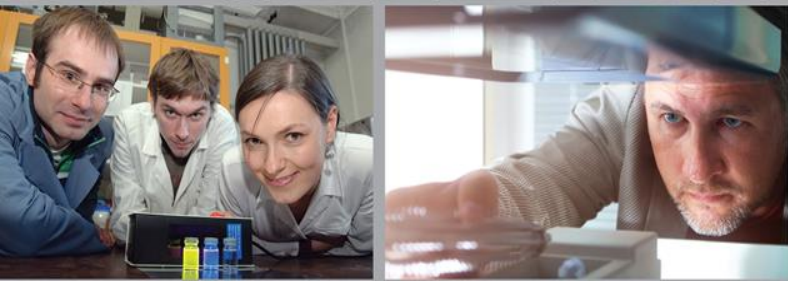




KAUNAS  
UNIVERSITY OF  
TECHNOLOGY



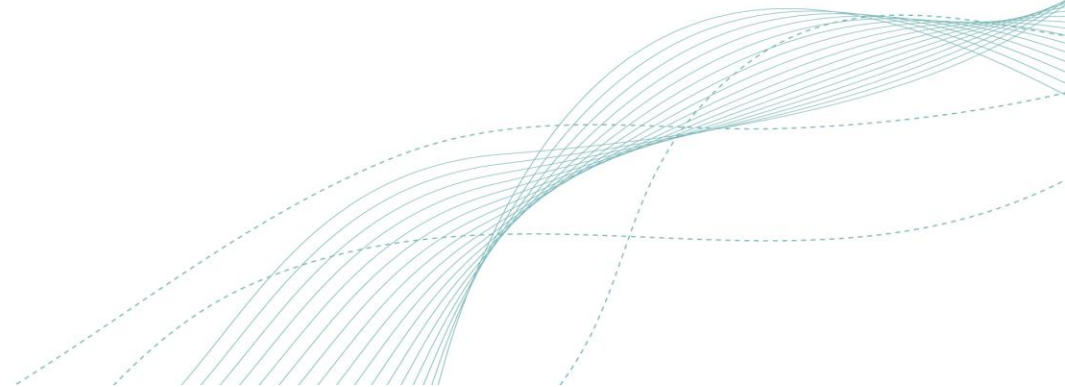
# Kaunas University of Technology (KTU) in a pace of Europe 2020

Prof. Petras Barsauskas

31<sup>th</sup> Conference of  
Rectors and Presidents of  
European Universities of Technology,  
Istanbul, Turkey, 2012

# Roadmap

- Directions for developing research and innovation provided by Europe 2020, Horizon 2020 - KEY WORDS THAT MATTERS
- Kaunas University of Technology research and innovation strategy
- Santaka and Nemunas Valleys as research and innovation area
- Conclusions



# Strategy Europe 2020 objectives

## SMART GROWTH means improving the EU's performance in:

- **education** (encouraging people to learn, study and update their skills)
- **research/innovation** (creating new products/services that generate growth and jobs and help address social challenges)
- **digital society** (using information and communication technologies)

## SUSTAINABLE GROWTH means:

- building a **more competitive low-carbon economy** that makes efficient, sustainable use of resources;
- **protecting the environment**, reducing emissions and preventing biodiversity loss;
- capitalising on Europe's leadership in developing **new green technologies** and production methods
- introducing **efficient smart electricity grids**
- **harnessing EU-scale networks** to give our businesses (especially small manufacturing firms) an additional competitive advantage
- **improving the business environment**, in particular for SMEs
- **helping consumers** make well-informed choices.

**INCLUSIVE GROWTH – a high-employment economy delivering economic, social and territorial cohesion**

# Horizon 2020 objectives

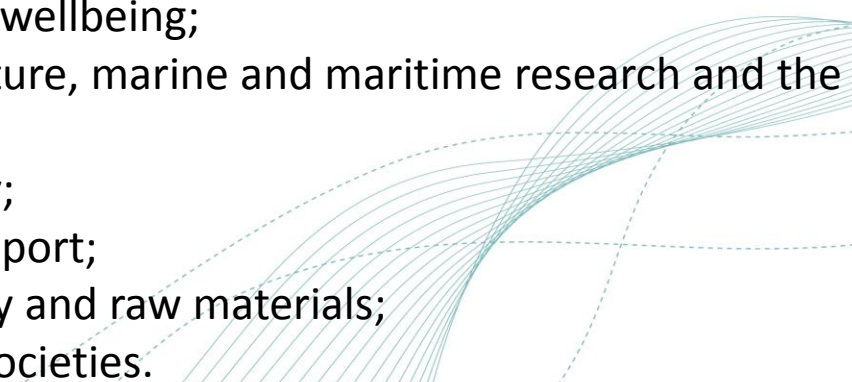
## EXCELLENT SCIENCE:

- support the most **talented and creative individuals** and their teams to carry out frontier research;
- Collaborative research & support for *Future and Emerging Technologies*;
- **provide researchers with excellent training and career development** opportunities;
- ensure Europe has world-class **research infrastructures**

## INDUSTRIAL LEADERSHIP – businesses set the agenda:

- build *leadership in enabling and industrial technologies*, with dedicated support for ICT, nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing, and space, key enabling technologies;
- facilitate **access to risk finance**;
- provide Union wide **support for innovation** in SMEs.

## SOCIETAL CHALLENGES:

- Health, demographic change and wellbeing;
  - Food security, sustainable agriculture, marine and maritime research and the bio-economy;
  - Secure, clean and efficient energy;
  - Smart, green and integrated transport;
  - Climate action, resource efficiency and raw materials;
  - Inclusive, innovative and secure societies.
- 

# LT Innovation strategy objectives

Foster Lithuanian integration into global markets;

- **Export of R&D;**

Contribute to the development of the creative and innovation oriented society:

- **Entrepreneurship education and training;**
- Lifelong Learning;

Foster diverse innovations:

- **Fostering start-ups;**
- **Technology transfer centers development;**

To foster systemic approach to innovation development;

- **Foster knowledge triangle development;**
  - **Research infrastructures.**
- 

- The place with **biggest concentration of technology based innovative ideas**;
  - **Diversity of competence** to form an operational team to implement the ideas, including technology coaches, economists, ICT experts, marketing experts, etc;
  - **Not for profit and thus has a potentially greater tolerance to high risk projects**, not “greedy” on margins;
  - As internal university unit **more trusted by inventors**;
  - **Easier to solve the Intellectual property division issues**;
  - Being close to the **research communities always has “latest news”**.
- 

### KTU Vision: Leading University with knowledge and technology development and transfer based activities in Europe

1

Development of students' competences for their self-expression and successful career

2

Internationally acknowledged technology and knowledge development and transfer

3

University's activities focused on human well-being and sustainable development of the state

4

Sustainable development of the University ensuring the quality and efficiency of activities

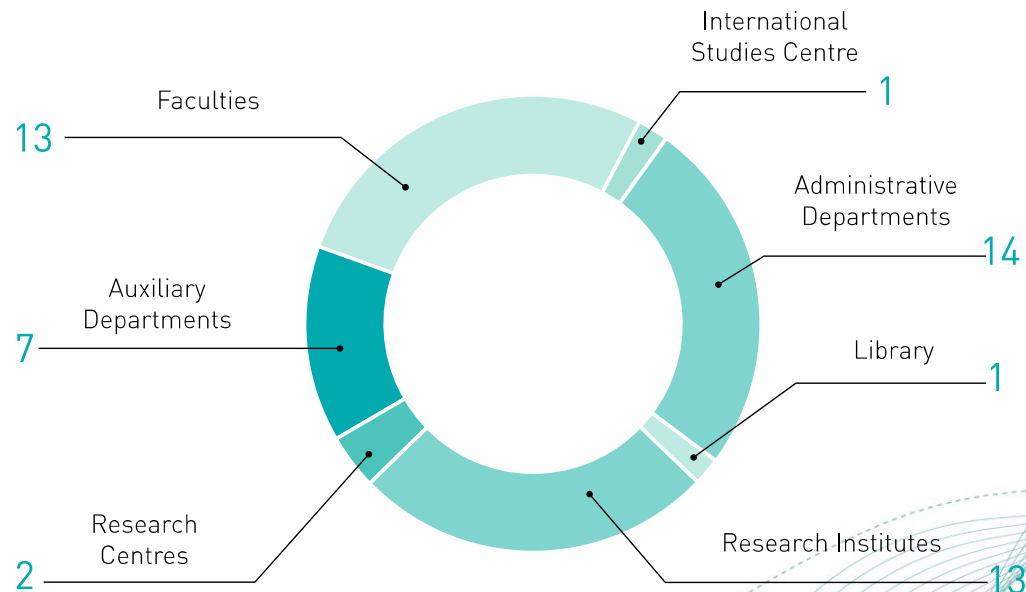
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Developing and fostering University's academic environment and infrastructure

# Strategic priorities of KTU activities

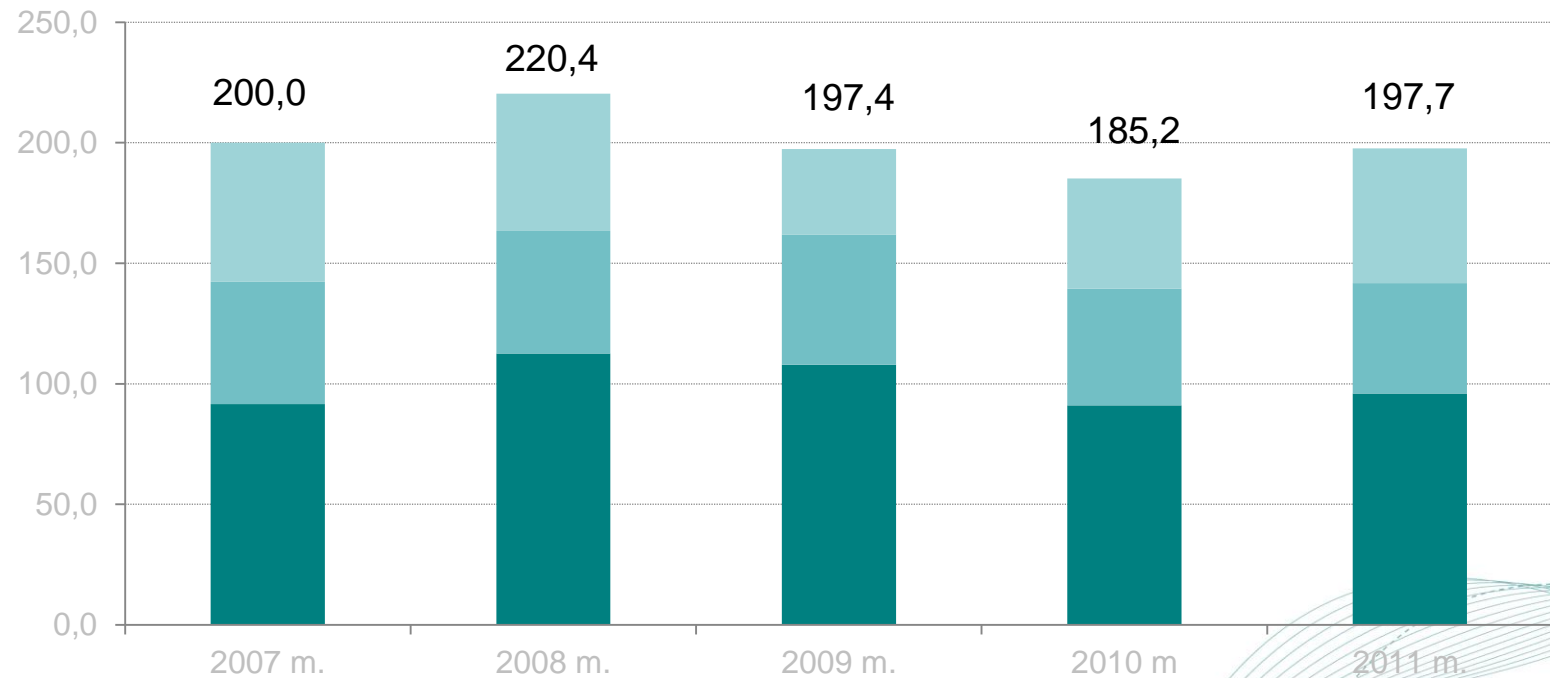
- **Talented and motivated** students, teachers and researchers
  - A critical mass of **world-class faculty, researchers and foreign students**
  - Integration of **education and research, close contact with business and industry**
  - Interdisciplinary and trans-domain research and studies
  - International recognition in **advanced knowledge and future technologies development and transfer**
  - **Participation in global knowledge networks**
  - Quality of activities and efficient management
  - **Inspiring and friendly environment**
  - **Sustainable development** and dissemination of knowledge and values among the society
- 





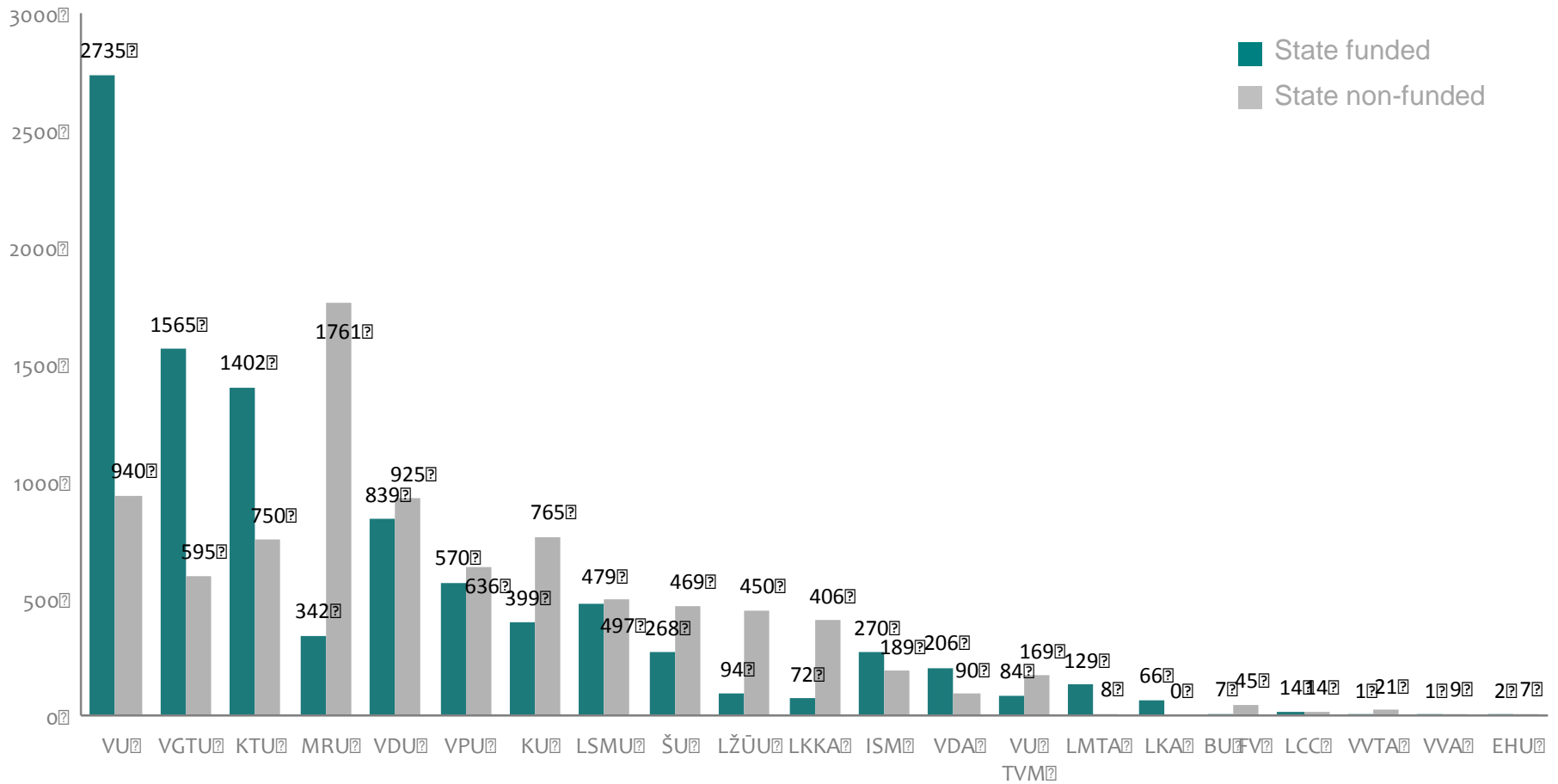
## University's income structure

mln. Lt



- Other funding incomes (project funds)
- Income for services provided
- State budget appropriations

# Number of students admitted to Lithuanian universities in 2011: state funded and non-funded places



Source: LAMA BPO



## Technological sciences:

29 bachelor and 29 master degrees;

## Physical Sciences:

6 bachelor and 4 master degrees;

## Social Sciences:

9 bachelor and 13 master degrees;

## Humanities:

3 bachelor and 2 master degrees;

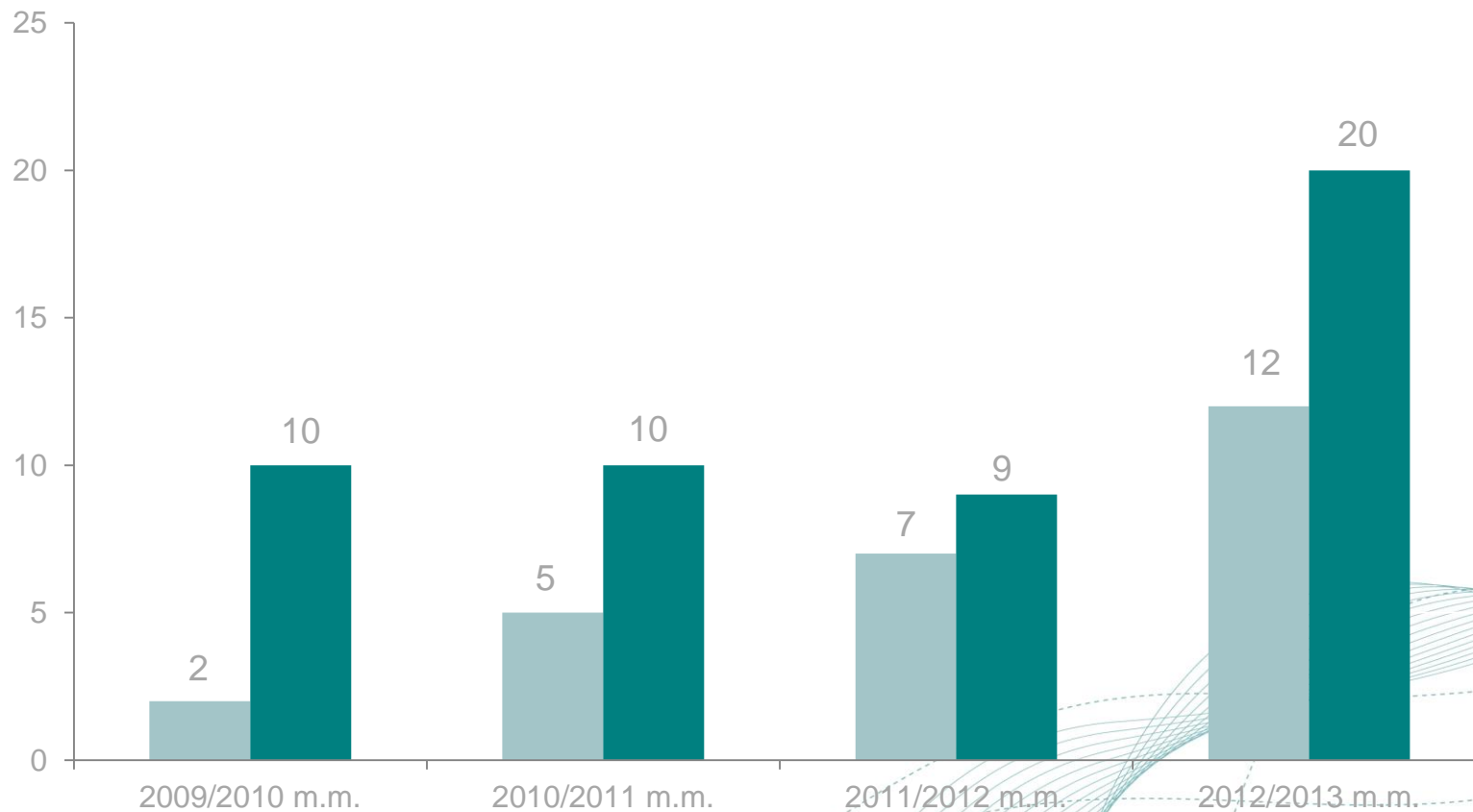
## Arts:

2 bachelor and 2 master degrees;

## Biomedical sciences:

1 master degree

## Number of study programmes in foreign languages according to study cycle



Undergraduate studies  
Master studies



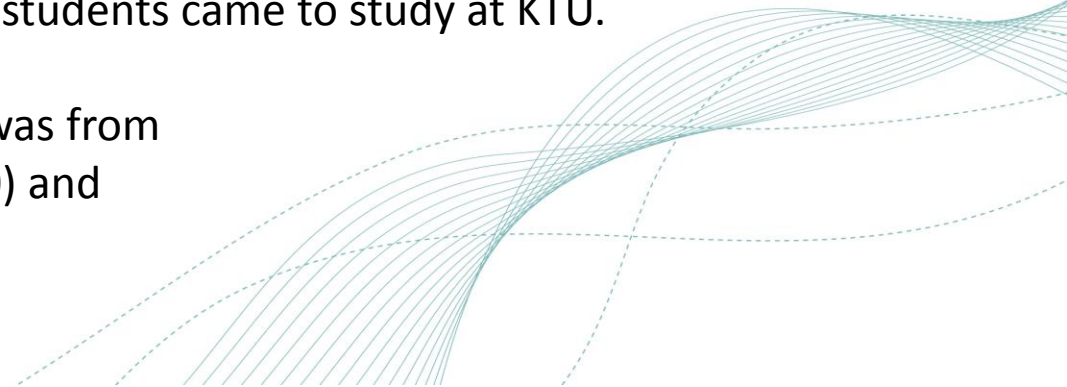
- ERASMUS exchange
- ERASMUS MUNDUS, activity I
- Exchange studies in South Korea
- BALTECH consortium scholarships
- AF CONSULT scholarships
- DAAD scholarships and studying opportunities in Germany
- International internship programme IAESTE
- Internship programme VULCANUS IN JAPAN



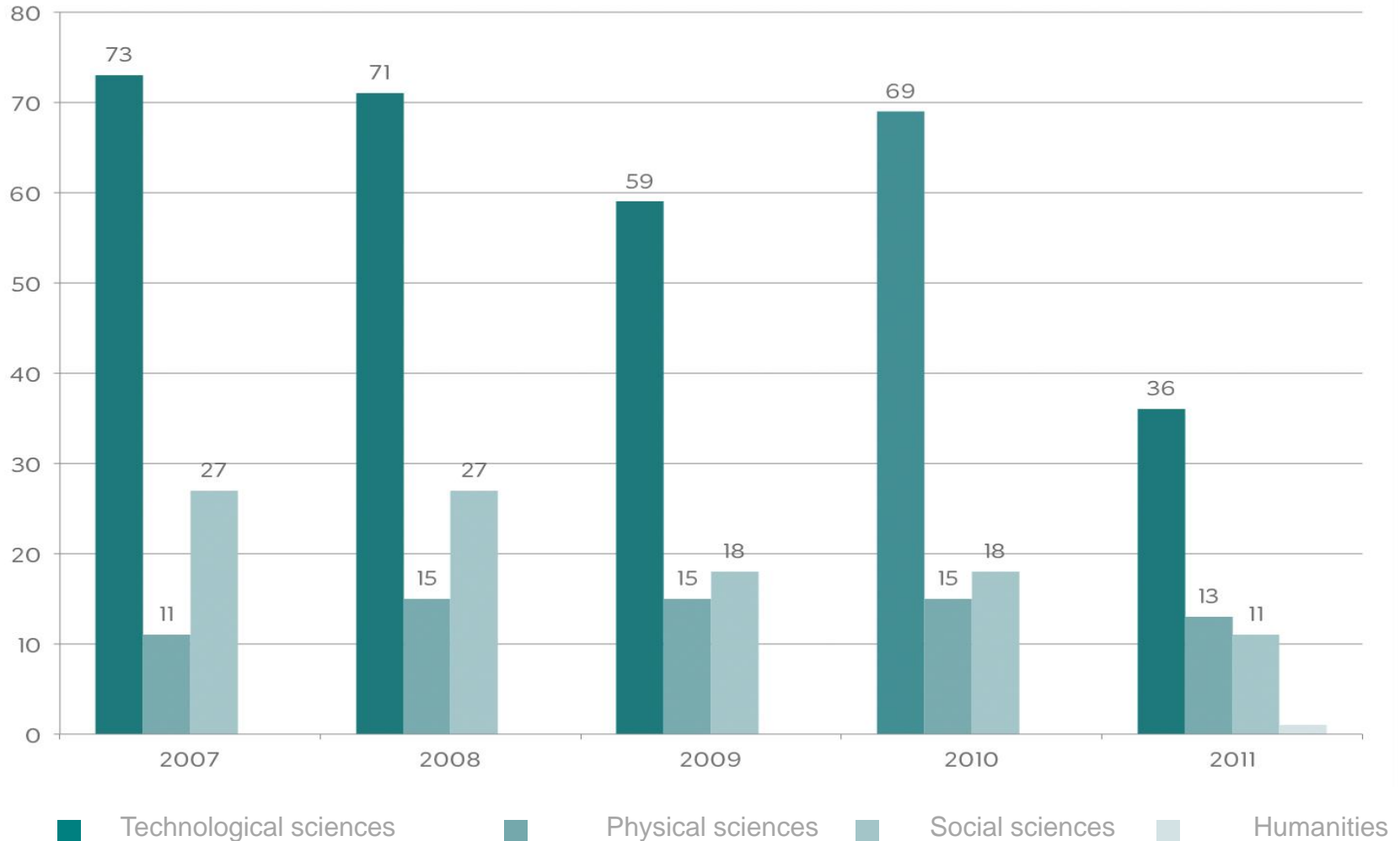
2010–2011 ERASMUS students and teachers exchange was based on 241 bilateral agreements with 195 foreign universities.

184 University's students participated in the exchange programme within the European Union; 86 international students came to study at KTU.

Major part of incoming students was from France (32), Turkey (13), Spain (10) and Portugal (10).



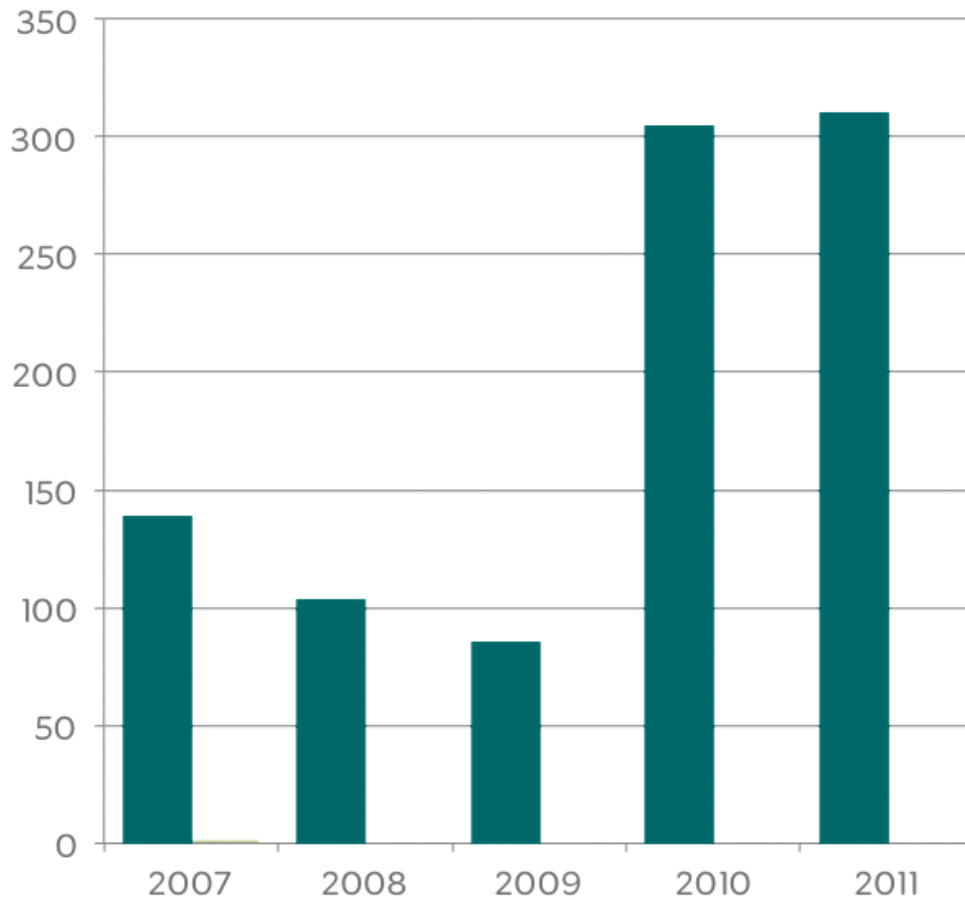
# Number of study Doctoral students according to science fields





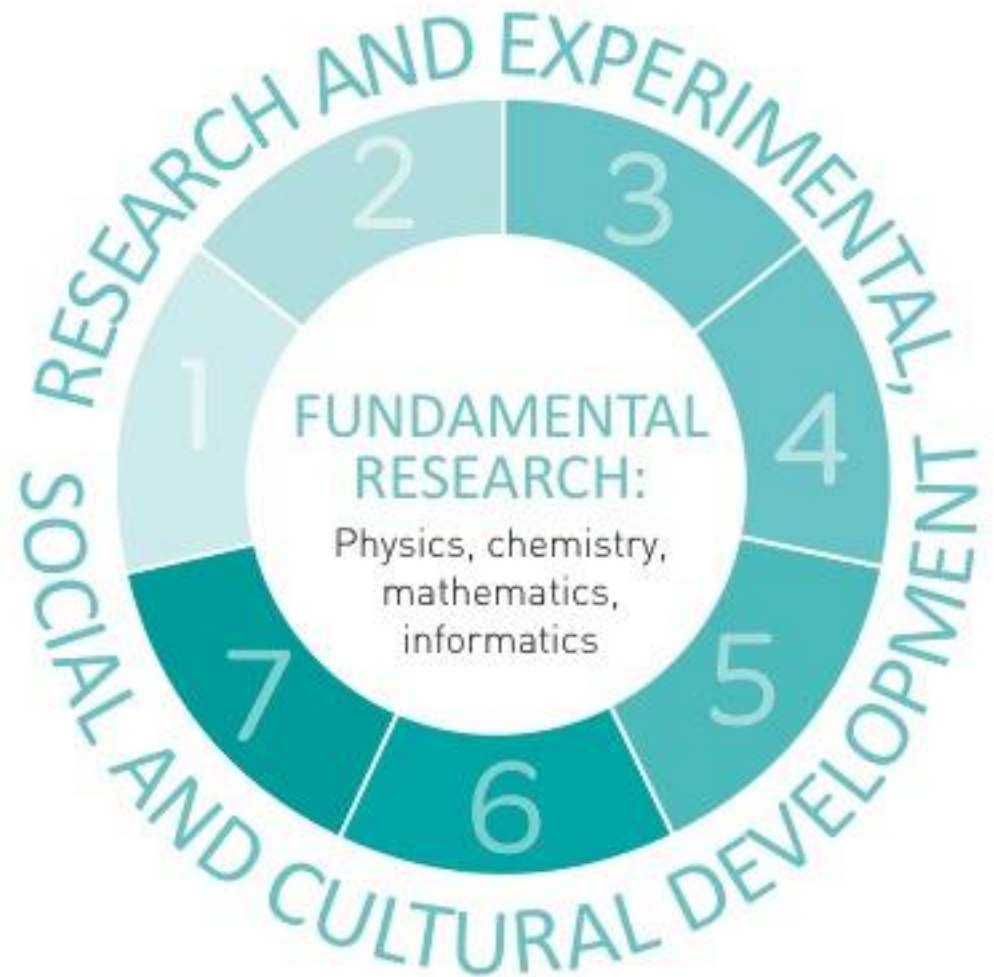
## Participation in research, technological development and demonstration projects

Programme	2007	2008	2009	2010	2011
7 FP	-	6	17	24	28
5 FP / 6 FP	32	22	7	-	-
EUREKA	10	8	8	7	8
EUROSTARS	-	1	2	2	3
COST	12	17	21	27	28
Other	30	27	25	30	26



Number of articles  
in Thomson Reuters  
Web of Knowledge  
publication list with  
citation index

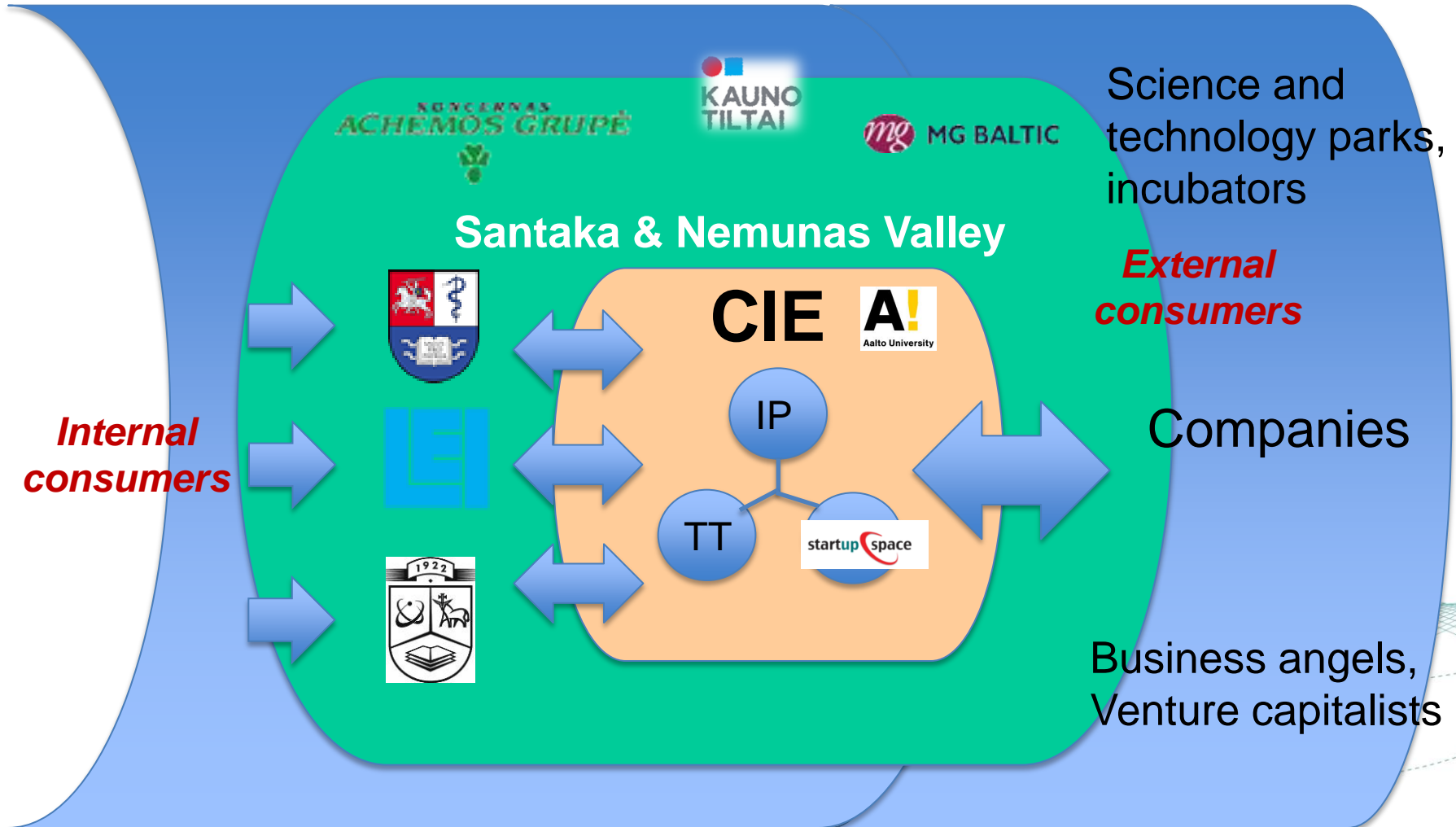
- 1 New materials for high technologies
- 2 Sustainable growth and cohesive social development
- 3 Smart environments
- 4 Future technologies
- 5 Technologies for sustainable development
- 6 Biomedical technologies
- 7 Information technologies



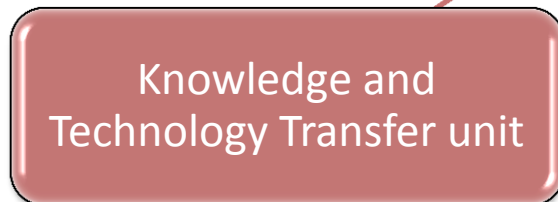


- In 2010 KTU has begun implementing one its most significant projects - the integrated science, studies and business centre *the Santaka and Nemunas Valley*.
- In 2010 the first state-of-the-art Lithuanian Food Science and Technology Competence Centre was established
- In cooperation with Aalto University (Finland), KTU has established Centre of Innovation and Entrepreneurship, acting as an animator of the Valley R&D

# Valley for integration of research, education and business



IEC mission – to assist researchers to mature R&D based business idea, protect University (Institute) Intellectual property and to build collaboration between research & business



- It is crucial for university to animate its research communities and help them to make use of the technology R&D in order to create readiness of absorption of technology based business as well as country innovation & competitiveness;
  - Actions shall be taken through Innovation and Entrepreneurship center gradually accumulating needed competence and potential;
  - Co-creation with State, Business as well as partner universities is crucial for acceleration and **sustainability** of the actions taken;
- 



Kaunas University of Technology  
K. Donelaičio str. 73, Kaunas, Lietuva  
[www.ktu.lt](http://www.ktu.lt)