



EU ENI East Twinning project Supporting inter-sectoral collaboration possibilities between Research and Industry GE 18 ENI OT 02 19 Component 1

Component 1

Thematic Priorities and Science Fields as Approaches to Science Funding













Scientific Thematic Priorities vs Scientific Disciplines

Der Wissenschaftsfonds

Scientific thematic priorities

- Address research needs from
 - Society
 - Business Sector
- Inform funding programmes, e.g.
 - Horizon Europe (EU)
- Can help to overcome existing silos in the science sector
- Can help to stimulate private sector R&D investments

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Scientific disciplines

- Structure science into branches
- Are codified in classifications such as
 - The OECD Frascati classification of science and technology (FOS)
 - UNESCO nomenclature for fields of science and technology

FFG

- Scientific disciplines in bibliometric databases (Web of Science, Scopus)
- Are a unit of analysis for the assessment of productivity and for benchmarking in science by branches (i.e. bibliometrics)







Agricultural Sciences

Social Sciences

Humanities

Examples Scientific priorities in Latvia Scientific disciplines Scientific priorities in OECD Austria Natural sciences, applied mathematics, ٠ Natural Sciences information and communication technologies for Quantum research and ٠ the development of the knowledge economy, **Engineering and Technology** technology smart materials and technologies for increasing **Medical and Health Sciences Smart Cities** Health biotechnology

- Cybersecurity
- **Artificial Intelligence** ٠
- **Renewable Energy and climate** change
- Mobility ٠
- **Production Technologies**
- Security and Defense

- the value of products and processes and enhancing cybersecurity.
- Energy independency, energy efficiency and climate change
- Local resources and their sustainable use
- Public health, sports, welfare and demography ٠
- Knowledge society and innovations for economic sustainability
- Open inclusive society and social securitability ٠
- Social security and defence challenges ٠
- Statehood of Latvia, local languages and values















Advantages and Disadvantages of the Approaches

	Funding by Thematic Priorities	Funding by Science Fields
Advantages	 Very good ability to adopt to emerging trends Strong potential to adress challenges from society and / or the business sector Strong potential to promote private sector investments in R&D 	 (Relatively) stable framework No inital consultative effort needed
Disadvantages	 Big intial effort needed to identify relevant priorities Need of periodic adjustments (every 7 to 10 years) 	 No involvement of the business sector No possibility to fund interdisciplinary projects No possibility to address sociental needs properly Difficulty to adopt to emerging trends















The Process of Thematic Priority Setting







Good Practice - Croatia

- Small country (4.3 Mio. Inhabitants)
- **Transformation challenges** from former socialist system (Science and Economy)
- Top ranked scientific fields in terms of international publications: medicine, agricultural and biological science, biochemistry/genetics/molecular biology, physics&astronomy, engineering, chemistry
- Patenting is very low in Croatia, but technological strengths can be found in: Pharmaceuticals, biotechnology, medical technology, ICT
- Limited number of private sector companies with substantial own R&D- activity, most notably in Ericsson-NikolaTesla (ICT, Telecommunication) and PLIVA (pharma)

















Priority setting in Croatia – Process Design

Process Design for identifying priorities

- Desk Research as a basis
 - Analysis of Science Sector and Trends
 - Analysyis of Business Sector and Trends
 - Analysis of Megatrends
- Extensive consultation process
 - Initial involvment of external experts
 - Dedicated working group to identify a premiminary list of priorities
 - Thematic workshops to develop more finegrained information and to activate stakeholders



SMART, INCLUSIVE AND SUSTAINABLE GROWTH of Croatian economy















Priority Setting in Croatia – Identified Priority Areas

