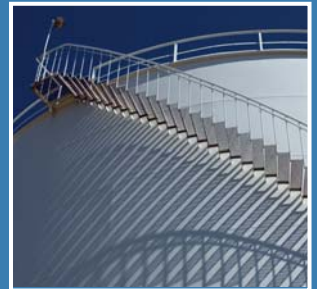


AVEVA

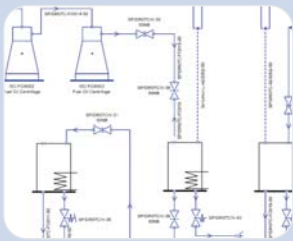
PLANT



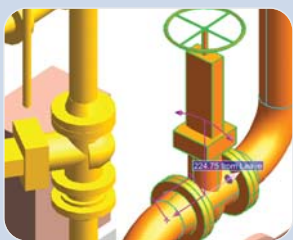
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AVEVA Plant – Overview

Integrated Engineering and Design



Engineering



Design

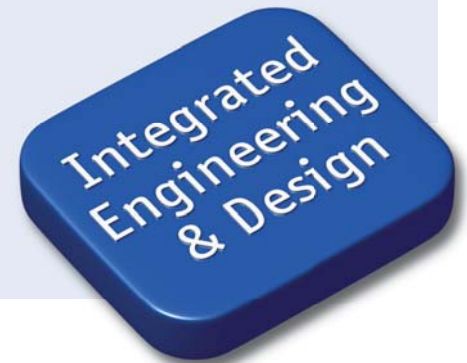


Design Management

Plant projects involve huge amounts of data from both the engineering and design phases across all plant disciplines. This data evolves during a lengthy workflow that requires the participation of many parties. To succeed, you must have good tools for generating, coordinating and managing this complex data flow.

AVEVA Plant is an integrated solution for plant engineering, design and design management.

It is composed of a set of integrated applications which allow engineers and designers on multiple sites to concurrently create, control and manage change to plant engineering and design data in a model database as a project is developed in the most productive and risk-free way.



AVEVA Plant – Key Features

- Integration of engineering and 3D design data in one model ensures managed consistency between engineering and design data.
- Flexibility in the choice of engineering authoring tools such as P&ID applications.
- The most productive 3D plant design solution in the world.
- Concurrent global project execution.
- Tight integration with AVEVA NET to support the entire plant lifecycle in both project execution and operations.



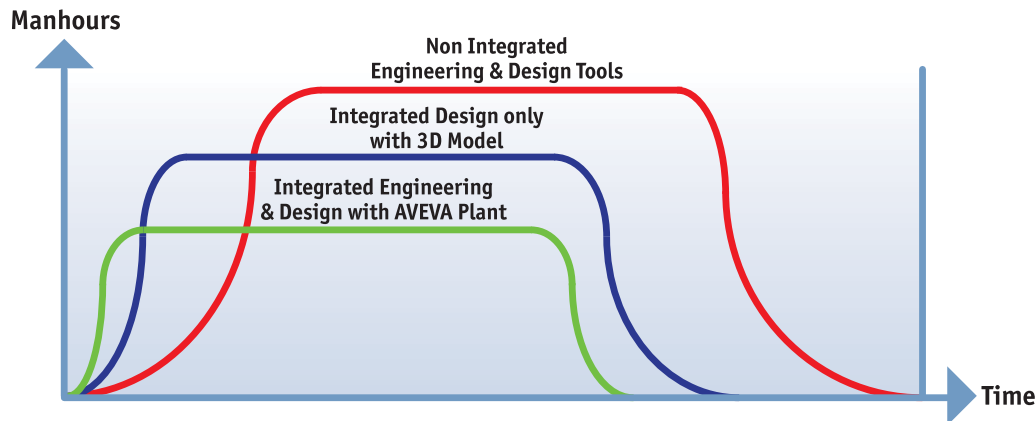
AVEVA Plant – Business benefits

Minimise time and cost for new plant projects

The integration of engineering and design applications in AVEVA Plant allows the maximum level of parallel working between the individual applications. This is achieved in a managed and controlled way, so that workflows and change management processes are applied across the complete project development process to create error-free deliverables. This leads to an efficient overall project, with a minimum of elapsed time and cost.

Cost-effective plant upgrades and life extensions

With the Integrated Engineering and Design functions of AVEVA Plant you can carry out upgrades and life extension projects with the highest level of parallel working between applications creating the most cost effective projects.

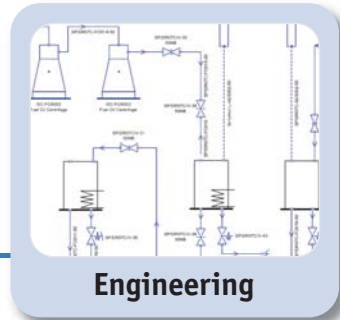


'Plant projects involve huge amounts of data from both the engineering and design phases across all plant disciplines...

To succeed, you must have good tools for generating, coordinating and managing this complex data flow...'

AVEVA Plant - Product portfolio

Engineering



Design

AVEVA Diagrams

AVEVA Diagrams is an application for creating P&IDs, HVAC diagrams and cable diagrams which saves both the diagram and the engineering objects directly in the schematic part of the model database.

AVEVA P&ID

AVEVA P&ID is an intelligent AutoCAD-based Piping & Instrumentation drafting application that also provides synchronisation of P&IDs with both the VPE Workbench and the schematic part of the model database.

AVEVA VPE Workbench

AVEVA VPE Workbench is an integrated engineering database which manages the evolving engineering descriptions of all tagged items in a plant. VPE Workbench provides two-way synchronisation of P&IDs with AVEVA P&ID.

AVEVA P&ID Manager

AVEVA P&ID Manager is an application for importing P&IDs from different authoring systems into the schematic part of the model database, to allow consolidation of all P&ID data in a project. Inconsistencies between P&ID drawings can be identified and highlighted. P&IDs are imported in ISO 15926 format.

AVEVA Schematic 3D Integrator

AVEVA Schematic 3D Integrator provides data consistency between engineering and 3D design data. It can be used to build the 3D model from the engineering data such as a P&ID, or to associate an existing 3D model with the corresponding engineering data, so that inconsistencies can be highlighted and corrected.

AVEVA Instrumentation

AVEVA Instrumentation is an application for Instrumentation and Control engineering which makes extensive use of design rules and catalogues for data creation. AVEVA Instrumentation is designed both for the EPC in design and for the Owner Operator in everyday plant operations.

AVEVA PDMS

AVEVA PDMS is a datacentric, multi-disciplinary design environment for the 3D design of process plant. It has modules for the design of equipment, piping, HVAC, structure and cable trays. Modelling is carried out using customer-defined catalogues and specifications, in a full colour shaded 3D environment, with the support of tools that ensure a clash-free design. A wide range of drawings, pipe isometrics, reports and Material Take Offs can be produced automatically from the model.

AVEVA Multi-Discipline Supports

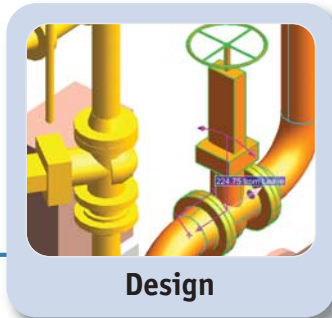
AVEVA Multi-Discipline Supports is an application for the detailed design, material take off and automated drawing production of supports for piping, ducting and cable trays. A comprehensive range of standards are included, in addition to user-defined catalogue customisation.

AVEVA Cable Design

AVEVA Cable Design is an application for the design of cables, including their routing in cableways and through penetrations. Output includes cable schedules with routes, cable-cutting lists, and Material Take Off.

AVEVA Laser Model Interface

AVEVA Laser Model Interface adds to PDMS a tool for working with as-built 3D model data by interfacing with point cloud data from laser scanning systems.



Design Management



AVEVA Pipe Stress Interface

AVEVA Pipe Stress Interface provides a two-way interface for the exchange of information between PDMS and the CAESAR II pipe stress system. Piping designers and stress engineers can exchange design and stress information seamlessly, without duplicating information.

AVEVA Final Designer

AVEVA Final Designer can be used at any point in the drawing production process to produce AutoCAD drawings from PDMS and to edit them in a closely integrated environment.

AVEVA Nuclear Concrete Design

AVEVA Nuclear Concrete Design is a highly productive, specialised product for the design and modification of the complex concrete structures found in nuclear power plants.

AVEVA Nuclear Room Manager

AVEVA Nuclear Room Manager is a specialist application for managing nuclear power plant design on a per Room, Volume or Area basis. Accurate, up-to-date Material Take Offs and inventories can then be automatically produced on an individual Room basis or for any given combination of Rooms that equate to a Construction or Erection area.

AVEVA ISOMET

AVEVA ISOMET is an application which supports the continuous maintenance of piping in a plant. All aspects of piping are handled from Catalogue and Specification management, to the creation of inspection isometrics, and isometrics for replacement pipes including production information for manufacture and assembly.

AVEVA Global

AVEVA Global allows users at multiple sites to work online together on the same project. It controls the release of data to each site and ensures that all users have access to the latest approved data.

AVEVA Review

AVEVA Review is a powerful 3D visualisation tool for large, complex, plant models. With features such as walk-through, animation, and high-quality photo-realistic images, Review lets you analyse designs and communicate complex ideas.

AVEVA ReviewShare

AVEVA ReviewShare brings together 3D design review, mark-up and collaboration using 3D models, embedded screenshots, document views and hyperlinks, into one application. ReviewShare works with a large number of 3D data formats, not just AVEVA Plant, with server-based streaming technology or desktop model files.

AVEVA Model Management

AVEVA Model Management is a set of powerful tools which maximise design productivity and quality by managing and reporting the progress, status and attributes of plant model objects in PDMS. Model Management also includes comprehensive clash management and controlled production of deliverables such as isometrics and support drawings.

'AVEVA Plant is composed of a set of integrated applications which allow engineers and designers on multiple sites to concurrently create, control and manage change to plant engineering and design data in a model database as a project is developed in the most productive and risk-free way...'

AVEVA Technology

Plant industry projects are typically characterised by the following features:

- one of a kind, or very short series
- short time for design and selection of equipment and materials
- no time or money for a prototype
- construction normally starts before design is finished
- project execution is spread around many companies globally
- a huge variety of applications are deployed, and selection is often influenced by the client.

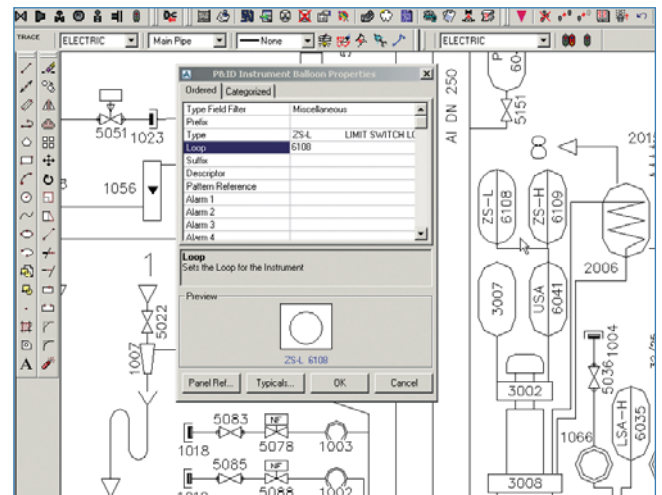
AVEVA has a unique technology, spanning four decades of continual development, which is designed especially for this type of project. Our approach has been proven on projects ranging from the smallest upgrades to the largest and most complex new installations.

At the centre of the AVEVA approach is the use of 'objects' to represent real parts of the plant such as a valve, a pipe or a pump. An object will have many types of data associated with it, such as schematic data, engineering property data, and 3D model data.

In the engineering phase, engineering properties and connectivity of the object are created and stored in the schematic part of the model database. In the design phase, the geometry of the object is created as part of a complete layout of the plant and stored in the model database.

In most projects, these two phases are carried out, to a large extent, in parallel. AVEVA Plant allows our customers to seamlessly manage the consistency of data between these two overlapping phases as the project is developed.

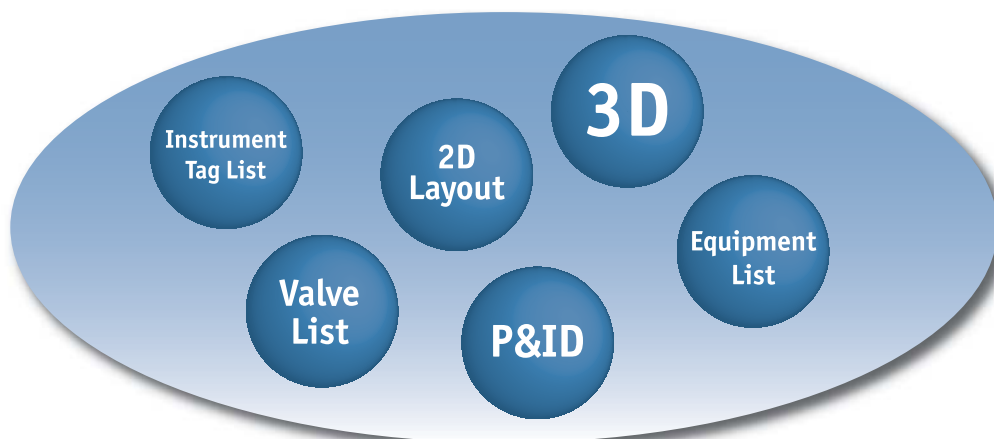
Managing project data at the object level reduces costs and shortens project times, because the controlled release of object data supports the maximum level of parallel or concurrent working in the project.



Example of engineering data



Example of design data

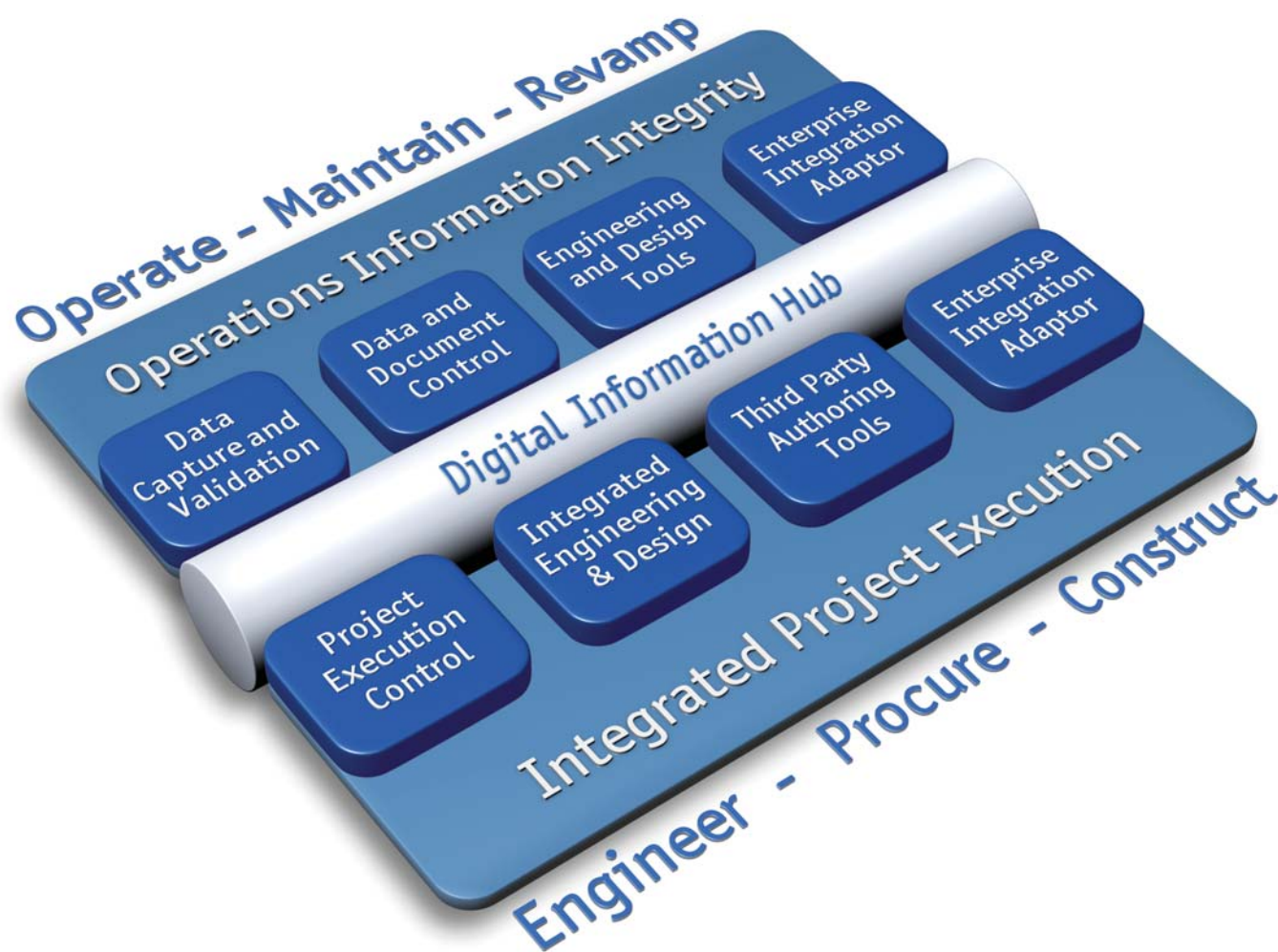


Engineering and Design data in the model database

AVEVA's complete solution offering - an overview

Solutions that address both Owner Operator and EPC needs

- AVEVA supplies Owner Operators with an **Operations Information Integrity** solution. This delivers real cost savings in support of plant operations, maintenance and revamps, through the effective capture, validation, control and change management of plant data and documents.
- AVEVA saves time and money during an EPC project with an **Integrated Project Execution** solution. This is achieved by effectively creating, controlling and managing change to the plant data and documents as the project develops through the engineering, procurement and construction stages.



Since all AVEVA's technology uses the same **Digital Information Hub** for the sharing of data and documents, collaborative processes, such as handover from an EPC to an Owner Operator, for example, can take place much more efficiently and at much lower cost.

AVEVA's complete solution is composed of AVEVA NET (Data Capture and Validation, Data and Document Control, Enterprise Integration Adaptors and Project Execution Control), **plus** the world-renowned AVEVA Plant and AVEVA Marine engineering design suites (depending on your needs). The latter two provide the Integrated Engineering & Design element of the overall solution.

'Since all AVEVA's technology uses the same **Digital Information Hub** ...collaborative processes can take place much more efficiently and at much lower cost...'

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