

A SINGLE DIGITAL PLATFORM FOR GREATER EFFICIENCY

Case study GKN Powder Metallurgy:
Visual Shop Floor in practice

GKN POWDER METALLURGY

Monitor and control production processes. Make global standards available quickly and easily at all locations. Use resources in a targeted manner and continuously implement optimizations. The globally active company GKN Powder Metallurgy achieves all this with the *Visual Shop Floor* software from Solunio.

Industry 4.0, digitalization, automation of manufacturing processes or innovative product development: For the

internationally active company GKN Powder Metallurgy, the world's leading supplier of powder metal solutions, these are not visions of the future, but are part of everyday working life. *"The basis for the digitalization of manufacturing and process control was laid at an early stage in our company. Every machine is integrated into a digital network, and all the data was already available in collected form. Thus, the idea arose to visualize this information as well. In cooperation with Solunio, we initially*

started with the visualization of the machine status. This was followed by the gradual expansion of the system with new functions, and finally we moved from pure visualization to digital process control." says Georg Bachmann, Director Global Business Systems at GKN Powder Metallurgy, describing the implementation of *Visual Shop Floor* in the company.

Profile GKN Powder Metallurgy

GKN Powder Metallurgy comprises the four business units **GKN Sinter Metals**, **GKN Hoeganaes – Metal Powder**, **GKN Additive – 3D Metal and Plastics Printing** and **GKN Hydrogen**. The company is the world's leading supplier of powder metallurgy manufactured components for the automotive and other industries. It employs more than 7,000 people at **30 sites worldwide** and serves more than 700 customers in 44 countries.



Fig. 1: © GKN Powder Metallurgy, Headquarter Brunico, South Tyrol
url.: <https://gknsintermetals.onboard.org/jobs/dGXb3Lmg>

Flexible software for all manufacturing areas

The initial aim was to provide employees with processed information about specific process sequences so that their work could be better organized. Initially, the visualized data was communicated on the screens at the workplace, then additionally on info boards in the production halls. “Whether it's classic powder metallurgy or additive manufacturing, we

currently use Visual Shop Floor in three out of four business units and at all of our sites.

The flexible software platform meets a wide range of requirements and can be used for any type of production,” confirms Georg Bachmann. Visual Shop Floor proved to be the perfect tool for bringing together data from the various systems and areas: from order data from the

ERP system to sensor data from production to PDF documents from administration.

Clear overview, efficient process planning

Visual Shop Floor collects, analyzes and visualizes the data from all production areas and makes it available to all employees as easily understandable information. “The overall manufacturing process can be viewed from various angles, for example, from the perspective of production, quality assurance or maintenance and repair. Through Visual Shop Floor, all information is also presented in an overall view that unites all perspectives: which machines are in operation, which systems produce good quality, which cause difficulties, and what are the major energy consumers?” explains Georg Bachmann. Visual Shop Floor thus not only provides insights into individual areas, but also shows the overall

scenario of the manufacturing process. Interrelationships can be identified more easily, and the preceding and subsequent processes can be planned more efficiently. “The setup process of our plants extends over several hours. In the past, it was a major challenge for us that the necessary tools and machines were not available in time. With a simple visualization, the on-time preparation of the working environment now succeeds smoothly,” informs Georg Bachmann, “thanks to the data analysis on machinedowntimes, rejects or reasons for interruptions, we now better understand where the challenges and optimization potentials are and can use them systematically. In addition, the various

resources can be better allocated and used, both in terms of material flow and manpower.”

Global networking

Meanwhile, Solunio's digital shop floor management has been implemented in **all 30 GKN Powder Metallurgy plants worldwide**. *"Visual Shop Floor also proved to be the optimal tool for making our global standards available at all sites. And it did so extremely quickly and with a short implemen-*

tation period," explains Georg Bachmann. But it's not just the introduction of cross-site standards that succeeds across borders. Digital networking brings further advantages. For example, **employees can click into the system from anywhere in the world**. *"If I want to know how the equipment is running*

in our plants in the USA, I can get the information I need at any time. In addition to standardization, this is a big advantage for us as a globally active company."

Talking about content instead of data

With its **meeting templates**, *Visual Shop Floor* also prepares meetings automatically. All participants have the necessary information and data available digitally. **"Our stand-up meetings for production now run in a much more structured and results-oriented way.** We used to spend a lot of time discussing whether the respective data was correct. Today, we talk about the really important content: What can be derived from the key figures and analyses? Where can we achieve optimization? Where do we have to make decisions?," describes Georg Bachmann.



Fig. 2: GKN Powder Metallurgy, Visual Shop Floor use in the production hall



Fig. 3: GKN Powder Metallurgy, Visual Shop Floor usage during the meeting

Identify weak points, control optimizations

Digital production is currently being further expanded at the GKN Powder Metallurgy production sites and ongoing activities are being integrated parallel into digital shop floor management. Employees will then no longer be assigned to fixed activities, but instead the tasks that arise will be sent to the relevant employee on a smartwatch according to their skills and availability.

Employees can then also use *Visual Shop Floor* to digitally report weaknesses, suggestions for improvement or near misses with text and photos. The system then automatically creates work tasks to initiate optimizations. The entire process of documenting, controlling and following up on the implementation of optimizations will therefore take place digitally in the

future instead of paper-based as before.

Essential tool for all employees

Visual Shop Floor is used across all hierarchies and divisions at all locations worldwide. *"The software has become an indispensable tool for us, providing real assistance. The pure machine display is now no longer the most important thing. Instead, we benefit from the simple display of the entire processes and the clear information,"* says Georg Bachmann. The software is managed independently by the company's own IT department.

This autonomous control of the shop floor management ensures the necessary flexibility and speed: accesses, authorizations or contents can be managed promptly.

So it's no wonder that Georg Bachmann with his team and Solunio already have their sights set on further areas of application for *Visual Shop Floor*: In addition to integration into digital manufacturing, the software will be used in

the future to better plan and control measuring equipment, and the global introduction into the GKN Additive business unit is also on the horizon. Other ideas are already buzzing around in their heads, *"because our aspiration is to constantly improve."*

“*Visual Shop Floor is used in almost 30 plants around the world and is an indispensable tool for providing our employees with targeted information, recognizing potential faults before they occur, and deriving the right actions from them.***”**

Georg Bachmann

Director Global Business Systems, GKN Powder Metallurgy



ABOUT US

Solunio Ltd, founded in **2013** and based in Bruneck, South Tyrol, bundled extensive experience from software development and industry into the **Visual Shop Floor software** in 2015.

The comprehensive and end-to-end platform for shop floor management contains flexible tools for data manage-

ment, creating transparency, organizing collaboration and optimizing processes. This enables companies to unlock the potential of digitization to improve production and logistics processes.

Visual Shop Floor is used daily by well-known top industrial companies at a total of **90 locations worldwide**.

These include globally active groups in various sectors of industry such as **Alupress, Intercable, GKN Powder Metallurgy, TDK-Electronics and Plansee**.



Matthias Unterberger and Paul Leiter
Founders of Solunio



📍 Via dei Campi della Rienza 46, I-39031 Brunico, South Tyrol

☎ +39 0474 64 60 57 | ✉ info@solunio.com

🌐 www.solunio.com/en