ChainPro Insight

A Solution for
Supply Chain Resilience

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PROBLEM

In a landscape marked by disruptions from the COVID-19 pandemic and recent geopolitical conflicts, the challenges within the global supply chain have multiplied. These obstacles have intensified the strain on businesses.

Supply chain frictions pose additional barriers to *efficiency*, *transparency*, and *sustainability*:

High and rising transportation costs for air and sea freight

Significant carbon emissions throughout transportation process

Bottlenecks and scalability issues with limited visibility in process

IMPACT ANALYSIS

+243%

increase in average freight rates for ships leaving Chinese ports between 2020 and 2021

Source: UN Review of Maritime Transport

Companies in **10 of 12** global sectors contemplate **relocating parts of their supply chain**

Source: MIT Sloan

11.4x

higher rates of carbon from supply chain emissions than operation emissions

Source: CDP Supply Chain Global Report

92% of companies believe that ESG efforts give them a **competitive advantage**

Source: FTI Consulting

+50%

of small businesses increased retail prices to offset high supply chain costs in 2022

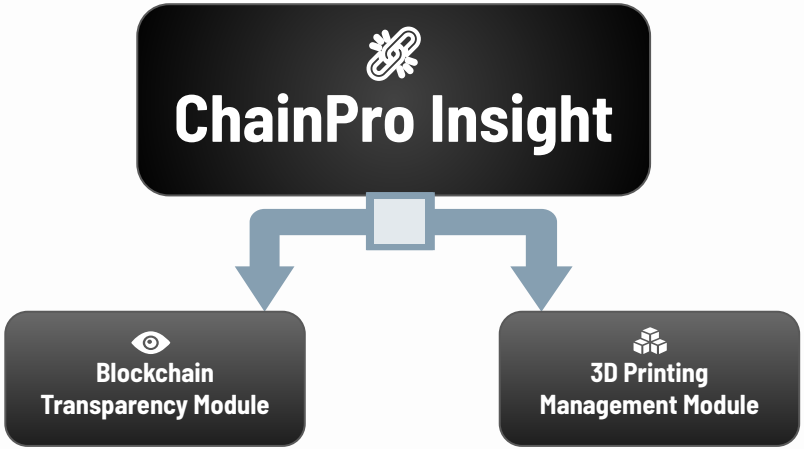
Source: Forbes

Studies show companies with end-to-end chain visibility can **shrink likelihood of issues by 2x**

Source: McKinsey

SOLUTION OVERVIEW

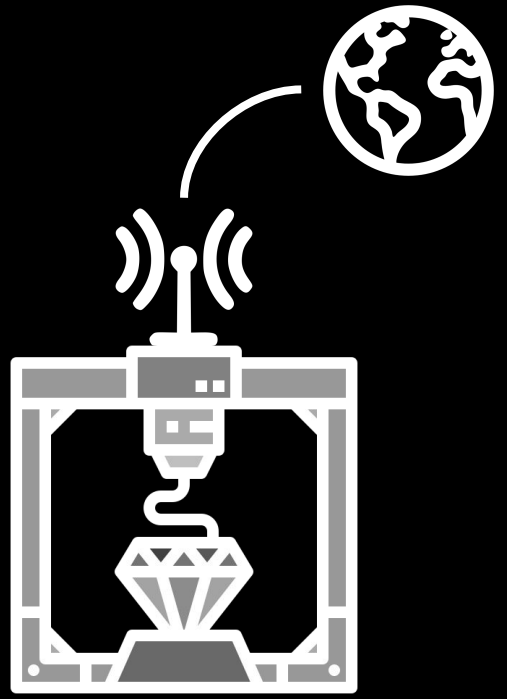
ChainPro Insight: *Web App Platform for Supply Chain Resiliency*



SOLUTION: 3D Printing Management Module

- Upload product design file and input delivery address
  - For big businesses: API can be integrated so it automatically inputs information about customer
  - For small businesses: Manually input information about customer

- **Automated Assignment Algorithm:** Based on distance, production capacity, operation status, and transportation infrastructure, **machine learning algorithm** will **efficiently assign a 3D printing hub** for localized manufacturing.

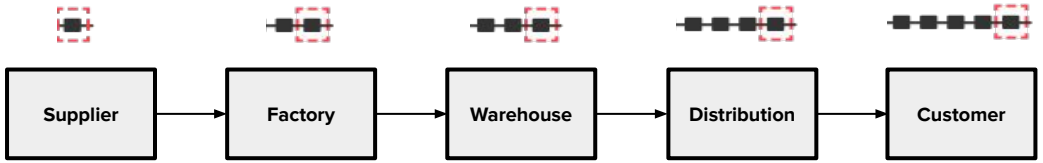


SOLUTION: Blockchain Transparency Module

- Blockchain network provides **immutable** and **verifiable** transaction history ensuring **transparency**
- Transactions are validated via a Proof-of-Stake consensus mechanism, which is **more energy-efficient** than Proof-of-Work
- **Relevant data entries**, or transactions, are input and added as blocks, **updating** at each stage of transportation
- Each participant in the supply chain can **access** information regarding origin and movement of products in real-time

- Location
- Carbon emissions
- Product ID
- Cost incurred

etc...



STAKEHOLDERS

Supplier/Company Customer

The supplier can use this option to drastically reduce money spent in transportation fees and production cost, as well as emissions

Factory/Warehouse/Distribution/Retailer

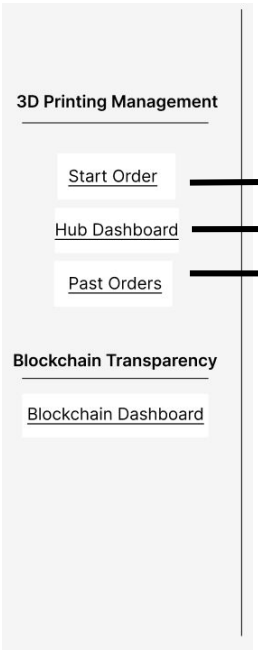
Inventory management operators will benefit from the use of blockchain technology via increased traceability and accountability of products they interact with

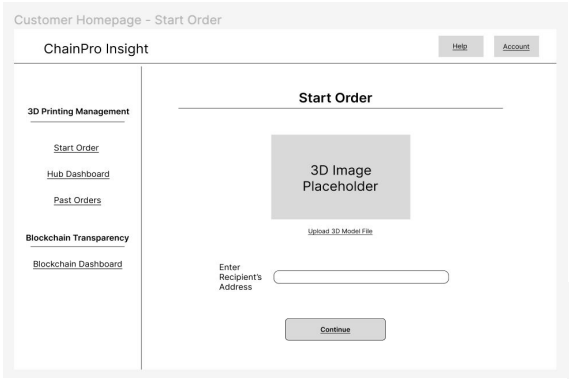
3D Printing Hub

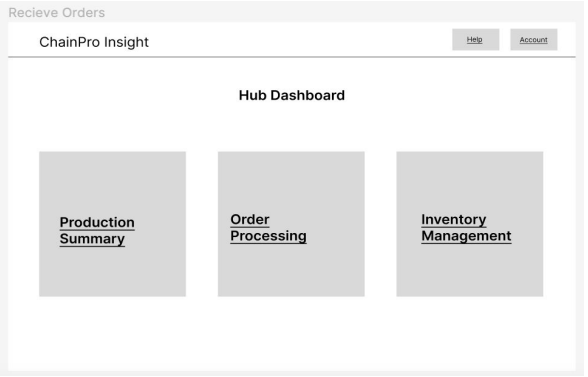
The hubs will benefit in an increase in clientele and production, potentially improving their economies of scale

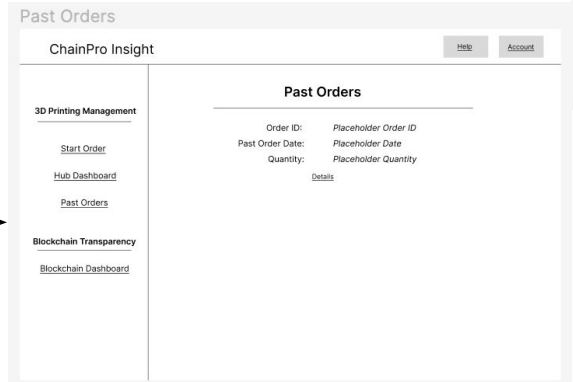
SOLUTION DESIGN

Figma Wireframe Mockup









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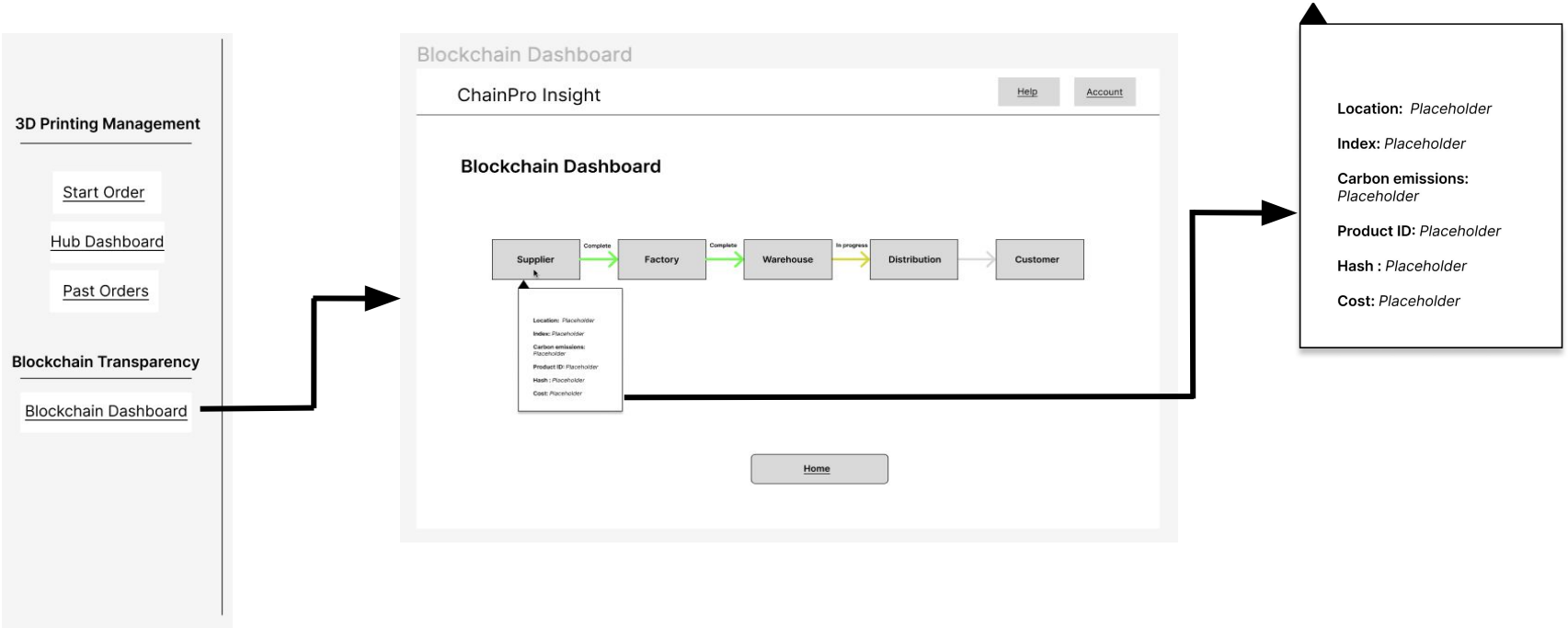

SUCCESS METRICS

KPIs:

- User on-time delivery
- Purchase order tracking
- Freight cost
- Perfect delivery rate
- Carbon emissions per product
- On-time supplier delivery

+40%

Reduction in lead times

Supply Chain Dive

+30%

Reduction in financial costs

McKinsey

+50%

Reduction in likelihood of supply chain issues

McKinsey

THANK YOU