



AVEVAWORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

AVEVA WORLD MILAN, MAY 2026

Roima: Smart Pulp & Paper Manufacturing

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AVEVA

ROIMA

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Roima Intelligence

20.5.2026

MES, Data and AI as the New Operating System of the Mill

PUBLIC

ROIMA Solutions Ensuring Pulp and Paper Performance and Quality

Roima Intelligence is a Nordic industrial software company. With deep roots in Nordic forest industry expertise and a broader portfolio spanning MES, production planning, industrial data management and supply chain, Roima serves as a long-term partner for manufacturing companies pursuing industrial digitalization.



Est. 2014



400+ experts



500+ customers globally



Offices in 6 countries

APS

MES

SCADA

PI System

WMS

Machine Vision

Consulting

PULP

PAPER

SAWN TIMBER

PLYWOOD

LABELSTOCK

BOARD

PACKAGING

FORESTING MACHINERY

PROCESS MACHINERY

BIOPRODUCTS



Metso

ANDRITZ

Valmet

Roima & AVEVA

AVEVA is a global leader in industrial software solutions, providing innovative tools and platforms to optimize engineering, operations, and asset performance across industries. Focused on the sectors of energy, manufacturing, and infrastructure, AVEVA offers software that enables businesses to improve efficiency, safety, and sustainability.

Roima has worked several years with AVEVA's operational software, including SCADA, MES and PI System and is an **Endorsed System Integrator**. Roima collaborates closely with AVEVA on daily basis enhancing the value provided with the software.

Key Offering from Roima

- ✓ AVEVA SCADA for monitoring and Control
- ✓ AVEVA MES for manufacturing execution
- ✓ AVEVA PI System for data collection and utilization
- ✓ AVEVA Connect & Advanced Analytics for Enterprise visualization and AI
- ✓ Roima value adding modules for AVEVA

Key Benefits

- ✓ Improved Production Efficiency
- ✓ Enhanced Quality Control
- ✓ Data-Driven Decision Making
- ✓ Regulatory Compliance
- ✓ Operational Transparency
- ✓ Cross-Industry Application

Sample Customers

Sekab

APRIL

SNELLMAN GROUP

WIPAK

Metso

Visko Teepak



Metsä

BOLIDEN

ROIMA

Roima's ISO 9001:2015 certified management system covers: Sales, design & deliver solutions by executing projects and implementations of multiple AVEVA products & systems



AVEVA Product Highlights

- **AVEVA MES** is a comprehensive manufacturing execution system that optimizes production efficiency, ensures quality control, and enables real-time visibility and data-driven decision-making across manufacturing operations.
- **AVEVA SCADA** is a real-time monitoring and control solution that enhances operational efficiency, scalability, and security by providing visibility into industrial processes and enabling quick responses to critical events.
- **AVEVA PI System** is a powerful real-time data management platform that collects, stores, contextualizes and analyzes operational data from various sources, enabling organizations to gain actionable insights and improve decision-making across complex industrial operations.
- AVEVA also offers software for operations such as AVEVA Unified Operations Center, AVEVA Asset Performance Management, AVEVA Connect (online data), which provide comprehensive tools for real-time monitoring, asset optimization, and process improvement to enhance overall operational efficiency and agility.



Limitless possibilities. Trusted by leaders.

AVEVA Partner Ecosystem | **System Integrator**

ENDORSED

Why Now

Paper Mills Are Operating Under a New Kind of Pressure

The fundamentals of pulp and paper haven't changed — but the operating environment around them has. Mills are being asked to deliver more value, with less variability, fewer people on the floor, and a much smaller environmental footprint.



EHS & Regulatory Compliance

Tightening CO2, water and energy targets. Safety expectations rising; zero-harm is the baseline. EUDR.



Demand mix shift

Graphic paper down, packaging, tissue and specialty up. Shorter runs, more grade changes, more SKUs.



Workforce & knowledge

Experienced operators retiring. Fewer people running larger, more complex assets.



Energy & cost volatility

Energy, fiber and chemical prices swing fast. Margin only survives with tight, real-time control.

The Figures Tell a Serious Story

Capacity Reshaping & Margin Pressure

87.5%

US mill operating rate in 2024 (+4 pp YoY) — aging equipment at the limit

Source: AF&PA, U.S. Paper Production & Capacity Trends 2025



Structural Demand Shift: Print → Packaging

Product Mix Agility

Mills unable to switch grades rapidly. Real-time scheduling and quality management are essential.

Source: ResourceWise P&P Review 2025; Atradius P&P Outlook 2025

46% of new paper grades

Launched in 2025 are biodegradable or eco-certified. Sustainability data in quality records is now a buyer requirement.

Source: GlobalGrowth Insights, Pulp and Paper Market 2025

The Decarbonisation Gap

70%

of mill energy consumed in drying — highest single-process lever for decarbonisation

Source: IEA, Pulp & Paper Energy Efficiency Perspectives

40% → 60%

bioenergy share in sector energy must grow by 2030 under net-zero pathways

Source: IEA Net Zero 2050 Scenario; IEA Paper Tracking 2024

~1%/yr

Historical intensity decline (2010-22)

IEA Paper Tracking

~8%/yr

Required pace 2023-30 for Net Zero

IEA NZE 2050

~78 Mt

US P&P fossil CO₂/yr

NC State / Jrnl Cleaner Prod.

6.6%

EU output below 2021 peak

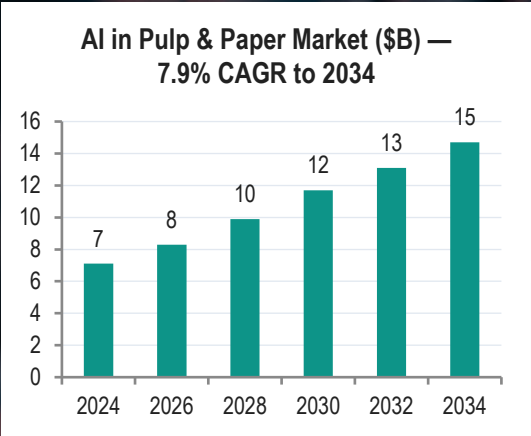
CEPI Mfg Figures 2025

>8x

faster emissions reduction required vs. historical ~1%/yr

Source: IEA Paper Tracking 2024; CEPI Mfg Figures 2025

AI & Digital Adoption Bottleneck



The Problem

84% of Industry 4.0 AI initiatives in pulp & paper never reach full production deployment. The bottleneck is not technology — it is operational data readiness and connectivity.

Source: Market.us, AI in P&P Industry Report 2025

The Opportunity

15-20% cost reduction & 5-10% throughput gains for mills that successfully deploy AI on a solid data foundation.

Source: Market.us AI Report 2025; AF&PA Production & Capacity Trends 2025

Safety, Water & Regulatory Compliance

EUDR Traceability

Forest → Mill

EU Deforestation Regulation demands digital, audit-ready supply chain visibility. Non-compliance risks market access across EMEA.

Source: ResourceWise P&P Industry Review 2025; CEPI 2023 Statistics

Water Intensity

10–60 m³ / tonne

Water scarcity and tightening discharge regulations demand real-time water analytics and reuse optimisation.

Source: ResourceWise, Benchmarking Water Usage in P&P 2024

Carbon Reporting

~78 Mt CO₂/yr (US)

ESG disclosure requirements are accelerating. Automated emissions data capture replaces manual reporting.

Source: NC State Univ. / Jnl of Cleaner Production; IEA Paper Tracking

Industry Imperatives and How to Get There



01

Circularity & recycled fiber

Higher recycled content, more contamination, more variable furnish.



02

Packaging & e-commerce growth

Containerboard, kraftliner and specialty boards driving capex.



03

Net-zero & green energy

Electrification of utilities, biomass, on-site solar and steam recovery.



04

Water stewardship

Closing water loops, effluent reuse, real-time water KPIs.



05

Operational excellence

OEE, breaks, grade changes and energy per ton as the new scorecard.



06

OT cybersecurity

IEC 62443, segmented networks, identity for every connected device.



07

Digital twin of the mill

Process, asset and product twins fed by live operational data.



08

AI & autonomous operations

From dashboards to closed-loop optimization and operator copilots.

Role of MES

MES is the Layer That Turns Automation into Plant Intelligence

ERP / Business Systems

Orders, plan, costs

MES — execution & data

Schedule · OEE · Quality · Genealogy · EHS

SCADA / Historian

Real-time process & alarm data

PLC / DCS / QCS

Control loops, paper machine, recovery

What MES makes possible in a paper mill



Real-time visibility

OEE, throughput, breaks, energy per ton — across every line and shift.



Closed-loop quality

Reel/roll genealogy, lab + scanner data linked to orders and customers.



Compliance & EHS

Electronic logs, work permits, deviations, environmental KPIs.



Plan ↔ floor integration

Orders, schedule, grade changes and warehouse moves in one flow.

Smart Manufacturing for Paper, Made Practical

We combine a paper-aware MES, a contextualized data platform and AI building blocks — designed to start with the use cases that pay back fastest, and scale into the autonomous mill on the same backbone.



Paper-aware MES

Pre-built and composable content, Roima examples to reel to reel production types and other supported



Contextualized data

Connectors and a semantic model that turn DCS, QCS, LIMS and ERP into one fabric.



AI building blocks

Quality, breaks, energy, maintenance and copilot — production-grade, not slideware.

Let's start with one mill, one use case — and a data foundation built to scale.

Why a Traditional MES is No Longer Enough

YESTERDAY'S MES

- Static reports and shift logs
- Siloed by line, area or system
- Designed around fixed grade portfolios
- Manual data entry and reconciliation
- Closed architecture, hard to extend
- AI bolted on as an afterthought

WHAT TODAY'S PAPER MILL NEEDS

- Real-time, contextualized operational data
- End-to-end view: forest → reel → roll → customer
- Configurable workflows for new grades, products and mills
- Task driven user interface for easy adoption and onboarding
- Open APIs to ERP, PLM, LIMS, EAM, CMMS, twin
- Cyber-ready and hybrid cloud-capable
- AI-native: data, models and apps in one platform

What a Next-Generation MES Must Deliver



Modular & composable

Choose what you need: scheduling, OEE, quality, EHS, energy, warehouse — without re-platforming.



Open by default

REST/MQTT/OPC UA, ISA-95 data model, standard connectors to ERP, EAM, LIMS, QCS.



Hybrid edge–cloud

Edge for sub-second control, cloud for analytics, AI and multi-mill comparison.



Secure by design

IEC 62443 zones, identity, signed updates, full audit trail.



Real-time & resilient

Survives network and DCS hiccups; never loses a reel, batch or shift event.

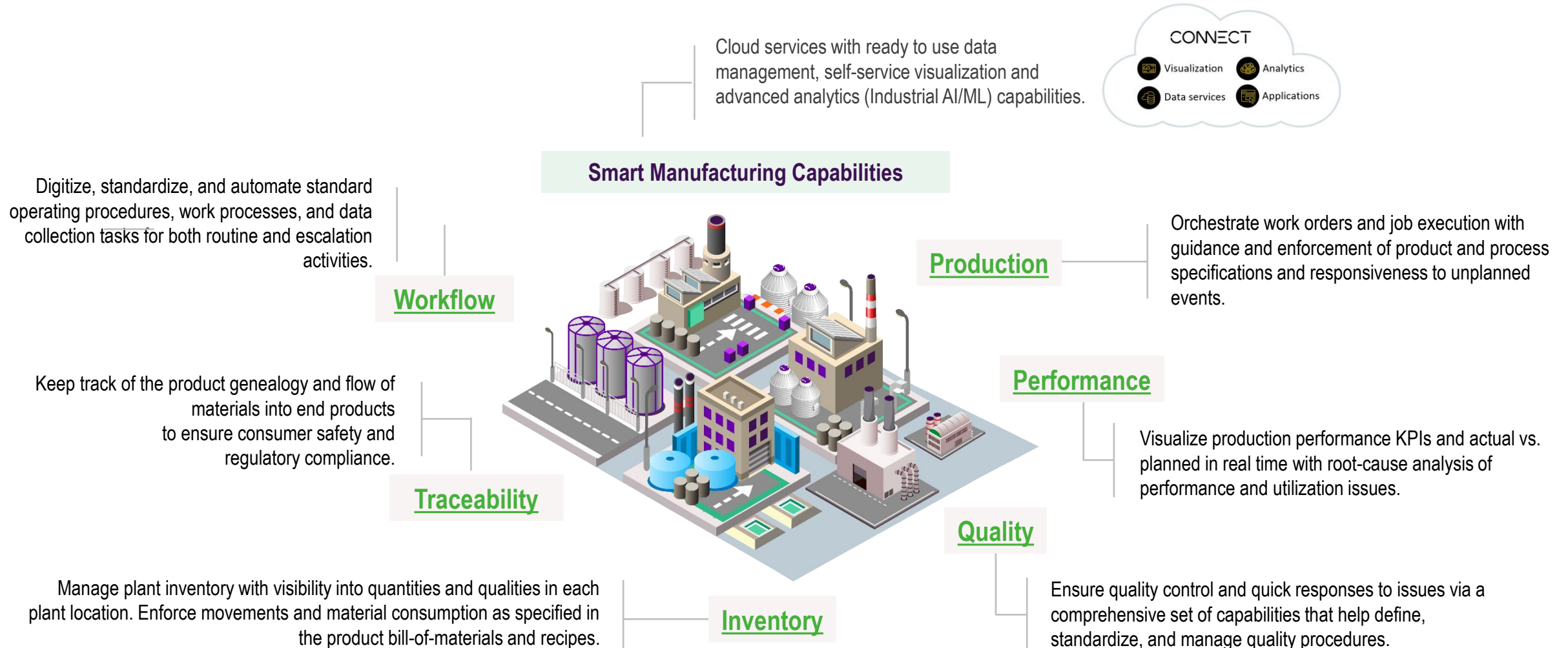


AI-ready foundation

Native time-series, contextualized data lake, MLOps for paper-specific models.

AVEVA Manufacturing Execution System Core Capabilities

Produce quality products at minimal costs by providing product and process guidance in real time



Composable MES – Shorten Time to Value

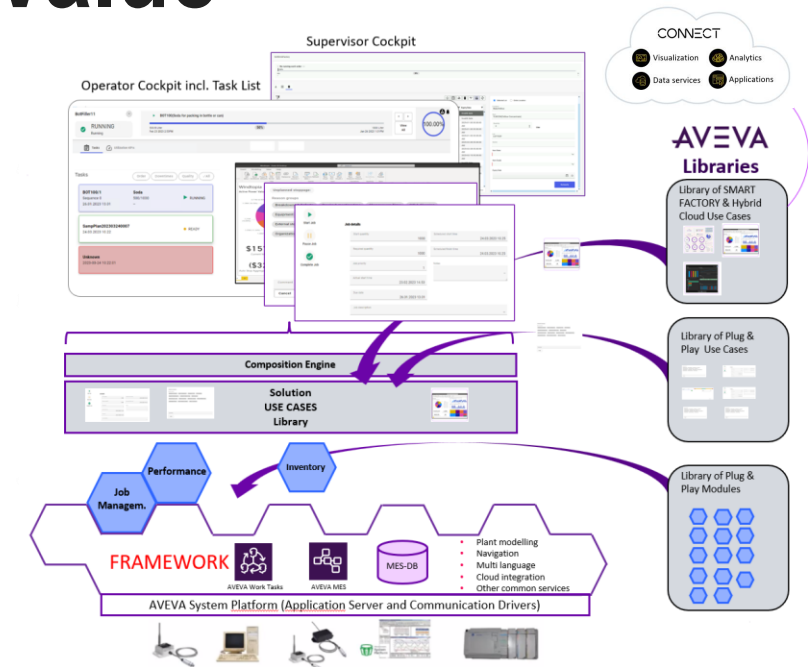
Differentiation to traditional implementation methodologies

AVEVA's Composable and Model Driven MES allows to

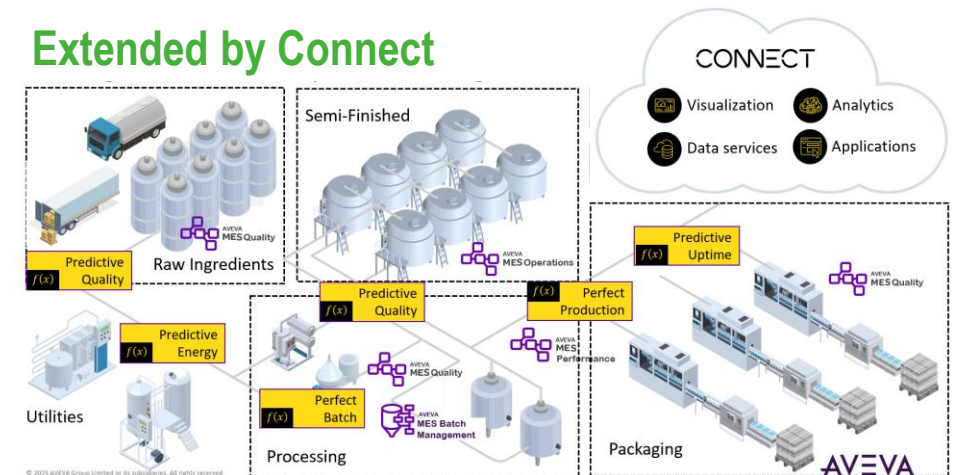
- Build MES solutions with **modular and autonomous packaged business capabilities (PBCs / Use Cases)**.
- **Achieve quick wins with an easily deployable MES**, which is incremental extensible, sustainable and future-proof.
- Extend the user experience with **low-code/no-code editors and model driven concepts** embedded in AVEVA's MES solution.
- Use **complementary cloud services with ready to use** enterprise data management, visualization and advanced analytics (AI/ML) capabilities.

Manufacturer benefits

- Reduced implementation efforts and TCO vs. traditional methodologies
- Libraries available to the whole AVEVA ecosystem for customer flexibility
- Ability to adapt with support for multi-site standardization & rollouts
- Open for partners & customers to introduce own functionalities to library



Extended by Connect



Enabling Multi-Site Standardization with Model Driven MES

Solutions Delivered

- Multi-Site AVEVA MES System supporting multiple different process types
- Complex automation integration
- AVEVA Enterprise Integrator
- Rollouts in Nordics and Central Europe

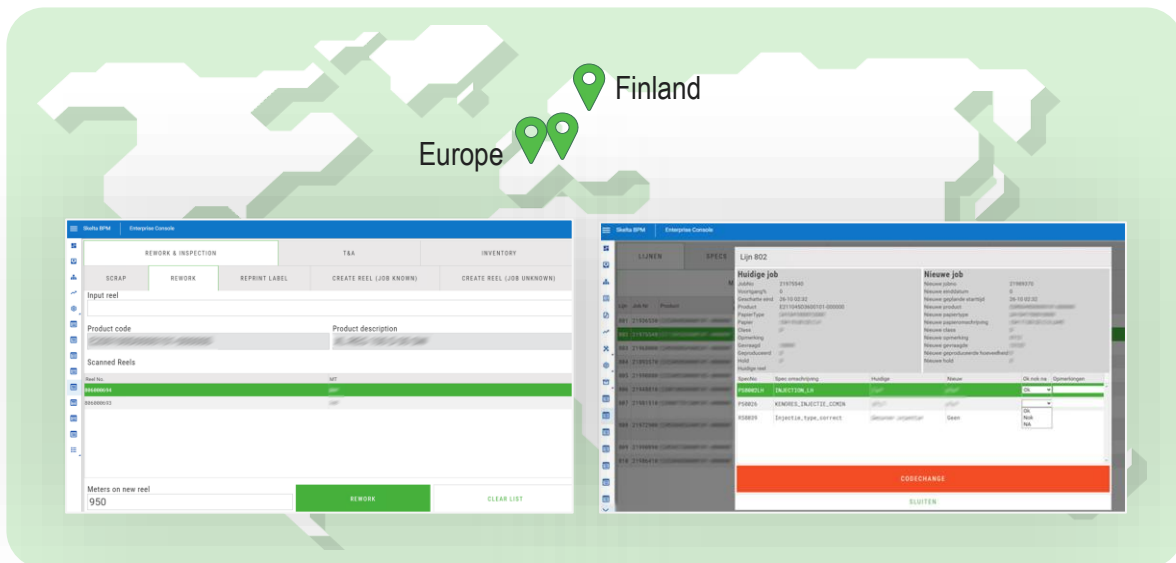
Benefits

- ✓ Deep understanding of the industry and processes
- ✓ Leading know-how in AVEVA
- ✓ AVEVA standard platforms and best practices in use enable easy maintenance and future upgradeability



ViskoTeepak is a Global brand with a local touch that delivers food casing and packaging solutions

- Roima was selected as a partner to design and develop a new MES solution for ViskoTeepak, based on the AVEVA MES Platform.
- The solution is designed with standard AVEVA tools to support ViskoTeepak processes, allowing easy development and roll-outs in the future.
- The solution also establishes comprehensive and standardized communication between MES and automation throughout the factory in ViskoTeepak's complex automation environment, including a standardized ERP integration.



Roima as partner from Prestudy to Value-Driving MES Solution

See presentation:
<https://resources.osisoft.com/presentations/enabling-multi-site-standardization-with-model-driven-mes-at-viskoteepak/>

Mill Level Solution for Self-Service Real-time Visibility

Solutions Delivered

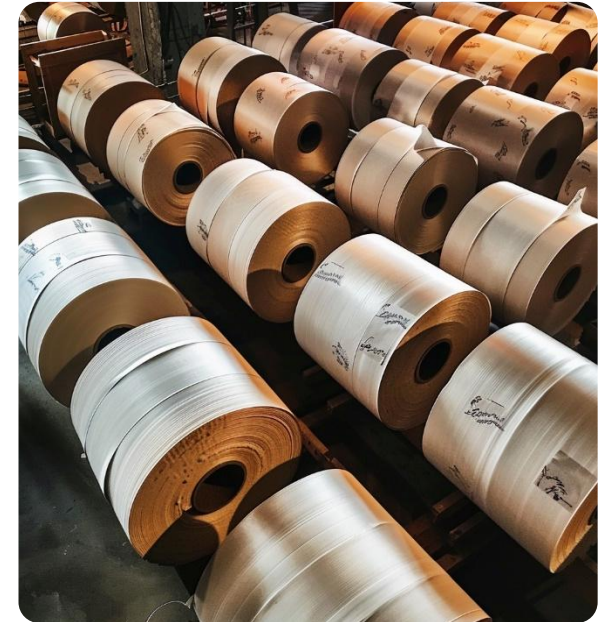
- AVEVA PI System platform
- Implementation of the solution including configuration, templates, integrations to devices to collect the required data and creation of the visualization templates
- Global implementation

Benefits

- ✓ Powerful tool for site specific data collection and utilization
- ✓ Self-service solution enabling shopfloor personnel to create their own visualizations easily based on short training
- ✓ No external support service required
- ✓ Template ready to roll out

Three sites implemented simultaneously

- Project for FPP industry customer
- Project ran simultaneously on three sites in global scope
- Project delivered in schedule and in budget
- Implemented solution includes the data required data collection integrations, configuration of the middle layer including contextualization of the data and setting up the visualization layer
- Training of end users to manage and create the visualizations themselves



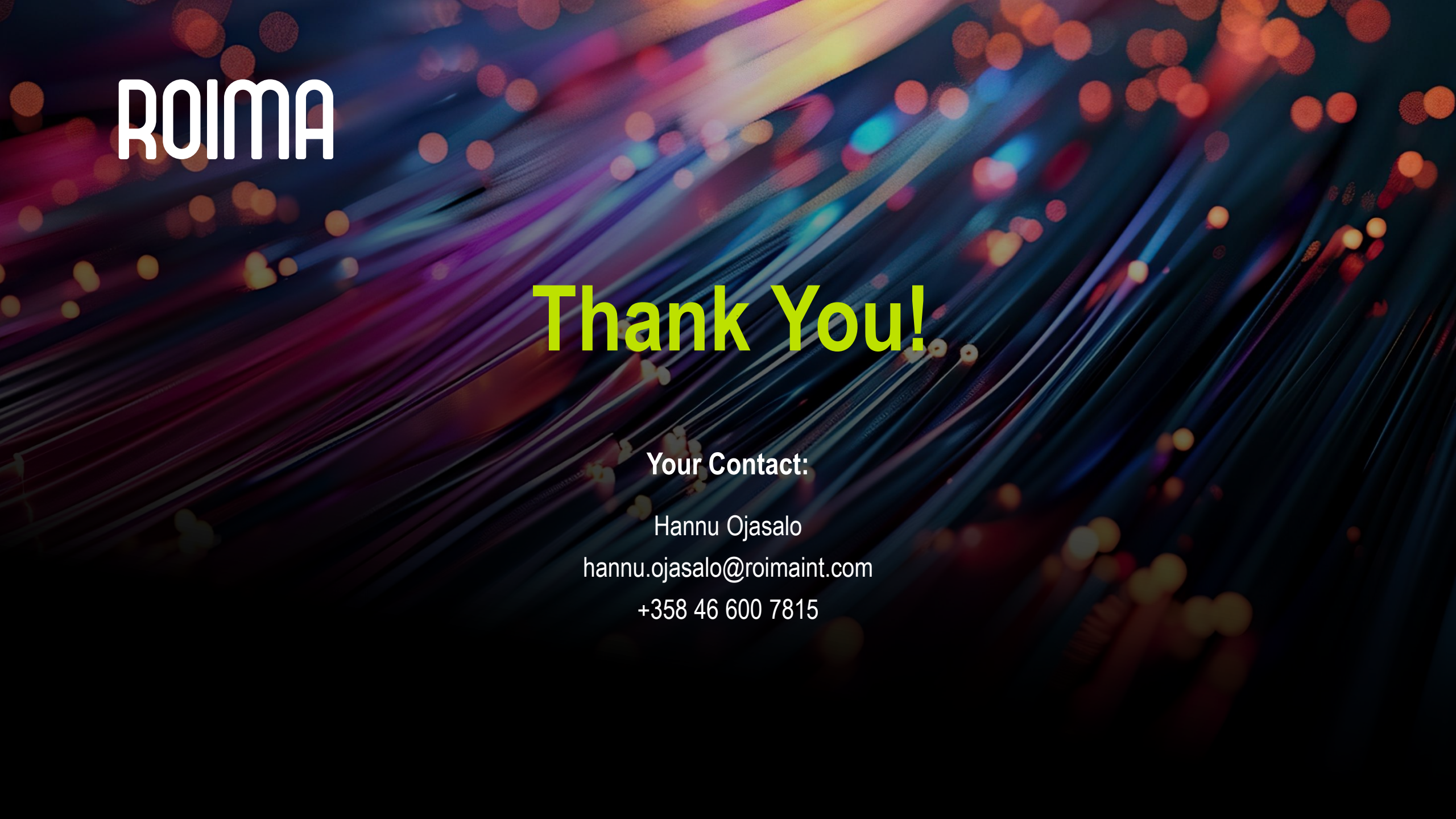
A self-service solution ready to use independently by shopfloor staff with short training

Read more:

<https://www.aveva.com/en/products/aveva-pi-system/>

AVEVA Portfolio — Capability Mapping to P&P Challenges

AVEVA MES		AVEVA PI System		CONNECT	
■ Production scheduling & grade changes ■ Digital work instructions ■ Quality management & SPC ■ OEE tracking & downtime analysis ■ Batch management for specialty grades ■ Integration: OT / IT		■ Real-time process data infrastructure ■ Energy & utilities monitoring ■ Predictive analytics for APM ■ Multi-fuel energy mix tracking ■ Water & emissions data capture ■ Foundation for AI/ML deployment		■ Cloud-based multi-site dashboards ■ Portfolio benchmarking ■ Sustainability & ESG reporting ■ Supply chain traceability (EUDR) ■ Remote monitoring & operations ■ Built-In AI (Advanced Analytics, Industrial AI Assistant)	
Capacity Efficiency		Decarbonisation		AI Readiness	
				Grade Agility	
				Safety & Compliance	



ROIMA

Thank You!

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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