



Blockchain

future-proofing
maritime logistics



T-MINING | BLOCKCHAIN
LOGISTICS

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Technology Provider

Recognized **forerunner in blockchain**

Framework tailored to Maritime, Ports, Logistics & Transport

Different **successful paid Projects** in Antwerp, Rotterdam, Singapore, ...



Founded in 2016

HQ in **Antwerp**, office in **Singapore**

>1.5m Seed funding raised from co-founders, FFF, Taste Invest
(Westerlund) imec.istart, government & grants

Experienced team of **10 people**

Inhouse blockchain development

Deep expertise in **maritime logistics**

Moving a container from A to B

> 30 different parties involved

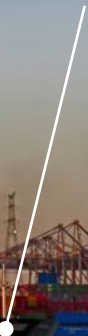
> 200 communication interactions

Poor supply chain efficiency

A wide-angle photograph of a busy container port at dusk. In the foreground, a large blue gantry crane stands on a concrete pier. Several container ships are docked along the pier, with colorful shipping containers visible on their decks. In the background, more cranes and ships are visible across the water. The sky is a deep blue, and the water reflects the light from the port.

> 99%

of freight transport
operations within EU still use
paper documents

A white line originates from the text and points down to a container ship in the middle ground of the port.

Poor supply chain efficiency

A wide-angle photograph of a busy container port at dusk. Several large container ships are docked at the pier, with their decks covered in colorful shipping containers. Multiple large gantry cranes are positioned along the pier, some with their booms extended over the ships. The sky is a deep blue, and the water reflects the light from the port. The overall scene conveys a sense of industrial activity and scale.

Up to **50%** of the cost of moving a container is related to paperwork

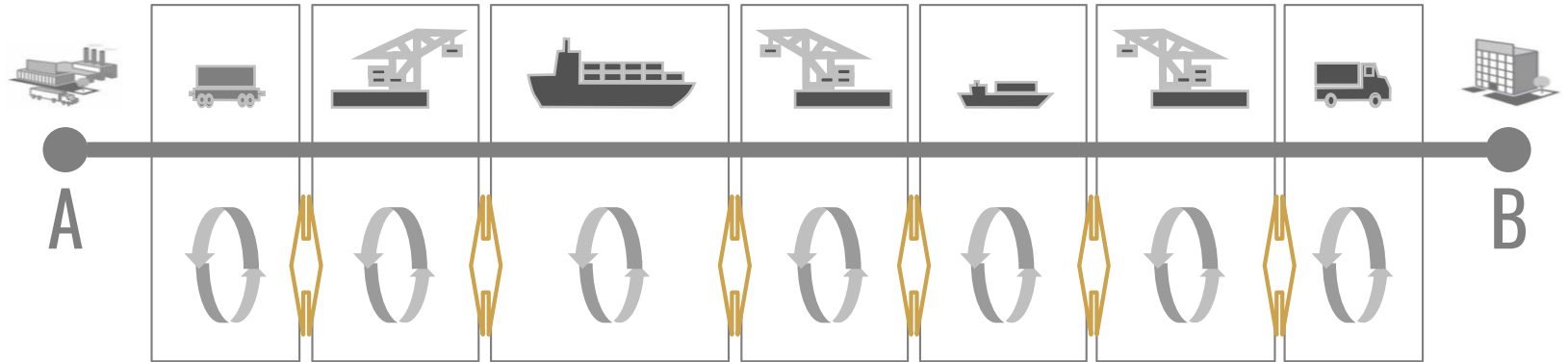
Terminal reposition a container

4 to 5
times

1 out of 4

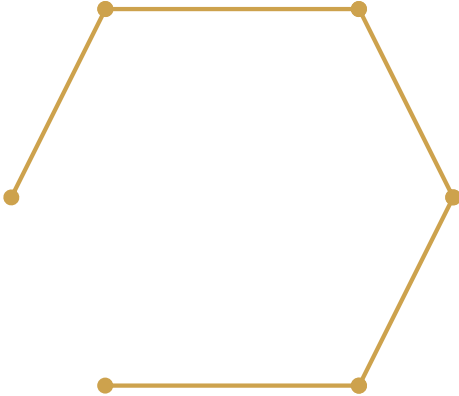
trucks is driving empty on our highways

Current information flow: Interconnected data silo's

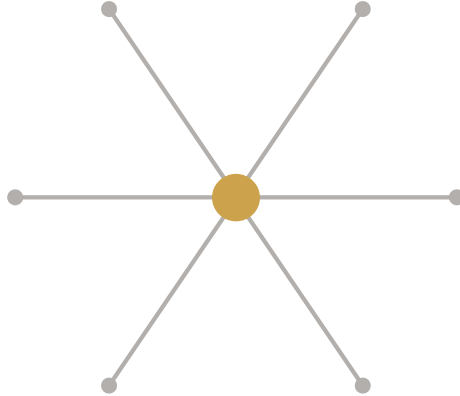


Information flows

Point-to-Point

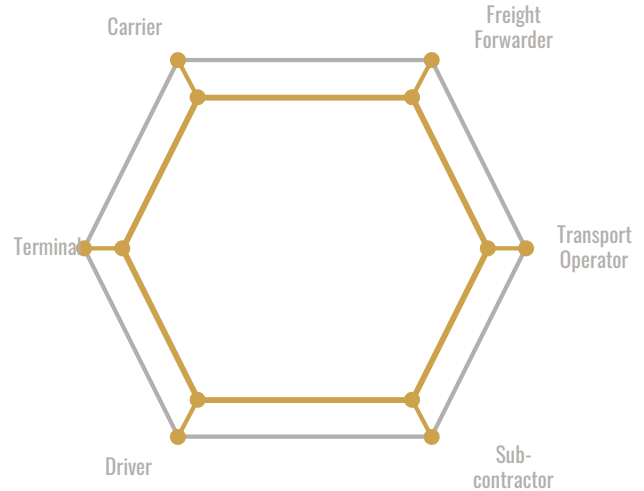


Centralised platform



Cloud
trust in middleman

Decentralised platform



Blockchain
Peer-to-Peer
trusted collaboration

The 3 flows in Supply Chain

blockchain enables assured multi-entity

collaboration

and facilitates shared control over data between the different flows in the supply chain

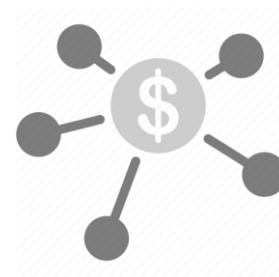
physical flow



document flow



financial flow



Use Case 1

50 tons of narcotics
found in the Port of Antwerp
in 2018

Secure Container Release



Use Case 2

Secure Document Workflow



administrative cost of
€8 billion
related to processing of
freight transport documents
in the EU

Use Case 3

today a terminal needs to
reposition a container

4 to 5

times before releasing it

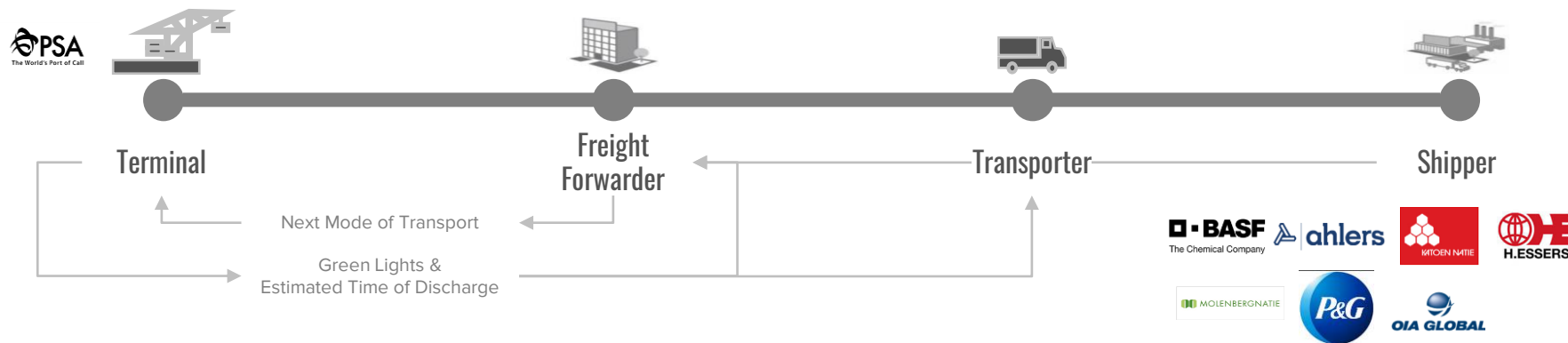
Chainwise collaboration



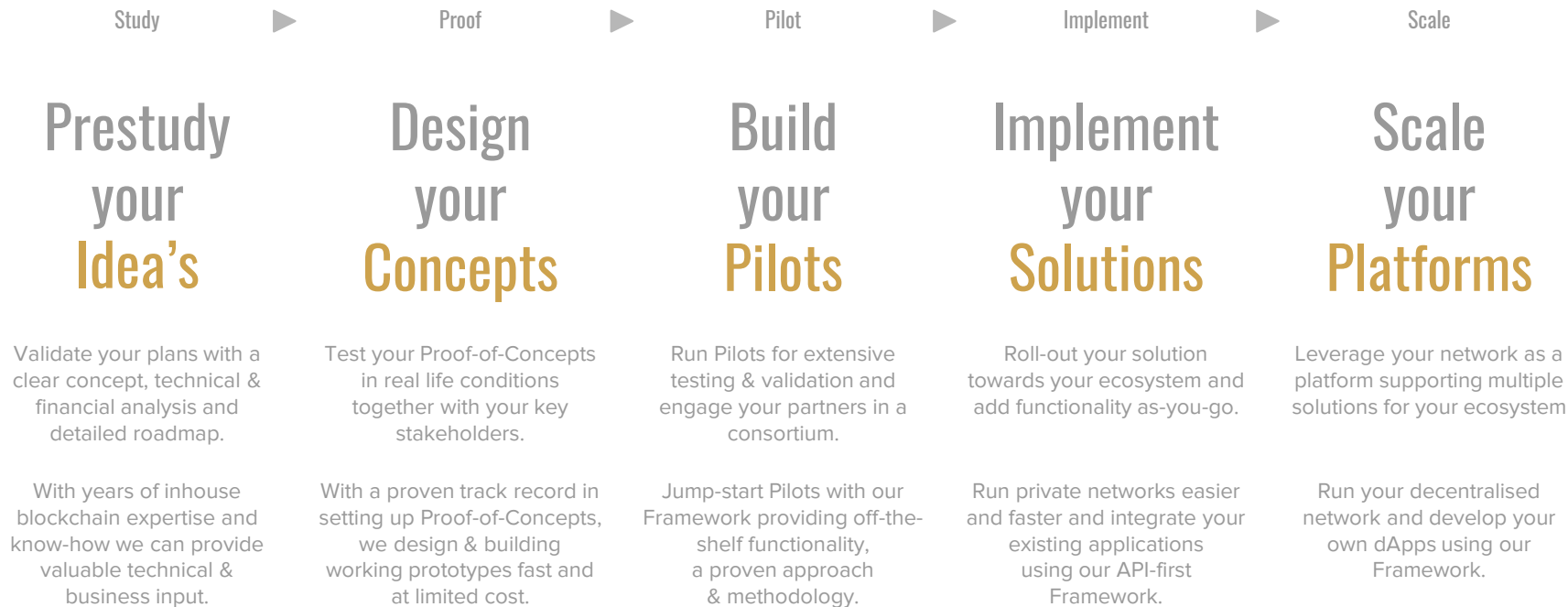
Chainwise Collaboration

Proof-of-Concept: Next Mode of Transport

Exchanging data at transaction level with a neutral platform results in a more efficient business process



We run projects to build trusted collaboration



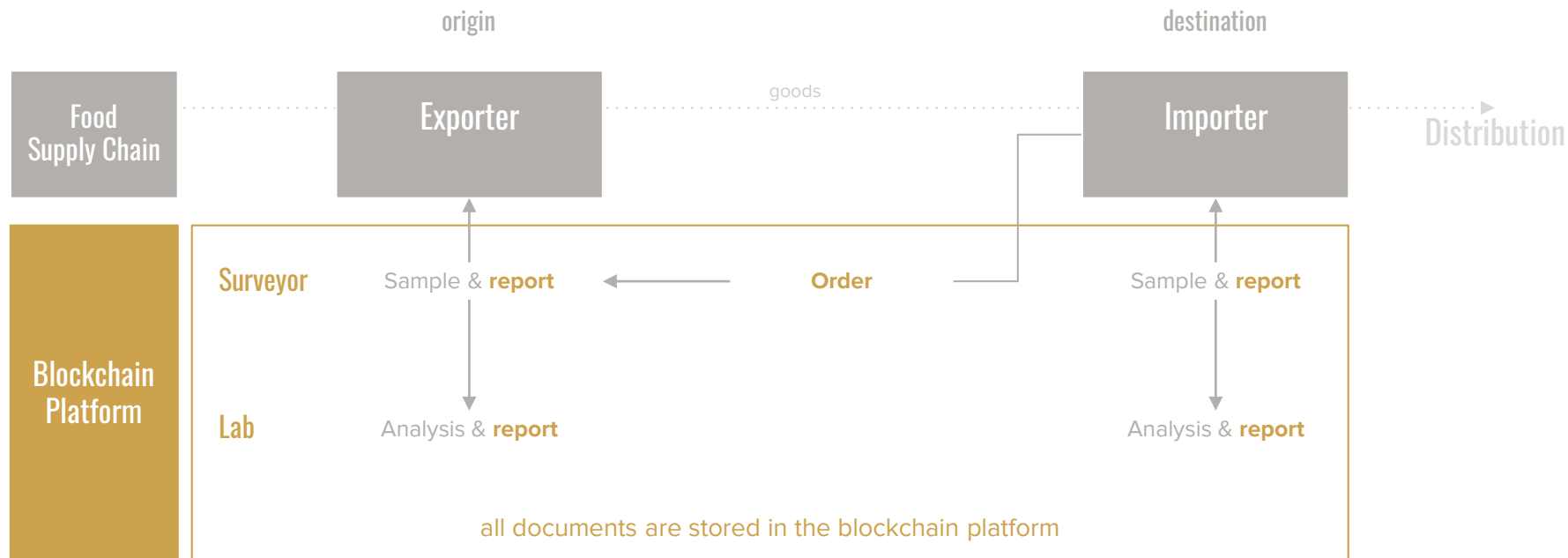
Fourth Use Case - Document Flow

Food testing certificates

Global player based in
The Netherlands

1 in 5 seafood samples mislabeled worldwide

Food testing certificates



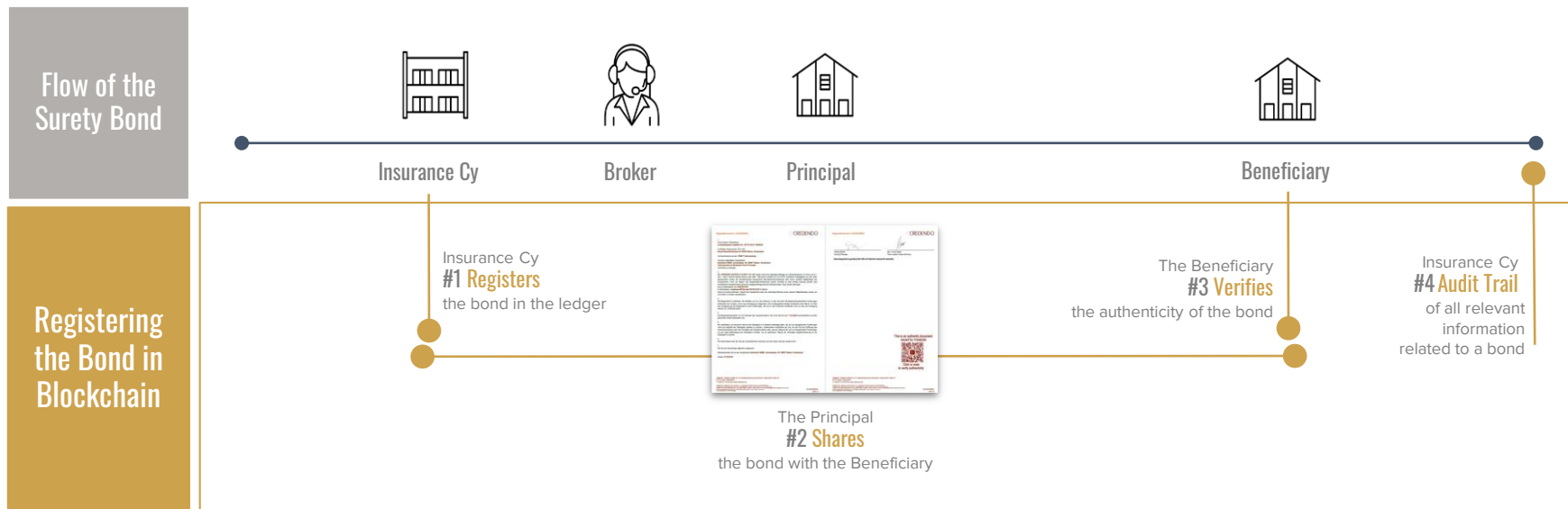
Use Case - Document Flow

Registration of Bonds

European Insurance Group with HQ in
Brussels

FAKE bonds represent a real threat for daily business operations

Registration of Insurance Bonds



Verification of the Authenticity of Surety Bonds

allowing to easily verify if the bond:

- (i) is still valid;
- (ii) the amount has not been tampered with;
- (iii) if it was issued by Insurance Cy.



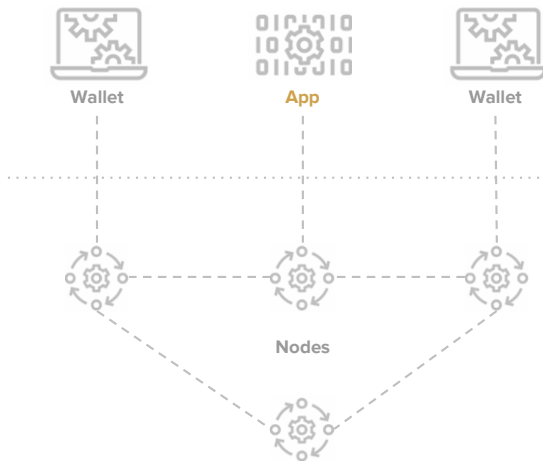
Different types of blockchain applications

	Notarisation	Tokenisation	Collaboration
Physical flow	 Register Facts Record statements of facts in a immutable ledger eg. a ship arriving in the port	 Transfer Rights Transfer rights without double spending issues eg. a right to pickup a container	 Exchange data at transaction level between peers on a need-to-know basis eg. Next-Mode-of-Transport
Document flow	Register Certificates Record documents & certificates in a immutable ledger eg. a food quality certificate	Transfer Certificates Transfer ownership of digital documents eg. a Bill of Lading	Exchange data at transaction level between peers on a need-to-know basis eg. Phytosanitary approval flow

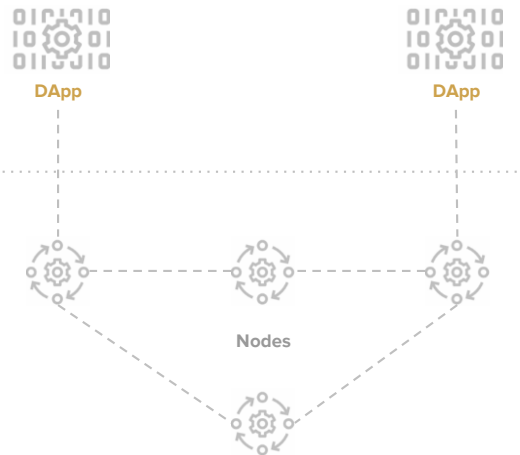
Building an additional layer of Trust



Central App



Decentral App





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