

The Lithuanian R&I Ecosystem

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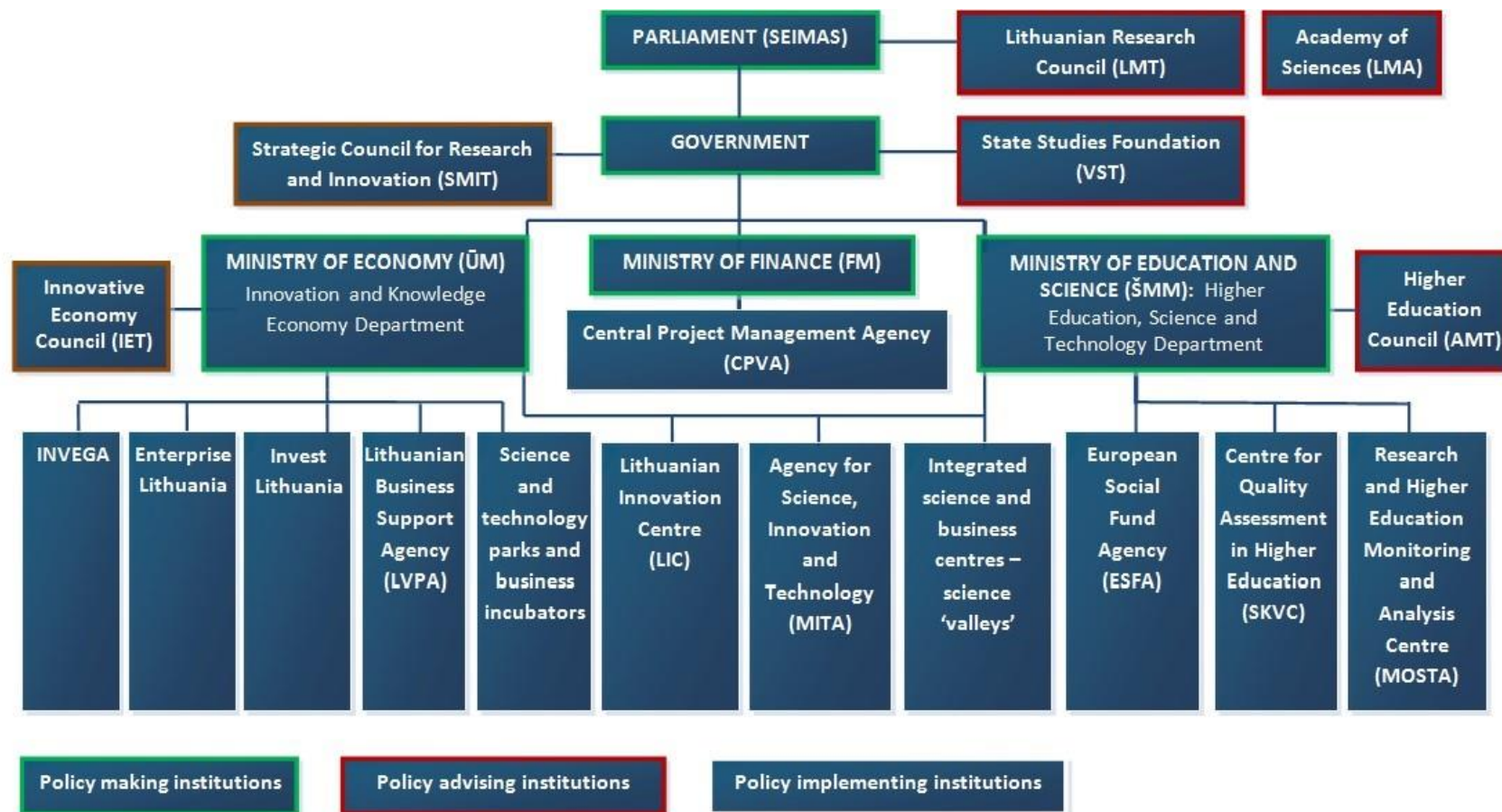


CHARACTERISTICS OF ECOSYSTEM

- Evolving
 - Organic
 - Diverse
 - Symbiotic
- Complex
 - Self-organizing
 - Self-regulating
 - Adaptive
- Fragile or Resilient?



R&I POLICY ORGANIZATIONAL STRUCTURE

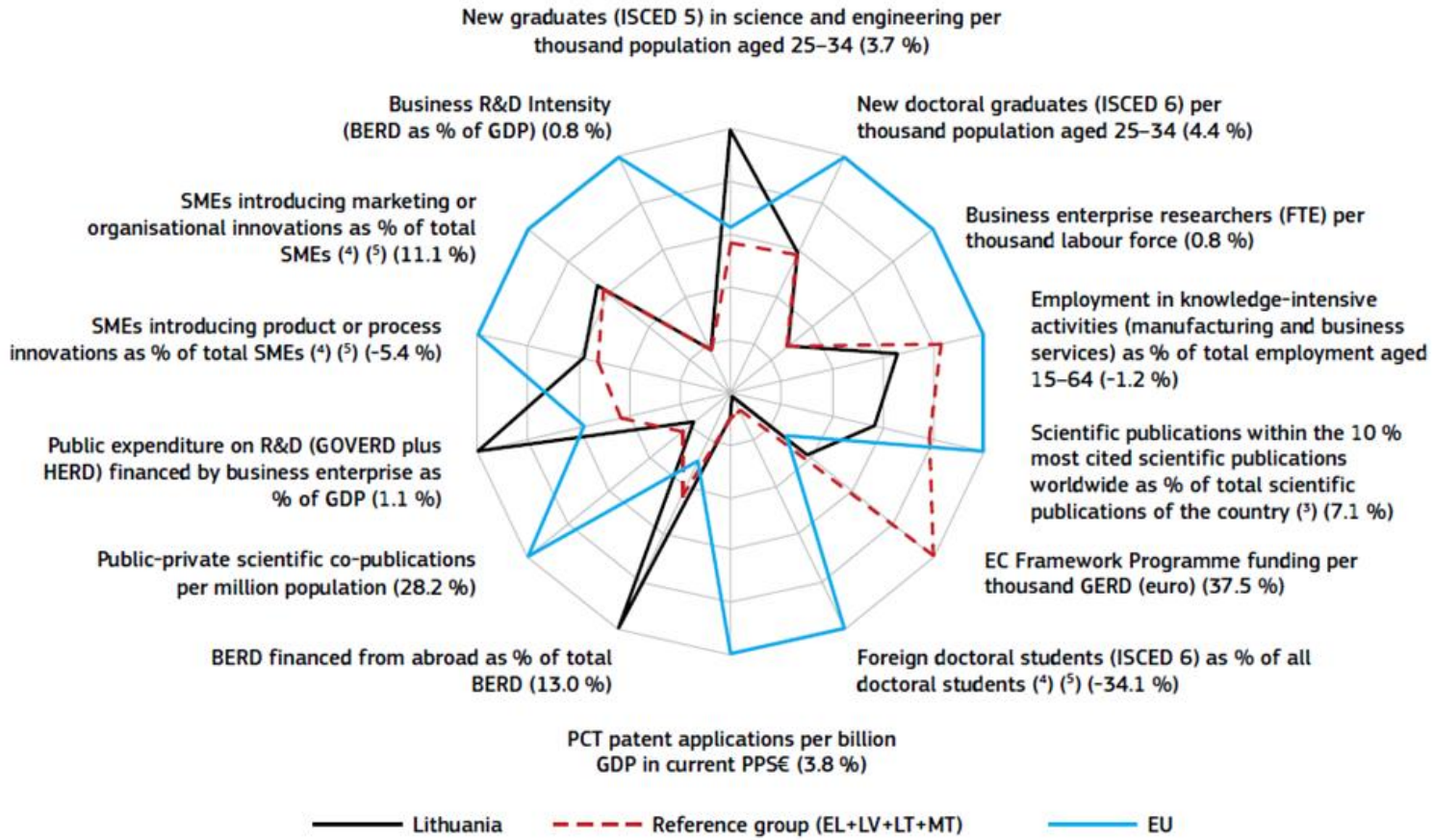


KEY INDICATORS OF R&I PERFORMANCE

| | |
|--|---|
| <p><i>R&D intensity</i></p> <p>2012: 0.90% (EU: 2.07 %; US: 2.79 %) 2007-2012: +2.2 % (EU: 2.4 %; US: 1.2 %)</p> | <p><i>Excellence in S&T</i></p> <p>2012: 14.1 (EU: 47.8; US: 58.1) 2007-2012: +1.2 % (EU: +2.9 %; US: -0.2)</p> |
| <p><i>Innovation Output Indicator</i></p> <p>2012: 57.9 (EU: 101.6)</p> | <p><i>Knowledge-intensity of the economy</i></p> <p>2012: 32.7 (EU: 51.2; US: 59.9) 2007-2012: +1.7 % (EU: +1.0 %; US: +0.5 %)</p> |
| <p><i>Areas of marked S&T specialisations:</i></p> <p>Other transport technologies (other than automobiles and aeronautics), construction technologies, energy, and food</p> | <p><i>HT + MT contribution to the trade balance</i></p> <p>2012: -0.8 % (EU: 4.23 %; US: 1.02 %) 2007-2012: n.a. (EU: +4.8 %; US: -32.3 %)</p> |

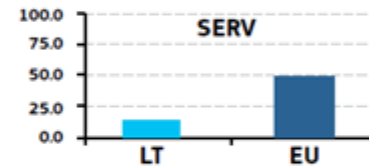
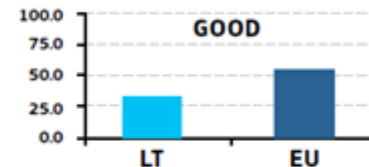
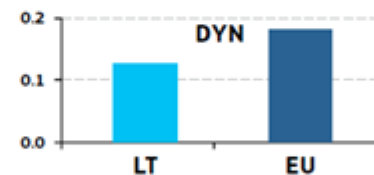
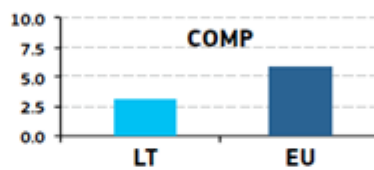
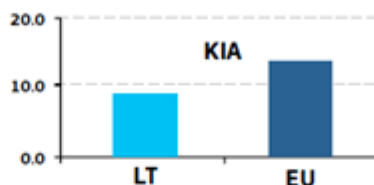
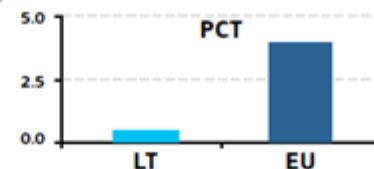
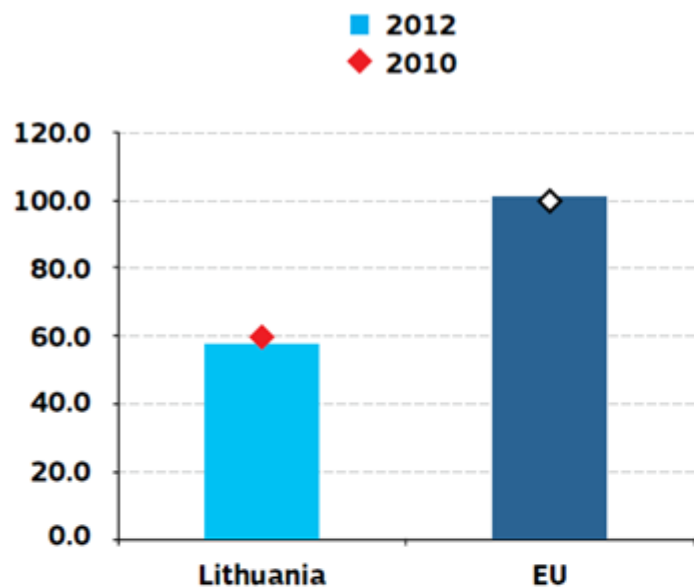
Research and Innovation performance. Innovation Union progress at country level in the EU. 2014

BUILDING EFFECTIVE R&I SYSTEM ON THE ERA



Source: DG Research and Innovation – Unit for the Analysis and Monitoring of National Research Policies
Data: DG Research and Innovation, Eurostat, OECD, Science-Matrix/Scopus (Elsevier), Innovation Union Scoreboard.
Notes: ⁽¹⁾ The values refer to 2012 or to the latest available year.
⁽²⁾ Growth rates which do not refer to 2007–2012 refer to growth between the earliest available year and the latest available year for which comparable data are available over the period 2007–2012.
⁽³⁾ Fractional counting method.
⁽⁴⁾ EU does not include EL.
⁽⁵⁾ EL is not included in the reference group.

INNOVATION OUTPUT INDICATOR



Source: DG Research and Innovation – Unit for the Analysis and Monitoring of National Research Policies

Data: Eurostat, OECD, Innovation Union Scoreboard 2014, DG JRC

Notes: All data refer to 2012 except PCT data, which refer to 2010.

PCT = Number of PCT patent applications per billion GDP, PPS.

KIA = Employment in knowledge-intensive activities in business industries as % of total employment.

DYN = Innovativeness of high-growth enterprises (employment-weighted average).

COMP = Combination of sub-components GOOD and SERV, using equal weights.

GOOD = High-tech and medium-high-tech products exports as % total exports. EU value refers to EU-28 average (extra-EU = 59.7 %).

SERV = Knowledge-intensive services exports as % of total service exports. EU value refers to EU-28 average (extra-EU = 56 %).

ECOSYSTEM COMPONENTS

- Valleys
- Clusters
- Technology parks
- Research institutions
- Open access centers
- Business incubators
- Associations
- Companies....



Illustration by Jeff Grader / property of Delta Education

There is a need to build

- commonly agreed vision of the desired results
- a unified approach
- clear alignment with national R&I goals

EFFECTIVENESS OF LITHUANIAN R&I SYSTEM

- The main strengths of Lithuania's R&I system remain the size of its public research sector and the good supply of new graduates.
- The weaknesses reveal scarce private and public R&D investments undertaken in a dispersed way and currently not linked to a smart specialisation strategy.

Key issues pointed out by different international evaluations:

- dispersed research resources,
- low R&D funding,
- R&D relies to a larger extent than the EU average on EU funds, be it SF or FP7 funding;
- modest R&D results
- weak internationalization of the national research system.

DEVELOPMENT OF LITHUANIAN R&I ECOSYSTEM THROUGH RIS3

New drivers of Change and New Critical Success Factors

- Focus on impact
- More innovation out of research
- User-driven development
- Innovation strategies based on RIS3
- From traditional clusters and triple helix to innovation ecosystems
- Not sectorial approach – breaking the borders
- Multifinancing
- Monitoring and evaluation system keeping the process alive and open

RIS3 PRIORITIES

Agro-innovation and food technologies

- Safer food and sustainable usage of biomaterials
- Functional food
- Innovative development, improvement and processing of biological raw materials (biorefinery)

Energy and sustainable environment

- Smart systems for energy efficiency, diagnostic, monitoring, metering and management of generators, grids and customers
- Energy and fuel production using biomass/waste and waste treatment, storage and disposal
- Technology for the development and use of smart low-energy buildings – digital construction
- Solar energy installations and technologies for using them for the power generation , heating and cooling

Health technologies and biotechnology

- Molecular technologies for medicine and biopharmaceutics
- Advanced applied technologies for individual and public health
- Advanced medical engineering for early diagnostics and treatment

Inclusive and creative society

- Modern self-development technologies and processes promoting formation of creative and productive individuals
- Technologies and processes for the development and implementation of breakthrough innovations

Novel production processes, materials and technologies

- Photonic and laser technologies
- Functional materials and coatings
- Structural and composite materials
- Flexible technological systems for product development and fabrication

Transport, logistics and information and communication technologies

- Advanced electronic content, content development technologies and information interoperability
- ICT infrastructure, cloud computing solutions and services
- Smart transport systems and ICT
- Technologies/models for the international transport corridors' management and integration of modes of transport

RIS3 FINANCING



Goal:

Increase R&I activities in private sector – 326 mEUR

Goals:

Enhance the usage of existing and newly developed R&D infrastructure – 197 mEUR
Increase the scope of commercialization and technology transfer – 156 mEUR

CHALLENGES AHEAD

- Implementation
- Successful coordination
- Keeping the process open and alive
- Having all the stakeholders involved
- Mindset/mentality is the most crucial success factor



Thank you

