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DATA SPACES AS DPP ENABLERS

Data Management in the Textile Value Chain

Three systemic challenges facing the textile industry today

PIACENZA 1733

01

Regulatory Chaos

DPP & regulation with no clear guidance

02

Fragmented Requirements

Each brand imposes its own standards

03

E-commerce & Supply Chain Burden

Data required for every item sold

Innovalia Association · DFA Transforming Manufacturing Together · European Commission

Challenge 01 | Regulatory Chaos around the DPP

01

Regulatory Chaos around the DPP

Digital Product Passport

!

The European regulatory framework is stalled and lacks operational guidance

Consultation

The European Commission confirmed the fourth JRC data collection consultation for the DPP, but the process is very slow.

No unified data model

Without a shared reference schema, suppliers are forced to collect different data for each client, with no interoperability between systems, as also highlighted in the EURATEX position paper.

Structural delay

The slowdown in defining the DPP prolongs the current chaos and opens the door to private certification providers pushing proprietary standards.

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Challenge 02 | Fragmentation of Sustainability Requirements

> *Kering's requirements are different from Louis Vuitton's, different from Hermès, different from Dior.*
>
> — Alessandro Canepa, Piacenza Group
> ETP Conference 2026

1. **Per-brand microservice development**
   Each fashion group demands a dedicated data collection system, multiplying IT development costs for every supplier in the chain.

2. **Insufficient development capacity**
   Even well-structured companies like Piacenza Group struggle to meet each brand's requirements within seasonal deadlines.

3. **Amplified impact on lower tiers**
   If a large manufacturer is already under strain, Tier 2, 3 and 4 suppliers — mostly SMEs — are in an even more critical position.

Challenge 03 | E-commerce Burden & Multi-tier Complexity

Item-by-item data request

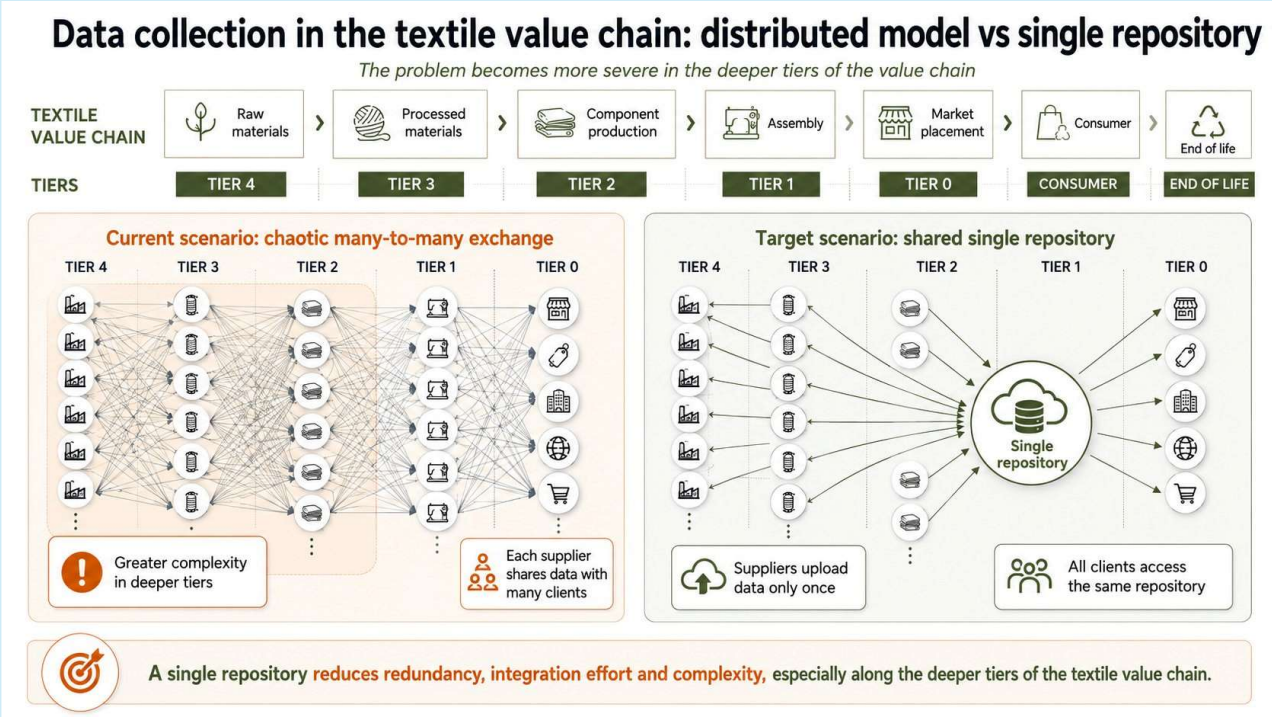
E-commerce platforms (Zalando, etc.) require suppliers to upload DPP data for each individual product listed online. The operational cost will be unsustainable.

The solution: a federated data space

An official, centralised data pool: suppliers upload data once, and retailers access it directly.

KEY MESSAGE

A centralised, institutionally-backed repository is essential. Without it, the multiplication of data flows will generate unsustainable costs — especially for the deeper tiers of the supply chain.



SM4RTENANCE demonstrates this federated model in a real textile value chain → Pilot 8, Piacenza

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FROM CHALLENGE TO IMPLEMENTATION | SM4RTENANCE PILOT 8

Optimisation of Production Performance through DPP

Trusted, sovereign data sharing across Piacenza Group entities for DPP, PEF and traceability

The challenge

Extend the European TRICK platform — originally developed for circular textile product management — to DPP, PEF and traceability data management across Piacenza Group companies and their suppliers of raw materials and yarns.

The data space value

Integrate standardised Digital Product Passports into TRICK through an EU-compliant data space, ensuring reliable and rapid data sharing for environmental compliance, in line with the European Data Spaces technical framework.

SECTOR

Textile & clothing — fabrics for fashion

USE CASE

Men's coat, from raw cashmere to finished garment

LEGAL ENTITIES

Piacenza Cashmere · Lanificio F.lli Cerruti

DATA SHARED

Traceability events · Energy consumption (water, gas, electricity)

The Pilot Partners

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Pilot owner

Defines the business process and regulatory objectives (DPP & PEF). Data owner across production and sustainability, validating the solution in real manufacturing.

COMPLEMENTARY SKILLS

domina data management

Platform integration

Brings TRICK platform expertise. Manages ERP data extraction, DPP data modelling and the REST APIs that bridge legacy systems with the data space.

PRE-EXISTING TRUST

SYXIS innovate together

Data space technology

Provides and operates the data space infrastructure: Sovity CE connectors, portal, DAPS identity service and logging house.

STANDARDS FOCUS

MADE Competence Center i4.0

Competence centre I4.0

Industry 4.0 competence centre in Milan: supports technology transfer and replication of the pilot results towards Italian manufacturing SMEs.

AGILE APPROACH

End-to-End Business Process: From Raw Cashmere to Men’s Coat

1 **PIACENZA CASHMERE**
Raw material

Supplies raw cashmere and generates the purchase and batch data.

2 **LANIFICIO CERRUTI**
Spinning & weaving

Records production parameters and tracks the transformation into semi-finished fabric.

3 **PIACENZA**
Finishing & garment

Finishing and garment manufacturing produce the final men’s coat with its DPP data.

DATA FOLLOWS THE PRODUCT — TRUSTED DATA TRANSFER WORKFLOW

ERP systems
Piacenza & Cerruti

Domina data model & API
Extraction, mapping, DPP format

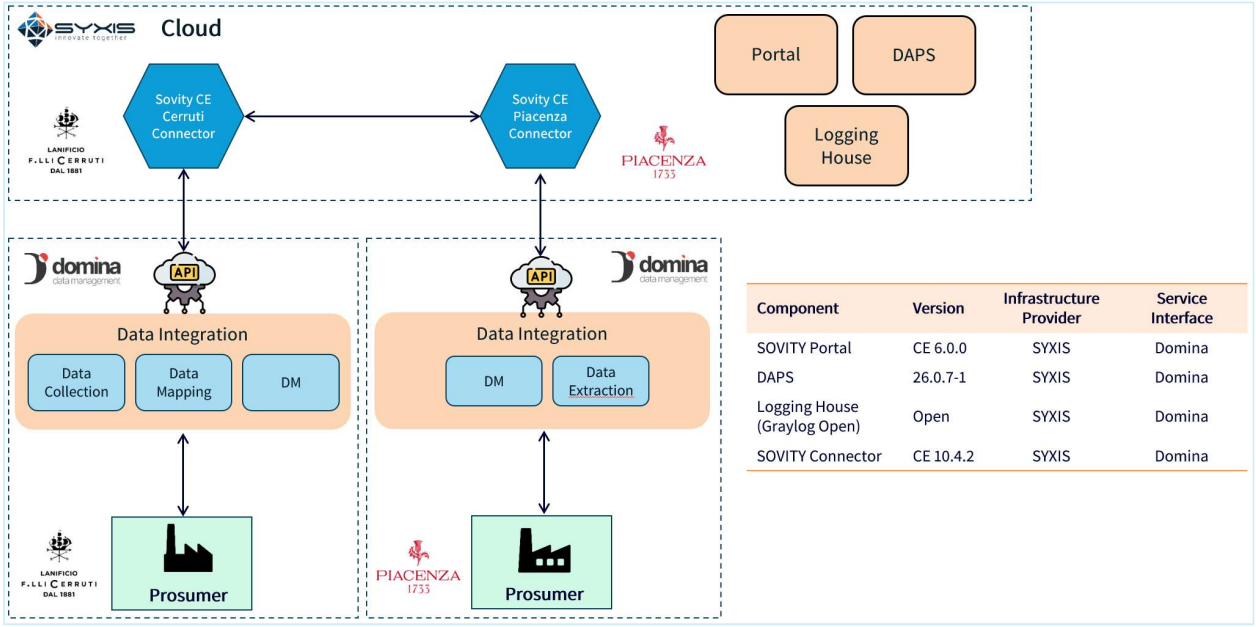
Syxis Sovity CE connectors
One per legal entity

TRICK platform
DPP · PEF · traceability

This scenario validates cross-entity traceability and structured data exchange throughout the full production lifecycle.

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Dedicated Data Space Architecture



Component	Version	Infrastructure Provider	Service Interface
SOVITY Portal	CE 6.0.0	SYXIS	Domina
DAPS	26.0.7-1	SYXIS	Domina
Logging House (Graylog Open)	Open	SYXIS	Domina
SOVITY Connector	CE 10.4.2	SYXIS	Domina

Syxis cloud: Sovity Portal CE 6.0.0 · DAPS 26.0.7 · Logging House (Graylog) · Sovity Connector CE 10.4.2

Connector provisioning

One Sovity CE connector per legal entity (Piacenza, Cerruti); dedicated deployment consolidated in March 2026.

Trust & identity

DAPS authentication and portal-guided onboarding of legal entities, roles and policies.

Service continuity

Domina–Syxis service contract framework, aligned with GA and CA, enabling operations beyond the project.

Data Models, APIs & Standards

Data Model 1 — Traceability

Product information, material components, traceability events, producer and activity data describing each production step.

Data Model 2 — Energy consumption

Water, gas and electricity used to produce the final product, supporting environmental monitoring and PEF.

Simplified, DPP-oriented by design

Instead of the full complexity of textile data models, only essential information is captured — interoperable across sectors and extracted directly from the ERP systems.

DATA SPACE LAYER | Syxis

- IDS-based architecture (EDC / Sovity CE)
- DSP protocol for data exchange
- OAuth 2.0 + DAPS dynamic attribute tokens
- ODRL usage policies · DCAT metadata catalogue

APPLICATION & DATA LAYER | Domina

- ERP-based data extraction
- RESTful APIs with API-key authentication
- Dedicated endpoints: traceability-info · energy-info
- TLS integration for encrypted communication

Implementation Status & Target KPIs

SM4RTENANCE 5-STEP READINESS PATH

01
Set business process
✓ Completed

02
Select service provider
✓ Completed

03
Connect stakeholders
✓ Completed

04
Connect data catalogues
✓ Completed

05
Start trusted transactions
◔ In progress

OPERATIONAL SETUP

2	active connectors
2	onboarded legal entities
2 + 2	data providers & consumers

TARGET KPIs

<1%	**99%**	**100%**	**>90%**
data transmission error rate	data accuracy and integrity	DPP data shared along the value chain	data space user satisfaction

Next: KPI measurement on live transactions, then extension to Tier 2–4 suppliers towards a federated textile data space.

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