

One Connector Many Sovereigns: A Multi-Tenant for Low IT Participants

11:45 – 12:00



- Sava Stanojevic – MicelioData



In partnership with



ONE CONNECTOR MANY SOVEREIGNS



Time: 15 minutes

The MicelioData logo, consisting of a stylized blue and green icon of four interconnected nodes on the left, followed by the text "MicelioData" in a bold, blue, sans-serif font.



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A white rounded rectangular box containing three logos: the "gaia-x Hub Greece" logo, the "LMS Laboratory for Manufacturing Systems & Automation" logo, and a stylized profile of a head with a brain-like pattern.

#GaiaX #TechX26



HOW DO WE CONNECT
PARTICIPANTS TO A DATA SPACE
WHEN OFTEN STATE-OF-THE-ART IS PEN AND
PAPER?

~95%

Of SMEs excluded from
dataspaces

~70%

Of textiles are exported to the EU
from Asian countries

2028

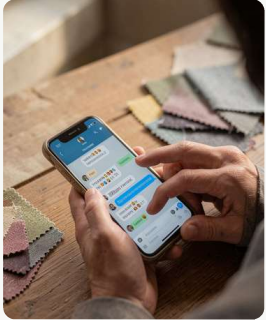
EU Digital Product Passport for textiles
Every supply chain tier must comply

WORK IN PROGRESS

DEPLOYMENT IN
PROGRESS

EDC-V · DSP · GAIA-X

BANGLADESH: HOW SUPPLY CHAINS ACTUALLY OPERATE



MOBILE-FIRST OPERATIONS

- Factory operations often run from a single mobile phone
- Orders and updates are managed via WhatsApp
- Quality checks rely on photos and voice notes



PAPER-BASED RECORDS

- Production and chemical records are often handwritten
- Most factories operate without digital backups
- Critical operational data remains offline and fragmented



CONTRACTS BY HANDSHAKE

- Supplier agreements negotiated verbally.
- No formal contracts, no digital signatures, no audit trail.



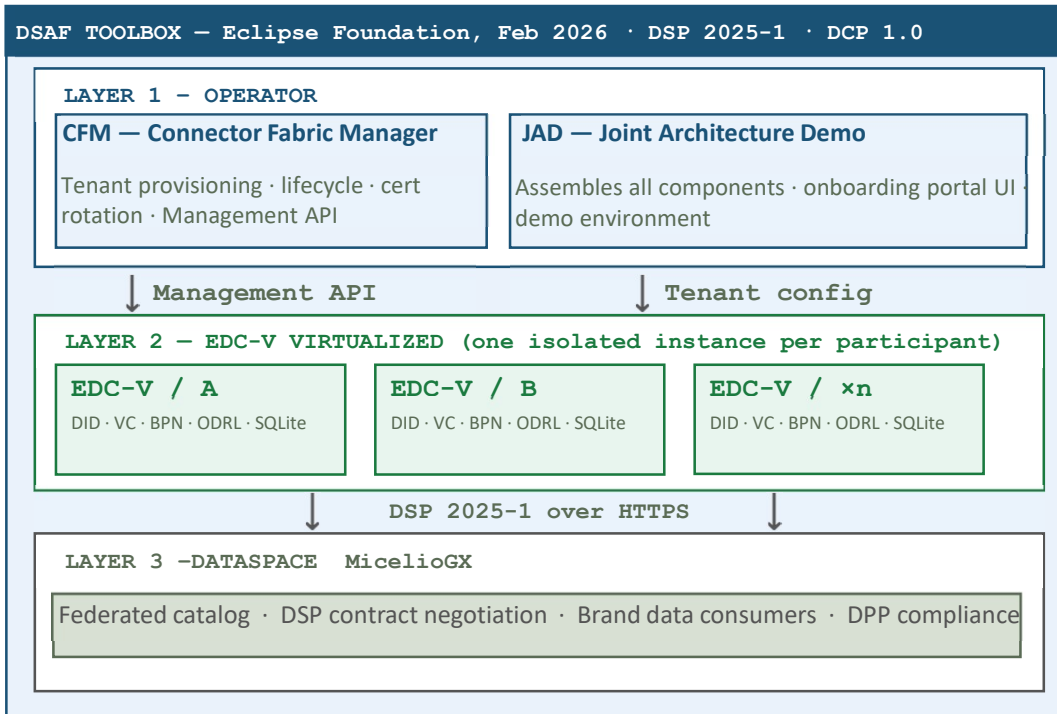
ZERO TECHNICAL INFRASTRUCTURE

- No ERP, no server, no IT department
- Low technological literacy
- Unstable internet and power connection

EU Digital Product Passport (2028) demands verified, machine-readable data from every tier of the supply chain

THE ARCHITECTURAL PROBLEM

THE INFRASTRUCTURE PROBLEM IS SOLVED.
THE PARTICIPATION PROBLEM IS NOT.



WHAT THE TOOLBOX SOLVES:

- ✓ Multi-tenant provisioning at scale via CFM
- ✓ Cloud-native EDC variant (EDC-V) for MSPs
- ✓ Automated lifecycle management
- ✓ Pluggable data planes for compatibility

CRITICAL ASSUMPTION REMAINS

- ✗ The tenant must have some technical knowledge
- ✗ They must be able to store their credentials
- ✗ They have some technical entity understanding the process
- ✗ They must have their data digitized and stored

Our participants have none of this. They are the majority of the SMEs and they are mandatory to ensure traceability

THE LAST METER — WHAT WE MUST HOLD ON THEIR BEHALF

SUPPLIERS WITH ZERO IT: THE LAST STEP



Identity Wallet

DIDs · BPN · Verifiable Credentials — provisioned, hosted and rotated by intermediary. Supplier never touches it.



Standardised & Interoperable Data

Raw data from paper/WhatsApp transformed into DPP, CSRD, EUDR compliant structured data assets.



Secure Sovereign Storage

Encrypted per-participant data store. Intermediary operates but cannot co-mingle with other tenants.



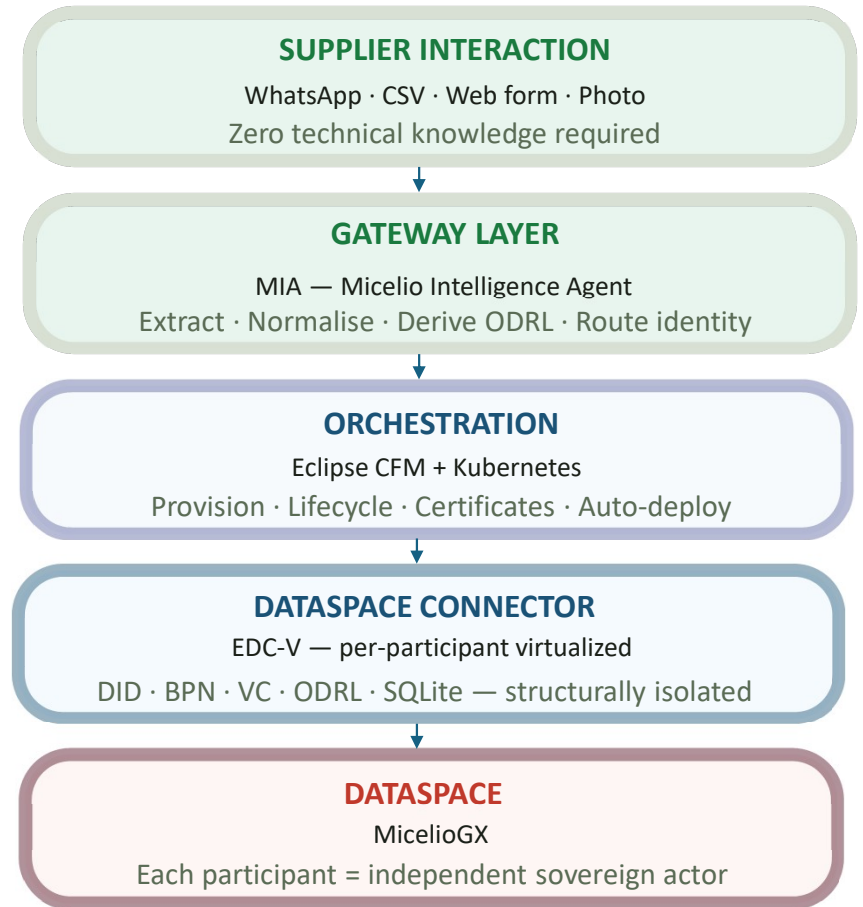
ODRL Policies → Plain Language

Machine-readable access policies derived from plain-language agreements the supplier can read and understand.



Contract Negotiation

EDC-V contract negotiations run live on every transaction — even when we operate both sides. This is our governance record.



MIA: TECHNICAL ARCHITECTURE FOR ZERO-IT PARTICIPANTS

MicelioData — Allowing the participations of participants with zero technical literacy

LAYER 1 — MIA (Micelio Intelligence Agent)

UI/UX Interface

- WhatsApp-native
- Mobile web form
- Photo/doc upload
- Voice + multilingual

ML/LLM Engine

- MD-SE semantic extraction
- Unstructured → DPP/CSRD
- LLM data matching
- Schema validation

Policy Translator

- Plain language → ODRL
- Policy store per tenant
- Consent provenance log
- Human-readable terms

Identity Broker

- DID provisioning
- VC issuance + mgmt
- BPN held in trust
- Key lifecycle mgmt

↓ DSP API calls via Management API

LAYER 2 — EDC-V (Eclipse Dataspace Components — Virtualised, DSAF / Eclipse Foundation)

Control Plane

- Contract negotiation (DSP)
- Catalog management
- Policy enforcement
- Management API

Data Plane

- Asset transfer
- EDR token refresh
- Pluggable connectors
- Encrypted data flows

CFM Orchestration

- Per-tenant provisioning
- K8s lifecycle mgmt
- Cert rotation
- Health monitoring

Identity Layer

- DCP 1.0 · DID resolver
- VC presentation
- IDSA Rulebook compliant
- DSP 2025-1 certified

↓ Dataspace Protocol (DSP 2025-1) over HTTPS

LAYER 3 — MicelioGX | Gaia-X / IDSA compliant dataspace | Federated catalog · DSP · Brand data consumers



THANK YOU!



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