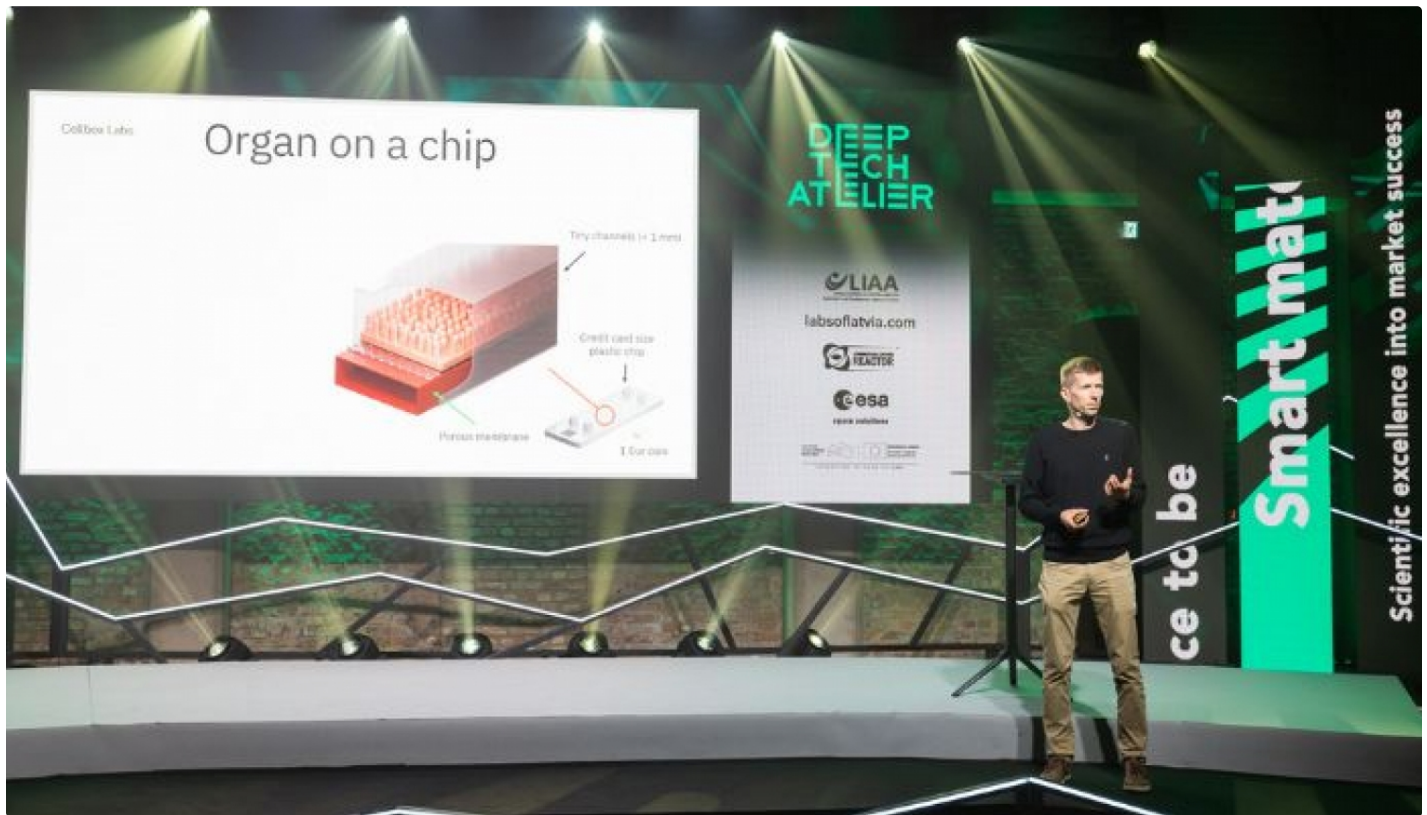


LIAA: Entrepreneurs at auctions will be able to buy solutions developed in science commercialisation projects

Published: 05.08.2022.



The third round of the selection of science commercialization projects submitted to the Technology Transfer Programme administered by the Investment and Development Agency of Latvia(LIAA) is drawing to a close. 26 Latvian scientific teams are ready to share their work with entrepreneurs, offering to buy patents for solutions such as drug efficacy studies without human intervention, smart clothing production, wood waste recycling, development of e-karting technology, etc.

“Global practice shows that scientists need to work closely with entrepreneurs and funders to ensure that the innovations they produce contribute to the economy as quickly as possible. This provides both economic growth and income for scientific institutions, which are no longer dependent on budget grants. Each scientific project has a business leader who is already in contact with potential customers and investors during the development phase. These projects are also good advertisements for our scientists, as many patents are sold abroad,” says Kaspars Rožkalns, Director General of LIAA.

Under the terms of the program, the scientific solutions developed must be passed on to entrepreneurs for further development into specific products already in demand on the market. The supported scientific institutions can choose how to proceed with the development of the idea, and the most popular model is to sell the patent at auction, with or without an additional selection procedure. A more complex model, which also requires additional investment, is to create a spin-off. This means that the scientific institution enters the company shares with its patent, and the investor invests the money. “We already have the first example of a patent being sold at a cost three times higher than the investment in the development of the scientific idea. This was the case when local Latvian start-up Cellbox Labs auctioned technology developed by the Institute of Solid State Physics, the University of Latvia, which makes it faster, cheaper and more efficient to test drugs for toxicity and efficacy at the pre-clinical stage. This example shows that Latvian entrepreneurs are also starting to appreciate the

contribution and potential of science in business development and are ready to pay for scientists' discoveries," says Māris Kromāns, Head of the Science Commercialisation Division at LIAA.

The Latvian State Institute of Wood Chemistry, with support from the program, has developed a new technology to efficiently process wood waste into furfural and glucose. The chemicals produced in the technological process can be used to produce the bioethanol that is currently in demand on the market. "The technology offers a solution to efficiently process wood chips, which would be worth at least ten times less when burnt than when converted into bioethanol. We have already started discussions with major Latvian timber industries on possible cooperation for further development and implementation of the technology. Our main conclusion from looking at the Latvian business environment is that Latvian companies working with biotechnology mostly lack scale. We have found a way to combine chemical recycling with industrial biotechnology. As a result, we developed a way to selectively and more efficiently produce furfural before glucose extraction by enzymatic means, which is the raw material for second-generation biofuels. We are now hopeful that the idea of a second-generation ethanol plant in Latvia will be revived by Baltic Bioethanol OU or another company. We specialise in the development of technologies for the large-scale production of bio-based products; therefore, we can offer technologies that can be used separately or integrated into large plants that process hundreds of thousands of tonnes of biomass, but in Latvia only individual companies undertake such activities. Of course, we are happy about our colleagues' cooperation with A/S Latvijas Finieris in suberin production, but we have not yet managed to turn their eyes towards us. We hope to continue cooperation with SIA Paletteries in the production of furfural and expect that AS Latvia's State Forests will more actively engage in the development of innovations related to the further processing and use of more complex wood. The investment needed to set up such a plant could reach 50 million euros, but given the high added value of the product, it would be a worthwhile investment," said Daniels Jeļisejevs, a representative of the project development team, adding that the solutions developed by the scientists will soon be available for purchase at an open auction.

☞ Meanwhile, Rēzekne Academy of Technologies (RTA) has developed a stepless drive for e-karts that will provide a major breakthrough in the production of such micro-mobility vehicles. "With the support of LIAA's Science Commercialisation Programme, we were able to develop the technology and prepare it for a demonstration to potential customers. With the support of the project, it was possible to register a patent application and carry out a number of specific tests to determine the advantages and potential of the technology. Branding and technical descriptions were also important. This helped to represent RTA and Latvia at an international exhibition in Germany and to approach various market players to assess their interest in the technology. At the moment, we are still working on the scientific publication, but at the same time, we have already started discussions with customers who have expressed interest in our solution," says Artis Cicens, representative of the project team.

☞ The Technology Transfer Programme will continue in the next EU programming period, focusing on companies that want to innovate. "Entrepreneurs will be obliged to come together with scientific institutions and work together to develop technologies and solutions. In this way, the potential product could reach the market faster, as several processes will be carried out at the same time, and the developed technology will already be owned by the company," says M. Kromāns.

You can follow the auction offers of patents developed by scientists on the website of the respective research organizations. The first auctions for the developed technologies have already been launched, but most of the auctions will take place in the autumn.

So far, 16 million euros from the EU-funded Technology Transfer Programme have been invested in the Science Commercialisation Programme to promote the development of high-added value products and services. The program offers scientific teams the opportunity to attract funding of up to 300 thousand euros per project. The Technology Transfer Programme, supported by the European Regional Development Fund, has total funding of 35 million euros, which also funds other activities in the field of technology transfer.

Science commercialisation projects in the final stage

Scientific institution	Project
University of Latvia	Development of a vision screening and training device
Rīga Stradiņš University	Clinical personality test
Institute of Solid State Physics, University of Latvia	Development of holographic recording materials on azo-benzene
Vidzeme University of Applied Sciences	Virtual reality platform for safety training of construction workers
Institute of Electronics and Computer Science	Sensorial Clothes for Accurate Physical Exercise and Instant Feedback (SCAPE-IF)
University of Latvia	Multimodal optical technology for monitoring human blood microcirculation
Latvian State Institute of Wood Chemistry	Commercialisation of efficient and ecological glucose solution production technology
University of Latvia	Processing technology for sheep wool fibres for use in the development of multifunctional bio-filters
University of Latvia	Clay mineral and anthocyanin composite material sensors for food quality control
Institute of Electronics and Computer Science	Silicon IP Design House (SilHouse)
Latvian State Institute of Wood Chemistry	Commercialisation of the technology of obtaining lignocellulose bulk thermal insulation material
Rīga Stradiņš University	Improving Natural Glycopeptide Isolation Technology and Studying Their Immune-Modulating Properties
Rīga Technical University	Online Drinking Water Quality Monitoring and Early Warning System – WATSON
Rīga Technical University	Advanced biodiesel from residual soapstock of oil production
Latvian Biomedical Research and Study Centre	Dynamic human microbiome data platform and interpretation tool for personalised health recommendations

Riga Technical University	Use of biodegradable by-products in the production of protein-rich animal and fish feed extracts – Single cell proteins (PREFER-VSP)
Riga Technical University	Sustainable solutions for biomass plates
Institute of Electronics and Computer Science	Contactless ice thickness measurement device (EDI-ICE)
Latvian State Institute of Wood Chemistry	Commercialisation of technology of plywood thermal modification
Institute of Solid State Physics, University of Latvia	Optical gas sensor
Latvian State Institute of Wood Chemistry	Commercialisation of the synthesis of rapeseed oil and recycled polyethylene terephthalate polyols (ROPET)
Latvian State Institute of Wood Chemistry	Commercialisation of the technology of the synthesis of autocatalytic tall oil fatty acid polyols (ACTOPOL)
University of Latvia	Rotating magnetic dipole system for the efficient transport of liquid aluminium
Institute of Electronics and Computer Science	Industrial inertial wireless sensor (IIWS)
Rēzekne Academy of Technology	Stepless drive for micro-mobility vehicles
Institute of Electronics and Computer Science	Automated railway level crossing control system (PAKS)

<https://www.liaa.gov.lv/en/article/liaa-entrepreneurs-auctions-will-be-able-buy-solutions-developed-science-commercialisation-projects>