Think brighter

Brightly introduction
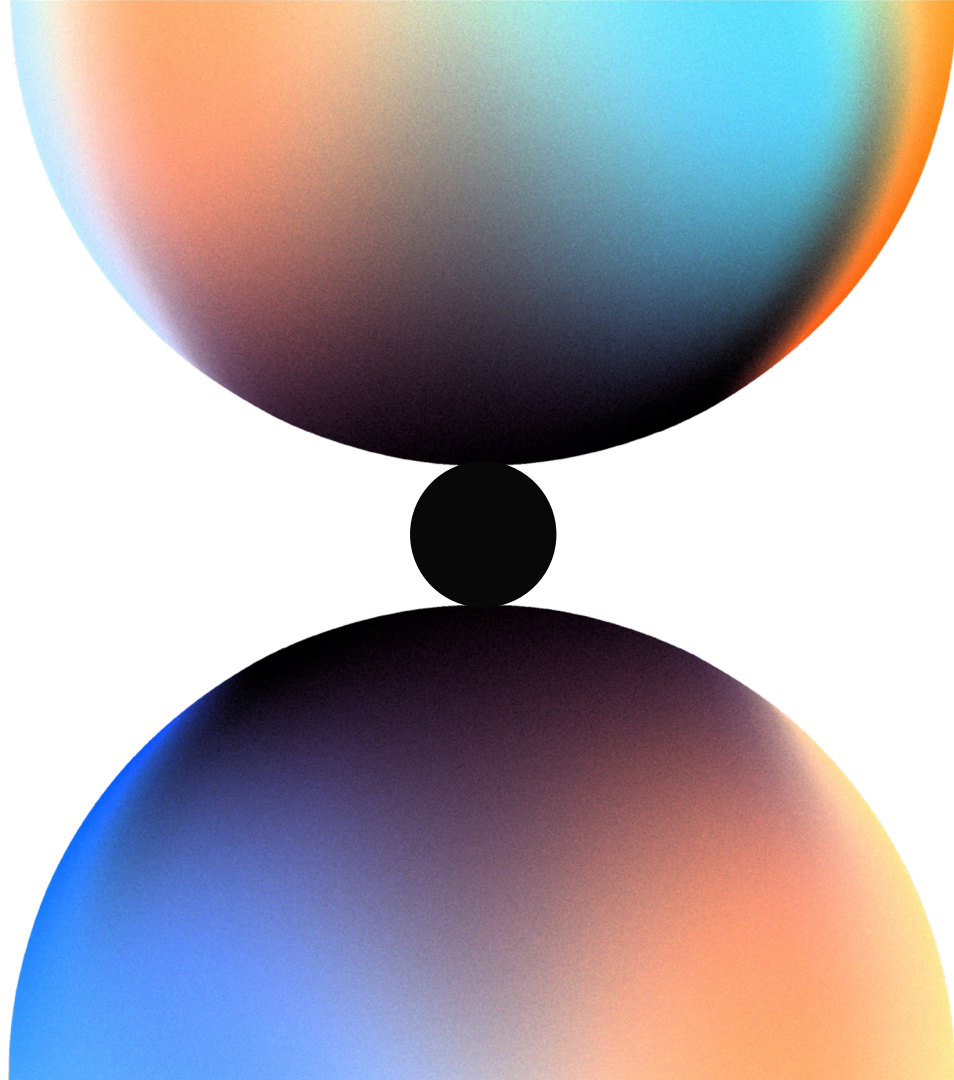
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We are Brightly

Strategic technology partner that thinks brighter

What we do?
Empower businesses and people to unlock brilliance by developing end-to-end digital, data, and IoT solutions.

We're a multidisciplinary community of creative software developers, innovative data engineers, and data-driven designers. We thrive in complex data landscapes, and our expertise ensures a seamless transformation of raw data into valuable insights and pioneering solutions to enable a brighter future.

Founded in 2020
Our team has developed many industry-changing data- & AI-driven digital solutions and cloud data implementations for large enterprises, for example, in the process industry, machinery, media, finance, retail, logistics, and energy.
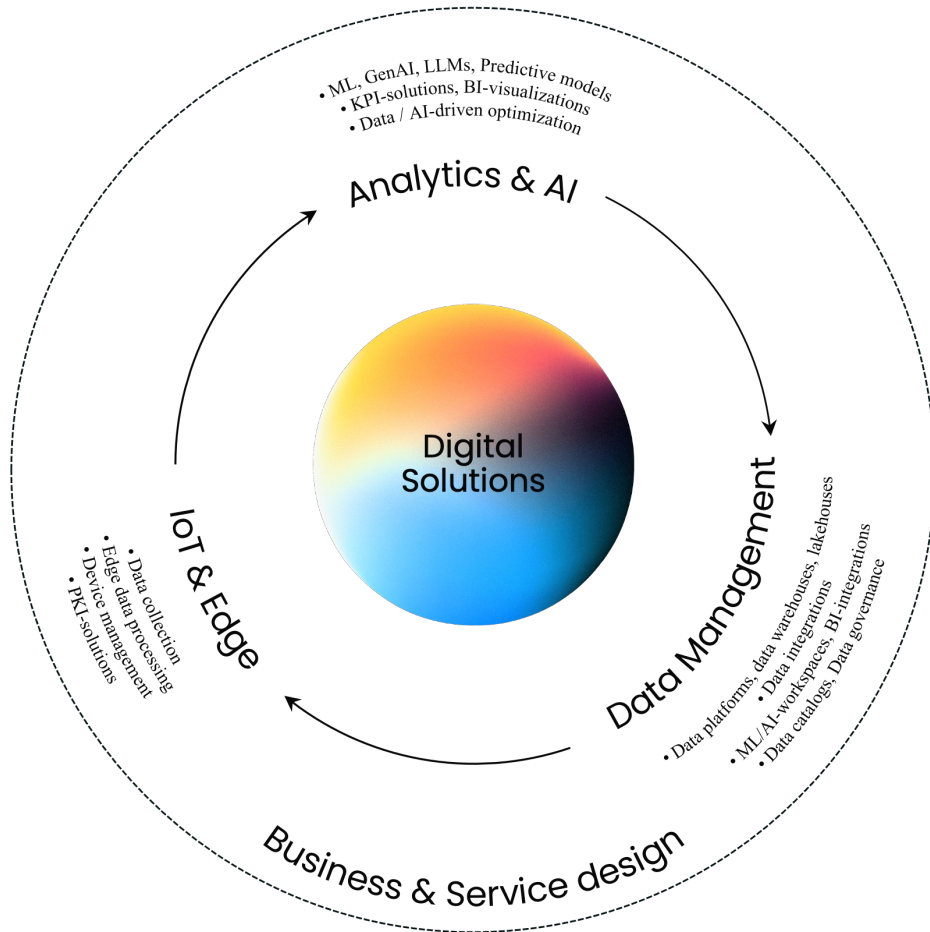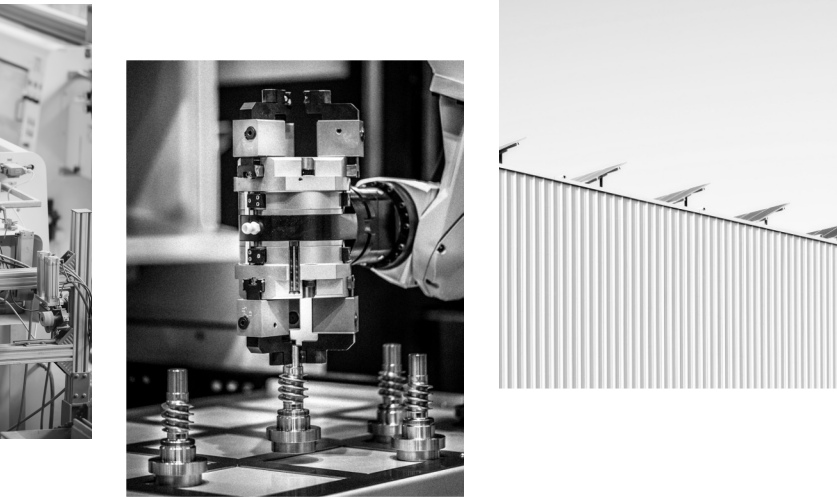
⚲ Helsinki
Baden-Baden
Amsterdam
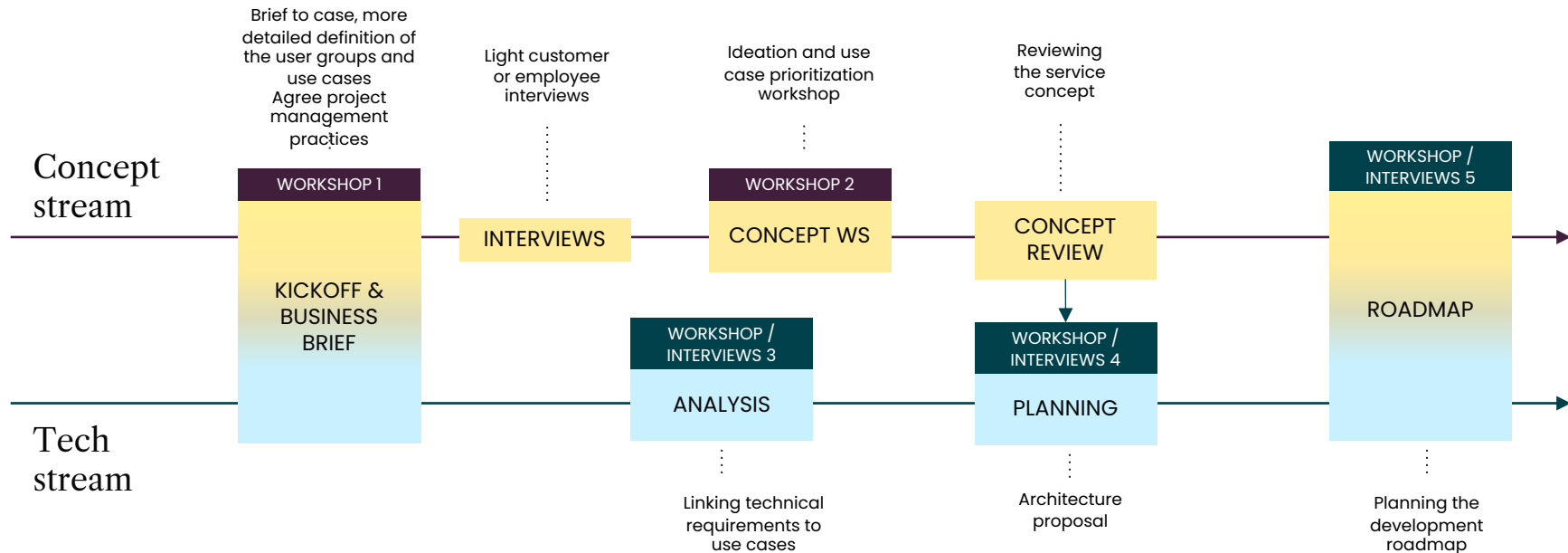Tampere
Oulu
Turku

↗ Team of 100
& Growing

✛ 6000+ experts in our
Fusion-ecosystem

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What we do

Brightly focuses on industrial solutions, building and modernizing industrial data platforms, and designing and developing digital solutions utilizing industrial data.

Analytics & AI
- ML, GenAI, LLMs, Predictive models
- KPI-solutions, BI-visualizations
- Data / AI-driven optimization

Data Management
- Data platforms, data warehouses, lakehouses
- Data integrations, BI-integrations
- ML/AI-workspaces, Data integrations
- Data catalogs, Data governance

IoT & Edge
- Data collection
- Edge data processing
- Device management
- PKI-solutions

Business & Service design

Digital Solutions

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Discover, define and create the concept

Brief to case, more detailed definition of the user groups and use cases
Agree project management practices

Light customer or employee interviews

Ideation and use case prioritization workshop

Reviewing the service concept

Concept stream

WORKSHOP 1

WORKSHOP 2

WORKSHOP / INTERVIEWS 5

INTERVIEWS

CONCEPT WS

CONCEPT REVIEW

KICKOFF & BUSINESS BRIEF

ROADMAP

Tech stream

WORKSHOP / INTERVIEWS 3

WORKSHOP / INTERVIEWS 4

ANALYSIS

PLANNING

Linking technical requirements to use cases

Architecture proposal

Planning the development roadmap

- Planning phase is typically done in 4 weeks (depending on the availability of customer's experts)

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Data Governance

ACCOUNTABILITY	DISCOVERABILITY	DATA QUALITY AND LIFECYCLE MANAGEMENT	SECURITY

Data ownership

- Define who are the owners of the datasets.
- How are responsibilities shared in the domains?
- Business domain vs. IT/OT ownership
- What does the ownership mean in practice?

Data stewardship

- Define who are the persons that oversee the data management practices and ensure that governance practices are met.

Discoverability

- Metadata and data lineage that support the discovery of datasets and how they are linked together.
- Interface where users can find the relevant datasets and how to use them.

Tools for discoverability

- Evaluate options for better data discovery. This can include complete data catalog products or functionality that is included in the current tools

Data quality

- Review and refine data quality practices. It is important to put emphasis on data quality management and create feedback loops to improve data quality.

Data lifecycle management

- Policies for data lifecycle management including retention, archiving and deletion.
- Meet compliance requirements and optimize costs.

Security and auditability

- Access control and authorization. Who has access to see the data?
- Data classification and masking based on sensitivity.
- Compliance with regulations and standards such as GDPR.

Data classification and masking

- Data sensitivity/classification levels.
- Masking techniques and policies.
- Compliance requirements, especially related to data masking.
- Audit and monitoring.

Chalenges

Raw data formats and data models vary in all cases. Different systems may use different naming conventions for the same entities.

Data Quality: Incorrect or missing data.

Integrating Data: Integrating data from various systems (e.g., ERP, MES, SCADA) that use different data formats.

Security: Protecting sensitive industrial data from cyber threats is critical, especially when integrating multiple systems.

System Updates and Upgrades: Adding and removing objects or upgrading or changing systems can disrupt data integration and require significant rework.

Regulatory Compliance: Adhering to industry regulations and standards adds another layer of complexity to data modeling, e.g., data integrity in pharmaceuticals.

Data modelling and contextualization

Data contextualization enables the analysis of large quantities of industrial data from several sources. It makes it easier for users to utilize the data and create datasets.

Contextualized data creates a foundation for data analytics and AI models.

Contextualization of industrial data is mostly done using semantic and dimensional models.

Contextualization means, for example:

- Equipment hierarchy
- Sensor meta data (engineering units, range, alarm limits, etc.)
- Batch IDs
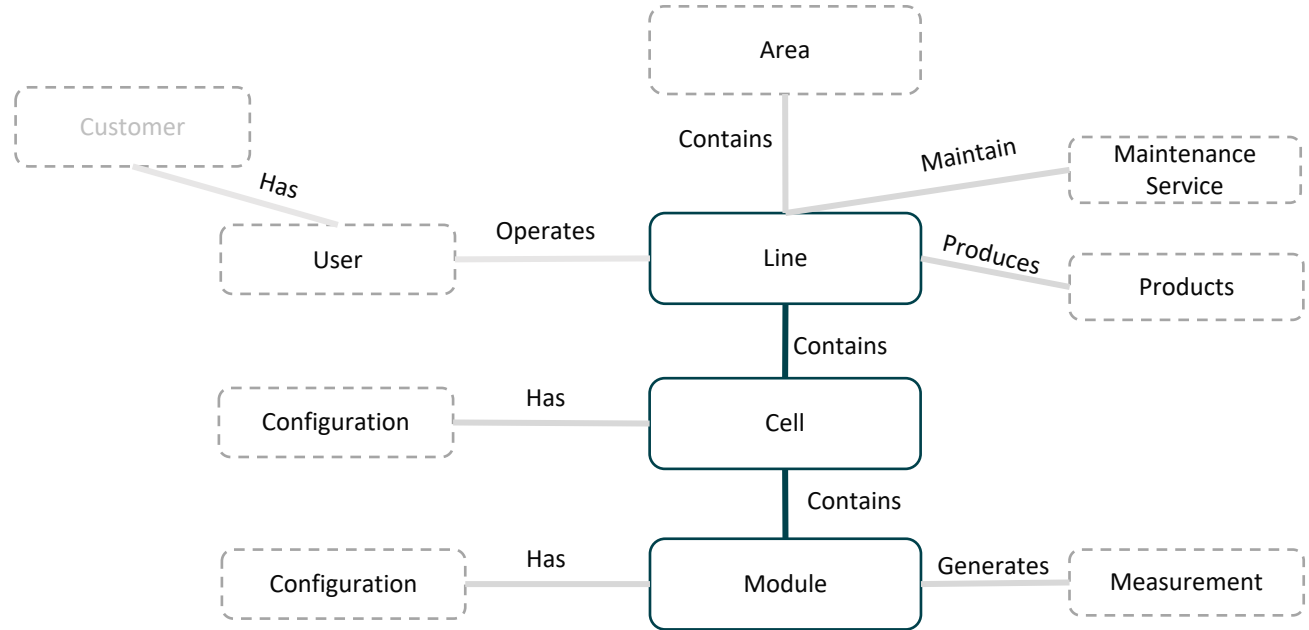- Process status or phases

Model sources

For example, the equipment models based on ISA95:

- ERP/CMMS (Functional locations)
- SCADA/PLC Naming conventions and models like PackML
- OPC UA Companion Specifications
- MES models
- Process Historian

Other models:
- Batch
- Material
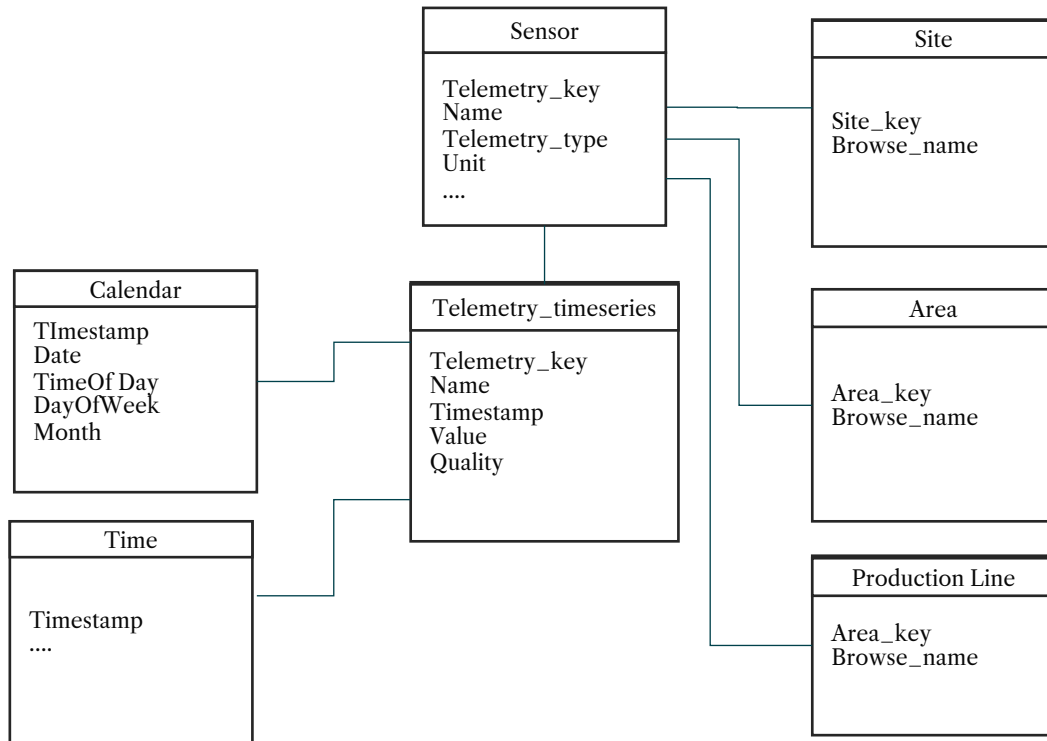- Personnel
- ….

Conceptual Modelling

Logical model for manufacturing data
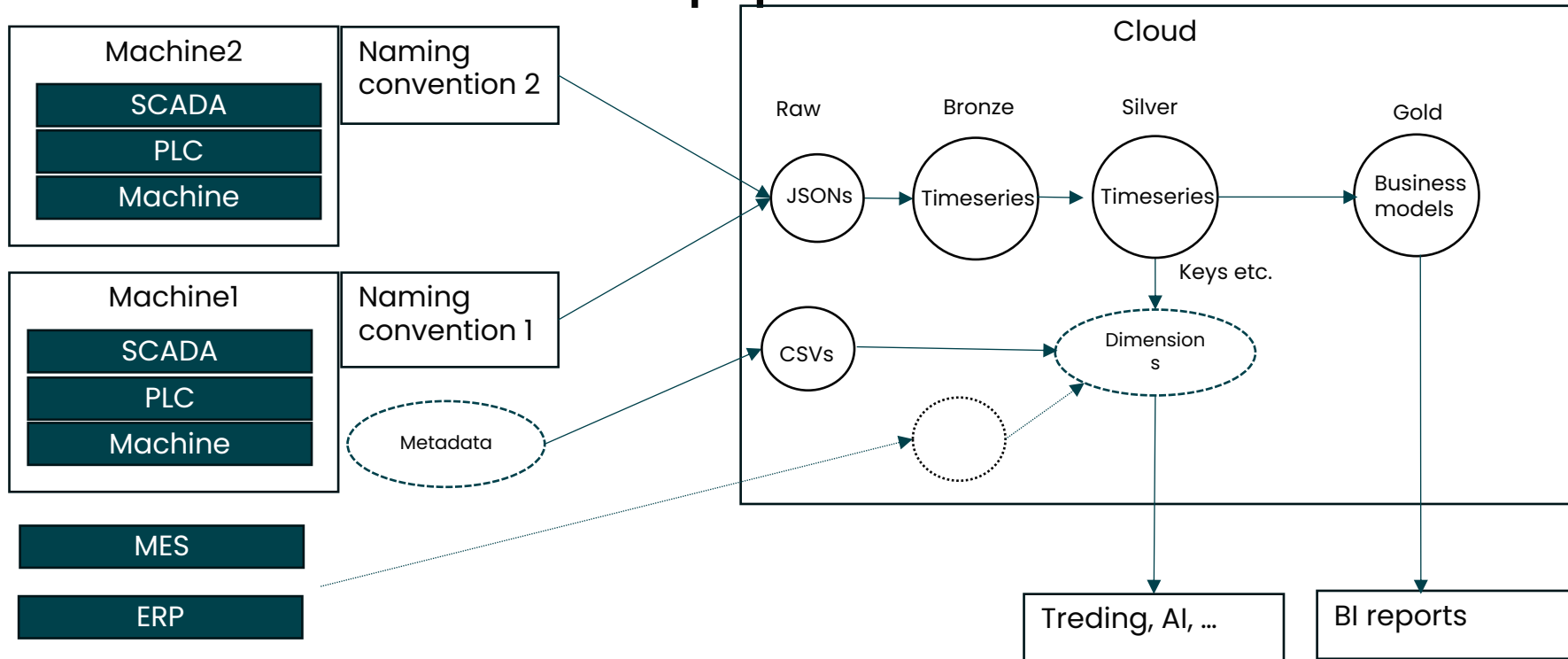
Common models
Hierachical equipment model
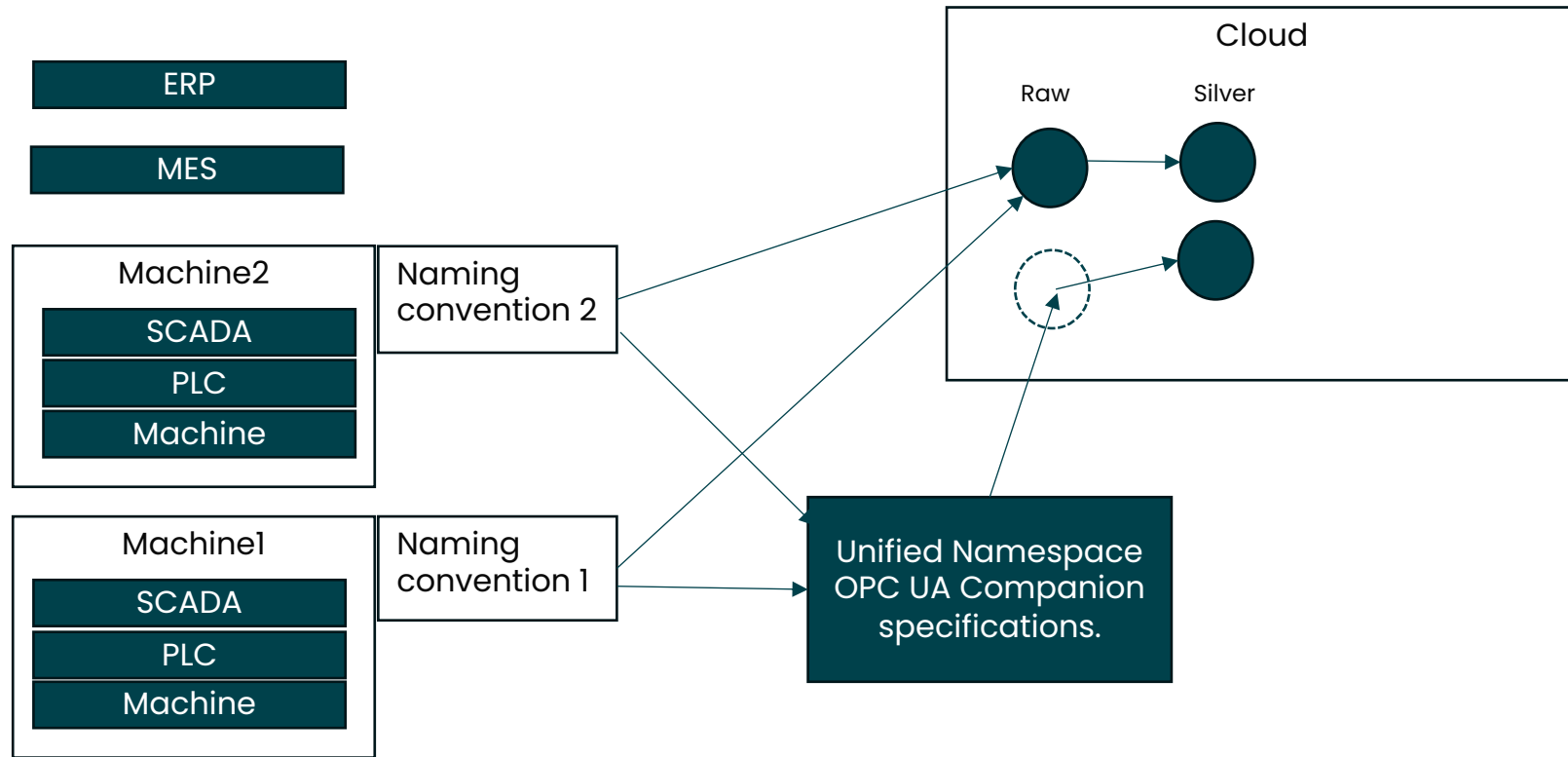Material models
Personnel model
....

Business Models
Business models
Cost management
Operational Effiency
S&OP
....

Sensor
Telemetry_key
Name
Telemetry_type
Unit
....

Site
Site_key
Browse_name

Calendar
TImestamp
Date
TimeOf Day
DayOfWeek
Month

Telemetry_timeseries
Telemetry_key
Name
Timestamp
Value
Quality

Area
Area_key
Browse_name

Time
Timestamp
....

Production Line
Area_key
Browse_name

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Common IoT Data pipelines

Modelled data

ERP

MES

Machine2
- SCADA
- PLC
- Machine

Naming convention 2

Machine1
- SCADA
- PLC
- Machine

Naming convention 1

Cloud

Raw   Silver

Unified Namespace OPC UA Companion specifications.
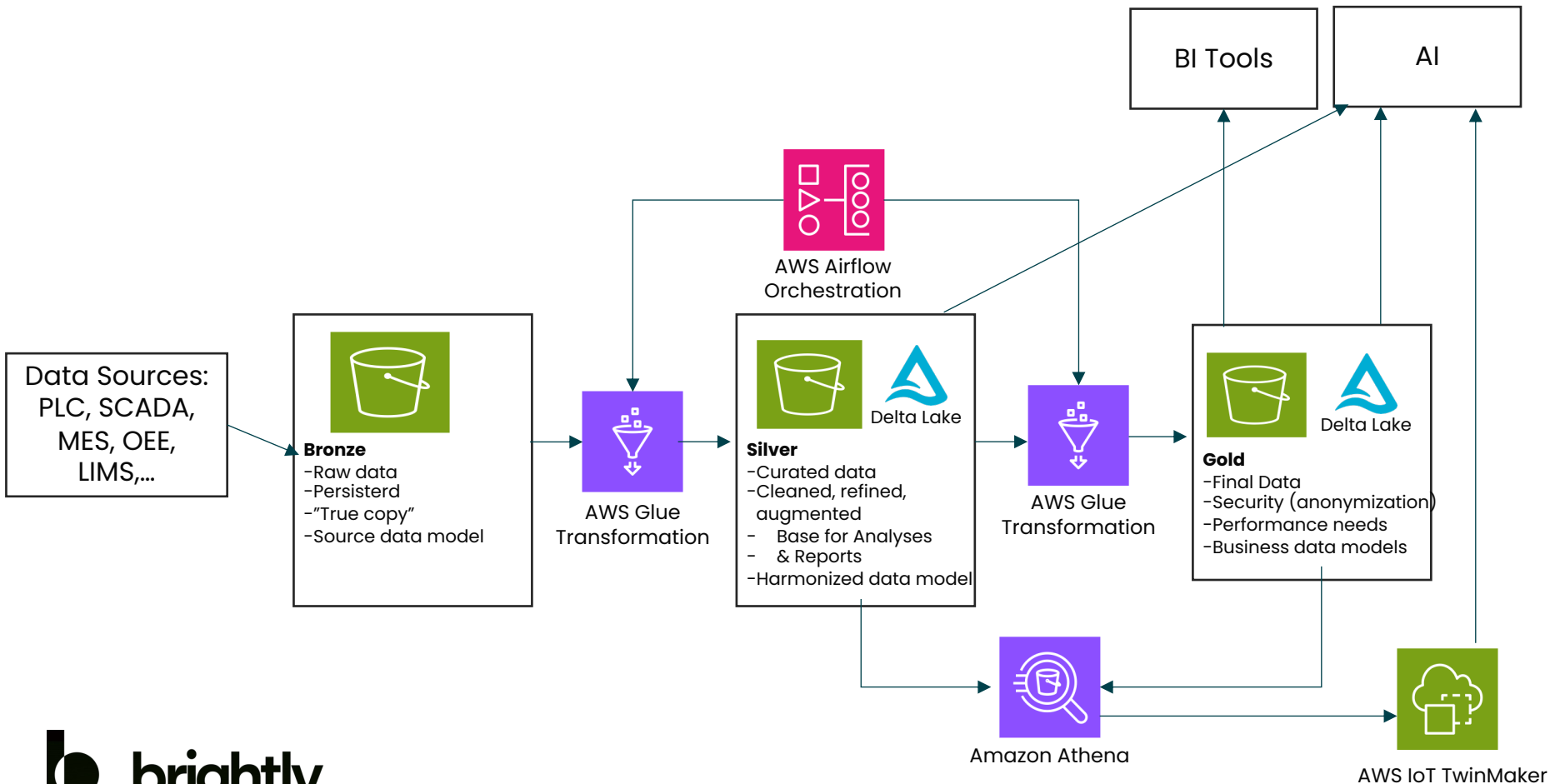
Large scale Architecture

Web And Mobile Apps

GenAI Solutions

OpenAI

Apis

Power BI

ORCHESTRATION & MONITORING

Databricks Workflows

IoT Hub

Databricks Sql

Automation
OPC UA ->MQTT

ERP

LIMS

MES

Data Factory

DELTA LAKE
Bronze Raw Ingestion

Databricks Data transformation Job

DELTA LAKE
Silver Filtered, Cleaned, Augmented

Databricks reporting model Job

DELTA LAKE
Gold Business Level Aggregates

Api Backend

Application Integrations

Databricks
Unity Catalog
Documentation & Lineage & Governance

Data Factory

Application integrations

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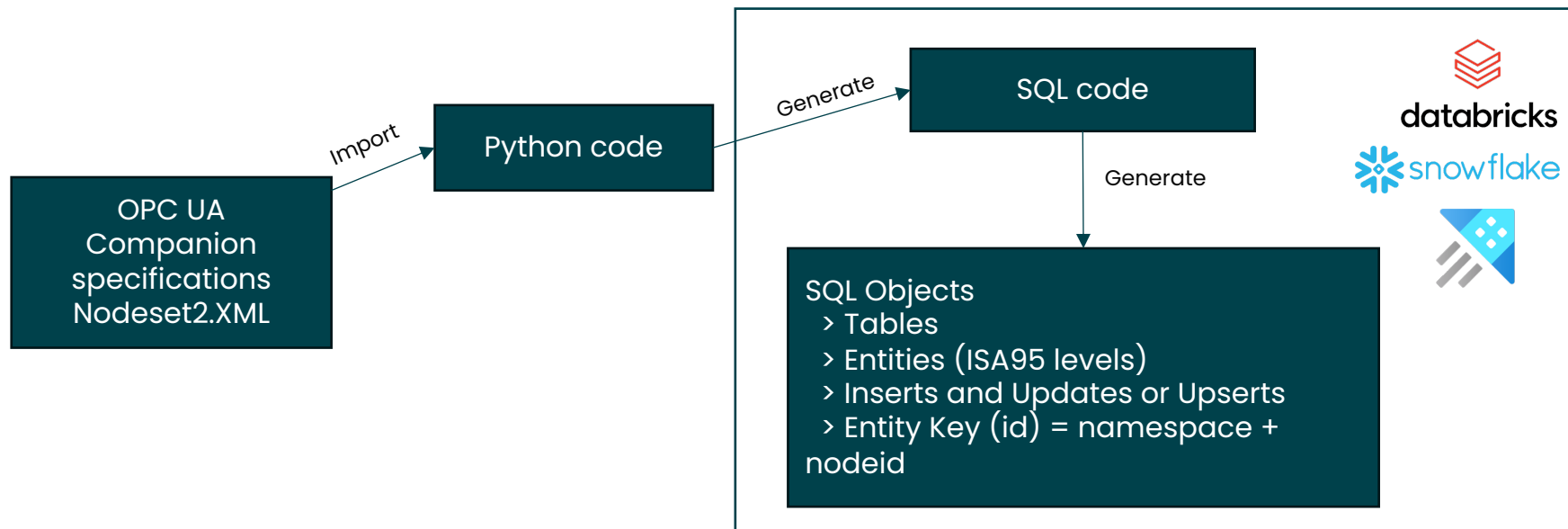
OPC UA Companion specification to logical model

IoT Insights Engine

Normet is a global leader in underground mining and tunnelling technology, providing equipment and services to customers worldwide. The company generates a vast amount of IoT data from its machinery and customer accounts, presenting an opportunity to unlock valuable insights.

Normet evaluated possibilities for democratizing data access within the company in a secure and easy-to-access way. The need was to enable especially non-technical users to derive insights from the IoT data without the need for specialized training or help from their data team.

Brightly integrated Normet's existing data platform with Databricks Genie, an AI intelligence platform and developed domain and use-case specific AI instructions to tailor the Genie platform for Normet. This system enables Normet's technical *and non-technical* users to unlock actionable insights from global IoT data on machinery and customer accounts using simple, natural language queries.

> "What was surprising for us is that the actual implementation with [Brightly's team] took only a few days - it basically worked out of the box! The technical proof of concept was well done, and we are satisfied with that. Now the ball is on our side to start integrating this into our processes in a way that it starts making business value."

Pekka Jaarinen, Director of Digital Services

Brightly's services:
- Data Engineering
- Data Integrations
- AI Engineering

(GenAI)　(Databricks)

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