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Digitising production  
Paperless manufacturing with  
the SOMA factory assistance system

 Worker  
Assistance

somai

straight

open

save

allaround

in time



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**KOSTAL Industrie Elektrik**

# Case Study

**Paperless production  
with flexAssistant®**

# Worker assistance minimises errors in assembly

## Successful implementation of paperless manufacturing in the assembly process at KOSTAL Industrie Elektrik

KOSTAL Industrie Elektrik GmbH & Co.KG, founded in 1995 under the umbrella of the KOSTAL Group, makes its extensive expertise in the automotive sector available to other markets such as drive technology. The leading power electronics company employs over 520 people in development, production and administration at its Hagen site. To strengthen international sales in the photovoltaic sector, the subsidiary KOSTAL Solar Electric GmbH was founded in Freiburg in 2006.

At the Hagen site, SOMA GmbH and KOSTAL Industrie Elektrik successfully introduced the flexAssistant® worker assistance system in a joint project to support employees on the INVEOR assembly line for the KOSTAL Drives Technology business unit. The highlight: the entire assembly line is now paperless and less prone to errors. Paperless manufacturing enables faster production and assembly, improved quality control and increased flexibility in business processes. It also allows KOSTAL Industrie Elektrik to respond even more effectively to customer requirements and increase its competitiveness.

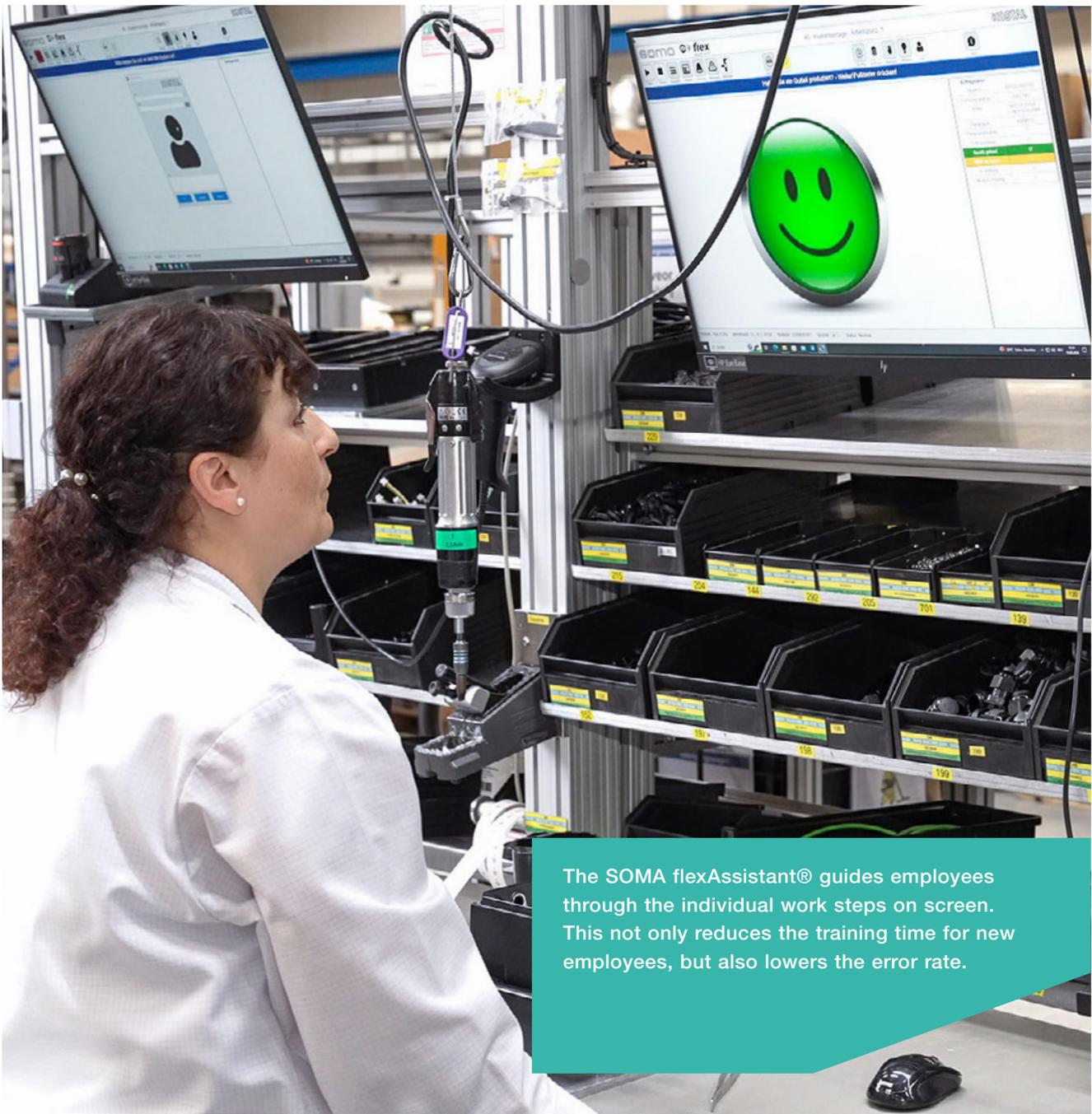
By implementing paperless manufacturing, the company increased its efficiency through automated processes, benefiting from reduced error rates,

improved traceability of production data, lower operating costs and faster responsiveness to changing market requirements.

### Digitising production: Fewer human errors through paperless manufacturing with the factory assistance system

Digitisation is leading to profound change in industry, increasing the need for paperless manufacturing, production and assembly. In numerous manufacturing companies, such as KOSTAL Industrie Elektrik, the switch to paperless manufacturing is a pioneering step towards a digitised future.

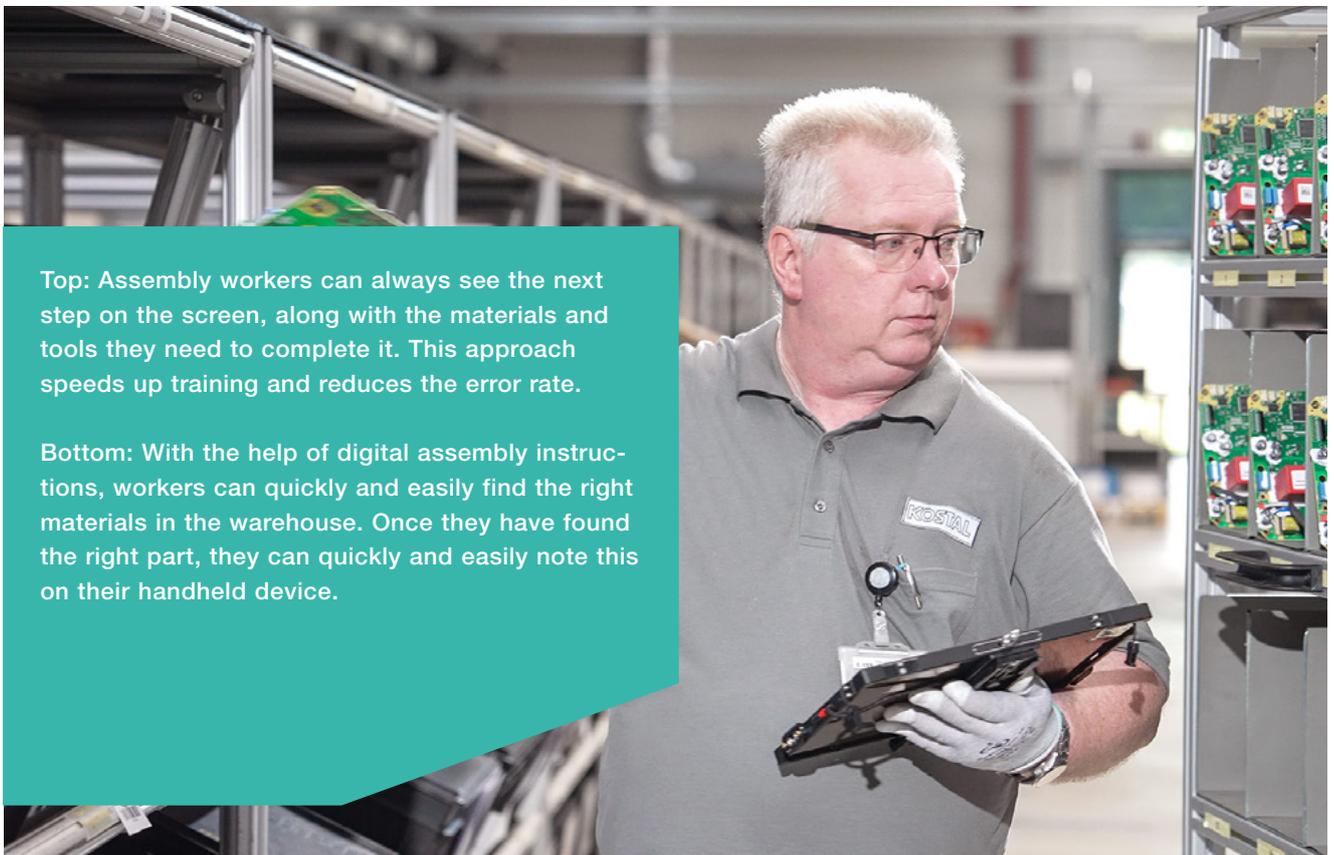
However, effective digital production requires much more than just scanning and electronically capturing documents. It involves the provision of information and data in Real-time information directly at the assembly workstation and the option of electronic feedback and documentation.



The SOMA flexAssistant® guides employees through the individual work steps on screen. This not only reduces the training time for new employees, but also lowers the error rate.

KOSTAL Industrie Elektrik recognised this and implemented SOMA's digital worker assistance system – the flexAssistant® – at its site in Hagen. The flexAssistant® provides work instructions and assistance in real time directly at the workstation

without the need for physical documents or paper records. The SOMA flexAssistant® worker assistance system thus enables an efficient manufacturing process through digital work instructions.



Top: Assembly workers can always see the next step on the screen, along with the materials and tools they need to complete it. This approach speeds up training and reduces the error rate.

Bottom: With the help of digital assembly instructions, workers can quickly and easily find the right materials in the warehouse. Once they have found the right part, they can quickly and easily note this on their handheld device.



The main objective of the project was to create a digital representation of the work instructions with the specified sequence of work steps for the majority of the manufacturing processes at the Hagen plant. The flexAssistant® was initially installed and used in frequency converter assembly. This modern and flexible assembly solution is a significant step towards contemporary and flexible production at KOSTAL Industrie Elektrik.

## Use of flexAssistant® at KOSTAL Industrie Elektrik

By using flexAssistant® at KOSTAL Industrie Elektrik, planned production targets can be achieved even with a large number of variants. All processing steps are now transmitted directly from SAP as production orders to flexAssistant®, which automatically converts them into efficient workflows for employees.

The elimination of the need to search for order-related documents such as drawings, work plans and production documents leads to increased efficiency in order processing. By digitising documents and work instructions, employees in Hagen can access the information they need more quickly and easily, saving time and minimising errors.

For example, they can digitally display and monitor the progress of orders and any remaining work at their workstation. Overall, paperless processes and digital instructions contribute to higher quality work in the production process and improved employee motivation and satisfaction. In addition, new employees can be trained and familiarised with their tasks more quickly thanks to digital access to all necessary information directly at the assembly site.

## Advantages of digital production and manufacturing in companies

Holistic automation is crucial to the success of paperless manufacturing. Companies should not only digitise individual process steps, but also digitally transform their entire manufacturing and assembly processes.

By linking ERP systems, document management systems and other digital components, companies can ensure efficient and transparent production, manufacturing and semi-automated and manual assembly across different departments.

This results in a number of advantages for companies, including a greater contribution to sustainability, cost savings, greater flexibility, shorter throughput times, traceability of individual process steps, quality assurance, faster adaptation of production documents, constantly updated product and process changes, avoidance of delays, and faster responsiveness.

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[flexassistant.de/entdecken/](https://flexassistant.de/entdecken/)



Experience  
flexAssistant  
in action





## **KOSTAL Industrie Elektrik**

With the founding of KOSTAL Industrie Elektrik in 1995 under the umbrella of the KOSTAL Group, the conditions were created to make the broad expertise from the automotive sector available to other markets such as drive technology.

The leading power electronics company employs over 520 people in development, production and administration at its Hagen site. To strengthen international sales in the photovoltaic sector, the subsidiary KOSTAL Solar Electric GmbH was founded in 2006 with its headquarters in Freiburg.

As a family-owned company, we are committed to operating sustainably and for the long term. One of our corporate values is: 'We shape the future today.' Because we know that the future will only be worth living if we treat our environment with care and use our resources sparingly and carefully. At KOSTAL Industrie Elektrik, however, we don't just talk about it, we act on it, because our products are used to generate clean, renewable energy on the one hand and to use energy efficiently and in a resource-saving manner on the other.

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# Have your hands full?

Our worker assistance division is aimed at anyone who has big plans for production and is planning to make the leap to digital manufacturing.

Our digital worker assistance system flexAssistant offers everything you need for production, testing, packaging, documentation and other specialised tasks in your company.

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# Philosophy

Individual requirements call for individual solutions: as your partner and source of ideas, we implement your investment in a future-proof manner.

Our goal: to tailor the digitalisation of your manual production perfectly to your individual processes – from the initial idea to the productive overall solution..

# SOMA in numbers

**50 years** of mechanical engineering

More than **200** feasibility analyses

Over **2,500** applications

Countless **customised** special solutions  
and complete systems

Thousands of **hours** of development and support

Thousands of **kilometres** travelled to reach you

**Partners** all over the world

**3 business areas**

**We are here for you.**



 **Test  
Technology &  
Automation**

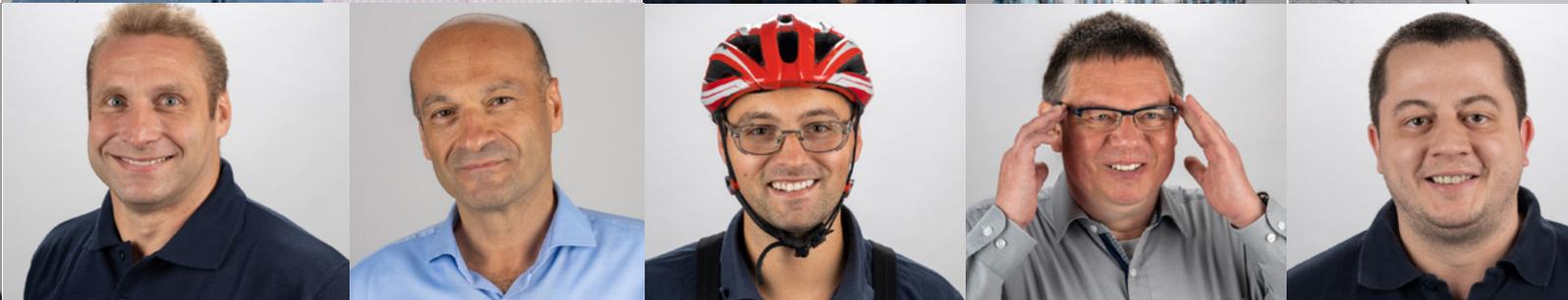
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