



Directorate-General
for Energy
and Transport



SET Plan – The Role of Regions and Cities

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● The context

- **EU energy and climate change policy**

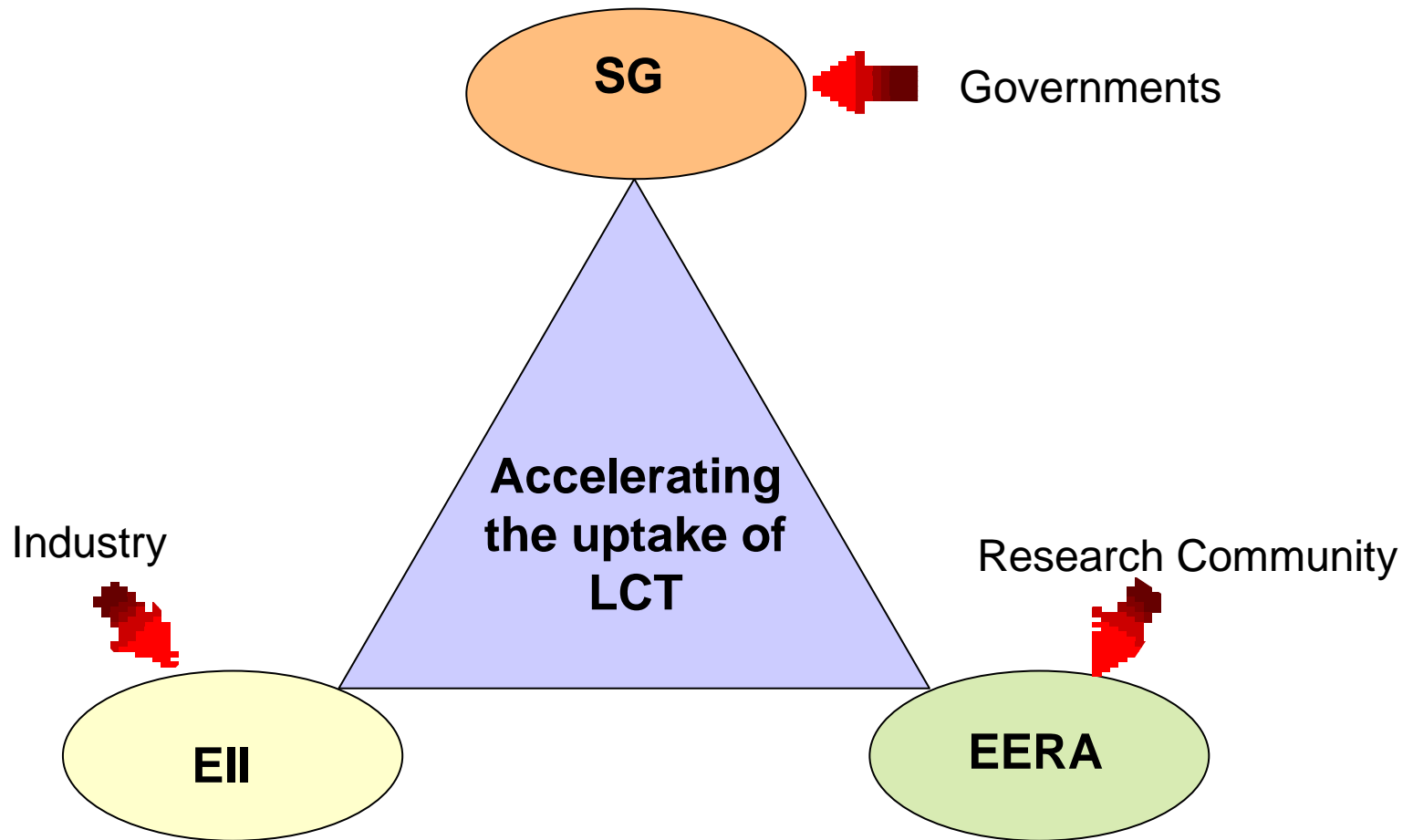
- **greenhouse gas emissions**
- **security of energy supply**
- **competitiveness**

- **The SET-Plan is the TECHNOLOGY PILLAR**

- **From 80% dependency on fossil fuels to 80% reduction in GHG emissions in 40 years!**

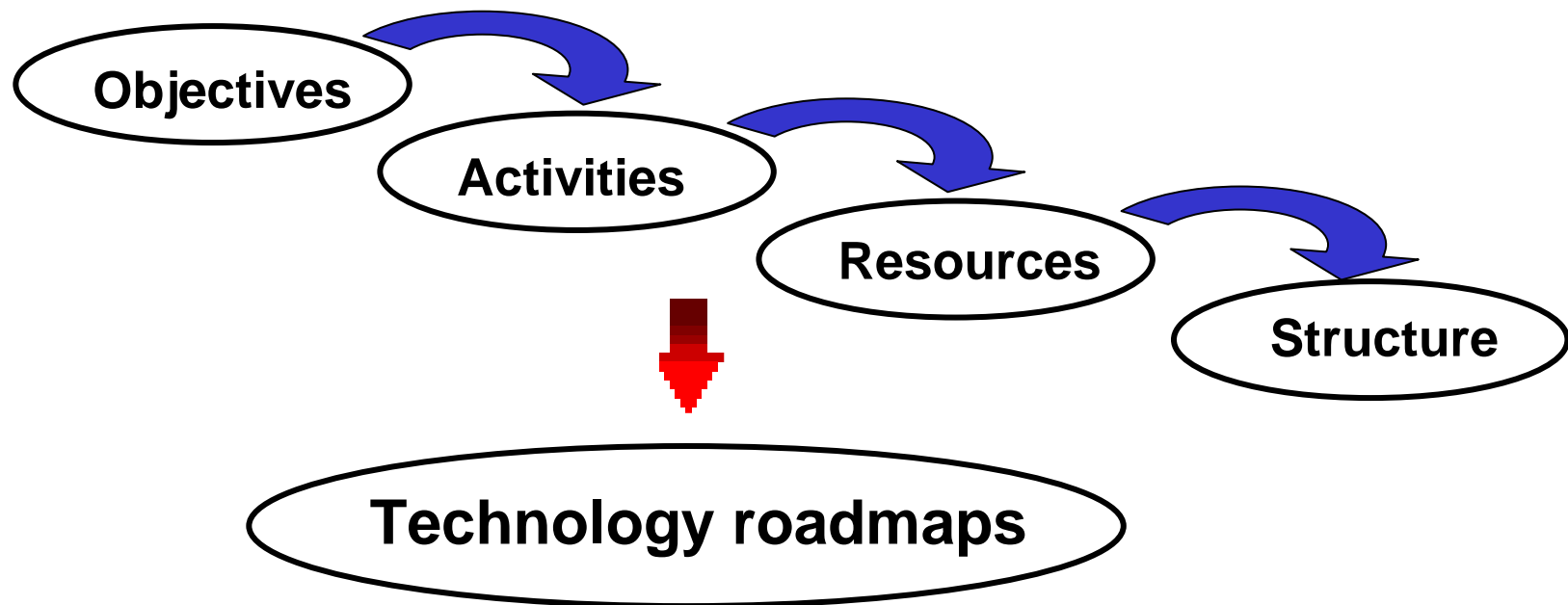
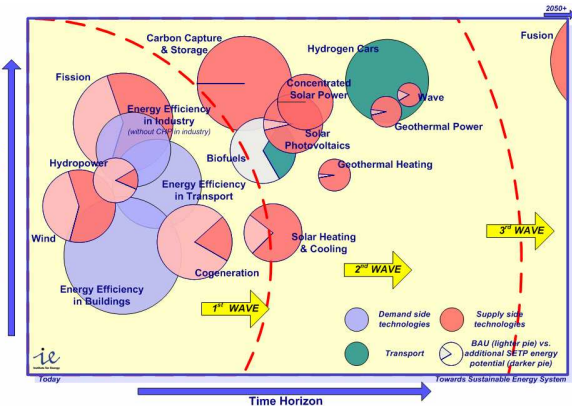
- **A reinvention of our energy system ...**

SET Plan in a nutshell



● From potential to targeted actions

- **Prioritise technologies:**
 - EU added value;
 - willingness of actors to join forces;
 - potential market penetration;
 - contributing to energy and climate policy goals
- **Prioritise activities based on the level of development**

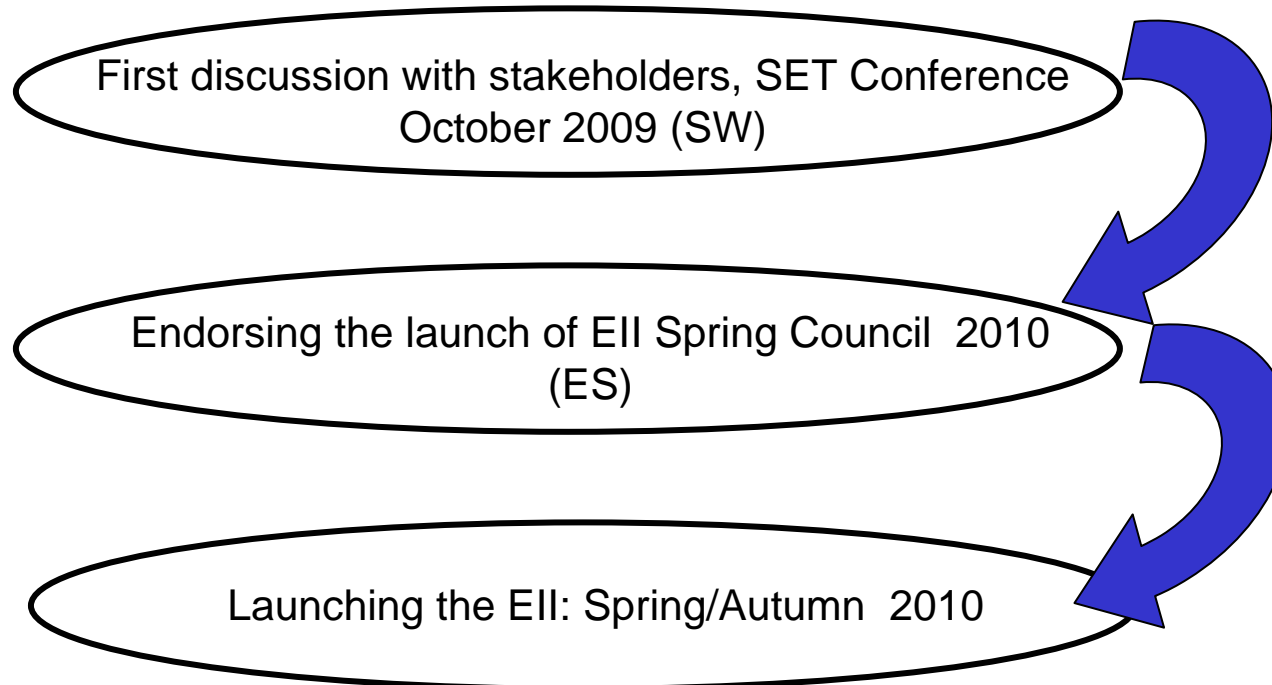




SET Plan focus –investing in low carbon technologies

- European Industrial Initiatives
- European Energy Research Alliance – pan- European joint research programmes
- Breakthrough science – game - changing technologies from the laboratory

Political process

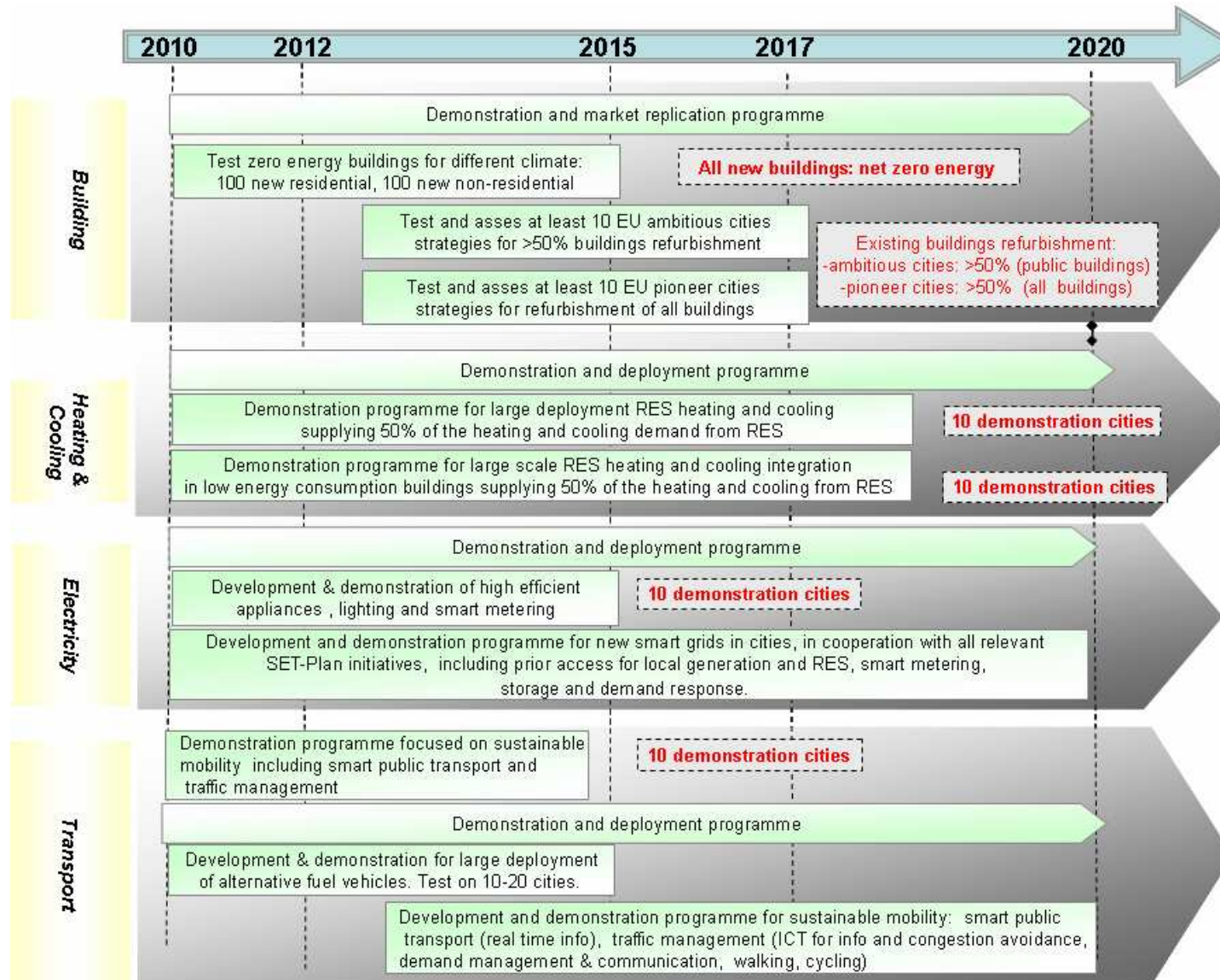




- # Smart cities and regions

- **Objective:** 40% reduction of GHG by 2020
- **What:** testing new integrated approaches and transitions strategies
- **How:** pioneers and breeding grounds of the sustainable energy system of the future
 - New generation of buildings
 - Smart energy networks
 - Low carbon transport

Technology Roadmap 2010-2020



● Buildings

- New – zero energy requirements
 - design options ,
 - climatic zones,
 - integration aspects
- Refurbishment
 - Processes: refurbishment techniques-comfort
 - Technologies: new materials, from passive to positive

● Energy networks

- Heating and Cooling
 - Innovative biomass, solar, geothermal
 - Hybrid systems with 100%RES
 - Co/Poly/trigeneration and DHC
- Electricity
 - Smart grids: RES, electrical vehicles, balancing
 - Smart meters
 - Smart appliances: ICT, domestic appliances, lightning
 - RES electricity production

● **Transport**

- Sustainable mobility:
 - advanced public transport,
 - intelligent traffic management
 - Demand management
- Alternative vehicles and fuels
 - Electrical,
 - Biofuels,
 - Hydrogen and fuel cells

● Towards smart cities and regions

At forefront to low carbon future

- Integrate different measures
- Targeting 5% of EU population
- Mass market take-up of energy efficiency and RES technologies and measures
- Selection- open call for proposals criteria (technical, managerial and financial), with open door to cities in the Covenant of Mayors

● Today:

- **CONCERTO**

- Benchmarks in R&D excellence

- **PPP on Buildings**

- R&D for new and refurbished buildings



Complex40 in Amsterdam (NL)



Wind turbines in Falkenberg (S)



SYNCHROTON lab in Cerdanyola (E)



Apartment buildings in Alessandria



- ***CIVITAS***
 - Clean and energy efficient vehicles
 - Sustainable urban mobility
- ***Covenant of Mayors***
 - By now 1000 cities
 - Cities committing to strengthen the energy efficiency agenda



● Existing Financing schemes

- FP7
- CIP – IEE
- EIB - ELENA initiative for technical support
- Commercial banks

● **Further considerations**

- *Challenge*: implementation
- *What do we need?*: Integration and Transition Strategies
- *Timeframe*: long time perspective 30-40years with priority actions for next 10 years



- **Approach to develop the initiative**

- Political commitment - the objective
- Planning and monitoring-actions framework
- Networks and Partnerships
- Financing – architecture and instruments



- **Possible actions**

- Listen to the Cities and Regions
- Develop City and Region plans
- Identify ready actions
- Adapt the financing architecture