

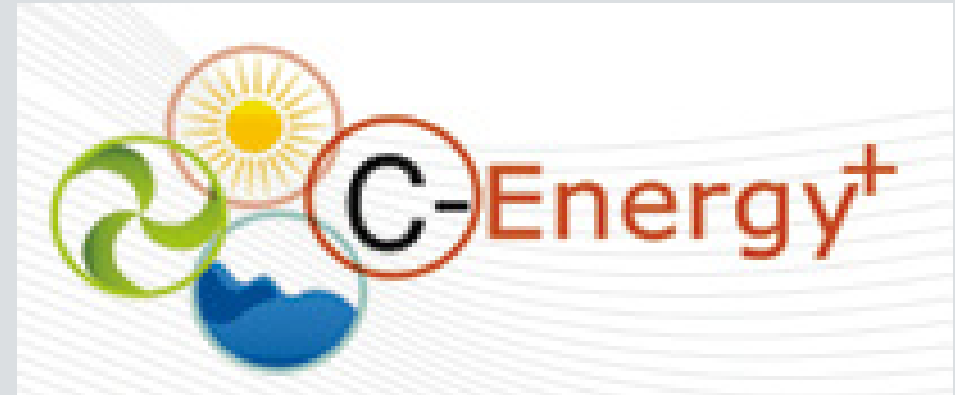
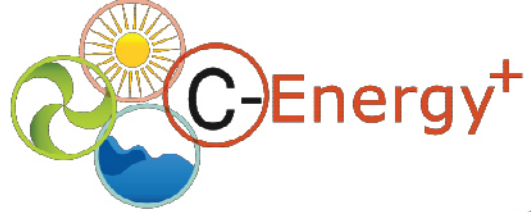
New Trends in EU Energy funding

The role of EU instruments

Piotr Świątek
National Contact Point for Energy
PtJ /FZJ



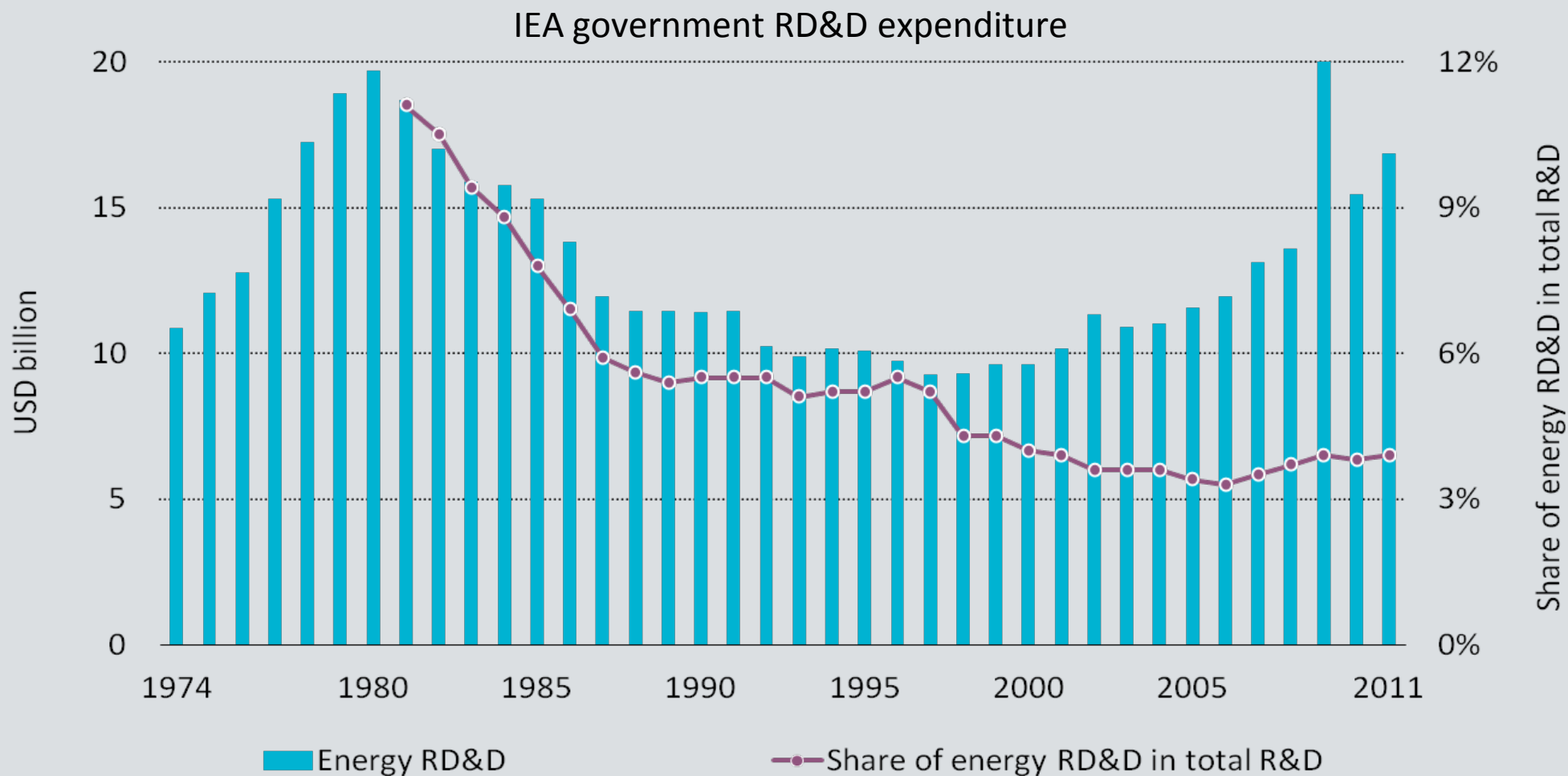
C-ENERGY+ Connecting Energy NCPs.
A Pro-Active Network of National Contact
Points in the Seventh Framework
Programme under the Energy Theme



C-ENERGY+

The Network of Energy National Contact Points

Energy RD&D: declining share but more wisely spent



Energy RD&D has slipped in priority in IEA member countries.

SET-Plan :

Strategic Energy Technology Plan

Strategy strongly involving the Member States

- Components:
 - SET-Plan Steering Group (CZ: Mr. Pazdera)
 - EII - European Industrial Initiatives
zu **Solar, Wind, Bio, Grids, CCS, Nuclear, Smart Cities**
 - EERA – European Energy Research Alliance
 - SETIS : setis.ec.europa.eu
- Activities:
 - Roadmaps, KPI
 - Preparation for implementation e.g PPPs, ERA-NETs

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020



www.c-energyplus.eu

1. Excellent Science

- European Research Council (ERC)
- Future and Emerging Technologies
- Marie Skłodowska-Curie Actions
- Research Infrastructures

2. Industrial leadership

- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs

3. Societal Challenges

7 Challenges

- Health, demographic change and well-being
- European Bioeconomy Challenges: Food security, sustainable agriculture and forestry, marine and inland water research
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Europe in a changing world – Inclusive, innovative and reflective societies
- Secure societies – Protection freedom and security of Europe and its citizens

4. Direct actions of the Joint Research Centre (JRC)

Joint Programming P2P

Joint Technology Initiatives (JTIs) P2B

5. European Institute of Innovation and Technology (EIT)

Graphic: Daria Urban-Thielecke

H2020 1st Call Energy

- 2-year Work Programme (2014 – 2015) with Leitmotif :
„The economic crisis and the path to sustainable growth“
- Scope: Horizon 2020 Specific Programme = FP7 + marketuptake (ex IEE)
+ unconventional hydro carbons + flexible fossil fuel power plants
- Challenge based approach
- Cross-cutting approach: inputs from and collaboration with other H2020 parts
- 3 Call areas:
 - **Energy Efficiency**
 - **Competitive low-carbon energy**
 - **Smart Cities and Communities**



**SECURE, CLEAN & EFFICIENT
ENERGY**

SECURE, CLEAN AND EFFICIENT ENERGY

- Energy research and innovation, an important part of Horizon 2020:
 - Included as a **key challenge 'Secure, clean and efficient energy'** under the societal challenges' block of Horizon 2020
 - **Separate but complementary programme for nuclear energy activities** adopted under the Euratom Treaty



'SECURE, CLEAN & EFFICIENT ENERGY'

Specific implementation aspects:

- Support the **implementation of the SET-Plan**
- Partnering with European stakeholders important to share resources & implement jointly
- SETIS mobilised to develop, together with stakeholders, **KPIs**
- Improve **coordination of relevant EU Programmes, initiatives & policies** (e.g. Cohesion policy and the Emissions Trading Schemes mechanisms)

SECURE, CLEAN & EFFICIENT ENERGY

Objective: to make the transition to a reliable, sustainable & competitive energy system, in the face of increasingly scarce resources, increasing energy needs and climate change.

Broad lines of activities:

- (1) Reducing energy consumption and carbon footprint by smart and sustainable use;
- (2) Low-cost, low-carbon electricity supply;
- (3) Alternative fuels and mobile energy sources;
- (4) A single, smart European electricity grid;
- (5) New knowledge and technologies;
- (6) Robust decision making and public engagement;
- (7) Market uptake of energy innovation.

SECURE, CLEAN & EFFICIENT ENERGY

- **Complementarities and cross-cutting actions:**
 - Energy research and innovation to be **implemented across the Horizon 2020**
 - **Strong synergies needed with the other societal challenges** as well as **with the other parts of Horizon 2020** such as 'Excellence Science' and 'Industrial leadership'
 - **A strong link with the EIT needed** to expand the knowledge, competence and innovation base and to accelerate the diffusion of low-carbon technologies into national research, education and innovation systems

UPCOMING CALLS: SECURE, CLEAN & EFFICIENT ENERGY

This societal challenge will possibly fund research activities in the following **areas**:

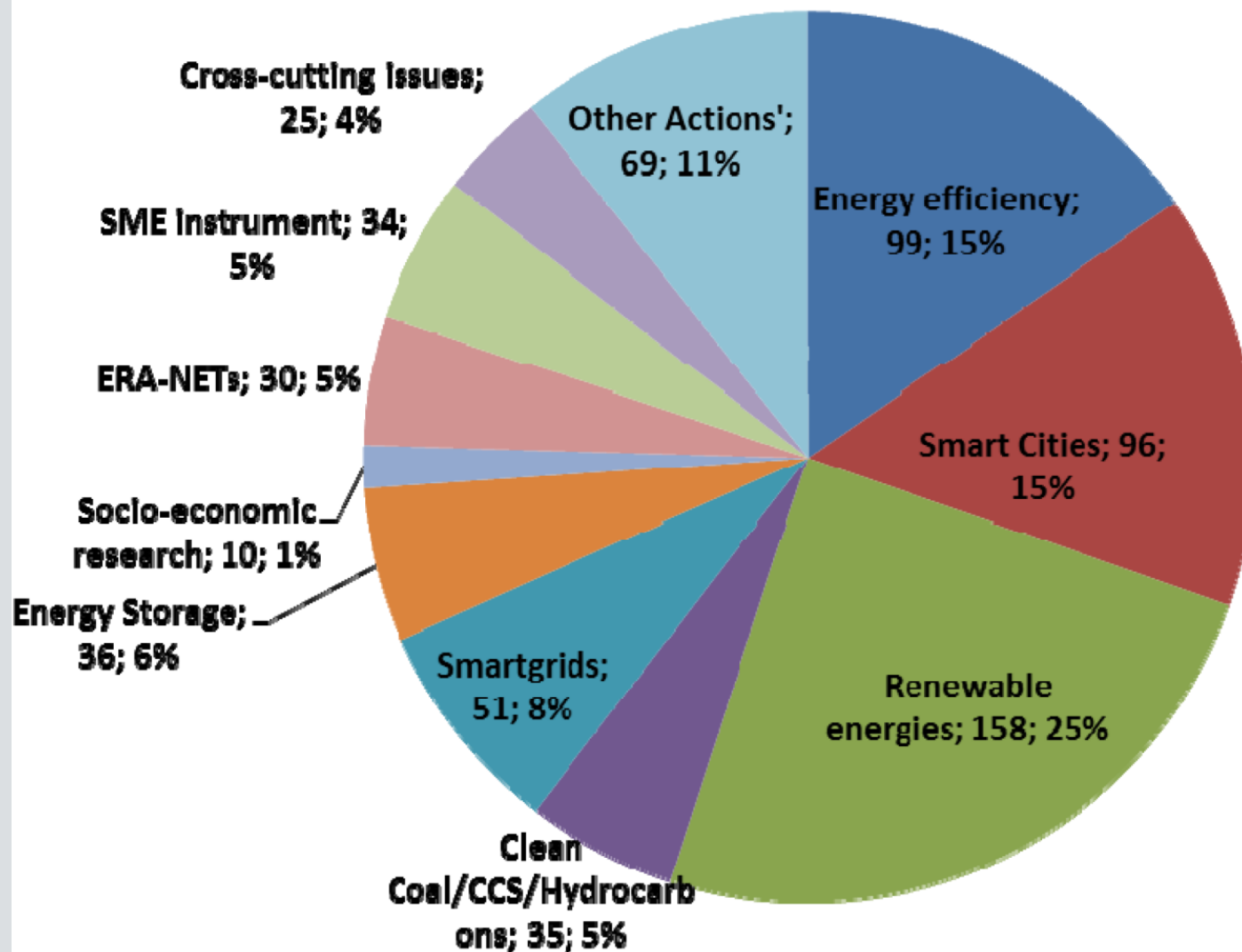
- Energy Efficiency
- Competitive low-carbon energy
- Smart Cities and Communities

Energy Work Programme

- Energy Efficiency Call
 - Buildings & Consumers
 - Heating & Cooling
 - Industry & Products
 - Finance for Sustainable Energy
- Smart Cities & Communities
 - ‘Light-house projects’
 - Support measures for enhancing the roll-out of Smart Cities & Communities solutions by stimulating the market demand

- **Competitive low-carbon energy**
 - Renewable electricity & heating and cooling
 - Modernising the single European Electricity grid
 - Providing the Energy system with flexibility through enhanced energy storage technologies
 - Sustainable biofuels & alternative fuels for the European transport fuel mix
 - Enabling the sustainable use of fossil fuels in the transition to a low-carbon economy
 - Supporting the development of a European research area in the field of energy
 - Social, environmental & economic aspects of the Energy system
 - Cross-cutting issues

Budget allocation of the Energy WP (2014)



TOTAL budget for 2014:
EUR 607 million

+ Contribution to JTI Fuel Cells and Hydrogen in 2014: **EUR 60 million**

Hydrogen and Fuel Cells, FCH JU 2

General objectives

- Contribute to the objectives of the Joint Technology Initiative on FCH
- Development of a strong, sustainable and competitive FCH sector

Specific Objectives

- Reduce **cost** of fuel cell systems for **transport** applications, while increasing their **lifetime**
- Increase the electrical **efficiency** and the **durability** for **power** production, while reducing costs
- Increase the energy **efficiency** of production of hydrogen from **electrolysis** while reducing capital **costs**
- Demonstrate **integration** of renewable energy sources through **H₂ storage**

Transport

- Road vehicles
- Non-road vehicles and machinery
- Refuelling infrastructure
- Maritime, rail and aviation applications

Energy

- Hydrogen production and distribution
- **Hydrogen storage** for renewable energy integration
- Fuel cells for power and combined heat & power generation

Cross-cutting Issues

(e.g. standards, consumer awareness, manufacturing methods, ...)

Cohesion Policy and Horizon 2020

- 80 – 100 billion EUR for R&D
- 80 (50) % of the ERDF funding should be used for:
 - R&D
 - SME competitiveness
 - Energy Efficiency & renewables
- **Necessity of early coordination with operational programmes (on regional level) !**

PCP and PPI

- *PCP: 'pre-commercial procurement' means procurement of research and development services involving risk-benefit sharing under market conditions, and competitive development in phases, where there is a separation of the research and development phase from the deployment of commercial volumes of end-products*
- *PPI: 'public procurement of innovative solutions' means procurement where contracting authorities act as a launch customer for innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformance testing*

Public Private Partnerships, PPPs

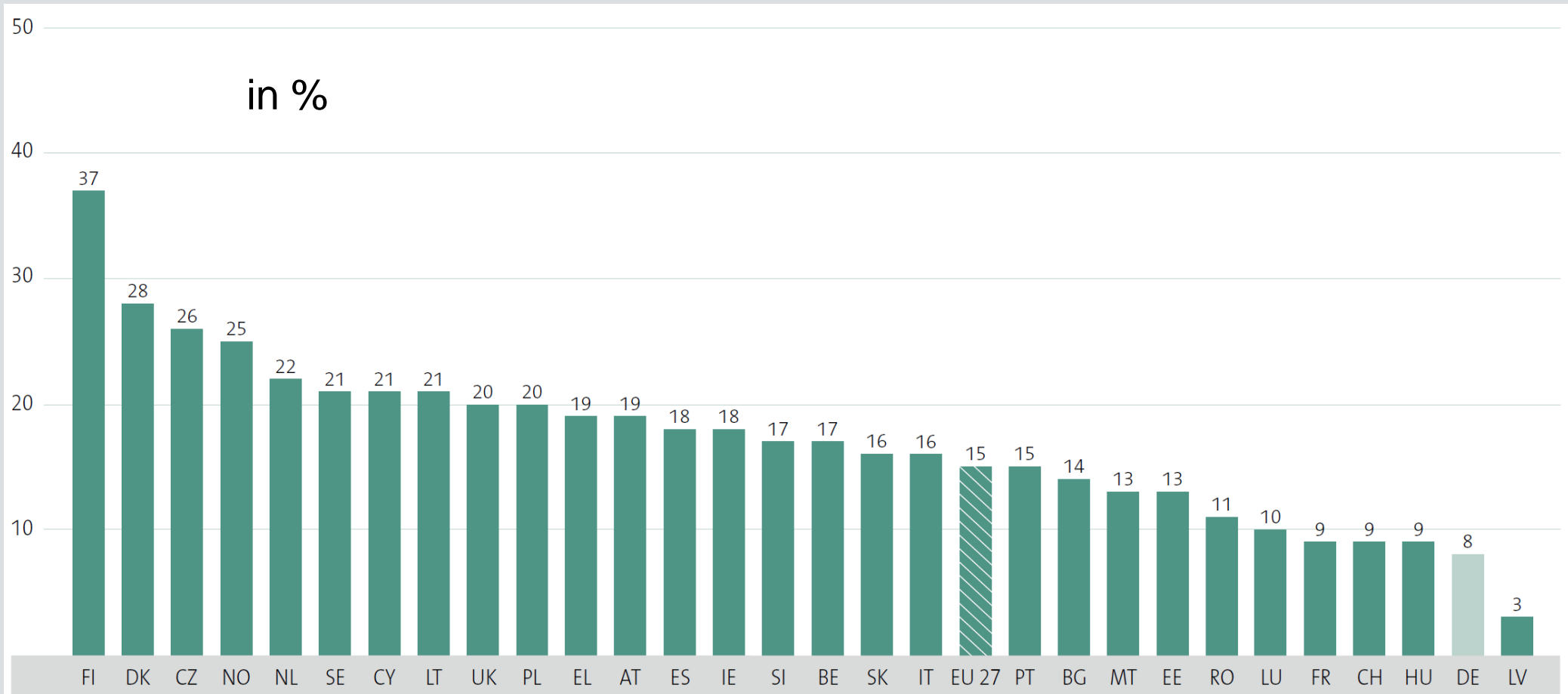
- *Trend to have private (industrial) sector involved in EU R&D*
- *Two types of PPPs in EU*
 - *Institutional PPPs (JTIs)*
 - *FCH JU*
 - *Clean Sky*
 - *ARTEMIS/ENIAC*
 - *Innovative Medicine*
 - *Contractual PPPs (first wave based on Recovery Package funding)*
 - *Green Cars*
 - *Factory of the Future*
 - *Energy Efficient Buildings*
 - *Ocean of Tomorrow*

H2020 foresees support to:

- PCP and PPI actions carried out by contracting authorities from Member States and associated countries
- PCP and PPI actions carried out by the Commission or the relevant funding body on its own behalf or jointly with contracting authorities from Member States and associated countries

Industry cooperation on R&D

Share of companies with strategic cooperation with research institutions



Die Frage im Innovationsbarometer 2009 lautete: „Since 2006, has your company developed any strategic relationships in support of your innovation activities with ...?“

Quelle: Europäische Kommission (2009), S. 48

Project Management Jülich PtJ

- We manage the funding of research and innovation
- We combine scientific, structural and administrative competence
- We are a neutral partner and have no economic interests of our own

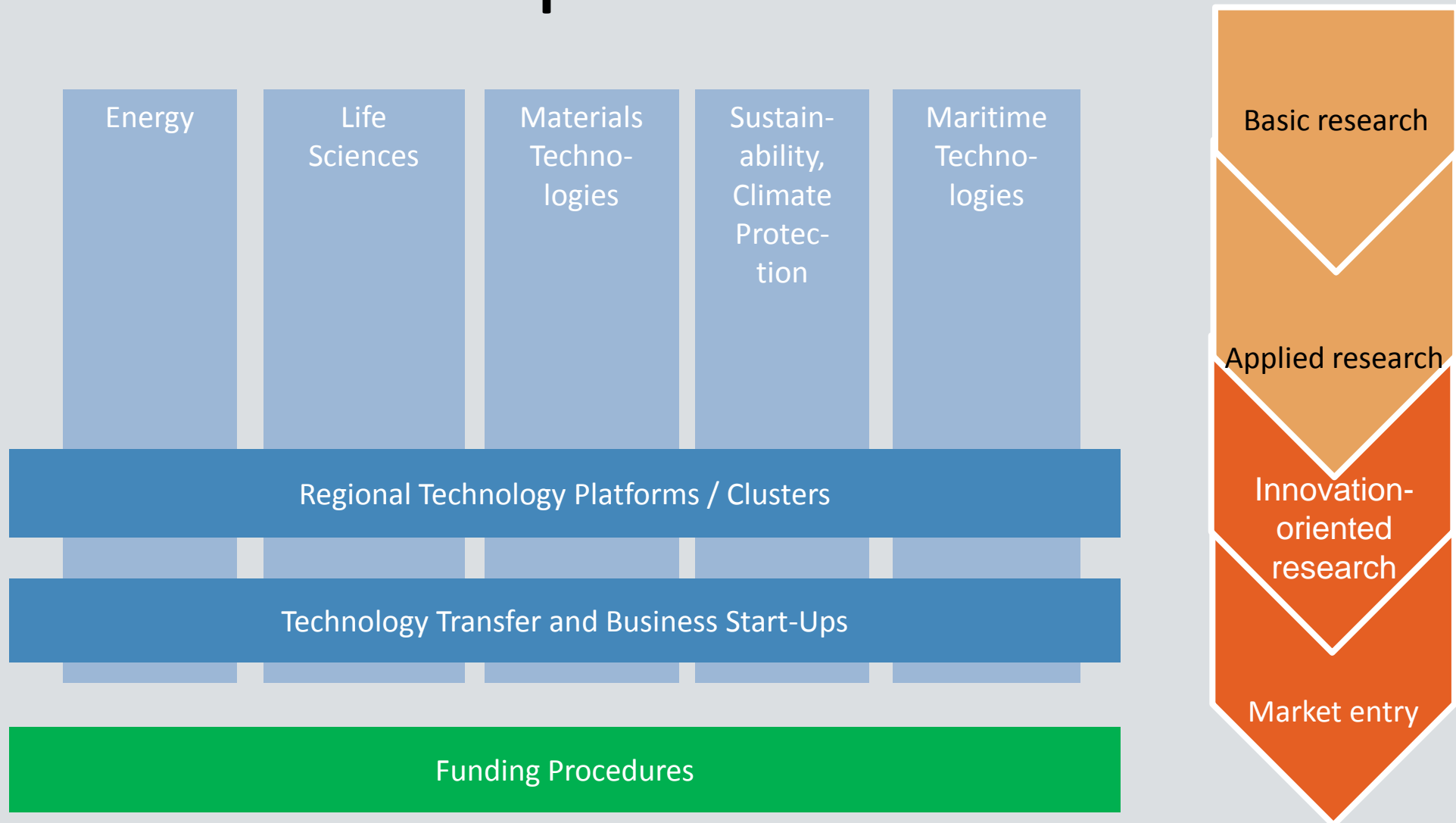
Profile of PtJ

- We have been implementing the research goals of our clients from government within the framework of project funding for more than 30 years
- We are a largely independent organizational unit of Forschungszentrum Jülich GmbH
- We have sites at Jülich, Berlin, Warnemünde and Bonn

Services of PtJ

- Analysis of scientific and technological trends
- Moderation and development of innovation strategies
- Development of funding concepts and guidelines
- Implementation of funding programmes
- Coordination of European and international funding initiatives
- Control of review and evaluation processes
- Evaluation of funding programmes
- Advice on national and European research funding
- Research communication and event management

Competence Profile



Advisory Institutions

- Federal "Research and Innovation" Funding Advisory Service
- Guidance Service for Companies
- Guidance Service for Electric Mobility

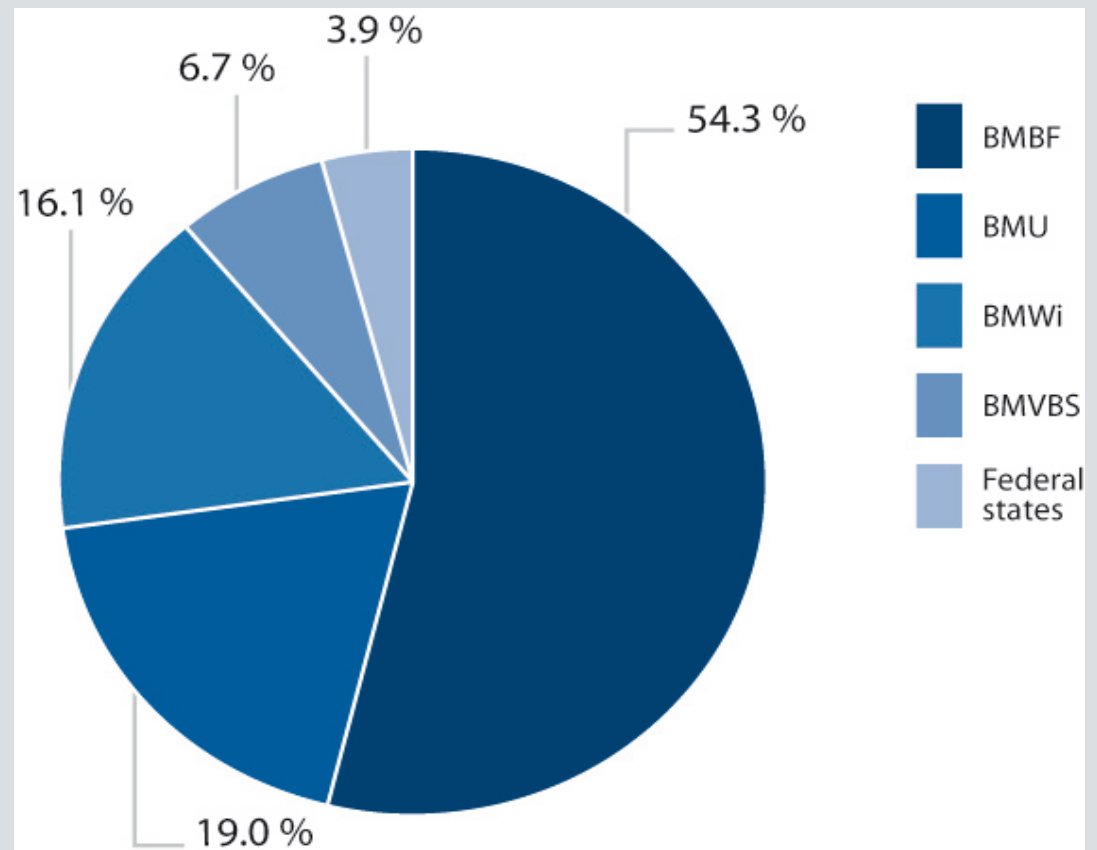
- National Contact Points for European research funding

European Coordination Initiatives

- ERA-Net projects

Funding Volume 2012

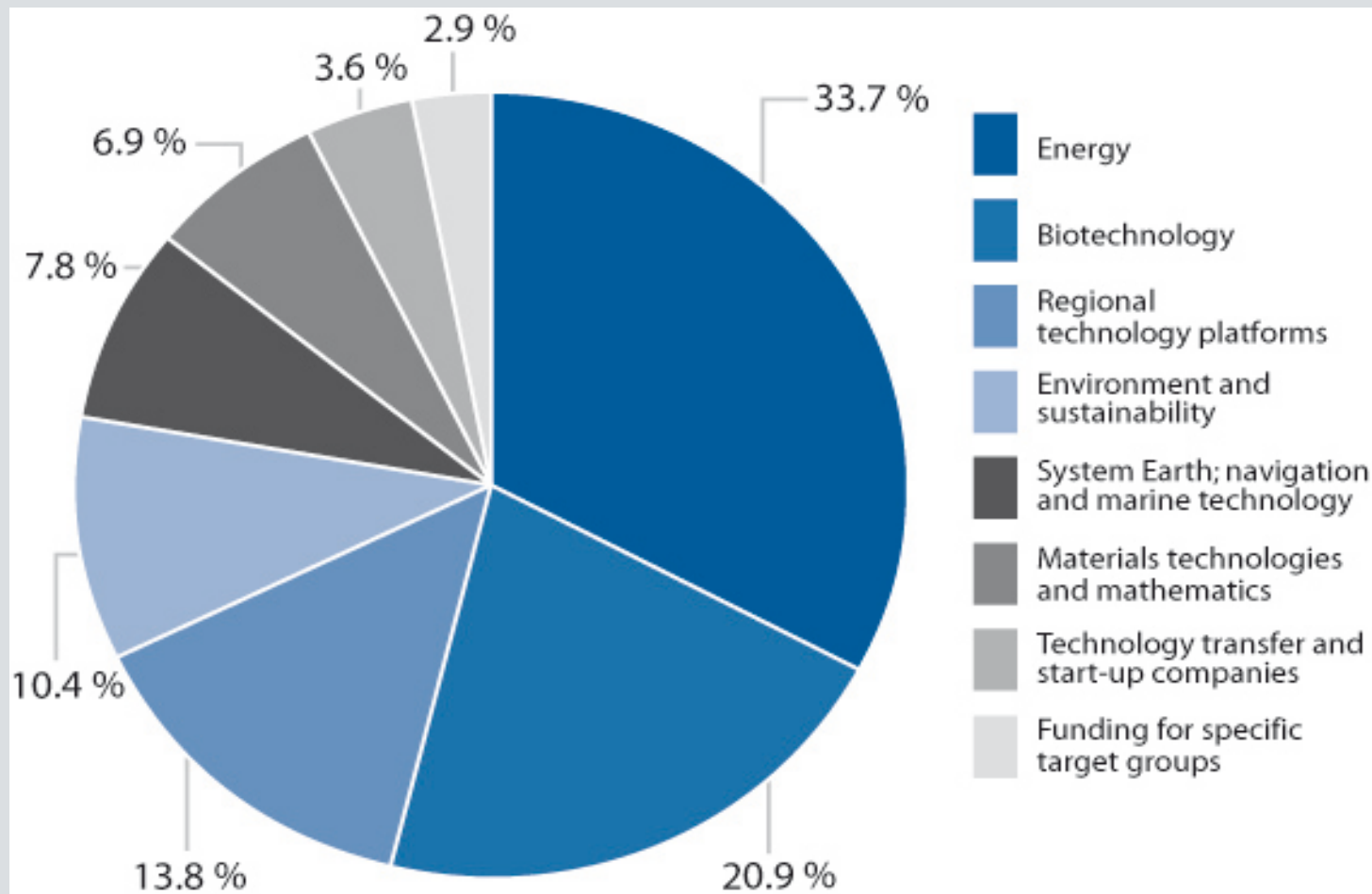
	Volume € million
Federal Ministry of Education and Research (BMBF)	675.4
Federal Ministry of Economics and Technology (BMWt)	200.5
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)	235.5
Federal Ministry of Transport, Building and Housing (BMVBS)	83.4
Federal states	48.0
Total	1,242.8



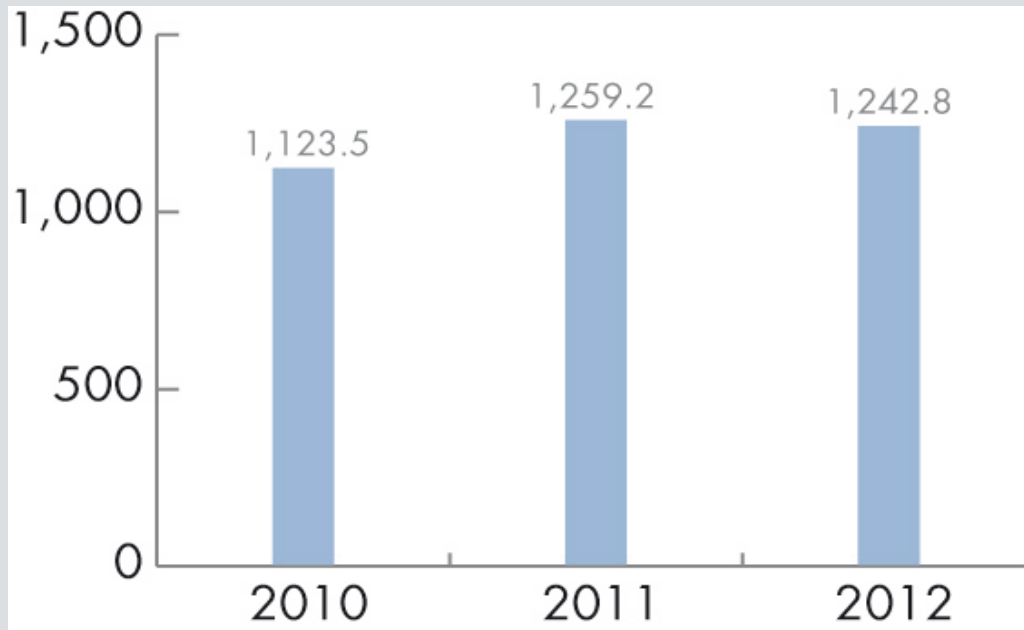
Funding volume 2012 in per cent according to client

Business Areas

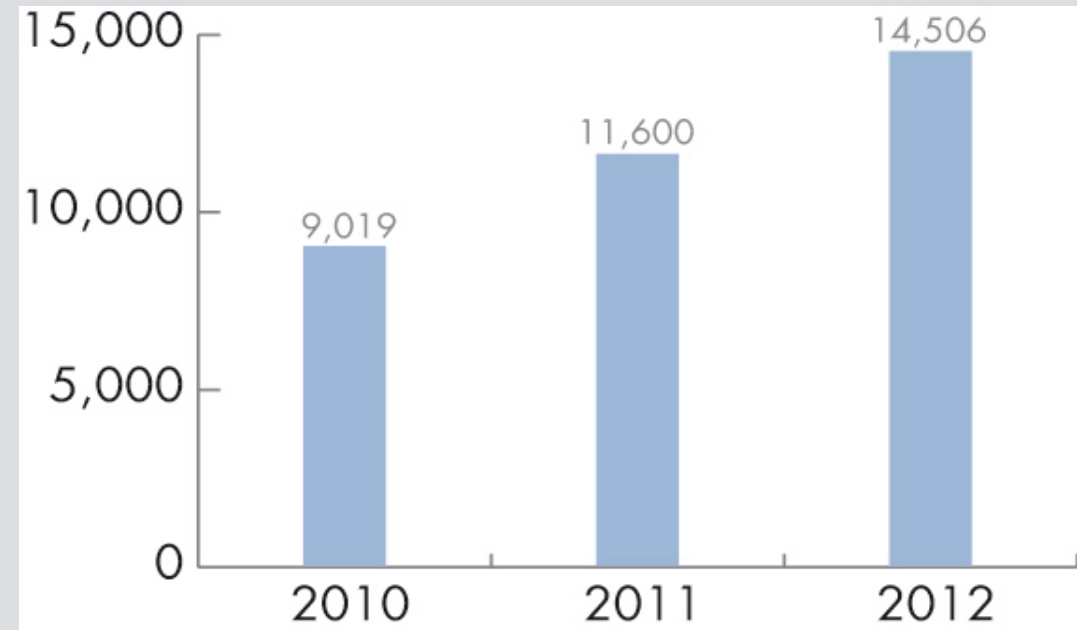
Funding volume 2012 in per cent



Business Development

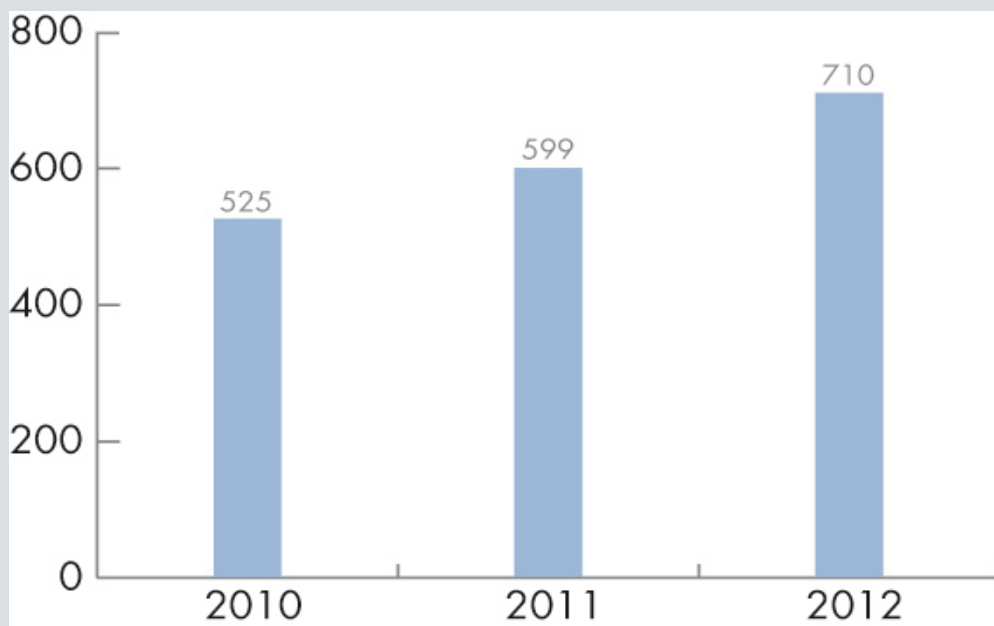


Development of funding volume in millions of euros
2010 – 2012

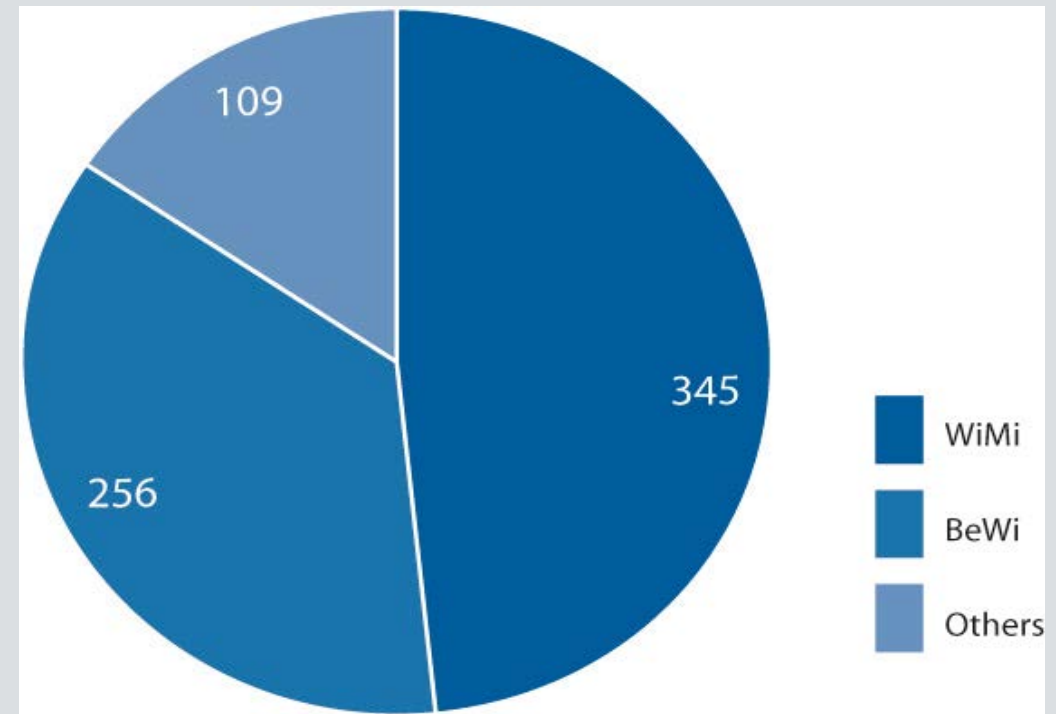


Number of current projects
2010 – 2012

Human Resource Development



Number of staff 2010 - 2012

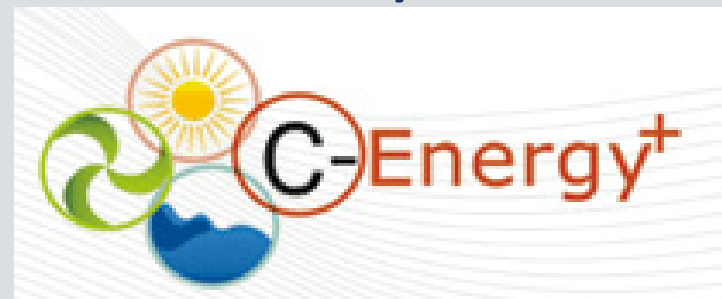


Staff 2012 according to function groups

Global Network with national dimension



- Has the overall objective to **reinforce the network** of Energy NCPs for Horizon 2020, broadening their **expertise** and **improving the quality** of their services.
- Strong cooperation with **Enterprise Europe Network, EEN** (SMEs and COSME)



- Meetings
- Joint Workshops
- International Brokerage events
- Training sessions
- On-the-job training visits
- Website: <http://www.c-energyplus.eu/>

National Contact Points (NCPs) play a crucial role in the Framework Programmes because we:

- reach out to the European research community in order to inform & raise awareness about the funding opportunities of the Framework Programmes,
- advise & assist potential applicants in the preparation, submission and follow-up of grant applications,
- offer support during the execution of projects.



Thank You!

Piotr Swiatek
NCP for ENERGY
Projekträger Jülich PtJ
p.swiatek@fz-juelich.de