Statements & Interviews

More space for digital innovation

Mechanical engineering firms are faced with continually growing demands for digitalisation. However, those companies often lack the required comprehensive know-how in IT. Lenze aims to close this gap with Nupano, their new open automation platform. Lenze experts Annekatrin Konermann, Nupano Product Manager, and Werner Paulin, Nupano Product Owner, explain how mechanical engineers can create new opportunities in the digital age thanks to the use of tried-and-tested IT technology and without needing any specific software or programming skills.

Editor: You are in constant contact with mechanical engineers. What is currently their greatest challenge in the area of automation and software?

Konermann: In our experience, it is a challenge for many machine builders to harness the great potential of digitalisation for their machines. These days, information technology, with all its possibilities, and sophisticated OT (note: operative technology) must be combined in a way that benefits the machine and therefore the user. This enables mechanical engineers to generate additional revenue streams. At Lenze, we are convinced that if mechanical engineers do not take advantage of this opportunity, software companies certainly will. After all, modern machines already perform at a very high level. So additional software can provide potential for innovation not only when a machine is new, but throughout its entire life cycle.

Editor: How do you deal with these problems and demands?

Paulin: We help mechanical engineers to exploit IT for the machines they produce by building a bridge that opens up new possibilities. For example: a manufacturer of die cut cardboard packaging would like to be notified, automatically and in advance, when the blade of the cutting tool needs to

be replaced. This can be determined from the power consumption of the drive motor as, put simply, the power requirement increases when the cutting tool gets blunt. For this AI application, the series machine builder must find a partner to develop the software and install it in every machine in the course of production. Nupano creates a bridge between these two worlds. Once the software has been developed it can be very easily scaled by the machine builder's employees and transferred to any number of machines.

Editor: Doesn't the customer need a huge amount of expertise themselves to do that?

Konermann: In the Nupano Cloud, the machine builder manages all the apps that they have written themselves or that have been developed on their behalf. They can assign these apps to a digital twin and flexibly download them onto the hardware using a clearly designed user interface. It is actually very easy. Anyone who can install an app on their smartphone can equip a machine with an application using Nupano. And all the apps remain fully in the hands of the machine builder as no source code is stored in the cloud. So our customers can also benefit from any additional revenue streams connected to them.

Editor: What does Nupano mean for the day-to-day work of a series machine builder?

Konermann: We simplify accessing the software, integrating it into series production and maintaining the installed base. Nupano relieves machine builders of the burden of developing extensive knowledge of IT within their own company. They can take full advantage of all the benefits that IT offers and exploit its full potential whilst concentrating on their core competencies. Nevertheless, the applications are tailored very individually and specifically to the requirements of the respective customer.

Editor: Why are open standards such a top priority for Lenze?

Paulin: We're probably the only providers that rely exclusively on standard IT. You don't have to employ any special technologies or libraries to use Nupano. This gives mechanical engineers the advantage of being able to work with any software producer they like and still continue using technologies that they already use in Nupano. You can develop new software at any time independently of our solution. We help users to subsequently transfer and configure it on the machines by using Nupano. In this way, Lenze optimises mechanical engineers' flexibility.

Editor: How do your customers gain a competitive advantage?

Konermann: In a nutshell, Nupano is a platform where an open, flexible collection of parameterisable and configurable software components is stored. From here, they can be combined to produce an individual overall software solution even without IT experts. In current series machine production, one machine is rarely similar to another. In fact customized configuration is the rule. Nupano provides a huge advantage with regard to machine-specific configuration of IT and so optimises productivity in the long term. One could even go so far as to say that Nupano counteracts the skills shortage because users do not need specific IT skills. What's more, manufacturers can easily equip machines with new IT services or automatically update existing ones throughout the entire service life and at any time using Nupano.

Editor: On what basis does Lenze offers these advantages?

Paulin: If a mechanical engineering company only uses publicly available apps on their machines, they have no advantage over their competitors. The Nupano platform goes much further and provides a comprehensive IT tool for the OT sector. Thanks to our experience with mechanical engineers and the expertise we have gained through this, we at Lenze know their exact needs and requirements and very specifically reproduce mechanical engineering processes in Nupano. For instance, many customers tell us that they're glad to have a simple, economical tool at their disposal with which they can easily transfer their own IT and special AI solutions onto their machines in series production. In this respect, Nupano is the ideal complement for our automation services.

Redaktion: You see Nupano as a solution for the future. Are you already planning your next steps?

Paulin: Naturally, development never stops at Lenze. We are currently focusing on extending our network of partners. On the one hand, we want to offer apps that are widely available to everyone. On the other, we are extending the network to include technology companies that develop customised IT services in Nupano. We also want to advance our MAaaS® (note: Machine Automation as a Service) concept. Combining machine IT with a server infrastructure offers the advantage of hugely increased availability.

The digital press kit, including images, can be found on our [website](#).

About Lenze

Lenze is a leading automation specialist and focuses on designing efficient and sustainable processes for production and material flow. For over 75 years, the company has been a pacesetter in automation and a strong partner at the side of its customers from the machine and plant manufacturing industry. With the help of a triad consisting of electrical engineering, software and a platform strategy, Lenze supports its customers in digitization and helps them to cut costs, optimize the utilization and lifecycle of machine systems and reduce their energy consumption. Lenze's portfolio consists of high-quality mechatronic solutions, powerful systems made of hardware and software for machine automation, and digital services for the machine and plant manufacturing industry.

The Lenze Group, headquartered in Aerzen, employs around 4,000 people globally and is represented in 45 countries. The company generated revenue amounting to 830 million euros across the Group in the 2021/2022 financial year.

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