

DRIVING REGIONAL COOPERATION FORWARD: FROM PROJECT TO POLICY AND BACK...

BOELL STIFTUNG 26 APRIL 2016, BRUSSELS

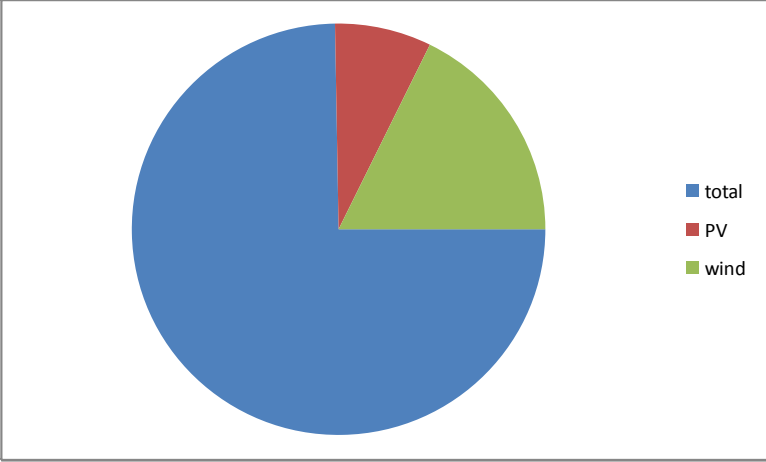
entsoe

Reliable Sustainable Connected

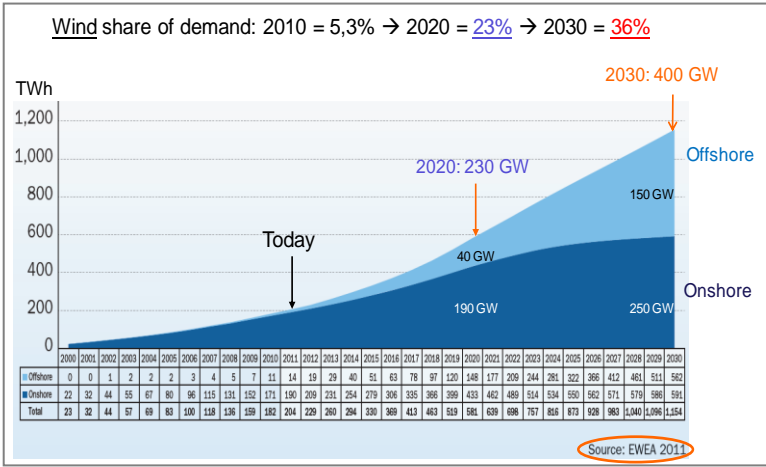
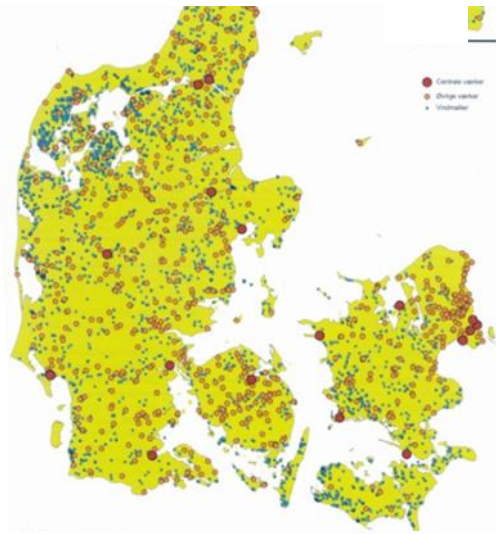
26 April 2016

Impact of the rapid increase of variable RES on Europe's electricity system

Huge flows all over Europe



Thousands of small units



The “very regional approach” of TSOs

Market:

- Internal Energy Market started as Regional: DA, ID, Balancing. Voluntary projects. CACM adoption and implementation

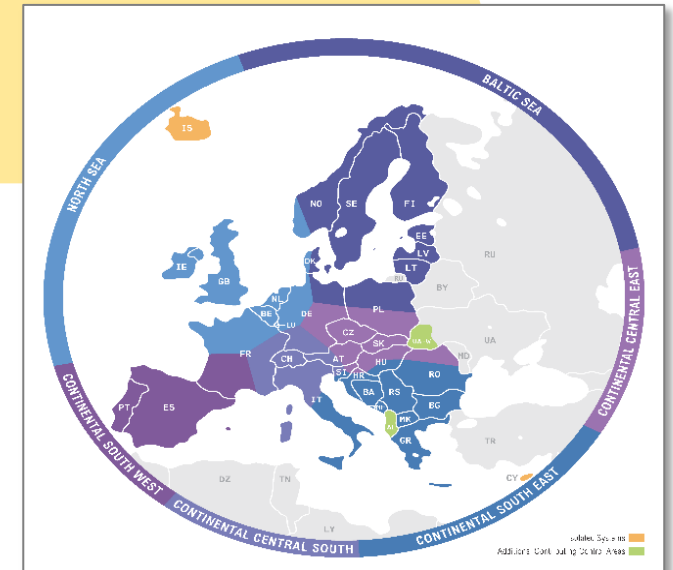
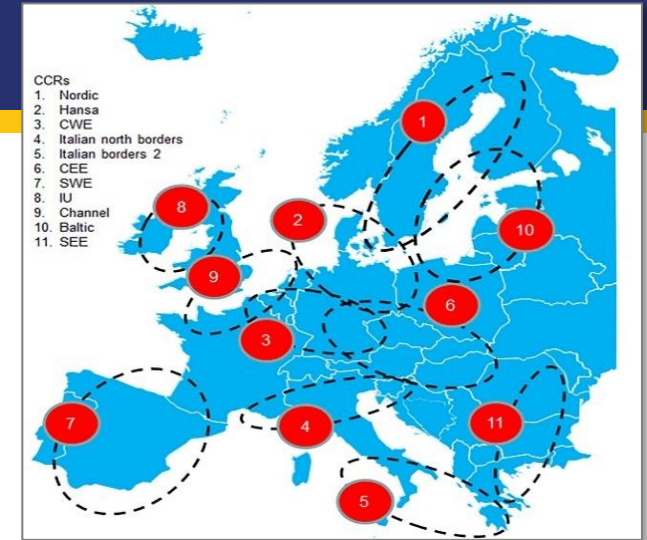


Operation:

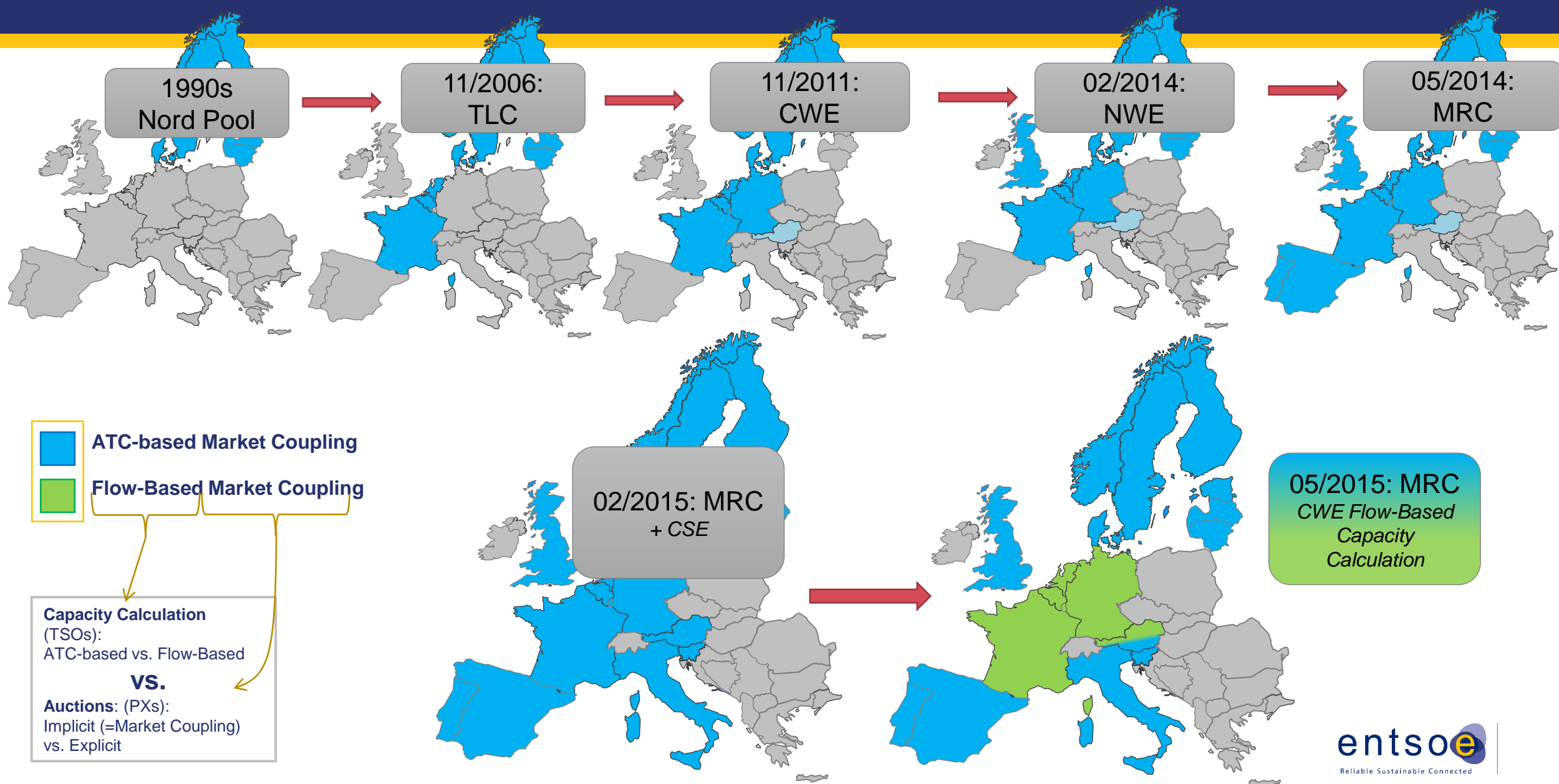
- RSPs through TSO cooperation early on: functions already defined and established or in the process of establishment

Planning:

- TYNDP Regional Investment plans. Regional work on the network codes.



Region to Europe: a success story



System operation in Europe: vision(s) have a *Common goal*

Secure,
Economically viable,
Ecologically sustainable,
Electricity for Europe

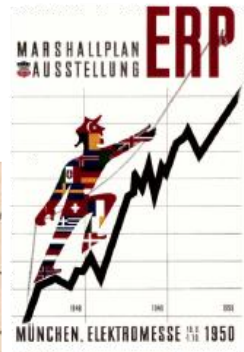
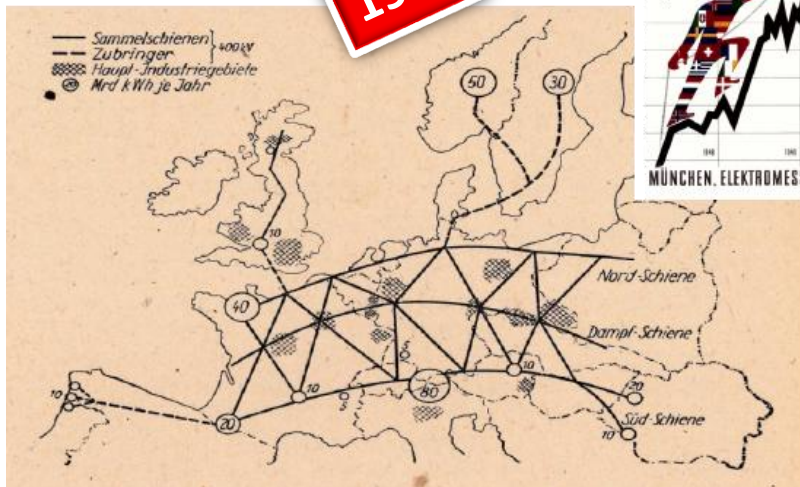


2020



https://ec.europa.eu/research/energy/pdf/smartgrids_en.pdf

1950

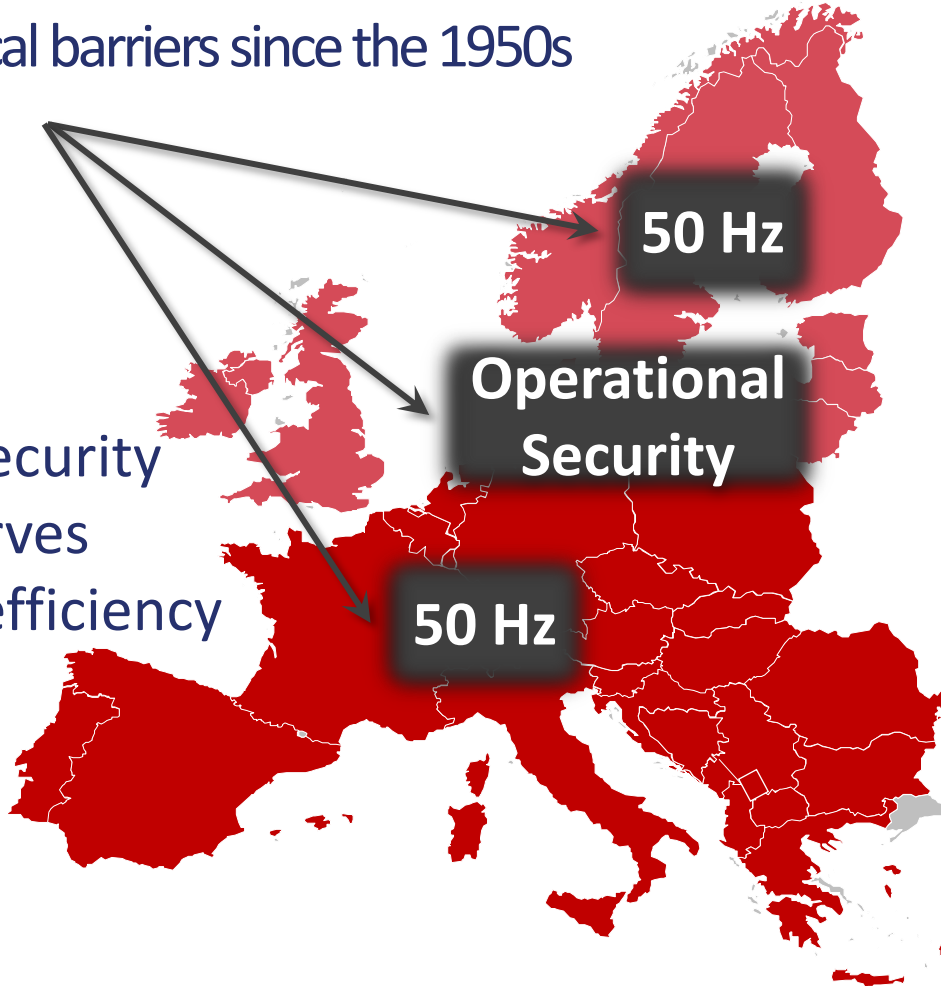


System operation in Europe: *vision & mplementation*

- Removing political barriers since the 1950s
- Common goods

Noble purpose*

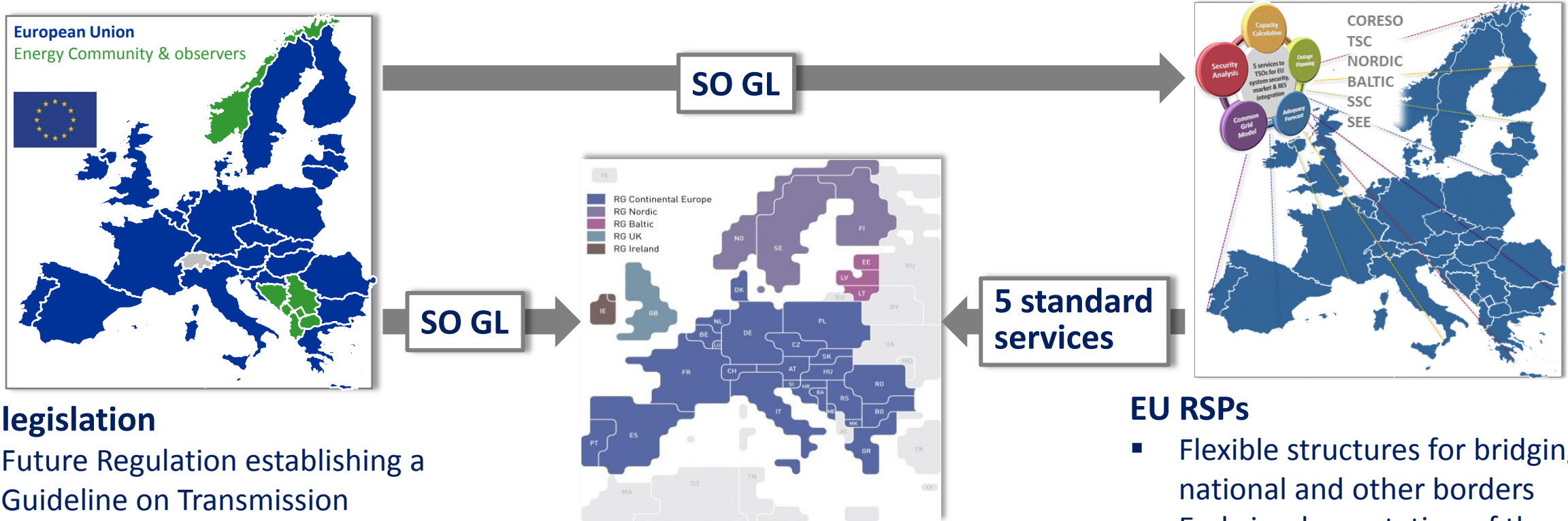
1. Maintain security
2. Share reserves
3. Economic efficiency



* *First UCPTE rules, mid-1950s*

When	What
1954...1957	Load-frequency control in central Europe
1957...1958	Accounting, statistics
1959...1964	Voltage control and reactive power management
1961-1962	Short-circuit calculation, synchronous operation
1962...1966	Disturbance prevention
1963...1969	Operatonal control of hydro/thermal generators
1967	Terminology of synchronous operation
1970-1971	Backup protection
1973-1974	Dealing with unintentional exchange (loop-flows)
1982-1983	Real-time data exchange
1985-1986	System states, emergency, load flow calculation
1999-2001	UCPTE, cross-border exchange
2001-2004	UCTE/ETSO, CBT (ITC), congestion management
2009-2015	ENTSO-E, RSPs (TSC, Coreso), 3. Package / NCs

Five standard services: *the „making of“*



EU legislation

- Future Regulation establishing a Guideline on Transmission System Operation
- Implementation across national borders vs. electrical & market needs

EU TSOs

- Maintaining system security, enabling IEM and RES integration
- Markets and security depend on coordination (volatility)

EU RSPs

- Flexible structures for bridging national and other borders
- Early implementation of the legal framework (operational needs)
- Support TSOs in maintaining system security

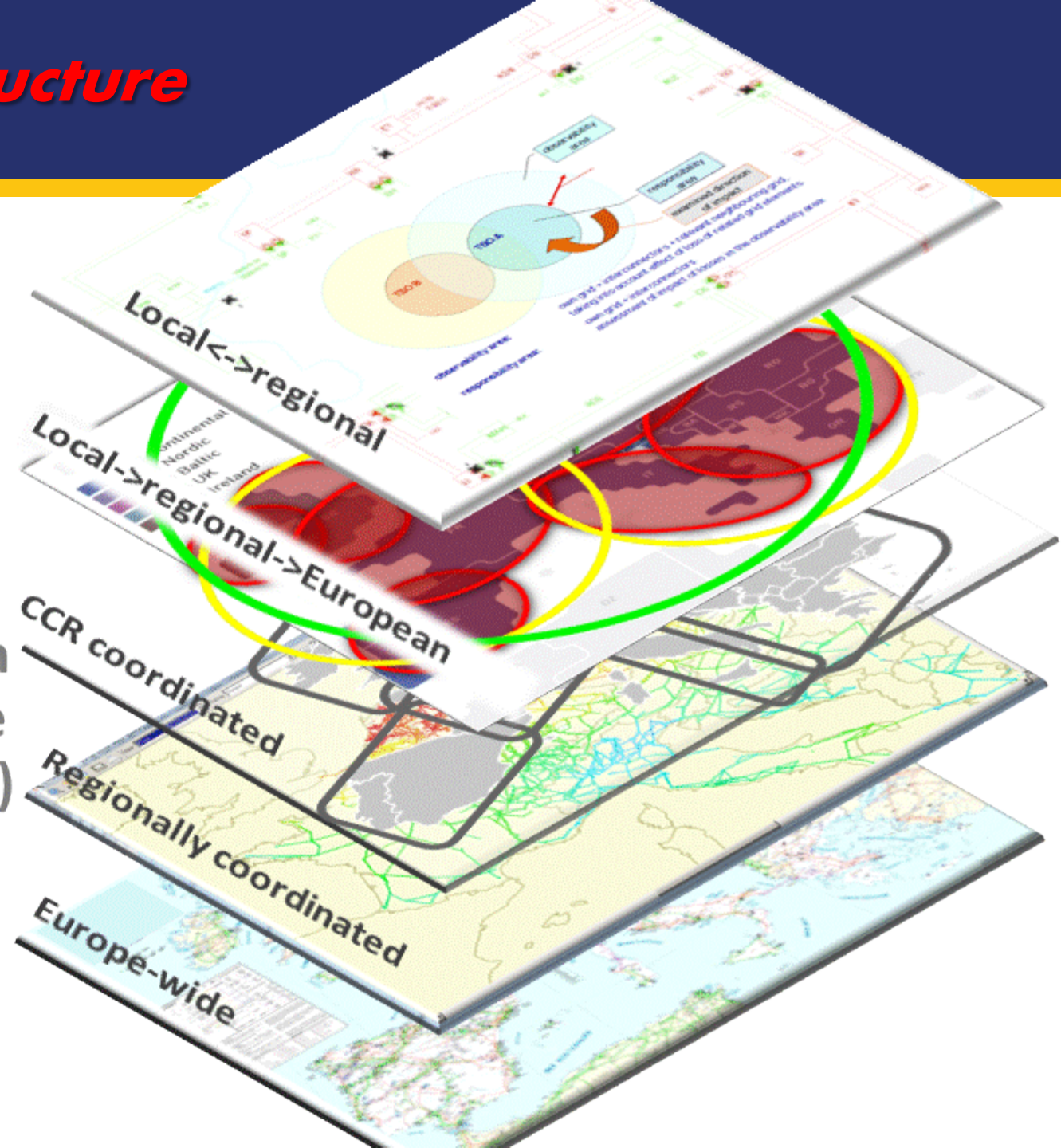
RSP: Regional Service Providers

Five services: *contents & structure*

5 standard services

1. Outage planning coordination
2. Short / medium-term adequacy forecast
3. Coordinated capacity calculation
4. Operational planning security analysis
5. Individual/common grid model delivery

ENTSO-E RSCI Project for European rollout and implementation of five services, until end 2017 (mid 2018)

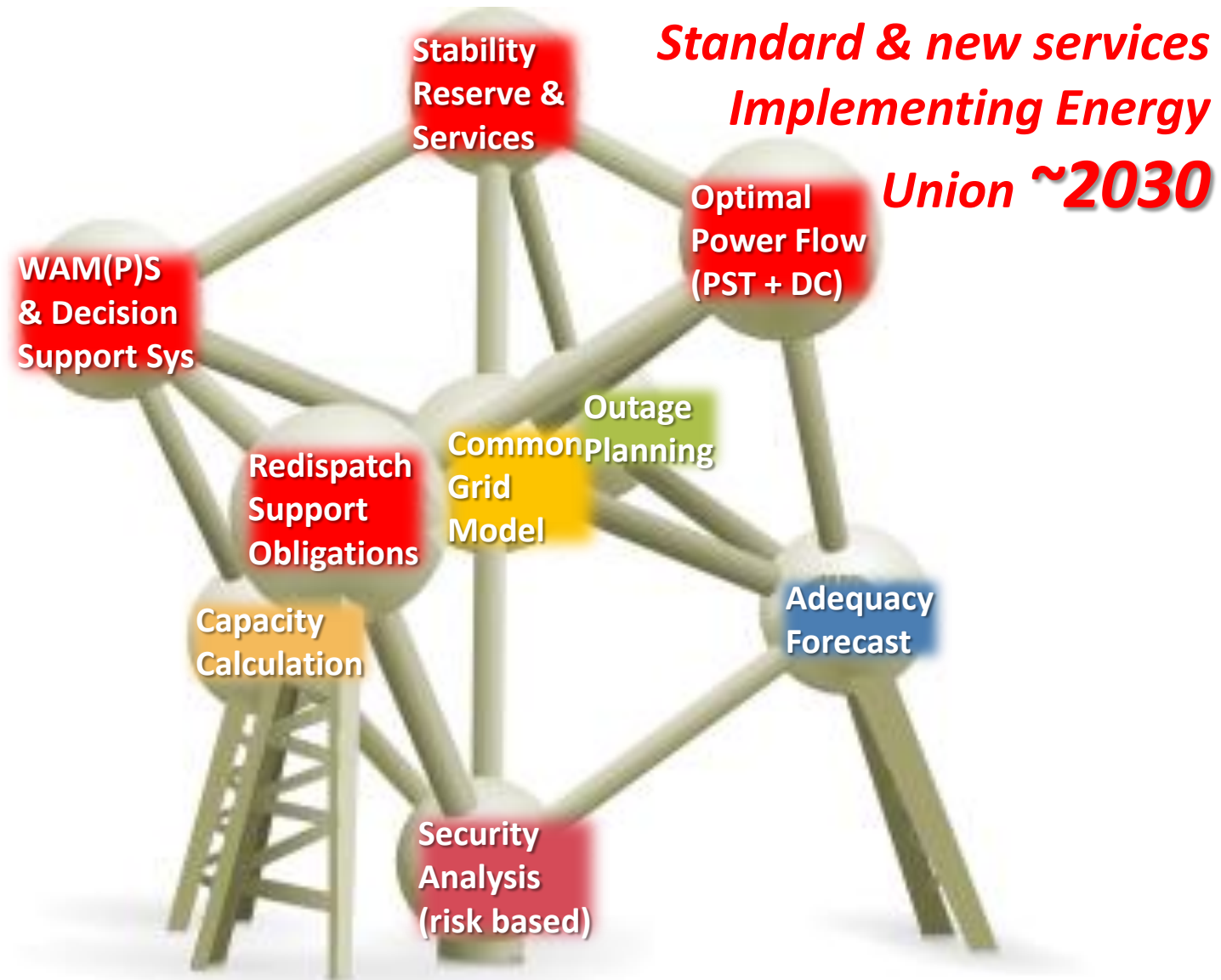


RSPs: the long-term vision = *flat flower to 3-dimensional crystal*



5 standardized services

Implementing CACM & SO GL ~2018



The way forward

- Distinguish between policy regions and functional areas
- There is a need for regional and smart: deepening and widening...
- RES and networks are successfully teaming up: RGI, solar eclipse 20 March 2015, to serve the customer.

Thanks for your attention

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