Block-chain in the Supply Chain
Use cases

April | 2018
Supply Chain Operations
Blockchain in the Supply Chain: Applications

- Augur: Decentralized prediction market platform
- Heija: Pharmaceutical Procurement
- Filament: Decentralized IoT
- Maersk: Ocean shipping
- Flight maintenance

Suppliers processes

Customer processes
Blockchain in the Supply Chain: Use Cases
The Blockchain: Short Recap

A block can contain various kinds of transactions...

- Payments (bitcoins)
- Invoices
- Purchase Orders
- Shipping documents
- Certificates of quality/inspection
- Vendor contracts
- Any digital asset

The content in the block is...

- Immutable
- Time-stamped
- Traceable
- Decentralized/Distributed
- Encrypted

Any digital asset
Community NdT: the place of companies for companies
Use Case: Food Processor - Quality Declaration
Use Case: Logistics company - Proof of Load

Exporter

Logistics

Importer

Goods

Shipping

Documents

Community NdT: the place of companies for companies.
Purchase Order is Written in Blockchain

<table>
<thead>
<tr>
<th>Order ID</th>
<th>Vendor</th>
<th>Transaction Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>450000001</td>
<td>Vendor 1</td>
<td>Dwa2x2ja3178238ba021922476691189740b6543x62</td>
</tr>
<tr>
<td>450000002</td>
<td>Vendor 1</td>
<td>Sense in BlockChain</td>
</tr>
<tr>
<td>450000003</td>
<td>Vendor 2</td>
<td>Sense in BlockChain</td>
</tr>
<tr>
<td>450000004</td>
<td>Vendor 3</td>
<td>Sense in BlockChain</td>
</tr>
</tbody>
</table>

Community NdT: the place of companies for companies.
A Picture of the Load is Stored in Blockchain
Logistics Provider Takes Charge of the Load on Blockchain

![Blockchain DEMO](image)

<table>
<thead>
<tr>
<th>Documenti di Trasporto</th>
<th>Transazioni del Venditore</th>
<th>Transazioni dell’Acquirente</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOT</td>
<td>Ordine di Vendita</td>
</tr>
<tr>
<td>DOT 0</td>
<td>20201213</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>20202000</td>
<td>0</td>
</tr>
</tbody>
</table>

Community NdT: the place of companies for companies.
At Receipt, Importer Checks that Load Corresponds to What Declared
By Comparing Pictures of the Load Taken at Receipt With Picture of Load Taken at Departure
If Pictures Match, Load is Accepted
Final Remarks

- Start internal education and create awareness.
- Don’t jump on the first blockchain bandwagon.
- Prepare list of questions that need to be answered before you even consider running a blockchain POC.