Microplásticos Improves Workers' Learning Curve with Glartek's Digital Solution

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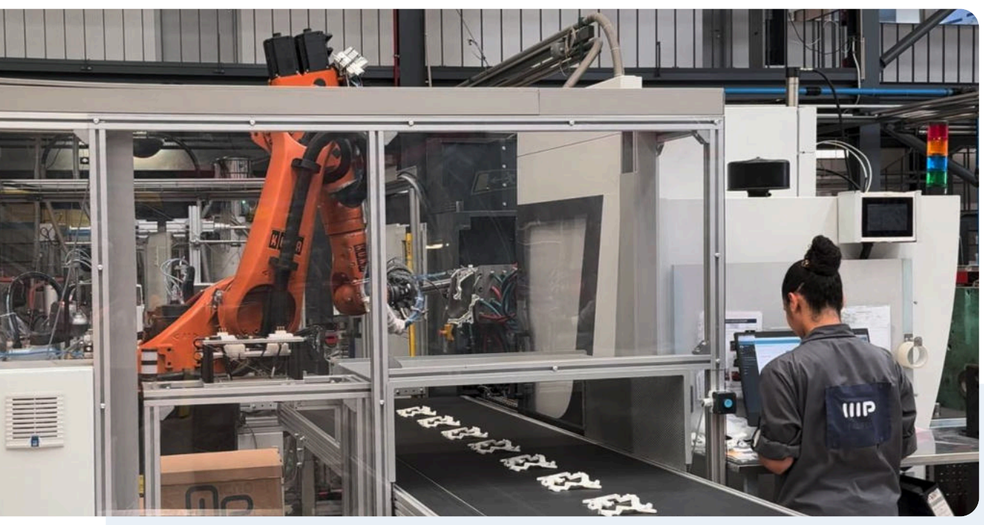
Background

Microplásticos, a powerhouse in the production of high-quality dimensional plastic components, is a Portuguese company that specializes in the injection of thermoplastics, catering primarily to the automotive and electronics industry.

Founded in 1987, the company operates globally being now one of the sector's references for some of the largest manufacturers in the world, with exceptional precision and dimensional accuracy.

As a leading industrial company, Microplásticos operates with a focus on innovation, quality, and sustainability, building a strong reputation for its rigorous precision and high-volume production capabilities.



Microplásticos employs more than **500 people** across its facilities in Portugal and Poland, producing **150 million parts** per year and generating an annual turnover of approximately **59 million euros**.

Challenge

For Microplásticos, operational efficiency and precision are crucial to maintaining high standards in plastic component production. However, due to the high complexity of its assembly line operations, Microplásticos faced some challenges:

- **Difficulty in training operators quickly and effectively**
- **Reliance on confusing and scattered paper-based forms**
- **Risk of inconsistent performance due to non-standardised instructions**
- **Frequent setup errors impacting operational stability**
- **Lack of real-time process monitoring and intervention capabilities**

Microplásticos struggled with inefficiencies from their paper-based instruction system. This resulted in unclear operator guidelines, slow learning curves for new employees, and the rise of some setup errors, which ultimately caused downtime and hindered production. The lack of real-time monitoring further delayed problem resolution.

Solution

The challenges underscored the need for an efficient solution that ensured smooth processes, reduced downtime, and streamlined new operators' integration. This way, the solution focused on:

Digitalization of Operational Processes and Instructions

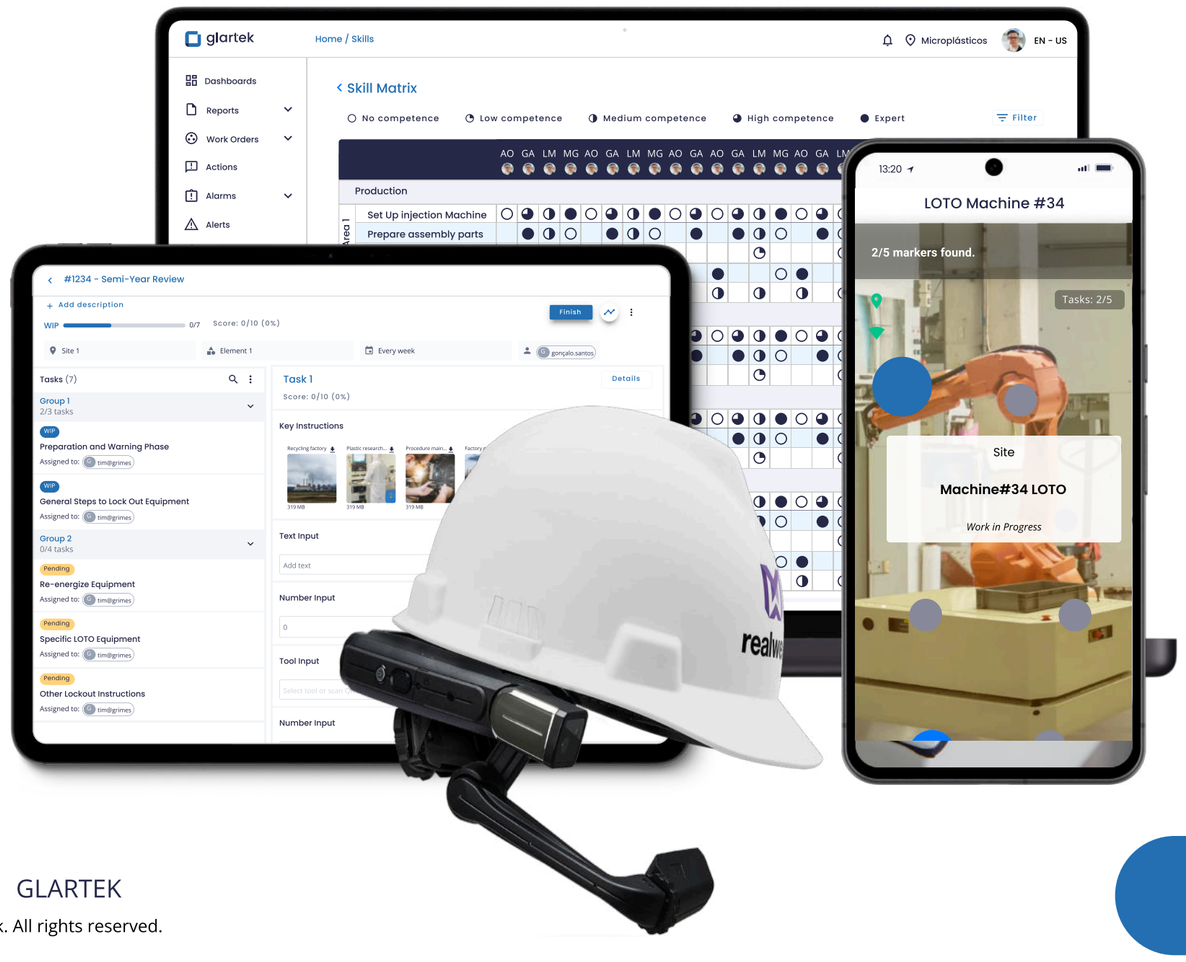
Digitalization of traditional paper-based work instructions, creating a step-by-step dynamic model with various response flows, including instructional images and videos available on mobile devices for enhanced guidance. This framework also integrated AR capabilities, allowing operators to easily identify components and follow contextualised instructions, which reduced setup errors.

Digitalization of Onboarding and Training Materials

Digitization of training materials and introduction of interactive training modules to enhance the onboarding process of new employes. Training through full digitized lines has reduced confusion and accelerated the learning curve by preparing operators more effectively for their tasks, contributing to a standardized and improved performance on the shopfloor.

Backoffice Operations Monitoring

With all processes digitalized, it was possible to monitor production lines in real-time. This allowed immediate identification and resolution of potential issues, and enabled the aggregation of detailed data to provide detailed insights into patterns and trends. It also offered visibility into which teams were intervening, leading to more efficient and stable production lines.



Results

56%
Reduction in training times

32%
Fewer setup errors

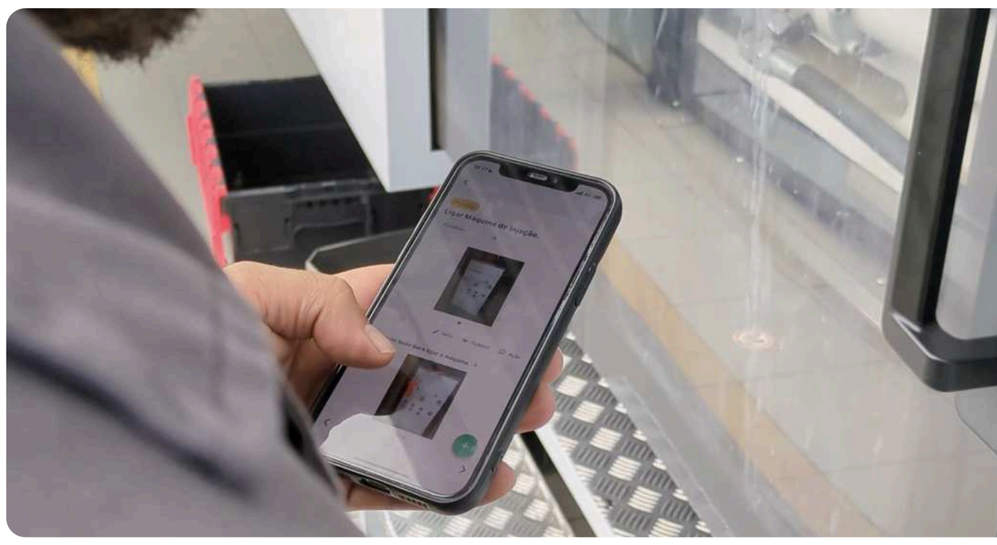
4x
Faster problem identification

15%
Less operational downtime

Next Steps

The adoption of Glartek solution is perfectly aligned with the continuous improvement strategy that the company has defined, helping to drive innovation and operational excellence.
Therefore, the next steps include:

- **Continuing** to optimize the system based on data insights
- **Digitalize** other operational processes
- **Adapt** the solution to other facilities



Conclusion

Glartek's solution has significantly transformed Microplásticos operations, leading to enhanced productivity, reduced errors, and improved training efficiency. This way, the company its well-positioned to continue delivering high-quality products while maintaining the highest standards of efficiency and safety.

> "We have been able to reduce downtime and increase our productivity by mitigating errors, especially in set-up. At the same time, initial launches have also become more controlled and stable."
>
> - João Marques, Administrator at Microplásticos

ABOUT US

Founded in 2017, Glartek specializes in Augmented Reality (AR) solutions tailored for the industrial sector. Our core mission revolves around enhancing efficiency and safety within industrial processes. We achieve this by integrating Augmented and Connected Worker technologies, providing visibility, optimization tools, and reassurance for frontline workers. Our focus is on improving industrial efficiency and safety for frontline workers while fostering a culture of Continuous Improvement to drive Operational Excellence. Our customer base is diverse, ranging from asset-intensive companies like EDP to manufacturing firms such as Renault.

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