

ROBERT BOSCH ENGINEERING AND BUSINESS SOLUTIONS

BLOCKCHAIN

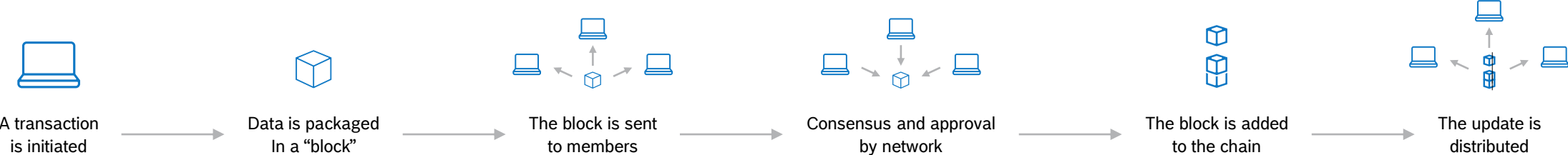
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Introduction to the Distributed Ledger Technology (DLT)

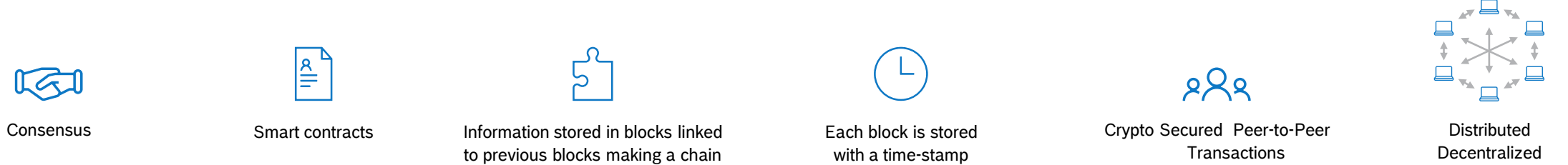
A **Distributed ledger** is a consensus of digitized, decentralized & replicated append only digital data geographically spread across multiple locations

Blockchain is one type of a distributed ledger. Blockchain organizes data into blocks, which are chained together in an append only mode.

How DLT works

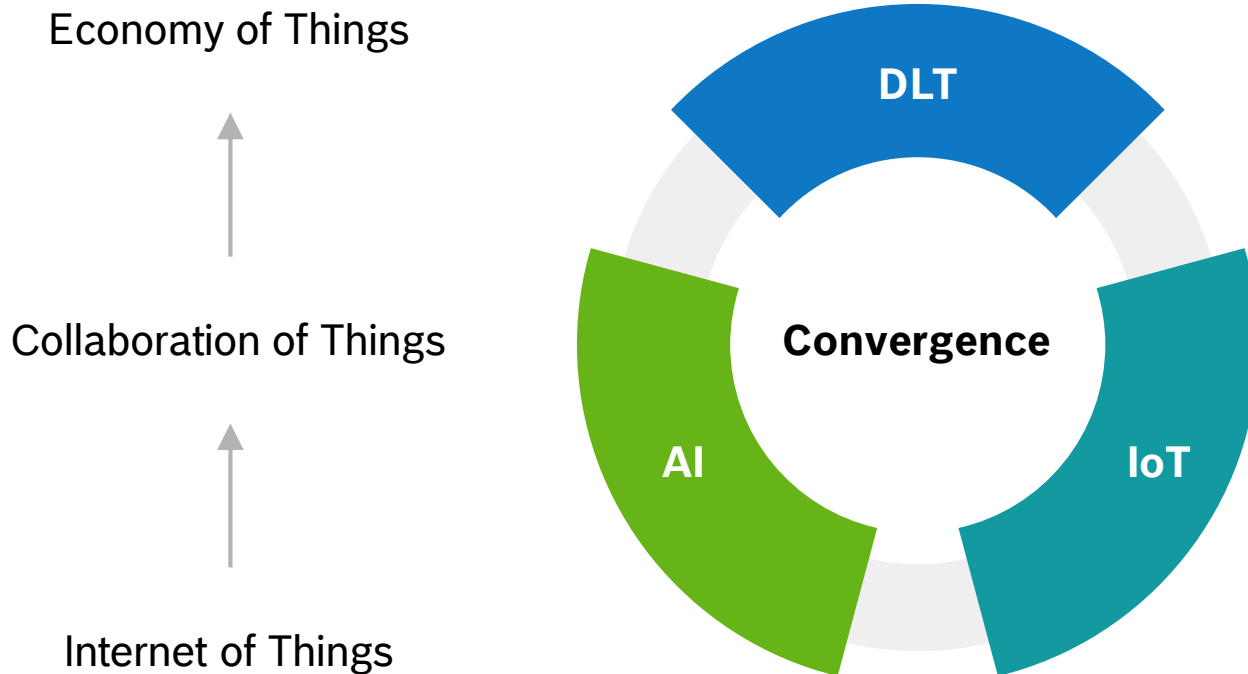


Key aspects of DLT



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Our Vision: The Technology Convergence Stack – DLT, IOT, AI



DLT (Distributed Ledger Technology): Enterprise Backbone

Cryptography, Consensus Immutability, Network Security, Smart contracts, Device Data security

IoT (Internet of Things): Enterprise Sensing

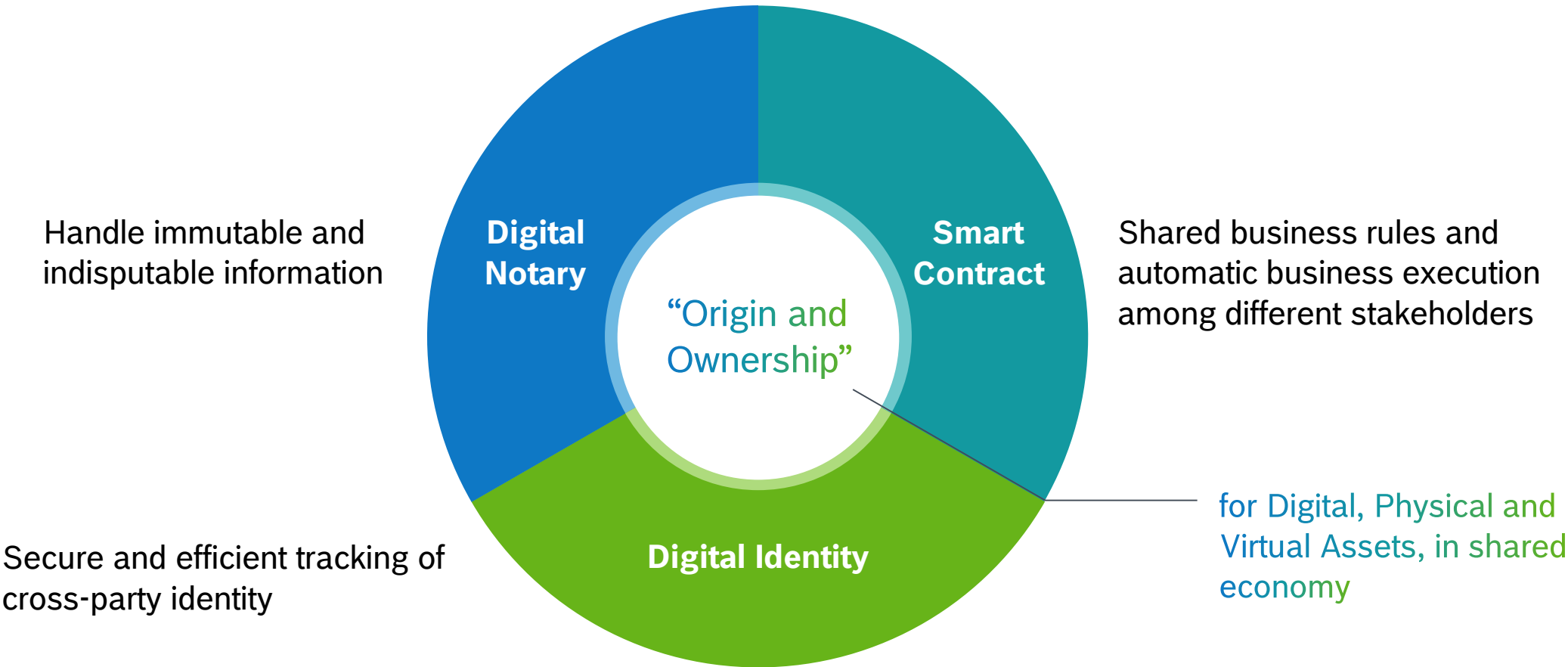
Sensing, Device computations, Over the Air (OTA) updates, Device identification and management, M2M transactions

AI (Artificial Intelligence): Enterprise Decision Making

Autonomous Economic Agents (AEA), Collective Intelligence on nodes Dynamic Incentivization model with Data monetization

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Blockchain Technology Attributes – Our Strategic Choice

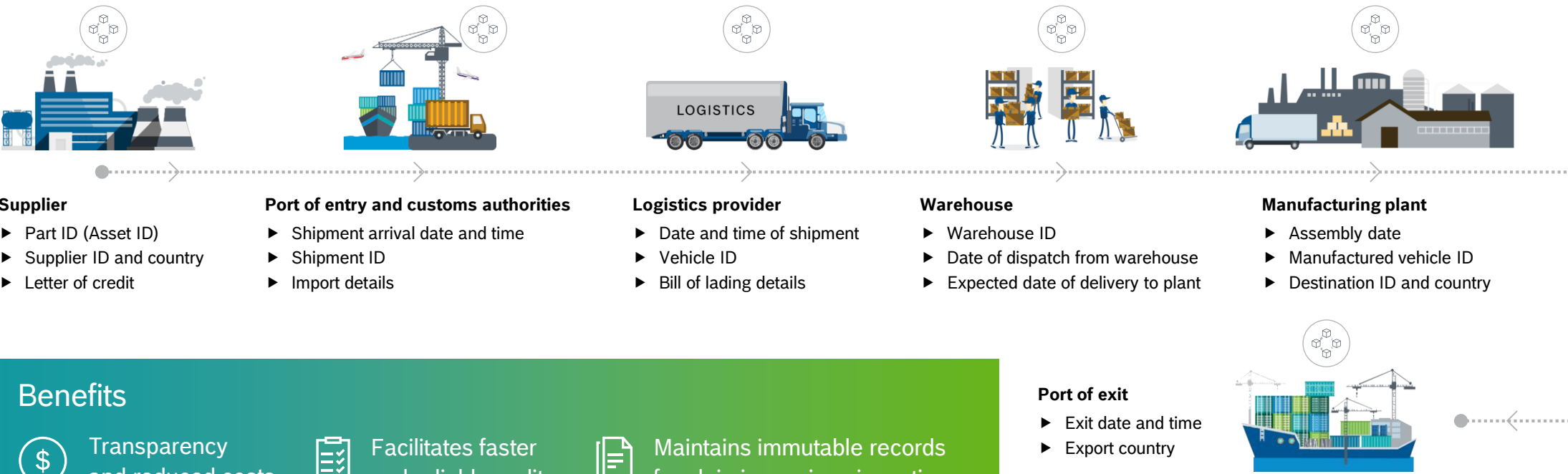


Blockchain – Use Cases

Boosting Foreign Trade

Business need

Need of traceability of each component right from its origin to its assembly and sale – this provides a trusted audit trail which enables the OEMs to confidently claim certain tax incentives.



Benefits

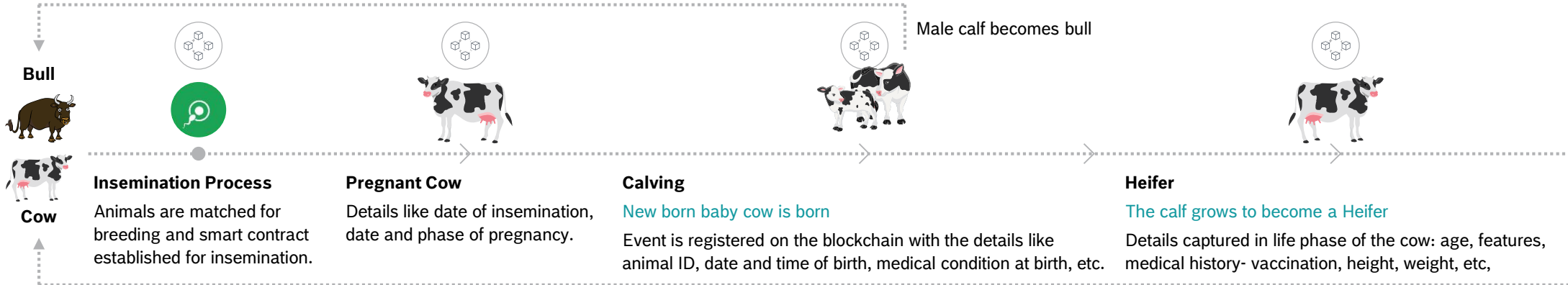
- Transparency and reduced costs
- Facilitates faster and reliable audits
- Maintains immutable records for claiming various incentives

Blockchain – Use Cases

Crypto Cow

Business need

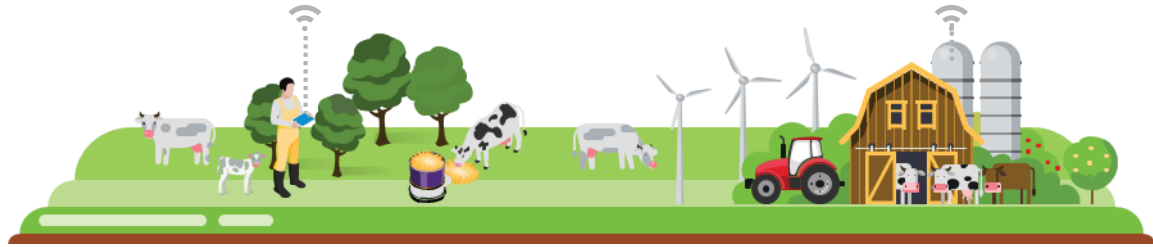
To have information on the origin and the quality of the dairy product by tracking how the cow was bred & also aid in seamless transfer of ownership of cow



Details available on blockchain ledger

- Cow/Calf/Heifer Breed
- Birth day and age
- Health records
- The cow's / bull's unique ID

Heifer grows into a cow.
Details captured in the ledger



Benefits

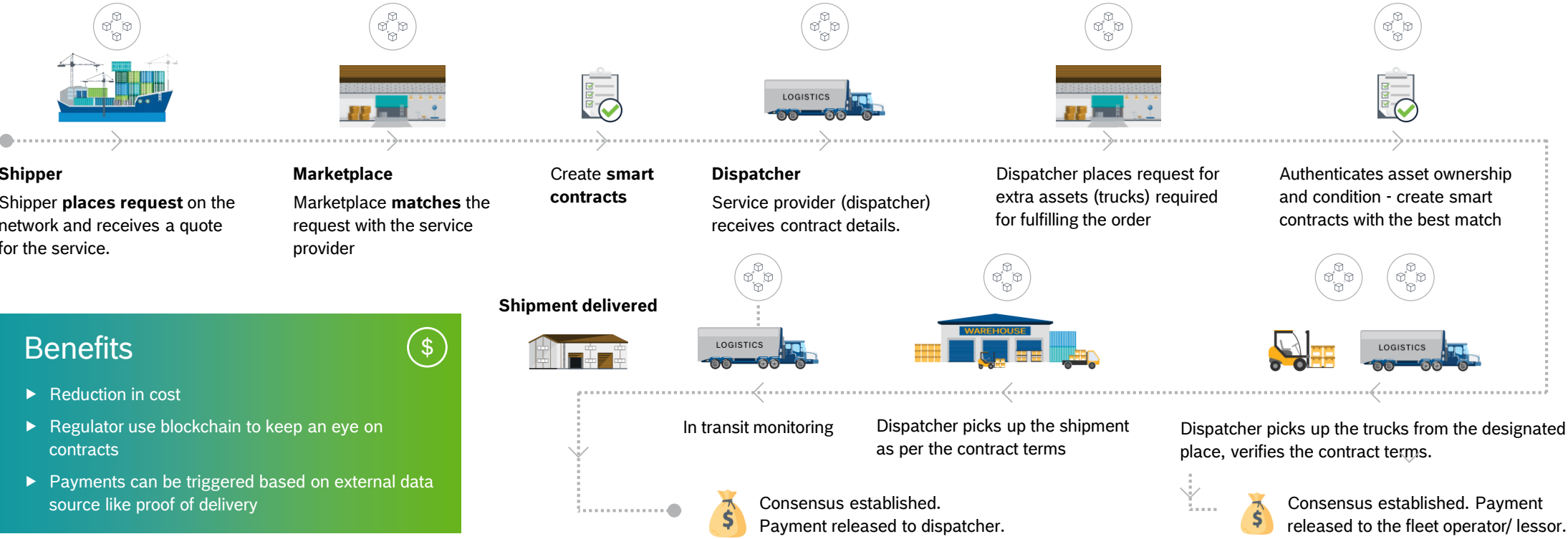
- Real time tracking of the health of a cow and change of ownership
- Introduce transparency in the origin and quality of the dairy products
- Creating a more transparent market for cow trading by tracking its breed and lineage.

Blockchain – Use Cases

Smart Leasing and smart logistics

Business need

Need for easy, secure and most cost effective way to lease assets for transportation



Benefits

- ▶ Reduction in cost
- ▶ Regulator use blockchain to keep an eye on contracts
- ▶ Payments can be triggered based on external data source like proof of delivery

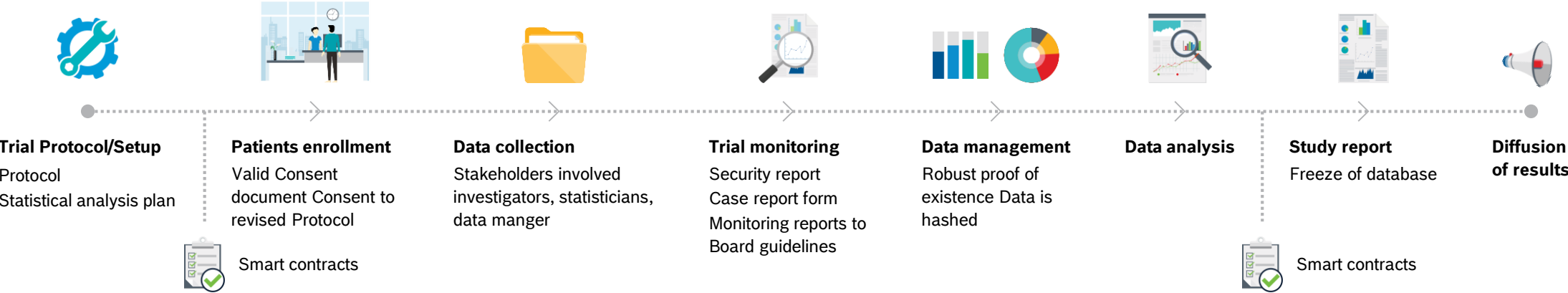
Blockchain – Use Cases

Clinical trials

Business need

To Improve quality of research by better reproducibility and empowering both researcher communities with secure data sharing and patient communities with tools guaranteeing their privacy are desirable goals

Clinical trial complex data workflow encoded in Blockchain

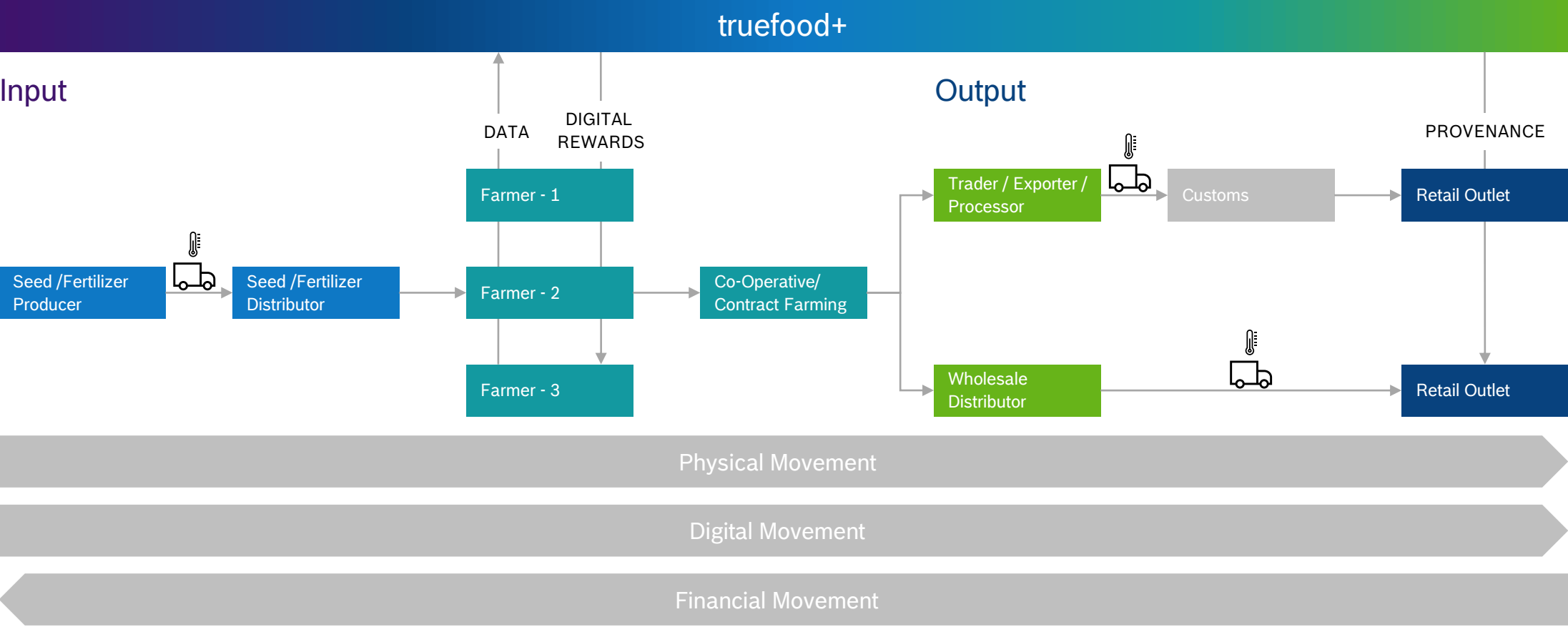


Benefits

- Speeding up trials
- Lowering drug cost
- Transparency, accessibility and privacy of Patient data

Blockchain – Use Cases

truefood+ : Value through collaboration



Blockchain – Use Cases

truefood+ : Value through collaboration

truefood+



- ▶ View Product journey
- ▶ Choose honest & fairly produced brands
- ▶ Feel good factor



- ▶ Food Safety
- ▶ Product Recall Planning
- ▶ Provenance & differentiation strategy
- ▶ Tier 2 & Tier 3 Transparency



- ▶ Brand counterfeit protection
- ▶ Greater control over supply chain
- ▶ Inventory management



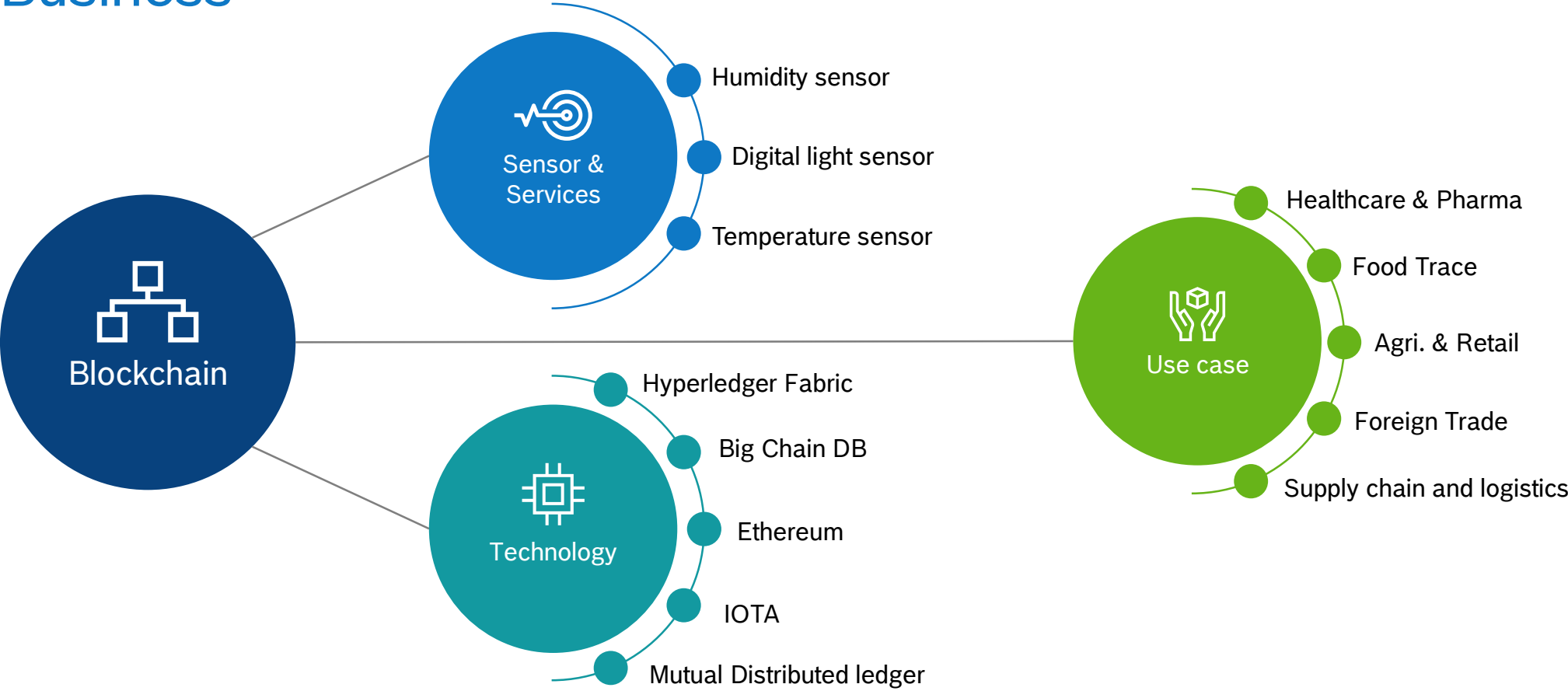
- ▶ Get rewarded for following sustainable farm practices
- ▶ Get rewarded for sharing farm data
- ▶ Validate and buy authentic products



- ▶ Optimize supply chain
- ▶ Monitor environmental condition of products
- ▶ Efficient import/export certifications management

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Solutions at the intersection of technology, user Experience and Business



THANK YOU