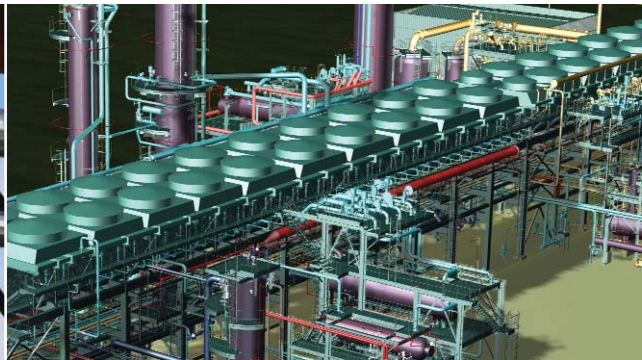


AVEVA solutions for Owner Operators Powered by AVEVA NET



Unlock plant and process information 'silos' –
create stable, safe operations across your plant



Understanding the challenges of plant operations

As an Owner Operator, you need comprehensive information to be made readily available to you, covering what assets you have, the state of those assets, real-time production data, schematics, site activity, standard operating procedures, and so on.

If you get this right, you can:

- Stay safe and legal and reduce risk
- Maximise plant throughput, minimise downtime and unplanned outage
- Improve staff productivity

Understanding risks and consequences

Get your information management wrong, however, and there are real financial and commercial consequences.

- According to our research, up to 60% of downtime can be attributed to delays in finding the correct information. At least 5% of total production lost each year is due to this unscheduled downtime.
- According to opinion cited in the industry journal Hydrocarbon Engineering, plants suffer an average of seven unplanned shutdowns per year, attributable to poor information sharing, with each shutdown typically costing an average of around \$8 million.

Poor information doesn't just mean poor productivity. It also threatens safety, regulatory compliance and, ultimately, your licence to operate.



The operation of large assets like plants is sustained by information but, all too often, getting to that information is a time-consuming, costly task

Understanding the solution

Plants typically use many different applications, so the information within them is effectively locked up in 'silos' – many disconnected data formats that simply don't communicate with each other or make themselves universally available, and which are never uniformly updated.

AVEVA NET

AVEVA's growing suite of Owner Operator solutions is built on AVEVA NET technology, an application-neutral environment for all your operational, maintenance and safety data, no matter which program created it.

AVEVA NET is also a platform to enable you to make data available and useful to a wide range of applications, including:

- Ready-made lifecycle solutions from AVEVA
- Bespoke solutions created for you by AVEVA
- Applications from other vendors



Manually trawling through mountains of information is not only a paper problem; electronic information is often produced by many different programs that can't communicate with each other, and is kept in separate 'silos', making it equally difficult to search

Solution overview

Ready-made, Owner Operator-focused lifecycle solutions, powered by AVEVA NET, include:

- **AVEVA NET Portal** – AVEVA's proven VNET solution, now re-engineered for the AVEVA NET platform.

AVEVA NET Portal brings together information from disparate applications and data sources found in operating plants, and provides a unified, web-based, digital profile of the physical plant that can be shared easily across offices and territories.

- **AVEVA NET and ISOMET** – recent plant incidents have highlighted the importance of pipe maintenance.

AVEVA NET and ISOMET supports the planning and execution of pipe maintenance and the outputs from this process (isometrics, work orders, etc.) and keeps ISOMET records up to date.

- **AVEVA NET Enterprise** – a fully customisable plant data management system, enabling solutions that create or use information to be developed, integrated and controlled.

It includes the AVEVA NET Portal, plus sophisticated tools for workflow and check in / check out of data, configuration management, impact assessment and management of change (MOC), including audit trails.

'Poor information not only equals poor productivity. It also threatens safety, regulatory compliance and, ultimately, your licence to operate...'

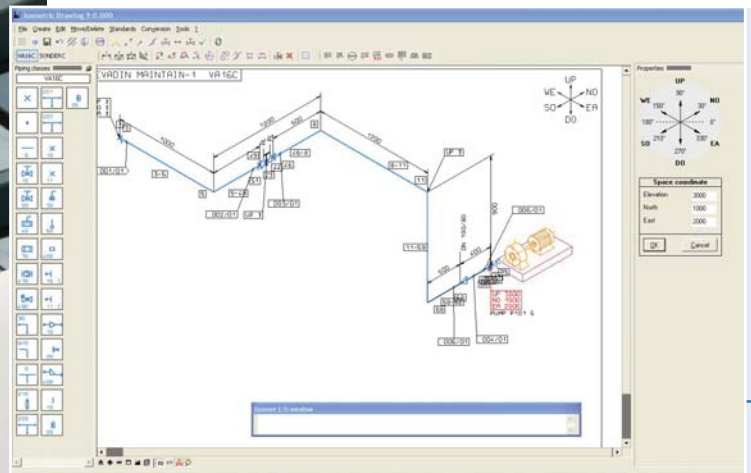
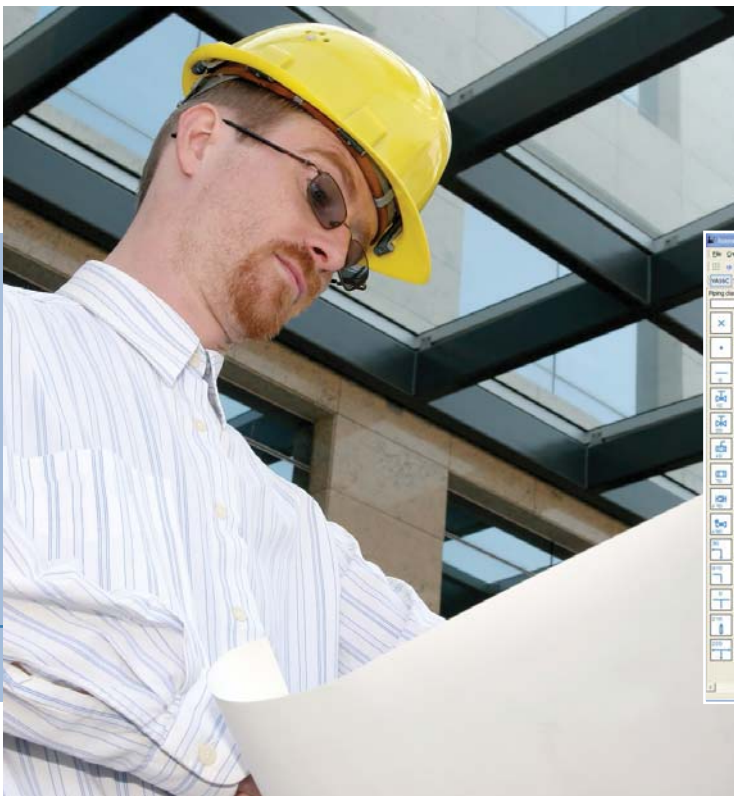
How can AVEVA NET help my operations to...

Stay safe and legal and reduce risk?

- **By highlighting missing documentation** – AVEVA NET Portal automatically creates a complete cross-reference index with links to, and associations between, all items in a plant. This process occurs the moment the data is loaded. Absent data is thus easily identified; so, for example, if you are missing vital safety/regulatory documentation, AVEVA NET Portal can bring it to the attention of your staff before it comes to the attention of the regulatory assessors!
- **By highlighting documentation that is not fit for purpose** – AVEVA NET Portal enables the checking of existing and new data against specified requirements and standards (e.g. numbering and tagging conventions) and the generation of inconsistency reports for corrective action.
- **By effective document management** – AVEVA NET Enterprise enables your staff to fully manage the creation, update, storage, history and availability of all product and project information, irrespective of its format and location. Document content is always readily available and its production and signoff history are clearly represented.
- **By effective maintenance procedures** – AVEVA NET and ISOMET enables documents to be automatically cross-checked to detect discrepancies in pipe maintenance records.

Improve staff productivity?

- **By reducing the time it takes to locate and navigate information** – AVEVA NET Portal's intuitive web interface enables your staff and your partners to rapidly access plant data and navigate to the required source. AVEVA NET Portal uses both familiar, hierarchical data structures and 'hot spotting', which enables you to jump from one drawing or document to another at the click of a mouse. Less time spent looking for information to solve a problem is more time spent solving the problem!
- **By more effective Management of Change (MOC)** – AVEVA NET Enterprise enables your staff to more accurately define changes. The system then controls and monitors the transactions involved in executing the identified changes, encouraging more effective working practices and better staff understanding of procedure, approach and the consequences of change.
- **By more effective workflow management** – AVEVA NET Enterprise supports Work Breakdown Structures (WBS), so your teams can track progress and costs (e.g. equipment lists / bills of materials) against the prescribed WBS, to quickly identify hindrances and progress issues. AVEVA NET also reduces the time involved in finding information for work permits, maintenance and engineering activities, commissioning and start-ups, enabling you to put your staff to work more quickly.



An isometric pipe drawing within AVEVA NET Portal. The diagram is 'hot spotted' to enable users to click on a part of the drawing and access related information, including maintenance documents, etc

Stay legal: the regulators want to see the right documentation for every element of your plant's operations, but this doesn't have to mean mountains of paper

Maintain operating and maintenance data/information quality?

- **By being data-agnostic** – AVEVA NET works with data imported from other applications – it is the platform for all your operational information activities.
- **By automating data associations** – AVEVA NET Portal automatically creates a complete cross-reference index with links to, and associations between, all items in a plant. This process occurs the moment the data is loaded, so time-consuming and error-prone manual data association processes no longer present a threat to the quality of your operating data.
- **By checking that information is truly complete** – AVEVA NET Portal enables the completeness of information to be checked; for example, does a tag on a P&ID have a corresponding data sheet, instrument loop diagram and cable schedule?
- **By effective security management** – AVEVA NET Enterprise's Security Management component enables your staff to manage the definition and configuration of all roles, responsibilities, rights and permissions to be applied to objects, data, documents and work processes. In this way, users' interaction with the system is auditably defined, so as to minimise the risk of error.
- **By keeping information transparent and current** – AVEVA NET Enterprise's Configuration Management component enables your staff to manage the assembly of objects, data, documents and structures so as to provide change history, version comparison and change highlighting – indispensable for establishing the validity/currency of a piece of information for regulatory purposes.



Associating information with related information by hand is a thing of the past; AVEVA NET Portal creates a complete cross-reference index with links to, and associations between, all items in a plant – automatically

'AVEVA NET Portal automatically creates a complete cross-reference index with links to, and associations between, all items in a plant... the moment the data is loaded...'

AVEVA NET: Information success versus maintenance failure

Arrangement drawings

Datasheets

Equipment lists

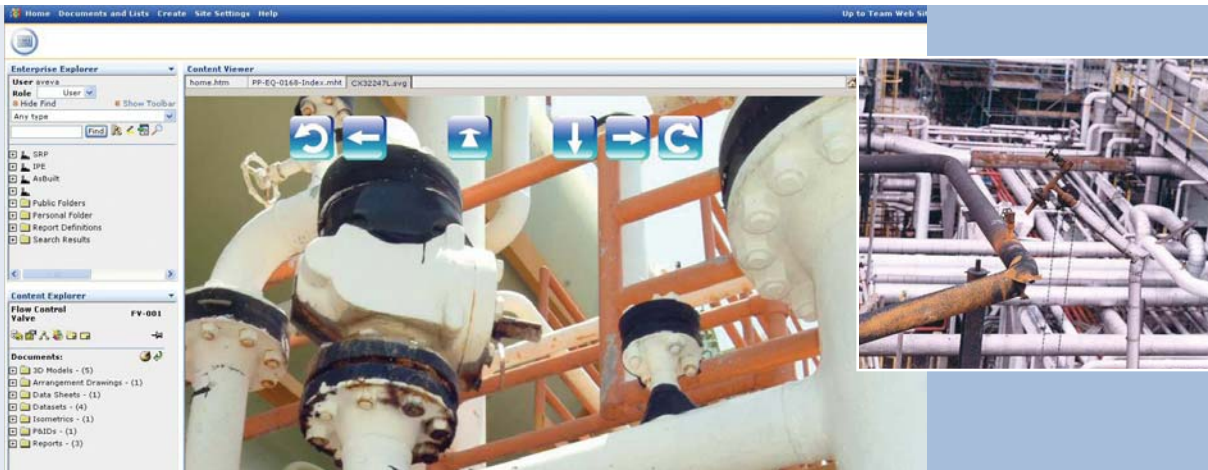
P&IDs

Purchase and delivery status

Maintenance plans

Visualisation of 3D model with real-time operational data and links to all related information accessible from a single page.

Accessing and managing operational/maintenance information should be as straightforward as what you see above. Failure to do so, however, can be catastrophic, as shown by the examples of piping corrosion, below



From configuration to 'go live' – a quick and easy exercise

We recognise that our customers' IT project resources are often limited, as their primary occupation is running their plants safely and competitively.

For this reason, AVEVA's solutions for Owner Operators are available with implementation services that are built around the system's inherently rapid automatic data association capabilities. Typically, the result of this is much quicker completion than would be possible using the more common manual data upload processes.



Generally speaking, we can help you to get the solution you want, in the timescales you want, in a way that does not disrupt your operational business.

Our Owner Operator solutions have a reputation for high reliability and low risk – their 24 x 7 deployment in some of the world's largest and most complex installations, run by some of the world's most high-profile operators confirms this.

AVEVA NET helps to increase staff productivity by better navigation of information, more effective management of change and more effective workflow management

'AVEVA's solutions are available with implementation services that are built around rapid data association capabilities... the result of this is much quicker completion...'



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