

INCREASE OEE WITH REAL-TIME TRANSPARENCY

Case study Alupress AG:
Visual Shop Floor in practice

ALUPRESS AG

With Solunio's *Visual Shop Floor* software, automotive supplier Alupress AG, which operates internationally at three locations, closes an information gap between existing MES and ERP systems and brings productivity and quality data right to the digital machine stations – an important step towards improving Overall Equipment Effectiveness (OEE).

The family-owned company Alupress AG has been manufacturing die cast components since 1965, and since 1974 at its current headquarters in the industrial area of Brixen, South Tyrol. There, the company was able to continuously develop technically and qualitatively into an important supplier to the automotive industry, meeting standards for quality (ISO IATF16949) and environmental or energy management (ISO

14001 or ISO 50001). In order to meet the strong demand, a foundry in Thüringen (Hildburghausen) was incorporated in 2002 and a tool shop in Vahrn (South Tyrol) in 2008, which is now located at the Brixen headquarters. With the branch office in Laurens, South Carolina (USA) acquired in 2010, the company currently employs around 1,000 people.



Fig. 1: Alupress AG, Headquarter Bressanone, South Tyrol

New production concept with digitalization

When the production concept was revised with an external partner in 2015, the need arose for software that could display important information about the machines in real time: “We no longer wanted to talk about yesterday’s problems in our morning meetings, but to find answers for today’s ques-

tions,” reports Christoph Beikircher, who was involved in the selection project at the time and now manages the *Visual Shop Floor* solution as a key user and contact person.

“We wanted to become more efficient with shorter response times and faster decisions.”

But because the Manufactu-

ring Execution and Enterprise Resource Planning systems only synchronize once per shift, much of the data was delayed and not available in the right form.

Leveraging optimization potential with real-time data

Through various groups from the Automotive Cluster Automotive Excellence Südtirol AES, they became aware of the specialist Solunio, whose web-based software *Visual Shop Floor* can extract accumulating data from different sources, logically link them, and present them in an appealing and comprehensible way on various end devices. In 2017, the company succeeded in convincing the management to make the investment: “There was no comparable software on the market that would have met our requirements,” says Christoph Beikircher.



Fig. 2: Illustration Solunio: Level Two, create transparency

Visualization on info boards

In the first project phase, ten info boards were installed in the production halls, which display current machine states and the OEE as the most important key figures. In addition, the **Smart Layout module** was used to implement a **digital hall mirror**. This virtual hall map provides separate views for shift supervisors, department managers, operations and plant managers, as well as for maintenance and

repair. For these, **role-specific dashboards** are designed with relevant information in each case, which can be accessed on the PC as well as on mobile devices. The content and key figures of the dashboards were designed in workshops with the production manager, key users from the departments, maintenance, controlling and IT. IT specialists at Alupress, who worked closely with Solunio, deal with

the sometimes very complex data derivation and linking.

Digital machine stations

In the second step, digital machine stations were set up on around 100 machines, which were equipped with the **Visual Shop Floor terminal module**. They always show employees the latest information on target and actual quantities on a shift basis, but also open up further information access. The preparatory phase of the project was already completed by the beginning of 2018. For the roll-out to the plants, the data was prepared in such a way that the same key figures were calculated everywhere using the same

information: *"We defined cross-plant standards, preconfigured the software and delivered it ready to use,"* says Christoph Beikircher. The employees' initial skepticism subsided after open discussions and the presentation of numerous advantages of the software. *"You have to court trust and get the employees on board; after all, it's all about transparency and fast reactions, which we need for our processes."*

In the meantime, *Visual Shop Floor* is being

used more and more intensively at all levels. The **high level of user-friendliness** is a major contributor to this. Incidentally, this also applies to administration and further development: *"As a key user, I can handle 90 percent of all adjustments and changes without support,"* Beikircher is satisfied.



Fig. 3: Alupress AG, Visual Shop Floor in action; Dashboard

Support in Shop Floor Meetings

Visual Shop Floor's **meeting module** will be deployed before the end of the year. "Because of the pandemic, our meetings have changed a lot" Beikircher reports. "We can no longer discuss issues in person at the boards, so we need new dashboards that we can present online." Already, morning meetings no longer rely on slips of paper and notes, but on digital facts. The dynamically growing

company was able to further increase output. "We are in a much better position than before thanks to the information from Visual Shop Floor," says Manfred Amort, production manager at the Brixen plant.

Clear targets, greater transparency and shorter response times have helped Alupress to better manage its processes today.

"Since the introduction of Visual Shop Floor, we only talk about OEE, no longer about machine availability," says Christoph Beikircher.

Using machine signals

The successful installation is now being further expanded. Machine signals are already being tapped via OPC-UA at highly automated plants with cutting machines with robot handling. The **task module** of *Visual Shop Floor* is to send notifications to robot technicians or machine setters depending on the malfunction. Another project is about visualizing quality control charts of the QA system via a widget. “*Solunio*

works excellently with us and is always open to new ideas and an exchange at eye level. We are also involved in further development and can contribute our requirements in an uncomplicated way,” says Christoph Beikircher.

“

With Visual Shop Floor we no longer talk about yesterday's problems in our morning meetings, but find answers to today's questions.

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Christoph Beikircher

Head of Lean Management, Alupress



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



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