

SIEMENS

Ingenuity for life

Energy and utilities

Avantha Power

Rapid PLM implementation results in significantly reduced project engineering cycle time and costs for power plant builder/operator

Product

Teamcenter

Business challenges

- Reduce project delivery and execution times
- Improve information quality
- Manage document workflow across departments
- Provide easy access to documentation at different project sites
- Provide vendors easy access to BOM information

Keys to success

- Implement Teamcenter in six months
- Enhance information sharing among employees and vendors
- Ensure highly secure, single database accessible from any location

Using Teamcenter, Avantha Power achieves breakthrough process gains; competitive agility measurably improves

Rapidly growing demand for electric power

India's rapid economic growth has fed an ever-increasing demand for reliable electric power throughout the country. This means opportunities for power plant builders and operators – as well as certain challenges, including meeting schedules and managing workflows on large-scale projects.

Avantha Power & Infrastructure Limited (Avantha Power) owns four power plants, is the part owner of another, and has two more plants under development. Once all of these projects are fully operational, Avantha Power will have a total installed capacity of 3,911 megawatts.

To meet its fast-growing business, Avantha Power turned to product lifecycle management (PLM) technology. Avantha Power manages its power plant engineering using Teamcenter® software from Siemens PLM Software.

Big challenges, little time

"Power plants represent multifaceted assemblies of systems and components built on-site by an extended team of construction workers and engineers," says Janmejaya Mahapatra, head of Control and Instrumentation at Avantha Power & Infrastructure Limited. "We work with a large number of vendors, who are required to deliver their project segments at the right time so that the overall project stays on schedule. Managing these projects is extremely complex, far more complex than our conventional spreadsheet solution could handle. While it got us by for a while, the system simply wasn't practical for such an application over the long haul.



Results

Reduced engineering cycle time, including cutting drawing review time from 21 days to 7

Enhanced speed of project engineering

Fast and easy access to secure and reliable data across project sites

Significantly improved collaboration across the enterprise

Improved competitive agility; new business opportunities



“The specialists at Siemens PLM Software convinced us that we could implement the new system quickly. And they were good to their word. We were fully operational with Teamcenter in just six months.”

Janmejaya Mahapatra
Head of Control and Instrumentation
Avantha Power & Infrastructure Limited

“On a recent thermal project, we managed multiple workflows – as many as 800 or more at a time – and cut reference drawing review time from 21 days to 7.”

Ravinder Verma
Deputy Manager of Control and Instrumentation
Avantha Power & Infrastructure Limited

It became cumbersome and slow. It was difficult to find information. Sharing it with stakeholders, whether internal or supplier-based, was even more difficult. Keeping track of project engineering changes and just being able to manage large volumes of data were way beyond the capacity of this approach.”

By implementing Teamcenter, Avantha Power management had chosen an effective and efficient system that would ensure an engineering-driven approach to power plant installation.

During the evaluation process, it was envisaged that the right PLM system would enable data to be used to quickly see the bigger picture or get granular. The requirements from management included a system that would provide substantially greater security for authorized users and better information access compared to its existing approach. Information re-use was critical, as was capturing lessons learned and best practices that could be leveraged to streamline future projects.

However, Avantha Power engineers had one big concern regarding PLM technology. They felt that it might take too long to implement, noting that the company simply couldn't afford any delays in meeting its competitive challenges and addressing a tough regulatory environment.

“The specialists at Siemens PLM Software convinced us that we could implement the new system quickly,” says Mahapatra. “And they were good to their word. We were fully operational with Teamcenter in just six months.”

Managing project data across the lifecycle of projects

Since implementing Teamcenter, the Avantha Power engineering team enjoys faster access to lifecycle information about their projects. Already, using Teamcenter has increased productivity by reducing workflow turnaround across departments. Visibility into the status of projects has been greatly improved through reliable reporting. Authorized users can access a single source of information via secure web connections from any location. The valuable knowledge and experience gained from each project is readily available to be re-used on future projects.

Avantha Power engineers say that using Teamcenter is SACRED, an acronym for Swift Archiving, Commenting, and Reviewing of Engineering Documents and Drawings.

Solutions/Services

Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Avantha Power specializes in power plant construction and operation.
www.avanthapower.com

Customer location

Gurgaon
India

Partner

Avantha Technologies Ltd.

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Head of Control and Instrumentation
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The use of Teamcenter makes it easy for Avantha Power to manage drawings and bills of materials (BOMs). Such easy access to project data across the lifecycle of Avantha Power projects, including BOMs, speeds project delivery and substantially improves collaboration among users. "On a recent thermal project, we managed multiple workflows – as many as 800 or more at a time – and cut drawing review time from 21 days to just 7," says Ravinder Verma, deputy manager of Control and Instrumentation at Avantha Power & Infrastructure Limited.



Siemens PLM Software partner Avantha Technologies Ltd. (Avantha Technologies) played a key role in the software roll out. "Avantha Technologies has been very supportive and proactive in its approach throughout the process of implementation and customization of Teamcenter for our requirements," says Verma. "The technical team effectively gathered the process requirements and worked on the continuous improvement of the application. The team ensured that individual user intent was reflected. The whole team of Avantha Technologies deserves special kudos for this achievement!"

Mahapatra concludes, "Using Teamcenter, we can now readily customize plants to meet customer requirements, while markedly reducing engineering cycle time and costs. Our ability to quickly find and re-use the right data makes this possible. Perhaps most importantly, with Teamcenter, we are on the critical path to advancing our business goals and targets, and importantly, helping to meet our country's demand for energy."

Siemens PLM Software

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www.siemens.com/plm

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