

DATA EXCHANGE WITH INTEGRATION IN THE PLM AND OFFICE WORLDS AT WITTE

By Udo Hering

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WITTE Automotive has been manufacturing innovative locking and actuating systems for car doors, hoods and tailgates, interiors and seats that can be found in all leading car brands for almost 125 years. The automotive supplier, which has its headquarters in Velbert in North Rhine-Westphalia, also develops tolerance compensation systems and digital solutions for mobility and logistics that can be used to unlock rental cars via a cell phone app or make it possible for logistics providers to place parcels in recipients' trunks, for example. WITTE is today one of the world's leading manufacturers of mechatronic locking systems. The company's acquisition of the VAST Automotive Group in 2023 has significantly enhanced its presence in China, Japan and India. With a workforce of approximately 6000, it will for the first time generate revenues in excess of one billion euros in the current financial year.

The first car to drive around the world with a door handle from WITTE was the forerunner of the VW Beetle. Locking and latching technology for cars has evolved considerably since then: simple door locks have become complex mechatronic systems that can be operated via a cell phone. "Our products contain a growing proportion of electronics," says Nick Benedens, Team Leader PLM and CAx at WITTE. "Their development is also becoming increasingly complex due to the fact that we not only have to take customers' requirements in terms of design and functionality into account but also, to an increasing extent, sustainability aspects."

Like many other automotive suppliers, WITTE develops its products in the CAx environment of the respective customer. The product data was previously managed using a highly customized PDM system. This system is currently being replaced by the PLM solution Teamcenter from Siemens Digital Industries Software to ensure that future requirements in the field of mechatronic product development can be met, says Benedens. The switch to a different system also made it necessary to replace the existing data exchange solution that the PDM system vendor had developed for WITTE.



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EASY TO USE AND EASILY INTEGRATED

“We looked at a number of different data exchange solutions and with OpenDXM GlobalX found a web-based application that is very easy to use,” says Benedens. In addition to its high level of usability, another argument in favor of the PROSTEP solution was the fact that it can be integrated in both Teamcenter and Windows Explorer. “This means that employees who don’t work with the PLM system are also able to use OpenDXM GlobalX to exchange their data,” adds Benedens. In the previous solution, they had to store their data in the PDM system temporarily if they wanted to make it available for downloading.

Data security and the fact that PROSTEP is ISO 27001 and TISAX certified played an important role in the system selection process. It took a great deal of time and effort to meet the customer’s security requirements in the existing solution with the download server they had developed themselves. “PROSTEP now takes this work off our hands as we always receive the latest security updates,” says Benedens. Having a partner with a broad-based presence and to whom certain services can also be outsourced if required is a great advantage.

OpenDXM GlobalX not only offers the option of making the data available for downloading in encrypted form, but also the option of exchanging it using a secure data line via the OFTP2 protocol. This option is particularly popular with OEMs and larger system suppliers in Europe. At present, approximately 100 of the 500 exchange partners that WITTE has set up in OpenDXM GlobalX are connected via OFTP.

PROSTEP migrated the profiles of the exchange partners from the existing data exchange solution. Unlike in the past, it is not the customers and suppliers that are created as exchange partners in OpenDXM GlobalX but rather individuals at these companies. As Benedens says, this means a certain amount of change for users. They are, however, more flexible when it comes to assigning rights and can send datasets to multiple people.

CENTRAL INSTALLATION AT HEADQUARTERS IN VELBERT

OpenDXM GlobalX is installed on site in Velbert, where the central Teamcenter data server is also located. “We opted for an on-premises solution because we first wanted to develop our own expertise, but things don’t necessarily have to stay that way in the long term,” says Benedens. Demographic change and the increasing shortage of skilled workers are making it more difficult to recruit new staff. In order to use the available resources more efficiently, it might be advantageous in future to switch to the SaaS solution or to purchase certain services from PROSTEP.

The locations in Germany, the Czech Republic, Bulgaria and Sweden also access the installation in Velbert when they want to start their data exchange processes. More remote locations in Japan, India and China can, in theory, be connected to OpenDXM GlobalX via a remote FileVaults in order to shorten the long journey that the data makes. But making that a reality is still a long way off. “We’re planning a joint solution for China,” says Benedens, “but it’s not yet clear which options we’ll use.”

Implementation of the new data exchange solution was not at all problematic – a showcase project, as Benedens says: “We had a very competent technician from PROSTEP, who quickly implemented all our change requests. The only problem was that the switch to Teamcenter tied up a lot of resources, so we sometimes didn’t have enough time for testing.”

EXCHANGING DIFFERENT 3D FORMATS

Because the introduction of Teamcenter has not yet been completed, WITTE has currently integrated the data exchange solution in Teamcenter with only the standard functionality that the interface offers. A rudimentary integration in the old PDM system was created in parallel so that users can always send data or make it available for downloading from both systems. Another of WITTE’s requirements with regard to the data exchange solution is the option of exchanging 2D and 3D data, or 3D data in different data formats, simultaneously in a single job. Although this is possible, it requires a certain amount of customizing.

WITTE had automated numerous processes in the existing data exchange solution that are now to be replaced by standard functions in OpenDXM GlobalX. With its robots and gateways, PROSTEP's solution makes it possible to automate the transfer processes to a large extent. Some functions, like creating delivery note, are no longer required because OpenDXM GlobalX creates a dedicated history of the exchange processes that can be made available to users as automatically generated reports.

One of OpenDXM GlobalX's strengths is the ability to initiate certain conversions as part of the data exchange process. Although this is not so important for WITTE in the context of the OEMs as the OEMs usually receive the data in the native formats, it is in the context of their own supply chain. The company has to support a wide range of 2D and 3D formats if they are to be able to include suppliers at all levels. The decision as to who receives which data in which formats can be stored in the user profiles, but WITTE is currently leaving this decision to the design engineers, who know best which formats their partners can process.

THE GREATEST BENEFIT IS GREATER FLEXIBILITY

The data exchange solution is currently being used by 200 to 250 people. These are mainly people from the engineering department, who send or make their CAD data available directly from their Teamcenter environment. Benedens assumes that the number of users will increase significantly once the solution is integrated in the Office environment.

The greatest benefit of the new data exchange solution at present is the higher level of flexibility when choosing exchange paths, as Benedens points out. It is also much easier to connect different converters out of the box or to integrate certain processes via Python. "The solution's usability is also a huge benefit. It means that not much training is required in order to use the software."

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