

The background is a dark purple gradient. On the left, there are two vertical neon lines, one blue and one magenta, with a horizontal magenta line intersecting the blue one. On the right, a large, glowing magenta arc curves from the top towards the bottom. The text 'AVEVA WORLD' is centered in a white, bold, sans-serif font.

AVEVA WORLD

APRIL 8, 2025

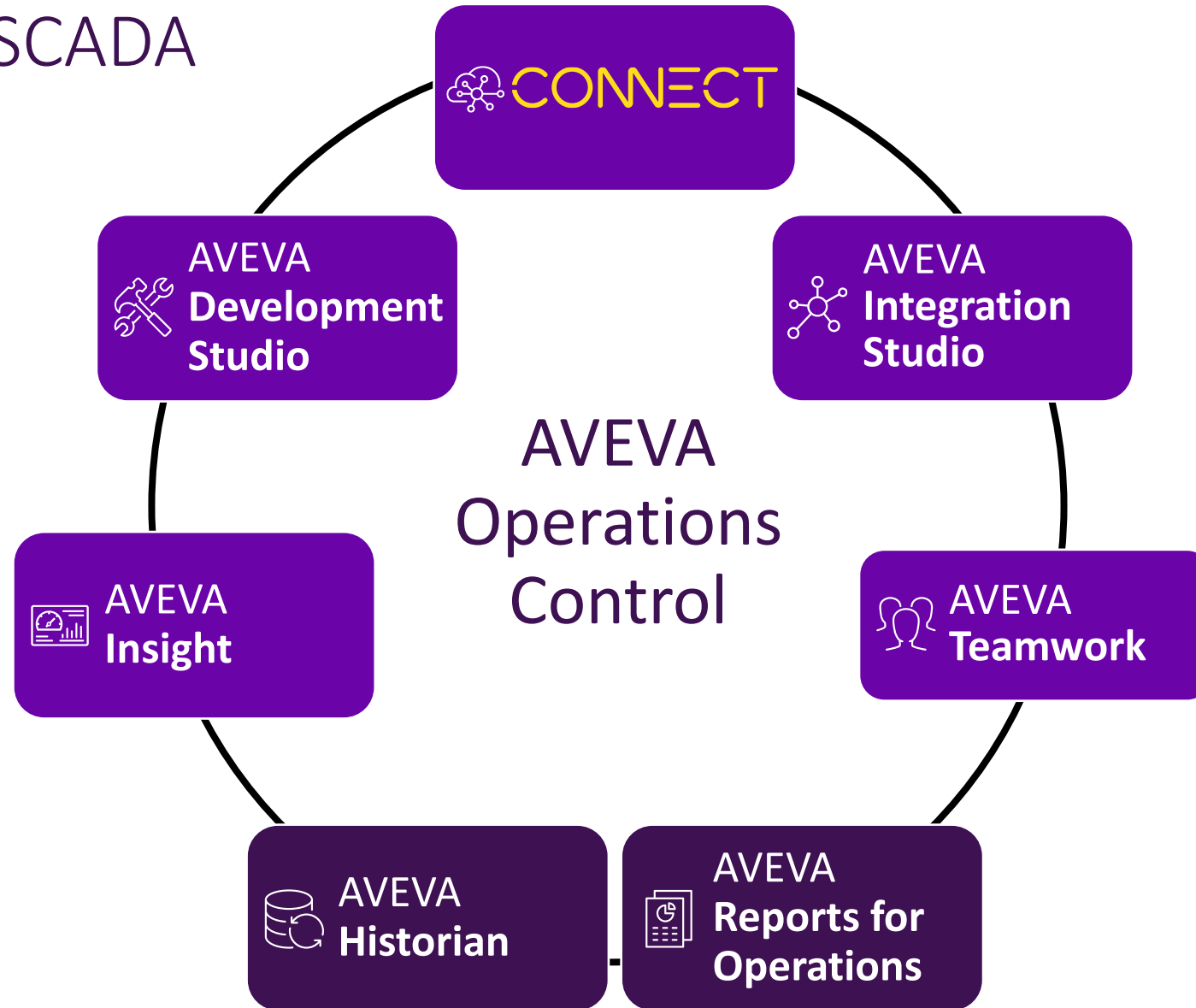
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# Common HMI/SCADA Portfolio Components Roadmap

Session-118

Elliott Middleton

## Common HMI/SCADA



# Challenges for industrial operations

## Accessibility for all teams

43% struggle making data more broadly accessible with the systems in place today.

IDC

## Data-driven visibility

70-80% of time spent preparing and cleansing data as opposed to analysis.

LNS Research

## Responsiveness to issues

Time and cost of break/fix repairs is three to five times the cost of pre-failure action.

Reliable Plant

## Accelerating and scaling results

A responsive workforce is at least 20% more likely to overperform against corporate goals.

Gartner

*“Long-held aspirations of optimizing business value while simultaneously reducing risk are now within reach as a result of technological advances in the areas of connectivity, cloud, and contextualization.*

*These technologies make data-driven operations possible.”*

IDC, 2023

# Increasing Access



## InTouch Unlimited

- World's leading HMI
- Integrated AVEVA Historian

Perpetual



## InTouch Unlimited

- World's leading HMI
- Integrated **Unlimited\*** AVEVA Historian



## System Platform

- Rich Operations Management Interface
- Ideal for highly-distributed applications
- Integrated Historian

Flex Subscription



## Operations Control

- Hybrid SaaS/on-premises
- User-centric subscription
- Architectural flexibility
- **Unlimited\*** redundant Historians

\* no licensed limit; 2 million tag architectural limit

# Solutions Compared

Enterprise



AVEVA PI

**42+**

years as a leader

**20,800+**

sites

**2B+**

points

**96K**

average points

Supervisory



AVEVA Historian

**35+**

years as a leader

**140,000+**

sites






**1.1B+**

points

**6K**

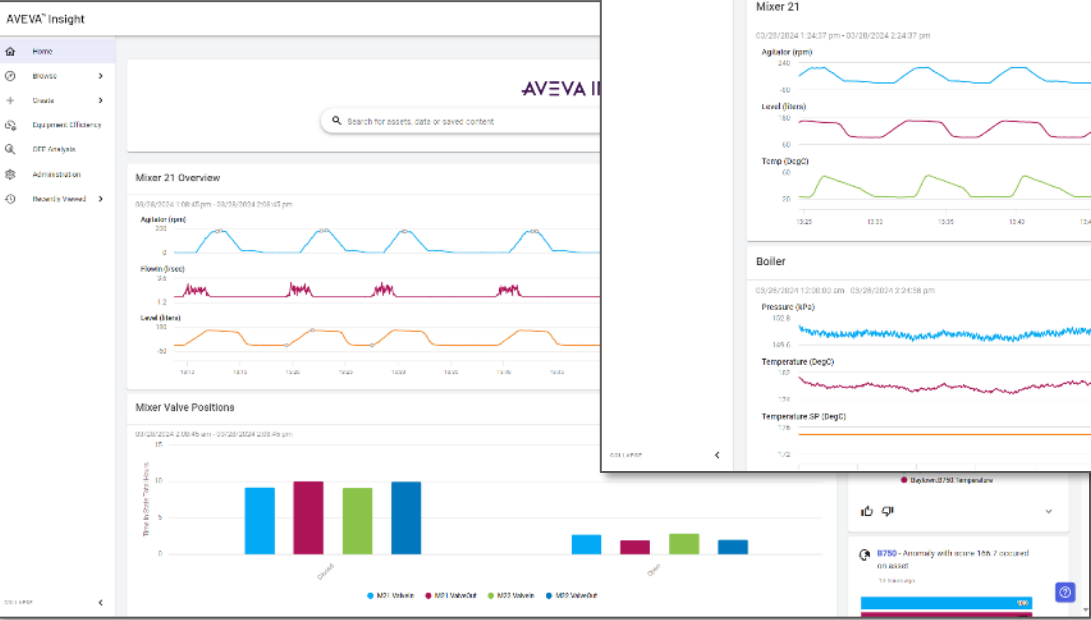
average points

# Overall Historian Themes

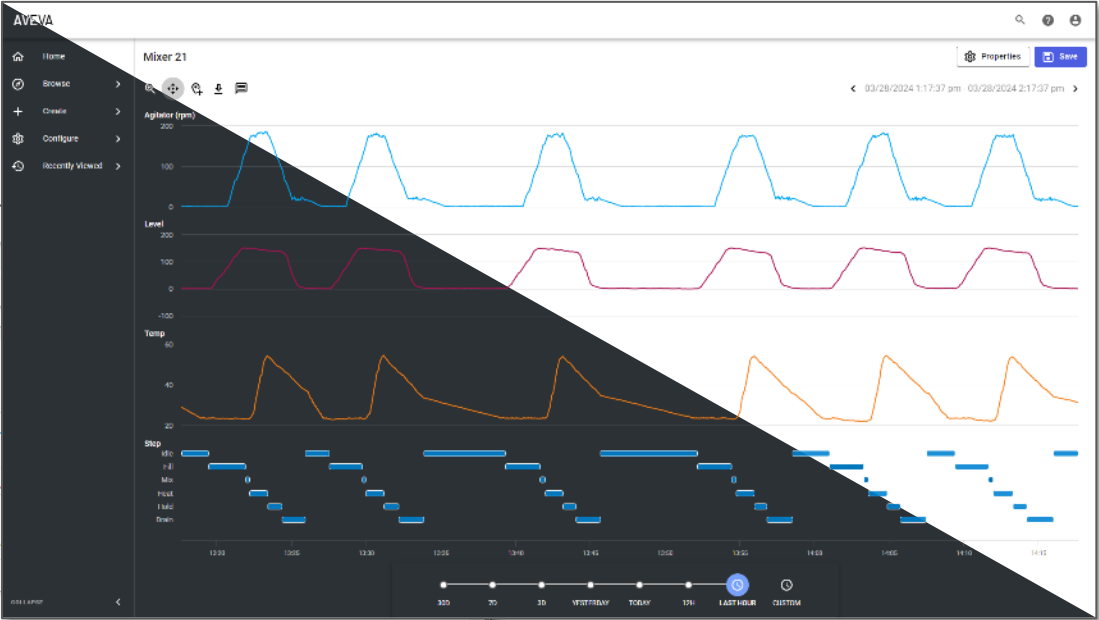
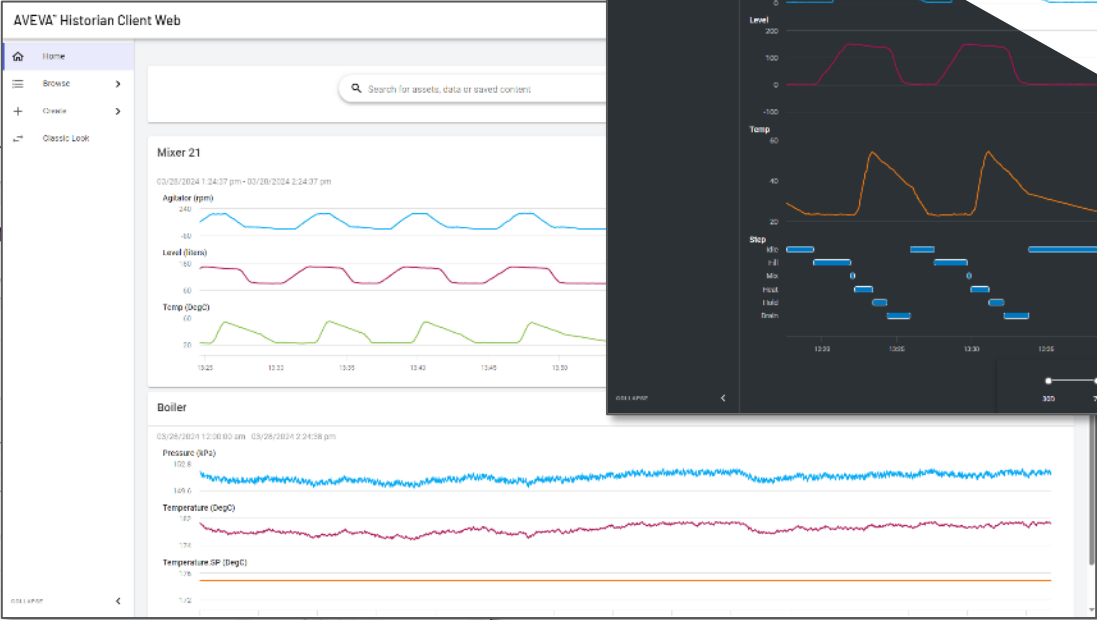
	CONNECT	<ul style="list-style-type: none"><li>• Connected Experience</li><li>• Assets in CONNECT data services</li><li>• Most popular data source for SaaS</li></ul>
	More Accessible	<ul style="list-style-type: none"><li>• Self-service browser access</li><li>• Online in Insight &amp; CONNECT visualization</li></ul>
	More Valuable	<ul style="list-style-type: none"><li>• Transformations</li><li>• Add Context</li></ul>
	Broaden Interest	<ul style="list-style-type: none"><li>• Alarm History</li><li>• Meaningful aggregates</li></ul>
	Reduce Friction	<ul style="list-style-type: none"><li>• Connecting sources</li><li>• Consuming information</li></ul>

# Common Visualization Technology

## AVEVA Insight



## AVEVA Historian Client Web

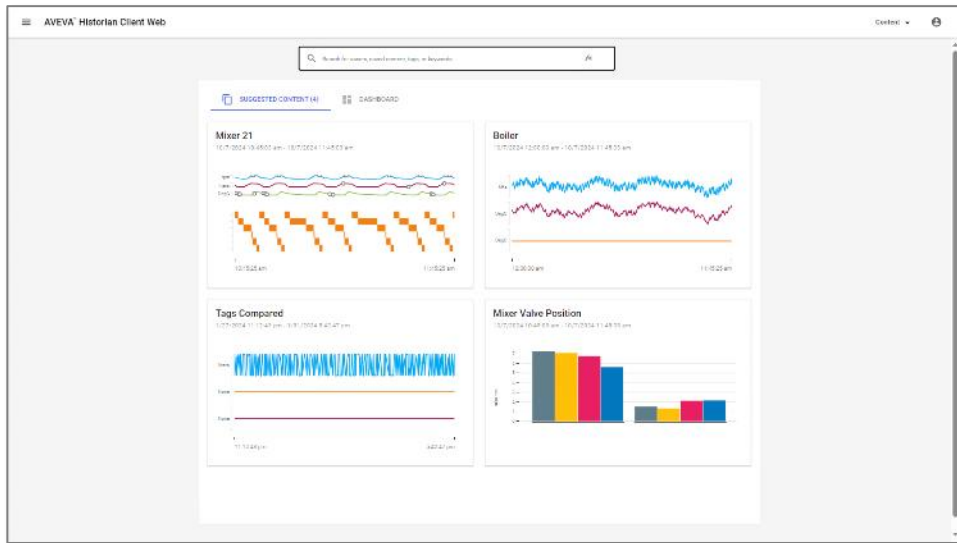


CONNECT visualization



# AVEVA Historian Client Web

## “Classic”



- Retiring for AVEVA Historian 2026

## “Modern”



- Near feature parity in 2023 R2
- Added URL chart in SP1

- Home
- Alerts
- Alarms
- Assets
- Lists
- Content
- Dashboards
- Equipment Efficiency
- Strategize
- OEE Analysis
- Administration
- Classic Look

Content001

🔍

📍

📌

⬇️

📄

🔔

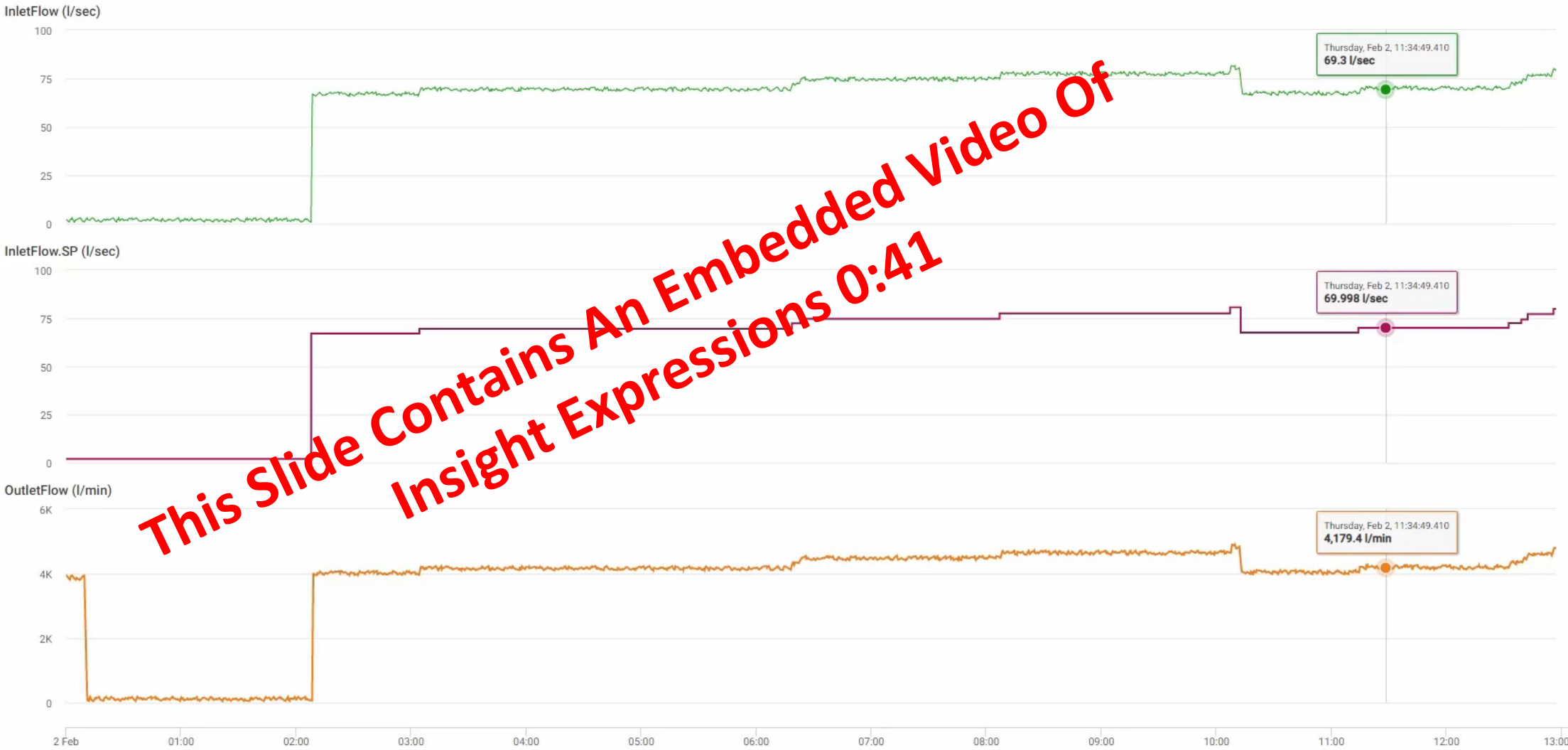
📍 Cursor

📄 Data

⚙️ Settings

💾 Save

< 02/02/2023 12:00:00 am - 02/02/2023 1:04:08 pm >



# Ad Hoc Expressions

## Arithmetic

+  
-  
/  
\*  
^  
%

## Units

UOM  
CASTUOM

## Scalar

SIGN  
ABS  
SQRT  
LOG  
ROUND  
TRUNCATE  
  
AND  
OR  
NOT  
  
IF  
IFBAD  
IFLONGER  
IFSHORTER

## Statistics

AVERAGE  
AVERAGES  
TOTAL  
TOTALS  
MIN  
MAX  
COUNT  
COUNTALL  
STDDEV

## Time Series

TIMESHIFT  
DURATION  
PREV  
PREVGGOOD

## String Literals

In logical expressions  
As results for IF

*New in AVEVA Historian 2023 R2  
New in AVEVA Historian 2026*

# Aggregate Function Expressions

AVERAGE( `SysTimeSec`, 5 minute )

AVERAGE( `M21.Level`, `M21.Batch` )

AVERAGE( `M21.Level`, `M21.Temp` > `70.0` )

*Future “Ideas”*

# Leveraging Auto-Summary in Expressions

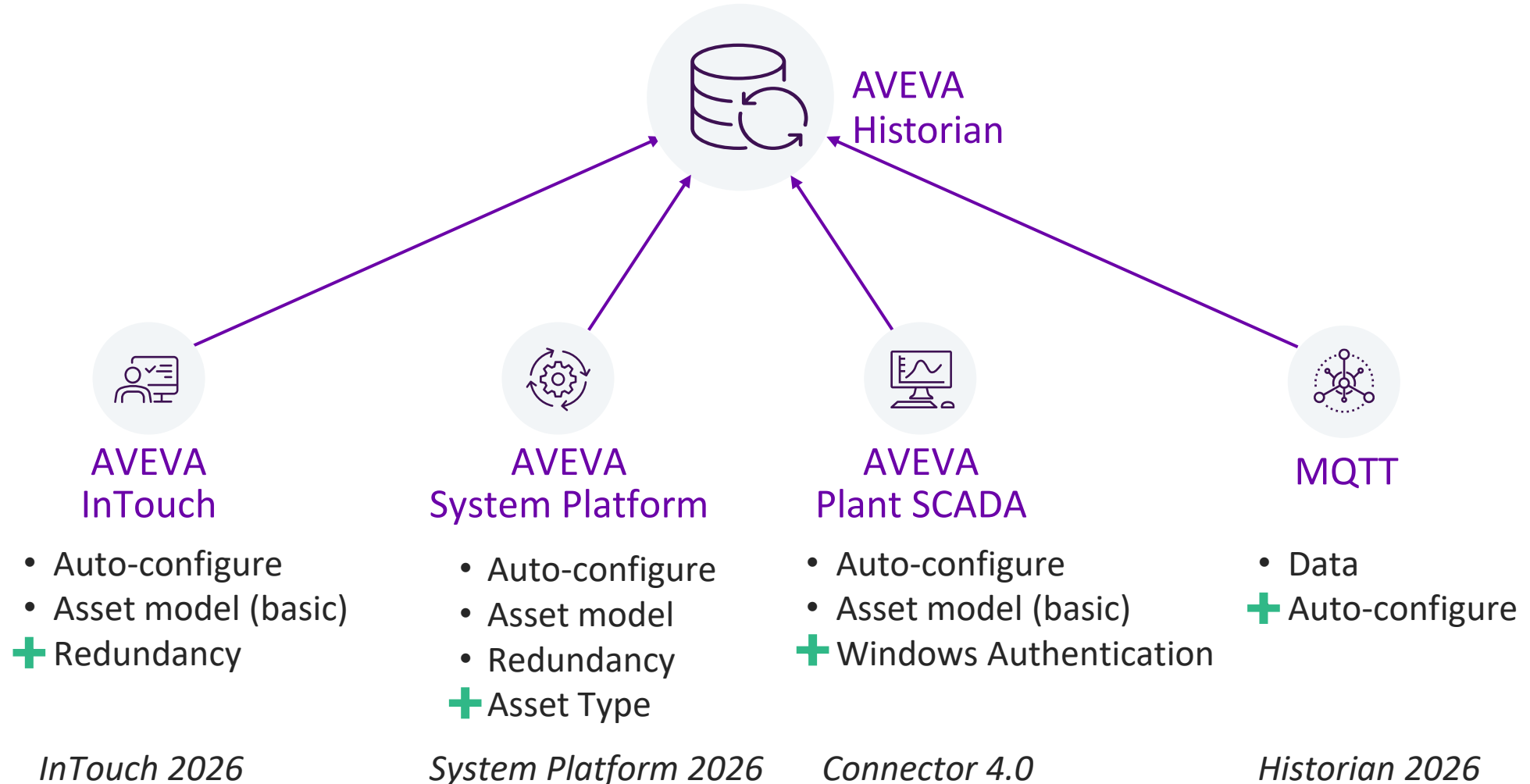
## Can Be *Significantly* Faster

```
TOTAL( Tag1, 1 hour )  
MAX( Tag1, 6 hour ) / 60.0  
AVERAGE( Tag1, 1 day ) + MIN( Tag2, 1 hour )
```

## Won't Help For Everything

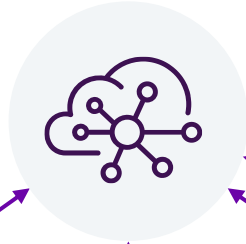
```
TOTAL( Tag1, 5 minute )  
MAX( Tag1 + Tag2, 1 hour )  
MAX( Tag1 / 60.0, 6 hour )  
AVERAGE( IFBAD( Tag1, Tag2 ), 1 day )
```

# AVEVA Historian Ingress



# AVEVA Historian/CONNECT data services Integration

CONNECT  
data services



- + Free download
- + New UI
- Backfill



AVEVA  
Historian **2020 R2 SP1\***  
*June 2025*



AVEVA  
Historian 2023  
*July 2023*



AVEVA  
Historian 2023 R2  
*January 2024*

+ Asset model



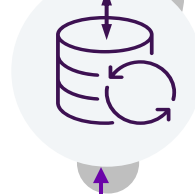
AVEVA  
Historian 2023 R2 **SP1**  
*November 2024*

AVEVA Historian Agent

Native Replication

# What About Older Source Systems?

CONNECT  
data services

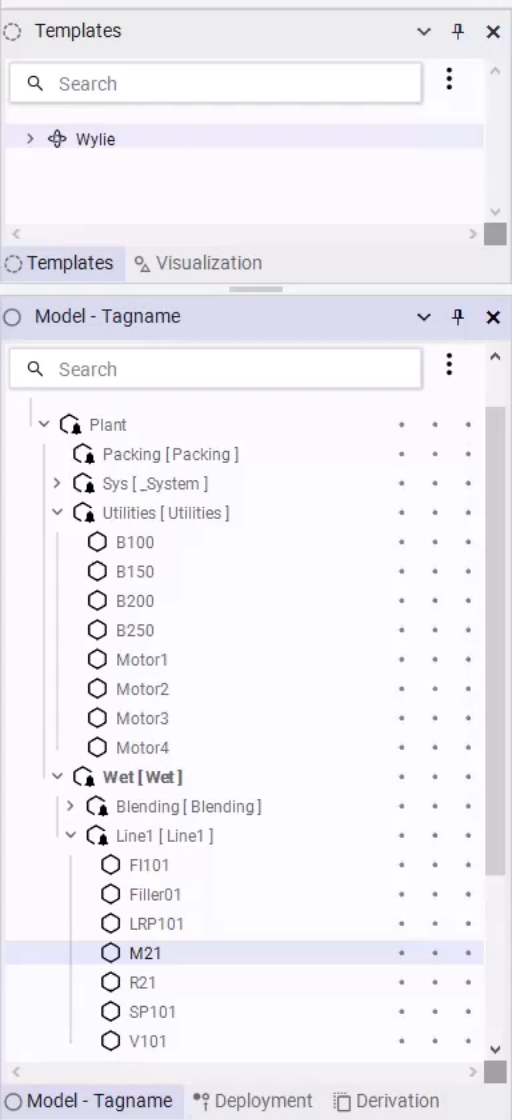
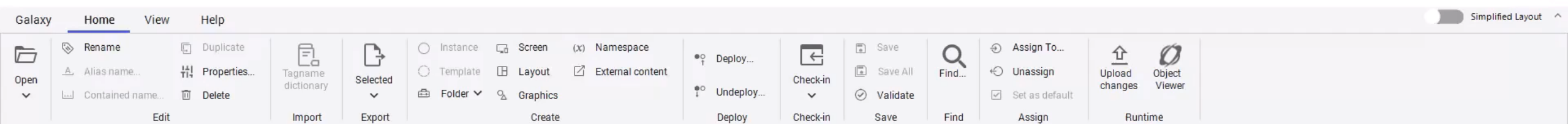


AVEVA  
Historian **2020 R2 SP1**  
*or later*



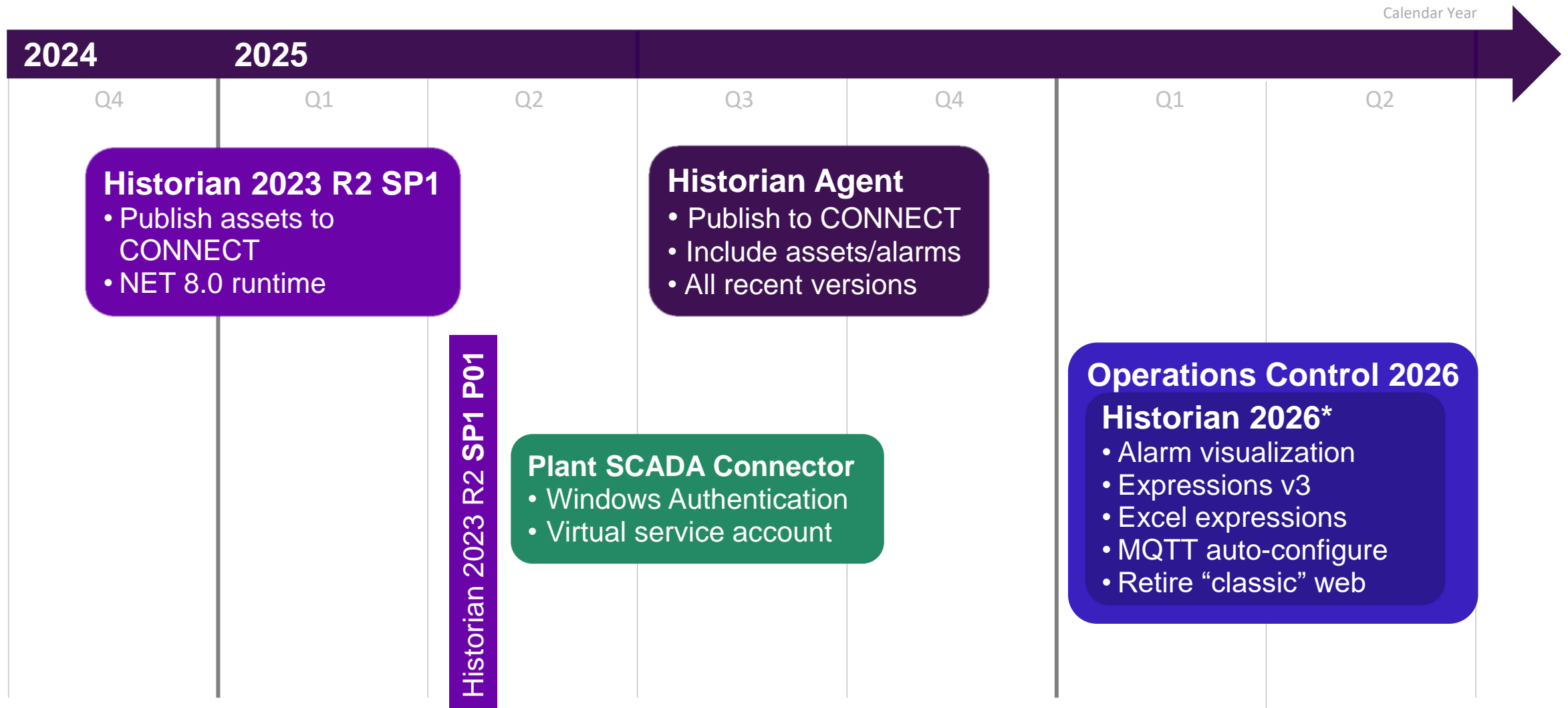
Wonderware Application  
Server **2014 R2**



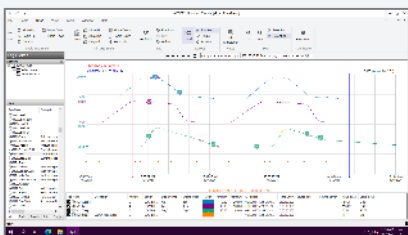


**This Slide Contains An Embedded Video Of  
Publishing Assets to CDS/CVS  
2:07**

# AVEVA Historian

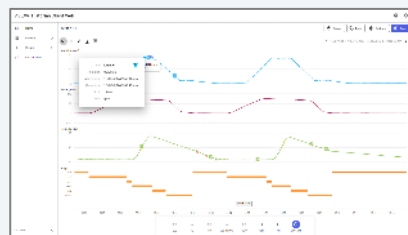


# Getting Information From Historian



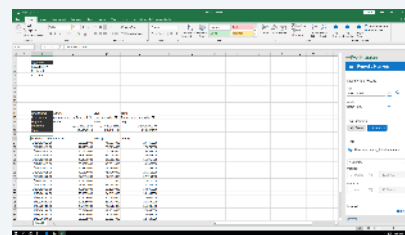
## Desktop

- Continued support
- Minor feature development



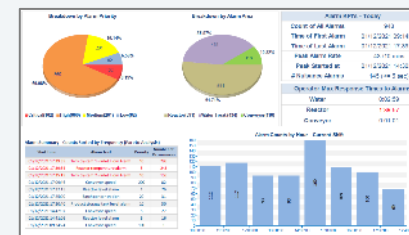
## Web

- Primary development focus
- Transitioning to “Modern”, retiring “Classic”
- Add more alarm-focused content



## Excel

- New features each release since 2017 U3
- Focus on “Task Pane” (32/64-bit)
- Most features from “Classic”, different workflow



## Reports

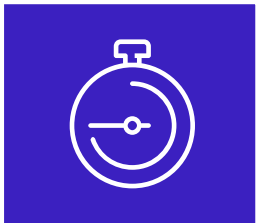
- Industrial-specific:
  - SPC
  - Batch
  - Energy
  - Alarms
- Supports non-Historian sources



## Power BI

- Not as useful without context
- Supports REST (common with Insight)
- Supports SQL (on-premises only)

# AVEVA Reports Capabilities



## Time-based Aggregates

- Average
- Integral
- Min/Max
- ...



## Setpoint Analysis

- Stable period metrics
- Rate of change before/after



## Alarm Analysis

- Counts
- Response times
- Time in alarm
- Alarm Rates
- Short/long duration
- Supports AMS/ISA 18.2



## Statistical Process Control

- Control Limits
- Process Capability
- Apply Nelson Rules



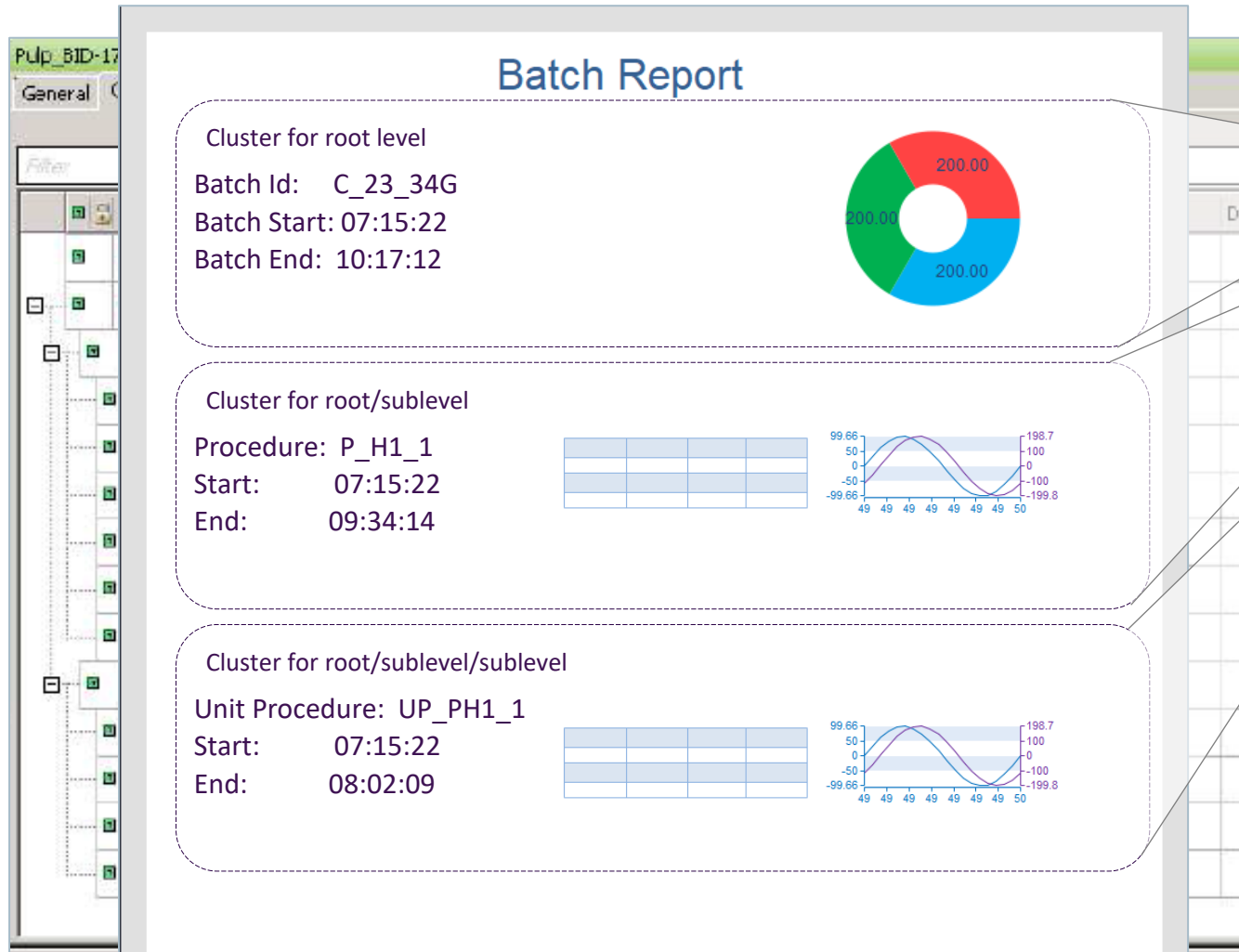
## Batch

- PI Event Frames
- Sublevels
- Clusters



## Manual Data Entry

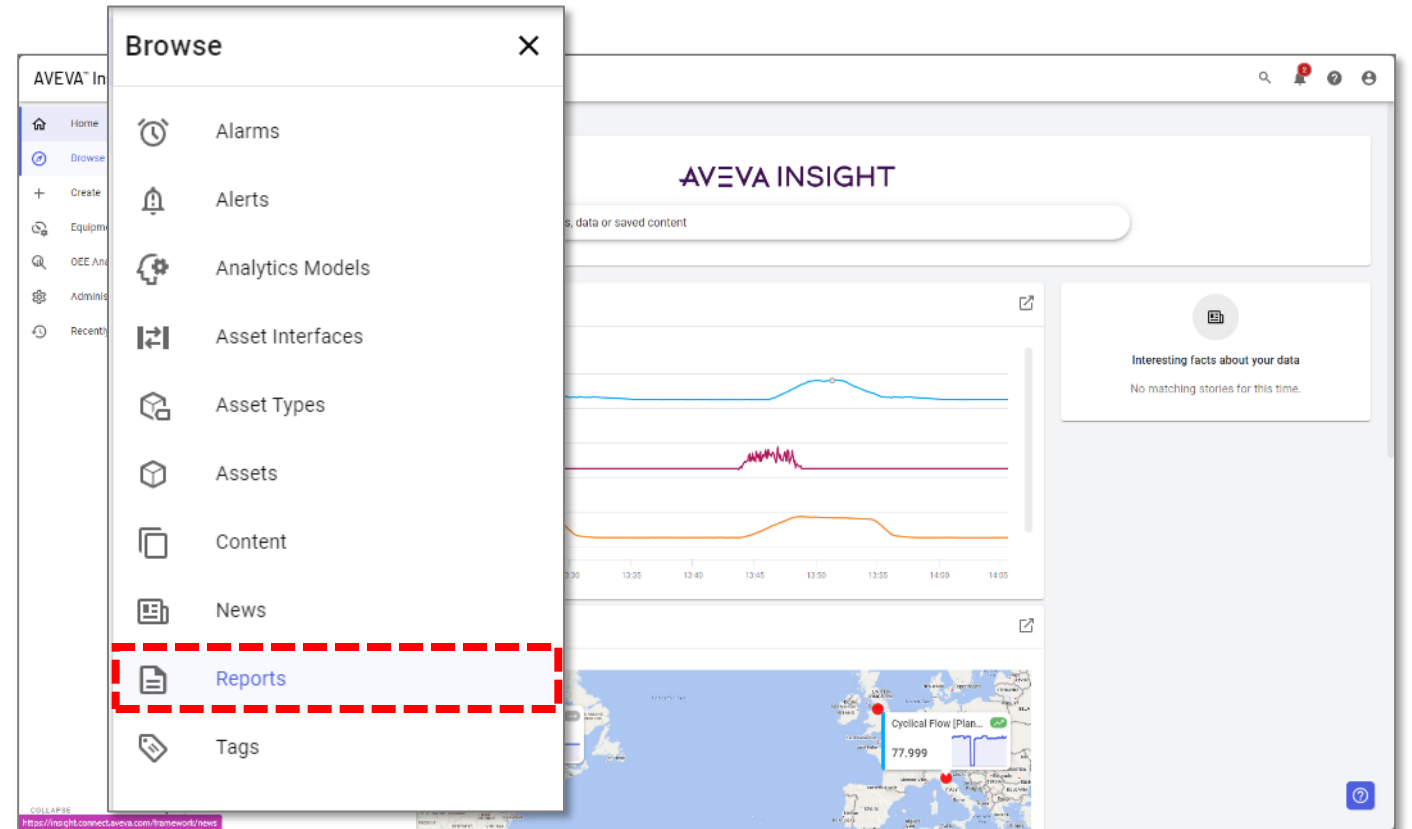
# Hierarchical Batch Model (S88)



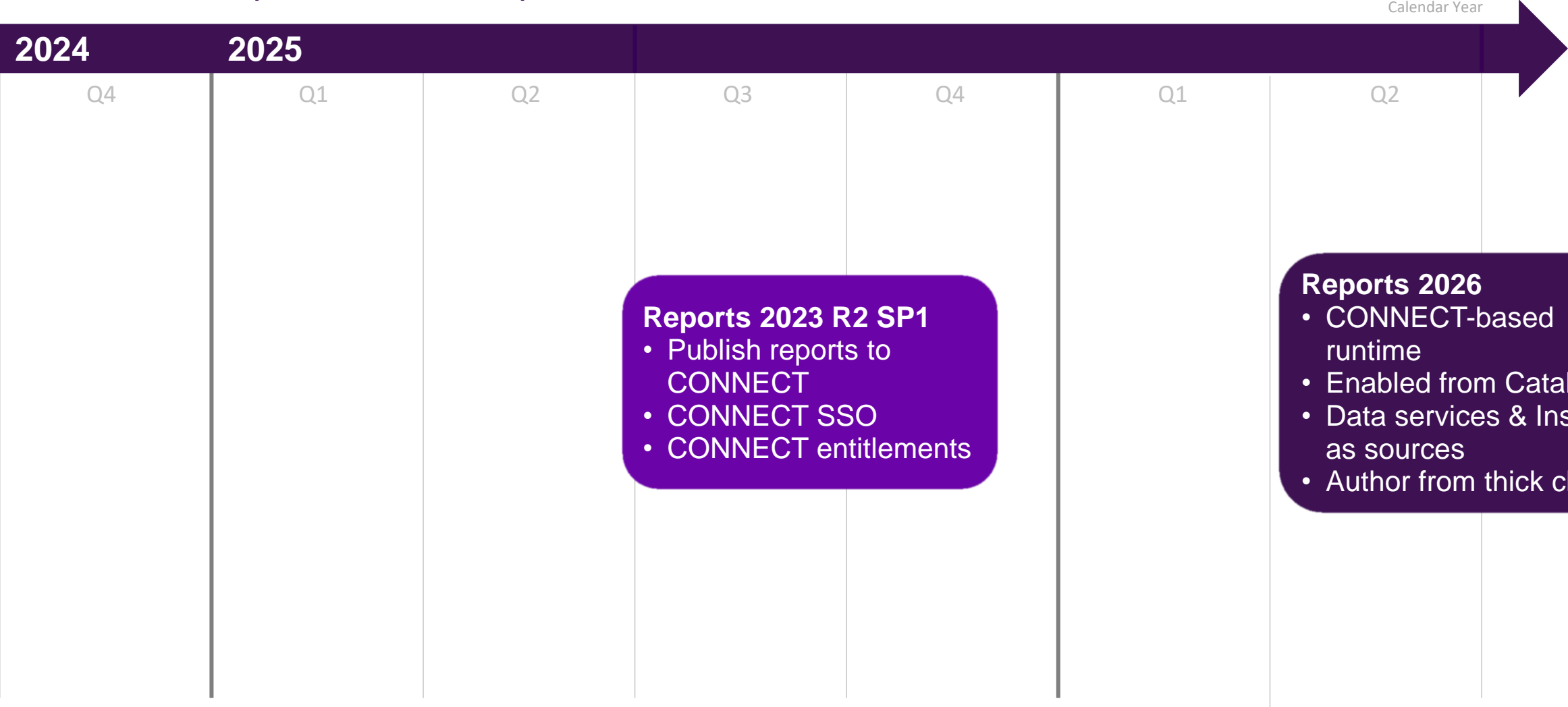
- Nested batch levels
  - Root Level Batch start and stop
  - Sublevel Procedure start and stop
  - Sublevel Unit Procedure start and stop
  - Sublevel Operation start and stop
  - Sublevel Phase start and stop
- Import PI Event Frames
- “Clusters” are sub-reports for a level

# For CONNECT

- Single Sign-On
  - Fully connected
  - Intermittent connections
- CONNECT-based Entitlement
- Publish & Access on CONNECT

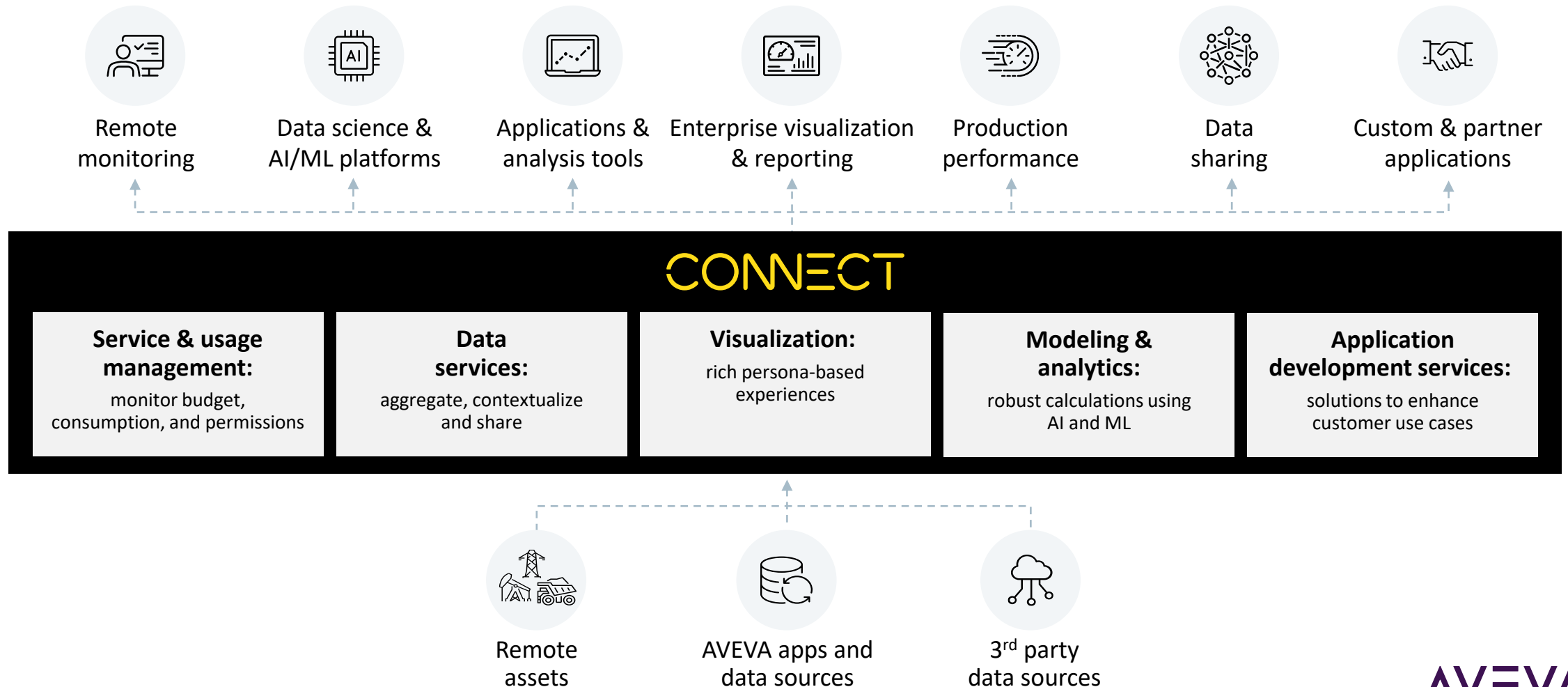


# AVEVA Reports for Operations



# CONNECT, our industrial intelligence platform

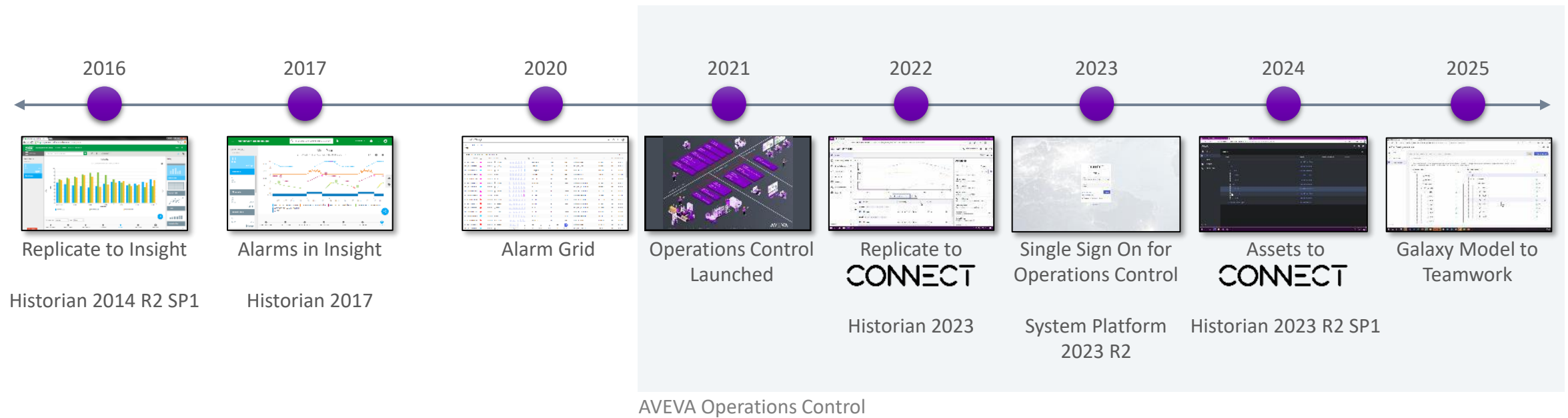
Open and neutral, providing rich data insights for your unified industrial ecosystem





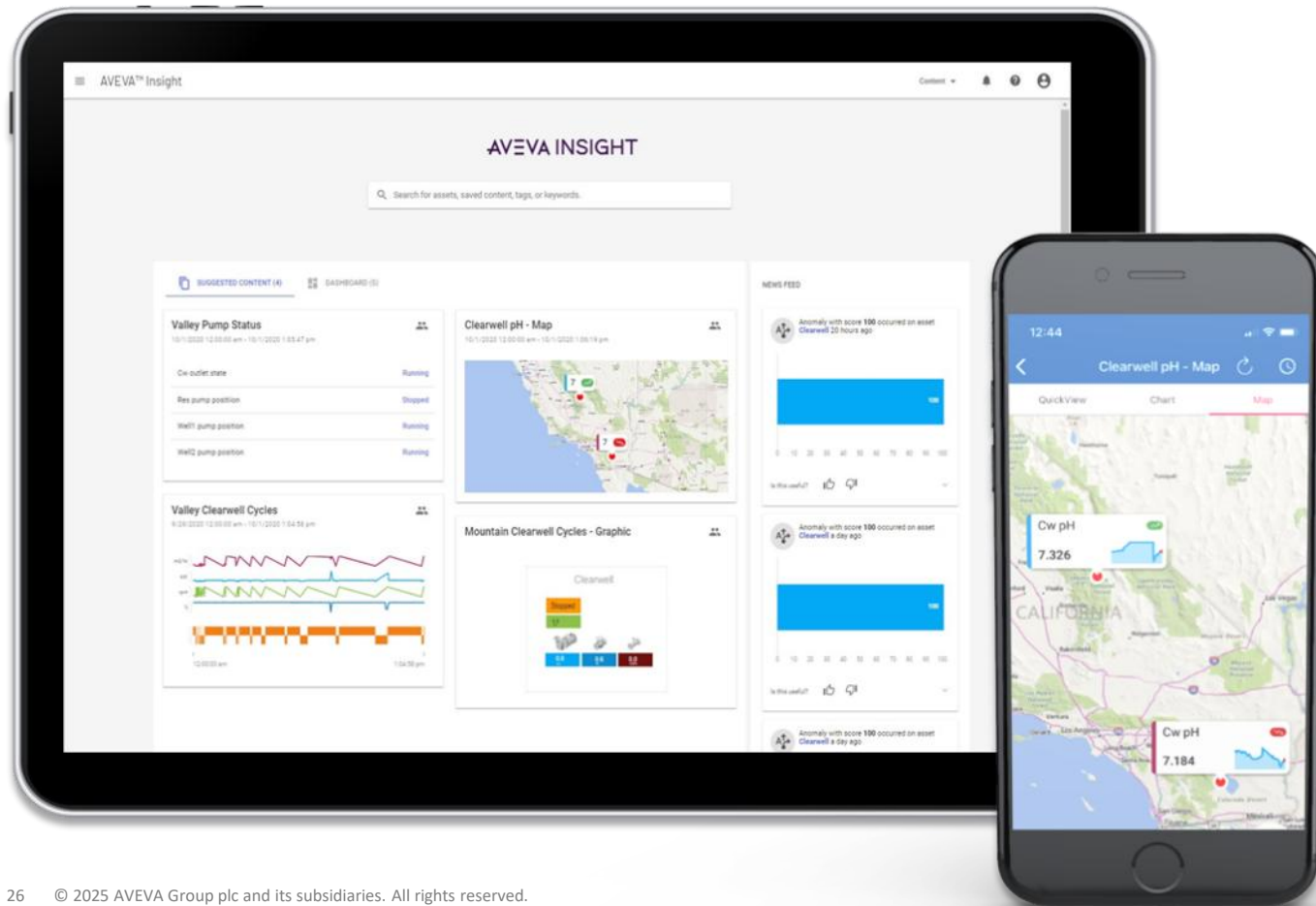
# Evolution To Hybrid SaaS

## Path to AVEVA Operations Control



# AVEVA Insight

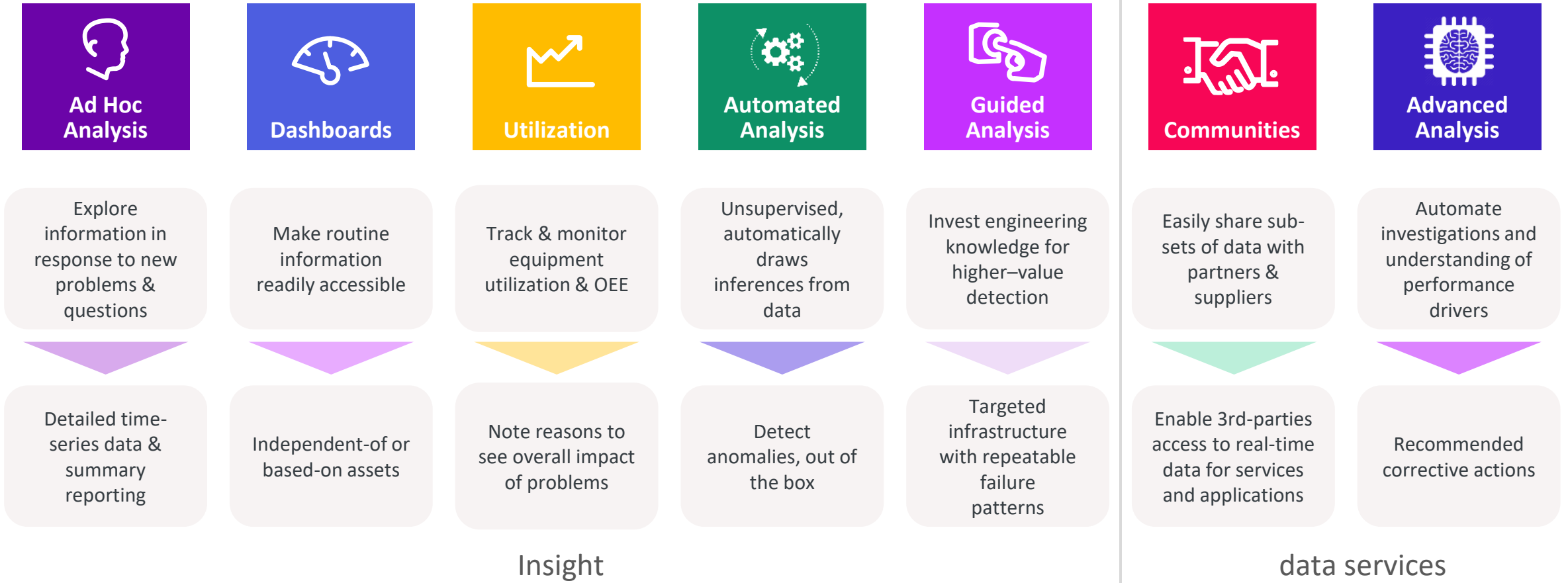
Easy-to-use cloud-based solution, enabling your teams to collaboratively manage your operations and assets from anywhere, at any time



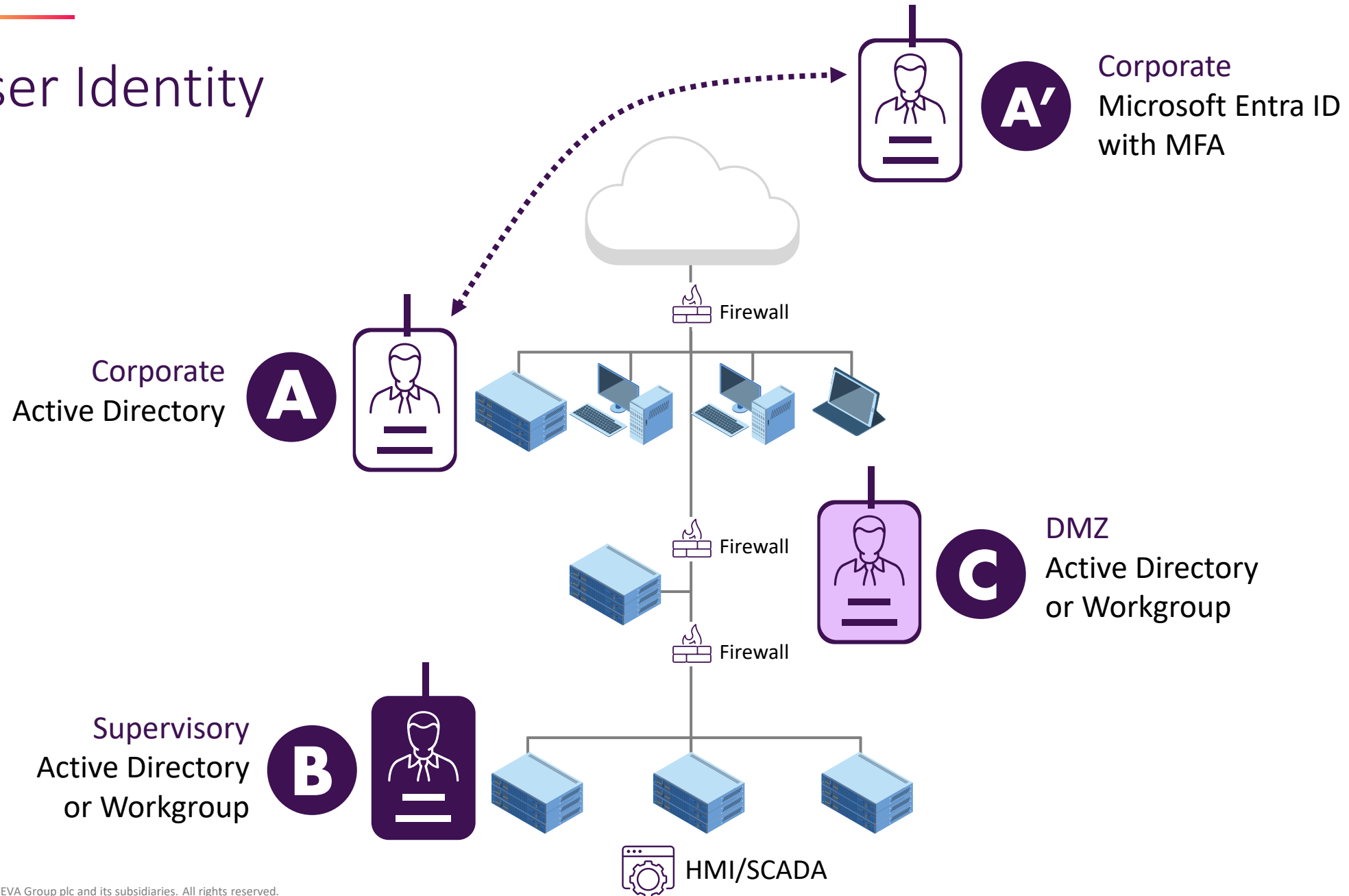
AVEVA Insight gives you easy access to actionable information in the cloud. Its no-code, self-service, fit-for-purpose analytics work for ordinary operations users—not just data scientists.

- Natural extension of HMI/SCADA
- Unlock and share critical data in the cloud
- Connect workers and increase collaboration
- Improve operational performance and asset reliability

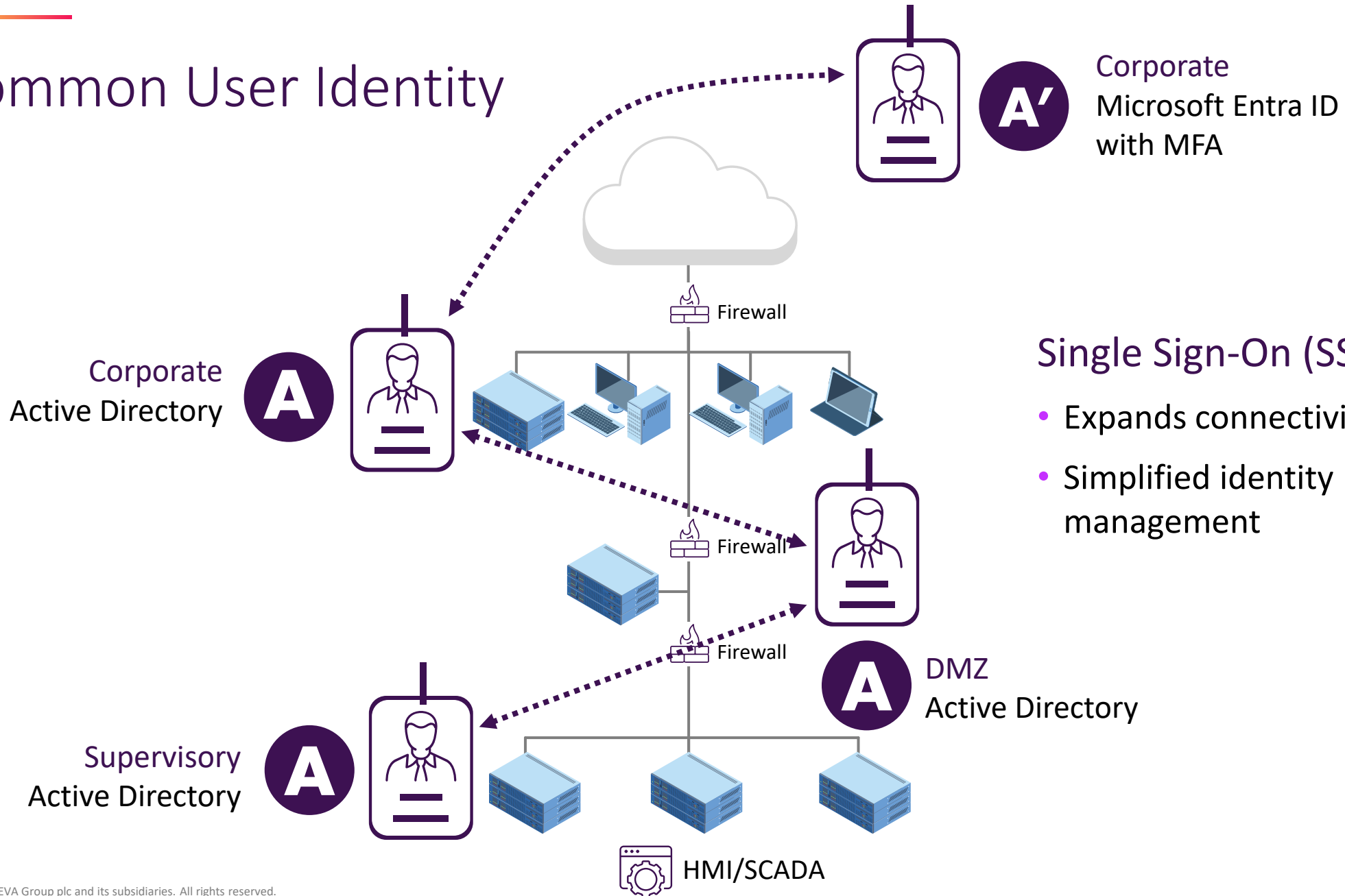
# CONNECT



# User Identity



# Common User Identity



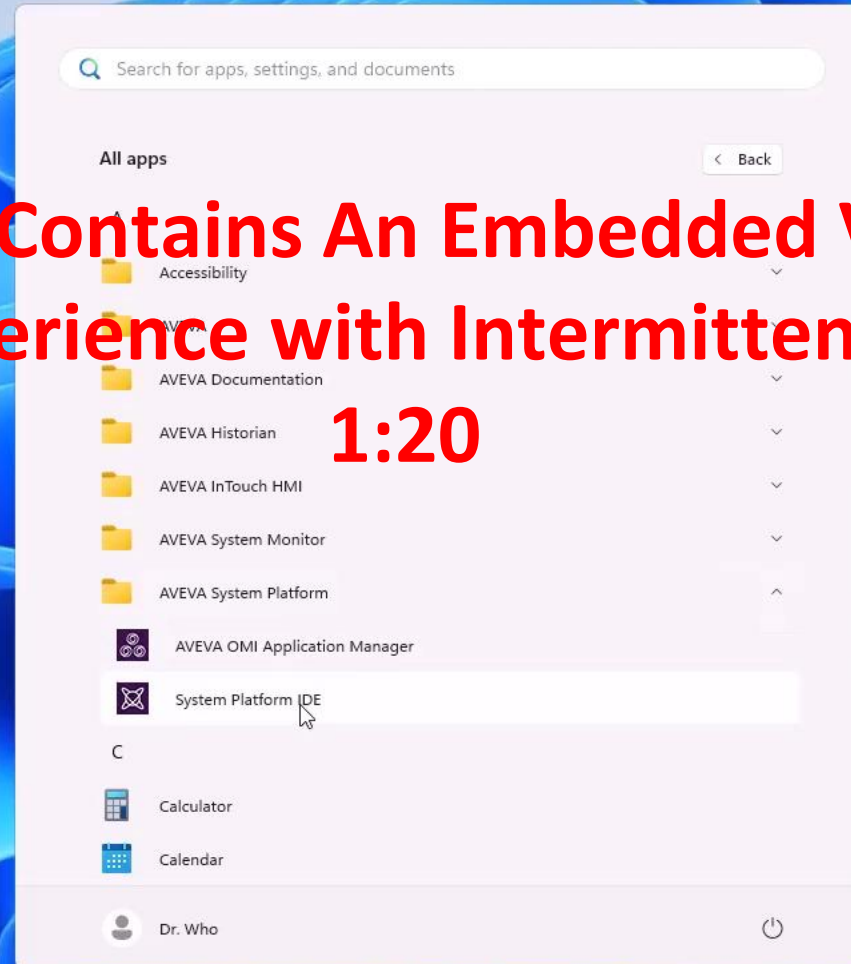
## Single Sign-On (SSO)

- Expands connectivity needs
- Simplified identity management

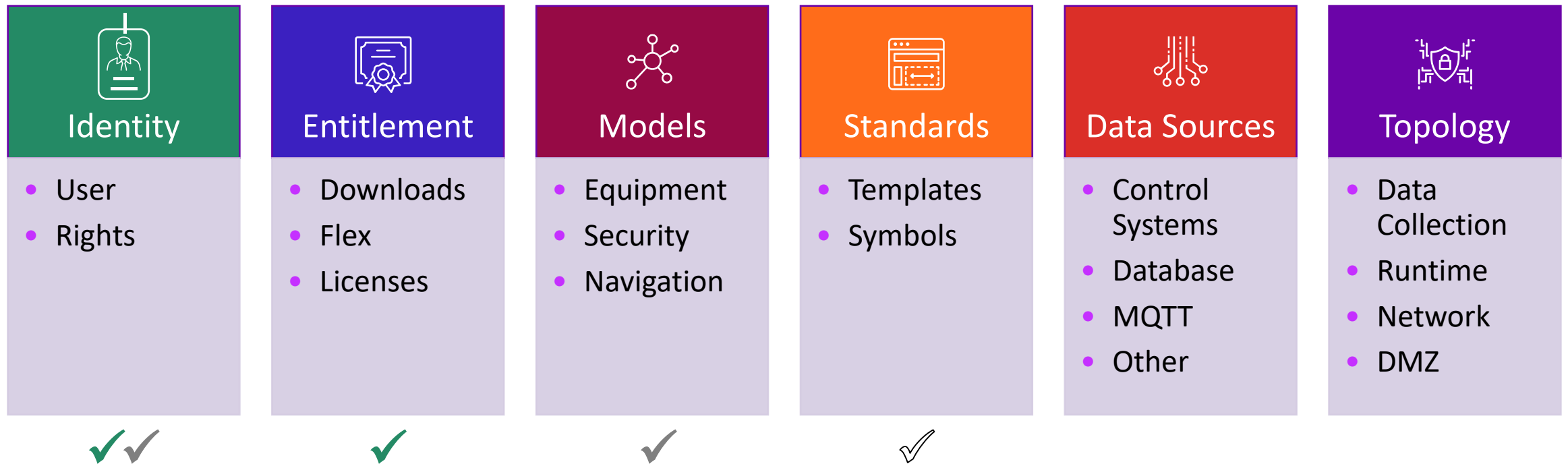


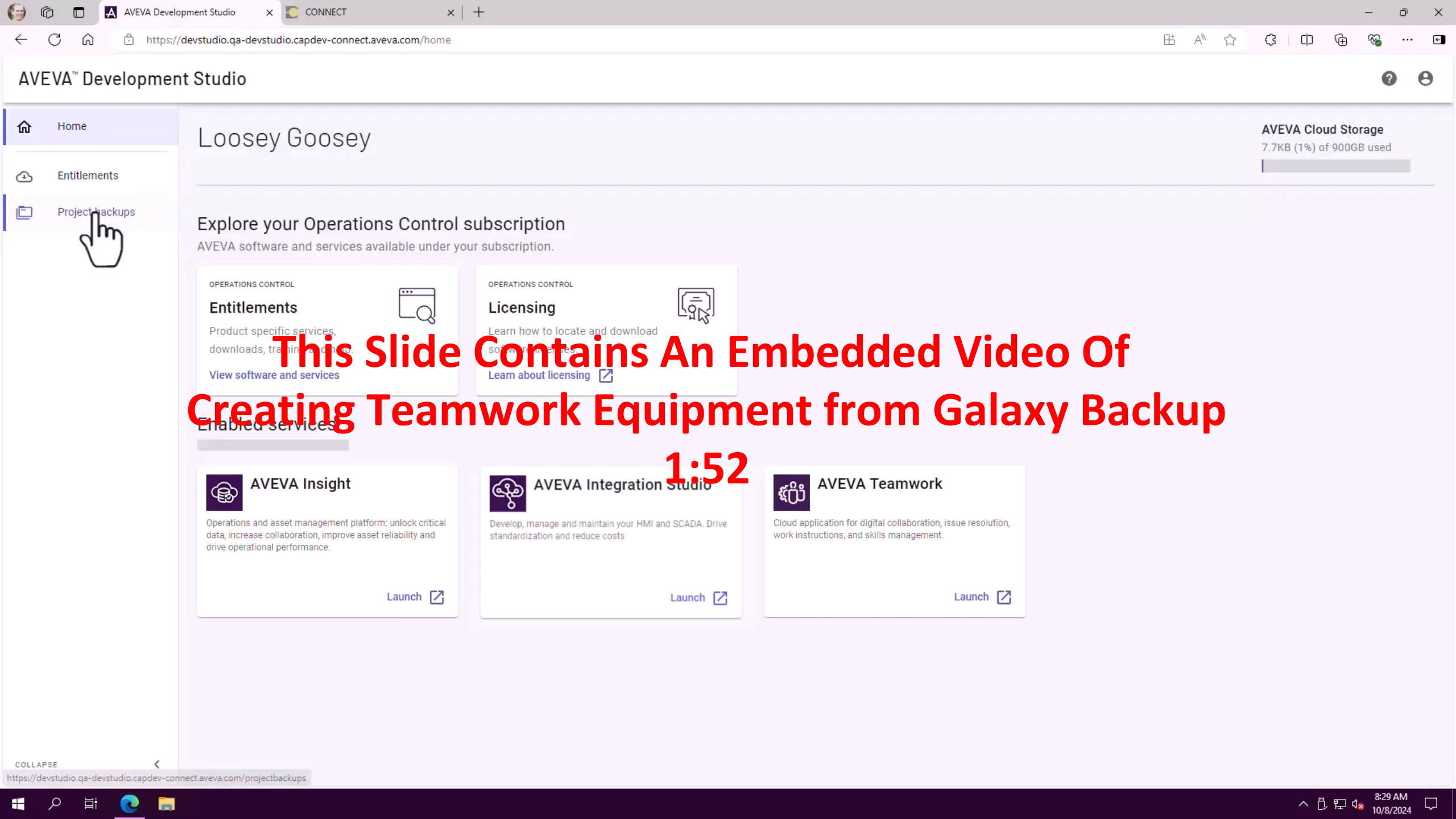
# This Slide Contains An Embedded Video Of Connected Experience with Intermittent Connections

1:20



# Goal: Centralized Management





This Slide Contains An Embedded Video Of  
Creating Teamwork Equipment from Galaxy Backup  
1:52



# Entitlement Access

AVEVA™ Development Studio

Home

HMI-SCADA Product Management

Entitlements

Explore your Operations Control subscription  
AVEVA software and services available under your subscription.

CONNECT

CALM - Client Activated License

dev-calm2.dev-license.capdev-connect.aveva.com/#/calm/LAASCUST03/orders/all

AVEVA™ Client Activated License Management 2

Orders

Filter by order number

Orders displayed  
Last 20

Filter by who made license request

Order Details Report

+ New License Request

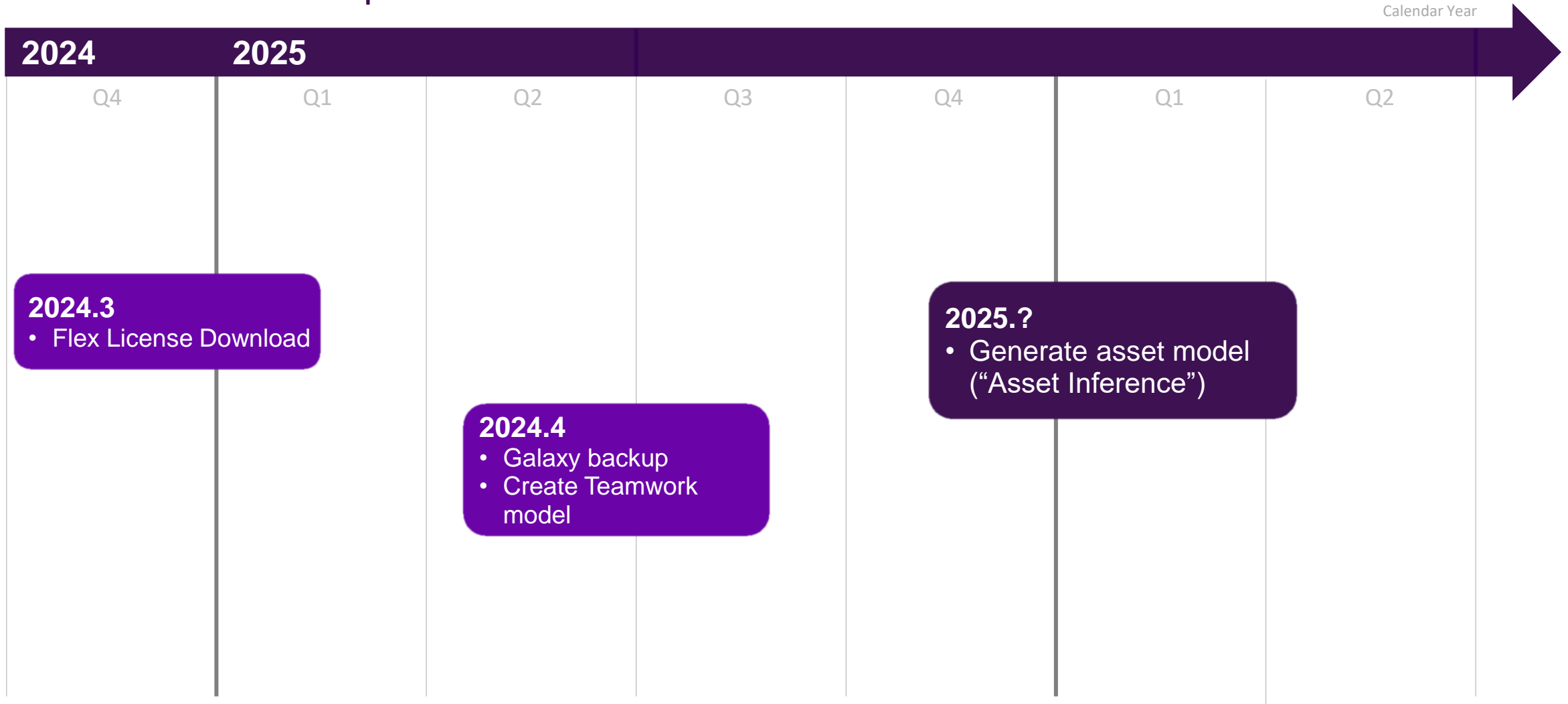
My orders only

Reset

Order Number	Order Date	Order Created by	Server Name	Location	Credits	License File
397463	06/16/2024 1:21 PM	Licensing Build	INHYDEDSPC878165	139873	0	
397462	06/16/2024 1:21 PM	Licensing Build	INHYDEDSPC878165	139873	220	

Displaying 20 of 20 orders

# AVEVA Development Studio



# AVEVA Teamwork Areas of Focus

## Communication

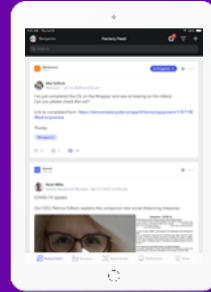
Connect with workers across shifts and facilities to solve problems. Share insights in a logbook and continuously grow the archive of knowledge.

## Skills Management

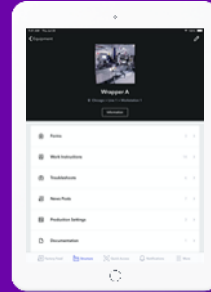
Deliver and track training for new hires, upskilling and certifications with a review pane to view pending and completed training.



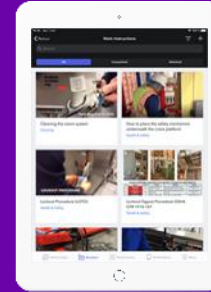
Collaboration



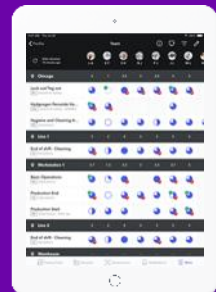
Factory Feed



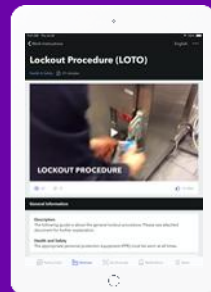
Equipment



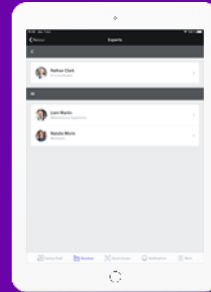
Video Library



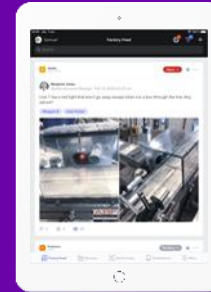
Users/Skills



Procedures



Subject Matter Experts



Call for Help

## Digital Knowledge

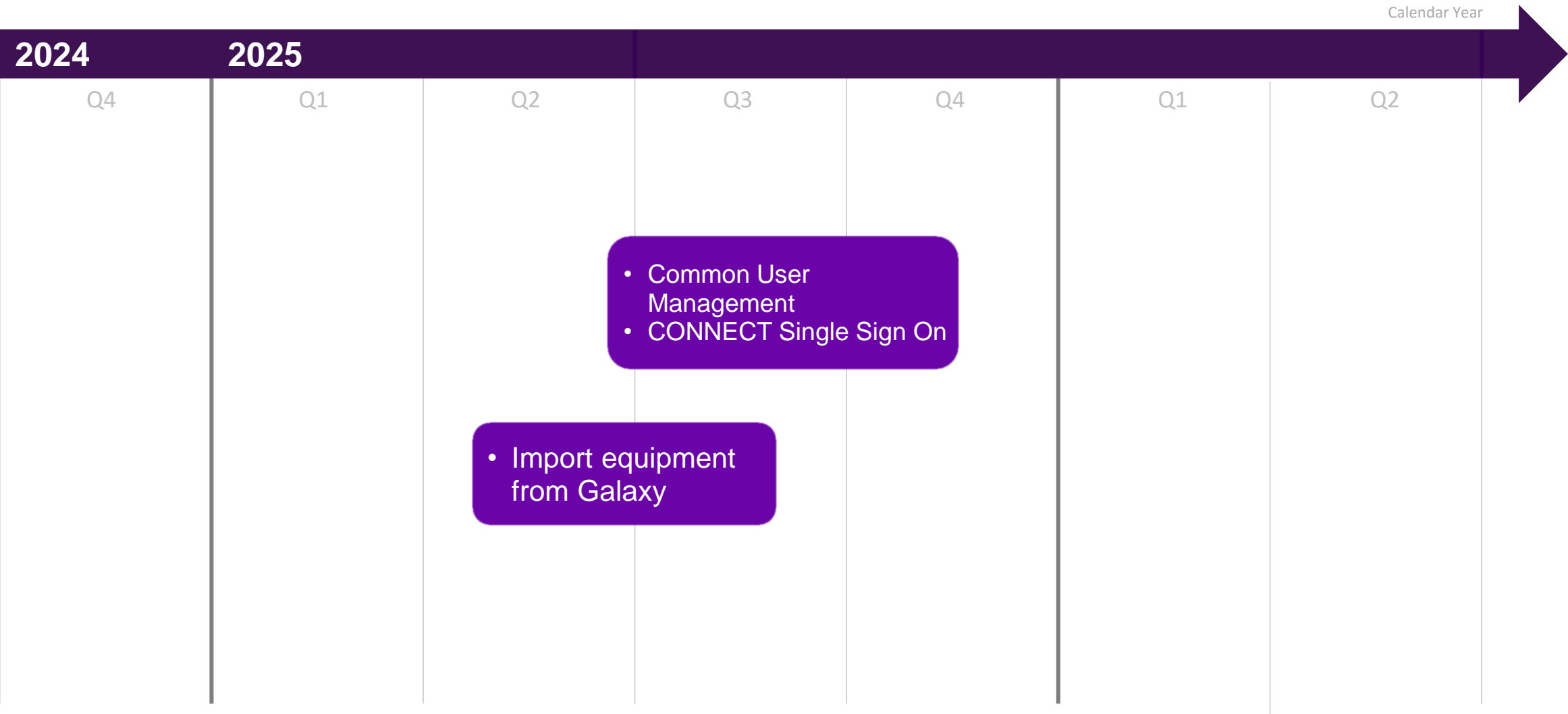
Scan QR codes to quickly access a standardized library of instructions, videos and troubleshooting content.

## Issues Management

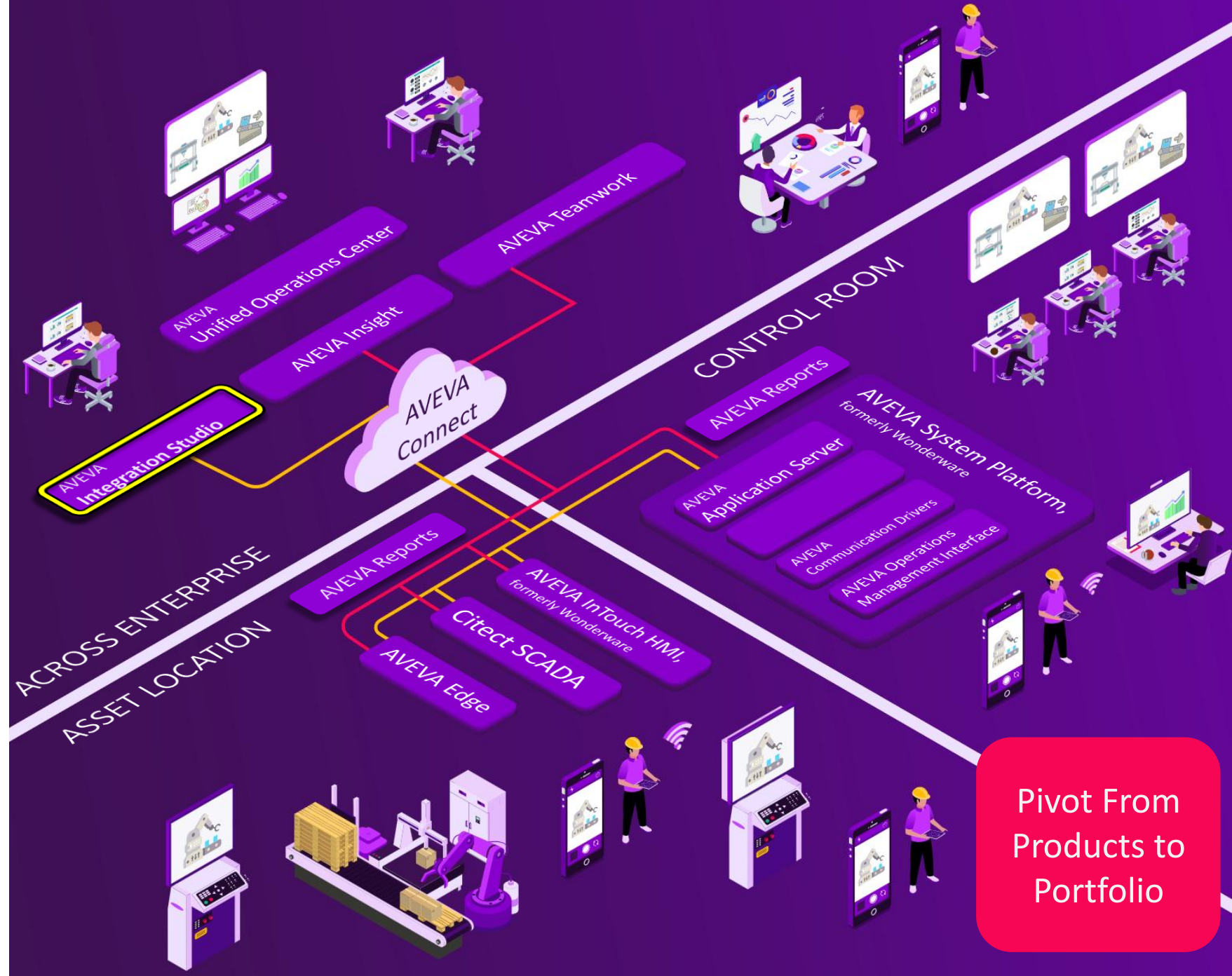
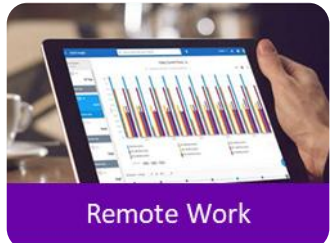
Capture, track and resolve problems through call for help escalation and collaboration with subject matter experts.



# AVEVA Teamwork



Manage your applications and standards in the **cloud** and on **premise**



Pivot From  
Products to  
Portfolio

# Integration Studio

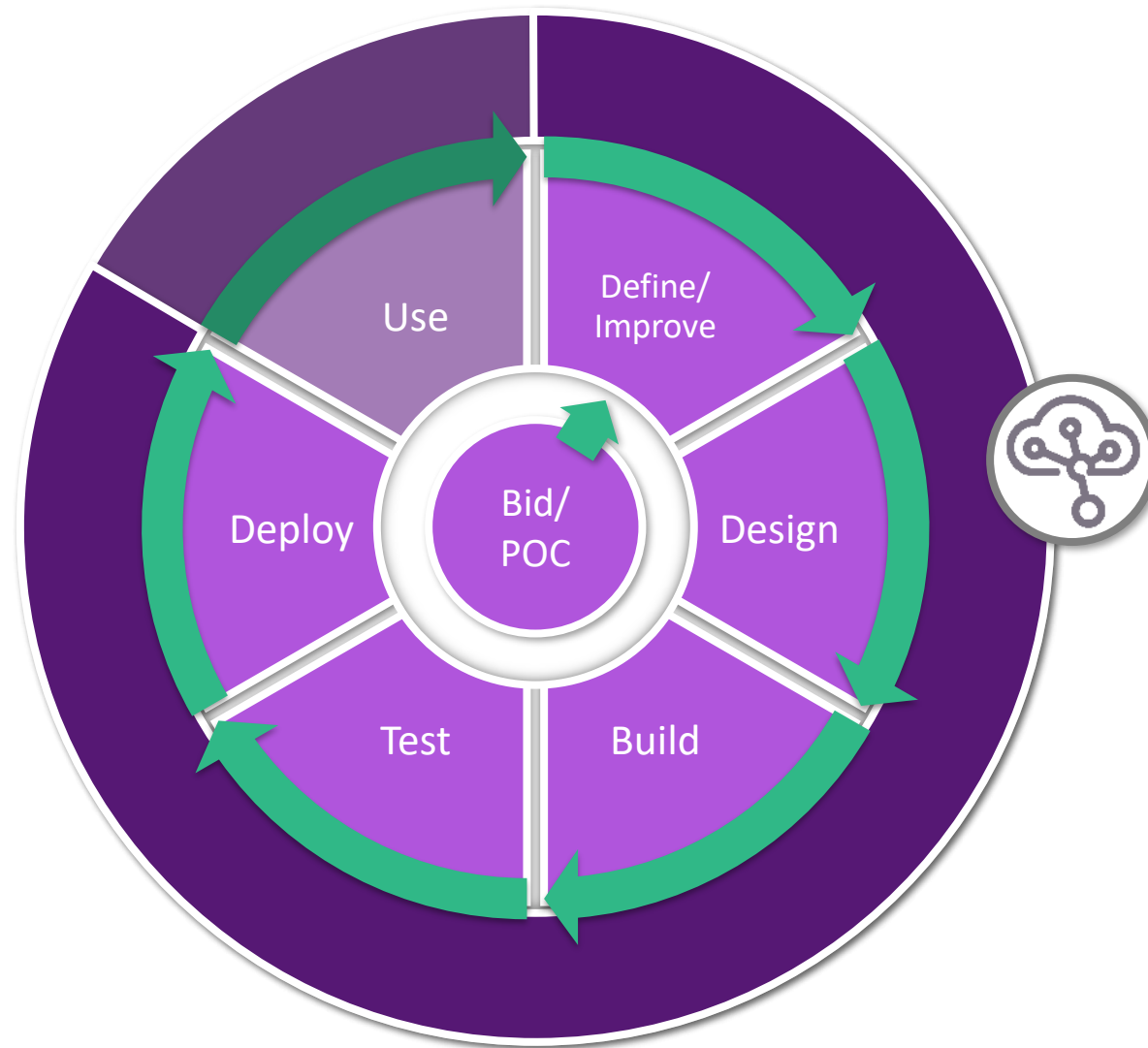
## Project Lifecycle

### First pass

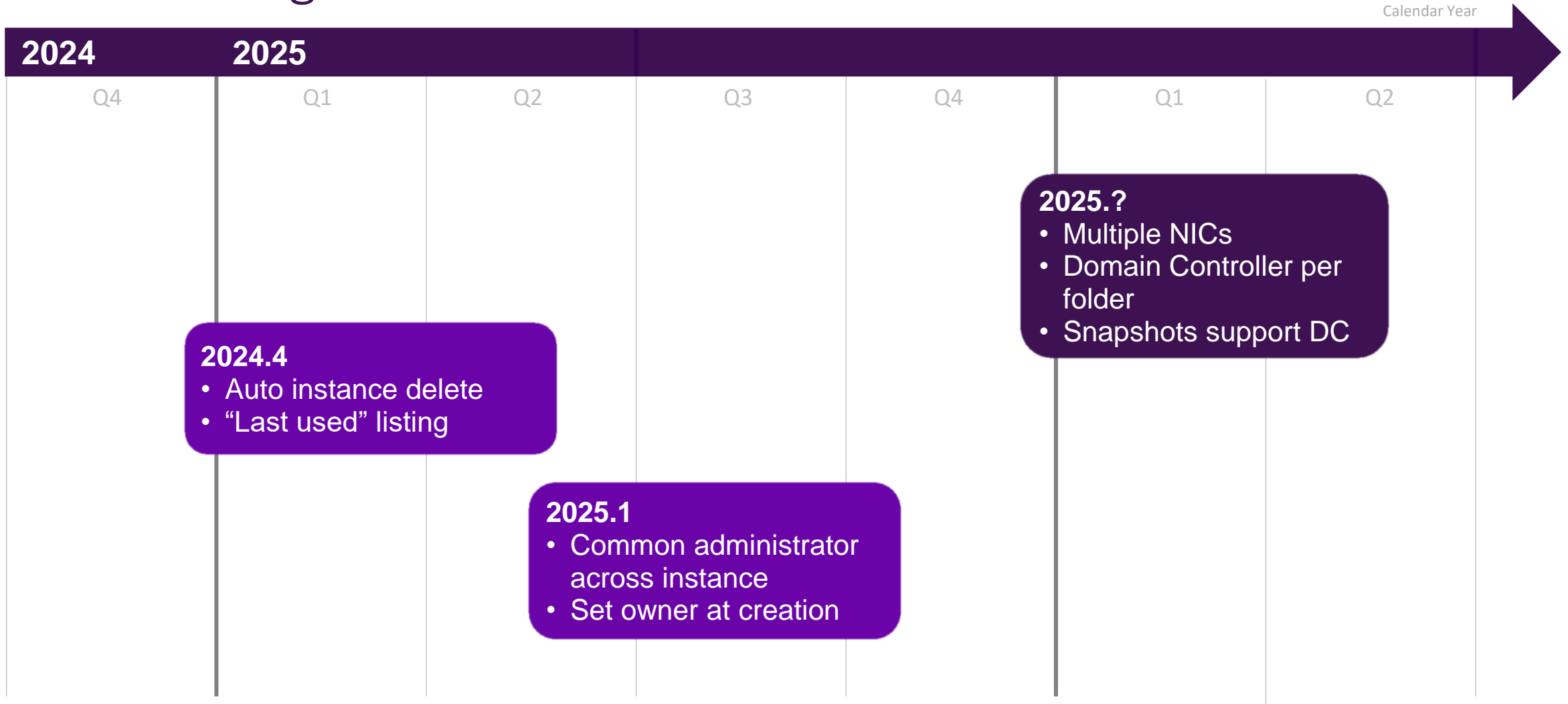
- Lower up-front costs
- Inventory not a prerequisite to project Build phase
- Start the warranty clock as late as possible

### Continue the value

- Easily duplicate entire project
- Test upgrades
- Version management
- Training for customers as well as your staff

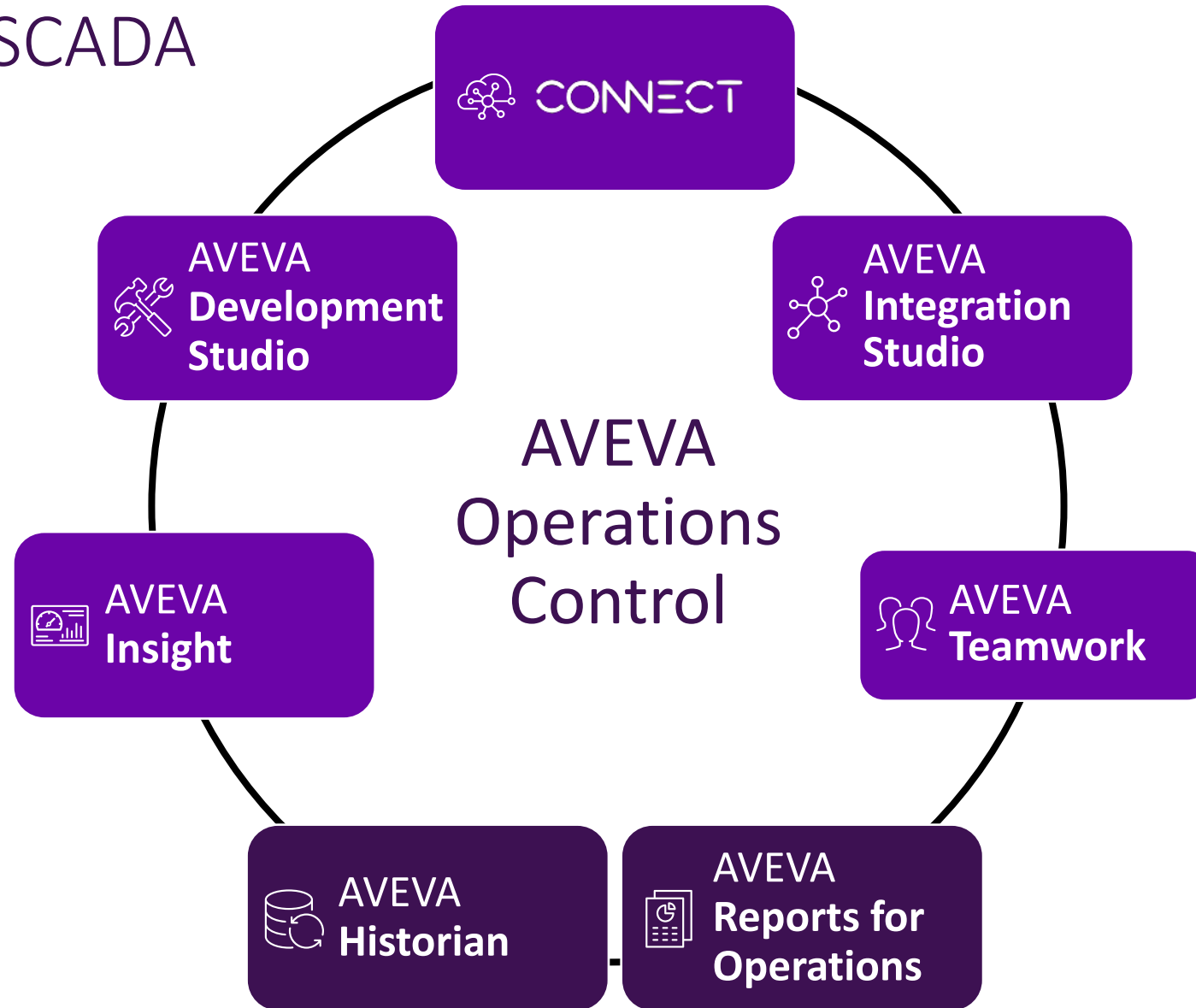


# AVEVA Integration Studio





# Common HMI/SCADA





AVEVA

# HEROES HQ



Ask → Forums



Discover →  
Products



Learn →  
Training



Elevate →  
Video Content



Utilize →  
Content



Socialize →  
Comms



Suggest →  
Idea Portals



Success →  
Recognition

Your one-stop location for all things  
HMI / SCADA Technical Enablement -  
designed and meant to empower *YOU, the  
technical superhero!*



AVEVA



# Operations Control Technical Symposium

Day 3, Thurs  
April 10<sup>th</sup>

## Unlocking Digital Transformation with Operations Control & UNS Architecture: 10:00 – 12:15

Dive into a real-world, real-time UNS implementation, exploring key takeaways and use cases from Provelt! 2025

### Feedback Session: 1:15 – 2:15

Share your thoughts, explore new ideas, and help shape the future of our solutions in a dynamic, engaging setting

### Networking & Social Hour: 2:15 – 3:00

Visit the Heroes HQ booth and celebrate with our raffle prize giveaways along with free drinks and merch!

**AVEVA**



# 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.

Visit us at our Operations Control Technical  
Symposium this Thursday (Day 3)!

# 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.

 [linkedin.com/company/aveva](https://www.linkedin.com/company/aveva)

 [@avevagroup](https://twitter.com/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](https://www.aveva.com)