Refining Operations Management from AVEVA transforms refining operations management business processes to drive consistent and proactive collaboration across functional domains to maximise operations margins and sustain performance. It unifies best-in-class application solutions for supply chain management, operations, production and asset management on a single operations-focused platform that breaks down silos and improves collaboration, business intelligence and agility for operational excellence.
Achieve operational excellence

Refineries are constantly challenged with sustaining and improving margins and retaining operational knowledge due to changing market conditions and requirements:

- Changes in crude prices and availability
- Changes in product market demand and prices
- Frequent unplanned shutdowns and plant outages
- Declining productivity due to retiring workforce

Embarking on a journey of transformation based on refinery digitisation is imperative for improved profitability and sustainability. Due to the complexity and traditions of refinery operations, refineries tend to use diverse software and technologies for each functional domain in an attempt to optimise both plant operations and the supply chain. This may result in poor coordination among operational silos, reducing operational efficiency and increasing operations costs.

Refining Operations Management transforms your operations to drive consistent and proactive collaboration across functional domains. It maximises operations margins and sustains performance by implementing best in class, specialised solutions to accelerate profitability and operational efficiencies, using a single, operations-focused performance management platform. Up to 5% incremental revenue, and 10% in cost reductions are achievable.

Refining Operations Management for maximising profitability

Refining Operations Management maximises refinery profitability by unifying best-in-class application solutions for supply chain, operations, production and asset management on a Performance Management platform that breaks down silos and improves collaboration, operations intelligence and agility. A Performance Management layer and an Application Integration layer host the specialised Refining Operations Management modules to address various aspects of refinery operation excellence:

- Unified supply chain
- Operations management
- Production management
- Asset Performance Management

Performance Manager

- Dashboards
- Reports
- KPI's
- Workflows
- Excel export
- Trends
- Application Views
- Data Warehouse
- Decision Management
- Calculations

Application Integration

- SOA/Web services
- ESB
- Orchestration
- Semantic Translation

Refining Operations Management Framework
1. **Improved enterprise-wide operational visibility** facilitates a performance-driven culture by empowering teams to be proactive and aligning them towards key metrics and goals.

2. **Optimise the entire value chain from actionable business insights with industry-leading applications** in process optimisation, unified planning and scheduling, asset performance management, offsites optimisation and mobile workforce management.

3. **Improved asset utilisation and reliability** through better predictions and reporting of asset performance and boundary violations

4. **Cross-domain collaboration console** for all the functional teams to manage the operational decision-making lifecycle, to facilitate corrective actions and to sustain best practices and operational knowledge.
INDUSTRY SOLUTION
REFINING OPERATIONS MANAGEMENT

Operations Console: KPIs of entire operations

Operations Console: Detailed KPIs for the process units

Self-service cause-action assignment interface

KPI self-configured panel
Refining Operations Management solutions include:

**Performance Manager**

Performance Manager provides operations management-focused performance monitoring and advanced workflow tools on a single, integrated visualisation platform; it enables operational excellence by standardising business workflows and processes, eliminating inefficient work and improving collaboration across functional domains. It includes an Industry Operations Console, KPI Manager, Event Manager, Decision Manager and Master Data Model.

**Supply Chain Management**

Spiral Unified Supply Chain Management optimises the supply chain operations by bringing together feedstock data management, planning, scheduling and envelope optimisation activities in a single, fully-integrated platform. It enables refineries to explore opportunities, reduce operational risk and reduce deviations between the plan and actual results. It delivers much more trustworthy data with much less effort than other approaches.

**Operations Management**

ROMeo Process Optimisation enables refineries to respond with agility to changes in key operating parameters and optimise their process units and utilities in the volatile environment due to frequent changes in demand, feedstocks and product specifications. This is the market-leading application which has helped refineries to maintain first quartile performance.

Refinery Off-sites enables refineries to optimise their off-sites operations by providing accurate, reliable and accessible inventory and movement information, movement automation and off-line/on-line multi-blend optimisation. It helps refineries to reduce product costs, giveaway and increase operational performance. This is the market-leading off-sites solution which helps refineries to reliably produce the most demanding fuels at a minimum cost.

**IntelaTrac Mobile Operator Rounds**

IntelaTrac Mobile Operator Rounds brings the field operator into the automation loop by utilising a combination of workforce management software, mobile handheld computers, monitoring devices and Radio Frequency Identification (RFID) equipment tags or bar codes. It enables refineries to standardise refinery process steps and deliver decision support to field workers to improve operating reliability, reduce maintenance costs and improve safety and environmental compliance. This solution is the standard for integrated oil companies and many national and independent refiners.

**Production Management**

ErrorSolver Yield Accounting provides an improved material, yield and unit cost management system that complies with best practices for data reconciliation and production accounting. It can be integrated directly with Off-sites Tank Inventory and Movement Solutions to streamline and improve the quality of data acquisition and help to reduce unaccounted and real losses. It delivers much more trustworthy data with much less effort than other approaches.

**Asset Performance Management**

PRiSM Predictive Asset Analytics is a predictive asset analytics solution that can provide early warning notification and diagnosis of equipment issues before failure. It helps refineries reduce unplanned downtime, increase reliability and improve availability.

**Application Integration**

Application Integration solution, based on a Service-oriented architecture (SOA) reduces overall cost and skill of integration by utilising common integration components to reconcile different data structures and fields across multiple applications on a single platform. This is implemented with a minimum amount of programming. Based on market-leading software from AVEVA and Microsoft.
Refining Operations Management

1. **Improve operational intelligence and agility** by breaking down information silos and unifying data from disparate sources on a single platform.

2. **Reduce Total Cost of Ownership (TCO)** through a self-service, intuitive operations-focused portal.

3. **Eliminate operational inefficiency, automate and transform work** processes around people, processes and assets by enabling advanced analytics, fast decision making, cross-discipline collaboration and the creation, accumulation and retention of operational knowledge.

4. **Improve revenue by up to 5% and reduce operations costs by up to 10%** with industry-proven performance platform in merging IT (information technology) and OT (operations technology) for many major oil and gas companies.

5. **Supported by experienced teams from AVEVA globally** to ensure continuous and high-quality support for customers to reduce total cost of ownership (TCO) and drive operational excellence.
Refining Operations Management transforms operations and business processes, enabling operations improvement in the following key areas:

- **Blending and oil movements** – reduced giveaway, no rework, minimum inventory, minimum downgrades, and higher fuels agility
- **Maintenance Management** – reduced unplanned shutdown, improved asset reliability and availability and improved asset ROI
- **Production management** – reduced accounting loss, reduced hydrogen and steam consumption, increased throughput
- **Reliability** – reduced unplanned shutdowns, reduced HSE incidents, reduced maintenance
- **Planning and scheduling** – reduced cost of crude purchases, increased throughput, increased yield
- **Process performance** – reduced energy, longer equipment life, increased availability, increased quality, increased yield
- **Energy management** – reduced energy conversion cost, reduced energy consumption cost, reduced cost of crude for energy
Refining Operations Management leverages both ROMeo Process Optimisation and PRiSM Predictive Asset Analytics for its functionality

Conclusion

Whether you are implementing a single or multiple Refining Operations Management solutions, the true value of AVEVA’s Refining Operations Management is that you can implement the industry-leading specialised solutions in a logical step-wise fashion, as economics and resources allow. This allows you to build value as additional solutions are implemented, allowing each solution to pay for the subsequent implementation. Refining Operations Management guides you in executing operational excellence that drives overall business excellence in your enterprise.

Customer FIRST Software Maintenance and Support Program

Our Mission: Your Success

Refining Operations Management offers the award-winning Customer FIRST Software Maintenance and Support Program. Customer FIRST is a flexible portfolio of services that help protect and extend the value of your AVEVA Industry Solutions across the entire lifecycle. A Customer FIRST Agreement establishes a formal service relationship with AVEVA, enabling access to the latest software upgrades and providing expert technical assistance, optional services and self-help tools to help you improve your operational effectiveness.

For more information on Customer FIRST for Industry Solutions, please visit: sw.aveva.com/support/customer-first/

For more information on Refining Operations Management, visit: software.schneider-electric.com/refining-operations-management