



Bringing Trust
and Transparency
to Agriculture

BLOCKCHAIN & WHAT IT COULD MEAN
FOR AGRICULTURE:

Applications for Blockchain in Australian Agriculture

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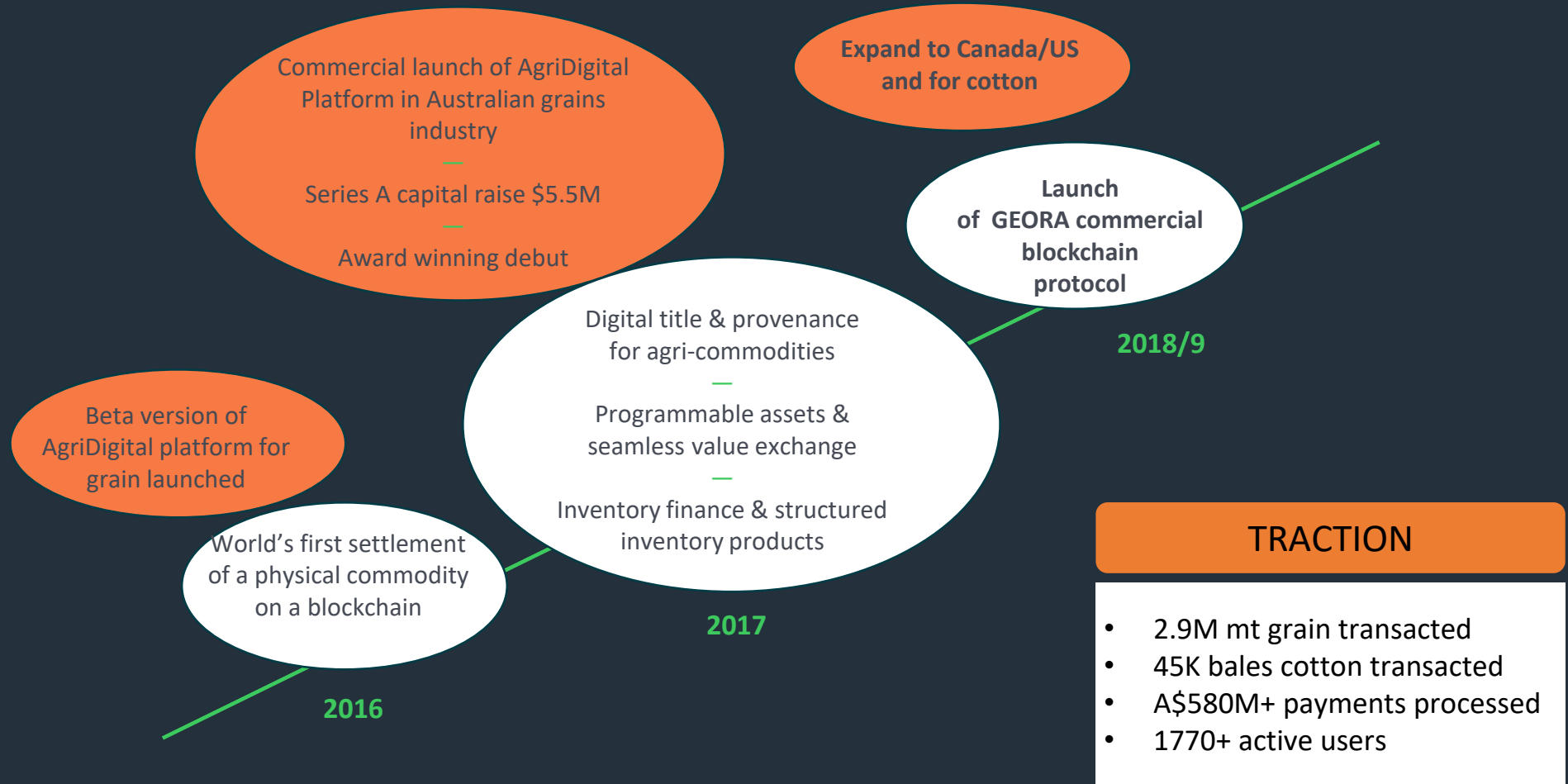
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Coast

Discussion Points

- AgriDigital: who we are, what we do
- Blockchain recap
- Key use cases in food and agriculture
- Blockchain in practice: global examples
- Case studies
- Challenges
- The future of commodities & the emergence of digital trust

AgriDigital has a leading position in the blockchain for supply chain



Blockchain recap

A **decentralized, distributed digital ledger** that is used to record transactions across a network of computers so that the record cannot be altered retroactively without the alteration of the subsequent blocks and the collusion of the network.

Transactions are **timestamped** and **recorded in blocks** which are linked and **cryptographically secured**.

Blockchain 2.0 refers to the programmable nature of blockchains via **smart contracts** and the digital representation of real world things via **tokenization**.

Digital assets are tokenized versions of real world assets or rights that can be seamlessly and atomically transacted without intermediaries.

Digital assets can be **programmable**, conditioned or constrained. They can contain all the information required to undisputedly understand an asset's **ownership, value and lifecycle** in real-time.

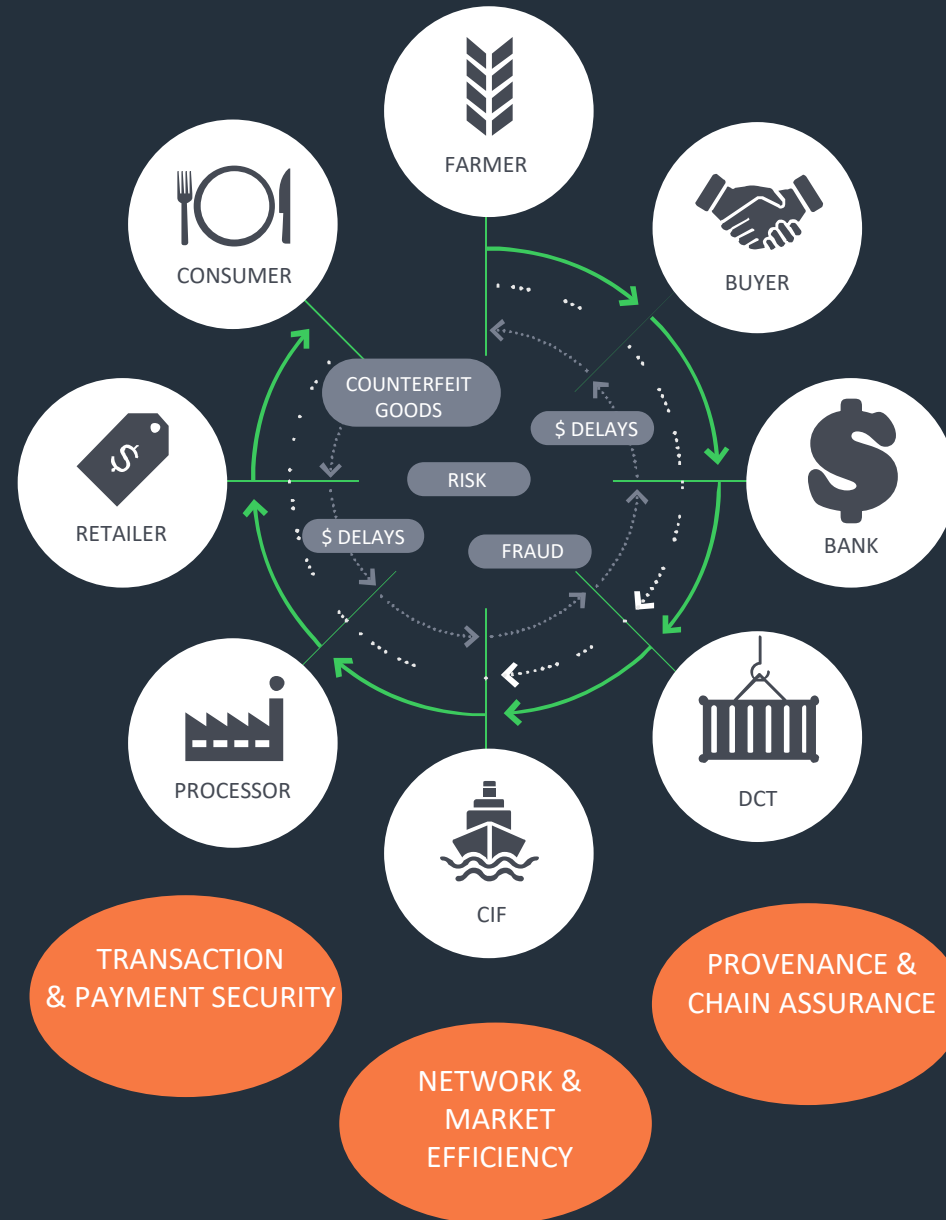


Key use cases in food & agriculture

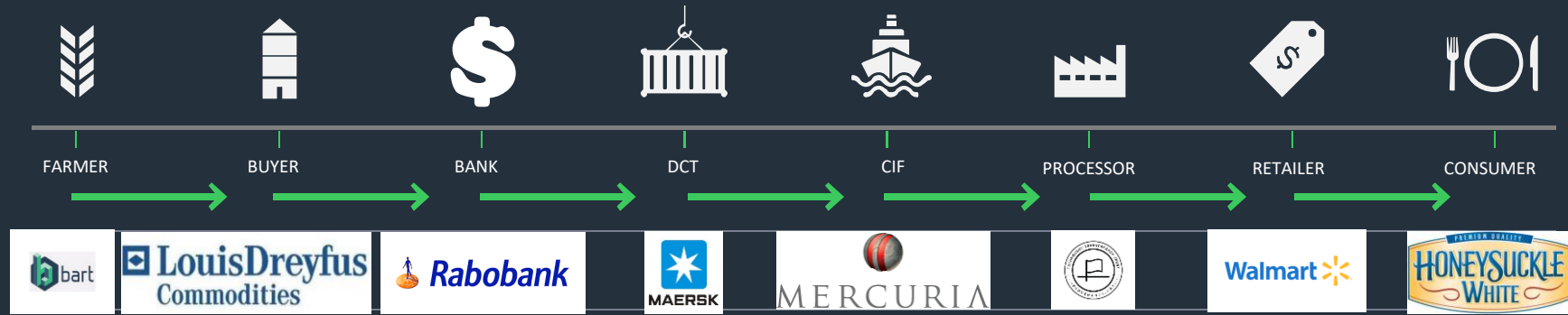
Supply Chain: Today



- PHYSICAL TRADE
- DATA
- FINANCE



Blockchain in practice: global examples



Case Study 1: CBA, Wells Fargo and Brighann Cotton execute first global trade between banks

PARTIES: Trader, Bank x 2

TRANSACTION: Widely regarded as the first global trade on a distributed ledger between two independent banks. A shipment of cotton from the US to China was shipped and sold from one division of Brighann Cotton to another – where each division was separately banked. As the shipment passed a predetermined geo-location it triggered title transfer of the cotton bales and a notification to the seller's bank make payment using a digitized letter of credit.

TECH SPECS: Skuchain distributed ledger platform (Brackets)

HIGH LEVEL BENEFITS:

- Title transfer on geo-location trigger
- Reduced settlement time
- Reduced costs and increased efficiencies
- Single version of truth



Case Study 2: AgriDigital and Rabobank team up to deploy SIP on the blockchain

PARTIES: Grower, Trader, Rabobank (as Purchaser)

TRANSACTION: Completed as an atomic (ie. simultaneous) transaction, the smart contract layer auto-executed the transfer of title in the commodity from grower to Rabobank in exchange for payment made under the trader's Rabobank SIP facility. The bank was then automatically repaid by the trader at the time it was ready to sell the commodity to a third party. All settlements were completed in bank-backed digital AUD.

TECH SPECS: AgriDigital Platform, Quorum (J P Morgan developed Ethereum blockchain derivant)

HIGH LEVEL BENEFITS:

- Real time payment on title transfer
- Reduced costs and increased efficiencies
- Single version of truth
- Improved liquidity



Benefits in detail by participant

GROWER

Flexible payment options secured to underlying commodity

Immediate payment on the delivery of commodity

Reduced counterparty risk

Improved liquidity enabling better decision making

Efficiencies due to automated deduction and payment of levies and for services provided

TRADER

Real time overview: price updates, deliveries, position management, invoices & payments

Overview of value chain in one solution & reduction of operational steps

Simplified reconciliation & monitoring

Single version of the truth

Immutable chain of custody

PURCHASER

Increased efficiencies & reduced costs of operation

Proof of ownership & auto settlement

Automated commodity financing, simultaneous payment to grower

Single version of the truth

Atomic transfer of digital title to commodity against payment reduces documentary fraud

Case Study 3: Provenance and Martine Jarlgaard complete farm to finished garment traceability

PARTIES: Farmer, Spinner, Knitter, Fashion Designer, Consumer

TRANSACTION: In 2017, designer Martine Jarlgaard piloted garment traceability using Provenance.org. From shearing at the British Alpaca Fashion farm to spinning at Two Rivers Mills, knitting at Knitster LDN and then to the designer's studio, all participants and their roles and actions were captured and verified. Each garment had a unique digital token. Consumers could interact with the token via QR Code or NFC-enabled labels via the Provenance app and access their garment's "story". This enabled informed purchasing decisions and created trust and transparency in the supply chain that produced the garment, from farmer to designer.

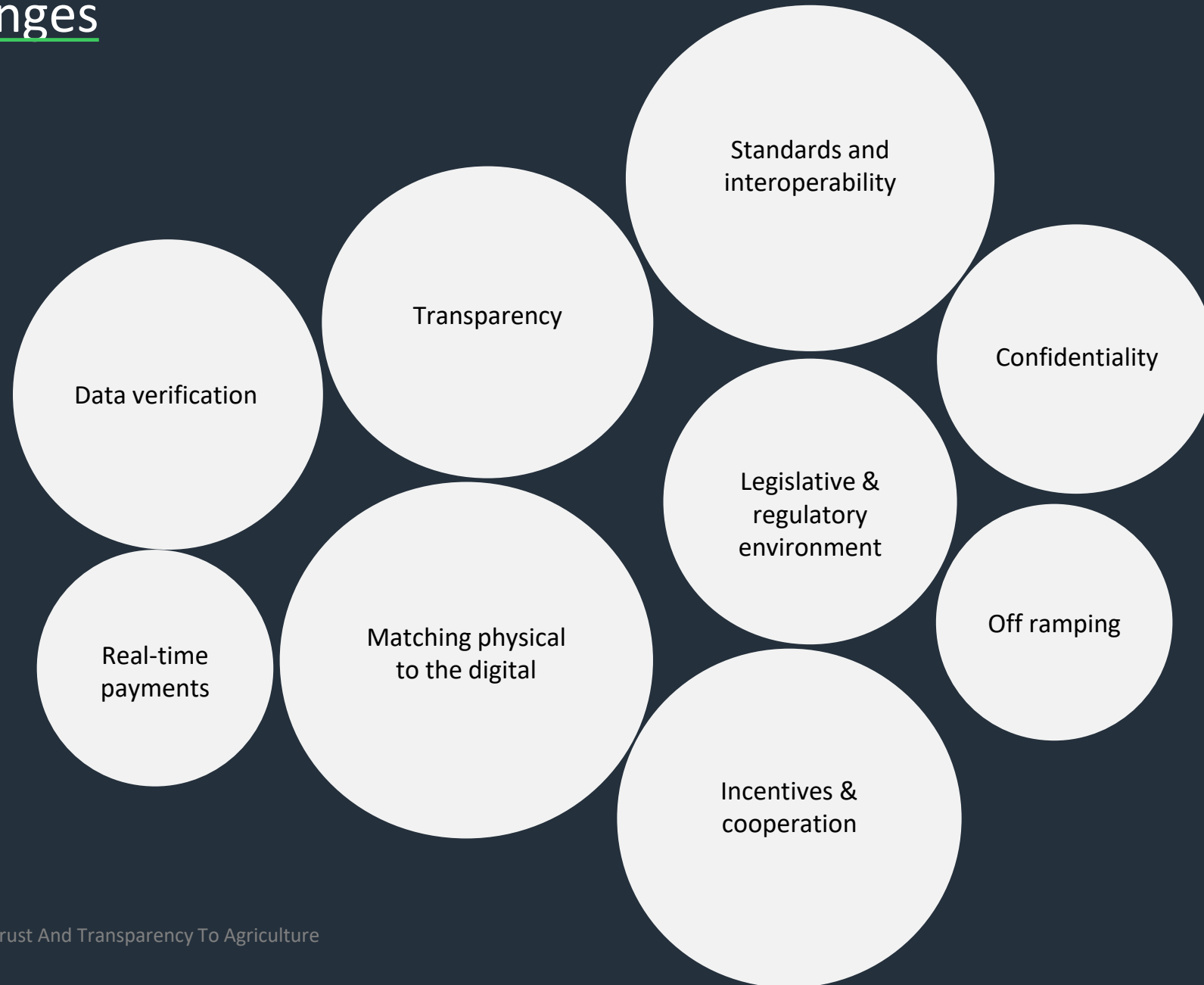
TECH SPECS: Provenance.org application, Ethereum blockchain (unconfirmed)

HIGH LEVEL BENEFITS:

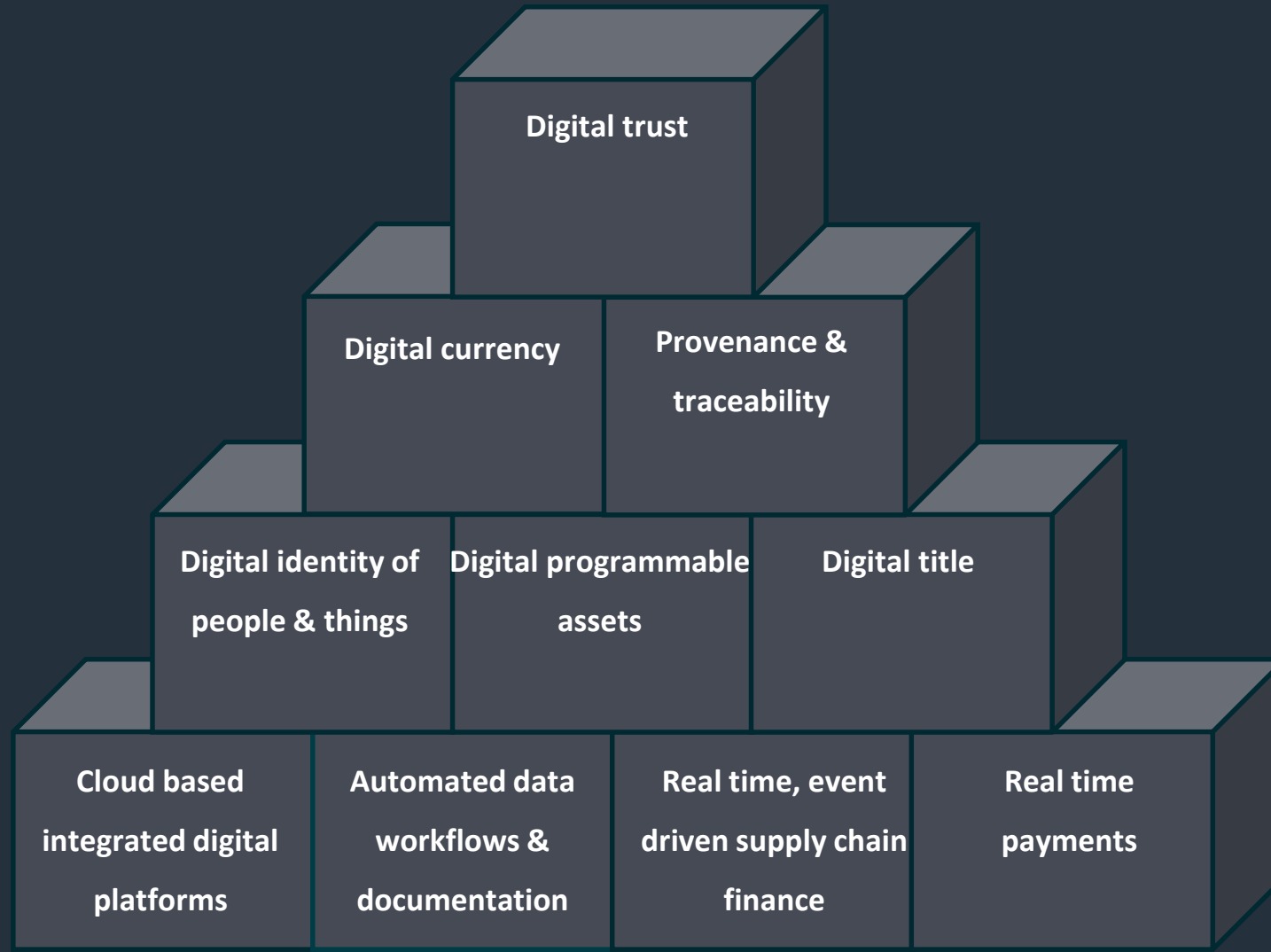
- Auditability at key stages in the product lifecycle
- Linking digital token and data with physical world
- Single version of truth
- Product "stories" that enable informed decision-making



Challenges



The future of commodities & the emergence of digital trust



Thank You

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