Connecting ecosystems: data-sharing at scale

How to unlock operational efficiencies

Gary Wong, Todd Brown – AVEVA
CREATE A MORE SUSTAINABLE FUTURE

Infrastructure

Modernize your critical operations and achieve net-zero emissions
87% of companies are making decisions with incomplete data

78% of companies know enabling data sharing drives highest value

AVEVA, 2022
Common data sharing challenges

- Data silos
- Disparate systems
- Security
- Can’t scale
- Data sharing - internally and externally
- Many sites, buildings, plants
- No situational awareness
- Remote locations
- Too much data
Common data sharing challenges
Or... finding a needle in the proverbial data haystack
How do we bring it all together?
How do we bring it all together?
From one to many - the power of connecting ecosystems

Water utilities want to:
- Find and reduce leaks
- Use less energy
- Forecast demand

Facilities and data centers want to:
- Plan for capacity
- Use less energy, water, gas
- Reduce downtime

All infrastructure companies want to:
- Share data internally and externally
- Apply AI
- Realize sustainability goals and net zero

Drive efficiencies by enabling more collaborative work
Water utility in America wants to leverage its data better to:
• Improve operational agility and resiliency
• Drive operational efficiency
• Transform work practices
• Improve asset reliability and safety
• Realize sustainability and net zero targets
Secure data-sharing at scale with AVEVA™ Data Hub connected community

Todd Brown, Strategic Product Manager
Leveraging new digital services industrial data

Service providers
Equipment suppliers
Partners

INDUSTRIAL DATA
MORE VALUE

MORE VALUE
Getting more value out of industrial data, together

“We want a standard sharing approach for the entire world. We’re the experts in the process. We are not experts on the individual components that are part of our process. This is why we want to share data.”

“We can get added value because we can send the data to the cloud, our service provider subscribes, they do their analysis, and they can notify us if we have a water leak.”
“We have big production clusters and have a team of data scientists to look at the data models and pass these analytics back to the customers. Our goal is to make money out of data for our customers.”

“The data we get is the same data the clients see in their PI Server typically. So, the value add is the analytics that we perform on the equipment that we know.”

“We talk and collaborate daily with our customers. We want to make sure the data we’re sharing with them is useful. Our goal is to be a good steward of the data and help make them successful.”

“We have big production clusters and have a team of data scientists to look at the data models and pass these analytics back to the customers. Our goal is to make money out of data for our customers.”
A spectrum of data-sharing challenges exists 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 the plant floor or custom apps w/csv, FTP, etc.
- Duplicate ‘customer facing’ AVEVA™ PI System™
- AVEVA 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
Industrial operator challenges

Sharing operations data externally

- No standard scalable way to share
- Increased security risk
- Data is copied all over the place
- Maintaining control & confidentiality
- High IT cost
- High overhead cost
- Not everyone has AVEVA PI System
- Not maximizing value
AVEVA™ Data Hub connected community
AVEVA™ Connect, common cloud platform: 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
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Supported Regions
- West US (California)
- North Europe (Ireland)
- Australia East (New South Wales)
A more secure way to share operational data
A more secure way to share operational data
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

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

• 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)

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

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Connected community: Powering your industrial ecosystem
APEVA™ Data Hub
Community demo

Seamless connectivity from AVEVA PI System to AVEVA Data Hub

1. Community stream sharing

2. Shared data in Databricks, share predictions back

3. Power BI dashboard, control & transparency for your data
AVEVA™ Data Hub > Communities

AVEVA Windtopia (Uptime Analytics)
53250928-57df-4624-b193-698663638dc7

Uptime Analytics
Sharing Active
Created Oct 18, 2022

Tenants

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How do I share data with this community?
What can you do with AVEVA™ Data Hub connected community today?

- Community management
- Stream data sharing
- Data views with shared data
- Transparent community usage

Trending with shared data
Power BI with shared data
Access via REST API / Integration
## 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, common cloud platform account | Easily connect to your trusted business partners in an AVEVA Data Hub community | Gain control and transparency over your shared data | Works great with AVEVA PI Server & AVEVA Historian, formerly Wonderware (but not required) | Scale your sharing to many business partners |

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Build your data ecosystem
With AVEVA Data Hub

• Open connectivity for ample and easy ingress and egress of data
• No development needed, deliver value in hours
• Manage any type of sequential data, including time-series
• Securely share data for collaboration inside or outside your organization
• Cloud-native, fully managed by AVEVA, eliminating the need for CAPEX, maintenance, and IT support

AVEVA Data Hub accelerates successful ecosystem creation
Where to find more information on AVEVA™ Data Hub

Overview & resources

Documentation
- https://www.aveva.com/content/dam/aveva/documents/datasheets/AVEVA_Data_Hub_on_AVEVA_Connect_v1_1.pdf

Security & trust center

Service description
- https://www.aveva.com/content/dam/aveva/documents/datasheets/AVEVA_Data_Hub_on_AVEVA_Connect_v1_1.pdf
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State your name and company.

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

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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