RFID COMMUNITY CONNECT

May 19 - 20

Digital Product Passport Panel

RFID Community Connect | May 19–20, 2026

Meet the Experts

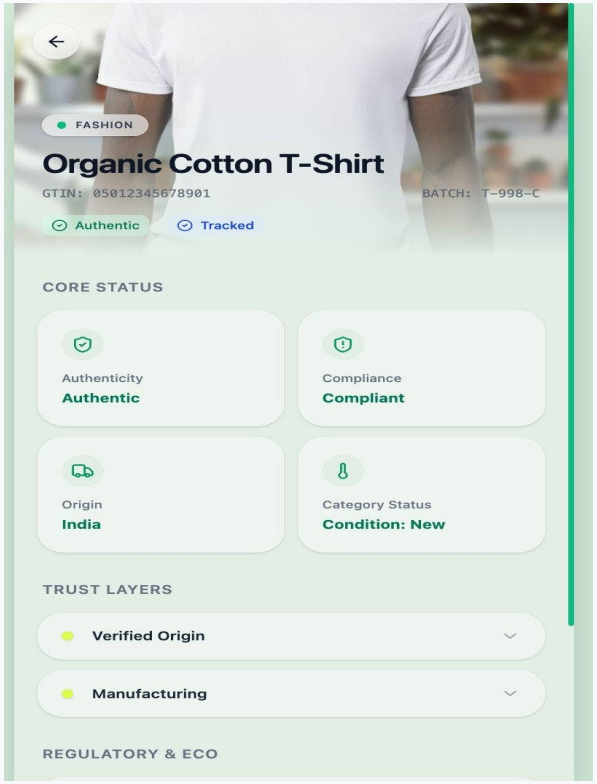
Dom Guinard
Spotd.com

Aliya Pogorelskaya
Altinteg

Slide Title

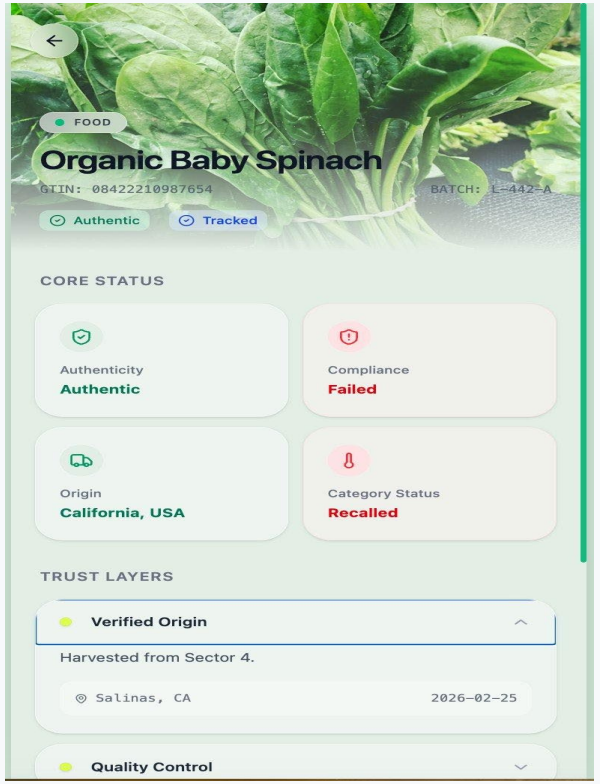
One standard. Every product. From fashion to food.

FASHION



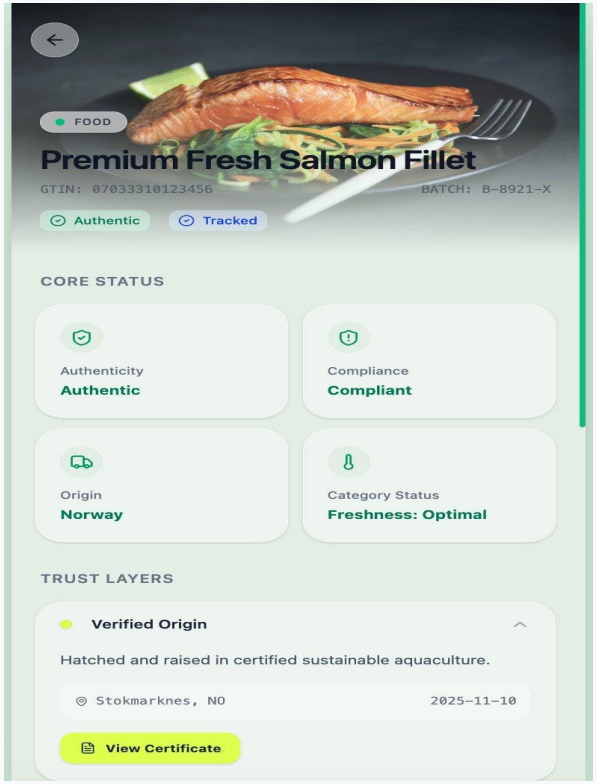
Organic Cotton T-Shirt

FOOD



Premium Fresh Salmon Fillet

FOOD



Organic Baby Spinach · Recalled

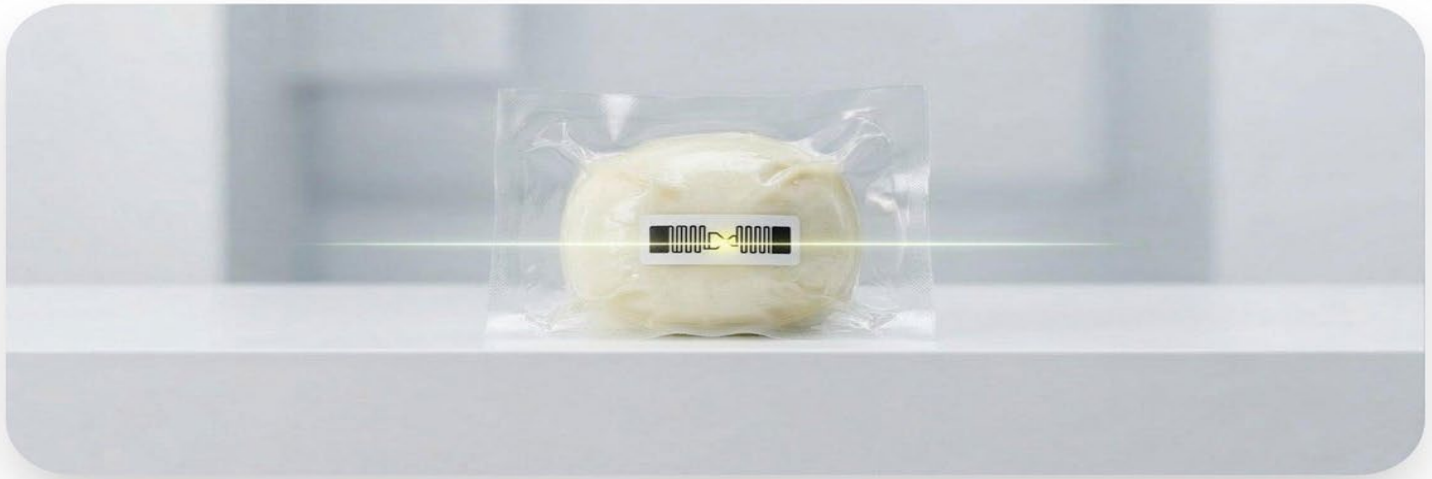
Authenticity · Compliance · Origin · Freshness — all captured via RFID and structured through EPC / EPCIS

Slide Title

U

-
-
-

From Tag to Cloud

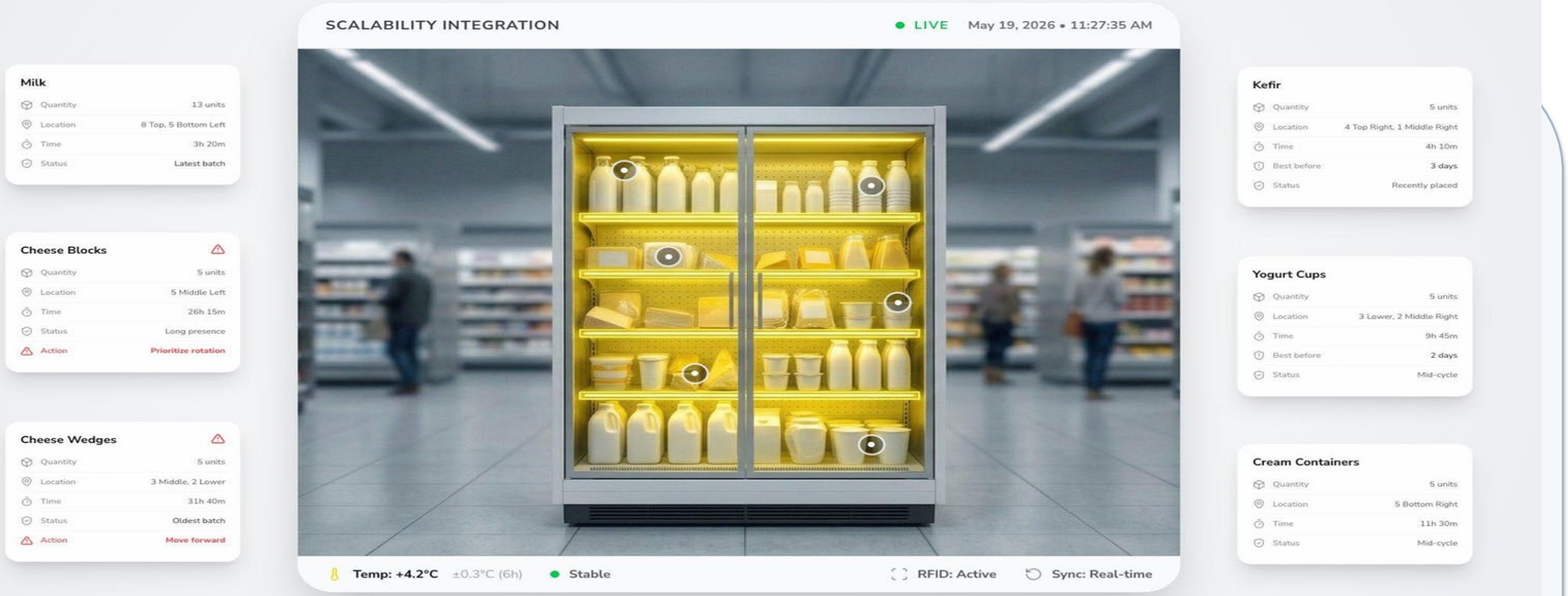


Seamless data flow from physical product to Digital Product Passport

01 Product → 02 RFID / Tag → 03 Automatic Reading → 04 Real-Time Data → 05 Supply Chain Intelligence

Product → RFID / Tag → Automatic Reading → Real-Time Data → Supply Chain Intelligence → Digital Product Passport

Slide Title



Live temperature monitoring · Item-level RFID reads · Automated rotation alerts · Real-time sync — all feeding a living DPP

RFID & DPP

1 Data Trust

Machine-generated reads
RFID events are written automatically — no manual entry, no human error. Every read is a timestamped, auditable record.

Standards-anchored identity
EPC (GS1 TDS) encodes unique item identity on the tag. EPCIS (ISO/IEC 19987) structures the event log — who, what, where, when, why.

Compliance-ready
Meets ESPR Art. 9 identity & audit trail requirements out of the box.

2 Dynamic Data

Static data
Captured at tagging: product identity, origin, batch, materials, supplier.

Dynamic data
Accumulated in motion: custody transfers, location events, temperature excursions, expiry status — a living DPP.

Quality sensing
Sensor-enabled tags capture environmental conditions (cold chain, humidity) — DPP reflects real product state, not just declared specs.

3 Carrier Interoperability

RFID + 2D together
Not competing — complementary. RFID drives supply chain visibility; QR/Datamatrix enables consumer-facing access.

One identity across all carriers
The same EPC / GS1 Digital Link must be encoded consistently in RFID tags AND 2D codes — pointing to the same DPP.

Breaking the link = breaking trust
Carrier inconsistency is the #1 underestimated deployment risk in real FMCG rollouts.

DPP Is not Just One Document & Workstream

ESPR Framework (Ratified, May 2024)

Core requirements applying to ALL product categories

ESPR Delegated Acts

Category-Specific Requirements:

Identifier granularity, required data attributes, and verification methods per product type.

- **Batteries (2024)**
- **Apparel (2027)**
- **Next Categories (?)**

Other Regulations referencing DPP

- **Packaging Regulation (PPWR)**
- **Construction Products (CPR)**
- **Other Future Regulations**

CENELEC JTC 24 Technical Standards

CEN/CENELEC JTC 24 Technical Standards

Trust Layer How can the data be trusted?	e.g., DID & VC, Blockchain anchoring	Out of scope for now
Data Layer What data format for the product passport?	Format, storage - e.g., GS1-Web Vocabulary, JSON-LD, EPCIS, etc.	Format defined by JTC 24 standards, content by delegated acts
Identity Layer What digital product identity is encoded the tag?	GS1 Digital Link, ISO 15459	Defined by JTC 24 standards
Carrier Layer What is the on-product tag?	QR / Datamatrix, RAIN RFID (UHF), NFC	

DPP Technical Details - What is Known Today from the ESPR

Identity

- Products will require a **unique identity** (at least SKU level) linking to a DPP [Art 9]
- Identity based on **recognized standard** (ISO15459 e.g., Digital Link) [Art 9]

Carrier

- One or more data carriers leading to passport [Art 9]
- Data carrier needs to be included **on the product** [Art 9]
- Primary data carrier needs to use a **recognized standard (e.g., QR)** [Art 9]

Data

- Foster greener choices [Art 7]
- Substances of concern [Art 5]
- Carbon & Environmental Footprint [Art 5]
- Needs to remain available if a company disappears [Art 9]

Access

- **DPP Web &** easily accessible [Art 7]
- Data accessible & transferable via **APIs** [An 28]
- **Decentralized** data needs to be supported [An 32]
- Allowing differentiated & **granular access [Art 10]**

CEN/CENELEC JTC 24 Technical Standards

Module 1: 18219
Unique identifiers: ISO15459, GS1 Digital Link, etc.

Module 2: 18220
Data carriers: QR, Datamatrix, RAIN RFID, NFC

Module 4: 18223
System interoperability

Module 5: 18216
Data exchange protocols

Module 6: 18221
Data storage, archiving, and data persistence

Module 8: 18222
Application Programming Interfaces (APIs) for the product passport lifecycle, management and searchability, REST / HTTP, etc.

Target publication: May 28, 2026

Still in progress:
Module 3 (18239) - Data carriers: QR, Datamatrix, RAIN RFID, NFC
Module 7 (18246) - Data authentication

What are some of the biggest practical challenges organizations face when moving from the concept of a Digital Product Passport to actual implementation?

As we wrap up, what is one key takeaway or prediction each of you would leave the audience with regarding the future of Digital Product Passports and connected product intelligence?

Questions?