STOP REBUILDING INTEGRATIONS FROM SCRATCH

BUILD ONE SHARED DATA FOUNDATION - AND LET EVERY CONNECTION REUSE IT

VELA CONTEXT DATAHUB FOR INDUSTRY

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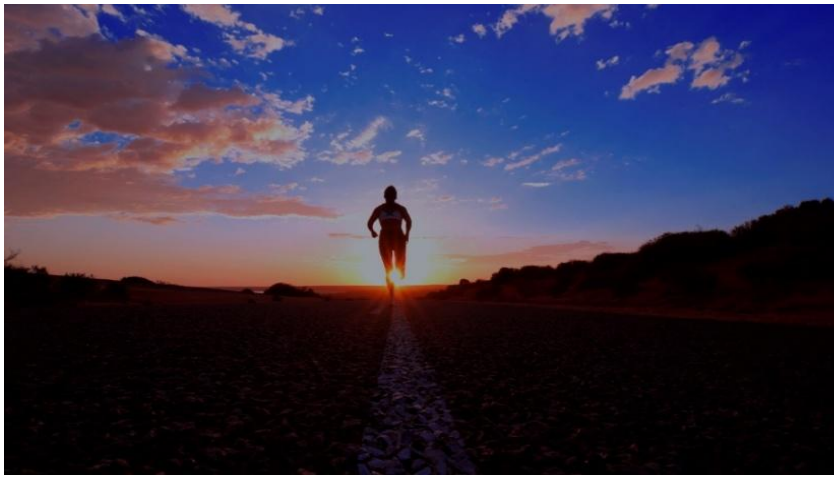
CONTEXT

EXECUTIVE SUMMARY



ONE SHARED DATA LANGUAGE

10 PRE-BUILT INDUSTRY STARTER PACKS

REUSABLE ACROSS EVERY INTEGRATION

SIX-MONTH VALIDATION

NO PLATFORM REPLACEMENT

FIXED INVESTMENT, MEASURABLE KPIS

Your ERP calls it a "material." Your supplier calls it a "component". Your DPP system calls it an "item."

Three words for the same physical object. Reconciling that difference costs your team 4-8 weeks every time you connect a new system, partner, or regulatory framework. That effort repeats in full for every subsequent connection.

This is not a technology problem. Your systems already exchange data. APIs exist. Connections can be built. The problem is that your systems do not share meaning.

Vela Context DataHub is a translation layer that sits between your existing systems - ERP, MES, PLM, IoT, supplier systems, regulatory frameworks - and gives them a common language built on **ETSI NGSI-LD**, the EU open standard for context data. Think of it as the shared dictionary your systems have never had. Define meaning once - what an "asset" is, what a "material" is, what an "emissions event" is - and every subsequent connection draws on that shared definition.

You don't start from a blank page. We deploy with one of **10 pre-built industry starter packs** - each a defined data domain with NGSI-LD models, connectors, dashboards, and example datasets.

A six-month engagement, isolated from production, with KPIs locked before any work begins. You measure the outcome. We are accountable to it.

The cost of inaction is not zero. It is deferred - and growing.

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PROBLEM

THE REAL COST OF DISCONNECTED DATA

4-8 WEEKS PER NEW PARTNER

MANUAL RECONCILIATION EVERY CYCLE

PILOTS THAT CANNOT SCALE

INTEGRATION DEBT COMPOUNDS

EU DEADLINES APPROACHING

Every integration your team builds gets built again

Most organisations track the per-project cost: IT hours, consultants, weeks of reconciliation. Fewer have calculated the systemic cost of having no shared foundation. Every integration built without one must be renegotiated when the next partner, system, or regulation changes.

Where this shows up every day:

- A new supplier takes 6 weeks to onboard because their data structures don't align - and the mapping starts over for the next supplier
- CO_2 and ESG reporting requires manual reconciliation each cycle because plants define "energy consumption" differently
- An integration that works in one plant cannot be replicated in another without rebuilding from scratch
- Digital Product Passport (DPP) compliance requires aggregating lifecycle data that no single system owns consistently
- Innovation projects succeed in pilot but stall when integration complexity meets production reality

EU regulatory obligations are expanding.

DPP requirements arriving 2026-28; ESG reporting tightening annually to 2030; the European Data Act adding interoperability obligations across industrial value chains. Organisations that address this proactively define shared meaning once. Those that wait address it repeatedly - at higher cost, under deadline pressure.

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SOLUTION

ONE SHARED DATA LANGUAGE.
DEFINED ONCE.
REUSED EVERYWHERE.

PERSISTENT SEMANTIC LAYER

YOUR INFRASTRUCTURE

EU OPEN STANDARDS (NGSI-LD)

OPERATIONAL IN WEEKS

COMPLEMENTS - NEVER REPLACES

What it is

- A persistent layer of shared data meaning between your systems and your ecosystem partners
- Deployed in your environment, on your infrastructure - no data leaves your boundary without your explicit decision
- Built on ETSI NGSI-LD and EU Smart Data Models - no vendor lock-in, no hyperscaler dependency
- Operational within weeks - no multi-year roadmap before value is realised
- Complementary to your ERP, MES, PLM, and cloud platforms

What it is NOT

- Not an API gateway or integration bus - those move data; we define what data means
- Not an SAP, MuleSoft, or Azure replacement - sits alongside them, solves the meaning problem they were not designed for
- Not a SaaS platform creating external dependency
- Not a consulting engagement with undefined scope - deliverables, KPIs, and investment are fixed before Month 1.

Define meaning once. Reuse it across every partner, regulation, and system connection.

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Choose your starting pack

Each pack ships with NGSI-LD models, connectors, dashboards, and example datasets - designed to deliver a working data layer within the timeline below.

- **Energy & Utilities: Industrial & Factory Utility** (90 days) - energy, water, gas across the plant; the broad starter. **Steam & Thermal Energy** (90 days) - boilers, heat networks, condensate recovery; the high-cost utility. **Compressed Air Monitoring & Leakage** (60 days) - leakage detection; fastest measurable saving. **Industrial Water & Process Fluids** (90 days) - process water, cooling, effluent; complements existing plant SCADA.
- **Production & Operations: Machine & Line Telemetry** (90 days) - OEE foundation; bridges PLC, MES, and ERP. **HVAC & Production Environment** (90 days) - temperature, humidity, air quality affecting product quality. **Operator Shift & Event Logging** (60 days) - structured shift data; quickest deployment without machine connectivity.
- **Quality & Maintenance: Quality & Test Lab Data Capture** (90 days) - lab integration; eliminates manual transcription. **Predictive Maintenance Signal Capture** (120 days) - vibration, current, temperature; foundation for downtime reduction.
- **Digital Twin: Factory Digital Twin MVP** (120 days) - first virtual model of one line; foundation for simulation and advanced ops.

Cross-pack reuse

The second pack you deploy reuses the first pack's models, identity, and dashboards - typically 20-40% less effort on pack #2, 40-60% less by pack #3. The platform pays for itself by the third domain.

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OUTCOMES

WHAT CHANGES FOR YOUR ORGANIZATION

20-40% CYCLE TIME REDUCTION

30% LESS ONBOARDING EFFORT

100+ DEPLOYMENTS

PRODUCTION-PROVEN

Performance targets - agreed before Phase 1

- Integration cycle time: 20-40% reduction
- Partner onboarding effort: 30% reduction
- Regulatory reconciliation: measurable reduction, documented per cycle

Targets are based on observed results from production deployments. Specific targets for your engagement are agreed and locked before technical work begins.

Client example - Tier-2 manufacturing supplier

Three geographically separate plants needed unified ESG reporting. Monthly reconciliation consumed three full working days, done manually by two staff members. Vela Context DataHub was deployed across all sites in Month 3. By Month 6, reconciliation fell from three days to under four hours - an 83% reduction. The shared data model was reused for DPP compliance with no additional mapping work.

Track record

- 200,000+ devices connected worldwide across industry, smart cities, energy, buildings, and mobility
- 20+ years of IoT and context data experience
- ETSI NGSI-LD ecosystem contributor; aligned with EU Smart Data Models, Gaia-X, and Eclipse Dataspace Components (EDC)
- Led personally by Jure Lampe, Founder & CEO, from scoping through evaluation

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CONTROL

YOUR DATA.
YOUR INFRASTRUCTURE.
YOUR RULES.

ON-PREMISES OR SOVEREIGN CLOUD

NO HYPERSCALER DEPENDENCY

OPEN STANDARDS, NO LOCK-IN

GDPR / NIS2 COMPLIANT

YOUR TEAM CONTROLS EVERY STEP

“We already have SAP / MuleSoft / Azure.”

Vela Context DataHub does not replace them. Those tools handle data movement. We handle what the data means: shared definitions that must exist before data movement is useful across boundaries. Your tools continue working. We added the layer they were not designed to provide.

“We don’t want another vendor accessing our data.”

Deployed on your infrastructure, under your governance. Nothing crosses a boundary without your team’s policy decision. All models, configurations, and data remain yours. SenLab retains no access once deployed.

“What if we decide not to proceed after six months?”

No automatic continuation. No lock-in. At Month 6, documented performance evaluation. You decide; proceed, expand, or conclude - zero further obligation.

“Is this EU compliant?”

Built on ETSI NGSI-LD - the standard underpinning EU data space initiatives and Gaia-X. On-premises or sovereign cloud. No US hyperscaler dependency. Aligned with GDPR, NIS2, the Data Act, and emerging EU industrial data regulations.

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FOUNDATION

SIX MONTHS.
ONE SCENARIO.
YOUR DECISION.

SELECT ONE STARTER PACK

DEPLOY IN SANDBOX

MEASURE IMPROVEMENT

YOU DECIDE NEXT STEPS

Phase 1 - Define & Baseline (Month 1-2)

- Select your starter pack with our team
- Define shared data entities and relationships
- Agree and lock performance KPIs before technical work begins
- Align with enterprise security, governance, and data ownership

Phase 2 - Deploy & Connect (Month 3-4)

- Deploy in an isolated non-production environment
- Connect selected systems within agreed boundaries
- Implement controlled data exposure policies
- No modifications to existing enterprise platforms

Phase 3 - Measure & Decide (Month 5-6)

- Measure against KPIs agreed in Phase 1
- Document integration cycle reduction and effort saved
- Full written evaluation for your organisation's decision
- You decide; full deployment, expand scope, or conclude

Your first 30 days

WEEK 1	WEEK 2	WEEK 3	WEEK 4
Scoping session, starter pack selected, KPIs drafted	System inventory completed; KPIs locked; signed scope	Sandbox environment deployed; first system connected	First NGSI-LD entities live; baseline measurements recorded

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ENGAGE

YOUR TEAM, YOUR TERMS, YOUR FIRST STEP

FIXED-PRICE ENGAGEMENT

THREE STEPS TO START

NO HIDDEN COSTS

ABOUT SENLAB

Industry Engagement

€18,000 - €45,000 fixed-price for a six-month structured engagement. Exact investment locked before Month 1. Scope varies by systems connected and complexity. No variable costs. No commitment beyond the engagement period.

Subscription (continuation)

Continue with **Starter (€850/mo)** on shared infrastructure or **Professional (from €1,999/mo)** with a dedicated instance - your team's choice at Month 6, or any time after.

Start the engagement

- Step 1: 60-minute scoping session - select the starter pack, agree baseline KPIs
- Step 2: Fixed-price scope document with investment terms - delivered within one week
- Step 3: Deployment begins within four weeks of signed agreement

After Phase 3: your decision

Month 6 closes with a documented performance evaluation against your agreed KPIs. You decide; full deployment, second scenario, switch to subscription, or conclude. No automatic continuation, no lock-in.

About SenLab

Slovenian industrial IoT and data integration company, founded 2015, Ljubljana, EU. 100+ deployments across manufacturing, energy, buildings, smart cities, and mobility. ETSI NGSI-LD ecosystem contributor. Open standards, vendor-neutral architecture.

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EXECUTION

TECHNICAL APPENDIX

NGSI-LD COMPLIANT

EU SMART DATA MODELS

SOVEREIGN DEPLOYMENT

INDUSTRIAL-GRADE

FOR YOUR IT TEAM

This section is for your IT and architecture team.

Standards & Ecosystem Alignment

- ETSI NGSI-LD compliant context data model (EU standard)
- EU Smart Data Models for industrial entities: assets, materials, batches, energy, environmental events
- JSON-LD semantic representation - API-first architecture
- Compatible with Gaia-X, Eclipse Dataspace Components (EDC), and EU industrial data space frameworks

Core Architecture

- CASSIOPEIA - no-code data transformation engine; maps any source (CSV, Excel, JSON, ERP/MES exports, MQTT, OPC-UA) to NGSI-LD Smart Data Models
- LIBRA - production-grade NGSI-LD API gateway with five enforcement dimensions: attribute, entity type, scope, time, query
- NGSI-LD Context Broker (semantic core, ETSI-conformant implementation)
- Keycloak identity & access management; integrates with existing enterprise identity frameworks
- ClickHouse (PostgreSQL with TimescaleDB optional) for high-frequency historical storage
- Connector library for ERP, MES, PLM, IoT gateways, and external partner APIs
- Event-driven integration (REST, MQTT, OPC-UA, Kafka)
- Containerised - Docker / Kubernetes ready; on-premises or sovereign cloud compatible
- Built on **SandBoxOS** - versatile IoT operating system with 130+ pre-loaded open-source packages