



AVEVA WORLD

APRIL 9, 2025

Data is the foundation of your digital transformation

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AVEVA WORLD 2025

Agenda

SESS-202

Data is the foundation of your
digital transformation

Moscone West Center
San Francisco

Digital transformation by the numbers

Collecting data for the foundation

Using data to enable digital transformation

Closing

Data-driven industry has become a reality

“Operational data is a unique resource. The more people use it, the more valuable it becomes.”

— Dr. J. Patrick Kennedy, *pioneer of AVEVA PI System*

75%

of industrial executives will prioritize investments in industrial intelligence solutions for their organization in the next 12 months¹.

87%

of Fortune 1000 and leading global organizations report delivering measurable business value from data and analytics investments².

Source: 1. AVEVA, *Industrial Intelligence: 2024 Industry Insights Report*, 2. Wavestone, *2024 Data and AI Leadership Executive Survey*



Operational data rapidly evolving across enterprises

Industrial data is doubling roughly every two years¹.

4.4
zettabytes

of OT data will be produced by industrial enterprises by 2030— nearly as much data as all mobile users².

40
billion

connected IoT devices estimated by 2030³.

Sources:

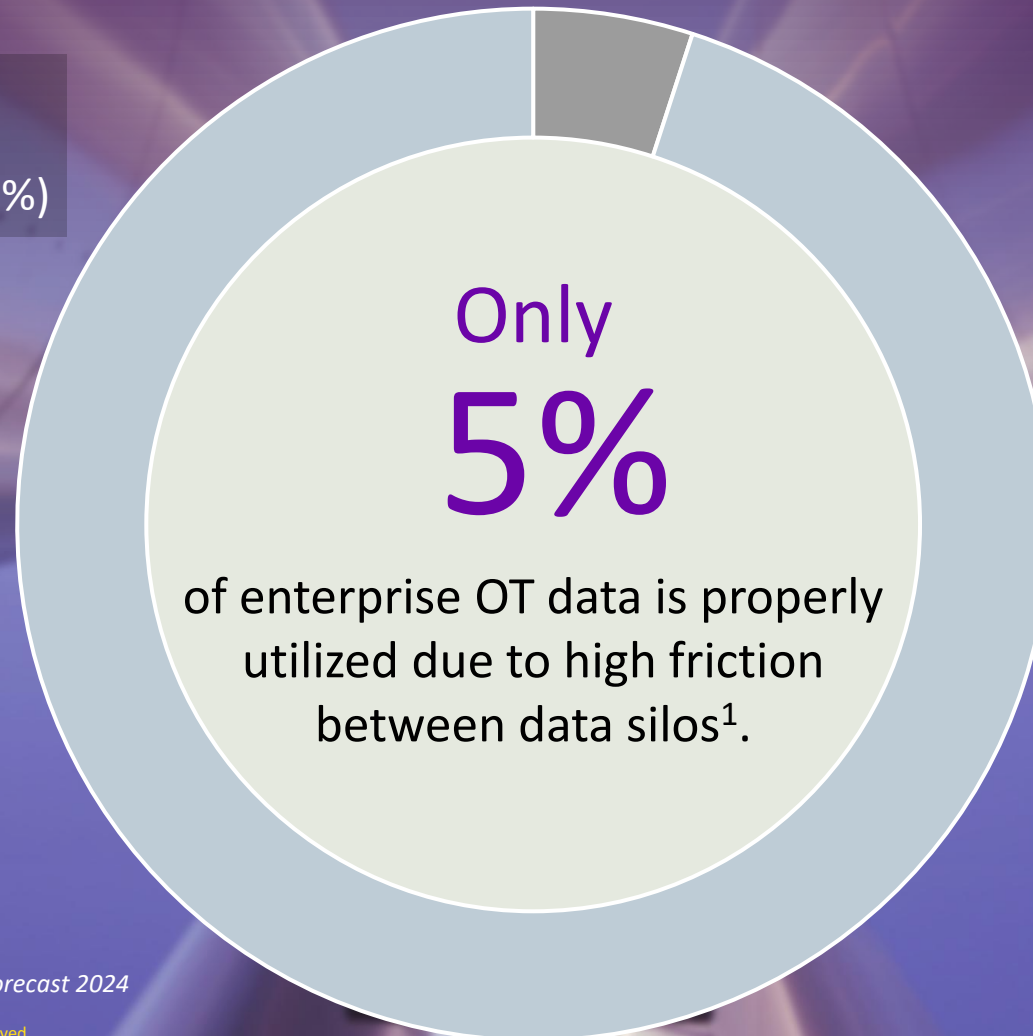
- 1. World Economic Forum, How industrial data can help unleash productivity, innovation and sustainability, 2022*
- 2. ABI Research, Industrial Data Generation Forecast 2024*
- 3. IoT Analytics, State of IoT Summer 2024*

Operational data has so much untapped potential

But data silos lead to inefficiencies, missed opportunities, and lost value for enterprises.

■ Properly utilized (5%)

■ Untapped potential (95%)



Source: 1. ABI Research, Industrial Data Generation Forecast 2024

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Data connectivity products for CONNECT

Collect, normalize and transfer real-time and historical operations, asset, event, and production data



Edge
Data Store

- Real-time data collection, persistent data storage, data access, and flexible data transfer
- Native integration of Modbus TCP and OPC UA data sources



AVEVA
Adapters

- Real-time data collection and data transfer
- Native integration of Azure Event Hubs, BACnet, DNP3, Modbus TCP, MQTT, OPC UA, RDBMS and structured data files



Partner OMF
Applications

- OMF = open message format
- Open and flexible for use in custom application development when AVEVA products are not available or do not meet the needs of the use case



AVEVA
PI Server

PI to CONNECT Agent

- Transfer PI Point data to CONNECT data streams and assets
- Current and historical data, asset data

CONNECT to PI Agent

- Transfer CONNECT data streams to PI Points
- Current, historical, and future data



AVEVA
Historian



AVEVA
System Platform

Replication

- Transfer Historian tag data to CONNECT data streams and assets
- Current and historical data, asset data; historical data backfill



AVEVA
MES



AVEVA
Production Mgmt

AVEVA Events to CONNECT Agent

- Collects and transfers MES, Production Management, and event data to CONNECT events and assets
- Enables integration of MES and production data with operations data
- Stores equipment hierarchy as assets and stores downtime, production, and metrics modules as events



Remote
Management

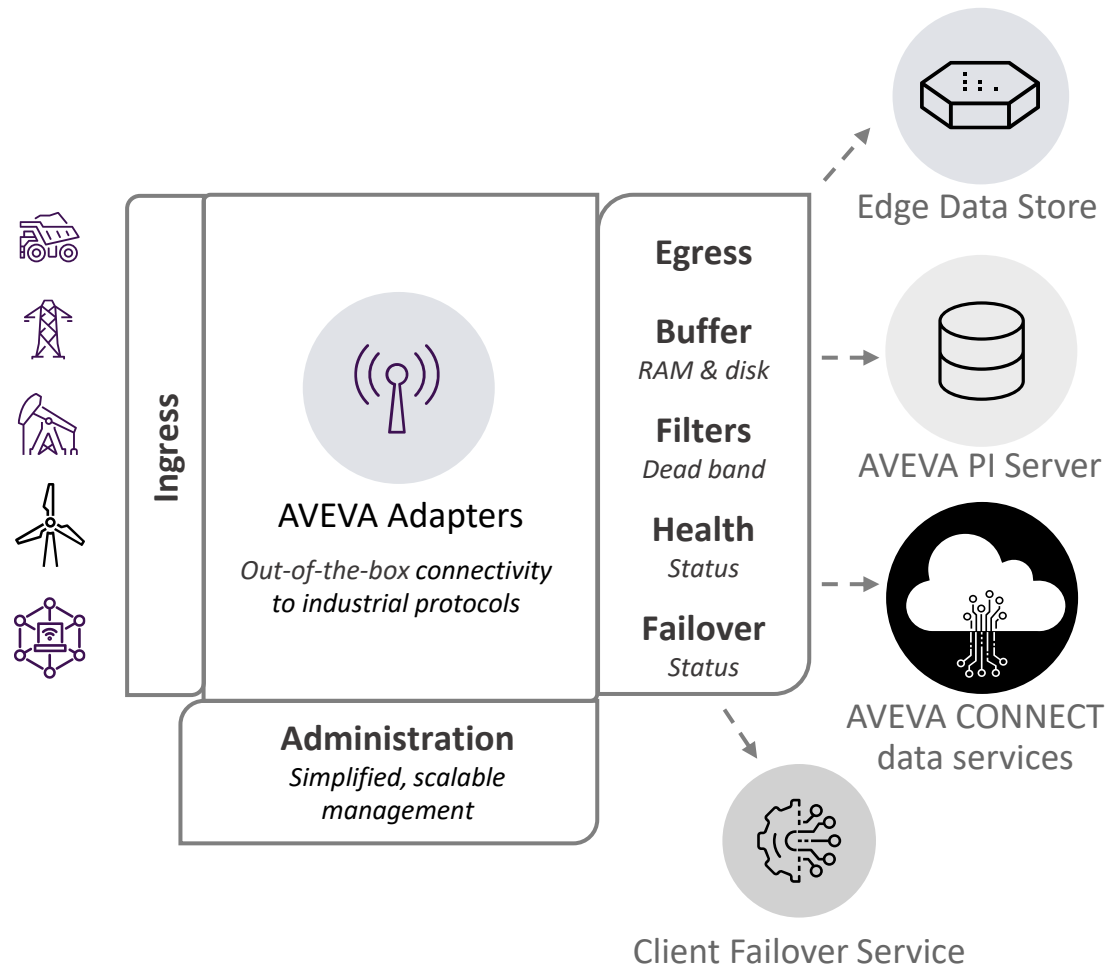
Edge Management

- Securely install, manage and update AVEVA data collection software on remote devices

CONNECT data services

- Remote monitoring and configuration management of AVEVA data collection software

Extending real-time data connectivity

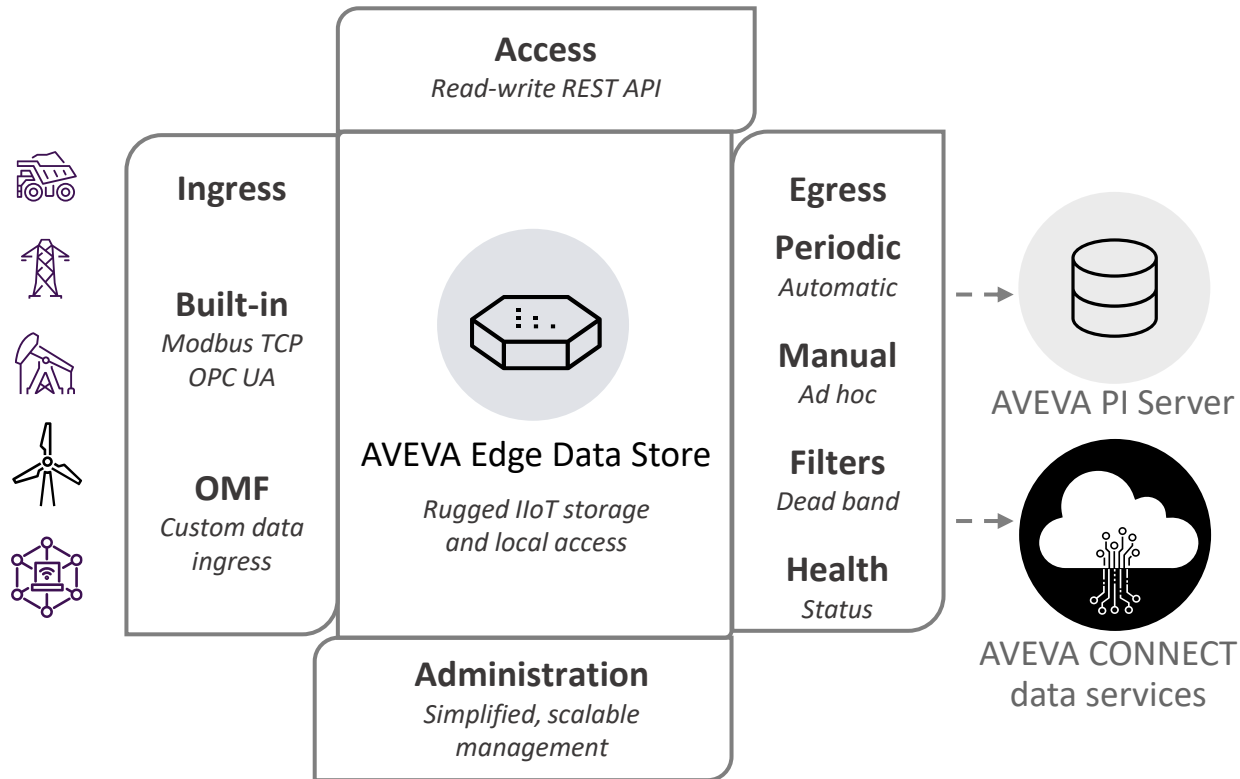


AVEVA Adapters

- Lightweight, robust, real-time data collection
- No-code connectivity to common industrial protocols*
- Health and diagnostics data for monitoring and troubleshooting
- Maximize uptime with client-side and server-side failover
- Multiple data destinations
- Run on Windows and Linux devices or in Docker containers
- Centralized, remote installation, configuration, and management

* Azure Event Hubs, BACnet, DNP3, Modbus TCP, MQTT, OPC UA, RDBMS, Structured Data Files

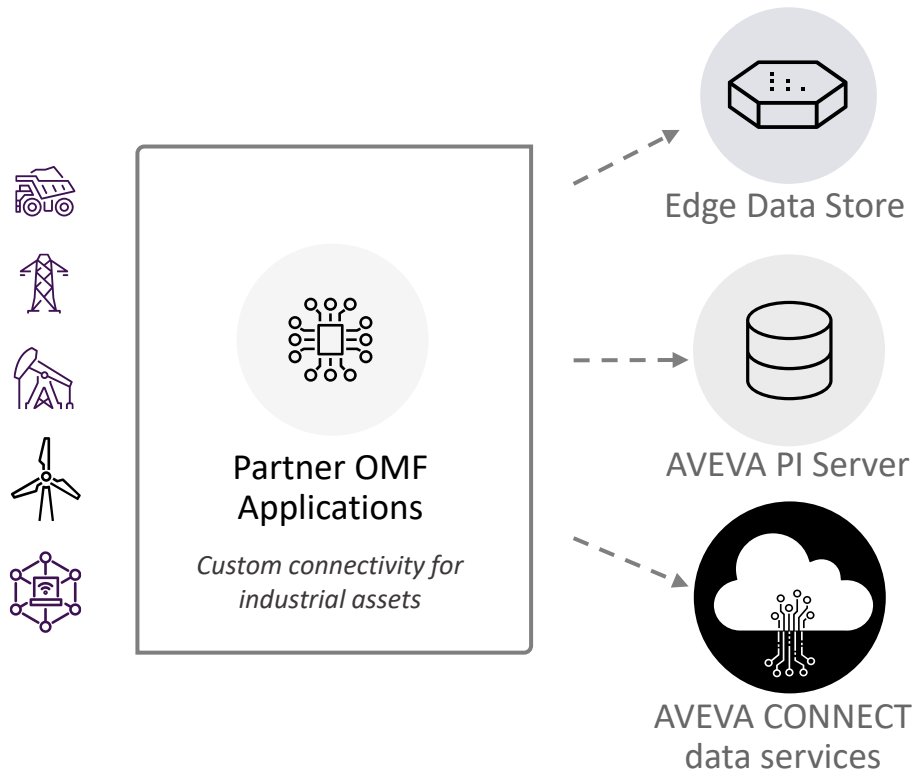
Lightweight data storage and integration at the industrial edge



AVEVA Edge Data Store

- Lightweight, resilient data storage
- No-code connectivity to Modbus TCP and OPC UA
- Health and diagnostics data for monitoring and troubleshooting
- Custom application connectivity available through the OMF endpoint
- Feature rich, programmatic RESTful API for data access
- Multiple data destinations
- Run on Windows and Linux devices or in Docker containers
- Centralized, remote installation, configuration, and management

Open connectivity to AVEVA systems

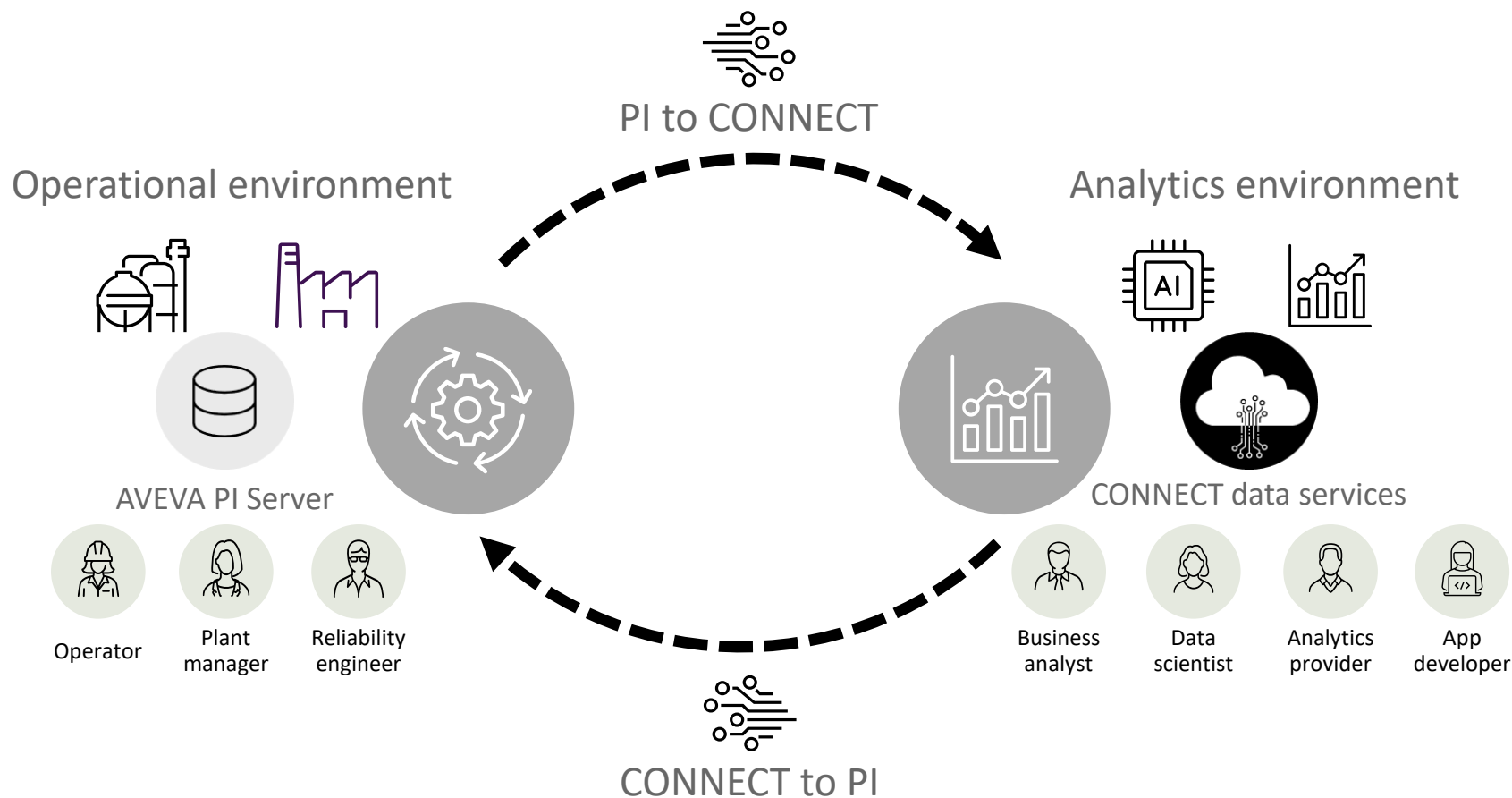


AVEVA Open Message Format

- Any hardware platform, any operating system, any development tools
- Internet friendly, secure REST API endpoints, no VPNs required!
- Inbound connectivity to Edge Data Store, AVEVA PI Servers, AVEVA Data Hub
- Outbound connectivity by Edge Data Store, AVEVA Adapters, and AVEVA Historian
- Specification is public and available to all

Moving data and insights seamlessly between plant and cloud

Expand interoperability across your data infrastructure



PI to CONNECT:

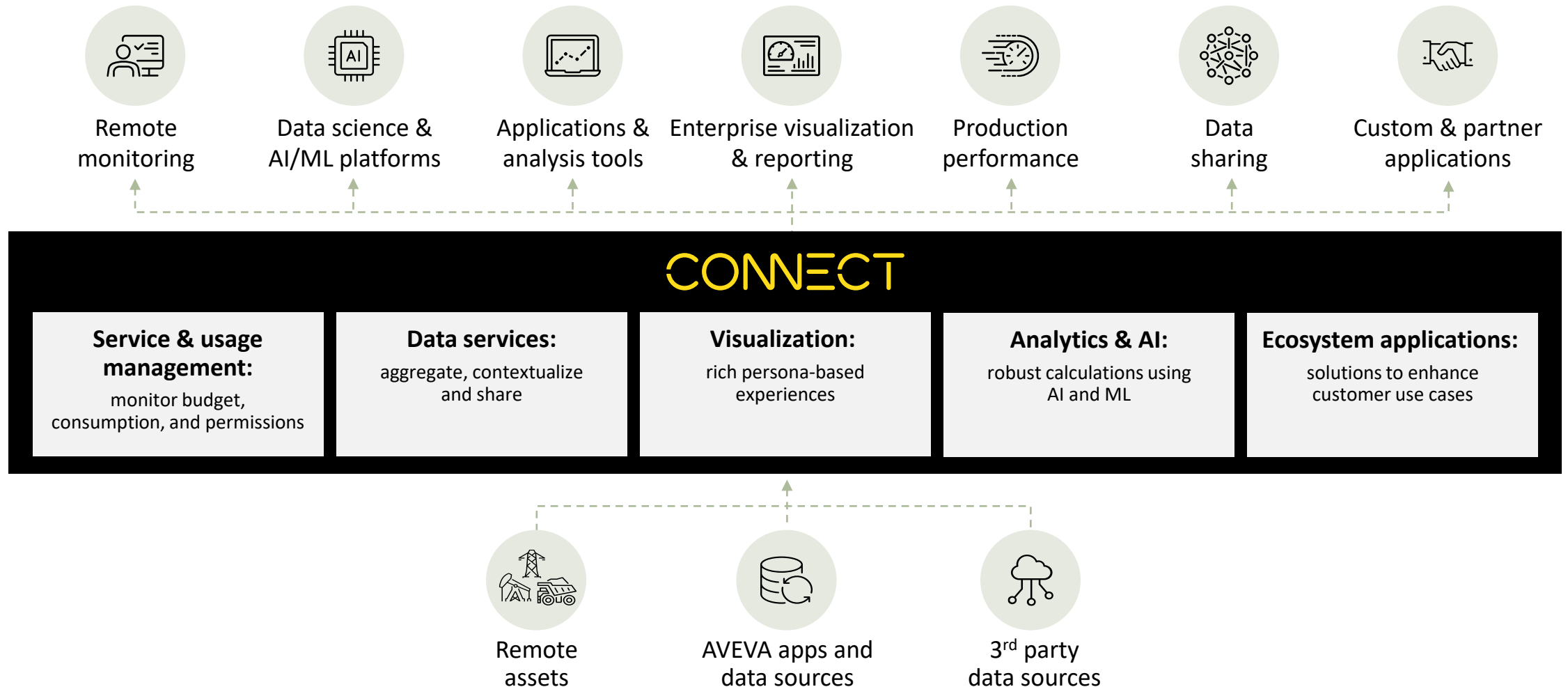
- Centralize, scale, and synchronize assets and real-time data.
- Perform history recovery.
- Easily extend the scope and scale of PI data to the cloud.
- Monitor transfer status and health statistics.

CONNECT to PI:

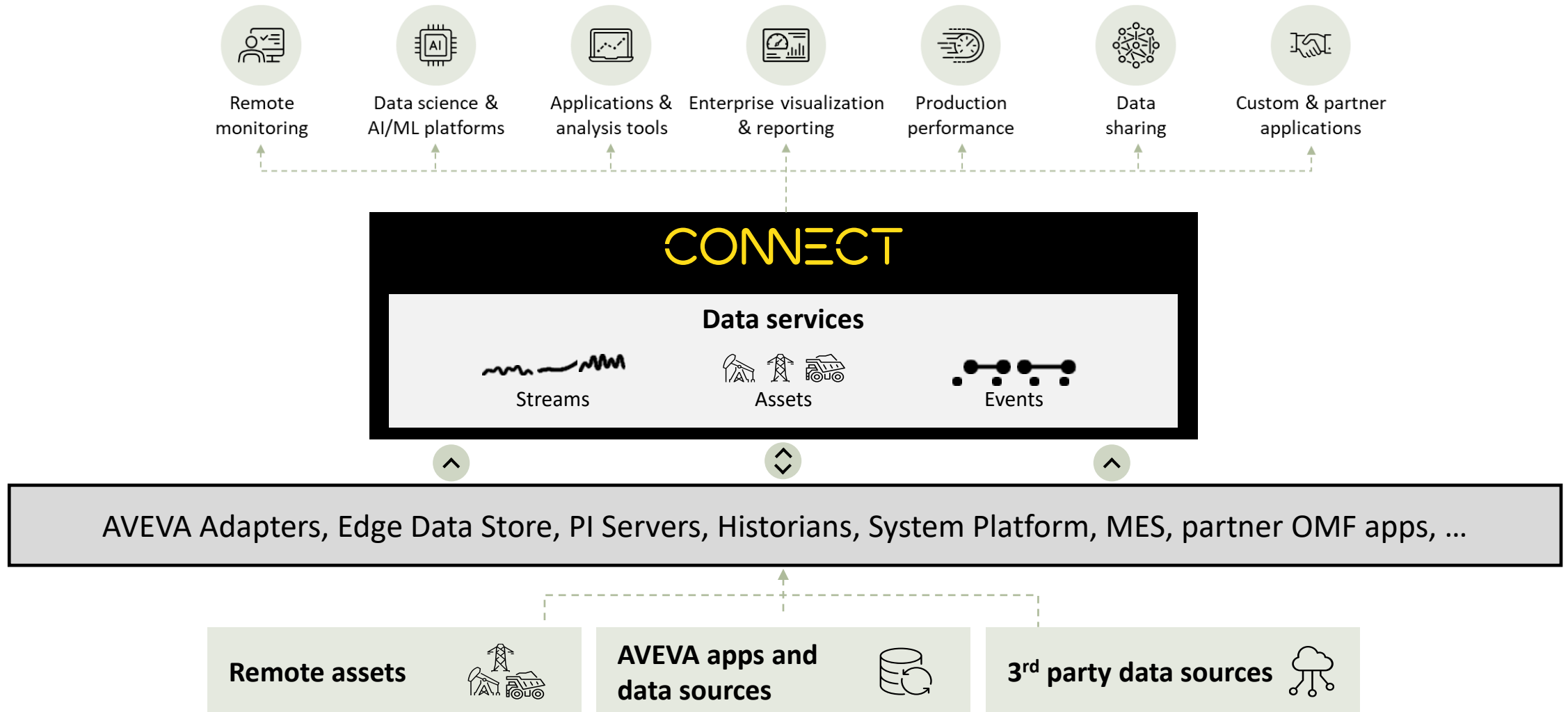
- Transfer real-time, historical, and future data streams, including from CONNECT communities between operations environments and enterprise.
- Supports backfilling and transfer to high availability collectives.
- Manage CONNECT to PI Server data flows centrally from the cloud.

CONNECT, our industrial intelligence platform

Open and neutral, providing rich data insights for your unified industrial ecosystem

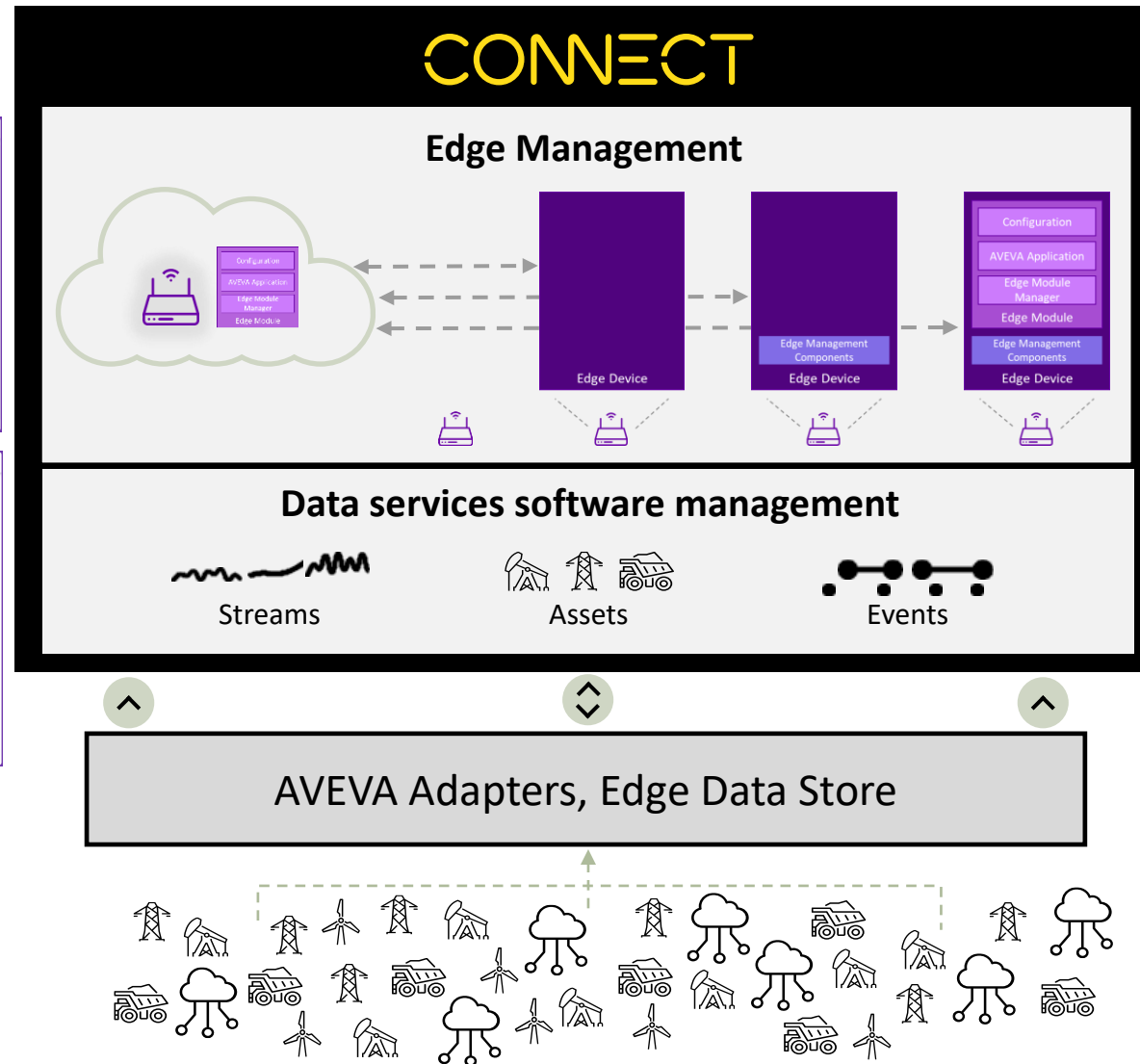
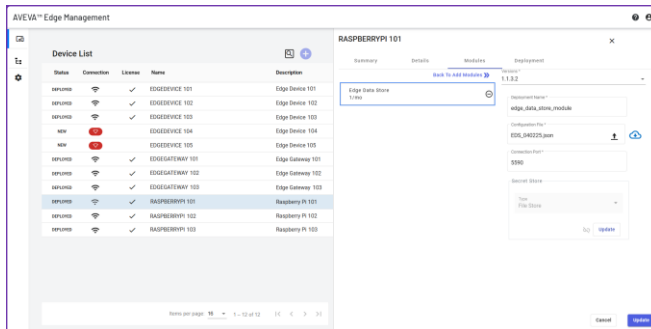
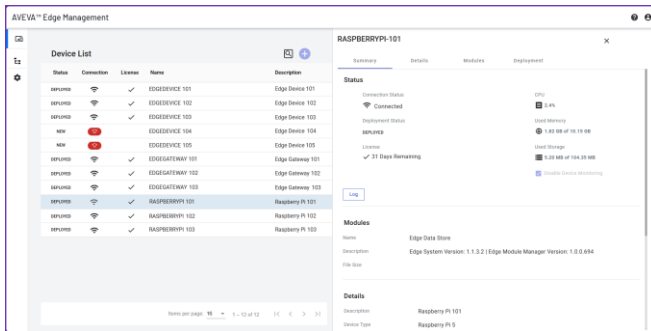


Aggregate, contextualize, and share industrial data

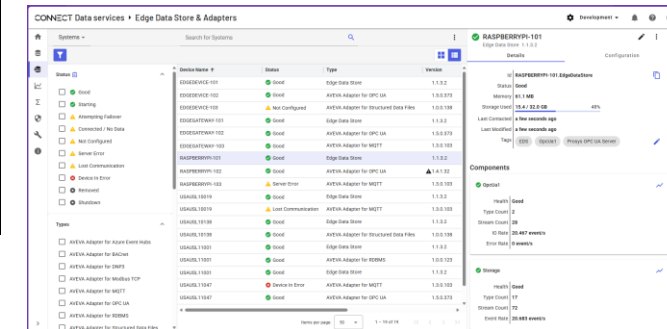
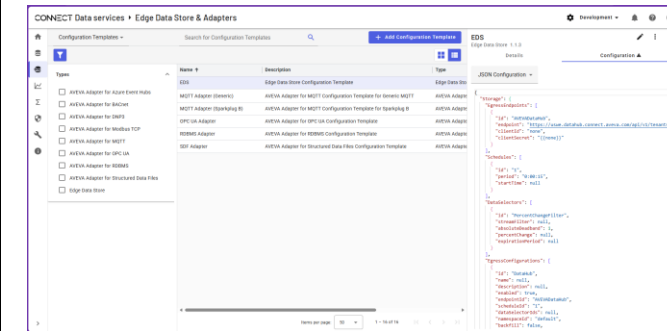


Centralized and scalable remote management

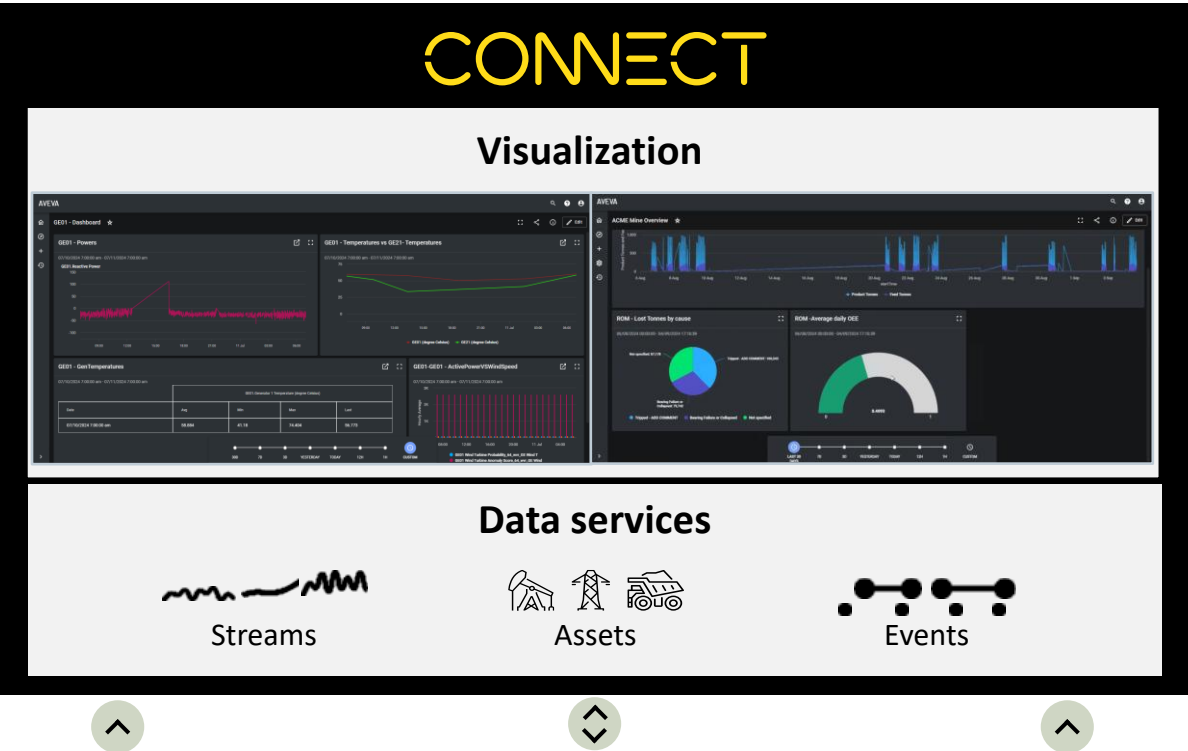
Edge Management portal



**Data services
software management portal**



Visualize complex relationships and data driven insights



What are the bearing and nacelle temperatures for GE07

Was the temperature for my bearing higher this week or last week?

Industrial Assistant 10:28:30 am

what has been the wind velocity at hornsea wind farm this week

Wind Velocity Data at Hornsea Wind Farm for This Week

Based on the available data, here are the relevant metrics for wind velocity at the Hornsea Wind Farm over the past week:

1. Wind Speed:

- Current Value: 5.55 meters per second (m/s)
- Minimum: 2.32 m/s
- Maximum: 18.69 m/s
- Average: 8.64 m/s

Summary

The wind speed at Hornsea Wind Farm this week has varied significantly, with a minimum of 2.32 m/s and a maximum of 18.69 m/s. The average wind speed over the week has been 8.64 m/s. This data indicates that the wind conditions have been quite variable, which is typical for offshore wind farms. If you need more specific details or further analysis, please let me know!

Enter your message... Send

Do I have a dashboard on utilization?

Do I have any stoppage events in Hornsea Wind Farm for the last 24 hours?

Does the document provide guidance on maintenance activities for high bearing temperature?

Do I have a trend for GE01 output?

Do we have a 3D Model for Hornsea Wind Farm?

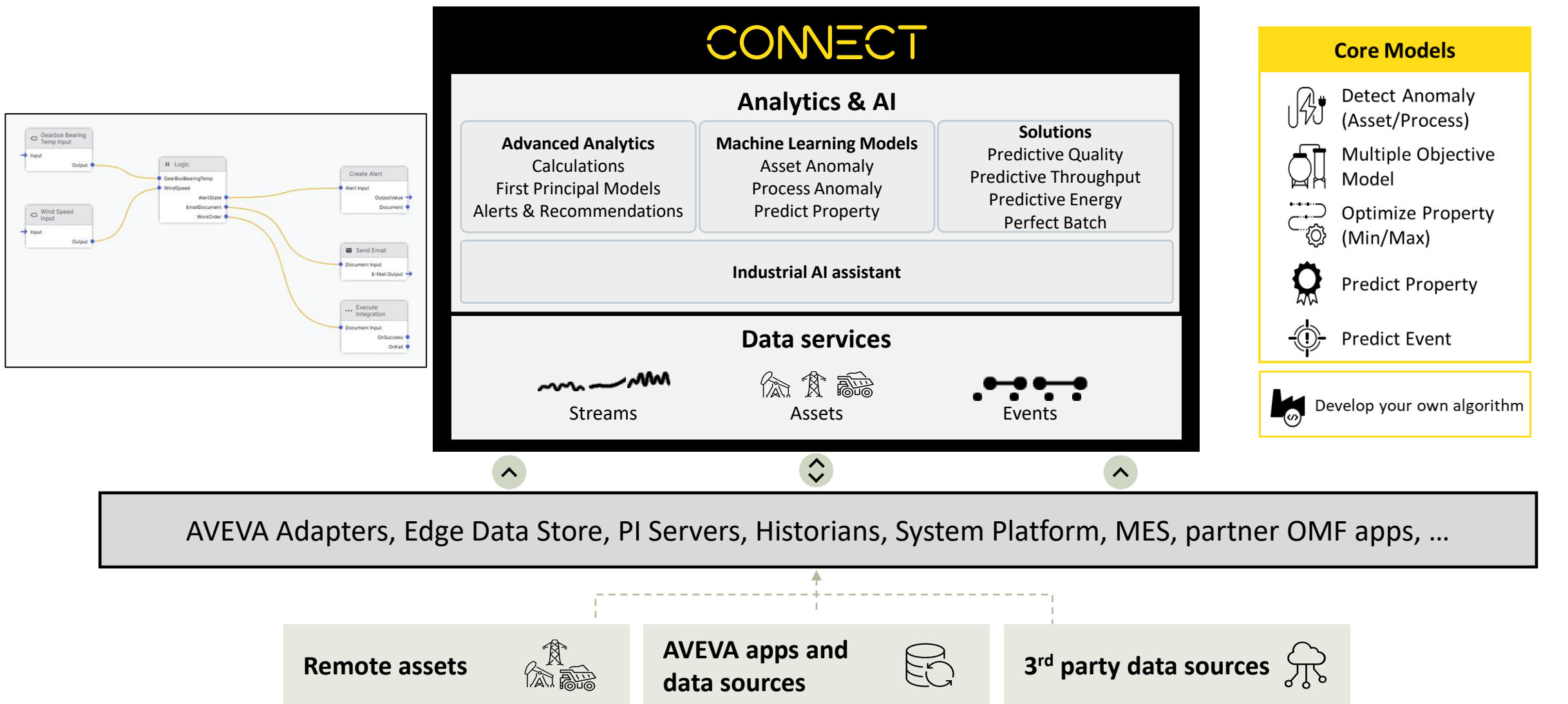
AVEVA Adapters, Edge Data Store, PI Servers, Historians, System Platform, MES, partner OMF apps, ...

Remote assets

AVEVA apps and data sources

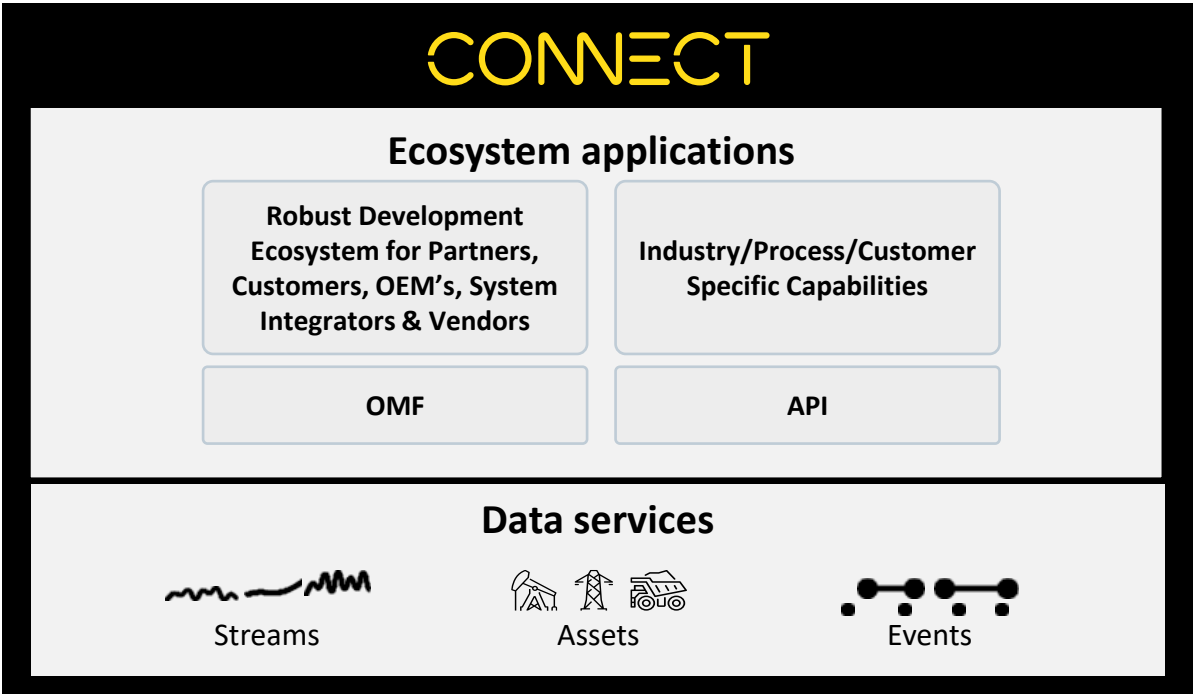
3rd party data sources

Analytics and AI-driven optimization for industrial excellence



Drive your digital transformation with the help of a network of partner applications and services

**databricks**
Unified Analytics Platforms



CONNECT Ecosystem Solutions

Schneider Electric

RIB

etap

WERUSYS

DIMENSION SOFTWARE

ProcessVue

ACTEMIUM

GTSgroup

timeseer.AI

accenture

LITYX

PLOTLOGIC

ISDMHoldings

Nitto

CALIBRE8

NodeIT

SYMXXAI

CEREBULB

BAUSCH+STRÖBEL

DERNetSoft

SARTORIUS

PiMSOFT

Mitsui Sumitomo Insurance MS&AD INSURANCE GROUP

Limble

APOLLO SOLUTIONS

Seeq

InSource SOLUTIONS Knowledge Center

Helin

TAQA

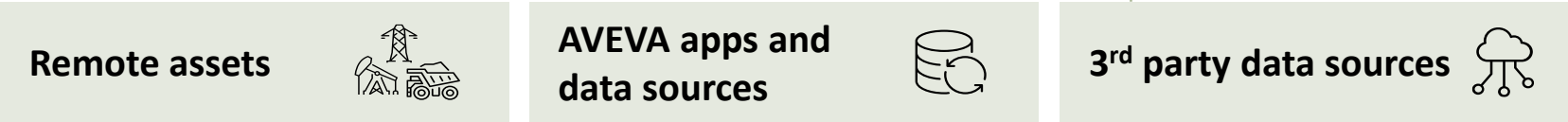
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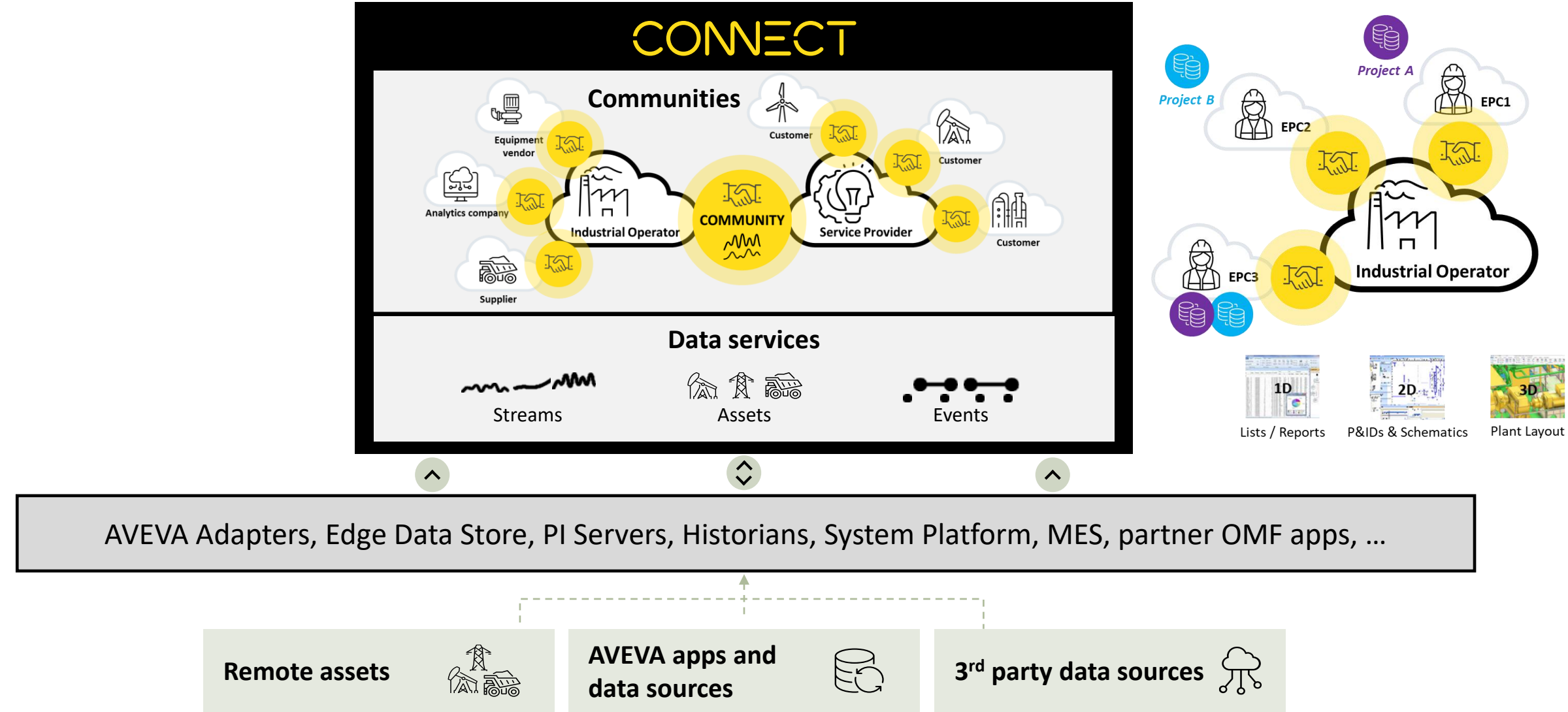
MayaMTT

<https://www.aveva.com/en/connect-experience/connect-ecosystem/>

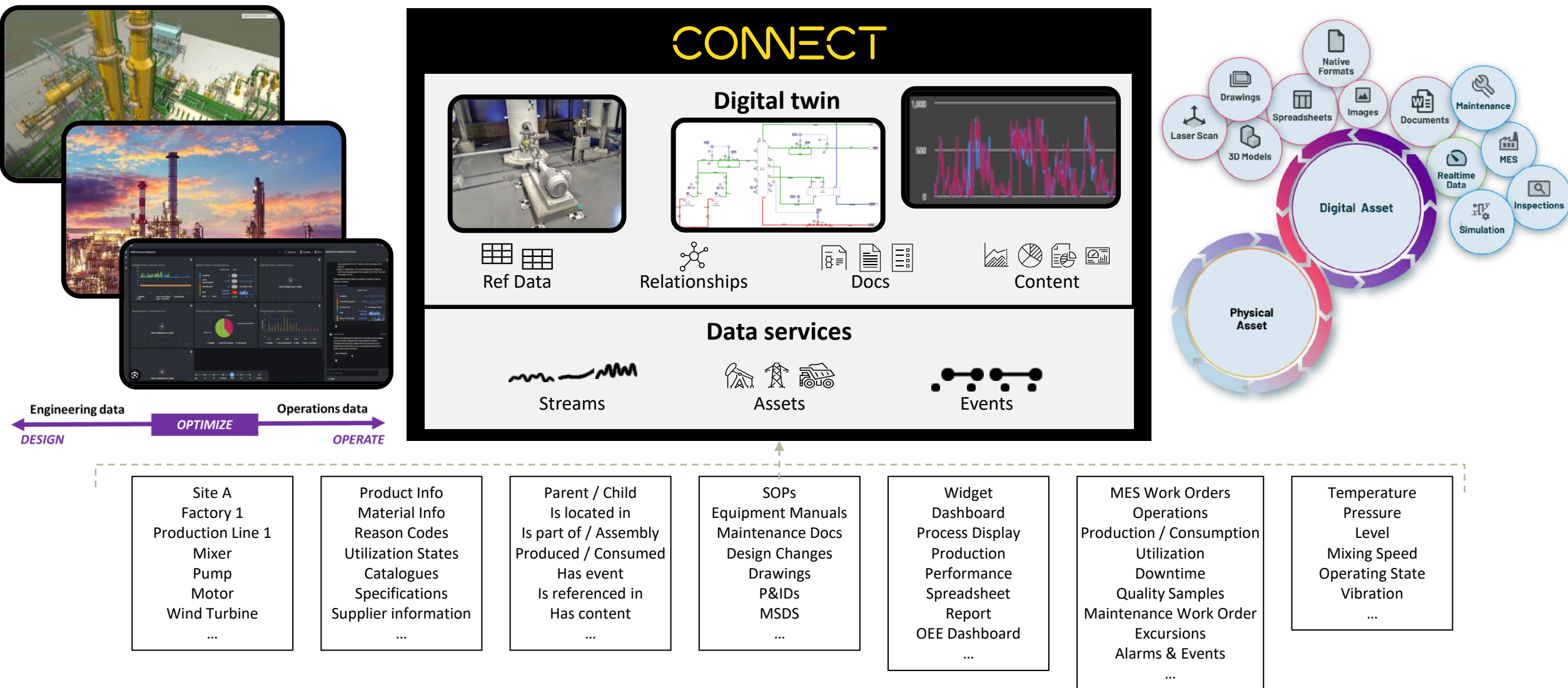
AVEVA Adapters, Edge Data Store, PI Servers, Historians, System Platform, MES, partner OMF apps, ...



Communities empower secure collaboration between stakeholders



Harmonize data in a digital representation



Digital transformation is a journey paved with data

Start small - collect the data and choose the capabilities that meet your goals and objectives

Remote
management



Visualization



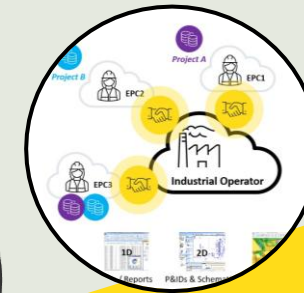
Analytics
& AI



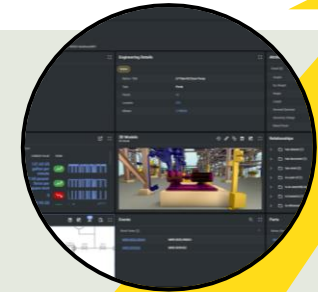
Ecosystem
applications



Communities



Industrial
Digital Twin



Data

Breakout Sessions Slide

SESS-201

Visualizing industrial data with CONNECT

Tuesday, April 8 @ 3:00 pm
Room 2005-2007

SESS-111

Fueling your data infrastructure with AVEVA connectivity

Tuesday, April 8 @ 2:00 pm
Room 2005-2007

SESS-199

Building and Evolving a Digital Twin Leveraging your existing investments

Tuesday, April 8 @ 4:30 pm
Room 2005-2007

SESS-113

Operations on-ramp to AI and advanced industrial analytics

Wednesday, April 09 @ 11:15 am
Room 2009-2011

SESS-112

Easily deploy AVEVA Adapters to remotely collect operations data at scale

Wednesday, April 09 @ 1:15 pm
Room 2000

SESS-198

CONNECT & Databricks: Unifying IT & OT data for smarter, sustainable operations

Wednesday, April 9 @ 2:00 pm
Room 2001-2003



Innovation zone

Exciting, modern &
engaging experience

5 key zones: CONNECT, operate &
optimize, design & build, industrial
sustainability, experiential zone
(hands-on activities)

45+ sponsor and exhibitor booths

CONNECT ecosystem partner kiosk

Partner solution sessions

Guided tours by industry

Game and leisure areas

Questions?



Please wait for the microphone.
State your name and company.

Please remember to...

Navigate to this session in the
mobile app to complete the survey.

Thank you!

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AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com