

NOVEMBER 2022

Power your secure industrial ecosystem of data, applications, and partners with AVEVA™ Data Hub connected communities

Presented By: Todd Brown, Landry Khounlavong, & Jay Gasner

AVEVA

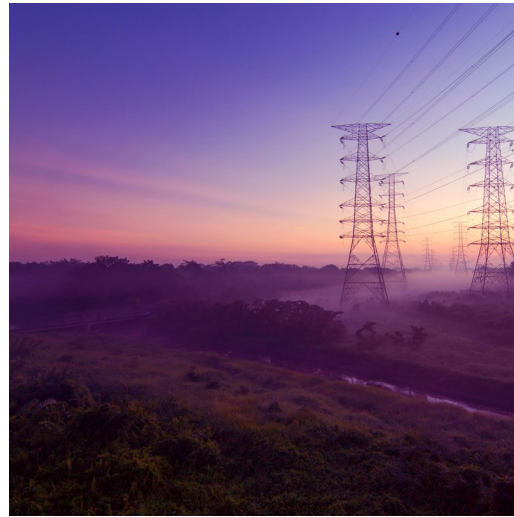
Sustainability drives a need for data sharing

An example of the potential for an ecosystem of data, inhibited by boundaries



Power Producer

How can I be transparent about what is generated?



Power Purchaser

How can I validate my daily purchase of renewable energy?



Power Scheduler

How can I scale my power management services?

Market demands are accelerating the need for data sharing



Consumer desire for
green alternatives



ESG regulations



Supply chain and
service disruptions



Labor shortages
and remote work

Leveraging new digital services are constrained to 1:1 interactions



**INDUSTRIAL DATA
MORE VALUE**



**Equipment
Suppliers**

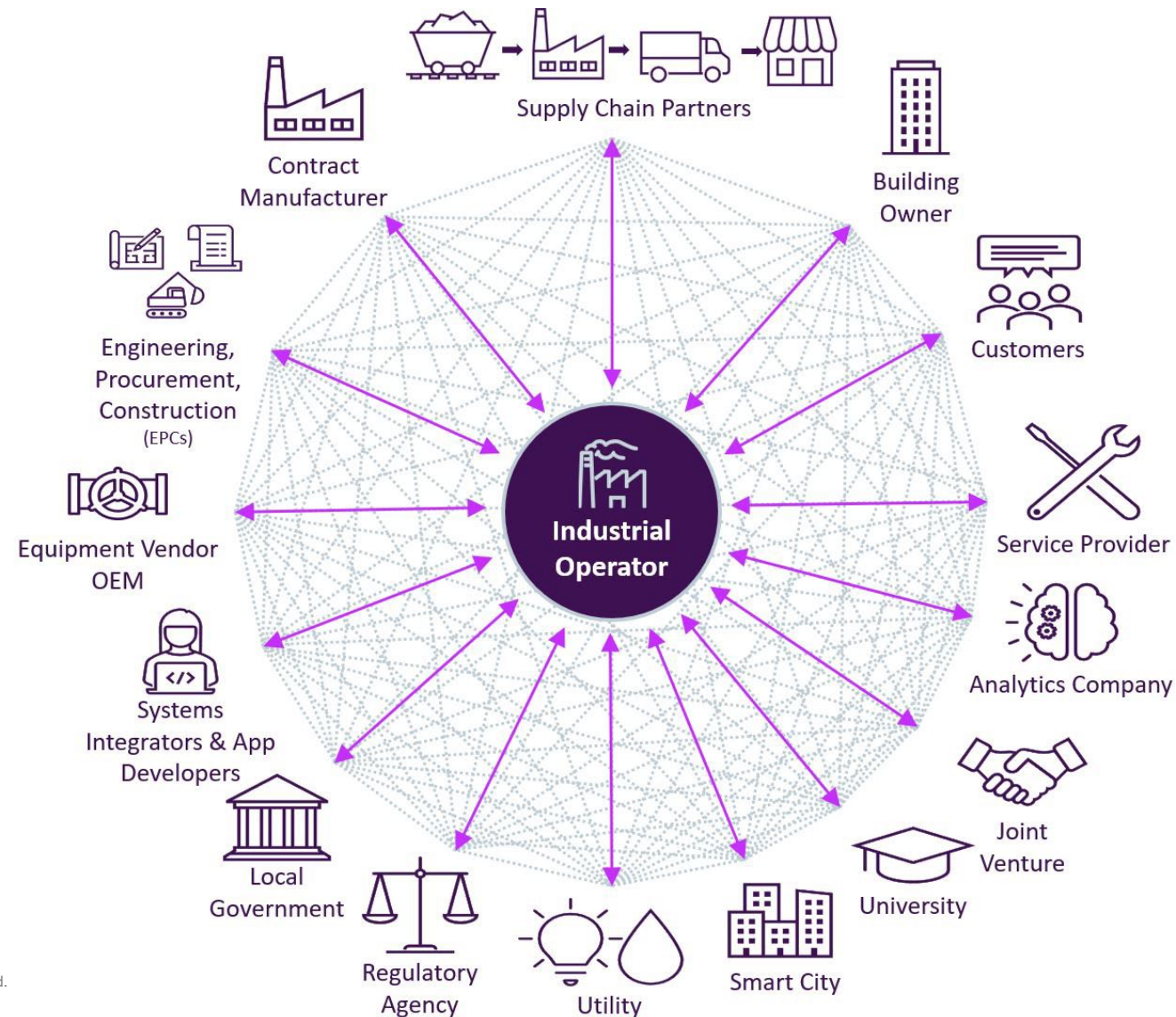


**Service
Providers**



Partners

Unlock your industrial ecosystem to deliver customer value



A spectrum of data sharing challenges exist today

From the age of the dinosaurs & some modern-day monkey business!



Come on site & download data



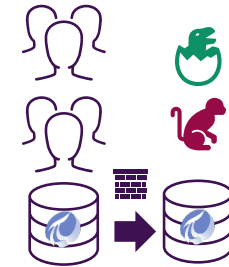
Export data / report & email



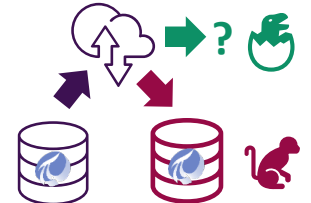
External users in our authentication & IT systems



VPNs or direct access to plant floor or custom apps w/csv, FTP, etc.



Duplicate 'customer facing' PI system



PI Cloud Connect



Stale, out of date data
Sparse snapshots of data, not granular
Very resource intensive
Analysis and value is severely delayed

Real time updating data
Full data granularity
Automated data copy to outside

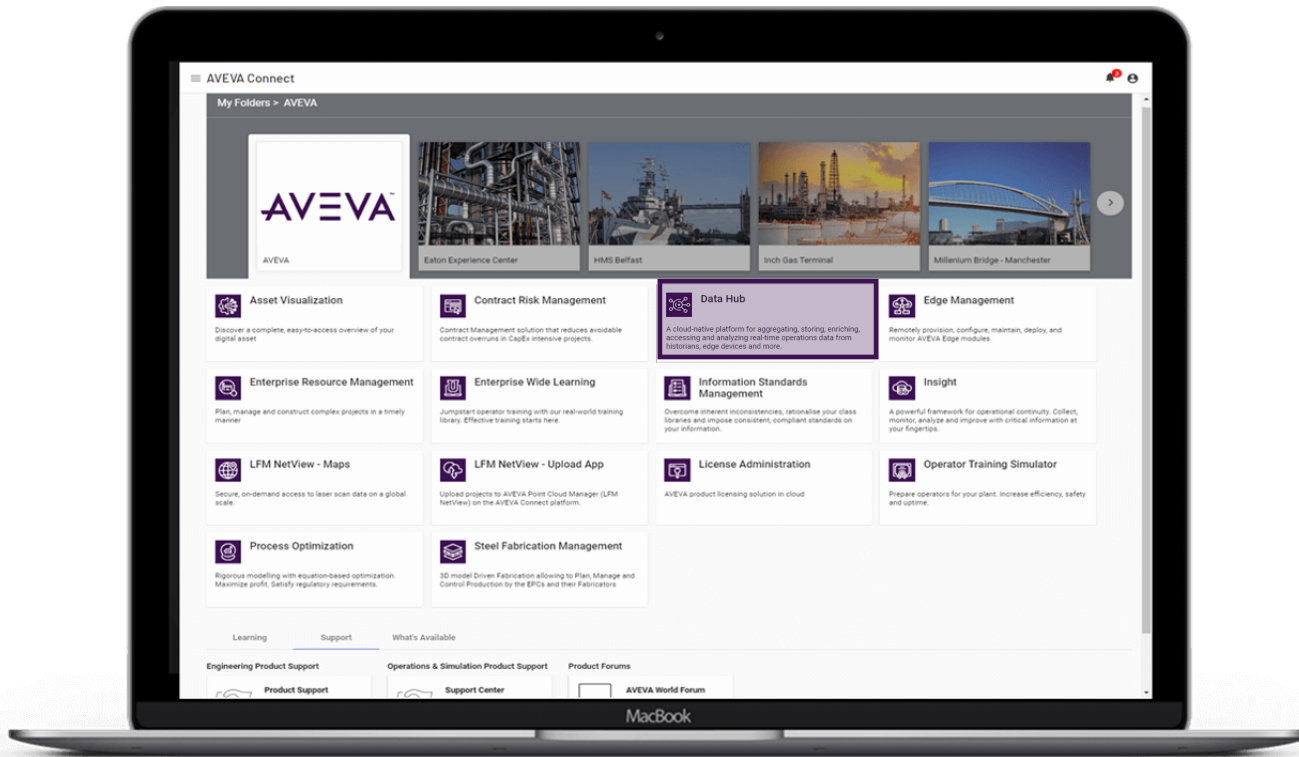
AVEVA CONNECT

AVEVA Data Hub connected community



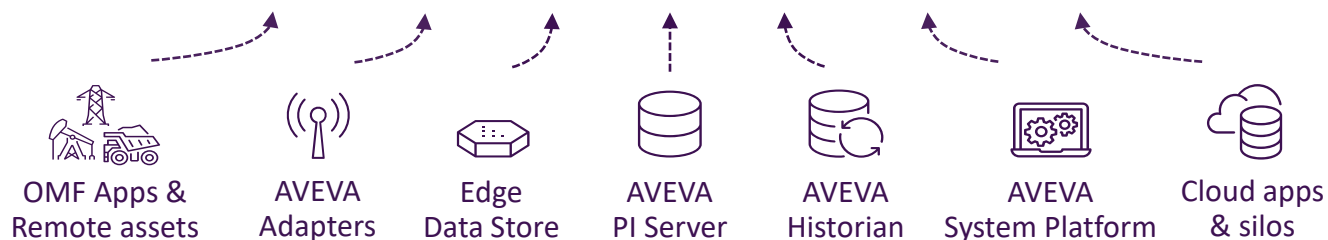
AVEVA Connect: Our industrial cloud platform

Our industrial cloud platform is your digital transformation hub



- ✓ Transform faster
- ✓ Enable new ways of work
- ✓ Connect and collaborate
- ✓ One single source of truth
- ✓ Move from CapEx to OpEx
- ✓ Lower dependency on IT
- ✓ Always the latest and greatest features
- ✓ Easily scale up and down
- ✓ Built with security, resiliency, high-availability

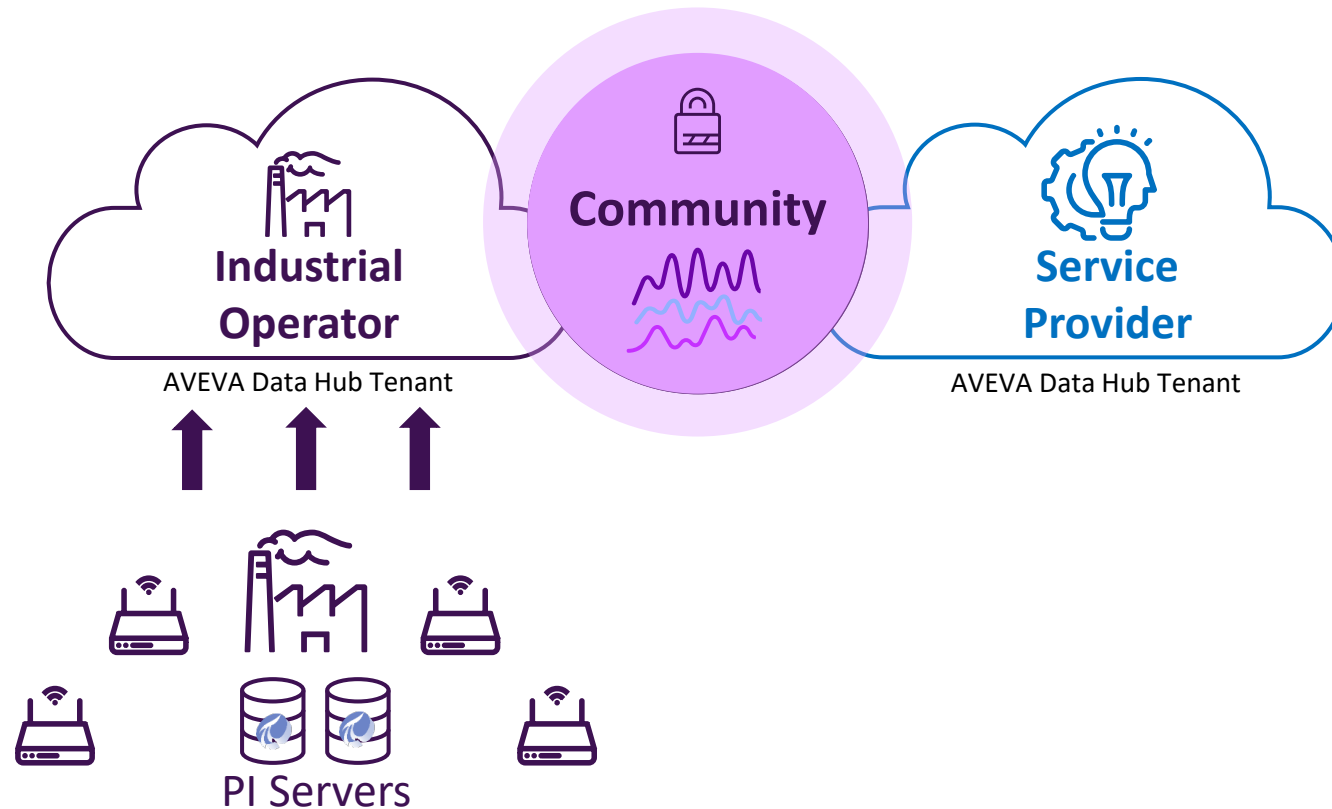
AVEVA Data Hub



A cloud-native industrial platform designed for aggregating, storing, enriching, accessing, analyzing, and securely sharing 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
- Built & deployed on Microsoft Azure

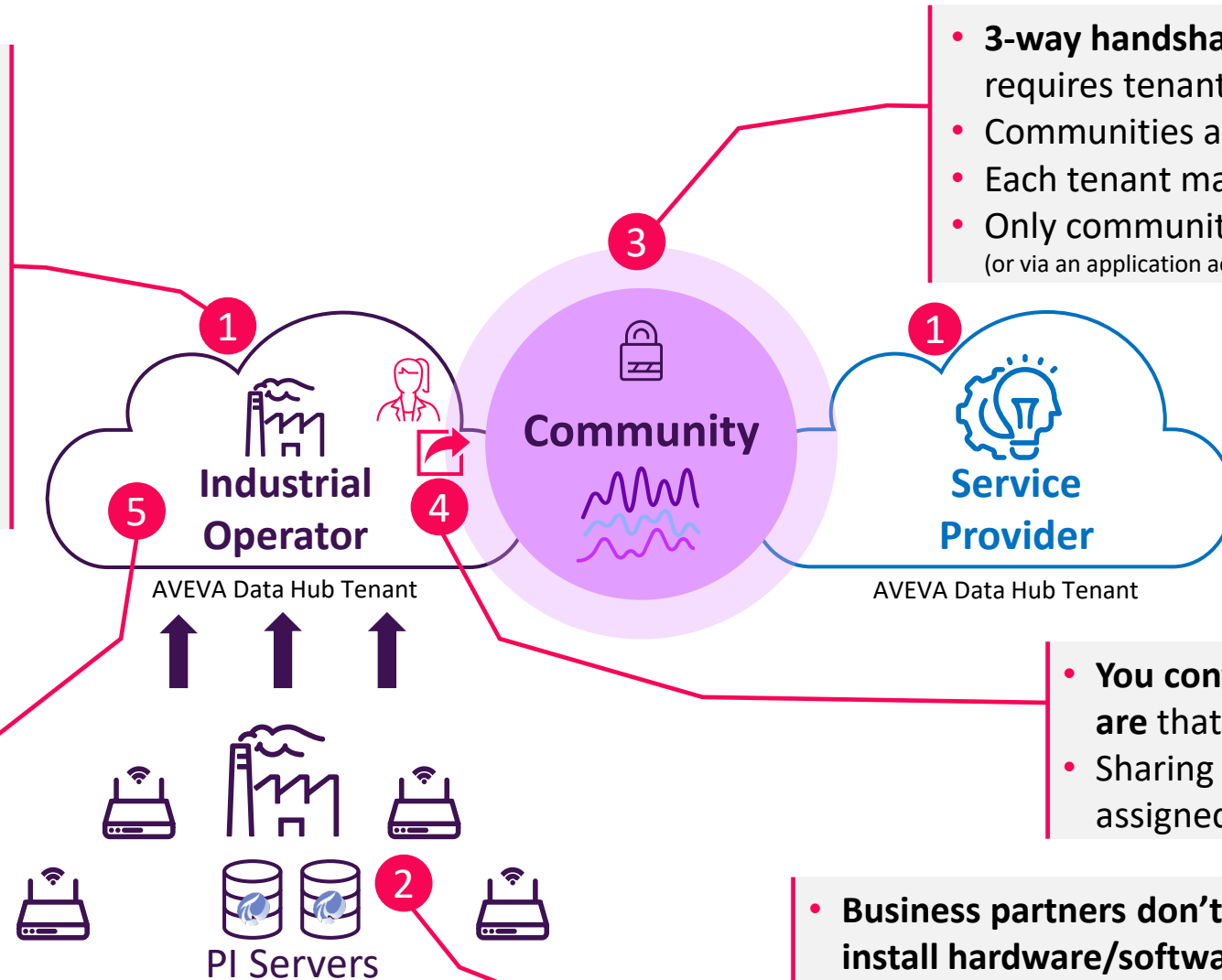
A more secure way to share operational data



A more secure way to share operational data

- True multi-tenant system
- **Natural separation of authentication, users, and data**
- Each tenant manages their own authentication & users
- No external users logging directly into your tenant
- Better protection of Intellectual Property (IP)

- Sharing provides *access* to data stored in your tenant
- **Data is not copied outside of your tenant** by AVEVA Data Hub

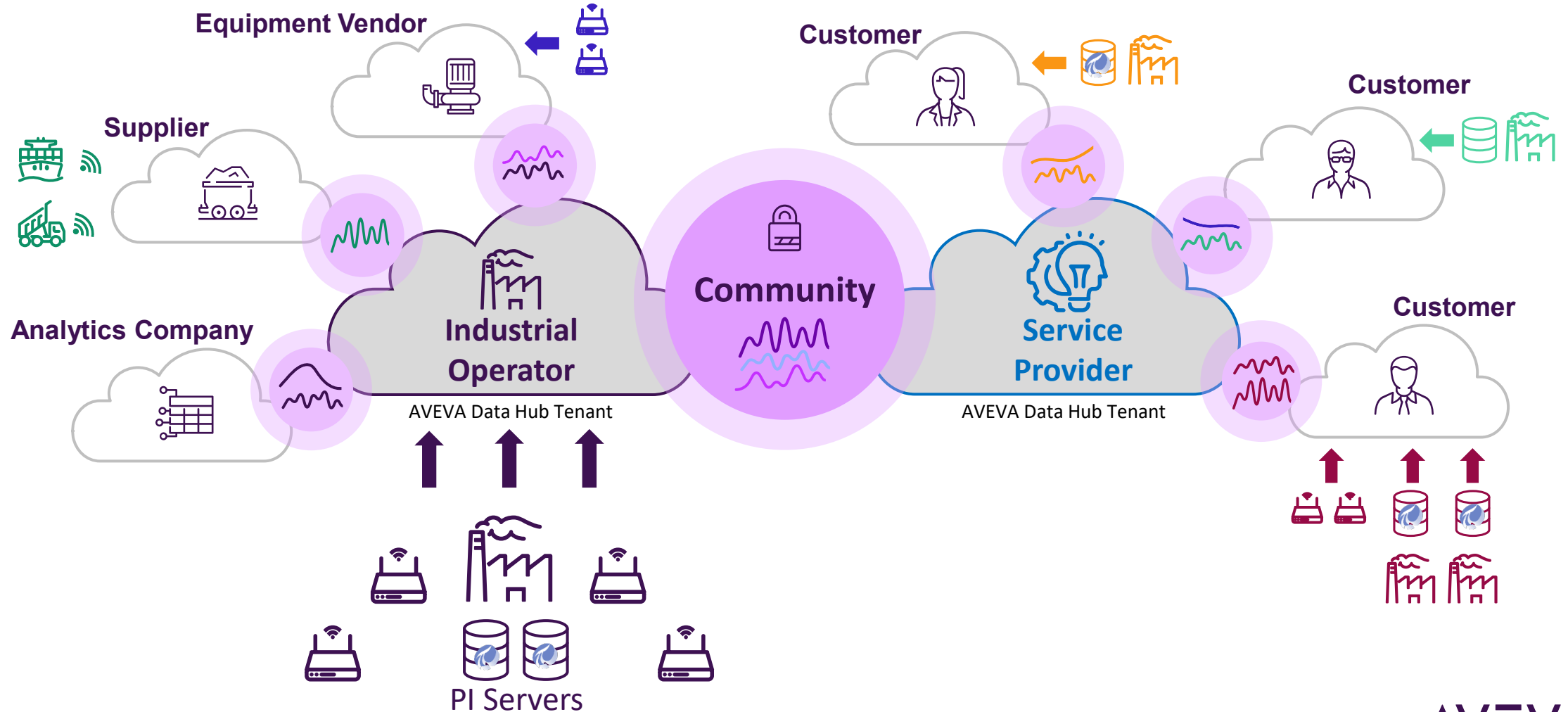


- **3-way handshake for Community formation & requires tenant admin approval**
- Communities are private
- Each tenant manages their community members
- Only community members can read shared data (or via an application accessing data via API)

- **You control who your “data stewards” are** that have resource sharing privileges
- Sharing privilege must be explicitly assigned

- **Business partners don’t need to install hardware/software** within your site to get access to your data

Connected community: Powering your industrial ecosystem

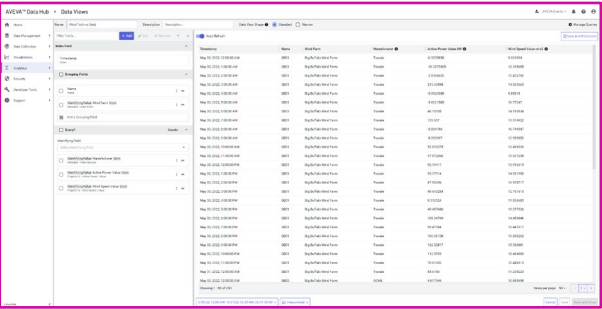


AVEVA Data Hub connected community

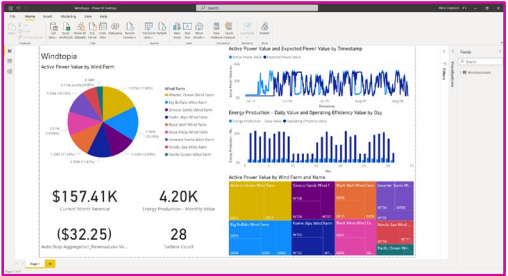
Data Science Tools & Data Exploration

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

Data Views support shared streams



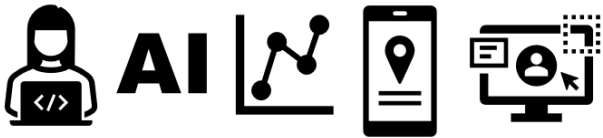
Power BI (via Data Views & Data Hub Power BI Connector)



Grafana (via REST API)



Custom Applications (via REST API)



Trending supports shared streams



Spreadsheets (via REST API)

	A	B
1	Timestamp	Temperature
2	3/1/2022 12:00:00	79
3	3/1/2022 12:01:00	65
4	3/1/2022 12:02:00	92
5	3/1/2022 12:03:00	81
6	3/1/2022 12:04:00	86
7	3/1/2022 12:05:00	88
8	3/1/2022 12:06:00	77
9	3/1/2022 12:07:00	92
10	3/1/2022 12:08:00	80
11	3/1/2022 12:09:00	49
12	3/1/2022 12:10:00	69
13	3/1/2022 12:11:00	44
14	3/1/2022 12:12:00	73

AVEVA Data Hub connected community

Enables simple & secure operational data sharing across organizations



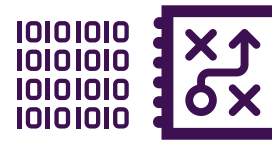
Achieve a more secure way of sharing your data



Manage users in your AVEVA Connect account



Easily connect to your trusted business partners in an AVEVA Data Hub community



Gain control and transparency over your shared data



optional

Works great with AVEVA PI Server & AVEVA Historian

(but not required)



Scale your sharing to many business partners



AVEVA DATA HUB CONNECTED COMMUNITY

Constellation Energy – Customer Example

Jay Gasner, Operations Manager, Constellation Energy

AVEVA

About Constellation Energy



#1
producer of
carbon-free
energy in the
U.S.



10%
of the
nation's
carbon-free
electricity

32,400 MW

of capacity consisting of nuclear, wind, solar,
natural gas and hydro, enough to power 20
million homes

215 TWh

of power served
to Commercial
customers

3/4

of Fortune 100
companies
count on us for
their energy
needs



“ Look for a flexible, secure, efficient and cost-effective way to share our ON-PREM PI data with our third-party, approved analytic vendors and utilize that same data within our Power BI application for data visualization needs

- Constellation Leadership

Objectives

1. Bring in outside analytics expertise to calculate and compare performance of wind turbines
2. Increase visibility of wind turbine data within the organization

Collaborating with 3rd-party analytic vendors has its challenges

Being dependent on an IT staff already stretched too thin

Editing ETL scripts every time a dataset needs updating

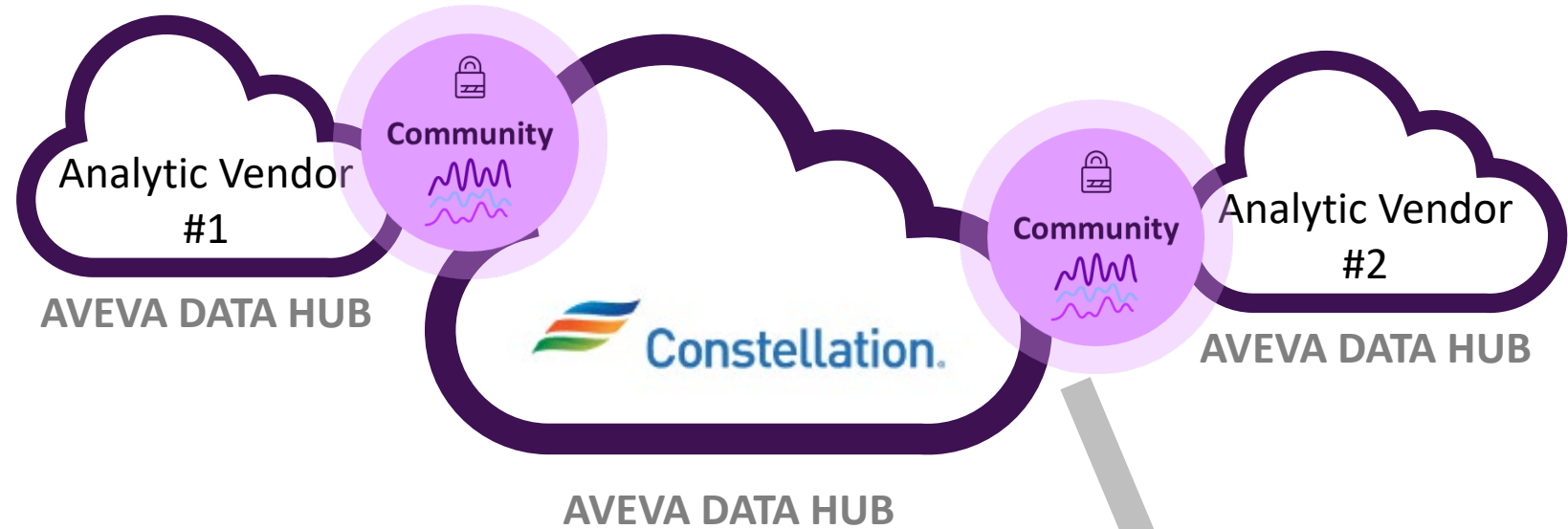
Giving permissions to on-prem PI Servers for 3rd-party analytics vendors

Preventing large, ad hoc queries that could impact a PI Server's performance

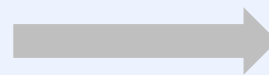
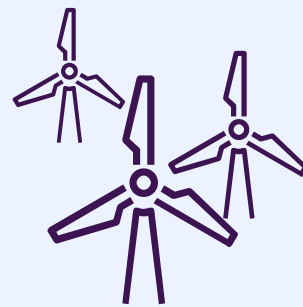
Supporting reports accessing many different operational data sources



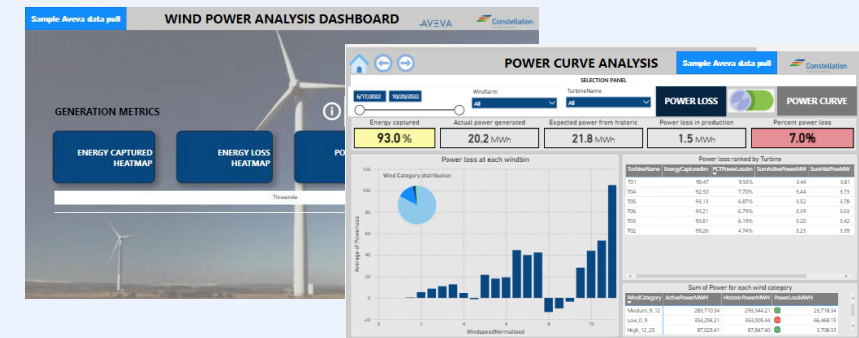
Empowering a community around data with AVEVA Data Hub



Constellation Energy
network



AVEVA
PI SERVER



Performance reports

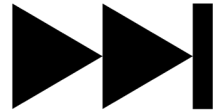
Constellation's Experience and Benefits



Only needed 45 min of IT's time to implement this solution

Estimated reduction in IT costs of \$10k

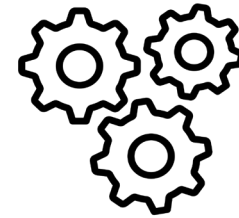
3rd-party analytic vendor did not need access to PI Server



Faster, easier-to-use solution for sharing data with external partners

Self-service UI for transferring data from AVEVA PI Server to AVEVA Data Hub

Shared dataset adjustments handled by Operations, no scripting



AVEVA Data Hub evolved throughout the project

Workflows became more intuitive

More capabilities were added that solved additional problems

Software as a Service!

AVEVA DATA HUB

Wrap up



Connected Industrial Ecosystem

AVEVA Connect industrial cloud platform



- Create more value from your industrial operational data
- Address the business-critical issues by connecting a community
- Gradually grow from your current infrastructure
- Domain specific cloud services for industrial use cases



Learn more about AVEVA Connect & AVEVA Data Hub

Industrial Cloud Platform @ AVEVA World 2022 – San Francisco

• Day 1: Industrial Cloud Platform

- AVEVA: AVEVA Connect, Industrial Cloud Platform – Vision, roadmap, and starting your operations and engineering digital twin journey [14:00]
- AVEVA: Power your secure industrial ecosystem of data, applications, and partners with AVEVA Data Hub connected communities [14:40]
- AVEVA: Accelerate Your Time to Value with Analytics and Applications Fueled by AVEVA Data Hub [15:40]
- AVEVA: On your marks, get set, Unleash your Operational Data in the Cloud! [16:20]
- AVEVA: Aggregating Engineering Content, Data and Documents and Real-Time Data into a Common User Experience [17:00]

• Day 2: Customer Presentations

- IGI: The International Group: Lityx, use AVEVA™ Data Hub (ADH) to implement AI-based analytics, improving yields and generating millions in additional profit at a 20x ROI [10:55]
- Industrial Parts Depot: Real-Time Fleet Monitoring with OCS at Industrial Parts Depot [14:00]

• Day 3: Industrial Cloud Platform

- AVEVA: Four Imperatives of a Trusted Information Infrastructure [10:45]
- AVEVA: Deploy Edge Data Store and Adapters in minutes with AVEVA Edge Management [11:25]
- AVEVA: Visualizing the Digital Twin, an Independent Service on the Industrial Cloud Platform [13:30]
- AVEVA: Uniting the connected community through secure and transparent industrial data sharing [14:25]
- AVEVA: Harnessing the power of Sequential Data Store (Sds) and Assets for developers and partners [15:30]
- AVEVA: Aggregating data with Data Hub asset rules and data views for analytics and applications [16:25]



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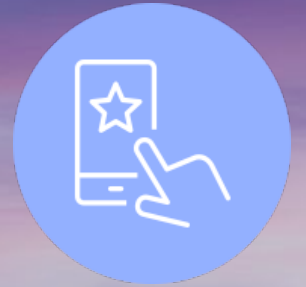
Questions?

Please wait for the microphone
State your name and company



Please remember to...

Navigate to this session in the mobile
app to complete the survey.



Thank you

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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