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Tetra Pak eBeam Systems & Cideon

CAD integration: The right connection

From CAD via PDM to SAP´s Public Cloud: This is the path of the engineering data that is produced by Tetra Pak´s eBeam division. When eBeam switched to SOLIDWORKS PDM Professional and to SAP S/4HANA Public Cloud, they decided to use the new Cideon connector – and Cideon´s professional support.

Tetra Pak has a purpose to make food safe and available, everywhere. The company pioneered aseptic technology, which allows food and beverage manufacturers to package a commercially sterile food product so that it can last longer, be distributed further and stored without the need for refrigeration or preservatives. For many consumers, Tetra Pak is synonymous with beverage cartons, owing to the company's heritage and innovation in the industry.

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Tetra Pak®

Tetra Pak eBeam Systems
Tetra Pak eBeam is an innovative business unit of Tetra Pak that develops electron beam technology (eBeam) for the food and packaging industry.

This technology enables energy-efficient, chemical-free sterilization of packages, saving resources and improving the sustainability of production processes. The company is based in Flamatt (Switzerland).

The company has developed into an international market leader for the processing and packaging of food. In order to ensure highest quality and hygienic standards, Tetra Pak produces the multi-layer packaging material and also the machines for the production and filling of food and beverage products.

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Connecting SOLIDWORKS and SAP S/4HANA

From chemical to physical packaging sterilization

A crucial step in the filling process is the sterilization of the packaging material. Here, Tetra Pak can make a unique offer. Instead of chemical sterilization with gaseous H2O2, it´s just a low-voltage electronic beam that does the job. This has several advantages: No chemistry is needed, less waste is generated, the “eBeam” modules are very compact, and the user can run the machines up to 60% faster – with, for sure, the same hygienic quality.

The eBeam modules have been developed and are produced in Flamatt/Switzerland. For the design of the modules, the eBeam team used a customized SOLIDWORKS system which sent its data to SAP ECC, using SAP´s CAD Desktop integration tool. Now, a standardized SOLIDWORKS PDM Professional solution with a connection to SAP S/4HANA Public Cloud should be implemented.

The missing link: Connection between CAD/PLM and Public Cloud

When the PDM system with all its engineering and product data is deeply integrated into the (cloud-based) enterprise resource planning (ERP) system, there is a consistent data stream and a “single source of truth” for the combination of engineering data (CAD) and commercial/product data used, for example, for purchasing and production planning.

Sven Muregard, project manager for this project at Tetra Pak: “The engineers were satisfied with SOLIDWORKS. So, we took the next step with SOLIDWORKS PDM Professional. And, as the appropriate SAP solution, we opted for S/4HANA Public Cloud because it is the most standard version of S/4 and it should suit eBeam´s needs.”

The solution: New Cideon connector

This idea seems simple – but to link these two systems or worlds, a separate connector is needed. Exactly this interface – ensuring the SOLIDWORKS PDM integration to SAP S/4HANA in a Public Cloud environment – had just been developed by Cideon. So, Tetra Pak opted to use this new connector.

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Successful Data Migration and New Single Source of Truth

The decision was facilitated by the fact that both companies already collaborated in the CAD area. Sven Muregard: “The eBeam users were happy with the SAP CAD Desktop solution from Cideon. We had a very integrated process of engineering and resource planning, and our intention was, of course, to continue to work that way.”

Migration: Meticulously planned

As the task of connecting SOLIDWORKS PDM Professional and the SAP Public Cloud was new territory not only for Tetra Pak but also for Cideon, the project was planned meticulously. Dirk Hille, Consultant at Cideon and responsible for the project: “We supported the data migration and exported the existing data, enriched with meta-data, from the ´old´ SAP ECC.” In the meantime, the CAD data from SOLIDWORKS was imported into SOLIDWORKS PDM Professional, and SAP migrated neutral formats like PDF documents into the Public Cloud. “After SOLIDWORKS Professional PDM was set up, we could install our interface and perform the cloud/CAD integration.”

Sven Muregard

Project manager,
Tetra Pak

“The purchasing department can use the CAD data, this is the most frequent use of the connection. And the suppliers can be provided with STEP files if needed.”

Streamlined data flow – Clear storage concept

What seems not quite easy in the description was, in reality, a smooth operation with a result that is, from the user´s view, absolutely satisfying. Sven Muregard: “The purchasing department can use the CAD data, this is the most frequent use of the connection. And the suppliers can be provided with STEP files if needed.” Because the purchase department and the suppliers just need a view of the files and not the original CAD data, the PDF format is used for transferring the information.

In order to ensure a smooth and quick data flow, Cideon chose a special and cost-effective ´single source of truth´ concept of data procurement. Dirk Hille: “Larger files remain in SOLIDWORKS PDM. The interface just creates links in the S/4HANA Public Cloud. Exchange formats such as PDF or STEP go directly into SAP. But all other formats stay as local as possible.” This is due to storage space, which is expensive in the SAP Public Cloud, so duplication should be avoided. Now, CAD data remains locally in the PDM system, and only the lightweight formats are transferred into the cloud.

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New CAD/ERP Environment Works Smoothly

Result: A big step – and a modern PLM platform
In the meantime, the new CAD/ERP landscape has been installed. Sven Muregard: “In the past 10 years, eBeam used a very sophisticated solution with the CAD Desktop environment, which was tightly integrated into ERP. The switch to a new PDM system feeding a new cloud-based ERP was a big change indeed, and we had a longer period of finetuning the complete solution. The engineers had to learn to work in a slightly different way but now the system is working great.”

All in all, eBeam now uses a modern ERP platform having a proper PDM system integrated with S/4HANA Public Cloud. Sven Muregard: “Previously SOLIDWORKS was used more like a drawing tool, and everything was uploaded in SAP. Now we have a proper PDM with a connection to the Public Cloud.” A valuable pre-condition for this workflow is the Cideon interface, and the support from Cideon is also appreciated: “We are very satisfied with the service provided by Cideon both when it comes to project management and the technical implementation. The collaboration was highly professional, and the result is what we expected.”

About Cideon

Cideon advises and supports companies in optimizing their product development processes – from the initial concept through to engineering, production and services. Cideon's innovative solutions ensure continuous data flow along process chains making data accessible and cost-effective throughout the company. In this way, Cideon's customers can fully exploit the potential of digitalization to benefit themselves and their clients. Cideon employs 310 staff at 13 locations in Germany and Austria. It is part of the Friedhelm Loh Group, a globally successful Group with 12 production facilities and 95 subsidiaries.

Further information can be found at:
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