

# Apparatus building cluster - engine of innovation

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# History

- University of Tartu founded in 1632
- Tartu Telephone Factory founded in 1907
- 1918 start of Engineering School of Estonian Technical Association - since 1936 Tallinn Technical University
- Radio Factory RET
- Lasers and spacecraft produced in Estonia in the end of last century



# Strengthening traditional industry towards high-tech industry

- Innovation, research- and development activities
- Entrepreneurial environment
- Promoting information society
- Effective and integrated financial services
- Social involvement

# Goals

- Develop towards high-tech sector to use potential of the universities
- Cooperation in the field of apparatus building, engineering, electronics and IT
- Global networks (Turkey, Bulgaria, Africa, China, Ukraine, Russia etc)
- Developing work force

# New industrial priorities

- Cooperation
- Integrated production
- Global networks
- Protecting environment
- Industrial logistics
- Information systems of production

# How to achieve goals?

- Merge into international system of labor division
- Prioritize development of technical education to assure fast implementation of R&D
- Construct base of semi-industrial laboratories to support product development for technology companies

This will result with **apparatus cluster** based on cooperation and traditions and

- Estonian robots will walk on Mars!

# Activities to support clusters I

## Value chain

- Joint purchase
- Joint logistics
- Joint production
- Developing supply chain

## Processes

- Technical education
- Management training
- Technical standards
- Educational system
- Production processes

# Activities to support clusters II

## Business environment

- Laws and politics
- Investments into infrastructure

## Formation of businesses

- Incubation services
- Supporting spin-off companies
- Support structures and services for the enterprises

## Joint marketing

- Joint product branding
- Joint regional branding
- Joint support for going to foreign markets

# Activities to support clusters III

## Monitoring

- Markets
- Trends

## Joint R&D

- Joint projects

# Who creates what?

- Scientists create new knowledge
- Engineers create new technological solutions and products
- Innovators create new values

This will result with a world worth living in

# Thank you

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