

DEUTSCHE LICHTMIETE

Case Study



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Challenge

Looking to expand its unique lighting-as-a-service business model beyond Germany and into Austria and Switzerland, Deutsche Lichtmiete required a scalable, future-proof innovation platform that its designers could use to collaborate more effectively. The solution needed to enable advanced configuration management and connect to the existing ERP system.

Solution

Deutsche Lichtmiete chose Dassault Systèmes' **3DEXPERIENCE** platform, providing a single reference for all engineering and design data, automatically generating a variant bill of materials (BOM) for each project. Engineers in disparate locations can easily access the latest version of a design and collaborate securely in real time.

Benefits

The **3DEXPERIENCE** platform has cut design time from days to hours thanks to improved simulation, configuration management and collaboration capabilities. Advanced configurations have reduced design time, prevented errors and helped with adherence to regulations. All this results in shorter response times and an improved customer experience.



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Stefan Bluhm, Product Development Engineer, Deutsche Lichtmiete

A LIGHTBULB MOMENT

When Alexander Hahn, CEO and founder of Deutsche Lichtmiete, was renovating his home back in 2008, he was shocked by the cost and quality of LED lighting solutions available to him. After studying the market, he realized that businesses across Germany faced the same problem – and so he made it his mission to address the situation. As a result, Deutsche Lichtmiete was born and with its perpetual founding motive given by Hahn: "The reduction of CO2 emissions through the use of LED lighting is what drives us constantly."

Deutsche Lichtmiete's approach was quite different to anything else on the market at the time. Hahn devised a unique lighting-as-a-service (LaaS) business model that would enable companies of all sizes, in any industry, to rent – rather than buy – bespoke, best-in-class lighting solutions. By making LED lighting more accessible and commercially attractive, Hahn aspired to help German industry organizations to become more sustainable.

"LED technology provides not only outstanding light, but is economical, environmentally sound and the most energy-efficient lighting on the market," explained Stella Dreyer, R&D project manager at Deutsche Lichtmiete. "By removing the investment hurdle, we make it much easier for businesses to make the transition and profit from the conversion to LED. We've made that process very easy: We guarantee the functionality of our installation for the entire contract duration, so it offers complete peace of mind."

Deutsche Lichtmiete's innovative rental model has been a great success. "Today we have extensive in-house design, production, installation and maintenance teams that serve over 600 projects," Dreyer explained. "These customers are incredibly diverse in terms of their requirements – we work with small shops who have four or five luminaires, as well as some of the largest factories and production sites in the country which may have thousands of luminaires. These bigger businesses often operate in heavy industries and under tough conditions. This means that the installation environment can be challenging, however our extensive experience helps us solve all our customers' challenges."

THE PATH TOWARDS VIRTUAL SUCCESS

Over the course of the past thirteen years, the company has evolved and now plans to expand its business. "We are looking to expand our business across and beyond Germany in the years ahead," Dreyer said. "We hope to help businesses in other regions reap the same benefits that our local client base is enjoying."

Developing in this way will see Deutsche Lichtmiete's teams scale and grow further – and this meant it needed a reliable,

future-proof technology platform at its foundation.

"We quickly realized that in order to achieve our future vision, we needed our engineers to work flexibly, wherever they are based – whether that's across Germany or beyond," explained Stefan Bluhm, a product development engineer at Deutsche Lichtmiete. "We wanted to enable remote collaboration with a proven solution that is able to grow according to our ever-evolving needs."

This meant a significant departure from Deutsche Lichtmiete's existing way of working. "Designers were working file-based using SOLIDWORKS," Bluhm said. "Everything was stored locally and in silos, and there was a lot of switching between different systems since our design software did not connect with our ERP system."

Deutsche Lichtmiete required a solution that could connect to its existing ERP system without the need for third party software. It also sought the benefits of a platform that offered advanced configuration and variant management, so that it could efficiently manage the different demands of its clients by minimizing the time for redesigning systems.

As part of a thorough review of the market, Deutsche Lichtmiete invited Dassault Systèmes' business partner CCE Systems Engineering to demonstrate how the **3DEXPERIENCE**® platform could meet their needs. Based on a first call with Bluhm and his team, CCE prepared a holistic scenario on the platform with real design data from Deutsche Lichtmiete. The live presentation included the design and CAD capabilities, variant management, project management and the connection to ERP systems.



"The 3DEXPERIENCE platform helps us to build better products; we can expedite decision-making and we can respond faster to our customers."

Stella Dreyer, R&D Project Manager, Deutsche Lichtmiete

"The presentation showcased exactly what was needed for our company," Bluhm said. "We were instantly won over, so we began the kick-off process immediately."

SHORT LEAD TIME

The professional preparation and consulting during the early project phase enabled a quick implementation and, within just a few months, Deutsche Lichtmiete was able to take full advantage of the capabilities delivered by the **3DEXPERIENCE** platform. "Implementation with CCE was very easy – and far quicker than we anticipated," Bluhm explained.

Regarding the user experience, he added: "As I, and many of the team, had used CATIA in previous workplaces, we only needed a short onboarding from our partner. CCE tailored this training to our needs, focusing on new features, process definition on the

platform and design methodologies. The interface is incredibly intuitive. In fact, it feels like I've never worked with anything else."

Thanks to the platform, Deutsche Lichtmiete now benefits from a much simpler product development process.

"Our designers are saving a huge amount of time," Bluhm said. "We have a new methodology which means we work faster, have reliable data and much improved design processes. The configuration management capabilities, in particular, have been a game-changer. The first time I was able to build a 150% BOM I was amazed – this was unthinkable in our previous system to work effectively."

Thanks to ENOVIA, users can now define a configured product structure that can be used as a template to generate families of product variants. This means they can easily scale bigger sizes of products, and share a single configured structure across multiple projects. This approach optimizes reuse, and ensures designers don't have to start from scratch with every new project.

Also some out-of-the box simulation capabilities helped Deutsche Lichtmiete shorten the time-to-bid and respond: "Because of the high-performance ray-tracing functionality, we can make live renderings incredibly quickly," Bluhm said. "And because everything is embedded in one platform, there's no need for us to switch from one system to another. As a result of all of this, what used to take our designers days can now be done in a matter of hours."

Finally, designers can now easily represent the different light points within a luminaire in their renderings. The designer can even assign materials to these light points, which are stored in a library containing optical properties. This allows a luminaire effect to be rapidly virtualized at a quality level that serves both internal catalogs as well as sales and marketing materials.

A STRONG FOUNDATION FOR GROWTH

Bluhm and his team can always be confident that, thanks to its platform approach, ENOVIA allows them to work on the latest iteration of a design – so versioning is no longer an issue. "It's also really easy to look back on a previous design if we need to do that," Bluhm explained.

With the integration of its ERP system, the **3DEXPERIENCE** platform makes it easy for Deutsche Lichtmiete to create and maintain a bill of materials (BOM) for each project. This leads to reduced design and BOM errors and enables innovation through the automatic generation and update of data-driven, fully connected, multi-disciplined design and engineering product views.

"We can create the exact BOM for production, based on the CATIA design," Bluhm said. "Not only does this reduce the chance of errors in assembly, and deliver cost savings as a result, but it also ensures we meet the increasingly stringent regulations that govern the different industries our customers operate within."

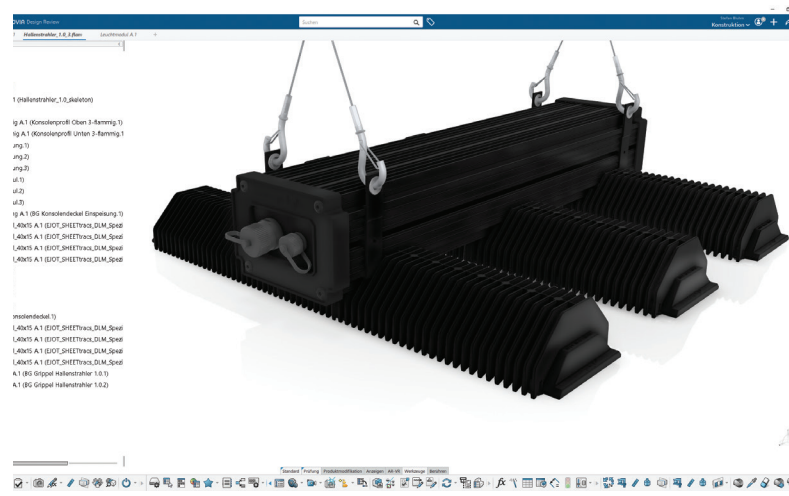
It's also easier than ever for Bluhm and his colleagues to assign work and manage projects between designers and other departments with ENOVIA – a capability that proved invaluable during the pandemic. "When COVID-19 struck, we were able to operate business as usual, because our design teams were able to work from home easily. From wherever we are working, the **3DEXPERIENCE** platform provides us the same experience. We can now collaborate far more effectively."

More about the solution:

The *Accelerated Device Industry Solution Experience* powered by Dassault Systèmes' **3DEXPERIENCE** platform provides your teams with the critical capabilities they need to connect electronics, mechanical and software engineering with requirements and project management, as well as with external partners. Incorporating advanced 3D design and simulation, high-tech companies can now innovate products at the speed of market demands.

Benefits:

- Better products and more product variants
- Reduced time to market and less project delays
- Secure, remote collaboration, also on the cloud
- Efficient integration with manufacturing planning



Top image: 3D model of a spotlight for production halls and its associated product structure

Bottom image: LED lighting in an industry warehouse meeting specific regulations

Focus on Deutsche Lichtmiete

Deutsche Lichtmiete aims to transform the world of industrial lighting – for the benefit of companies, people and the environment. To this end, it manufactures intelligent LED lighting which it then rents out for industry, commerce and public buildings. This approach means that customers benefit from state-of-the-art lighting solutions, but with lower costs and less effort.

For more information: www.lichtmiete.de

Focus on CCE Systems Engineering

Dassault Systèmes' partner CCE Systems Engineering specializes in the sale and implementation of PLM, CAD and CAM software. The company serves a global portfolio of clients operating across a wide range of industries, including automotive, high-tech and mechanical engineering. Thanks to its "Road to Success" approach and the 3DEXPERIENCE platform, CCE has successfully implemented almost 50 projects over the past few years. To ensure the best quality, a dedicated team works closely with the customer during the entire process – starting with the first workshop to go-live and ongoing support.

For more information: www.cce.de



Dreyer is confident that the advantages of the platform are helping Deutsche Lichtmiete to deliver a much better customer experience. "It's of paramount importance for us to be very responsive to our customers, from the moment of engagement to final delivery of a well-priced, high-quality solution that meets individual needs. The 3DEXPERIENCE platform helps with all of this – we can build better products; we can expedite decision-making and we can respond faster."

PUTTING SUSTAINABILITY FIRST

Sustainability has always been a priority for Deutsche Lichtmiete, since they contribute to several Sustainable Development Goals (SDG). In line with the United Nations SDG number nine, the firm is committed to building resilient infrastructure, promoting sustainable industrialization and fostering innovation. It not only recycles the old equipment that it removes from its

customers, but also operates with a reduced carbon footprint.

"Recycling and refurbishment are primary areas of focus for our business," Dreyer explained. "Our luminaires are IP64 rated, and modular by design so that we can reuse and reassemble individual components. The aluminum casing is already highly recyclable. In addition to this, we are always looking for new innovations that deliver even more sustainable solutions."

The 3DEXPERIENCE platform will make it easier for Deutsche Lichtmiete to experiment with new sustainable designs. "We will be able to further reduce our carbon footprint and explore more options in a far more efficient way, enabling a faster time to market," Dreyer said. "And this will help us to move further along the path to sustainability in the months and years to come."

CREATING A RESILIENT FUTURE

Having realized these benefits within their own teams, Bluhm and Dreyer are keen to leverage more of the capabilities of the 3DEXPERIENCE platform – and across the business.

"Our teams are really seeing the value of having central access to design data," Dreyer explained. "As we grow, we will look to build knowledge management within the platform so that we don't have to answer the same questions time and time again. A lot of our knowledge is currently stored inside our employees' heads, or in siloed databases. It will make a huge difference when our knowledge is accessible, and when each and every one of our 150 members of staff can access the information they need."

"By intelligently collecting and reusing intellectual property gained over multiple projects, we will be able to further improve response times and support our sustainability aspirations," Bluhm added. "We are onboarding new colleagues every month, so we want to make it as easy as possible for them to access information and get up to speed quickly. The 3DEXPERIENCE platform will help us achieve that."

Overall, Bluhm said he wouldn't hesitate to recommend the 3DEXPERIENCE platform to other companies. "The solution offers endless possibilities for all types of businesses," he concluded. "And while the benefits of the platform have been incredible, what has made it even better is the support we have had from both CCE and Dassault Systèmes. Both companies really understand our business, which has made everything so easy. Ultimately, this implementation has made my everyday work so much more fun. I have no doubt that it will do the same for others."

Our 3DEXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating 'virtual experience twins' of the real world with our 3DEXPERIENCE platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes' 20,000 employees are bringing value to more than 290,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.



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