

# CAPABILITY & PRODUCT OFFERING OVERVIEW

## Jotne Connect AS

Norwegian Software  
Development SME.  
Established 1994.

## Industries

- Defence
- Aerospace
- Space
- Manufacturing
- Built Environment

## Capabilities

- Open standards-based data interoperability
- Digital twin & lifecycle data foundations
- Simulation & engineering data management
- Semantic data modelling & ontology mapping
- Long-term digital archiving & retrieval
- AI Enablement

## Services

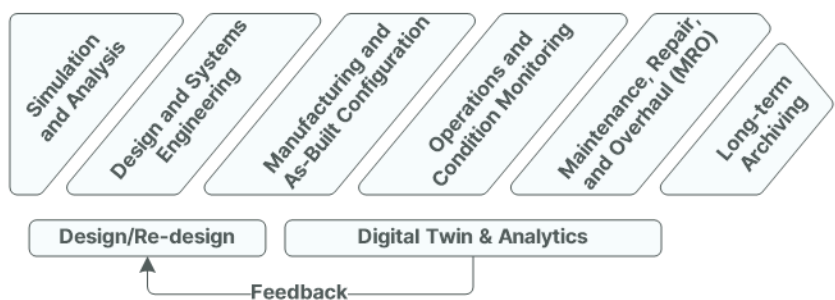
- Modular software development
- Standards implementation
- Systems integration
- Data migration, cleansing & transformation
- Solution tailoring & configuration



Jotne Connect specialises in open standards-based digital engineering and built environment solutions. Trusted by leading organisations worldwide, including Lockheed Martin, Airbus, Leonardo, BAE Systems and the European Space Agency, we enable interoperability, lifecycle integrity and digital twins across complex system environments.

Our capabilities span engineering and built environment lifecycles, from simulation and design through manufacturing, production and as-built configuration, into operations, condition monitoring, maintenance and long-term archiving.

We support digital twin environments that connect engineering data foundations with operational data streams, enabling traceable configuration control and informed decision-making throughout the lifecycle with twin- and AI-enabled feedback loops.

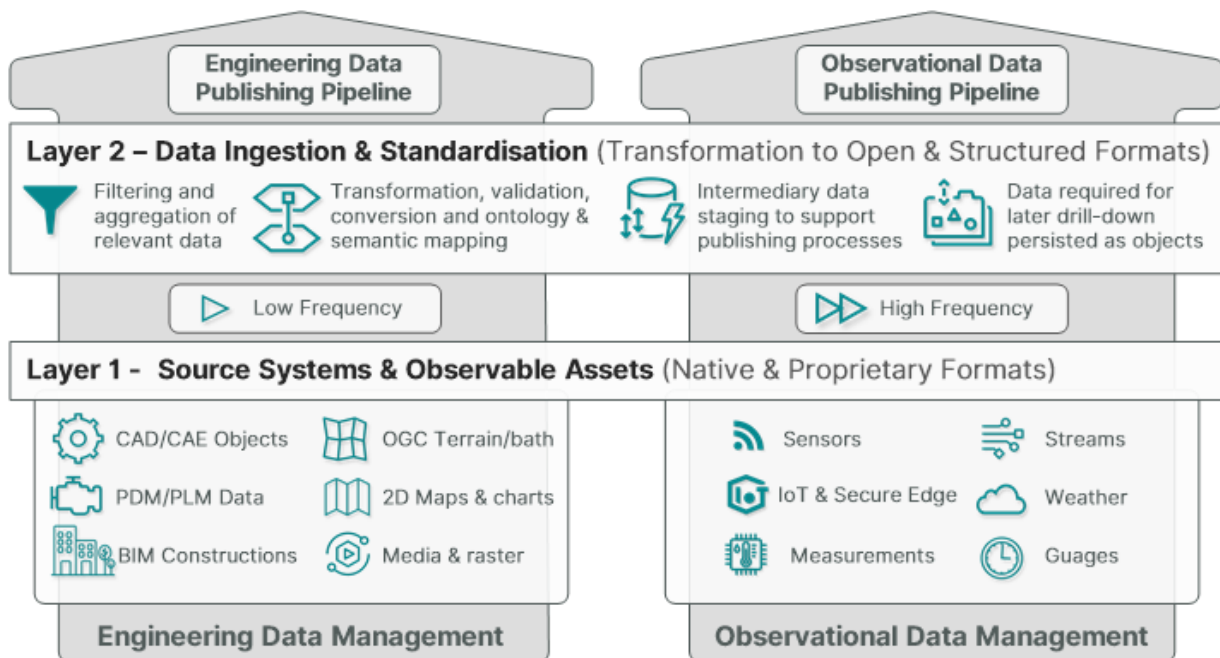


This fact sheet summarises our capabilities across data pipelines, digital twin foundations, integration environments and AI enablement, as well as selected reference platforms.

Engineering and observational data share similar processing but originate from different environments. Engineering data is lifecycle-controlled and configuration-driven, while observational data is time-based and governed by different network segmentation.

**Engineering Data Management** - Delivered through modules built on open standards, such as ISO STEP 10303 and Building SMART IFC, enabling structured interoperability across lifecycle systems.

- Ontology mapping & data normalisation
- Validation & verification of complex structured data
- Product configuration & version control
- Structured lifecycle data exchange (import, export, migration & cleansing)
- Product structure & BOM management
- Technical Data Package management
- Simulation & engineering data integration
- High-performance Object-Oriented databases for large structured datasets

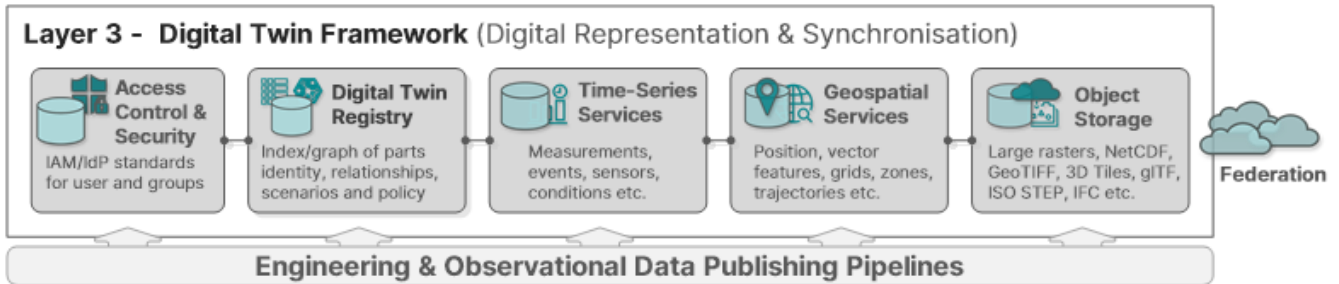


**Observational Data Management** - Delivered through datastream-processing modules for secure ingestion and contextualisation of time-based operational & MRO data originating from Purdue-segmented environments, ensuring data trustworthiness and provenance.

- Secure data ingestion from distributed observable systems
- Stream filtering, aggregation & transformation
- Event normalisation & contextual linking to engineering assemblies
- Time-series storage & state sync
- IoT & edge device integration with device identity and zero-trust validation
- Certificate-based authentication & trust boundary integration
- Event publication & controlled downstream distribution

**Digital Twin Framework** - Delivered through modular twin services aligned with ISO 23247 digital twin principles and ISO 30173 interoperability concepts, establishing an authoritative and synchronised representation of assets, configurations, and operational state across systems. The framework enables semantic and object-level linking, supporting structured deep-dives from downstream consumption and application layers.

- Digital Twin registry & identity management
- Authoritative configuration & state synchronisation
- Contextual linking of engineering, operational & MRO data
- Semantic & object linking
- Persistent lifecycle traceability & auditability
- Role-based access control & security governance
- Federated twin integration across domains
- Geospatial services when relevant



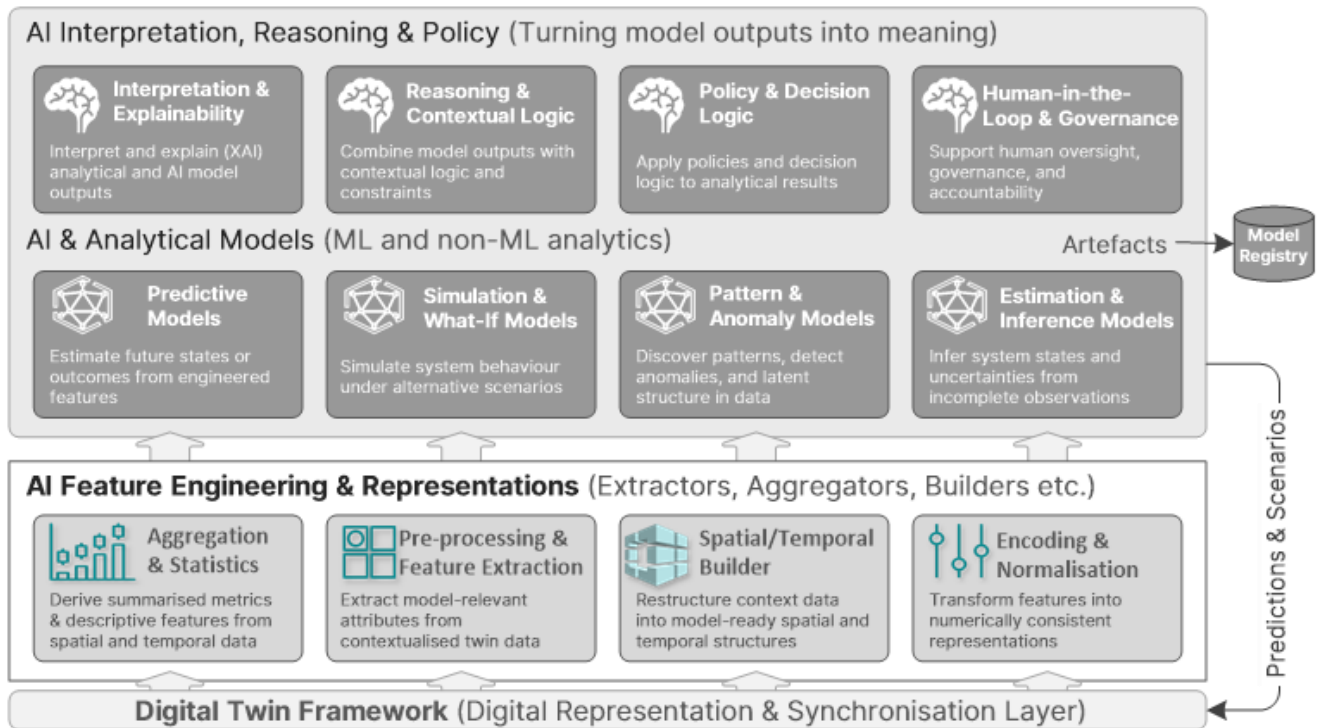
**Consumption & Application** - Supported through modular interface and integration services that expose digital twin state, events, and contextualised data to users and external systems in a controlled and structured manner.

- Structured twin data exposure & query services
- Context-aware data binding for visual and analytical interfaces
- Temporal state management & historical replay support
- Event-driven distribution & subscription infrastructure
- Secure API management & partner integration services



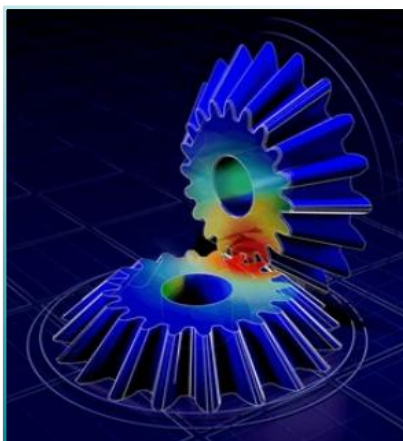
**AI & Analytical Enablement** - Supported through analytical enablement services that prepare, structure, and govern digital twin data for diverse AI and analytical use cases. The focus is on data readiness, feature engineering, provenance, and governance foundations required for trustworthy and context-aware analytics across varying objectives and domains.

- Feature engineering & model-ready data preparation
- Aggregation, transformation & contextual feature extraction
- Provenance tracking & data lineage for trustworthy AI
- Governance support for compliant and explainable analytics
- Structured model input pipelines (spatial, temporal & graph-based)
- Data quality validation & integrity controls for AI workflows



**TruePLM** - Engineering data management system used to integrate, govern, and deliver trusted product digital-twin information across systems and suppliers.

- Engineering data platform that establishes and maintains a trusted digital twins across design, supplier, operational, and lifecycle environments
- Unified, ontology-driven asset model combining engineering, operational, and sensor data into a governed single source of truth with consistent lifecycle semantics
- Configuration-controlled Technical Data Package (TDP) management supporting milestone deliveries, auditability, and contractual traceability
- Open APIs and data services enabling advanced analytics, AI/ML pipelines, and industrial application development



**OpenSimDM** - Open standards-based simulation and engineering analysis data management platform.

- AP209ed2-based multidisciplinary analysis & simulation data management
- Linking of CAD, simulation and test data
- Archival Information Package (AIP) preparation
- Interoperability with structural and thermal analysis formats
- 3D visualization and cross-model comparison
- Lifecycle traceability of design, simulation and analysis results

**Express Data Manager & Core** - Model-driven interoperability engine

- High-performance Express-based schema-drive object oriented database engine
- Data validation and rule execution framework
- Implementation of ISO 10303 and related standards (e.g. AP242)
- Development toolkit (EDMsdk) for custom applications and modules
- Data exchange, migration, integration, and conversion support



# Reference Platforms

## Building SMART / Open BIM

**EnterpriseBIM** - Open BIM model server and lifecycle data management platform (IFC-based).

- buildingSMART-compliant IFC model server
- Schema-based validation and model rule checking
- Partial model check-in / check-out and merging
- Integrated 3D model viewing and reporting
- Structured BIM lifecycle data persistence



**EDMworkOrder** - Work order and maintenance management module integrated with BIM.

- Work order and task management linked to BIM objects
- Planned and condition-based maintenance
- Budget and cost tracking
- Role-based access control
- Project and activity planning with visualization

**EDMissueDB** - Issue management module integrated with BIM and BCF

- Issue and task tracking linked to BIM objects
- BCF import/export and round-tripping
- Configurable workflows and dashboards
- Map-based and 3D-integrated issue visualization
- Multi-user access control



**EDMcatalog** - Module for structured registry of building systems and components.

- Central catalog of systems and products
- Linking catalog items to BIM model objects
- Structured component data management
- Support for lifecycle traceability
- Controlled data access and configuration