



BROCHURE

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# Effective resource allocation, planning and construction

**Integrated Enterprise Resource Management for proven  
project performance**

The complexity of major CAPEX projects and the various business processes involved in their establishment requires the control and use of vast amounts of resources and information.

While enterprise applications may be used to support individual processes such as managing time, expenditure and risk, the inability to share and reuse information between applications limits overall business efficiency, potentially leading to delays, penalties and risk.



## The main challenges faced in process plant projects today are:



### 1 Lack of integration between departments

Having to re-enter data into more than one system compromises information reliability and quality, and significantly increases the total time spent by teams entering and searching for information.



### 2 Inefficient material management and control

In general, 28% of the cost of a greenfield capital project relates to material costs. This means that any wastage in material acquisition significantly affects financial results and project outcomes.



### 3 Rework due to lack of control and visibility

Typically, 5% of the cost of a process plant project is spent on engineering and 60-70% on materials. A typical CAPEX project has an average of 25-35% of the total costs of a project to control or save on direct and indirect labour. Any rework in the project execution phase will impact one or more of these areas, and therefore have an impact on the overall cost of the project.



### 4 Management KPI query repository

Most projects lack a single database with information from every phase of the project, from which it is possible to extract all the managerial KPIs for quick and effective decision making.

# AVEVA Enterprise Resource Management

## Defining a new future of on-plan projects

AVEVA ERM is the new generation of resource management applications that meet the specific needs of the process plant sector.

Unique to the market, AVEVA ERM combines material management, project planning and fabrication and construction support with engineering data and design models. The integrated solution delivers a powerful, easy-to-use platform for improving productivity, minimising material and production costs and bettering project quality.

Built for the process plant and marine industries, the integrated AVEVA ERM suite of applications supports the entire construction design and delivery process, creating efficiencies from the automation of initial project planning and material definition, through Bill of Materials management, procurement and logistics, to construction and fabrication planning and control.

AVEVA ERM provides unrivalled data integrity and its modular framework is flexible enough to meet the evolving requirements of any enterprise.

## AVEVA Enterprise Management ensures:

- The right materials are delivered to the right place at the right time, in the right quantities
- Progress and costs are accurately monitored
- Management decisions are based on up-to-date, detailed and accurate information
- Historical data is readily usable when tendering for new projects
- Accurate and detailed information can be extracted for management reporting

Based on AVEVA's open technology, data from AVEVA ERM easily imports and exports with in-house or third-party systems, minimizing data leakage and protecting your investment in technology and information.

Embodying proven best practices and extensive industry experience, AVEVA ERM enables the streamlining of all construction and material work processes.

Uniquely, AVEVA ERM offers configurable, secure third-party access to its information, enabling seamless and effective collaboration on joint projects with other EPCs.

### Shortened timescales

- Predict and prevent problems and bottlenecks
- Plan more efficient work schedules
- Avoid delays through materials shortages



### Improved project quality

- Improves your project monitoring and control
- Improves your data quality, availability and visibility
- Minimises errors and rework



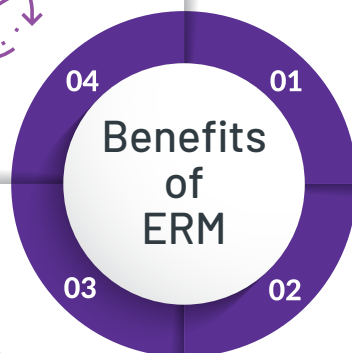
### Decrease production costs

- Increase efficiency and coordination of working processes
- Optimise resource use and materials availability



### Lower materials costs

- Buy the right materials at the best price
- Minimise waste and surpluses





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“We believe the AVEVA Enterprise Resource Management solution marks a step forward for productivity, efficiency and effectiveness that will drive the EPC industry forward.”

-Andrew Wood, CEO, Worley



# The AVEVA Enterprise Resource Management product family consists of:

## AVEVA Planning

A project planning and control tool, enabling the management and control of work breakdown structures and tasks.

## AVEVA Material

A materials management solution to support the entire materials flow, from budgeting through requirements, procurement, receipt, warehousing and issue.

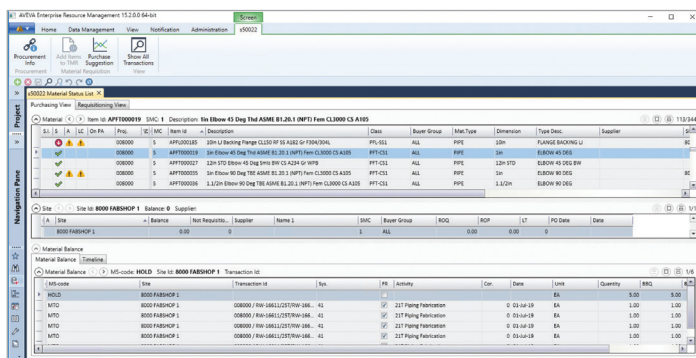
## AVEVA Production

A fabrication and construction planning and control tool, enabling the detailed management, scheduling and control of work orders and jobs in detail by using information provided by AVEVA Planning and AVEVA Material.

## AVEVA Catalogue Manager

Technology for creating and managing bulk material catalogues, supporting the materials management lifecycle. Configurable to manage multiple engineering disciplines and meet corporate and client standards, it includes a tool to create and manage piping and other specifications to fully align 3D design with materials management.

Each module can be used independently, but the full value of AVEVA ERM is achieved through seamless integration on a single database shared by all its applications. This unique feature ensures the best possible coordination between planning, material management and all other construction processes, and enables a progressive deployment to suit business needs and opportunities, with measurable benefits achievable at every stage.

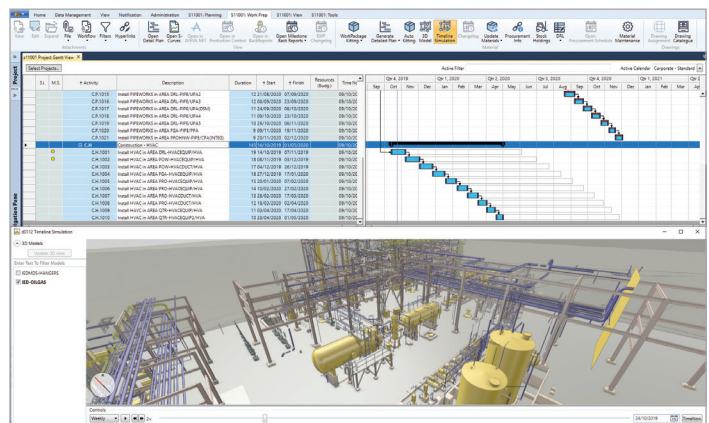


Material Status provides both the overall status of any project item plus details quantities at various stages

- Easy-to-use user interface means business adoption is simple
- Out-of-the-box seamless integration with many other AVEVA products makes interoperability effortless
- Built-in, best-of-class features support engineering, multi-discipline bulk materials, and specific processes for piping
- Simple integration with other ERP systems and configurable to suit your needs.

Each module can be used independently, but the full value of AVEVA ERM is achieved through seamless integration on a single database shared by all its applications.

Created by experienced consultants who have been involved in some of the most complex EPC projects in the world, and merged with planning functions from the Shipbuilding industry, ERM meets the complete needs of the industries it serves.



Material linked to activities allows 4D visualisation and timeline simulation



# AVEVA ERM in the Cloud

AVEVA ERM can be deployed on-premises, or as a private cloud service provisioned by AVEVA through our AVEVA Connect cloud platform, making it accessible wherever there is an internet connection.

Provide your global teams with a scalable, robust and reliable corporate ERM solution so they can deliver unified and integrated business processes, local and global projects in a globally shared environment.

Select the deployment model that is right for your business: on-premises or cloud.

## Why cloud, why now?



### Increase Collaboration

Cloud allows you to consolidate data from multiple sources into a central location for improved transparency, accessibility and visibility across your value chain. Easily and securely share engineering models and critical operational information with employees, trusted partners and suppliers. Everyone sees the same data in context so smart collaboration is made possible. Data is unlocked and made available anywhere, anytime and any device.



### Futureproof Investments

Augment existing systems with digital services. Take advantage of new capabilities such as machine learning, artificial intelligence, advanced analytics, and more, all as a natural extension to existing systems. Cloud forms the backbone to the advanced digital twin so that you have a “living” representation of your all elements of your engineering and operational activities.



### Reduce Costs

All the benefits of industrial software without the overhead of installation, deployment, version control and hardware maintenance. And because it's the same easy to use software now accessed over the internet, training costs are minimized.

Cloud offers commercial flexibility too with various subscription approaches available. Pay for what you use, and quickly scale as required. Plus, your IT burden is reduced since AVEVA provides the necessary computing Infrastructure, backup, updates, security, and performance.





## Unified Systems for Maximum Value

AVEVA ERM can be deployed as a part of a Unified Engineering and Project Execution solution (or both) where additional AVEVA solution components can be combined to derive the maximum return on your technology investment, to the tune of 15% off total project costs.

### Unified Engineering

For example, the combination of AVEVA ERM with AVEVA NET and solutions from AVEVA's engineering & design portfolio allows AVEVA customers to uniquely benefit from a completely integrated construction management and control solution.

Using this combination, construction workers can access, not only their list of jobs from AVEVA Planning, but also 3D models from AVEVA Everything3D (AVEVA E3D), and all the project documentation – such as drawings, photos, and datasheets – from the integrated information environment of AVEVA NET.

Additionally, workers can provide feedback via their production control interface that will actively set access control to the 3D design model in AVEVA E3D or to documents in a third-party document management system.

### Unified Project Execution

AVEVA ERM combines with AVEVA ProCon to streamline CAPEX delivery systems and align project planning, contract management, and resource allocation for minimized risk of project overages. Alignment between the solutions improves forecast reliability through automated insights and timely alerts when key project success measures are trending to miss the target.

Scope change in project delivery is vast and inevitable, requiring constant updates to contract and resource allocations each time there is an update to the plan. Commonly tracked manually, or with disconnected systems, each change increases the risk of human error and data loss which can ultimately drive up costs and push back the schedule.

AVEVA's integrated solutions deliver measurable benefits for executive, project, information, production and materials management.

With the most aligned systems available on the market project teams can improve transparency, collaboration, and decrease total project costs for better overall performance.





For more information on AVEVA Enterprise Resource Management, visit: [sw.aveva.com/engineer-procure-construct/procure-construct-and-handover/enterprise-resource-management](https://sw.aveva.com/engineer-procure-construct/procure-construct-and-handover/enterprise-resource-management) or contact us today.

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