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POLO MECCATRONICA: THE PARTNERSHIP FOR THE PROM FACILITY, PRODUCT DEVELOPMENT, SIMULATION AND RAPID PROTOTYPING LABS SIGNED ON APRIL 4, 2017

April 4, 2017

Open to companies and to technical and specialized training programs, they can count on unparalleled technological equipment in Italy. Promoted by the Province and financed with European funds, the labs will be managed by Trentino Sviluppo, FBK and the University of Trento, in cooperation with Confindustria Trento

(m.d.c.) – **Cutting-edge equipment, including metal and polymer powder 3D printers, laser tube and plate cutting equipment, 3D scanners and an innovative hybrid machine tool for additive and subtractive processes, the first of its kind to be installed in Italy. There will also be an entire area dedicated to metrology and quality control, as well as ICT infrastructure to approach the "Industry 4.0" model. A flying start for the new ProM Facility, laboratories for rapid prototyping of the mechatronics hub, the result of intense collaboration between the Province Government, Trentino Sviluppo, FBK, University of Trento and Confindustria Trento. The signing was also the occasion for a visit to the 1,400-meter laboratories and a chance to see the first installed machinery at work. A two-day "open doors" event will be held in late June when all the equipment, worth a total of about 5 million Euros, will be in full operation. The laser cutting machine, worth about € 1 million, was produced in the Trentino-South Tyrol Region by BLM, and made available to the laboratories for free as part of a collaboration between the company and Polo**

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“The ProM Facility is a new space for ideas – said Alessandro Olivi, vice president of the Autonomous Province of Trento – a center of knowledge where technology innovation and substantial investment in human capital merge, with the aim to innovate the local industrial system, offering new work and research opportunities to businesses and young people. A project designed to be concrete, one that does not aim to build an ideal model of smart factory but to make it very tangible and real. There are many companies interested in applying for the technology incubator programs of Trentino Sviluppo and is up to us to provide the best conditions to meet these requests. ”

The new laboratory for rapid prototyping of the mechatronics hub, called ProM Facility, builds on the skills acquired locally on Industry 4.0. It also represents the link between the three “souls” of the hub – companies, research institutions, universities and schools – projecting the tech incubator in Rovereto as a leading experience in Europe.

The Facility can provide support by reducing the production time of design products and industrial prototypes, allows for the design of innovative services for information security and embedded systems and offers students, and PhD students, educational opportunities of excellence.

The memorandum of understanding for the joint management of the ProM Facility was signed in the afternoon of Monday, 3 April by Vice President of the Autonomous Province of Trento and Councilor for Economic Development and Labor Alessandro Olivi, the chairmen of Trentino Sviluppo, Flavio Tosi, of Fondazione Bruno Kessler, Francesco Profumo, and of Confindustria Trento, Giulio Bonazzi, and the Chancelloor of the University of Trento, Paolo Collini.

“Today we are signing a protocol to which is actually already underway – said Flavio Tosi, President of Trentino Sviluppo – and proves that this collaboration is effective and concrete. We can say that the ProM Facility has already won its bet since some companies have contacted us asking how to access this laboratory. Thanks to the synergy between the five bodies that signed the agreement, we can also say we met another challenge: we were as as fast as private companies in the construction and opening of this new facility.

“This collaboration – said Francesco Profumo”, FBK President – fits into and strengthens the open innovation model and research-industry ecosystem that Fondazione Bruno Kessler launched in

Trentino. In collaboration with other companies in the area, this mechatronics facility will increase our attractiveness and competitiveness nationally and internationally and will help develop innovative prototypes and advanced mechatronic systems “.

University of Trento chancellor Paolo Collini said that “The prototyping lab marks another step towards the construction of a Rovereto-based hub for competence, business services, education and research, intended to strengthen the competitiveness level of local manufacturing companies. An important piece of the design that, bringing together businesses, the science and technology research of the University and Fondazione Bruno Kessler, the training of the school system and the University makes the Rovereto-based hub a place of great potential. ” “Today – concluded Collini – another important piece is being added to Trentino’s contribution to the creation of a center of expertise that brings together all the universities of the North East in the framework of the government’s Industry 4.0 project.”

“To share a new idea of facing tomorrow is a success. Confindustria-Trento – stressed President Giulio Bonazzi – is excited and proud to be here today for a project in which industrialists have always believed and in which some of our best companies participate. A project that is ahead of its time and that could rightfully borrow the name of Industry 4.0.”

An “open doors” event to complete the launch the services of the facility is scheduled for June 29 and 30, with two days full of guests and events, during which visitors will be able to see all the equipment at work and appreciate all kinds of processes and services that the facility provides.

Cutting-edge systems and tools: a budget of 5 million Euros. Equipped with machinery and sophisticated equipment, worth a total of almost 5 million Euros, financed by the European Regional Development Fund (FESR), the ProM Facility covers an area of 1,400 square meters obtained by Trentino Sviluppo from the new production building of Polo Meccatronica with an investment in plant infrastructure for the installation of machinery amounting to 560 thousand Euros. At the same time, we will initiate the works for the construction of the new building of about 6,000 square meters with spaces dedicated to the Facility but also to “Temporary Labs” available to companies interested in using laboratory skills and equipment for their research projects. Among the flagships of the ProM Facility, an integrated tool system, which works simultaneously as a five-axis CNC milling machine working center, and as an additive manufacturing system by sintering and melting metal powders via laser beam, built by a multinational company and delivered to the ProM Facility as the first one sold in Italy. Among other state-of-the-art equipment of the ProM Facility, there is also a 18-meter long machine for combined laser cutting of tubes and sheets of various materials: it is the Adige-sys LC5, worth about 1 million Euros. It was built at the Adige-BLM Group premises at Levico Terme and made available by the company free of charge as part of a partnership with Polo Meccatronica. Other available pieces of equipment include two 3D printers for the production of components by means of selective sintering or melting of metal and polymer powders by means of laser beam, a 3D scanner, an electro-spindle CNC machine, as well as numerous other specialized systems.

The benefits for companies, researchers and students. By cutting down development and prototyping times and offering first-class systems in the areas of 3D printing, electronics, product quality testing, design of integrated systems, metrology and computer science, with particular reference to ” cyber security “, i.e. resilience to cyber attacks, and to Internet of Things, seen as the extension of the virtual world to objects and concrete places, the ProM Facility will help Trentino-based mechatronics industry companies increase their competitiveness, and face the challenges of “Industry 4.0”, the fourth industrial revolution aimed at the automation of production processes,

integrating important doses of artificial intelligence in all sorts of products. The technologies employed in the laboratory are congenial to every type of business experience, in that they allow small and medium businesses to quickly create customized design products, but at the same time enable large companies to quickly, and cost-effectively experiment prototypes to be produced on large scale once they have been optimized. The Facility will therefore act as a catalyst both for industrial groups active in the high-tech and advanced engineering areas, and for innovative startups, in particular synergy with the Industrio accelerator already present at the hub.

The management model. The agreement signed between the partners provides that, for the operational functions of the ProM Facility, encompassed in a specific area created within the Trentino Sviluppo premises, there be three top figures: a director, to whose position Paolo Gregori, has been appointed, a scientific manager, that will be occupied by Paolo Bosetti, professor of the Department of Industrial Engineering at the University of Trento, while Amos Collini, former head of the FBK testing laboratory, will be the technical manager. In addition to them, four highly specialized figures – three of these have already been appointed and hired by Trentino Sviluppo – in the mechanics, electronics and information technology fields.

Also, the Provincial Government will shortly formalize the establishment of a public-private Steering Committee with advisory, control and strategic planning functions, which will play a key role in promoting technology transfer and in higher education.

Students of technical high schools, undergraduate and graduate students as well will be offered the opportunity for internships and top quality courses in research. The University of Trento will support two scholarships per year on specific issues pertaining the mechatronics hub and on the activities that can be pursued within the new ProM Facility. Confindustria Trento as well will fund a specific research grant for a period of two years for related activities.

By June, the ProM team will be completed with a second PhD scholarship under the Agreement with our University, as well as with the implementation of specific activities of the ICT, whose contact person will be researcher Marco Roveri, from FBK’s Information Technology Center.

Students of the E-Agle Trento Racing Team are already at work in the laboratories. The merger between the worlds of education and research within the newly-created ProM Facility is actually already underway: 60 students from the University of Trento, under the cross-faculty E-Agle Trento Racing Team, are in fact already using CNC machine tools, the 3D metal printers and the laser cutting machine for the construction of an electric car, with which they will be competing on the Varano Track in Parma, July 17 through 23, in the SAE (Society of Automotive Engineers) Formula race, an international competition between university students, which involves designing and trying on the track an energy-efficient, appealing, high-performance single-seater.

Images and interviews by the Press Office.

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