

Research program of Riga Technical University 2016-2020 – the roadmap to excellence

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Project: „Development of institutional capacity of Riga Technical University”

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IEGULDĪJUMS TAVĀ NĀKOTNĒ



FOUNDED **1862**



767 ACADEMIC STAFF

502 RESEARCHERS

13 RESEARCH CENTRES

9 FACULTIES

34 INSTITUTES

134 STUDY PROGRAMS

MORE THAN
100.000
GRADUATES



15.000 STUDENTS



RESEARCH FIELDS:

ENERGY

INFORMATION &
COMMUNICATION

MATERIAL SCIENCE &
CHEMISTRY

SAFETY & SECURITY

SMART NETWORKS



Structure of the program – areas of responsibility

Faculties

- Research programs of the faculties

6 Research Platforms

- Programs of the Research Platforms

Administration

- Project management system
- Support for publication activities
- System of technology transfer
- Development of infrastructure



Research programs of the faculties and the research platforms determine the direction of future development for research

- **activity plan** for increase of **scientific capacity** and reaching of the strategic goals of RTU

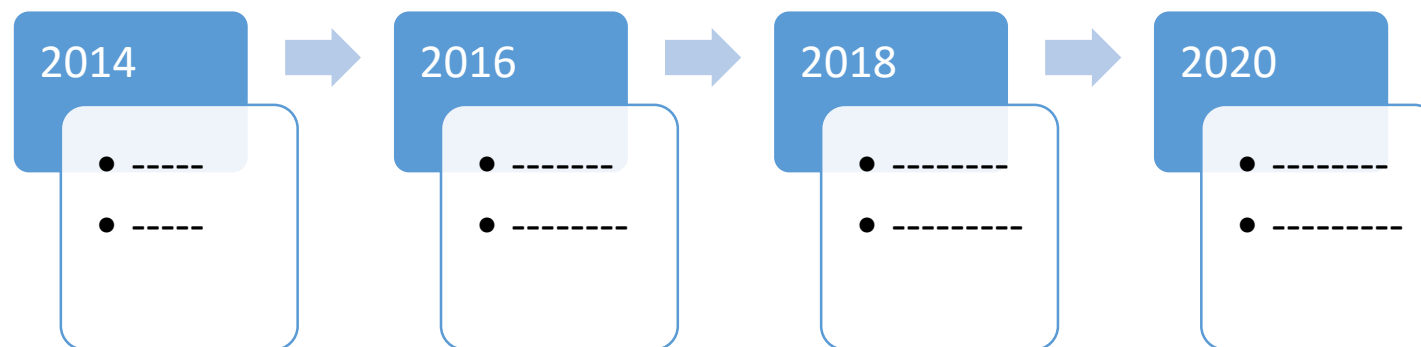


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EIROPAS SAVIENĪBA

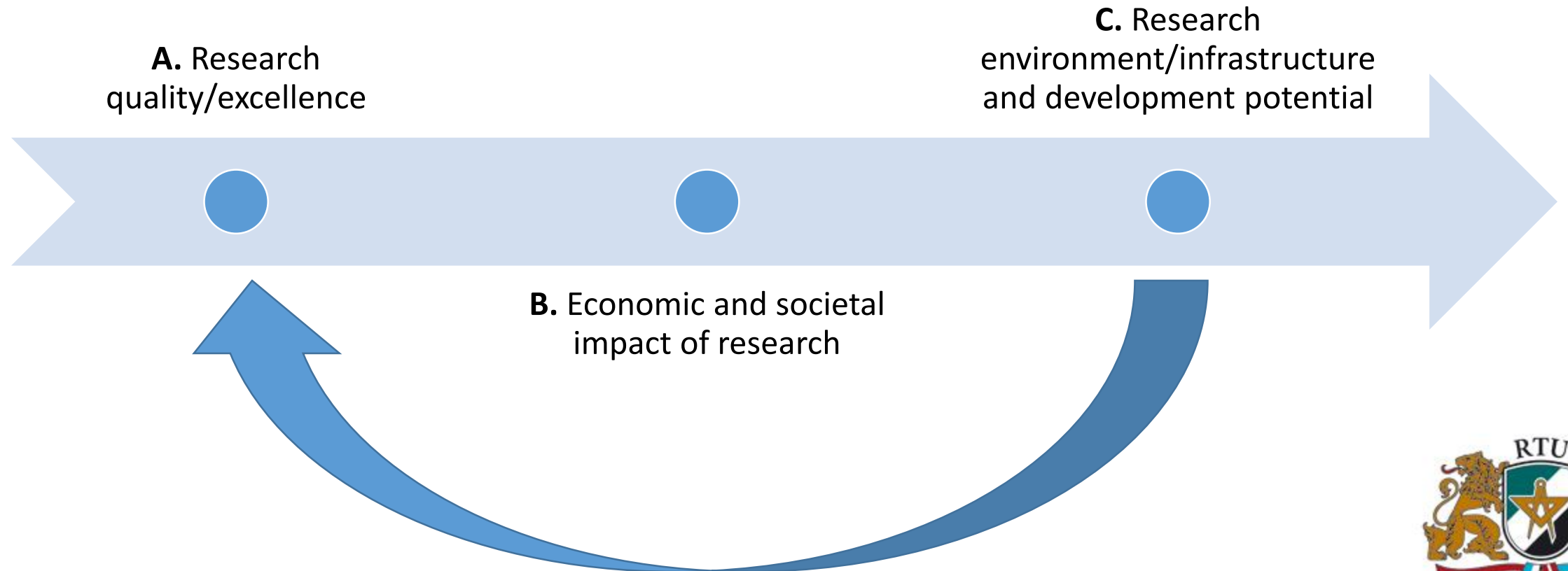
RESEARCH PROGRAMME
OF
RIGA TECHNICAL UNIVERSITY
2016 – 2020



Reviewed by members of International Advisory Board and 16 external experts



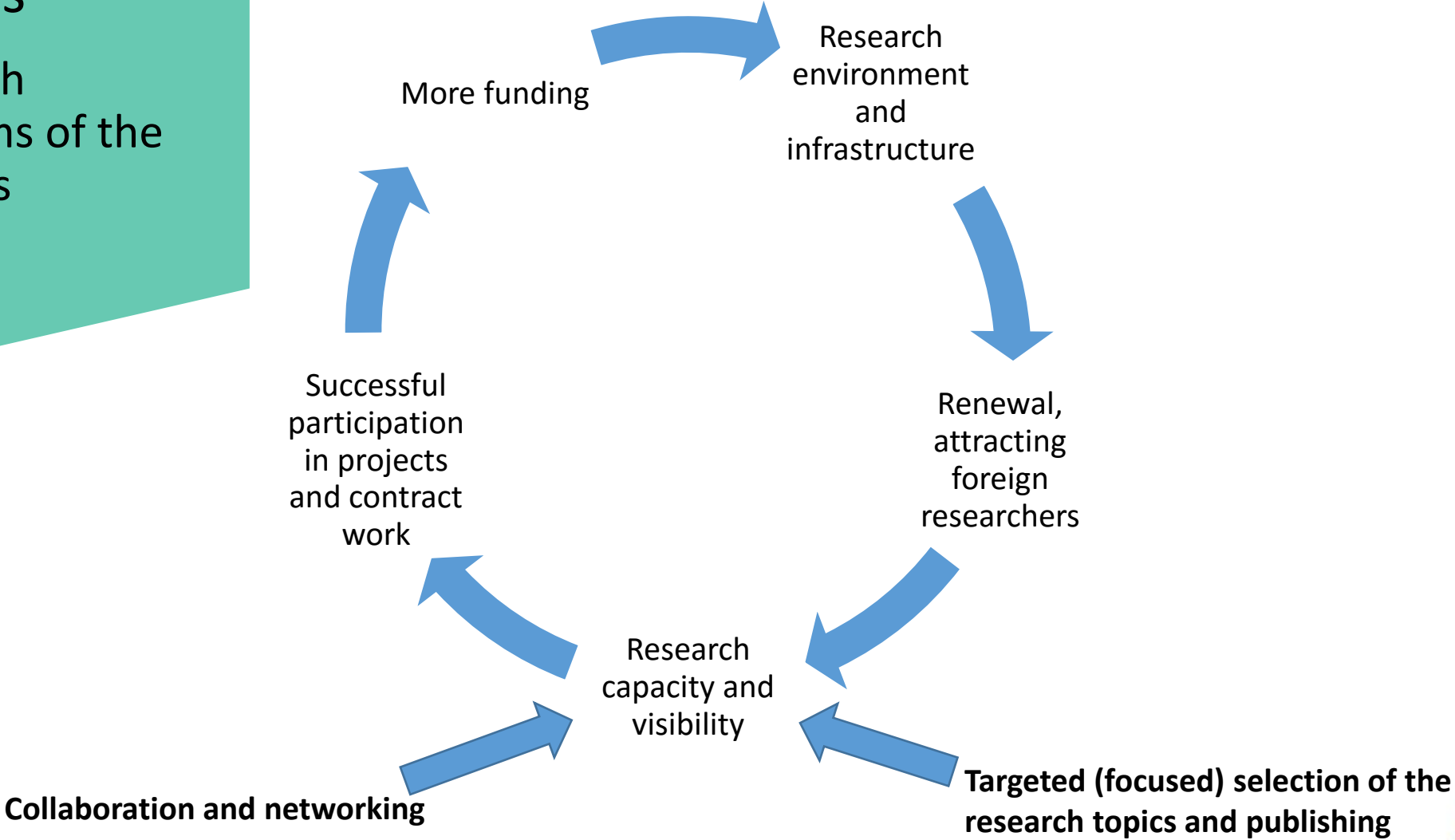
What characterizes scientific capacity?



How to put reinforcing loop in action?

Faculties

- Research programs of the faculties



Research platforms

6 Research platforms

- research programs

	1. Energy and environment	2. Cities and Development	3. Information and Communication	4. Transport	5. Materials, processes and technologies	6. Security and Defence
Faculties						
APF						
BIF						
DITF						
EEF						
ETF						
MLKF						
MTAF						
IEVF						
ETHZF						



Research platforms



Task?

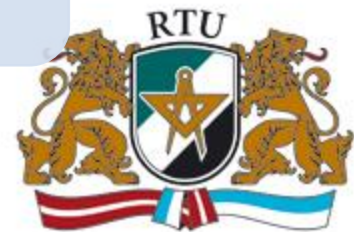
- **inter-faculty, transdisciplinary research** in the areas which are important for economy and society

How will operate?

- **not new units** but **coordination mechanism**
- foundation – the council of coordinators

Source of finance?

- RTU internal project competition in the areas of platforms
- Contract work and international projects
- RTU Fund for support of research

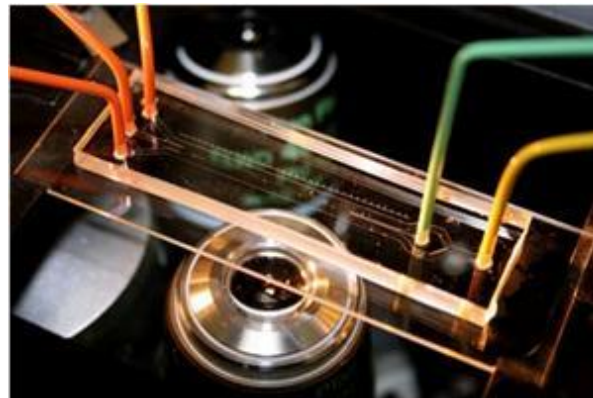


Research directions of the platform «Energy and Environment»

- a. Safety of power supply systems and optimum operational modes for the improvement of performance and economic return
- b. Methods and technologies for the improvement of power and thermal energy generation, transmission, distribution and consumption efficiency
- c. Methods and technologies for the promotion of renewables to increase the regional energy independence and reduce environmental impact
- d. Climate technologies and environmental methods for circular economy



Flue gas condensers saving 10-15% of wood fuel



Technology for rapid bacteriological control of liquids and surfaces-will allow to obtain test results in food industry, water supply industry, etc. considerably faster



Administration

- Project management system

Facilitation of successful participation in projects

1. Unified project management system

2. More efficient project application procedures:

- better information about possibilities
- better coordination of efforts during application preparation process
- seminars and analysis of deficiencies (learning from mistakes)
- better information about partners and visits to them

3. Assessment of research areas which have difficulties to rise funding with the aim to facilitate development



Administration

- Support for publication activities

Support for increasing of the number and visibility of publications

1. Courses on writing publications and ethics of research in undergraduate and master's degree programs

2. Seminars and workshops, e-study courses on the publishing process and required software

3. Intensive work with editors of RTU journals and staff of RTU Publishing house



Administration

- System of technology transfer

Valorization of research outcome

1. What do we understand by that?

- cooperation with the large domestic and international companies
- creation of new companies
- knowledge spill-overs for society - “opinion leaders” in certain areas and more active communication with society

2. The main activities:

- research of research needs of companies
- development of system for focused work with clients
- creation of collaboration networks – especially important for commercialization and start-up development
- use of potential provided by RTU Design Factory and students
- involvement of the Research Platforms in linking RTU competencies with needs of industry and society
- further development of “UseScience”



Administration

- Development of infrastructure

1. Complete information on the available research equipment and services in Latvia and abroad - “UseScience”

2. Easy access – concentration, reservation system, transparent conditions of use

3. Targeted further development of infrastructure – «infrastructure investment plan »



USE SCIENCE

<http://scientificservices.eu>

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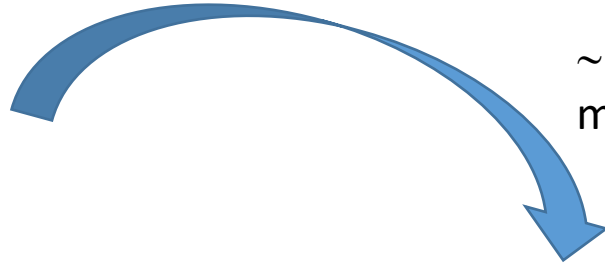


Joining of Institute of Inorganic Chemistry strengthens positions of RTU in the area of material science



The former location in Salaspils

~1500 m³ of equipment, furniture and documentation were moved



New laboratory premises in RTU, Ķīpsala



Development of RTU institutional capacity – implementation

- greater responsibility of faculties for implementation of the research programs
- linkage of the RTU Strategy, the faculty research programs and activity plans
- establishing of faculty research councils for coordination and management of the research activities
- active work of the research platforms
- systems for providing research process quality (including indicators, responsibility, etc.)
- improvement of cooperation with research organizations and companies



THANK YOU!

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