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PharmaPack

Packaging equipment manufacturer cuts R&D cycle time by 17 percent

Industry

Industrial machinery and equipment

Business challenges

Facilitate collaboration for development of single-floor and low-volume model

Provide sound project management tools to enhance R&D process

Keys to success

Seamless integration between Teamcenter and Solid Edge

Extensive, scalable functionality provided by Teamcenter and Solid Edge

Industrial experience and world-class software technologies reflected in capabilities of Teamcenter

Localized services and excellent implementation teams of GOHOPE

Results

Reduced the R&D design cycle by 17 percent

Shortened the production preparation time by 20 percent

Seamless integration of Teamcenter and Solid Edge enhances collaboration and standardizes business processes

Coordinating disciplines

PharmaPack Asia Limited is a packaging machinery company that was established in 2001 in Hong Kong. The company is dedicated to the marketing, development, design, manufacturing, installation, debugging and after-sales service of pharmaceutical packaging equipment. Its products include an automatic tablet/capsule packaging line, end-of-the-line packaging line and ink-jet printing machine, a particle inspection machine and labeler. In October 2002, PharmaPack established its manufacturing facility, PharmaPack

Packaging Equipment Co., Ltd (PharmaPack), in the Guangzhou Economic and Technological Development District.

The single-floor and low-volume model adopted by packaging machinery enterprises requires engineers to customize design solutions to meet the unique requirements of every customer. Generally, the packaging device involves machinery, electronics and other areas of expertise, which means the product design and research and development (R&D) teams must be divided by disciplines. It is critical that data flows seamlessly between the teams to guarantee smooth R&D, production and machining processes. The R&D process is challenging because it is not under the sole control of the production and machining enterprise. The

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packaging equipment purchaser must also participate in the R&D process and confirm certain key tasks, such as the first design examination, design review, delivery testing, transportation and production. As a result, the company must establish a sound project management system to effectively facilitate R&D projects. That's why it was so important for PharmaPack to deploy a product lifecycle management (PLM) solution.
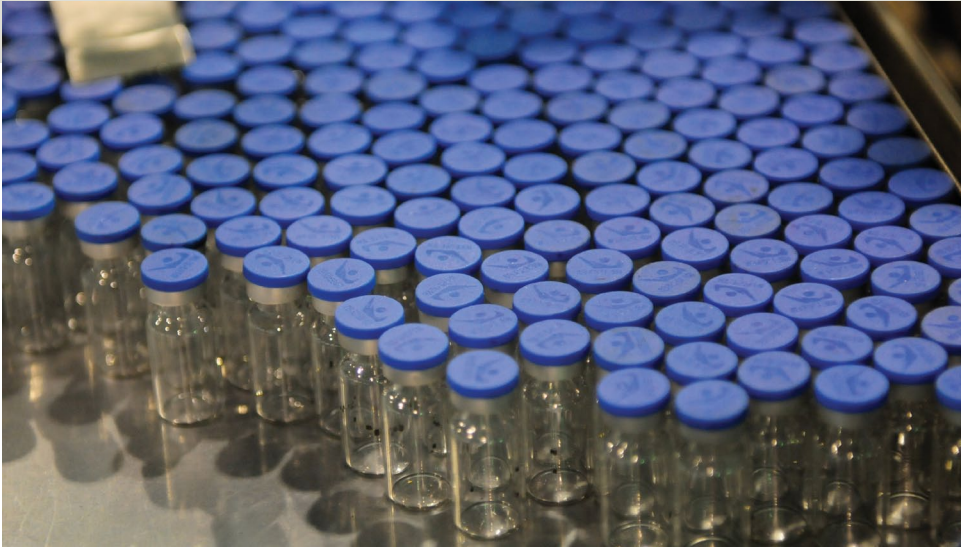
"Integrating seamlessly"
PharmaPack implemented Solid Edge® software, a Siemens PLM Software solution, as its global product development platform shortly after the founding of the company. While Solid Edge provides a strong computer-aided design (CAD) tool, PharmaPack found that its designers needed a way to facilitate collaboration, especially when dealing with a large volume of design data.

But as the company sought a more effective approach to data management, especially for search and version control of the design data, it realized that to leverage the full value of its CAD system, it would need a PLM solution to achieve a fully standardized business process.

After evaluating several options, PharmaPack settled on Teamcenter® software, a PLM solution, also from Siemens PLM Software. Based on the powerful search function and version control capability of Teamcenter, PharmaPack found that its engineers could find the re-usable design data quickly, allowing them more time to focus on designing and creating better products.

Prior to the implementation of Teamcenter, the product information and data produced by Solid Edge could not be reviewed, approved and released electronically, meaning it had to be transferred manually, a laborious and error-prone process. In addition, any change to product data could not be synchronized with the company's enterprise resource planning (ERP) system, making effective project management almost impossible. However, using Teamcenter in conjunction with Solid Edge changed all of that.

Now, PharmaPack's designers are carrying out product development and design activities with Teamcenter, which is used to manage all 2D drawing data and design changes. With Teamcenter, PharmaPack has reduced the R&D design cycle by 17 percent and shortened production preparation time by 20 percent.

"Teamcenter and Solid Edge integrate seamlessly, supporting a single data source and effectively guaranteeing data accuracy," says Qi Xianjun, deputy general manager of PharmaPack (Guangzhou). "They provide extensive and scalable CAD and PDM (product data management) functions, and are able to meet our business requirements across different levels of complexity."

Recognizing the opportunity
PharmaPack realized that key functions, such as PDM, standardization of the enterprise's production business processes, and full and effective project management, had to be vastly improved. The company recognized that a PLM system could help in all of these areas. Just like other enterprises that implement product lifecycle management technology, PharmaPack required very specific functionality from its PLM system.

First, it needed to enhance its ability to manage and facilitate integrated design collaboration of all product-related machinery, electronics and software data across organizations, including differently-structured environments. Second, PharmaPack needed to enable the rapid and effective management of product design and parts re-use, plus manage and control working processes and changes according to specific needs across organizations. Third, the company needed to facilitate project collaboration between

the design and purchasing departments, as well as across the enterprise.

By implementing Teamcenter, PharmaPack has been able to organize data with the product structure instead of the file folder at the core, providing clear visibility to the hierarchies and relationships between tens of thousands of drawings under the product structure tree. Engineers no longer need to do time-consuming searches for their own or others' drawings; instead, they get a clear project view by simply clicking to unfold the product structure tree on the desktop. This not only facilitates data sharing and easily locating relevant drawings, but also reduces design errors and costs, thanks to version control and timely changes.

By using the process management capability of Teamcenter, the company is able to customize relevant process templates, and quickly complete the validation and review process by making annotations in red lines with the embedded browse tool. Use of such functionality changes the company's review method from essentially paper-based to fully digital, making the R&D process substantially more efficient and smoother while helping to ensure the accuracy and consistency of file information. Using Teamcenter has also enabled PharmaPack to eliminate isolated information repositories and establish very effective communication channels between project teams. Such effective management

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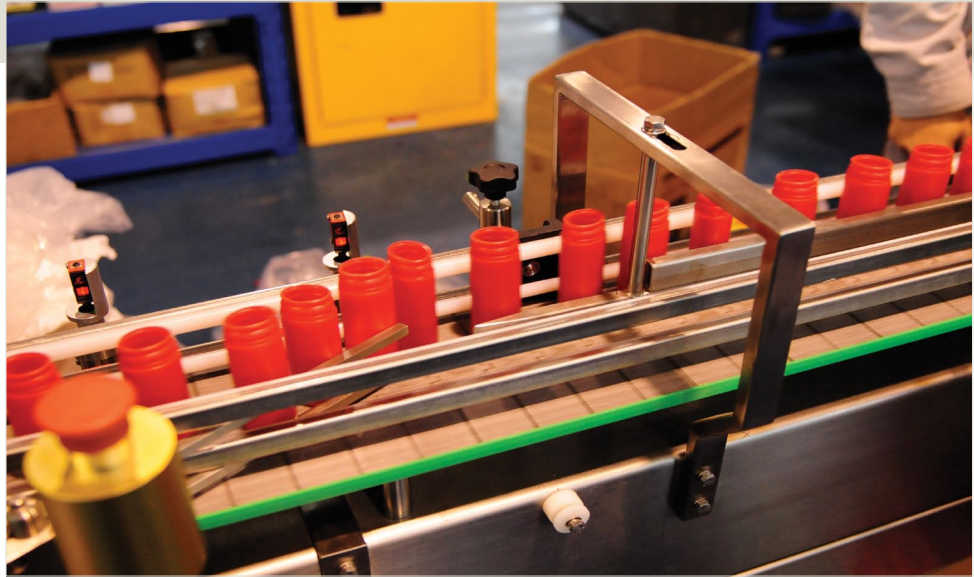
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and sharing of data helps to significantly cut design rework and enable notable cost reductions.

Paying dividends

Teamcenter is integrated with the company's ERP system to produce a bill of materials (BOM) list automatically. This considerably reduces manual entry, improving efficiency and reducing errors. In addition, all changes to the design can be readily reflected in the BOM list, facilitating a significant advance in synchronized updates between product data and other information across the entire process. From an operator's standpoint, use of Teamcenter supports a timely view of machinery parts and components, as well as provides the assembly status and assembly drawings. For example, this enables purchasing personnel to find data and understand the status of a project.

In the past, designers would spend 20 to 30 percent of their time looking for drawings, including their own and the other designers' work, but now they can easily obtain the drawings with relevant search information. By integrating the PLM system with the ERP system, BOM creation

that previously took about two to three working days for one person to complete can now be automatically accomplished with a click of a button. According to Xianjun, by using the process management and printing management capabilities of Teamcenter, designers can cut unnecessary drawings by 30 to 40 percent per month, which also results in a notable cost savings.

"With its profound industrial experiences and world-class software technologies, Siemens PLM Software has provided us with an advanced and reliable PLM solution which, in combination with the localized services and excellent implementation team of GOHOPE, has resulted in a highly successful deployment and exceptionally productive use," concludes Xianjun.