

MATICS 

Advanced Plastics Moves to Industry 4.0 with Matics



Adopting a holistic solution for real-time OEE management and enabling continuous improvement of complex production process in real-time

Business Needs:

- **Eliminating manual processes** that result in human errors and mistakes, and adopting an automated, real-time objective solution to gain full visibility of all production resources within the production floor.
- **Real-time monitoring of mold usage** by upgrading to a fully digital condition-based maintenance to prevent failures and waste.
- **Optimizing communication** between different personas, management and staff from every department and shift.
- **Tracking performance, making business decisions**, and continuing factory daily routines based on **real-time data and reports**.
- **Dynamic planning** of machines, auxiliaries, and tools to maximize machine utilization and OEE.

Matics Solutions:

Real-time Manufacturing Management and Collaboration Platform

The Impact:

- Increased transparency and agility on the factory floor
- Provided one source of truth for all employees
- Eliminated manual work that was creating inaccuracies
- Easily generated reports that allowed for optimal analysis





About Advanced Plastics:

Advanced Plastics is a leading technical injection molding company operating from a modern 50,000 sq. ft. world class manufacturing facility in East Yorkshire, England. The company is providing a diverse range of technical injection moulded products for blue chip clients from the initial design concept to volume production and variety for a series of tens to millions of units. Advanced Plastics manufacture complex products with world-class standards, serving across a range of market sectors, including Automotive, Aerospace, Heating, and Defense.



The Challenges:

Advanced Plastics understood the value of real-time OEE and its ability to improve the production process continuously. Prior to Matics, the Advanced Plastics' team allocated two admins per shift to monitor the production line every hour to capture and record the machines' stop events and stop reasons. This tedious process required admins to manually calculate the production efficiency (OEE) on an Excel spreadsheet, which often created inaccurate data that led to wrong conclusions and actions. This is why the team was looking to adopt a holistic solution: to digitize the whole process and manage OEE in real-time.



Agility of the production process

With so many production components and multiple variables, Advanced Plastics needed to be able to execute, monitor, and keep track of all of the production resources in real-time. The manufacturer wanted to gain a full visibility of the whole production journey from raw materials to final goods. In its mission to maximize its manufacturing efficiency, Advanced Plastics understood they needed to get more than just data: they needed actionable insights and they needed to have them available in real-time and from anywhere, all the time.

Manual maintenance of molds

Advanced Plastics was keen on seeking a digital solution that would help them manage molds maintenance and improve their control over mold utilization. They wanted to reduce the risk from molds being overused during production, causing a higher level of rejects. This process required an on-site maintenance manager that would manually track molds throughout production, and typically resulted in a lengthy, multi-step setup process that increased downtime.

Lack of transparency

Management and staff at Advanced Plastics were overloaded with timely manual procedures and sought after a simple solution to optimize communication between staff, track the team's performance, and increase transparency on the shop floor.

Dynamic planning

Advanced Plastics also longed for a solution to maximize the utilization of machines and auxiliary tools, including dryers, conveyor belts, robots etc. It was challenging to track all jobs that came from the planning system and see the current production status versus the plan. The team was also looking for a system that could easily identify delays or performance discrepancies before they occurred, and immediately send a notification to all the relevant people to allow for quick and effective actions to prevent shipment delays.





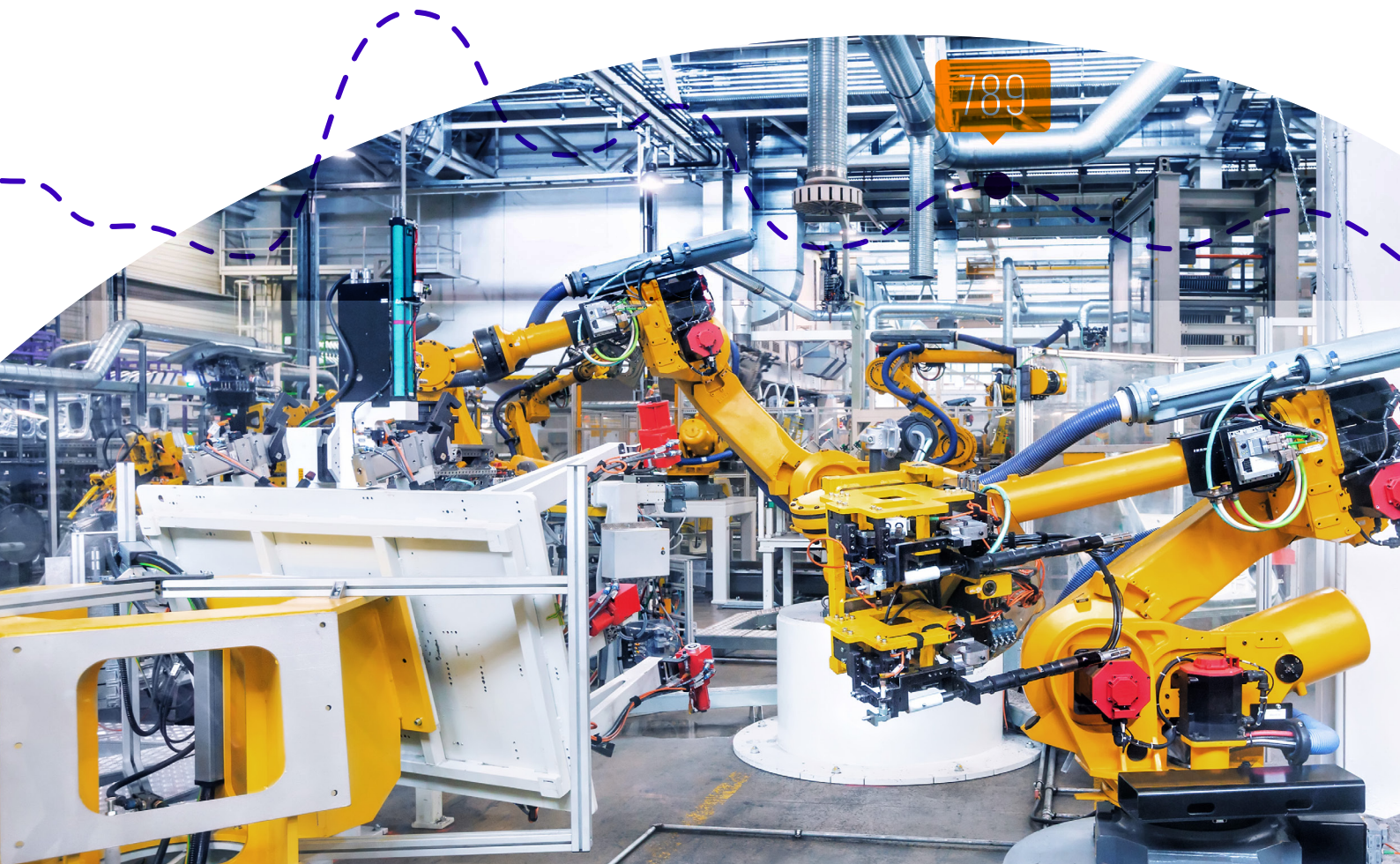
The Solutions:

Faced with challenging requests and a competitive landscape, the Advanced Plastics team decided to adopt the Matics holistic platform to help with major tasks and routines, overlooking all aspects of the production floor. It would track and manage people, machines, tools and auxiliaries, all together and in real-time.

Following a smooth and simple integration of Matics, Advanced Plastics started realizing its true OEE. Understanding the big gap between the manual measurement of OEE and digital **automatic measurement** led to a series of significant process improvements. By tracking all production resources 24/7 and getting real-time **alerts and notifications**, the factory succeeded to improve its production efficiency far more than they ever thought was possible. The immediate access to all data and total visibility of production also helped Advanced Plastics with smarter, **predictive mold maintenance** and control over molds' usage that didn't require an on-site maintenance manager present every hour.

Matics recorded and analyzed the usage of each mold unit in real-time and counted cycles, sending alerts ahead to the planner and maintenance manager, and preventing the problem of failures, due to overused molds. With Matics, Advanced Plastics got full control and was able to monitor units production in real-time, thus not allowing to operate a job with a specific mold, once the end of the cycle was nearing.

Furthermore, Advanced Plastics experienced increase in productivity thanks to better transparency, and improved its internal communication with the Matics' **chat messaging feature**. Matics quickly became **one source of truth** for the whole organization. This tool enabled the factory teams to optimize communication between various group members anytime from anywhere. Matics helped Advanced Plastics increase productivity by creating an effortless communication system, within production context, between its staff and encouraged them to complete their work more efficiently and feel more accountable.



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"Our Director is always using Matics, even at 3 o'clock in the morning, constantly checking the status of the machines and using the chat options to notify operators in the factory."

Luiza Kotaba, Information Technology Assistant, Advanced Plastics

In addition, all routine production meetings were now using data coming directly from the system. With all needed information, customized dashboards and reports present in one interface and accessible to all, preparation for weekly or monthly meetings took minutes instead of hours. The dynamic nature of Matics analytics tool enabled to slice up any data set on-the-spot for more in-depth analysis and insights.



Dynamic Planning:

With Matics Gantt module, Advanced Plastics was able to monitor in real-time the progress and the expected completion times for current and future jobs, identify performance discrepancies before they happen, and minimize the risk of shipment delays. The next step provided by Matics would be the possibility to manage utilization of all the different tools and accessories by moving them between machines, tracking in which hours they were used, knowing with precision when the needed tool would become available and much more.

Advanced Plastics were also able to track the number of employees per machine per day, in order to make sure they had enough employees for each job and make necessary changes.





The Bottom Line?

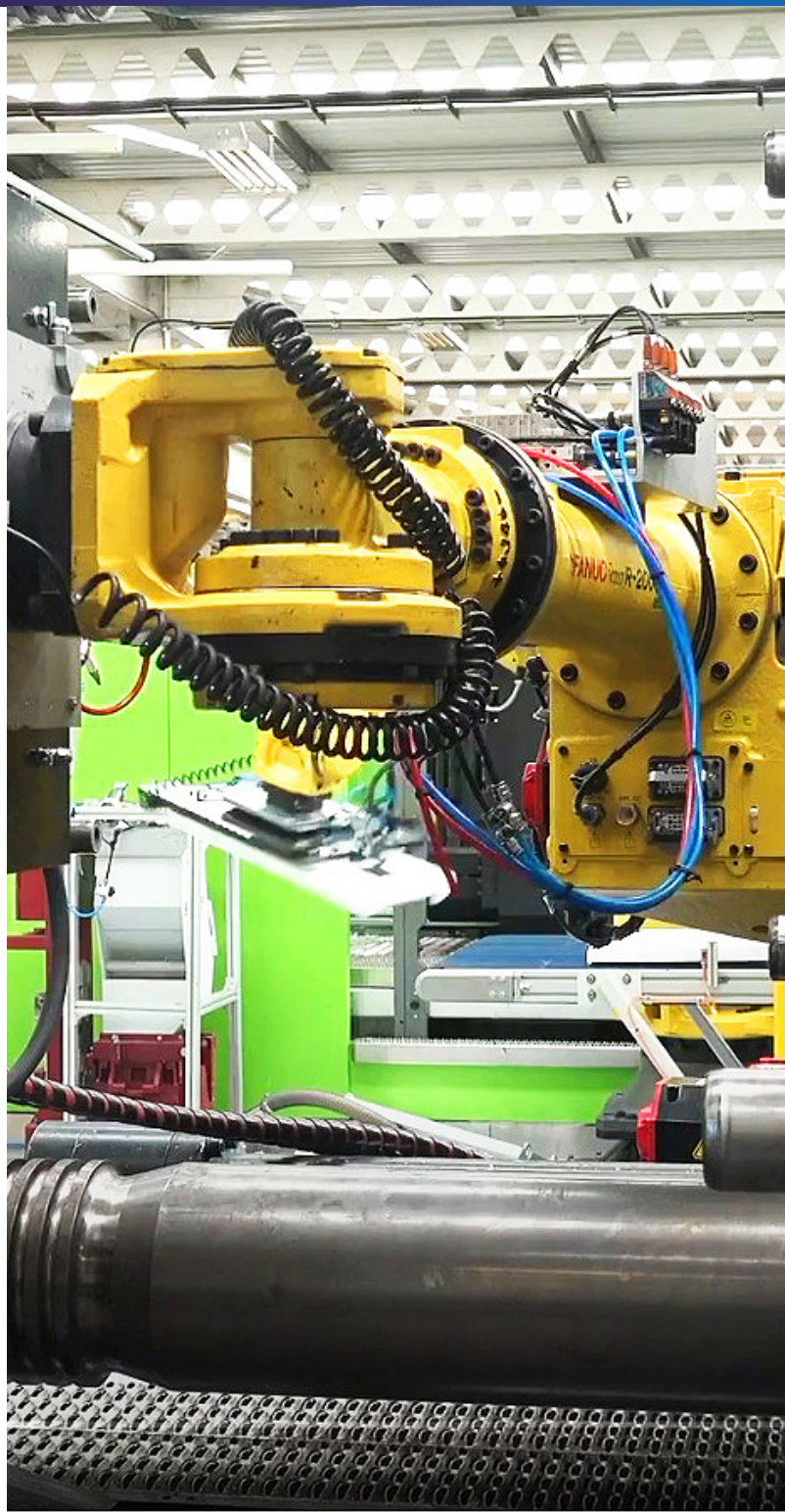
With real-time data, increased transparency and efficient management tools, Advanced Plastics was able to holistically manage its operations with a new generation RtOI system and reap its numerous benefits. When starting out, Advanced Plastics connected six of their machines to the Matics software, but after some time the team decided to upgrade to full machines' coverage.

The shop floor teams and management extensively use Matics from supporting routine manufacturing operations to successfully conducting team meetings and taking smart business decisions based on real-time insights, and continue to sustain and improve its production processes daily.



"Matics is a true partner we can rely on to continuously deliver new solutions and solve issues as they arise."

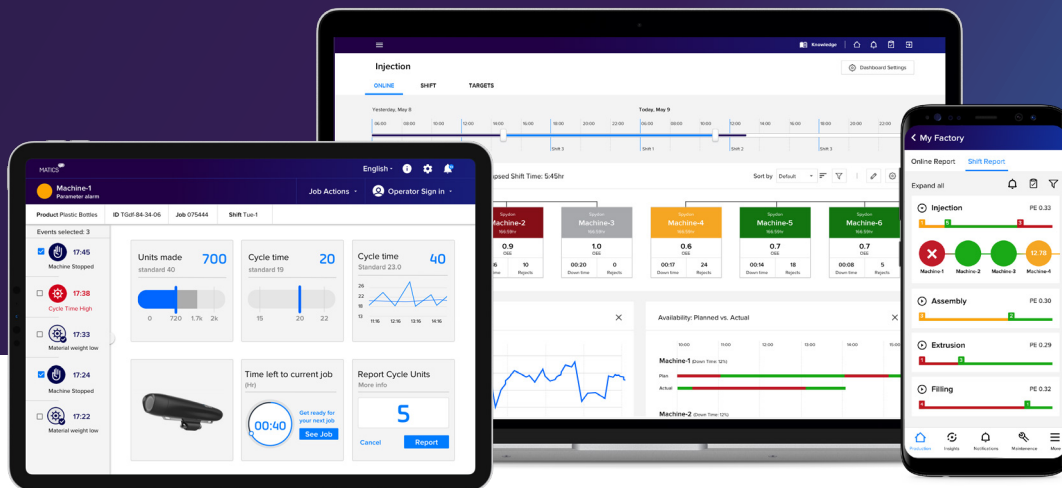
Luiza Kotaba, Information Technology Assistant, Advanced Plastics



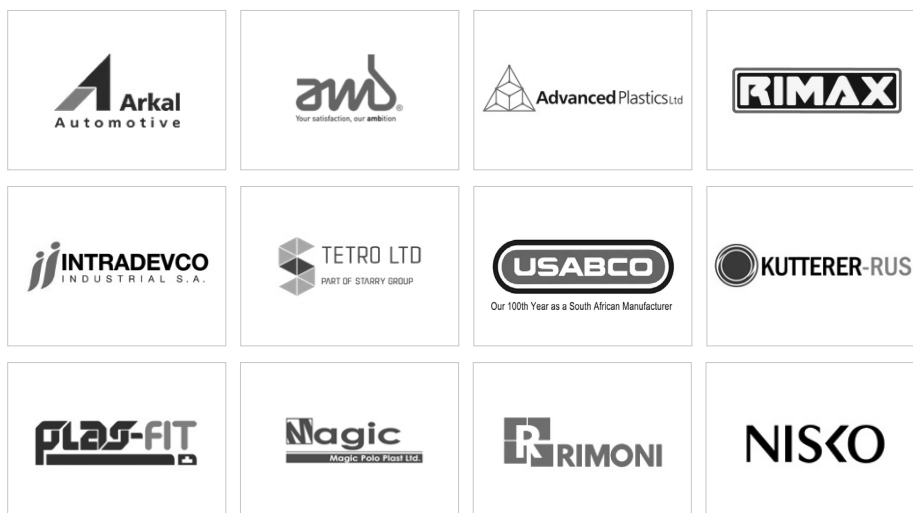
About Matics

Matics' software solution is a real-time operational intelligence solution for collaborative management of the manufacturing floor that can help you with all of the above functions and more. Matics allows factories to collect and analyze data in real-time and collaborate remotely to gain production efficiency over 25% in a matter of weeks.

Contact us today to learn more about how we can help you implement our non-disruptive industry-leading solution in as little as a single day.



Join our customers in smart factory revolution



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