

AI FOR PROCESS OPTIMIZATION IN A MANUFACTURING COMPANY



Novel T

In 2025, we can no longer ignore AI. However, it is not always easy to integrate such a new technology into your company. Family business Pentas Moulding did not shy away from this challenge. With the help of European Digital Innovation Hubs (EDIH), the company realized process optimization that completely changed their way of working. Marthijn Koorn, Commercial Director at Pentas Moulding, explains how this manufacturing company remains at the forefront.

Pentas Moulding was founded in 1975 in Almelo and produces plastic products for the manufacturing industry, always tailor-made to the customer's wishes. They have a clear vision in mind: focus on automation to be technically progressive. "We have always been involved in innovation in the field of

IT and technology," says Marthijn. "We started developing our own ERP system in 2000 and our factory is paperless. In recent years, we have linked all machines and sensors to our databases, so that we have an even better grip on the quality we deliver. So we are always looking at how we can use new technologies to make our work more efficient. Now with AI, a new era is dawning, which offers a lot of opportunities."

Personal AI-Assistant

Two years ago, they started using ChatGPT to write emails, and translate texts, but also to digitize manuals. But the use of AI goes further than that. Marthijn: "We have made ChatGPT available on our machines. In the event of a malfunction, a technical employee

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- Marthijn Koorn,

Commercial Director Pentas Moulding



can ask what to do, or ask how the machine has performed compared to other machines. But also what needs to be done for even better performance.” Another application they have found is in the vision system. Cameras perform video analyses on how a product is post-processed, for example. This way, AI can quickly interpret what the employee is doing and help them when they deviate from the procedure. “Every employee will soon have a personal AI assistant,” says Marthijn. “This will not only make us more efficient and flexible, but also more attractive as an employer in an increasingly competitive market.”

More than Process Optimisation

To find the right direction, they called in the help of Novel-T. “They helped us get in touch with the right people, such as partners and experts who guided us through the AI integration,” says Marthijn. “We also received help with financing options, such as EDIH. Thanks to this support, we have now been able to lay a solid foundation for future innovations.” This is not yet the

end of Pentas Moulding’s digitalization. Marthijn: “The impact of this digitalization goes beyond just process optimization. It fundamentally changes the way we work. We are now working towards a more connected organization in which technology and people work hand in hand to achieve better results.”

Example for Others

Of course, we do not know what other technologies will emerge in the future. But one thing is certain: Pentas Moulding will continue to invest in innovation. “Not only for ourselves but also to contribute to the development of the industry as a whole,” says Marthijn. “We see a future in which AI is an integral part of all our processes, with a personal digital assistant for all colleagues. Our factory will only become smarter, more flexible, and more sustainable, with minimal waste and maximum efficiency. In fact, we want to achieve more with fewer resources and produce completely CO2-neutral. We want to be an example for other companies in the transition to a more sustainable and data-driven future.” ■



Pentas Moulding in Almelo is one of the most modern and advanced companies in Europe when it comes to producing plastic rotational moulding products. Since their inception in 1975, they have viewed technology as the basis for optimal delivery of client-specific plastic products.