

# THE INNOVATION HUB IN THE HEART OF EUROPE



## IN A FEW WORDS...

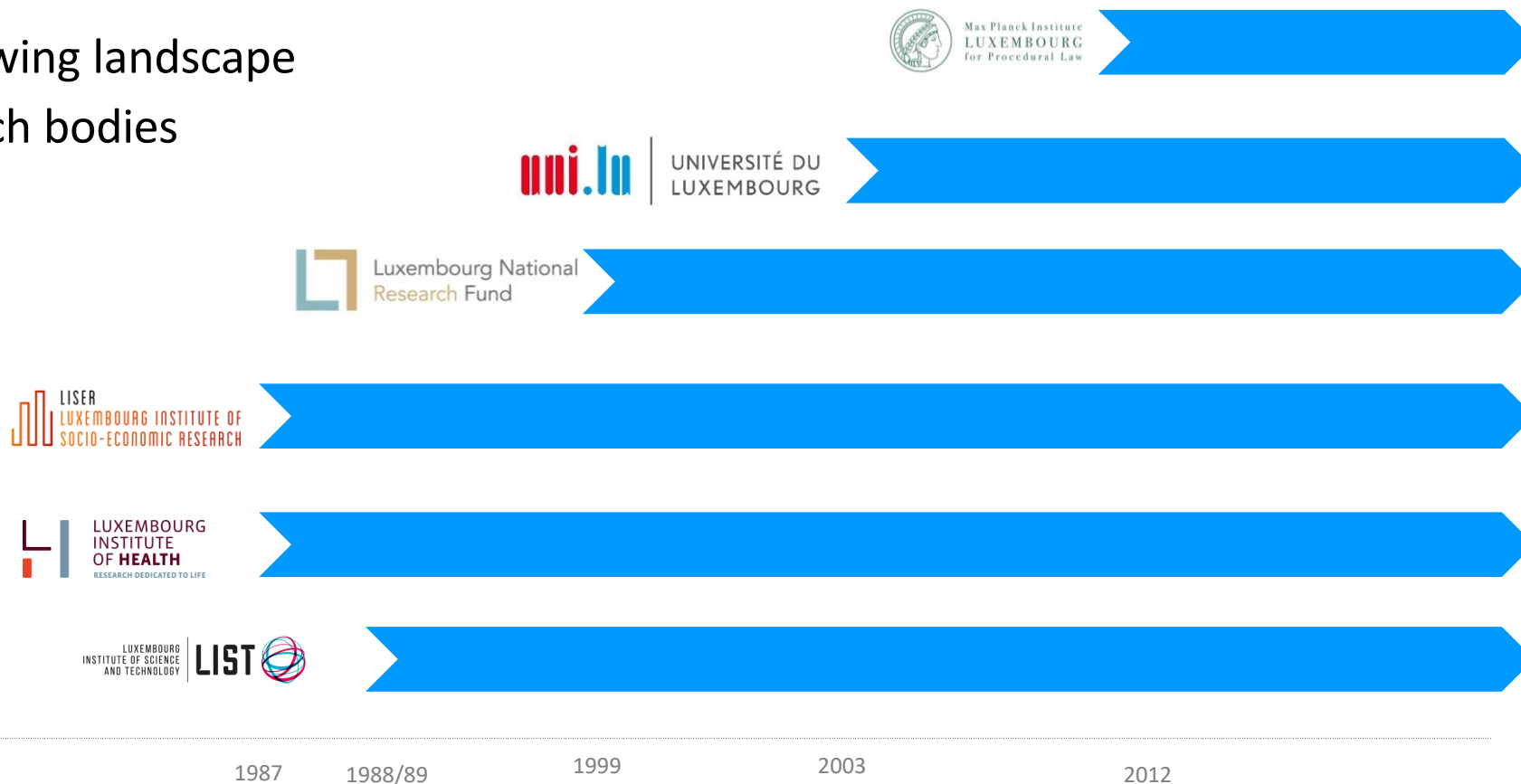
Luxembourg is reinventing itself – again.

Once a leading steel producer and later a global financial centre, Luxembourg is now also an international academic hub fostering research and innovation. This nation's research landscape – sustained by robust state funding and public support – makes it an attractive place to excel.



# OUR STORY

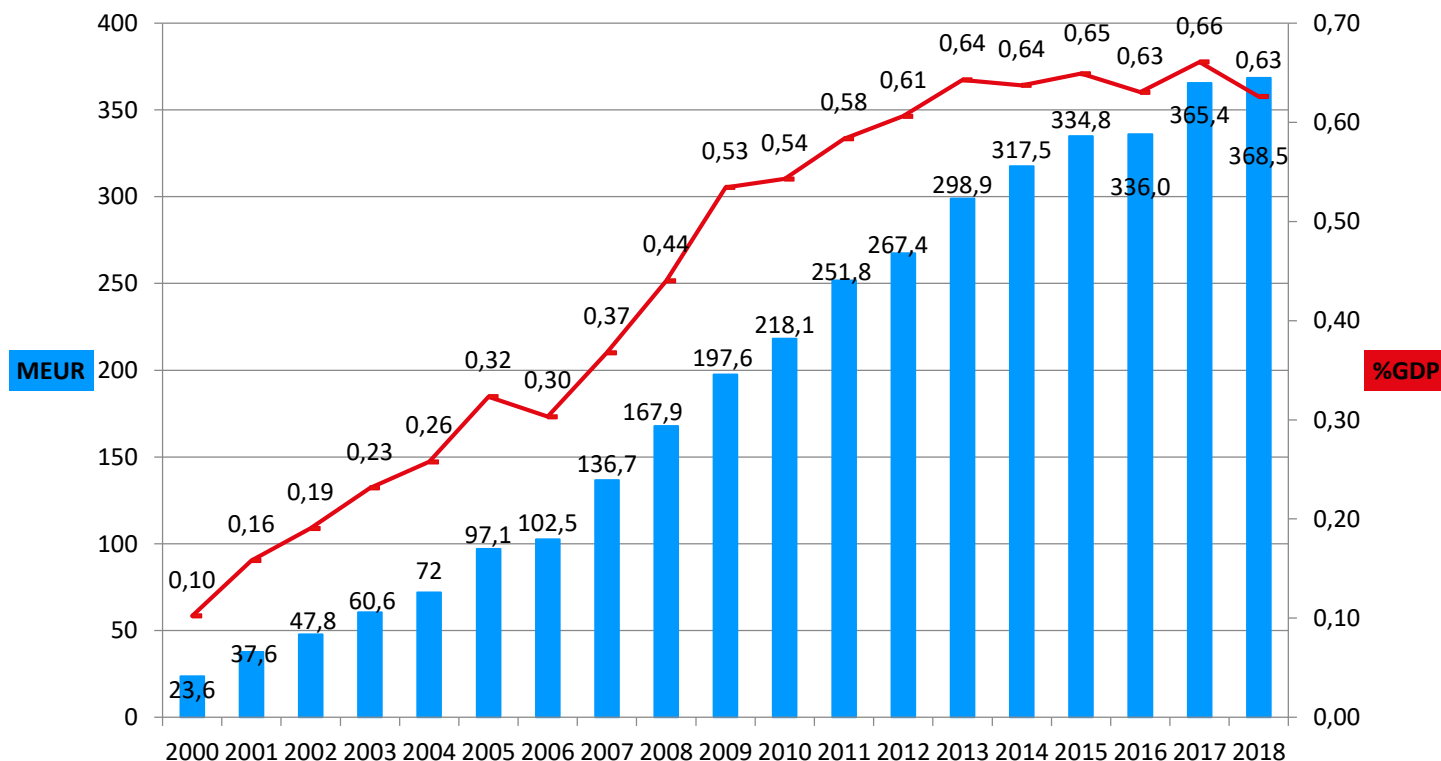
- A fast growing landscape of research bodies





# A PROVEN GOVERNMENTAL PRIORITY TO DEVELOP R&D

Luxembourg Public Investments in Public and Private R&D



- Sustained **funding growth** from successive governments - from €24 million in 2000 to €1.5 billion for the 2018-2021 period
- **Objective:** raise public spending on R&D, for both the public and the private sector, to 1% of GDP by 2023



## AN ATTRACTIVE PLACE TO EXCEL!

Government support has built an attractive and fertile research landscape, gaining high international recognition in specific domains:

- Materials science
- Health
- ICT
- Data science
- Education

**13 ERC grants were awarded  
between 2014 and 2019**





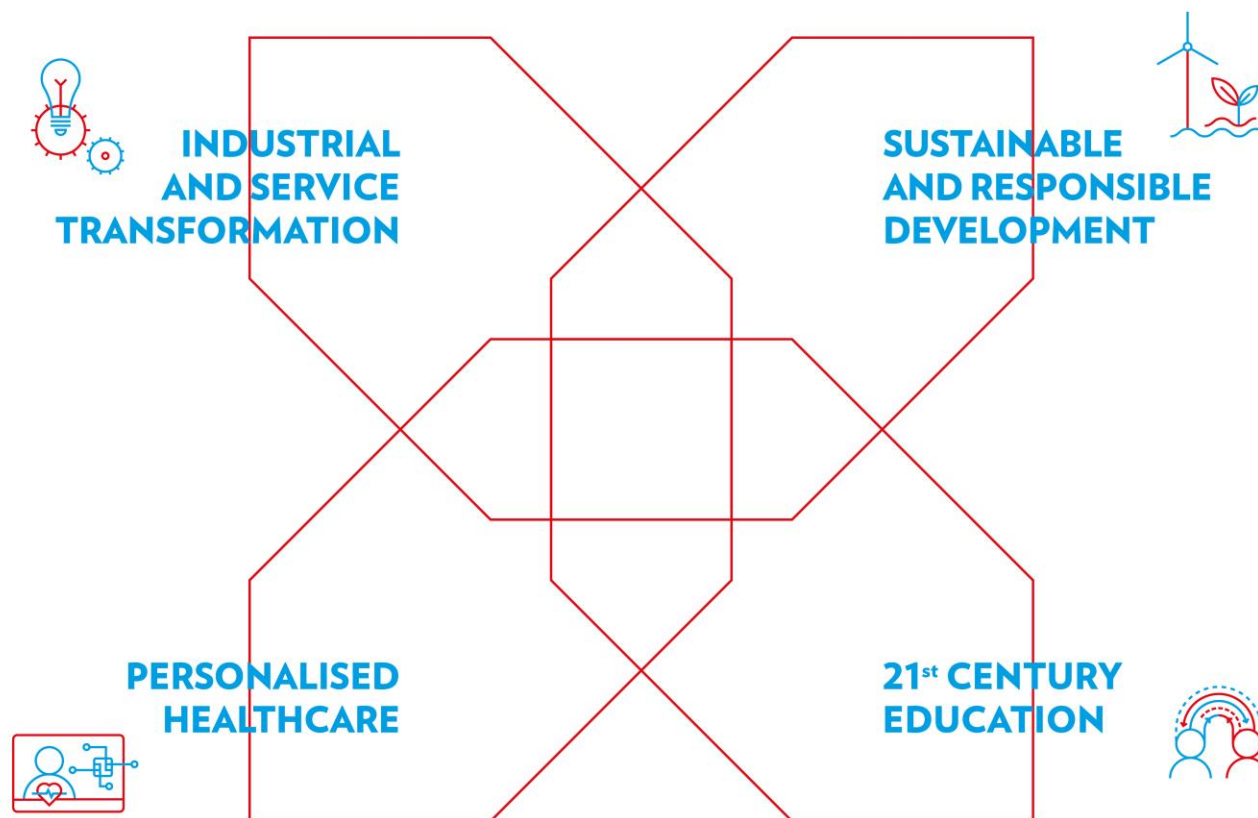


# AN ATTRACTIVE PLACE TO EXCEL!

National research and innovation strategy approved by the Government in December 2019

Mission: make Luxembourg a sustainable, knowledge-driven, diverse and trusted digital society by 2030

Four interdisciplinary research priority areas to fulfill the mission





# The University of Luxembourg

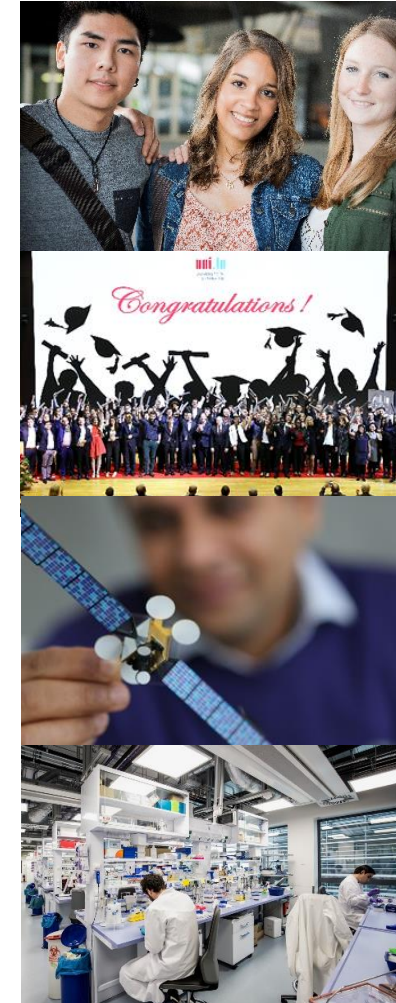


# FACTS AND FIGURES



## Towards an international leader in selected areas of research

- 6,400 students, thereof 1,650 Master students and 900 PhD candidates
- 14 Bachelor and 42 Master degree programmes, 4 doctoral schools
- 270 faculty members, 500 researchers
- 54% students from abroad, multilingual teaching and mandatory semester abroad
- 32 chairs since 2005, thereof 12 ERC chairs; 70 Horizon2020 grants
- Ranked **No.17** (THE Young Universities) and **No.1** for its international outlook
- Ranked **No.14** in the NATURE index 2018 of “rising stars”\*

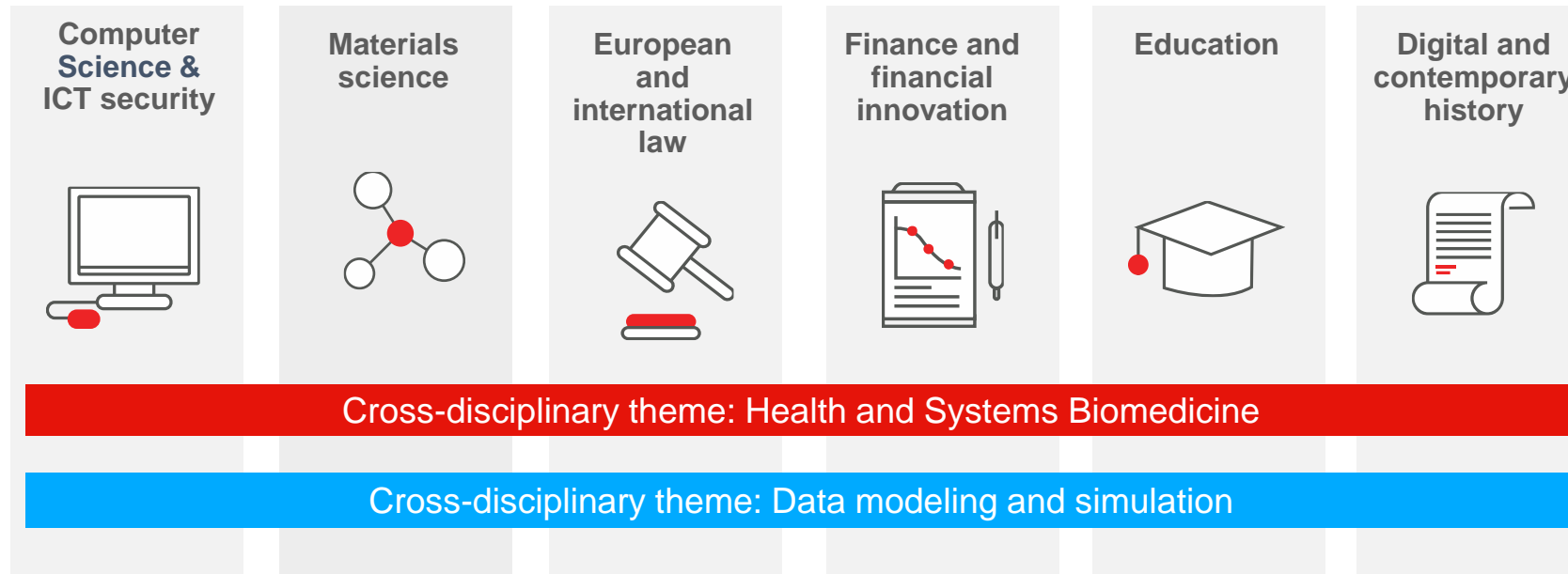


\*universities younger than 30 years with increasing publication numbers in first-rate scientific journals





# INTERDISCIPLINARITY



>> On the agenda: SPACE and GREEN FINANCE

LUXEMBOURG  
INSTITUTE OF SCIENCE  
AND TECHNOLOGY



# The Luxembourg Institute of Science and Technology







# MISSION

Created in 2015 | Active in 3 fields

Environment

Informatics

Materials



# FACTS & FIGURES

## Human resources

**600** employees

**35%** women

**45** nationalities

**80** people recruited

**75%** researchers or Innovation experts

**110** PhD students hosted





# THE NEW research and technology organisation

**LIST**

**Partners:**

- ArcelorMittal
- Villeroy & Boch
- ZEISS
- SES<sup>^</sup> your satellite company
- GOODYEAR
- TOYOTA
- ThermoFisher SCIENTIFIC
- CERATIZIT
- POLYgone
- TRALUX
- esa
- probiotic Group
- Carlex
- ROQUETTE
- BLUE HORIZON
- hap2U
- ROTAREX
- KLEOS
- IEE
- SIEMENS
- MET-LUX
- AIXTRON
- CIRCUIT FOIL LUXEMBOURG
- eurofoi
- CRM GROUP

**Government Support:**

- CNPD
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de l'Économie
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de la Digitalisation
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de l'Enseignement supérieur et de la Recherche
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de l'Environnement, du Climat et du Développement durable
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de l'Agriculture, de la Viticulture et du Développement rural
- LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG - Ministère de l'Énergie et de l'Aménagement du territoire

**Other Support:**

- Fonds National de la Recherche Luxembourg
- UNIVERSITÉ DU LUXEMBOURG
- LISEF
- LUXEMBOURG INSTITUTE OF HEALTH



# The Luxembourg Institute of Health



# Luxembourg Institute of Health (LIH) in a nutshell



**LIH performs outstanding research for the benefit of patients**



**3** research departments  
& **1** biobank



**383**  
employees\*



**> 370**  
ongoing projects\*



LIH ranks **#15** in the world  
& **#7** in Europe

\* 2018 figures



# LIH tomorrow: Vision and mission

## Towards a centre of excellence aiming at impacting on patients' needs.



- LIH diseases model and approaches:
- Cancer and Immunological diseases
  - Population Health



Set up to lead the way in a new era of data driven, patient based research



- Transversal, translational bed-to-bench-to-bed programmes:
- Connecting unmet needs of patients in hospitals with cutting edge biomedical research
  - Driving new therapy developments forward into a clinical trial dimension





# The Luxembourg Institute of Socio-Economic Research



# VISION AND MISSION

LISER is a **socio-economic research institute internationally** recognised, focused on **societal challenges**.

Through its **multi and interdisciplinary research**, LISER contributes in an **active and focused way** to a **sustainable and inclusive knowledge society** at **national and international levels**.

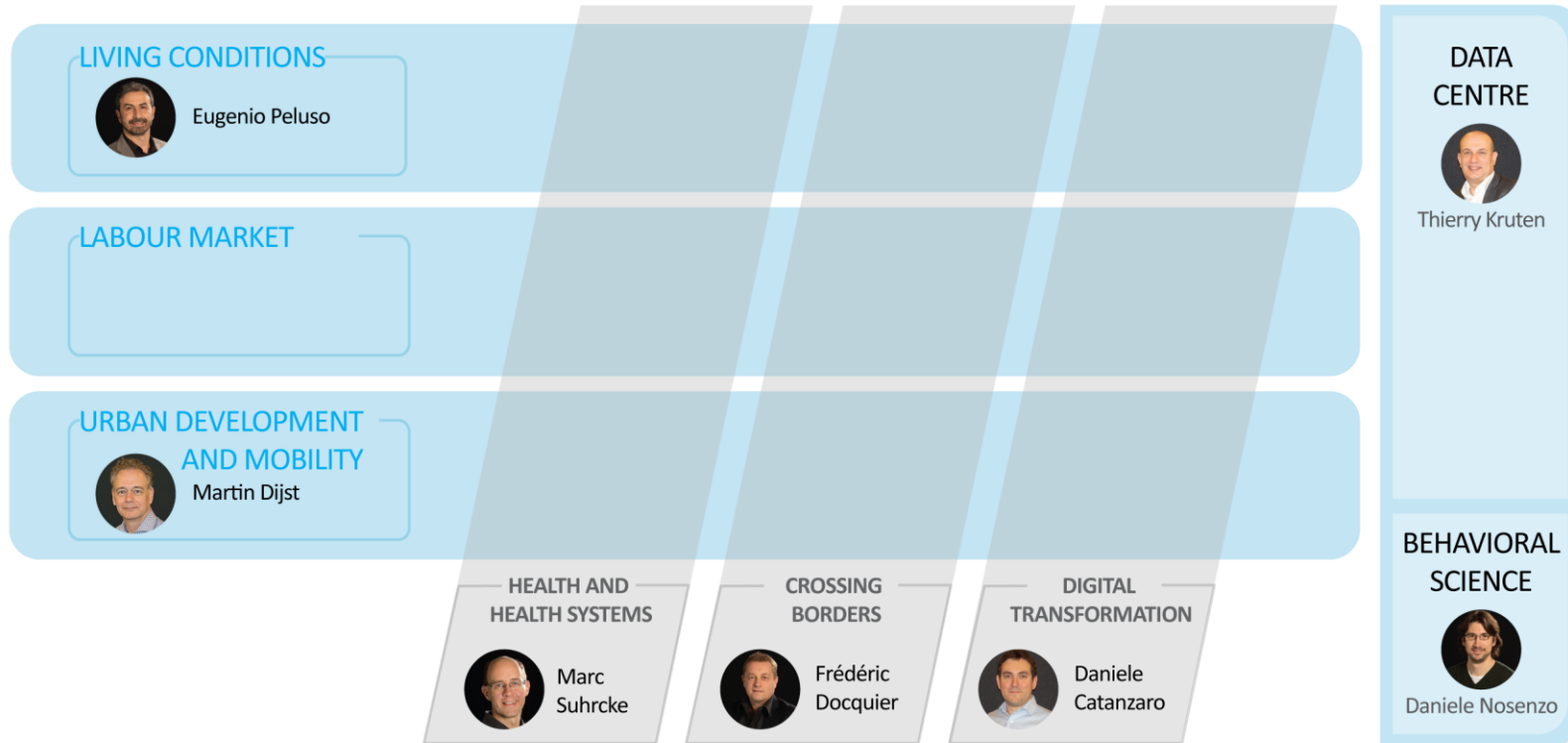




# LISER's ORGANISATION

RESEARCH DEPARTMENTS

## INTERDISCIPLINARY RESEARCH PROGRAMMES







# FACTS AND FIGURES

# 147

STAFF MEMBERS



# 26

NATIONALITIES



## NETWORKS

### INTERNATIONAL ORGANISATIONS

- European Commission
- United Nations
- OECD
- WHO
- ILO
- World Bank
- ...

### INTER-INSTITUTIONAL COLLABORATIONS

- Sciences Politiques, Paris
- NYU (Abu Dhabi)
- University of Zurich
- Paris 1 Sorbonne
- University of Oxford
- Institut des Systèmes complexes
- European Social Observatory
- ...

## VISITING AND MOBILITY PROGRAMMES



**115** VISITOR WEEKS in 2018



## PROJECTS

- INGRID 2, MIGAPE, EXHAUSTION (H2020)
- MMUST, SDT-GT/REK-GR (FEDER-INTERREG)
- CECCUT (Erasmus+, Jean Monnet)
- Evalab4Lux (FSE)
- A-HOUSE, TIMING, TER\_INEQ, CASinO, CROSS-POP (FNR Luxembourg)
- ...

Review of Economics and Statistics

PLoS Medicine



Econometrica

The Lancet

## SCIENTIFIC OUTPUTS

**+80** PEER-REVIEWED ARTICLES PER YEAR



## DATA CENTRE PLATFORM

### 2 PILLARS ACTIVITY

- 1 the data collection capability
- 2 the data archiving and data management capability and is in charge of the EU-wide data collection surveys in Luxembourg

### SURVEYS



HFCS  
EU-SILC  
EVS  
SHARE

...



# The Luxembourg National Research Fund (FNR)



# VISION AND MISSION

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## Our Mission

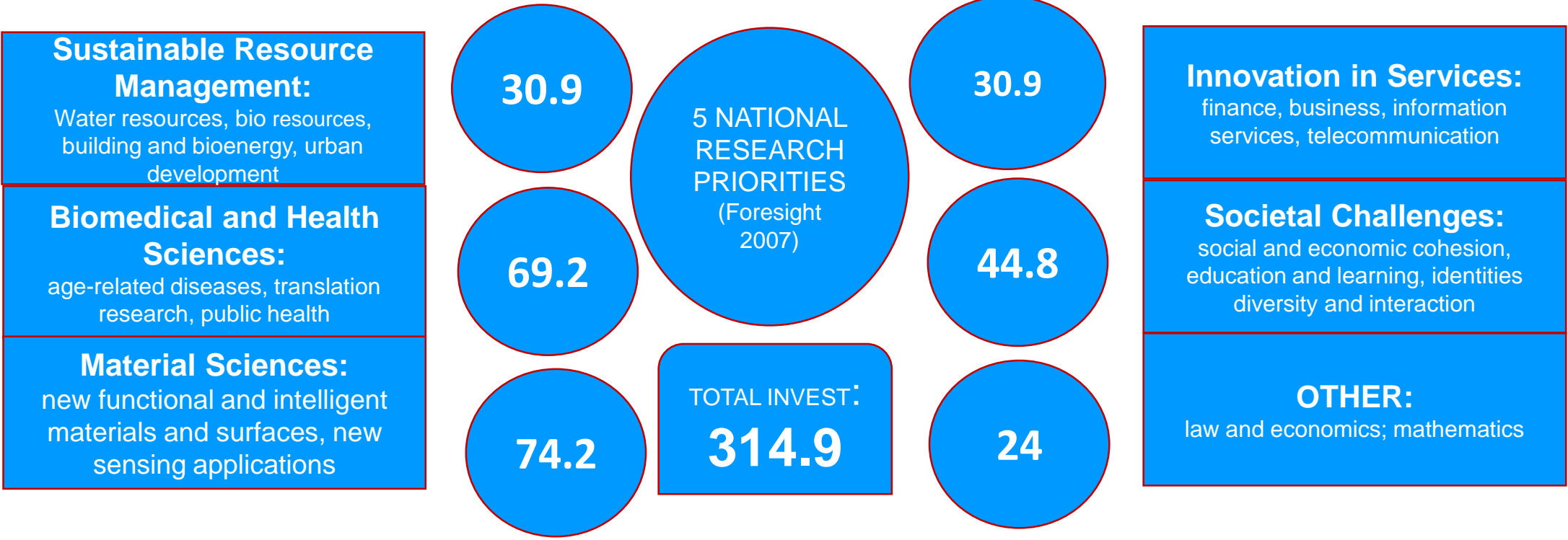
To set up a sustainable **world-class research system in Luxembourg** that will generate societal and economic impact in key strategic areas

- Supports excellence and quality in research
- Project selection always based on external peer-review
- Supports the transfer of research results
- Collaborates with many funding agencies worldwide
- Promotes science in society





# FACTS AND FIGURES



- 21% of all the FNR funded projects were international projects
- 20,5% of the total FNR budget were dedicated to international projects



# FNR: INTERNATIONAL COLLABORATION



- **Project funding** in the framework of **bilateral or multilateral collaborations** built on joint research activities
- **Mobility** scheme for experienced researchers
- **AFR Bilateral:** Specific calls for PhD and Postdoc Grants with selected partners



## RELATIONS WITH ASEAN COUNTRIES

- About 30 students from ASEAN countries enrolled at the University of Luxembourg in 2018/2019; majority from Vietnam
- Interuniversity agreements with
  - University Gadjah Mada (Indonesia)
  - Nanyang Technological University (Singapore)
  - King Mongkut's University of Technology Thonburi (Thailand)
  - Chulalongkorn University (Thailand)
  - Hanoi University of Science and Technology (Vietnam)
- Cooperation of University of Luxembourg with National University of Laos in the field of Law, with the support of Luxembourg Development Cooperation





# RELATIONS WITH ASEAN COUNTRIES

## Examples of research collaboration:

- University of Luxembourg - National Science and Technology Development Agency (NSTDA)/National Electronics and Computer Technology Centre (NECTEC), Thailand: high performance computing;
- University of Luxembourg - National University of Singapore: mathematics (joint PhD projects funded by FNR)
- Luxembourg Institute of Science and Technology (LIST) - National University of Singapore, Nanyang Technological University and Agency for Science, Technology and Research, Singapore: Nanomaterials and Nanotechnology, Environmental and Industrial Biotechnologies
- LIH – Institut Pasteur Laos/ Red Cross Laos/ National University of Laos
- LIH – National University of Singapore: Regulatory RNA markers, cancer

EURAXESS Luxembourg: services centre at the University of Luxembourg to foster researcher mobility and provide information and assistance for researchers moving to Luxembourg





# RESEARCH LUXEMBOURG A PLACE TO EXCEL!