

Automotive and transportation

Grammer

Automotive interiors manufacturer uses Teamcenter to realize up to 15 percent cost savings in the quotation phase

Product

Teamcenter

Business challenges

Respond to an increasing number of quotation requests

Deal with different global calculation methods, data and cost models

Support the internationalization of the production network and sourcing initiatives

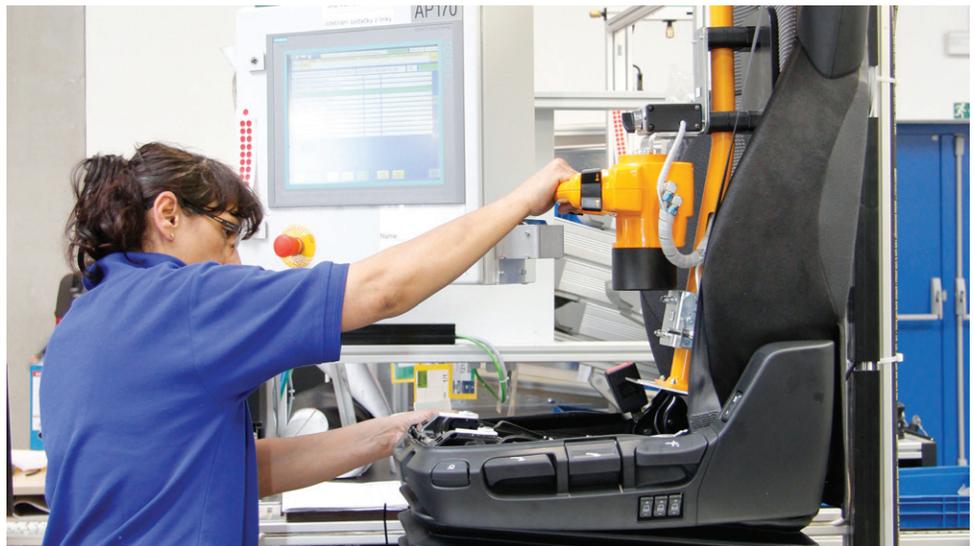
Keys to success

Use Teamcenter for product costing, tool costing and profitability calculation on one platform

Increase the calculation accuracy of quotations

Leverage fast simulations and comparisons of business case scenarios

Use consistent, current data for calculations



Siemens PLM Software solution enables Grammer to reduce throughput time in the quotation phase by 50 percent

Using innovation to grow

Grammer AG (Grammer) was founded over 100 years ago as a saddlery. Since that time, the company has transformed from a regional supplier of seat cushions to a global player in the automotive and commercial vehicle industry. Today, Grammer specializes in the development and production of components and systems for automobile interiors as well as driver and passenger seats for commercial vehicles. The Grammer automotive division provides

headrests, armrests and center consoles to well-known premium car manufacturers as well as system suppliers. The seating systems division comprises truck, off-road, train and bus seating.

Suppliers that want to become trusted development partners of global car manufacturers must offer added value and contribute ideas during the early phase of projects. Aside from its excellent global position, the innovative power of Grammer is a prerequisite to securing growth opportunities worldwide.

“We must be able to supply large volumes of the highest quality and just-in-sequence at competitive prices at various locations

Results

Realized up to 15 percent cost savings in the quotation phase for selected projects

Reduced throughput time by approximately 50 percent in the quotation process

Increased order probability by complying with deadlines

Improved competitive position with early identification of potential improvements

around the world," says Frank Semmler, head of controlling for the truck product and market segment at Grammer.

To fulfill this task, Grammer requires transparency into product and tooling costs. It is important for technical developers and project purchasers to have detailed knowledge of the cost of a product or product variant within the lifecycle, because only by knowing the cost details and drivers can they identify potential areas for reducing costs.

Disconnected applications are not up to the task

In the past, Grammer encountered challenges in quotation calculation, purchase price analysis and profitability calculation. Due to the different calculation methods used in individual segments around the world, it was impossible to systematically track and optimize product and tool costs. Different information technology (IT) structures and lack of standardization of the storage systems also made it difficult for Grammer to analyze the costs, especially in global projects. The preparation of cost calculations with different versions of spreadsheet software meant that Grammer was dealing with nonstandard calculations. Above all, this lack of standardization of quotation calculations led to different global sales prices, with resulting competitive disadvantages.

In addition, the different calculation bases made it almost impossible to compare the

profitability of projects worldwide. The existing potential of the sites around the world could not be implemented and it was difficult to control the global manufacturing network, individual supplier structure and supplier management. With the increasing complexity of submitting quotations and limited response time, formulating bids presented big risks. There were significant discrepancies between the calculations created with spreadsheet software and the series calculation after the start of production (SOP) in the enterprise resource planning (ERP) system, which meant employees were not sure if the master data had been used consistently.

The data exchange between project and plant was very complicated. Bills of materials (BOMs) and calculations were decentralized and often created in parallel. As a result, the response time for global customer requests was slow.

Grammer recognized the weaknesses in the acquisition process and decided to refine the processes, unify the software worldwide and reorganize the work teams. One of the key requirements of the new system was to connect product costs and tool costs within one system to simulate the influence of changes in the tool cost calculation on product costs. The company's goal was to be able to determine make-or-buy decisions for each assembly and tool. In order to simultaneously

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Frank Semmler
Head Controller
Truck Product and Market Segment
Grammer



support the progressive internationalization and integrate all business units in the calculation process, Grammer decided to introduce integrated costing solutions for products and tools from product lifecycle management (PLM) specialist Siemens PLM Software. The Teamcenter® solution for product costing replaced the standalone solutions that were not suitable for the increasing demands of an efficient costing process.

Cost-oriented product development

The complexity of current development projects is reflected in the quotation phase. The quotation processes at Grammer are handled by a project team from specialist divisions in order to provide the customer with the best possible solution. Complex products are no longer produced in a central development department, but rather in global project teams. For example, a modern seating system by Grammer consists of more than 1,000 individual parts. If the production is carried out at a new location, or the development of many new parts is required, a correspondingly greater effort is required. Due to the complexity and intensity of

competition, Grammer requires a detailed cost calculation to compete successfully. Calculating quotations is a comprehensive analytical task that covers areas such as development, purchasing and controlling. This phase is crucial for new orders. If a company wants to keep winning contracts and enjoy financial success, it must have the greatest possible accuracy in the calculation of quotations.

Grammer calculates quotations using Teamcenter to successfully deal with the complexity. With the Teamcenter solution for product costing, Grammer achieves optimal calculations for its quotations. Using Teamcenter for product costing creates the necessary transparency for the customer and provides financial benefits. This is important for gaining the confidence of the customers, because original equipment manufacturers (OEMs) often calculate cost analysis on the basis of the same information.

Cost transparency throughout the product lifecycle

Typically, the quotation price will be calculated two to three years before the start of

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Head Controller
Truck Product and Market
Segment
Grammer

“With Teamcenter product cost management, we have implemented our strategic approach, including our functions across the entire value chain, from acquisition through to series production, merged in the calculation process and represented in a common global system landscape. Thus, we ensure a stable, transparent and consistent global standard within the Grammer Group.”

Josef Trettenbach
Vice President
Controlling, Accounting and
Purchasing
Grammer

production, and generally applies to the entire product lifecycle of the vehicle, which in many instances is seven to eight years. All relevant variables that determine the costs are thereby taken into consideration, such as external development costs and raising capital, as well as technological progress, the company's strategic objectives, medium- and long-term productivity, and capacity and occupancy rate developments. Grammer must have reliable quotation calculations so it won't quote too high and lose business, or too low and lose profits.

With the profitability calculation capabilities of Teamcenter, Grammer can perform fast simulations and comparisons across business case scenarios. Use of the Teamcenter solution provides management with timely, at-a-glance, relevant performance metrics, such as net present value (NPV), internal rate of return (IRR), payback period, etc. The dynamic profitability calculation enables the decision-makers to be regularly informed about changes in future unit costs and selling prices across the entire product lifecycle. Direct cash flow comparisons for several ongoing projects over defined periods serve as additional management tools in decision-making.

“With Teamcenter, we are creating a more transparent presentation of the profitability of the calculated products and achieving a clear view of the results of future projects,” says Semmler.

Efficiently calculating the advantages

After a project has been awarded, the calculations begin. The advantage of using Teamcenter is evident at an early stage of the process. The 3D design data – generated with NX™ software, the system the company uses for CAD/CAM/CAE (computer-aided design/computer-aided manufacturing/computer-aided engineering) – can be used for calculations. With the support of the Teamcenter database for machine data, material data, worldwide labor costs, overhead rates and exchange rates, the cost calculations are built from the bottom-up. Therefore, Grammer also uses the

Teamcenter reference processes for stamping, welding and injection molding. Significant calculation elements include purchased parts, in-house parts, raw materials, work plans with manufacturing processes and additional costs, such as tools and assemblies.

During the project, the result is a calculation based on a detailed BOM. Once the details about the individual cost items have been obtained, Grammer can perform regular target-cost reporting. With the defined figures, the product costs are compared with the previously established target costs. Thus, the controller can use Teamcenter to track the cost of development of individual processing steps and identify critical projects immediately.

Starting from the part geometry in the tool costing area, the tool components are automatically dimensioned and calculated with the Teamcenter tool costing solution. This is made possible by integrating product and tool cost calculations using Teamcenter. The ability to simulate the implication of the changes gives Grammer reliable and fast make-or-buy decisions for each assembly and tool. Despite the frequent changes from customers during the quotation phase, Grammer remains flexible and can adapt the quotations in a very short time.

“Teamcenter supports us in optimizing our quotation calculation processes so the time for quoting can be halved,” says Semmler.

Grammer focuses on the innovation process to develop new solutions for benchmarking. The potential for improvement can be identified and implemented by comparing it with competitive solutions. Teamcenter product cost management supports Grammer in the cost analysis of existing products, or in the appropriate selection of cost-effective alternatives. The use of the Teamcenter product costing solution provides valuable support for product design and selection of manufacturing variants so the product cost can be further optimized.

Solutions/Services

Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Grammer AG specializes in developing and manufacturing components and systems for car interiors as well as driver and passenger seats for off-road vehicles, trucks, buses and trains. As a global partner to the vehicle manufacturing industry, the company is represented around the world by the automotive and seating systems divisions.
www.grammer.com

Customer location

Amberg
Germany

Purchasing team involved early in the quotation process

The purchasing team is engaged early in the quotation process by the global project team at Grammer. Using Teamcenter enables the global project team to track the high cost of materials and purchased parts that are particularly in-demand and provide important input for project decisions. Location and vendor-granting decisions are based on this information as well as is make-or-buy decisions, innovation exploration and idea management. The purchasing department uses Teamcenter product costing solutions to verify the cost structure and the cost drivers of the suppliers. Using information from a detailed cost breakdown and underlying cost analysis enables Grammer to have reliable calculations for price negotiations with suppliers.

"With Teamcenter, we realize up to 15 percent savings in the quotation process on certain projects with suppliers," says Semmler. This allows the company to reach the target cost of the OEM.

Realizing significant revenue potential in the future

Today, Grammer has 110 Teamcenter licenses worldwide. By using Teamcenter,

Grammer is, for the first time, using a common working environment across purchasing, cost engineering, sales and production. All involved parties access the same data and thus have the same level of knowledge. Grammer minimizes sources of errors and calculates additional variants with little effort through a structured representation of the cost and the use of consistent standards. Teamcenter enables Grammer to work much more efficiently throughout the calculation process and produce traceable results. With Teamcenter, Grammer has achieved a structured and standardized global process.

"With Teamcenter product cost management, we have implemented our strategic approach, including our functions across the entire value chain, from acquisition through to series production, merged in the calculation process and represented in a common global system landscape. Thus, we ensure a stable, transparent and consistent global standard within the Grammer Group," says Josef Trettenbach, vice president of controlling, accounting and purchasing at Grammer.

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Head Controller
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