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Policy, Market and Government Interventions: European Electricity Grid Initiative (EEGI)

EGRD IEA workshop: will a smarter grid lead to smarter end consumers or vice versa

Oslo, 3-4th June 2015

European Energy Policy drivers

Sustainability

Renewable
Energy Sources

Energy
Efficiency

Diversified
Supply

Competitive
markets

Smart
Infrastructures

Security of
Supply

Competitiveness

EU power grids need to change

Challenges in the 2020 perspective

- ✓ 20% Renewable energy – up to 35% renewable electricity
- ✓ Implementing the single market for electricity
- ✓ Security of supply

European Energy Roadmap 2050

- ✓ Energy Efficiency
- ✓ Strong increase in renewable electricity
- ✓ Increased role of electricity in final consumption and energy delivery

Development of renewable electricity – main challenges

- Generation far from consumption – need more grid capacity
- Variability of renewables – need flexibility from generation, active demand, interconnections, storage
- From 100's to millions of supply points – need active distribution, automation



Focus on technologies with market impact up to 2020 (set up of EIIs)

- **Wind**
- **Solar**
- **Electricity grids**
- **CCS**
- **Bioenergy**
- **Nuclear**
- **Smart Cities and Communities**
- **Fuel cells and hydrogen**

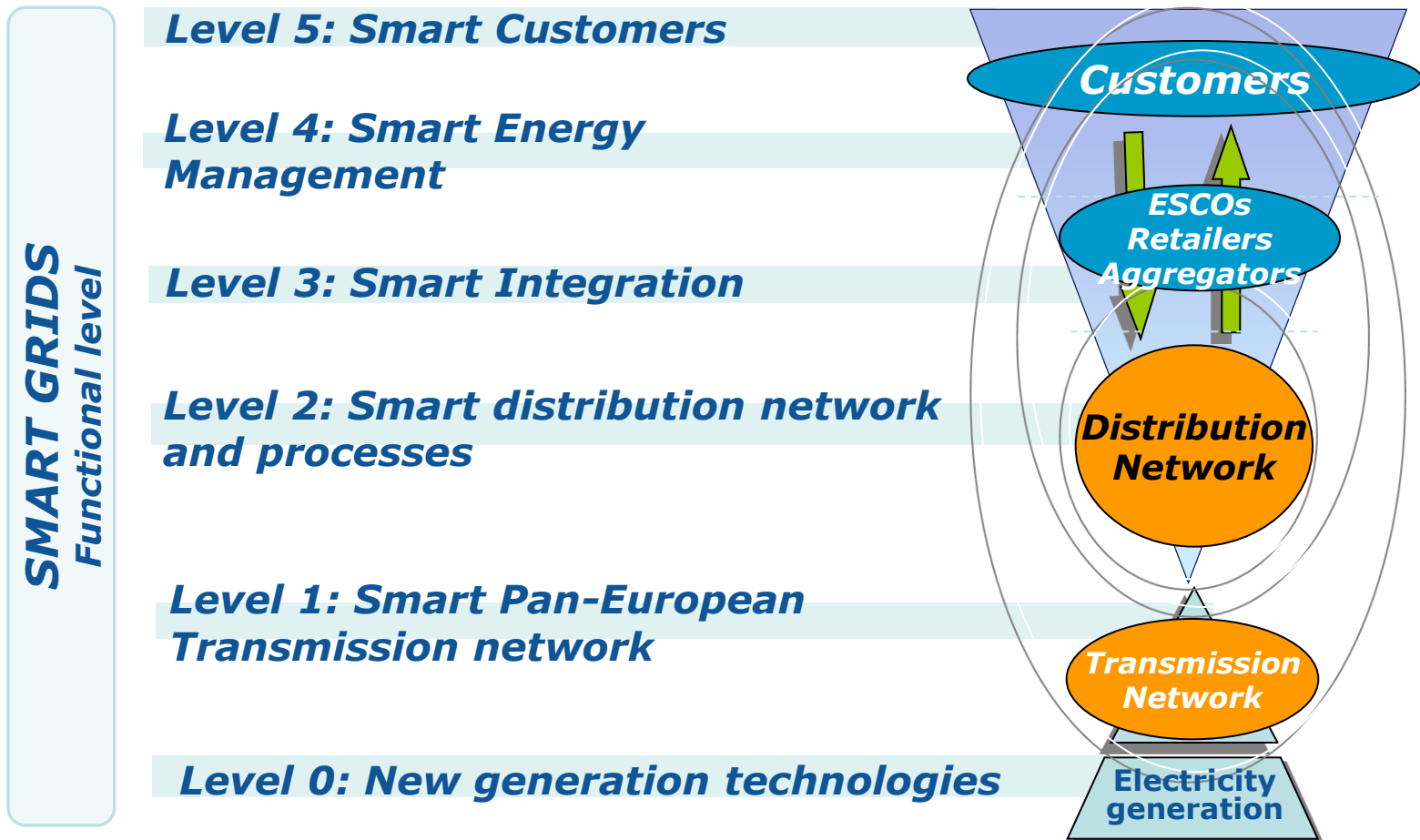
Focus on longer-term research actions beyond 2020 (set up of EERA)



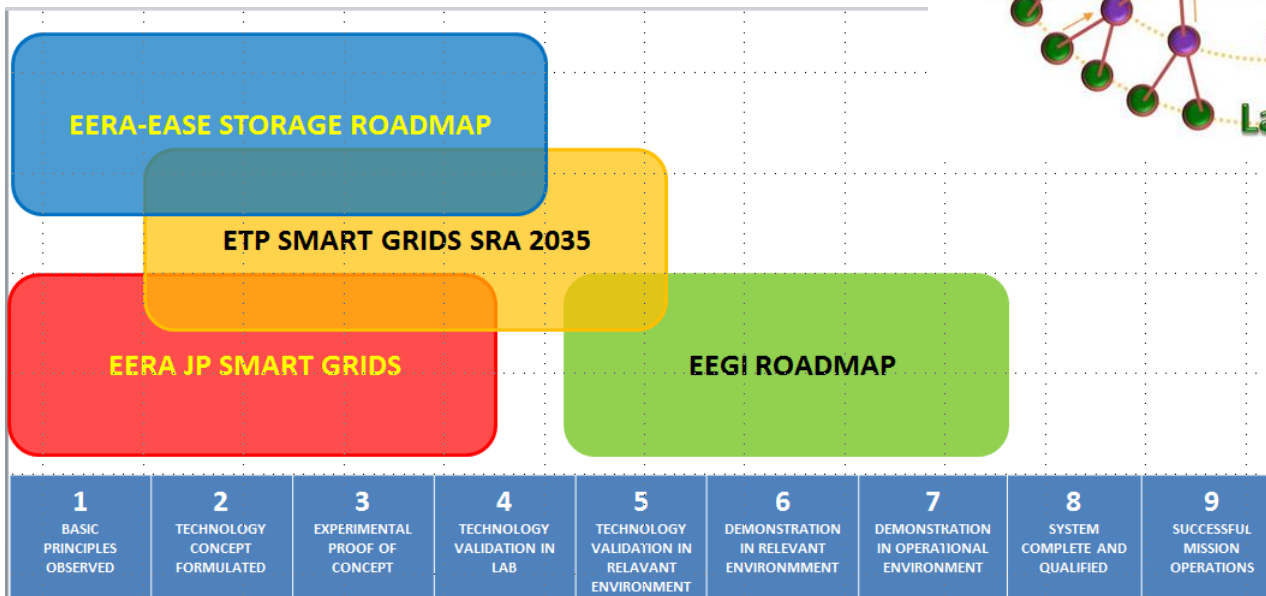
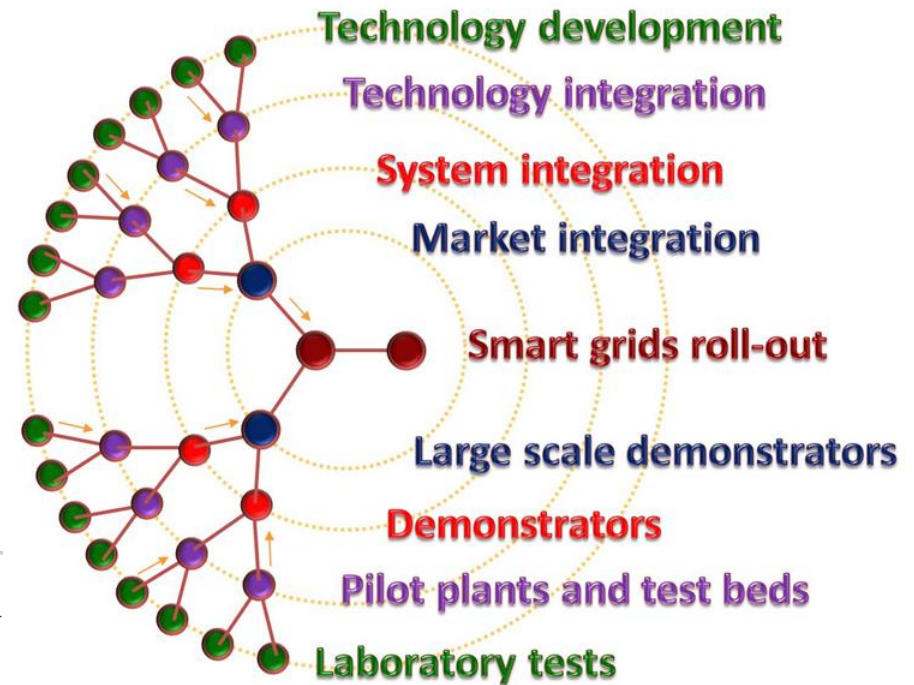
Objective for 2020

- 20% reduction of CO2 emissions (wrt 1990)
 - 20% share of Renewable Energy
 - 20% improvement in Energy Efficiency

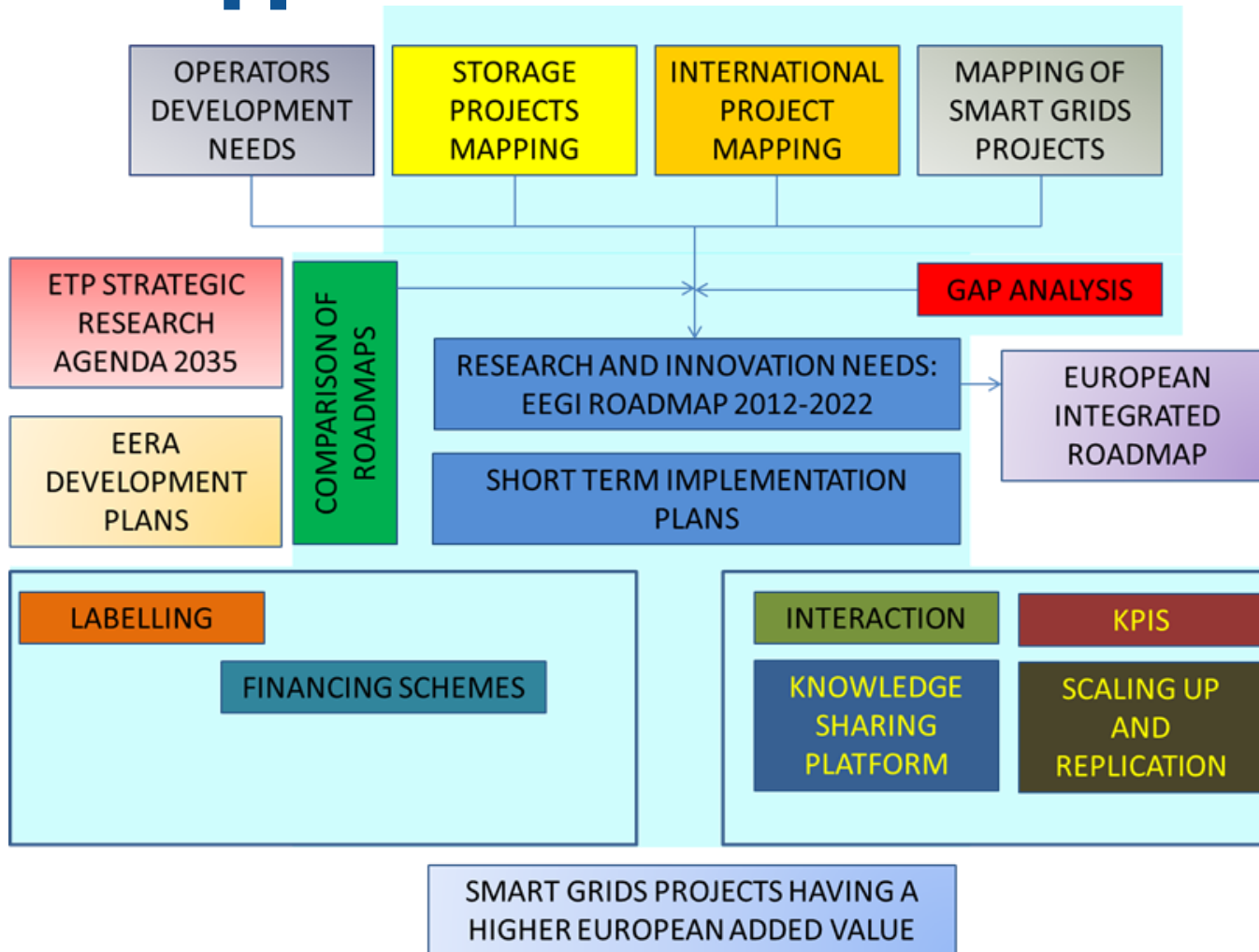
EEGI roadmap – covering all levels



EEGI R&I roadmap context



EEGI supported activities



2013: Communication on Energy Technologies and Innovation

Key Principles

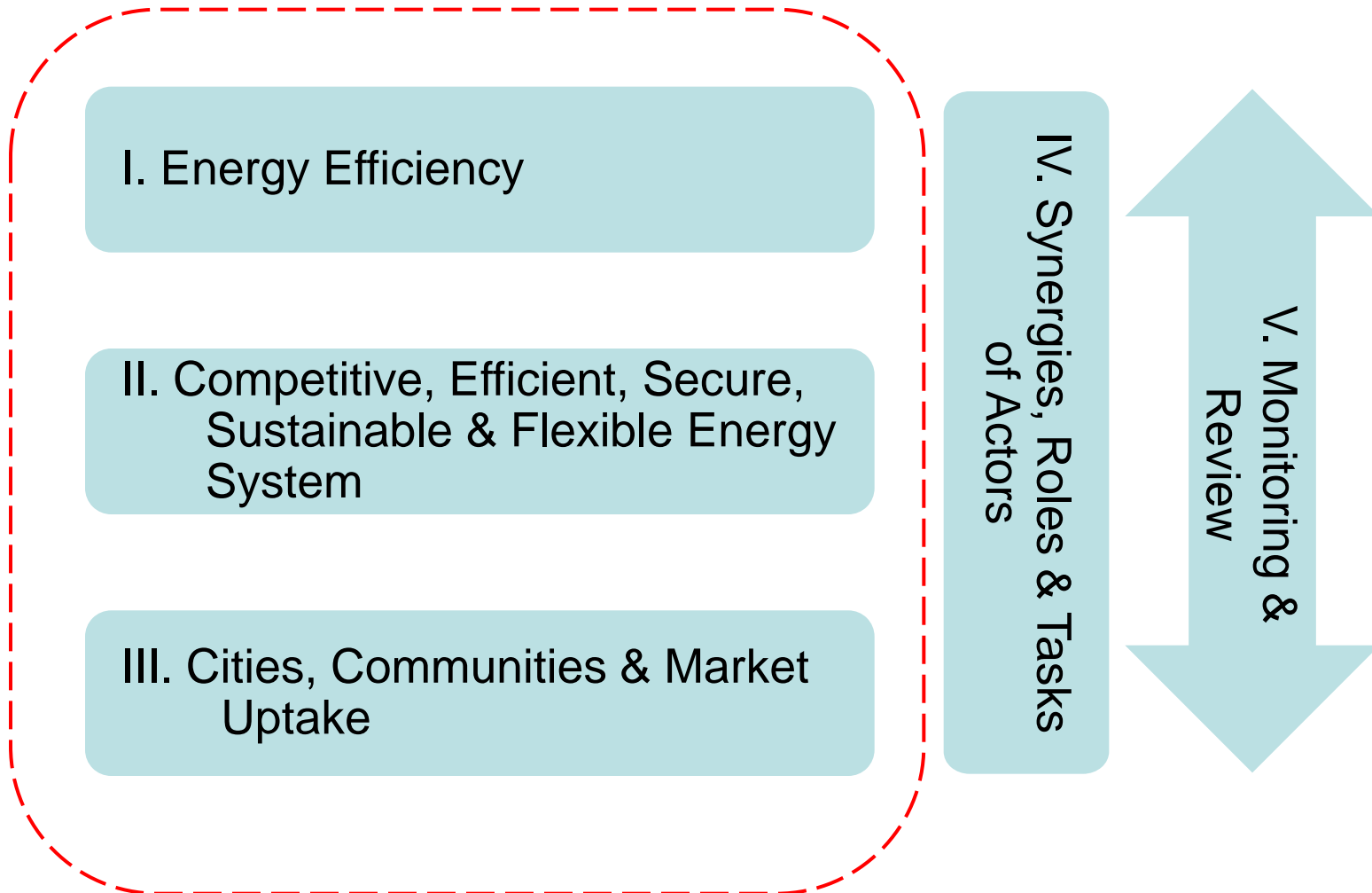
- New Challenges post 2020
- From sectors to system
- Bridging research and innovation with energy policy
- Making better use of existing and increased financial resources
- Keep options open
- Harness endogenous resources



- Integrated Roadmap
- Action Plan –EC and MS financing
- Robust reporting system
- A new coordination structure under the SET plan SG on energy efficiency
- New competences: e.g. non-technological barriers
- External Dimension



Current Structure



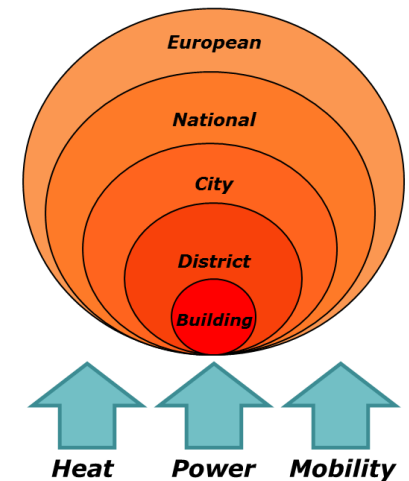
Challenges and Key Issues



- **Cost competitiveness/performance**
- **System integration (smart interfaces, new capabilities of equipment, new or improved services to system, forecast)**
- **Supply chains (industrial logistics, maintenance, materials and manufacturing, recycling)**
- **Non technological aspects (market framework, business model, spatial planning, standards, financing, skills and capacities)**
- **Societal issues (environment impact, safety, health, social acceptance)**

Objective for 2030 (Climate-Energy package)

- 40% reduction of CO₂ emissions (wrt 1990)
- 27% share of Renewable Energy
- 27 % improvement in Energy Efficiency





The way towards: **The Energy Union**

Where we want to go:

A secure, sustainable, competitive, affordable energy for every European

What this means:

Energy security, solidarity and trust

A fully integrated internal energy market

Energy efficiency first

Transition to a long-lasting low-carbon society

An Energy Union for Research, Innovation and Competitiveness

How we want to reach it:



5 Research & innovation



Developing EU technological leadership in low carbon technologies

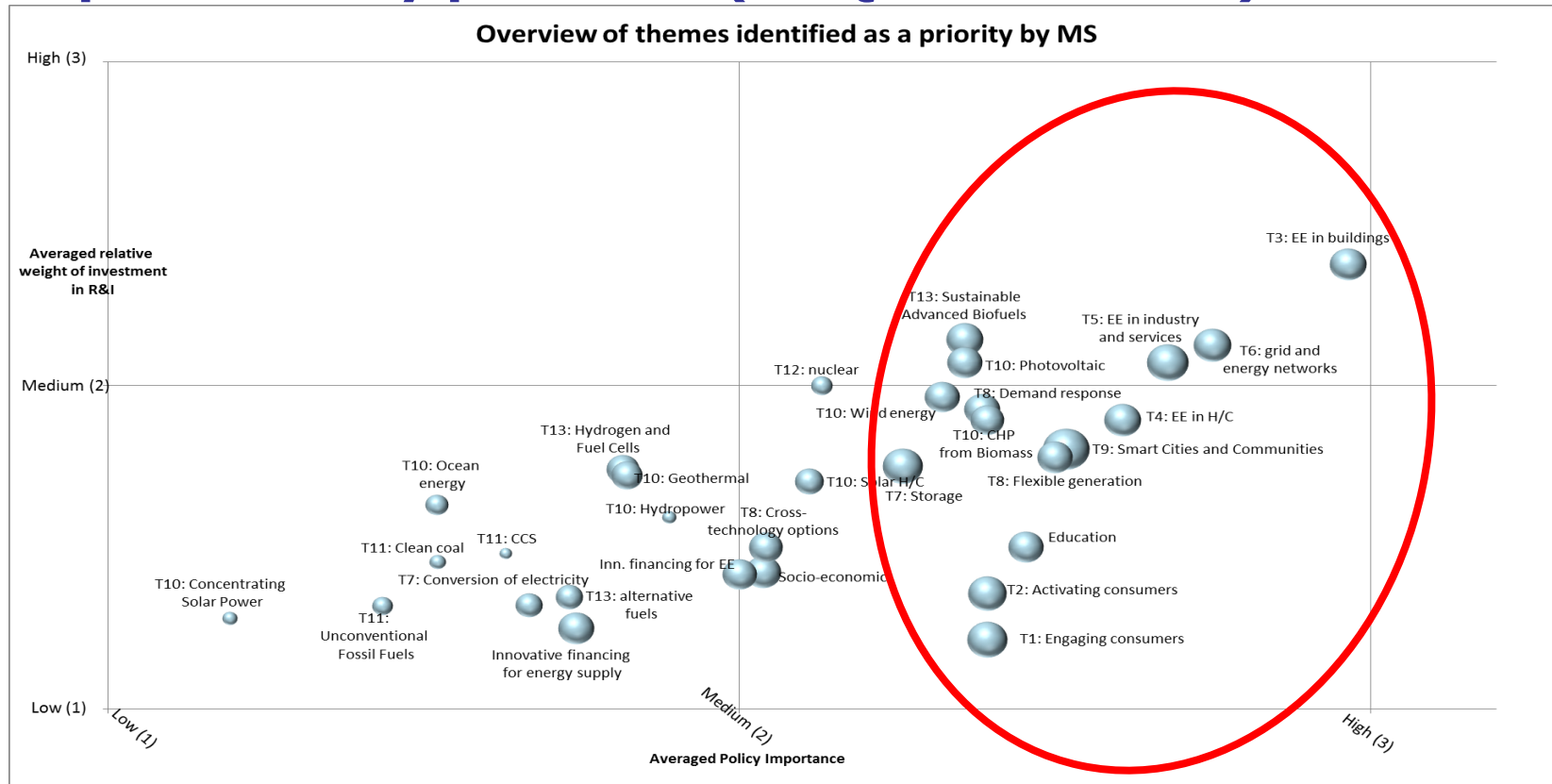
This will reduce energy consumption, empower consumers, create huge industrial opportunities and boost growth and jobs.

- **Linking MS priorities to the R&I strategy of the Energy Union (Integrated action plan)**
- **Perspectives for the EEGI**

Member States Priorities – 1st questionnaire



Step 1: Identify priorities (*1st Questionnaire*)



➤ MSs & ACs indicated their perceived level of investments & policy importance for each Theme/Subtheme of the "*Towards an Integrated Roadmap*" document;

Energy Union

**European policy
directions**

**EEGI in the new
Governance
structure of
the SET Plan**

**SET Plan
integrated
action plan**



Thank you

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