CONNECT

CONNECT visualization

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

If you could view regional or global operations performance from end to end, what might you uncover? What if you could enhance strategic visibility by converging engineering, operations, and business data in context? Imagine how deploying a flexible browser software environment that enables virtual teams and delivers decision insight to many users could streamline your operations.

Purpose-built enterprise visualization

With the rise of remote working and talent shortages, industrial enterprises have shifted their focus to virtual competency. Many organizations are assembling expert teams to investigate, resolve, and recommend actions for facilities they may never visit in person. These teams require diverse skills and data sets to come together in a collaborative environment and achieve goals that drive value across operations, including:

- Improving asset reliability
- Increasing asset utilization
- Monitoring energy and reducing energy waste
- Improving production rates and material usage
- Prioritizing health and safety

How can an organization structure and contextualize information to get relevant data to the appropriate expert no matter where that person is located?

Achieving this orchestrated collaboration at speed and scale requires gathering data from many siloed sources and federating it into a unifying information system.

This system would ideally include production and engineering information, data governance, modeling, analytics, benchmarking, and a highly detailed presentation layer for customizable visualization.

Enterprise visualization provides complete visibility into many facilities and systems, merging models and data. It also lets virtual experts access and view different information based on their role. Enterprise visualization is critical to expediting decisions and increasing the overall agility of an organization. These systems rely on trusted digital threads connecting assets, data, devices, people, and locations to a common data structure. The more digital threads that exist, the more insights and value can be uncovered.

Ultimately, the solution also enables organizations to achieve transparency across their corporate operational landscape, empowering them to unlock new efficiencies.

Composable visualizations in a browser

Through CONNECT, users access preconfigured and customizable content from a library that can be linked to their stored data in CONNECT data services.

Rich tools enable those users to create visualizations for multiple use cases and role-based needs, allowing them to visualize processes and other information through their organization's operations context. CONNECT lets users:

- Enable mass accessibility and decision insight for industrial data.
- Organize industrial assets and data in ways that enable teams to drive action quickly.
- Enhance strategic visibility by converging engineering, operations, and business data in context.
- View global or regional operations KPIs and analytics from end to end.
- Supplement analyses using a digital intellect to expedite investigations into data, assets, events, and documentation.
- Easily define and deploy flexible browser-based visualizations by role and use case.

At a glance

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

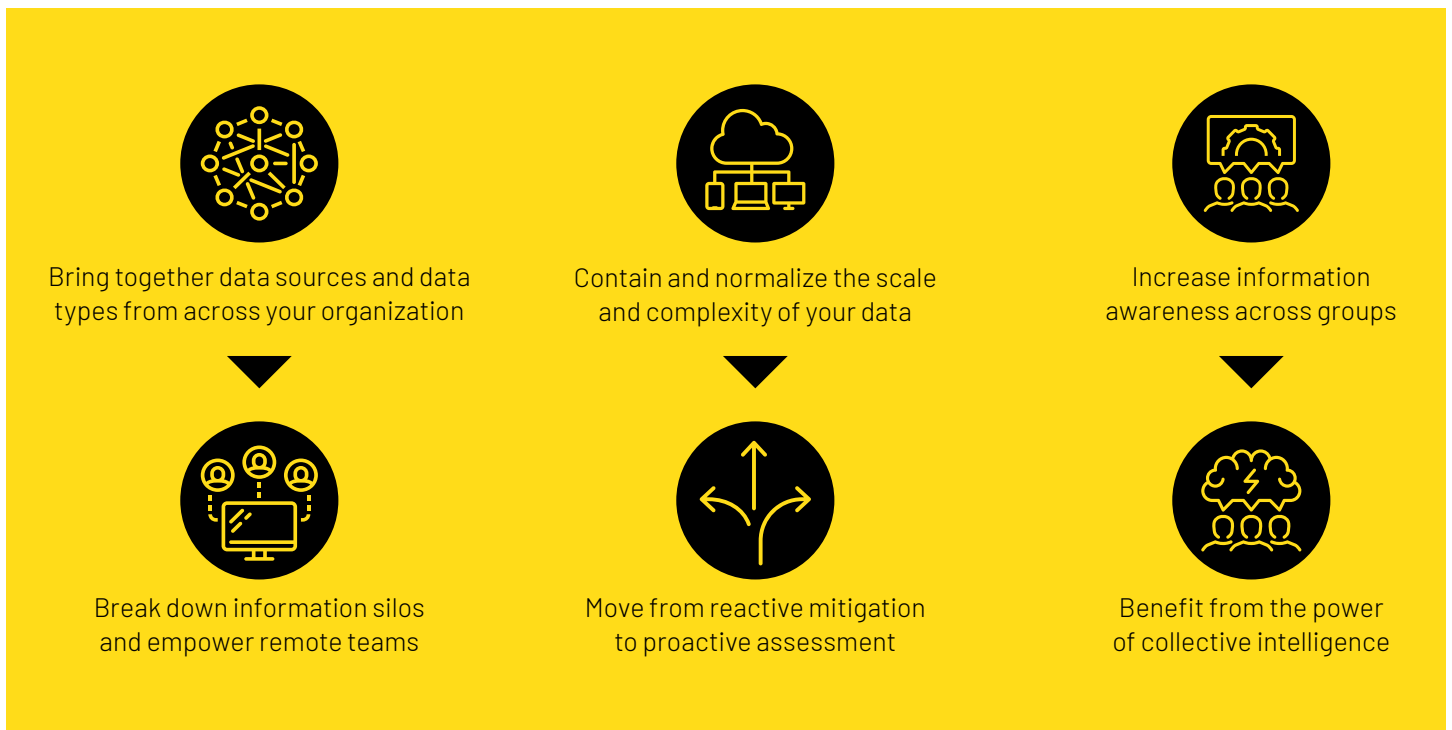Choose from Grid, Canvas, Panes Layout, or Experience visualization formats.

Craft many visualizations for different use cases, roles and other data analysis needs.

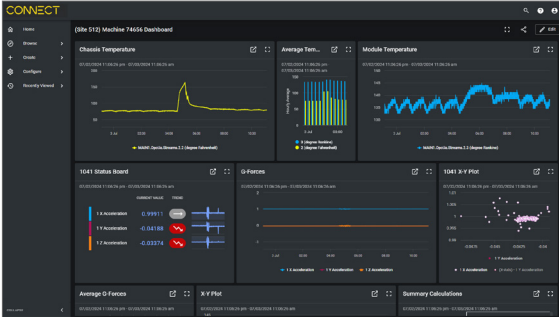Blend time-series charts, event and efficiency KPIs, 3D models and a variety of other content.

Organize, save and share assembled visualizations with other teams.

Quickly find and summarize information with Industrial AI Assistant, a generative AI tool.

CONNECT

Enhance strategic visibility with enterprise visualization

HR data **Financial data** **Event data** **Asset status** **Asset specifications**

Production data **GIS map with weather** **User-entered data** **3D model**

Bring together data sources and data types from across your organization

Contain and normalize the scale and complexity of your data

Increase information awareness across groups

Break down information silos and empower remote teams

Move from reactive mitigation to proactive assessment

Benefit from the power of collective intelligence

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Visualizations you can create 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.
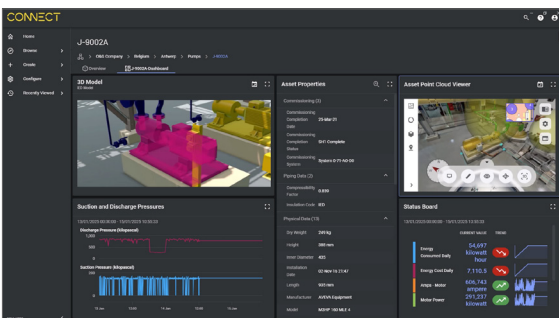
Asset-based visualizations

Asset-based visualizations can be comprised of mixed information that provides 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.

CONNECT

Canvas

Grid

Panes layout

Experience
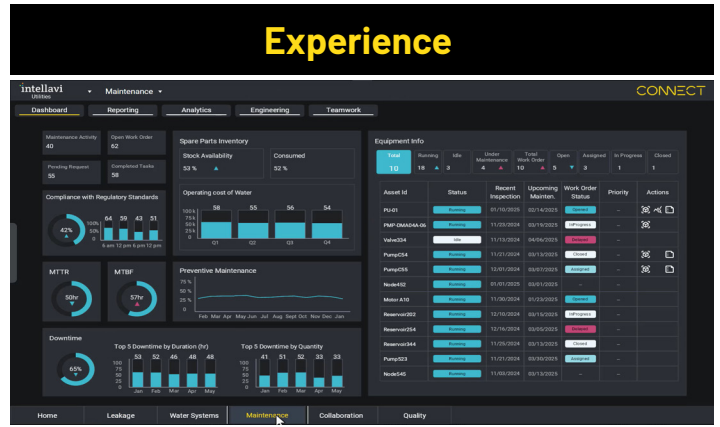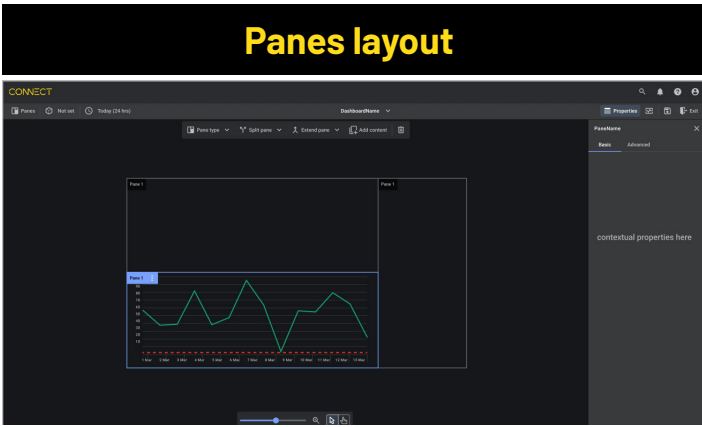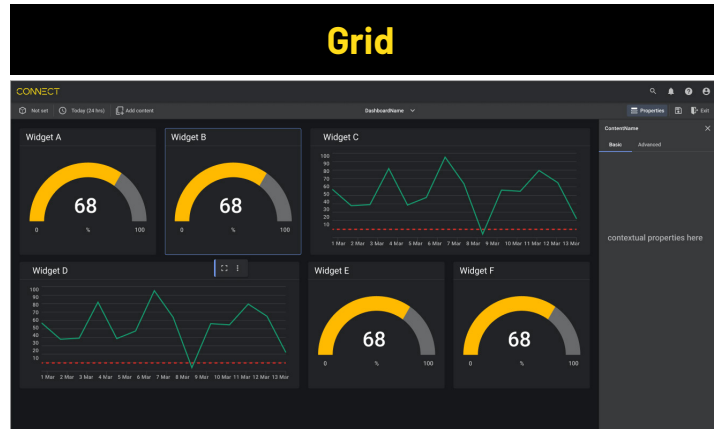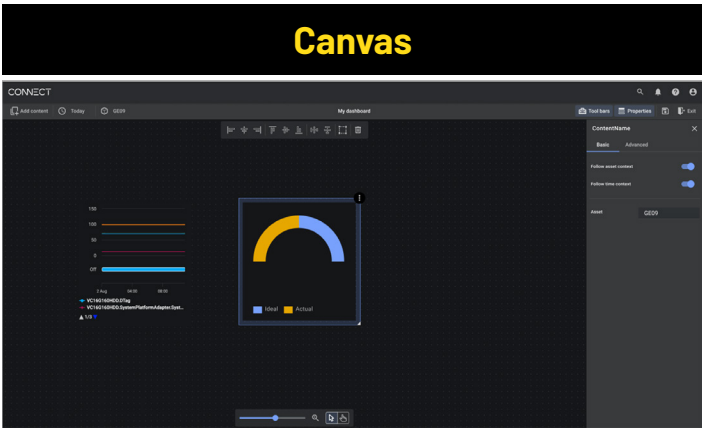
Multiple visualization formats to choose from

Canvas board

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

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, and users can scroll down for more content visibility.

Panes layout

Arrange your content using resizable panes that offer a greater degree of structure and design for deeper analytic objectives. This can include basic navigation and richer content types that conform to the pane space.

Rich interactive experiences

Defined views provide a more structured and interactive visualization experience that give users the flexibility to design what they want. Its deeply customizable environment allows unlimited choice in design, color schemes, menu interactions, and content mix.

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# Craft visualizations for every need

A visualization is the representation of data through use of graphics, charts, rendered models, and even animations to communicate complex data relationships and data-driven insights in a way that is easy to understand.

Users can create CONNECT visualizations for many different use cases and data analysis needs, including for specific roles, with a unique flexibility for surfacing industrial information.

This can increase collaboration between operations analysis teams for improved knowledge-sharing and information access.

Data is provisioned from CONNECT data services, applications and third-party sources to populate visualizations with charts, graphics, and other visual information.

To design and build visualizations in CONNECT, users can take advantage of the Visualization designer for Grid, Canvas and Panes Layout configurations—or
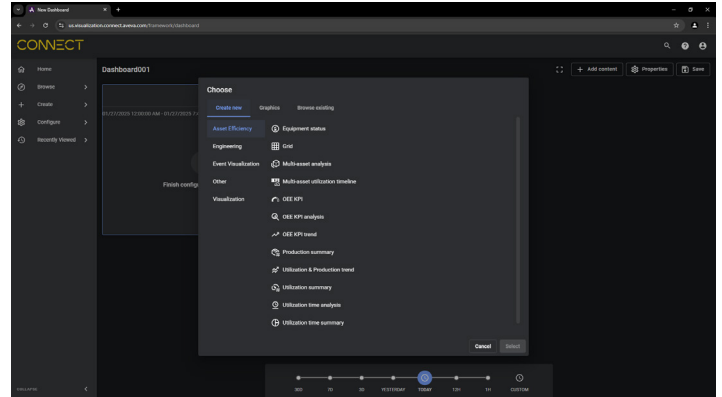

the Experience designer for defining more advanced interactive Experience visualizations.

Content comprises the configured visual elements used to assemble and represent data in visualizations such as charts, status KPIs, documents, 3D models and more.

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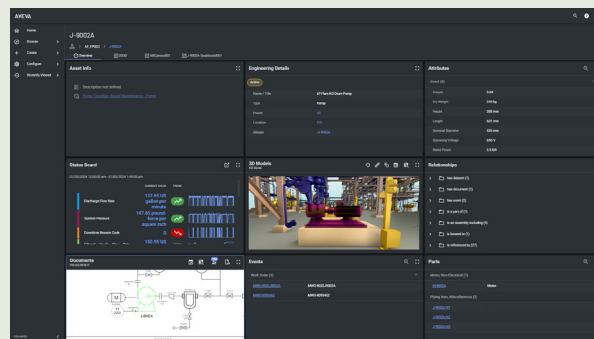
CONNECT visualization includes a library of configurable content types
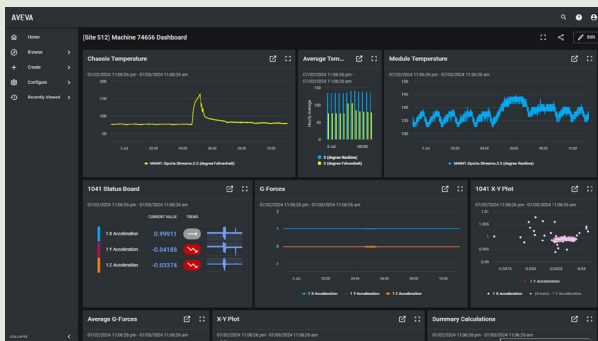
Time-series content
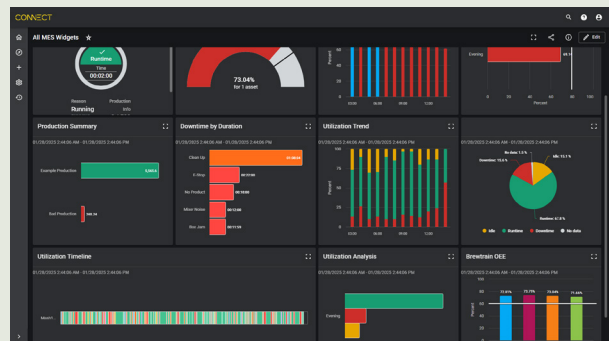
Event and asset efficiency content

Models, documents, and other content

Industrial AI Assistant

Industrial AI Assistant is a generative AI tool to quickly find and summarize information by asking a digital intellect natural language queries through a chat interface.

- Identifies related information using intended meaning, not exact keywords
- Finds 1D, 2D and 3D content and summarizes data within documents
- Citations show the data sources and response values
- Uses current user's profile for information visibility
- Enables queries across different applications and data types
- Background processing of linked knowledge
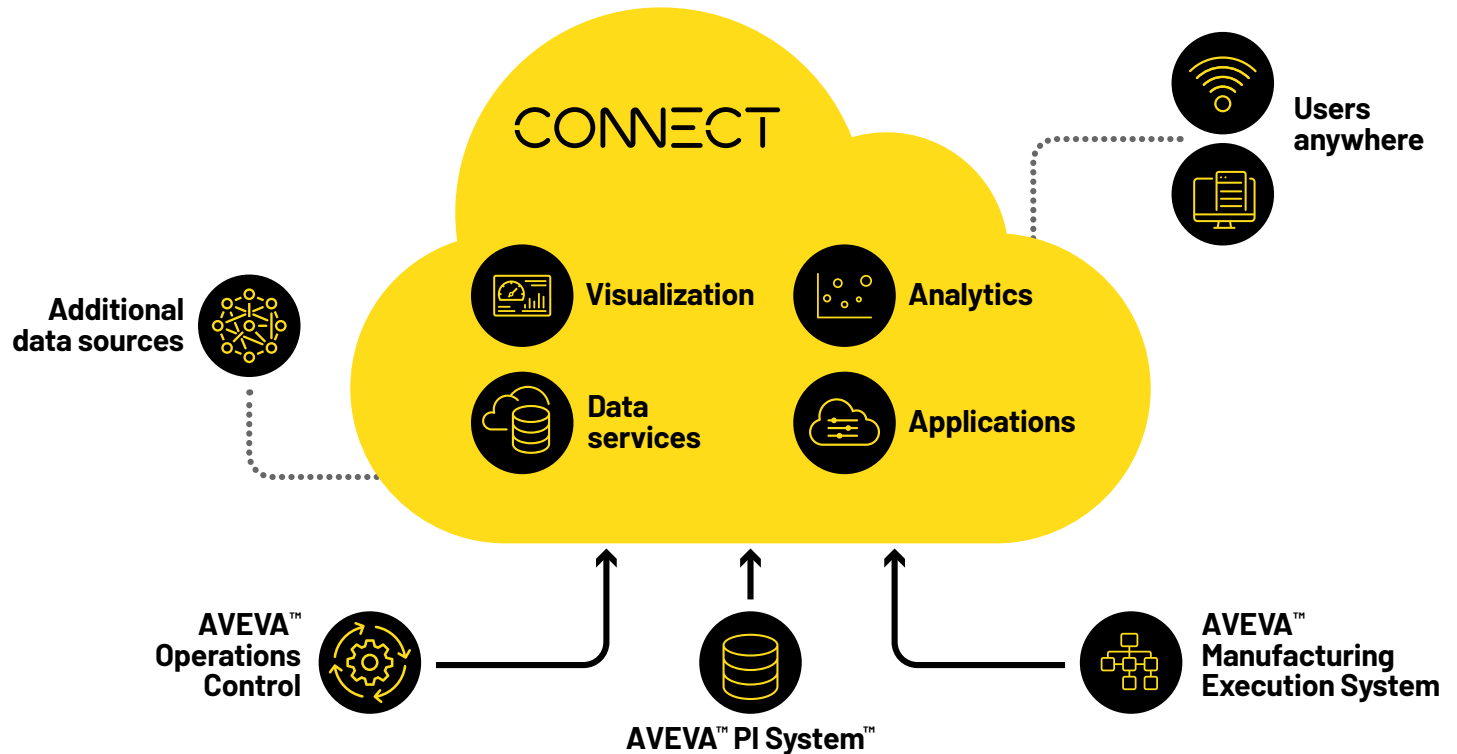- Never trained using customer data

Use cases

Enabling remote operations center experts

Experienced groups forming a remote operations center tasked with driving performance, coordinating operations, or responding to issues that are escalated by site-based personnel or automated notification systems.

Virtual user accessibility

Executive, strategic analyst, and third-party use case emphasizing independent interaction and analysis of operations activities, KPIs, and associated information for decision support.

CONNECT

- Visualization
- Analytics
- Data services
- Applications

Users anywhere

Additional data sources

AVEVA™ Operations Control

AVEVA™ PI System™

AVEVA™ Manufacturing Execution System

To learn more about CONNECT, visit: **connect.aveva.com**