OCTOBER 24, 2023

MES portfolio overview and roadmap

Tom Troy – Leader, Operations and Execution Portfolio

AV∃VA

Portfolio overview

Digital transformation – a business imperative

The challenges

Improving agility and consistency in manufacturing	Safeguarding product quality, safety and compliance
Minimizing waste and losses	**Improving productivity and efficiency**

The initiatives

Empower employees
- Transform the way you execute work across a team
- Enable natural collaboration between roles

Engage customers
- Safety/regulation compliance
- End-to-end traceability
- New product introductions

Optimize operations
- Measure and improve operations performance
- Continuously improve efficiency and sustainability

Transform offerings
- Demand-driven
- Resilient
- Increased value
- New business models

AVEVA Operations and Execution portfolio – empowering customers to digitally transform their manufacturing operations to become more agile, optimized, sustainable and customer-focused.

AVEVA

Review of the Manufacturing Execution System (MES) Portfolio

Batch/recipe mgt. apps

AVEVA

Recipe Management

AVEVA

Batch Management

MES/MOM apps

AVEVA

MES

AVEVA

Production Management

AVEVA

Insight

"Companion" apps

AVEVA

Work Tasks

AVEVA

Enterprise Integration

planet together

Planning and Scheduling

AVEVA

Review of the MES Portfolio

AVEVA Batch and Recipe Management (On-Premise)

Effectively manages flexible batch processes in process and hybrid industries.

Dirk Kozian

AVEVA MES (On-Premise)

Operations mgt. - Improves production execution consistency, visibility and agility in hybrid industries.

Performance mgt. - Increases plant asset utilization and performance by providing accurate information on equipment downtime and efficiency.

Quality mgt. - Improves product quality and consistency through real-time statistical process control and analysis.

Jeff Barkehanai

AVEVA

Review of the MES Portfolio

AVEVA Insight - Equipment Efficiency (Cloud/SaaS Offering)

Increases plant asset utilization and operational performance by providing accurate information on equipment downtime and efficiency.

Jeff Barkehanai

AVEVA Model-Driven MES Application Content

Pre-assembled, extensible MES application content (business rules and UIs) that accelerates time to value for MES deployments.

JP Caron

AVEVA Production Management (On-Premise)

Optimizes the mining supply chain, maximizes the utilization of all operating assets.
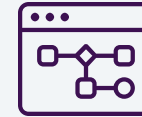
Nina Nicholls

Review of the MES Portfolio

AVEVA Work Tasks (On-Premise & Cloud/SaaS)

Orchestrates plant-level business processes across disparate domains (people, processes and systems).

Dirk Kozian

AVEVA Enterprise Integration (On-Premise)

Facilitates integration of plant floor applications to enterprise solutions.

Jeff Barkehanai

Production Planning and Scheduling (On-Premise)

planet together

Improves production schedule performance, manages critical constraints, and eliminates uncertainties to reduce risk.
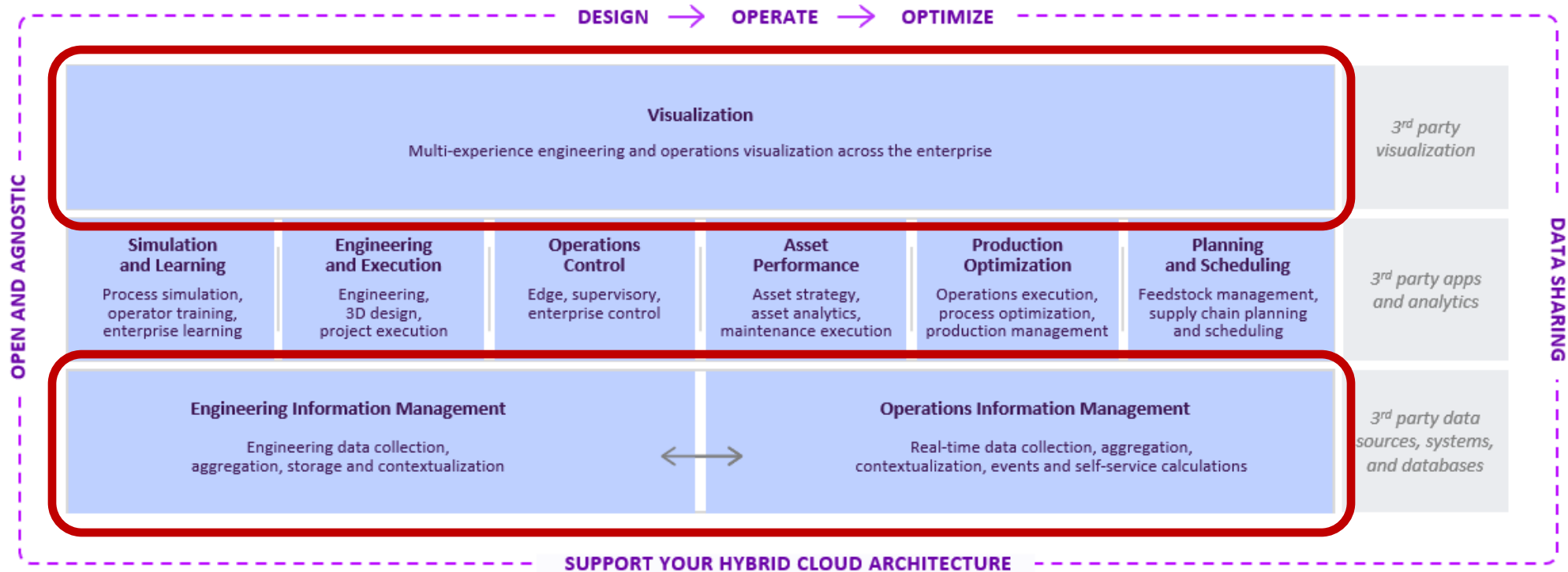
JP Caron

AVEVA

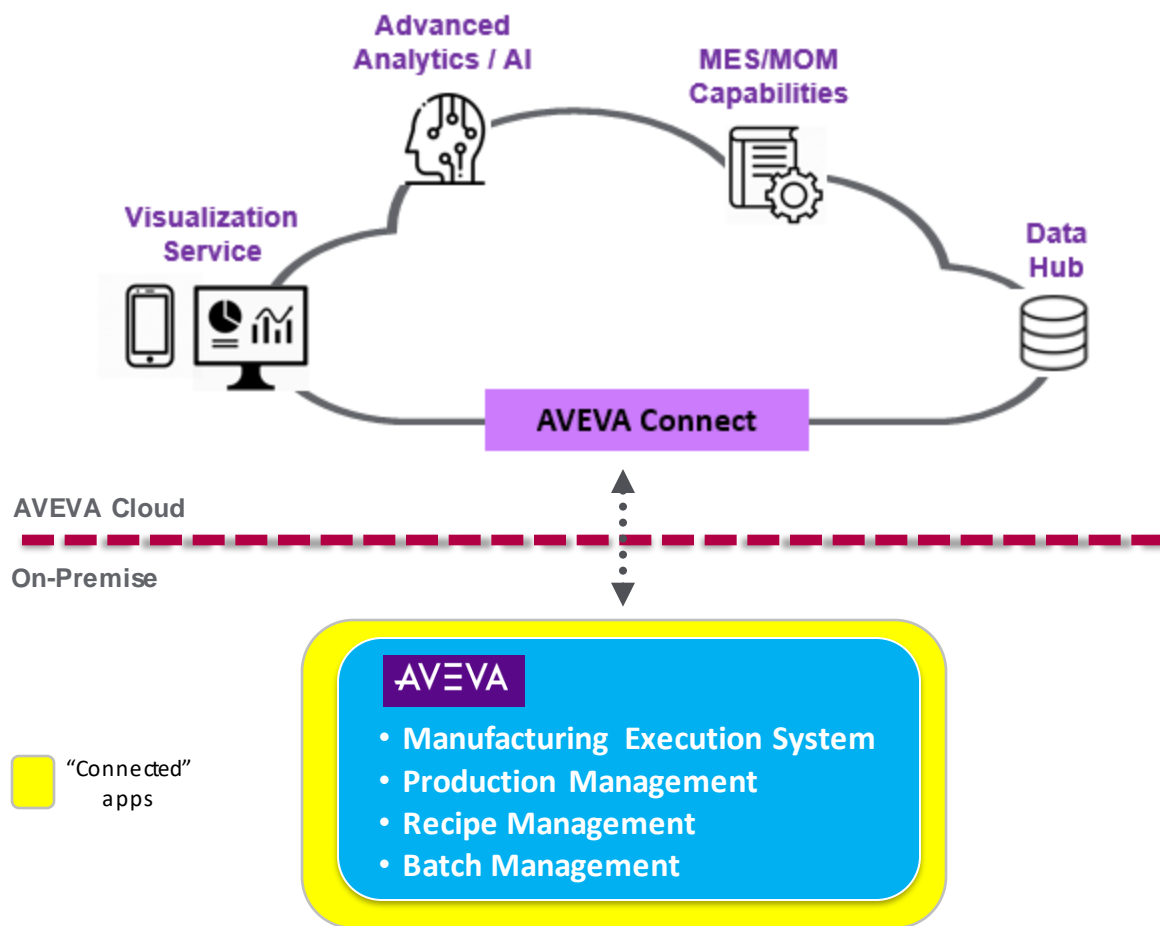# Portfolio strategy and timelines

AVEVA

Aligning with the broader AVEVA strategy

AVEVA Operations and Execution Portfolio aligns with the broader AVEVA strategy of providing a **single "industrial information management" and "visualization" service** that spans from engineering to operations.

Evolving to a hybrid cloud architecture

Native cloud capabilities

Light-weight MES/MOM capabilities, fast time to value

Value-add cloud apps and services

These cloud-based apps and services extend our on-premise (edge) and cloud-based capabilities with:
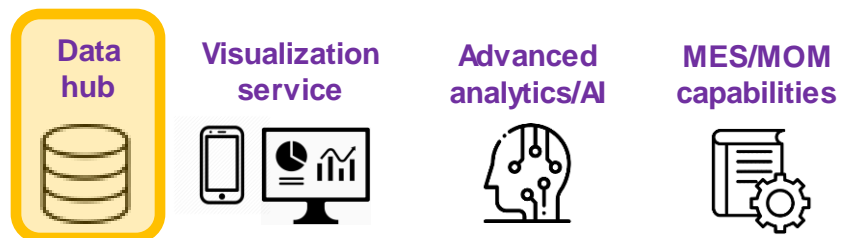
- **Data hub** - enterprise data historization and sharing
- **Visualization service** - enterprise visualization and dashboarding
- **Advanced analytics/AI** - predictive and prescriptive analytics
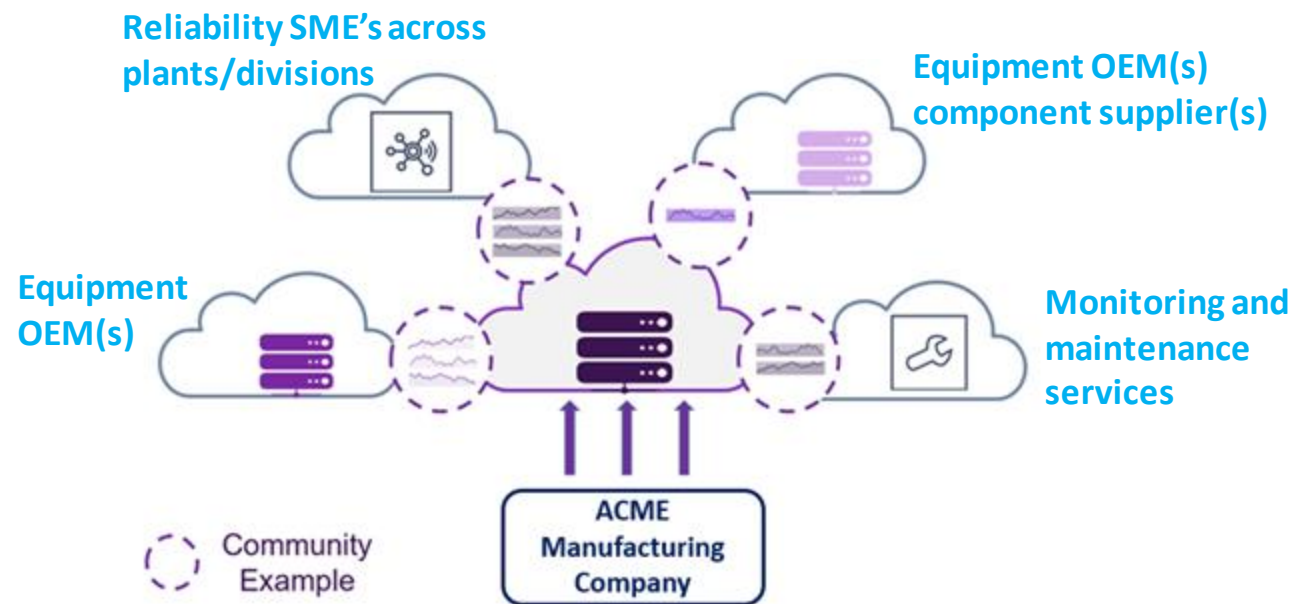
"Connected" applications

- Consume value-add cloud services from AVEVA™ Connect
- Content and config managed centrally from AVEVA Connect

Evolving to a hybrid cloud architecture

Enterprise data management

Data hub | **Visualization service** | **Advanced analytics/AI** | **MES/MOM capabilities**

AVEVA™ Data Hub provides a **cloud-based industrial information management service** that spans engineering and operations domains to deliver advanced **data collection, aggregation, storage, contextualization and data sharing capabilities**.

Reliability SME's across plants/divisions

Equipment OEM(s) component supplier(s)

Equipment OEM(s)

Monitoring and maintenance services

Community Example

ACME Manufacturing Company

AVEVA

Evolving to a hybrid cloud architecture

Enterprise visualization
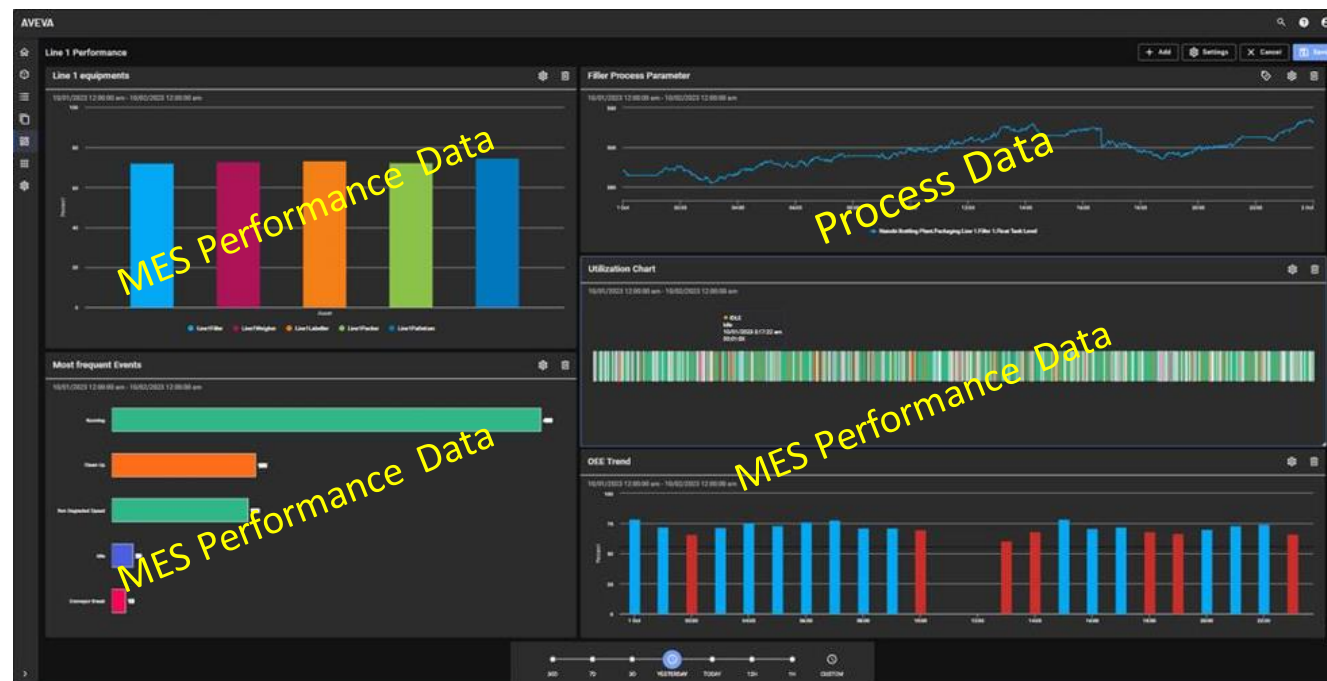
Data hub · **Visualization service** · **Advanced analytics/AI** · **MES/MOM aapabilities**
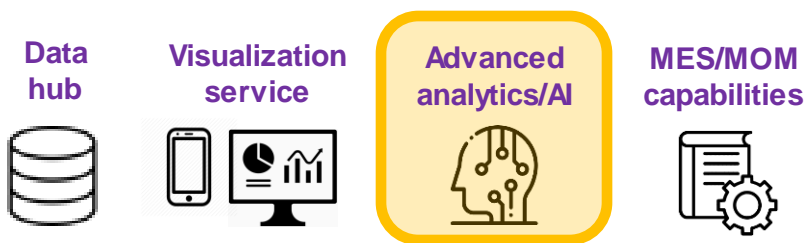
AVEVA Enterprise Visualization provides a **cloud-based visualization service** that spans engineering and operations domains to deliver **advanced visualization and analysis/ analytics capabilities**.
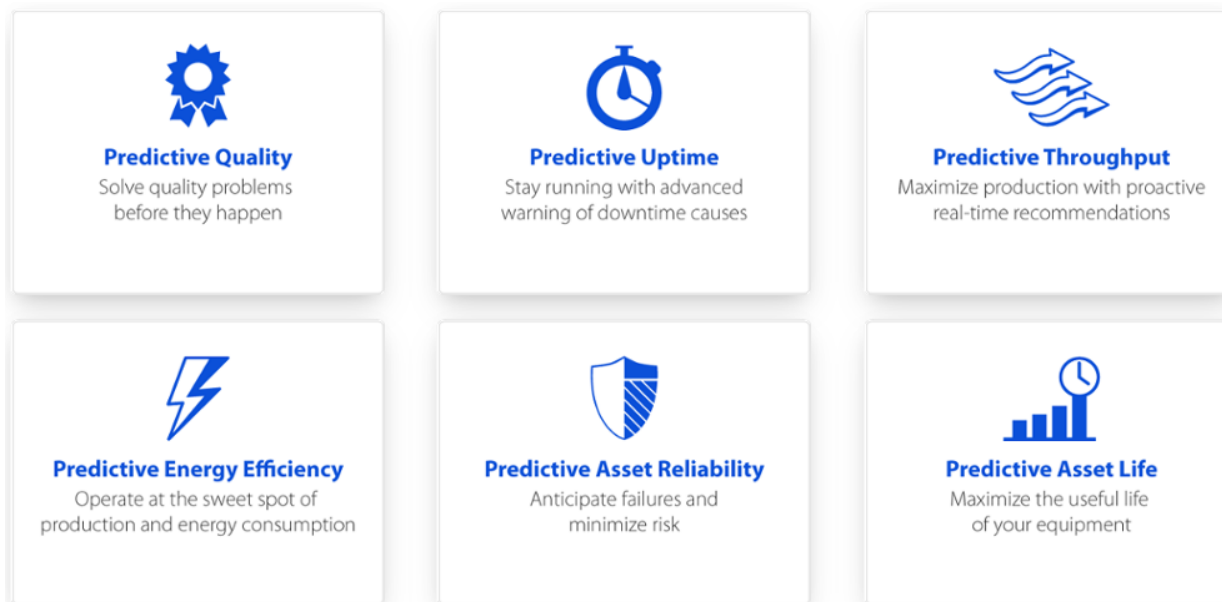
AVΞVA

Evolving to a hybrid cloud architecture

Predictive and prescriptive analytics

Data hub

Visualization service

Advanced analytics/AI

MES/MOM capabilities

AVEVA Advanced Analytics enables **continuous production optimization** through **advanced analytics and machine learning (ML) capabilities**.

Out-of-the-box anomaly models for hybrid manufacturing processes - batch, continuous and discrete.

Predictive Quality
Solve quality problems before they happen

Predictive Uptime
Stay running with advanced warning of downtime causes

Predictive Throughput
Maximize production with proactive real-time recommendations

Predictive Energy Efficiency
Operate at the sweet spot of production and energy consumption

Predictive Asset Reliability
Anticipate failures and minimize risk

Predictive Asset Life
Maximize the useful life of your equipment

AVEVA

Evolving to a hybrid cloud architecture

Native MES/MOM capabilities

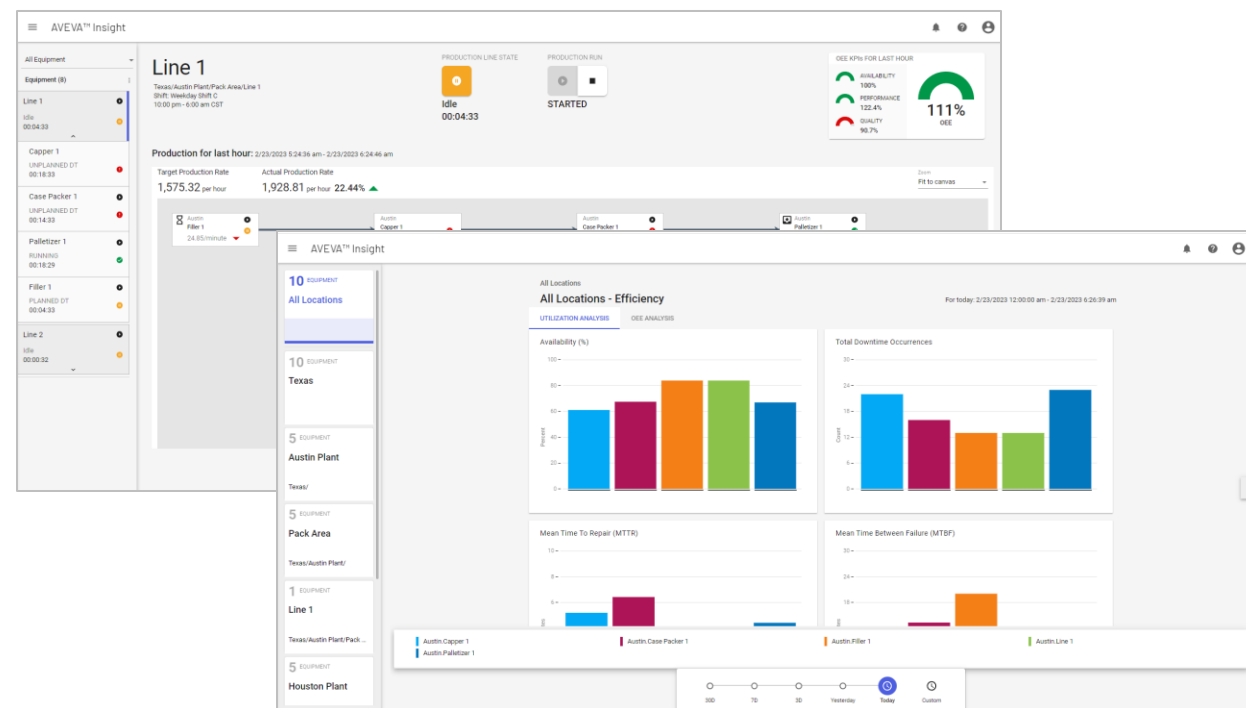**Data hub**

Visualization service
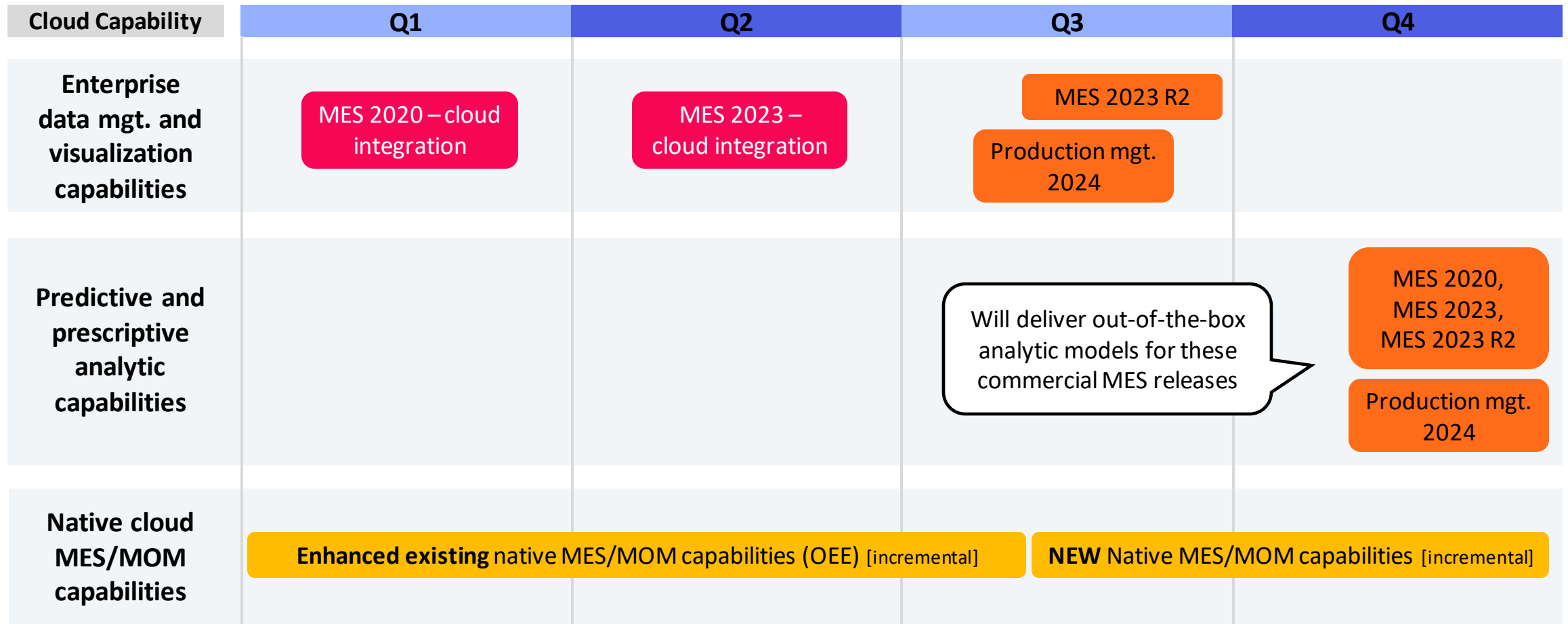
Advanced analytics/AI

MES/MOM capabilities

Provide **multi-tenant native cloud capabilities** in support of **production operations, inventory operations and quality operations** for continuous and hybrid production environments.
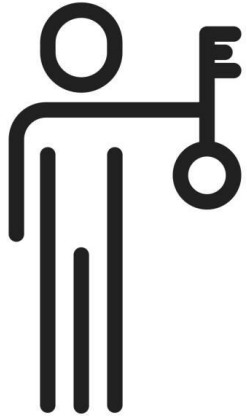
AVEVA

CY24 - Native cloud & "connected" MES releases

Cloud Capability	Q1	Q2	Q3	Q4
Enterprise data mgt. and visualization capabilities	MES 2020 – cloud integration	MES 2023 – cloud integration	MES 2023 R2 Production mgt. 2024	
Predictive and prescriptive analytic capabilities			Will deliver out-of-the-box analytic models for these commercial MES releases	MES 2020, MES 2023, MES 2023 R2 Production mgt. 2024
Native cloud MES/MOM capabilities	Enhanced existing native MES/MOM capabilities (OEE) [incremental]		NEW Native MES/MOM capabilities [incremental]	

Legend:
- ■ "Connected" MES add-ons
- ■ "Connected" MES releases
- ■ Native cloud releases

AVEVA

CY24 - On-premise MES app and content releases

Application	Q1	Q2	Q3	Q4
Model-driven MES			7.0	
Work tasks			2023 R2	
Batch mgt.			2023 R2	
Recipe mgt.	2023 R2			
Enterprise integration				2023 R2

■ On-premise commercial releases

AVEVA

Key takeaways

- Delivering **new and improved MES/MOM capabilities** that help our customers **accelerate their digital transformation initiatives**

- Improving **time to value** and **lowering total cost of ownership (TCO)** through our **hybrid cloud approach**

- Enabling customers to **obtain more advanced insights** from their industrial data - **optimized with AI** to drive sustainable growth

AVEVA

Tom Troy

Leader, Operations and Execution Portfolio

- AVEVA
- tom.troy@aveva.com

AVΞVA

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!

AVEVA

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.

AVEVA

in linkedin.com/company/aveva

𝕏 @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

AVEVA