



Data project on track

TDM Systems creates 40,000 digital twins for HAHN+KOLB

Creating a database with digital twins for over 40,000 cutting tools? A challenging project for which the world's leading system supplier HAHN+KOLB was looking for the right partner. More than a year later, the head office in Ludwigsburg knows that TDM Systems was the right choice. Over 80 percent of the tools are already digitalized. The feedback from customers is positive: The data quality is impressive and ensures greater planning and process reliability.

Anyone who works in procurement for a company in the mechanical engineering, automotive, metal, electronics or energy industries is familiar with the HAHN+KOLB Group. Founded in 1898, the company is now one of the world's leading tool service providers and system suppliers. HAHN+KOLB provides companies with just about everything they need for production: From operating equipment and tools to everyday consumables. For many customers, HAHN+KOLB is actually their one-stop store for procurement.

HAHN+KOLB offers its customers a wide range of digital options to make ordering and processing as smooth as possible. On the one hand, of course, there is an online store. However, many companies also use digital procurement tools that are customized to suit their require-

ments and needs. HAHN+KOLB manages the databases and applications, which are also essential for smooth production processes at the customer, in-house.

Digitalization becomes a standard requirement

Stefan Lehmann, responsible for Product Management Machining and Clamping Technology at HAHN+KOLB, had a very clear idea of the complexity of the next digitalization step: All cutting tools of their own brands Atron and Orion get their respective digital twin. He explains: "Digitalization is playing an increasingly important role in our customers' production processes. It makes working with CAD/CAM systems and NC programming much easier if all the relevant tool data is already available in high quality. Digital twins also significantly improve process reliability and stability –

TDM in use

key decision-making factors for our customers. Cutting tools without easily accessible data and graphics will soon face a very challenging time on the market. Users have come to expect this."

Engin Özkan, Tool Data Projects Manager at TDM Systems, heads the Data Projects department and is responsible for the digitalization project for HAHN+KOLB, and confirms this assessment: "The digitalization and automation of machining processes is an important topic, especially for larger companies, and is developing extremely dynamically. Being able to model or even simulate tools, machines and entire processes completely digitally will soon be something of a basic requirement. We are also seeing this in the inquiries that TDM Systems receives."

The challenge of heterogeneous data

A particular challenge in the digitalization of Atorn and Orion tools for HAHN+KOLB lies in the large size and diversity of the portfolio with many individual tool groups and types. Tool data is not always available with the same quality everywhere. Stefan Lehmann from HAHN+KOLB explains: "The central challenge in the project was the varying quality and completeness of the tool data to which we had access. But

that is exactly why the TDM Systems Data Service Team is the right partner." Engin Özkan adds: "Companies are often concerned that a digitalization project will put a strain on their own processes and, above all, consume resources. Engin Özkan's data team works to address precisely this issue: We have the processes and tools to largely relieve customers of the small details of digitalization."

A clear choice in favor of TDM Systems

The decision to choose TDM Systems as a partner for the extensive and strategically important digitalization project at HAHN+KOLB was made relatively quickly. Stefan Lehmann was convinced right from the start and he played a key role in managing the selection process at HAHN+KOLB: "The deciding factor in favor of TDM Systems was the high quality of consulting, which was evident from the very first meeting. Engin Özkan got in touch with me almost immediately after the tender to follow up on possible sticking points. It just made a super competent, service-oriented impression on me. I had a good idea of how our collaboration would work." Engin Özkan is team leader of Data Projects at TDM Systems. Having previously worked as an application engineer, he also trained as an industrial mechanic and worked for a cutting



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Manager Tool Data Projects
at TDM Systems



Engin Özkan, Manager Tool Data Projects at TDM Systems (left) together with Stefan Lehmann, HAHN+KOLB.

load the digital twin of a tool into their systems via the online store. In the format they need.

"We benefit greatly from the fact that the team at TDM Systems has so much experience. And they have all the tools that they need to generate the complete digital twin even from data records with small gaps. So we really are satisfied with our decision to choose TDM Systems", says Stefan Lehmann. Engin Özkan adds: "We attach great importance to dialog and consulting, especially in the initial phase of a project. This makes our time and cost estimates very realistic: An optimal basis for decision-making and planning for customers and other interested parties."

Another advantage from which tool manufacturers and dealers such as HAHN+KOLB in particular benefit, is that their data is provided in the TDM WebCatalog and therefore available to TDM users worldwide. The tool data is available in the cloud application and enables users who use TDM Systems software to easily access and download the data directly into the TDM application.



The HAHN+KOLB Group's product range includes cutting tools, handling systems, measuring technology, large and small machines, customized system solutions, individual services and complete factory equipment.



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tools manufacturer for several years. Özkan describes TDM Systems' approach to the project: "The big unknown when you embark on a digitalization project like this is the degree of heterogeneity in the existing data. And what data is already available. What gaps need to be closed and how can this be done most effectively?"

Optimal cooperation in all project phases

The project has now been running for four years. For 80 percent of Atorn and Orion cutting tools, the digital twin is already available in the HAHN+KOLB online store and can be downloaded by users in their preferred format. Entire tool groups are already fully digitalized, so only new products need to be updated regularly. In the first few months of the project, we met virtually or spoke on the phone almost every day; nowadays, one meeting a week is enough. Any problems that arise at short notice are resolved simply and directly. Engin Özkan and Stefan Lehmann are proud of how quickly they were able to move from the planning phase to processing the work packages. The systematization of the stock according to tool classes (such as solid carbide drills and hybrid drills or different types of milling cutters) and the definition of standards for data collection and generation form the basis for effective project management. This results in the work packages and the tool groups to be prioritized for machining. HAHN+KOLB customers usually only become aware of the extensive digitalization project because they can now easily

Everything at a glance

TDM Systems builds 40,000 digital twins for HAHN+KOLB

TDM in use at HAHN+KOLB



System supplier

- Tool service provider
- Supplier of complete operating equipment and consumables



Company

- Headquarters in Ludwigsburg, Germany
- founded in 1898



Data project at HAHN+KOLB

- Analysis of the tool structure
- Analysis of the data requirements
- Advice on the digitalization procedure and project planning
- Creation of digital twins and feeding of data into the HAHN+KOLB online store



Comprehensive **data services** from TDM Systems

In addition to numerous software solutions for generating and modifying tool data, TDM Systems also offers its customers data services. This also includes data consulting, which includes a comprehensive analysis of the tool inventory and, based on this, makes recommendations for the simplest and most efficient approach to digitalization of the tool inventory, even for more complex tools. TDM Systems also offers to take over complete digitalization of the tool inventory for customers. Data services are also offered for tool manufacturers or dealers, enabling TDM Systems to take over the digitalization of their tool data and create digital tool catalogs. If requested by the tool manufacturer, these are provided in the TDM WebCatalog, making them available to TDM users. Around 345,000 tool data sets from 11 tool manufacturers are currently offered in the TDM WebCatalog.

The **Targets** of the data project

- ✓ All cutting tools of their own brands Atron and Orion get their respective digital twin
- ✓ 100% reliable tool data and graphics for HAHN+KOLB customers
- ✓ Placement of data in the TDM WebCatalog

The **Benefits** at a glance



| High-quality consulting

HAHN+KOLB benefits from TDM Systems' extensive data expertise



| Increasing customer loyalty

HAHN+KOLB customers are enthusiastic about the easily available data and graphics



| Reliability

Project was reliably planned and realized by TDM