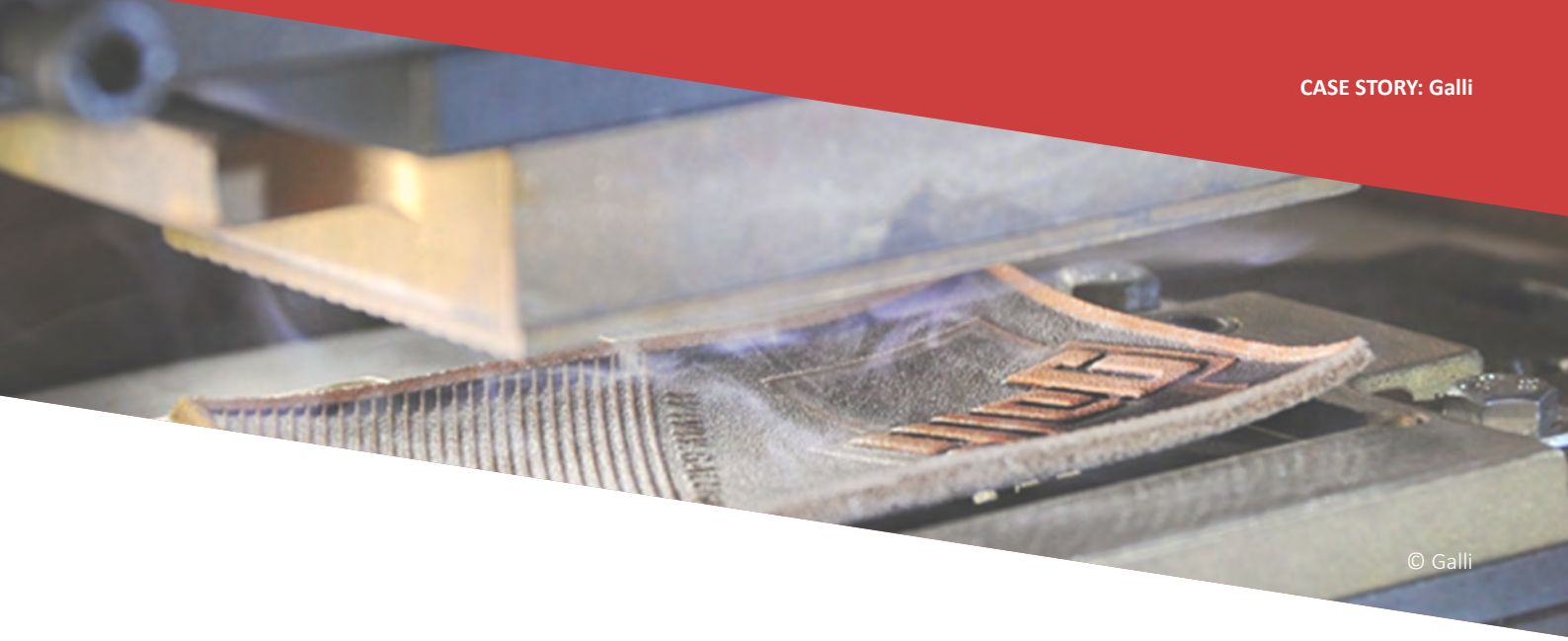

WHEN ROBOTICS IS NO LONGER JUST A MATTER FOR EXPERTS

High quality is a top priority in the leather goods industry. To remain competitive, manufacturers must convert their production processes to the latest technologies. Therefore, Italian machine builder Galli ventured into robotics and developed a robot-based flexible automation solution for processing leather pieces using ArtiMinds Robot Programming Suite software.

Galli SpA develops innovative systems and machines for the leather goods industry. The leading Italian company offers a large product portfolio for a wide range of applications and supplies individual machines tailored to customer requirements.

For the production of leather goods, numerous work steps are necessary and it is important to guarantee a high and consistent quality. Many processes have to be supported or carried out by employees, but often involve very monotonous or unergonomic tasks. In order to increase productivity and also remain globally competitive, Galli was asked by a customer to develop a customized automation solution that could handle the grinding, polishing and dyeing of the edges of leather pieces, e.g. for belts or bags.

Staying competitive thanks to new robotics technologies

To achieve the highest possible level of automation, Galli added a robot to the specially designed machine to take over the steps previously performed manually. However, since the process could not be fully automated throughout and temporary support for the worker was still necessary, it was decided to integrate a cobot from Universal Robots. This is because it can be used safely next to or in interaction with humans without the need for safety fencing. Thanks to the size and shape of cobots, it was also possible to implement a space-saving solution in this way.

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"Whenever we needed assistance with programming, our requests were always processed very quickly and an optimal solution was delivered. The helpfulness and professionalism of the ArtiMinds team is remarkable."

Roberto Verduci, R&D Manager at Galli

According to Roberto Verduci, R&D Manager at Galli, it is particularly important to provide the best possible support to the operator by means of the latest modern technologies and to choose appropriate solutions and tools so that the user no longer needs specific knowledge. The machine builder did not have any experience and touch points in the implementation of robotics applications up to that point. Therefore, Universal Robots recommended Verduci to take a look at the programming software ArtiMinds Robot Programming Suite (RPS). He quickly realized what a great time saver and simplifier the intuitive, function block-based graphical programming was. He explains, "The software is so intuitive to use that we didn't need to take any training." Thanks to ArtiMinds, Galli was able to complete the project, from design to programming to implementation, without an external integrator. "I can definitely recommend ArtiMinds to anyone who wants to integrate robots into their processes, even if they have little or no programming knowledge. ArtiMinds RPS offers a wide range of predefined templates and features that guide and support the programmer to program even complex applications independently. Since the software generates native robot code, one is absolutely flexible at all times and can, for example, also make changes directly on the robot," explains Verduci.

Minimized programming effort despite a large number of variants

The cut leather pieces are first provided to the robot by a worker in a container. The robot picks them up from the box and guides them to the machine. In order to process the edges and carry out the actual work step, it moves the leather pieces back and forth along their cut edges on firmly positioned, paint-impregnated rollers. The robot must constantly adjust its orientation and alignment so that the leather pieces touch down on the rollers in the correct way. Similar to the principle of a ballpoint pen, the ink is thus transferred to the leather edges.

A major challenge of the application is the large number of different belts, buckles and other leather goods that are processed with the machine. This is because the varying geometries require constant adaptation of the robot program. Thanks to the CAD2Path function of ArtiMinds RPS, however, this problem can be easily solved. Instead of time-consuming teach-in of all points with the robot, (geometrically complex) profiles can be imported from CAD models and the software automatically generates the exact robot path from this. But it is not only

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this feature that leads to considerable time savings in the programming phase: “Auxiliary functions such as wizards simplify the parameterization of the individual function blocks. Thanks to the 3D simulation environment, it is possible to perform collision and reachability analyses already in the planning phase and in offline mode.” The R&D manager is also enthusiastic about the online support: “Whenever we needed assistance with programming, our requests were always processed very quickly and an optimal solution was delivered. The helpfulness and professionalism of the ArtiMinds team is remarkable.”

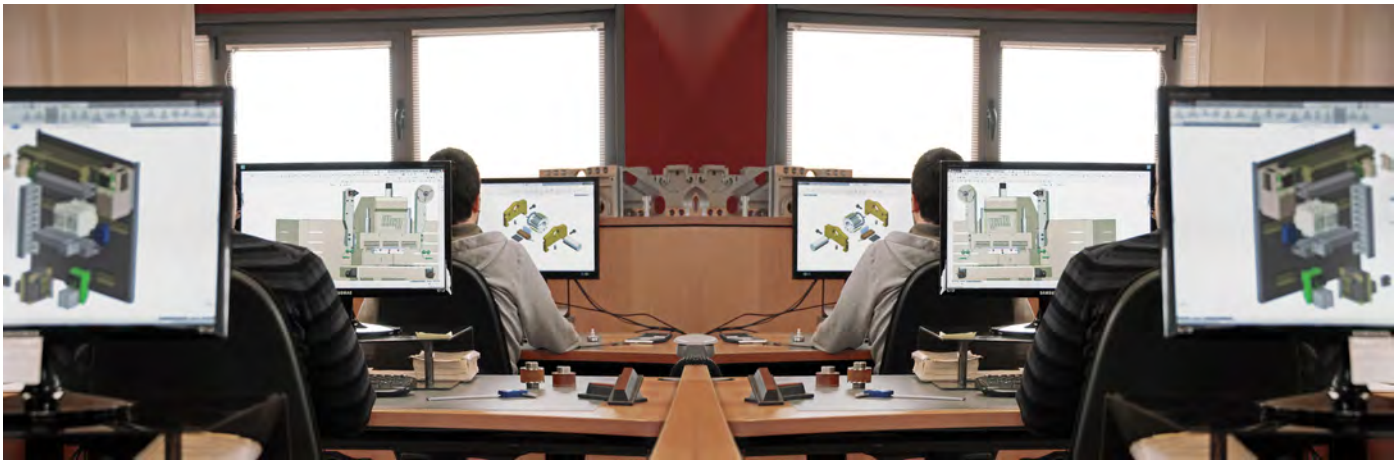
Higher quality and productivity

Robot-based automation of processes previously carried out manually by the operator has increased productivity and produced a consistent quality result that, overall, was even higher than before. The use of robots also has positive effects in terms of personnel resources: Because the operator can now, on the one hand, ensure the smooth operation of the machine without much effort and, in parallel, take care of new and more important processes for which highly qualified know-how is required.

”In the run-up, we had also looked at other software solutions, but quickly realized that these were out of the question for us due to the high complexity in programming and for economic aspects.”

Roberto Verduci, R&D Manager at Galli

According to Verduci, there is no comparable alternative to the ArtiMinds Robot Programming Suite: “In the run-up, we had also looked at other software solutions, but quickly realized that these were out of the question for us due to the high complexity in programming and for economic aspects. With ArtiMinds, on the other hand, we found a really helpful tool with a convincing price-performance ratio.”



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About ArtiMinds

ArtiMinds Robotics develops software solutions to standardize the deployment of robot-based industrial automation processes. Our goal is to simplify the programming and operation of industrial robots and to enable cost-efficient integration and maintenance as well as flexible automation.

As a pioneer for sensor-based robot applications, we are familiar with the challenges of our customers and encourage them in implementing their applications independently and building up know-how within the company and securing it in the long term.

With a team of over 40 employees and around 20 international distribution partners, ArtiMinds Robotics serves customers from a wide range of industries worldwide.

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