AVEVA<sup>™</sup> Connect: Vision & Roadmap

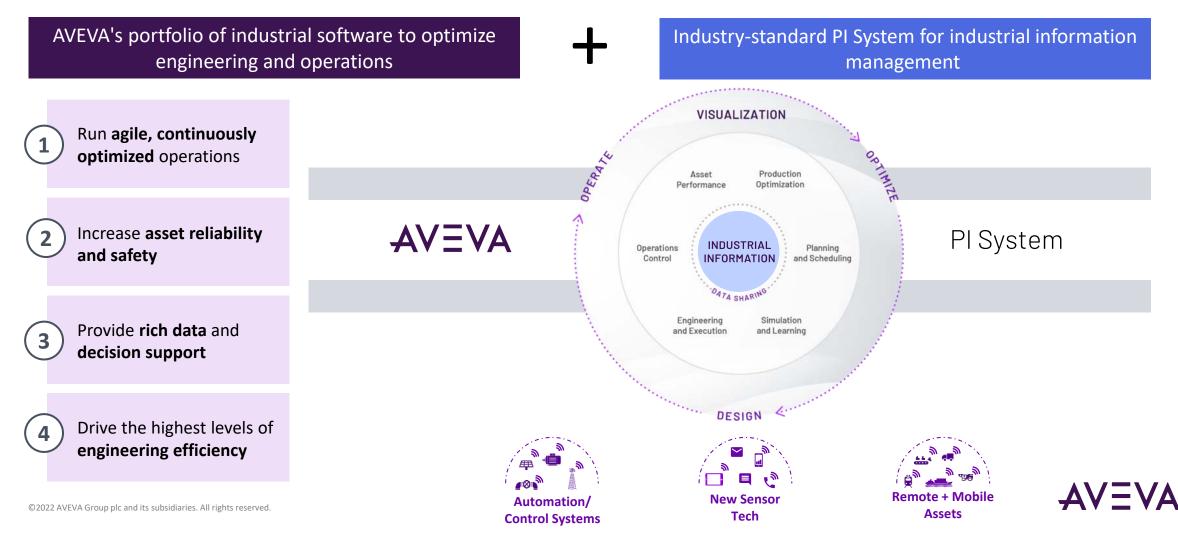
Gregg Le Blanc – SVP, Operations Information Management



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## Harnessing the power of information, AI and human insight

Delivering world-class, end-to-end industrial software



#### Market driven customer priorities

Market trends

#### **Business goals**

and emissions

Improve sustainability,

reduce carbon intensity

() ESG

ESG regulations



Supply chain and service disruptions

Capital projects and supply chain agility and resilience



Consumer desire for green alternatives



Commodity price fluctuations



Labor shortages and remote work

New materials, processes, and facilities for circular economy

Operational efficiency, optimized planning and scheduling

Adaptive and autonomous operations, connected and empowered workforce







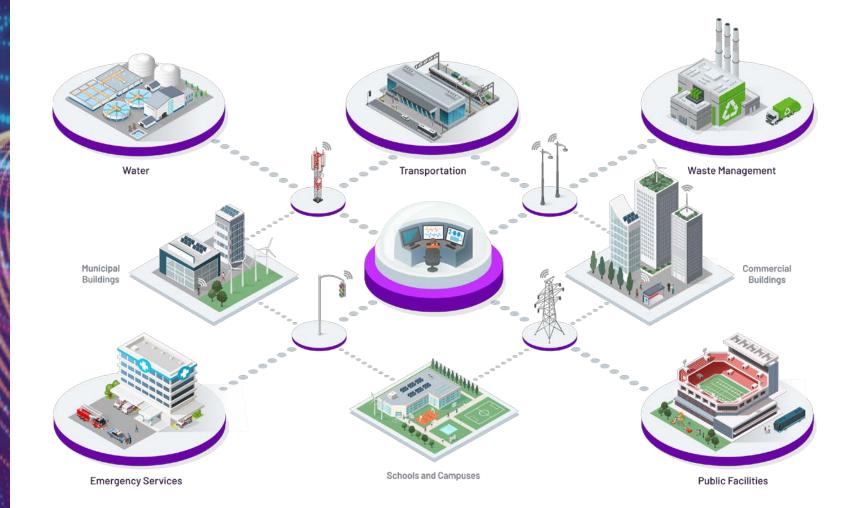


# Power has an ecosystem...





# Cities have an ecosystem...

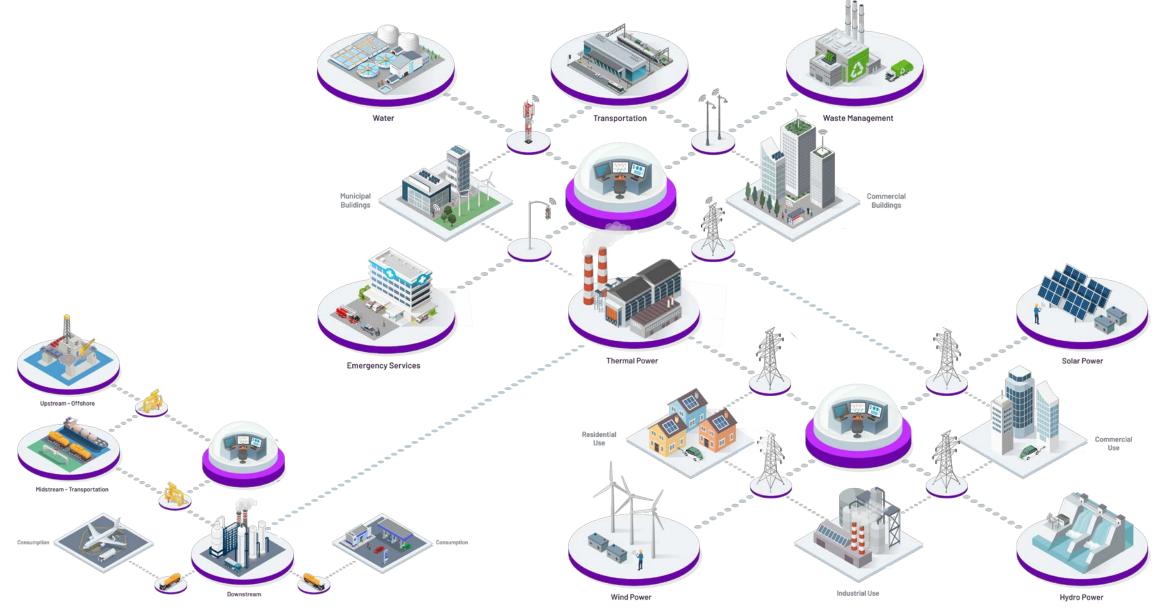




# Energy has an ecosystem...



## And they're connected



### The same is true for our teams

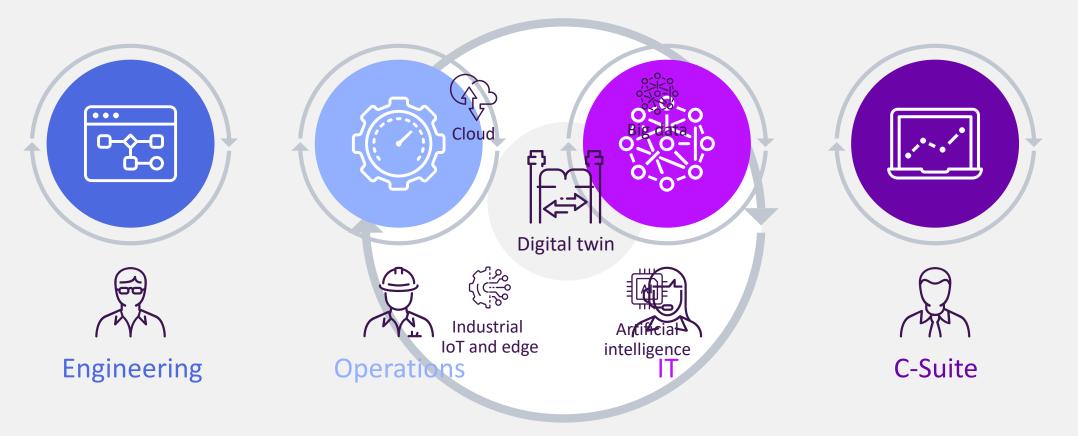
#### From siloed **functional islands...**





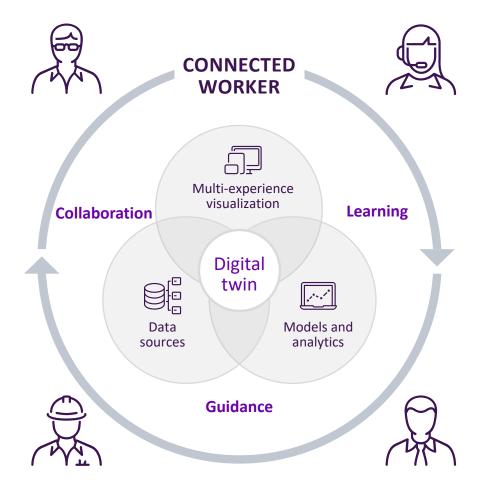
...to collaborative innovation

#### Enabled by **digital technology**



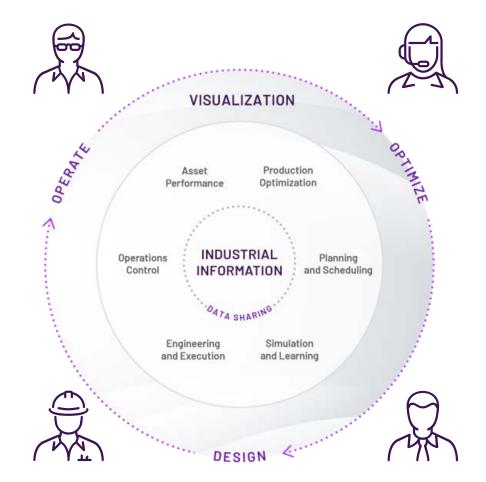
## To empower the connected worker

With a comprehensive digital twin across engineering and operations



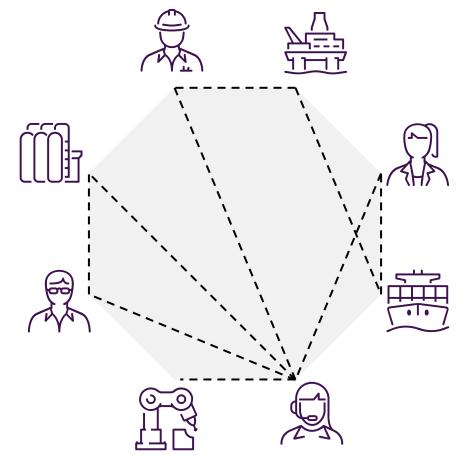
## To empower the connected worker

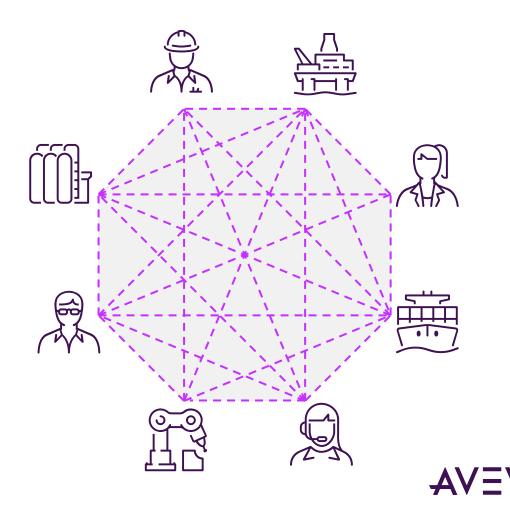
With a comprehensive digital twin across engineering and operations



Connecting people with industrial intelligence

Vision for global, holistic optimization across the entire industrial ecosystem





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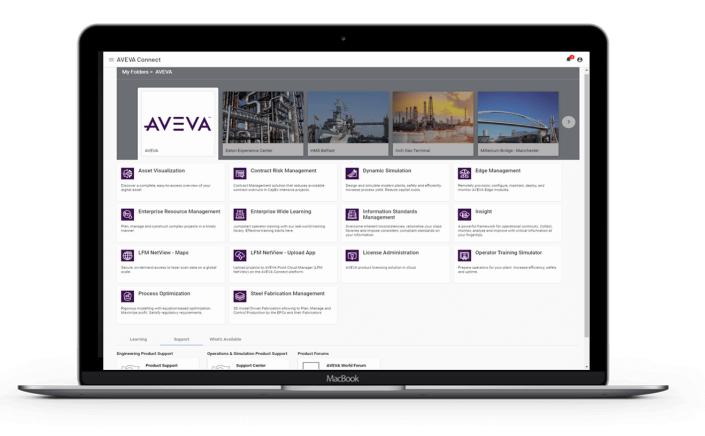
## AVEVA Connect

Accelerate time to value and scale faster with AVEVA Connect industrial cloud platform



### What is AVEVA Connect?

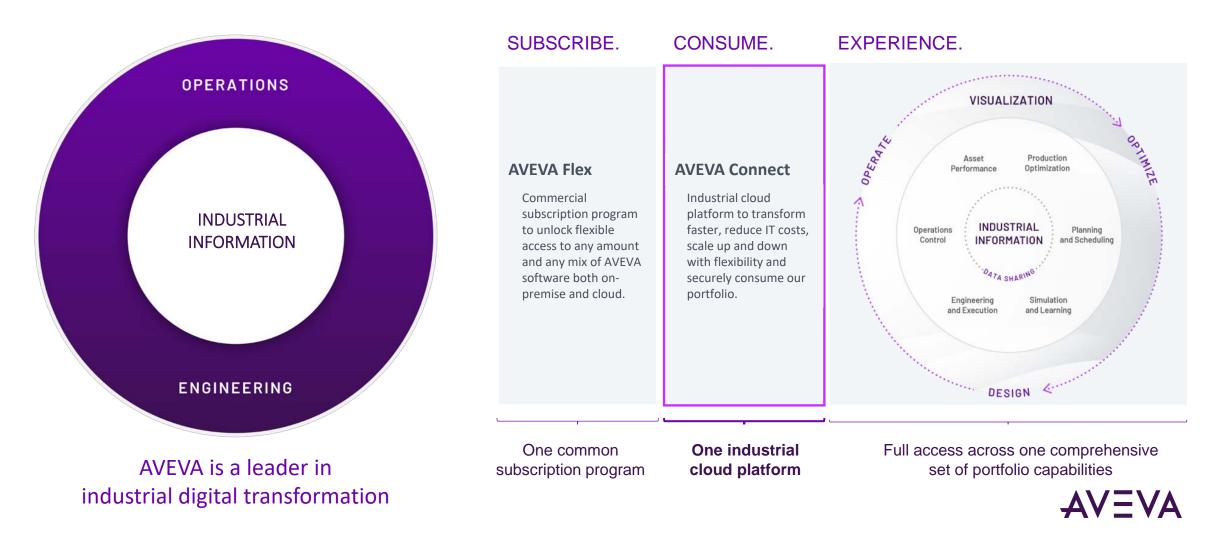
Our industrial cloud platform is your digital transformation hub



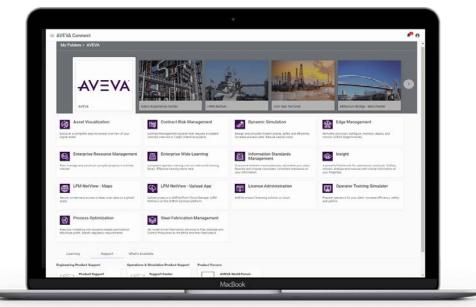
- Transform faster
- Enable new ways of work
- Connect and collaborate
- ✓ One single source of truth
- ✓ Move from CapEx to OpEx
- Lower dependency on IT
- Always the latest and greatest features
- Easily scale up and down
- Built with security, resiliency, highavailability

## An Industrial Cloud Platform

#### AVEVA's comprehensive portfolio, on AVEVA Connect



## Why AVEVA Connect ?



#### Collaborative

Remove organizational silos and enable transparent, realtime collaboration in a shared environment to allow unmatched levels of workforce efficiency.

#### Fast

Fast deployment and easy access to contextualized information and rich Artificial Intelligence, to make agile decisions and ensure sustainable growth.

#### Flexible

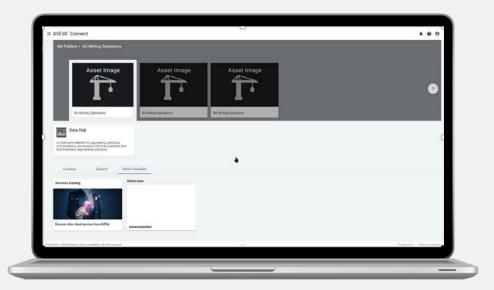
Lower total cost of ownership (TCO) and flexible consumption based on need. Scale up, or down, with the right tools at the right time.

#### Secure

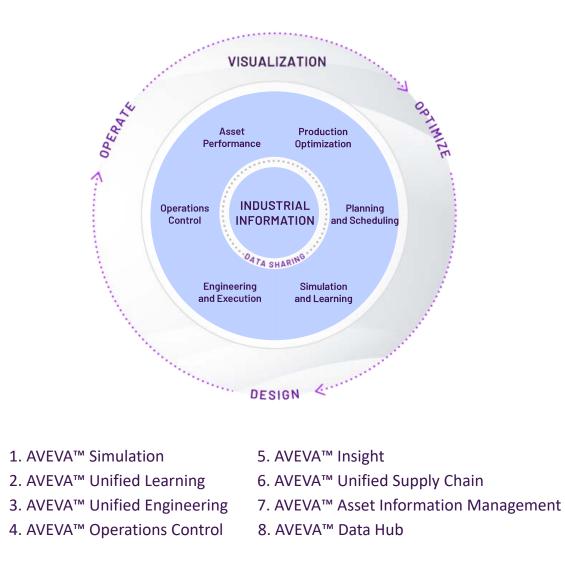
Access the latest digital services built for data security and high availability (>99% uptime), with centralized user management and single signon.

## AVEVA software in the cloud drives sustainable growth

Transform faster, reduce costs and easily scale to engineer smarter, operate better



**Roadmap:** Launch of AVEVA Data Hub, visualization across engineering and operations, OEM & partner integration, extend on-prem integration, hybrid cloud



## Increasing AVEVA Connect's capabilities

The platform journey



### Delivering a complete digital thread, purpose-built for industry

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

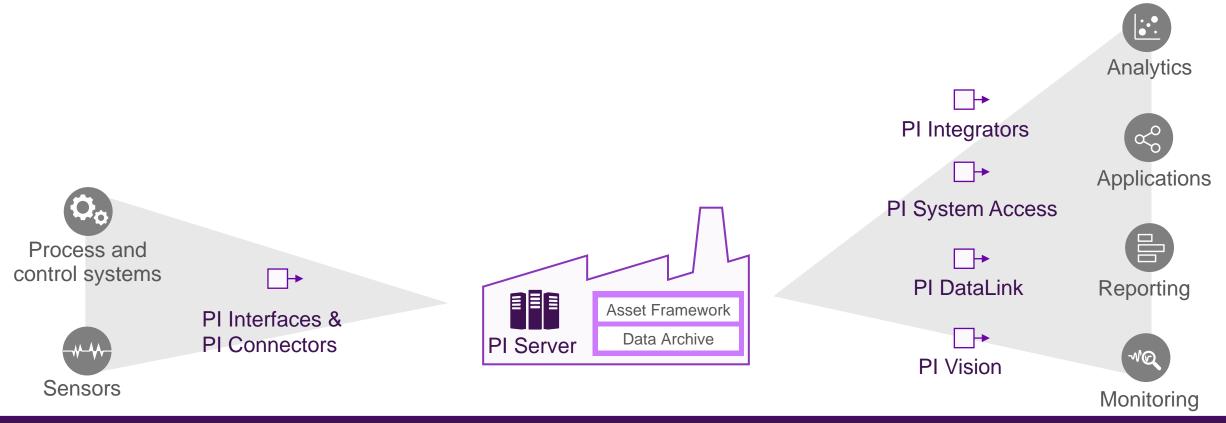
Multi-experience engineering and operations visualization across the enterprise					3 <sup>rd</sup> party visualization	
Simulation Pr <b>and Garming</b> operator training, enterprise learning	3D design,	<b>Operations</b> Edge <b>, ଦେନୁହେବା</b> sory, enterprise control	Asset Rerformance, asset analytics, maintenance execution	<b>Production</b> Ope <b>Optimization</b> ion, process optimization, production management	<b>Planning</b> Fee <b>and Schedslying</b> ent, supply chain planning and scheduling	3 <sup>rd</sup> party apps and analytics
Engineering: Engineering data collection, aggregation, storage and contextualization Aggregation aggregation, storage and contextualization Aggregation aggregatio					3 <sup>rd</sup> party data sources, systems and databases	

## Delivering a complete digital thread, purpose-built for industry

Accelerate time to value with trusted industrial hybrid SaaS solutions

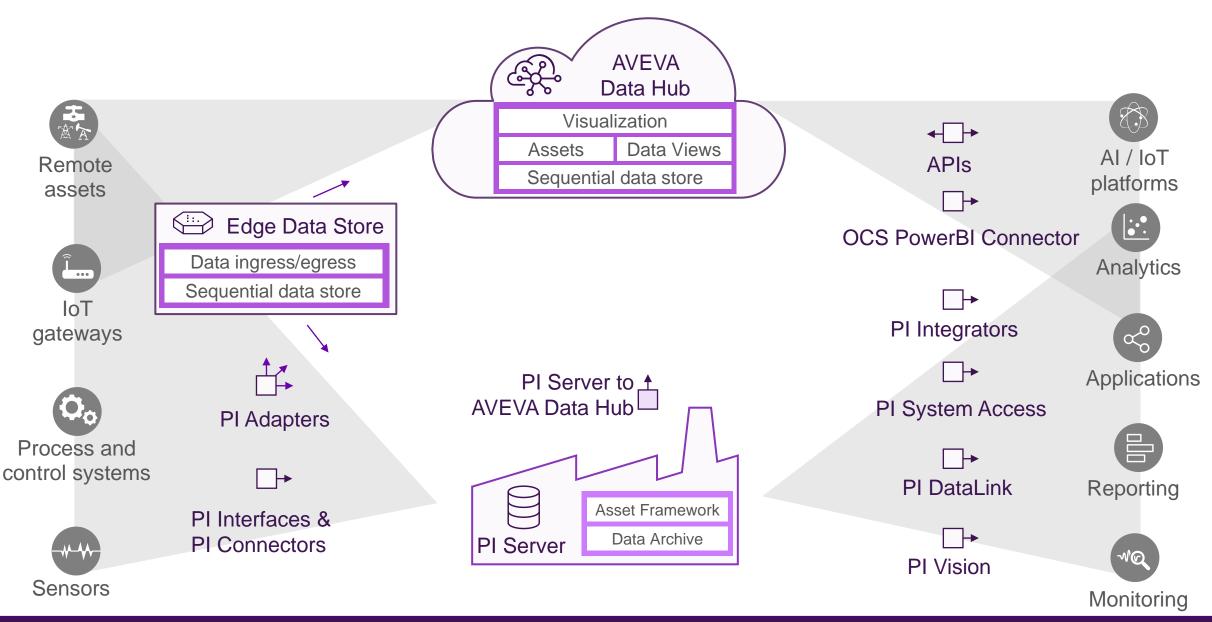
Visualization Multi-experience engineering and operations visualization across the enterprise					3 <sup>rd</sup> party visualization	
Simulation and Learning Process simulation, operator training, enterprise learning	Engineering and Execution Engineering, 3D design, project execution	Operations Control Edge, supervisory, enterprise control	Asset Performance Asset strategy, asset analytics, maintenance execution	<b>Production</b> <b>Optimization</b> Operations execution, process optimization, production management	Planning and Scheduling Feedstock management, supply chain planning and scheduling	3 <sup>rd</sup> party apps and analytics
	and Learningand ExecutionControlPerformanceOptimizationand SchedulingProcess simulation, operator training,Engineering, 3D design,Edge, supervisory, enterprise controlAsset strategy, asset analytics,Operations execution, process optimization,Feedstock management, supply chain planning				3 <sup>rd</sup> party data sources, systems and databases	





#### 2018: PI Server

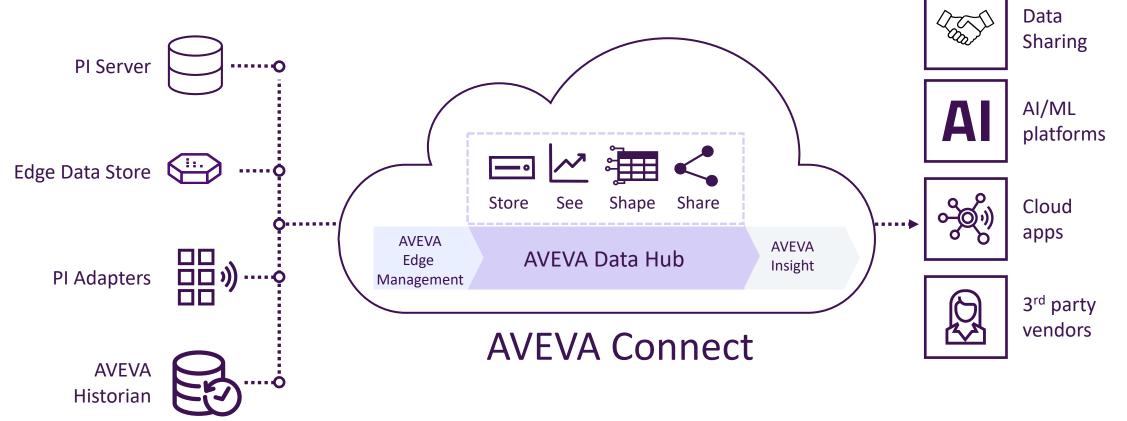
Focused on the asset and plant. Hardening the core for **critical operations**.



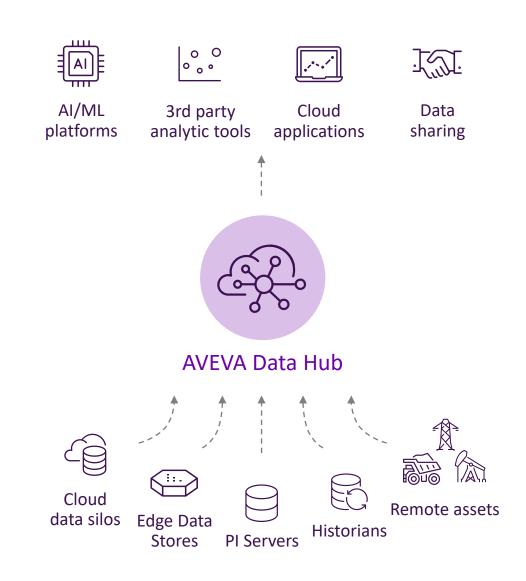
TODAY – Customers can build their seamless infrastructure Leverage ADH Assets, Asset Framework and Communities (preview) to keep data in **context** and **secure** so you can enable **new users** and **new use cases**.

## AVEVA Data Hub, now part of AVEVA Connect industrial cloud platform

#### Your shared version of the truth



AVEVA

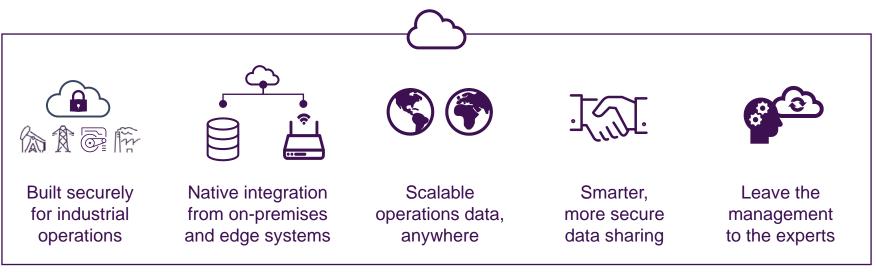


A cloud-native service for aggregating, storing, enriching, accessing, and analyzing real-time operations data from historians, edge devices, and more

- Managed, secure, multitenant platform
- Operated & maintained by AVEVA
- High speed, scalable, elastic, & resilient
- Modern, secure REST APIs
- Built & deployed on Microsoft Azure

AVEVA

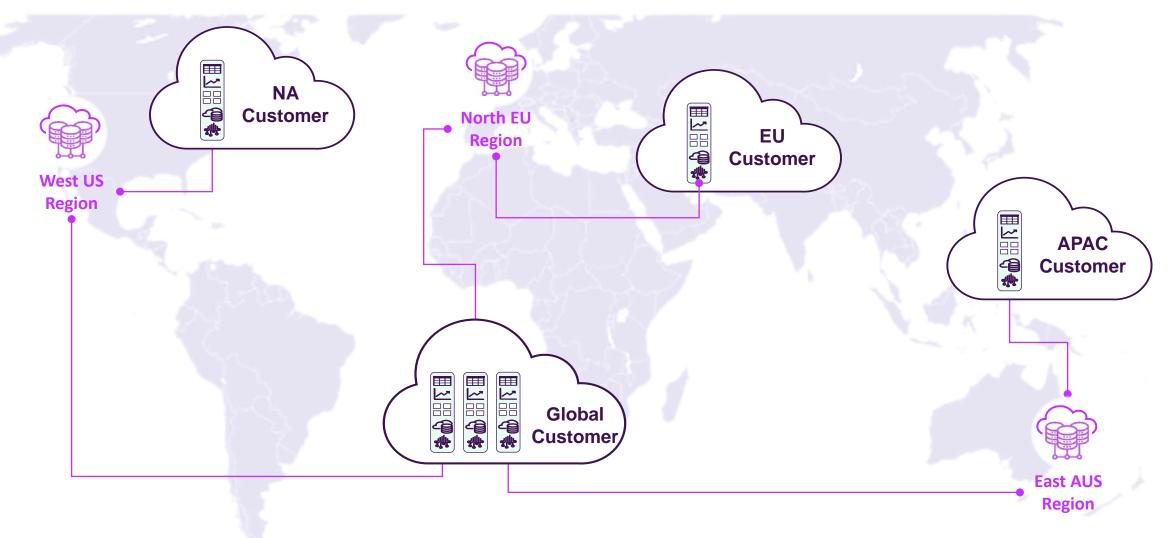
#### What sets AVEVA Data Hub apart?



**AVEVA Data Hub** 

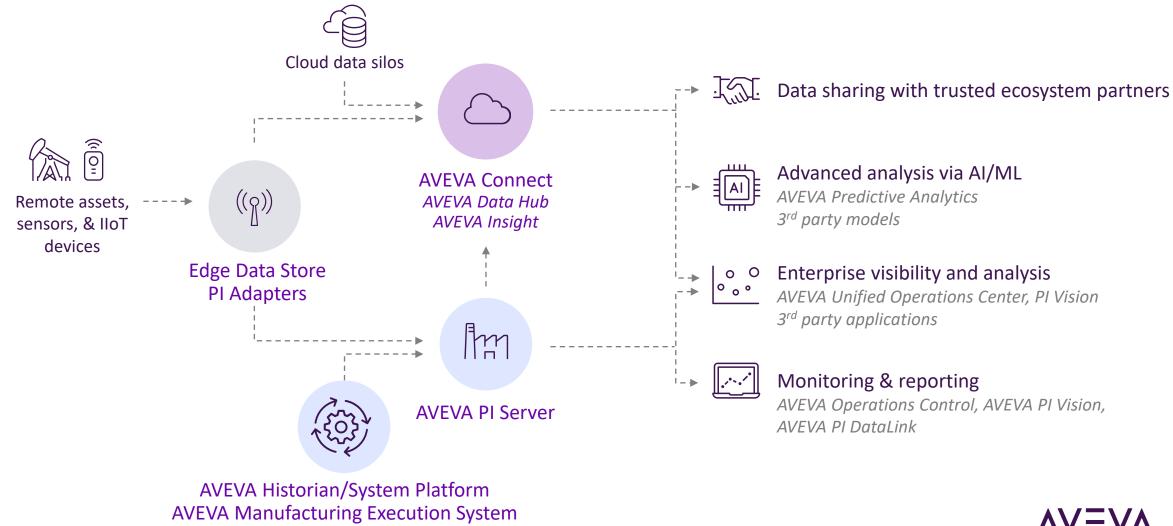


## Enabling global accounts, supporting local data residency

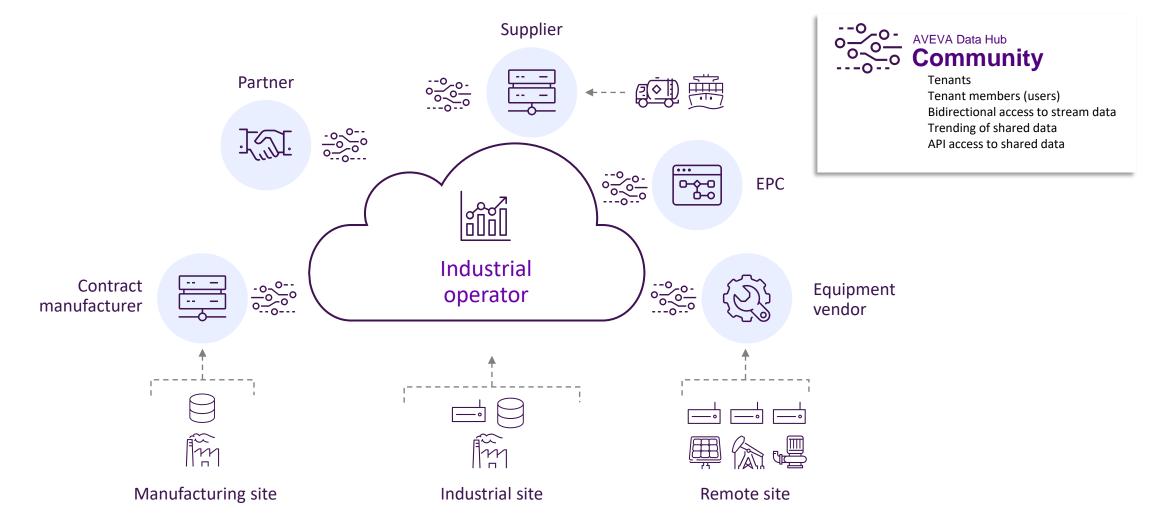




## Bridging engineering, operations, and business domains



## Data becomes the foundation of a connected community



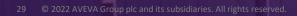
## Renewable Energy Group & Allied Reliability

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

> 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%





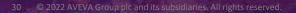


Mining operation captured near realtime data from fleet of trucks, to create a digital Knowledge Center, improving fleet management, reducing unplanned downtime and boosting productivity.

Significant savings expected per extra production day through smart maintenance.

Reduced risk of expensive asset failures through predictive maintenance. (Trucks can cost up to 5M USD)

Data sharing improved collaboration between mining truck operations, dam management and other departments.



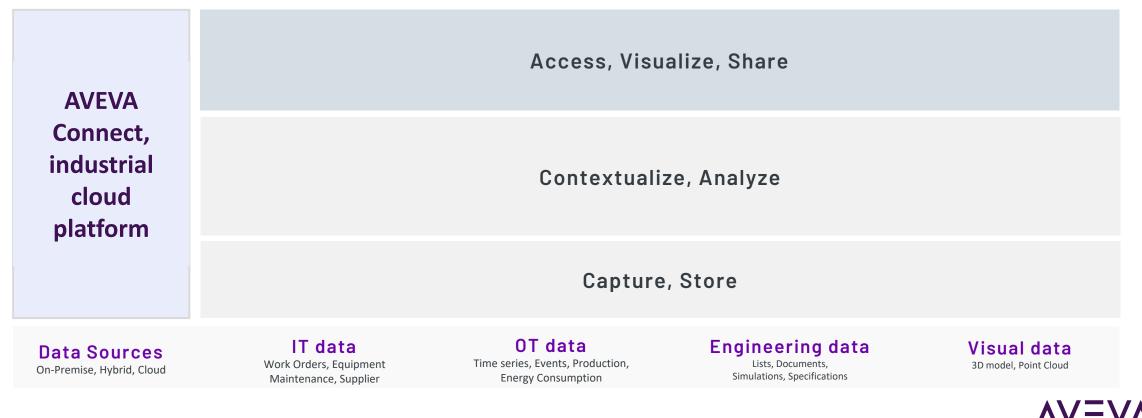


## The future of AVEVA Connect

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Connecting people with industrial intelligence

Global, holistic optimization across the entire industrial ecosystem



#### Future vision: Optimize the entire industrial ecosystem

#### Connecting people with Industrial Intelligence-as-a-Service

		Domain and Eco	osystem User Experiences				
AVEVA Software Applications		Custo	Customer Applications		OEM and Partner Applications		
Platform Tooling:	Search, Data Access, & Con	figuration API	Community Data Sharing	Reference Fran	neworks		
		Enrichmer	nt Software Services				
Data Enrichment Services	Visualiza	ation Services	Hybrid Ser	vices	Referen	ce Services	
					[		
	Domain Software S	<b>ervices:</b> Ingress – Da	ata Storage – Processing – Mod	elling – Digital Twin			
	Common Software Servio	ces: Authentication	and Authorization – Consumpti	on – Billing – Self Se	ervice		





## AVEVA Connect: Industrial Intelligence-as-a-Service

#### **EXPANDING AVEVA CONNECT & DATA HUB VALUE**

Increased data source aggregation & data science capabilities Leverage and extend your investments in AVEVA's applications

#### SUPPORTING FROM EDGE TO COMMUNITY

Make it easy to manage everything from edge devices to data sharing Close the loop for data operations between the edge and cloud

#### **BRIDGE ENGINEERING & OPERATIONS DIGITAL TWIN**

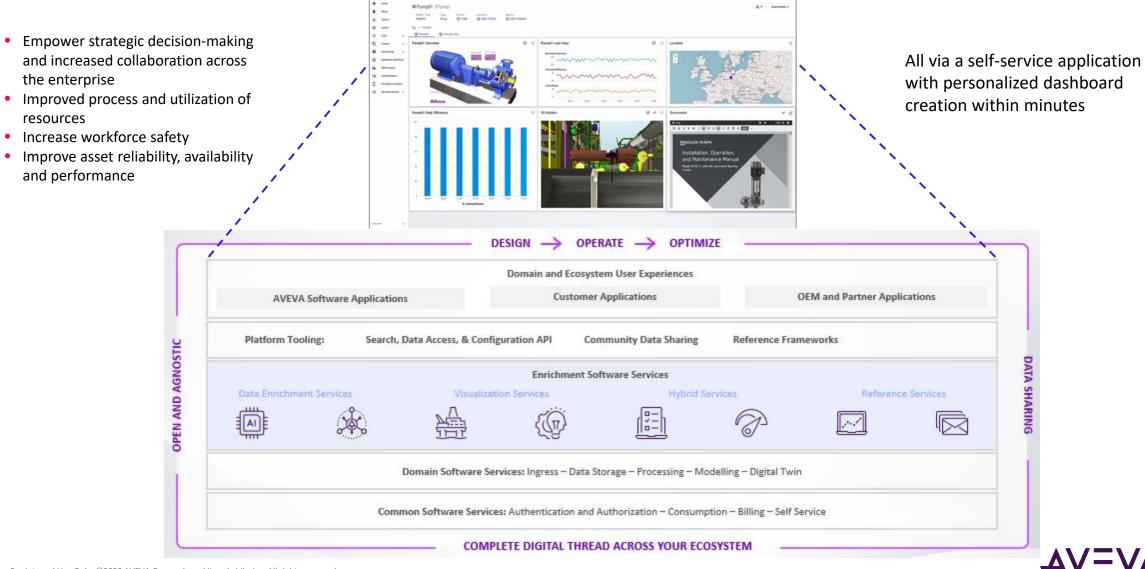
Increase storage, management, and alignment capabilities Represent engineering information in operational contexts

#### **EXPANDING THE ECOSYSTEM**

Open and neutral platform for engineering and operations information Supporting new digital business ventures and customer applications



## Lighthouse Ready: Optimize the entire industrial ecosystem





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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.

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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 <u>www.aveva.com</u>