About me

"Field technicians don't need more data - they need the right information at the right time. With Knowledge Graphs, we can finally deliver intelligent service assistants that truly assist."
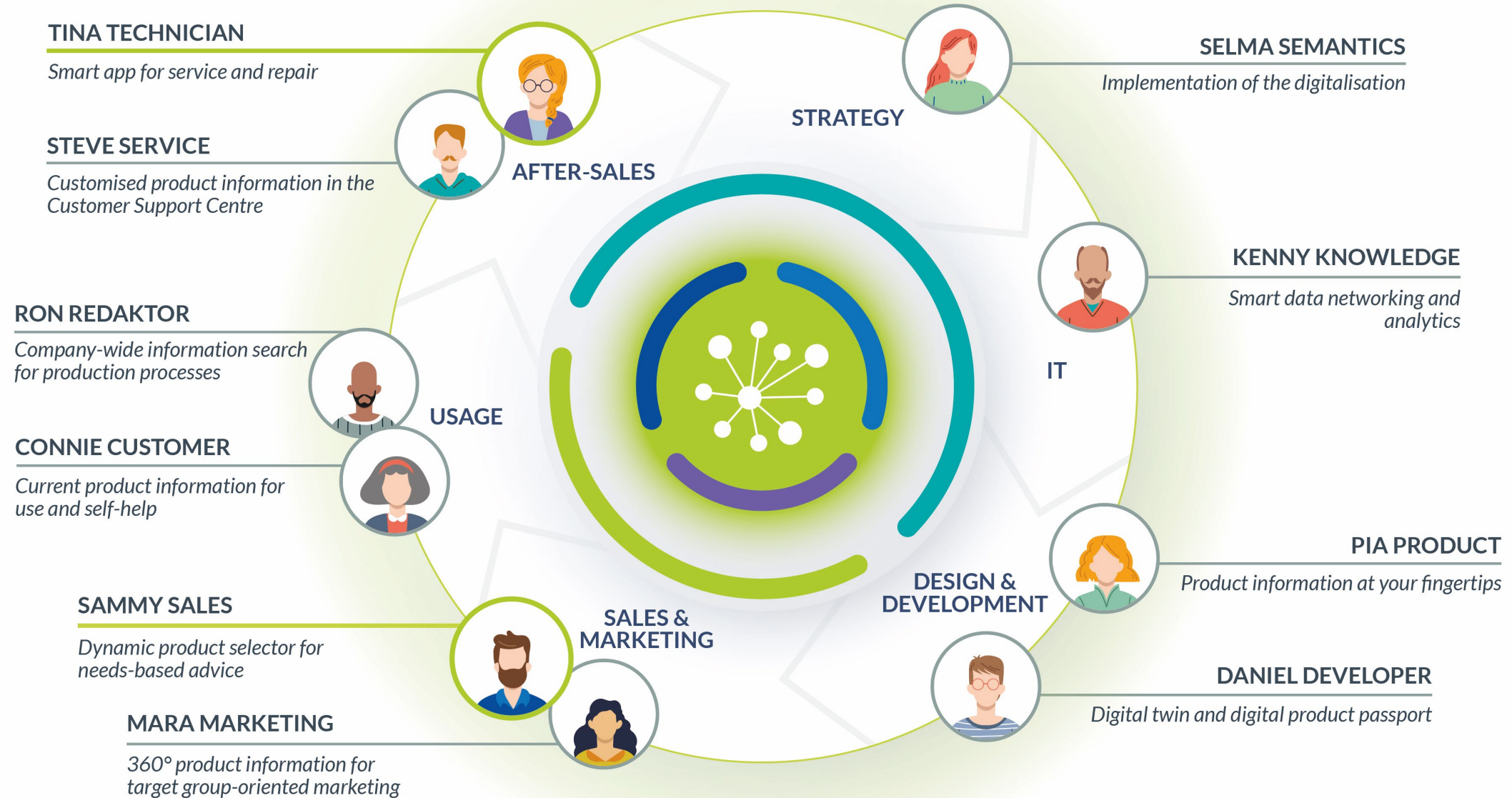
Karsten Schrempp | Founder & Managing Partner

The Challenge of Information Management

- Management of constantly increasing volumes of information

- Information utilisation due to different data formats

- Integration of information from different information silos

- Reliability of information provided

- Manual processes for information provision and utilization

PANTOPIX SPHERE

Product Lifecycle

TINA TECHNICIAN

Smart app for service and repair

STEVE SERVICE

Customised product information in the Customer Support Centre

RON REDAKTOR

Company-wide information search for production processes

CONNIE CUSTOMER

Current product information for use and self-help

SAMMY SALES

Dynamic product selector for needs-based advice

MARA MARKETING

360° product information for target group-oriented marketing

STRATEGY

AFTER-SALES

USAGE

SALES & MARKETING

DESIGN & DEVELOPMENT

IT

SELMA SEMANTICS

Implementation of the digitalisation

KENNY KNOWLEDGE

Smart data networking and analytics

PIA PRODUCT

Product information at your fingertips

DANIEL DEVELOPER

Digital twin and digital product passport

PANTOPIX SPHERE

Digitalisation
Transforms business processes with the help of digital technologies.

Digital Twin in KG
Allows a digital product image to be transferred to the Knowledge Graph.

360° product information
Provides a centralized overview of all relevant product data for marketing.

Information at the touch of a button
Provides quick access to market analyses and product development.

Intelligent service app
Recommends the best solutions for troubleshooting and repairs.

STRATEGY

PRODUCT DEVELOPMENT

MARKETING

PRODUCT MANAGEMENT

SERVICE

EMPOWERING YOUR DIGITAL TRANSFORMATION

IT

ENGINEERING

TECHNICAL COMMUNICATION

END USER

SALES

Industry 4.0 applications
Optimizes production and processes through networking and data analysis in real time.

Design and Development
Integrates product-related information from suppliers for the digital product passport.

Authors Co-Pilot
Supports research, product comparison and content creation via company resources.

Content Delivery Portal
Provides personalised content directly from a central data source.

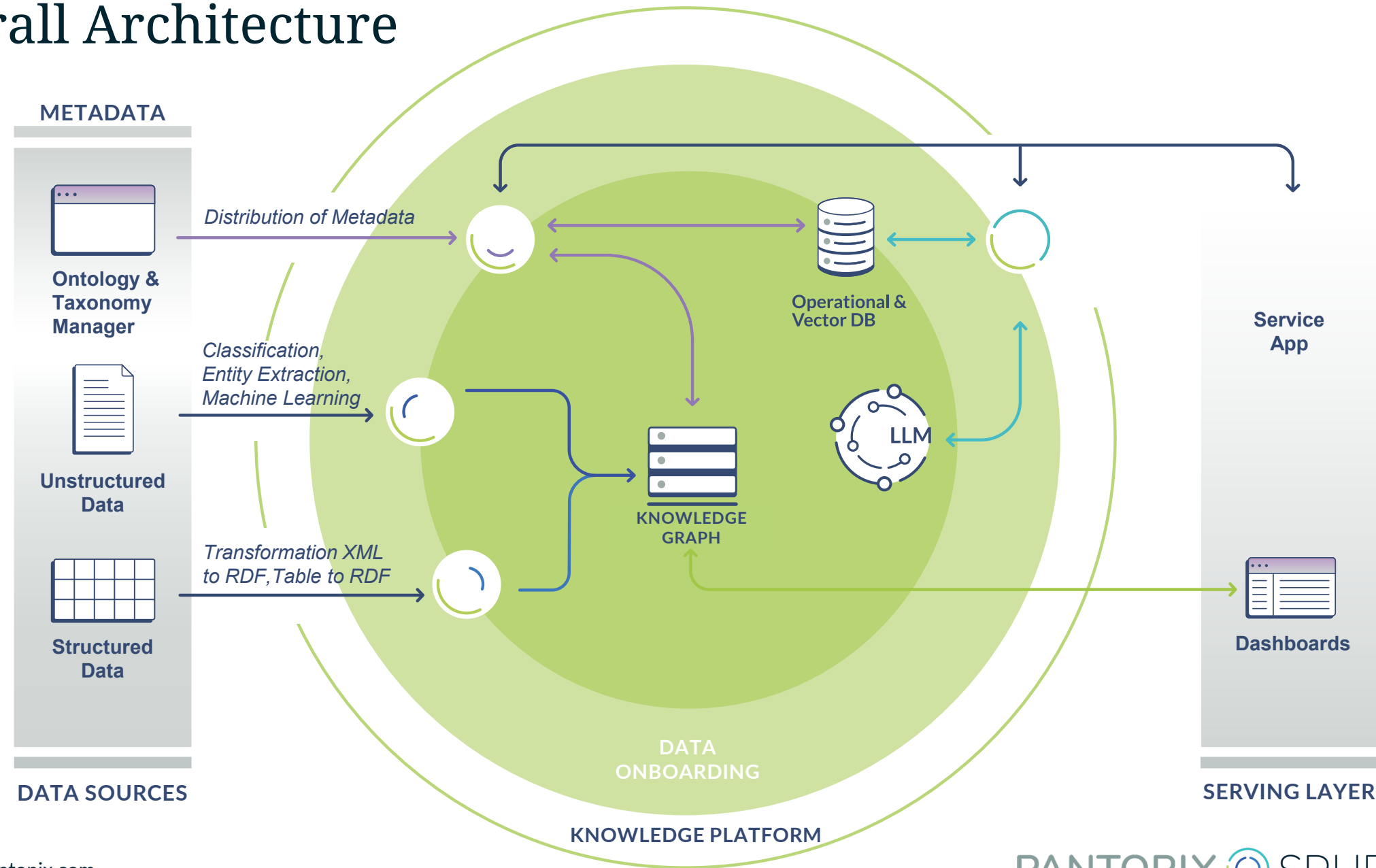**Product catalogue and selector**
Enables easy selection and presentation of the right product.

Overall Architecture

METADATA

- Ontology & Taxonomy Manager
- Unstructured Data
- Structured Data

DATA SOURCES

Distribution of Metadata

Classification, Entity Extraction, Machine Learning

Transformation XML to RDF, Table to RDF

Operational & Vector DB

KNOWLEDGE GRAPH

LLM

DATA ONBOARDING

KNOWLEDGE PLATFORM

Service App

Dashboards

SERVING LAYER

PANTOPIX SPHERE

Knowledge Graph

- Networking and virtualisation of structured and unstructured data and 'information silos'

- Integration of diverse information through automated classification, text mining and auto-tagging of information

- 360° knowledge modelling in the company

- Linking corporate knowledge with 'public knowledge'

- Knowledge model (controlled vocabulary, one or more ontologies)
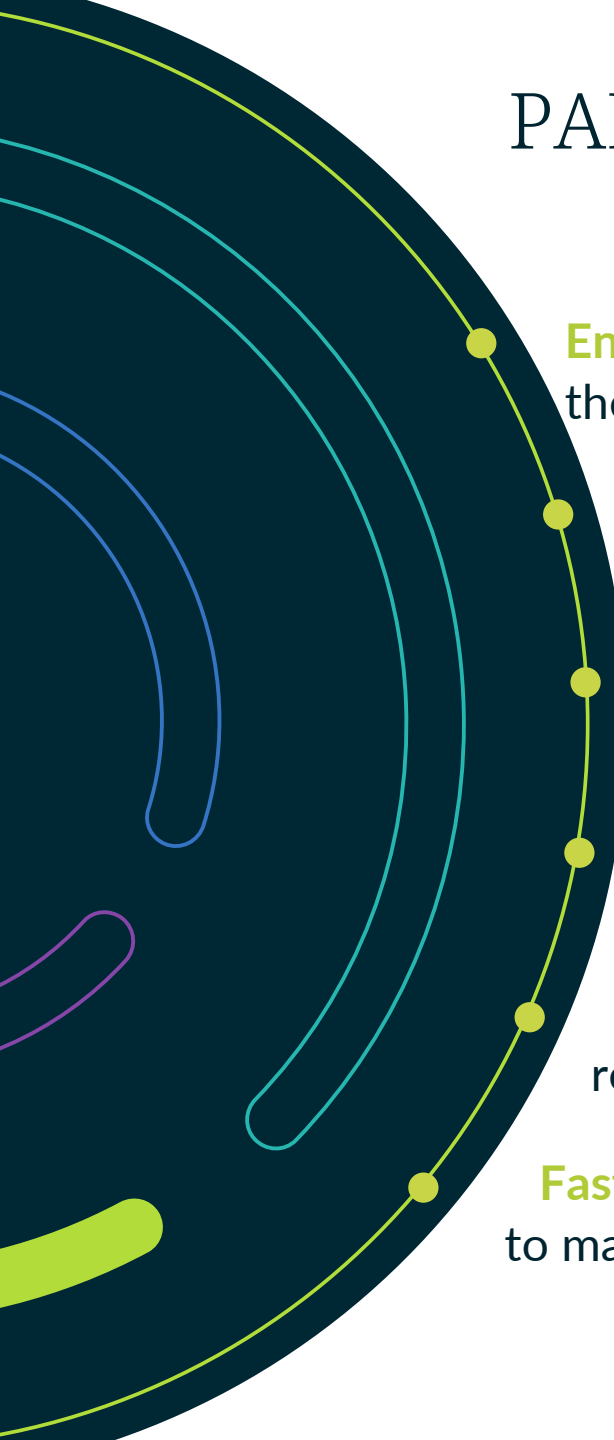
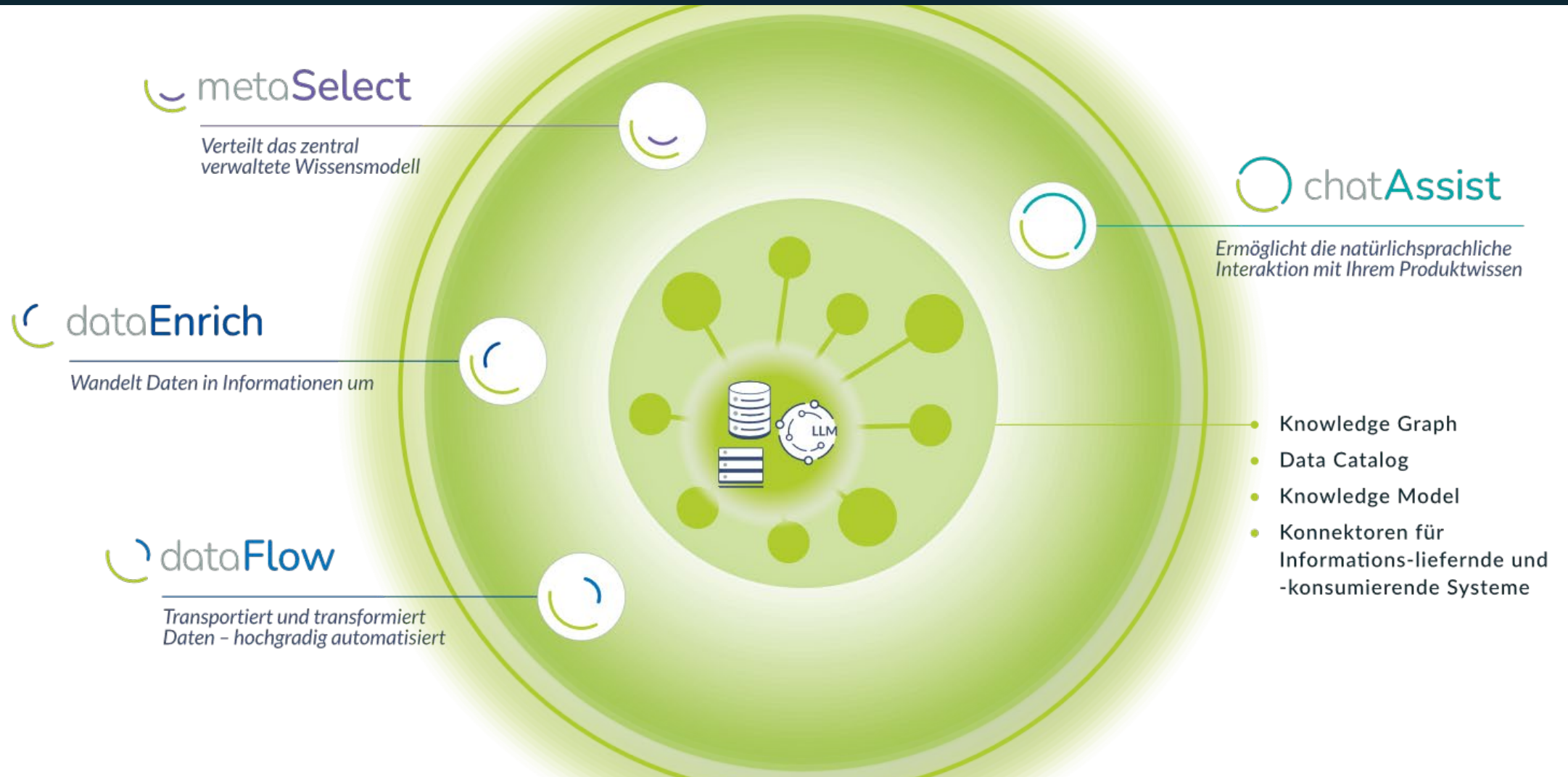- Instance data to make knowledge of a domain available
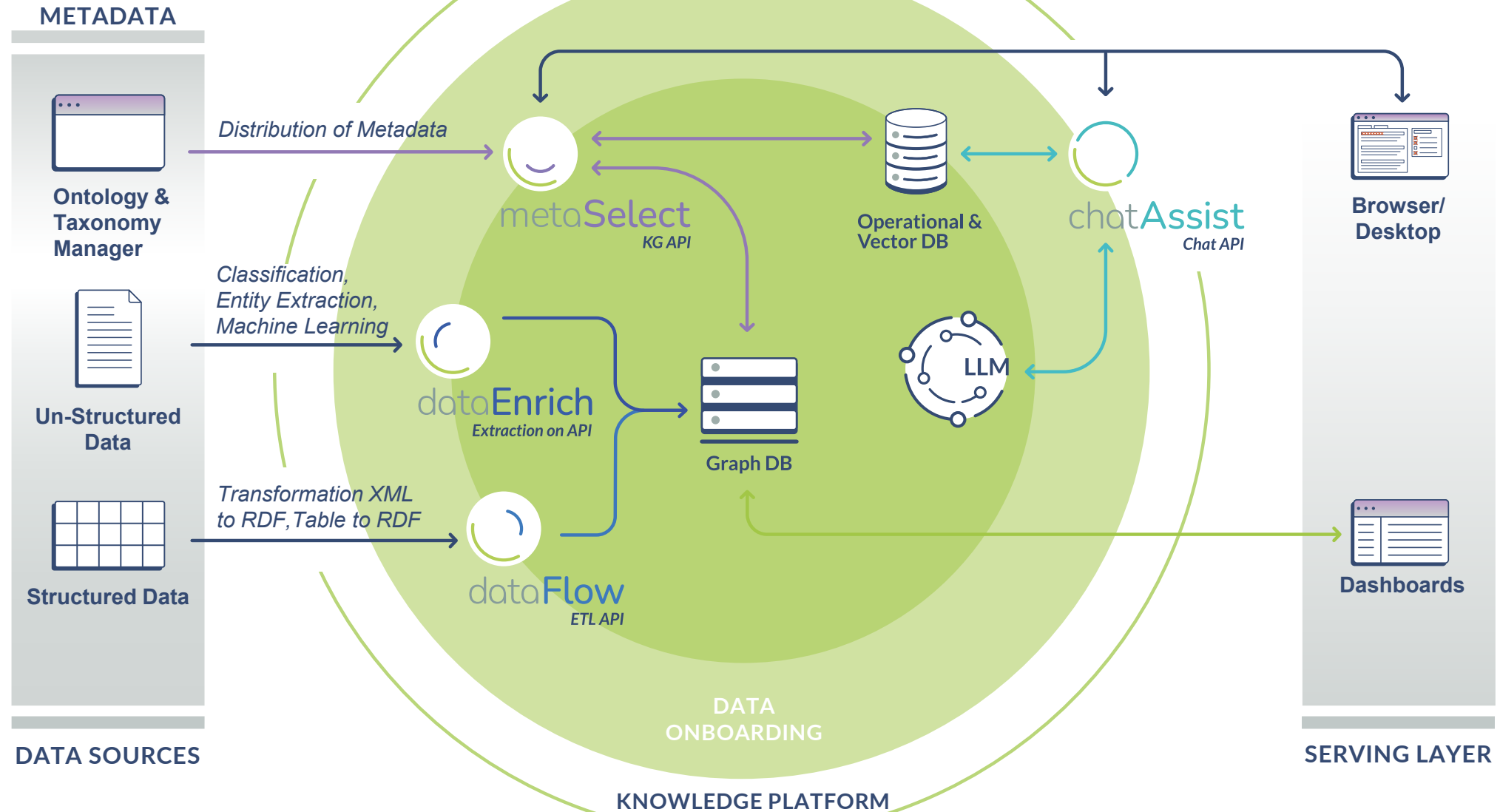
The Future of Information Integration

chat**Assist**

meta**Select**

data**Enrich**

data**Flow**

PANTOPIX SPHERE

Revolutionize the intelligent linking of company-wide technical information in a unique knowledge platform.

PANTOPIX SPHERE at a glance

End-to-End-Integration – Modular architecture links data from source systems and covers the entire information journey.

Plug & Play Interfaces – Pre-configured connectors and a ready-to-use ontology enable seamless integration.

GenAI connected – AI and semantic technologies enable precise extraction, classification and queries in natural language.

Knowledge Graph as the centrepiece – Single-Source-of-Truth for company-specific knowledge with knowledge model and graph database.

Simple Configuration – User-friendly configuration, quickly customisable to specific requirements.

Fast time to market – Predefined process chains enable fast implementation and rapid time to market.

PANTOPIX ◯ SPHERE 9

One SPHERE – Four Apps

metaSelect
Verteilt das zentral verwaltete Wissensmodell

dataEnrich
Wandelt Daten in Informationen um

dataFlow
Transportiert und transformiert Daten – hochgradig automatisiert

chatAssist
Ermöglicht die natürlichsprachliche Interaktion mit Ihrem Produktwissen

- Knowledge Graph
- Data Catalog
- Knowledge Model
- Konnektoren für Informations-liefernde und -konsumierende Systeme

PANTOPIX SPHERE

chatAssist

*chatAssist enables **dialogue-oriented** and **reliable interaction** with my company-wide **product knowledge**.*

TINA TECHNICIAN

VISION

- Easy to find answers
- Company-specific answers in natural language
- Precise, up-to-date and reliable
- Interaction with the knowledge graph via chat
- 100% confidence in the answers

HIGHLIGHTS

- LLM-based chat for reliable interaction with corporate knowledge
- Taxonomies & graph data maximise response quality
- Sourcing ensures transparency & traceability
- Instant access via natural language,
- Compatible with Azure OpenAI, Mistral & Google Gemini

BENEFITS

- chatAssist is intuitive to use - without any expert knowledge, in contrast to direct database queries
- Complex information from different sources is intelligently linked.
- By connecting to the knowledge graph, the information is reliable, up-to-date and complete

metaSelect

> *metaSelect enables the distribution of the **knowledge model** to all systems in which information is generated or used.*

KENNY KNOWLEDGE

VISION

- Availability of the knowledge model in the CCMS or CDP
- Automated process chains for the transport and transformation of metadata
- Extraction of networked knowledge from the knowledge graph

HIGHLIGHTS

- UI-supported management
- Integration into the company infrastructure
- Dynamic provision via REST APIs
- Linking of data silos
- Provides access to data catalogue
- Metadata is available exactly where and in what form it is needed

BENEFITS

- Flexibly customizable workflows for needs-based process design
- Simple query configuration thanks to an intuitive low-code environment
- Automated distribution of the knowledge model across all systems
- Maximum control and transparency of the current status of the knowledge model

dataEnrich

> *dataEnrich converts **unstructured data** and assigns it to the **company-specific knowledge** model using **taxonomies**.*

VISION

- Optimally utilize the potential of unstructured data through intelligent processing
- Automated classification of documents and information units
- Automated supplementation of the company-wide knowledge model

HIGHLIGHTS

- Converts unstructured data into machine-readable information
- Precisely classifies documents and information units
- Checks and ensures data quality using a knowledge model
- Compatible with AI-supported document extraction solutions, e.g. Microsoft or Google

BENEFITS

- Fast and flexible configuration
- Automated process chains
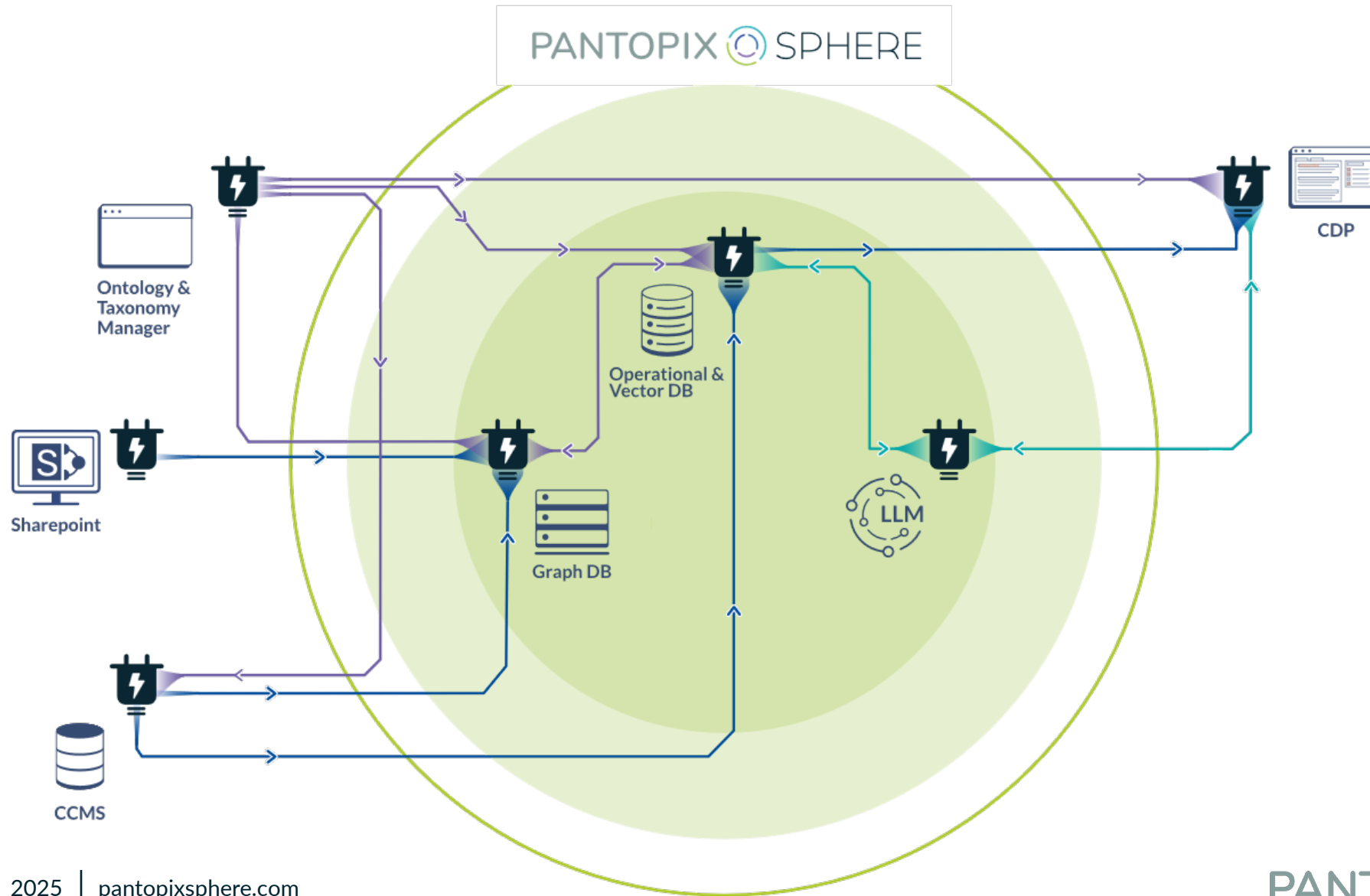- Closes blind spots in the knowledge model
- Captures all unstructured data

DANIEL DEVELOPER

PANTOPIX SPHERE

Connectors and streams
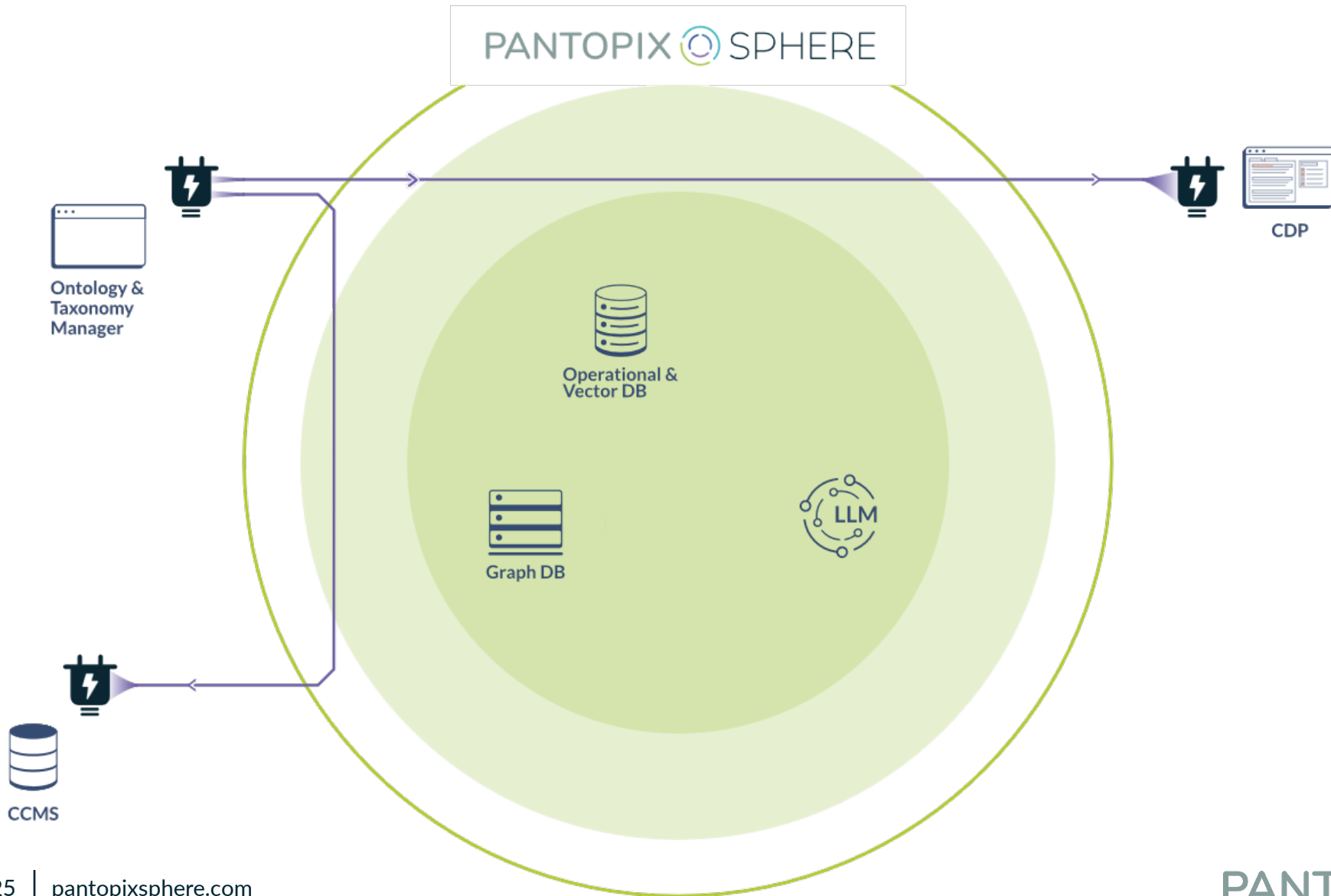
USE CASE:

→ Metadata is distributed from Taxonomy Manager to CCMS and CDP via 3 connectors using 2 streams.

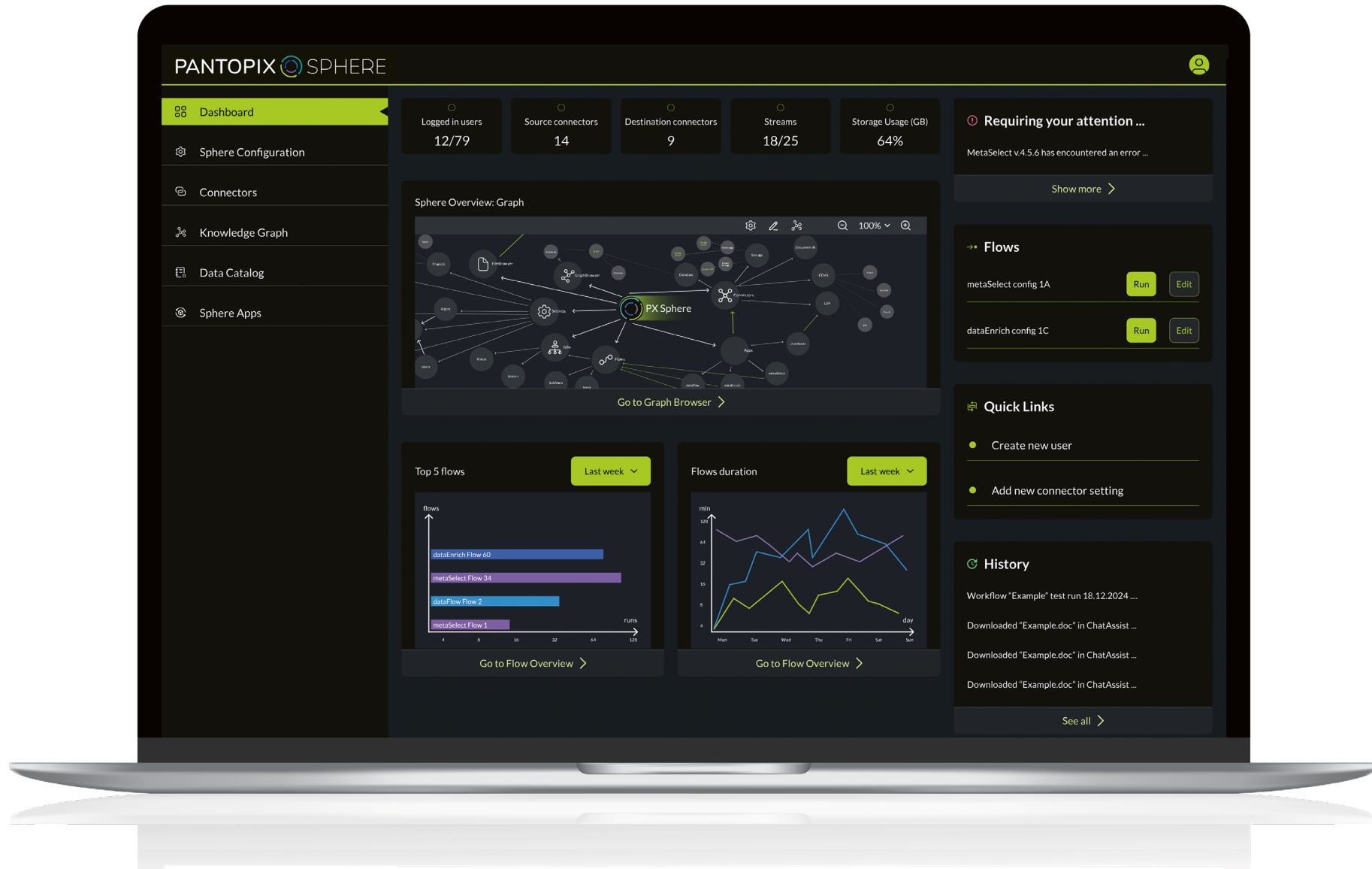# Connectors and streams

USE CASE:

→ For a knowledge hub, several systems are connected via connectors 🔌 and several streams ▷