



BROCHURE

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## Engineering and Design

Control and accelerate your iterative design and engineering process with an integrated set of engineering software that spans your brownfield and greenfield projects.

Improve your process efficiency with linked data capture and accessible change communications that put your engineers at the center of the collaborative process, wherever they may be in the world.

Create your Digital Asset to manage your asset's lifecycle from handover, throughout project management, all the way to decommissioning. No matter what stage your project is at, AVEVA's Engineering and Design solutions can start improving efficiency and reducing cost, delays and risk.

## Reduce design iterations, cost and risk

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Delivering projects on time, on budget, and to the highest standards requires that you control and manage changes as the design iterates through progressive refinements and detailing. This demands a collaborative, digital environment that enables all engineering and design disciplines to respond to multi-discipline changes in an ordered and organised manner.

AVEVA's Engineering and Design portfolio has everything you need for high-quality engineering and design project execution. It allows your engineering teams to create line and equipment lists, diagrams, data capture, 3D models, while also being able to visualize engineering information and manage contracts effectively.

As part of AVEVA's Digital Asset approach our solutions are limitless, which means you can support projects of any size. We offer robust yet flexible tools to enable your multi-discipline teams to effectively collaborate, create, refine and communicate engineering and design information, in real-time, from anywhere in the world.

AVEVA's Engineering and Design products integrate as part of the AVEVA Unified Engineering and AVEVA Unified Project Execution suite of solutions.

Products can be deployed either in the cloud or on-premise providing the full end-to-end suite of conceptual, FEED and detailed design right through to project execution to increase engineering efficiency and deliver projects on-time and within budget.

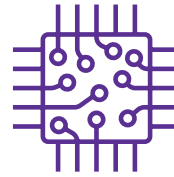
## Business benefits

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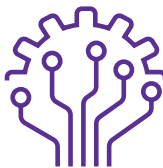
### Increase design efficiency and team Collaboration

Empower multi-discipline teams to create, refine and communicate engineering and design information, in real-time, from anywhere in the world.



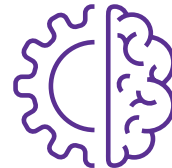
### Improve project Information Management

Keep up with evolving project engineering data, and automatically validate against regulatory and client standards on a single, unified platform.



### Minimize contracts and obligations risk

Identify the impact (\$/schedule) of potential changes quickly to allow time for scrutiny and to mitigate the risk of unnecessary changes.



### Improve Brownfield Remediation Efficiency

Visualize brownfield sites with 3D data capture and insert new designs to eliminate the risk for clashes and other design errors.



## High-level features and benefits

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### Easy deployment

Accelerate time to project start-up with ease of deployment in the cloud or on-premise, and with minimal disruption to your business.

### Scalability

Expand initial deployments to support any size of project, scale, and complexity, with minimal deterioration to system performance.

### Multi-discipline collaboration

Enable engineering teams to collaborate on 1D, 2D, 3D data in real-time across one common platform to increase efficiency and minimize rework in construction.

### Increased project capacity

Deliver high-quality projects on budget and on schedule with increased project capacity, enabling contractors to execute capital projects with flexible, rapid responses to client change requests.

### Reduced project risk

Increase project predictability, respond easily to unexpected circumstances through clear visibility of current statuses and progress against plan. Evolving engineering and design information can be robustly controlled and rapidly communicated.

### High-quality deliverables

Create accurate, high-quality deliverables rapidly – direct from the project model – for compliance, procurement, fabrication, construction, and project management purposes.

### Improved contract delivery

Effectively manage contract obligations at every phase of the asset's life cycle to mitigate cost overruns and risk.

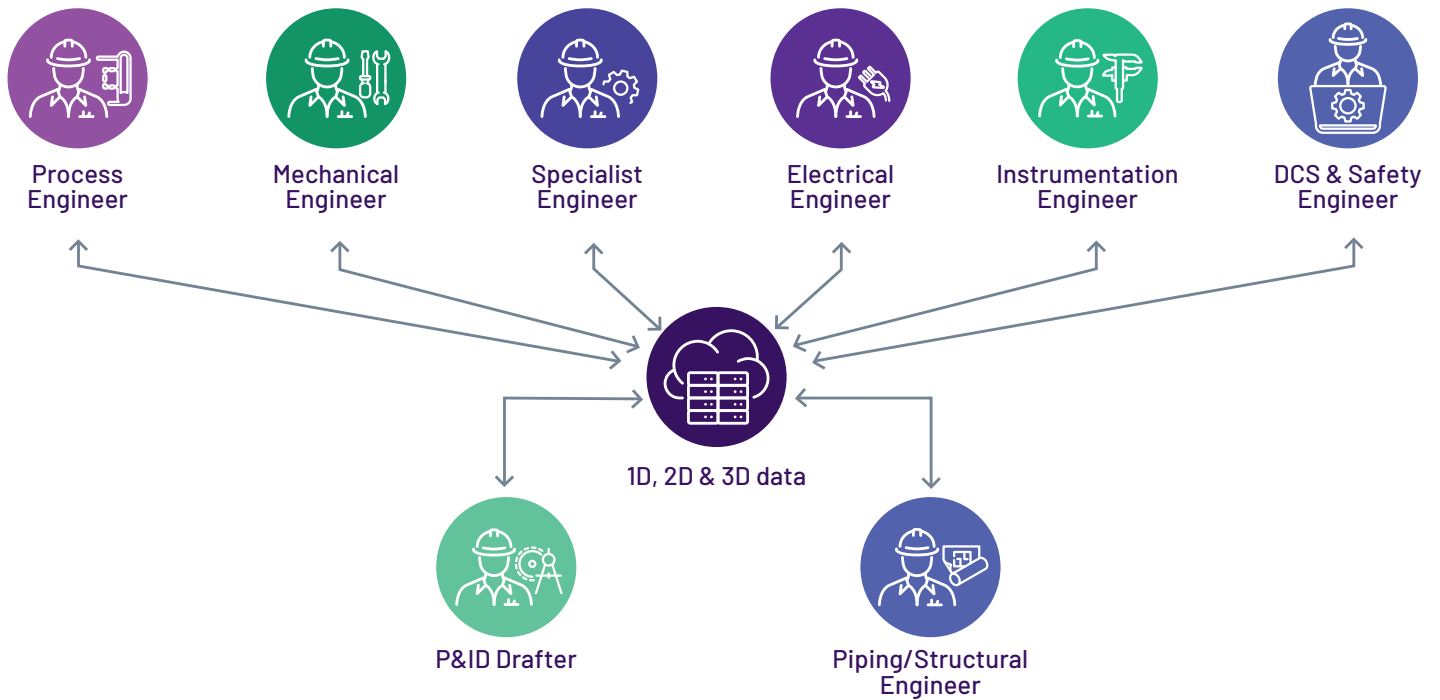
# AVEVA™ Engineering and Design

AVEVA's Engineering and Design solutions help you control and accelerate the iterative design and engineering process within one integrated set of products.

Owner Operators, EPC contractors and Shipyards can improve process efficiency by aligning data capture and easily communicating change, allowing engineers from

different disciplines to collaborate in real-time on site and from anywhere in the world.

Engineering data is at the heart of every major capital project. A data-centric approach is key to ensuring your global engineering teams communicate and collaborate effectively.



# AVEVA Engineering and Design products:

## AVEVA™ E3D Design

AVEVA E3D combines the latest 3D graphics and user interface technologies with state-of-the-art data management. Designed using the latest user experience principles and practices, its intuitive interface makes using it a breeze. It has taken the plant, marine and power industry to new levels of capability, reducing cost, timescale and project risk on projects of all sizes.

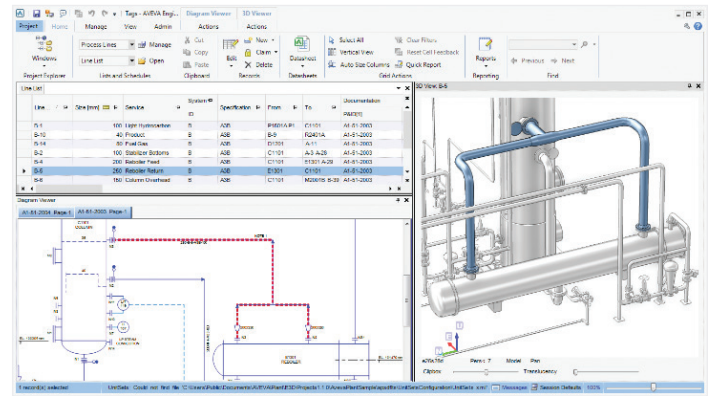


### Benefits

- Rapid project start-up within days, and easy global deployment
- Maintain control throughout the design chain by easier adherence to regulatory, industry, company and project standards
- Increased design efficiency and capabilities, reducing man-hours and cost
- Eliminate rework, costly construction errors, project risk and litigation exposure

## AVEVA™ Engineering

Enabling multi-disciplinary teams of engineers to jointly develop the definition of all key engineering items (such as lines, equipment, and valves) and their key attributes. A highly configurable data model allows you to meet a wide range of project, customer and industry requirements, and to manage virtually any scope of engineering data.

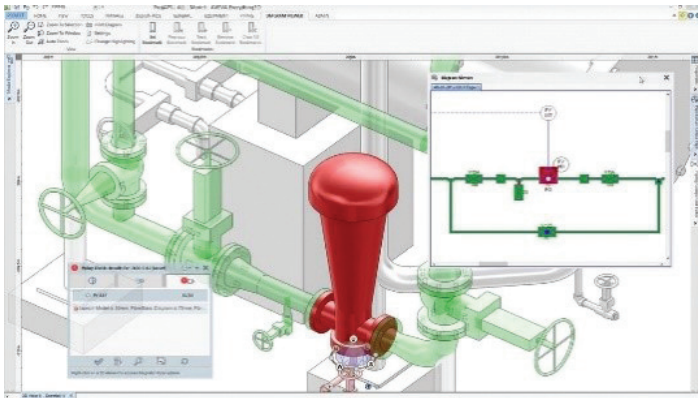


### Benefits

- Effective management of data assets in one, unified database
- Efficient and flexible multi-location, global collaboration
- Reduced impact of changes on cost, schedule, quality, and risk
- Unrivaled for integration across process simulation, schematics, engineering and 3D Design

## AVEVA™ Diagrams

A specification-driven schematic design application for process engineering, AVEVA Diagrams enables efficient creation of P&IDs and other schematics integrated with engineering and 3D design. It delivers exceptional integration capabilities, including shared administration, report generation and data management.

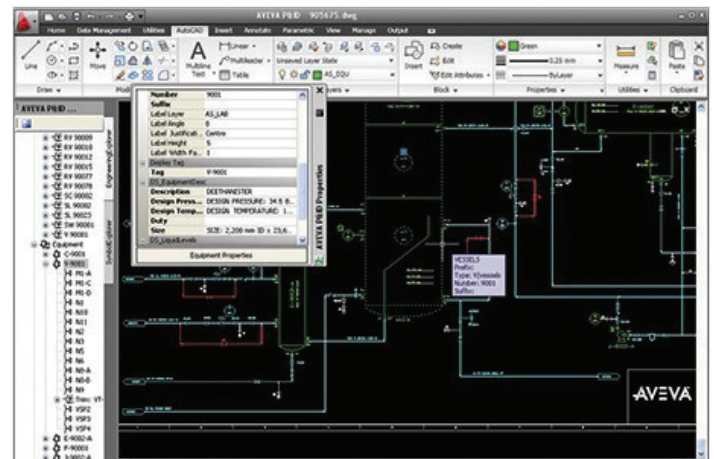


### Benefits

- Dedicated schematic design functions maximize productivity
- Full consistency across the entire project through customizable rules and actions
- AVEVA technology platform reduces system administration by exposing P&ID data directly into the full product model
- Improves quality and reduces rework in design and production by avoiding costly errors

## AVEVA™ P&ID

AVEVA P&ID is an intelligent, data-centric application ensuring design integrity from the outset. It is quick to set-up, easy to use, and enables process engineers & drafters to create, edit, and manage their 2D process drawings efficiently.

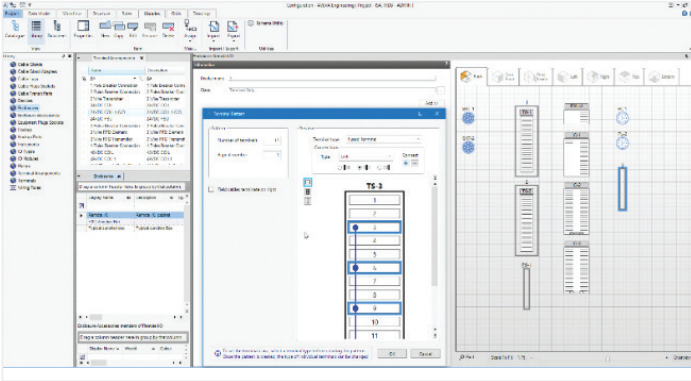


### Benefits

- Project-wide configuration, customization, data control, and reporting for supreme design efficiency
- Design data can be easily reused and effectively reapplied on subsequent projects
- Significantly reduce man-hours through the ability to bulk-modify existing data
- ISO 15926 output to create a logical model for integration with engineering and design activities

## AVEVA™ Electrical and Instrumentation

Create high-quality project deliverables including instrumentation and electrical drawings, schematics and data sheets. The solution provides integration with ETAP for detailed calculations and 3D Design for smarter cable routing.



### Benefits

- Fast delivery of engineering projects
- Reduction in delay-and error-related costs
- Multi-discipline integration with global workshare
- Intuitive user experience

## AVEVA™ E3D Design Mobile

Intuitive app for touch-screen devices that allows your project decision makers, fabricators and shipyard managers to access live AVEVA design models literally at their fingertips, from anywhere in the world.

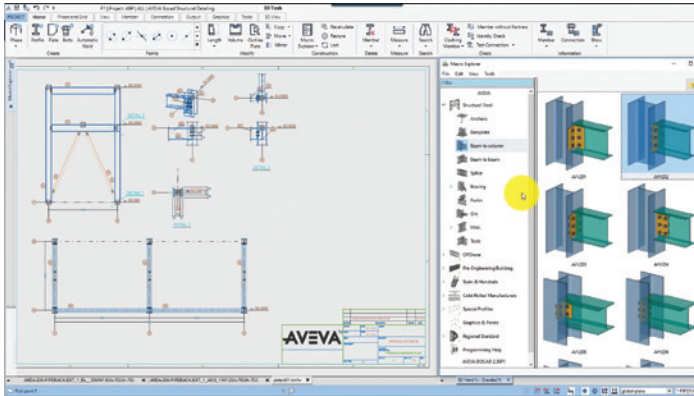


### Benefits

- Easy access to the 3D model for non-design specialists
- Eliminate or reduce approval bottlenecks
- Extremely intuitive user experience for improved speed, transparency, and traceability
- All input and feedback automatically recorded for future reference

## AVEVA™ E3D Structural Design

AVEVA E3D Structural Design provides increased productivity in structural steel for the process plant, marine and power industries. Enabling consistently rapid, high-quality design, fabrication and construction, for on-time, on-budget delivery of complex projects.

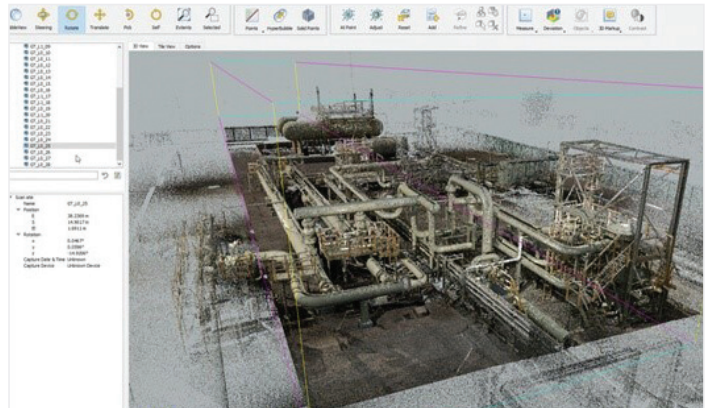


### Benefits

- Collaborate and clash-check with architectural, mechanical, plant and marine design systems
- Automatically generate shop-ready fabrication deliverables, direct from the 3D model, with minimal additional drafting
- Respond effectively to late changes in project scope
- Powerful parts-nesting functions for accurate material estimating and procurement

## AVEVA™ 3D Data Capture

Visualize your site effectively with AVEVA 3D data capture. Best-in-class productivity features are complemented with the unique ability to integrate high-resolution laser scan data with new design, both in the 3D design environment and in drawing deliverables.



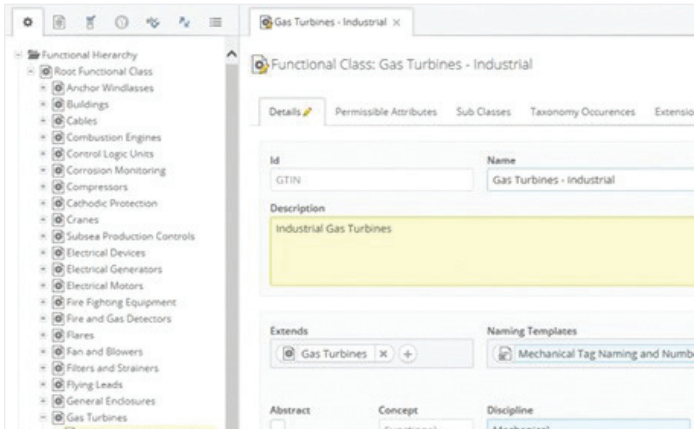
### Benefits

- Share data easily with partners and contractors
- Use any capture device to ensure high-quality data and the very best visualization of a site
- Validate as-built condition against engineering plans to minimize rework and ensure data integrity
- Minimize risk and reduce costs associated with on-site visits



## AVEVA™ Information Standards Manager (AVEVA ISM)

AVEVA ISM rationalizes existing class libraries and allows for consistent and compliant information standards. It enables more efficient business processes without the costs and risks of replacing numerous individual authoring applications.

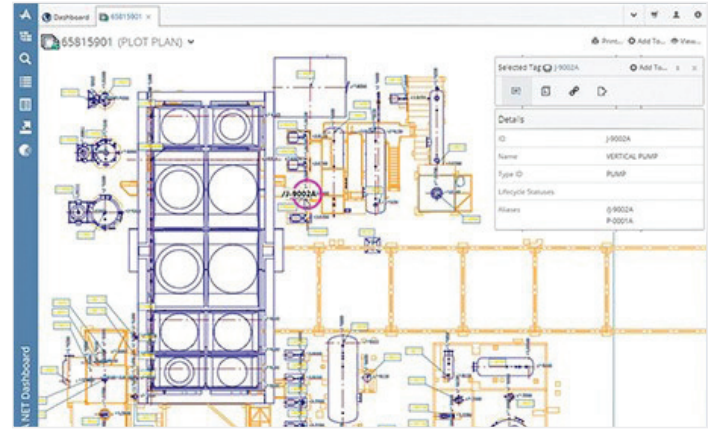


### Benefits

- Audit compliance with contractual information standards requirements
- Easily apply and verify the use of customer or project-specific information standards
- Collaborate more easily with project partners, subcontractors and suppliers
- Improved data quality at handover, streamlining the process

## AVEVA™ NET

Aggregate, capture and work with information of all types and from all sources, including documents, drawings, 3D models, laser scans and operations data without replacing your current systems.



### Benefits

- Reduce planned and unplanned downtime by finding the correct information quickly
- Improve operational safety and maintenance planning
- Capture and validate brownfield data for regulatory reporting or turnaround planning
- Improve operational decision making through better access to trusted information

## AVEVA™ Engage

AVEVA Engage combines market-leading 3D visualization with a seamlessly connected view of project and asset information, delivering a highly efficient and effective decision support capability for capital projects and operations environments.

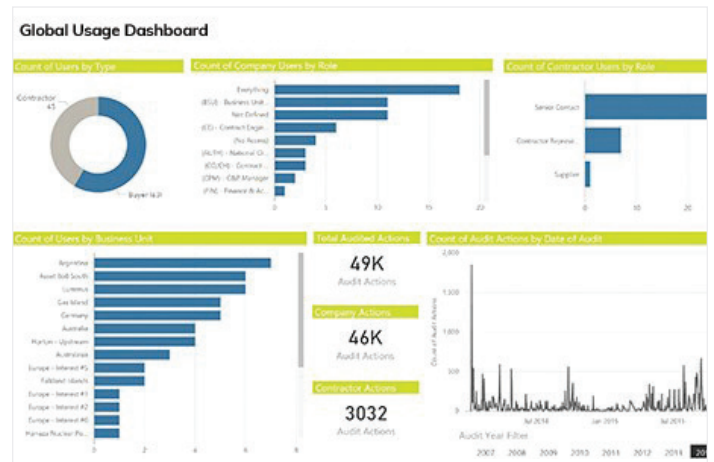


### Benefits

- Immersive navigation and walk-through of models and their data sources
- Multi-discipline design review and issue resolution
- Inspection, maintenance and turnaround planning
- Asset performance trend visualization

## AVEVA™ Contract Risk Management

Connect all decision makers to protect capital investment, drive performance, and improve profitability in large CapEx projects. Effectively manage all commercial activity at every phase of the asset lifecycle.



### Benefits

- Effective change control – all change orders initiated with preapproved templates
- Enhanced financial control with early warning indicators and automatic invoice reconciliation
- Improved contract delivery – one, single, formal system to manage all interactions with contractors
- Mitigated contractor claim using time-and event-based alerts, and all correspondence available instantly
- Best practice governance – transparency regarding contractual award and execution promotes



## The Engineer, Procure and Construct portfolio

Empower your teams and lower the time, cost, and risk of capital project engineering. Develop an EPC 4.0 strategy that sets your teams up for success, saving you up to 15% on your total installed costs.

Our solutions cover integrated process design, simulation, engineering, procurement, construction, and handover processes. Ensure your capital expenditure counts for more, projects are delivered on time, and plants can start up faster and safer.

## About AVEVA

AVEVA is a global provider of Industrial Software. We have more than 50 years of proven experience delivering plant and process modeling technologies. We are trusted by 19 of the top 20 petroleum companies; 22 of the top 40 chemical companies; and all 15 of the largest EPCs as our customers.

For further information please visit: [aveva.com/engineer-procure-construct](https://www.aveva.com/engineer-procure-construct)

**AVEVA**

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