EURAXESS members in focus: LITHUANIA

Lithuania is a country in the Baltic region of North-Eastern Europe (source: Wikipedia).

From the world's most powerful laser through to the extra-resistant glass used in over 4.5 billion smartphones, Lithuanian innovation is impacting research and product development globally. So, it's not surprising that the 2018 Bloomberg Innovation Index ranked Lithuania 8th globally for "tertiary efficiency," a category which includes enrolment in higher education and the number of graduates in key innovation sectors. Companies are currently assembling international-quality research teams in Lithuania at highly competitive costs, and there is strong and committed governmental support for R&D.

Research, Development & Innovation in Lithuania

The Ministry of Economy and the Ministry of Education and Science are the main institutions responsible for the formation and implementation of innovation policy in Lithuania. The other institutions involved in coordinating and implementing R&D and innovation policy in Lithuania are:

- The Research Council of Lithuania, which consists of a Research Fund and a number of expert committees. The council's role is to be an expert institution, implementing R&D policy and providing competitive funding.
- The Agency for Science, Innovation and Technology (MITA), national organisation for the implementation of innovation policy.
- The Research and Higher Education Monitoring and Analysis Centre (MOSTA), which operates as an advisory institution. It monitors and evaluates research, higher education and innovation, and other related activities, and provides evidence-based information and guidance.

The fundamental strategic documents that set the guidelines for innovation policy in Lithuania are:

- The Science and Innovation Policy Reform guidelines that were issued by the President's Office and adopted by the Parliament in 2016. This important policy reform initiative was launched to provide significant impetus to the country's innovation performance.
- The Innovation Development Programme 2014–2020. This programme was drafted with a view to mobilising state resources for two purposes: firstly, the improvement of Lithuania's innovativeness, and secondly, the continued development of a competitive economy that is based on high-level knowledge, advanced technologies, skilled and well-qualified human resources and smart specialisation. The programme's strategic goal is to enhance the competitiveness of the Lithuanian economy through the development of an effective system that promotes economic innovation.
- The Smart Specialization Strategy, which is the main programme of state support for R&D in Lithuania. The following R&D and innovation priority areas are defined in the Smart Specialization Strategy: energy and environmental sustainability; agro-innovation and food technologies; health technologies and bio technologies; forming an inclusive and creative society; new production processes; materials and technologies; transport and logistics; ICT.

In order to fully exploit Lithuania's scientific potential, Open R&D Lithuania, a new platform that brings together the main actors in this field, was launched. This network consists of 14 Lithuanian universities, 13 research institutes, and 7 science and technology parks. These institutions have united their high-level R&D intellectual potential, infrastructure and resources in order to provide science-based solutions to problems in business and society. This concentration of resources facilitates the creation of new technologies and products, the

Research Council of Lithuania

The Research Council of Lithuania – an expert institution for scientific development at a national level

mita

The Agency for Science, Innovation and Technology (MITA) – a national innovation agency

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Lithuania is a member of the European Union, the Council of Europe, the Eurozone, the Schengen Agreement, NATO and the OECD.

provision of R&D services, and the growth of the competitiveness of all the partners involved.

Support for R&D and innovative technology sectors has been made a national priority. As a result, between 2006-2013, Lithuania invested €411 million to develop its R&D infrastructure and science valleys. Another €679 million will be put into the further enhancement of Lithuania's R&D capacity over the period 2014-2020.

Research Excellence in Lithuania

Lithuania has been planting seeds which are now bearing fruit, thanks to its longstanding focus on two areas: developing talents and professionals in scientific institutions and investing into modern R&D equipment (more than €300 million has been invested in the last 7-8 years).

The most significant achievements of Lithuanian researchers to date have been in the fields of biotechnology, life sciences and lasers.

The most important factor in the success of the Lithuanian laser industry has been the continuous and diverse collaboration between researchers from scientific institutions and engineers from the private sector. This collaborative approach has become the foundation for constantly growing expertise in cutting-edge laser technologies. The products manufactured by the Lithuanian laser sector are extremely diverse. They include every kind of laser, along with optics, electronics, mechanical laser components, assemblies, elements and more. Lithuania accounts for more than half of the global market of pico-second laser spectrometers. These are widely exported to European countries, the USA, Australia, and Asia.

The laser manufacturing sector in Lithuania has recorded 15–20% year on year growth. Lithuanian laser products are exported to over 100 countries around the world - the largest clients are laboratories and research centres in the EU, the USA and Japan.

Lithuania is known for its world class researchers. For example, Prof. Virginijus Šikšnys from Vilnius University, working with Emmanuelle Charpentier and Jennifer A. Doudna, is credited as one of the inventors of CRISPR-Cas9, a precise nano-tool for editing DNA. These so-called DNA scissors allow scientists to correct disease-causing mutations and use gene therapy to cure serious diseases, such as muscular dystrophy, sickle-cell anemia, and some forms of blindness and cancer.

Another example is Prof. Arminas Ragauskas, a scientist at Kaunas Technology University who has invented two devices for measuring intracranial pressure and blood flow. His inventions enable the fast and safe diagnosis of traumatic brain injuries, strokes, glaucoma and brain tumours. Ragauskas' innovative measuring devices are important tools for treating intracranial injuries, which are among the world's deadliest killers.

Recruitment opportunities

Lithuanian universities and research institutions offer study and employment opportunities to foreign researchers at all levels of their career, from doctoral students through to high level researchers. The Research Council of Lithuania provides a wide range of funding tools for research competence and skills development. It also works to promote international cooperation and activities to internationalise research. Foreign researchers are encouraged to work in Lithuania and, together with Lithuanian researchers, to participate in projects funded by the Research Council of Lithuania and other initiatives.

Enterprise Lithuania – an agency that promotes entrepreneurship and business development

Invest Lithuania – an investment development agency that provides free advice to global companies interested in doing business in Lithuania

1st in CEE for university-business collaboration in R&D

Over 25% of students in Lithuania are enrolled in innovation related studies – Science, Mathematics, Computing and engineering-related fields

Lithuania spent €411 million on developing its R&D infrastructure and science valleys in the period 2006-2013

International recognition

Prof. Virginijus Šikšnys – A Lithuanian biochemist who has received numerous international awards, including the Warren Alpert Foundation Prize, the Novozymes Prize and the shared Kavli Prize in Nanoscience, for his work on the invention of CRISPR-Cas9, a precise nanotool for editing DNA which has sparked a revolution in biology, agriculture, and medicine.

EURAXESS Lithuania portal: http://www.euraxess.lt/

READ OUR EURAXESS countries in FOCUS:

EURAXESS is supported by over 40 countries, of which we profile one in each of our quarterly EURAXESS LAC newsletters. In this edition, we zoom in on LITHUANIA.

Focuses on other EU countries are available here.

So far, we featured the following countries: Albania, the Czech Republic, Estonia, Greece, Hungary, Iceland, Luxembourg, the Netherlands, Portugal, Slovakia, and Spain.

The Center for Physical Sciences and Technology (FTMC), the largest non-university research institution in the Baltic States, offers **PhD studies in physical and technological sciences**. These study programmes are open to international students, and talents from all over the world are very welcome to apply. Joint project collaboration is also promoted, and the FTMC looks forward to arranging exchanges not only of students, but also of scientists and engineers who have already graduated.

As most research is performed in public universities and research institutes, these are also where most research jobs are available. Many of the positions available are published on the EURAXESS webpage.

Funding Opportunities

Research in Lithuania is primarily financed on the basis of quality competition. Financing comes from the state budget, foreign funds (mostly EU), and several institutions.

The Research Council of Lithuania (RCL) is the principal national institution providing competitive R&D funding in Lithuania. Every year, the RCL publishes more than 30 calls for proposals.

Lithuania also offers a wide range of direct and indirect public support for business R&D and technological innovation, aimed primarily at boosting private investment in R&D. State support includes grants and subsidies, financial engineering schemes, public innovation support services, and R&D tax incentives on corporate income tax. In Lithuania, business R&D and innovation support schemes focus on funding R&D, procuring R&D services, and providing (mainly soft) support for innovation. Funding for innovation is mostly focused on start-up and equity instruments. Click here for more information.

Important information for incoming researchers

The Research Council of Lithuania is the EURAXESS Bridgehead Organisation in Lithuania. The EURAXESS network in Lithuania has 5 members: Kaunas University of Technology, Mykolas Romeris University, Vilnius Gediminas Technical University, Vilnius University, and Vytautas Magnus University. EURAXESS provides incoming researchers with up-to-date information related to mobility services.

In 2018, Lithuania launched a new programme aimed at attracting internationally-recognised foreign researchers to carry out research in **smart specialisation areas** and encouraging them to establish themselves in research and higher education institutions. These researchers are given a range of opportunities through this programme, including implementing high-budget research projects; putting together and leading a research team; transferring knowledge and experience; and introducing advanced research methods and new practices. The programme is coordinated by the Research Council of Lithuania.

For employment opportunities, and to participate in projects coordinated by the Research Council of Lithuania, foreign researchers should apply directly to their chosen university or research institute.