



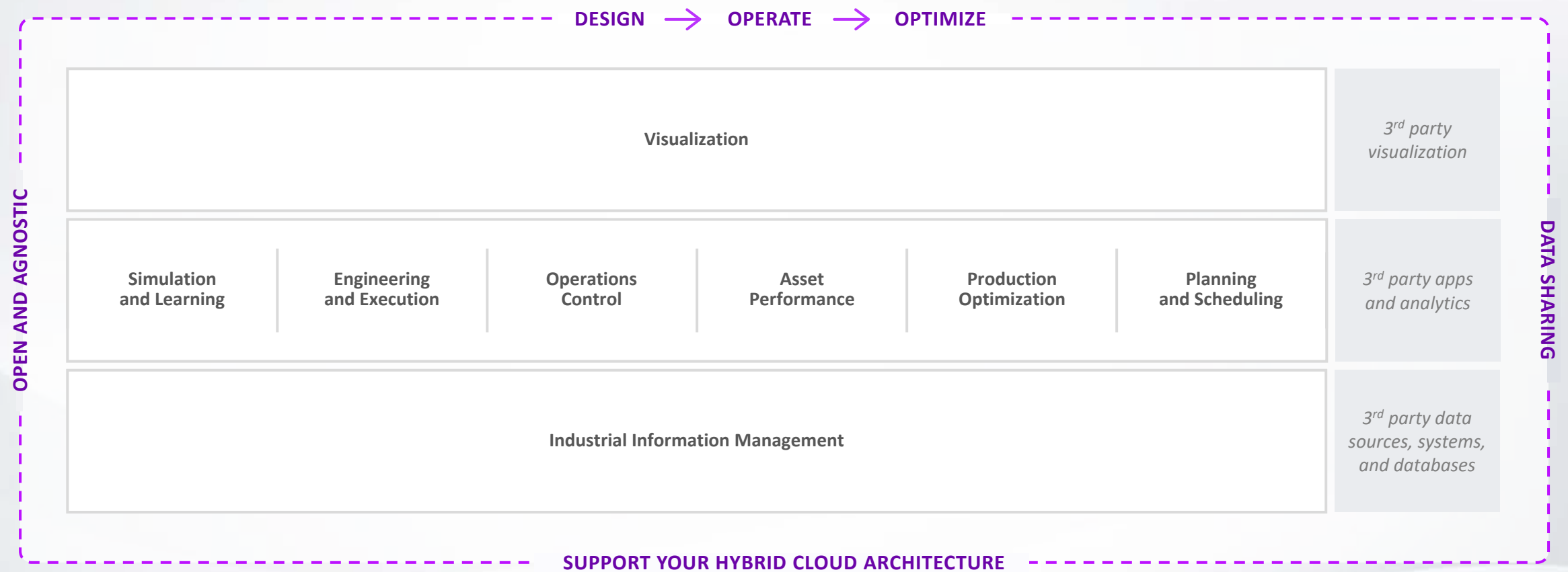
Increasing the value of your existing data through innovation with AVEVA Data Hub

Presented by Elizabeth McErlean and Chloe Carasso dit Carson

AVEVA

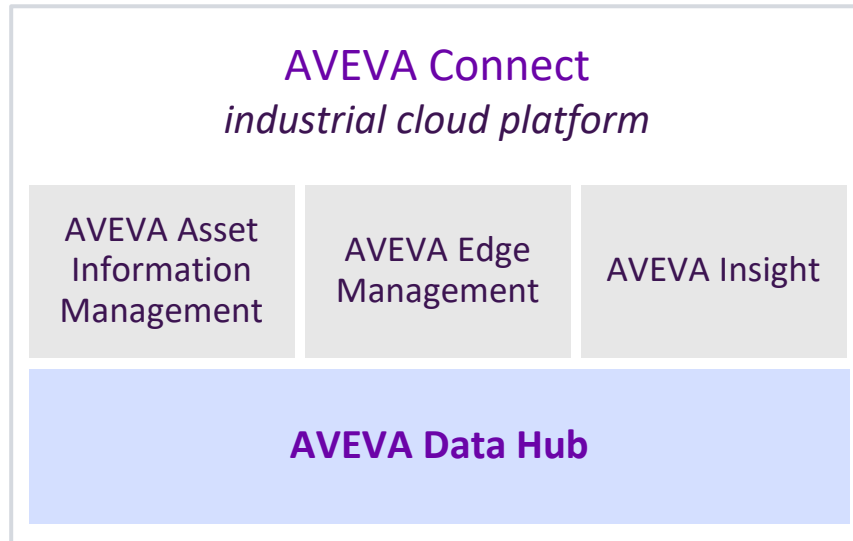
Delivering a complete digital thread, purpose-built for industry

Accelerate time to value with flexible, scalable, and trusted industrial hybrid SaaS solutions

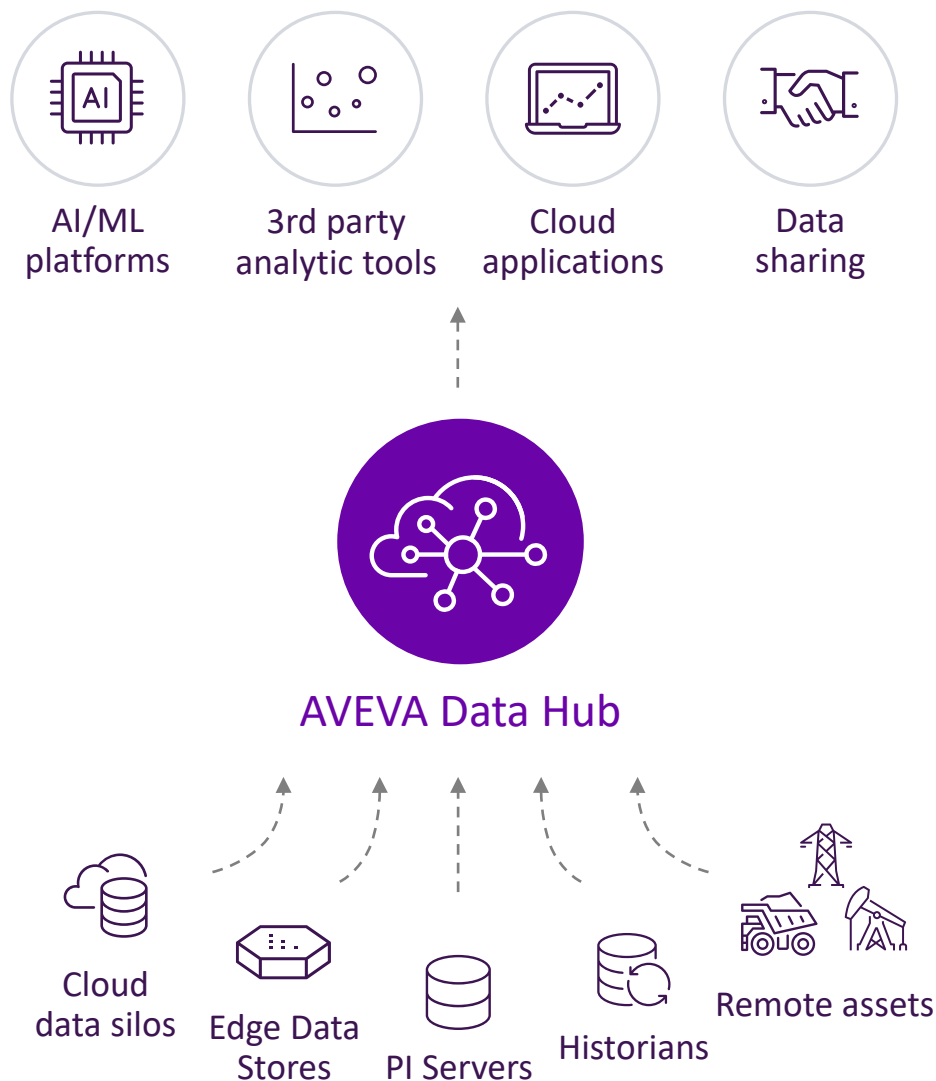


Securely consume & manage solutions with AVEVA Connect today

Centralized access to hybrid SaaS portfolio



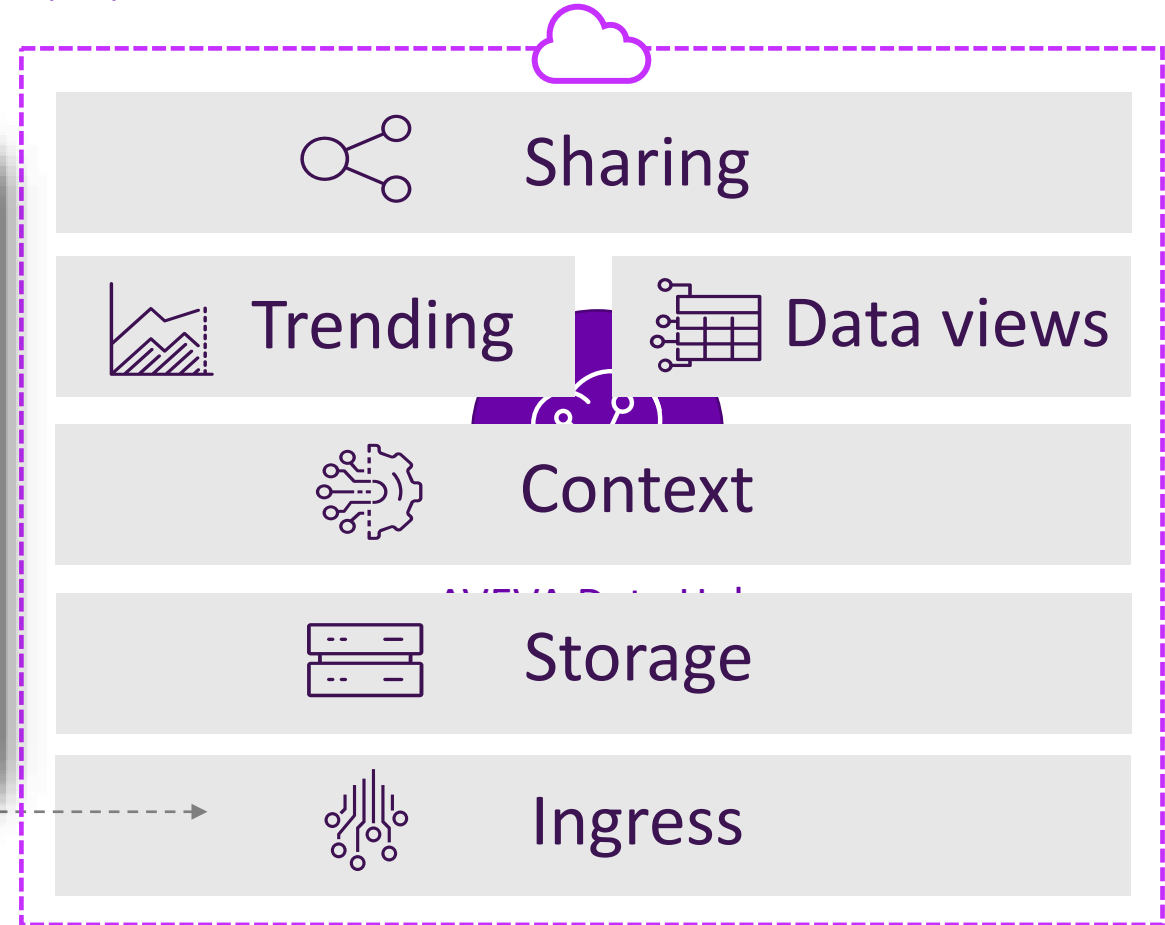
- Manage organization's access to AVEVA's portfolio
- Centralized user management
- Integrated flex credit reporting and usage monitoring



A cloud-native platform for aggregating, storing, enriching, accessing, and analyzing real-time operations data from historians, edge devices, and more

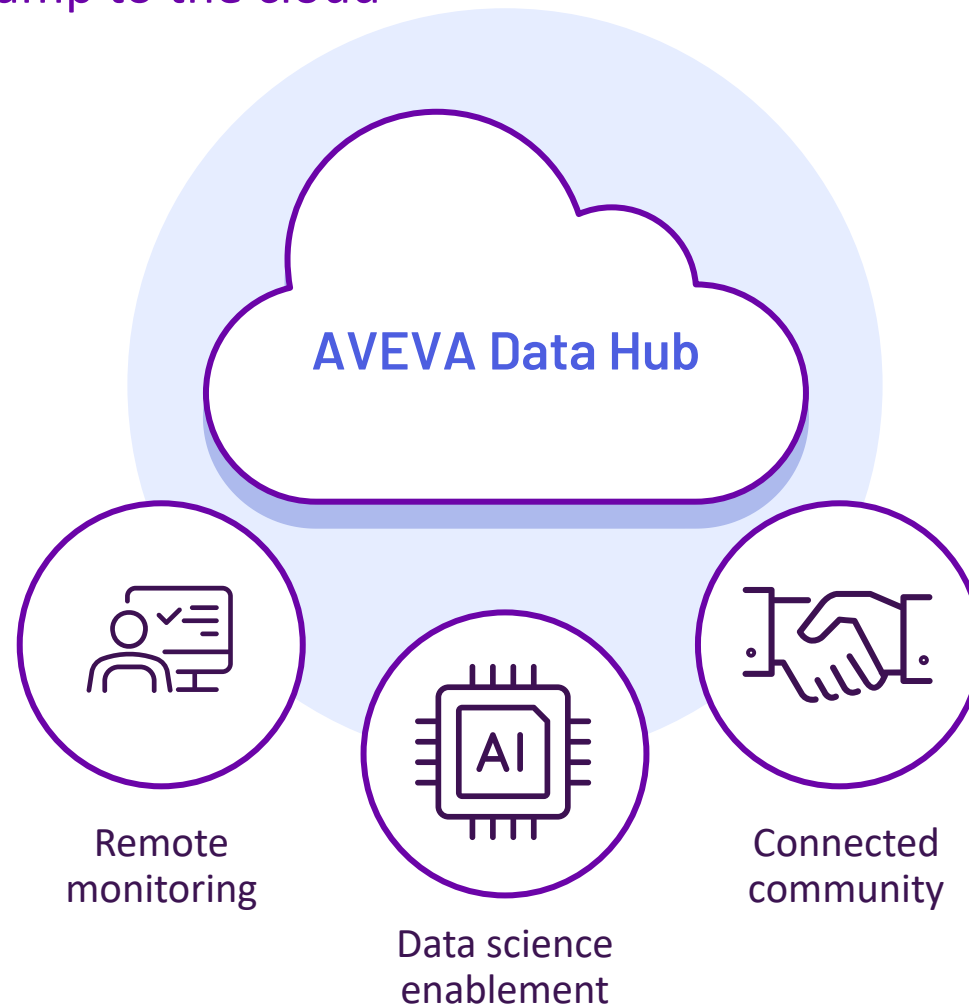
- Managed, secure, multi-tenant platform
- Operated & maintained by AVEVA
- High speed, scalable, elastic, & resilient
- Modern, secure REST APIs

Your shared version of the truth bridging OT, IT, and business domains



Engage new personas, enable new use cases

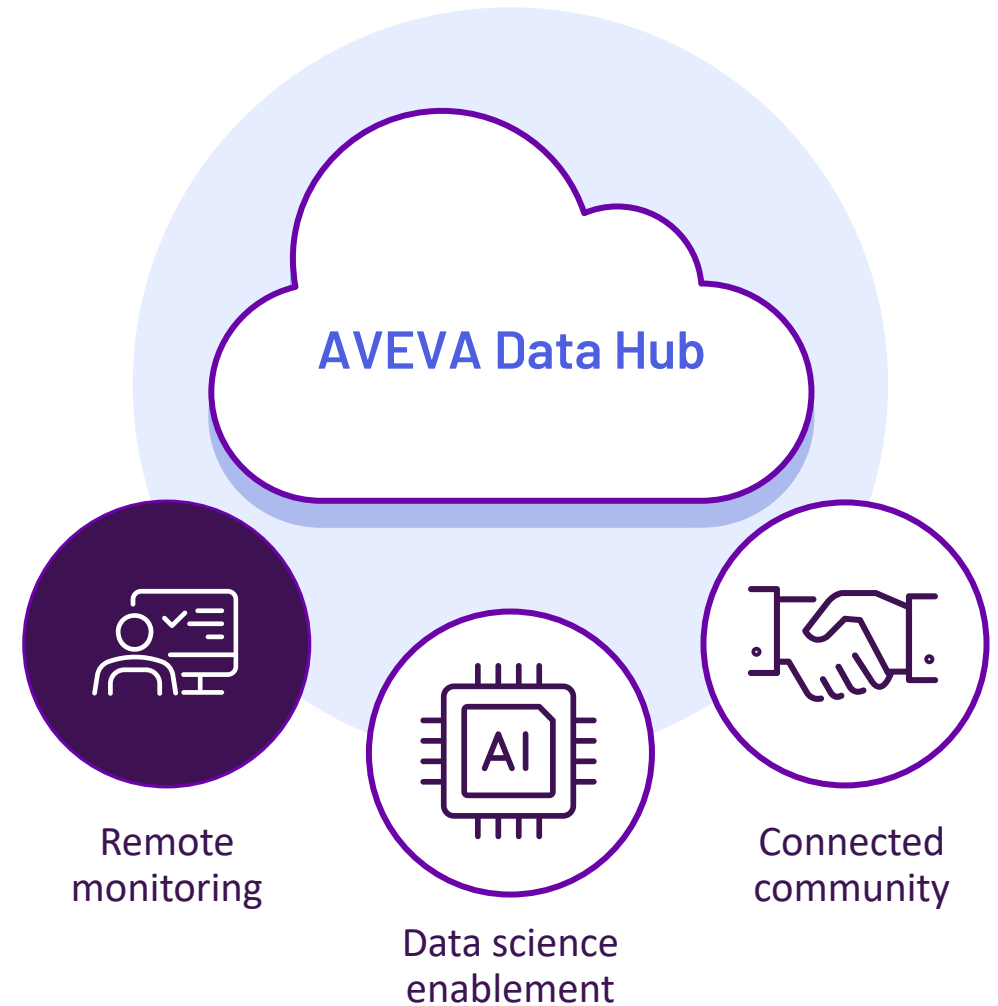
With the fastest, easiest onramp to the cloud



Remote Monitoring

More efficient monitoring of remote assets

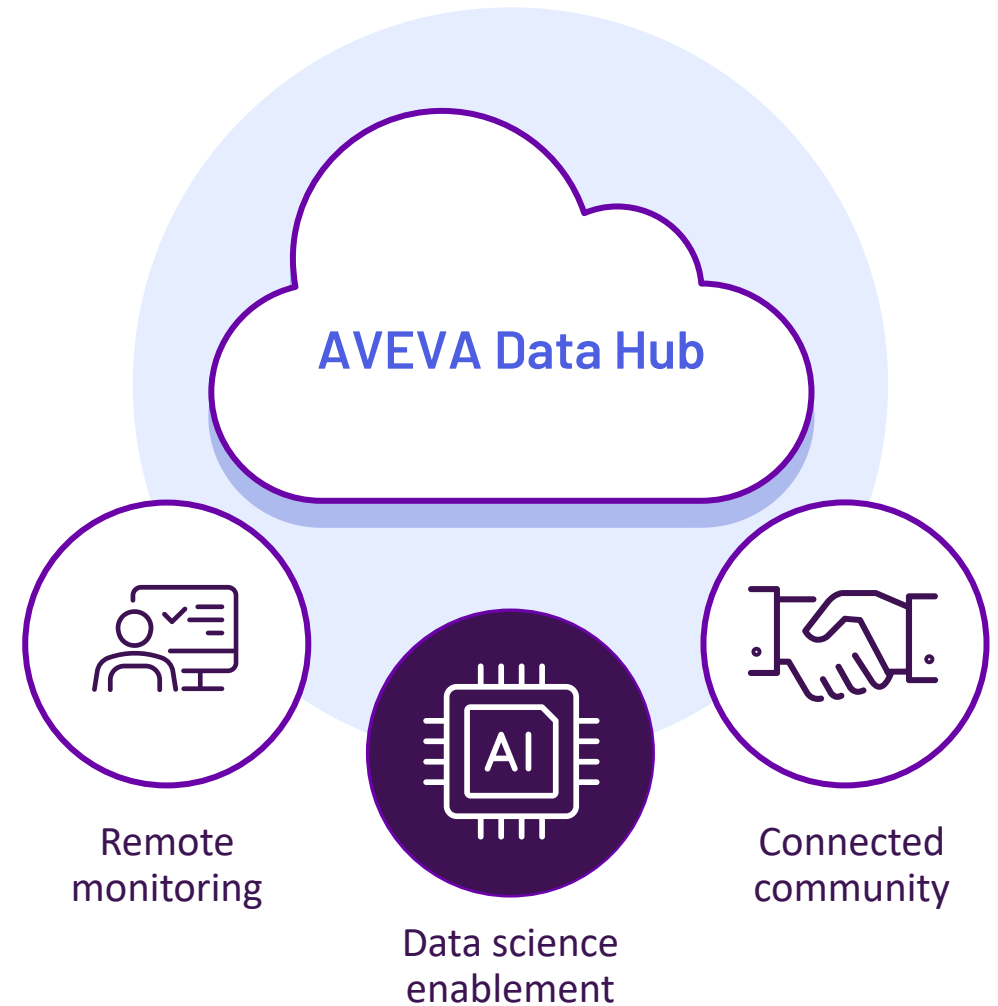
- Shine light on dark data
- Reduce the cost, effort and risk associated with monitoring assets located outside the primary operations network
- With **PI Adapters** and **Edge Data Store**, pull real-time data from IIoT devices, sensors and legacy assets and aggregate in a secure cloud-based data hub



Data Science Enablement

Faster data delivery to analysts and data scientists

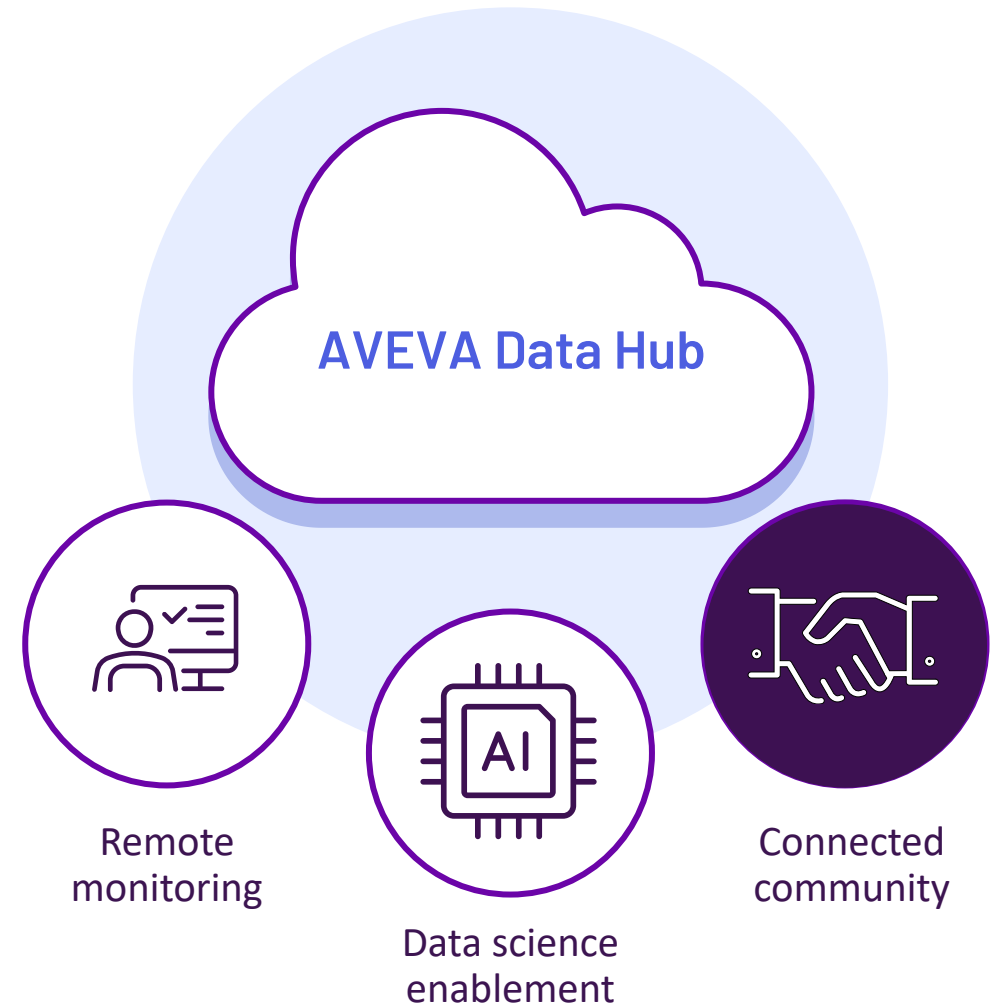
- Aggregate contextualized and curated data from multiple plants and distributed assets or IIoT devices
- With **Data Views**, run inquiries against large data sets with no impact to operations
- Reduce the need for data wrangling so data scientists can spend their time developing insights
- Get insight for uses such as: predictive maintenance, process optimization, condition monitoring, and demand forecasting



Connected Community

Secure data sharing and remote collaboration

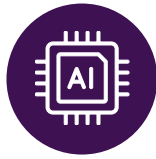
- With the **communities feature**, easily share relevant sub-sets of data with key partners, suppliers and logistics companies
- Save costs by enabling the shift to condition-based maintenance
- Leverage new, high-value services such as continuous asset monitoring or automated procurement





Let's see these use cases in action





Data science
enablement

Drax Power

Looking to extend operational lifetime of critical assets

Goals

- UK's largest source of renewable electricity wanted to extend operational lifetime of assets like generators and biomass fuel mills.
- Reduce maintenance costs and increase production by delaying planned outages and avoiding unplanned outages.

Challenges

Generator condition monitoring

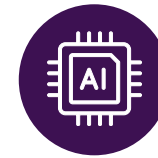
- Coolant leakages caused unscheduled downtime.
- Taken offline for maintenance too early due to lack of visibility on defects.

Blockage Anomaly Detection Alarm System

- Fuel mill blockages imposed significant cost of outages and repair.
- No availability of historical and live data to drive predictions – this was a manual process.



Drax Power



Data science
enablement

Minimizing downtime with smart maintenance

Results

- Replaced a slow, manual data extraction process with a fully automated data flow
 - Data scientists have direct access to data
 - Data is easily consumable in various workflows and applications
 - Removed impact of big data queries on the on-prem infrastructure
- Significant savings for each extra production day through reduced planned downtime
- De-risked production output through analytics-driven alarms



AVEVA PI Server

----->
PI to AVEVA Data Hub



AVEVA Data Hub

----->
Data Hub REST API



Databricks
in Azure

*“A cornerstone of the Drax Power digital transformation strategy is to **enable our people to extract real business value from our data...** AVEVA Data Hub has become our digital data backbone that enables our Microsoft environment (DataBricks) to run in a way it couldn’t previously. **Now the data flow is fully automated, at scale, and we have a much better grip on our ‘data to value’ activities.**”*

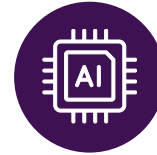
Bjoern Reinke
Director of Data and Data Science

AVEVA

RHI Magnesita



Remote
monitoring



Data science
enablement

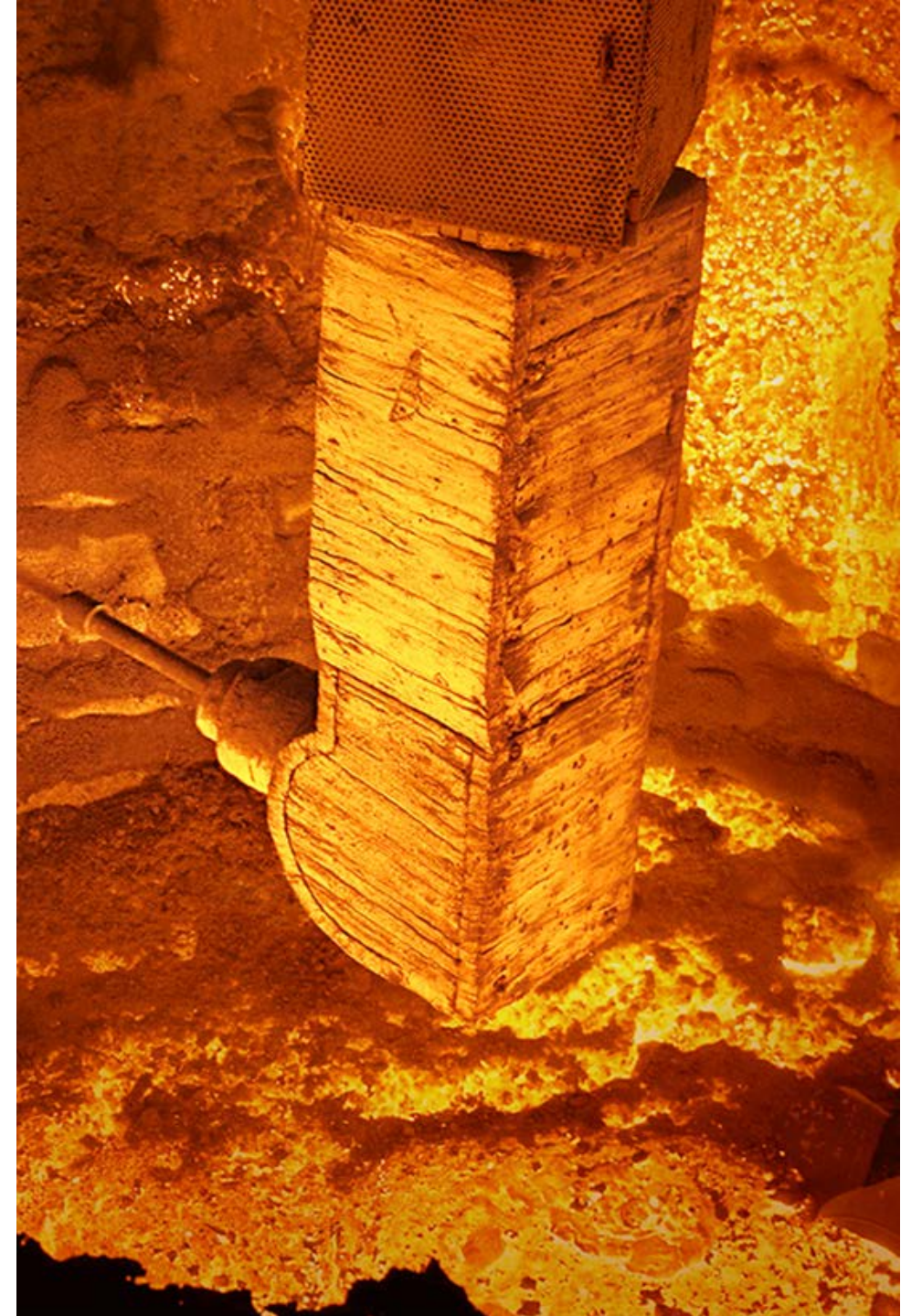
Looking to implement predictive maintenance

Goals

- Worldwide supplier of 1,000+ refractory application machines operating in extreme conditions wanted to improve asset performance and reduce maintenance costs for their customers.
- Wanted to use the wealth of data recorded by their machines to offer predictive maintenance service and better manage parts & supplies.

Challenges

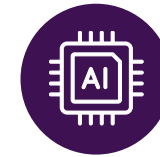
- Needed real-time data from customer operations to run their predictive analysis; manual data collection would take too long and reduce accuracy.



RHI Magnesita



Remote
monitoring



Data science
enablement

Remote monitoring improves efficiency, reduces emissions

Results

- ‘Connected Machines’ service able to **relieve supply bottlenecks and reduce downtime.**
- Machine learning models enable refractory consumption predictions for six months with an **accuracy of more than 80%.**
- **Increased sustainability** with estimated reduction of carbon dioxide emissions ~4,200+ tons/year.

“From the hardware down to the virtual machine, it has all been done with the support of the AVEVA PI System and the cloud-based AVEVA Data Hub. It wouldn’t have been possible if all of these solutions were not at hand and easy to use.”

Alexander Platzer
Vice President, Head of Global Engineering
and Simulation



Remote assets



PI Adapters



AVEVA Data Hub



Data Hub REST API

Custom developed
apps

HENN



Remote
monitoring



Connected
community

Seeking improvements to production stability & performance

Goal

- Optimize the performance and reliability of assembly machines.

Solution

- Upgrade solution for real-time data collection and remote data access.

Result

- Increased overall equipment effectiveness by 10%.

Check out their talk tomorrow 08:40 - 09:30!

“OSIsoft Cloud Services in discrete manufacturing / value chain approach”

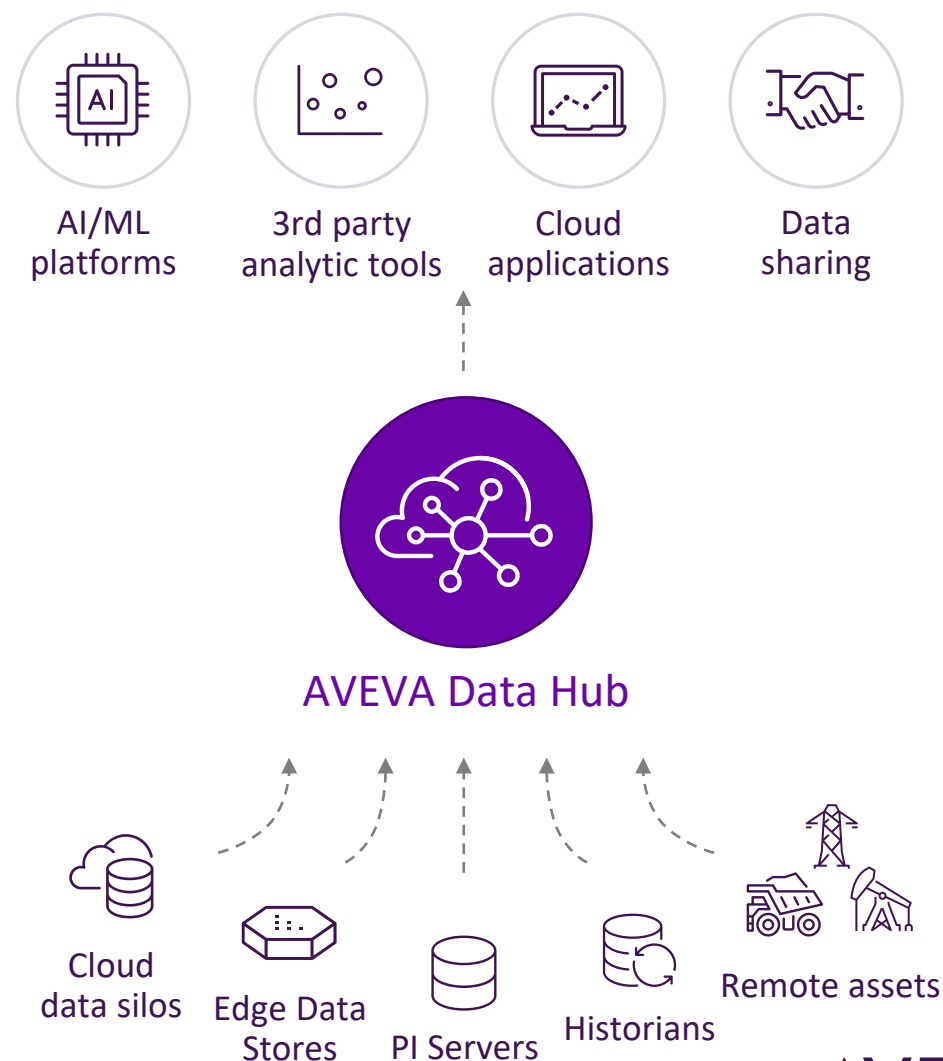


AVEVA

AVEVA Data Hub enables customer innovation

Seize your opportunity to do more with your data

- Engage more personas and enable more use cases by extending your data to the cloud with AVEVA Data Hub
- Facilitate a hybrid architecture from edge to plant to cloud
- Learn from the examples of Drax Power, RHI Magnesita, and HENN who are enabling data science, remote operations monitoring, and community data sharing scenarios



Learn more throughout the week

Day 1 - Tuesday

- AVEVA Connect vision & roadmap
AVEVA, 13:45 - 14:15
- Tapping into data from your industrial ecosystem on AVEVA Data Hub
AVEVA, 15:25 - 15:55
- Secure Industrial Information Infrastructure to comply to your IT standards
AVEVA, 16:05 – 16:35
- Lighten your load: How to accelerate time to value and streamline technology upkeep through SaaS
AVEVA, 16:45 – 17:15

Day 2 - Wednesday

- OSIsoft Cloud Services in discrete manufacturing / value chain approach
HENN GmbH, 08:40 - 09:30
- Analyzing Wind Power data in the AVEVA Data Hub (OCS)
EDP Renewables, 09:45 - 10:15
- Real Time Fleet Analytics with OCS
Industrial Digital Solutions, 11:15 - 11:45
- Leveraging the combination of on-prem PI server and OCS cloud, to feed data analytics and machine learning applications
IMA LIFE, 14:00 - 14:30
- Leveraging on AVEVA Edge/Cloud solutions to satisfy Enel's new data needs
Enel, 16:00 – 16:30

Day 3 - Thursday

- Customer Administration Best Practices for AVEVA Connect
AVEVA, 10:00 – 11:00
- Securely Share Data with Your Trusted Business Partners & Customers using AVEVA Data Hub connected community
AVEVA, 11:15 - 12:15
- The Data Value Chain: From Edge to Impact
AVEVA, 13:30 - 14:30
- Integrating your Operations Data Infrastructure
AVEVA, 13:30 - 14:30



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ABOUT AVEVA

AVEVA is a global leader in industrial software, driving digital transformation and sustainability. By connecting the power of information and artificial intelligence with human insight, AVEVA enables teams to use their data to unlock new value. We call this Performance Intelligence. AVEVA's comprehensive portfolio enables more than 20,000 industrial enterprises to engineer smarter, operate better and drive sustainable efficiency. AVEVA supports customers through a trusted ecosystem that includes 5,500 partners and 5,700 certified developers around the world. The company is headquartered in Cambridge, UK, with over 6,500 employees and 90 offices in over 40 countries.

Learn more at www.aveva.com