

Smart Grids development in Europe

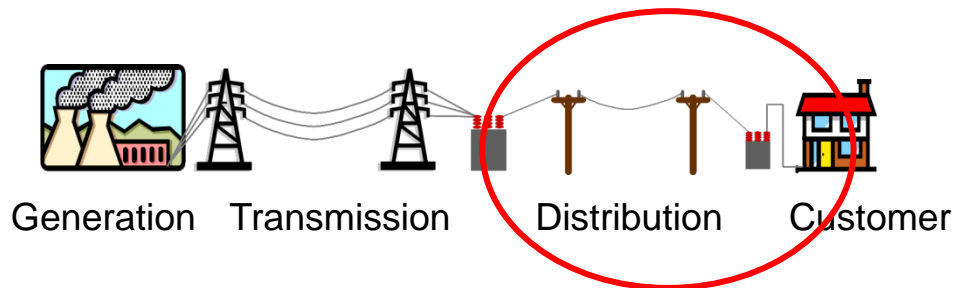
“Smart Grid challenges and electricity
distributors’ responsibilities”

EEF, 12 March 2013, Strasbourg

Per-Olof Granström,
Secretary General, EDSO for Smart Grids

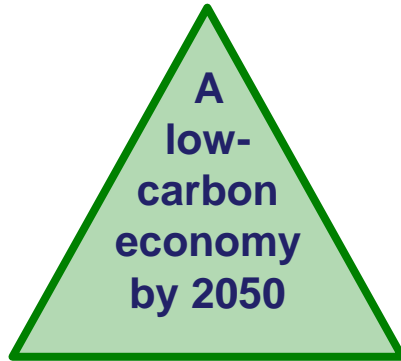
- European Distribution System Operators for Electricity
- Representing some 70 percent of the EU customers
- Leading the cooperation for the Electricity networks of the future

Bringing Smart Grids from vision to reality



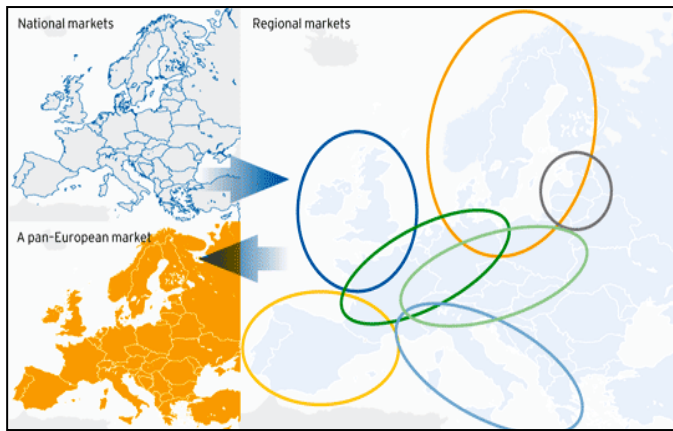
Strong drivers and investment needs ...

Competitiveness



Security of supply

Climate/Environment



Total investment needs in the electricity and gas sector 2010-20: over 1 trillion EUR

Power generation ~ 500 bn

Transmission and distribution ~ 600 bn

RES
~ 310 – 370 bn

Distribution
~ 400 bn

Transmission
~ 200 bn

Source: EC communication on Energy Infrastructure priorities for 2020 and beyond, 17.11.2011 based on PRIMES calculations

... paradigm shift – evolving role for the DSO

Energy Europe is changing – decarbonisation and market integration ...

Very strong impact at local level ...

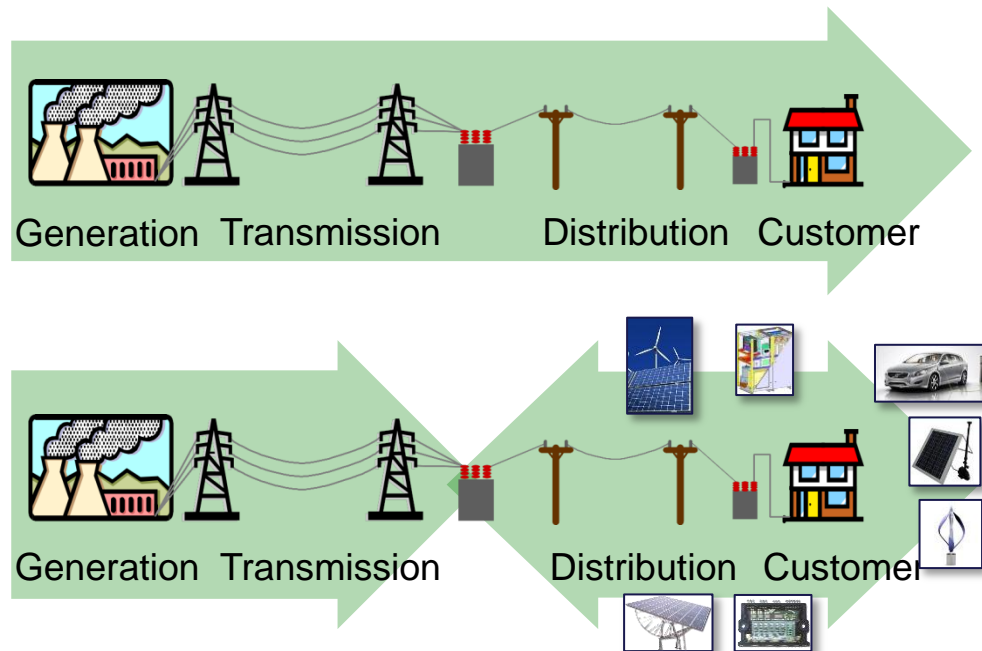
- Vast amounts of distributed energy
- Empowering consumers, active demand, smart metering and communication
- Electric Vehicle charging

Changes the distribution network ...

- From radial to complex
- Reverse energy flows
- ...

Highlights the need for

- Local balancing and energy storage
- Communication, open data access
- Market facilitation
- ...

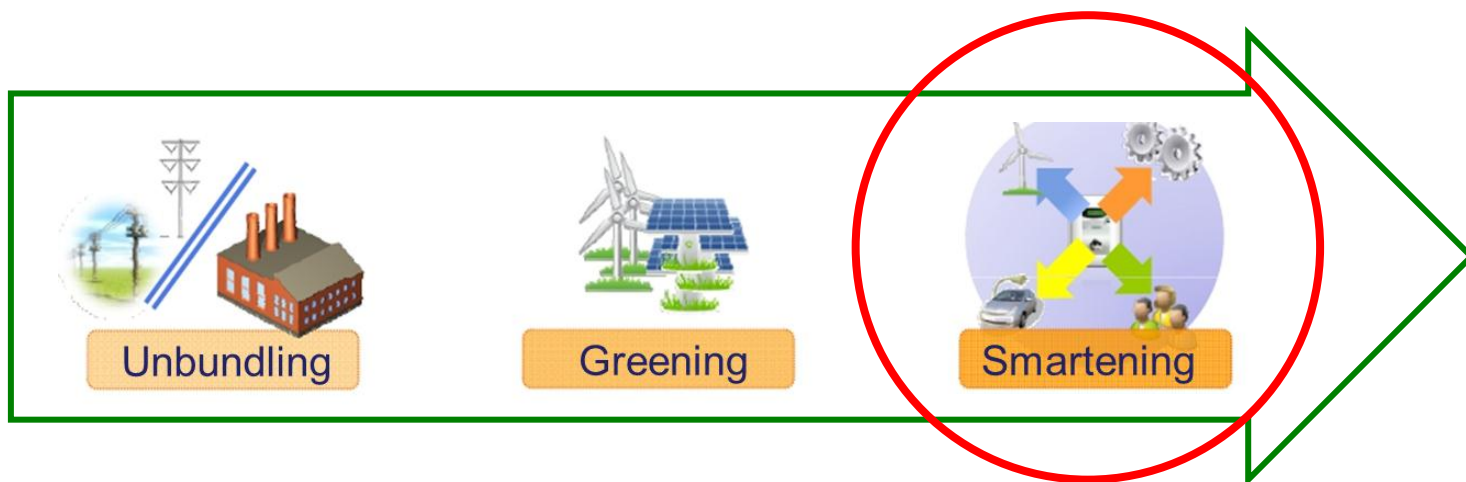


Technology

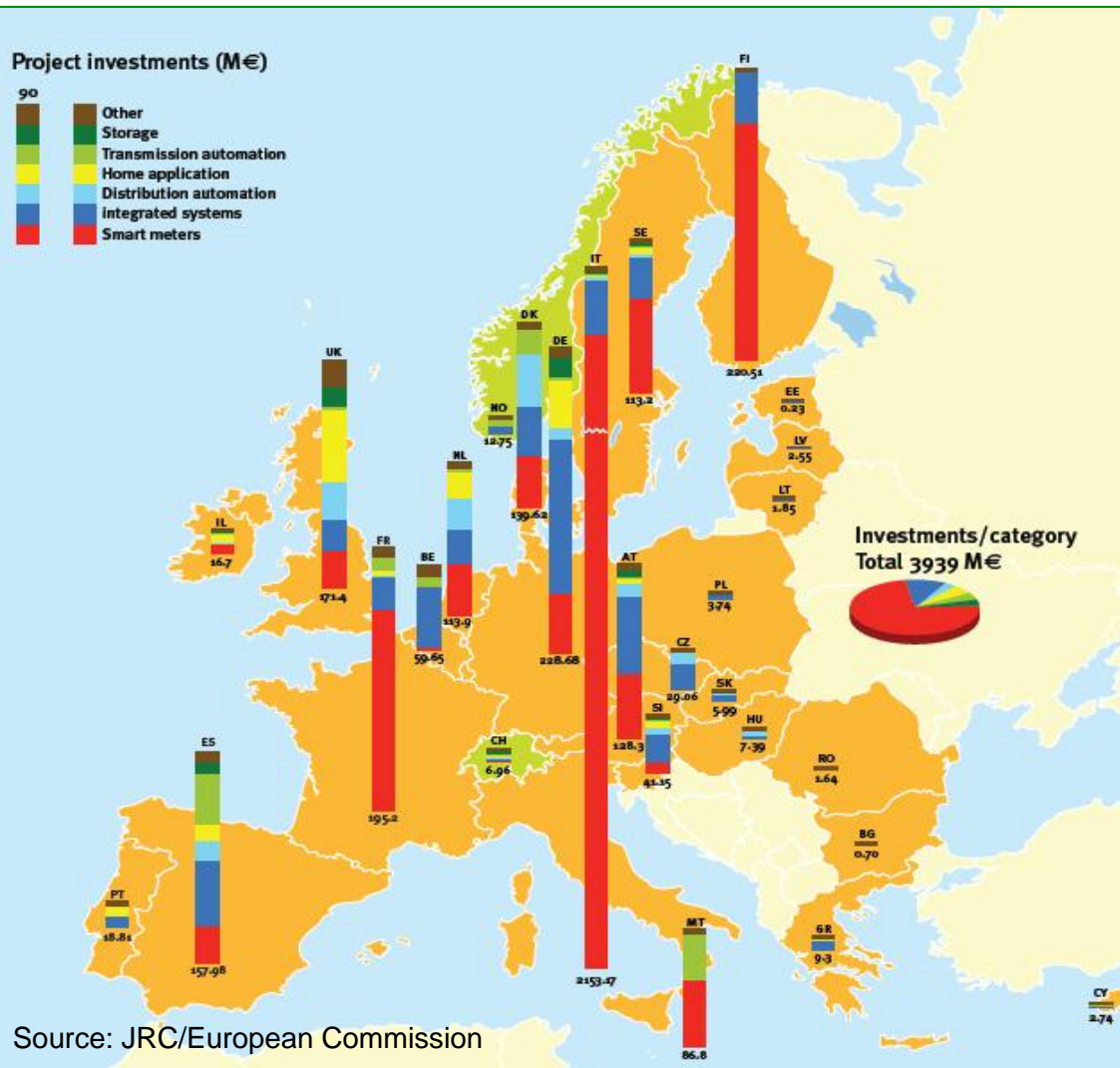
- SET-plan – European Electricity Grids Initiative (EERA, etc.)
- Strategic Research Agenda 2035
- Smart Cities Platform
- Standardisation mandate
- (International Smart Grid Action Network – ISGAN)

Policy and regulation

- 3rd Energy package
- Smart Grids Communication
- Smart Grids Task Force: standards, data, regulation, infrastructure
- Connecting Europe Facility
- Energy Efficiency directive
- Network codes



Smart Grid projects in Europe

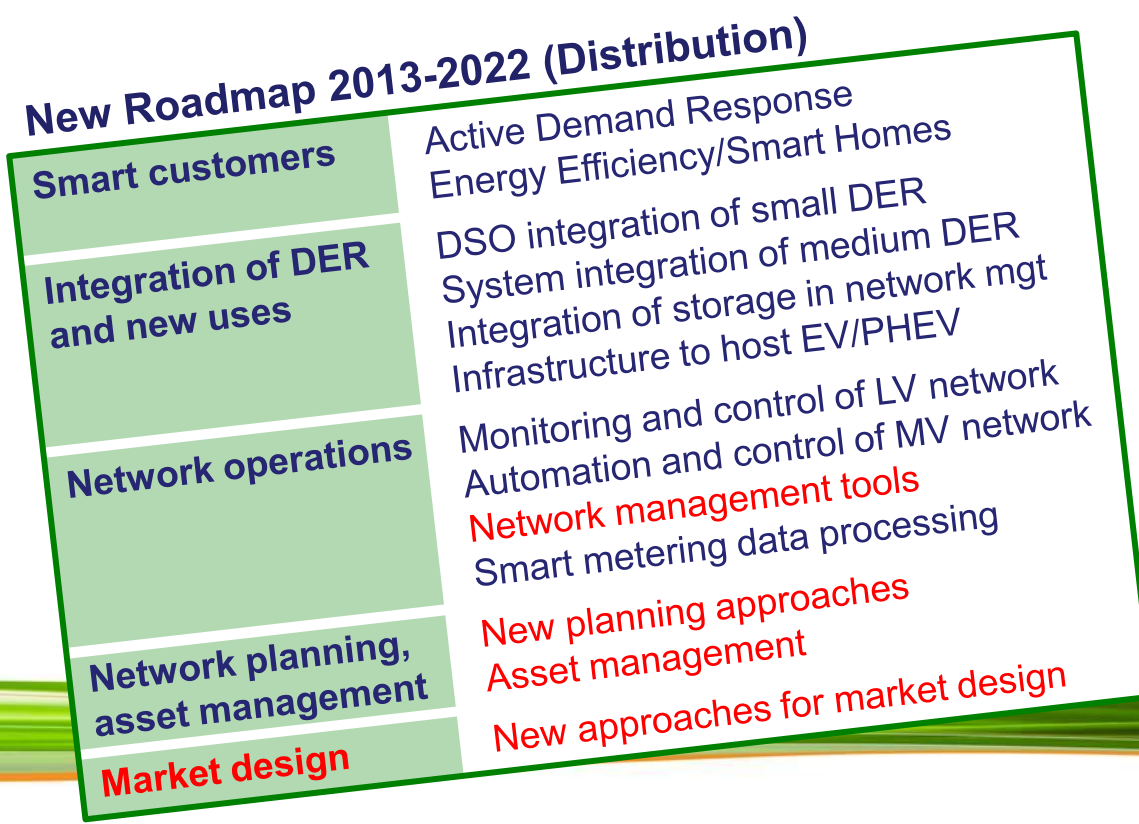


MAIN FINDINGS

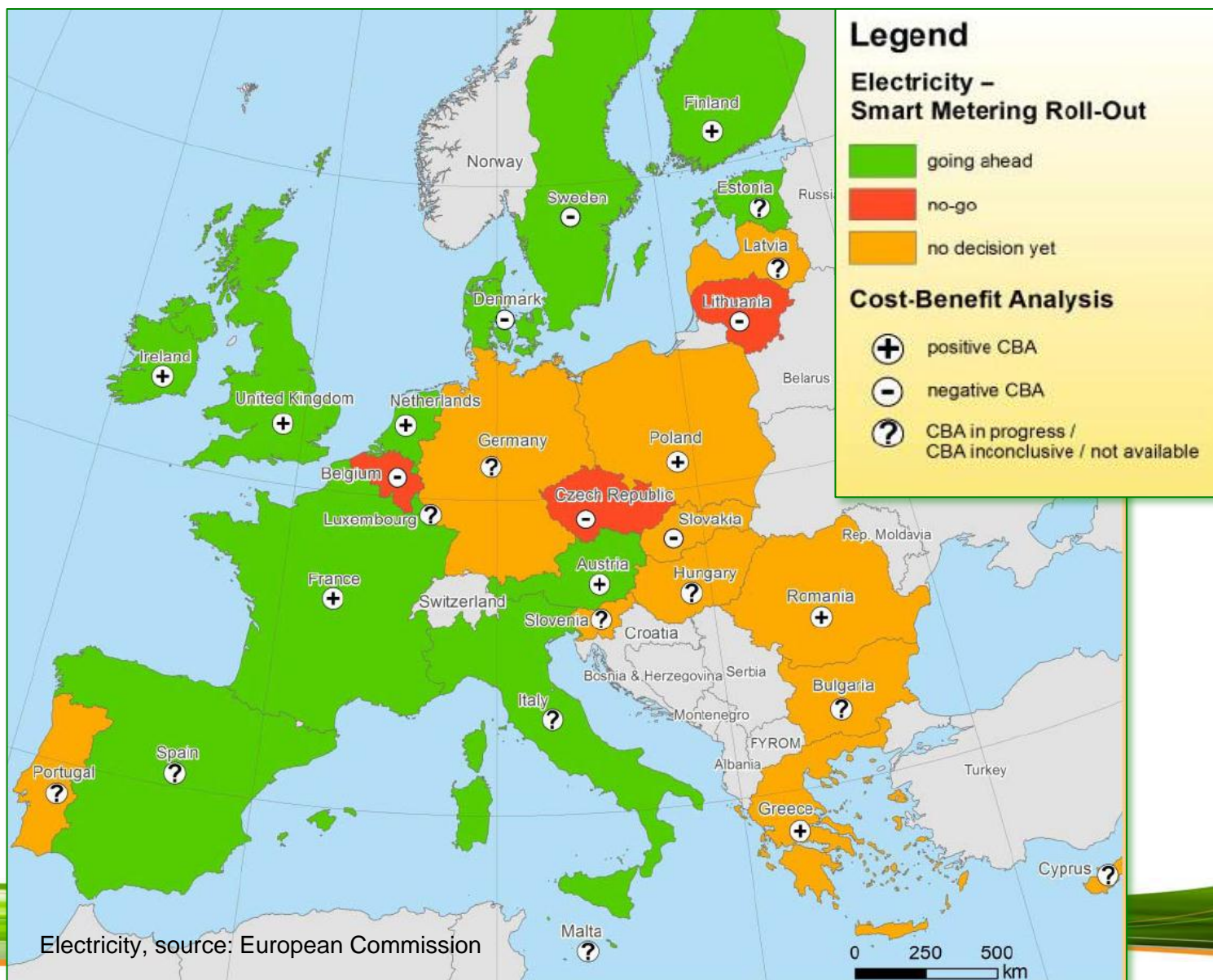
- Smart Grids bring benefits
- DSOs in leading role
- Difficult to accelerate Smart Grids deployment without revising the regulatory frameworks
- Important bringing the customer on-board
- Technology integration not technology innovation
- Knowledge sharing

European Electricity Grid Initiative (SET-plan) 2010-

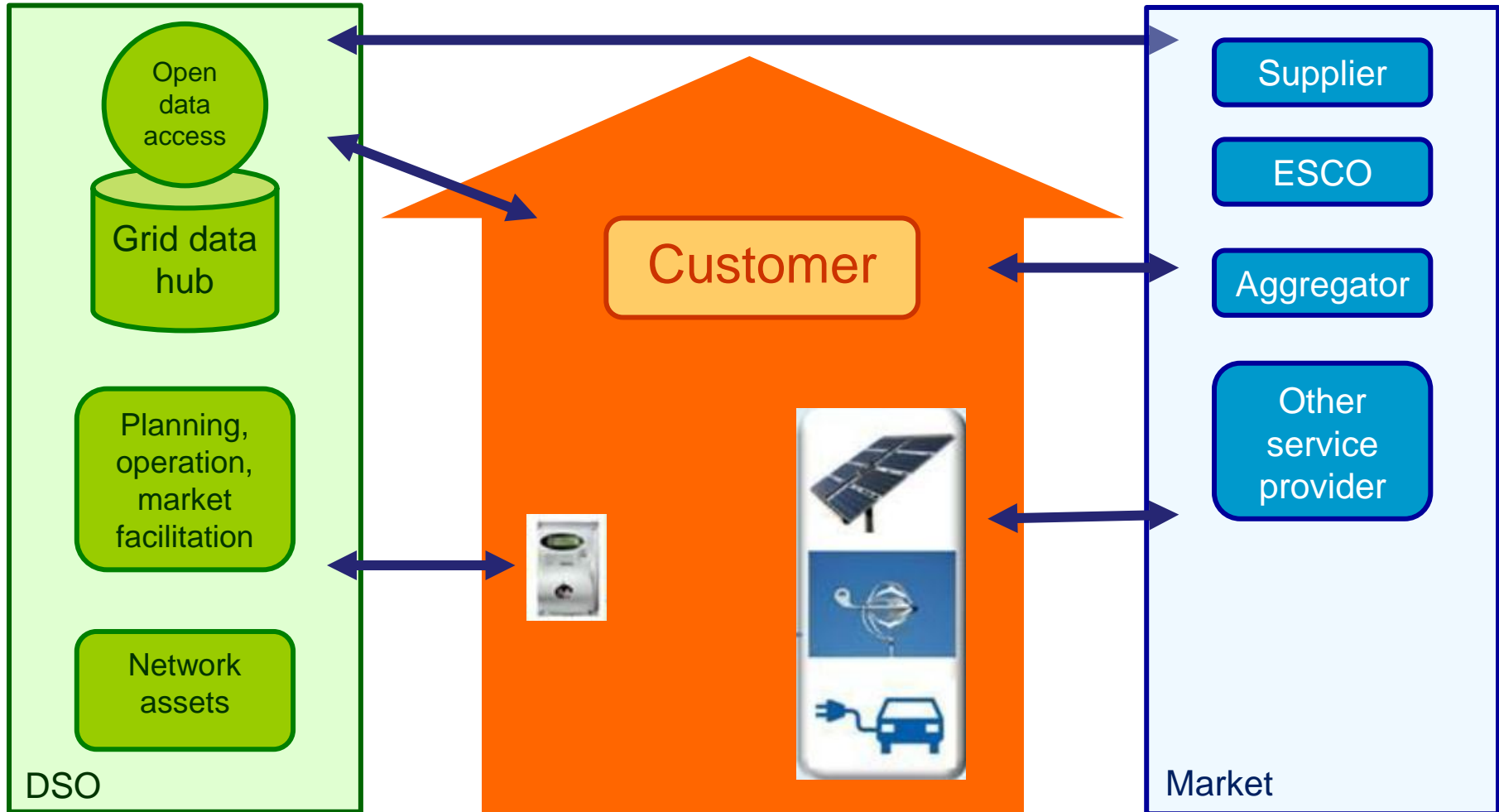
- RD&D – Accelerate Smart Grids innovation and development
- Transmission and distribution – focus on system integration
- Knowledge sharing, scaling and replication
- Horizon 2020



Smart meter roll-out in the EU

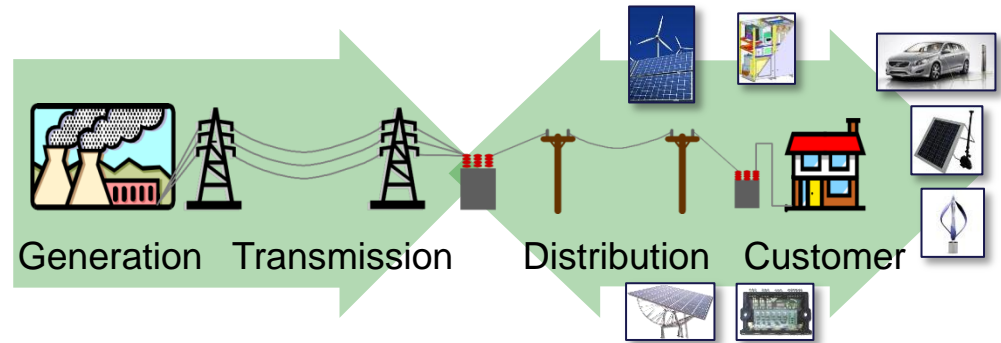


Customer and the smart grid



Accelerating Smart Grids development

- Energy Europe is changing
- Very strong drivers/ impact at local level
- Huge investment needs



DSO role evolving

Large scale demonstrators,
knowledge sharing – EEGI

Regulatory frameworks

Standards

- Market facilitator, grid data hub, local balancing, ...
- Necessary for deployments
- Public co-funding to test solutions at earliest stage
- National incentives for smart investments
- Clear definition of roles and responsibilities
- European/international interoperability

Thank you for your attention!

pog@edsoforsmartgrids.eu