Systems Perspective of the Austrian Energy Technology Policy

EGRD Workshop „System Resiliency and Flexibility"

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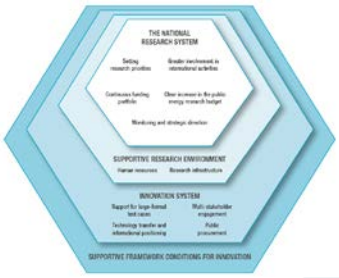
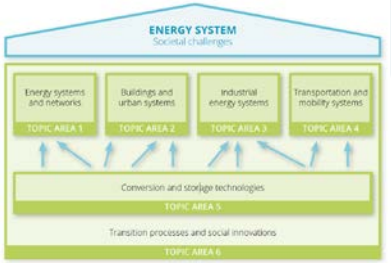
Energy Research and Innovation Strategy (2017)

- based on a comprehensive open public consultation process

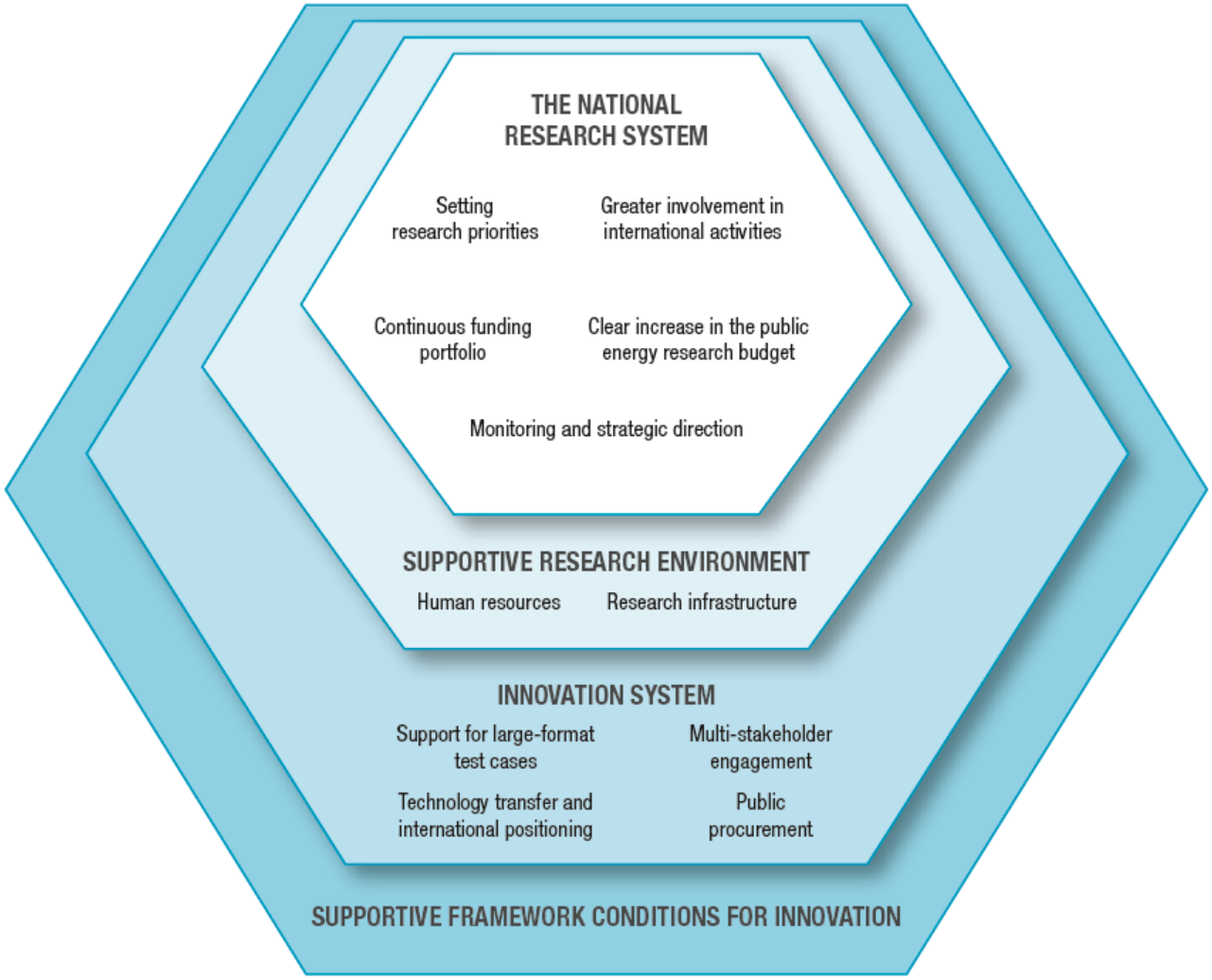
Volume 1: general recommendation on targets, instruments and measures



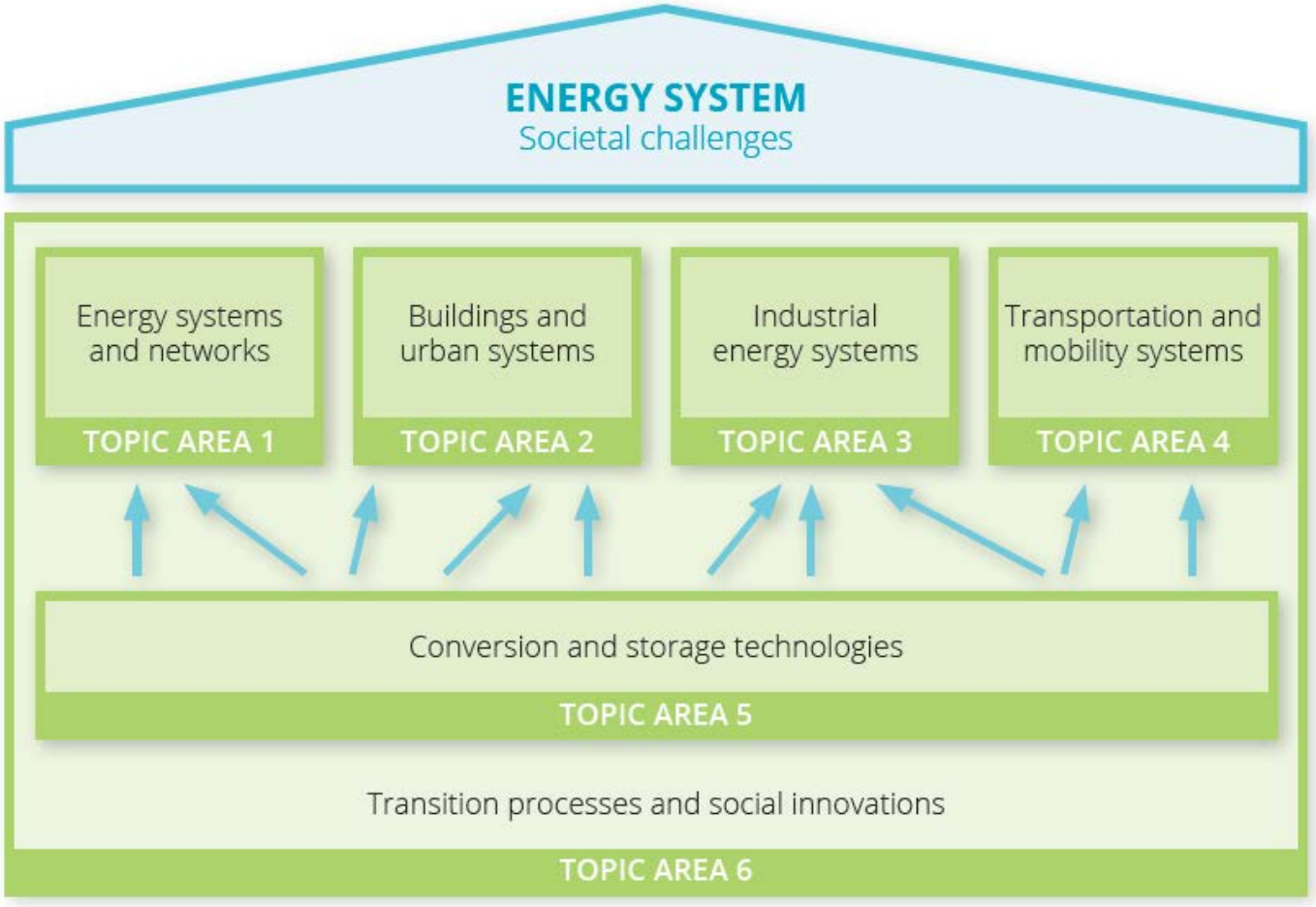
Volume 2: results of the thematic discussions



Levels and Areas for Action and Measures



Topic Areas and System Approach for Energy RDI



Topic area 5:

1) bioenergy
2) solar thermal
3) heat pumps
4) photovoltaics
5) wind energy
6) water power
7) fuel cells
8) geothermal
9) electric storage
10) thermal storage

Bundesministerium
Verkehr, Innovation
und Technologie

Climate and Energy Strategy #mission2030

intergrates energy, climate and RDI policy

#mission2030 confirms:

- RDI play a key role for decarbonisation
- Importance of RDI for economic success on global markets

#mission2030 comprises 2 lighthouse projects for RDI:

- **Flagship 9:** components for the future energy system
  Mission-oriented R&D in the fields of: #plus energy areas, #integrated regional energy systems, #break-through technologies for industry, #energy-efficient mobility systems of the future
  (TRL 2-7)

- **Flagship 10:** programme mission innovation austria
  Large-scale test regions as models for smart, safe and affordable energy and mobility systems of the future
  (TRL 5-8)

Main Strategic Aspects

- **RDI should be relevant and have strong impacts: clear priorities, mission orientation and focus on implementation**
- **Main focus on functionalities and (energy) services: system orientation und sector coupling**
- **Appropriate funding instruments in all phases of the innovation chain up to successful implementation (test phases, innovation laboratories, innovation partnerships)**
- **Accelerating RDI-investments: Industry investments should be triggered by the public sector**
  (Mission Innovation recommends: doubling the budget within 5 years)

Thematic Priorities

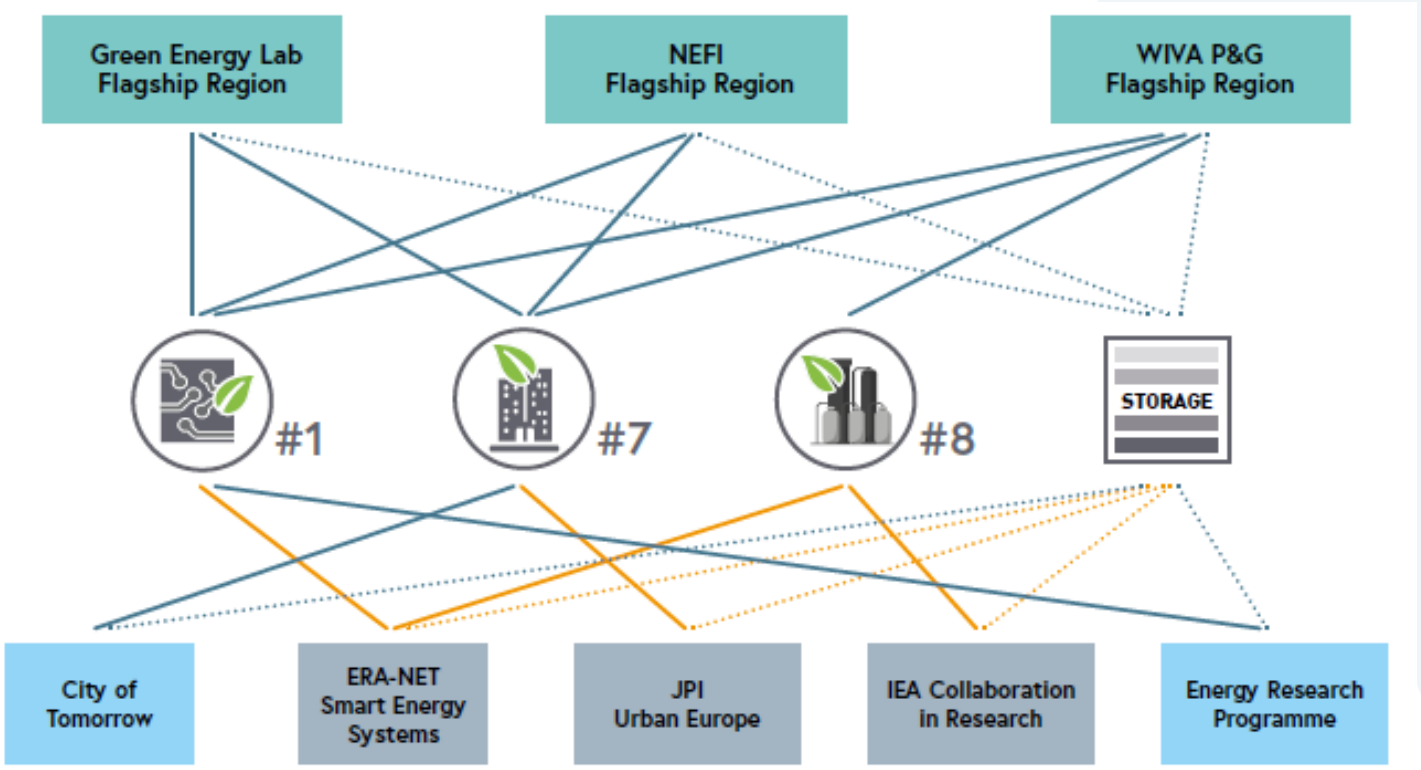
- Smart and flexible energy systems
- Urban infrastructure and smart cities
- Decarbonisation of (energy-intensive) industry
- Clean mobility and transportation technologies
- **Digitalisation in city planning and building construction**
- **Positiv-energy-districts**
- **Storage for mobile and stationary systems**
- **Hydrogen for storage and decentralized energy systems**

Austrias IEA Technology Collaboration Programmes Participations

21 TCPs and EGRD

- Industrial Energy related Technologies and Systems (Sep 2016)
- District Heating and Cooling (Jan 2017)
- Clean Energy Education and Empowerment TCP (July 2018)
- Hydrogen TCP (September 2018)
- Energy Conservation through Energy Storage (March 2019)

Programmes/Priorities of BMVIT and Climate and Energy Fund incl. international collaborations and relation to MI Innovation Challenges



Flagship Region Energy

- In the "**Green Energy Lab**", a substantive part of Austria becomes a test region for a future energy system with a significant share of renewable energies. The focus is placed on more flexibility and digitisation of the energy system to support energy supply security.
- The purpose of "NEFI" (**New Energy for Industry**) is to show that 100% renewable energy supply of industrial sites is possible with energy technologies developed in Austria.
- The aim of **"WIVA" (hydrogen initiative**) is to demonstrate the viability of a shift of the Austrian economy to an energy system which is largely based on hydrogen. The focus is on the production, storage, distribution and application of renewable hydrogen in the fields of energy supply, industry and mobility.