

MAY 2022

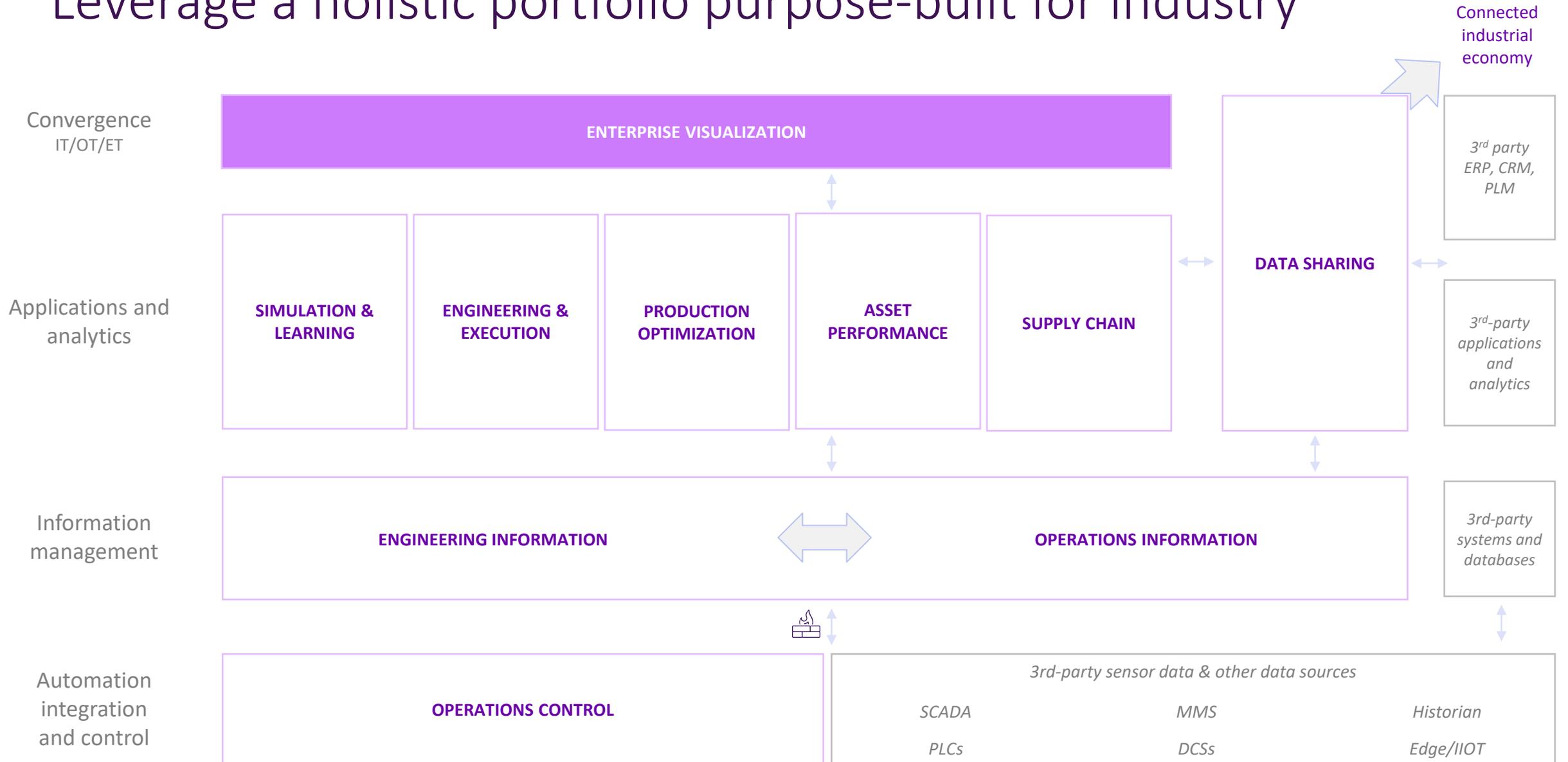
AVEVA PI World

Enterprise Visualization, A Step Change in Operational Awareness

Rob Kambach, Director of Unified Operations Center Solutions

AVEVA

Leverage a holistic portfolio purpose-built for industry



Meeting the needs of the Enterprise User

Enterprise

Long Term Focus
(up to 1 Year)
Enterprise View
IT/OT Convergence



Command Center



Remote Operations Center



Casual User

Supervisory

Medium Term Focus
(up to 1 Week)
Process View
OT Convergence



Control Room



Area Workstation



Mobile Supervisor

Edge

Short Term Focus
(up to 1 Shift)
Work Cell View
Control Convergence



Panel-based Operations

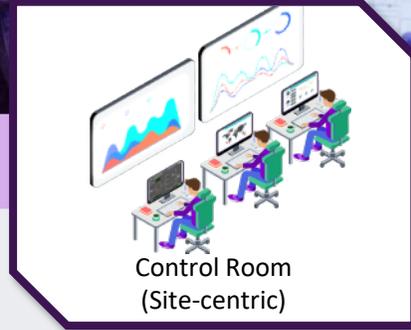
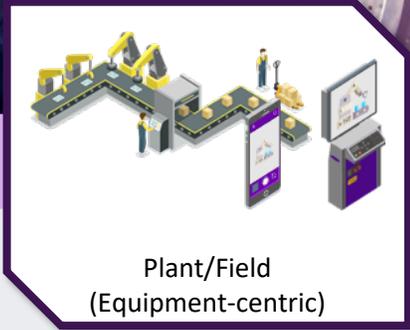


Tablet-based Operations



Off-site Operations

Operations Control to Enterprise Visualization



Real-time

Near Real-time

	Execution
Dashboards & KPIs	Predictive Analytics
	Mobile Rounds
Training	Tasks
Extended Reality	Collaboration Tools
GIS	Reporting
Process Screens	Historical Analytics

LIMS	Scheduling
Energy	MES
Dashboards & KPIs	Predictive Analytics
3D Models	Work Orders
Training	Workflow
Extended Reality	Collaboration Tools
GIS	Reporting
Process Screens	Historical Analytics

Financial	Supply Chain
Energy	ERP
Dashboards & KPIs	Predictive Analytics
3D Models	Maintenance
	Workflow
	Collaboration Tools
GIS	Reporting
Process Screens	Data Modelling

Scaling beyond traditional operations control

Enterprise visualization

- High-level perspective
- Consolidated content
- Enriched data in context
- Connected workforce enablement
- Operating environment for decisions



Operations Control



Data Management



Maintenance



AI/ML



Engineering Information



3D Models



Financial & Business



Weather



Other Data Systems



Wider information in context to operations

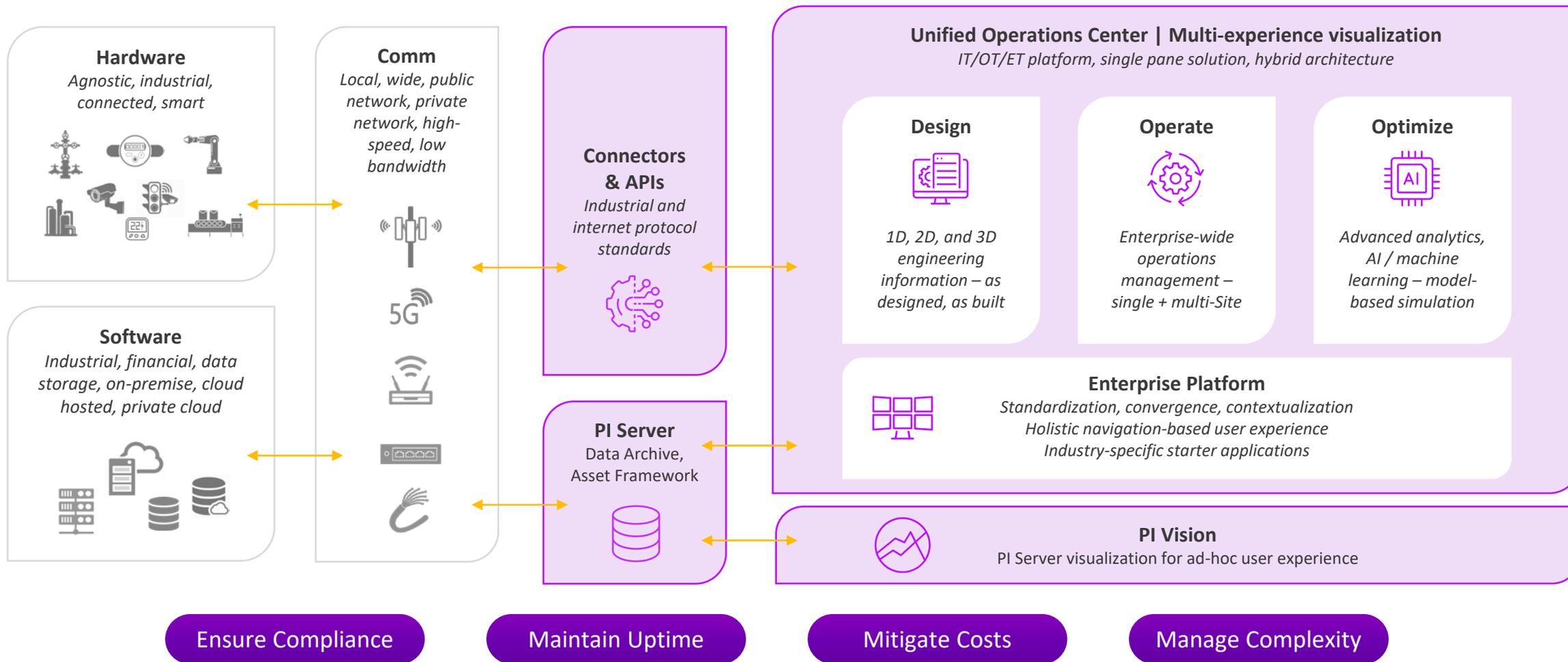
Instrumented Assets



Non-Instrumented Assets

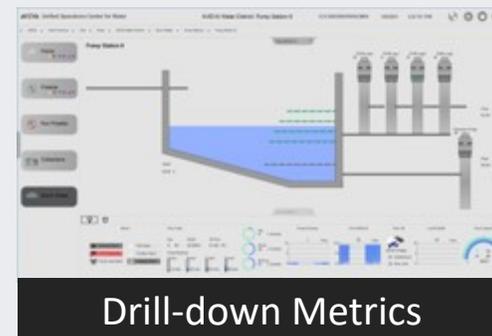


System of systems approach



AVEVA Unified Operations Center

- ▲ Hierarchy of linked KPIs
 - Global
 - Regional
 - Plant/Facility/Operations
 - Equipment
- ▲ Supervisory control
- ▲ Map-based / GIS content
- ▲ Cross-functional collaboration
- ▲ Connected workforces
- ▲ Contextualized 3D models
- ▲ Regulatory alerts
- ▲ Infuse AI and ML
- ▲ Workflow integration
- ▲ Reporting integration
- ▲ Maintenance integration
- ▲ Incident reporting & SOPs
- ▲ Revenue/financial
- ▲ PI Server & PI Vision integration
- ▲ Video surveillance
- ▲ Extensible apps



Converges IT, OT, ET, and IoT data systems into a **single pane solution**



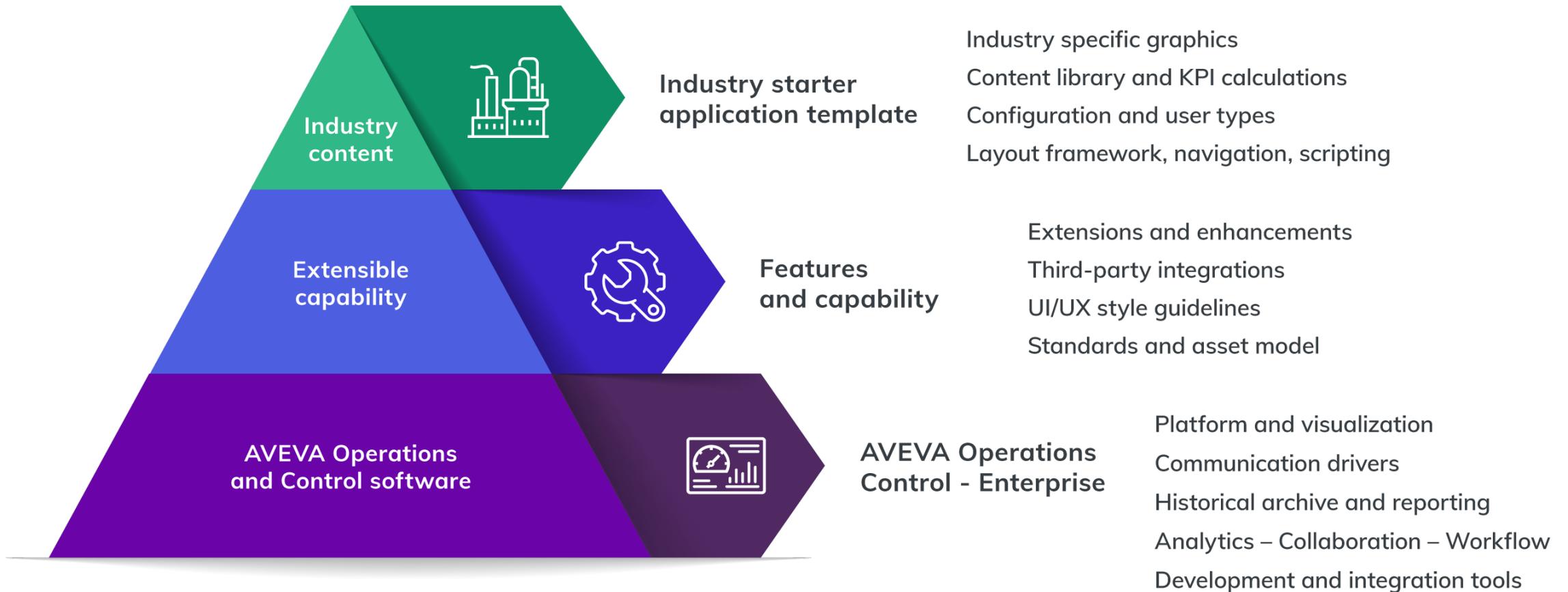
Converges Features & Functionality; for Monitoring & **Command\Control**



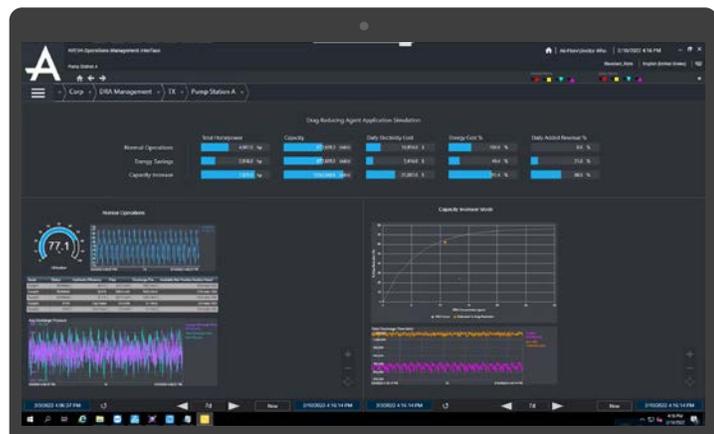
Out-of-Box **Industry Content**; **accelerate** development and ensure **scalability**

Building blocks of AVEVA Unified Operations Center

Industry templates provides a base structure that you can customize

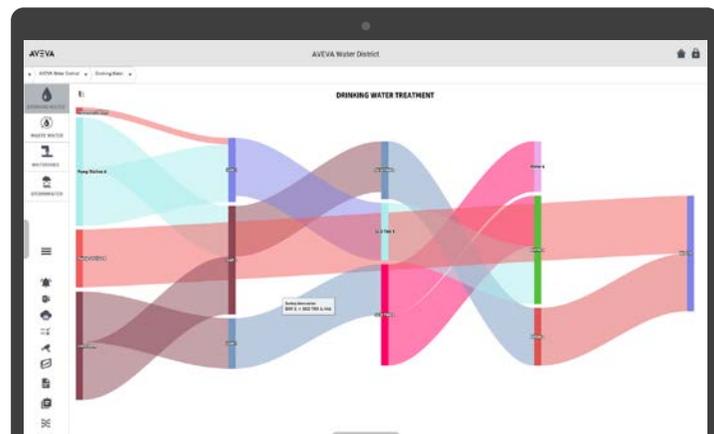


Extensibility



AVEVA PI Vision

Integrate existing AVEVA PI Vision dashboards, benefiting from navigational context between selected content.



Sankey Diagrams

Visualize energy, financial, and material paths, on a regional or national level to locate the most important contributions to a flow.



Microsoft Power BI

Show Power BI reports with dynamically configure dashboards based on the current context or configuration of the application.

Industry templates for AVEVA Unified Operations Center



Smart Cities



Data Centers



Water



Renewables

General Availability



Midstream

Early Access



Mining



Marine



Consumer Products

Conceptual

Enterprise operations performance visibility in real-time

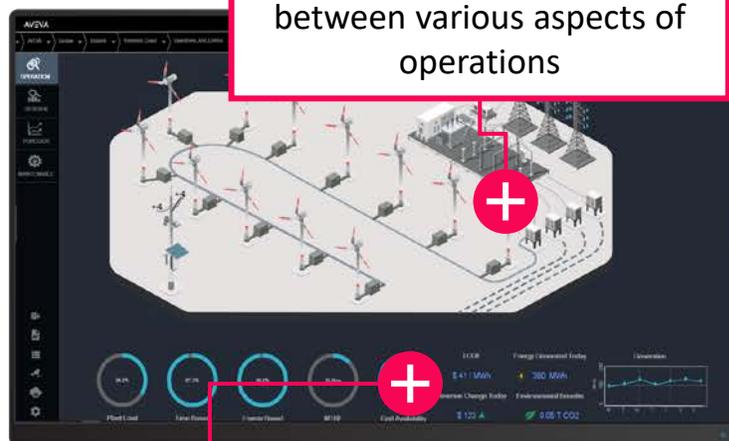
Rich intelligence offers a high-level perspective

Drill down by site to individual assets using hierarchical navigation and intuitive visualization



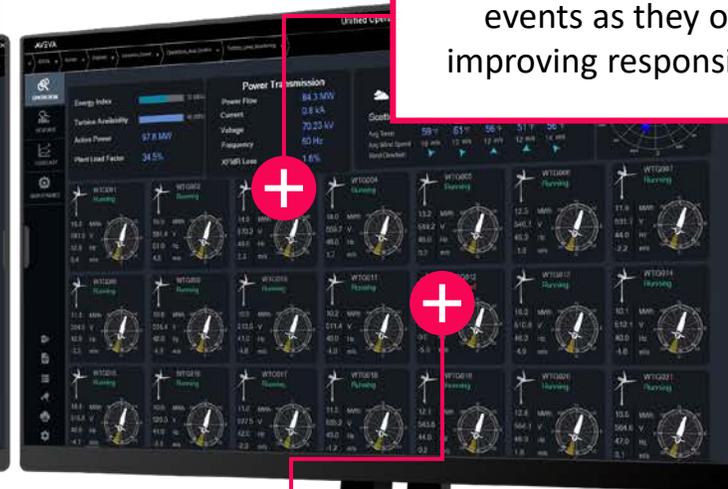
Detailed operational analysis to maximize efficiency and ensure resource availability

Merge data types to understand deeper context between various aspects of operations



Holistic view of impacts from upstream and downstream operational disruptions or outages

Real-time visibility to critical events as they occur, improving responsiveness



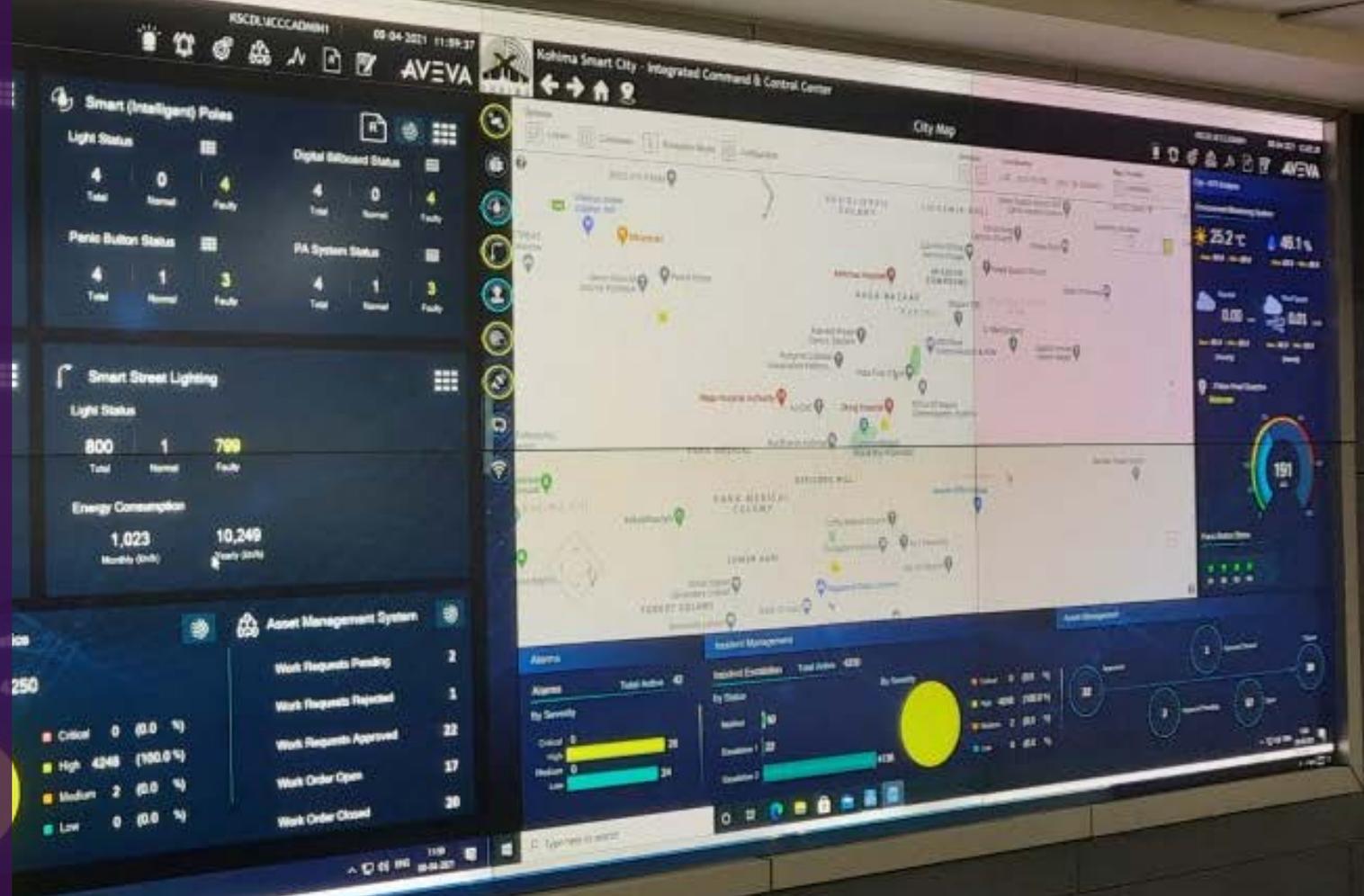
Innovative approach to alarm management, emphasizing actionable alerts

Kohima Smart City

AVEVA's Unified Operations Center helps create blueprint in sustainable smart city innovation

Integrated cross-city command center and technology platform optimizing the management and efficiency of the city's smart services

Deployed remotely to manage traffic, energy consumption using smart street lighting, city pollution monitoring and public address system



Saudi Aramco

Saudi Aramco remotely implemented AVEVA Unified Operations Center

Early value chain optimization using 3D engineering model

Improved visibility for faster decision making

Installation completed remotely securely & to time, during lockdown



Nutrien

Improved efficiency using operational data and insight from the PI System and AVEVA Unified Operations Center

Real-time data empowers the team to proactively troubleshoot and problem solve operational challenges in nitrate production

Better cross-team collaboration using shared data

Streamlined data-transfer between teams and plants



謝謝
 DZIĘKUJĘ CI
 NGIYABONGA
 TEŞEKKÜR EDERİM
 DANKIE
 TERIMA KASIH
 SPASIBO
 ПАСИБО
 GRAZIE
 МАТУР НУВУН
 ХВАЛА ВАМ
 MULȚUMESC
 PAKMET CIZGE
 GO RAIBH MAITH AGAT
 БЛАГОДАРЯ
 GRACIAS
 МАНАДСАНИД
 ТИ БЛАГОДАРАМ
 TAK DANKE
 RAHMAT
 MERCİ
 HATUR NUHUN
 PAKKA PÉR
 PAXMAT CAĜA
 CÁM ƠN BẠN
 WAZVIITA
 FALEMINDERIT
 TAPADH LEIBH
 KEA LEBONHA
 БАЯРЛАЛАА
 MISAOTRA ANAO
 WHAKAWHETAI KOE
 DANKON TANK TAPADH LEAT
 SALAMAT
 GRAZIE
 SHUKRA
 HVALA
 FAAFETAİ
 ESKERRIK ASKO
 HVALA
 TEŞEKKÜR EDERİM
 OBRIGADO
 MERCİ
 DI OU MÈSI
 ĎAKUJEM
 GRAZZI
 PAKKA PÉR
 PAXMAT CAĜA
 SIPAS JI WERE
 TERIMA KASIH
 UA TSAUG RAU KOJ
 ТИ БЛАГОДАРАМ
 СИПОС

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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.

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