DSR PROTOCOL · PLAIN-LANGUAGE REFERENCE

Abbreviations & glossary

One page, plain words: every abbreviation we use and what it means — for the Teknopark panel, investors, factory owners and our own team. A few loaded words (like "immutable") carry a different meaning in a Digital Product Passport than they do in blockchain, so those are spelled out at the end.

Every abbreviation, in plain words

TERM	MEANING (PLAIN WORDS)
DPP Digital Product Passport	A digital file holding verified information about a product (materials, environmental data, repair info). Required under EU law (ESPR).
DT Digital Twin	A secure digital identity for a physical item. Tap or scan the product to open it.
NFC Near Field Communication	Tap-to-verify technology. DSR uses secure NTAG 424 DNA chips to prove a product is genuine.
QR / GS1 QR Quick Response code	A scannable square code printed on the product. A GS1 QR follows the official global standard.
GS1 DL GS1 Digital Link	The global standard that connects a QR or NFC code to the product's data. Required for Sunrise 2027.
GS1 DataMatrix DataMatrix 2D barcode	A compact square barcode used in retail, logistics and healthcare. Becoming mandatory in many EU categories.
ESPR Ecodesign for Sustainable Products Regulation	The EU law that makes Digital Product Passports a requirement.
EPD Environmental Product Declaration	A verified environmental report for a product — more reliable than a simple LCA.
LCA Life Cycle Assessment	An environmental calculation, often unverified. Competitors lean on this; DSR anchors verified EPDs instead.
VC Verifiable Credential	A digitally signed piece of information (e.g. supplier data) that proves it is authentic and unaltered.
R2R Right to Repair	EU and US rules requiring repair information, spare-part availability and lifecycle tracking.
CoC Chain of Custody	A record of everyone who handled the product from factory to customer.
In-perimeter	DSR's architecture keeps data inside the region and avoids per-scan cloud compute and bandwidth charges.
SUN / AES Secure Unique NFC message / Advanced Encryption Standard	Security features in NTAG 424 DNA chips that prevent cloning and tampering.
TAM Total Addressable Market	The full global size of your product category.

TERM	MEANING (PLAIN WORDS)
SAM Serviceable Available Market	The share you could realistically serve (e.g. Türkiye's EU exporters plus EU back-up customers).
SOM Serviceable Obtainable Market	Your realistic three-year revenue capture (e.g. €35–50M).
FTE Full-Time Equivalent	The number of full-time staff on the R&D team.
KVKK Kişisel Verilerin Korunması Kanunu (Turkish Personal Data Protection Law)	Türkiye's data-protection law — its version of GDPR.
GDPR General Data Protection Regulation	The EU's data-protection law.
EPCIS Electronic Product Code Information Services	A supply-chain event standard DSR integrates with when needed.
Resolver	DSR's core engine. It connects QR, DataMatrix and NFC to the product's digital twin without cloud compute on each scan.
Scan Tax / Compute Tax	The hidden cost competitors pay the cloud every time a product is scanned. DSR's resolver bypasses it.
Sunrise 2027	The global deadline when GS1 moves retail products from old 1D barcodes to new 2D codes (QR and DataMatrix).

Words that mean different things — said plainly

Immutable

IN A DPP (HOW DSR MEANS IT)

The record is tamper-evident and versioned: it is cryptographically signed, so any change is detectable, and history is kept append-only — you can publish a correction, but you cannot silently rewrite the past. DSR achieves this with W3C Verifiable Credentials, with no blockchain.

IN BLOCKCHAIN (HOW OTHERS MEAN IT)

The same data is copied across a public ledger of many computers so no single party can alter it. It is powerful but heavy; DSR does not use it — Verifiable Credentials give the same tamper-evidence without that cost or energy.

Verified vs self-declared

VERIFIED

Checked and signed by an independent or accountable party (e.g. an EPD, or a supplier's Verifiable Credential). You can trust it without taking anyone's word.

SELF-DECLARED

Stated by the maker with nothing backing it (e.g. a bare LCA). DSR prefers verified data wherever it exists.

Centralised by design / decoupled — with decentralised data delivery

WHAT DSR SAYS: CENTRALISED CONTROL, DECENTRALISED DATA DELIVERY

Two planes, held apart. The administrative control plane (dashboard, logins, billing, the single authoritative record) is centralised by design and decoupled from the brand's own systems. The data plane is decentralised data delivery: there is no central honeypot of every brand's data — each passport resolves via its GS1 Digital Link and is served from the global edge cache plus object storage, indexed as the EU DPP Registry expects.

WHAT DSR AVOIDS SAYING: BARE "DECENTRALISED", OR "EDGE-NATIVE"

Never bare "decentralised" (it implies peer-to-peer or a distributed ledger — we are not that) and never "edge-native"/"edge-compute" (no code runs at the edge; delivery is edge-cached, compute stays central). Use "decentralised data delivery" only, qualified to the data plane. Sub-second figures describe cached reads; dynamic resolution is central, well under 100 ms, self-benchmarked.