



AVEVAWORLD

CONNECT



APRIL 2025

Visualize industrial data with CONNECT

Simplify the way you visualize operations, engineering
and other industrial business information together.



GÉNÉRIE
LANIFIER

MAINTENANCE
OPTIMISER

Zoë Dodgson

Senior Product Manager

AVEVA

With 18-years' experience at AVEVA, Zoe is a Senior Product Manager responsible for Content within CONNECT visualization services, specifically focused on delivering new visual tools to design displays and experiences with your Industrial data.



Lori Warda

AI Product Director

AVEVA

Lori is an AI Product Director with over 25 years of experience with industrial software at AVEVA. Most recently, she has been working to bring the AI Assistant to CONNECT Visualization to transform the user experience.



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CONNECT

CONNECT

Industrial intelligence platform



A single interface to manage cloud and on-premises applications



Aggregate, contextualize, and share real-time industrial data



Visualize industrial data simply, in a way that is easy to understand



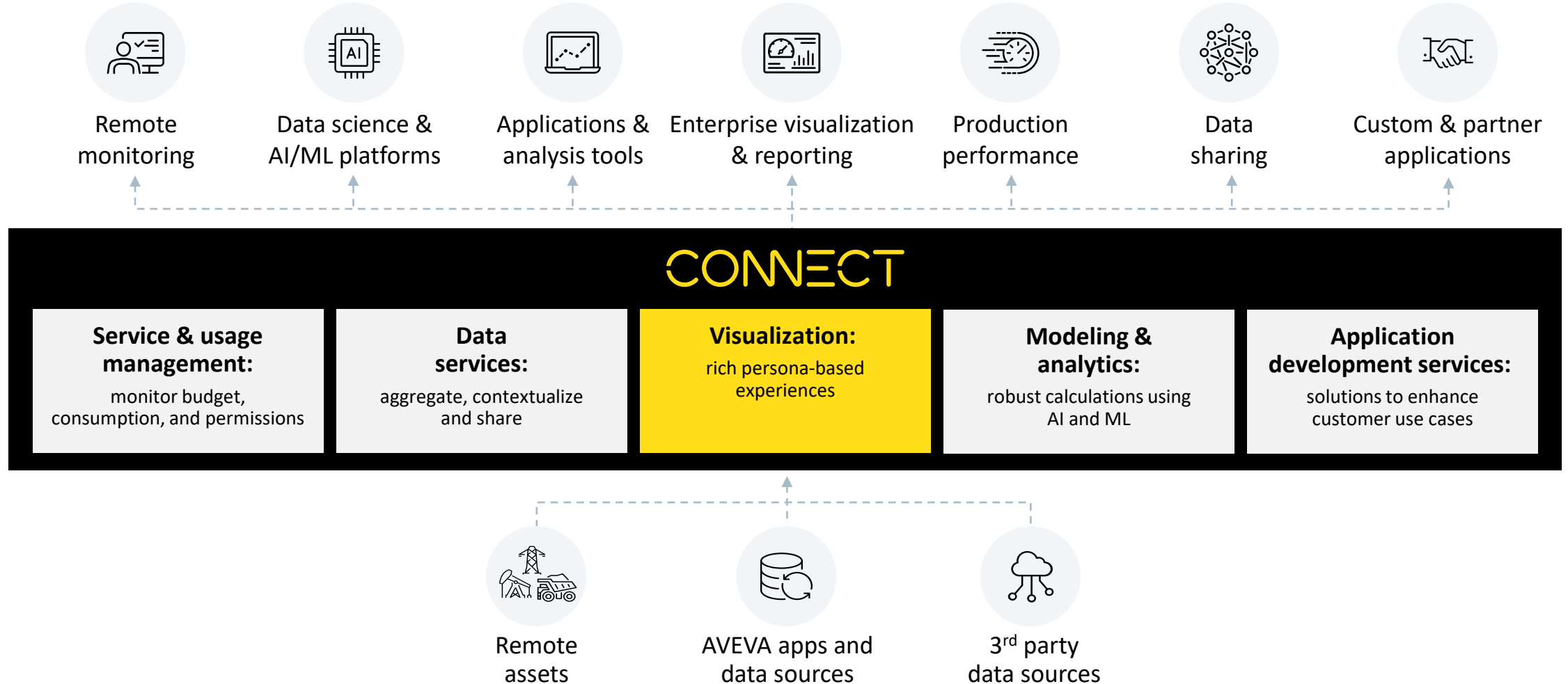
Combine existing data with AI for faster and smarter decisions



Expand your ecosystem with solutions that bring added value

CONNECT, our industrial intelligence platform

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



Why Lighthouse?

The value of engagement



Prove value of new technology



Create library of use cases



Client receives:

- Pre-released software
- Engineering support
- Program management



AVEVA receives:

- Solution feedback
- Public presentation or case study



About Eldorado Gold



Background

- **Gold and base metals producer** with mining, development and exploration operations in Türkiye, Canada, and Greece, for over 30 years.
- Since 2023, Eldorado Gold and AVEVA have been **collaborating** to enhance their operations through rigorous data management practices. They had been using AVEVA's technology sporadically at different sites (**AVEVA PI System in Greece and Canada** and **AVEVA System Platform in Türkiye**).
- Embarked on a **Lighthouse project** with AVEVA to develop and implement effective solutions using the CONNECT industrial intelligence platform to **design visualization displays** to solve critical challenges that the company is currently facing.

Eldorado Gold challenges & business objectives

Challenges

- HQ currently **lacks consistent visibility** into holistic and asset-level remote site operations
- **Unable to aggregate and share** multiple disparate data sources via a single consistent platform
- **Missing** key **data-driven decision-making** capability






Business Objectives

- **Increase** production **efficiency**
- **Reduce** operations **cost**
- **Data standardization** to achieve single version of truth after integrating time series and non-time series data
- Make **fast and informed** data-driven decisions

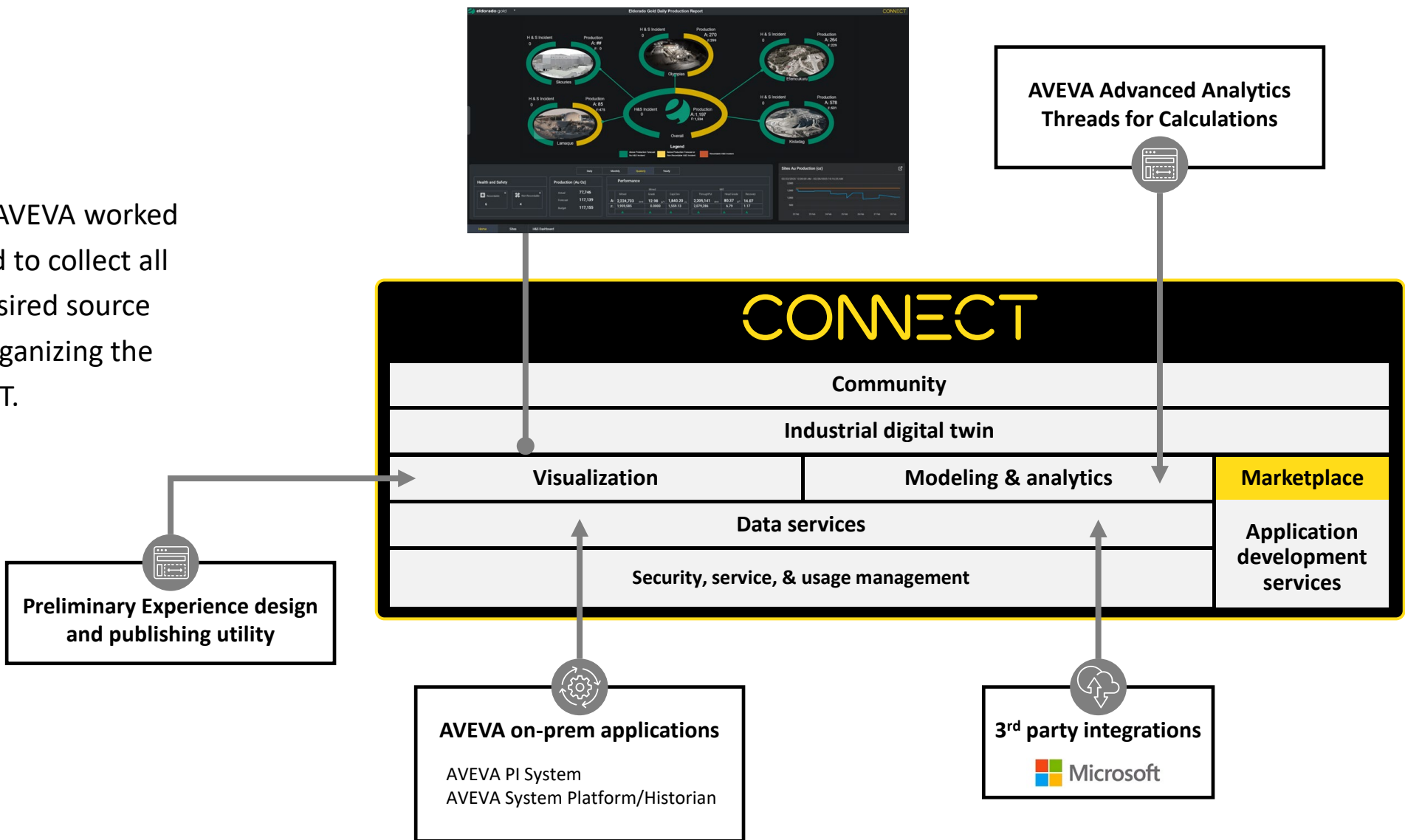
Eldorado Gold's Journey to CONNECT

Remote monitoring and decision making in the cloud

	Business challenges	Solution	Benefits
	HQ currently lacks consistent visibility into holistic and asset-level remote site operations	<ul style="list-style-type: none">• Drill-Down Capability in CONNECT Visualization makes it possible to go from holistic view to single Asset Level	By analysing production data from dashboard (aiming for 2%+ increase in production efficiency and decreased costs)
	Unable to aggregate and share multiple disparate data sources via a single consistent platform	<ul style="list-style-type: none">• Connect and contextualize 3 disparate source systems AVEVA PI, Historian and Azure SQL Databases	Save significant time at site to collect and input the data (2 to 5 hours saved collective time daily per site)
	Missing key data-driven decision-making capability	<ul style="list-style-type: none">• Real-time, customizable dashboards that can be shared company-wide	More informed and accurate data-driven operations decisions , yielding thousands of dollars of savings

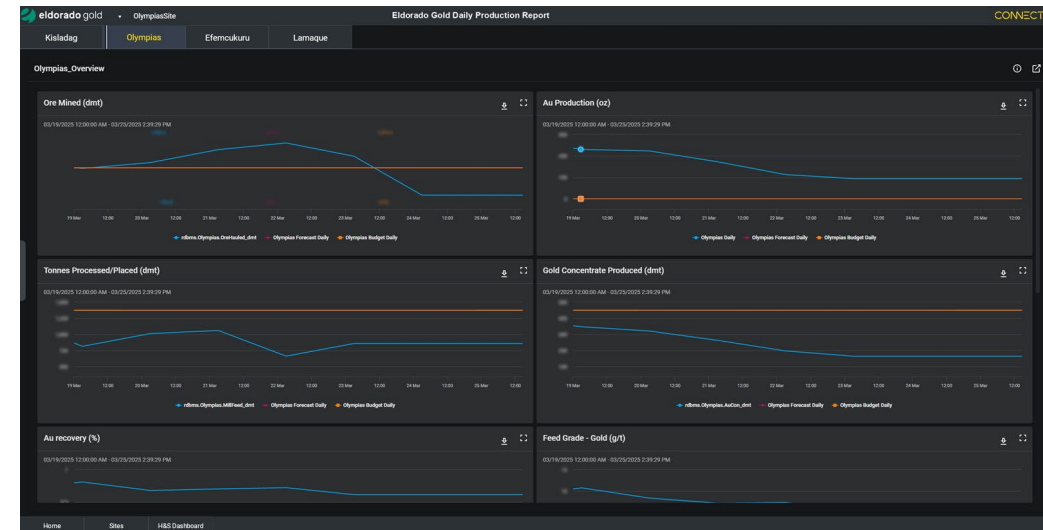
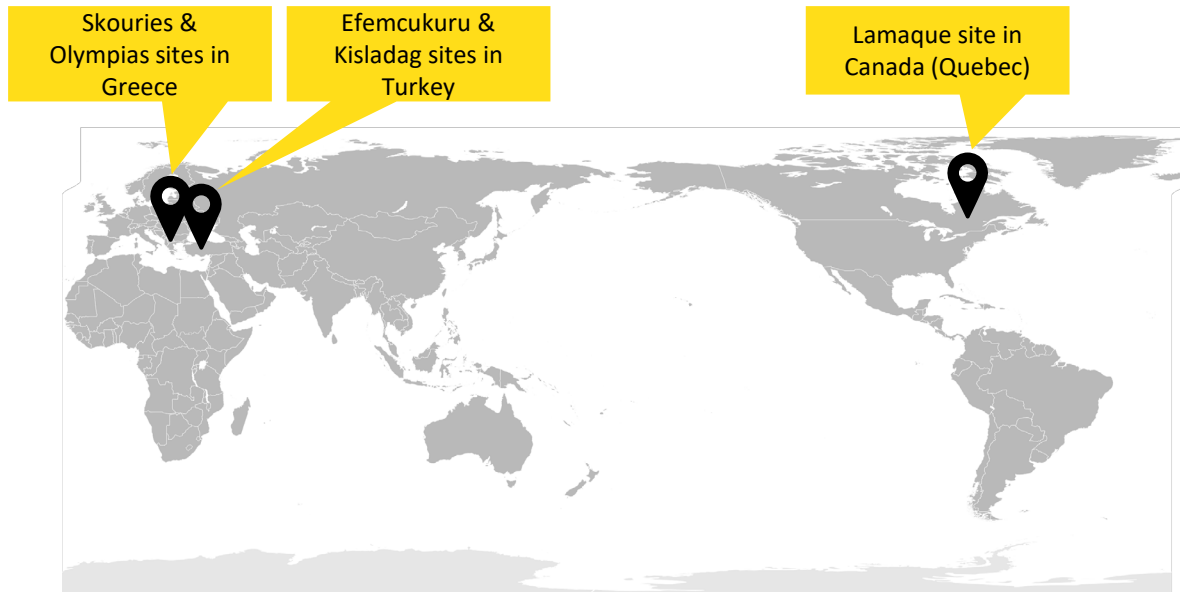
Solution Architecture

To implement use cases, AVEVA worked jointly with Eldorado Gold to collect all appropriate data from desired source systems, centralizing & organizing the information into CONNECT.



Lighthouse Use Case

- Create a **'Centralized Production Reporting'** Experience application using the CONNECT Industrial intelligence platform
 - Connecting AVEVA PI Server from Lamaque site
 - Connecting AVEVA System Platform/Historian from Kisladag site
 - Connecting a Microsoft Azure cloud SQL Server database for all sites for Health & Safety
 - AVEVA Advanced Analytics (Threads) for calculations



“CONNECT has the potential to be a game changer in consolidated operations reporting and analytics with its seamless integration of different data sources in a centralized platform

It was an absolute pleasure working with the AVEVA's Lighthouse team on testing different capabilities and providing feedback; looking forward to future innovation in this product ”



David Pan

Head of Operational Analytics



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TSX: ELD | NYSE: EGO

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CONNECT visualization



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

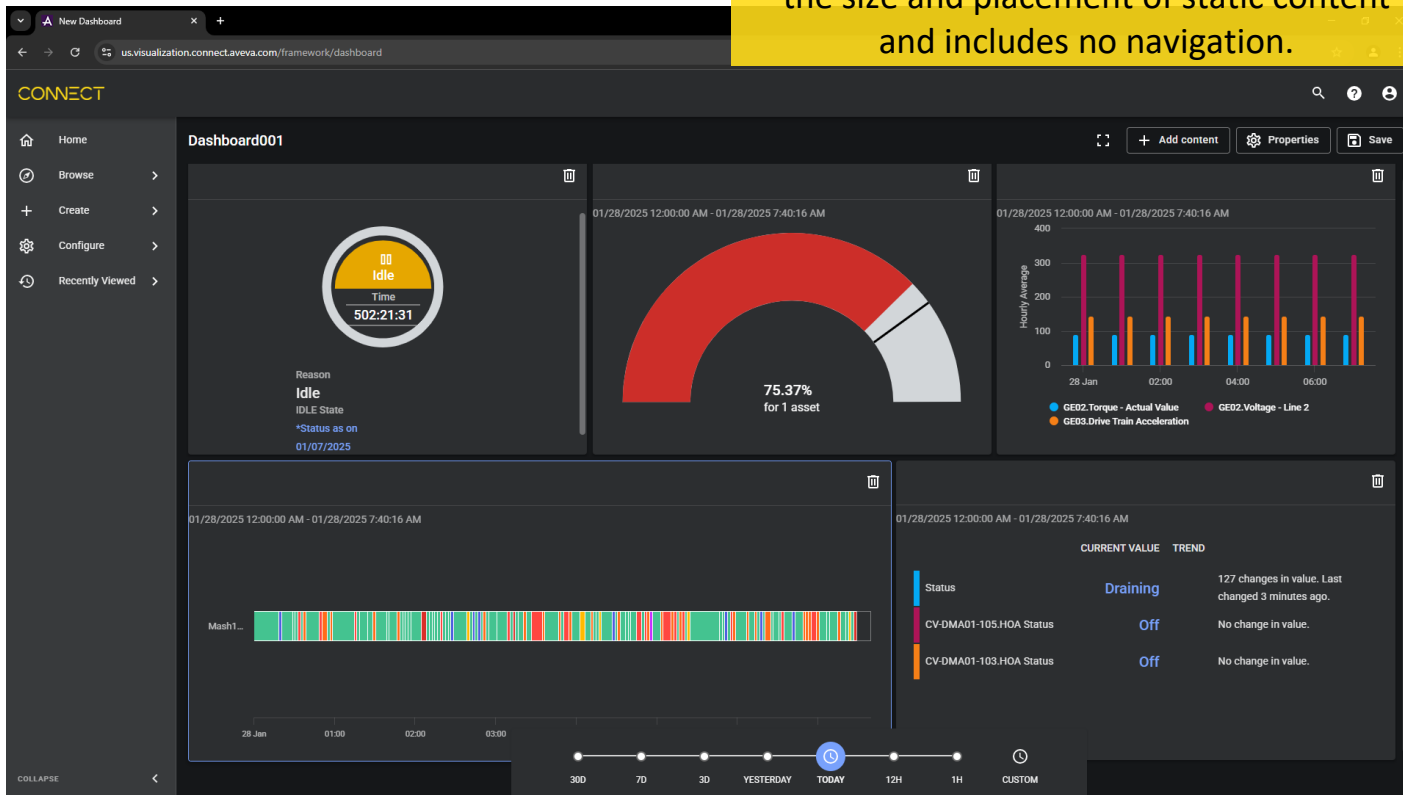
- Relate disparate data sources & systems in context to each other
- Gather insights between data sources and across data types quickly and easily
- Expedite analysis using an Industrial AI Assistant to answer natural language questions
- Share actionable information with operations, reliability, business,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

Grid visualizations in CONNECT

Responsive snap-to type that limits the size and placement of static content and includes no navigation

Grid

Responsive snap-to visualization that limits the size and placement of static content and includes no navigation.



Grid structure

Align your content using columns and rows to display information in an easy to organize Grid format. Content can be resized to stretch across multiple cells, including the option to scroll down for more content visibility.

Responsive interface

Browser application conforms to the browser space available on the device, this includes standard desktop/laptop, tablet, and phone.

No code experience

Point, click, and configure removes barriers to adoption for all user skill levels.

User editable

Assemble visualizations how you want them as a user. Create as many as you require to depict the information you are seeking.

Adjustable historical view

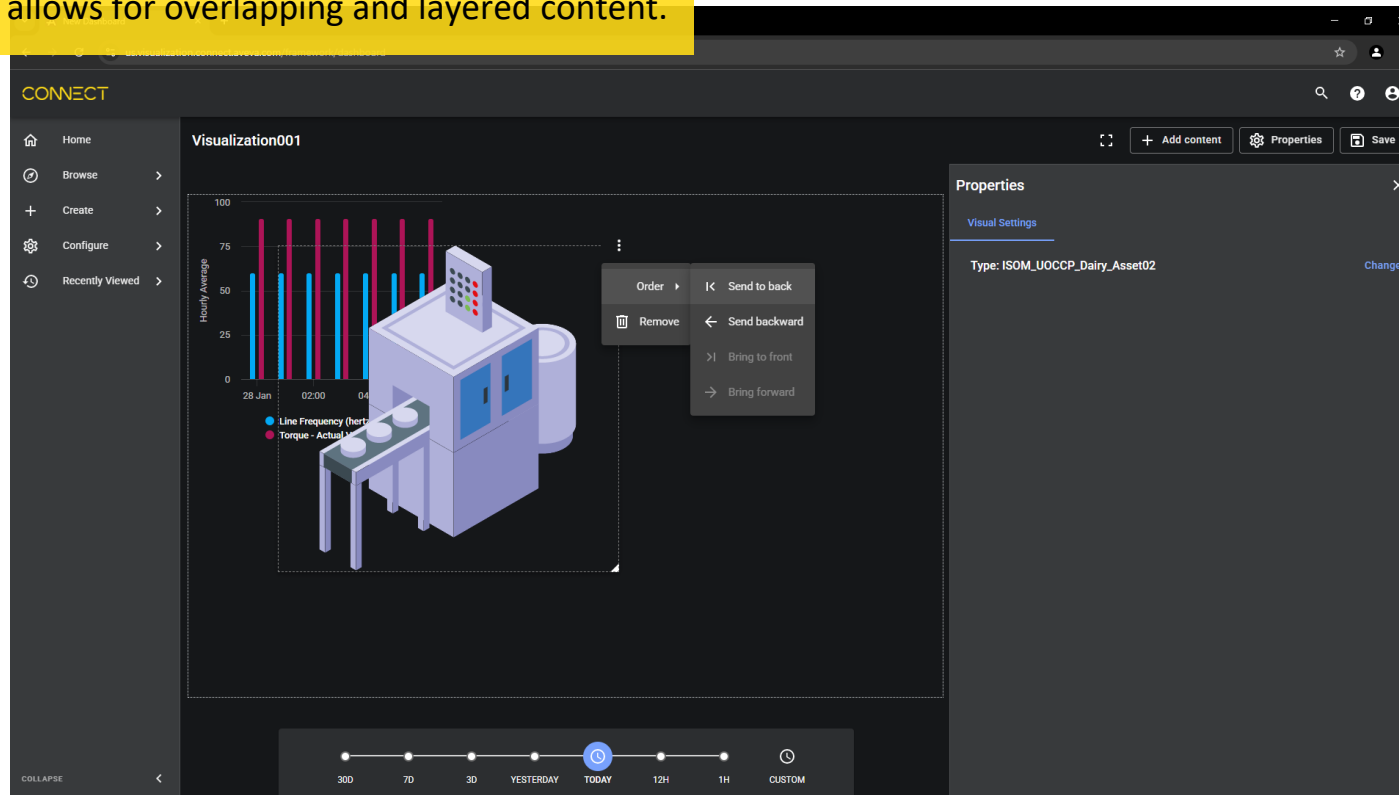
Show data from the last hour, last twelve hours, today, yesterday, last three days, last seven days, and the last 30 days.

Canvas visualizations in CONNECT

Freeform sketch board that allows for overlapping and layered content

Canvas

Freeform sketch board visualization that allows for overlapping and layered content.



Canvas board

Layer your content without boundary or organizational restrictions, shifting content over and behind each other. The added flexibility of Canvas provides an opportunity for creativity using different content types to assemble visually engaging visualizations.

No code experience

Point, click, and configure removes barriers to adoption for all user skill levels.

User editable

Assemble visualizations how you want them as a user. Create as many as you require to depict the information you are seeking.

Adjustable historical view

Show data from the last hour, last twelve hours, today, yesterday, last three days, last seven days, and the last 30 days.

Experience visualizations in CONNECT

Interactive with dynamically driven content, advanced functions and deep customization



Rich interactive experiences

Defined views providing a more structured and interactive visualization experience that provides a great amount of flexibility to design what you want. Deeply customizable environment allows unlimited choice in design, color schemes, menu interactions, and content mix.

Complete 360-degree view

Visualize any combination of process metrics, maintenance analytics, engineering documentation, financial performance, or anything in between.

Holistic operations view

Increase visibility to critical event impacts from upstream and downstream operational disruptions or outages.

CONNECT data services and third-party data sources

Data is provisioned from CONNECT, other CONNECT applications, and third-party sources to populate visualizations with information.

Time-series data visualization

Library of configurable time-series data content types:

- Column chart
- Data grid
- Industrial graphic
- Line chart
- Pie chart
- Status board
- Summary chart
- XY Plot

(Site 510) Machine 1656 Dashboard

Chart: Temperature

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

200

50

0 Jul 02:00 04:00

MAIN1.OpcUa.Streams.2.2 (degree Fahrenheit)

06:00 08:00 10:00

41 Status Board

CURRENT VALUE TREND

1 X Acceleration 0.99911

1 Y Acceleration -0.04188

1 Z Acceleration -0.03374

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

145

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

145

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

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07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

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07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

145

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

145

Share, Full Screen icons

Average Tem...

Share, Full Screen icons

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

Hourly Average

150

100

50

0

3 Jul 08:00

3 (degree Rankine)

2 (degree Fahrenheit)

Module Temperature

Share, Full Screen icons

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

150

145

140

135

130

3 Jul 02:00 04:00 06:00 08:00 10:00

MAIN1.OpcUa.Streams.2.3 (degree Rankine)

Share, Full Screen icons

G-Forces

Share, Full Screen icons

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

2

1

0

-1

3 Jul 02:00 04:00 06:00 08:00 10:00

1 X Acceleration 1 Y Acceleration 1 Z Acceleration

1041 X-Y Plot

Share, Full Screen icons

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

1.01

1.005

1

0.995

0.99

-0.0475 -0.045 -0.0425 -0.04

1 Y Acceleration

1 X Acceleration (X-Axis) - 1 Y Acceleration

Average G-Forces

Share, Full Screen icons

X-Y Plot

Share, Full Screen icons

Summary Calculations

Share, Full Screen icons

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

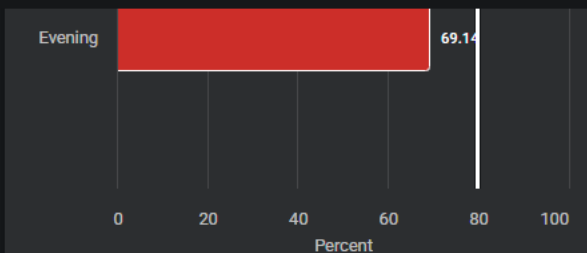
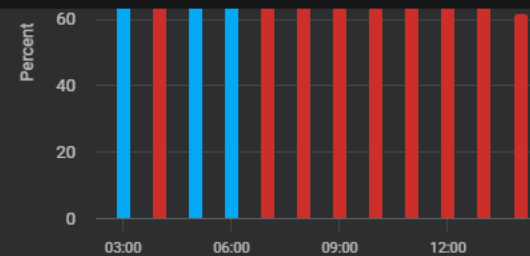
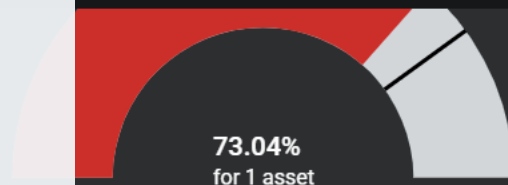
145

07/02/2024 11:06:26 pm - 07/03/2024 11:06:26 am

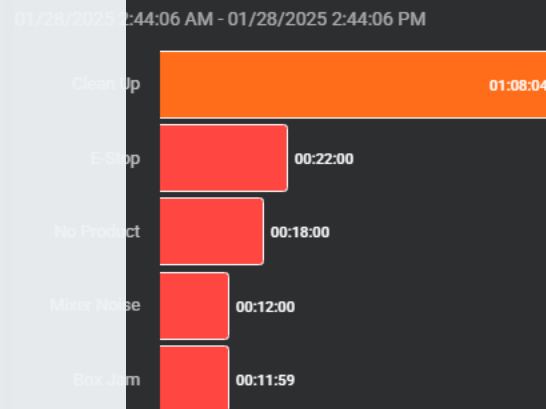
Event and asset efficiency data visualization

Library of configurable event data content types:

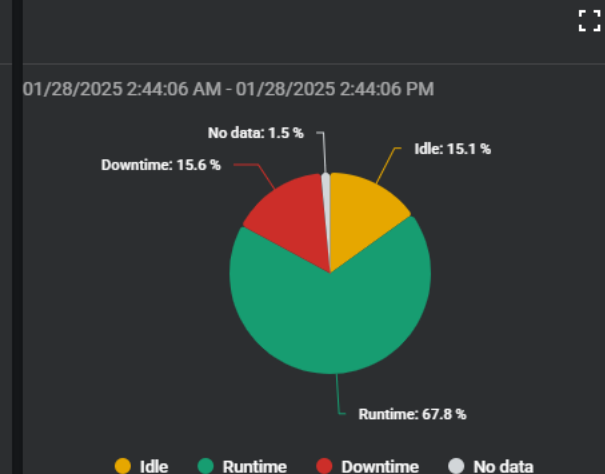
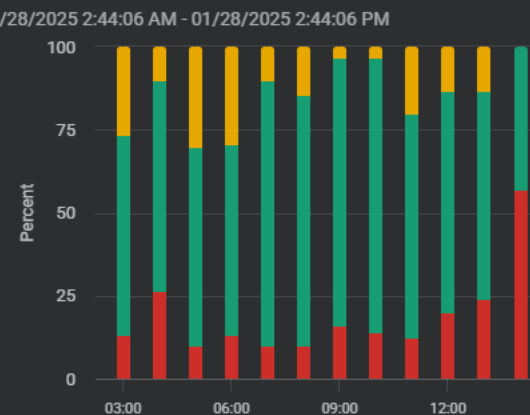
- Card Summary
- Column chart
- Gauge
- Line chart
- Pie chat
- Grid
- Equipment status
- Multi-asset analysis
- Multi-asset utilization timeline
- OEE KPI
- OEE KPI analysis
- OEE KPI trend
- Production summary
- Utilization & Production trend
- Utilization summary
- Utilization time analysis
- Utilization time summary



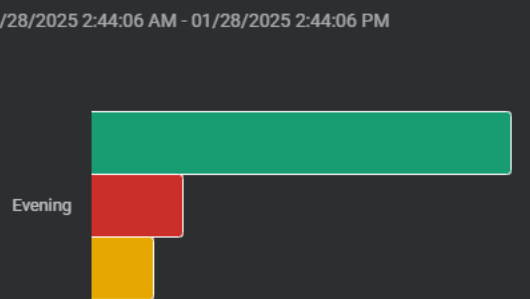
Downtime by Duration



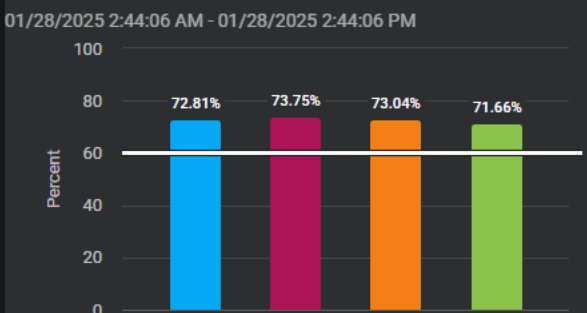
Utilization Trend



Utilization Analysis



Brewtrain OEE



- Home
- Browse
- Create
- Configure
- Recently Viewed

J-9002A

AF_FPS02 > J-9002A

Overview 2D3D ARCanvas001 J-9002A-Dashboard001

Asset Info

Description not defined

Pump Condition Based Maintenance - Pump

Engineering Details

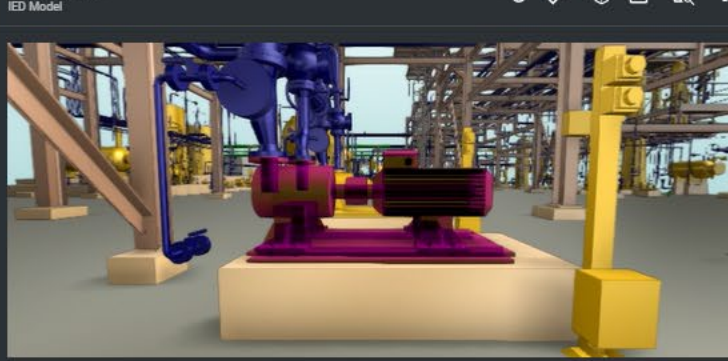
Active	
Name / Title	LP Flare KO Drum Pump
Type	Pump
Parent	43
Location	C31
Aliases	/J-9002A

Status Board

07/03/2024 12:00:00 am - 07/03/2024 1:49:05 pm

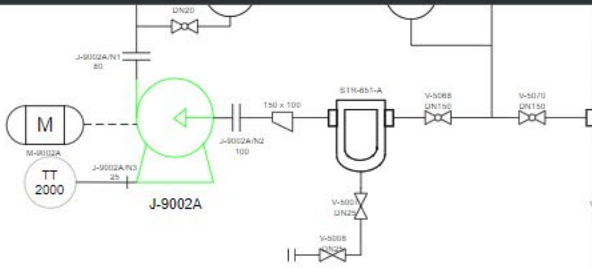
	CURRENT VALUE	TREND
Discharge Flow Rate	137.65 US gallon per minute	
Suction Pressure	147.65 pound-force per square inch	
Downtime Reason Code	0	
Flow Rate	150.95 US	

3D Models



Documents

PID-IED-903675



Events

Work Order (2)	
MWO-0032.J9002A	MWO-0032.J9002A
MWO-0093452	MWO-0093452

Models, documents, and other data visualization

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

- 3D viewer
- Doc viewer
- Point cloud viewer

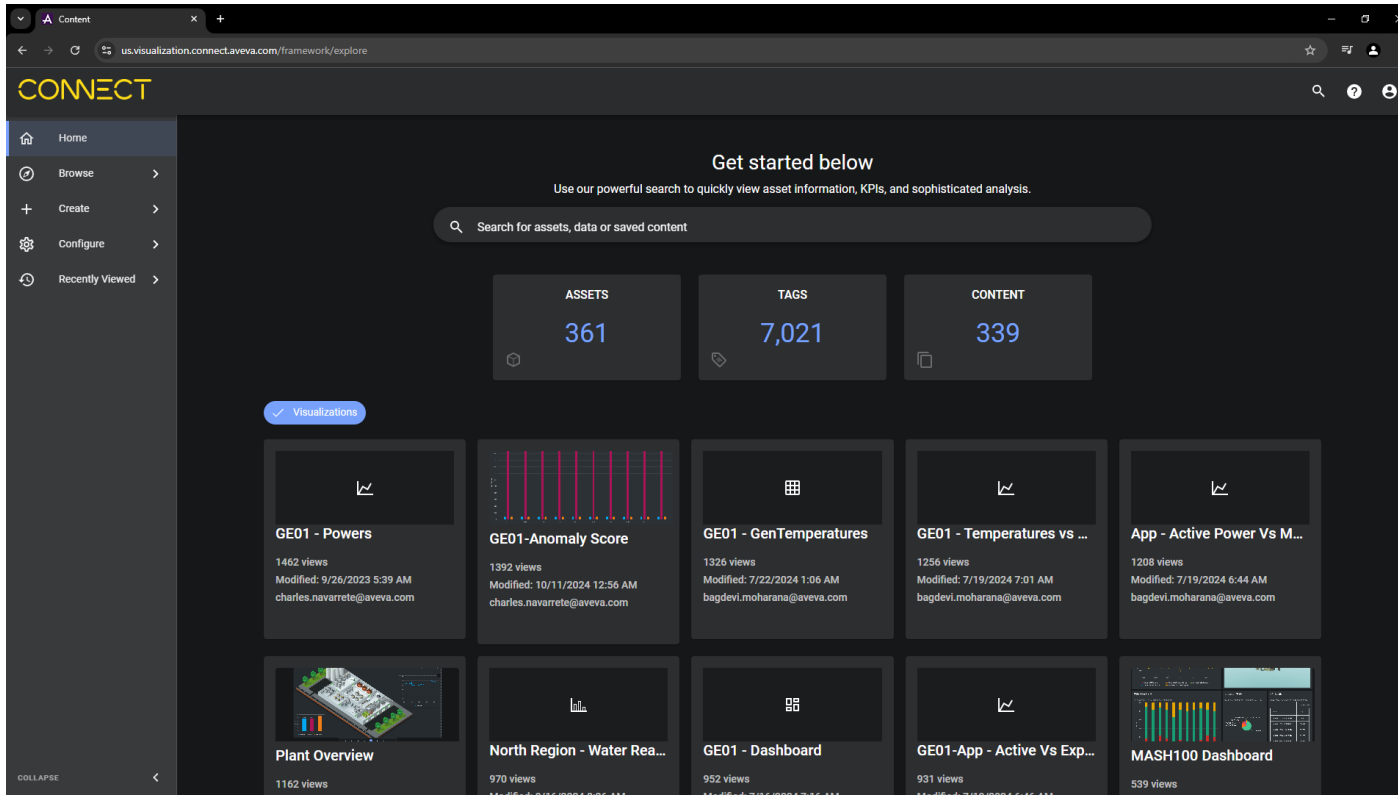
Properties

- Relationship explorer
- Relationship viewer
- Report viewer
- Microsoft Power BI

Parts

Motor, Non-Electrical (1)	
M-9002A	Motor
Piping Item, Miscellaneous (3)	
J-9002A/N1	
J-9002A/N2	
J-9002A/N3	

Customize your CONNECT visualization



Search for content

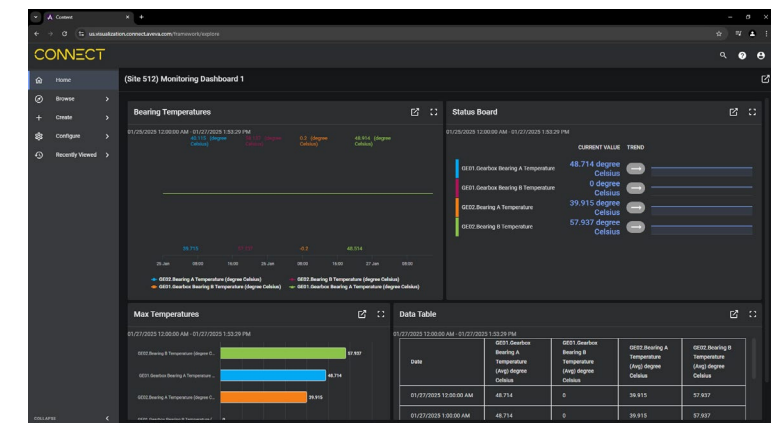
Use the search bar to find data, assets, and other content. This includes filtering by different options to help narrow results.

Organize and share displays

Name, save, and link dashboards to specific assets. Retain for personal use or share with the broader team.

Set your own homepage

Choose a visualization of your choice to be your default homepage, instead of the search bar and general visualization list.



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.

The screenshot shows a chat interface with a dark background. At the top, a user message from 'Lori Brossard-Warda' at 10:28:22 am asks: 'what has been the wind velocity at hornsea wind farm this week'. Below it, the 'Industrial Assistant' responds at 10:28:38 am. The response includes a title 'Wind Velocity Data at [Hornsea Wind Farm](#) for This Week', a summary of the data, and a list of metrics for wind speed. The metrics are: Current Value: 5.55 m/s, Minimum: 2.32 m/s, Maximum: 18.69 m/s, and Average: 8.64 m/s. A 'Summary' section follows, stating that the wind speed has varied significantly and that the average is 8.64 m/s. It also mentions that the data is typical for offshore wind farms and offers further analysis if needed. At the bottom, there is a text input field with the placeholder 'Enter your message...' and a 'Send' button.

LB Lori Brossard-Warda 10:28:22 am

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

Industrial Assistant 10:28:38 am

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

What are the bearing and nacelle temperatures for GE07

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

Do I have a dashboard on utilization?

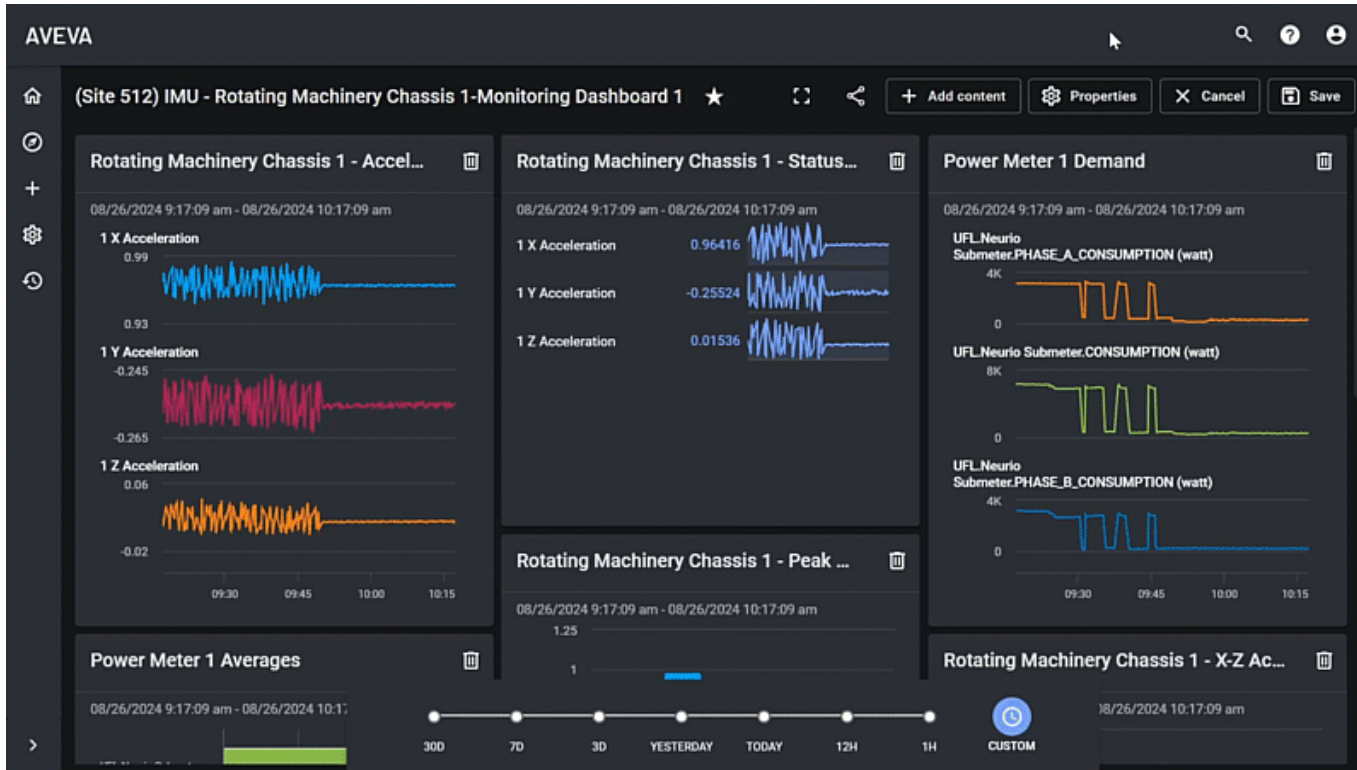
Do I have any stoppage events in Hornsea Wind Farm for the last 24 hours?

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?

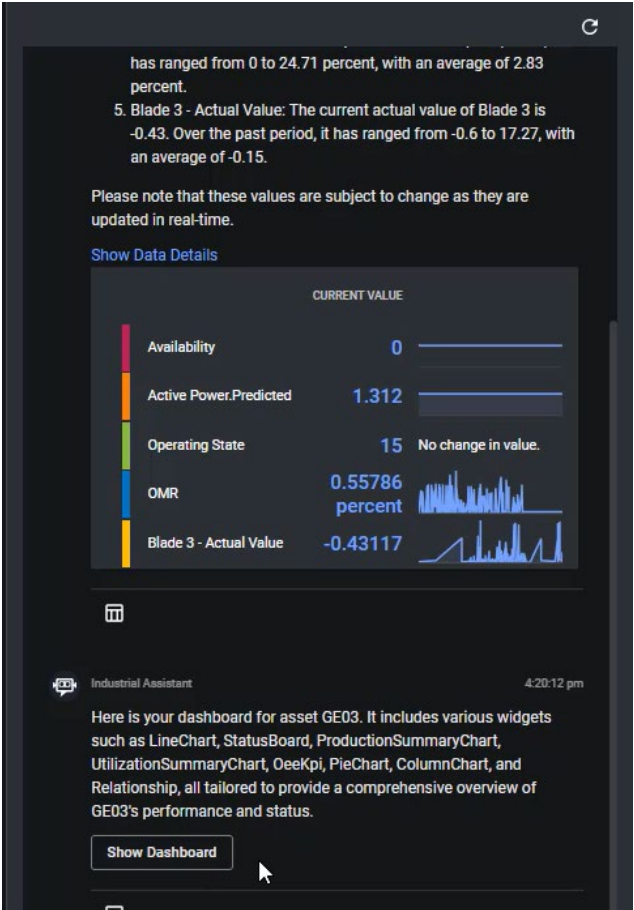
About Industrial AI Assistant



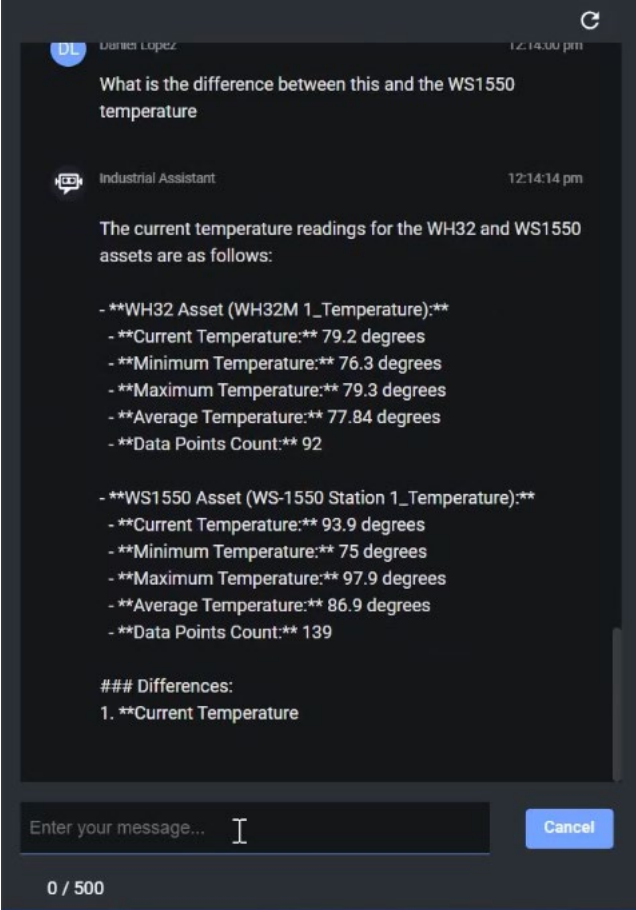
- Assistant utilizes semantic indexing for query and to help identify related information between data sources. This uses the intended meaning instead of an exact keyword.
 - Example: a search for air velocity could return information relating to wind speed.
- Ask Industrial AI Assistant to find 1D, 2D, and 3D content, and summarize data within documents
- Information retrieved uses the current user's profile to restrict results to what they have permission to see.
- Citations will show the values of the data, and which sources were considered when answering a question.
- Background processing of 'linked knowledge' between data sources and content without pre-configuration.
- Ability to integrate voice-to-text.
- Chat history management / configuration management / user feedback.
- Guardrails to prevent asking inappropriate questions.

More about Industrial AI Assistant

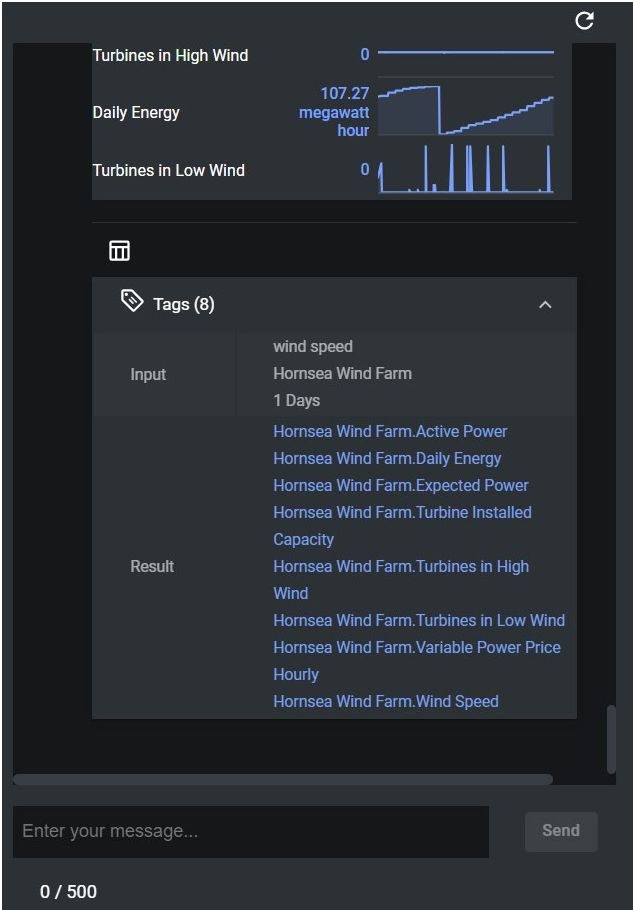
Charts



Multiple responses



Citations



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

CONNECT

Home Browse

3D Model
Hornsea_Wind_Farm

Custom 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 Average

Line Frequency (hertz)

Torque - Actual

Order Remove

Send to back

Send backward

Bring to front

Bring forward

Event and asset efficiency content

Production Summary

Downtime by Duration

Utilization Trend

Reason Value

Production Info

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

Example Production

5,129.1

Bad Production

221.4

Clean Up

01:04:05

Label Jam

00:24:01

Idle

00:16:00

Stacker Fault

00:16:00

Paper Tear

00:10:00

Percent

17 Mar

04:00

08:00

No data: 2.3 %

Idle: 14.2 %

Downtime: 16.1 %

Runtime: 65.4 %

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

amper

83

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

Future time on charts

08:20

08:30

08:40

08:50

09:00

CUSTOM

Asset metadata

30

25

20

Asset relative referencing

ization001

Shared Entity

GE02

Properties

Common (11)

Corrosive Liquid

no

MainTag

GE02

Originator

ARB

Plant

WTP

Project Code

Shared entity selection

Shared Entity

GE01

GE02

11 results for "GE02"

Assets (1 of 1)

GE02

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

Demo – Asset Relative Referencing / Asset Selection

The screenshot displays the AVEVA CONNECT user interface. On the left is a dark sidebar with navigation options: Home, Browse, Create, Configure, Query Builder, and Recently Viewed. The main content area has a top header with the word 'CONNECT' and search/help icons. Below this is a 'Get started below' section with a search bar and three summary cards: ASSETS (2,769), STREAMS (1,793), and VISUALIZATIONS (117). A tab bar below the summary cards shows 'Experiences' and 'Visualizations' (which is selected). The main area contains a grid of visualization cards. The first card, 'Woodlands.RealLosses', shows a line chart and has 228 views. The other cards in the grid include 'GE01-GE01 Turbine Image', 'Overview Turbine', 'GE01 - Turbine Operations', 'PID-IED-905675', 'GE01 - Turbine Details', '3D Model-Insulations', 'North Region-RealLosses', 'Ang Mo Kio - RealLosses', and 'Equipment List'. Each card displays a view count and a modification timestamp.

- Define visualizations that can be used as a template for multiple assets
- Create the visualization using a single asset – select ‘Use Shared Entity’
- At runtime, use the ‘Shared Entity Selector’ to change the asset context

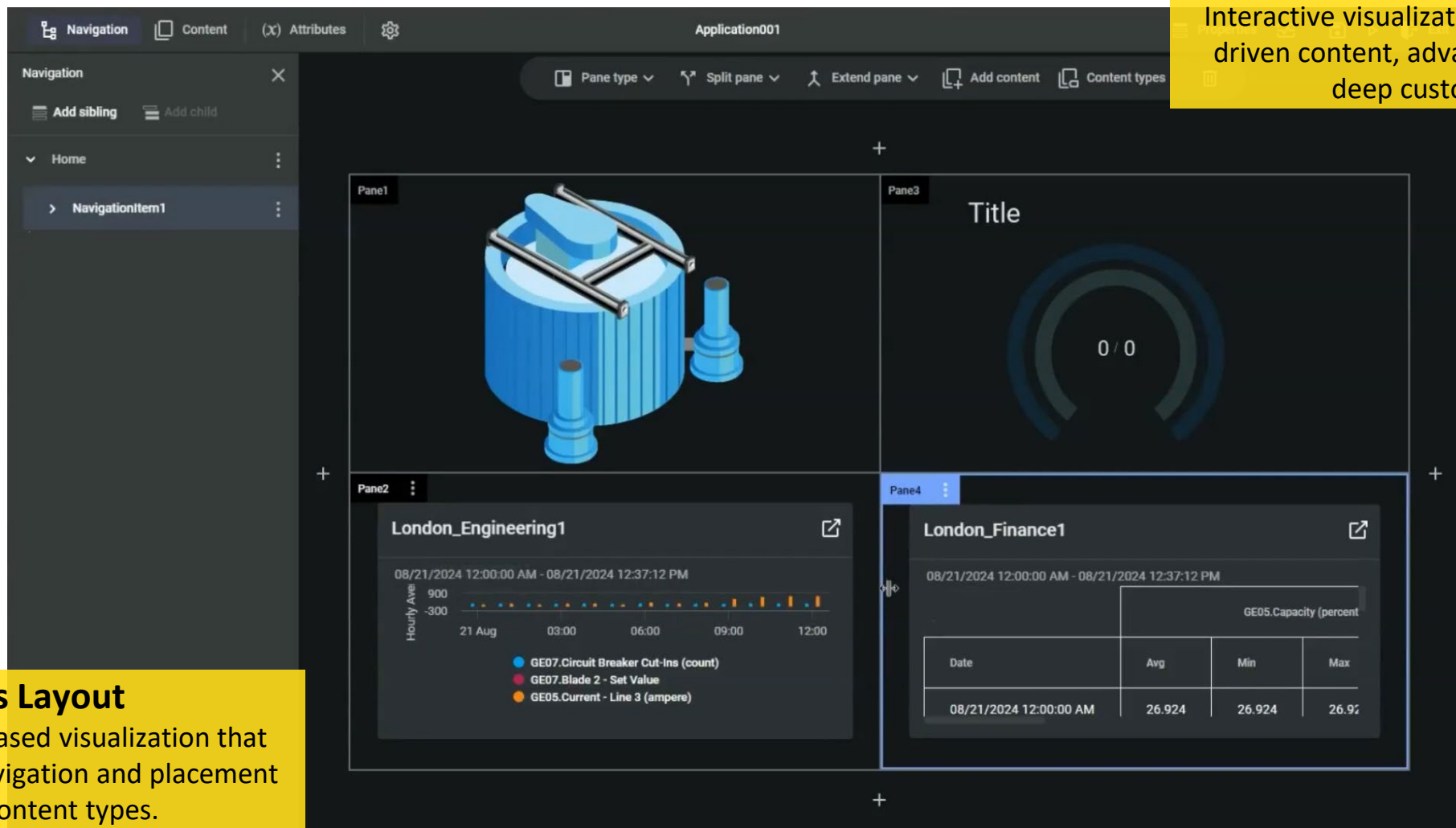
Coming soon

Experience designer

Used for assembling the more advanced Experience visualizations

Experience

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

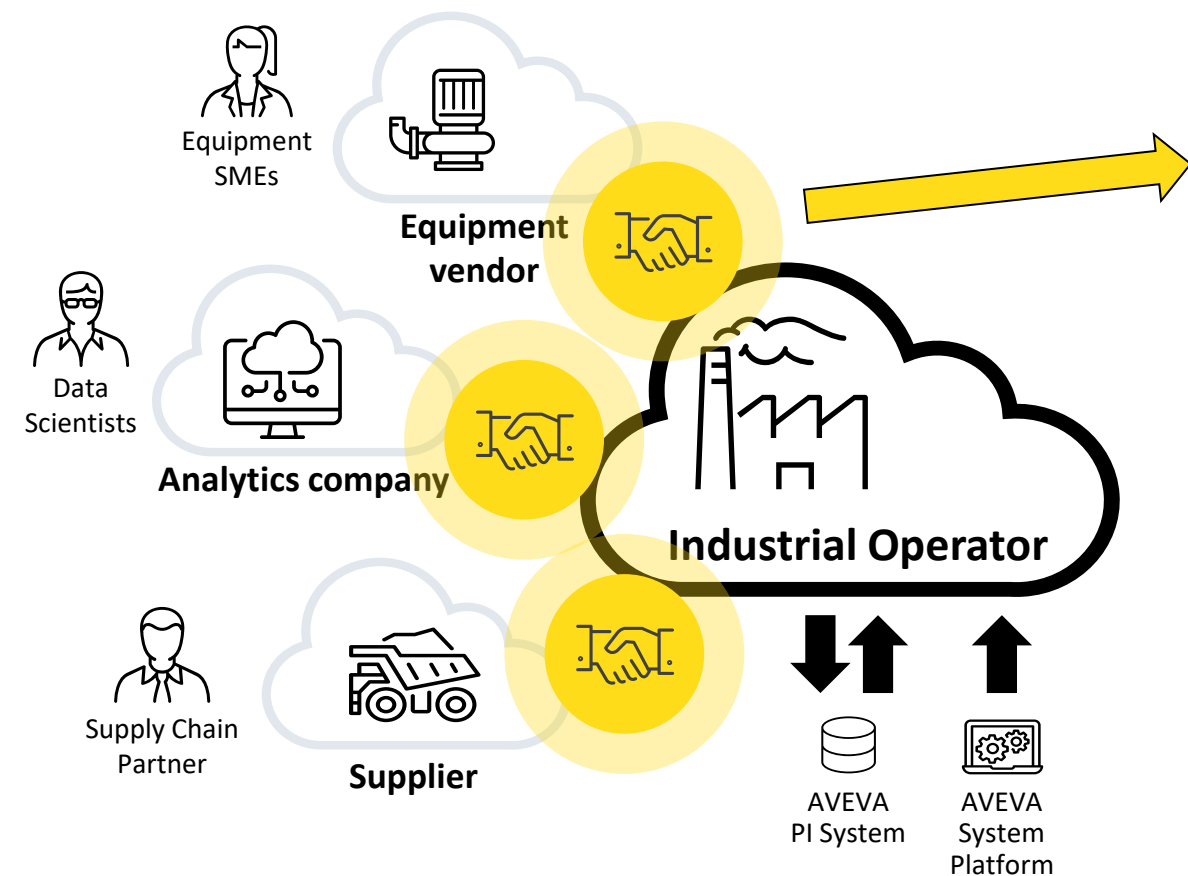


Panes Layout

Adjustable pane-based visualization that supports simple navigation and placement of more content types.

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.

***Look for the 'Try Me' stations
in our CONNECT area!**

What's next? Try these...

SESS-109

Define interactive visualizations in
CONNECT with the Experience
designer
2 day, April 09 @ 1:15pm
CONNECT Lounge

SESS-92

Unlocking enterprise-wide insights
with Hybrid MES
2 day, April 09 @ 2:00pm
CONNECT Lounge

SESS-294

Visualize your data together in
CONNECT (featuring the Industrial AI
Assistant)
2 day, April 09 @ 4:15pm
CONNECT Lounge

SESS-202

Data is the foundation of your digital
transformation
2 day, April 09 @ 11:15am
Room 2000

SESS-198

CONNECT & Databricks: Unifying IT &
OT data for smarter, sustainable
operations
2 day, April 09 @ 2:00pm
Room 2001-2003

SESS-206

Amcor: Enterprise analytics and
visualization of MES/process data
2 day, April 09 @ 2:45pm
Room 2001-2003





CONNECT visualization

Contextualized views into complex data sets



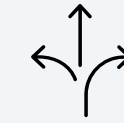
Bring together data sources and data types from across your organization



Breakdown information siloes and empower remote teams



Contain and normalize the scale and complexity of your data



Move from reactive mitigation to proactive assessment



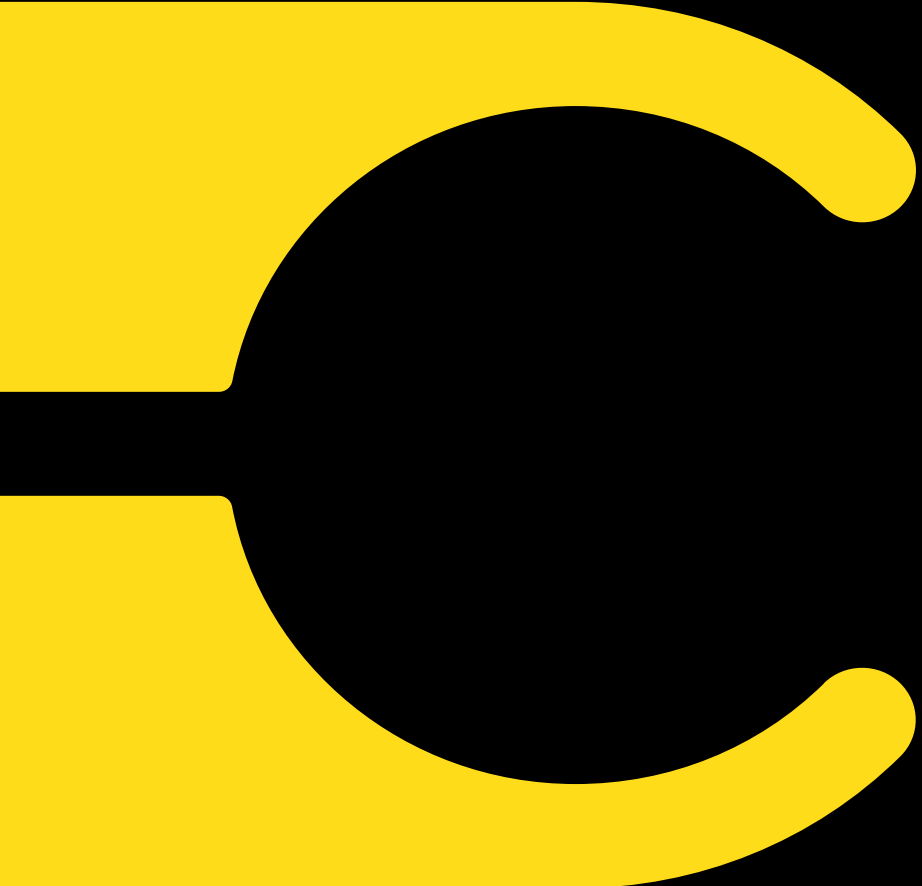
Increase information awareness across groups




Benefit from the power of collective intelligence

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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.

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