



University-industry cooperation in Gdańsk

„In tandem with industry”

Prof. Henryk Krawczyk, Rector of GUT

Prof. Jacek Mąkinia, Vice-rector of GUT for cooperation and innovation

Crossing Borders – 34th CRP, 18–19 September 2015
Aalto University, Finland





1904 – 1918

Royal Higher Technical School of Gdansk

1918 – 1921

Higher Technical School in Gdansk

1921 – 1939

Higher Technical School of the Free City of Gdansk

1939 – 1941

Higher Technical School of Gdansk

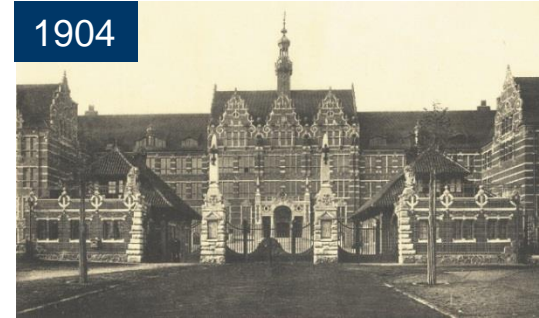
1941 – 1945

Reich Higher Technical School of Gdansk

1945 – present

Gdańsk University of Technology

1904



1945



2015



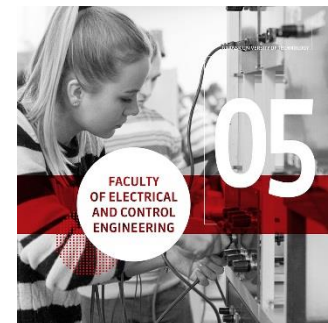
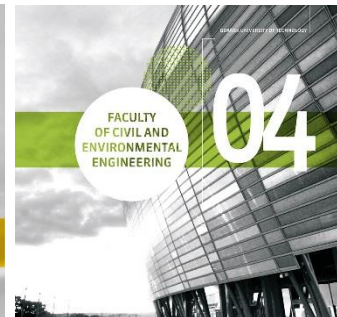
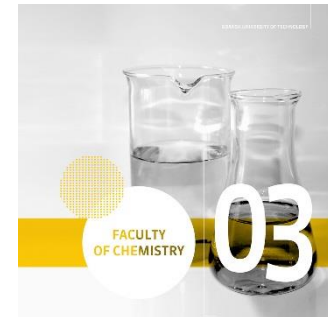
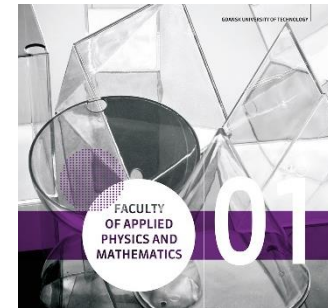


GDANŃSK UNIVERSITY
OF TECHNOLOGY

111 YEARS

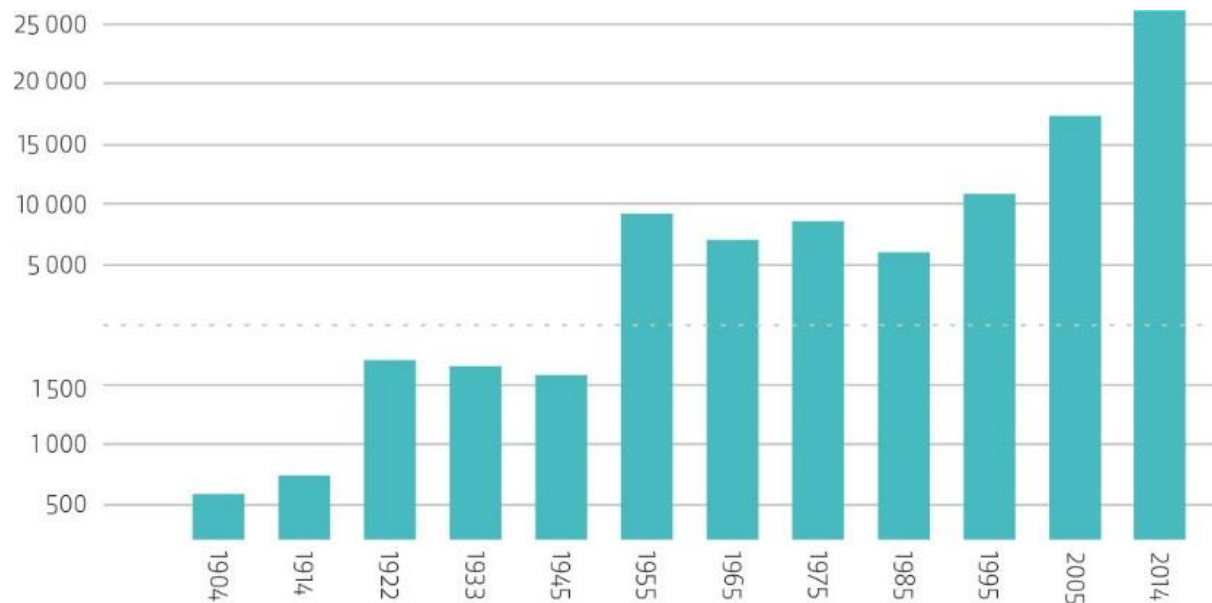
Faculties (9)

- | Faculty of Applied Physics and Mathematics
- | Faculty of Architecture
- | Faculty of Chemistry
- | Faculty of Civil and Environmental Engineering
- | Faculty of Electrical and Control Engineering
- | Faculty of Electronics, Telecommunications and Informatics
- | Faculty of Management and Economics
- | Faculty of Mechanical Engineering
- | Faculty of Ocean Engineering and Ship Technology





Number of students



Full-time studies (21 058)

Part-time studies (3177)

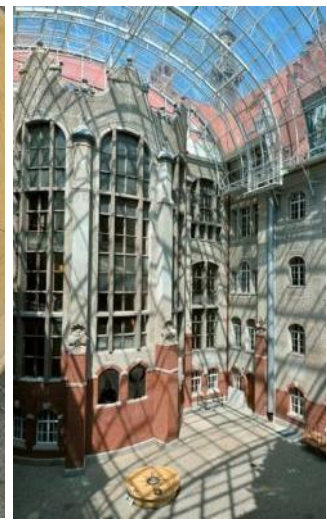
Postgraduate and MBA (1036)

Doctoral studies (710)



First, second & third cycle studies / full-time and part-time

- | 33 undergraduate and 29 graduate programs, including:
 - 3 inter-faculty programs
 - 2 inter-institutional programs (both unique in the country):
Medical and Mechanical Engineering and *Chemistry of Building Materials*
 - 15 programs taught in English
- | 7 Ph.D. programs – full-time and part-time
- | Over 50 postgraduate study courses
- | MBA studies

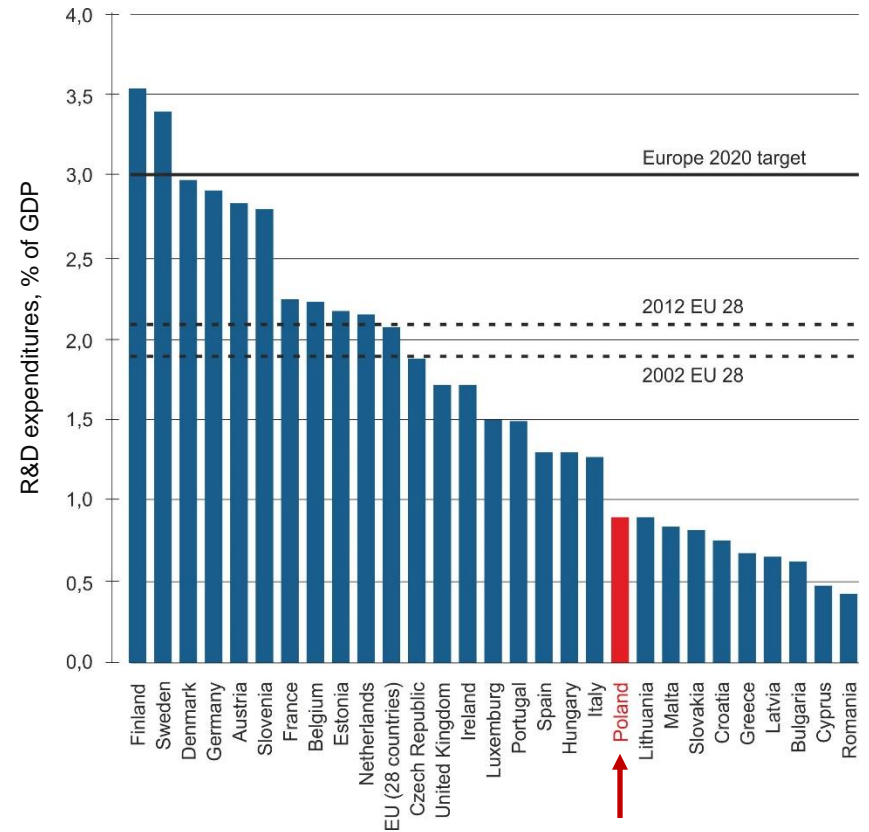
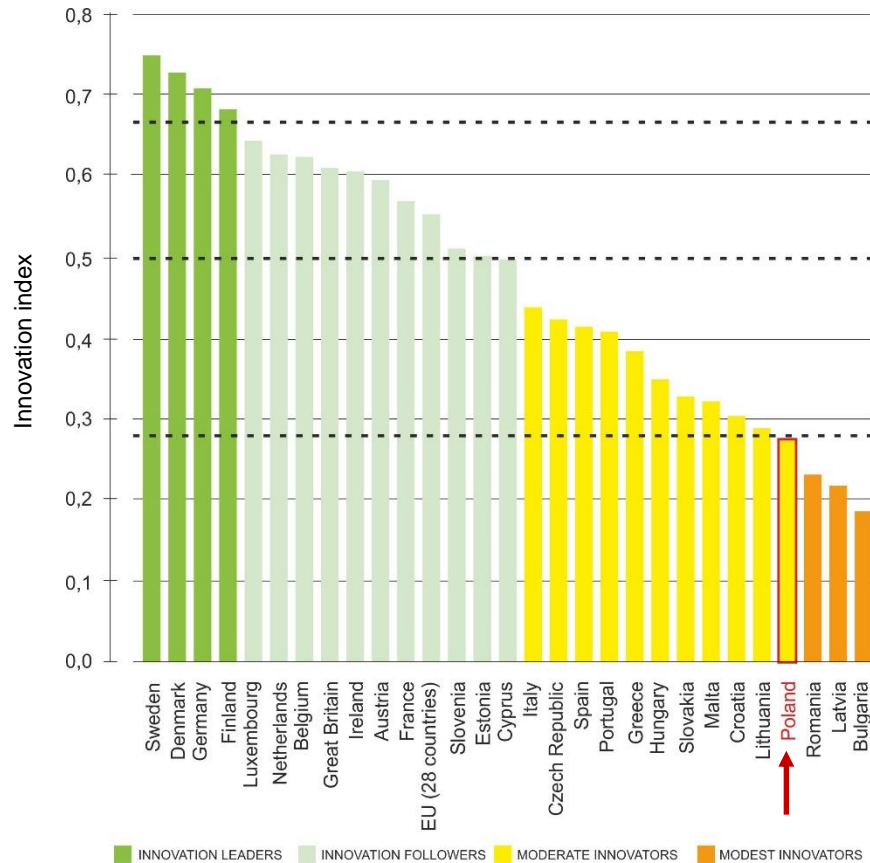




- | 2nd most popular university among student candidates
- | 4th place in regard to salaries of alumni
- | 7th place among universities, whose alumni are the most wanted by the largest employers
- | 2 GUT research teams among *'15 most creative teams in science'* for a successful commercialization of the developed technologies

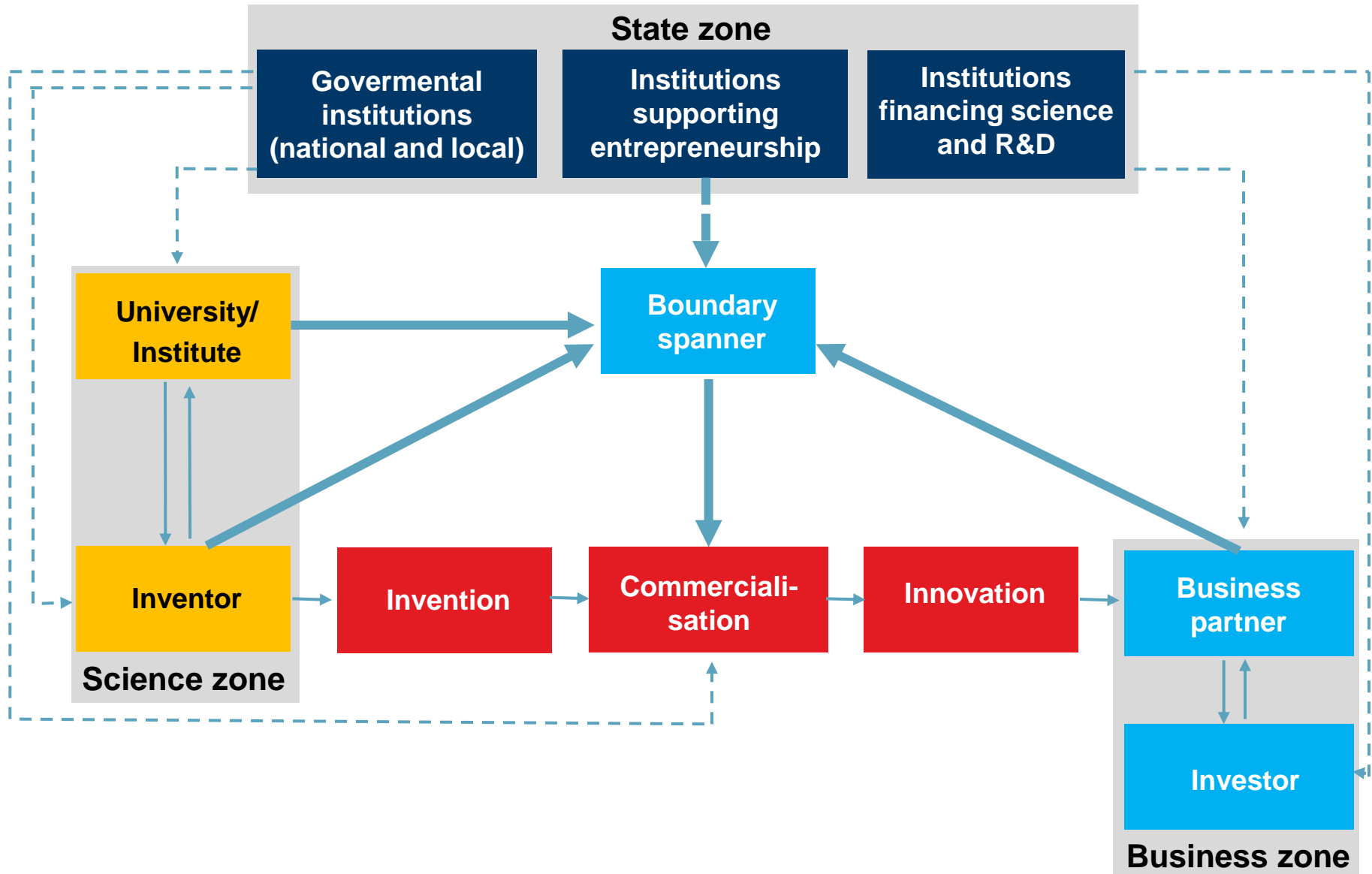


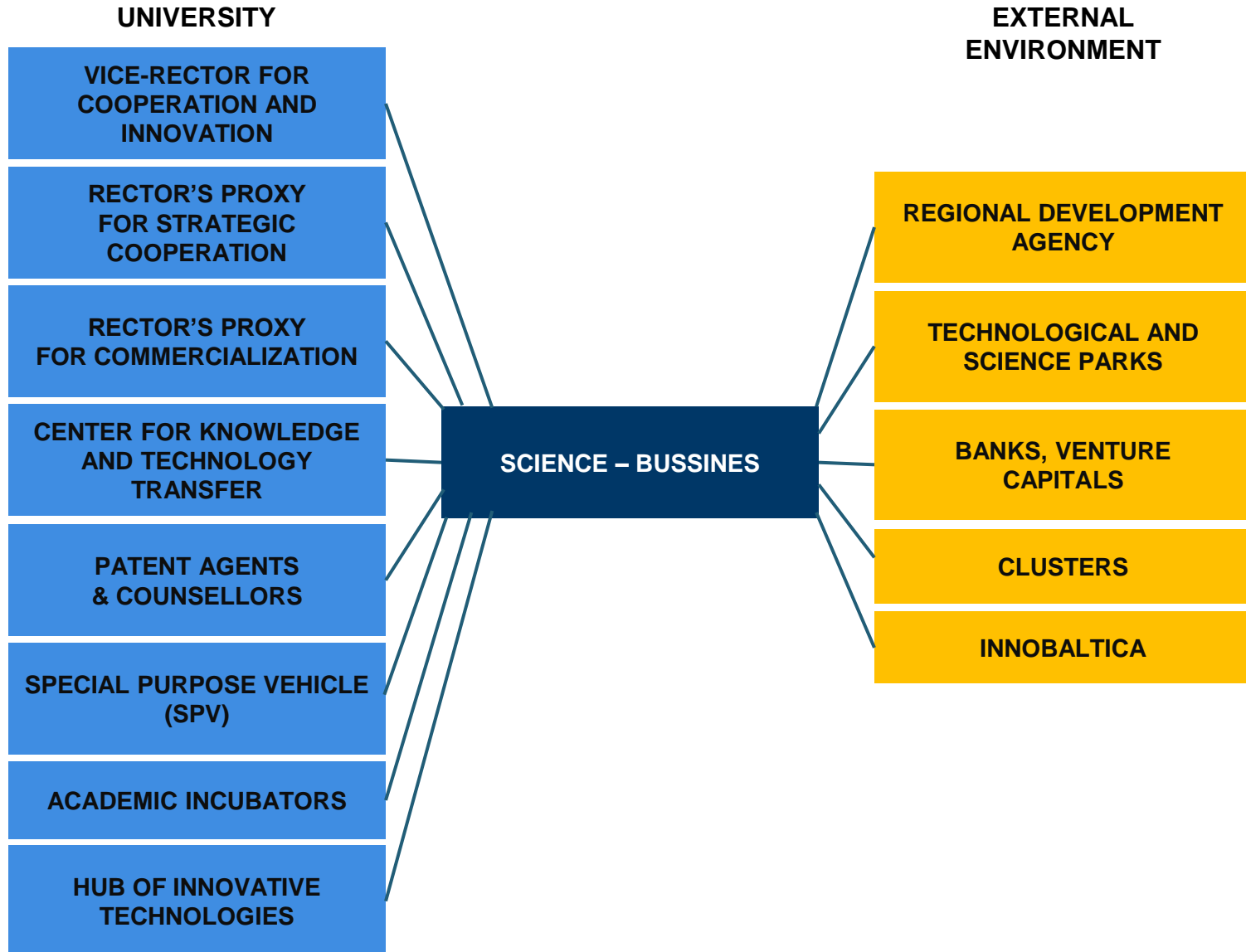
Innovation index and R&D expenditures in Europe (2014)





Model for science-business cooperation in Poland







Commercialization of R&D results

Faculties
and other
units

Center for
Knowledge &
Technology
Transfer

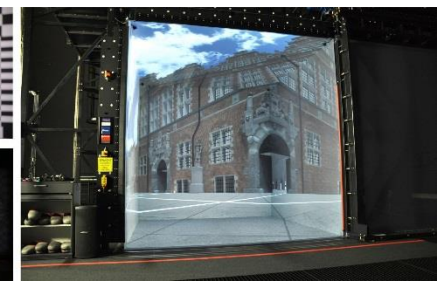
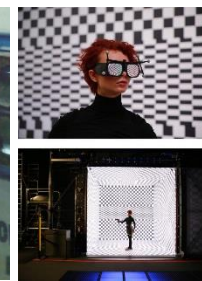
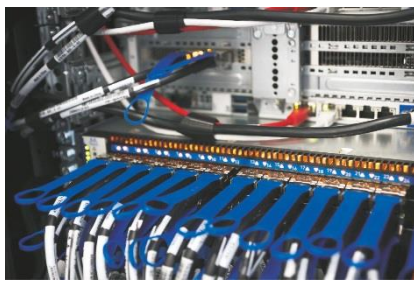
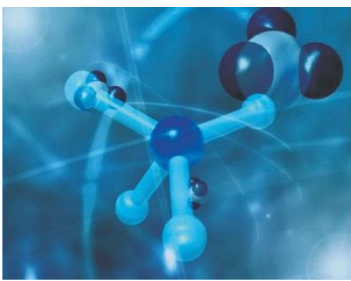
Special
Purpose
Vehicle (SPV)
(Excento Ltd)

Commissioned
Research

Scientific and
industrial
consortia

Direct
commercialization
(sales, licenses)

Indirect
commercialization
(spin-off
companies)





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Innovation ecosystem at GUT

**Comissioned
research**

Science & technology parks

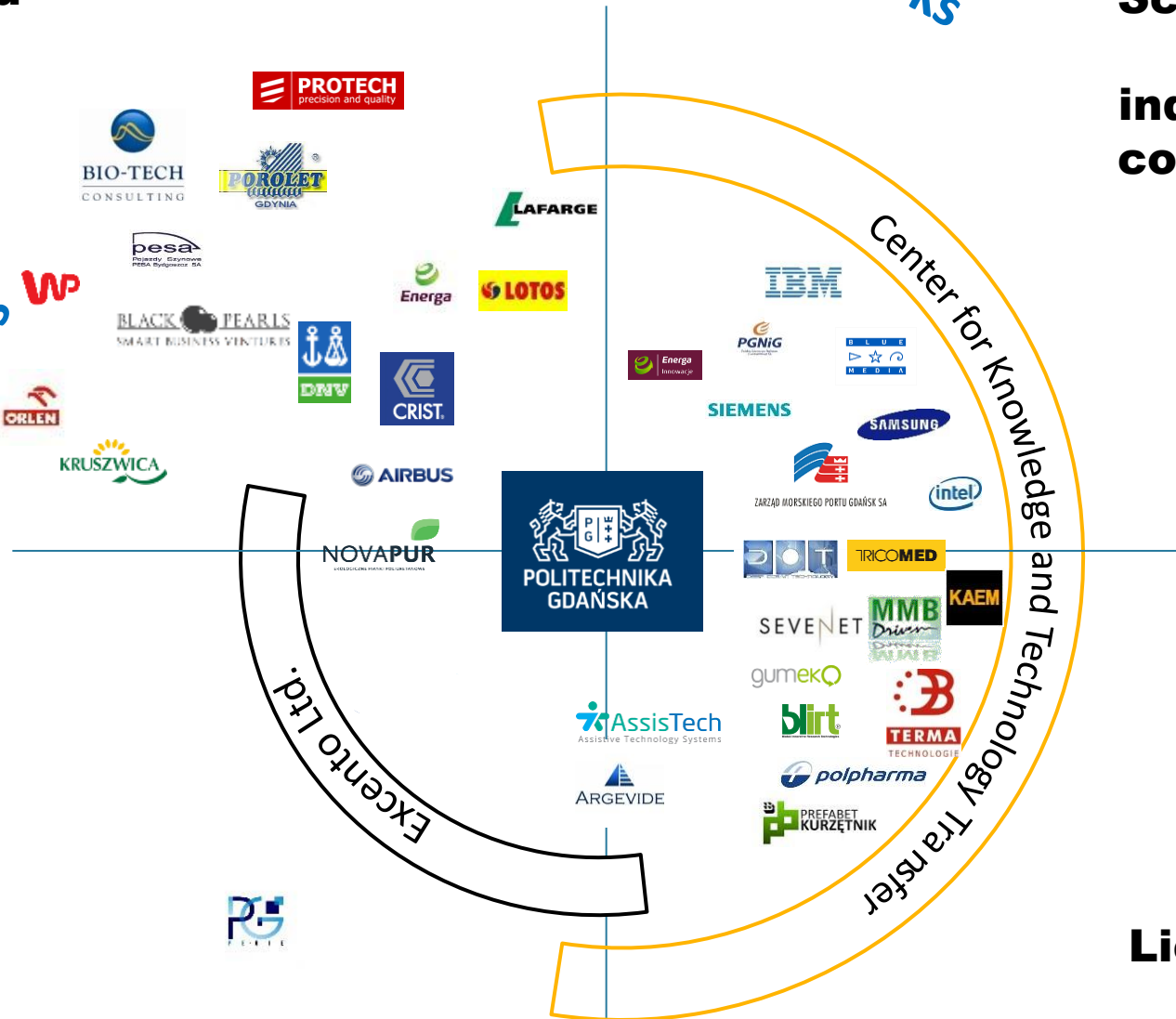
**Scientific
and
industrial
consortia**

Business Incubators

Clusters

Spin-offs

Licensing

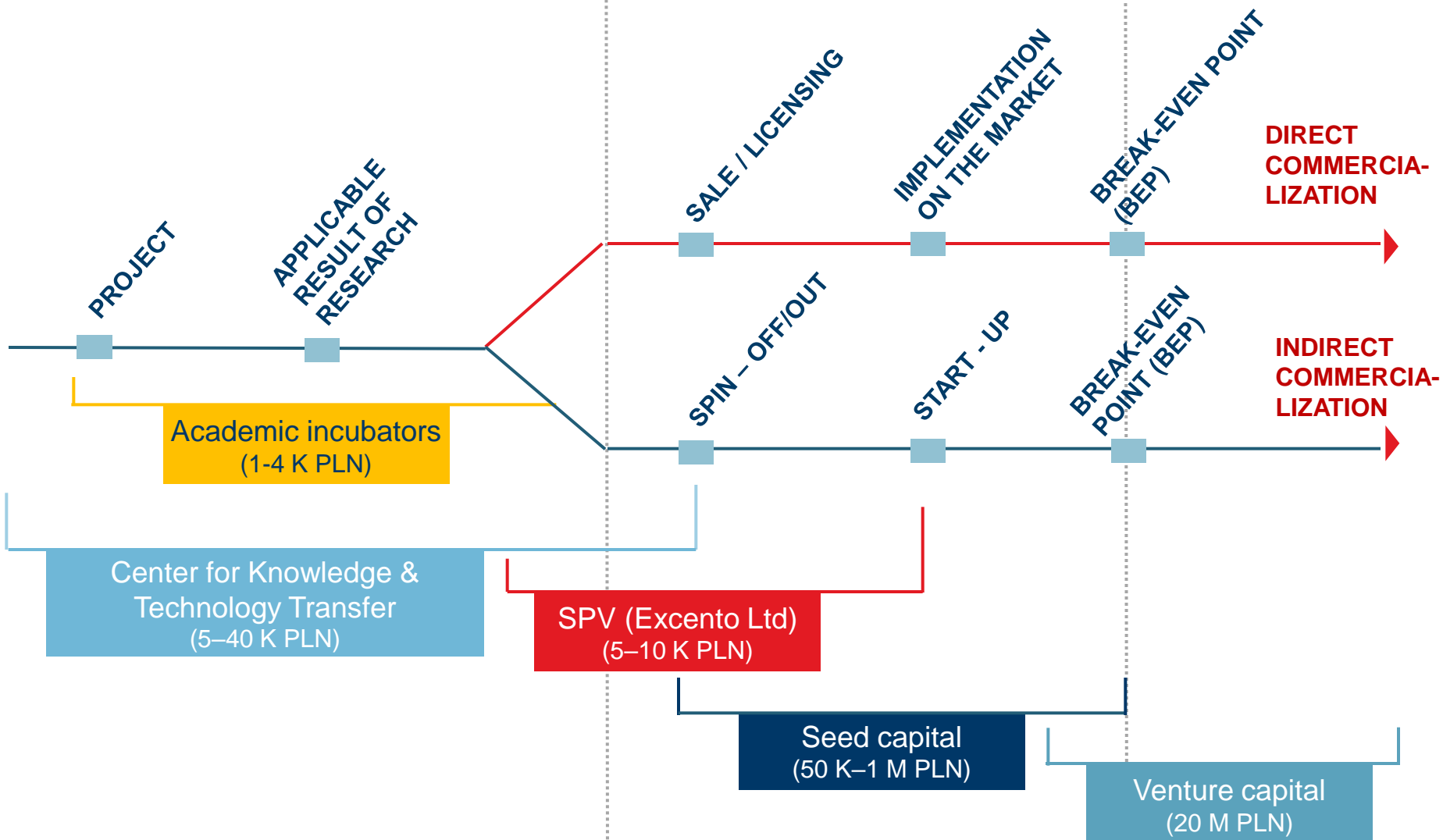




INCUBATION

DEVELOPMENT

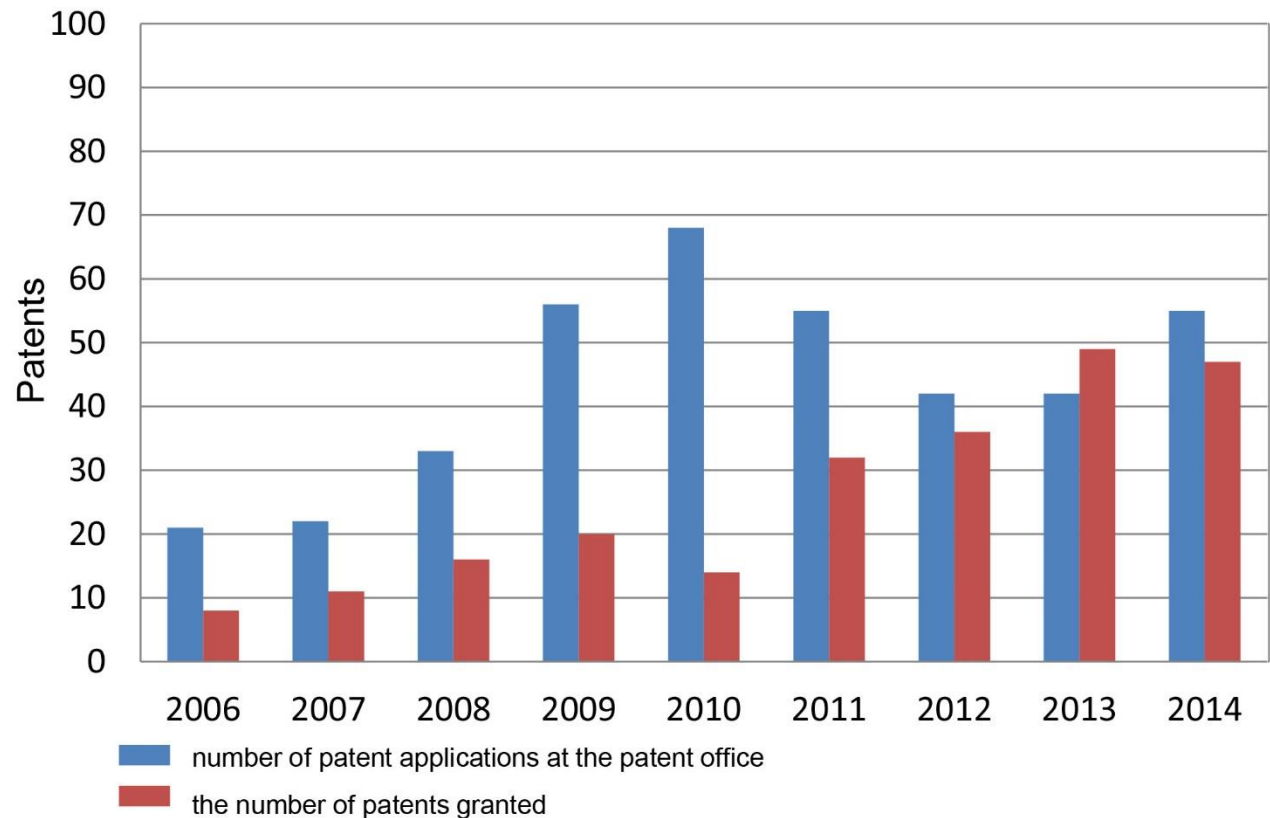
DIVESTMENT





Direct commercialization at GUT (sales or licensing)

Up to 30 licenses and sales concluded per year





| **CyberEye** – application in the diagnosis and treatment of patients in coma and a vegetative state

| **"Polish invention of the year 2013"**

| **Prime Minister's Award** for scientific and technical achievements in 2013

| Special promotional emblem
"Poland Now" (2015)

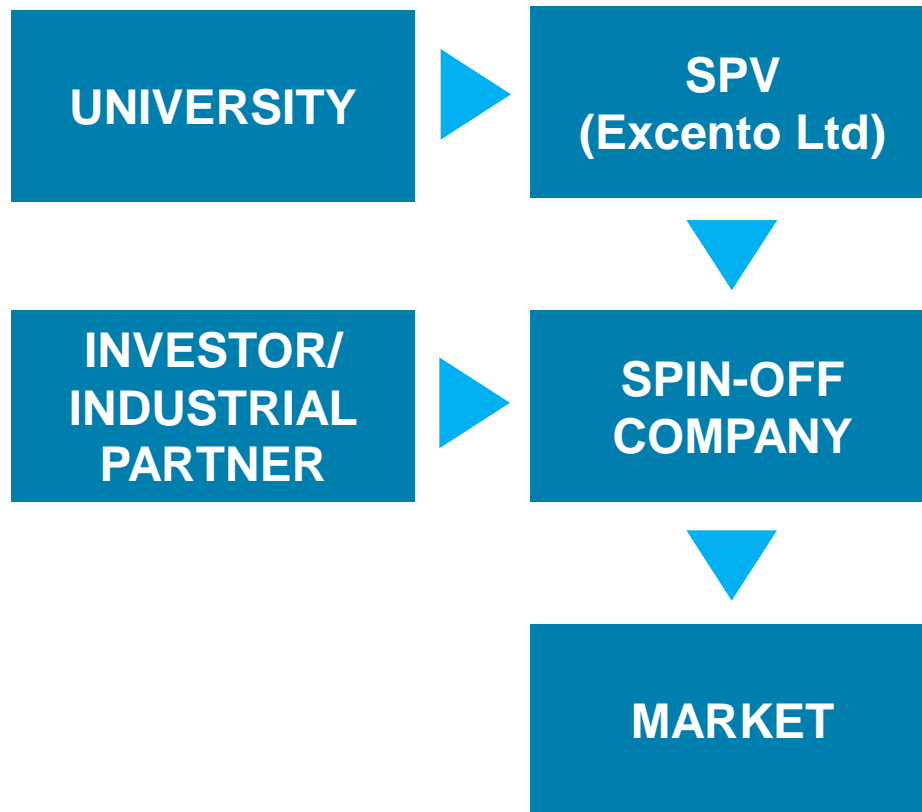
| **Technology of large diameter bored piles** for increasing the load capacity and decreasing the settlement

| Used in the key national and regional projects:
– **Kwiatkowski flyover in Gdynia**
– **cable-stayed bridge of Pope John Paul II in Gdańsk**





Indirect commercialization (by founding spin-off companies)



**5 spin-off companies
in 2013–2014**

**2- 3 new spin-off
companies per year**





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Indirect commercialization (by founding spin-off companies)

Research projects

Special Purpose Vehicle



Spin-off companies



**Green
polyurethane
foams**

**Labels
indicating
food freshness**



**Platform
supporting
compliance with
standards**



**System for diagnosing
and treatment
of patients in coma**



**Promotion of
sport activity
among the
academic
community**



28 projects within the framework of scientific and industrial consortia

National Centre
for R&D

PROGRAM	CONSORTIUM OF CONTRACTS
INNOTECH	3
PBS	6
POIG	1
BLUE GAS	4
7th EU Framework Programme	6
ERA NET	1
Norwegian Financial Mechanism	2
EUREKA	2
HORIZON 2020	3

Largest industrial partners





I Interizon Pomeranian ICT Cluster (almost 160 members)

- administrated by GUT (Faculty of Electronics, Telecommunications and Informatics)
- largest and fastest growing ICT cluster in Poland
- one of the key Polish clusters according to the Ministry of Economy
- most advanced cluster in Poland according to Deloitte Business Consulting
- awarded the prestigious Bronze Label of the European Cluster Excellence Initiative

I Baltic Eco-Energy Cluster and Gdańsk Construction Cluster – key in the Pomeranian Region

I Pomeranian Bio-Eco-Chemical Cluster

I KlimaPomerania Cluster

I Polish Maritime Cluster



Interizon
Pomorski Klaster ICT





**Number of
projects**

**Value of
projects (EURO)**

87



136 M

Structural funds

646



70 M

National research programs

24



31 M

7th EU Framework Program

35



8 M

Other international research programs

13



0.5 M

International educational programs
(excluding Erasmus+)



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Largest investment projects at GUT dedicated for science-business cooperation



**Nanotechnology
Center – 18 M Euro**



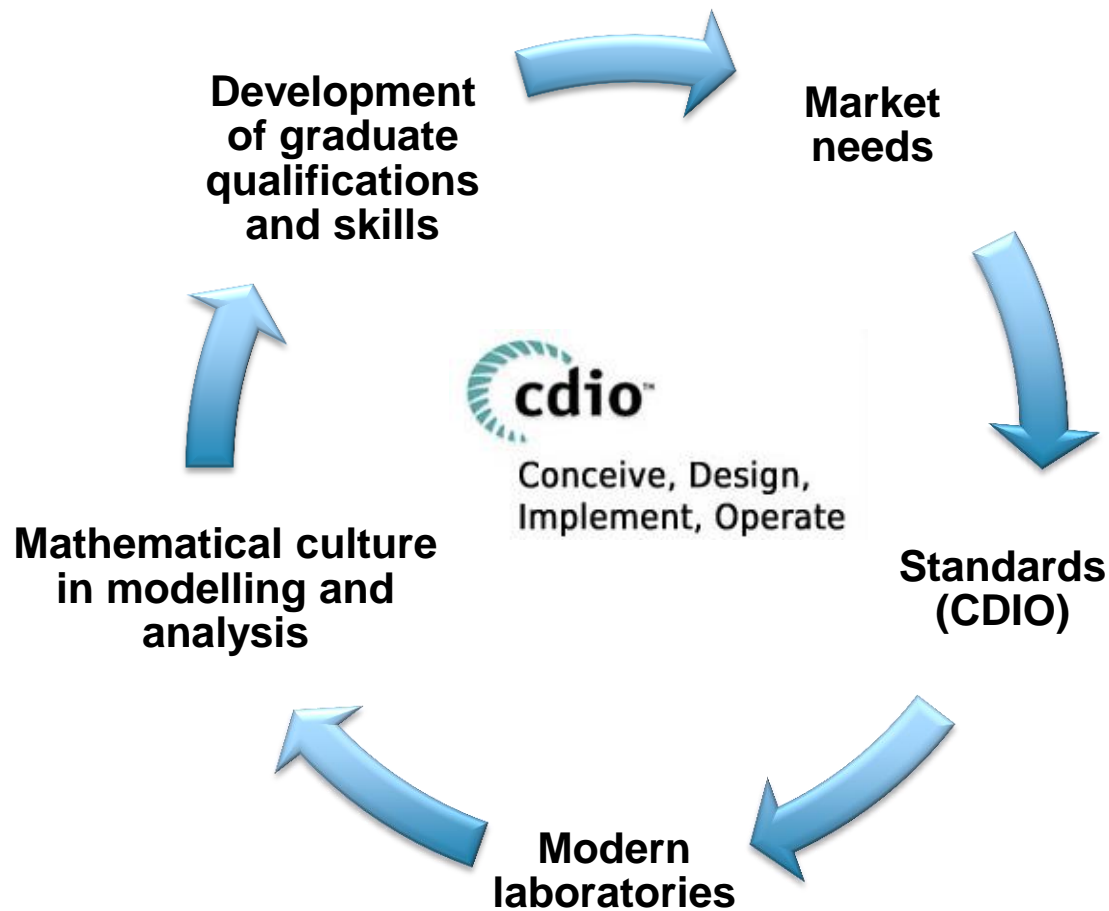
**Laboratory of innovative electroenergy
technologies and integration of
renewable energy sources LINTE² –
11 M Euro**



Engineer of the Future – 19 M Euro

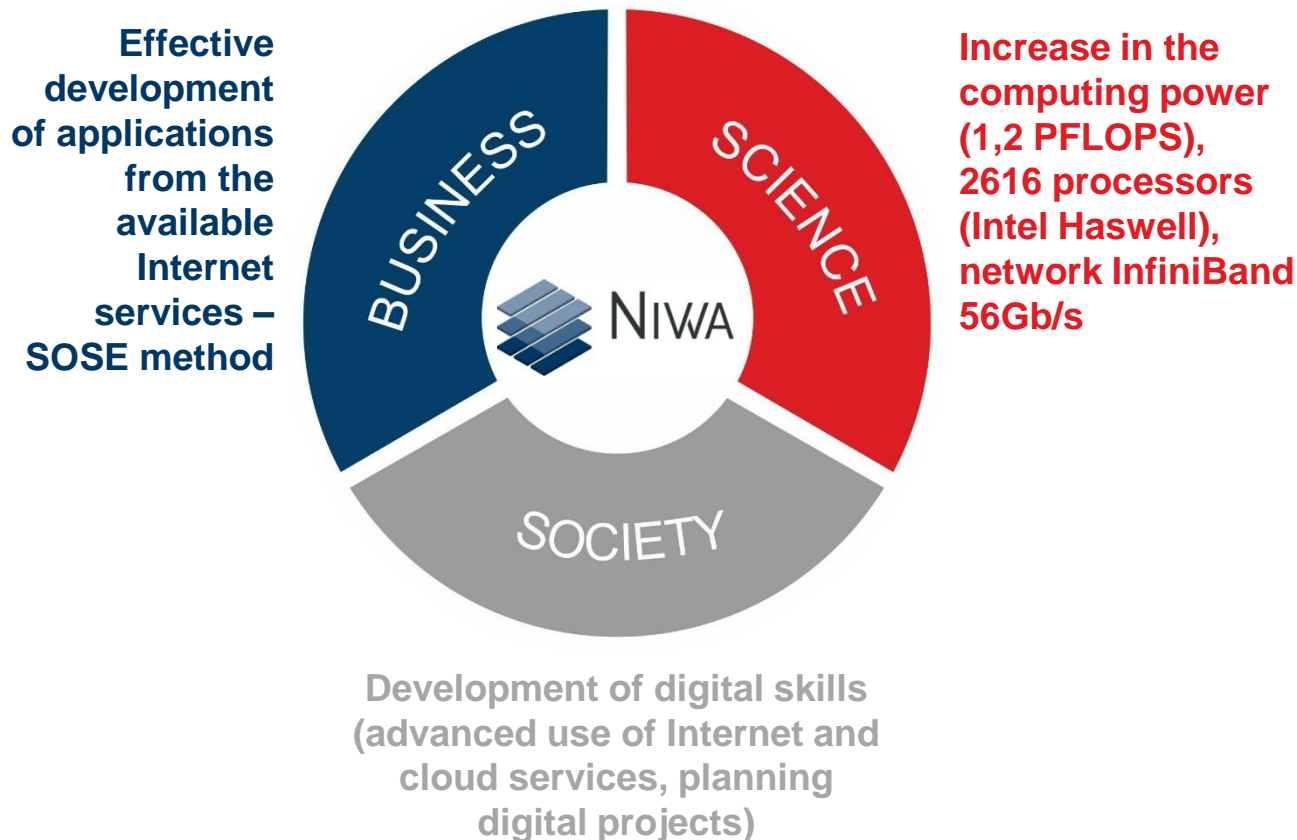


Modernisation of learning process – addressing the market needs





Competence Center of Novel Infrastructure for Workable Applications (10 M Euro)



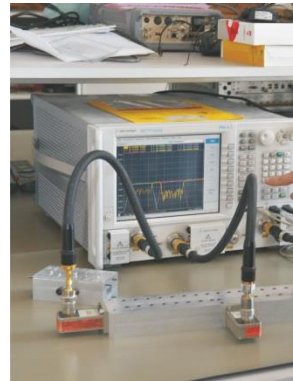


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Centre for Advanced Technologies POMERANIA

- I **Joint initiative of GUT and the University of Gdańsk**
- I **10 laboratories equipped with modern research infrastructure founded (6 M Euro) from the Regional Operational Program (2007–2013)**
- I **Research areas:**
 - Information and telecommunication technologies
 - Functional materials and nanotechnology
 - Environmental protection
 - Biotechnology, food chemistry, medicinal chemistry
- I **Mission:** *to support the development of innovative enterprises through joint initiatives and commissioned research and development of sustainable partnerships between the learning environment and the business sector.*





- I the highest possible degree of feeling immersion (unrestricted freedom of movement and stereoscopic 3D projection)
- I the maximum comfort and impression of natural activity





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Concept of the Innovation Valley in Gdańsk





HISTORY IS WISDOM – FUTURE IS CHALLENGE

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Knowledge triangle

