

Skanska Finland

Improving cost control with ENOVIA V6

Users had positive experiences with ENOVIA V5 and are eager to extend these successes to new levels with V6. The solution provides what we need on a single unified platform.



Markus Pöllä
Development Manager
Skanska Finland

Challenge

In a diverse range of one-of-a-kind construction projects, Skanska Finland needed to better forecast project costs and monitor expenses in every phase of the building process as well as streamline major business processes.

Solution

Skanska Finland is transitioning from ENOVIA V5 to V6 and consolidating critical cost-related information and other data formerly residing on dozens of separate and incompatible small application programs.

Benefits

ENOVIA gives stakeholders better visibility into different levels of project data for faster and more accurate cost control, improved decision-making and closer project control for increased efficiency and productivity.



SKANSKA

Global construction company

Skanska Finland is part of the 120-year-old Skanska Group, one of the world's leading construction and project development companies. With headquarters in Sweden and more than 53,000 employees in local offices throughout Europe, the UK, North America, Latin America and around the world, the company's revenue in 2009 was €14.9 billion. The firm's chief competitive advantages comes from a strong local presence – with extensive knowledge of particular markets, customers and suppliers – backed by the brand value, financial resources and company-wide expertise of a large global player.

The firm coordinates complex construction projects including office buildings, shopping malls, schools, apartment buildings, hospitals and public buildings as well as highways, bridges, tunnels and railway systems. Many smaller projects are also handled including single-family homes and mid-size buildings in the private sector. Skanska is rated as one of the top companies in the world for sustainable "green" building design and construction.

Skanska generally serves as the prime contractor responsible for overall program management on structure development and construction of the building as well as integration of major components and systems including HVAC, communications, piping, wiring, security, flooring and interior design.

Controlling costs on complex projects

The most challenging aspect in this diverse range of projects is cost control. Accurately forecasting costs and monitoring expenses are critical in every phase of a project from start to finish, since a single loss-making project can wipe out earnings from many profitable ones. Many of these projects – especially in Nordic countries – are based on fixed-price contracts in which contractors must charge a set fee and absorb any losses. Moreover, each project is one-of-a-kind, representing a huge challenge in accurately forecasting detailed expenses for projects that are unique each time.

Given the size and complexity of these projects, construction companies are hard-pressed to accurately determine costs for materials, parts, systems and labor. Estimates involve input from hundreds of suppliers and subcontractors as well as information on tens of thousands of different materials, parts and equipment.



With ENOVIA, we get at information much more quickly. Conservatively, cost forecasts can now be completed in half the time previously required.

Markus Pöllä
Development Manager
Skanska Finland

At Skanska Finland – one of the company’s largest Nordic operations – most data needed for cost forecasting and expense monitoring formerly resided in small application programs that made sharing of information difficult because of different formats. Retrieving information was a slow process of hunting for the right database and manually extracting raw data.

Building a single version of the truth

To address these issues, Skanska Finland in 2008 implemented ENOVIA V5, which is comprised of cost-controlling processes integrated into a project hub for collecting critical data. Recently, the company extended the solution by migrating to ENOVIA V6.

“The transition to ENOVIA V6 is going smoothly,” explained Markus Pöllä, Development Manager at Skanska Finland. He noted that the PLM solution replaced dozens of legacy systems and enabled users in various groups to quickly access information they need to perform their jobs faster and more efficiently, particularly those involved in cost control. “ENOVIA V6 manages all data in one place – a single version of the truth across multiple disciplines and many different applications.”

The solution now enables cross-functional collaboration between groups within the company such as cost control, engineering,



Instead of spending hours or days hunting through separate databases, we can retrieve information almost immediately, make better informed decisions and start acting on accurate up-to-date information without delay.

project management, and procurement as well as sharing of data throughout the external value chain including customers, design partners, contractors, suppliers and subcontractors.

With the ENOVIA on-line solution, offsite subcontractor designers of items such as HVAC, structures and piping, save time by submitting documents electronically, formerly sent through the mail. They also use ENOVIA to access relevant project data for their work. For monitoring project status, customers can access ENOVIA, as do partners and suppliers, through web portals. All together, about 1,200 users have access to ENOVIA, which Skanska Finland currently uses to manage up to 300 projects annually with as many as 200 documents stored per project.

Greater visibility of critical data

Most PLM benefits for Skanska can be attributed to ENOVIA’s capabilities in consolidating all data in one place, giving stakeholders a better view of project information and related cost data. Greater visibility of this critical data leads to faster and more accurate cost control as well as overall improved decision-making and closer project management.

“Because cost data was so readily accessible, we were able to closely monitor expenses to date on each project, compare figures to the budget and quickly spot which projects were drifting off target. Identifying projects needing more support in reaching their budget goals was helpful in minimizing the number of projects ending in loss.” Many factors influenced this shift, but the number of unprofitable projects was reported to have decreased dramatically during the first months after going live with ENOVIA.

Markus Pöllä
Development Manager
Skanska Finland



Pöllä explained that the ability to view data on different levels is of particular value in controlling costs. "With ENOVIA, we can easily examine overall cost data as well as views of different levels according to various types of materials, major subsystems, components, suppliers and so forth. Having this extensive background information enables us to analyze cost data in greater detail and generate highly accurate forecasts."

A collaborative interface in ENOVIA allows a customer to review their project status. In the near future, customers will also be able to authorize invoices electronically – saving many days compared to former paper-based processes. Streamlining such processes helps yield significant savings on multi-million euro transactions. Better cost planning and more accurate material purchases also enables Skanska Finland to minimize waste, thus reducing expenses and supporting the corporate goal to be the number one green construction company in the world.

Future plans extend the scope of PLM

In the near future, the company plans to integrate procurement processes into design, planning and cost-forecasting processes. This will boost productivity by developing cross-functional process support as well as provide more fact-based visibility and control over direct procurement spending. Plans are also to incorporate a closer interface with suppliers, with two-way exchanges regarding RFOs, bids, scheduling, shipments, inspection, etc.

In the long term, Skanska plans to link more PLM functionalities to the overall data definition of construction design: BIM (Building Information Modeling). The objective is to fully utilize BIM information in key business processes. A first step in reaching this goal is creation of the Skanska Global BIM Competency Center. Its goal is to streamline processes and enable cross-functional collaboration between areas such as cost control, facilities management, production, site planning, procurement, and supply chain management.

Strategic development with BIM facilitates "green" construction in using BIM models to determine environmental loads, energy requirements, indoor climate conditions and optimized sustainability. Leveraging BIM linked to PLM will also be of value in visualizing alternative designs, factoring in cost estimates early in development, improving operational efficiencies and minimizing lifecycle costs through initiatives such as design optimization and energy analysis.

Overall, these investments will leverage PLM to reinforce Skanska's strength as a global construction industry leader and create significantly more added value for its customers worldwide.

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