



Shaping the future
of Europe. People.
Technology. Innovation



EUROPEAN MANUFACTURING CONFERENCE

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Breaking the Spell.

National and EU level R&D initiatives - Poland



PhD Grzegorz Malinowski

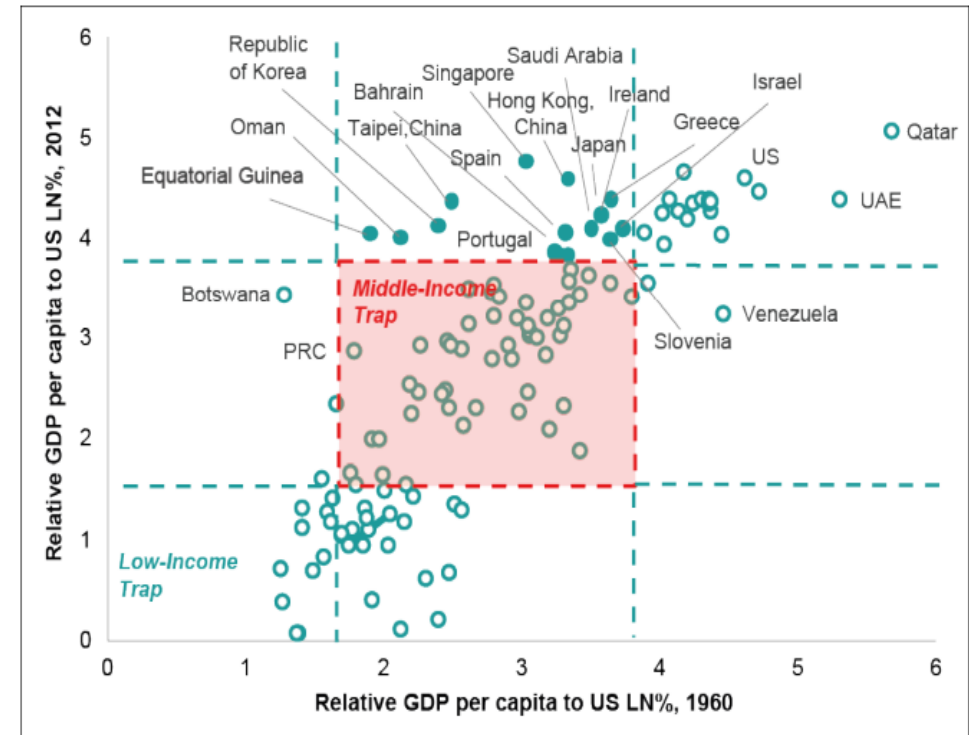
Łukasiewicz Research Network – Institute of Organisation and Management in Industry ORGMASZ, Director

Poland – case study

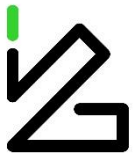
It is very easy in Poland
to fall into the trap of mediocrity

Solution to the middle income trap:
innovation.

How it can be done?
Riding on two horsebacks (1)
National initiatives (2)
EU level initiatives



Source: Own elaboration, World Bank (2015), Bolt and van Zande (2014), Penn World Table (2015). This is an updated version of a figure that appeared in Pruchnik and Toborowicz (2014) and Gill and Kharas (2015).



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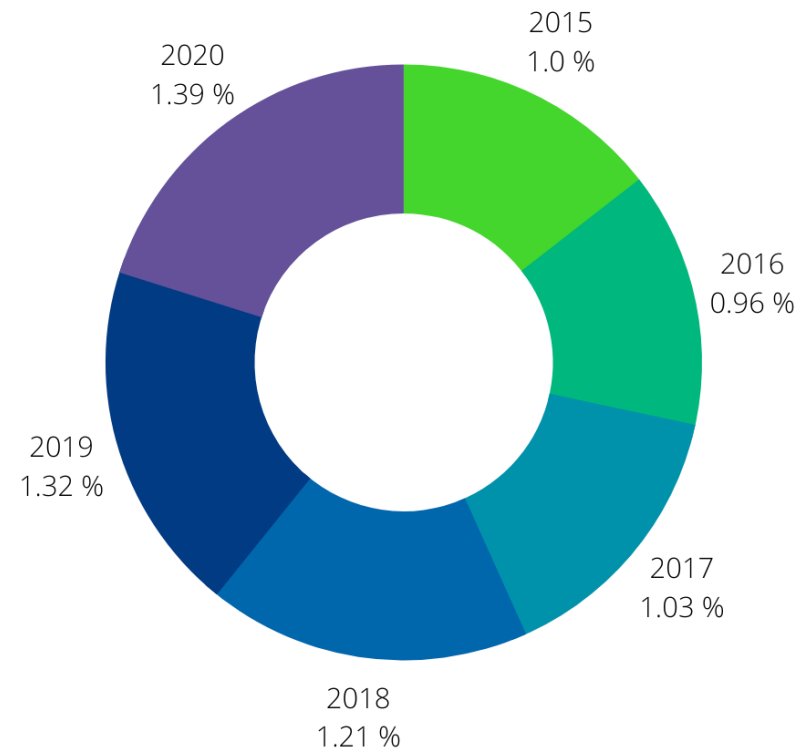
R&D inputs

Bloomberg Innovation Index 2021 r. puts Poland on 23rd position among 111 countries worldwide, highly rating the intensity of the high technology sector (high tech advancement – 19th position) and added value created by manufacturing sector (19th position).

BUT

In European and Regional Innovation Scoreboards 2021 Poland is among the countries below the EU average, still as a Emerging Innovator.

GERD to GDP %



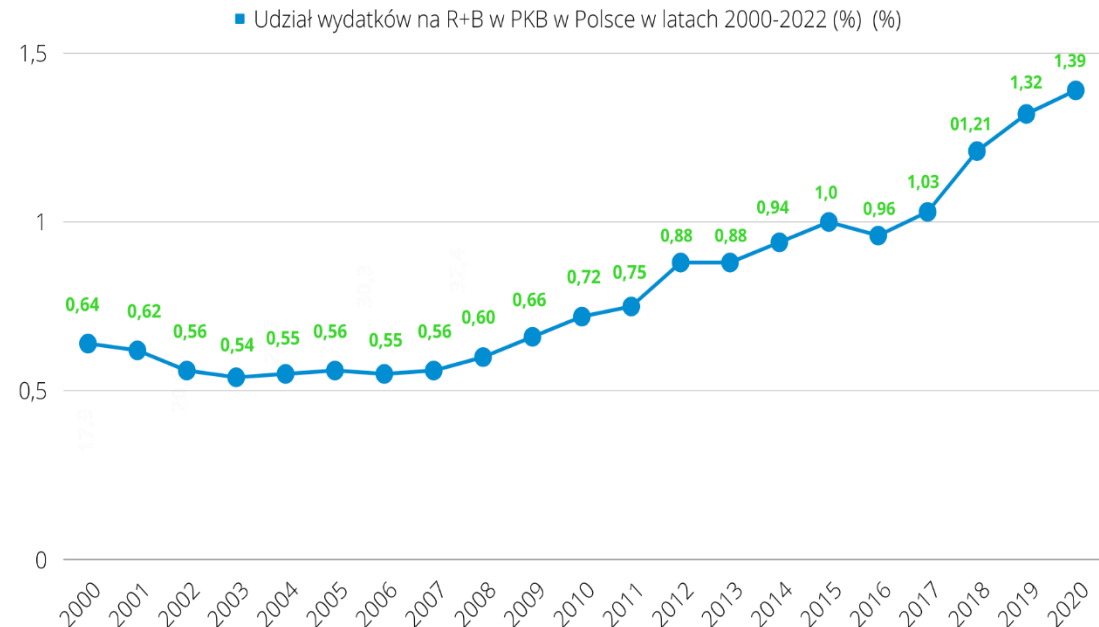
R&D inputs

1 The dynamics of Gross Expenses on R&D in Poland has increased substantially.

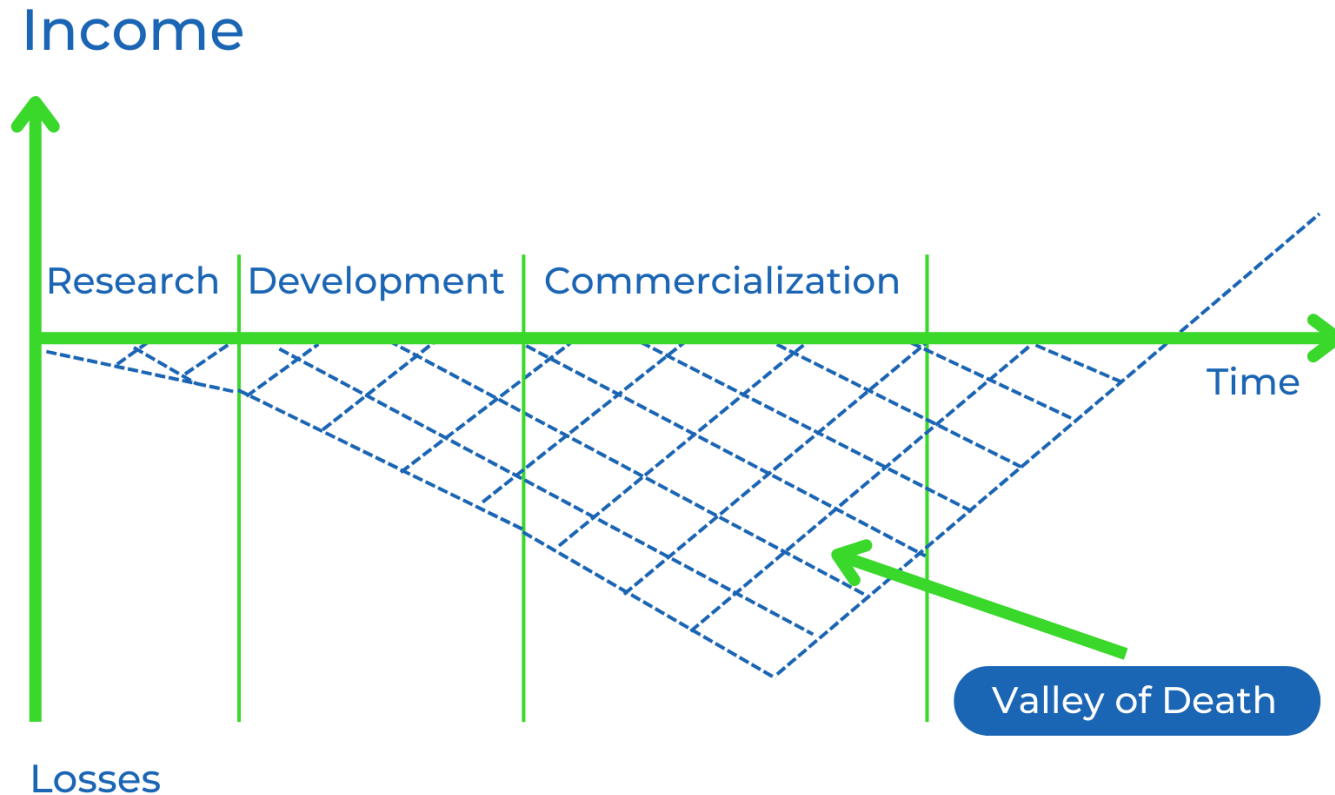
3 Business Enterprise Expenditures on R&D (BERD) over the period of 2017-2020 was 4th largest in Europe.

4 Simultaneously the scale of employment in R&D is constantly growing. Full-time equivalent (FTE) of employed in R&D increased of 29,9 thousands and amounted to 111,8 thousands. In 2019 FTE skyrocketed by 164 thousands and raises steadily by 52,2 thousands over the last 3 years.

2 Compound Annual Growth Rate of (CAGR) of GERD in the years 2017-2020 amounted to 21%.



Why mediocrity is rational?



Innovation Valley of Death

The moment when the resources involved in research and development do not bring income yet.

Research Papers no 848, Market conditions of SME development, Microfirm 2015, Univeristy of Szczecin, p. 345 (text 5.2021)

Synergy arises, where part of the investment risk is mitigated





Łukasiewicz Research Network



The third largest research network in Europe and the largest network in Poland, the R&D leader in Central and Eastern Europe.



We are modern research institution, managing 440 R&D laboratories.



We integrate 26 research institutes and the Łukasiewicz Center, which was established to plan and coordinate the scientific research.



The best people work for us!
Our teams consists more than 4,500 creative scientists and engineers.



Łukasiewicz Research Groups



1645
R&D projects in 2021

1.7 bn PLN
(0.4 bn USD)
Budget of Łukasiewicz
in these projects

almost
7.5 bn PLN
(1.9 bn USD)
Total budget of ongoing projects

Łukasiewicz Research Groups

43%



Green and
low-emission
economy

- bioeconomy
- new materials, materials recovery
- transmission and storage energy
- building materials with low energy consumption and material consumption and high insulation
- sustainable cultivation processes
- green chemistry

14%



Digital
transformation

- automation, robotics
- artificial intelligence
- intelligent services for citizens and businesses
- smart industry and Logistics
- smart cities
- digital agriculture
- digital education
- data science, digital networking, Internet of Things (IoT), AR - augmented reality

31%



Smart and clean
mobility

- intelligent and green logistics infrastructure
- autonomous mobility and network solutions
- structural materials and processes for design and fabrication in transportation
- cargo drones (UAVs)
- clean aviation
- electromobility

12%



Healthy living

- innovations in the healthcare system
- medical products
- innovations in medical technologies

Łukasiewicz Challenges!





Łukasiewicz challenges in numbers

1751 challenges

667 R&D challenges
1097 P&S challenges

732 companies
challenged us



Industry Contact Points – complementary support system in Łukasiewicz

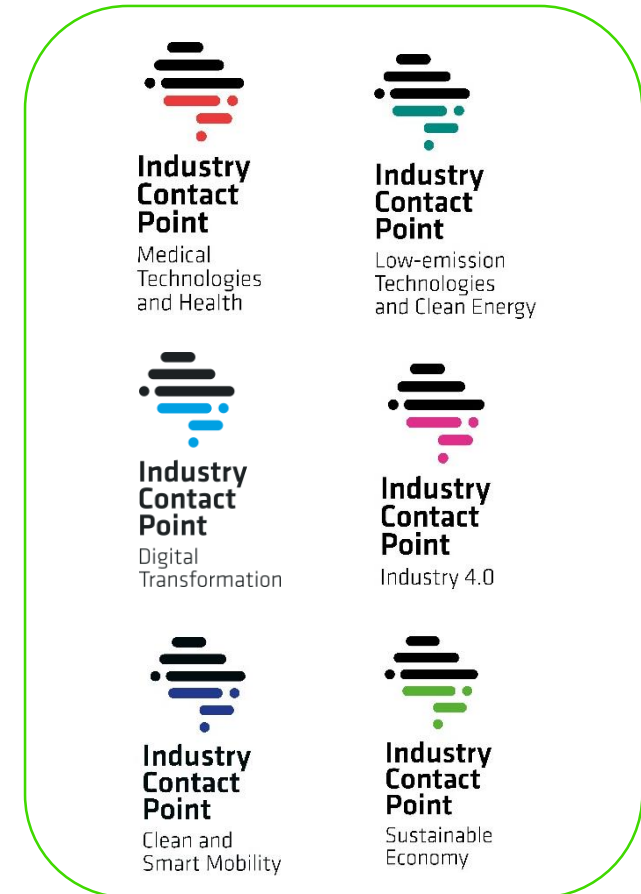
HPK **NCBR**  **Industry Contact Points** Coordinator

National Contact Point for EU Research Programmes

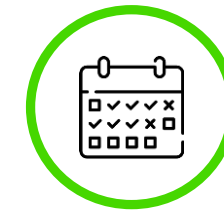


HORIZON europe



Matchmaking with Polish Horizon Partners



Warsaw, 22 November 2022
Industry Contact Points

Thank you for attention