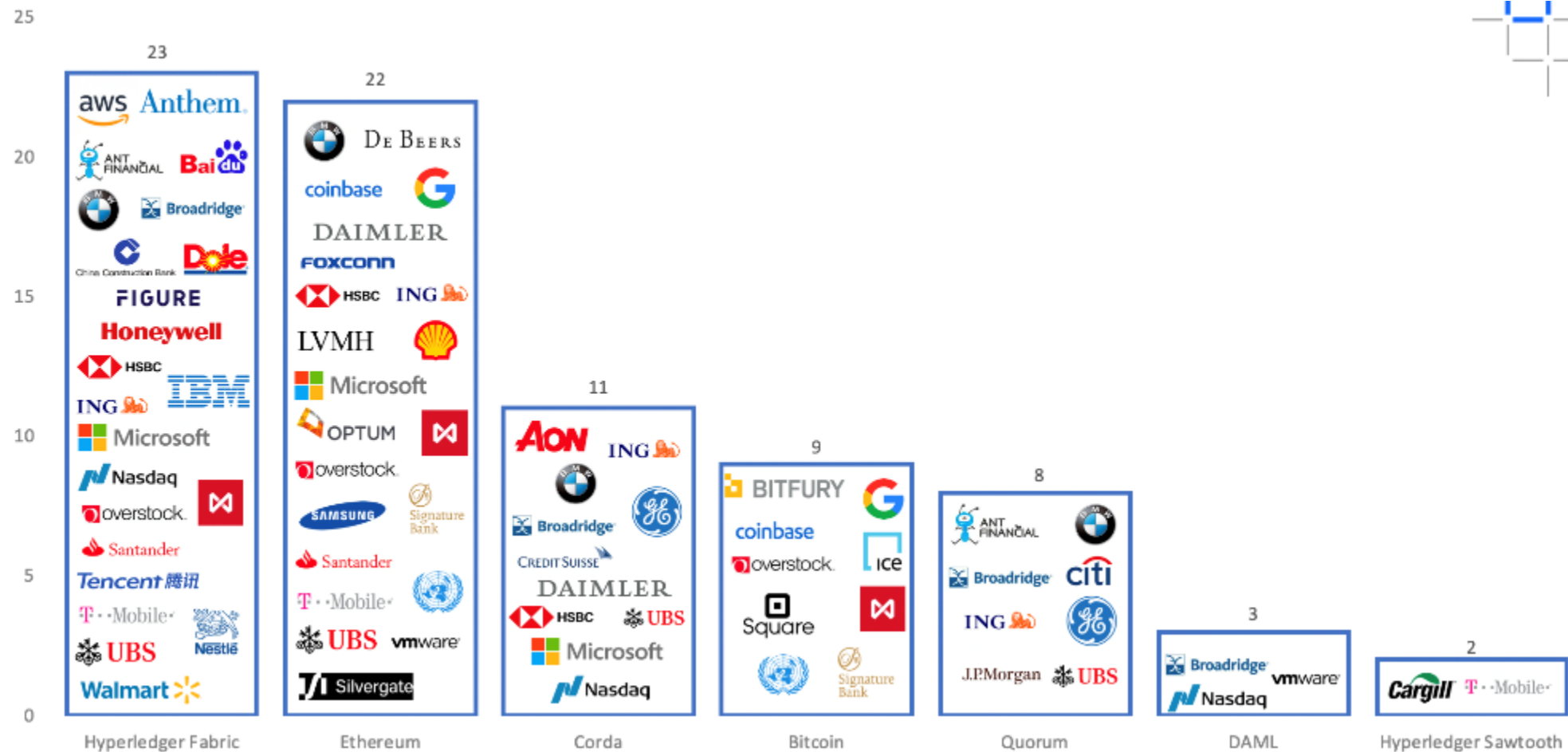
Retail & consumer						Governments								
														
Digital currency	Food supply chain	Luxury goods tracing	Fabric certification	Loyalty programmes	Asset & inventory management	Regulatory compliance	Contract management	Voting systems	Financial transactions	Identity management	Asset management	Borderless services	Citizen services	
Energy & utilities								Industrial & life science						
														
Energy trading	Energy supply contracts	Component provenance	Distribution/ grid efficiency	Microgrid	EV charging infrastructure	P2P energy trading	Alternative energy options	Regulatory compliance	Contract management	Operations data	Digital marketplace	Asset & inventory management	Warranty & service management	
Communications, media & entertainment														
														
Music/content distribution	Online lottery tickets	P2P concert tickets	Digital advert trading	Advertising inventory	Advert/Digital media buying	5G infrastructure	IoT infrastructure	Component provenance	Supply chain management	Clinical trial records	Medical device data	Medical/ health records		

Enterprise Scenario and Use Case

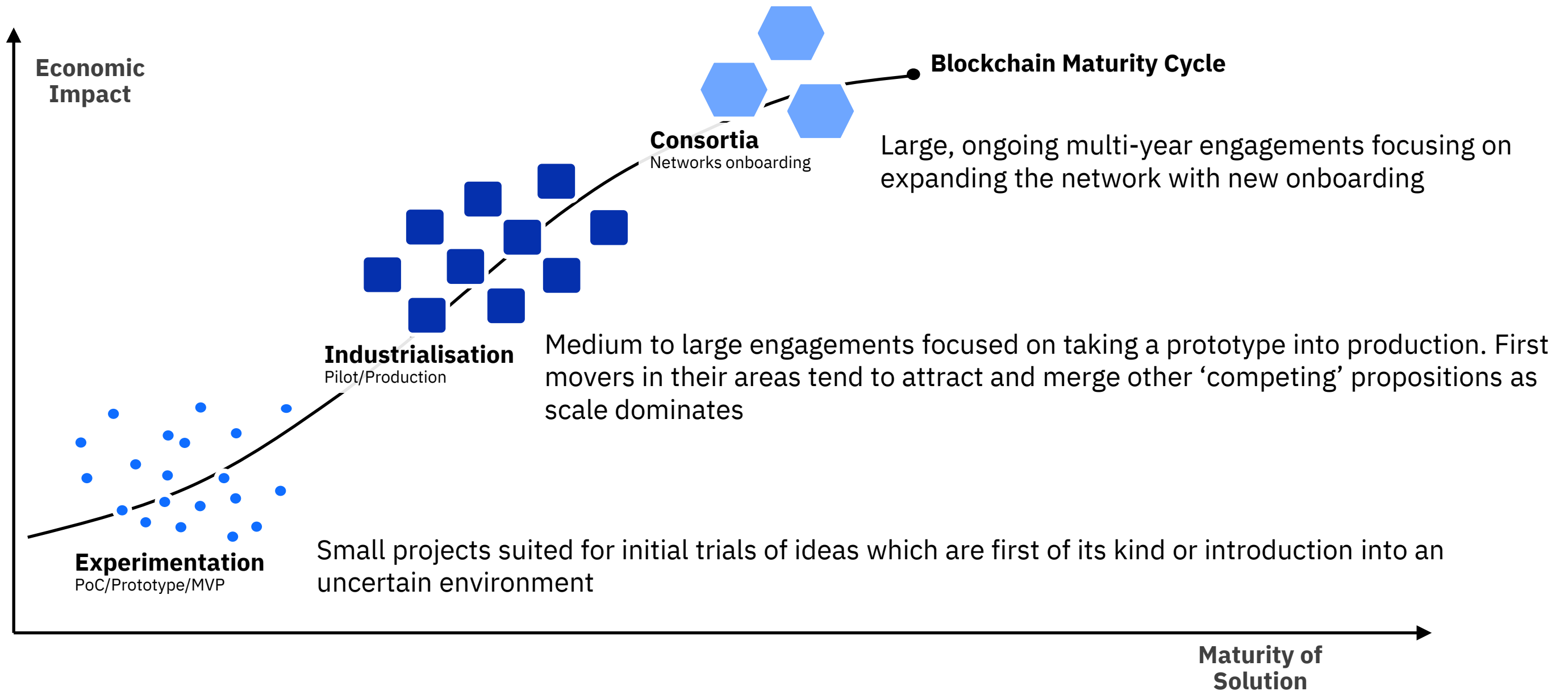
Forbes Top 50 Blockchain Companies Framework of Choice

Guide to what blockchain frameworks the largest enterprises in blockchain are using

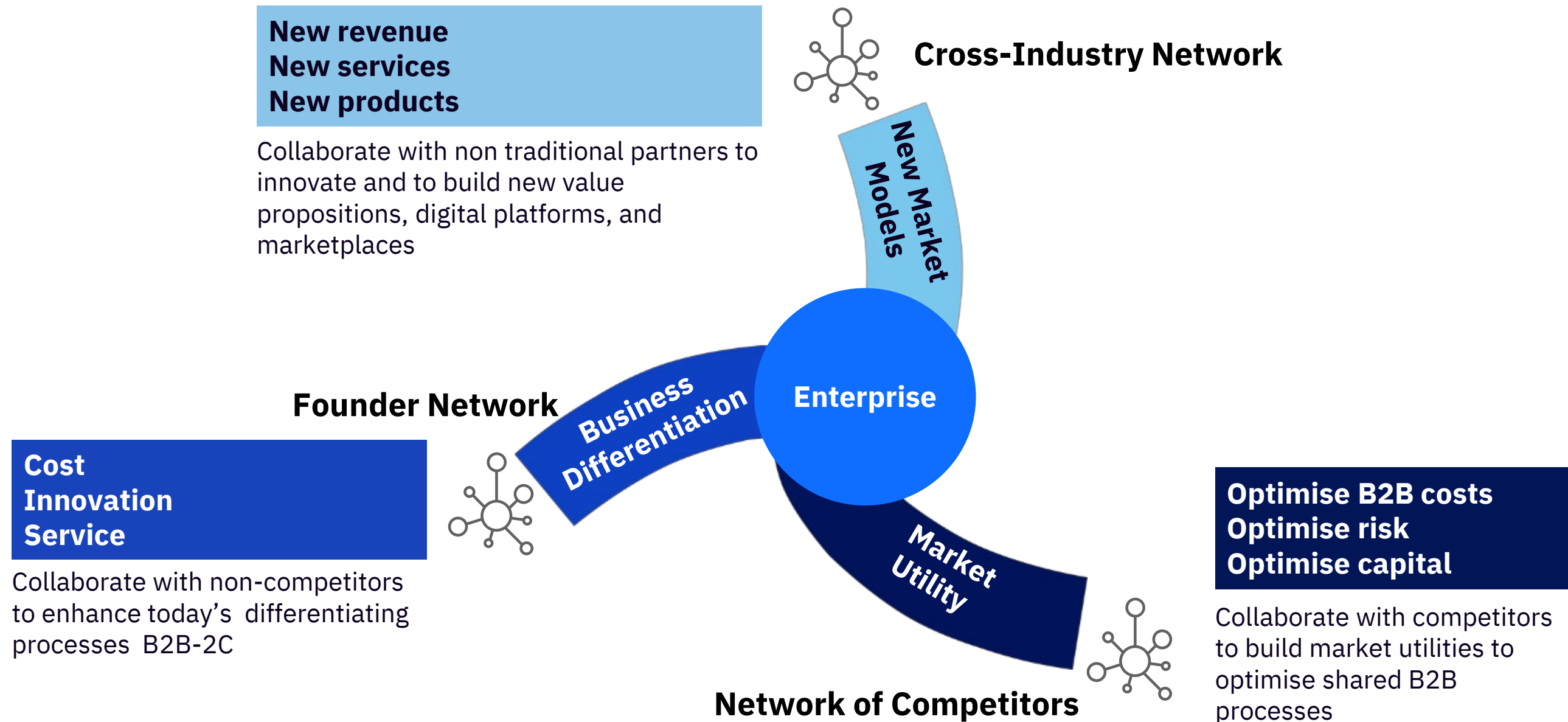
- Focus on companies either **generating \$1+ Billion** or **valued** at \$1+ Billion
- **Hyperledger Fabric** leads all DLTs with **23** companies basing their solutions on the framework, it is closely followed by **Ethereum (22)** with a large drop off to **Corda (11)** at #3
- **21** companies are implementing **FSS** focused use-cases followed by **supply chain (13)** and **identity (4)**
- **60%** of companies are based in the **US** with the rest in either EMEA or APAC



Evolving Market Segments as Blockchain Matures

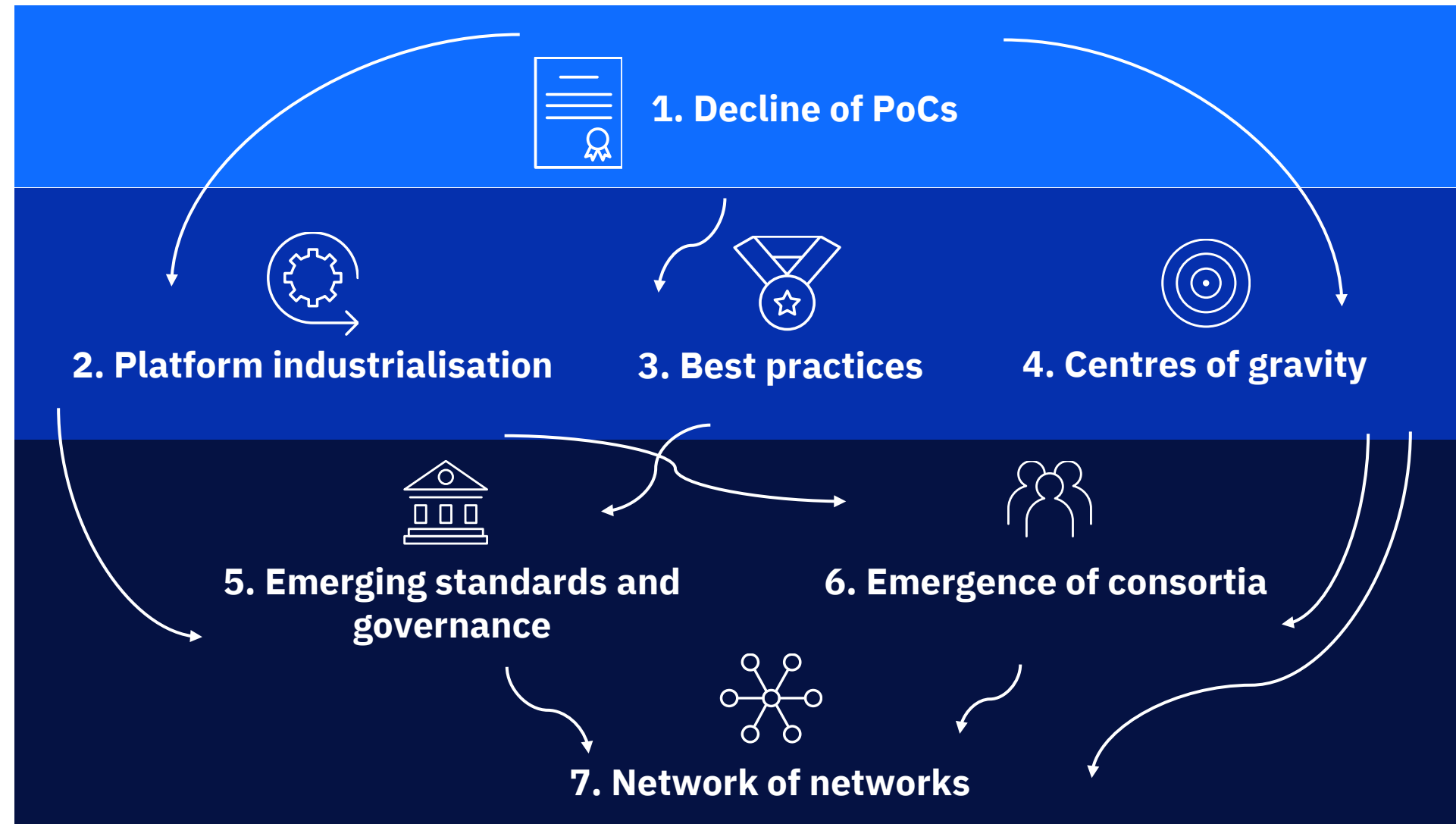
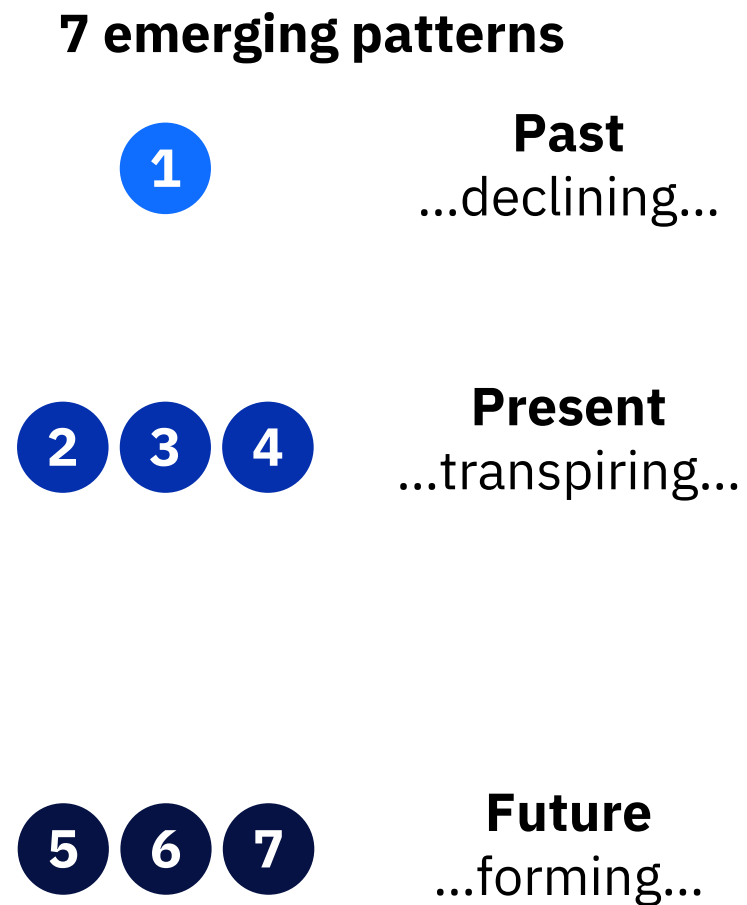


3 Entry Points for Blockchain



Emerging Patterns

7 emerging patterns that are likely to shift the micro and macro economic landscape of the blockchain ecosystem.



Transforming industry, globally

From the food supply chain to the financial industry, IBM Blockchain's solutions are disrupting global verticals.

| Explore the solutions



Transparent Supply
Build your own blockchain ecosystem to share data with your supply chain partners



IBM Food Trust™
Building confidence in the food system



TRADELENS
Driving trust and transparency across the global supply chain



Trust Your Supplier
Digital identity for supplier management



A photograph of an industrial robotic arm in a factory setting. The arm is orange and black, positioned over a metal track. In the background, another yellow robotic arm is visible. A white grid pattern is overlaid on the right side of the image. The text "Case studies" is written in large white letters across the center.

Case studies

Transforming prescription drug distribution

The FDA, Pharma and Consumer Retail team up with IBM Blockchain

IBM has teamed up with the US Food & Drug Administration, Merck, Walmart, and KPMG to explore using blockchain to make prescription drug distribution safer and more secure.

The new blockchain solution will reduce the time it takes to track and trace inventory, increase data accuracy and better determine the integrity of products in the distribution chain.



Blockchain can make the prescription drug distribution safer and more secure

Combining blockchain capabilities and IoT solutions to monitor fleet operations



IBM is collaborating with Golden State Foods to combine blockchain capabilities with internet of things (IoT) solutions to monitor fleet operations.

GSF is infusing cognitive computing and augmented intelligence to improve fleet management, enhance driver safety and test new capabilities that optimize decision making in energy, equipment and restaurant wellness management.

IBM IoT for Automotive incorporates weather, traffic and telematics data, improving operations and ensuring on-time deliveries.

Blockchain + IoT =
exceptional fleet
management

A large blue semi-truck is driving on a two-lane road towards the viewer. The sun is low on the horizon, creating a warm, golden glow and long shadows. The sky is filled with dramatic, dark clouds. The road has a white dashed line on the right side.

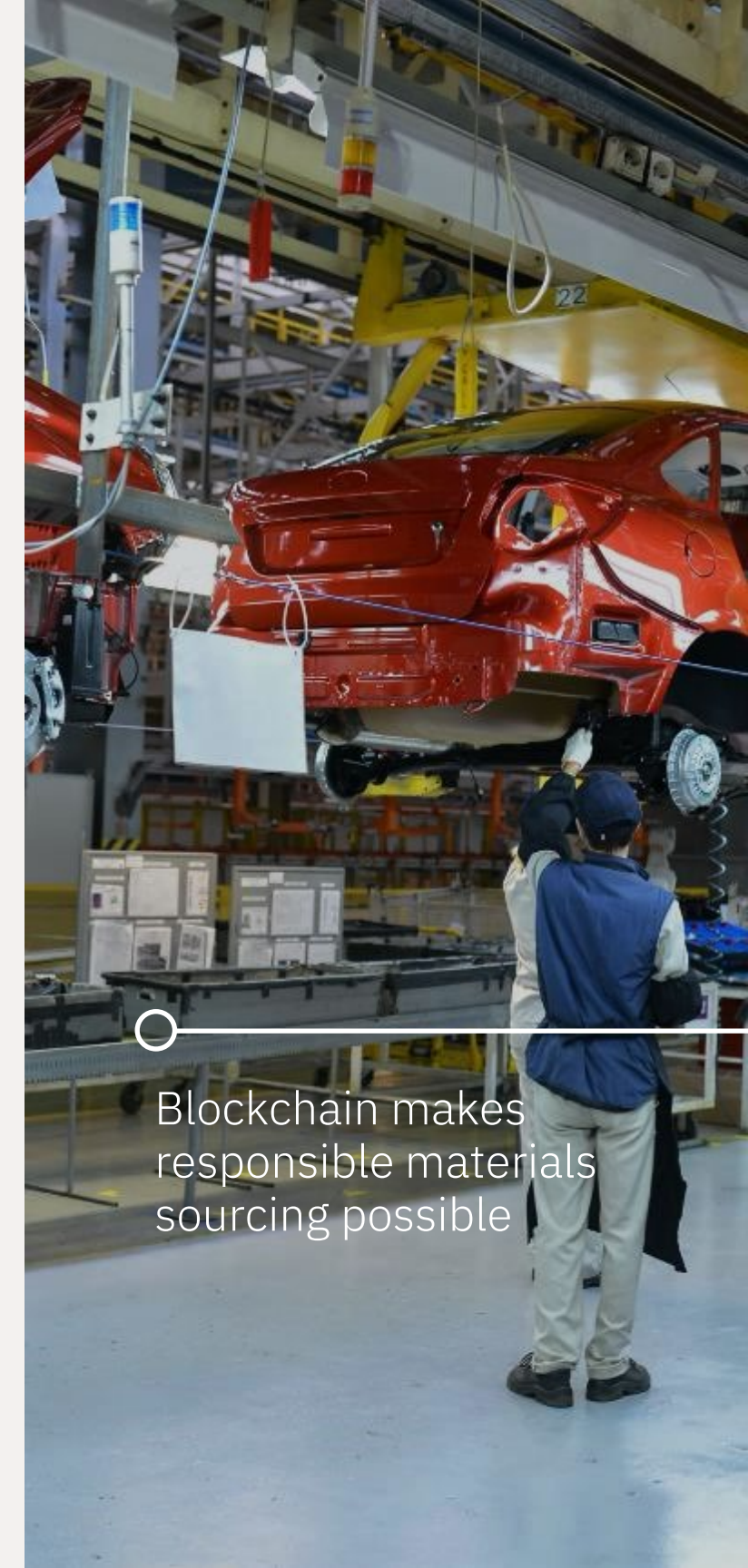
Volkswagen joins IBM Blockchain network for cobalt supply chains



Cobalt has become a crucial component for everything from smartphones to cars.

Volkswagen is working to ensure the cobalt used in lithium-ion batteries for its electric vehicles is responsibly sourced.

The blockchain network allows companies to trace and record the flow of minerals across the supply chain in near real-time.



Blockchain makes responsible materials sourcing possible

Proctor & Gamble joins TradeLens ecosystem to streamline cargo and information flow



As part of a wider effort to reduce complexity and find efficiencies across their organization, P&G decided to investigate the impact of digitized workflows via TradeLens within their supply chain.

They also undertook a trial to explore the potential of Blockchain Invoicing from TradeLens to improve management of the supply chain invoices P&G receives from ocean carriers, land carriers and freight forwarders.

The goal was to reduce the total cost of invoice reconciliation and P&G achieved that goal.

They did so by automating inefficient processes, reducing the number of tedious, manual efforts required by paper invoices, and ultimately gaining greater visibility into all supply chain events was possible for P&G via the TradeLens platform.

A woman with dark hair and glasses is shown from the chest up, looking at a computer screen. She is wearing a dark shirt. The background is dark and out of focus.

IBM Blockchain provides the supply chain with automation, efficiency, and greater visibility

Carrefour partners with IBM Food Trust to empower customers' purchasing decisions

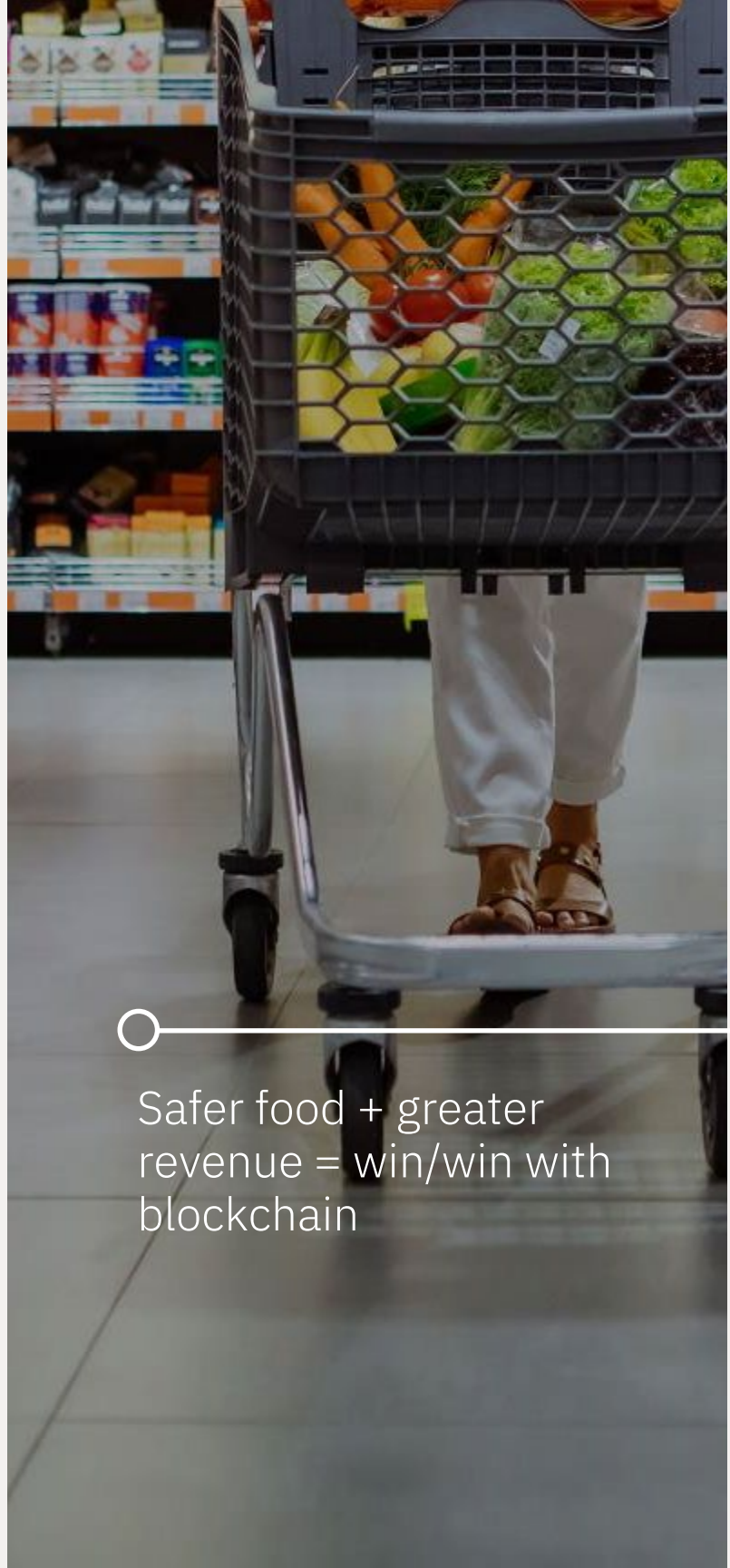


Customers today want greater insight into the origin and character of their food than ever before.

To satisfy this demand and build brand loyalty, Carrefour partnered with IBM Food Trust to trace select Carrefour products.

Together, we implemented QR codes with chicken products that consumers scan to gain more information about their source and quality.

The campaign was a success, leading to increased sales and greater revenue for Carrefour, as well as improved brand trust and customer loyalty.

A photograph of a shopping cart filled with fresh produce, including carrots, tomatoes, and leafy greens, in a supermarket aisle. The cart is being pushed by a person whose legs and feet are visible. The background shows shelves stocked with various products.

○ Safer food + greater revenue = win/win with blockchain

Q&A



