



UNIVERSITY OF TARTU

# Technology Transfer in the University of Tartu

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**University of Tartu**  
**Head of Intellectual Property Unit**

**Tartu**  
**20th of October 2017**



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## UT in a nutshell

- Founded in 1632
- Studies and Research is carried out in four main areas
  - Humanities and arts
  - Social sciences
  - Medical sciences
  - Science and Technology
- 13 600 students, over 1300 foreign students, 1300 PhD students
- 3400 staff, including 1775 academic personell, and 195 professor
- 2016. Budget 121,2 million €



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**Cooperation with companies**

**Lifelong learning**

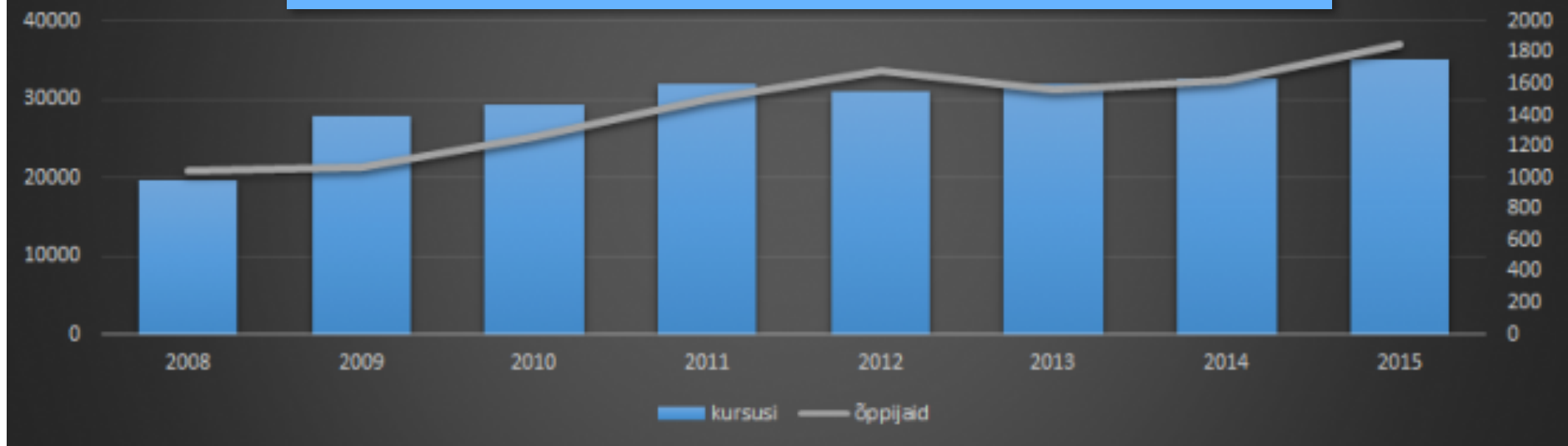


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### Estonia's largest provider of in-service training Number of courses and learners 2008-2015





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## Technology transfer unit

# Technology Transfer Office (TTO)

## Input from UT

- Project results
- Competences
- Know-how
- Inventions
- Infrastructure
- etc



## Input from companies

- Problems, needs
- Future vision
- Development plans



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**Cooperation with companies**

# Privately funded research and development work

- A group of scientists may work on a problem as presented by a company.
  - Company remunerates University for time, expenses and Intellectual Property
  - Licenses and Assignments are negotiated with companies for mutually beneficial results
- Usually at least 6 month project
- May also include development of University Technology (see later)
- Application of existing competences, know-how and infrastructure, to solve an existing problem
  - usually a one-off project
  - usually under 10 000 €
  - Usually funded for the most part by Enterprise Estonia or alike



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**Access to services**

# Consultations

- The combined knowledge available at the UT is a valuable resource for enterprises.
- We're routinely consulting on:
  - energy-efficient and energy-neutral buildings and construction
  - work environment
  - quality in measurement and analysis
  - material sciences
  - robotics
  - etc



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**Access to infrastructure**

# World class infrastructure



20.10.17

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**Access to Technology**

## IP portfolio (2017)

- 65 objects incl. know-how
- 28 patents / 21 patent applications / 10+ license agreements
- 15-20 new invention disclosures per year
- 2-3 filing per year

Direct income from commercialization:

107 000€ (2015), most of which was received from five enterprises

# Functional food and supplements

## Prof. Marika Mikelsaar & prof. Mihkel Zilmer

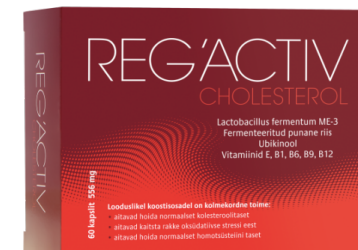
Institute of Microbiology and Institute of Biochemistry combine their know-how in offering **innovative solutions to food and food supplement** companies.

**Unique patented lactic acid bacteria** *L. fermentum* ME-3 is strong natural antioxidant suitable for different products containing dairy, vegan milk, chocolate or vitamins, minerals and other active substances.

Extensive **collection of other beneficial strains.**

Long-term experience with Maitokolmio (FI), Raisio (FI), L'allemand (FR), VF Bioscience – Reg'Activ products (FR), **licenses available.**

Contact: Jane Luht, [Jane.Luht@ut.ee](mailto:Jane.Luht@ut.ee), 737 4804





# Open innovation programs

- Johnson&Johnson
- Eli Lilly
- OneStart



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## Spin-offs



## TARTU ÜLIKOOLI IDEE LABOR

IdeaLab of the University of Tartu provides STARTER pre-incubation program for all the students. Our extra-curricular entrepreneurial program enables students to develop ideas to validated business models. Our workshops are integrated with hands-on exercises and team mentoring sessions. Mentors are start-up founders or entrepreneurs from different business sectors.

It is a place where students from all disciplines can find innovative solutions to everyday problems and test viability of their ideas.

STARTER program is financed by EU Social Fund.



- Starter Basic
- Starter Advanced
- From Idea to Execution
- Kaleidoskoop
- NGAL
- Vega
- Est-Lat Accelerace
- Prototyping

# Spin-offs

**Our startup and spin-off ecosystem** will support founders of UT spin-off companies through various stages of business development:

- Awareness training, meeting business mentors, coaching, networking, negotiating, prototyping –IdeaLab and its VegaFund,
- public financing – EnterpriseEstonia start-up grant;
- private investments through Estonian Business Angel Network
- Access to an equity investment of (up to \$50K)–The Harry and Reba Huge Foundation(USA)

**Incubation:** is organized together with and by:

- Centre of Creative Industries;
- Tartu Science Park;
- Tartu Biotechnology Park
- Tallinn Science Park Tehnopol.



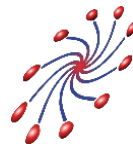
## ReLaDe OÜ

- Chemical detergents are toxic and harm reproductive health when spread into the water ecosystem. Instead of these toxic compounds, biological enzymes can be used without any loss of performance and with lower energy consumption.
- To address this issue, we use magnetic nanoparticles to bind enzyme molecules and magnetize them. The resulting magnetic detergent molecules can be easily removed from waste water via magnetic force and reused in subsequent wash cycles for months.
- Thus, we have redesigned the laundry detergent concept, creating a sustainable, reusable product which, if produced on an industrial scale and adopted into wide-spread use, could have significant positive health and environmental implications.


**Source:** <http://climatelaunchpad.org/finalists/relade/>

**2-nd National 2015**

**3-rd European 2015!!!**



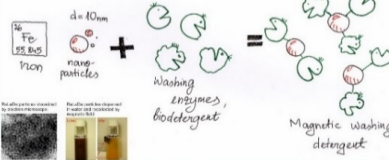
University of Tartu  
**SPIN-OFF**  
company

**Recyclable Laundry Detergent (ReLaDe)** changes the concept of how laundry is done. It is the basis of **the first** reusable laundry detergent system **in the world**.

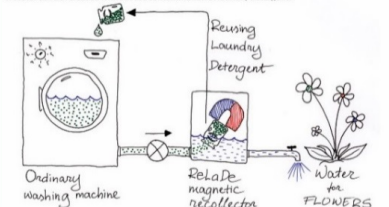
**The product:**

1. Biological washing enzymes for laundry;
2. Magnetic particles - superparamagnetic nanoparticles.




**The concept at work:**

1. Very small amounts of ReLaDe agent is automatically loaded per wash;
2. Ordinary laundry machine and washing programs are used;
3. Used detergent/nanoparticle complex is separated from the water by magnet and prepared for storage until next washing cycle;
4. Water can be released without the contamination of laundry detergent.



**The team:**



<b>Mart Ustav</b> Jr. co-founder M.Sc. (genetic technology)	<b>Andrew Wilfong</b> business advisor B.Sc. (business administration)	<b>Rainis Venta</b> chief technological M.Sc. (molecular biology)	<b>Holger Saare</b> physicist B.Sc. (physics)	<b>Martin Jarvekuik</b> biologist, air pollution Ph.D. (biological sciences)
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**Key partners:** Tartu University (1), GreenBead OÜ (2), Enterprise Estonia (3) and Estonian Development Fund (4).

(1) UNIVERSITY OF TARTU (2) GreenBead (3) EAS (4)

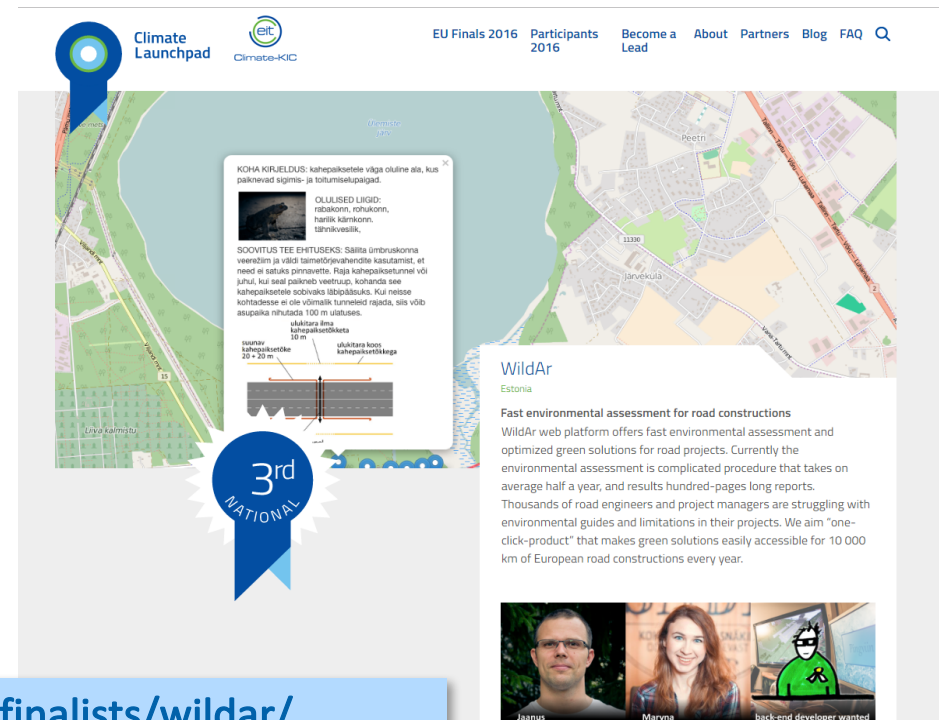
GreenBead OÜ    Rainis Venta +372 53 444 041    Tähtvere 36-3, Tartu 51007, ESTONIA rainis.venta@ut.ee

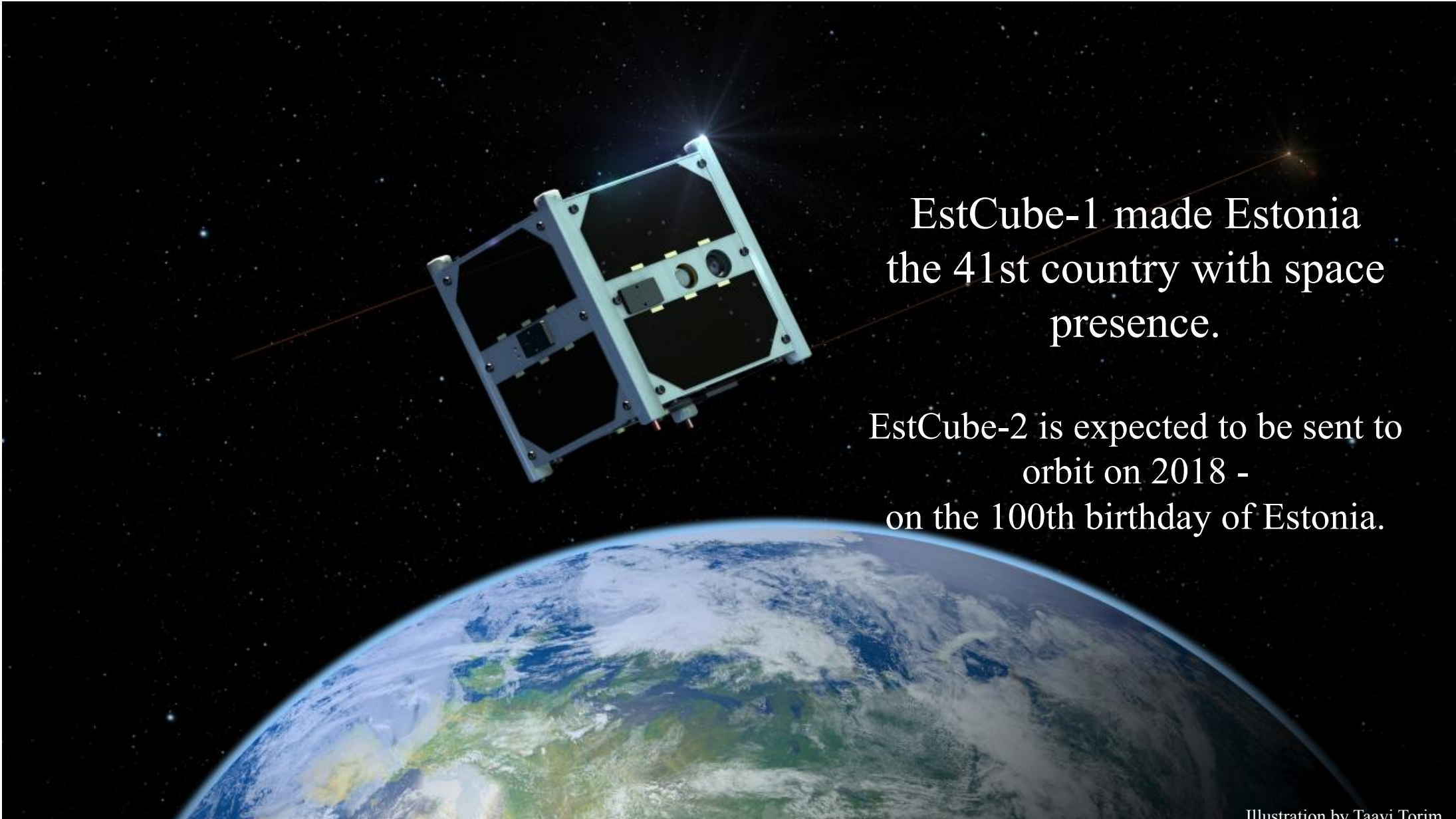


# WildAr - Fast environmental assessment for road constructions

WildAr web platform offers fast environmental assessment and optimized green solutions for road projects. Currently the environmental assessment is complicated procedure that takes on average half a year, and results hundred-pages long reports. Thousands of road engineers and project managers are struggling with environmental guides and limitations in their projects. We aim “one-click-product” that makes green solutions easily accessible for 10 000 km of European road constructions every year.

<http://climatelaunchpad.org/finalists/wildar/>





EstCube-1 made Estonia  
the 41st country with space  
presence.

EstCube-2 is expected to be sent to  
orbit on 2018 -  
on the 100th birthday of Estonia.



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## Additional resources



## Partnership programm – your guide in university

- Research and development
- Recruitment and practical training
- Inservice training and motivation
- Shaping the future



<https://goo.gl/ZEgjQn>

# ADAPTER

Ühendab teaduse ja ettevõtluse



TARTU ÜLIKOOL



TALLINNA  
TEHNIKAÜLIKOOL



www.emu.ee  
**Eesti Maaülikool**  
Estonian University of Life Sciences



TALLINNA ÜLIKOOL



EESTI  
MUUSIKA- JA TEATRIAKADEEMIA



EESTI  
KUNSTIAKADEEMIA



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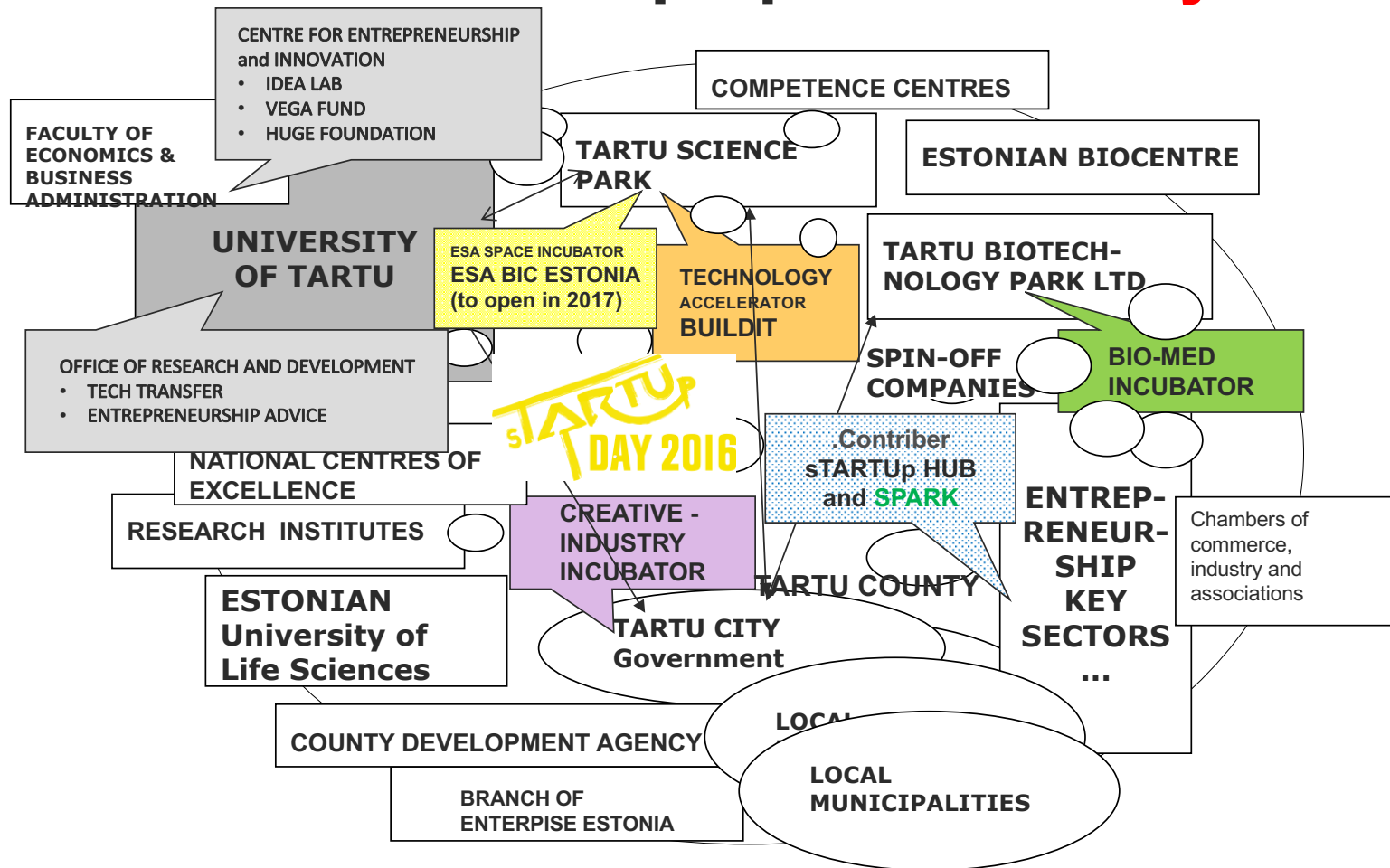
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**Ecosystem**

# Tartu's R&D+startup/spin-off ecosystem





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# Collaboration with UT gives companies' a competitive advantage

University of Tartu is the largest R&D partner for the public and private sector in Baltics



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# You can contact us

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