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MAGAZINE

Drug logistics, the GPI-HIT-FBK-UNITN project's prototyping phase

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The collaboration started in February 2020 and the next step will be to improve the performance of the Riedl Phasys robotic cabinet

GPI-HIT-FBK-UNITN press release

The second phase of the partnership between the GPI Group, FBK, University of Trento, HIT, in collaboration with the startup Dolomiti Robotics, has started. After completing the feasibility analysis, the next step will be the creation of the prototype that will serve the purpose of improving the performance of the Riedl Phasys robotic cabinet. "Confidence in the possibility of achieving a tangible result has grown over time, thanks to the fruitful collaboration between our teams – said GPI's Asa Automation director Massimiliano Rossi – We hope to have the prototype available in early 2022".

The collaboration started in February 2020: GPI Group entrusted HIT, the University of Trento and FBK with starting a technology transfer process, capable of pooling the resources of the Trentino system. The Riedl Phasys system is a cabinet equipped with a robotic gripper, used in drug logistics, both for private pharmacies and large plants in hospitals and wholesalers premises. This technology is being sold around the world, with hundreds of plants operating in Europe, America, China, the Middle East and Africa.

The improvement being worked on is the drug loading system inside the cabinet. The goal is to make it fully automated, capable of handling also cylindrical packages and, more importantly, capable higher performance in terms of speed compared to the ones that are now available on the market.

At the moment, the team's feasibility study has generated highly innovative solutions that will be incorporated into the company's technological development process, generating real advantages in terms of market competitiveness.

"Up to now our work has obtained great results – said Rossi from FBK. The university and the start-up Dolomiti Robotics have shown that it is possible to create a system that will meet GPI requirements in terms of cost, performance and small size".

In addition to developing the prototype, the director of Asa Automation is planning on making the collaboration with the Trentino research system permanent. "The idea is to overcome the

impromptu joint effort, focused on a single project, to reach a more stable form of collaboration – he explained – so as to monitor the market and stay up to date. I liked our interlocutors' approach: extremely pragmatic, but at the same time able to look up from everyday life and look into the future. A burst of energy that we consider very useful".

"The ongoing project – commented **Francesco Placentino**, technology transfer expert who followed the project on behalf of Hub Innovazione Trentino (HIT) – represents a good example of product development aimed at marketing, which goes through the typical study phases: feasibility, prototyping, engineering and industrialization. Everything started with HIT looking for a solution for a company, and continued with the involvement of the Trentino research system. Today, thanks to FBK, UniTrento and local startups' skills and technologies, we have created a strong team that works for a common and measurable final goal".

Fabio Poiesi, with the Tev Research Unit (Digital Industry Center), coordinator for the FBK work in this project, added: "As Fondazione Bruno Kessler, we are happy to continue the collaboration, both for the quality of the working group that GPI has been able to build, and for the stimuli that derive from the new challenge that is being thrown at us,i.e., to develop artificial vision algorithms characterized by low processing times and a high degree of reliability. This will be carried out by the Tev Unit within FBK's new Digital Industry research center, focused on digital technologies for industry and with an approach strongly oriented towards technology transfer".

"Innovative startups can be virtuous channels because they offer fertile ground for innovation and product development. And this project is a demonstration of the potential of technology transfer processes ", added **Fabiano Zenatti,** co-founder and technical director of Dolomiti Robotics, a startup born from multidisciplinary research conducted within the University of Trentino. "This is what happens when the university listens to the needs of the local area and its businesses – agree professors **Luigi Palopoli** from the Department of Information Engineering and Information Science and **Daniele Fontanelli** from the Department of Industrial Engineering, who oversaw theearly stages of the project – The University contributed with the technology redesigning of the loading machines used by the company. The feasibility study has made it possible to develop a more efficient second generation system: it loads drugs faster, can easily adapt to different formats and performs its task at lower costs. Technologies on which the company can increase its international competitiveness".

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