

Modelling Any Supply Chain On Enterprise Ethereum

Supply Chain on Blockchain Conference

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2. Demo: Treum (formerly Viant)

1. Intro: Blockchain patterns for supply chain modelling



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Global marketplaces are increasingly demanding provenance-informed products



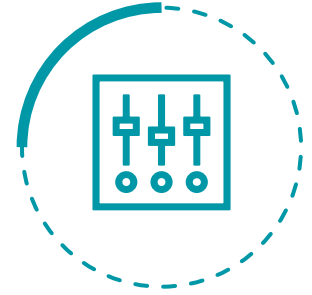
Buyers

Conscious buyers are seeking more granular information to form their own provenance opinions beyond a mere label of assurance from a central certifying body



Sellers

Sellers are looking to unlock value, increase trust and command premium for their special product lineage



Regulators

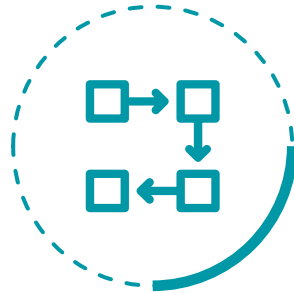
Reliably, continuously and expediently track, audit and report on provenance of key natural resources

Blockchain provides a native infrastructure for transparency, traceability and traded...



Transparency

A product narrative about how it is sourced, manufactured and packaged - responsibly, sustainably using quality ingredients



Traceability

A **source** narrative that a product item/batch traces back to. The source could be an ingredient, a region etc.



Trade

An ownership narrative that allows items to be claimed, transferred and traded fluidly

...that can solve trust problems that span across industries



Pharma

Counterfeit drugs

Tracking of data for clinical trials

Compliance reporting concerns

Administrative records



Education

Certification fraud

Diploma validation lag time

Grade & Credits mgt

Administrative records



Food

Food recalls

Food illnesses

Inventory management

Administrative records



Autos

Car valuation

Auto parts tracking

Working capital mgt

Recalls



Real Estate

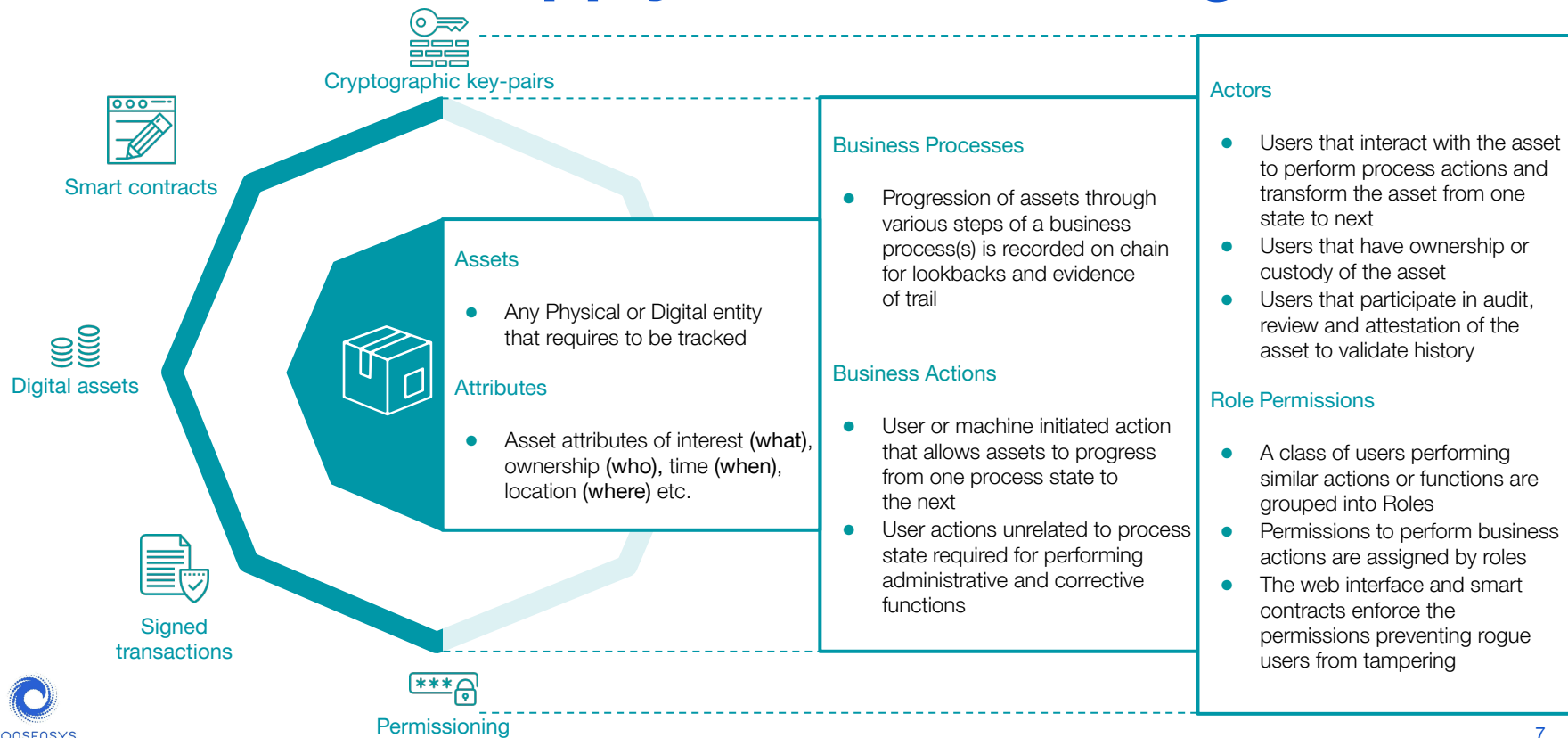
Property valuation

Transfer of ownership

Contracts and approval mgt

Servicing

Enterprise Ethereum capabilities enable asset-centric supply chain modelling...



...that can be applied to virtually any supply chain and business process

- Enforce the business process(s) on chain curbing rogue actions
- Execute asset transfer



Smart contracts



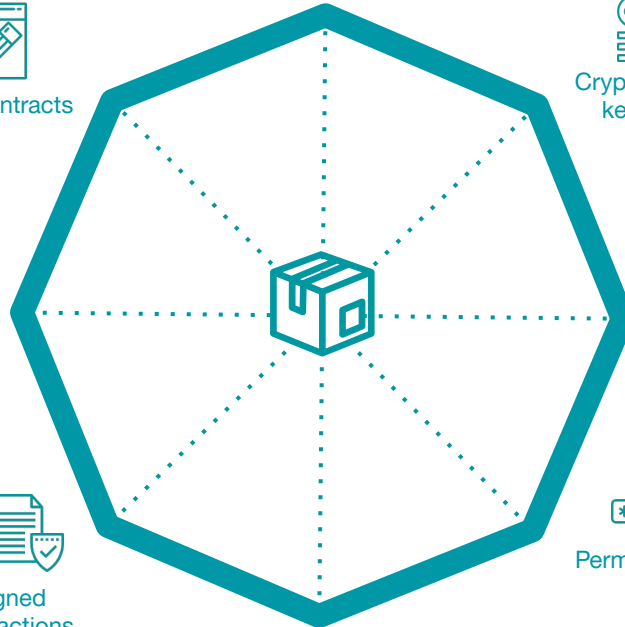
Cryptographic key-pairs

- Establish on-chain identity for all the actors in the supply chain
- Enable tracking of asset ownership and custody

- Digital assets registries used for accounting purposes
- NFTs allow certification and tradability of asset



Digital assets



- Smart contracts can implement whitelists and blacklists at the asset and process level
- Pantheon's privacy groups and side-chains can segregate informations at the node/chain level

- Trigger smart contracts execution and state changes in the process
- Guarantee non-repudiation of the supply chain actions

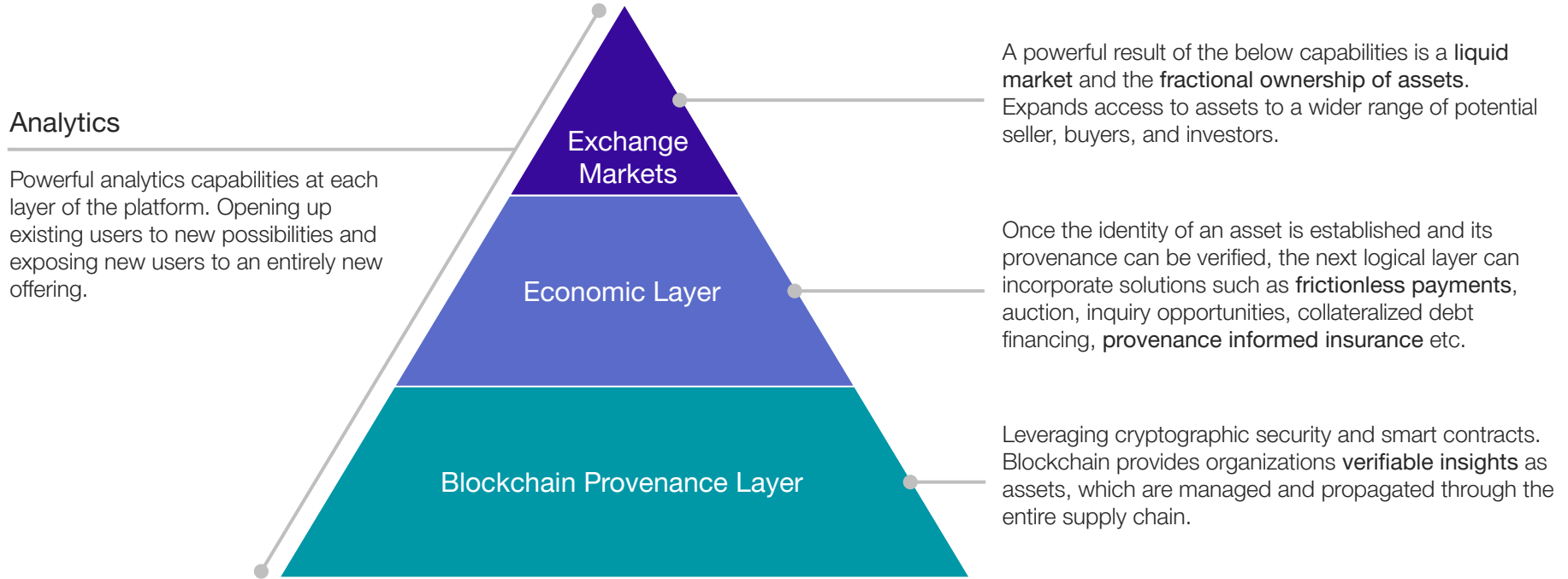


Signed transactions



Permissioning

Leveraging blockchain-based provenance, new business models will emerge



2. Demo: Treum (formerly Viant)



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Treum key components allow to model and track any supply chain



Modeler / Allows business users to model processes, list assets, define attributes to track, determine UI requirements and deploy everything to the blockchain



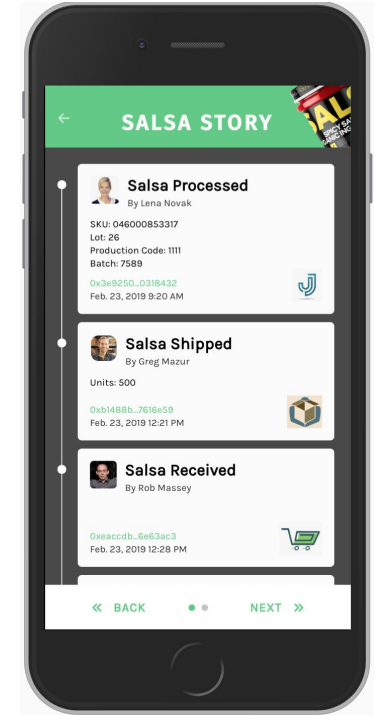
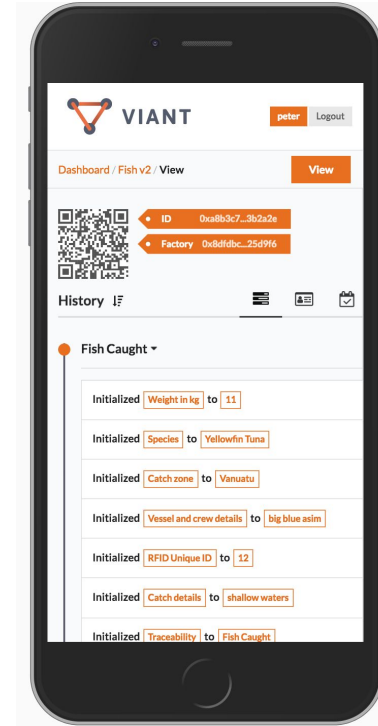
Access Manager / Allows a system manager to add roles, users and set permissions within a specified organization for who can execute actions and see the journey of each asset



Network Manager / Allows a network administrator to provision organizations or vendors as a designated organization and manage specified instances within the permissioned blockchain



Tracker / Allows end users to view the provenance and journey of an asset and allow users to create and view the status of any asset in real time - this is where business happens



Treum key components allow to model and track any supply chain

	<u>Network Manager</u>	<u>Modeler</u>	<u>Access Manager</u>	<u>Tracker</u>
User Persona	Consortium Administrator	Analyst/Consultant/ Process SME	System Administrator	Customer/Manufacturer/ Producer
SDLC Phase	Production	Requirements/ Design/Deployment	Production	Production
Functionality	Provides a mechanism to manage <ul style="list-style-type: none"> Organizations Organization's Permissions 	Provides a mechanism to define <ul style="list-style-type: none"> Asset attributes Valid states Rules for state transitions Permissions 	Provides a mechanism to manage <ul style="list-style-type: none"> Users, Roles and Permissions 	Provides a mechanism to <ul style="list-style-type: none"> Search assets Create assets Record state transitions View asset lineage
Scope	To provide a consortium administrator a UI to manage their organizations and permissions	A user interface to generate configuration files	To provide an Organization's system administrator a UI to manage their users, roles and permissions	A user interface to the asset provenance on the blockchain
Storage	On-chain	Off-chain (Models) >> On-chain (Smart Contracts)	On-chain	On-chain

Demo time...

← → ↻ 🏠 🔒 https://demo1.demo.viant.io/modeler/processes/5 ☆ 🌐 📄 🗄️ 🗨️ 📧 Paused 👤

VIANT claudio 🧑‍🚀

Dashboard / Modeler / Timber Processes Duplicate Download </>

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graph LR; Felled((Timber Felled)) --> Transported((Timber Transported)); Transported --> Seasoned((Timber Seasoned)); Seasoned --> Delivered((Timber Delivered)); Delivered --> Rejected((Timber Rejected)); Delivered --> Received((Timber Received));
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API Docs Powered by Viant

Thank you! Questions?

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