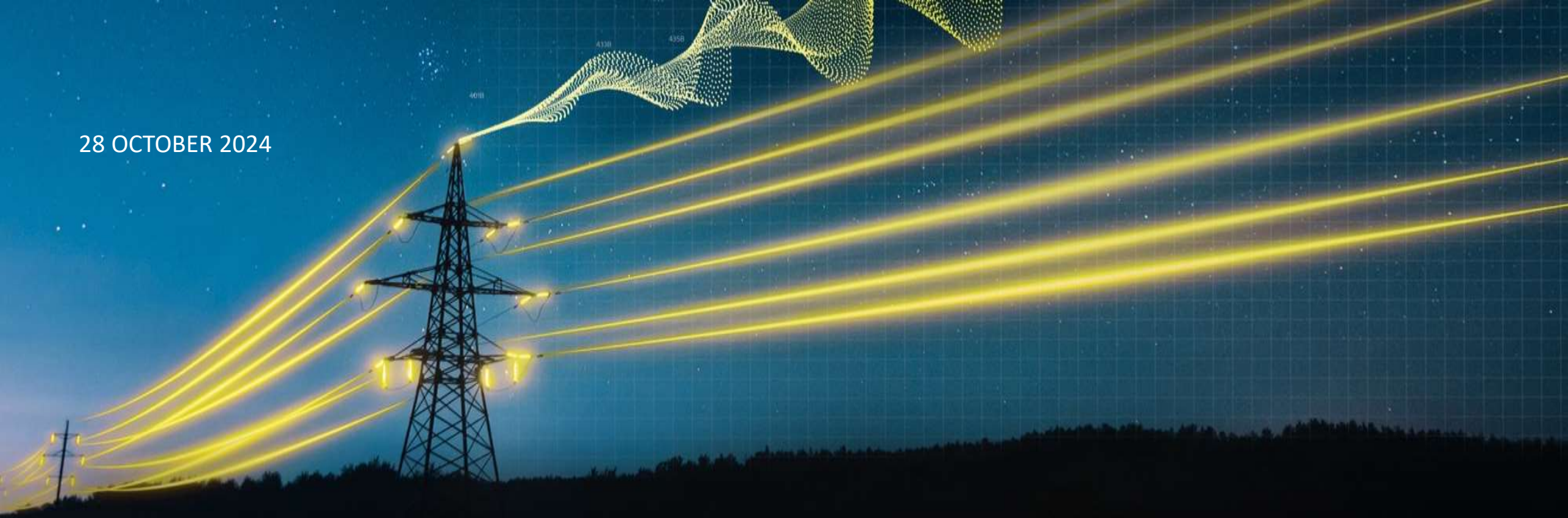


28 OCTOBER 2024

The CONNECT Industrial Platform

Unlocking new capabilities with an intelligence platform
that brings together your unique industrial ecosystem

Matthew Del Bonta, CONNECT Specialist

CONNECT

Our users have presented challenges for us to solve

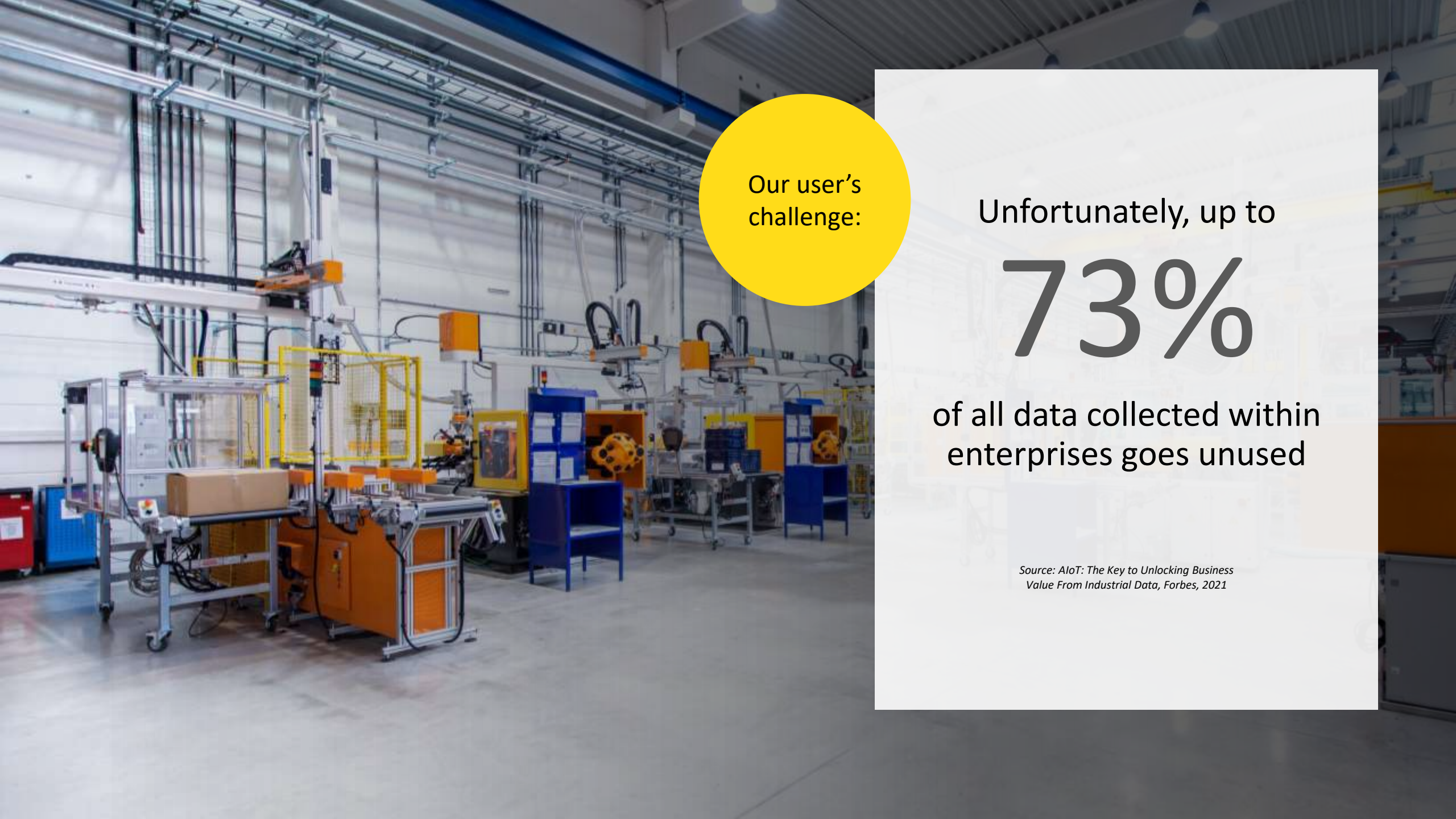
Information silos

Inconsistent data and slow responsiveness

Remote and virtual teams have limited access to reliable data

Difficulty understanding operational performance across sites and teams

Need to predict behaviors and outcomes for greater efficiency and sustainability



Our user's challenge:

Unfortunately, up to

73%

of all data collected within enterprises goes unused

Source: AIoT: The Key to Unlocking Business Value From Industrial Data, Forbes, 2021

And even worse,

76%

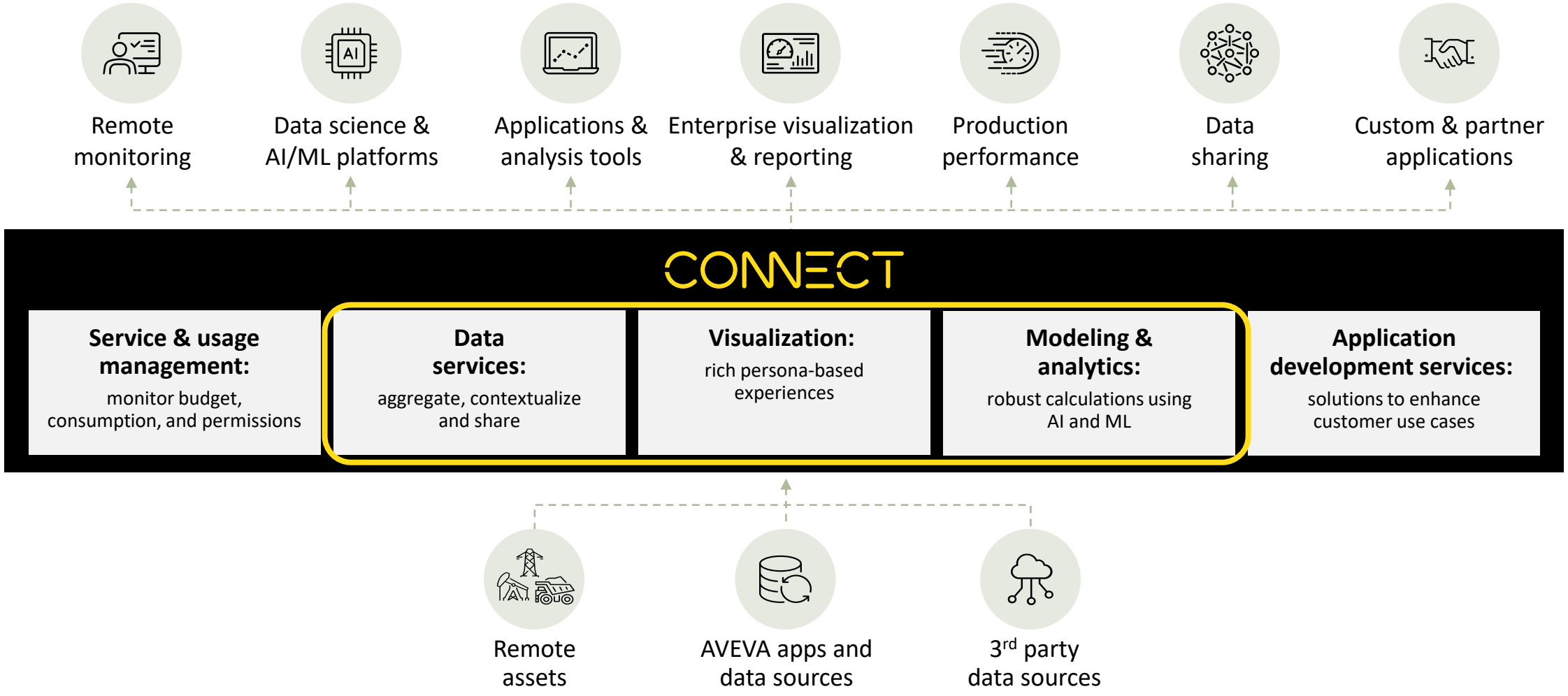
of business leaders find it difficult to understand their data

Source: Data Management Poses Major Challenges and Issues for Companies: New Study, Forbes, 2022

And we at AVEVA want to help

Introducing: CONNECT, our industrial intelligence platform

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



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

CONNECT

Extends your existing investments and capabilities

Ecosystem of partners

EcoStruxure · AVEVA · etap · RIB · Wonderware

AVEVA

CONNECT

With CONNECT, we want to deliver:

Data

Intelligent Twin

Experience

Empowered Ecosystem

Full library of hybrid SaaS portfolio and partner applications

Enterprise visualization

Gain single-pane-of-glass visibility across engineering, operations, and business information

Engineering and execution

Maximize efficiency of capital projects

Asset performance

Improve reliability with AI insights

Data sharing

Collaborate securely within and beyond the enterprise

Production optimization

Optimize productivity and quality in real time

Planning and scheduling

Stay ahead of a fast-changing market

Simulation and learning

Accelerate process design innovation

Plus, more AVEVA provided and 3rd-party applications

Operations control

Drive instant decision-making and safe operations with responsive visualization and control

Engineering information

Deliver projects on time and improve safety and performance with rapid, intuitive access to the digital twin

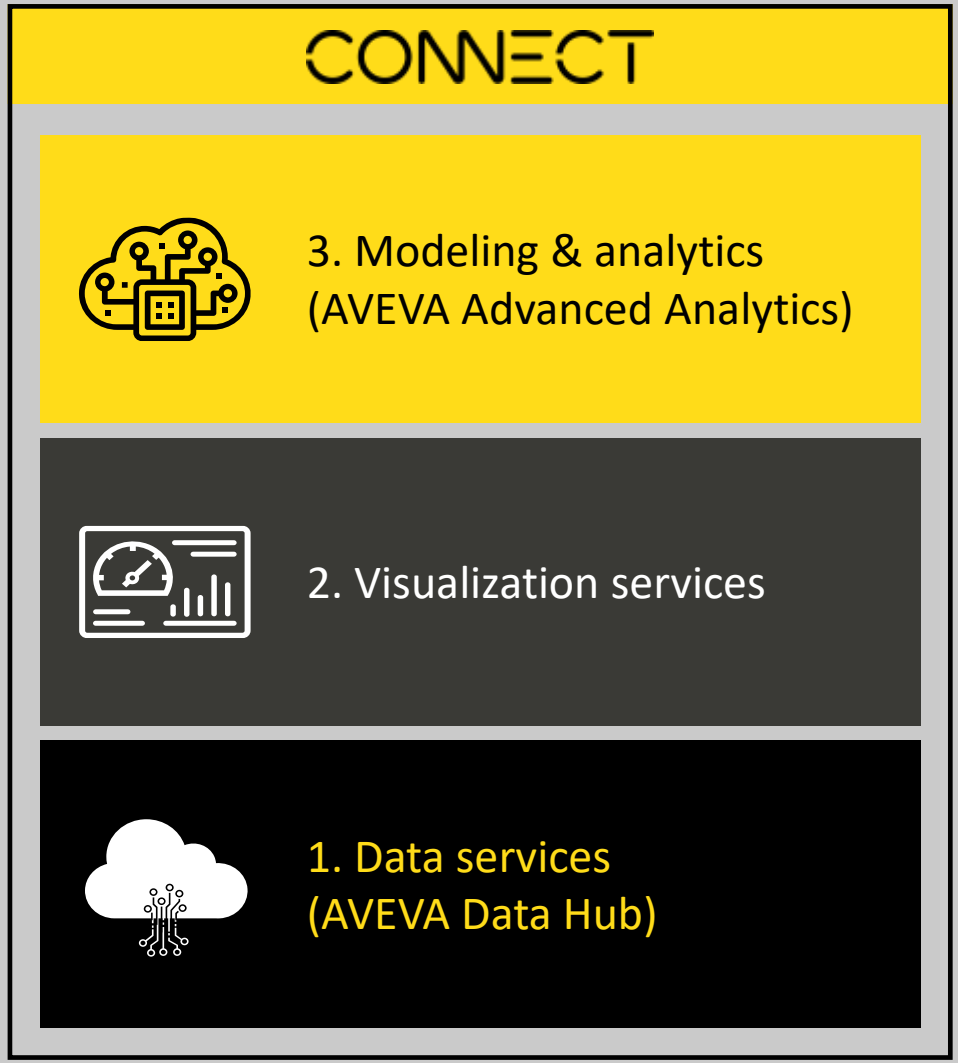
Operations information

Break through silos with contextualized information and self-service tools that accelerate analytics projects

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

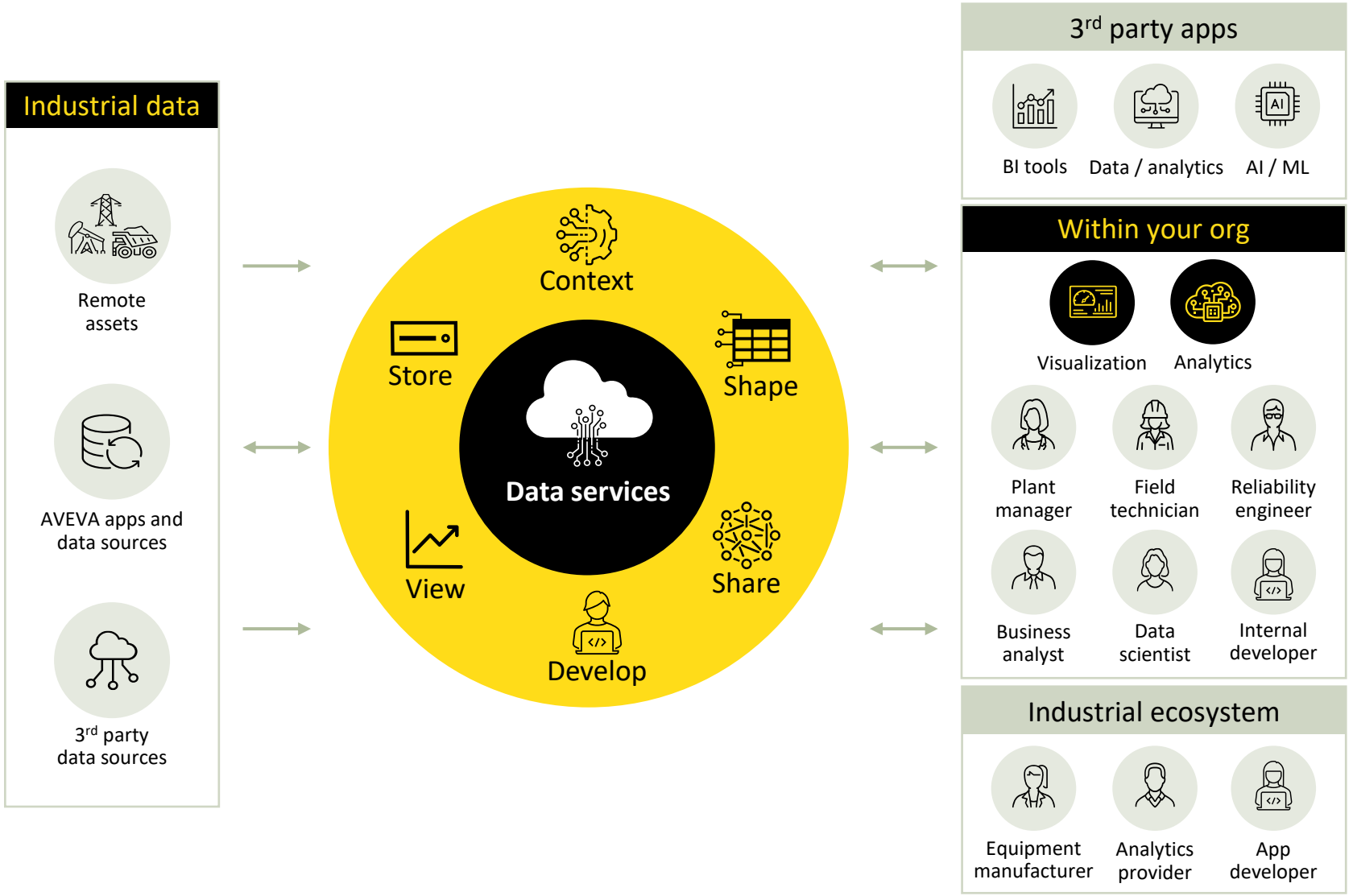
Today we'll focus on 3 specific CONNECT platform services

As the core of our industrial intelligence platform for real-time operations



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

1. CONNECT Data Services



Aggregate, contextualize, and share real-time industrial data

- Build and manage a central data repository for BI, data and analytics, and AI / ML tools
- Securely share your industrial information with authorized users, extending the use of your existing data beyond your organization's four walls
- Enable 3rd-party providers to access real-time industrial data for customized services and applications

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

2. CONNECT Visualization Services

Data services

3rd party data sources

Self-service

- Editable dashboards
- Arrange various content types
- No code experience
- Search for content
- Adjustable historical view

Pre-defined

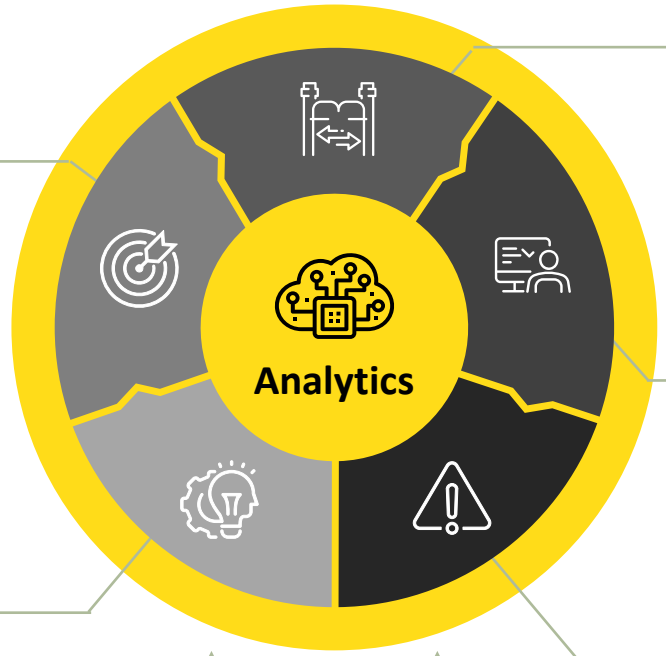
- Custom developed experiences
- Rich animations and dynamic styling
- Asset driven navigation
- Complex interactions
- Holistic operations view

Visualize industrial data using self-service and pre-defined dashboards

- Visually relate disparate data sources & systems in context to each other
- Gather insights between applications and across data types quickly and easily
- Share actionable information with operations, reliability, business, and other teams, anywhere through a browser

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

3. CONNECT Modeling & Analytics
(AVEVA Advanced Analytics)



1 Learn

Automate investigations and understanding of performance drivers with ML

2 Solve

Consolidate learnings and apply solutions that mitigate problems and improve performance

3 Model

Combine data from multiple sources to mirror physical assets & processes on digital twins

4 Monitor

Apply algorithms & logic to continuously assess performance

5 Alert

Give early warnings of performance issues with improvement suggestions

Data services

3rd party data sources

Combine existing data with AI for faster and smarter decisions

- Utilize AI and ML to improve process efficiency
- Understand production outcomes and get recommended corrective actions
- Collaborate with trusted partners to enable cross-company collaboration and discover new opportunities

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

What can this look like when applied to real-world use cases?

1. **Enterprise-level** analytics and performance reporting

2. **Proactively** managed energy use, performance parameters, product quality and other metrics through **analytical guidance**

3. **Collaboration** among stakeholders, information sharing, and creation of mutual business value

4. **Extending current investments** with new solutions, and support for **innovative business models** for solution providers

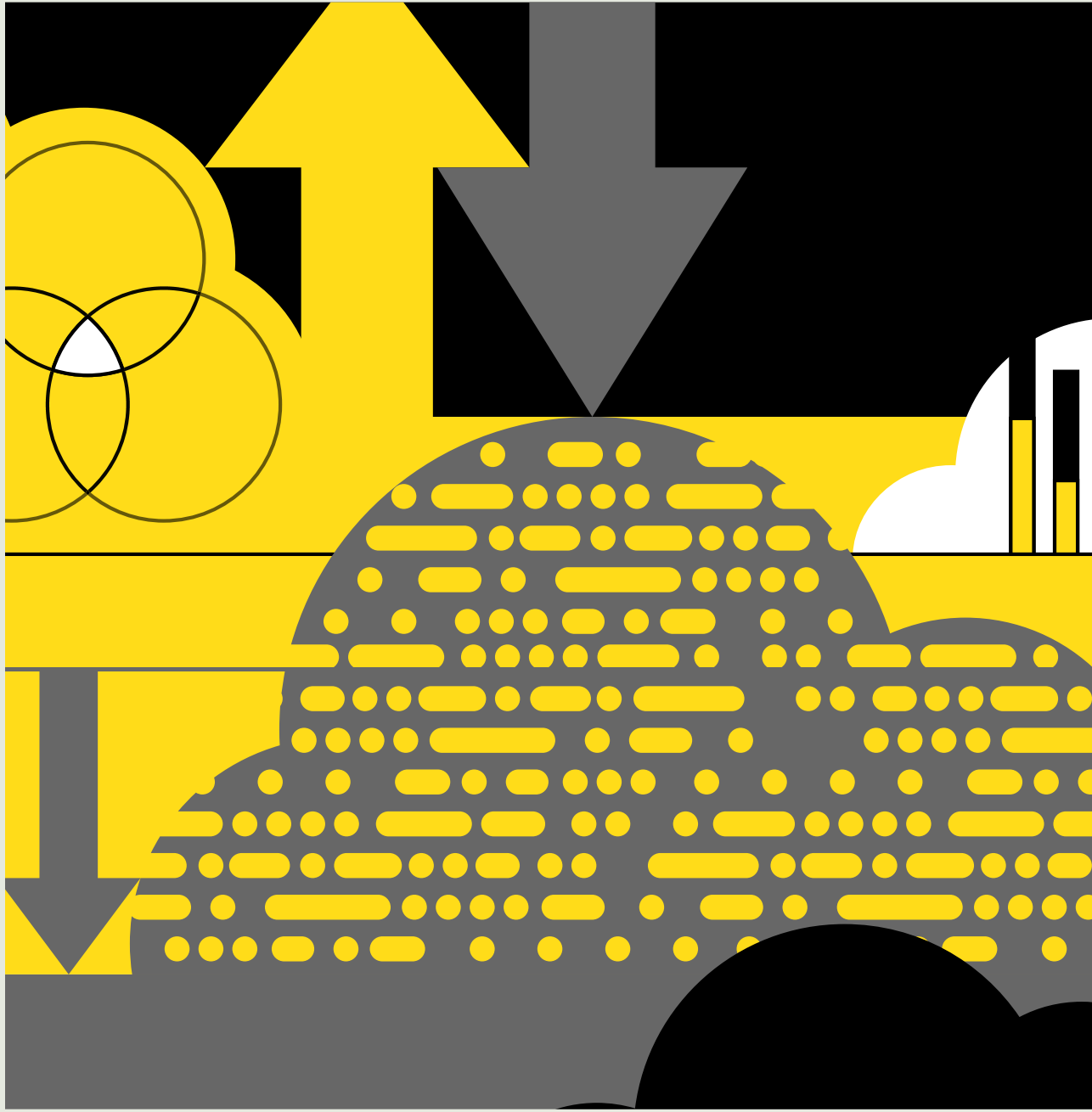
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

What can this look like when applied to real-world use cases?

5. **Data sets and industrial context** for tackling performance, operations reporting, and other actionable requirements

6. **Views** of equipment performance over periods of time, downtimes, utilization, OEE, and incidents, including potential **alarms,** through a “single pane of glass”

7. **Drill-downs** into specific events and detailed trends to understand total uptime and utilization impacts



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Single interface for cloud and on-prem applications

Via CONNECT service & usage management

Consume

- Access the **full portfolio** of AVEVA software
- Subscribe and configure your solutions
- **Rapid deployment** and provisioning of cloud services
- **Manage your budget** and monitor your consumption through the AVEVA™ Flex subscription program

Analyze

- **Management reporting** offers a central hub of information and insights about Flex credit consumption, usage and adoption, and audit logs
- **Subscribe to alerts** from the status dashboard for notifications of planned and unplanned events

Access

- Guaranteed >99% **uptime**
- Centralized **user management** and permissions
- **Import credentials** directly into CONNECT from Microsoft™ Azure Active Directory

Integrate

- Manage and **configure integrations** between CONNECT services, partner and other third-party applications from cloud to edge
- **Leverage shared services** for cloud storage, applications, licensing and entitlement

- Accelerate time to value with flexible, scalable, and trusted industrial hybrid SaaS solutions
- Optimize your industrial software investments centrally
- Extend your ecosystem of teams and partners with a purpose-built industrial cloud platform

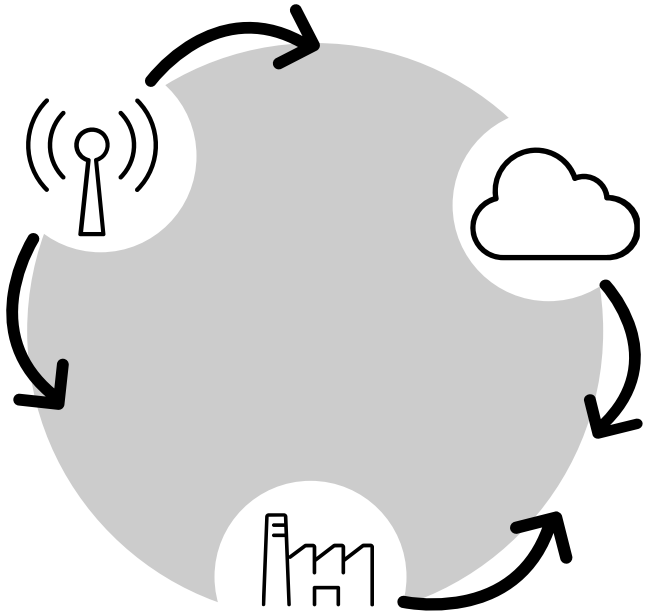
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Flexibility is a requirement in today's connected industries

For **industrial** users, the future is not cloud **or** on-premises; it is the **flexibility to do both**

At the edge

Collect real-time data from sensors, IIoT devices and remote assets outside the control network



In the cloud

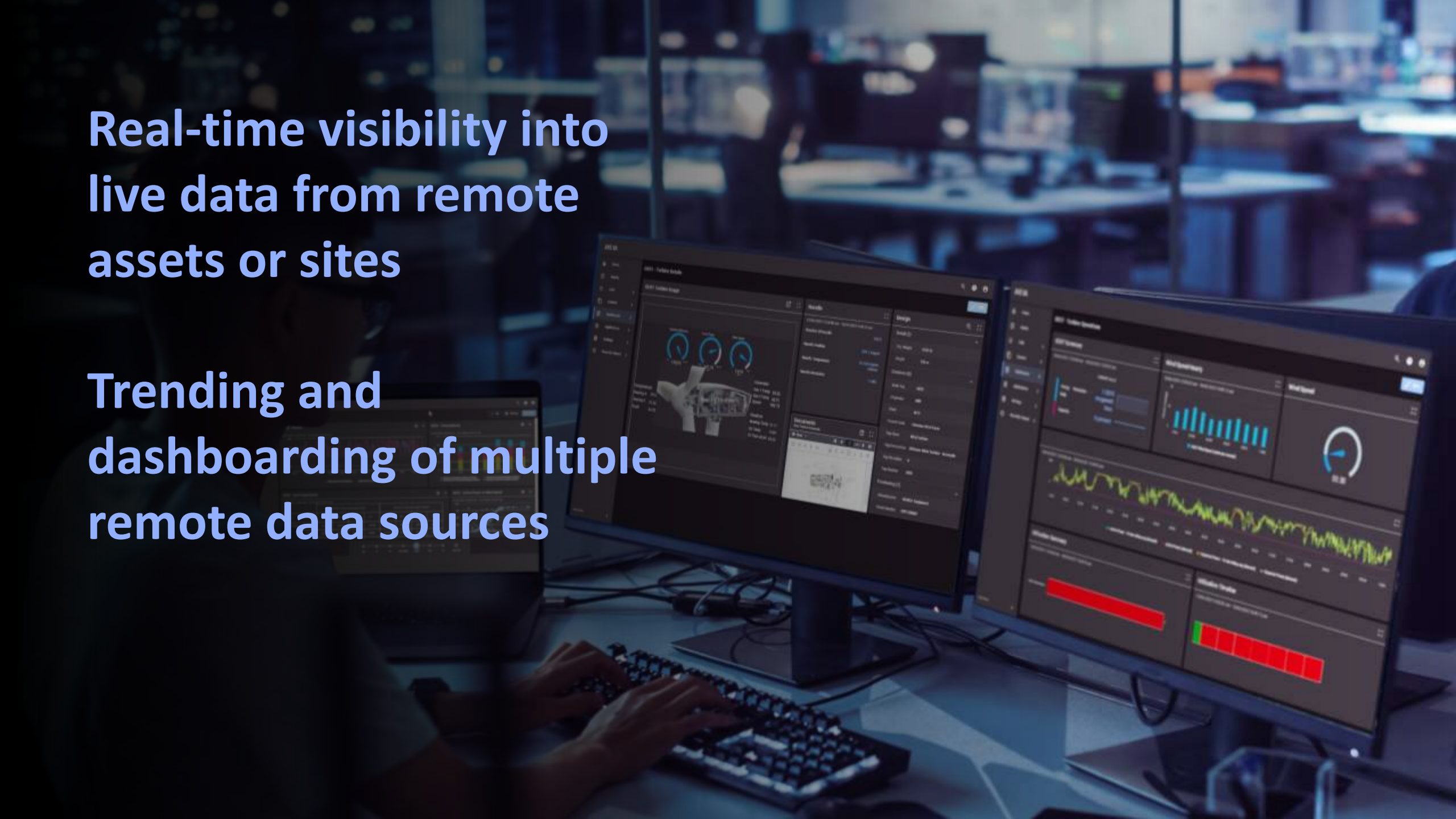
Store and aggregate data at scale, and offer data to any authorized users, tools or applications in the cloud

On-premises

Store enriched industrial data, and offer it to users on-demand, for 24/7 critical operations

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

Altogether, what benefits do CONNECT users ultimately receive?


Real-time visibility into live data from remote assets or sites
Trending and dashboarding of multiple remote data sources

Secure data delivery to management teams and multiple different user groups

Self-service data access for Power BI users and data scientists

AVEVA

Quick, measurable wins from applying AI and ML to industrial data
Analytics capabilities that are both template-driven *and* customizable
AVEVA

Unleash the potential of your data with **AI-enabled applications**

The CONNECT platform analytics tools drive innovation & efficiency

Predictive quality

- Reduce frequency of quality measurements
- Offline measurement with delayed lab results
- Get an early indication of quality in production line

- Predicted quality value
- Ideal operating conditions
- Anomaly timeline and breakdown
- Recommendations on controllable parameters

Predictive throughput

- Identify optimum operating conditions to maximize production
- Identify measures of production by product or rate

- Predicted production rate
- Ideal operating conditions
- Anomaly timeline and breakdown
- Recommendations on controllable parameters

Predictive energy efficiency

- When there is no overall measure of energy consumption
- Normalized measures of energy use by product
- Identify optimum operating conditions to minimize energy consumption

- Normalized energy use
- Predicted total energy consumption
- Ideal operating conditions
- Anomaly timeline and breakdown
- Recommendations on controllable parameters

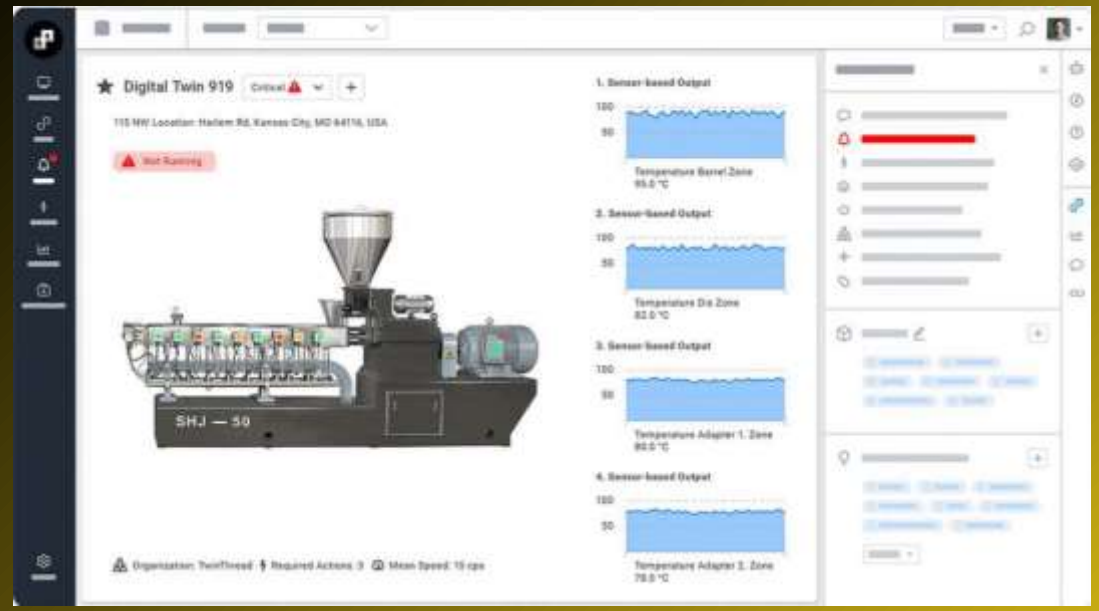
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Provided by Advanced Analytics

Digital Twins

Visibility into all aspects of industrial assets and operations

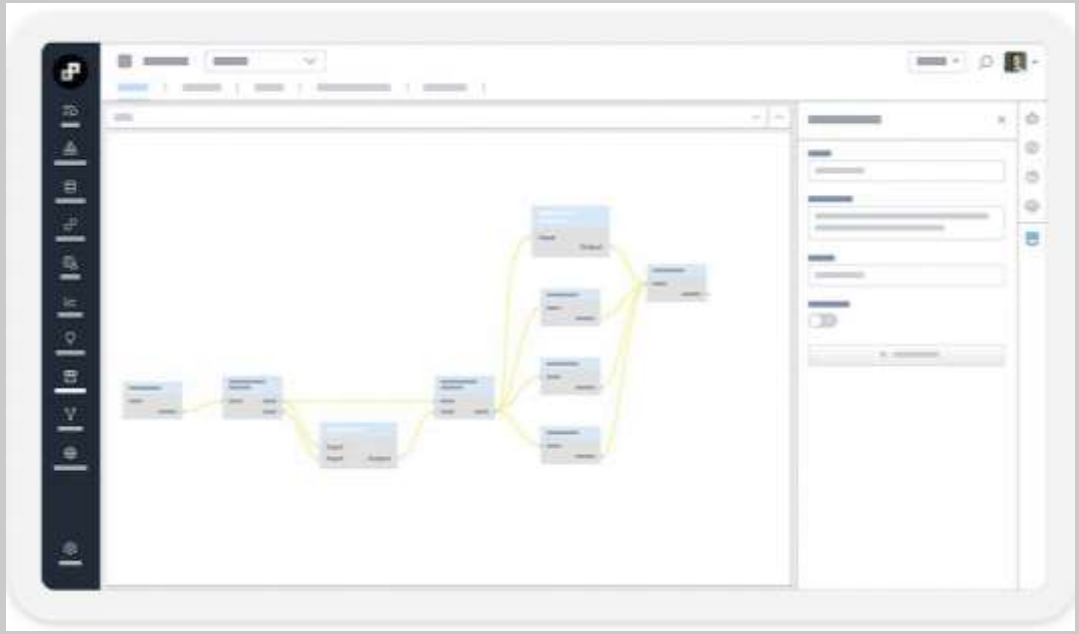
- Asset classes for scaling twins
- Parent-children hierarchies
  - *Site, Plant, Department, Line, Machine*
- Linked Sensors for receiving data
- Timelines of key twin properties
- Visual dashboards with key information
- Opportunities - possible issues to examine



Digital Twins provide the structure and context to automate insights across all assets, production lines, and plants

© 2024 AVEVA Group Limited and its subsidiaries. All rights reserved.

Provided by
Advanced Analytics



Model factory templates

No-code templates to solve fundamental industrial challenges

- Use case templates for model selection
- Automated Machine Learning (ML) model creation
- Easy-guided twin configuration steps (product segmentation, operational state, rate, etc.)
- Automatic evaluation and selection of the best performing algorithm
- Visualized model creation process

The Model Factory provides a digital assembly line for automating machine learning (ML) model creation and deployment

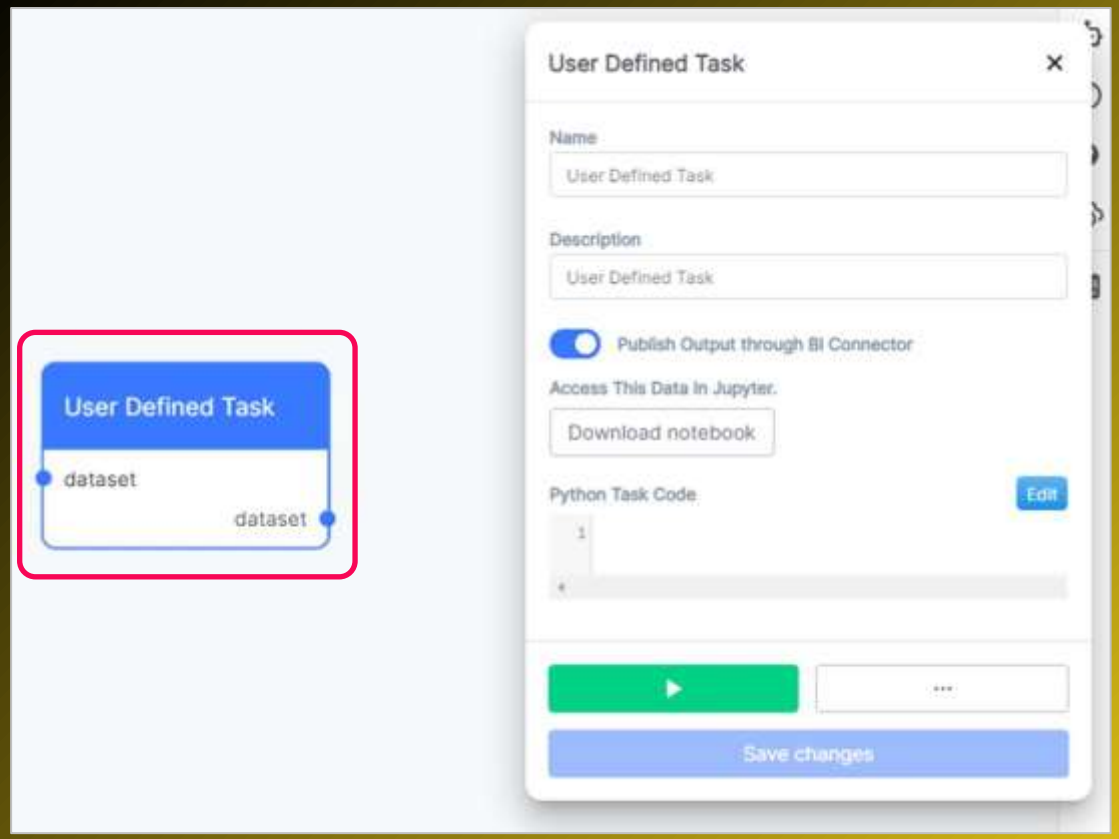
© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

Provided by Advanced Analytics

Model customization

Extend the built-in library of models

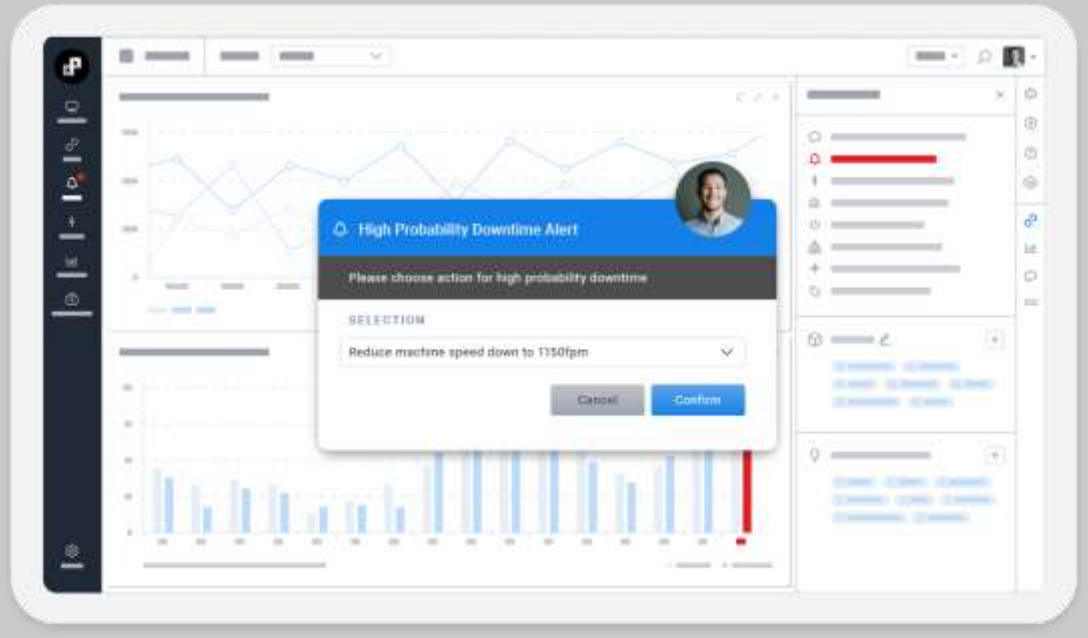
- Add user defined tasks to extend standard models
  - Verification of model task output
  - Custom visualizations, Python coding
- Add user defined training blocks:
  - Support applying custom algorithms to train data
  - Allow selecting specific columns to train
  - Create "derived" columns to the training input dataset



Flexibility configure your models with User Defined algorithms and transforms

© 2024 AVEVA Group Limited and its subsidiaries. All rights reserved.

Provided by Advanced Analytics



Intelligent alerts & actions

Notifications for abnormal conditions

- Deploying intelligent alerts
- Creating logical workflows
- Automating actions
- Delivering action awareness views

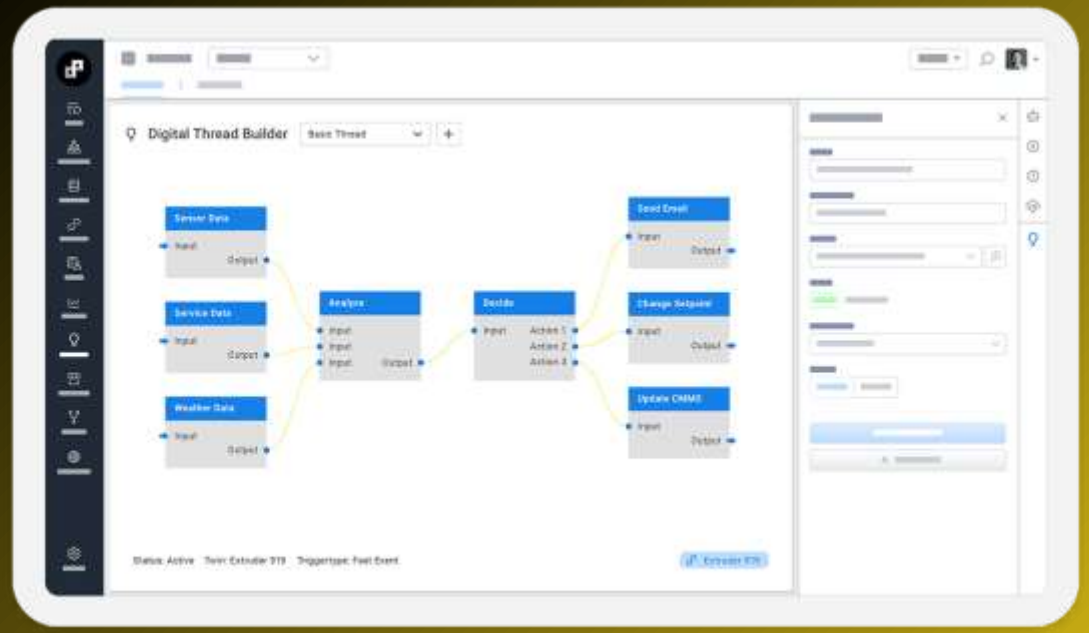
Intelligent alerts and automated actions can be delivered each time a process is operating outside of normal conditions.

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

Customizable digital threads

Logical workflows to support operations

- Streamlined, no-code logical workflows
- Automated calculations and expressions
- Triggers for specific actions or activities
- Notifications via email and SMS
- Automatic and continuous thread execution

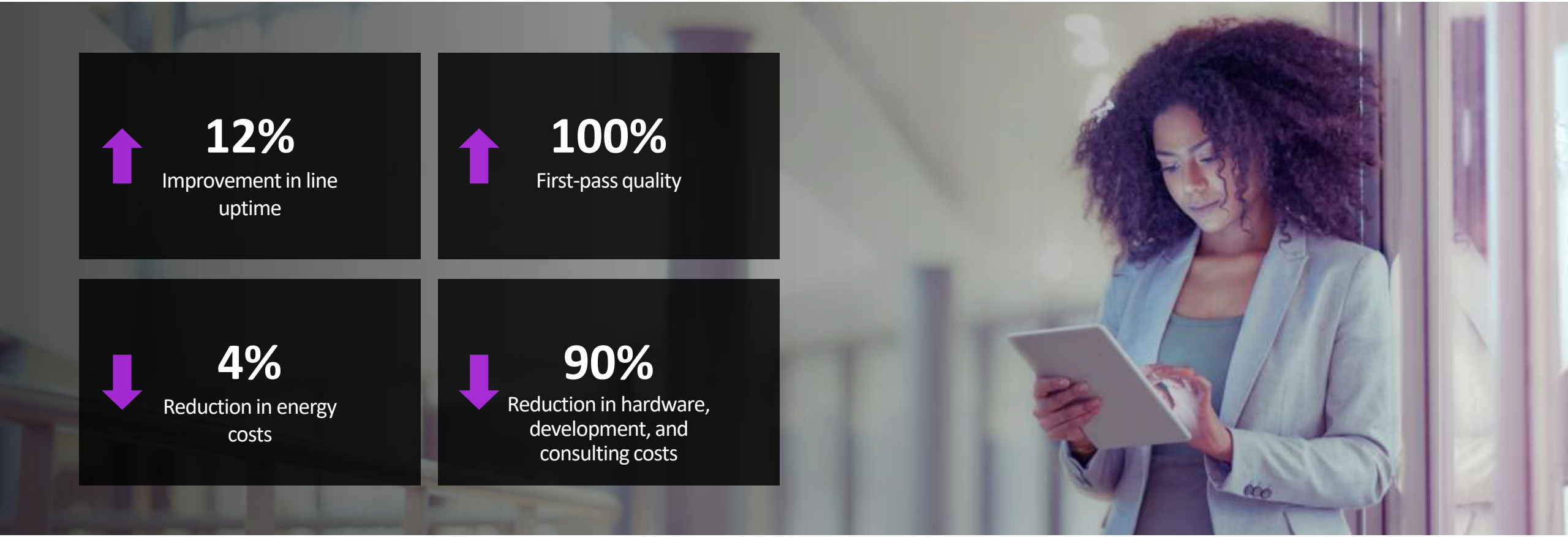


The actions represented by a digital thread calculation can trigger specific actions or activities

© 2024 AVEVA Group Limited and its subsidiaries. All rights reserved.

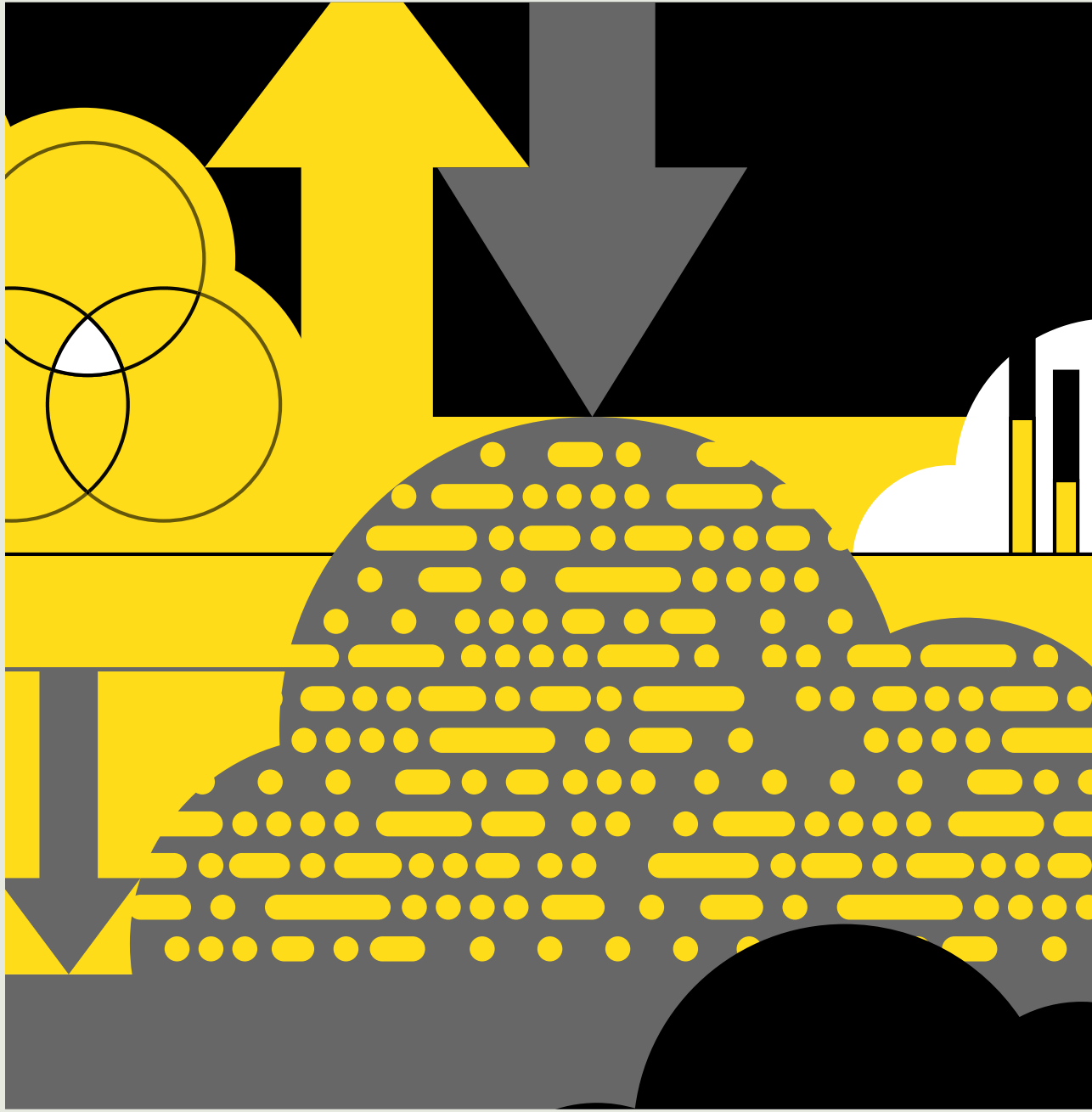
AVEVA Advanced Analytics has proven that it can deliver success

Typical deployments enjoy a 10x ROI on their subscription investment



© 2024 AVEVA Group Limited and its subsidiaries. All rights reserved.

How can you get started with CONNECT Data Services?



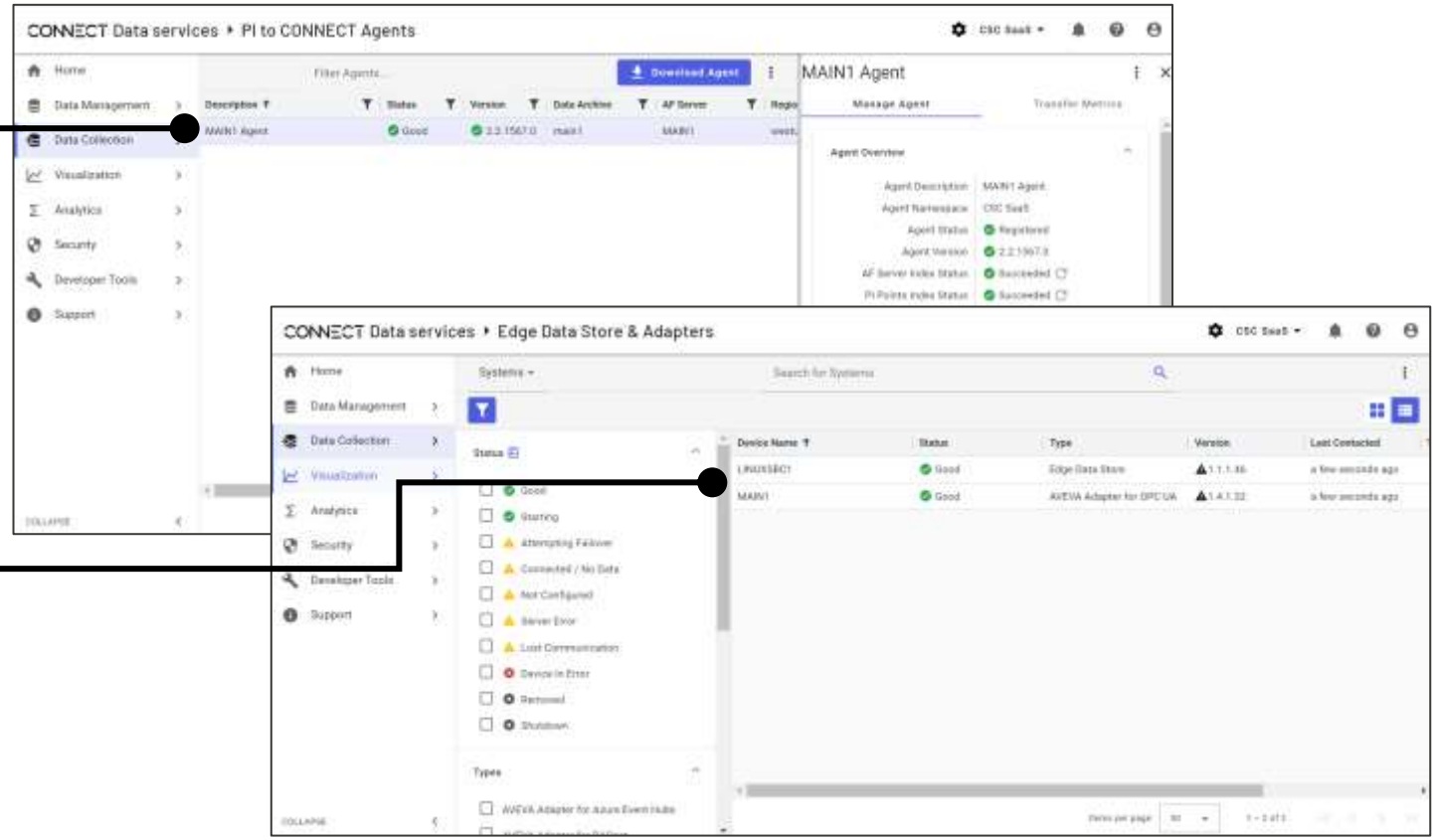
1: Securely stream on-premises data into your cloud tenant

Data Connectivity

1. Download and install the **Transfer Agent** to sync live data to the cloud from AVEVA **PI Servers**

2. Deploy AVEVA **Adapters** and **Edge Data Store** to collect data from devices **directly into the cloud**
   - With support for BACnet, DNP3, Modbus TCP, MQTT, OPC UA, RDBMS, structured event files, and Azure Event Hubs

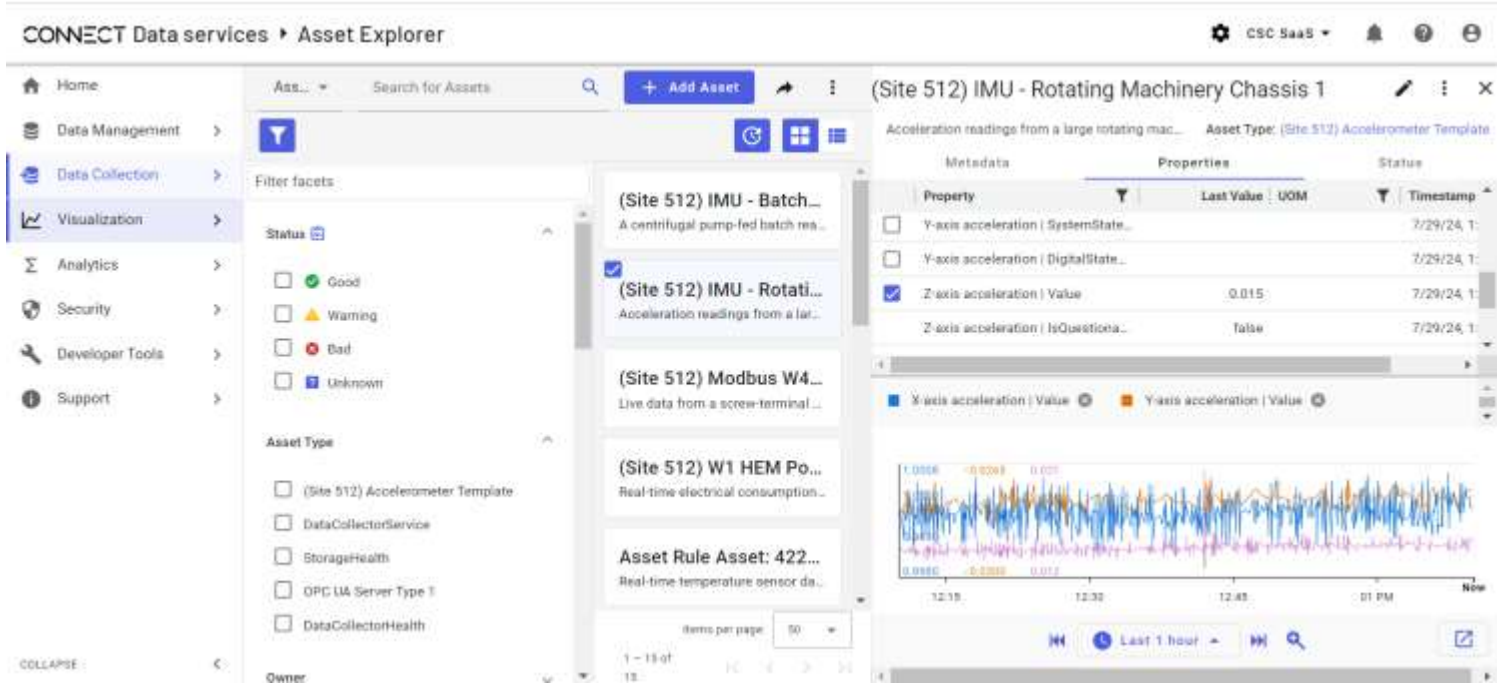
*Data can also be synced from AVEVA **Historian** + AVEVA **MES***



© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

2: Create or import asset and metadata contextualization

Assets



Organize and group your cloud data streams, and combine them with:

- **Static metadata** (Region: North America, Wind farm: Big Buffalo Wind Farm, Asset Type: Wind Turbine, Manufacturer: Truvale, Model: T65-2MW, …)
- **Stream reference properties** (Active power, expected power, operating state, etc.)
- **Asset statuses** (stream property values mapped to status: good, warning, bad)

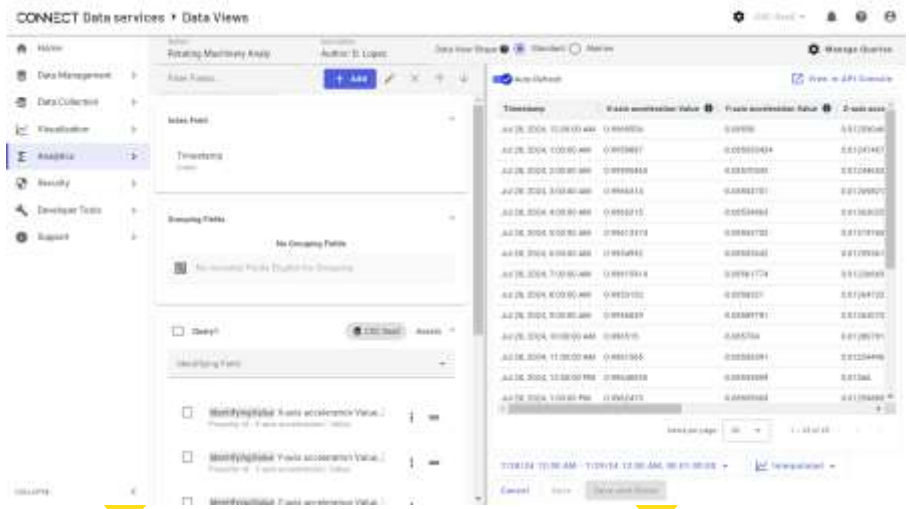
© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT

3: Group and shape data into user- and app-friendly Data Views

Data Views

DATA VIEW



Create analysis-ready data sets in the cloud with our point-and-click, no-code Data View builder.

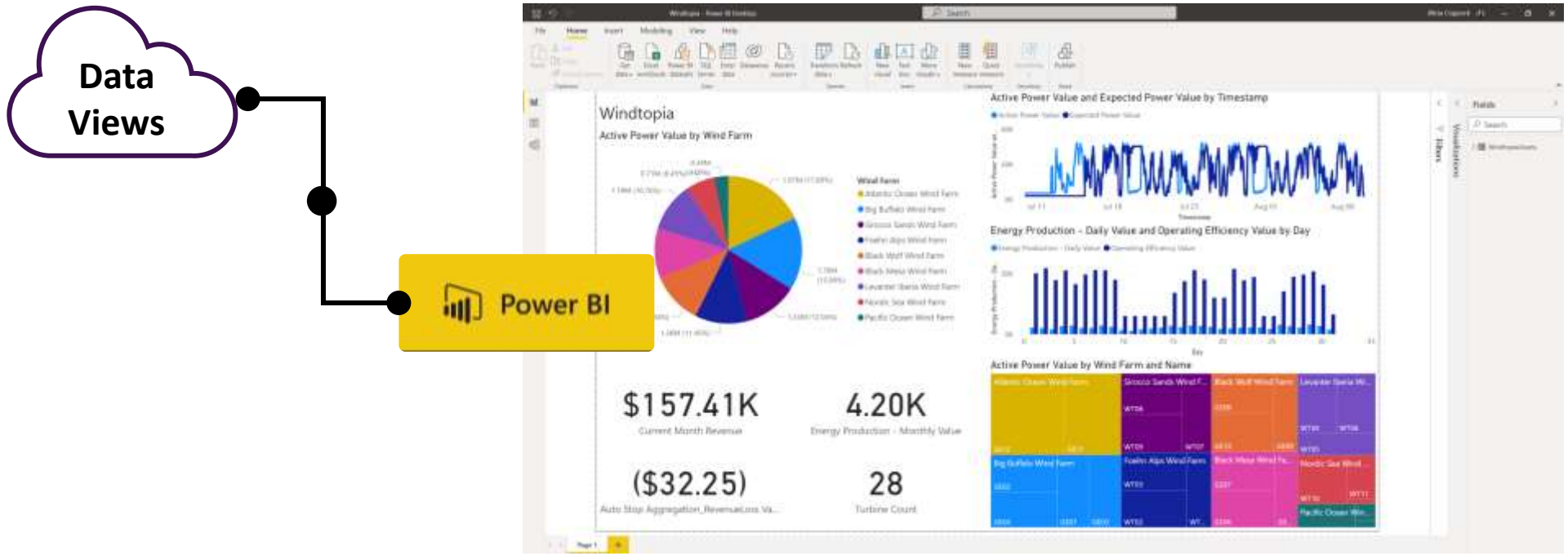
- Data Science Tools & Data Exploration
- Data Science via Code
- Partners & Apps
- Cloud Platforms

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT

4: Import data into Power BI using the native Power BI connector

Power BI Connector

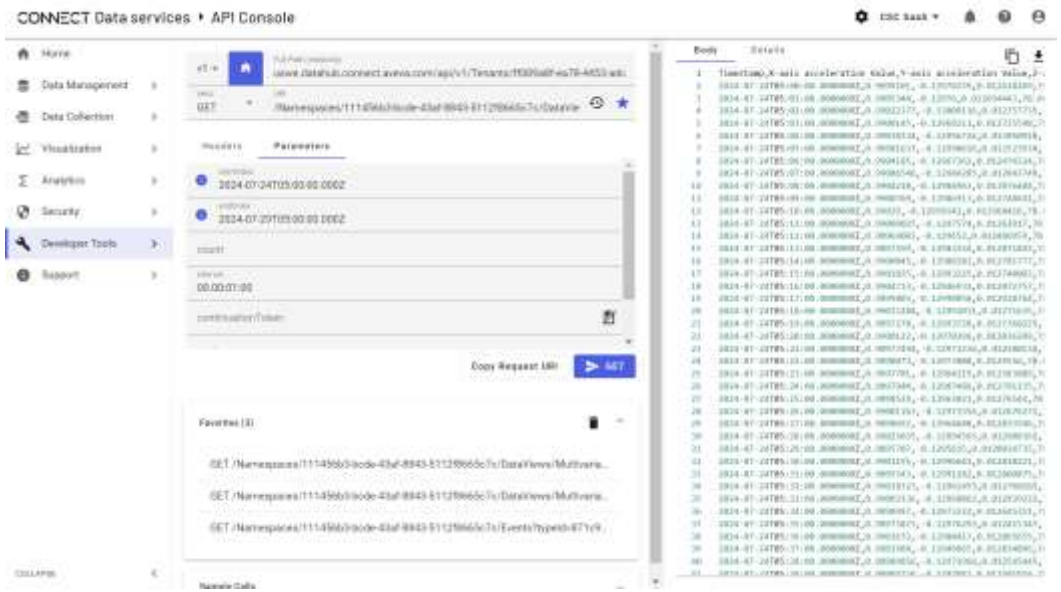


- ✓ Import cloud Data Views into Power BI
- ✓ Retrieve both stored & interpolated data
- ✓ Get started in minutes, with zero code required
- ✓ Connect Power BI Desktop *and* Power BI Service
  (through On-Premises Data Gateway)

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

5: Use the cloud REST API to connect additional apps and tools

REST API



C#

Python

Java

NodeJS

Angular

Grafana

https://github.com/AVEVA

Enabling Custom Apps

- Custom Development
- Partner Applications
- Data Pipelines & Workflows
- Machine Learning
- Collaboration Tools
- Business Intelligence

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

6: Grant users access to quick trending in the cloud

Trending

Deliver enterprise-class browser-based trending to your users:

- ✓ Intuitive trend interactions
- ✓ Stream & asset searches
- ✓ Stacked and single trending
- ✓ Trend summary calculations
- ✓ Min/max easy cursors
- ✓ Multi-cursor delta summaries
- ✓ Trend sharing
- ✓ Configuration via URL parameters
- ✓ String & enum trending
- ✓ Seamless contextual navigation from Asset Explorer
- ✓ Asset property trending & asset swapping

Share trend workspaces via single-click URL generation

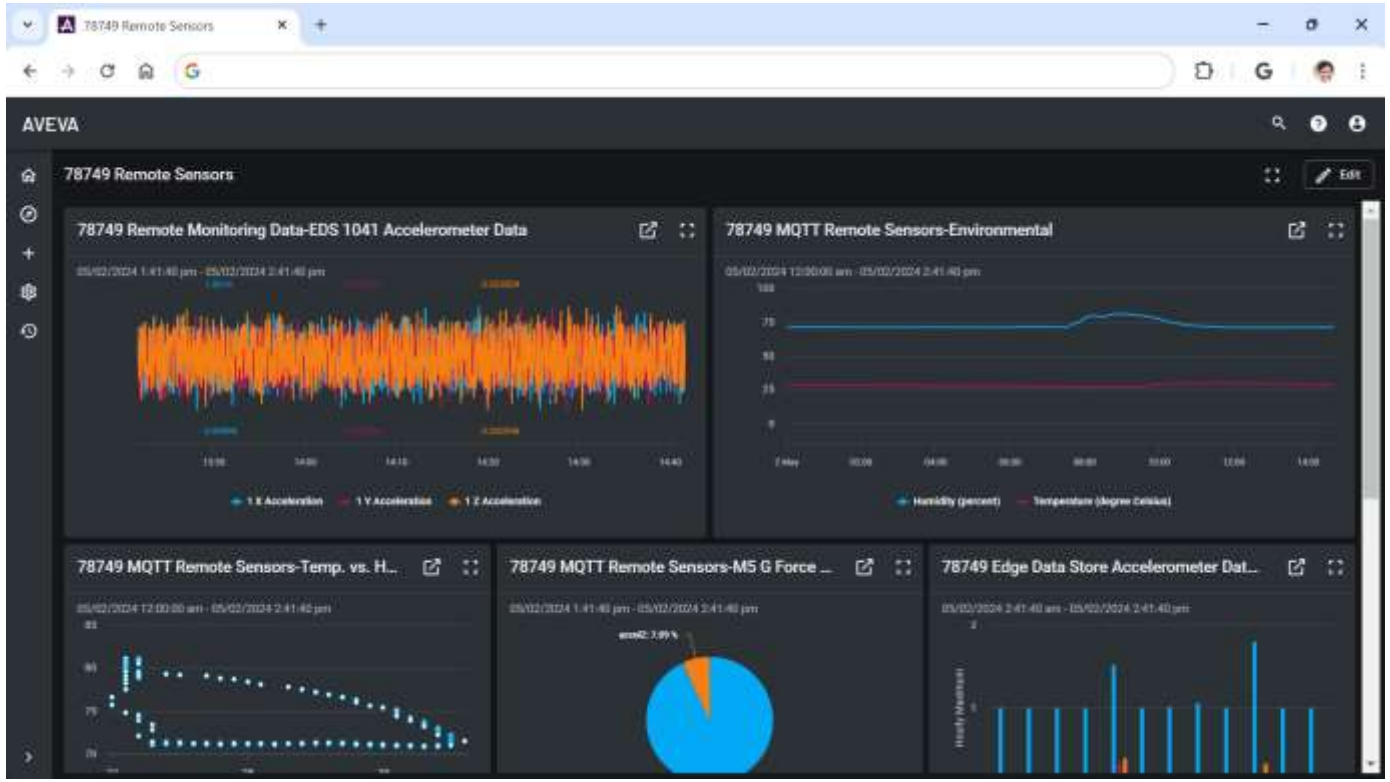
https://datahub.connect.aveva.com/tenant/b5b83eaa-a674-4a0b-9acd-e343dbb1b6d8/trend?origin=1;b5b83eaa-a674-4a0b-9acd-e343dbb1b6d8;euno.datahub.connect.aveva.com;63a7020f-e047-4279-8dea-c71d36df747d&**trace**=a;1;a083e9bb-47a9-47bf-a5eb-c7b4ea8cef28;Active%2520Power;Value;%25231A76D9&**trace**=a;1;a083e9bb-47a9-47bf-a5eb-c7b4ea8cef28;Active%2520Power%257CPredicted;Value;%2523DC7300&**trace**=a;1;a083e9bb-47a9-47bf-a5eb-c7b4ea8cef28;Wind%2520Speed;Value;%2523D28CD2&mode=**multiple**&selectedOrigin=1&selectedTrace=null;&**timeRange**=last2Days

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT

7: Create rich data dashboards in CONNECT Visualization services

Visualization



Add CONNECT Visualization services to allow creating real-time, cross-platform dashboards

- Easily manage your operations and assets from anywhere, at any time.
- Improve asset reliability and operational performance by receiving key data within the context of your business

Unlock critical data: Access contextualized data in a single cloud environment to gain operational insights.

Increase collaboration: Provide workers with a single source of truth for better, faster decisions.

Improve asset reliability: Gain asset performance insights and respond to anomalies earlier.

Drive operational performance: Fully understand your operations with a digital twin.

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT

8: Set up streaming cloud-based calculations and ML modeling

CONNECT modeling & analytics

Run equations, KPI calculations, limit tests, and custom expressions in the cloud calculation engine

- ✓ Operate on data from multiple on-premises data sources at once
- ✓ Drive real-time cloud-based **notifications**
- ✓ Save calculated values back into the cloud data store

Next, use our library of AI and ML model templates to perform true predictive and prescriptive analysis

- ✓ Analyze multiple input variables in order to optimize energy usage
- ✓ Proactively detect **anomalies** in multiple sets of data streams
- ✓ Predict product **quality** and process **throughput** in real-time

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT

And even set up controlled data sharing with other organizations

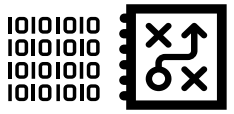
Communities

Via Data Services Communities: a more secure way to share operational data

Achieve a more secure way of sharing your data

Securely manage users in your AVEVA CONNECT account

Easily connect to your trusted business partners in an CONNECT Data services community



Gain control and transparency over your shared data

Natively integrate with AVEVA PI Server & AVEVA Historian & AVEVA MES

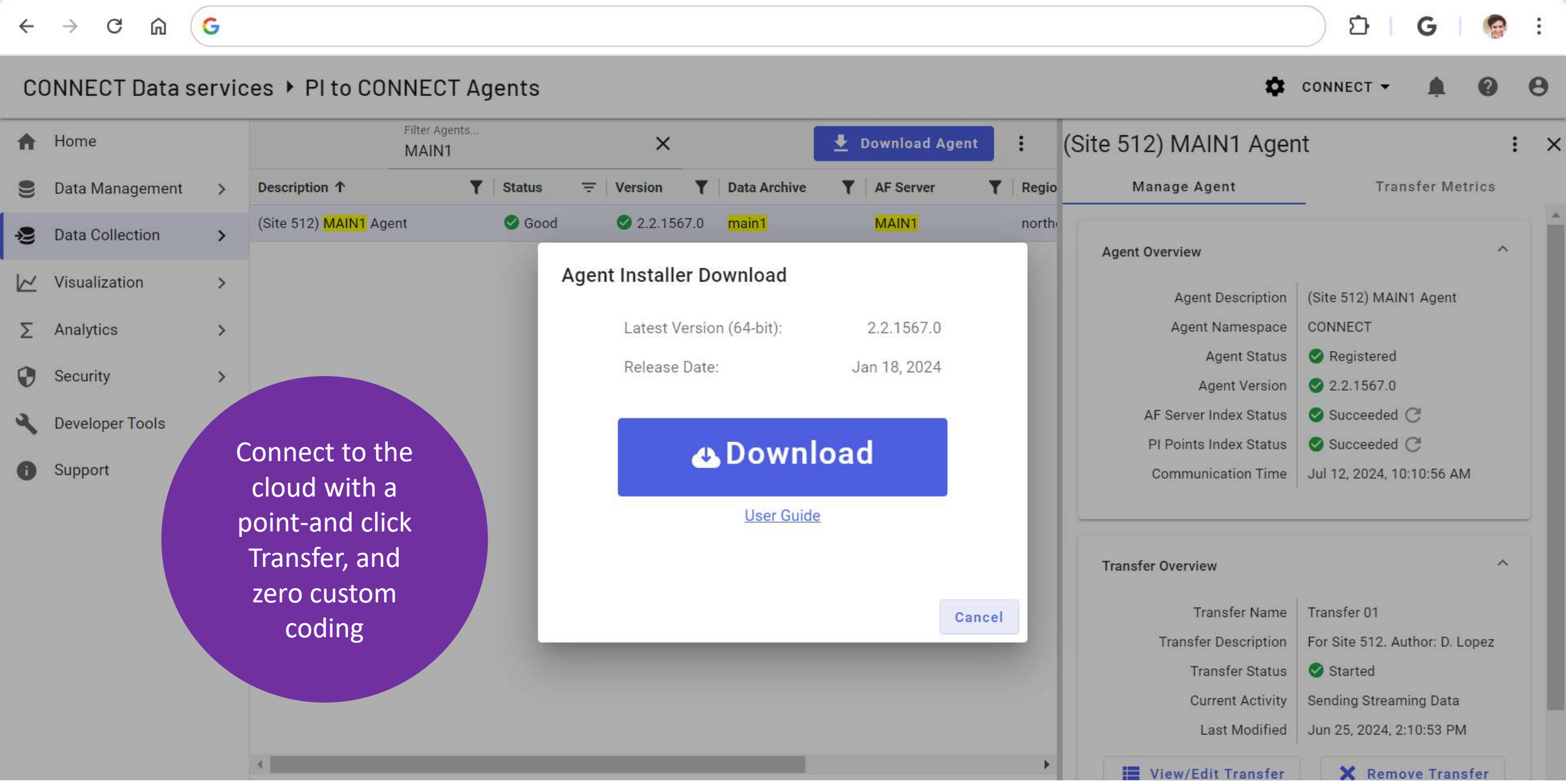
Scale your sharing to many business partners

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

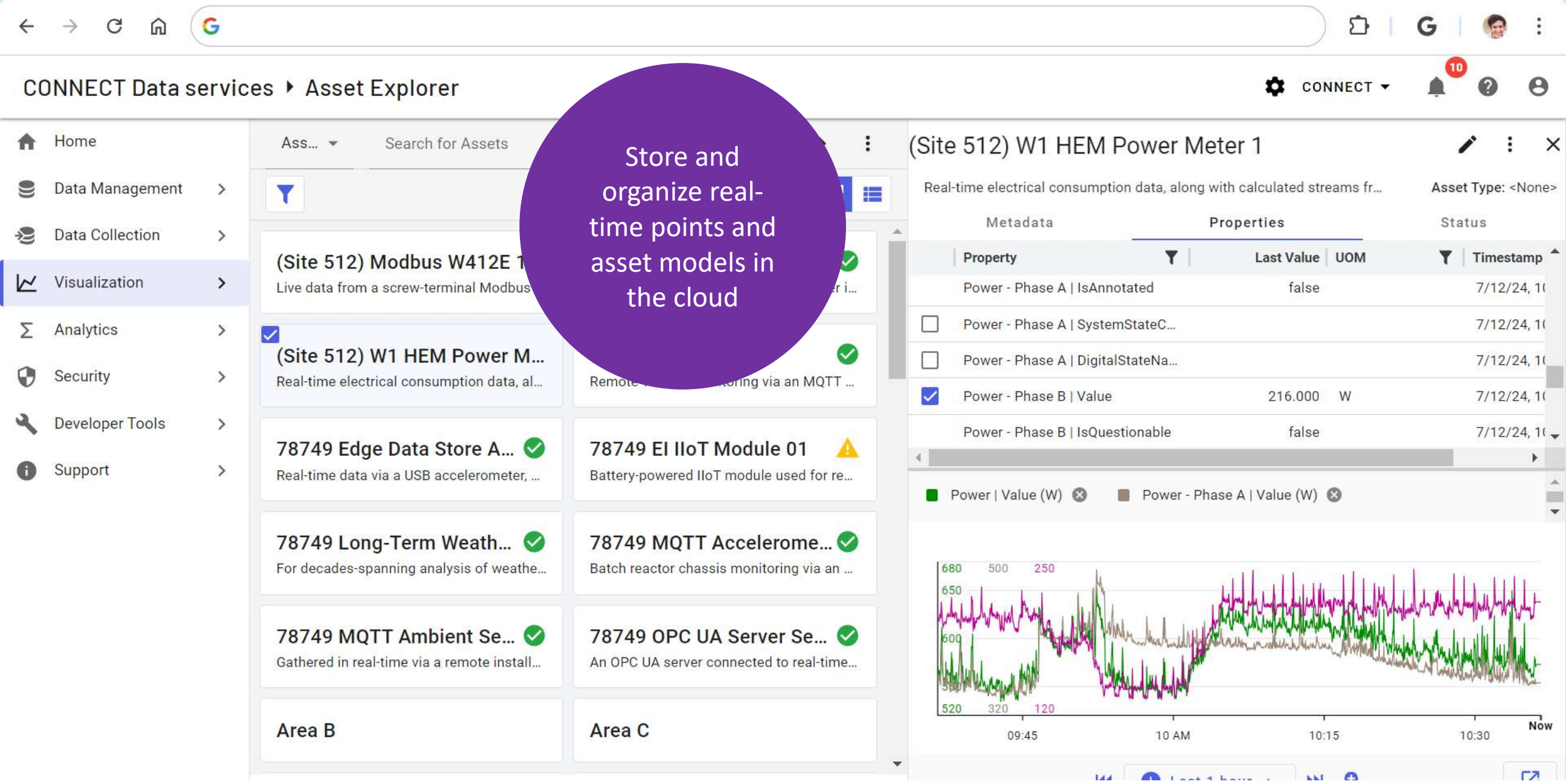
What can this look like?

When applied to real industrial data

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

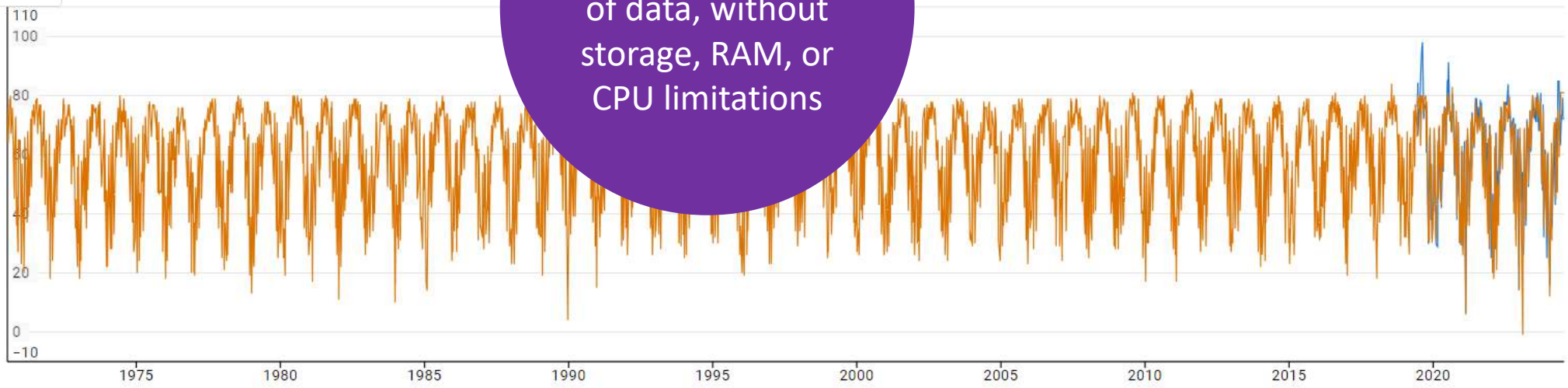
CONNECT Data services ▸ Trend

CONNECT

Trend and analyze decades of data, without storage, RAM, or CPU limitations

- Home
- Data Management
- Data Collection
- Visualization
- Analytics
- Security
- Developer Tools
- Support

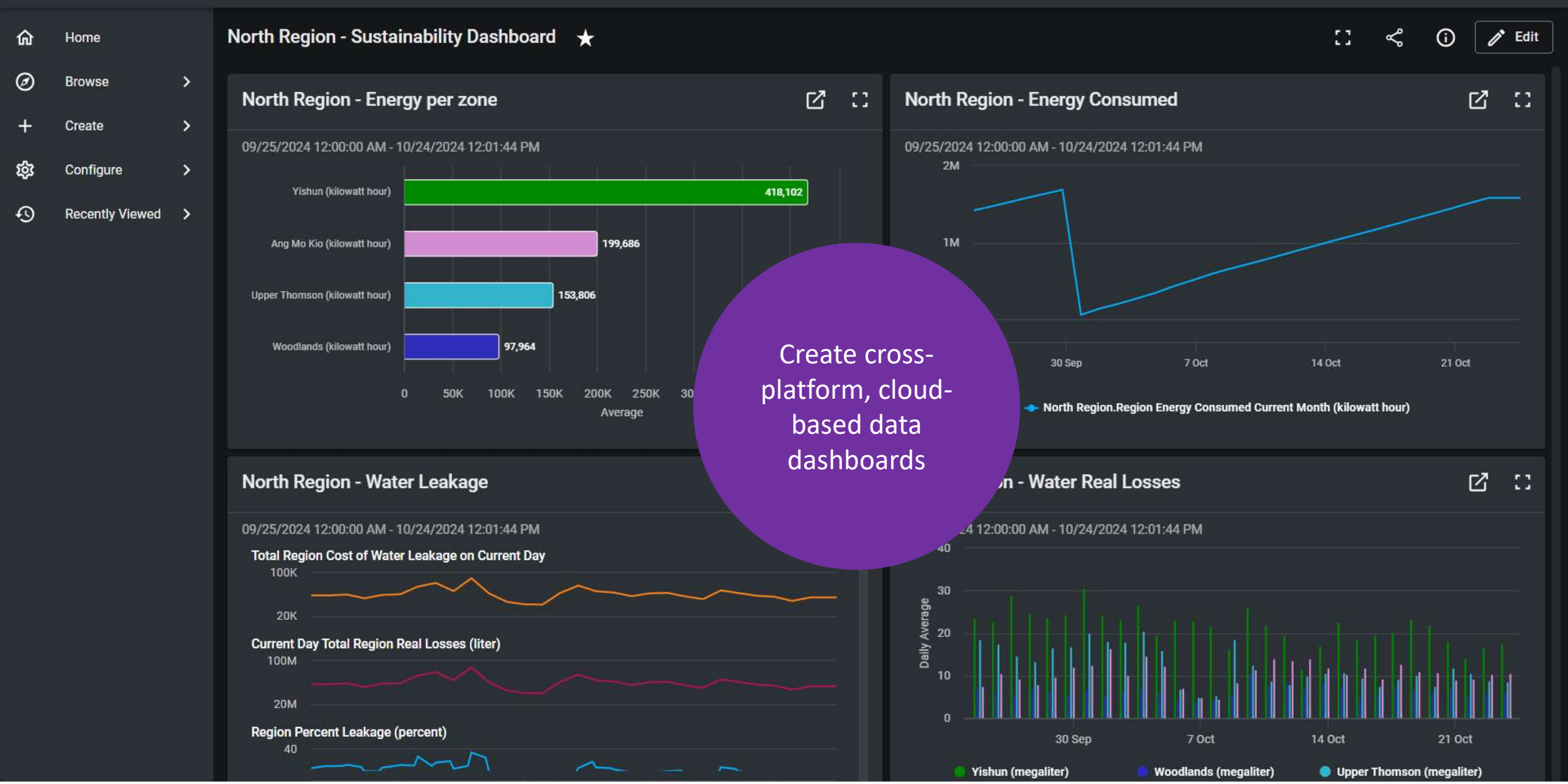
Download CSV RESET



Jul 12, 1970, 12:00:00 PM to Jul 12, 2024, 12:17:56 PM

Name	Timestamp	Value	UOM	Min	Max	Avg	Total
DL WS 1550 Daily Minimum Temperature CONNECT							
Value	Jul 11, 2024, 12:00:00 AM	72.1	°F	6.3	98.036	60.278	111,494.731
Austin TX Daily Minimum Temperature CONNECT							
Value	Jul 11, 2024, 12:00:00 AM	81	°F	-1	84	58.908	1,161,613....

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

AVEVA

(Site 512) Remote Sensors Dashboard

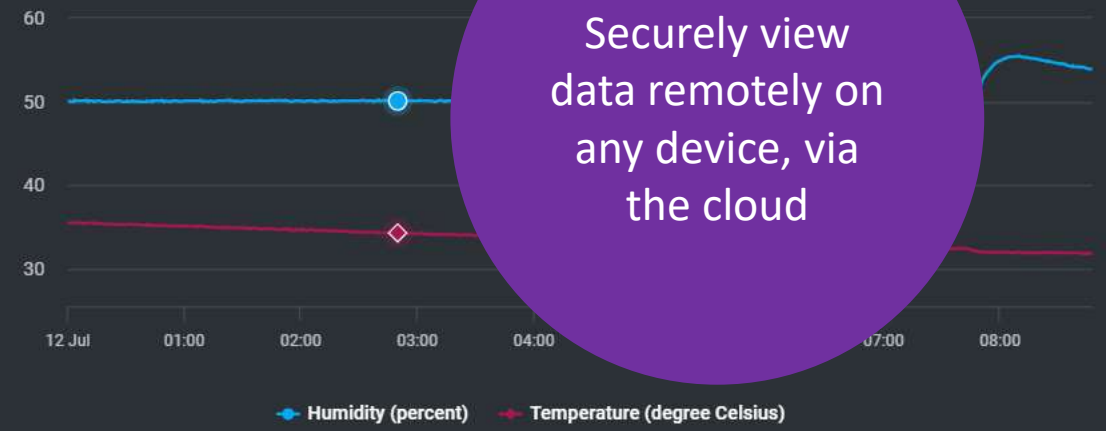
Edit

Rotating Machinery Accelerometer Trend

07/12/2024 12:00:00 am - 07/12/2024 8:47:39 am

MQTT Environmental Sensors Trend

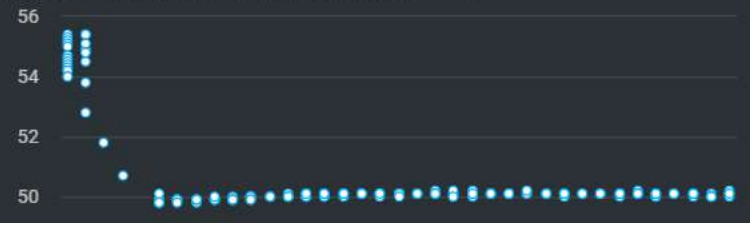
07/12/2024 12:00:00 am - 07/12/2024 8:47:39 am



Securely view data remotely on any device, via the cloud

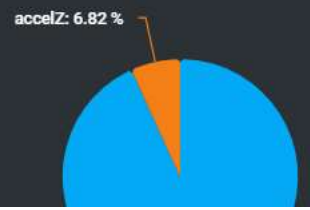
MQTT Environmental Sensors XY Plot

07/12/2024 12:00:00 am - 07/12/2024 8:47:39 am



Reactor Acceleration Statistics

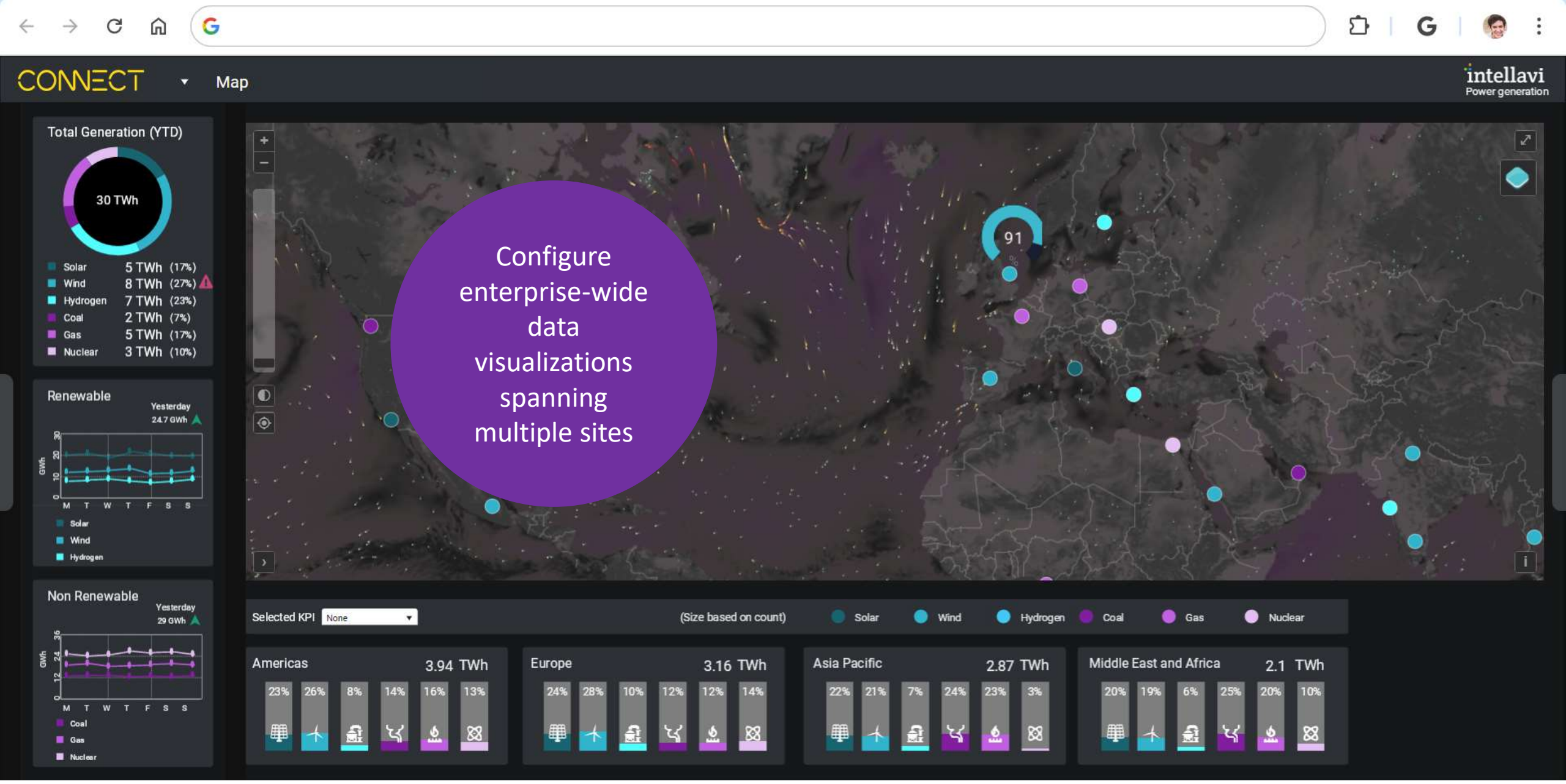
07/12/2024 12:00:00 am - 07/12/2024 8:47:39 am



Accelerometer Peak Amplitudes

07/12/2024 12:00:00 am - 07/12/2024 8:47:39 am

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.
CONNECT



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Train cloud-based AI models within mere minutes

Model Factory / Asset Anomaly Detection 1 | Viewing: Quick Start | Configure Model

Overview

Name: Asset Anomaly Detection 1

Description: None

Problem To Solve: Detect Anomaly - Asset

Twin

What data doe… | 6 TOPICS

1041 Accelerometer… Property Input Active

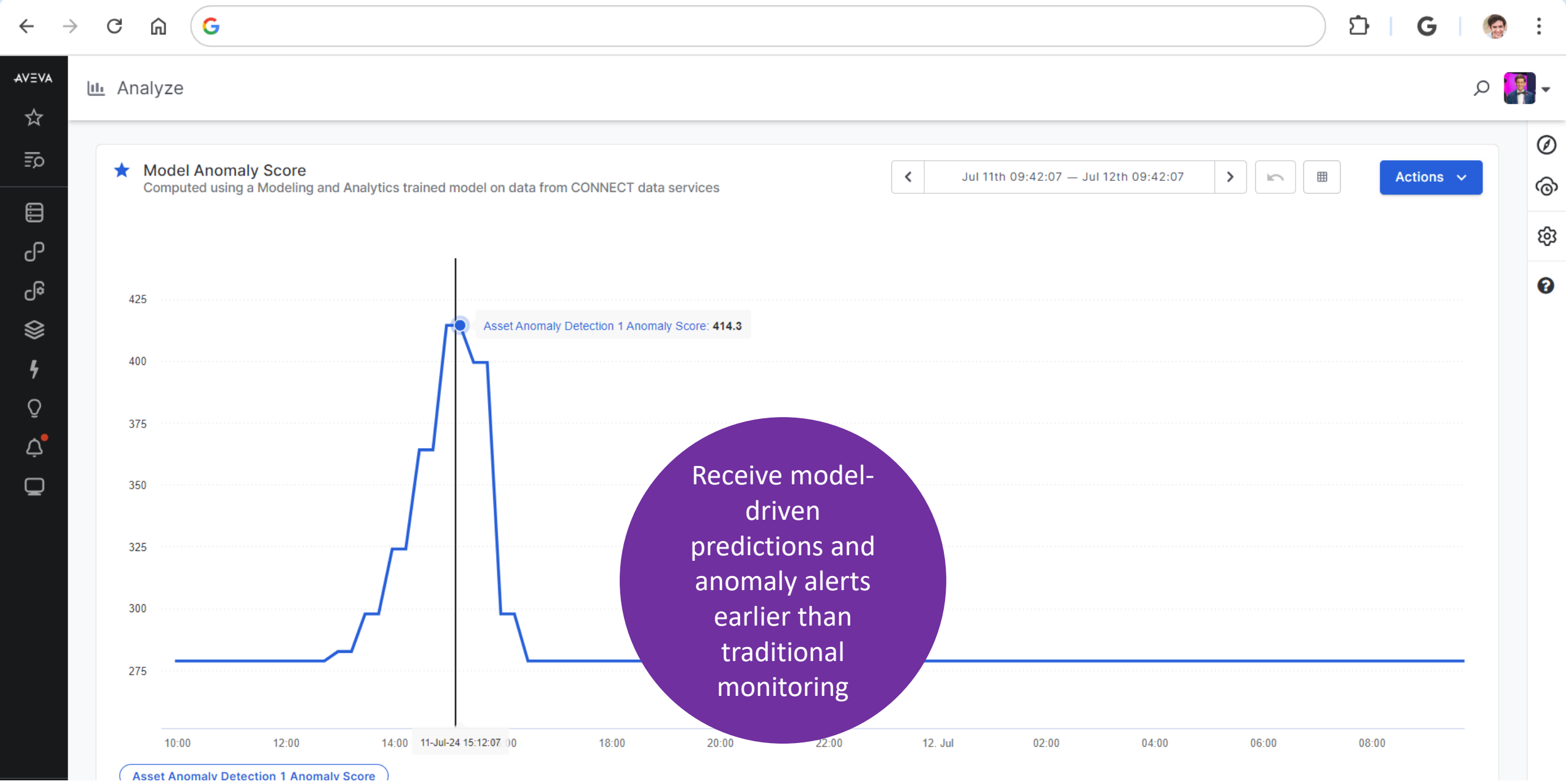
1041 Accelerometer - … Property Input Active

1041 Accelerometer - Z Gs.Value Property Input Active

Active?: Last Training: **Jun 10th, 2024 at 17:15** Data collected every: **0:30** Executes every: **0:30** Retraining every: **N/A** **Model is executing**

What data should the Model consider?	When should data be collected?	Validate the Model's configuration.	Start training a Model with your Twin's data.	See what your Model found in your data.	When should the trained Model run?
Add Data	Set Timing	Evaluate Model	Start Training	Review Results	Operationalize Model

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

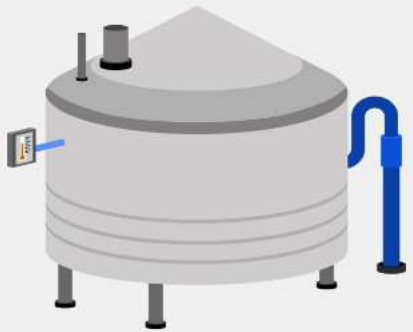


© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Normal Viewing: Operator View

Operator View

Status Page Dedicated to Control Performance Monitoring



Melter

Start up Conditions

Current Operating Scenario

Current Product: Regular

Current Equipment State

Status: Down

Temperature Setpoint: 23.3 C

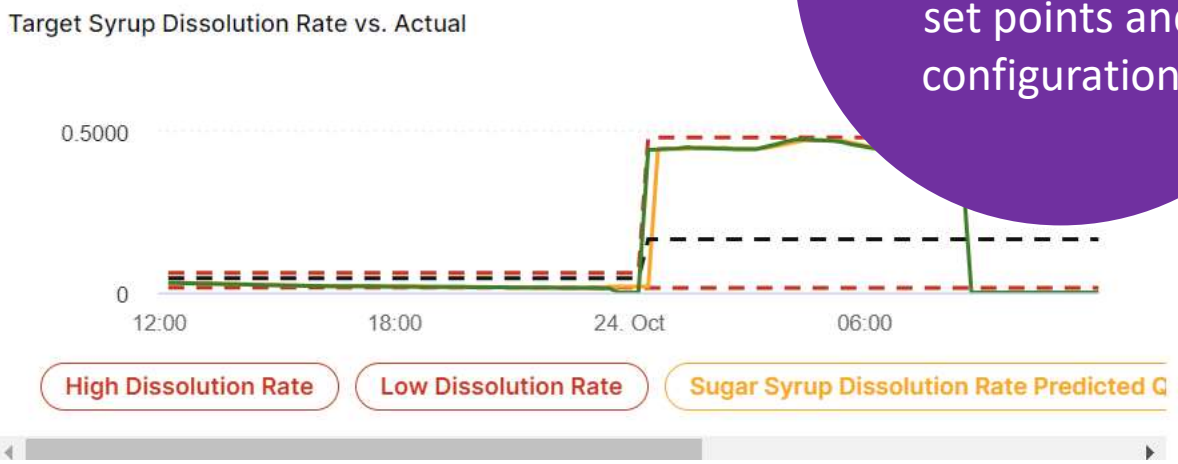
Agitator Setpoint: 0.0 rpm

Syrup Dissolution Rate

Actual vs. Target Deviation: 16.50 %

Recommended Operating Setpoints

MixerTemperaturePV Normal	123.9 C 110.8 C	110.8
AgitatorSpeed Unprecedented Low	57.3 rpm 0.0 rpm	0.0



Receive predictions of recommended set points and configurations

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Why do industrial users choose CONNECT?

Comprehensive, secure, user-friendly data management layer

It's easier to aggregate, store, enrich, access, analyze, and securely share real-time data to improve efficiency, sustainability and drive digital transformation

Unique Strengths					
Ready to use SaaS, **requires no development** or integration and can **start delivering value in hours**, not months	The **easiest path to get industrial operations data to the cloud** and optimized for OT data, at scale	Compatible with **any kind of sequential** data, with data stream **contextualization** to support users from any functional area	**Protection for control networks** with a separate data layer and one-way communication	A more **secure, multi-tenant way of sharing data** with granular control over what data is shared to which partners	A SaaS available via CONNECT and fully **managed by AVEVA**; nothing for you to manage or maintain

It is purpose-built for OT, from the leader in industrial software solutions, ready for the enterprise

It natively integrates with AVEVA PI System, AVEVA Historian, Edge Data Store, other data sources

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Committed to earning and maintaining your digital trust

- Learn more about our cybersecurity at our Trust Center: trust.aveva.com

Cloud System Status

- Verify services availability and performance

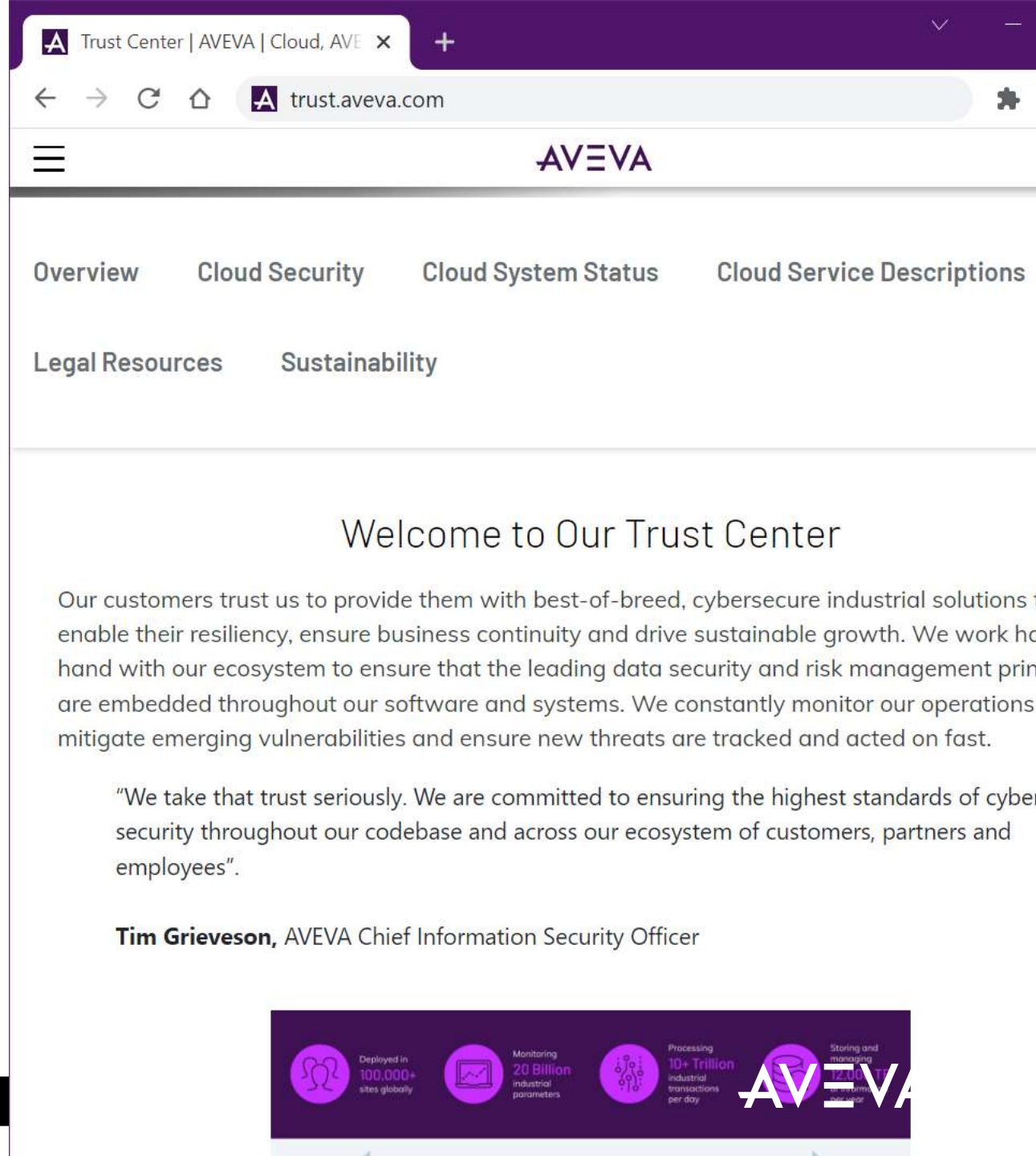
Cloud Security

- Data is always safe and secure. Learn what steps we take to ensure that: Cloud CAIQ review

Legal Resources

- Review our services level agreement and other legal policies

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.



We are safeguarding your data in the CONNECT cloud

- As a fully managed cloud-native SaaS, CONNECT Data services is ready to use from day one.
- Back-end cloud software upgrades are handled for you, by AVEVA.
- With CONNECT Data services, **you're always running the latest, most secure software.**

24 / 7 / 365

Currently, CONNECT Data services runs in three Azure regions: West US, West Europe, and Australia

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

CONNECT is designed specifically with cybersecurity in mind

Security is “baked in” by AVEVA from the beginning

Extensive Certification

ISASecure

Continuous Monitoring

Proactive monitoring and security policies to identify abnormal behaviour.

Encryption Everywhere

All data in motion and at rest encrypted using Advanced Encryption Standards (AES) 256 bit.

Best in class, certified datacentres

Hosted on Azure and AWS datacentres globally. Compliance with numerous security standards.

Enterprise Authentication & Authorization

SSO & federated identity access. Fine grained access control to data.

© 2024 AVEVA Group plc and its subsidiaries. All rights reserved.

ZGlobal, along with its partner SVCE, uses CONNECT to simplify real-time data sharing in power operations

Simplified real-time data sharing between multiple organizations

Improved security, transparency, and trust.

Analysis of data aggregated by CONNECT has saved thousands of dollars on power purchases.

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Centrifuge manufacturer worked collaboratively with monitoring service partner to share real-time performance data securely, enabling proactive maintenance and reducing downtime. Made possible with CONNECT.

- Established secure, bi-directional data highway between partners
- Service provider easily able to access real-time and historical data for analysis, decreasing diagnostic time and improving accuracy
- Supports shift to predictive maintenance, estimated to deliver a reduction in downtime by up to 90%

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

TENDEKA

Tendeka helps oil and gas producers continuously monitor subsurface conditions—to increase safety and optimize production.

"We now have data we can analyze and compare. We can offer our clients insights, perhaps detect the potential for early failure, or see events happening deep underground they otherwise can't see.."

Andy Nelson
Senior Software Engineer, Tendeka

AVEVA

Hill’s Pet Products

Historically, each change over required lab tests to confirm that the recipes specifications were being met.

Implement real-time predictive quality measures

Improved quality and significant improvement in yield

CpK improved by almost 30%

Increased production output and reduced waste

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Toray Plastics

Line instability causes off-quality product and leads to costly downtime

Combine subject matter experts with AVEVA Advanced Analytics' digital twin enabled industrial operations platform

A substantial reduction in downtime:

+90% uptime

$500,000 savings annually

Monitoring 400+ line stability measures

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

ERM

Previous technology platform required a number of different data collection, analysis and reporting approaches

Unify disparate data into one operating platform and implement real-time predictive operations center measures and processes

A greener planet, a proactive operations center and millions in annual economic benefit

30% reduction in time reporting

Significantly reduced asset and system downtime

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Resideo

Predicting home utility failures before they happen

Resideo's solution included sensors and gateways that collect data directly off of in-home appliances and uses TwinThread to develop predictive models of that data

From concept to commercially available service in six months

60% reduction in repair cycles

50% improvement in service technician utilization

50% improvement in customer retention

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

CONNECT

Unifying the industrial ecosystem with data,
AI and deep domain expertise for greater sustainability and efficiency

TRUSTED INTELLIGENCE

Single source of truth for proven applications

ACTIONABLE INSIGHT

Closing the loop for real-world impact

UNIFIED EXPERIENCE

Hundreds of perspectives. One shared reality

EMPOWERED ECOSYSTEM

Accelerating the network effect across the value chain

Thank you

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

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.

© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

linkedin.com/company/aveva

@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

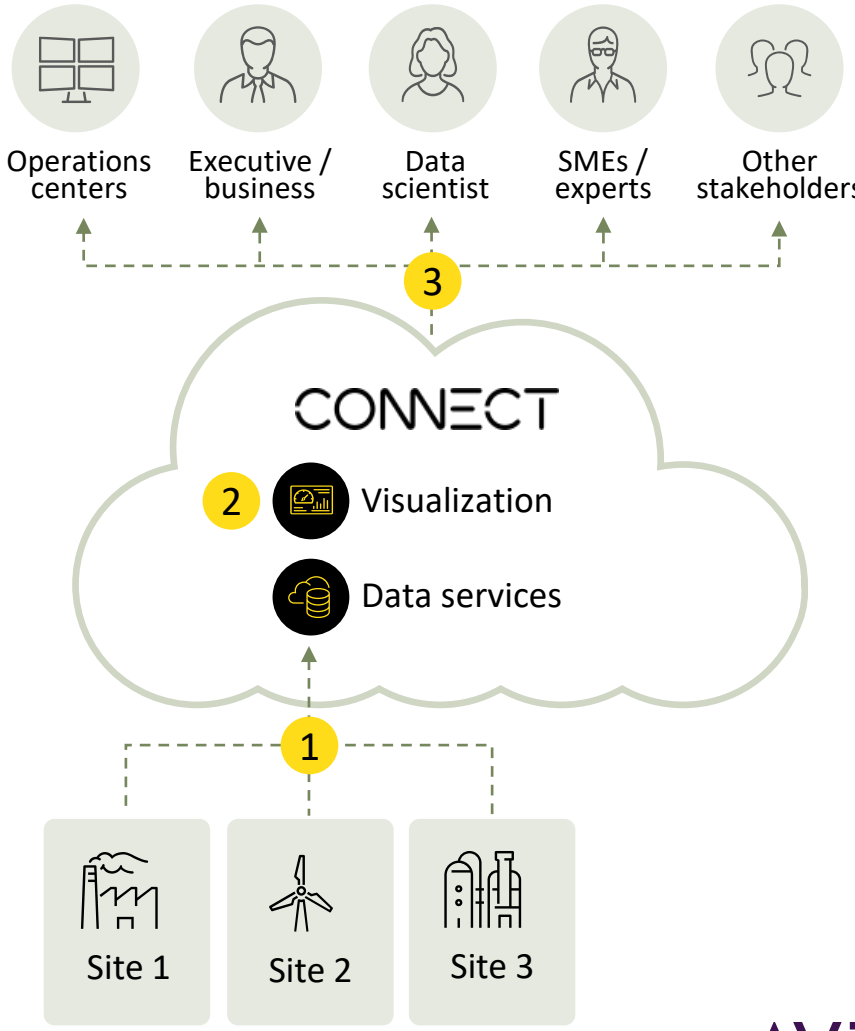
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Aggregated data monitoring & reporting

1. Aggregate on-premises/process data into CONNECT data services
2. Leverage data and content for numerous dashboards and visual displays in the cloud. Or, share data with 3rd party tools like Microsoft Power BI or Tableau.
3. Access reporting across geographies and functions and customize dashboards based on business needs

Results:

- Data sets and industrial context for tackling performance, operations reporting and other actionable requirements
- View equipment performance over a period of time, downtimes, utilization, OEE, and incidents, including potential alarms
- Drill down into specific events and detailed trends to understand total uptime and utilization impacts



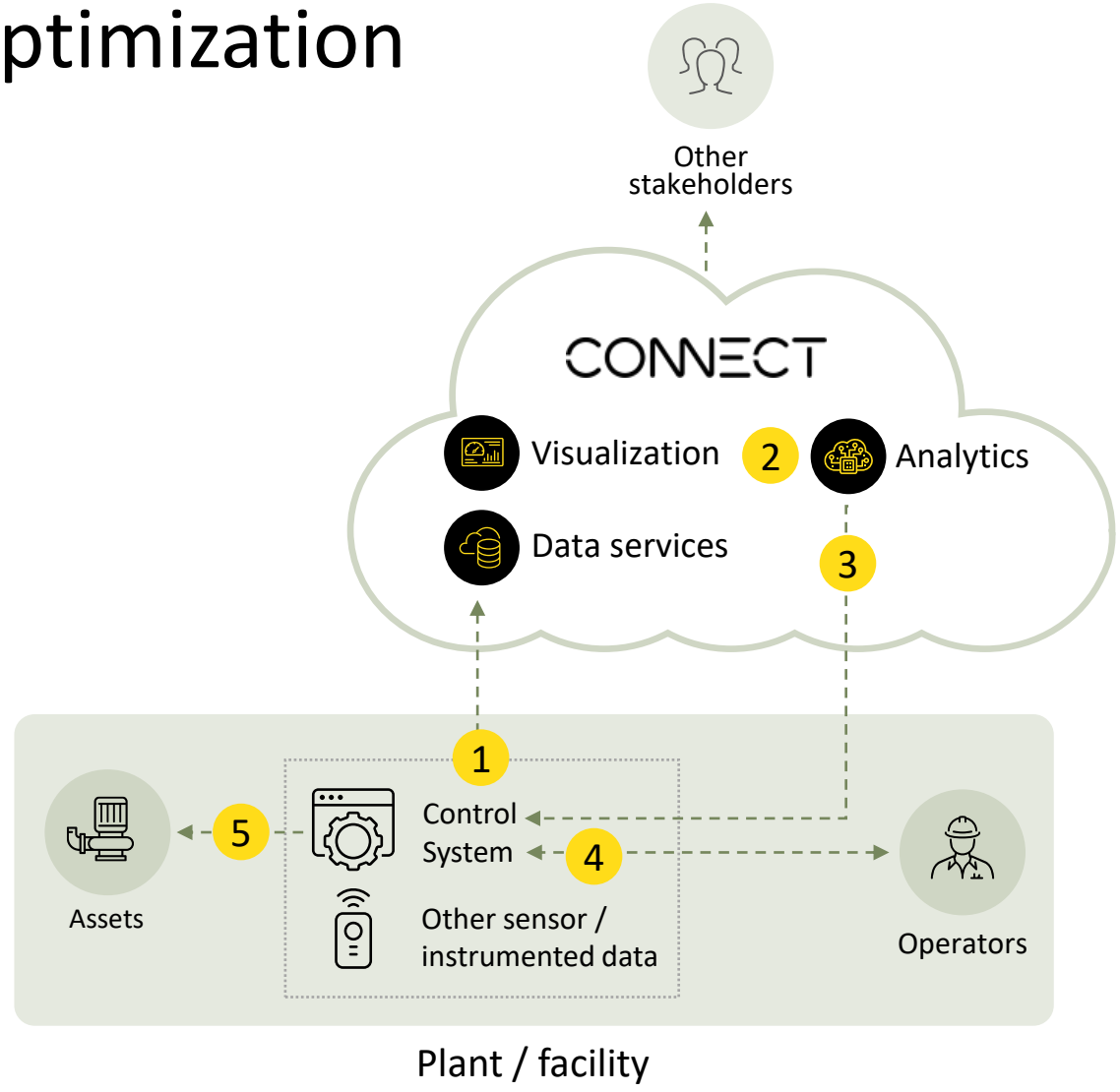
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Prescriptive setpoint optimization

1. Aggregate control system and other instrumented data into CONNECT data services
2. Predict operations performance and propose set point adjustments using AI/ML models to achieve desired performance targets
3. Suggested set point adjustments provided to the control environment
4. Accept set point guidance or make your own adjustment
5. Adjust assets at preferred cadence to maintain performance balance

Results:

- Proactively manage energy use, performance parameters, product quality and other metrics through analytical guidance to operations
- Monitor and view data, trends and performance outcomes through CONNECT visualization or 3rd party tools



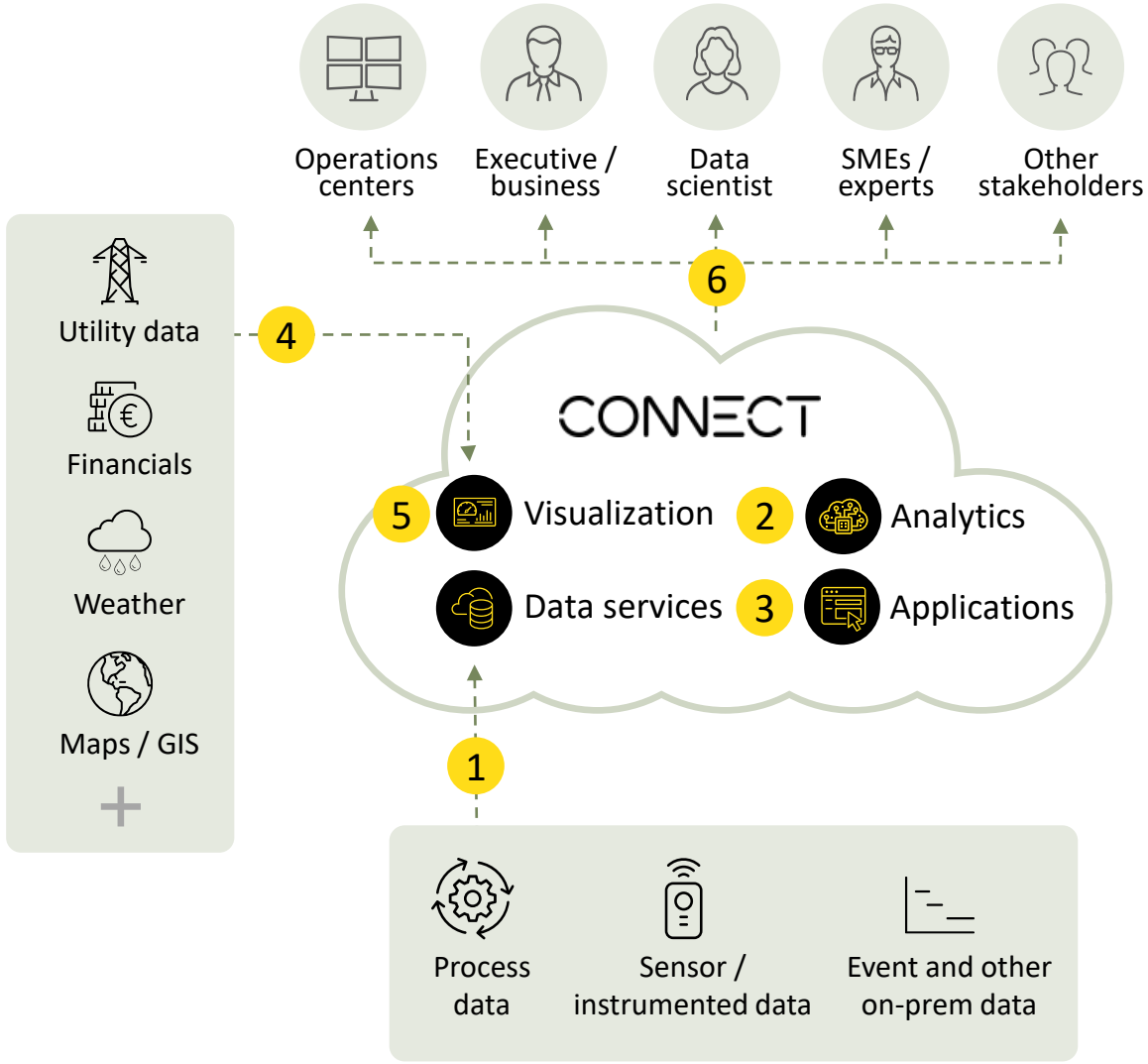
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Enterprise visualization

1. Aggregate on-premises/process data into CONNECT data services
2. Apply AI/ML to enrich aggregated data
3. Provide 1D, 2D, 3D, specialized content and other relevant industrial information through native CONNECT apps
4. Integrate 3rd-party data and content for enhanced insight
5. Leverage data, content and generative analytics across dashboards and visuals for a complete view of your industrial environments
6. Access reporting across geographies and functions and customize dashboards based on business needs

Results:

- Comprehensive view of data sets and industrial context through a “single pane of glass”
- Addresses enterprise-level analytical, performance, reporting and other actionable requirements



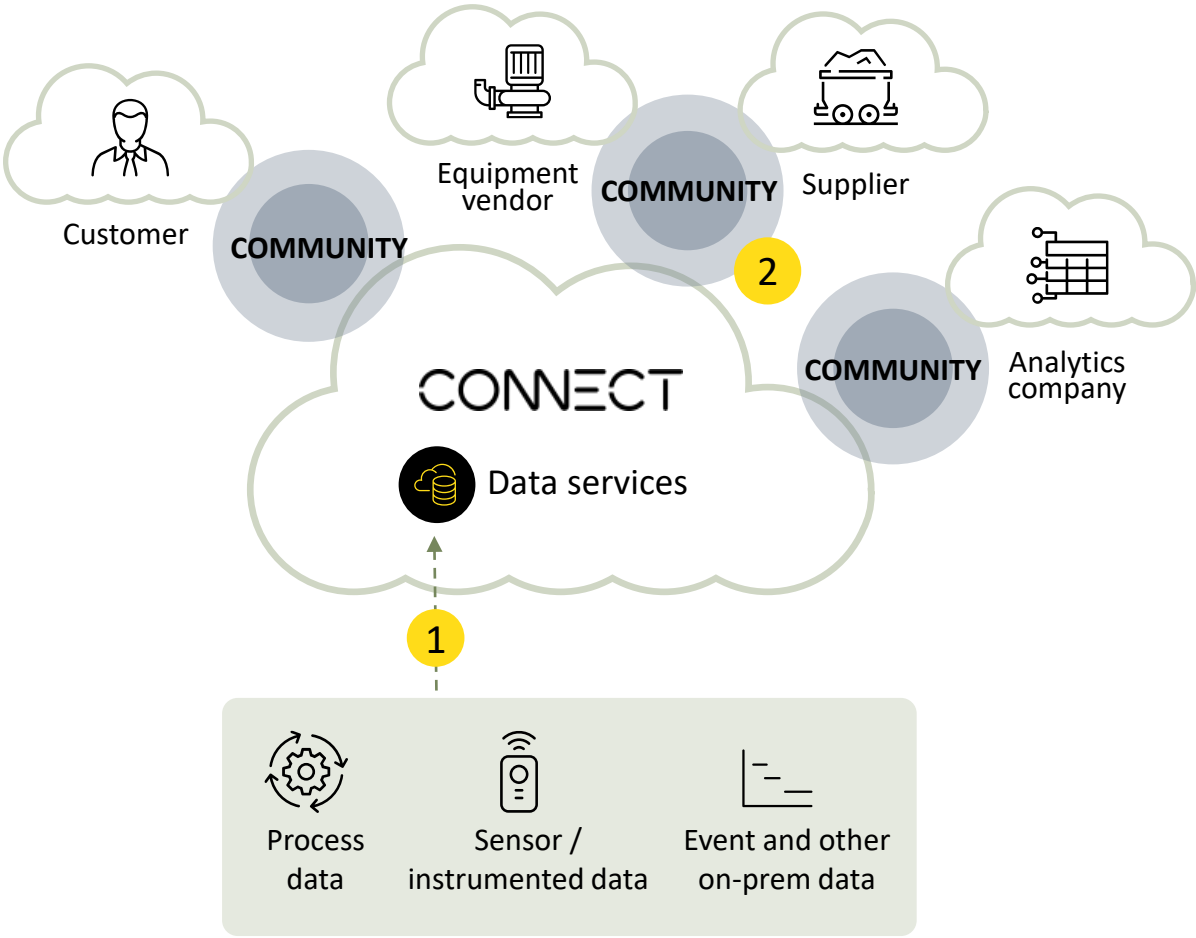
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Data sharing

1. Aggregate edge and on-premises/process data into CONNECT data services
2. Create secure data communities and share data with external stakeholders. No transfer of data, access is granular and can be revoked at any time by the data owner.

Results:

- Enables collaboration among stakeholders, sharing information and creating mutual business value
- Extends current investments with new solutions
- Supports innovative business models for solution providers



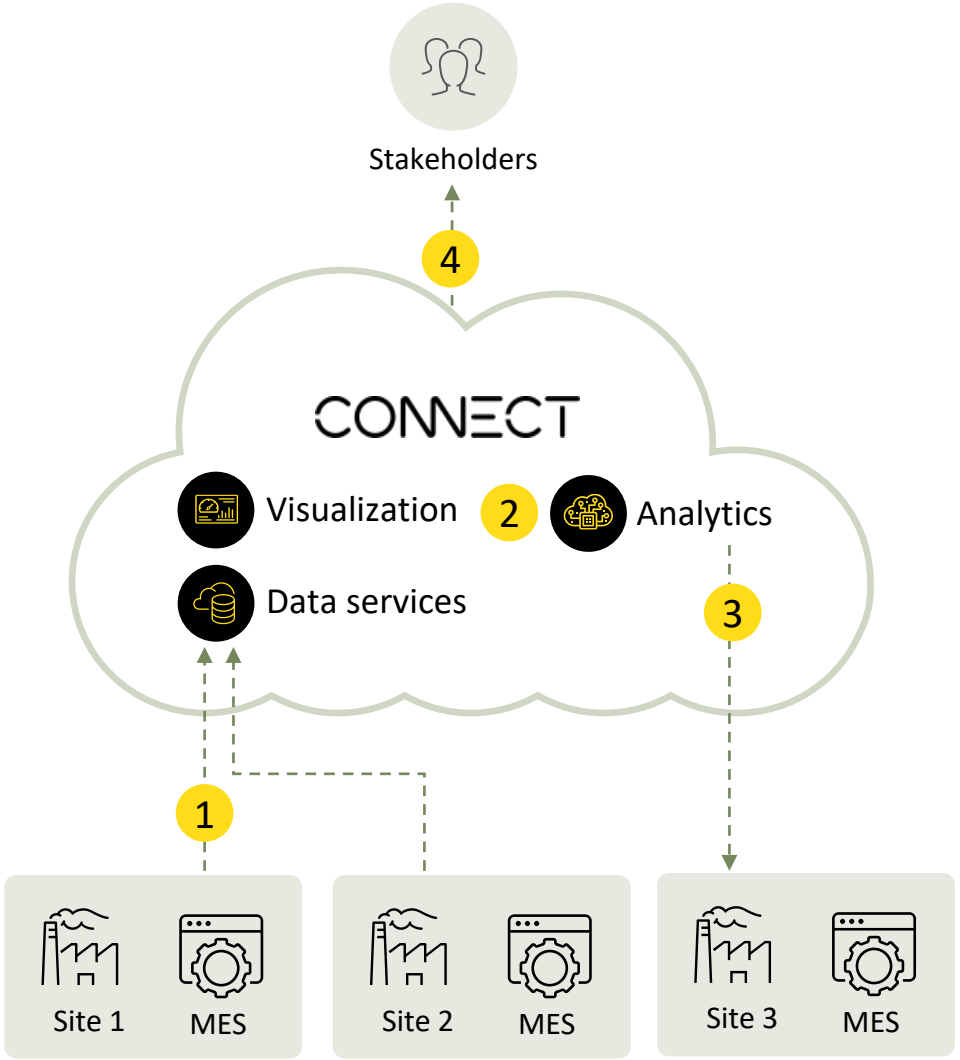
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Predictive downtime alerts

1. Aggregate MES production data and other lab data into CONNECT data services
2. Train AI/ML models on previous production runs to detect potential downtime causing conditions when producing a specific product
3. Suggested corrective action to operations teams based on detected conditions
4. Provide stakeholders with greater visibility to recommendations to avoid downtime when producing this product

Results:

- Proactively manage production through analytical guidance to operations. Real-time alerts to and recommendations for avoiding downtime events.
- Monitor and view data, trends and performance outcomes through CONNECT visualization or 3rd party tools



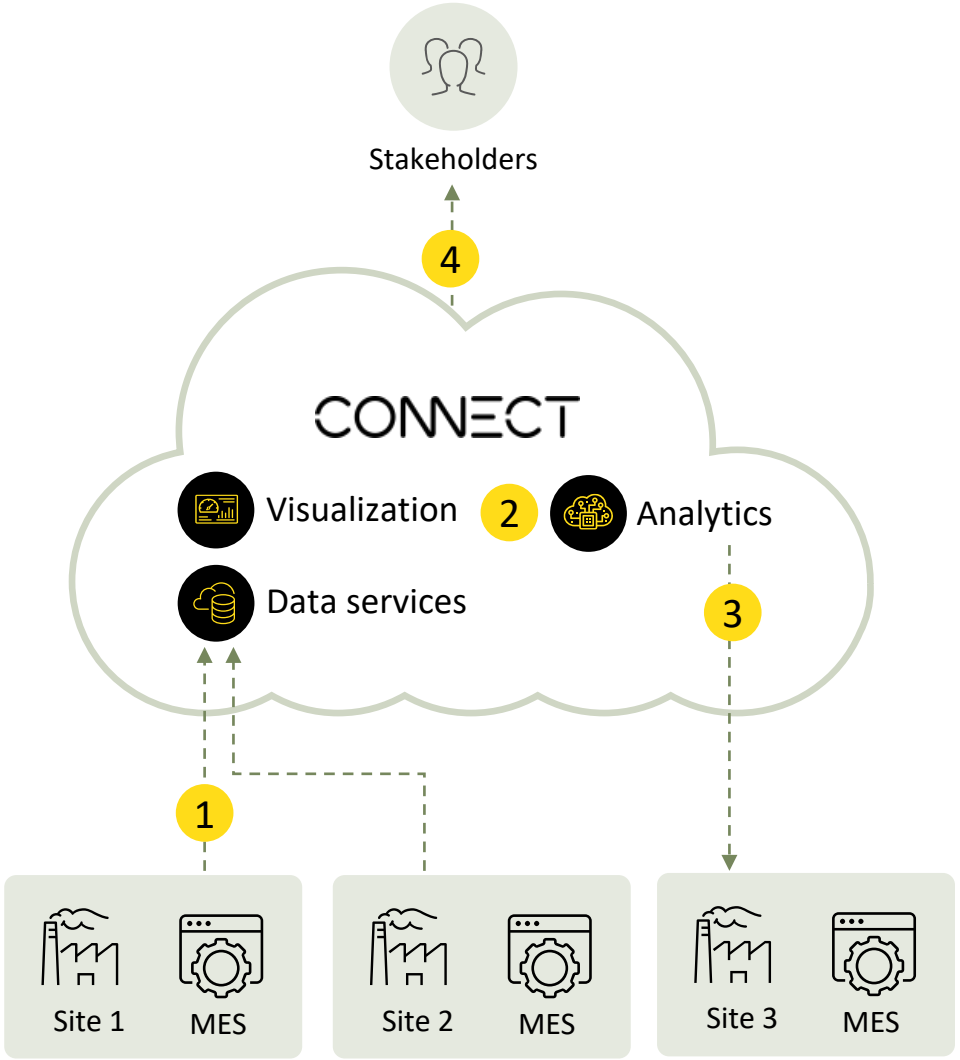
© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.

Use case: Predictive throughput

1. Aggregate MES production data and other lab data into CONNECT data services
2. Train AI/ML models to identify the perfect production rate conditions
3. Suggested corrective action to production line operations based on detected conditions, in context to product in production
4. Provide stakeholders with greater visibility to recurring conditions across plants for root cause analyses

Results:

- Shorten production time, increase efficiency, and realize cost savings while operating at the highest possible production rate
- Monitor and view data, trends and performance outcomes through CONNECT visualization or 3rd party tools



© 2024 AVEVA Group Limited or its subsidiaries. All rights reserved.