

EU 2020 objectives

Strategic Energy Technology (SET) Plan

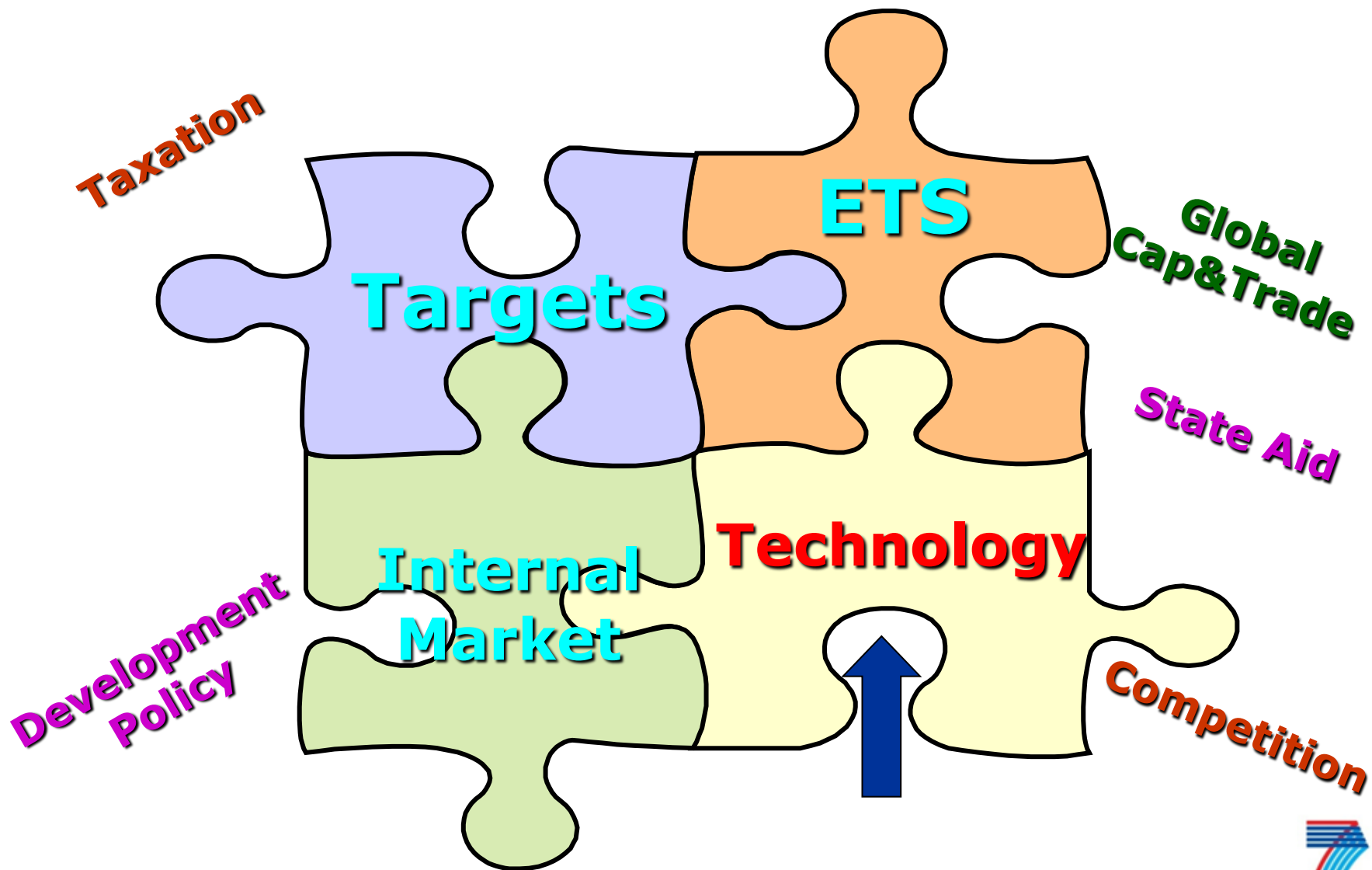
Solar European Industrial Initiative



Bruno Schmitz
Head of New and Renewable Energy Sources
DG Research, European Commission

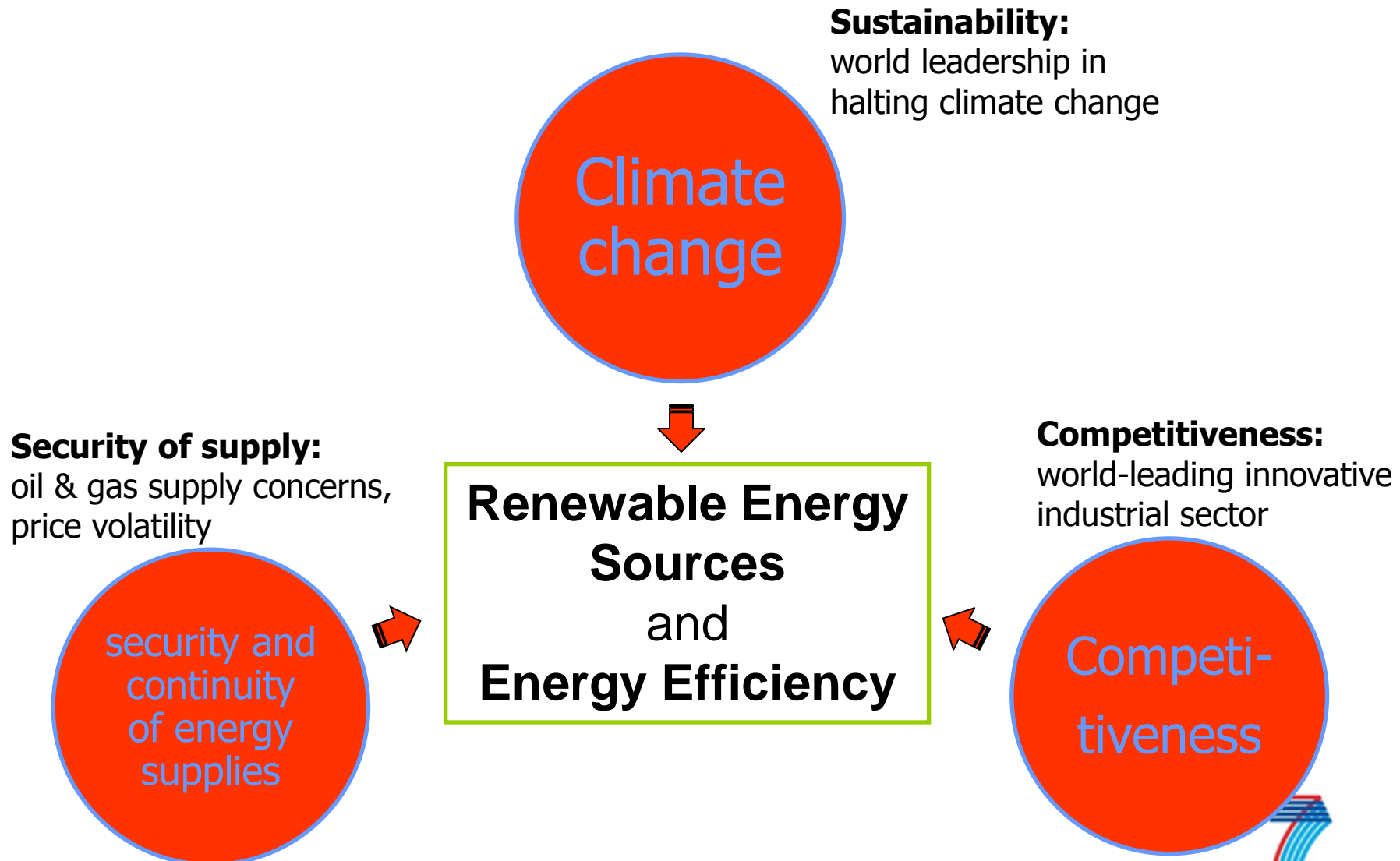
- **EU Policy Context**
- **SET Plan**
 - ▶ European Industrial Initiatives (EIIs)
 - ▶ European Research Alliance (EERA)
- **Investments in PV R&D**
- **ETS NER 300**

A complex Policy Jigsaw



SET-Plan





- Binding and mandatory targets for 2020*
 - ▶ **Renewable energy: 20% of consumption**
 - ▶ **10% of all transport fuel to be renewable**
 - ▶ **GHG emissions reduced by 20%**
 - ▶ **Energy efficiency increase of 20%**

**Presidency Conclusions, Brussels European Council 8/9 March 2007
and Energy and Climate Change Package, adopted Dec 2008*

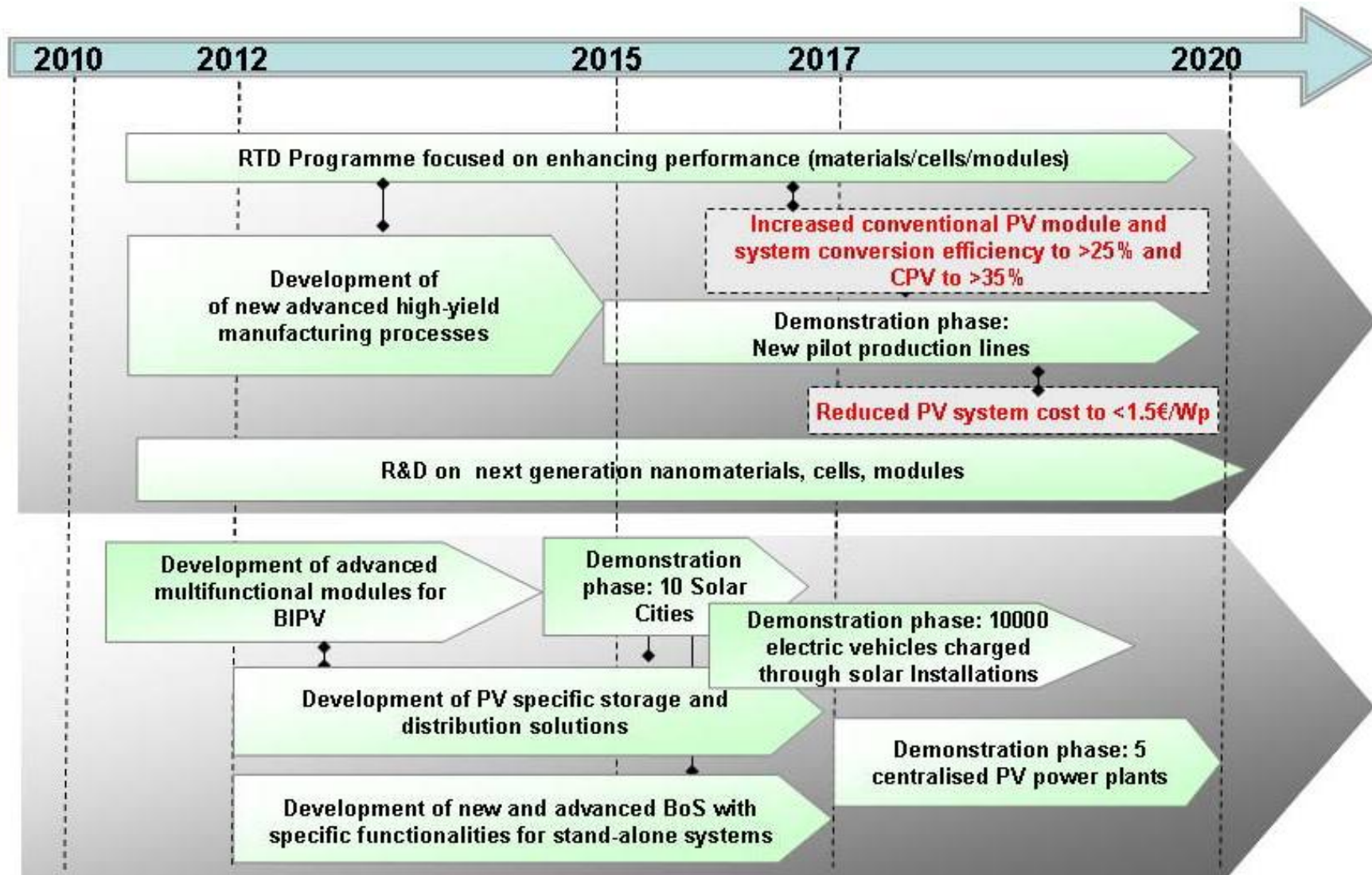
- **Setting out the pathway towards the 2020 national target for each Member State.**
- **Critical for:**
 - ▶ the necessary stability / predictability for investors
 - ▶ the Commission's ability to effectively enforce the Directive and keep Member States on track
 - ▶ The Member States to have an adequate implementation strategy
 - ▶ transparency of RES developments in the EU

- **National plans to be submitted by Member States by 30 June 2010 setting out:**
 - ▶ national sectoral targets and trajectories adequate measures to achieve the overall target
 - ▶ planned statistical transfers or joint projects
 - ▶ support schemes for each type of renewable energy
 - ▶ measures to remove administrative barriers

- Joint strategic planning / New governance / Information System (SETIS)
- Three main pillars for implementation:
 - ▶ European Industrial Initiatives (EIIs)
 - ▶ European Energy Research Alliance (EERA)
 - ▶ Trans-European Energy Networks and Systems (transition planning)
- Increase resources, both financial and human
- Reinforce international cooperation

- **Technology Roadmaps 2010-2020:**
- **Technological objectives → Concrete action plans**
→ **Estimated investments needed for the period 2010-2020 to achieve:**
 - ▶ Up to 20% of the EU electricity produced by wind energy technologies by 2020
 - ▶ **Up to 15% of the EU electricity will be generated by solar energy in 2020**
 - ▶ By 2020, 50% of networks in Europe operate along “smart principle” effectively matching supply and demand.
 - ▶ 25 to 30 European cities will be at the forefront of the transition to a low carbon economy by 2020.

Solar EII Techn. Roadmap



Recent developments:

- **Official Launch of the SEII in Madrid in June**
- **Presentation of the Implementation Plan 2010-2012**
- **First meeting of the SEII TEAM in Brussels, May 2010**
 - ▶ Common interests at Member State level have been defined
 - ▶ Follow-up action, definition of the KPI's



The conclusions of the SEII Team meeting, May 2010

Short Term:

- **Advance manufacturing technologies (wafer, cells, modules)**
 - ▶ Reducing the Cost of manufacturing (\downarrow €/W)
- **Building Integrated PV: Product design & application development**
 - ▶ Increasing added value of PV in buildings
- **Concentrator PV: large field demonstration**
 - ▶ Reducing PV electricity generation cost : (\downarrow €/kWh), increasing reliability

The conclusions of the SEII Team meeting, May 2010

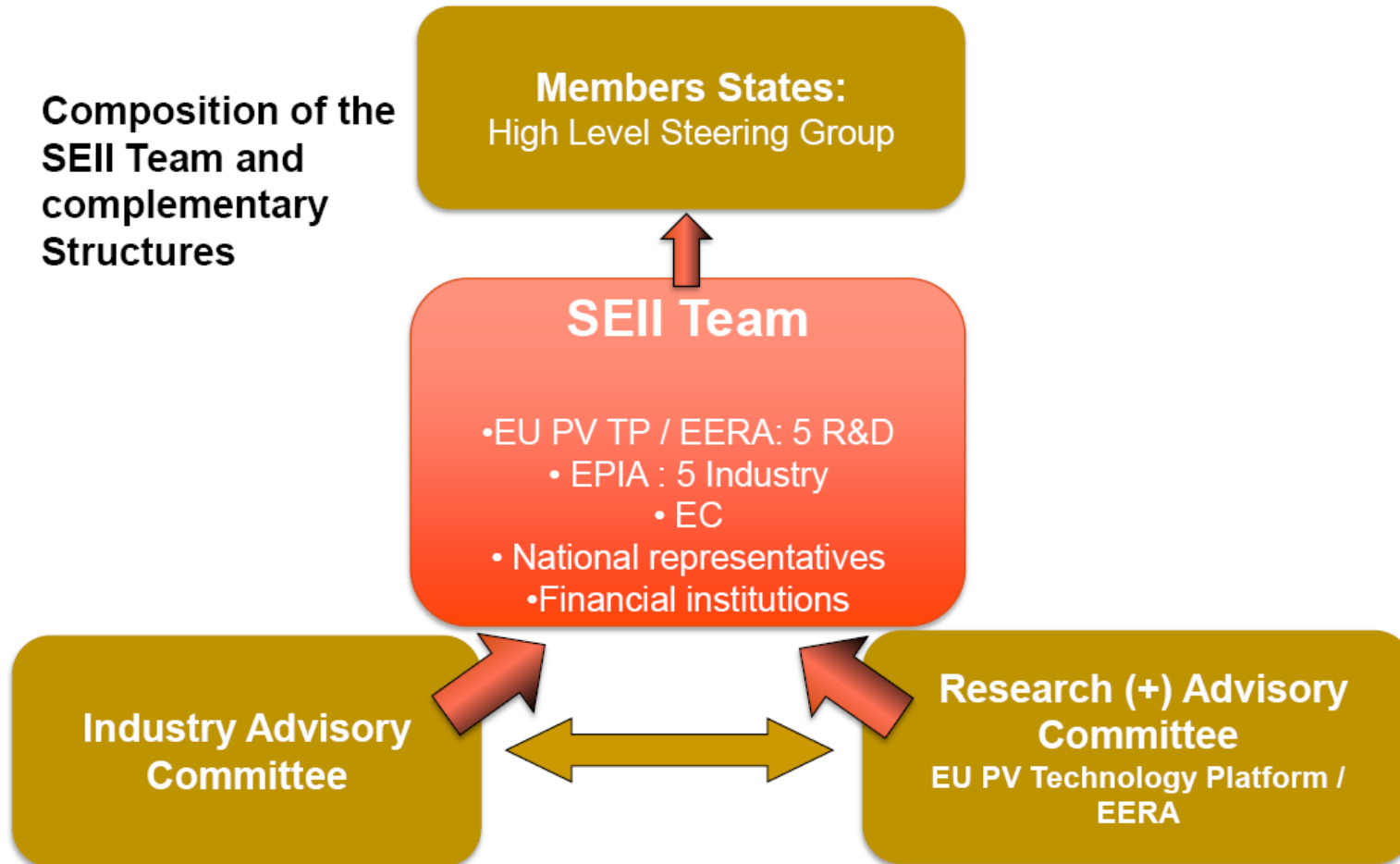
Medium/long Term:

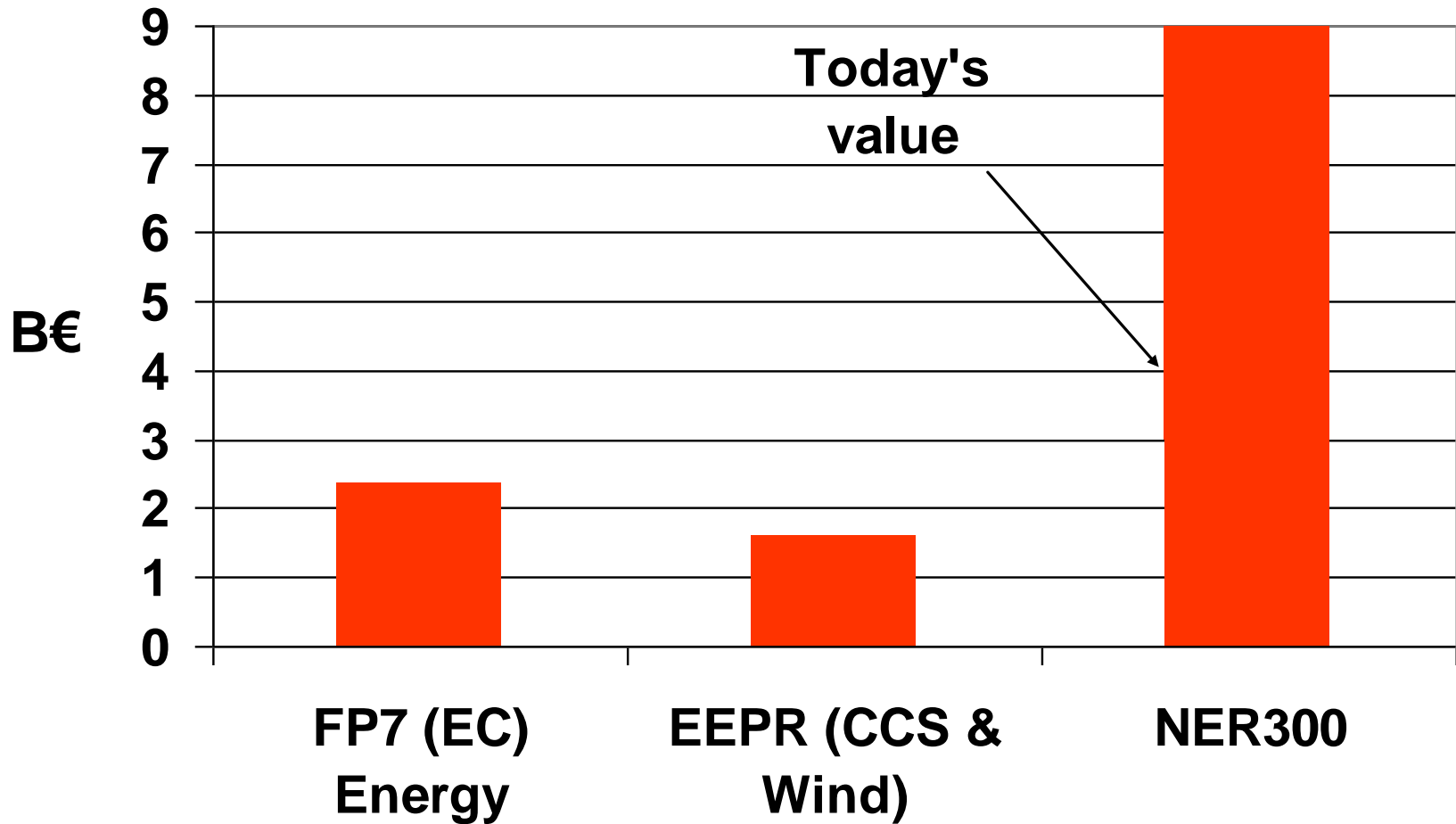
- **Materials development (incl. Organic cells)**
 - ▶ Increasing lifetime, improving environmental footprint and decreasing manufacturing cost
- **Smart PV modules**
 - ▶ Easing their installation, interface to the network,
 - ▶ Reducing PV electricity generation cost : (\downarrow €/kWh)

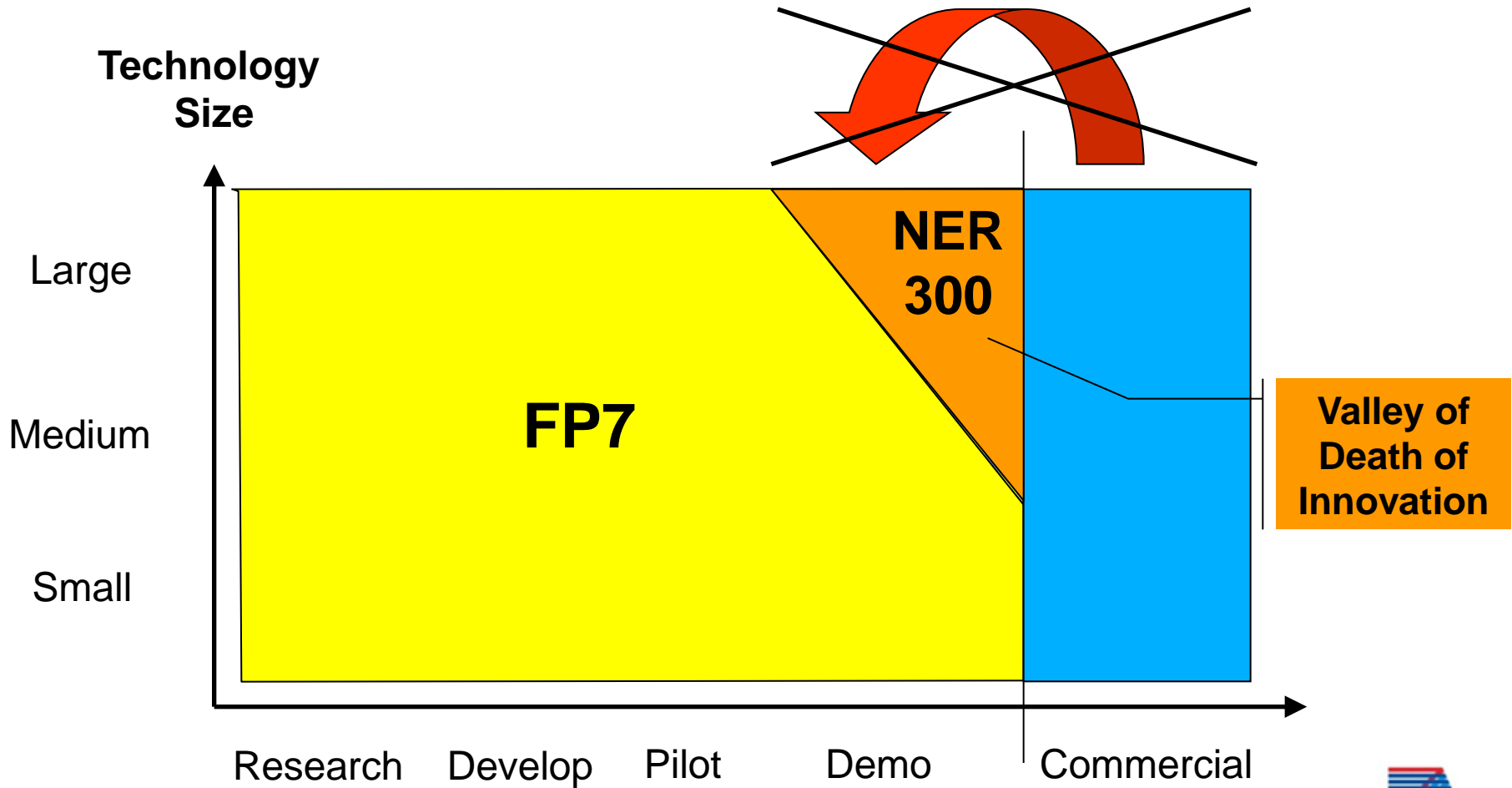
Next steps:

- **Dedicated meetings of the SEII Team**
 - ▶ Identify concrete projects
 - ▶ Identify financing mechanisms/ programmes
 - ▶ Define implementation time lines
 - ▶ Define specific KPI's for those projects

Composition of the SEII Team and complementary Structures







- **NER300 Decision**

- ▶ 2 Feb 2010 - Approved by Climate Change Committee
- ▶ May 2010 - Parliament scrutiny
- ▶ Early summer 2010 - Formal Adoption by Commission

- **1st Call (200 M EUA)**

- ▶ 3rd quarter 2010 - Publication
- ▶ 4th quarter 2010 - Deadline for submission to MS
- ▶ 1st quarter 2011 - Deadline for submission to EIB
- ▶ 31 Dec 2011 - Deadline for Award Decision

- **2nd Call (100 M EUA)**

- ▶ 31 Dec 2013 - Deadline for Award Decision

31 December 2015 – entry into operation of projects of 1st Call

THANK YOU FOR YOUR ATTENTION

bruno.schmitz@ec.europa.eu

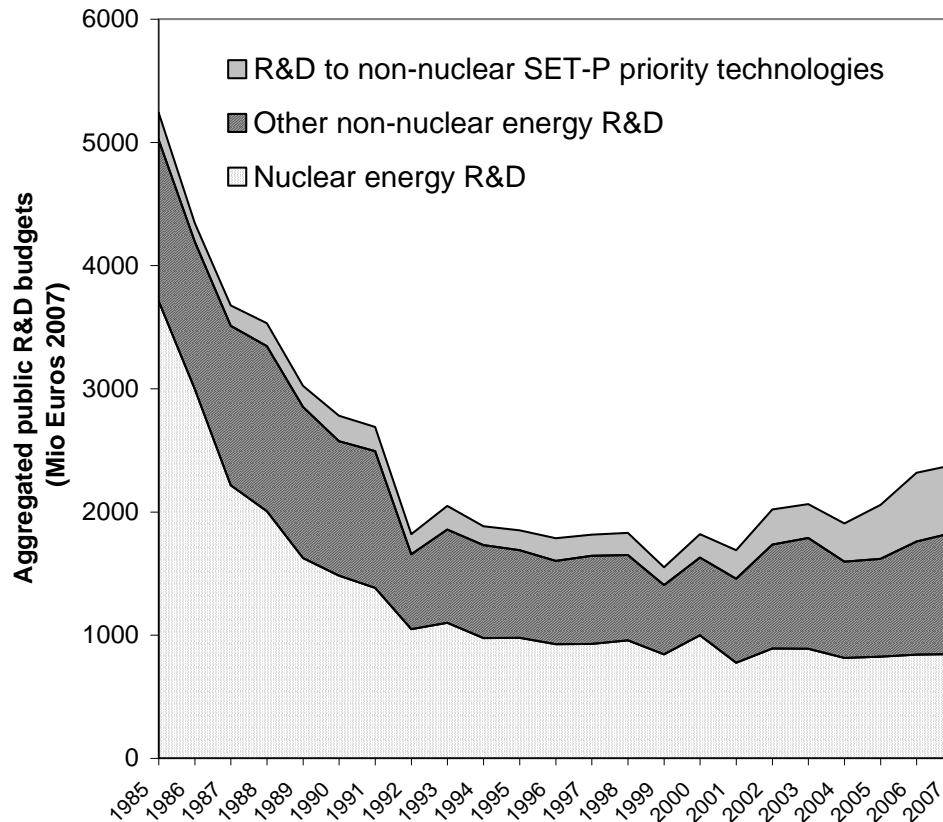
Tel. 32-2-2950514

European Energy Research Alliance (EERA) aims to:

- **Strengthen, expand and optimise research capabilities**
- **Harmonise national and EC programmes (decrease fragmentation)**
- **Draw on results from fundamental research**
- **Mature technologies to hand-over to industry-driven research**

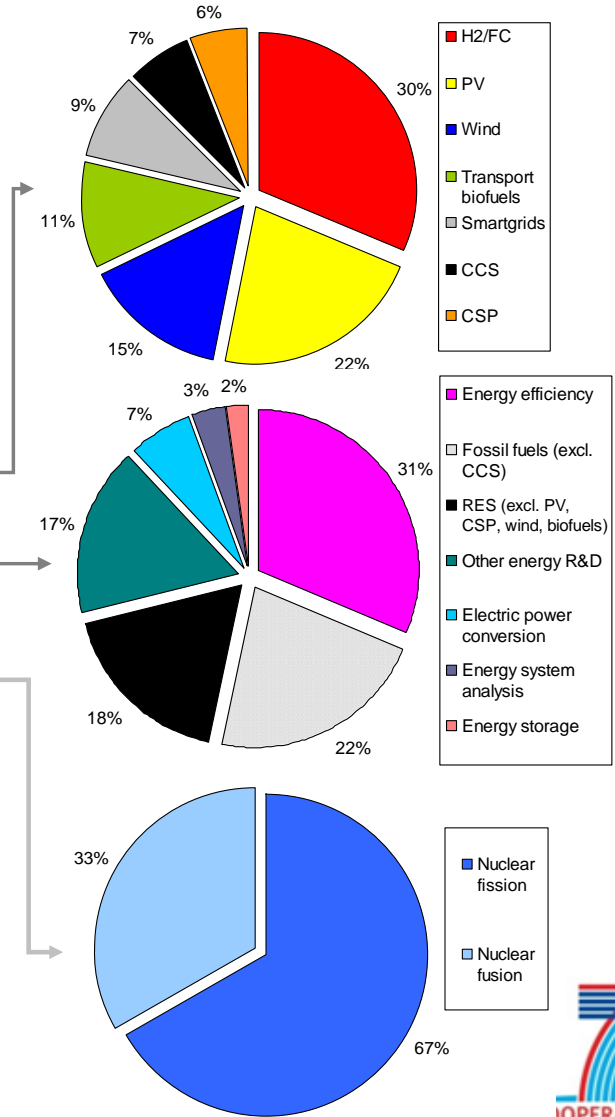
Important Upcoming Activities:

- June 2010 Meeting JP Management Board
- Fall 2010 Kick-off JP sub-programmes
- Fall 2010 Start SOPHIA Research Infrastructure project

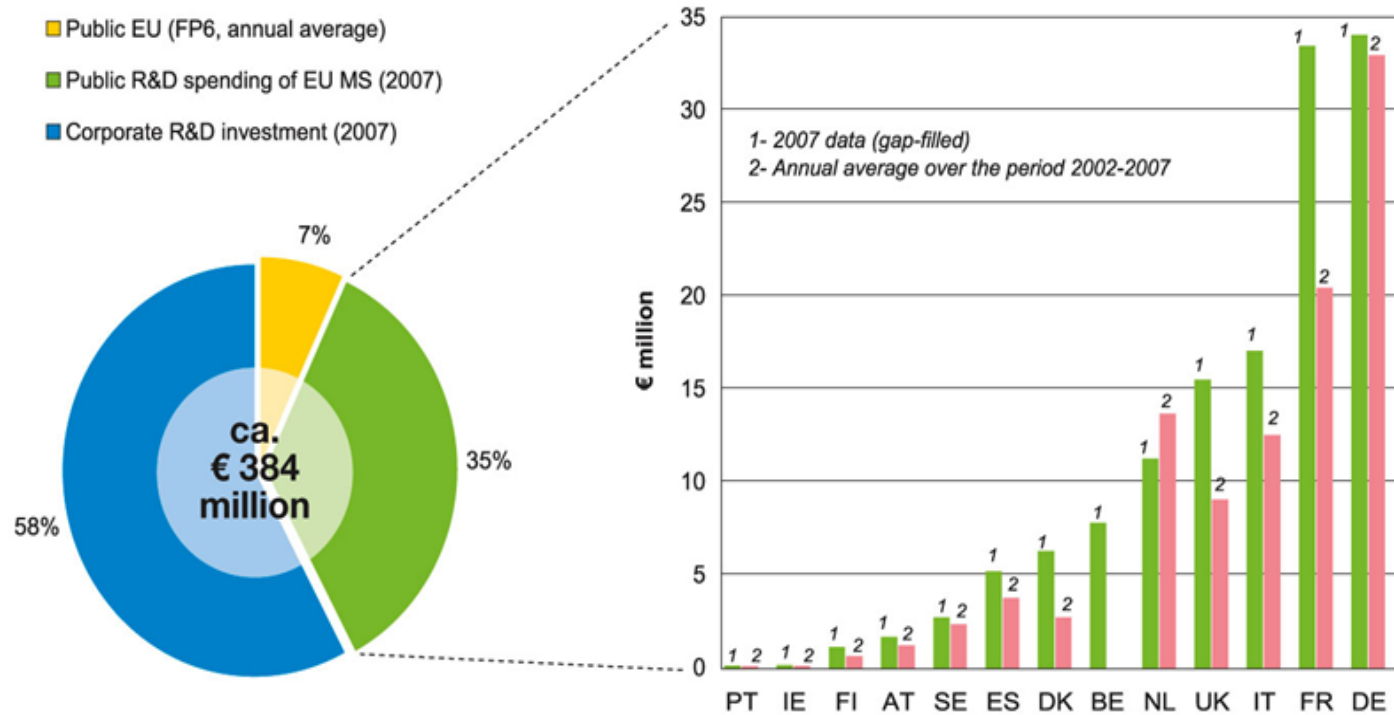


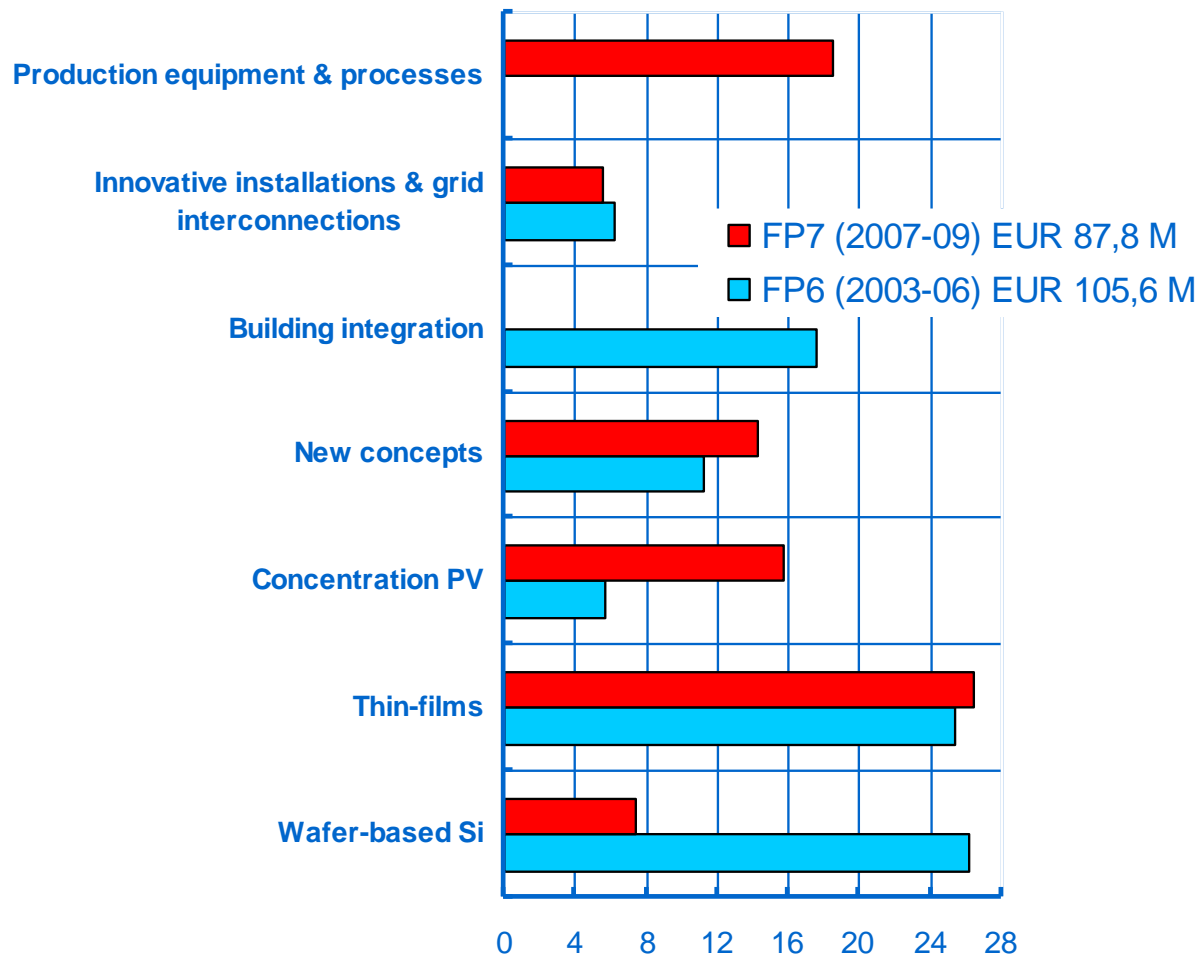
Source data: IEA

2007 (Gap filled)



Results PV





FP Investments in PV, 2003-2009 (Euro million)

- **Need for a step change in investment**
- **From 3b€ to 8b€ per year (public and private)
= an additional investment of 50b€ over the next 10 years**
- **IEA World Energy Outlook 2009:
additional 10.5 trillion \$ over baseline up to 2030**
- **Translates into huge global market opportunity**