German 3DEXPERIENCE with Dassault Systèmes

CIMdata Commentary

Key takeaways:

- *Alongside the development of their 3DEXPERIENCE PLM Platform, Dassault Systèmes has also invested significantly in setting up an appropriate business ecosystem*
- *A long-term client-supplier relationship has resulted in a strong partnership between Dassault Systèmes and Miele, a leading home appliances company, which resulted in the decision to jointly walk the journey towards realizing the 3DEXPERIENCE*
- *The partnership between Dassault Systèmes and Fraunhofer IPT-EM makes the 3DEXPERIENCE Platform and methodologies more accessible to mid-size companies*

CIMdata recently participated in a two-day PLM analyst meeting and briefing from Dassault Systèmes, in Germany. During these two days of meetings, Dassault Systèmes briefed the invited analysts on the progress they have made around their 3DEXPERIENCE Platform. The setting for this meeting was within the service area of the Fraunhofer IPT-EM project in Paderborn, Germany. This is a systems engineering research project commissioned to develop a set of tools that can be used as part of interdisciplinary work to design intelligent products and production systems. The project's focus is on defining a holistic methodology as well as providing tools and practical knowledge to participating companies.

Customer Visits

CIMdata found it quite refreshing that the first day of the meeting was dedicated to two client visits in the region. The first visit was at the washing machine manufacturing facilities of Miele, a leading German appliances designer and manufacturer, who has been a client of Dassault Systèmes for many years. Miele's tag line is "immer besser" (better and better) and during a guided tour through their manufacturing facility the company's high standards for design, quality, and production flexibility became quite clear. This was re-emphasized during a conversation with two members of their corporate executive board. The gentlemen explained the nature of their industry and business. They closely follow the developments in society, where mobility, convenience, and connected products are increasing in importance. The reference to Industry 4.0 was easily made, however, these executives preferred to talk about Internet of Things (IoT), as they found Industry 4.0 too restricted towards manufacturing. Over the years the company has developed a good and solid relationship with Dassault Systèmes. Today they work tightly with Dassault Systèmes solutions in mechanical and electrical design as well as in process design. This has resulted in a partner relationship where they jointly take the 3DEXPERIENCE journey and learn what the best design and engineering approaches are, throughout this journey. A leading principle is the Requirements, Functional, Logical, and Physical (RFLP) approach enabled by Dassault Systèmes' various PLM solutions. Miele's latest product model has been designed along this approach.

CIMdata found it quite a compliment for Dassault Systèmes that two executive board members took ample time from their busy calendars to sit with the analysts and promote their partner relationship with Dassault Systèmes. It was also very positive to learn that Dassault

Systèmes embraces such partnerships as it apparently recognizes and appreciates that they are a true foundation for lasting, sustainable PLM strategy implementations.

The client visit in the afternoon, with ELHA Maschinenbau, made clear that Dassault Systèmes seeks to be partners not only with the larger enterprises, but also with the medium size companies. ELHA Maschinenbau is a mid-size machine tools manufacturer, with an outstanding quality reputation, that employs some 250 people. From the meeting with the company owner and some of his executives it became clear that they have come to understand that with the increasing importance of software in products, implementing a systems engineering approach is extremely important. This sentiment is quite new in mid-sized companies, and requires proper IT enablement. ELHA Maschinenbau executives recognize that Dassault Systèmes 3DEXPERIENCE Platform can provide this IT enablement, but adopting a systems engineering approach requires the availability of a methodology, education, and support, which are often financially out of reach for mid-sized companies. That is where the close relationship of Fraunhofer IPT-EM with industrial companies in the region, like ELHA Maschinenbau, and with Dassault Systèmes fits in—more about this later.

For Dassault Systèmes' 3DEXPERIENCE Platform to achieve sustainable success, adoption across companies of all sizes will be critical. Dassault Systèmes is taking the right steps with their additional focus on mid-size companies. In the end this will be beneficial for both the large enterprises who work with the mid-sized companies, as well as the mid-sized companies who deploy these platform-based solutions. As further described below, the partnership with Fraunhofer IPT-EM provides a good and well-respected means to address and reach these mid-size companies.

Fraunhofer IPT-EM

The second day of the analyst meeting was fully dedicated to Fraunhofer IPT-EM and the relationship with Dassault Systèmes. For those who are not familiar with Fraunhofer, they are Europe's largest applied research organization. Their research efforts are geared entirely to people's needs: health, security, communication, energy, and the environment. The Fraunhofer Gesellschaft consists of approximately 70 research institutes and facilities, has ~23,000 staff, and performs ~€2 billion in research volume per year. Each institute operates within its own geographical region and supports collaboration among the different institutes. Also, each institute is linked to a university, and collaborates with them to further their cause. The role of the Fraunhofer institutes is to stimulate certain innovations within the designated geographical region in which they are active. They do that by binding regional companies through memberships and universities by collaboration, and helping the member companies through applied and focused research, education, and where appropriate, support. Through these memberships, academic research comes within reach of midsize companies. This allows the Fraunhofer institutes be driving forces for innovation. Fraunhofer IPT-EM was founded in 2011 as a project group of the Fraunhofer Institute for Production Technology in Aachen, Germany and focuses on Mechatronic Systems Design (Intelligent Technical Systems as they call it), an area that is important within the German Industry 4.0 initiative. Fraunhofer IPT-EM works from 3 research groups:

- Product Engineering
- Control Engineering
- Software Engineering

Fraunhofer IPT-EM currently brings together 140 businesses, 15 universities and research institutes, and 31 business related institutions in a strong regional network. Within the network Fraunhofer IPT-EM support the development of methodologies and techniques for Model Based Systems Engineering, product engineering support, education and coaching, and modeling tools.

As over 90% of the businesses are mid-sized, these companies individually in general can't afford to invest significantly in new design, engineering, and production methodologies and techniques, and also can't afford to stay behind. Fraunhofer provides an excellent framework for them to participate in new trends and developments, at reasonable costs.

Dassault Systèmes and Fraunhofer IPT-EM

As Fraunhofer IPT-EM was in search of a platform that they could use in their institute to support their R&D and manage their projects. They also were looking for a platform that would support their industrial partners. They ultimately found Dassault Systèmes; a partner that was willing to invest in their institute and the region they support. This investment has come in two ways: (1) in making the 3DEXERPIENCE Platform available to the institute and providing senior staff to collaborate with Fraunhofer and the companies in their network, and (2) financially, funding research from which both Fraunhofer and Dassault Systèmes will benefit. Mr. Philippe Bartissol, Vice President Industrial Equipment Industry at Dassault Systèmes, emphasized that for them it is important to have a sustainable and lasting partnership with Fraunhofer, and thus they have committed themselves financially for the long-term in the partnership. This long-term commitment implies a strong message of trust and continuity to the mid-sized industrial companies. Through this partnership their 3DEXPERIENCE Platform comes within reach for an extended range of companies.

CIMdata sees this partnership as a good example of how research institutes, universities, industrial companies, and PLM solution providers can come together in an ecosystem from which all parties involved can and do benefit. The partnership has created a trusted backbone for companies that operate their business in a hectic world, allowing them to focus on their business.

Summary

Dassault Systèmes has not only created their 3DEXPERIENCE Platform, but they have also developed a number of valuable partnerships with industrial companies and with the Fraunhofer IPT-EM institute. Through these partnerships Dassault Systèmes has expanded their reach into the industrial market towards mid-sized businesses, for whom systems engineering methodologies and enabling solutions are within their reach. This is important to assure that mid-sized businesses can adapt to new engineering, design, and production approaches and remain competitive in a highly dynamic market environment.

About CIMdata

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