Peltor

70 percent more products launched thanks to CATIA V5 and SMARTEAM

Company overview

Founded in 1950, Peltor AB is a world leading manufacturer of high quality hearing protection and communication products for professionals and consumers. Peltor products include headsets, visors, and helmets. Its hearing protection products are used in a wide range of fields including manufacturing, aviation, military, firearms, motor sports, forestry, and agriculture.

Headquartered in Värnamo, Sweden, Peltor has 350 employees with operations in 11 countries across Europe and North America. The company has doubled its annual turnover since 1998, with 2004 turnover of US$ 116 million. Peltor is part of Aearo Corporation, which specializes in personal safety equipment.

Business challenges

+ **Launch more new products**

+ **Deliver innovative products with superior functionality and ergonomics**

+ **Adapt products to local standards and customer needs**

+ **Share product data across the company, including global after-sales teams**

Situation

70% more new products developed in same time period

Over the past ten years, the personal protective equipment industry has moved toward products that include communication capabilities. To address this evolution, Peltor has refocused and expanded its product range from simple, passive hearing protectors to complex headsets that include built-in electronic components.

Due to rapid technological advances in the electronics sector and strong consumer demand for the latest functionalities, Peltor must now launch more new products.

"Today, we are under great pressure to bring more new products to market faster, better, and at a lower cost," said Per Gustafsson, European Marketing Director, Peltor.

Peltor must also differentiate itself with innovative products that marry the latest technology (e.g. Bluetooth) with high-end ergonomics (light-weight and comfort). In addition, Peltor must also adapt its product to local standards and share product information with its teams around the globe throughout the entire product lifecycle, including after-sales service and repair.

"In the electronic consumer goods industry, what is new today is old tomorrow. CATIA V5 and SMARTEAM help us innovate at the speed of market demand."

Per Gustafsson, European Marketing Director, Peltor

Solution

In 2000, to address its evolving business challenges, Peltor chose CATIA V5 and SMARTEAM, Product Lifecycle Management (PLM) solutions from IBM and developed by Dassault Systèmes, to optimize its new product development process. Peltor selected the integrated PLM solution to replace its former Euclid CAD system and "drawing vault".

CATIA V5 for 3D product design

Peltor R&D uses CATIA V5 in the pre-study stage of product development to create virtual prototypes based on requirements provided by the marketing department. "We create 3D digital mock-ups for study in the company's quarterly global forums where new product feasibility is discussed," said Sigvaard Nilsson, Technical Director, Peltor.

Once approved, mechanical engineers use CATIA V5 to develop detailed designs and product molds, while concurrently performing part stress analysis.

"Our PLM solution based on CATIA V5 and SMARTEAM enables our teams in 11 countries to collaborate simultaneously in all stages of product development from ideation to after-sales service."

Hans Wickström, European IT Director, Peltor

Centralized product data management with SMARTEAM

Peltor uses SMARTEAM to manage all its product data including 3D CATIA models, product drawings, electrical design drawings, layouts, test reports, product specifications, and manufacturing and assembly operations.

Companywide collaboration

Peltor uses SMARTEAM to give its extended-enterprise teams in 11 countries access to a single database to share the same resources and files. Ten SMARTEAM-equipped stations and 75 SMARTEAM Web Editor connections give all departments in the company access to the same information.

"With SMARTEAM Web Editor, our repair, customer service, and third-party representatives around the world have instant access to our most up-to-date technical files, spare parts drawings, and product certificates. Before, we used to send paper," said Hans Wickström, European IT Director, Peltor.
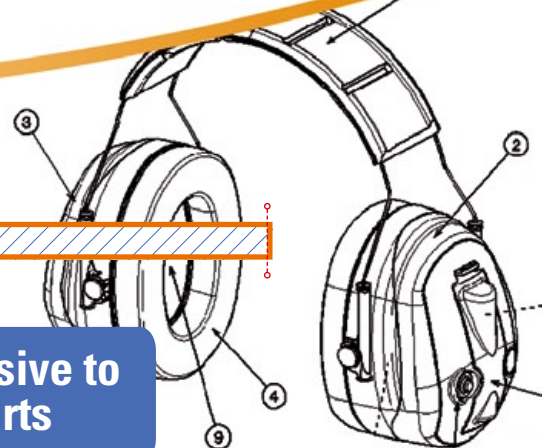
SMARTEAM for managing regulatory compliance

Peltor also uses SMARTEAM to help it comply with a European Union (EU) directive called Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment. As of July 1, 2006, all new electrical and electronic equipment must not contain banned chemicals such as lead, mercury, and cadmium.

"We are contacting all of our electrical component vendors to see whether their products contain hazardous materials. By inputting that information in SMARTEAM, we can verify instantly that all of our products are RoHS compliant," said Wickström.

33% less expensive to develop new parts

Results

More products launched

Peltor's PLM solution enables the company to address one of its principal business challenges – create more new products. Since implementing CATIA V5 and SMARTEAM, the company develops 70%* more new products.

"CATIA V5 is very comprehensive and intuitive, and offers information back to the designer. New users can learn it rapidly. Another benefit is the large number of freelance designers who know CATIA V5. We never waste time looking for external consultants," said Sigvard Nilsson.

Moreover, SMARTEAM speeds Peltor's product development by giving all departments instant access to the latest product data and revisions. SMARTEAM has enabled Peltor to cut data search time by more than 75%.

In addition, thanks to SMARTEAM, Peltor has almost completely eliminated the use of printed drawings (reduced by 97%) and the problem of distributing current versions. The result is fewer errors and better productivity - the number of errors found during production has plummeted by 80%.

Finally, SMARTEAM streamlines Peltor's product development since all product modifications are captured immediately and are instantly available across the extended enterprise. When creating a new product from an existing model, Peltor has reduced development cycles by 55%.

Accent on innovation

Peltor uses CATIA V5 to create 3D virtual prototypes to illustrate potential products and speed communication in product feasibility meetings. This permits Peltor to study a wider range of products and options early in the product development process.
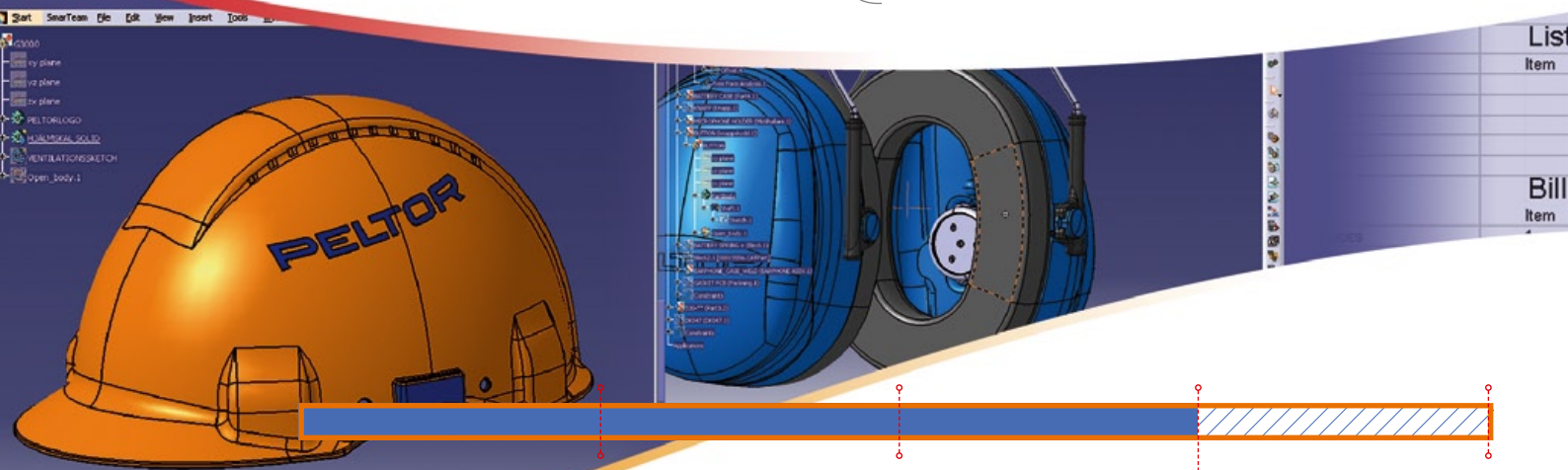
"3D virtual prototyping helps us to study more products and to receive the input of our marketing colleagues on the feasibility of a new model," said Sigvard Nilsson.

In addition, Peltor transmits its product designs from CATIA V5 to a rapid prototyping device to create 3D physical prototypes. This also facilitates feasibility studies and has reduced Peltor's prototype production costs by 40%. Overall, with PLM, Peltor has reduced the cost of developing new parts by 33%.

"As a company grows, its product information grows along side at an exponential rate. SMARTEAM helps us to efficiently manage our increasing amount of product data."

Sigvard Nilsson, Technical Director, Peltor

80% fewer errors during production

Greater adaptability to client needs

SMARTEAM helps Peltor to tightly control its development processes and track the product configurations sent out.

"Some customers are governed by strict safety regulations. With our PLM solution, we're sure to deliver the right model because we know the exact product configuration, right down to the critical parts," said Wickström.

Creating Bills of Materials (BOM) with SMARTEAM has helped Peltor to manage and track information on product materials more effectively. Time required to produce BOMs has dropped by 50%.

Regulatory compliance and sustainable development

SMARTEAM helps Peltor to comply with the EU's ban on hazardous materials in electrical equipment (RoHS directive). The company uses SMARTEAM to track the materials in electronic components from suppliers to ensure their products are in line with the directive.

Finally, SMARTEAM helps Peltor to contribute to environmental and economic sustainable development by eliminating paper drawings (from 60,000 to 2,000 printed drawings annually) and to social sustainable development by increasing worker satisfaction.

"In Sweden, if employees are not happy, they complain, especially when it comes to IT," said Nilsson. "However, with CATIA V5, we only 'hear' silence. That is a good thing."

Better response to the after-market

The single, up-to-date data repository in SMARTEAM enables Peltor departments, including its global after-sales service teams, to work in concert and share the latest product information.

"Today, we know that everyone has access to the latest version, including our after-sales teams. The result is better after-sales service and happier customers," said Nilsson.

> *"With SMARTEAM, we are sure that our products comply with local standards and regulations, such as the EU ban on hazardous materials in electrical products."*
>
> **Per Gustafsson, European Marketing Director, Peltor**

One man-year saved by eliminating printed drawings

Future

CATIA V5 and SMARTEAM have enabled Peltor address its critical business challenges and strengthen its leadership position in the personal protective equipment industry.

Peltor plans to maximize use of its PLM solution by further populating SMARTEAM with all product related information, including test reports about third-party products and finalized Engineering Change Request (ECR) documents.

In addition, the company will grow use of the SMARTEAM Web Editor to give more users access to the centralized product database. The company also plans to implement a document approval process via SMARTEAM, and increase use of its workflow capabilities.

Finally, in response to the EU's RoHS environmental directive, Peltor will use SMARTEAM to manage the resulting large number of ECRs required to adapt its products to the legislation. The company is also investigating SMARTEAM's other regulatory compliance functionalities to further its design-to-compliancy product development strategy.

+ 70% number of new products developed in same time period

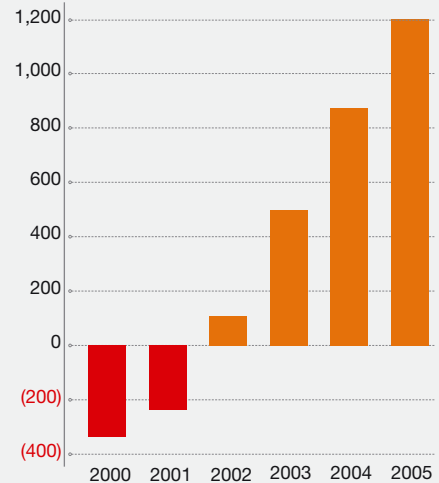**− 80%** number of errors during production

Independent ROI study

CIMdata performed an independent Return on Investment (ROI) study on Peltor's implementation of the PLM solution. The study was based on interviews with Peltor personnel, data about the benefits of the PLM solution, and the cost of its deployment (software, hardware, training, maintenance, ramp-up and administration). CIMdata's ROI model calculated the overall ROI for a six-year period. Peltor's overall ROI is impressive with a short payback period and a high internal rate of return.

The findings are as follows:

- the pay back period is **2.2 years**

- the net present value of benefit (the cumulative discounted cash flow) over six years is **1,195k$**

- the internal rate of return is **89.9%**

Cumulative Discounted Cash Flows - k$

CIMdata is a leading and independent worldwide consultancy specialized in PLM strategy

2005 - **CIM**data

− 33% cost of developing new parts

1 man-year annual savings from elimination of printed drawings

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