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R&D in Lithuania:

Beautiful minds at work

R&D Sector:

- Proactive Governmental policy
- Network of 5 integrated R&D valleys
- Pool of more than 18 000 R&D personnel
- Cash grants by the Government, EU Structural Funds' support, and generous tax incentives

Lithuania is rapidly moving towards its major goal of becoming the Northern Europe Innovation Hub by 2020, as multinationals have been eagerly developing their innovative products in Lithuania and using Lithuania's R&D resources for their own advantage.

Lithuania is increasingly being seen as a prime location for international companies looking to establish R&D and outsourcing operations. Recently a range of companies including IBM, Thermo Fisher Scientific, Moog Medical Devices and others have invested or announced their major investments in Lithuania.

"Our

research partnership with Lithuania presents an opportunity to share skills, assets and resources to achieve common research goals in nanotechnology, healthcare and intellectual property. The joint research centre with a global high-tech giant undoubtedly marks a huge achievement for Lithuania, which is turning into a country creating innovations for the entire world."

Success stories

IBM

In September 2010 IBM and the Government of Lithuania signed a 5-year agreement to carry joint IBM's and Lithuanian scientists' research.

In mid-May 2011 IBM and Swiss Federal Institute of Technology of Zurich (ETH Zurich) opened a Binnig and Rohrer Nanotechnology Center in Zurich (Switzerland), where Lithuanian scientists will focus on integrated photonics and novel photonic materials to create faster computers, improved solar technologies, and nanopatterning security tags for advanced anti-forgery technology.

IBM will collaborate with scientists from Vilnius University, Kaunas University of Technology and Centre for Physical Sciences and Technology.

Lithuania and IBM will share equal rights to the intellectual property, and R&D commercialization, such as patents, IP licenses, products and prototypes that result from the center's activities.

Also, IBM's centre in Haifa, Israel, will as well partner with Lithuanian scientists on a variety of healthcare projects that will aim to provide a better understanding of how to diagnose, and treat life-threatening diseases, such as cardiovascular disease.

MOOG

In 2009, Moog Medical (Subsidiary of Moog, the United States) has acquired a 100-percent holding of the Lithuanian enterprise "Viltechmeda", a company that manufactured, sold and repaired medical equipment, devices for infusion and syringe pumps.

In 2010, the company has announced its plans to invest another EUR 4 million in Lithuania in the near future, to establish a service centre and expand its research and technology branch. The centre will employ 50 Lithuanian professionals in the science and business valley "Santara" located in the capital city and will focus on the development of medical technologies and innovations.

"Investment climate in Lithuania was a very positive experience for us. We were surprised by the support we received here and are confident in our decision to set up our Medical Devices Group base for Europe in Vilnius. We found a highly talented people with an exceptional level of expertise in high-tech industry. Engineering staff we found in Lithuania was a great addition to our global engineering group". Moog

Thermo Fisher

In May 2010 the world leader in serving science Thermo Fisher Scientific Inc. announced the acquisition of a Lithuanian manufacturer and global distributor of enzymes, reagents and kits for molecular and cellular biology research Fermentas for almost EUR 183 million. With headquarters in Burlington, Ontario, and principal operations in Vilnius, Lithuania, Fermentas is now integrated into Thermo Fisher Scientific's Analytical Technologies Segment. Capital investment has reached EUR 202.7 million.

With revenues of more than EUR 7 billion, Thermo Fisher Scientific employs 35,000 employees worldwide and serves customers within pharmaceutical and biotech companies, hospitals and clinical diagnostic labs, universities, research institutions and government agencies, as well as in environmental and process control industries. The company has an ambitious goal to create 1.1% of Lithuania's GDP in 2020.



In mid-May 2011 the second largest global supplier of telecommunications equipment China's Huawei Technologies, the University of Vilnius and Lithuania's mobile operator Omnitel signed a cooperation agreement for setting up a joint research laboratory in fall 2011.

The laboratory will focus on speech recognition, cloud computing, designing applications and other issues. Huawei will offer the LTE (Long Term Evolution - next generation mobile wireless broadband technology) equipment for the laboratory, while Omnitel will provide LTE services.

State Policy to Foster R&D and Innovations

NORWAY

Following the experience of other countries with high achievements in the field of innovation (Finland, Sweden, Norway, the Netherlands, Ireland and Great Britain) in 2010 Lithuania approved the first large-scale Lithuanian Innovation Strategy for the Year 2010-2020 (the Strategy). It is a long-term strategic planning document which sets vision, objectives, goals and results to be achieved in the field of Lithuanian Innovation up to 2020. The goal of the decade's vision is ambitious – Lithuanian summary innovation index should reach the European average in 2020.

The Strategy has reinstated the long-term objective of innovation policy: to build a creative society and create conditions for the development of entrepreneurship and innovation. The implementation of this objective is intended along four principal directions:

- enhancing the Lithuanian integration into the global market ("Lithuania without borders");
- educating a creative and innovative society;
- developing broad-based innovation;
- implementing a systematic approach to innovation.

The Strategy distinguishes the high-potential sectors of

- biotechnologies and laser technologies
- industry of electricity and optical equipment
- clean technologies
- future energetic
- creative industries
- welfare and wellness

Immediate to the Strategy Lithuania drafted and approved the Implementation Action Plan for the year 2010-2013 (the Action Plan) defining the specific measures to attain the objectives established. The Action Plan envisages diverse financial instruments to promote the business and science sector co-operation, develop innovation activities of enterprises, streamline the services of the public sector, improve the competence and capacities of human resources, as well as numerous non-financial measures that will contribute to the development of the environment favourable to innovation.



5 Integrated R&D and Business Valleys

The Government of the Republic of Lithuania launched the development and invested EUR 1 billion into the network of 5 world-class integrated R&D and business valleys constructed in country's three largest cities – the capital Vilnius, 2nd largest city and industrial centre Kaunas and the seaport city Klaipėda.

Public investments are used for the development of engineering infrastructure of valleys and establishment of the physical infrastructure of scientific research, technology parks and incubators as well as development of technology transfer, IPR exploitation mechanisms and access to finance (including VC funds).

Within the next 4–5 years the valleys will put in place infrastructure fully equipped for research and technological development. The valley facilities will be used by new and young innovative companies, and they will become a place for the creation of innovative products, business entities will be able to make use of the most state-of-the art technologies, patent the results of their scientific and experimental research, and develop product prototypes. Researchers engaged in scientific and experimental activities will be provided best possible facilities to coordinate the commercial research and research activities.



		Santara Valley (Vilnius)	Biotechnology Innovative Medical Technologies, Molecular Medicine Ecosystems and Sustainable Development Informatics and Communication Technologies	800 scientists and researchers	
Advantages of R&D valleys in Lithuania		Sunrise Valley (Vilnius)	Laser and Light Technologies Material Sciences and Nanotechnologies Semi-conductor Physics, Electronics and Organic Electronics Civil Engineering, Renewable Energy and Environmental Technologies Life Sciences (Biotechnology, Genetics, Microbiology) ICT and Creative Industries	~1000 scientists and researchers	
Access to skills and networking – Concentration of scientists, researchers, developers and university academia, close collaboration of knowledge-intensive businesses with science and study institutions, opportunity to be co-located with other companies in the same sector (clusters) and region		Santaka Valley (Kaunas)	Sustainable Chemistry and Pharmaceutics Future Power Engineering Information and Communication Technologies Mechatronics and Related Electronics Technologies and Biomedical Engineering	~2300 scientists and researchers	
Research excellence – Open access labs, R&D projects supported by EU/state, application of research results in industry and business High-quality infrastructure and premises – Infrastructure for research, innovation and new		Nemunas Valley (Kaunas)	Agro Biotechnology Food Technology, Safety and Health Forestry Bio Energy	~1000 scientists and researchers	
technology development and comfortable conditions to establish new technology-oriented businesse – offices, labs, business incubators. Internationalization – Increased international competitiveness	:S	Maritime Valley (Klaipėda)	Marine Environment Coastal Research Maritime Technologies	~600 scientists and researchers	

Environmental Engineering

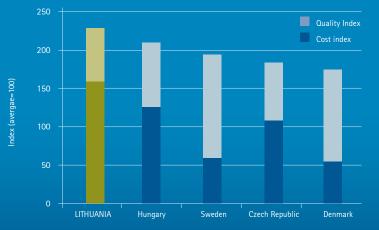
BALTIC

SEA

CASE STUDY – Life Science R&D Centre benchmark by fDi Intelligence from the Financial Times Ltd (2011)

fDi Benchmark – Location Attractiveness Index

The location attractiveness index shows the overall attractiveness of the 5 selected locations for the Life Science R&D centre profile. The ratio of quality to cost (Quality:Cost) is (50:50). Head count: 50.



Source: fDi Intelligence, from the Financial Times Ltd (2011)

Innovations and Inventions by Lithuanian Researchers

World's first tunable wavelength laser NT200 produced by Lithuanian ISO9001 certified manufacturer of lasers, laser systems and components for R&D and industrial applications EKSPLA won the world's best Scientific Laser award at the prestigious 2010 Prism Awards for Photonics Innovation in San Francisco.

The medicine against cancer TevaGrastim® developed by Lithuanian pharmaceuticals researchers and producers is the internationally acknowledged medicine which is 25-35 % cheaper than a similar treatment already on the market, but just as effective.

Lithuanians are authors of a **3 times quicker way to cut genes** using enzymes than the best previously known methods.

"Lithuania is a perfect place to generate and implement new ideas- a peaceful and tension-free environment conducive to business, with engineering potential and vast possibilities for business and science collaboration, plus a good choice of skilled labour and managerial staff". Wally Olins, Saffron Brand Consultants

"Lithuanians are authors of a cheaper, but no less effective, version of an existing medicine for treating cancer Teva-Grastim® and of a 3 times quicker way to cut genes using enzymes than the best previously known methods. So far, our scientists are the only ones in Central and Eastern Europe to have pulled off such a high-level project".

> Algirdas Bumelis, Head of Sicor Biotech, inventor of TevaGrastim®

R&D Personnel

40 % of the Lithuanian talent is concentrated in science and technology with 50 % of researchers below the age of 45. Lithuania has a pool of more than 18.000 R&D researchers and scientists in various fields.

R&D personnel by posi	ition	R&D personnel by education		R&D personnel by field of science			
Total:	18 428	Total:	18 428			Technicians and	
Researchers	13 827	Scientific degree (habilitated doctors, doctors)	6 141		Researchers	equivalent staff	
Researchers with scientific	6 418	Higher (university)	10 158	Total:	12 342*	1 510*	
degree or an academic title	0 410	Higher (college)	352	Humanities sciences	2 915	278	
Technicians and equivalent staff	1 837	Post-secondary tertiary	686	Social sciences	2 819	102	
	0.704	Other (special secondary,	1 091	Physical sciences	1 855	214	
Other supporting staff	2 764	secondary, etc.)	1031	Technological sciences	2 341	306	

*Other

Higher (university)	10 158	Total:	
Higher (college)	352	Humanities sciences	
Post-secondary tertiary	686	Social sciences	
Other (special secondary,	1 091	Physical sciences	
secondary, etc.)	1031	Technological sciences	
		Biomedical sciences	
		Agricultural sciences	
er R&D supporting staff is not br by field	oken down of science.	Natural sciences	
Course Statistics	Madiaal salanaas		

Source: Statistics Lithuania Medical sciences

Average year	ly gross salaries	of R&D personr	iel, EUR

	Lithuania	Northern Ireland	Poland	Slovakia	Czech Republic	Hungary
Chemical Engineer (3-5 years' experience)	12,000	38,000	16,500	12,000	17,000	15,500
Pharmaceutical Microbiologist	10,000	33,000	14,250	16,000	19,000	20,000
Biochemist	11,000	42,000	13,500	16,000	16,500	16,000
Clinical Operations Manager	28,000	48,000	65,000	30,000	21,500	40,000
Clinical Research Officer	21,000	36,000	30,000	12,000	15,000	30,000
Lab Manager (pharma)	17,500	40,000	17,250	24,000	21,500	20,000
Lab Manager (non pharma)	14,000	38,000	17,250	20,000	19,000	18,000
Lab Technician	8,500	21,000	12,750	10,000	12,000	11,000
Lab Assistant	7,000	19,000	10,500	8,400	9,500	10,000

Source: Salary Survey 2011 by Grafton Recruitment

2 412

425

724

1 263

610

284

207

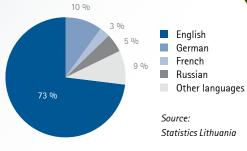
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and the

Lithuania has one of EU's most educated people and is also among the top 5 EU Member States with the best multilingual skills:

- 90 % of Lithuanians are able to participate in a conversation in a language other than their mother tongue. The EU-25 average is only 50 %.
- 50 % of the population speak two foreign languages
- 90 % of Lithuanians are able to speak Russian, almost 40 % speak English, and around 20 % know the German language

Languages studied in 2010



Financial Support for R&D Investment Projects

Financial support for R&D development projects includes cash grants by the Government, EU Structural Funds' support, as well as tax incentives.

INVEST LT+ cash grants by the Lithuanian Government

Foreign investors interested in locating a R&D business in Lithuania as well as foreign companies already operating on the Lithuanian market but eager to further expand may apply for INVEST LT+ financial investment support of up to EUR 3.5 million per investment project.

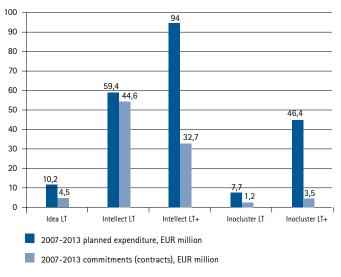


More than EUR 600 million have been allocated from the EU Structural Funds 2007-2013 for Lithuania to develop Lithuania's R&D sector — namely, preparation of specialists of the highest qualification, modernization of the R&D infrastructure, as well as creation of favorable conditions for the cooperation between business enterprises and scientific institutions while promoting cutting-edge technology transfer and implementation of innovations.

A total of EUR 218 million from the EU Structural Funds' support has been assigned for business enterprises' R&D projects in Lithuania (investment into development of new products).

R&D businesses may apply for support from 5 finance programs:





Source: Ministry of Economy of Lithuania

Support programme:	Idea LT
Supported activities	Identification of possibilities for the product innovation. The measure is earmarked to support small and medium-size enterprises to facilitate their efforts to prepare for the development of technologically new products, processes or services (development of research and development).
Available funds	EUR 10,2 million
Maximum amount of support per project	~EUR 40 thousand
Percent of total costs reimbursed to investor by European Union (Support intensity level)	 75 % for research related TFS 50 % for development related TFS
Duration of the project	3-18 months
Eligible costs	 Travel costs related to TFS Subcontracting of consultancy and research services related to TFS
Support programme:	Intellect LT
Supported activities	Establishment of the basis for the development of new products (R&D). The measure has been designed to promote the development of enterprises, support investment into the establishment of the infrastructure necessary for the creation of new products and the creation of new positions of researchers, technicians, testers, and similar highly qualified personnel.
Available funds	EUR 59,4 million
Maximum amount of support per project	EUR 1 million
Support intensity level	Research activities: up to 50-65 % for all companies Development activities: • 45-60 % - for small companies • 35-50 % - for medium companies • 25-40 % - for big companies
Duration of the project	Up to 36 months
Eligible costs	 R&D staff wages R&D related travel costs Depreciation costs of R&D instruments, equipment and buildings (long-term assets) R&D services, technical knowledge, licenses (up to 75 % of eligible expenses) Costs for materials, components, other items for R&D activities (short-term assets) Overheads (up to 20 % of eligible expenses)
Support programme:	Intellect LT+
Supported activities	Establishment of the basis for the development of new products (R&D). The measure has been designed to promote the development of enterprises, support investment into the establishment of the infrastructure necessary for the creation of new products and the creation of new positions of researchers, technicians, testers, and similar highly qualified personnel.
Available funds	EUR 94 million
Maximum amount of support per project	EUR 6 million
Support intensity level	 70 % - for small companies 60 % - for medium companies 50 % - for big companies
Duration of the project	Up to 36 months
Eligible costs	Construction costs RRD equipment, instruments IT software and hardware Patents, licenses, trade marks

Support programme:	InoCluster LT
Supported activities	Establishment and operations of clusters*. The purpose of the measure is to initiate, promote and accelerate the cooperation between branches and sectors of Lithuanian industry, by forming prospective cooperation models and forms (clusters), and, as a result, increase their international competitiveness.
Available funds	EUR 7,7 million
Maximum amount of support per project	EUR 0,5 million
Percent of total costs reimbursed to investor by European Union (Support intensity level)	50 %
Eligible costs	 Staff wages (up to 4 persons) Travel costs (up to 25 % of eligible costs) Rent of facilities, depreciation costs External services necessary for running a cluster Short-term assets Overheads (up to 10 % of eligible costs)
Support programme:	InoCluster LT+
Supported activities	Development of the infrastructure of innovative clusters. The purpose of the measure is to promote and accelerate the cooperation between Lithuanian sectors and branches of industry, enhance international competitiveness by creating an environment conducive to the proliferation of knowledge and technologies.
Available funds	EUR 46,4 million
Maximum amount of support per project	EUR 12 million
Percent of total costs reimbursed to investor by European Union (Support intensity level)	 70 % - for small companies; 60 % - for medium companies; 50 % - for big companies.
Eligible costs	Construction of RED facilities In hardware and software Equipment, instruments necessary to develop cluster infrastructure Training infrastructure buildout costs

* Cluster is considered as a group of at least 5 independent public and/or private entities having common economic interest and participating in the same value chain. The Cluster shall operate in one of the following areas: manufacturing of machines and equipment, lasers or their components, IC7, chemical industry, biotechnology, wood processing industry etc.

Source: Ministry of Economy of Lithuania

Tax incentives for investments into R&D*

- Triple deduction: The costs of R&D, except for depreciation or amortisation costs of fixed assets, shall be deducted three times from income for the tax period during which they are incurred where the scientific research and/or experimental development works carried out are related to the usual or intended activities of the entity which generate or will generate income or economic benefit.
- Super-accelerated depreciation: Depreciation or amortisation costs of fixed assets used to carry out R&D shall be deducted from income in accordance with the procedure laid down in Law on Corporate Income Tax of the Republic of Lithuania. The terms of depreciation and amortisation applied to such fixed assets are reduced, namely, 2 years instead of 3-8 years to respective assets (machinery, software etc.).

Reduction of taxable profits: The entity carrying out an investment project may reduce the taxable
profits by the amount of the actual costs incurred for the acquisition of the assets during the tax period.
The taxable profits shall be reduced if the assets are necessary for the entity to carry out the investment
project and:

• the assets are attributable to the class of fixed assets:

- plant and machinery,
- installations (structures, wells, etc.),
- computer and communications equipment (computers, computer networks and software),
- software,
- acquired rights, and
- the assets have not been used and were produced not earlier than two years ago (as calculatedfrom the date when such fixed assets were put into use).

Taxable profits calculated for each tax period may be reduced by 50 %. Where the amount of costs exceeds 50 % of the amount of taxable profits calculated for a tax period, the costs exceeding this amount may be carried forward to reduce the amounts of taxable profits calculated for the four subsequent tax periods, respectively reducing the amount of the costs carried forward. The taxable profits may be reduced only by the costs incurred during the tax periods of 2009–2013.

* Incentives are of general guidance and may differ in specific circumstances.

Information and Service Point-Invest Lithuania

INVEST LITHUANIA is a team of more than 30 professionals actively working to facilitate foreign investors in Lithuania, as well as to spread the word all around the globe about immense business opportunities on the biggest market among the Baltic countries. INVEST LITHUANIA is ready to make your dreams turn into a real success story of your business in Lithuania – the Northern Europe Innovation Centre 2020.

The agency has helped such companies as BARCLAYS BANK (UK), WESTERN UNION (USA), IDEAL INVENT TECHNOLOGIES (India), SYSTEMAIR (Sweden), MOOG (USA), SEB (Sweden), CIE AUTOMOTIVE (Spain), IBM (USA), FINNFOAM (Finland), INDORAMA (Thailand), DEMATIC (Germany), RGE (UK), ALBRIGHT INTERNATIONAL (UK), CHRISTIE TYLER (UK), MARZOTTO (Italy), METSO PAPER (Sweden), INVACARE HOGH (Denmark), GLENDALE CABINS (UK) and many others to start doing business in and with Lithuania.

INVEST LITHUANIA. Working answers.

"I have worked with a number of groups such as yours over the years and I can safely say that the professionalism, flexibility and speed of execution was without doubt the best I have experienced."

David Larkworthy, SVP Head of Operating Strategy, EMEA-APAC, Western Union Financial Services

"When we started collaborating with the Ministry of Economy and INVEST LITHUANIA, we received a very favourable standpoint and much interest as well as support, and decided not to look elsewhere."

Premkumar Bhagwatsaran, CEO of Ideal Invent Technologiess





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