



AVEVAWORLD

CONNECT



APRIL 8, 2025

CONNECT Industrial intelligence platform Vision and Roadmap

Todd Brown – VP, Industrial Platform Portfolio

Laurent Garrigues – VP, Industrial Platform Portfolio



Todd Brown

VP, Industrial Platform Portfolio
AVEVA

With 25-years' experience in operations industrial data, Todd leads the CONNECT industrial platform portfolio team at AVEVA.



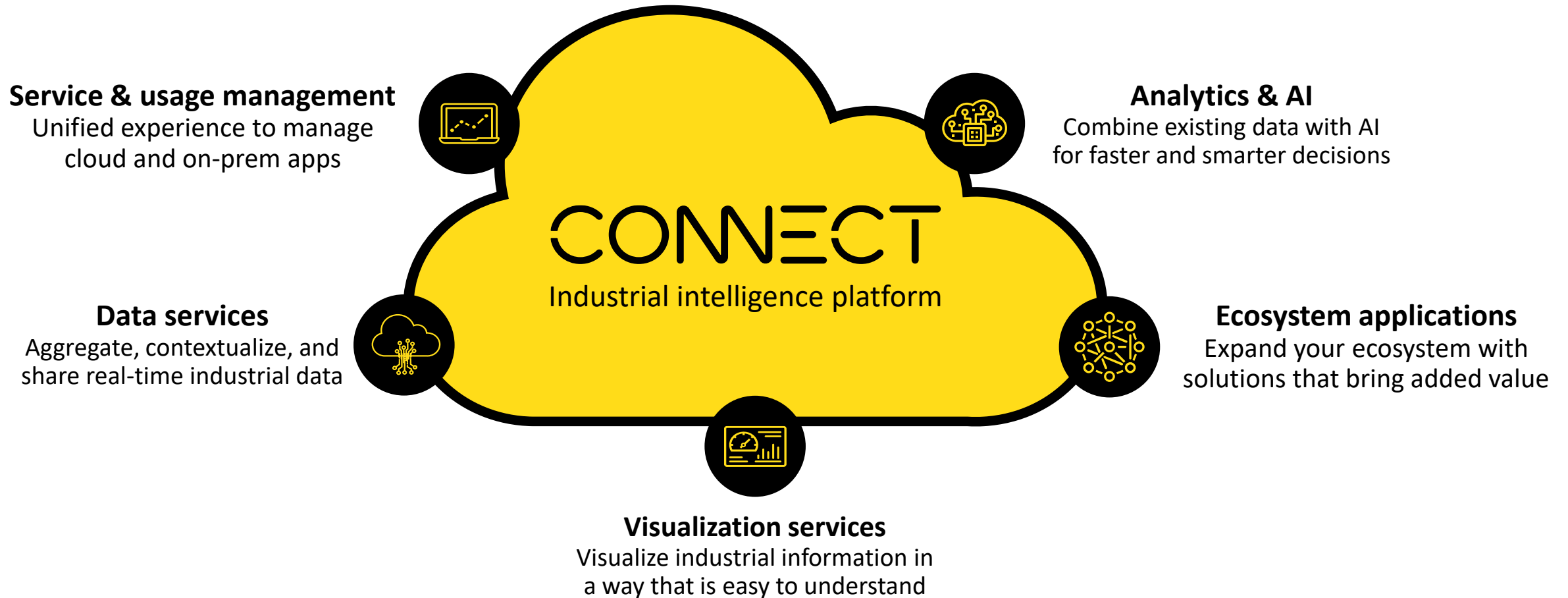
Laurent Garrigues

VP, Industrial Platform Portfolio
AVEVA

With also 25-years' experience in operations industrial data, Laurent is part of the CONNECT industrial platform portfolio team at AVEVA

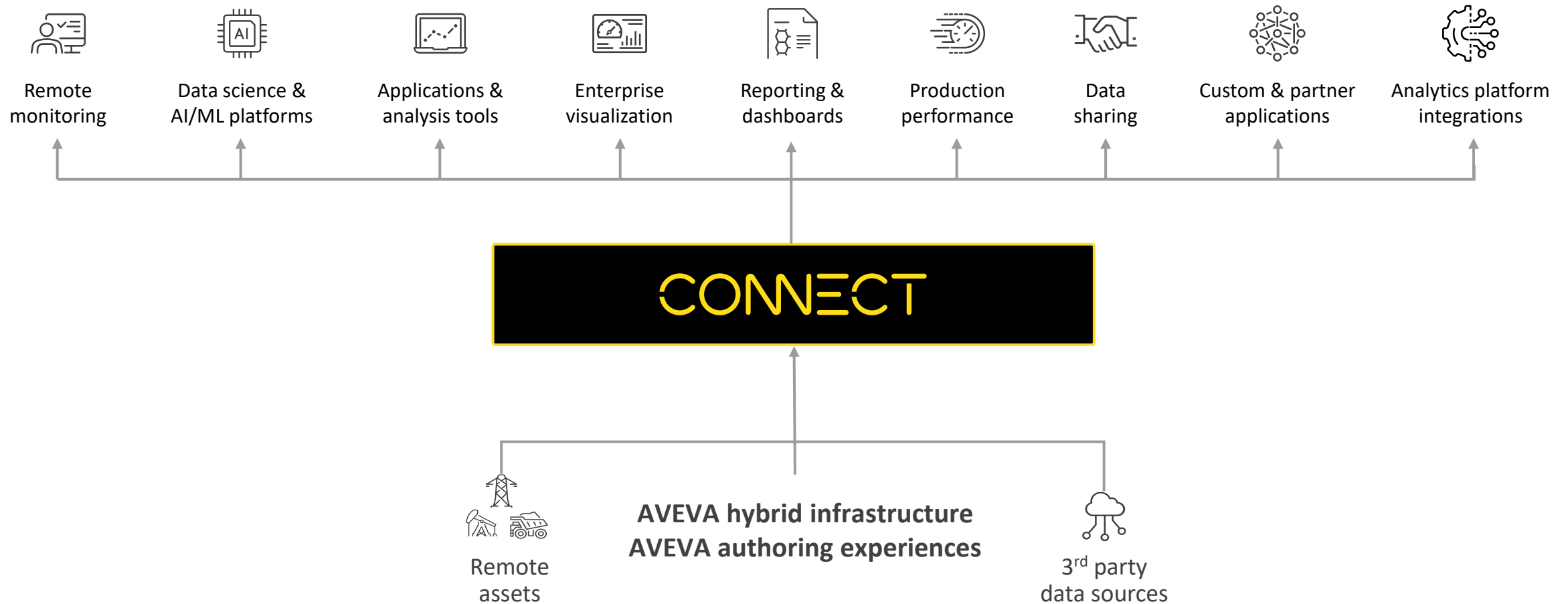


Open and neutral, providing rich insights for your unified industrial ecosystem



Industrial intelligence platform

Providing hybrid solutions to accelerate new value creation for AVEVA customers

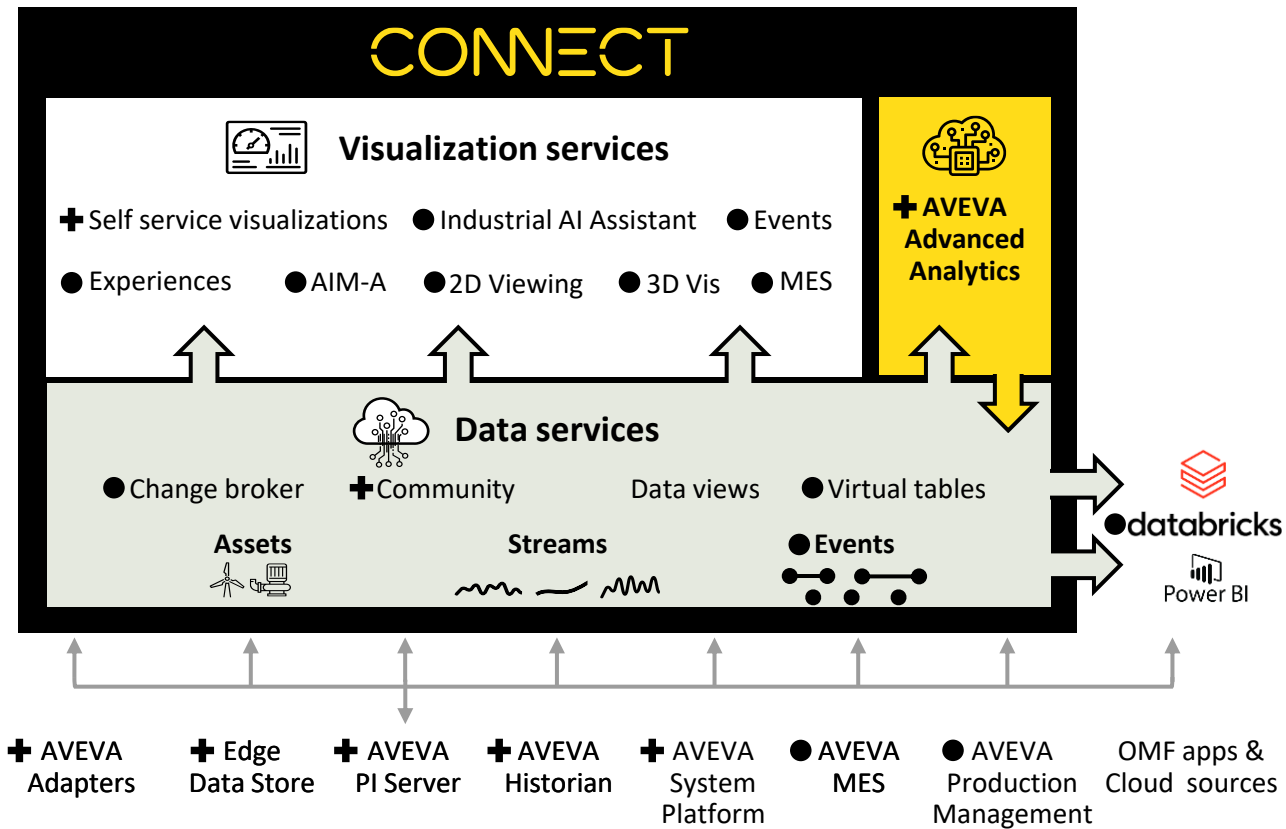


CONNECT in 2Q 2025

Significant enhancements across the industrial platform in the past 12 months

- New capability
- + Enhancements

Remote monitoring + Data science & AI/ML platforms + Applications & analysis tools ● Enterprise visualization Reporting & dashboards ● Production performance + Data sharing + Custom & partner applications ● Analytics platform integrations



- New and enhanced customer use cases
- New integration with Databricks, up-to-date operational data in context
- New Industrial AI Assistant
- Significant visualization enhancements, support for community data coming soon
- AAA: new alert rules system, new AI models model, events support, and more
- New event store & MES/APM integrations, signup for stream changes
- Close the analytics loop on prem with write-backs to PI
- Failover & remote mgt for Adapters



CONNECT roadmap themes



Hybrid: Extend the value for AVEVA's existing customers

Secure, rapid connectivity – powerful new use cases
System of record for industrial data, apps, & data science capabilities



Enterprise insights: From enterprise data to industrial insights

Powerful analytics and AI models driving operations improvements
Visually relate data in context and expedite analysis with an AI Assistant



Ecosystem: Drive digital transformation

Leverage a network of partner applications and services
Flexibly use, monitor, and provision AVEVA capabilities



Industrial digital twin: Bridge engineering & operations context

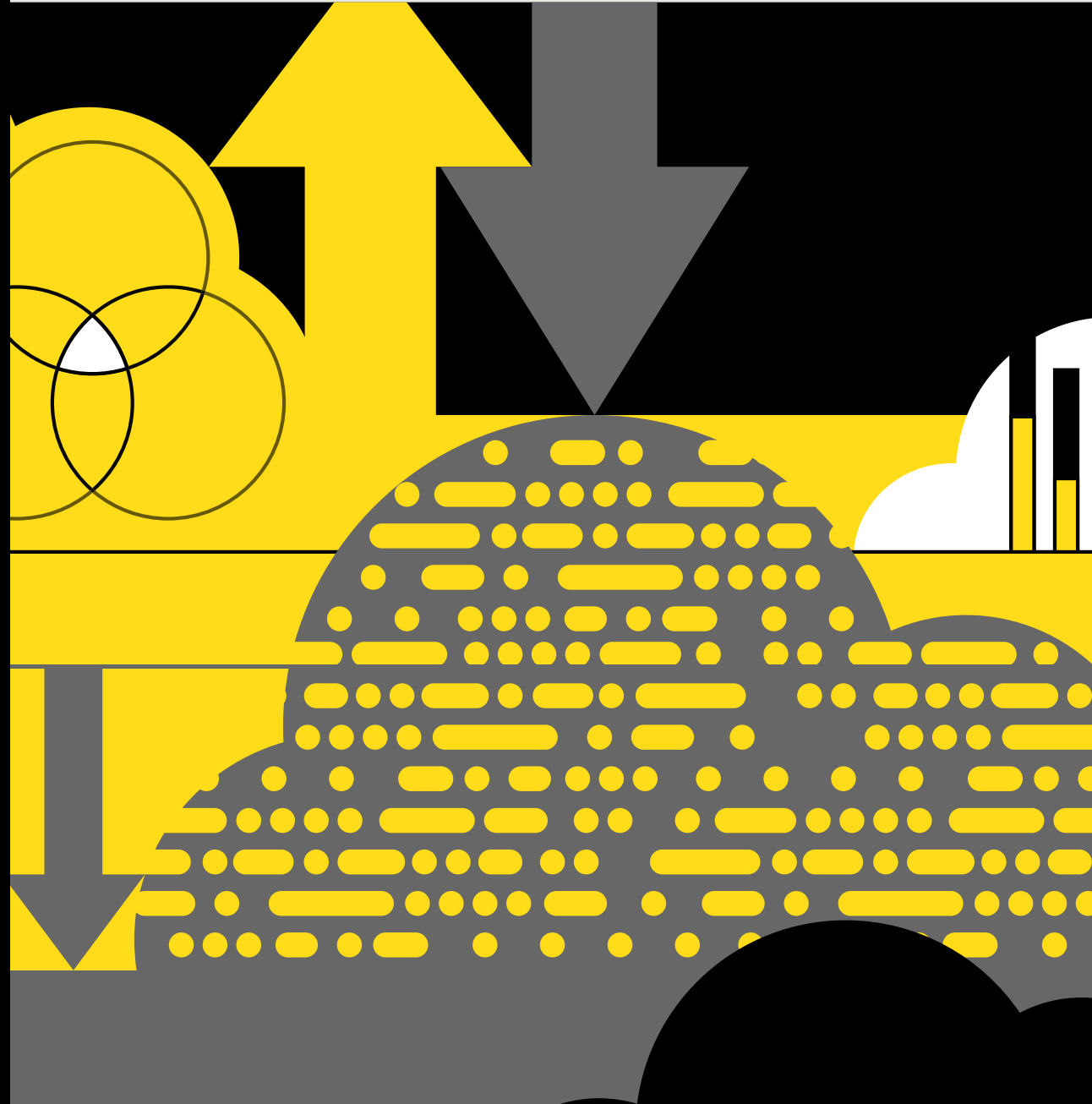
Shared version of the truth for analytics, visualization, and AI
Enhance visibility, consistency, and insights across operations

CONNECT ROADMAP THEME



Hybrid

Extend the value for AVEVA's existing industrial customers

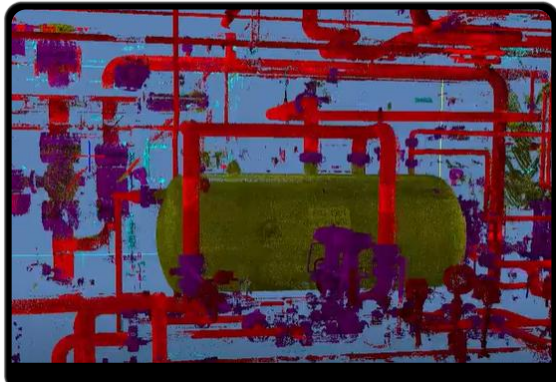




Extend the value for AVEVA's Existing Industrial Customers

Hybrid

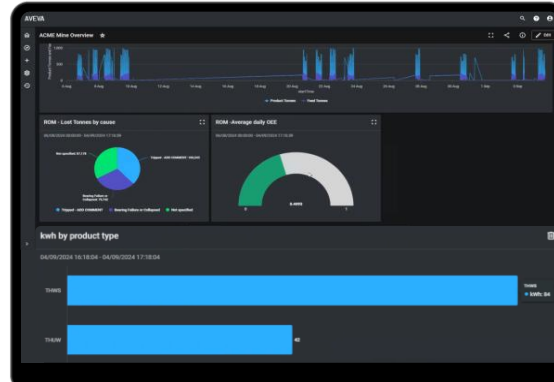
Engineering data



**Point Cloud, Asset Information
Management**

Design - Build

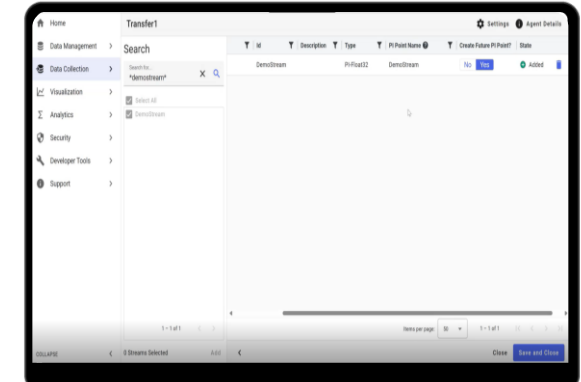
Historians / MES



**System Platform, PI Systems,
MES, Production Management**

Operate - Optimize

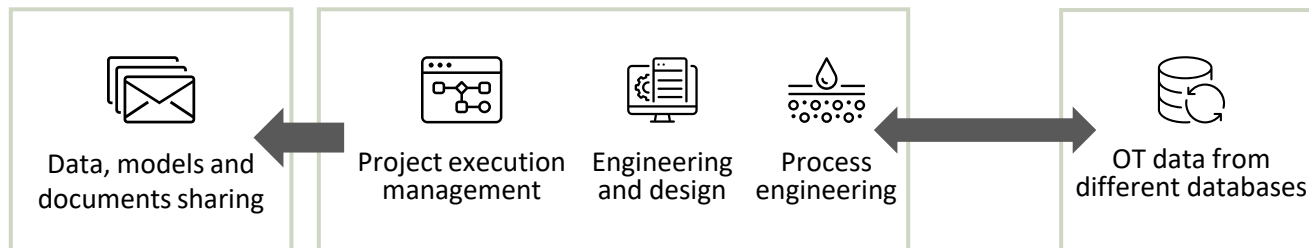
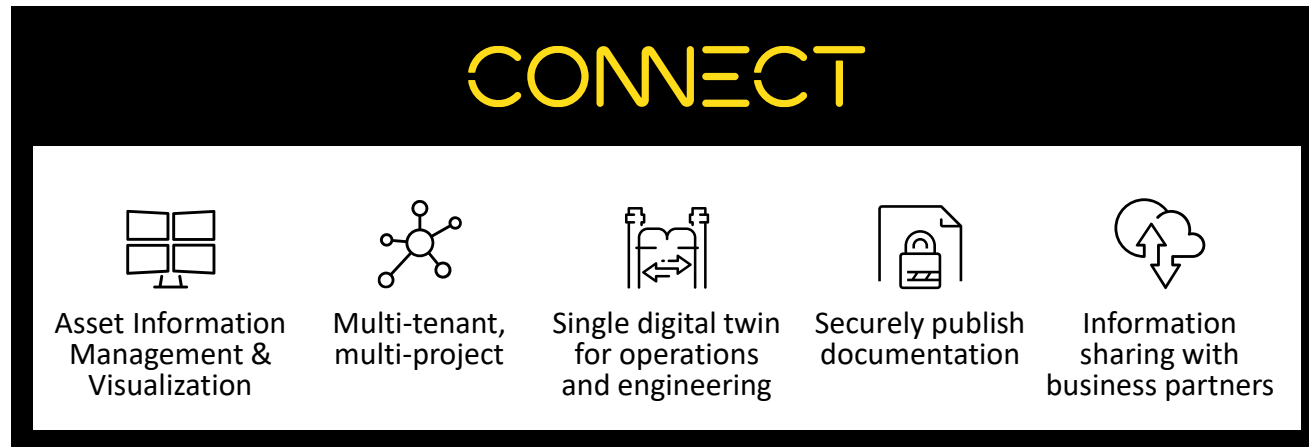
CONNECT to On-prem



Data Write-Back

Operate - Optimize

CONNECT extends value for our **engineering customers**



Drive time to value - reduce complexity for setup and maintenance

Collaborative - making data-sharing easy, while meeting security demands

Dynamic - adjust configurations as projects, facilities, and businesses mature

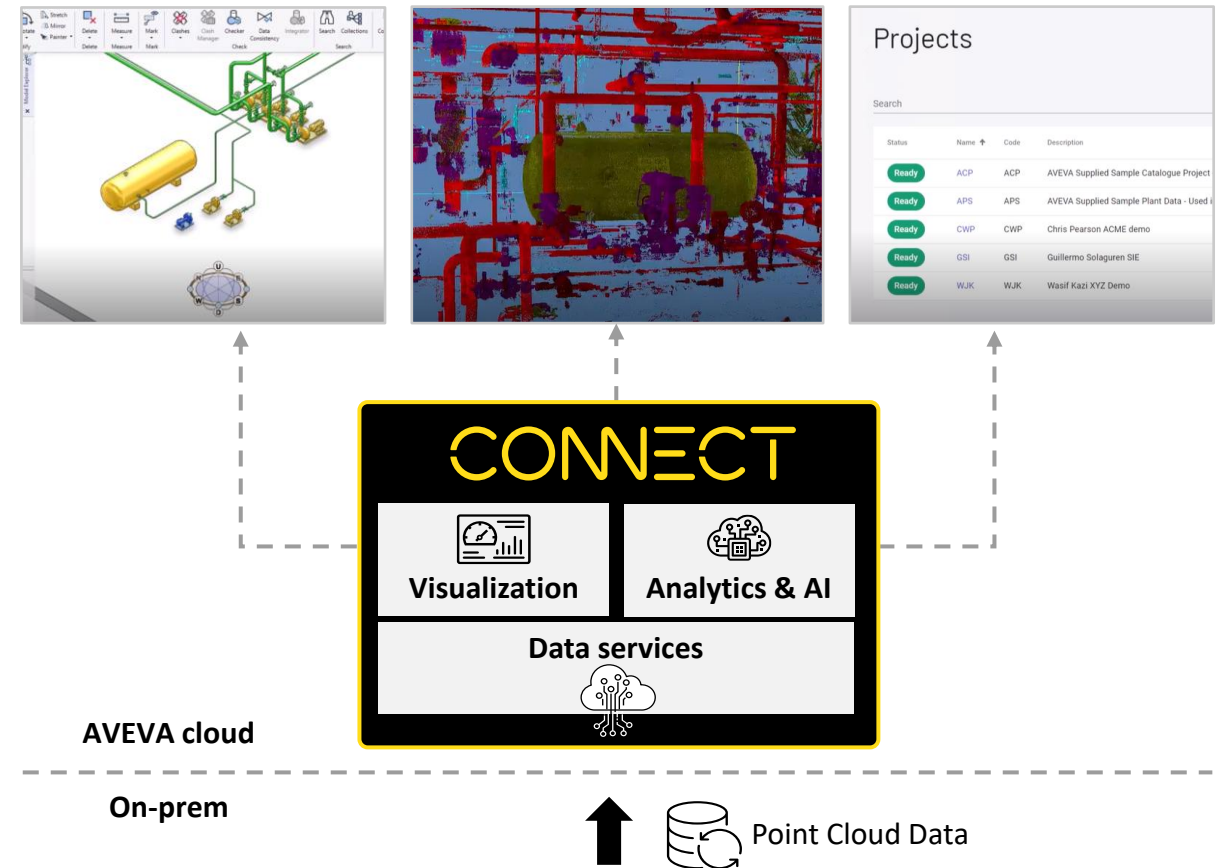
Scale - manage megaproject workflows across global teams

Living digital twin - bridge operations and engineering data

CONNECT for AVEVA reality capture

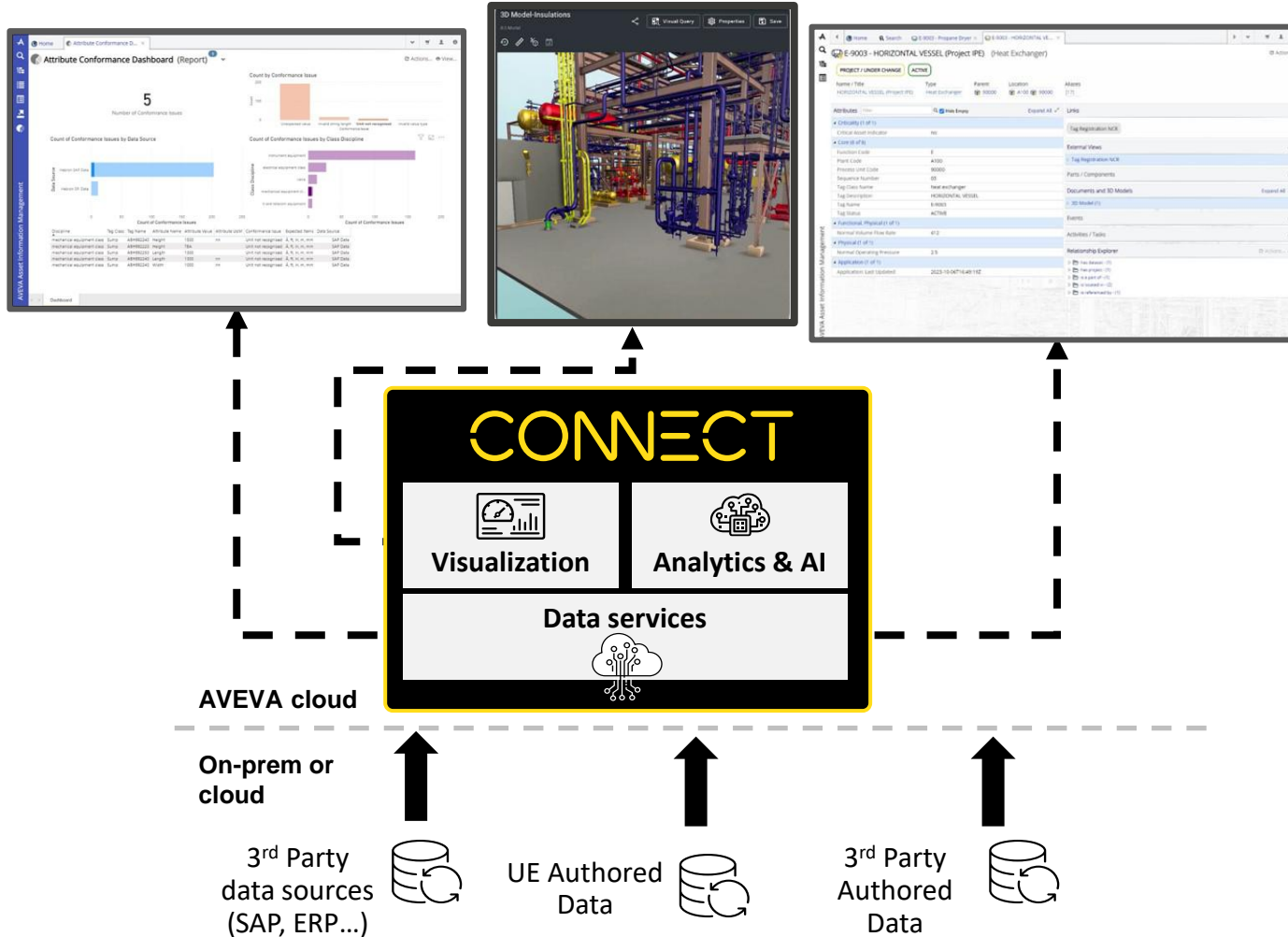
Rapid time to value with connectivity to CONNECT in a safe, secure, robust manner

- As built 3D rendering of Point Clouds
- Large file point cloud active data store and archive
- Intelligent objects in Point Cloud
- Visualization in context to other CONNECT data in CONNECT visualization



CONNECT for AVEVA Asset Information Management

Rapid time to value with connectivity to CONNECT in a safe, secure, robust manner



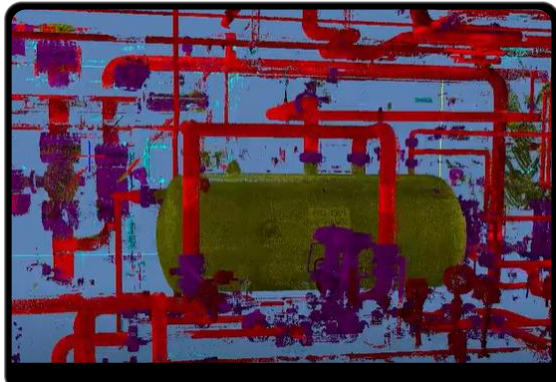
- Aggregating and contextualizing engineering data with multiple other sources
- Combines 1D/2D/3D engineering data in context
- Dashboarding & reporting of Engineering data
- Configurable to support Projects and Operations
- Data quality reporting



Extend the value for AVEVA's Existing Industrial Customers

Hybrid

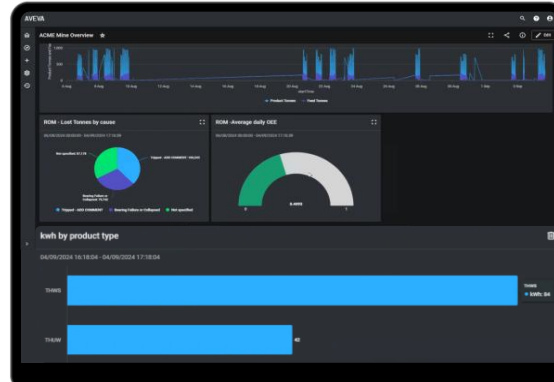
Engineering data



Point Cloud, Asset Information
Management

Design - Build

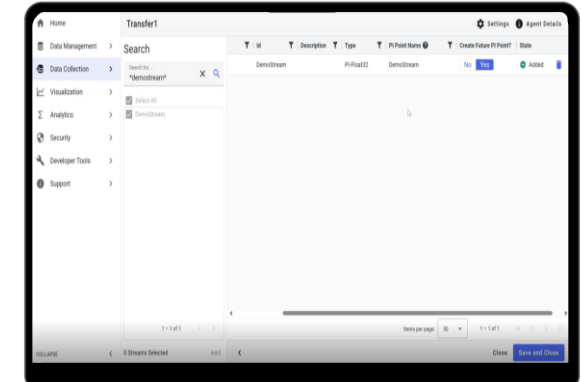
Historians / MES



System Platform, PI Systems,
MES, Production Management

Operate - Optimize

CONNECT to On-prem

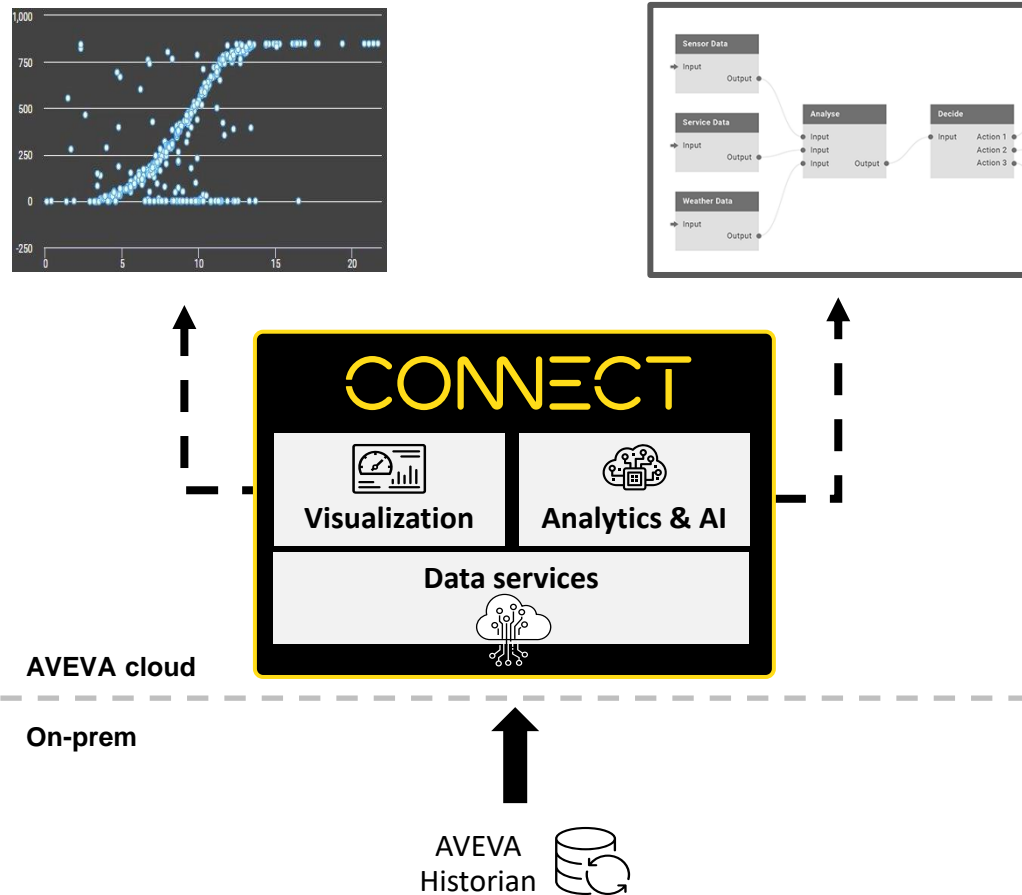


Data Write-Back

Operate - Optimize

CONNECT for AVEVA Operations Control

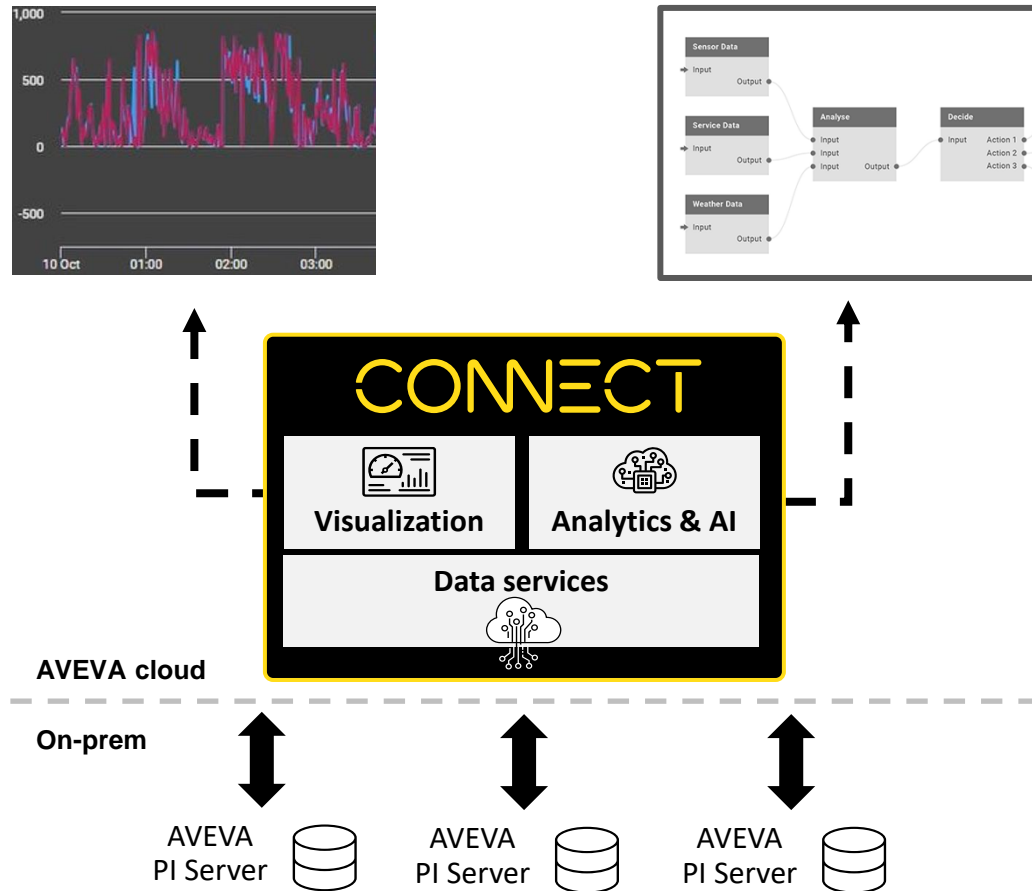
Rapid time to value with connectivity to CONNECT in a safe, secure, robust manner



- Predicting quality and throughput
- Optimizing production in real time
- Optimizing for energy efficiency

CONNECT for AVEVA PI Data Infrastructure

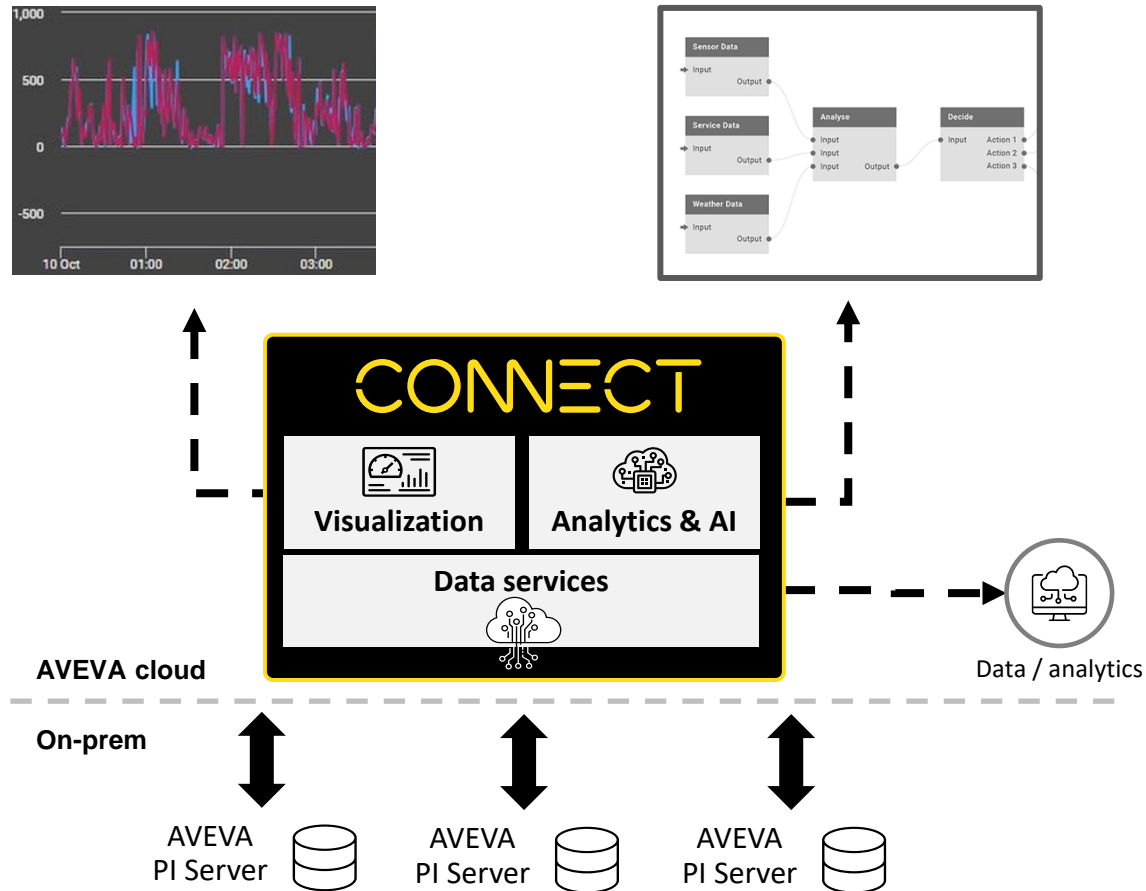
Easily integrate multi-site data at scale



- Predicting quality and throughput
- Optimizing production in real time
- Optimizing for energy efficiency
- Reducing TCO by replacing regional servers

CONNECT for AVEVA PI Data Infrastructure

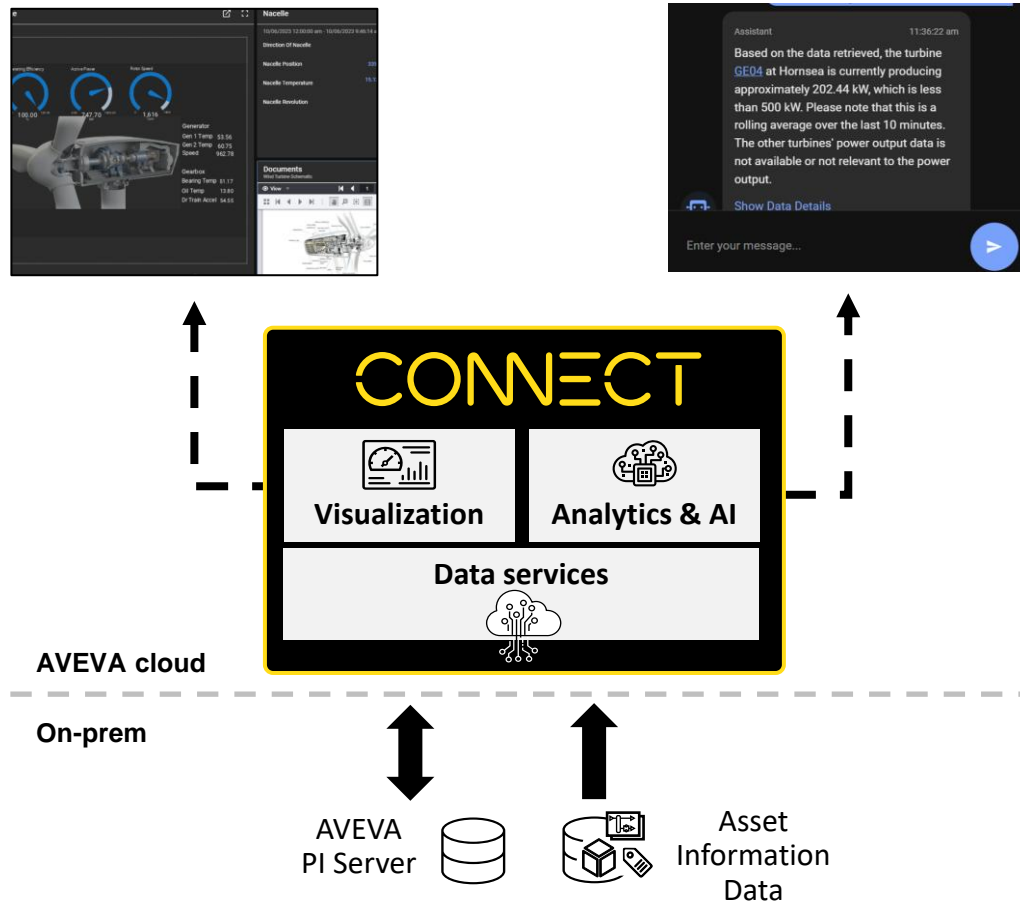
Curate data in context and share with 3rd party analytic and data vendors



- Predicting quality and throughput
- Optimizing production in real time
- Optimizing for energy efficiency
- Reducing TCO by replacing regional servers
- Easily curate data in context at scale

CONNECT for AVEVA PI Data Infrastructure & AVEVA Asset Information Management

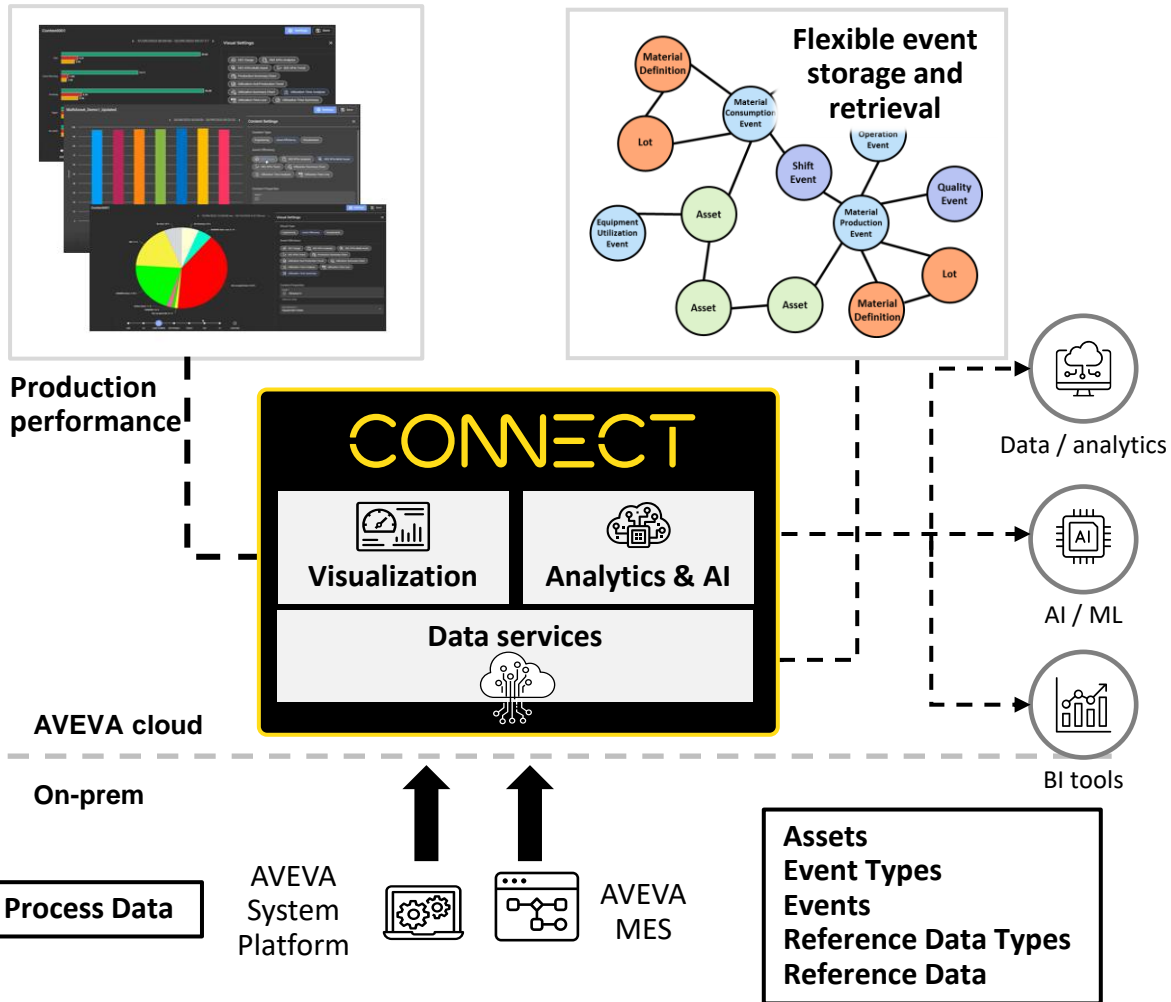
Easily integrate operations and asset information



- Predicting quality and throughput
- Optimizing production in real time
- Optimizing for energy efficiency
- Reducing TCO by replacing regional servers
- Easily curate data in context at scale
- Answering questions offering new insights across information boundaries

CONNECT for AVEVA Manufacturing Execution System

Integration with CONNECT enabling enterprise production visualizations and analytics across sites



Features

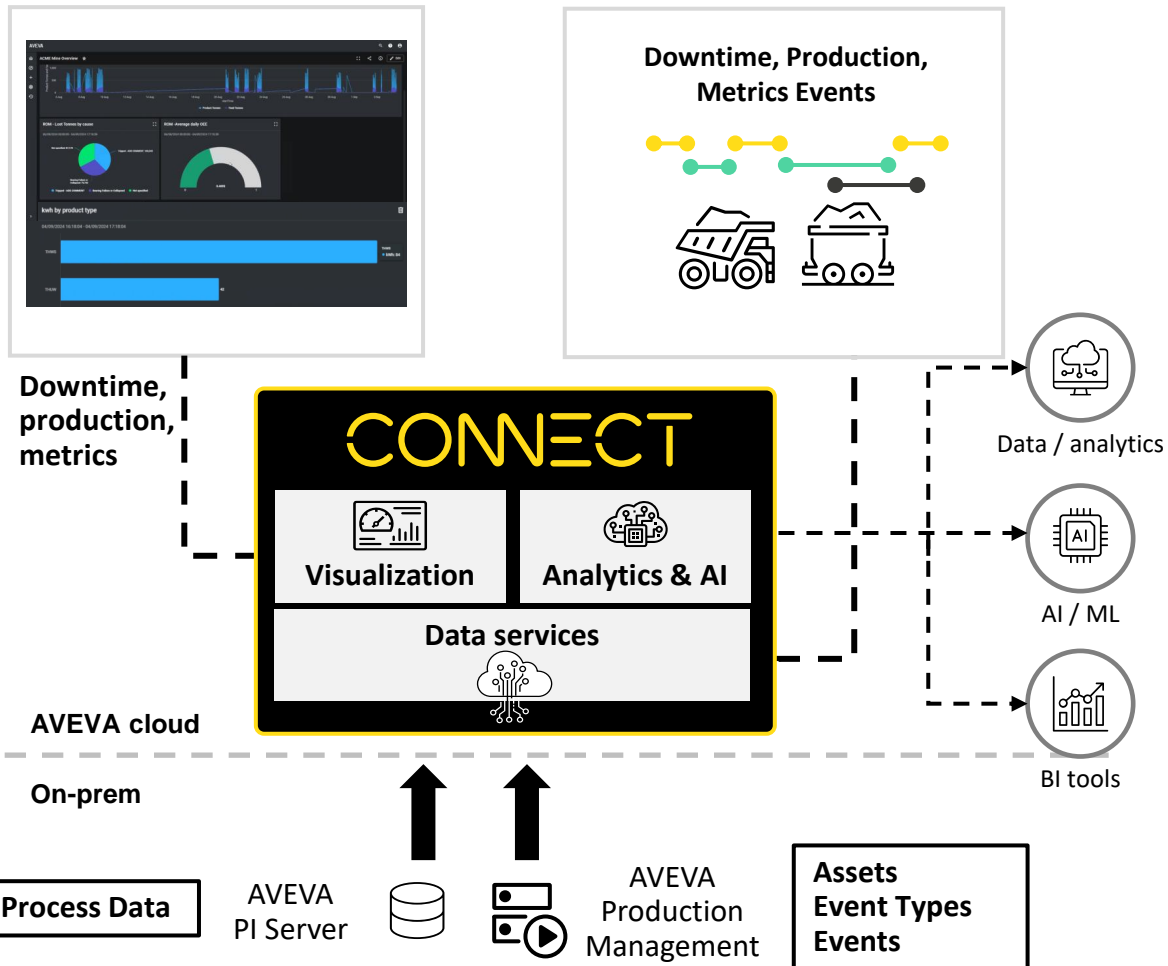
- Native AVEVA Manufacturing Execution System integration
- Store MES assets and events (production, utilization, shift, etc.) and associated reference data in CONNECT
- Visualize event data and other operational data together in a single plane of glass using CONNECT visualization.
- Rich GraphQL API for querying event relationships

Benefits

- Manages production data in a single repository across a network of plants
- Brings MES data and process data together
- Provides enterprise-wide visibility into manufacturing operations
- Connects operational data with advanced analytics services

CONNECT for AVEVA Production Management

Store and visualize event data such as downtime, production & metrics data



Features

- Native AVEVA Production Management integration
- Store equipment hierarchy information including application, site, area, and equipment stored as assets in CONNECT.
- Store downtime, production, and metrics modules as events in CONNECT.
- New generic event-based visualization widgets.

Benefits

- Visualize event data and other operational data in a single pane of glass.
- Provides enterprise-wide visibility into manufacturing operations
- Connects operational data with advanced analytics services



Extend the value for AVEVA's Existing Industrial Customers

Hybrid

Engineering data

Historians / MES

CONNECT to On-prem



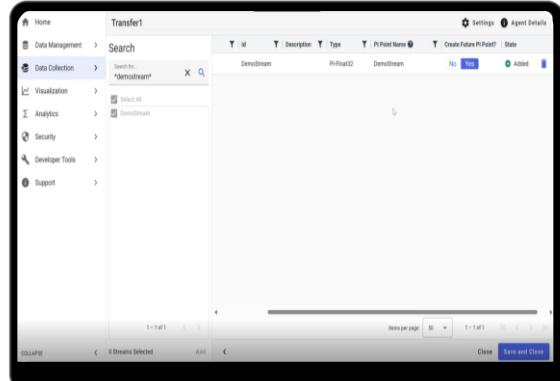
Point Cloud, Asset Information Management

Design - Build



System Platform, PI Systems, MES, Production Management

Operate - Optimize

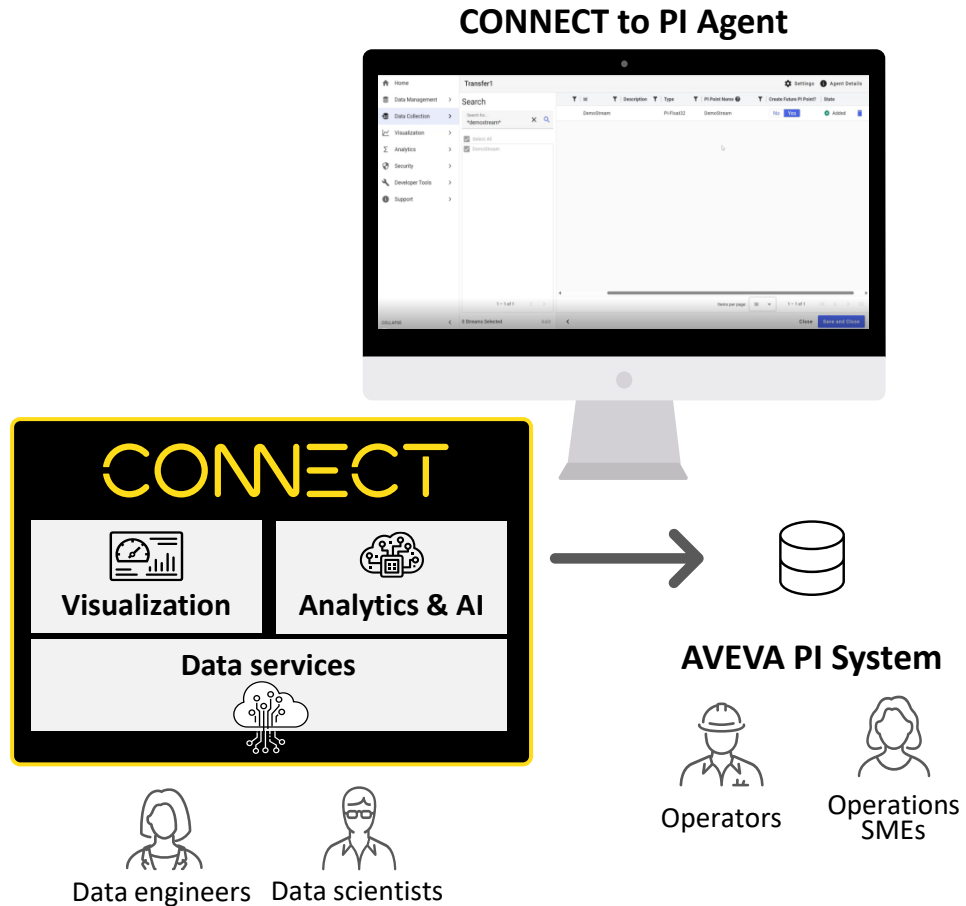


Data Write-Back

Operate - Optimize

CONNECT Write-Back to AVEVA PI Server

CONNECT to PI Agent: Write back from CONNECT to AVEVA PI Server



Features

- Transfer CONNECT data streams to tags in PI Server
- Works with real-time, historical, and future data streams
- Supports backfilling and transfer to high availability collectives
- Manage CONNECT to PI Server data flows centrally from cloud

Benefits

- Use advanced analytics capabilities in the cloud and bring the results and insights back on-premises
- Enhance collaboration between operations domain experts and data scientists
- Empower operations with advanced analytics insights using their familiar tools and existing workflows



Hybrid: Recommended sessions

Hybrid System Platform: Industrial data in CONNECT

Tuesday, April 8 @ 11:15 am (15 min)
CONNECT Lounge

Unlocking the hybrid cloud with PI Data Infrastructure

Tuesday, April 8 @ 1:15 pm (15 min)
CONNECT Lounge

Data is the foundation of your digital transformation

Wednesday, April 9 @ 11:15 am
Room 2000

Amping up Unified Engineering with the power of CONNECT

Wednesday, April 9 @ 11:45 am
Room 2002

Unlocking enterprise-wide insights with Hybrid MES

Wednesday, April 9 @ 2:00 pm (15 min)
CONNECT Lounge

Amcor: Enterprise analytics and visualization of MES/process data

Wednesday, April 9 @ 2:45 pm
Room 2001-2003



CONNECT ROADMAP THEME



Enterprise Insights

Deliver enterprise industrial insights that deliver more value





Deliver enterprise industrial insights that deliver more value

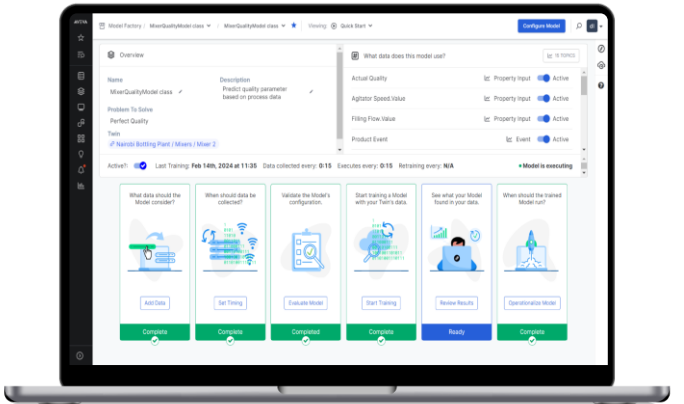
Enterprise Insights

CONNECT visualization



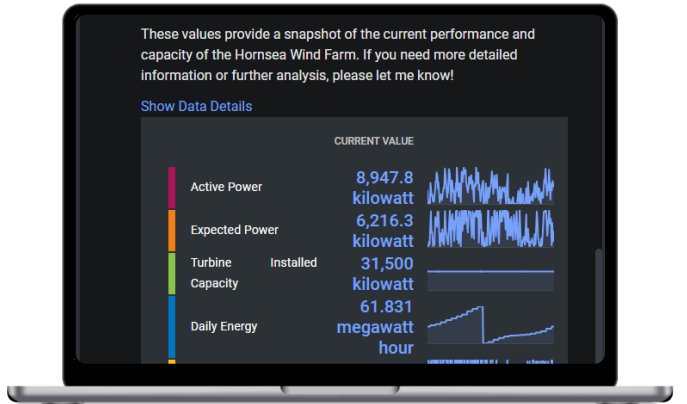
Visualization of enterprise data in context

AVEVA Advanced Analytics



Powerful analytics and AI models driving operations improvements

CONNECT Industrial AI Assistant



Natural language interface for your enterprise data

CONNECT visualization



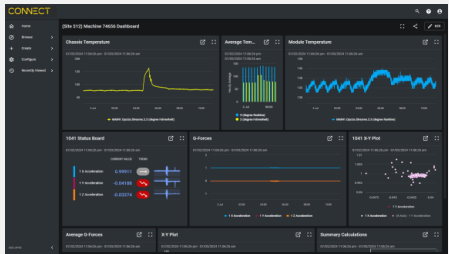
Self service visualizations

Customized experiences

Visualize complex relationships and data-driven insights in a way that is easy to understand

- Relate disparate data sources & systems in context to each other
- Gather insights between data sources and across data types quickly and easily
- Expedite analysis using an Industrial AI Assistant to answer natural language questions
- Share actionable information with operations, reliability, business, and other teams, anywhere through a browser

5 visualizations you can build with CONNECT



Dashboard visualizations

Dashboard visualizations contain an overview of high-level information intended for quick and simple interpretation of critical business or KPI data.

Content can be grouped in multiple ways, including the use of tabular navigation to segment categories of information.



Enterprise visualizations

Enterprise visualizations are broad in scope and can be shallow or deep, intended to showcase current and projected performance across multiple sites, divisions, or fleets of assets.

These can be highly interactive, supporting drill-down, filtering, and other user engagement to manipulate content.



Role-based visualizations

Role-based visualizations are narrow in scope, with deep information tailored for the persona or functional role to support decisions and troubleshooting.

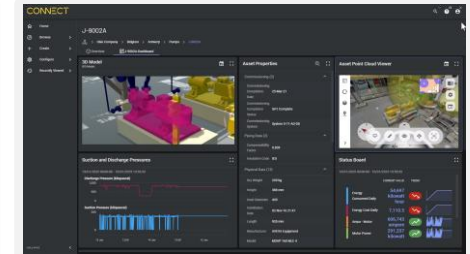
Facilitating issue resolution and other actions, these provide intelligence on performance, events and other details.



Process-based visualizations

Process-based visualizations are graphical displays emphasizing production details to drive interpretation of data and optimal performance between linked assets.

Relatable with HMI (Human Machine Interface) use cases, these displays are often highly detailed and require specialized knowledge.



Asset-based visualizations

Asset-based visualizations can be comprised of mixed information that provide greater insight to the performance and maintenance of a single asset.

Arranged content can include time-series data, metadata, 3D models, GIS, and maintenance and other documentation.



Get started below

Use our powerful search to quickly view asset information, KPIs, and sophisticated analysis.

Search for assets, data or saved content

Redesigned home page

PowerBI

File Export Share

Wind Farm

Big Buffalo

Active Power by Wind F

Big Buffalo

Power BI as content

Canvas visualization format

Hourly Ave

50

25

0

28 Jan 02:00 04:00

Line Frequency (hertz)

Torque - Actual

Order

Remove

Send to back

Send backward

Bring to front

Bring forward

Event and asset efficiency content

Reason Value Production Info

Production Summary

03/16/2025 8:55:21 PM - 03/17/2025 8:55:21 AM

Example Production

6,129.1

Bad Production

221.4

Downtime by Duration

03/16/2025 8:55:21 PM - 03/17/2025 8:55:21 AM

Clean Up

01:04:05

Label Jam

00:24:01

Idle

00:16:00

Stacker Fault

00:16:00

Paper Tear

00:10:00

Utilization Trend

03/16/2025 8:55:21 PM - 03/17/2025 8:55:21 AM

Percent

100

75

50

25

0

17 Mar 04:00 08:00

No data: 2.3 %

Idle: 14.2 %

Downtime: 16.1 %

Runtime: 65.4 %

Future time on charts

08:20 08:30 08:40 08:50 09:00

CUSTOM

Asset metadata

30

25

20

CONNECT

Home Browse

3D Model

Homsea_Wind_Farm

Custom home page

Industrial AI Assistant

Board

25 00:00:00 - 10/02/2025 17:15:18

56,19

Energy

6

kilowatt hour

7,305.4

Energy

4

122,5

Amps

83

amper

e

58,84

What can you help me with?

How are some of my operations performing?

What are some assets in this system?

Hi, I received an alert for a pump, J-9002A at the Antwerp site related to vibration sensors. Can you help share any potential issues with this asset that could have contributed to this?

Send

Visualizations Favorites

Powers

3/11/2025 3:45 AM

Favorites

zation001

Shared Entity

GE02

Properties

Common (11)

Corrosive Liquid

no

MainTag

GE02

Originator

ARB

Plant

WTP

Project Code

Asset relative referencing

Shared Entity

GE01

GE02

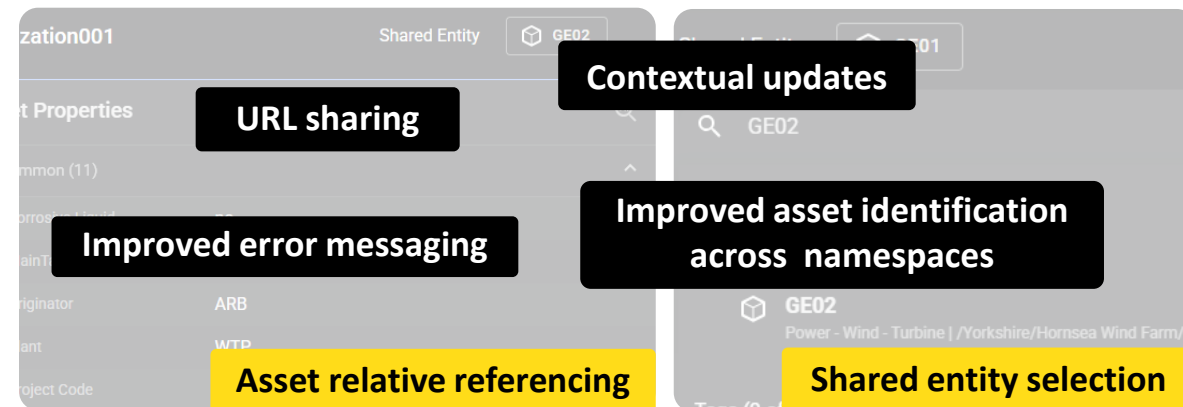
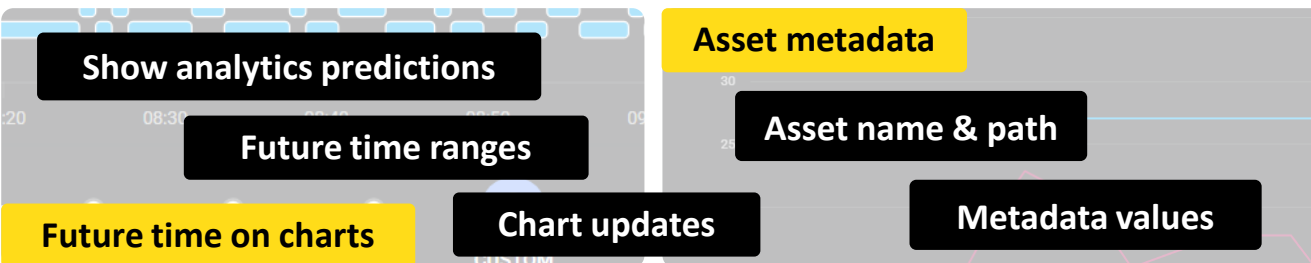
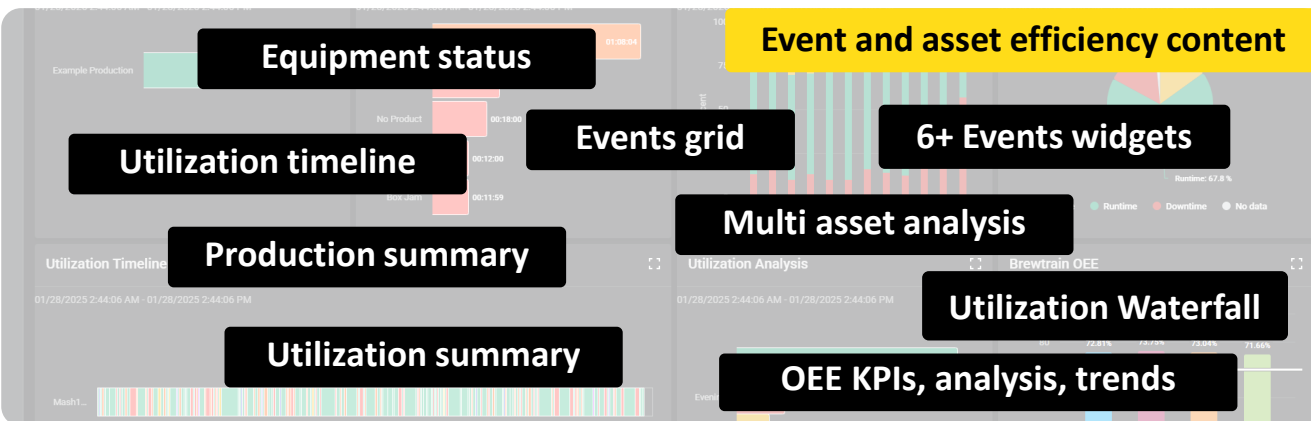
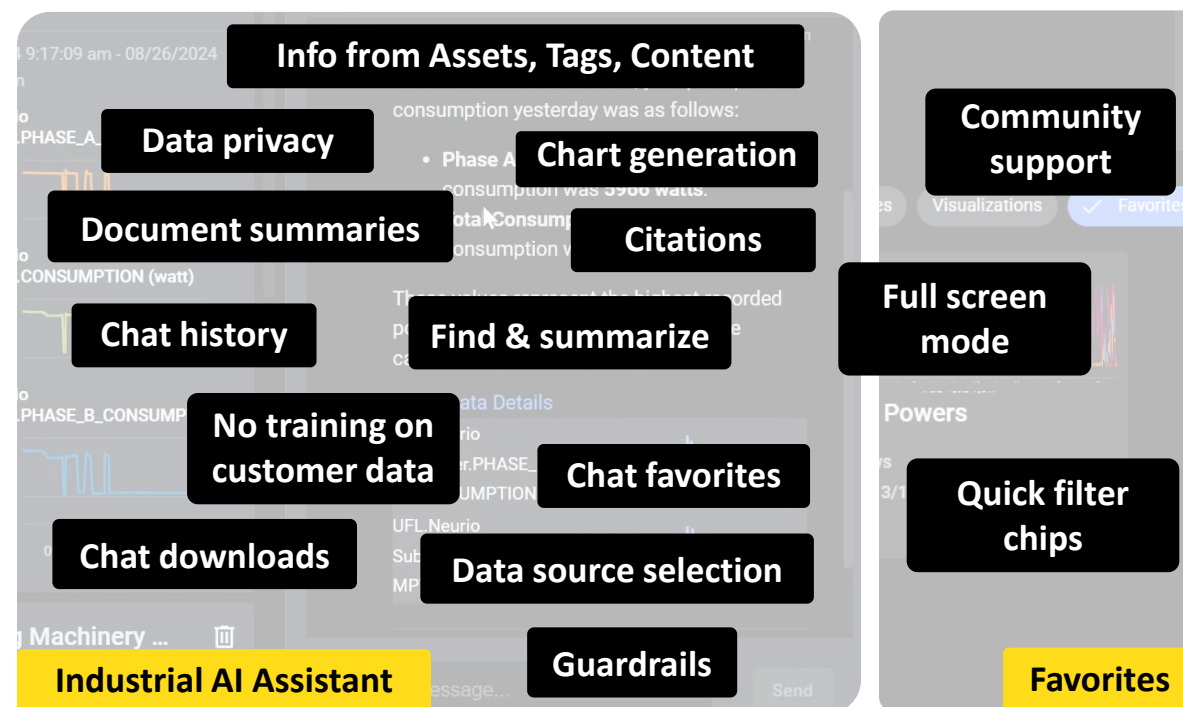
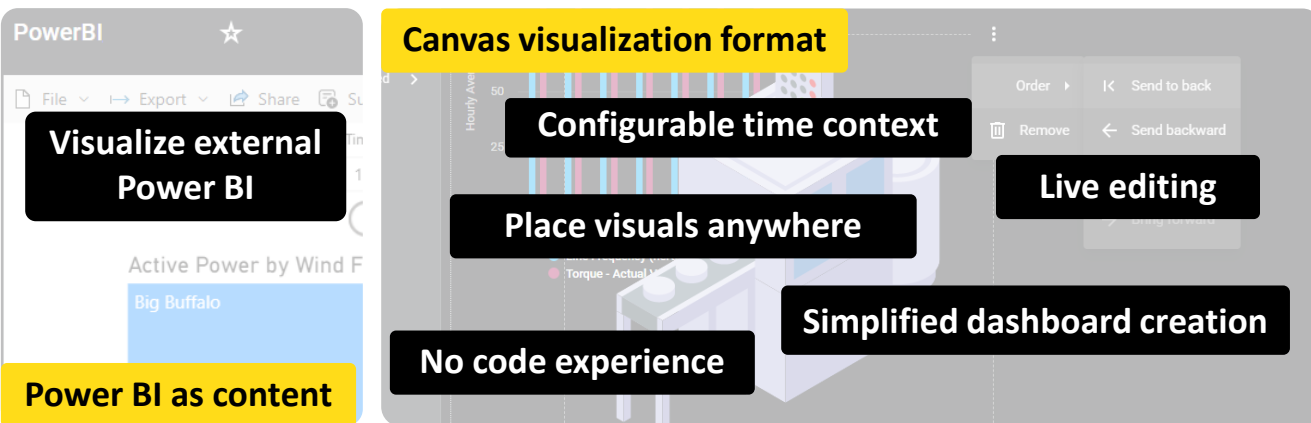
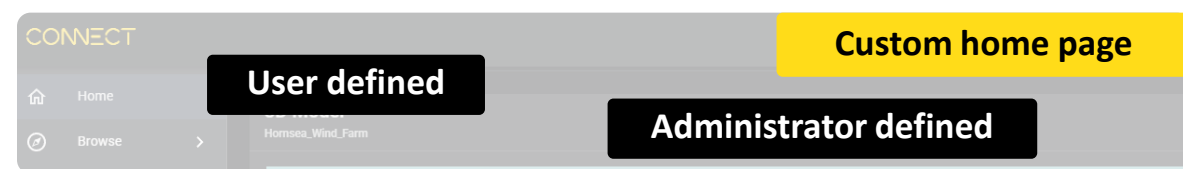
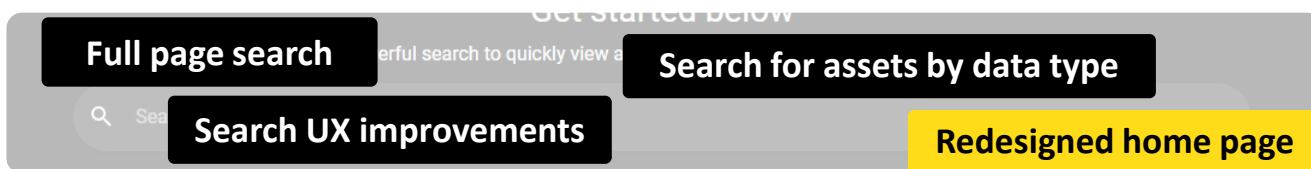
11 results for "GE02"

Assets (1 of 1)

GE02

Power - Wind - Turbine | /Yorkshire/Hornsea Wind Farm/G

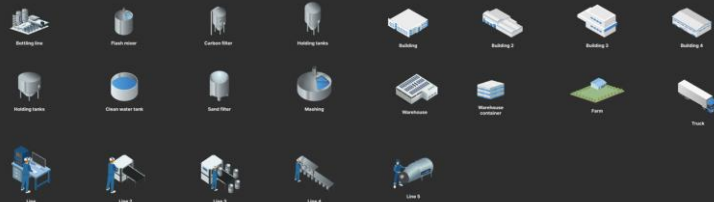
Shared entity selection



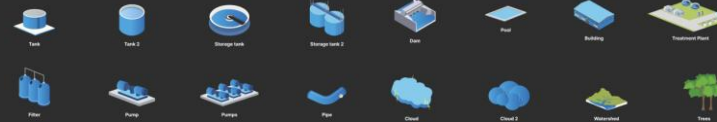
CONNECT visualization: Content library

18 highly configurable graphics + 82 Isometrics for 5 industries ... to start

Consumer Products (21)



Water (16)



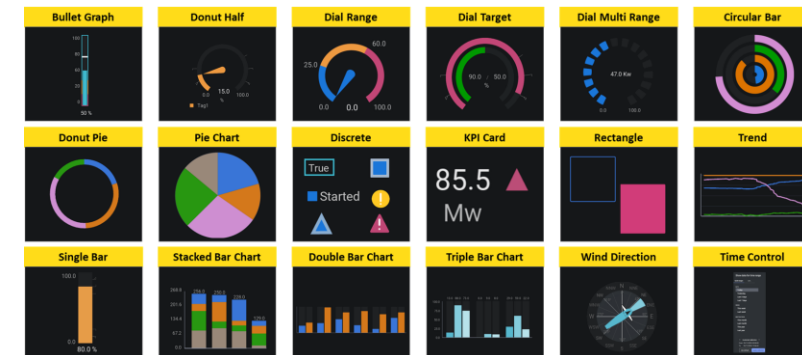
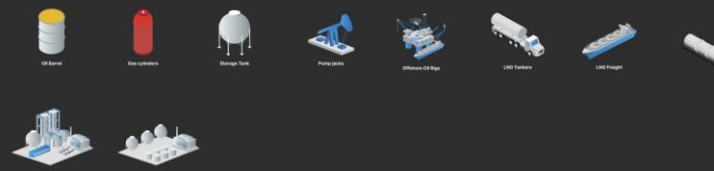
Mining (22)



Power (13)

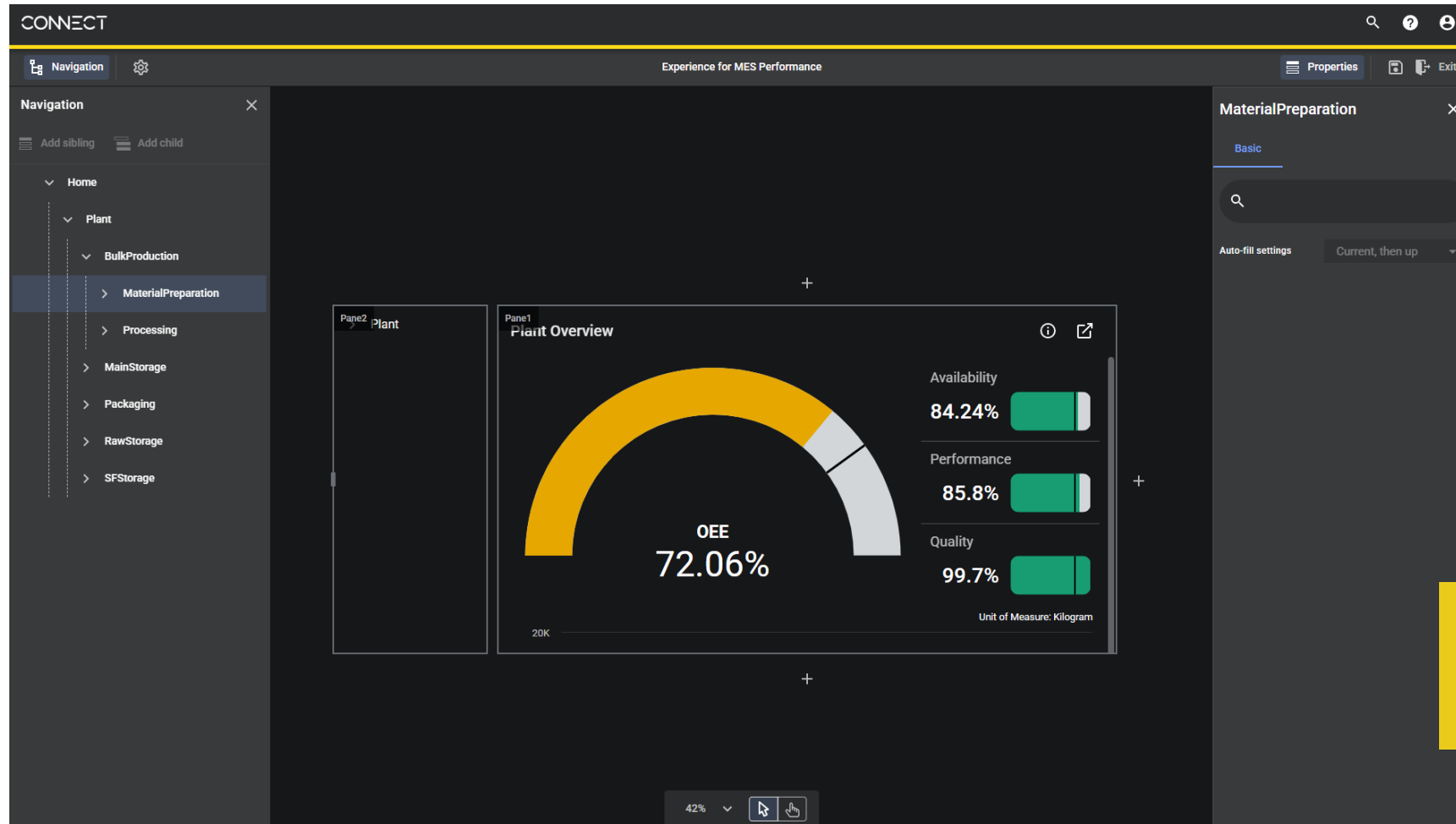


Energy (O&G) (10)



Experience designer

Used for assembling the more advanced Experience visualizations

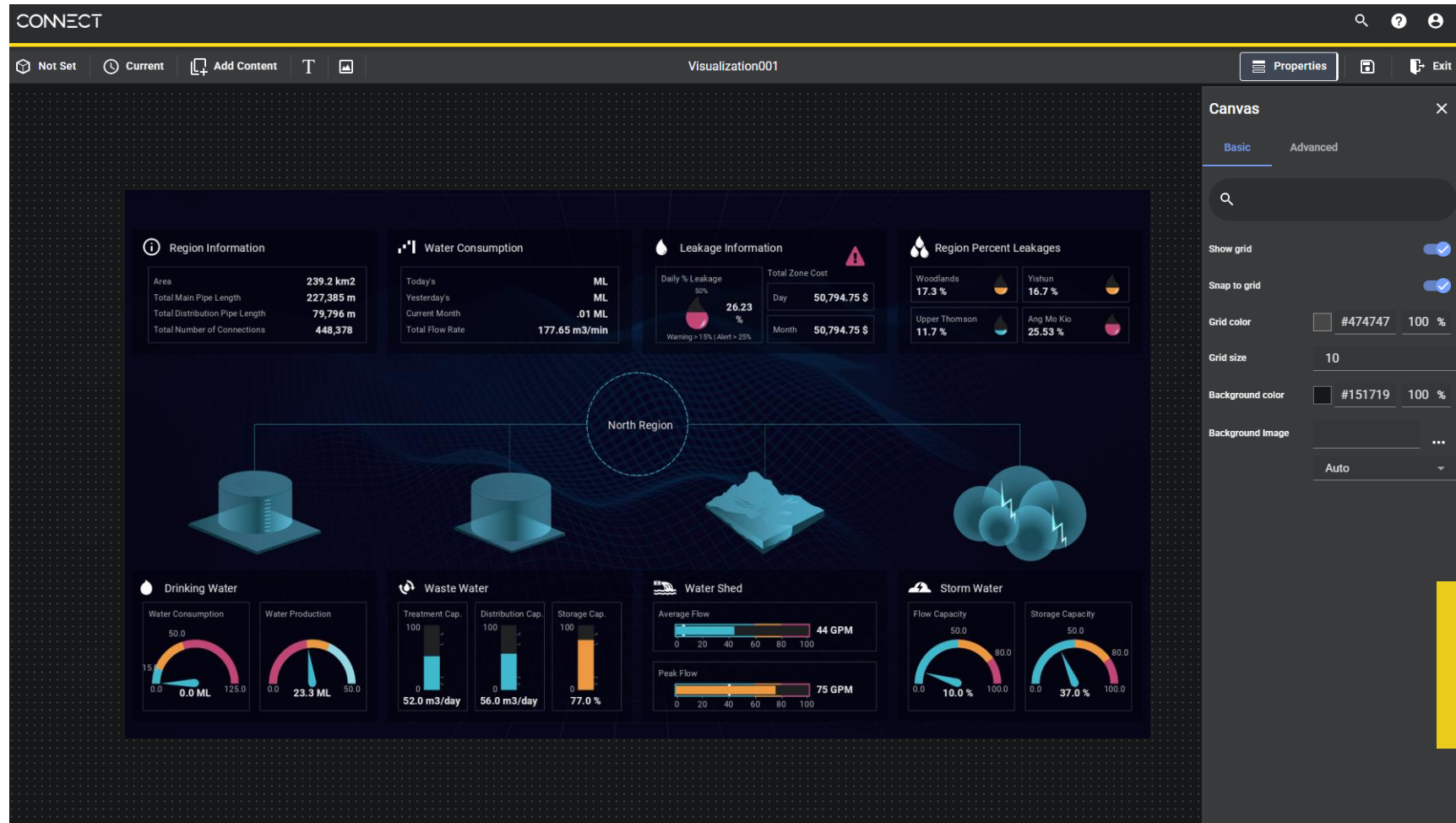


Experience Designer

Interactive visualization with dynamically driven content, advanced functions and deep customization.

New Canvas layout

Used to freeform design Visualization Dashboards



Canvas Dashboard
freeform Visualization to design
Enterprise-wide views.



Deliver enterprise industrial insights that deliver more value

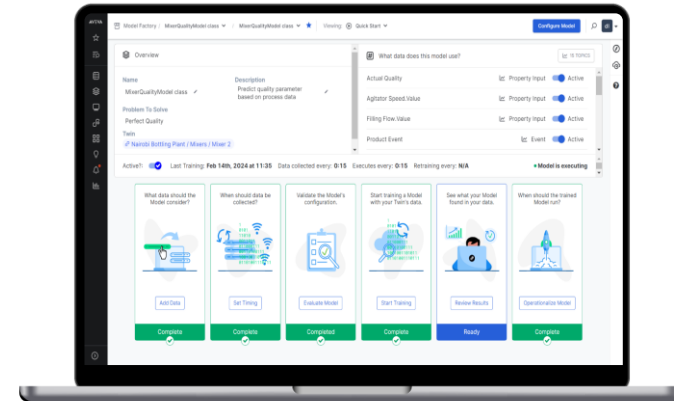
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CONNECT visualization



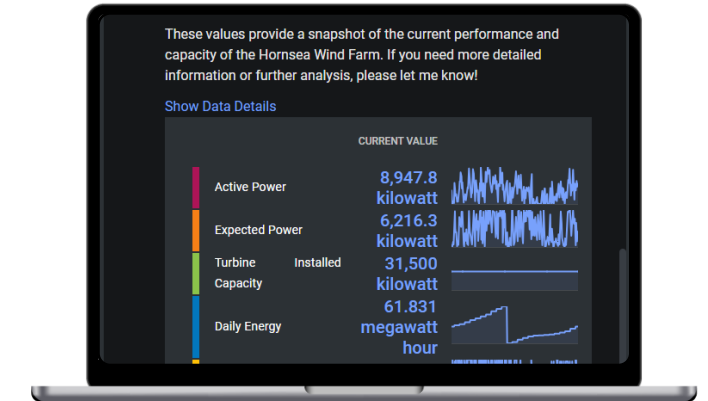
Visualization of enterprise data in context

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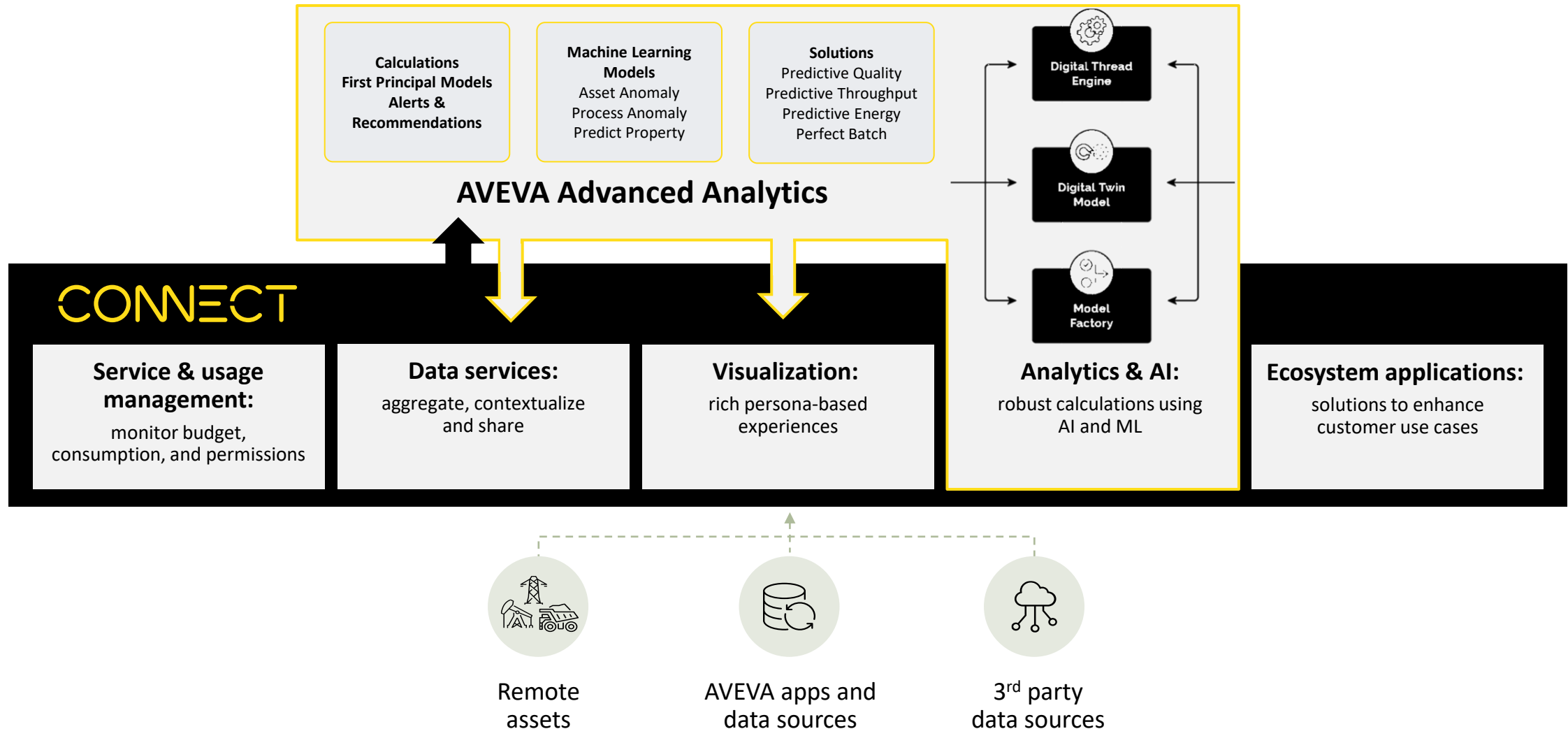
Powerful analytics and AI models driving operations improvements

CONNECT Industrial AI Assistant



Natural language interface for your enterprise data

Connect AI with all industrial data and visualization



AI-driven optimization for industrial excellence

Process Optimization

Perfect Energy

Operate at the sweet spot of production and energy consumption

Perfect Production

Automate investigations and understand performance drivers with ML

Perfect Quality

Reduce variability, eliminate losses, and improve operational flexibility

Perfect Batch

Continuously evaluate batch performance and automate actions

Perfect Centerline

Identify optimal operating conditions for the best performance, yield, or quality

Asset Optimization

Uptime Optimization

Real-time alerts and recommendations to avoid downtime events

Throughput Optimization

Maximize production output on a per-product and per-asset basis

Asset Reliability

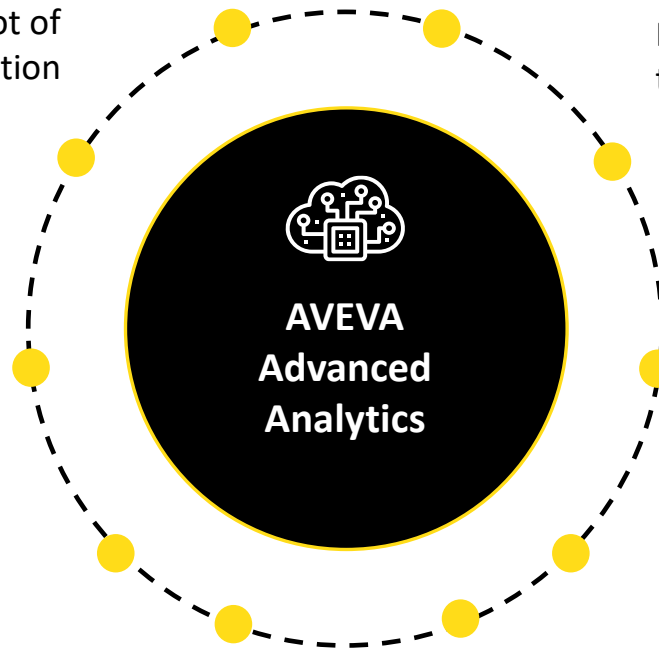
Predict and prevent common failure modes at scale

Asset Life

Maximize serviceable life and proactively manage failure risks at scale

Asset Anomaly Detection

Detect asset anomalies in real-time, prioritize by impact, enable early intervention



F. Hoffmann-La Roche requires a reliable cloud-based data platform



Pharma & Life Sciences | Switzerland - Global

Challenges

- **Availability** of relevant data for business analysts of ROCHE
- Terabytes in the PI System become petabytes in a commercial data lake
- **Complex server landscape** to aggregate data at global scale
- **High skill set** and expertise **required** to work with data
- Demonstration of project results in **less than 3 months** (target milestone: Hannover Messe)

Solution

- Leverage CONNECT Data Services (aka AVEVA Data Hub) as **industrial** data enablement infrastructure
- Leverage **AVEVA Advanced Analytics** for rapid implementation of **self-service data analytics**
- **Partnership approach:** Client – Vendor – Integrators

Results

- End-to-End data availability
- Major reduction of data consumption cost (petabytes become terabytes again 😊)
- Potential reduction by approx. up to 70 servers within the entire system landscape
- accelerated time-to-market for industrial data-products

A woman with dark hair and glasses is shown in profile, looking at a computer monitor. The monitor displays a complex data visualization, possibly a network graph or a molecular structure, with various nodes and connections. The background is slightly blurred, showing other computer monitors and office equipment.

“ We didn’t expect to have tangible results within such a short time frame. CONNECT data services supported by a strong partner (Capgemini) accelerates the time-to-value of a cloud-based data infrastructure significantly. ”

- Heiko Trefzger, ROCHE, Product Manager, Data & Insights



Deliver enterprise industrial insights that deliver more value

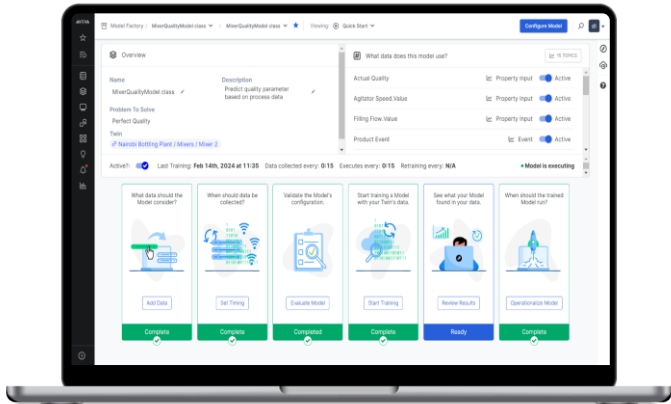
Enterprise Insights

CONNECT visualization



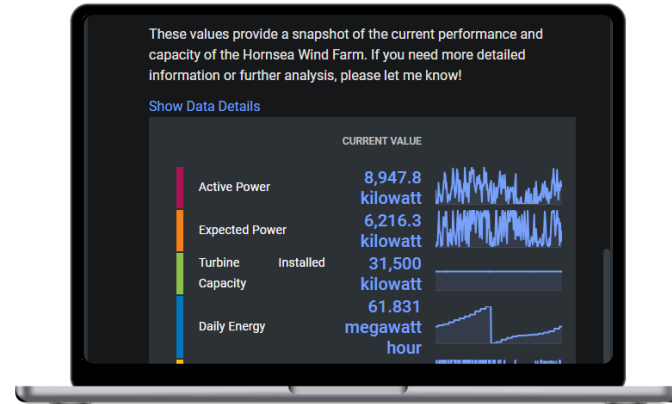
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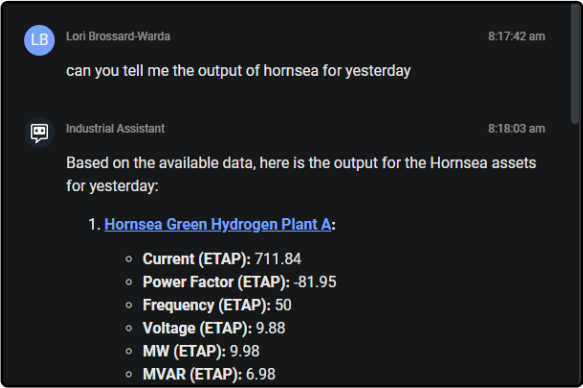


Natural language interface for your enterprise data

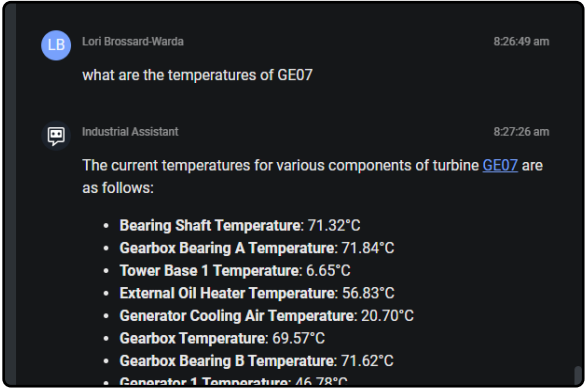
Industrial AI Assistant

Natural language interface
to your data in CONNECT

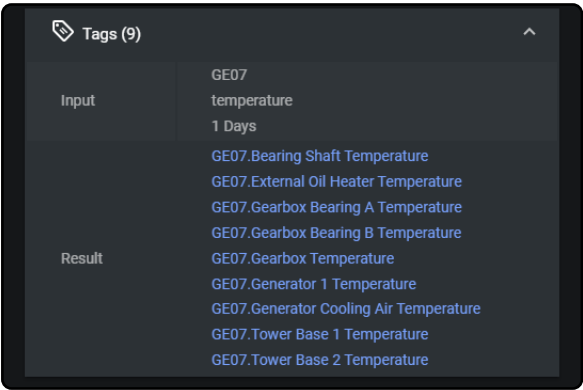
Natural language interface



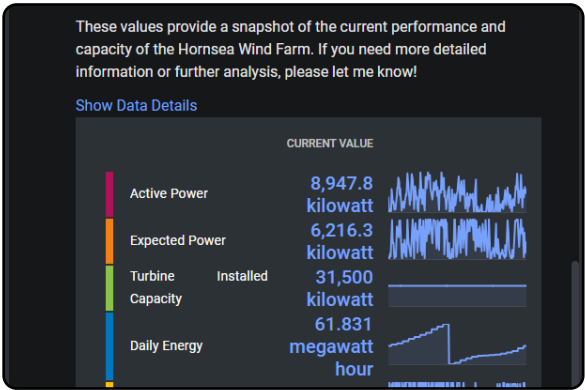
Content search & summarization



Citations show work (transparency & traceability)



Generate dashboards & charts inline



Industrial AI Assistant

Leveraging the power of Generative AI in CONNECT

Integrate the power of Generative AI with your industrial data.

Quickly find and summarize information by asking a digital intellect natural language queries through a chat interface.

Fast onboarding to supplement SMEs and non-SMEs.

Model is never trained using data from the customer's account.

What are the bearing and nacelle temperatures for GE07

The screenshot shows a chat window with a dark background. At the top, a user named 'Lori Brossard-Warda' (with a blue circular icon containing 'LB') asks: 'what has been the wind velocity at hornsea wind farm this week'. The timestamp is '10:28:22 am'. Below this, the 'Industrial Assistant' (with a speech bubble icon) responds at '10:28:38 am'. The response is titled 'Wind Velocity Data at [Hornsea Wind Farm](#) for This Week'. It states: 'Based on the available data, here are the relevant metrics for wind velocity at the Hornsea Wind Farm over the past week:'. It then lists '1. Wind Speed:' with four bullet points: 'Current Value: 5.55 meters per second (m/s)', 'Minimum: 2.32 m/s', 'Maximum: 18.69 m/s', and 'Average: 8.64 m/s'. A 'Summary' section follows, stating: '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!'. At the bottom, there is a text input field with the placeholder 'Enter your message...' and a 'Send' button.

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

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 we have a 3D Model for Hornsea Wind Farm?

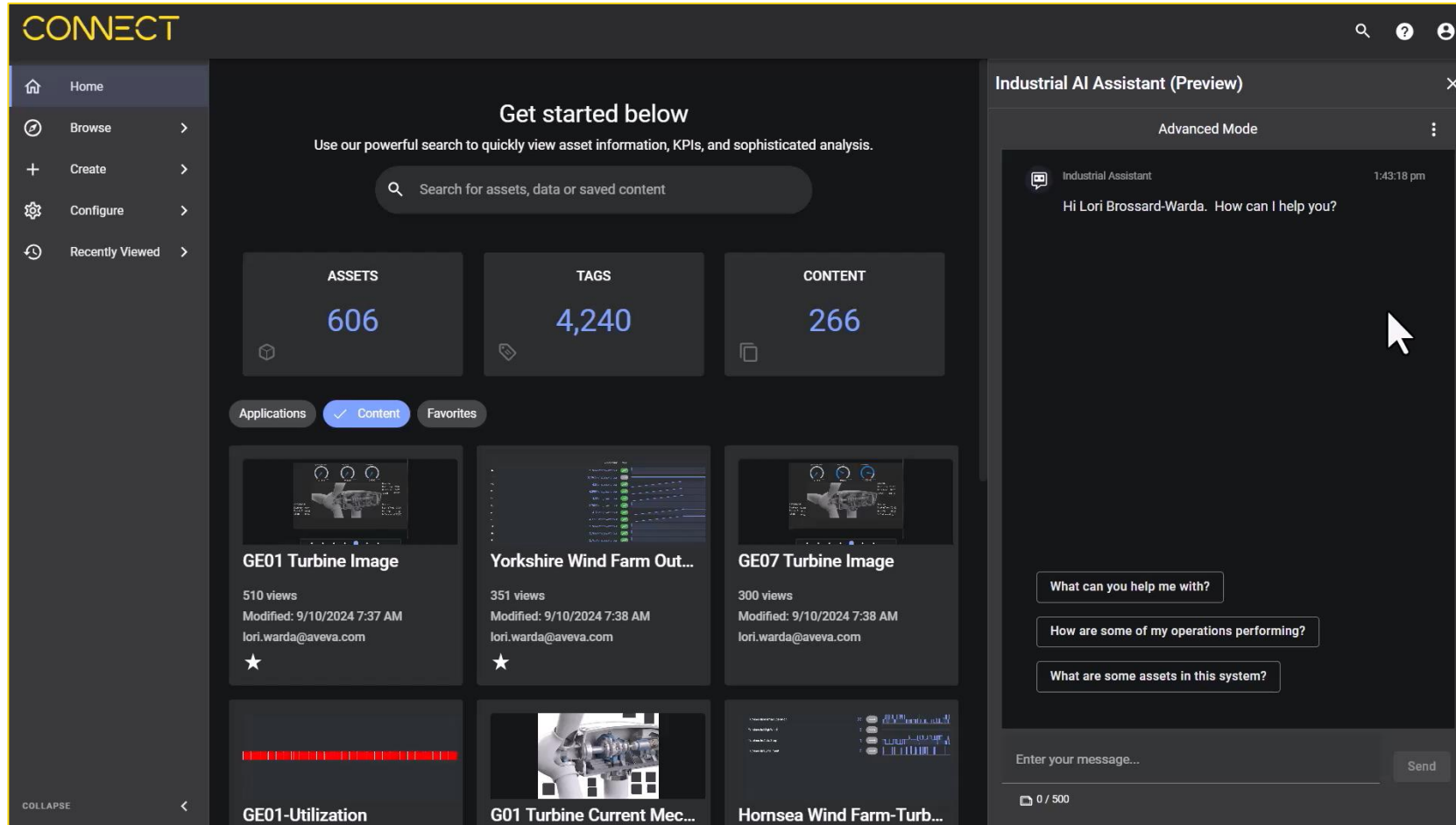
Do I have a trend for GE01 output?

PREVIEW TODAY



CONNECT

Industrial AI Assistant – generating visualizations



- Save time and clicks by using natural language to create visualizations
- Initially, will be very explicitly – create a visualization with a line chart that shows the temperature data from GE01
- Expanding to more implicit requests – create a visualization highlighting the operating conditions at GE01
- Extending the learning and capability to other products / solutions



Enterprise Insights: Recommended sessions

From Data to Decisions: How AVEVA AI is Shaping the Future of Industry

Tuesday, April 8 @ 2:15 pm

Room 2001-2003

Visualizing industrial data with CONNECT

Tuesday, April 8 @ 3:00 pm

Room 2005-2007

Machine learning made easy with AVEVA Advanced Analytics in CONNECT

Tuesday, April 8 @ 2:45 pm (15 min)

CONNECT Lounge

Powering Industrial Analytics & Machine Learning with CONNECT & AVEVA Advanced Analytics

Tuesday, April 8 @ 3:45 pm

Room 2005-2007

User created dashboards and displays in CONNECT with the Visualization designer

Wednesday, April 9 @ 12:00 pm (15 min)

CONNECT Lounge

Define interactive visualizations in CONNECT with the Experience designer

Wednesday, April 9 @ 1:15 pm (15 min)

CONNECT Lounge

CONNECT data services for a data analytics platform at F. Hoffmann-La Roche

Wednesday, April 9 @ 1:15 PM

Room 2001-2003

From Data to Decisions: using the Industrial AI Assistant to get there quicker

Wednesday, April 9 @ 2:45 pm (15 min)

CONNECT Lounge

Visualize your data together in CONNECT (featuring the Industrial AI Assistant)

Wednesday, April 9 @ 4:15 pm (15 min)

CONNECT Lounge





CONNECT ROADMAP THEME



Industrial Ecosystem

Drive industrial transformation through a network of partner applications and services

CONNECT ecosystem

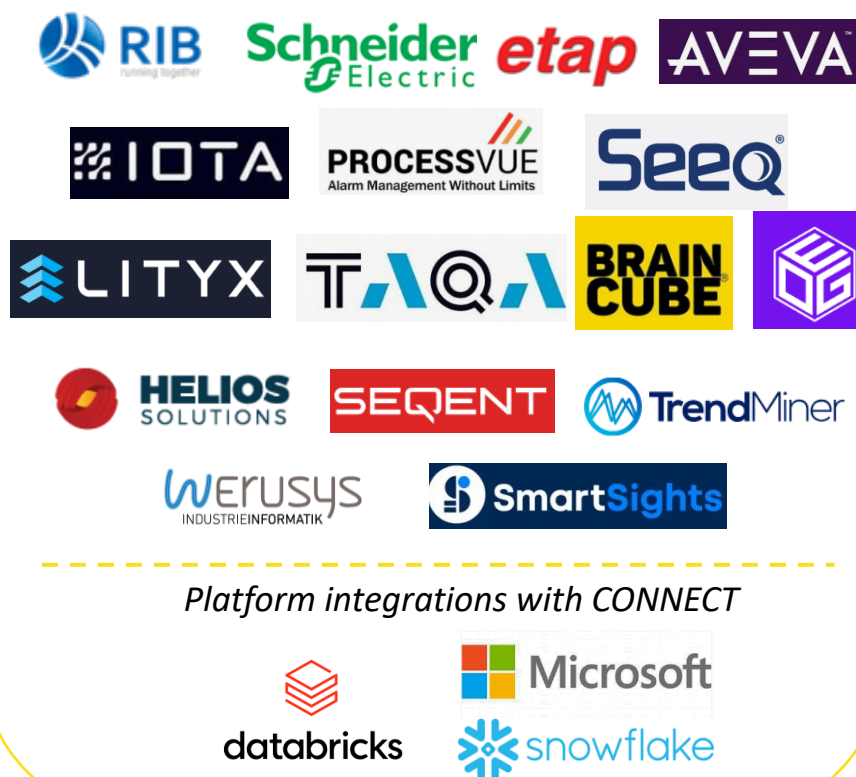
Managed Solution Providers (MSPs)

Design, build and market your value-added solutions to a wide range of customers using CONNECT technology



Technology Partners

Develop and integrate applications with CONNECT



System Integrators

Develop/configure ad-hoc (bespoke) projects with CONNECT services based on end user requirements



Alliance partners

Provide consulting services for end users on technology, products and technology required for their projects and initiatives






Drive industrial transformation through a network of partner applications and services

Ecosystem

Databricks Integration



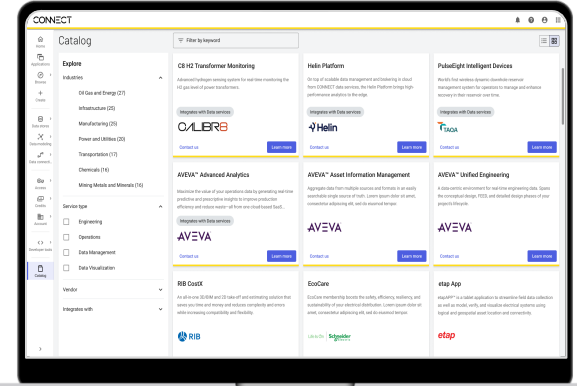
Live industrial data for data science

Community sharing across companies



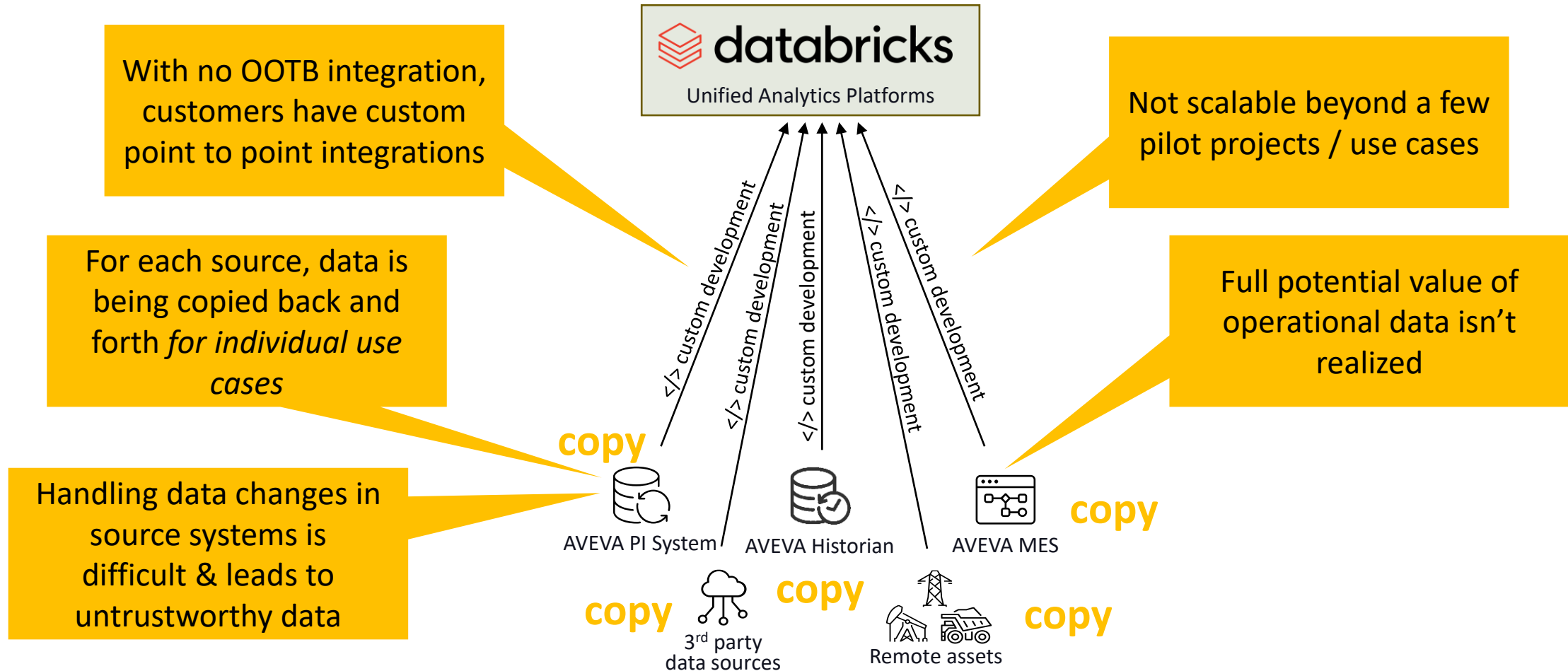
Powering your industrial ecosystem with connected community

CONNECT Ecosystem



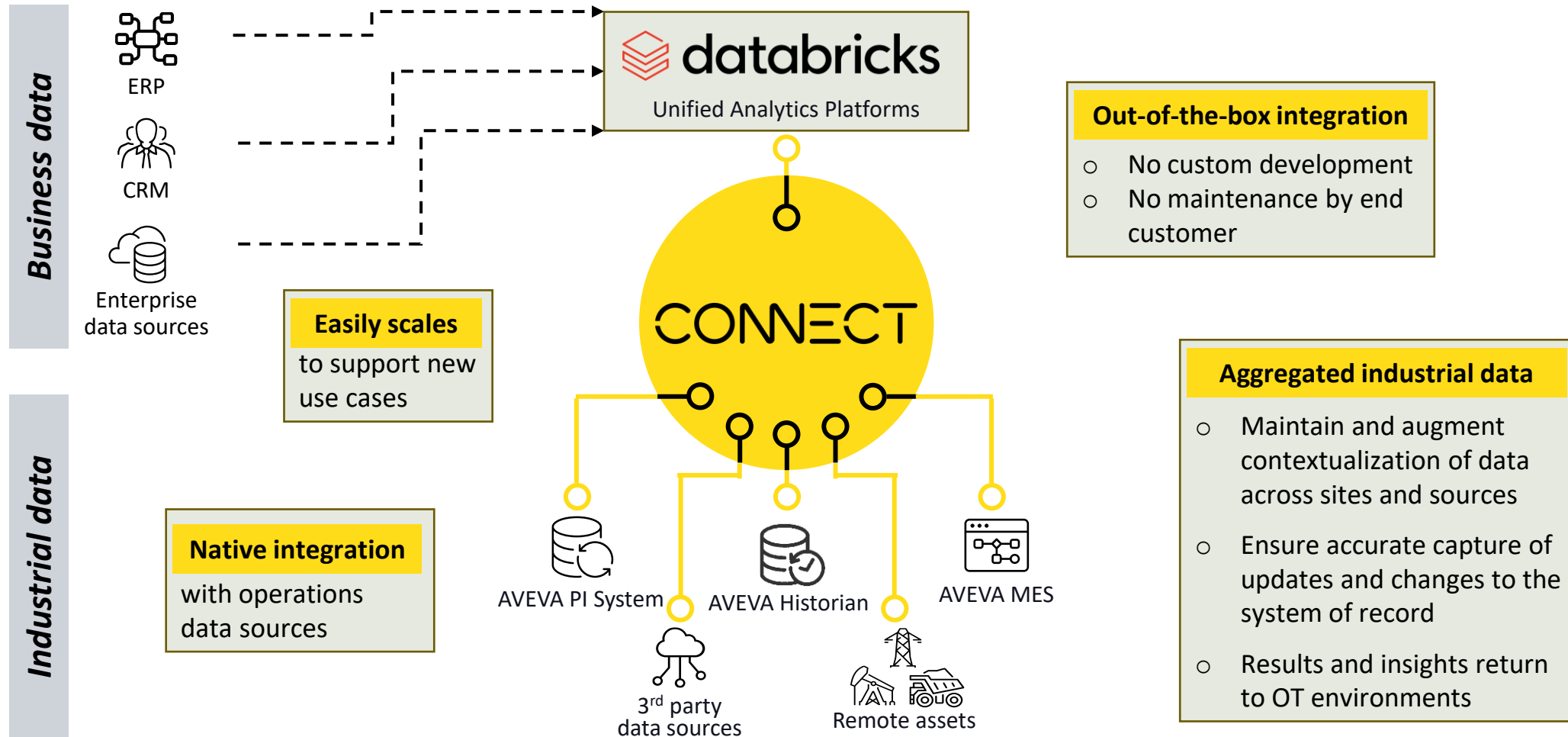
Easily find CONNECT apps and solutions

Past: Custom fragmented solutions that aren't scalable



Today: Live industrial data for data science

Authoritative, high quality, contextualized live sharing of data between OT and IT environments

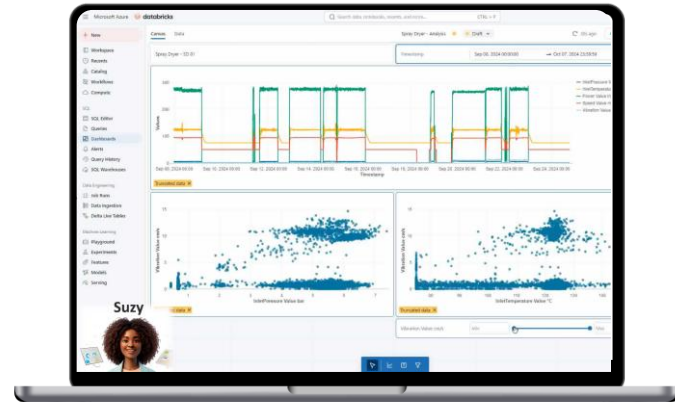




Drive industrial transformation through a network of partner applications and services

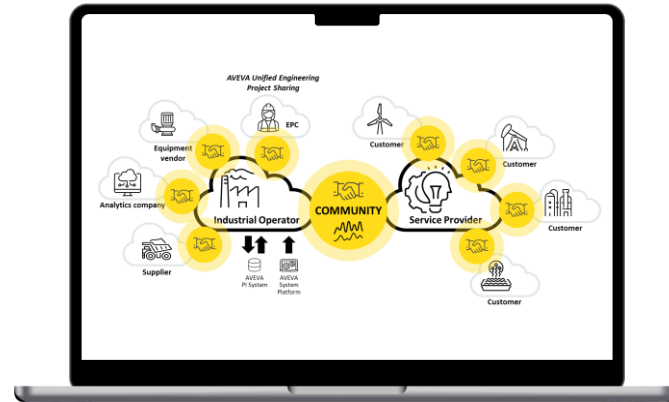
Ecosystem

Databricks Integration



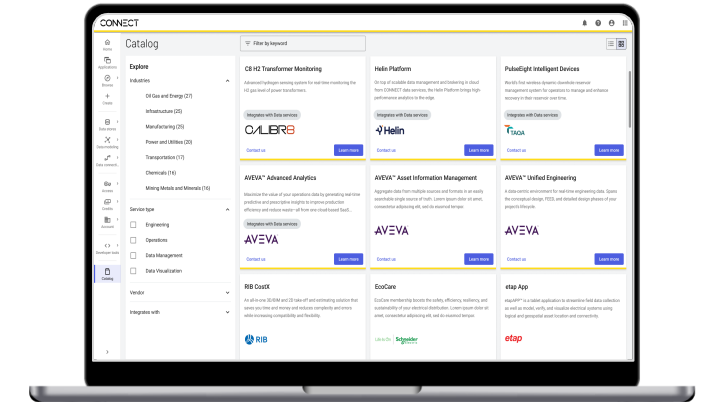
Live industrial data
for data science

Community sharing across companies



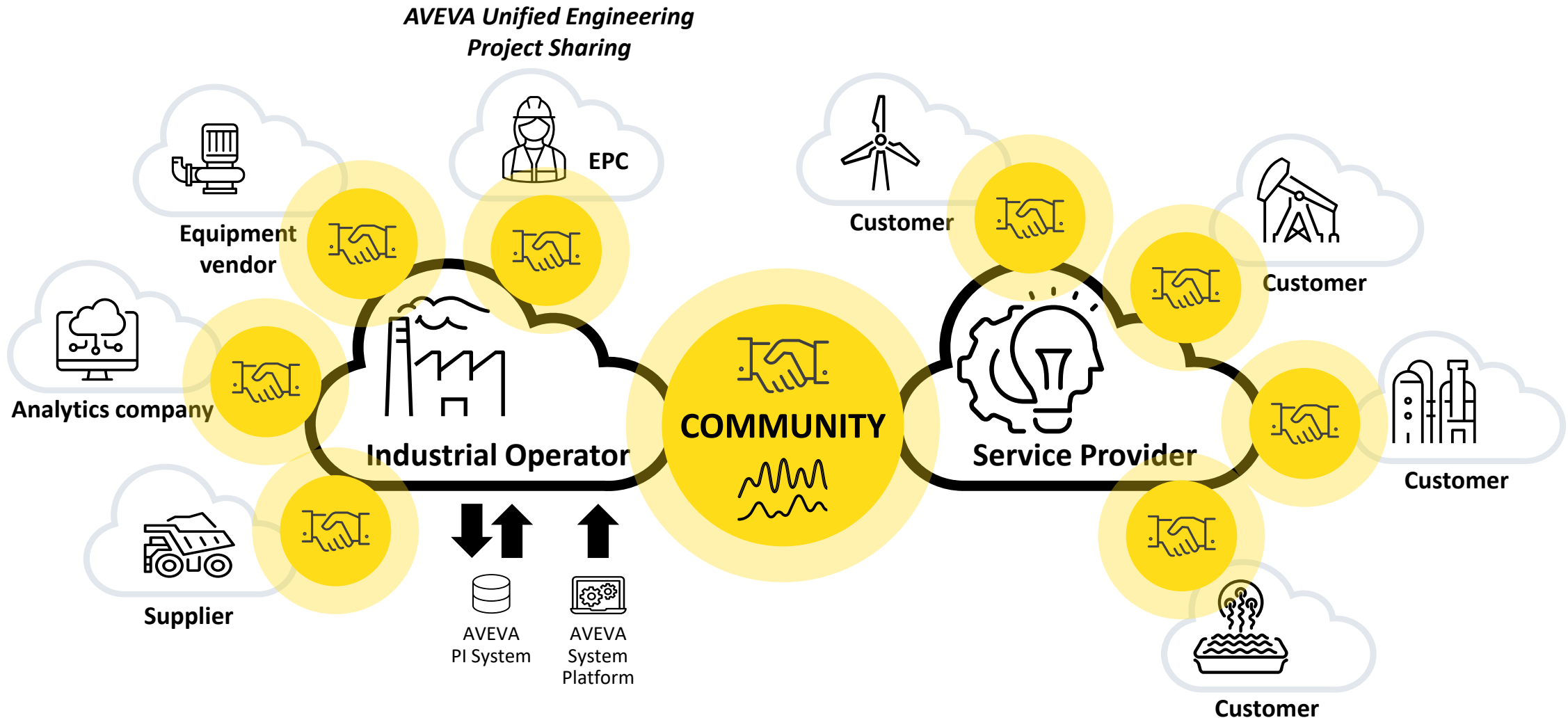
Powering your industrial
ecosystem with connected
community

CONNECT Ecosystem

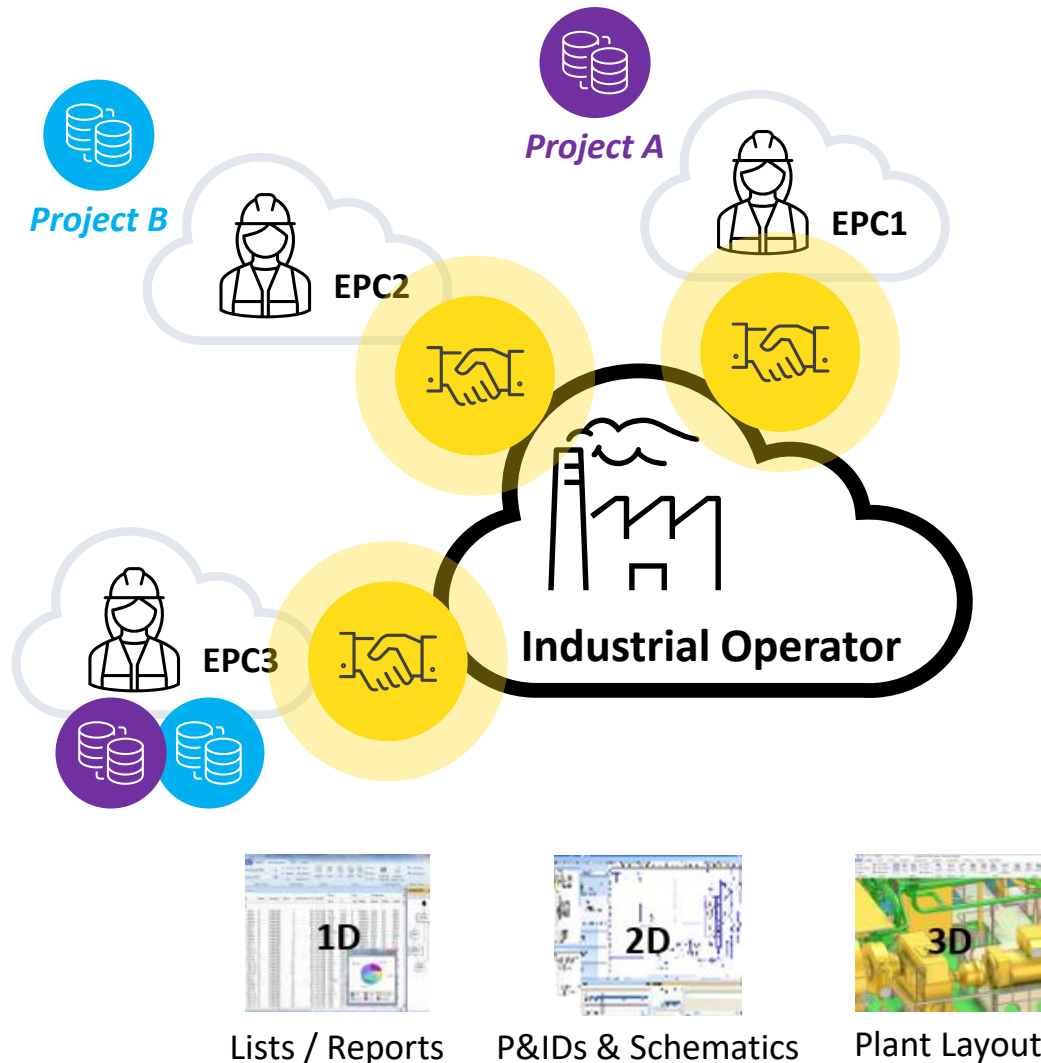


Easily find CONNECT
apps and solutions

Powering your industrial ecosystem with connected community



Cross company collaboration with AVEVA Unified Engineering



Features

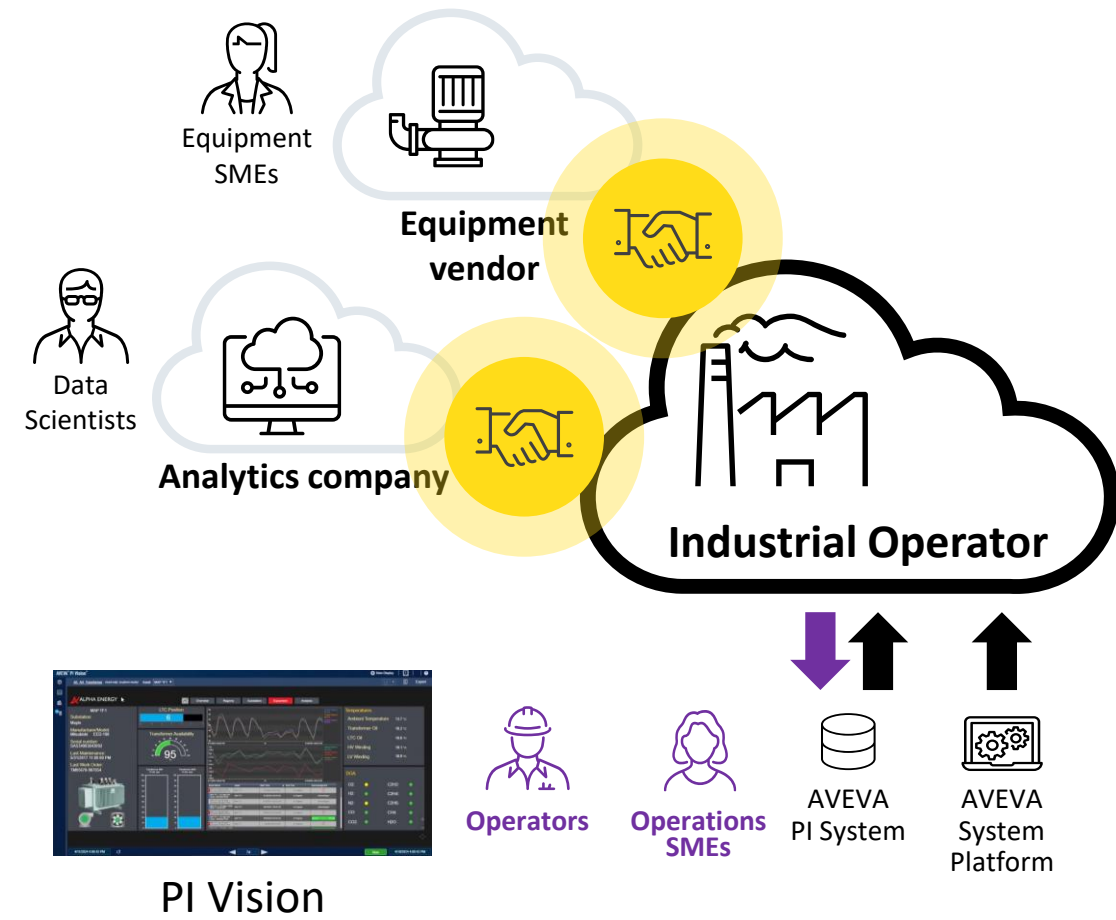
- Connect multiple sites to your trusted Engineering, Procurement, & Construction partners through CONNECT communities
- Easily manage AVEVA Unified Engineering project sharing scopes with different EPCs
- Commercial flexibility with “bring your own credit” option for partners/contractors

Benefits

- Share Engineering projects without copy/sync operations
- Keep complex engineering project information up to date across multiple companies
- Enable real time multi-company, multi-site, & multi-project collaboration

CONNECT to PI Agent: Community write back

Operationalize analytics insights back to on prem



Features

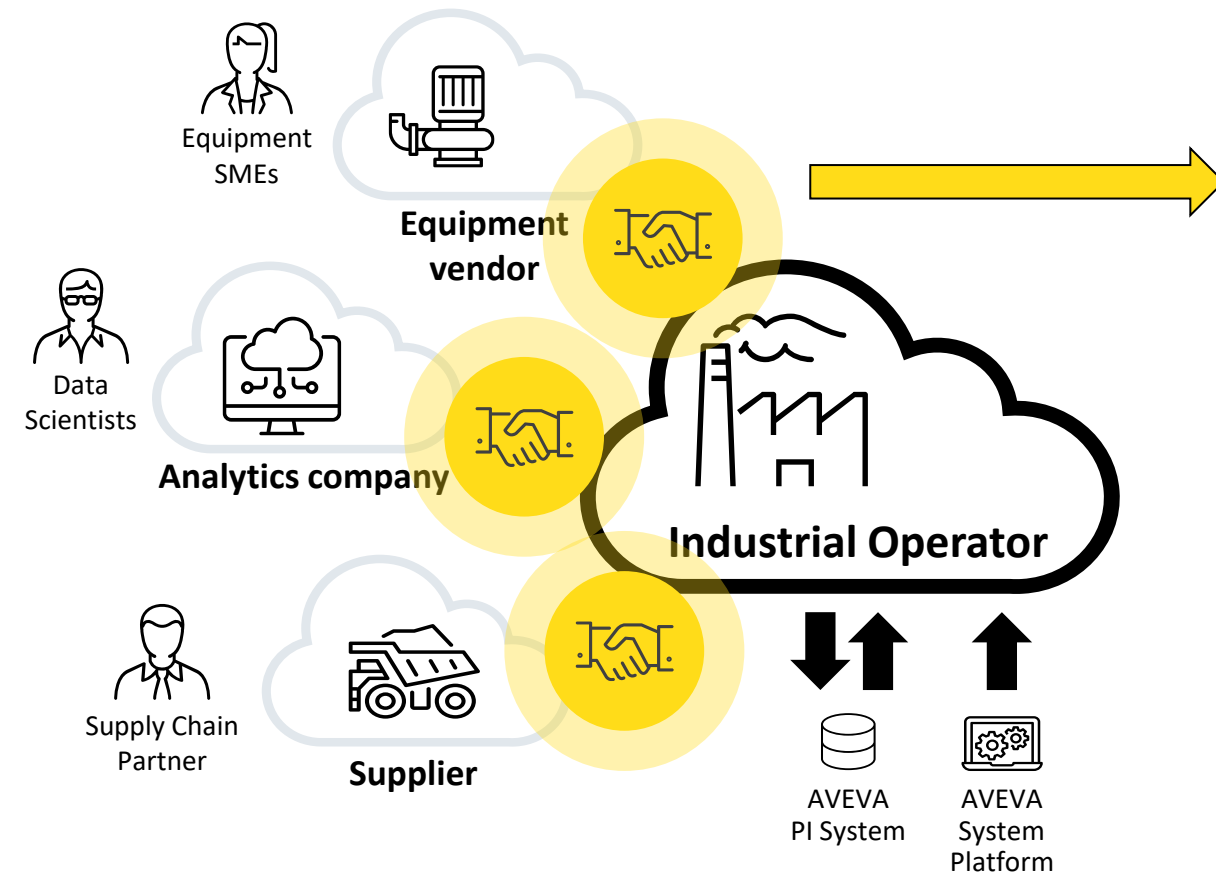
- Transfer data streams shared through CONNECT communities to PI Tags.
- Works with real-time, historical, and future data streams
- Supports backfilling and transfer to high availability collectives
- Manage CONNECT to PI Server data flows centrally from cloud

Benefits

- Use advanced analytics capabilities in the cloud and bring the results and insights back on-premises
- Enhance collaboration between operations experts and data scientists and trusted business partners.
- Empower operations with advanced analytics insights using their familiar tools and existing workflows

CONNECT visualization: Community support

Visualize shared data in rich displays



Features

- Visualize community shared data in CONNECT visualization services along side data in your tenant.

Benefits

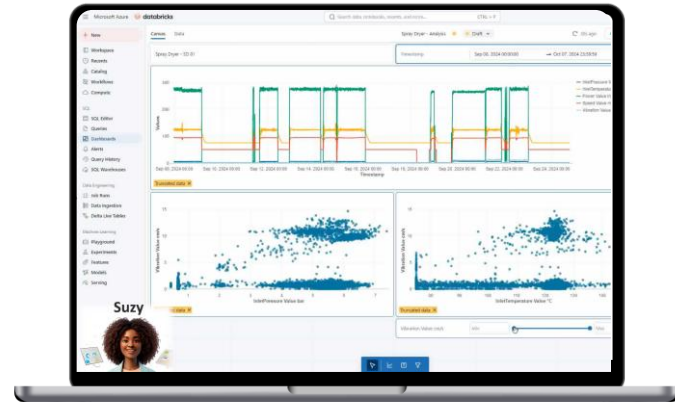
- Use shared data along side your own data in rich contextual visualizations and dashboards.
- Enhance collaboration between operations experts and your trusted business partners.



Drive industrial transformation through a network of partner applications and services

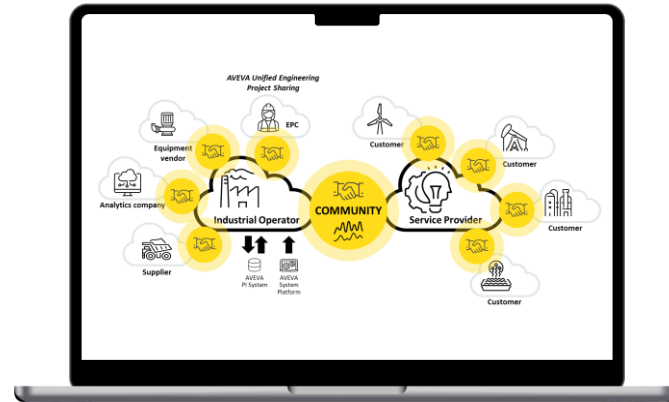
Ecosystem

Databricks Integration



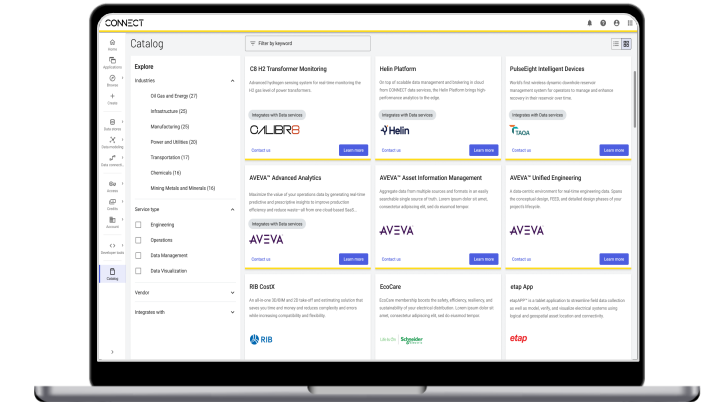
Live industrial data
for data science

Community sharing across companies



Powering your industrial
ecosystem with connected
community

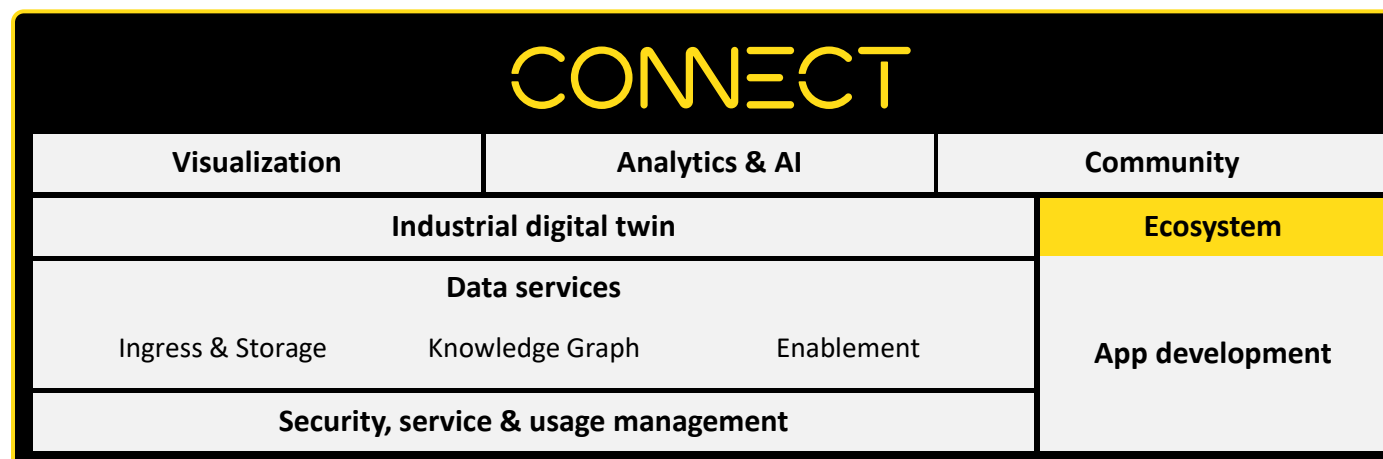
CONNECT Ecosystem



Easily find CONNECT
apps and solutions

CONNECT Ecosystem solutions listing

One stop shop with solutions for your industrial challenges



CONNECT Ecosystem solutions listing

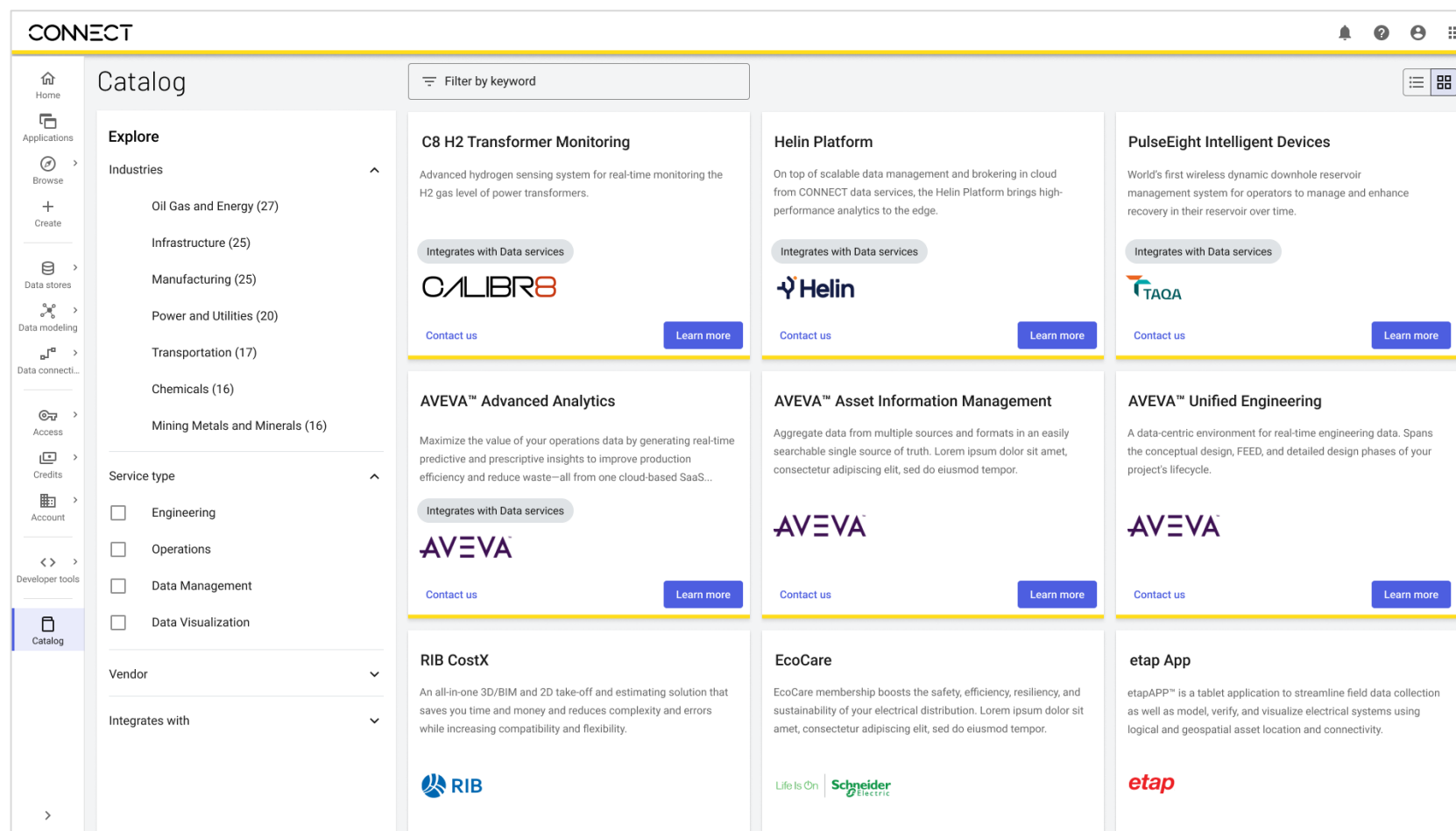
- Partners can list their solutions via self service portal
- Customers can easily find partner apps – integrated into CONNECT user experience
- Customers can contact partners for more information



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

CONNECT Ecosystem solutions listing

One stop shop with solutions for your industrial challenges



Prototype



Industrial Ecosystem: Recommended sessions

Visualizing industrial data with CONNECT

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

CONNECT Communities: Data sharing is data caring

Tuesday, April 8 @ 4:15 pm (15 min)
CONNECT Lounge

Data sharing from CONNECT to Databricks

Wednesday, April 9 @ 11:15 am (15 min)
CONNECT Lounge

Amping up Unified Engineering with the power of CONNECT

Wednesday, April 9 @ 11:45 am
Room 2002

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

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



CONNECT ROADMAP THEME



Industrial Digital Twin

Harmonize siloed engineering and operations data together for a shared version of industrial truth

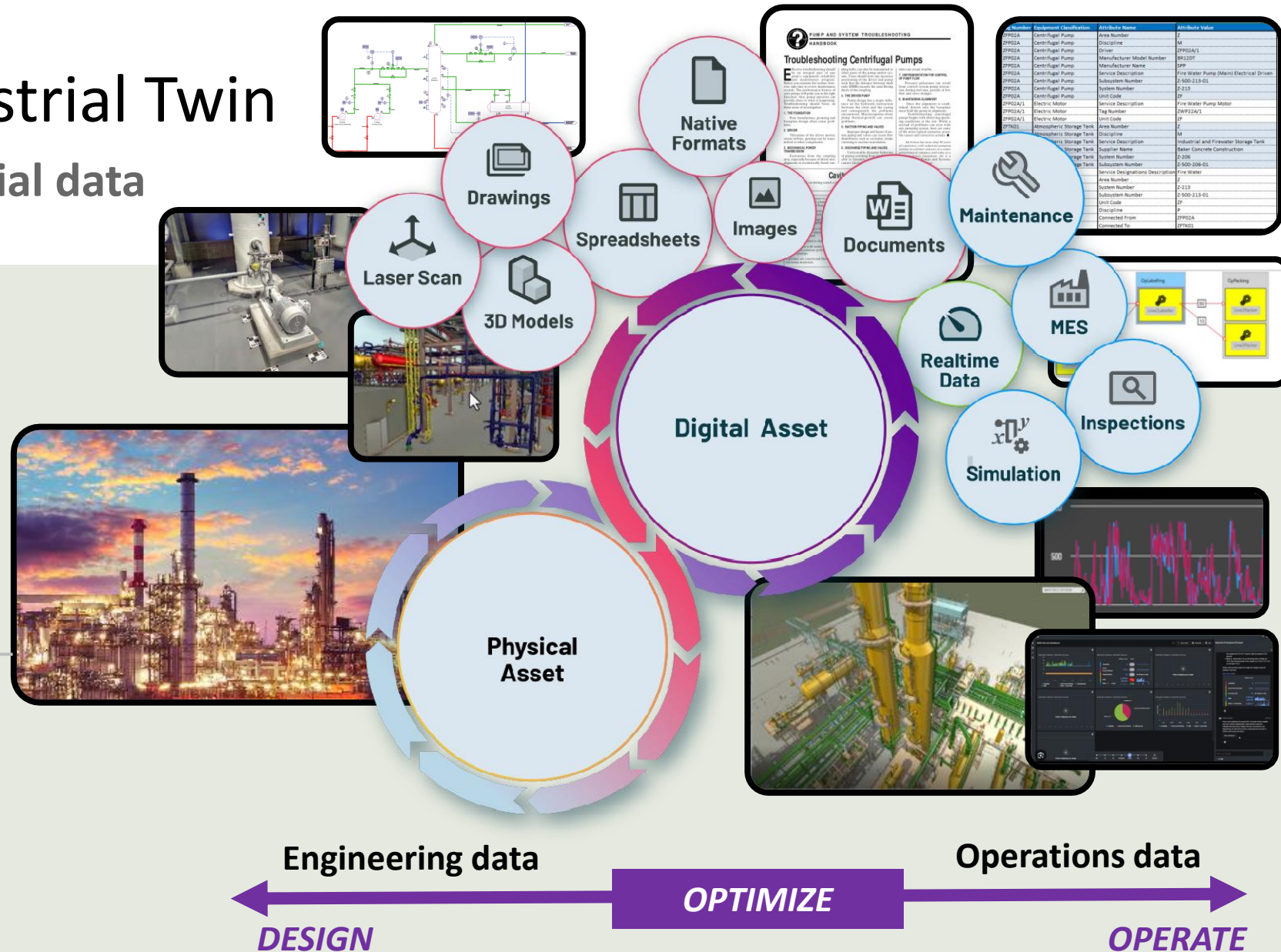


AVEVA's Digital Industrial Twin

A map for ALL YOUR industrial data

AVEVA'S Industrial Twin is a digital representation, which **harmonizes data** from a variety of systems/sources, **in context** to form a **digital representation** of a system, plant or piece of equipment and includes the **visualization** of the information.

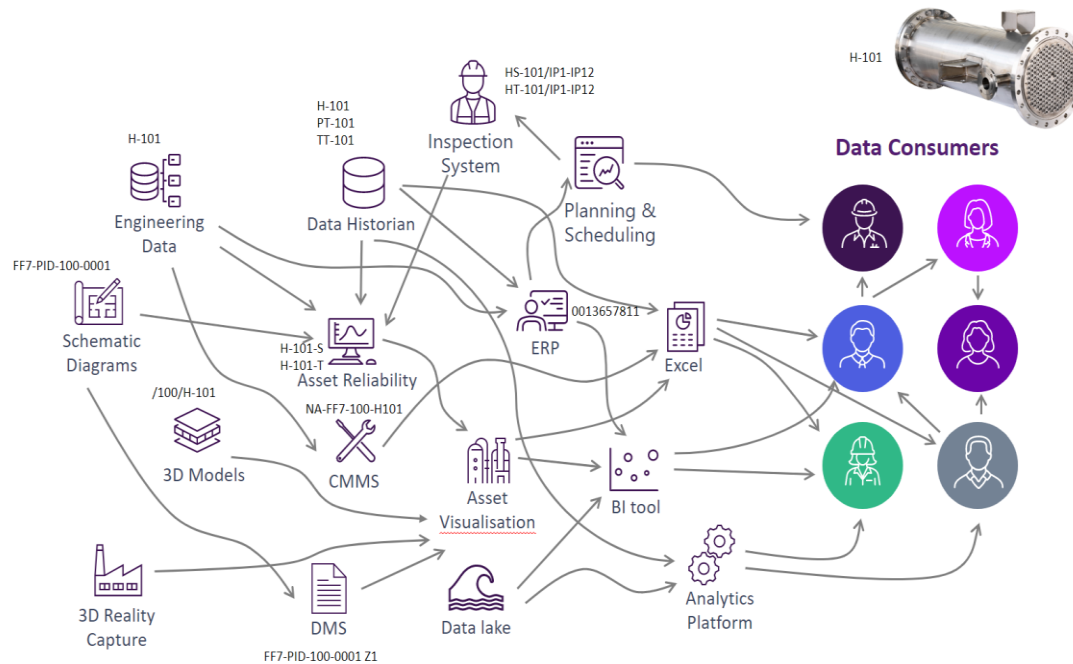
Digital twins can help many kinds of organizations **rapidly access information** and simulate real situations and their outcomes, ultimately allowing them to **make better decisions**.



Digital twins are a *hard problem*

The data challenge: industrial data trapped in silos

- Increasing data over time + documents from 1997
- Different representations across different silos
- Data conflicts
- Lack of trust in the data
- Scale up: 16M assets & 40B relationships
- Scale down: 100 assets
- No info. standards in place
- Varying rates of change
- Resource intensive projects with specialized expertise required



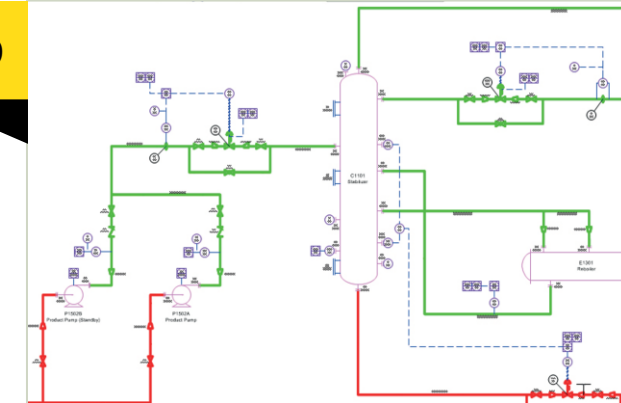
Many data silos with different representations of the same equipment

1D

Tag Number	Equipment Classification	Attribute Name	Attribute Value
ZFPO2A	Centrifugal Pump	Area Number	Z
ZFPO2A	Centrifugal Pump	Discipline	M
ZFPO2A	Centrifugal Pump	Driver	ZFPO2A/1
ZFPO2A	Centrifugal Pump	Manufacturer Model Number	BR12DT
ZFPO2A	Centrifugal Pump	Manufacturer Name	SPP
ZFPO2A	Centrifugal Pump	Service Description	Fire Water Pump
ZFPO2A	Centrifugal Pump	Subsystem Number	Z-500-213-01
ZFPO2A	Centrifugal Pump	System Number	Z-213
ZFPO2A	Centrifugal Pump	Unit Code	ZF
ZFPO2A/1	Electric Motor	Service Description	Fire Water Pump
ZFPO2A/1	Electric Motor	Tag Number	ZWP22A/1
ZFPO2A/1	Electric Motor	Unit Code	ZF
ZFTK01	Atmospheric Storage Tank	Area Number	Z
ZFTK01	Atmospheric Storage Tank	Discipline	M
ZFTK01	Atmospheric Storage Tank	Service Description	Industrial and F
ZFTK01	Atmospheric Storage Tank	Supplier Name	Baker Concrete C
ZFTK01	Atmospheric Storage Tank	System Number	Z-206
ZFTK01	Atmospheric Storage Tank	Subsystem Number	Z-500-206-01
FW-ZF-0009	Piping Line	Service Designations Description	Fire Water
FW-ZF-0009	Piping Line	Area Number	Z
FW-ZF-0009	Piping Line	System Number	Z-213
FW-ZF-0009	Piping Line	Subsystem Number	Z-500-213-01
FW-ZF-0009	Piping Line	Unit Code	ZF
FW-ZF-0009	Piping Line	Discipline	P
FW-ZF-0009	Piping Line	Connected From	ZFPO2A
FW-ZF-0009	Piping Line	Connected To	ZFTK01

- Assets / equipment
- Properties
- Material definitions
- Work words
- Quality
- Documents
- ...

2D



- P&ID diagrams
- Images / photos
- CAD drawings,
- Document
- ...

3D



- 3D CAD models
- Laser scans
- Point clouds
- ...

CONNECT

AVEVA Asset Information Management (AIM-A)



Engineering efficiency and transparency



Quick access to data in context



Data governance, quality and completion



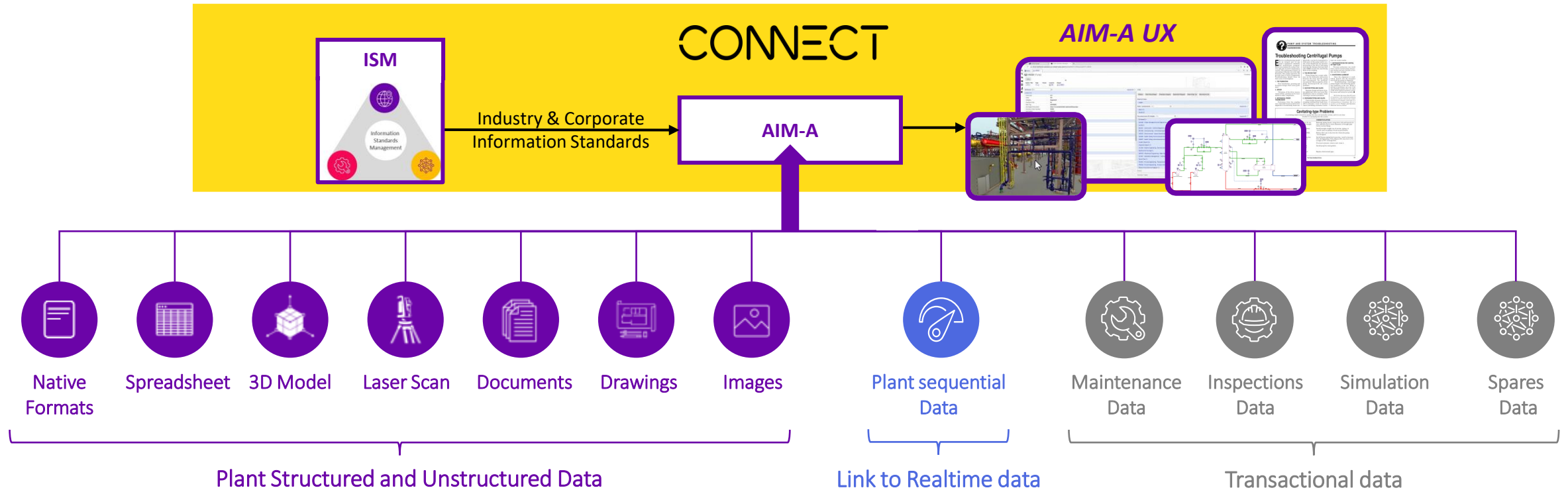
Support operations and maintenance by keeping data evergreen



Improve handover and operational readiness

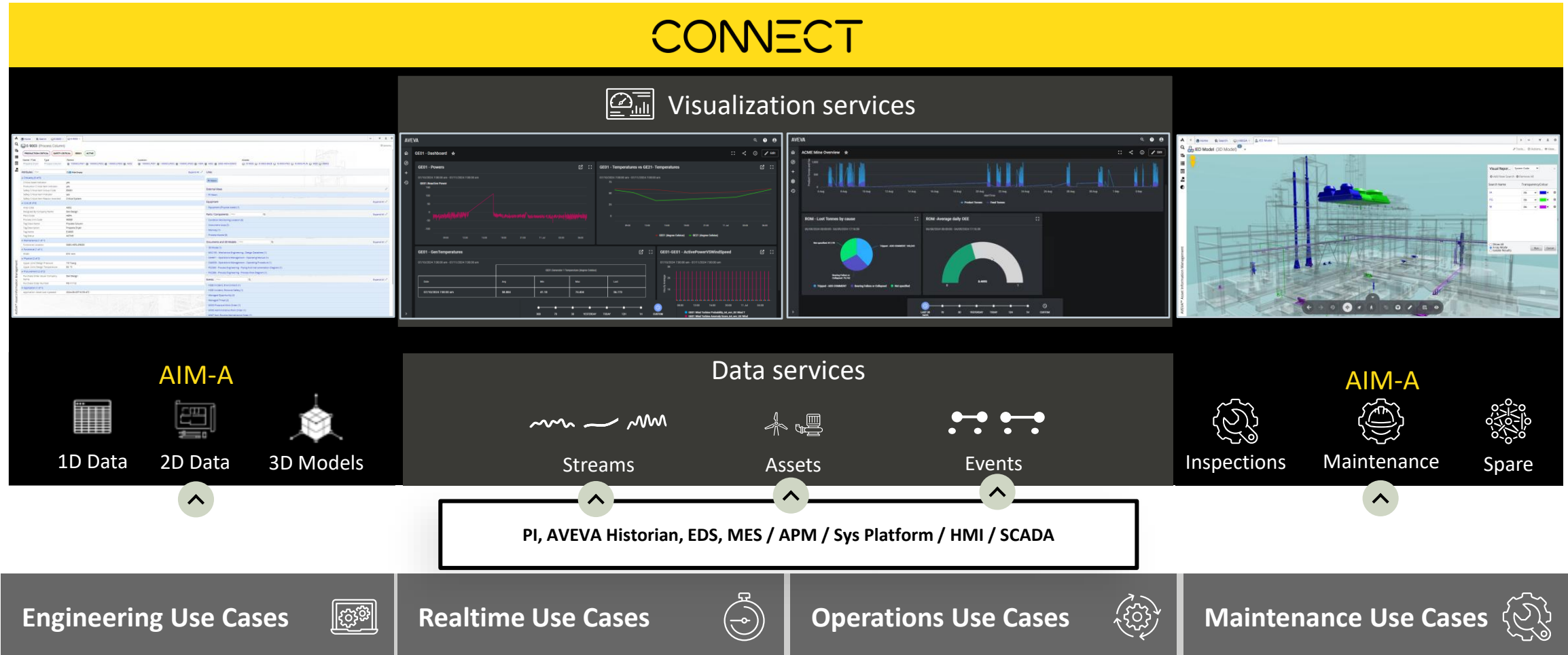


Reduce unplanned downtime, risk and maintenance cost



CONNECT Industrial digital twin roadmap journey

Leverage your existing investments today

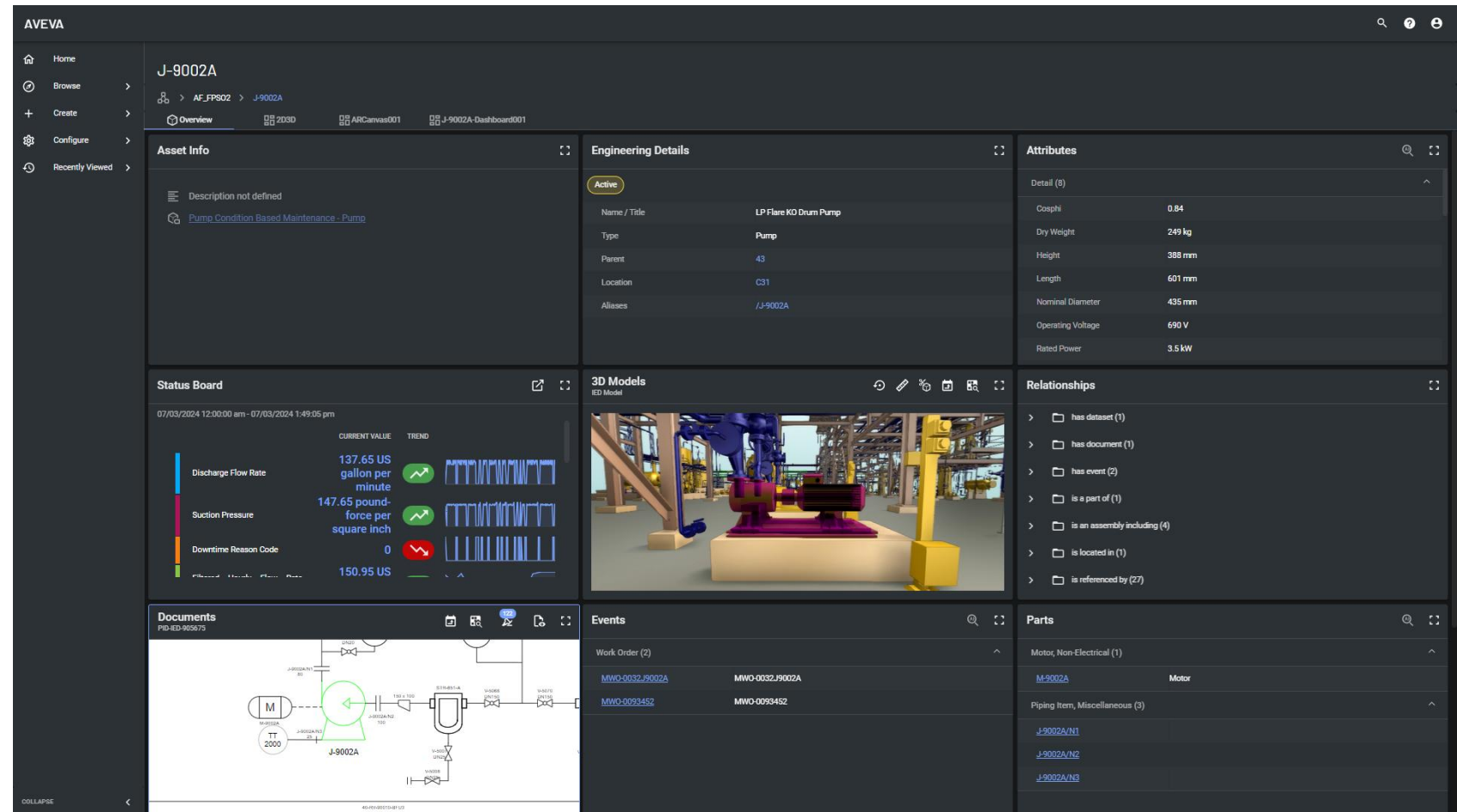


CONNECT: Engineering data visualization

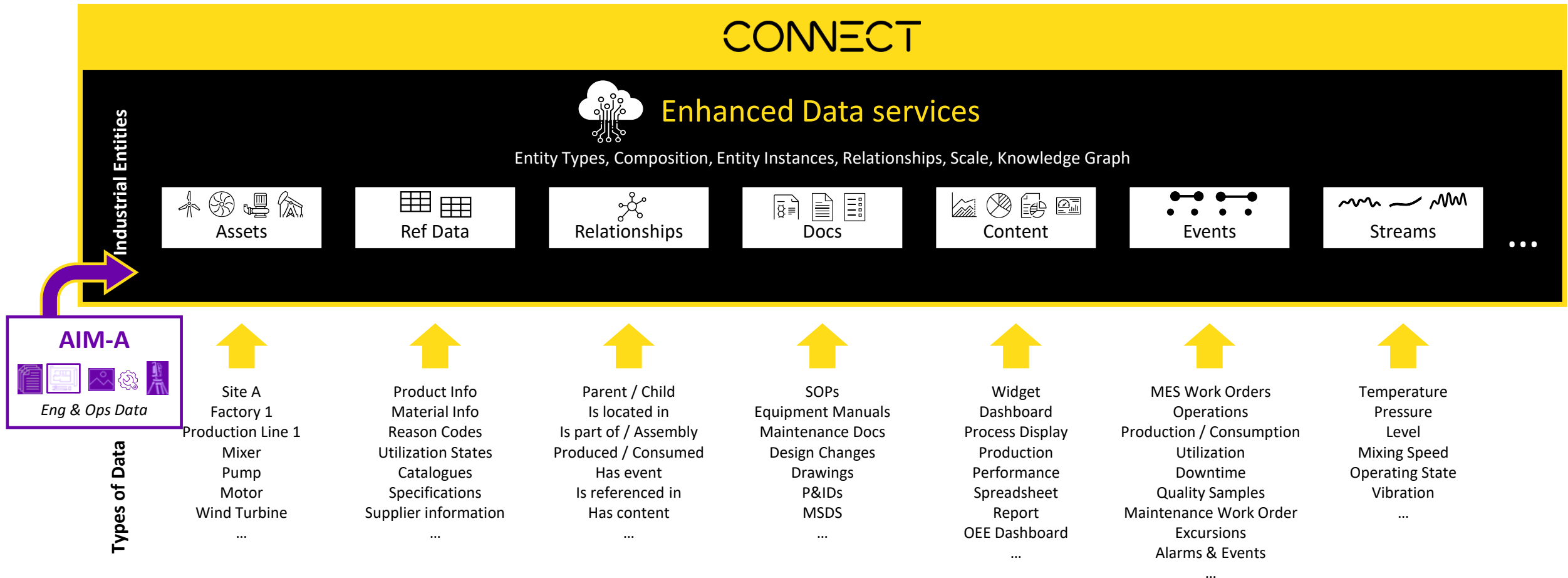
Visualize engineering data from AVEVA Asset Information Management (AIM-A)

Library of configurable 1D, 2D and 3D data content types:

- 3D viewer
- Doc viewer
- Point cloud viewer
- Properties
- Relationship explorer
- Relationship viewer
- Report viewer
- Microsoft Power BI



CONNECT: Storing broader types of industrial data



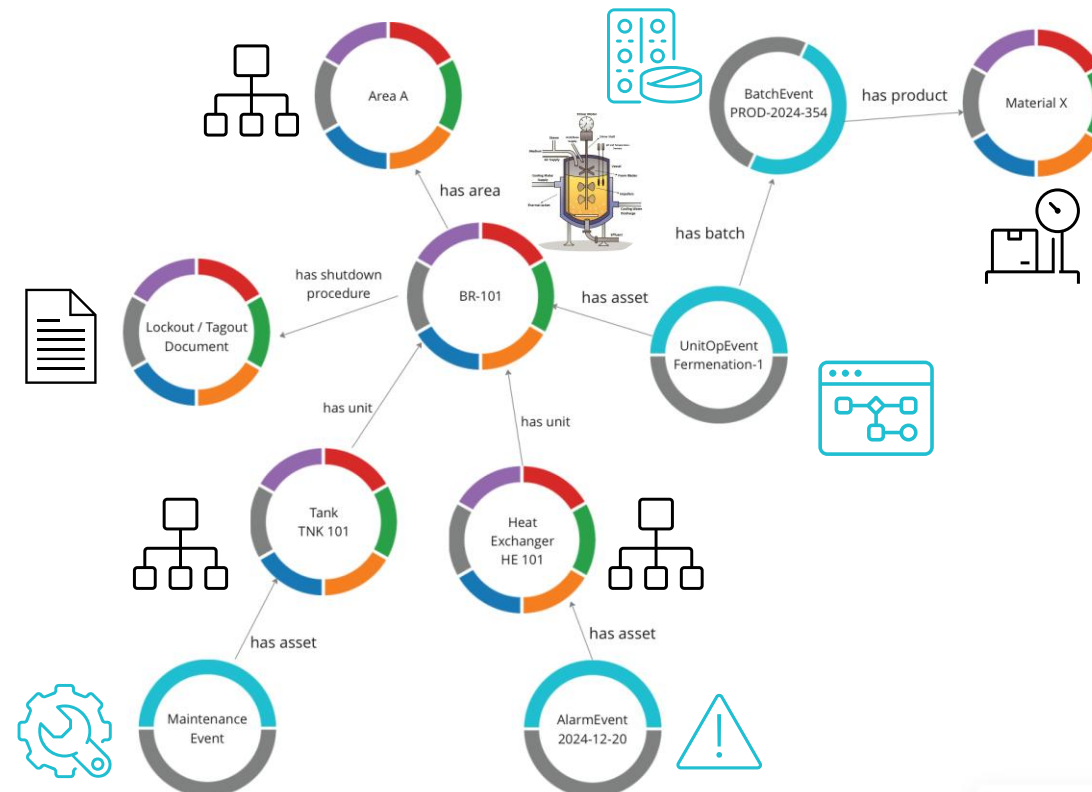
CONNECT: Industrial knowledge graph

CONNECT



Enhanced Data services

Entity Types, Composition, Entity Instances, Relationships, Scale, Knowledge Graph

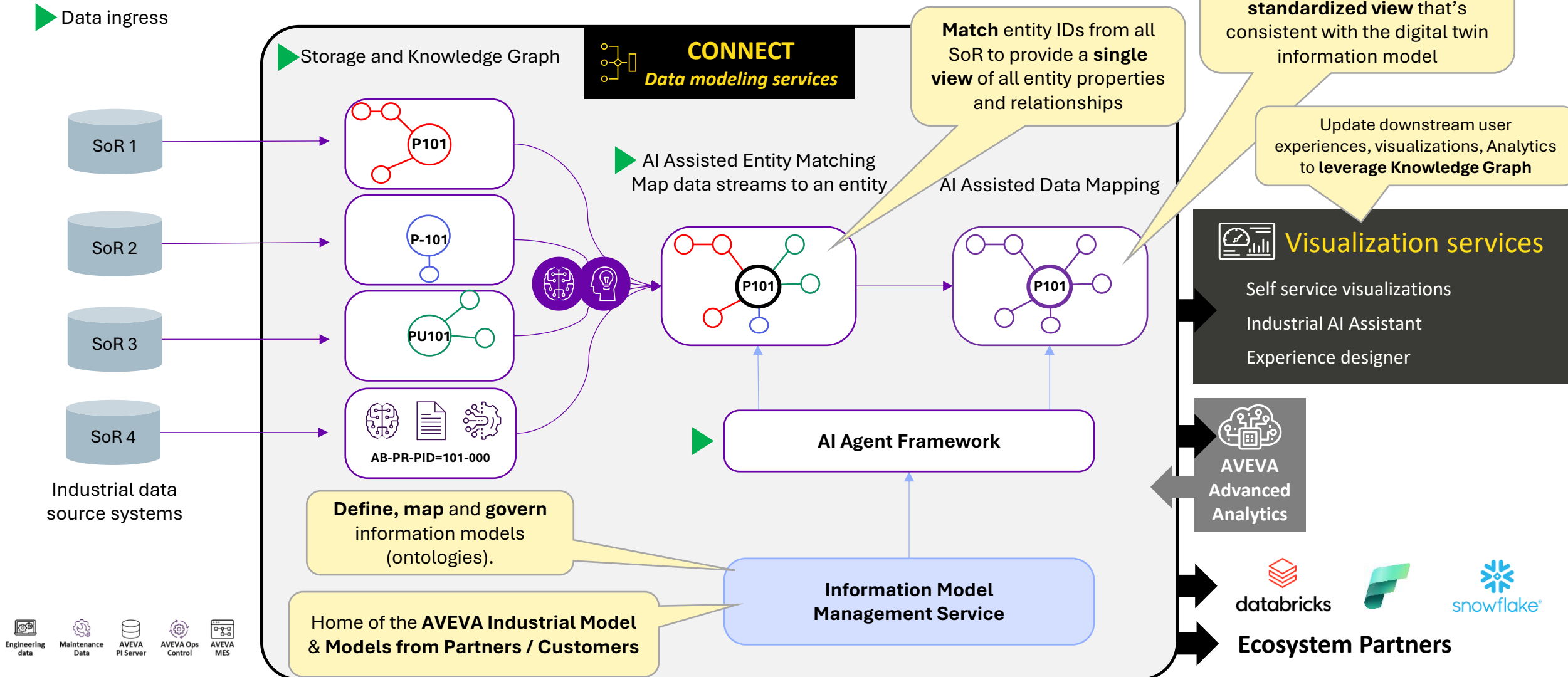


Example knowledge graph questions

- What are the alarms for all assets and sub-equipment where my batch PROD-2024-354 was running on?
- What are the streams reporting data from the Heat Exchanger HE-101?
- What Piping & Instrumentation (P&ID) documents related to this Heat Exchanger?
- What Isolation does this Heat Exchanger have?
- What are the Safety instructions and any Lockout/Tagout procedures for the Heat Exchanger for Bioreactor 101?
- What batches and equipment had Material X running through it?
- Which equipment across my enterprise do I have maintenance events for Lubrication Oil Pumps and Hydraulic Pump seizures?

Industrial Knowledge Graph

CONNECT Industrial digital twin future state





Industrial Digital Twin: Recommended sessions

Building and Evolving a Digital Twin Leveraging your existing investments

Tuesday, April 8 @ 4:30 PM

Room 2005-2007

AVEVA Roadmap: Engineering Information Management

Wednesday, April 9 @ 1:45 PM

Room 2005-2007

Panel: Industrial Data Management / Digital Twin

Thursday, April 10 @ 10:00 AM

Room 2010-2012

Interactive Customer Panel & Tech Session | CONNECT, digital twins, ecosystems and AI in electric utilities.

Thursday, April 10 @ 10:00 am

Room 2004



CONNECT Roadmap Summary

CONNECT Industrial Intelligence Platform Roadmap

Hybrid



TBD Future

Planning

In development

Available (new)

- AVEVA Engineering authoring data store
- **Additional integrations from AVEVA**

- **Support for enhanced data services** (entity & store & relationships, hierarchy)
 - Data views
 - AVEVA MES
 - AVEVA Production Management
- **PI Event Frames** to CONNECT Events
- **PI Vision displays** to CONNECT visualization
- **System Platform Alarms & Events** to CONNECT Events
- **Pharma industry compliance:** audit trail & continuous validation

- **Support for enhanced data services** (entity & store & relationships, hierarchy)
 - PI to CONNECT
 - System Platform to CONNECT
- **AVEVA MES** operations & quality use cases
- **Pharma industry compliance:** GxP gap analysis & continuous validation POC
- **Aggregated Calcs**

- **AVEVA System Platform 2023** standalone publisher [Mar 2025]
 - **CONNECT writebacks to PI** [2024]
 - **AVEVA System Platform assets** [Nov 2024]
-
- **AVEVA Production Management** event visualizations [2024]
 - **AVEVA MES** production reporting [2024]

CONNECT Industrial Intelligence Platform Roadmap



TBD Future

Planning

In development

Available (new)

- **CONNECT visualization**
 - PI Vision displays to CONNECT visualization
 - Collaboration
- **Industrial AI Assistant**
 - Ad hoc analytics
 - Embedding in vis experiences
 - More generation capabilities & use cases

- **CONNECT visualization**
 - Support for enhanced data services (entity)
- **Industrial AI Assistant**
 - Support for enhanced data services (entity)
- **Advanced Analytics**
 - Support for enhanced data services (entity)

- **CONNECT visualization**
 - App experience designer [May 2025]
 - Developer widgets content SDK & library [3Q 2025]
 - AIM-A engineering digital twin visualization [3Q 2025]
- **Industrial AI Assistant** [May]
 - Asset metadata
 - Documents +
 - Dashboard generation
- **Advanced Analytics**
 - Improved self service
 - Work process integration

- **CONNECT visualization**
 - Enhanced integration with data services: assets, events, metadata [Feb 2025]
- **Industrial AI Assistant**
 - Finding & summarizing data & MES data
 - Generating data charts
 - Simple analysis of data
 - Basic Documents
 - Citations, Help support
- **Advanced Analytics**
 - Australia region [March 2025]
 - New AI models
 - Multi-Objective Model

CONNECT Industrial Intelligence Platform Roadmap

Ecosystem



TBD Future

- **Community Virtual Table support**
- **Community event sharing**
- **Community display sharing**
- **Account subletting**

Planning

- **CONNECT Ecosystem Partner Listing**
- **Data views** support for enhanced data services (entity store)
- **Virtual Tables:** Microsoft Fabric Integration
- **Virtual Tables:** Snowflake Integration
- **Change broker** for enhanced data services (entity store)
- **Community** support for enhanced data services & entity / asset sharing

In development

- **Community support in CONNECT visualization** (include shared data in dashboards) [2Q 2025]
- **Virtual Tables: Databricks Integration** General Availability [2Q/3Q 2025]

Available (new)

- **Virtual Tables: Databricks Integration** Limited Release [Apr 2025]
 - **CONNECT Community shared streams writebacks to PI** [Jan 2025]
 - **AVEVA Unified Engineering** Community Project Sharing [Dec 2024]
-
- **Community data sharing** (streams)

CONNECT Industrial Intelligence Platform Roadmap



TBD Future

Planning

In development

Available (new)

- **Community support** for mapping between customer and partner data models

- **Industrial AI Assistant** support for enhanced data services.
- **Native data ingress from 1D / 2D / 3D sources**
- **Linked data support**
- **Information Standards Management**
- **AVEVA Industrial Information Model**
- **AI Assisted data harmonization:** data mapping

- **Enhanced data services** (entity & event store, relationships, industrial knowledge graph) [Partner Preview 2Q 2025]
- **CONNECT visualization AIM-A support:** visualize 1D/2D/3D engineering & operations data in CONNECT [3Q 2025]
- **AIM-A writes to enhanced data services** [4Q 2025]
- **Support for enhanced data services** [4Q 2025]
 - PI to CONNECT
 - System Platform to CONNECT
 - CONNECT visualization
- **AI assisted entity matching** [TBD 2026]

- **ISM & AIM-A on CONNECT:** harmonize engineering & operations data, standards management

Digital Twin

Five CONNECT takeaways

Enhancements for your industrial journey


**Extend the value
of existing
investments**




**50+
enhancements
& Industrial AI
Assistant**



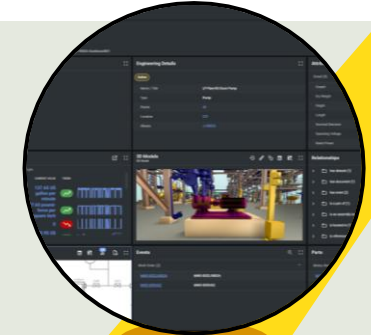

**New
Databricks
integration**




**UE project
sharing & vis.
communities**




**Industrial
Digital Twin**



CONNECT

Introducing the CONNECT Explorer Program

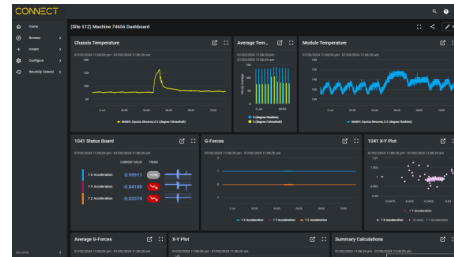
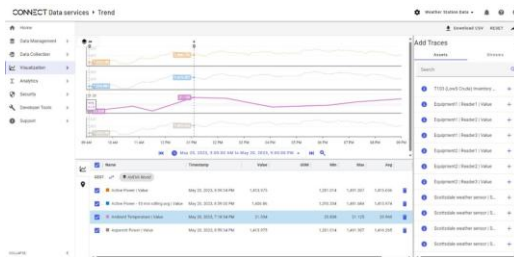
Empowering you with a simplified, low-risk evaluation of CONNECT use cases



The **CONNECT Explorer Program** empowers your teams and organization to explore and evaluate new CONNECT use-cases with:

- Assisted guidance of AVEVA technical resources
- Business development resources
- 3-months of free CONNECT licenses to test and evaluate CONNECT functionality and business value at zero-cost

- ✓ Minimize risk and cost by understanding **consumption patterns**
- ✓ Increase cost/usage **predictability** before long-term commitment
- ✓ **Explore more complex use-cases** by increasing data streams, analytics units, and monthly CONNECT visualization services access available to customers



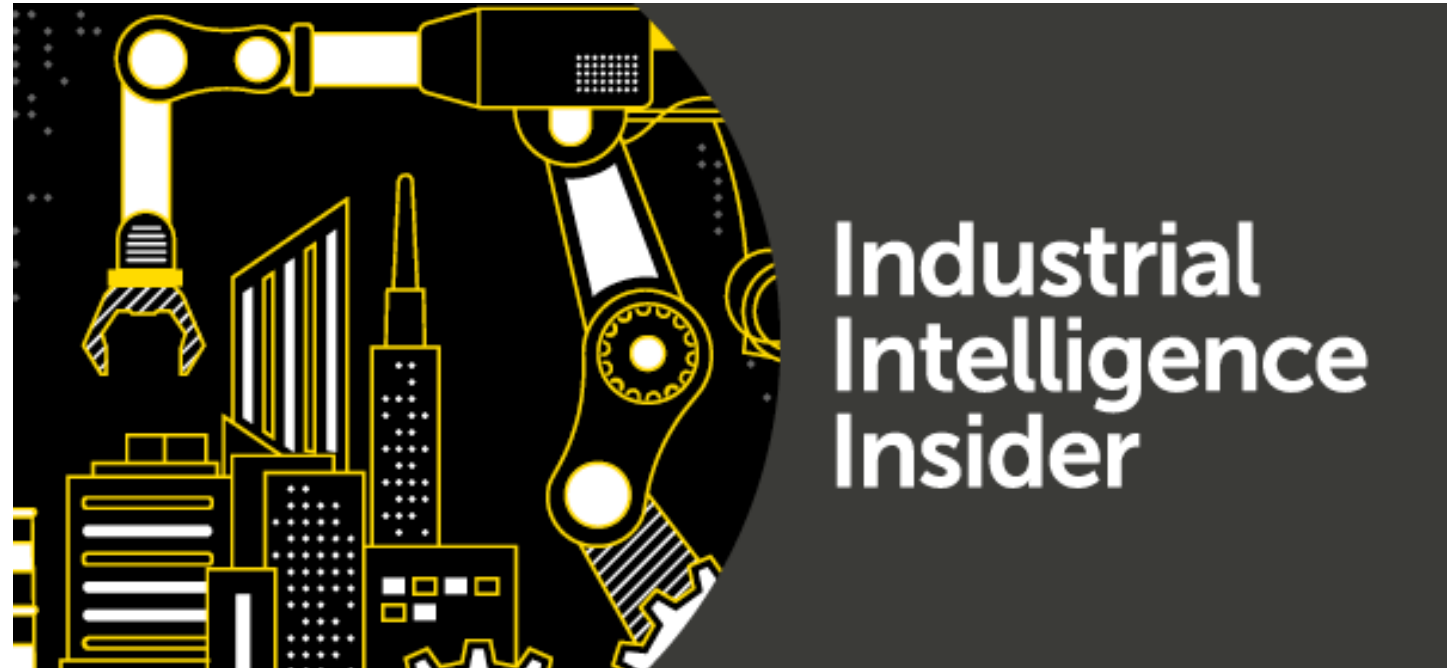
For more information, reach out to your AVEVA Account Manager or Customer Success Manager

New! Industrial Intelligence Insider Newsletter

Stay up to date with the latest product news on AVEVA and CONNECT

Each issue includes:

- Key industry insights & trends
- Product release updates
- Event details
- And more!





Check out the **Innovation Zone** – on Level 1



Demos booths



Food court / seating



Sponsors / exhibitors



Tours, theaters, games



Todd Brown

VP, Industrial Platform Portfolio
AVEVA

With 25-years' experience in operations industrial data, Todd leads the CONNECT industrial platform portfolio team at AVEVA.



Laurent Garrigues

VP, Industrial Platform Portfolio
AVEVA

With also 25-years' experience in operations industrial data, Laurent is part of the CONNECT industrial platform portfolio team at AVEVA




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CONNECT

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The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.



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 [@avevagroup](https://twitter.com/avevagroup)

ABOUT AVEVA

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