



PIACENZA
CASHMERE

BLOCKCHAIN & TRACEABILITY IN THE TEXTILE FIELD

Nimble



Co-funded by Horizon 2020 Framework
Programme of the European
Union NIMBLE Consortium
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Agenda

1. Blockchain & Traceability
2. Nimble platform
3. Case History– Piacenza Cashmere



Blockchain & Traceability in textile field

In the present, fast evolving textile and clothing market, actions to answer unpredictable demand must be taken very quickly and require high level of diffused collaboration.

*“Millennials are driving companies to sustainable practices ...
New generations demand for sustainable products and a visible and transparent value chain: from “sheep to shop”, something that blockchain is already enabling.”*

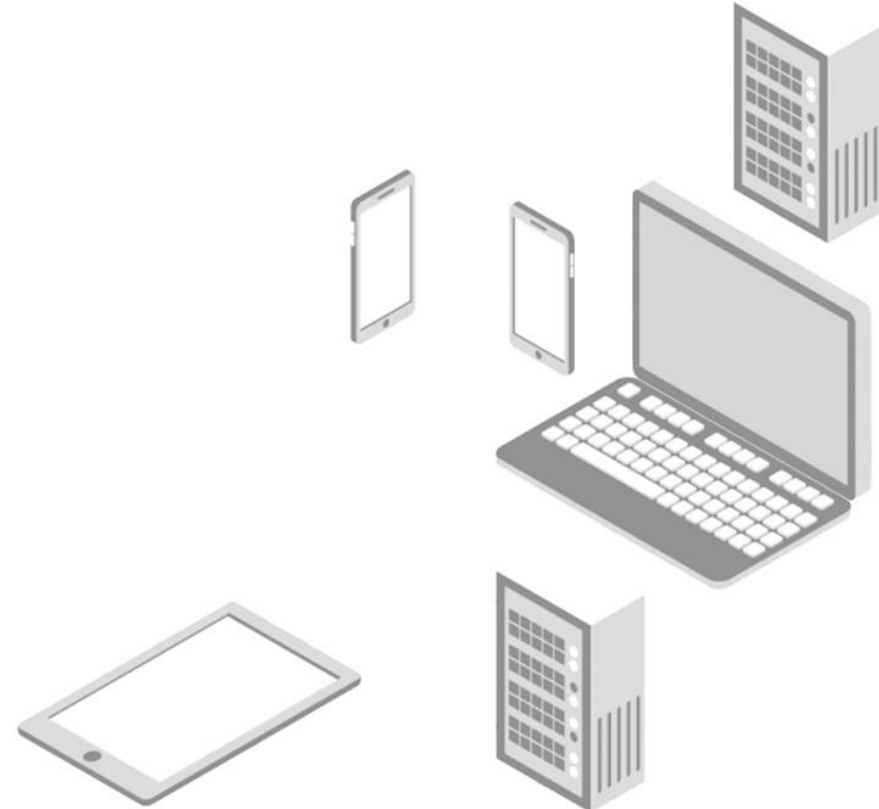




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THE SOLUTION - DESCRIPTION

NIMBLE developed the software infrastructure for B2B platforms specifically designed for European manufacturing SMEs and service providers to help them grow.



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THE SOLUTION

POSITIONING (FoF-11-2016 PROJECTS)

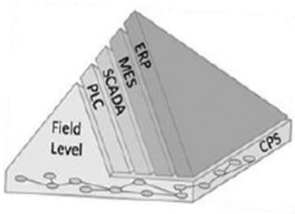
MANUFACTURING SYSTEM LEVELS

Connected Enterprises

Enterprise

Manufacturing Cells

Factory Equipment
Field Device



MANUFACTURING SYSTEM LIFE CYCLE STAGE

Design/
Development

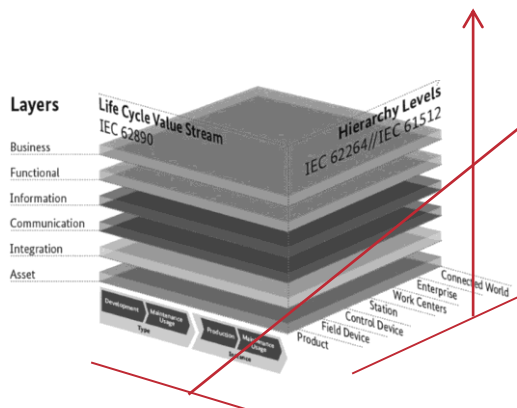
Production
Engineering
of manufactur
ing equipment/
Technologies

Production
Of manufacturi
ng equipment/
Technologie
s

Integratin/
Configuration
of manufacturin
g systems

Use of
manufacturin
g Systems
(productig
products)

After-use
Phase of
Manufacturing
Systems





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KEY FEATURES

LIKE A MANUFACTURER

- register my company in one platform installation
- publish my products and services
- search for a product and service
- make requests for products and services
- negotiate terms and place orders
- manage contracts
- arrange and manage transportation and logistics
- link my data sources (IoT)

LIKE A MANUFACTURING B2B SERVICE PROVIDER / INTERMEDIARY

- deploy a NIMBLE platform installation
- custom / extend my platform installation
- run my platform installation to serve my customers/segment
- obtain analytics about platform operations



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B2B PLATFORM FRONT-END

Graphical user interface services
Request dispatching to underlying services

BUSINESS COLLABORATION

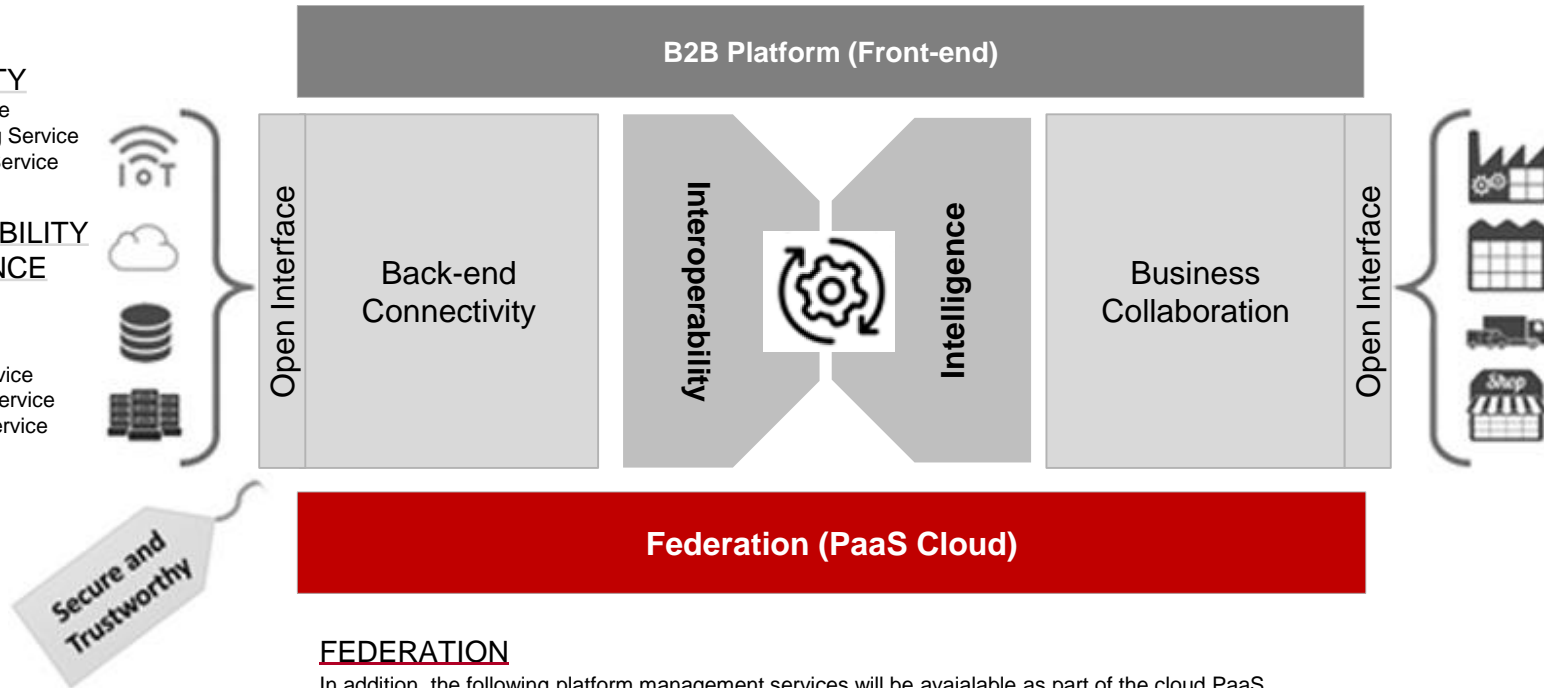
Register on platform (Person | Company)
Publish (Catalogue | Product | Service | Configurator)
Search for (Product | Service | Company | Person-in role | Configuration)
Negotiate for (Product ! Service | Contractual Terms) → Contract
Specify B2B data sharing Rules as part of Contractual terms → Platform data channels
Execute (Business-Process) according-to (Contract)
Monitor (Business-Process) according-to- Platform data channels

BACK-END CONNECTIVITY

Data Sharing Service
IoT Data Processing Service
IoT Data Analytics Service

INTEROPERABILITY & INTELLIGENCE

Identity Service
Catalogue Service
Matching Service
Communication Service
Business Process Service
Product Lifecycle Service



FEDERATION

In addition, the following platform management services will be available as part of the cloud PaaS approach:

- Audit (Transactions) of Company (Buyer, Supplier, 3rd Party)
- Show platform dashboard (# of Companies, # of Transactions, Trading Volume, ..)
- Show platform security dashboard (# of Incidents, Risk Volume, Threat Vectors, ..)
- Manage user feedback (all user-facing functions should provide usability statistics and a back-channel to the development team)

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KEY FEATURES

FEDERATED

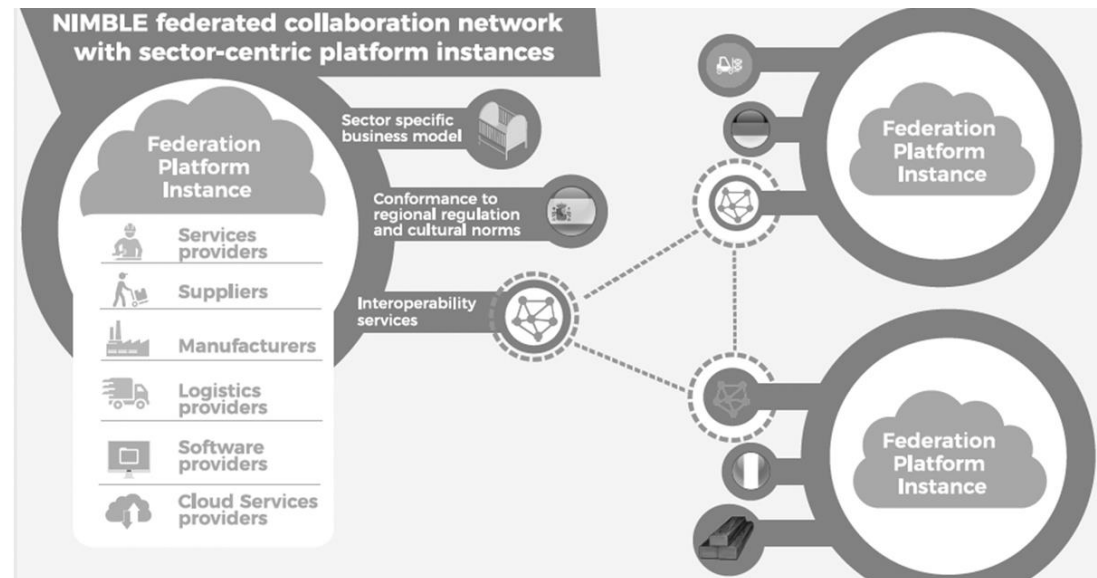
NIMBLE supports bottom-up, scalable growth. Federated platform providers give different sectors or regions a platform instance. Platform instances link via semantic interoperability services

TRUSTWORTHY

NIMBLE implements novel reputation and trust assessment mechanisms and it ensures high level security standards for data access and control

LIGHTWEIGHT

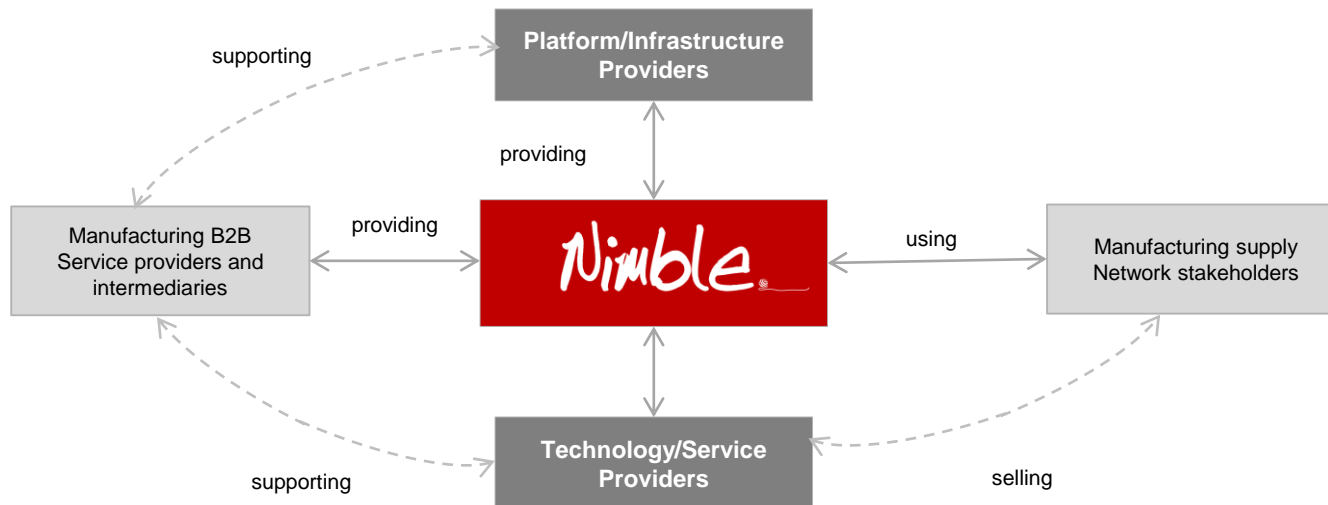
No need for SMEs to install software
Fast onboarding
Focus on supporting core business activities





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KEY FEATURES



MULTI-SIDED

- Participating companies can optimize business workflows, breaking traditional supply chain pipelines.
- Optional added-value business functions can be provided by third parties

OPEN

- Core services are open source (Apache 2.0)
- Comprehensive API set to extend core services with specific plug-ins and added value tools

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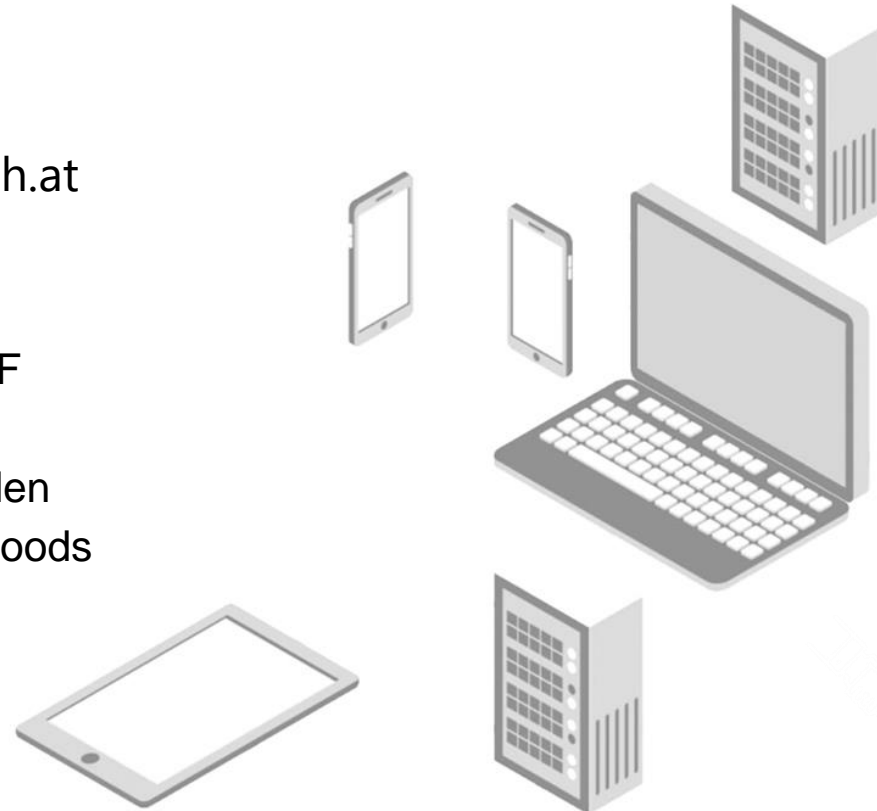
INSTANCES „ALIVE“ OR PLANNED

Demo-System:

<https://nimble-platform.salzburgresearch.at>

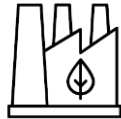
INSTANTIATIONS

- Live: NIMBLE Furniture Manufacturing P/F
- Live: Experimental eFactory instance
- Under testing: eco-houses platform Sweden
- Under testing: NIMBLE Textile & White Goods





Piacenza Cashmere – Case History



CHALLENGE

- Country: Italy
- Manufacturing Company: Piacenza
- Involved partners: Domina, ENEA
- Services + Textile CAD tool + IoT and Blockchain technologies



BUSINESS IMPACT - BENEFITS

- Gain visibility in the sector
- Connect supply chain organizations
- Creating more offer variety, thanks to the standard language that makes everybody equal.
- Widen the range of suppliers and customers



KEY VALUE PROPOSITIONS

- Foster agility and value-creation, enabling environments for business collaboration
- Traceability of all production actions in the supply chain
- Provide updated data and accurate forecasts of machinery and product availability
- Information redirection/filtering in order to convey information to the right person at the right time

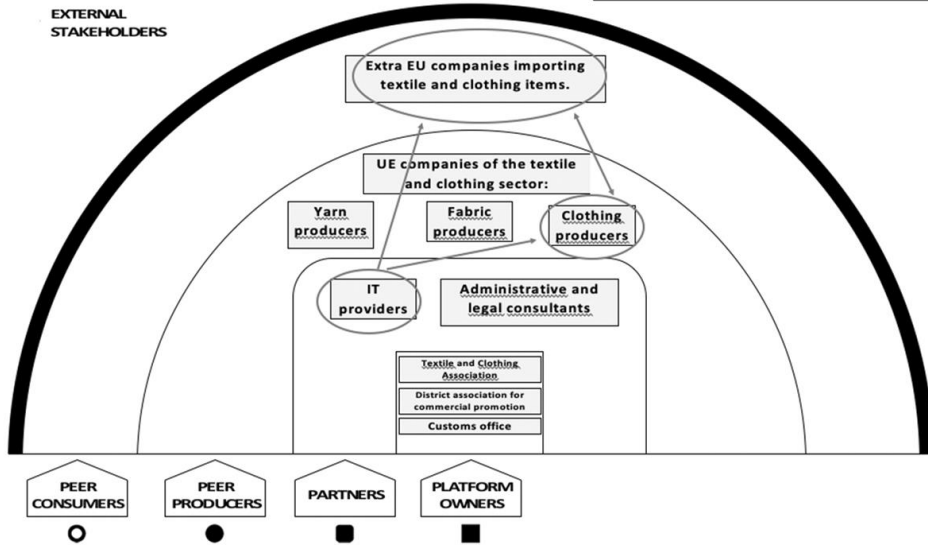
Piacenza Cashmere - Case History

THE ECOSYSTEM CANVAS PLATFORM
DESIGN TOOLKIT 2.1



Textile 2 - Certification of Origin scenario

EXTERNAL
STAKEHOLDERS

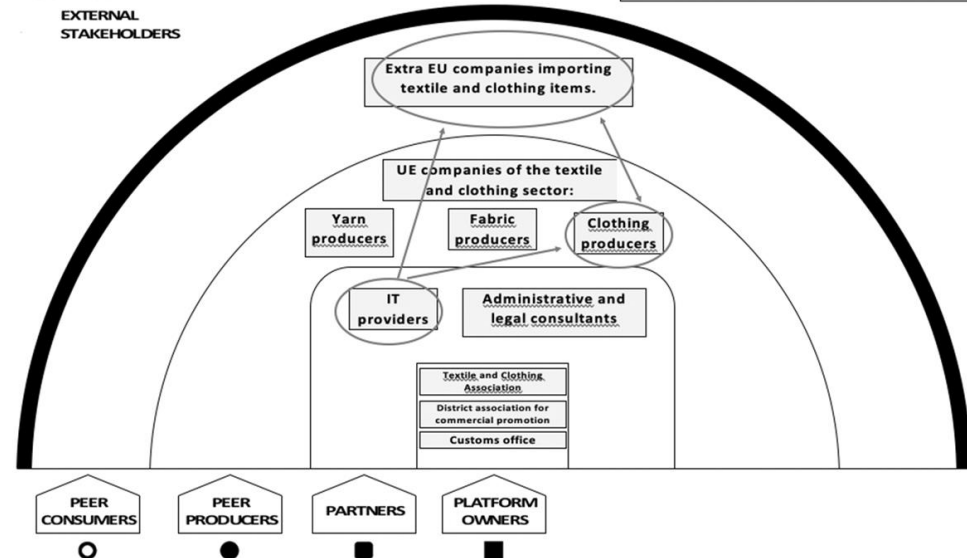


THE ECOSYSTEM CANVAS PLATFORM
DESIGN TOOLKIT 2.1



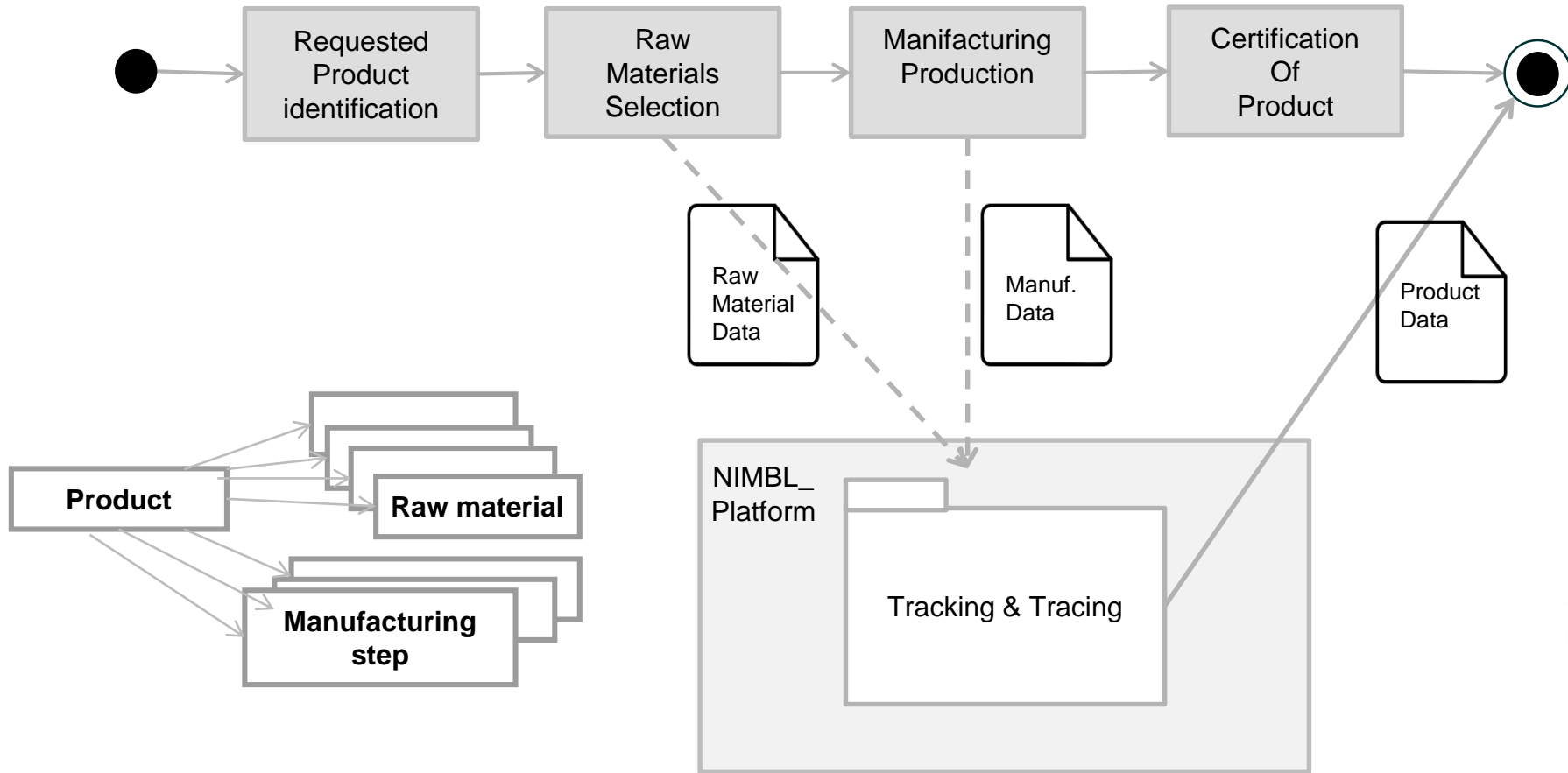
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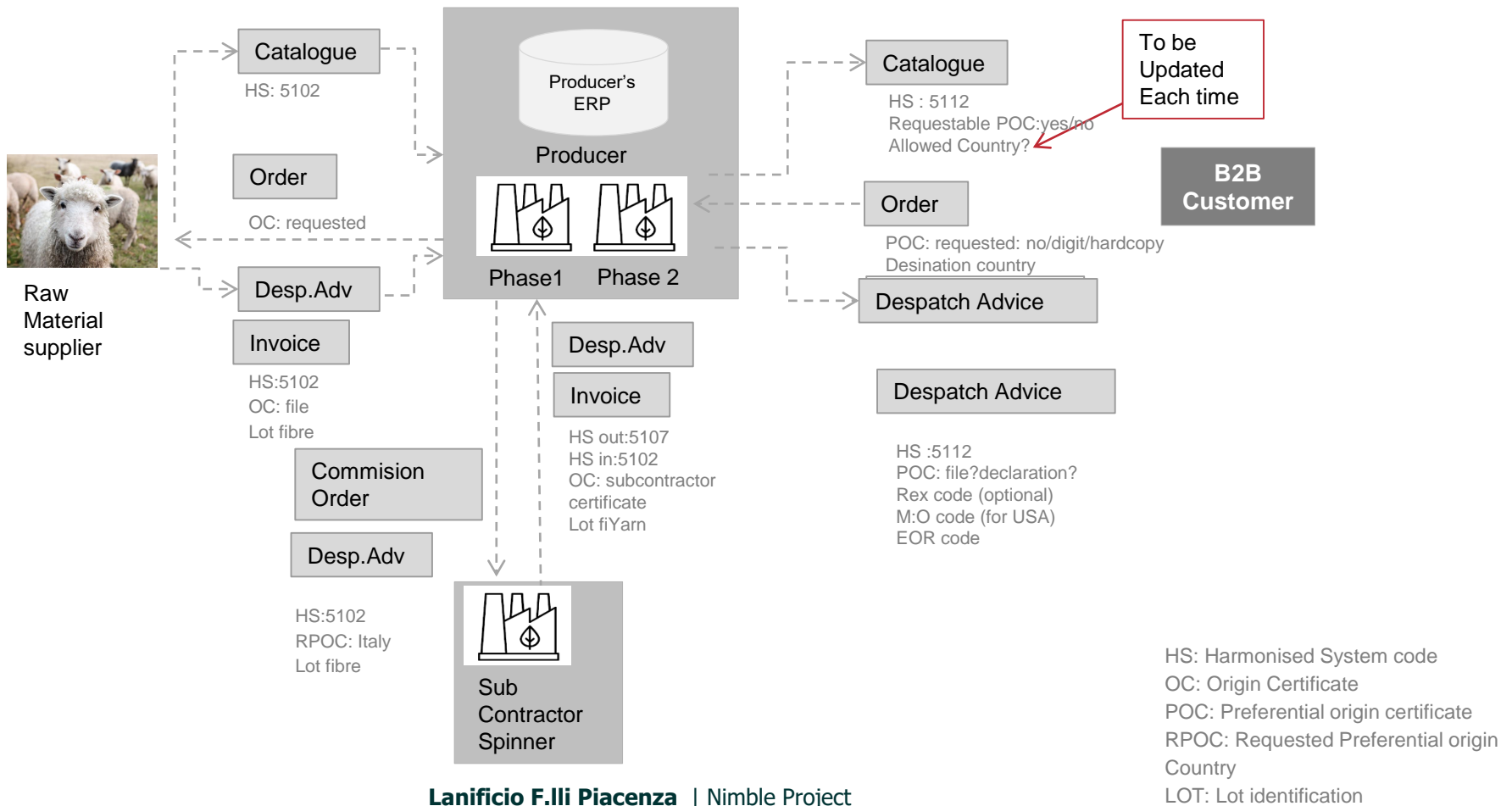


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BLOCKCHAIN FOR TRACEABILITY





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CONSORTIUM PARTNERS

