

THE USE OF *VISUAL SHOP FLOOR* AT INTERCABLE LTD

Case study Intercable Ltd:
Visual Shop Floor in practice



INTERCABLE LTD

Founded in 1972 in Brunico (South Tyrol), **Intercable Ltd.** today operates as a global player with two mainstays: Intercable Tools develops and manufactures tools for processing low and medium voltage cables as well as connecting materials for the electrical, wind and railroad sectors. Intercable Automotive

has been producing plastic parts and cable protection systems for the automotive industry since the early 1990s. With customer-specific tooling, innovative plastic injection molded parts and a zero-defect quality target, the Tier 1 supplier of high-current components for electromobility at the Bruneck site grew from 120 employees

in 2008 to 800 today, with a further 700 employees spread across plants in Slovakia and China.

Fig. 1: Intercable Ltd, Visual Shop Floor usage during the shop floor meeting



Fig. 2: Intercable Ltd, Visual Shop Floor responsive Design

Transparency for better results

The internationally active Intercable Group has been relying on digital shop floor management with Solunio's Visual Shop Floor software since 2016.

It obtains information from eight IT systems, prepares important key figures clearly

and makes them available to managers and employees in real time based on their roles. With considerable growth, the company benefits from stable processes, higher Overall Equipment Efficiency (OEE) and significantly lower error costs.



Fig. 3: Intercable Ltd, Visual Shop Floor use in the production hall

Growing challenges

Interlinked, multi-stage production processes such as die casting, punching and welding, finishing, assembly, packaging and shipping are difficult to keep track of. Extensive data on machines, employees, quality processes, output and rejects are generated and processed in systems ranging from PDA to CAQ and ERP. "But these are all isolated

solutions," says Patrick Abfalterer, Automotive Assembly Department Manager at Intercable. "Those responsible were missing important data and key figures, which they had to laboriously gather from various systems."

When faced with problems from strong company growth and increasing

quality requirements, they did not always focus on the right processes, machines or production areas. "The priorities were not clearly evident," says Patrick Abfalterer. "The consequences were unrest in production and planning errors, incorrect distribution of competencies and capacities."

Germ cell in the automotive assembly hall

In 2016, for example, the company decided on an Industry 4.0 project with the software manufacturer **Solunio**, also based in Bruneck, and its **Visual Shop Floor software**. The digital tool for the lean discipline of shop floor management creates transparency – for employees and managers. Data is taken from the existing systems, machine controls and sensors and processed according to the customer's information needs. The information obtained is continuously displayed on dashboards. Likewise, they

are used to prepare meetings or for process automation. *"In preparation, we defined the desired key figures on Overall Equipment Efficiency (OEE), quality trends and productivity as well as the corresponding data sources including eight different IT systems,"* Patrick Abfalterer reports. *"Likewise, we had to determine the exact information needed along our management structure."* To keep the project manageable, the first step was to start with the automotive assembly hall. There, around **70 employees work on 43 systems,**

which mainly comprise special machines, in various manufacturing and assembly processes.

“

I can see at a glance the current order status at every workplace!

”

Patrick Abfalterer

Head of Automotive Assembly, Intercable





Fig. 4: Intercable Ltd, Visual Shop Floor use in the production hall; detailed machine data in real time

Successful pilot project

After about a year, each employee had a terminal at his or her workstation with all the information for the respective job. Current key figures on **quality, output, break times** are just as much a part of this as **information and regulations** on the often customer-specific work processes. *"In addition, I can send messages and notifications to any workstation at any time,"* Patrick Abfalterer is pleased to say. *"In addition, each management level receives its own view of all the data*

relevant to its area." For example, a **digital hall mirror** with all workstations provides him with a constant overview of the situation in production. *"I can see at a glance the current order status at each workstation, which employee is at which system, and where malfunctions or bottlenecks are occurring,"* says Patrick Abfalterer. *"This makes it possible to react faster and make better decisions."* From there, he can **call up detailed views of areas, machine groups or workstations.** *From shift planning to*

setup processes and sampling to the digital quality matrix, all areas were gradually integrated. *"Along the way, our employees have been trained on Visual Shop Floor so we can make changes and continue projects without Solunio."*

Living, growing system

After the successful pilot project, the use of *Visual Shop Floor* has now been extended to all halls and production areas at the Bruneck site. As a result, the top management, including the two sons of the company founder, Klaus and Kurt Mutschlechner, can now access all key figures, such as the current OEE, on a daily basis. The introduction in small, manageable steps and the transfer of the successful projects to other halls and

areas has proven successful for Patrick Abfalterer: “You save on large-scale planning and concepts and duplicate the successful components.”

Intercable is not stopping at what it has achieved either. At the rotary transfer lines, a project is to provide more insight into the reasons for rejects and downtimes. To that end, individual

stations on the line will provide machine data in the future.

Another project involves **Layered Process Audits (LPA)** for compliance and implementation of process standards. The auditing of all management levels in the plant is to be implemented together with Solunio and *Visual Shop Floor*.

Positive balance sheet

Over the past two years, Intercable has seen numerous positive effects in various areas.

“Our production processes are running smoother and more stable,” Patrick Abfalterer summarizes. “We have been able to increase OEE significantly. Most importantly, we’ve been able to amortize our entire effort through lower scrap costs alone.” Shutdowns and production interruptions have become less frequent, and it has been possible to react more quickly than before when plant problems arise. “As soon as individual key figures show deviations, we

take action.” *Visual Shop Floor* is becoming the central source of information, so that other production-related systems are no longer rolled out and used to the same extent as before. So it’s no surprise that in the medium term, all of the company’s 17 subsidiaries and sites are expected to benefit from *Visual Shop Floor*.





Fig. 5: Interactable Ltd, Headquarter brunico

How to introduce *Visual Shop Floor* correctly: Tips from Patrick Abfalterer

- ✓ Clear definition of key figures
- ✓ Designate responsible persons from IT and someone for each department
- ✓ Establish clear management structure, such as department management, shift management, setters, and workers, and develop precise role profiles
- ✓ Select the systems that will be integrated
- ✓ Select data and information for each management level
- ✓ Select only the necessary information for maximum transparency
- ✓ Inform all levels about the purpose of the system
- ✓ Obtain andon boards or terminals to inform production

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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