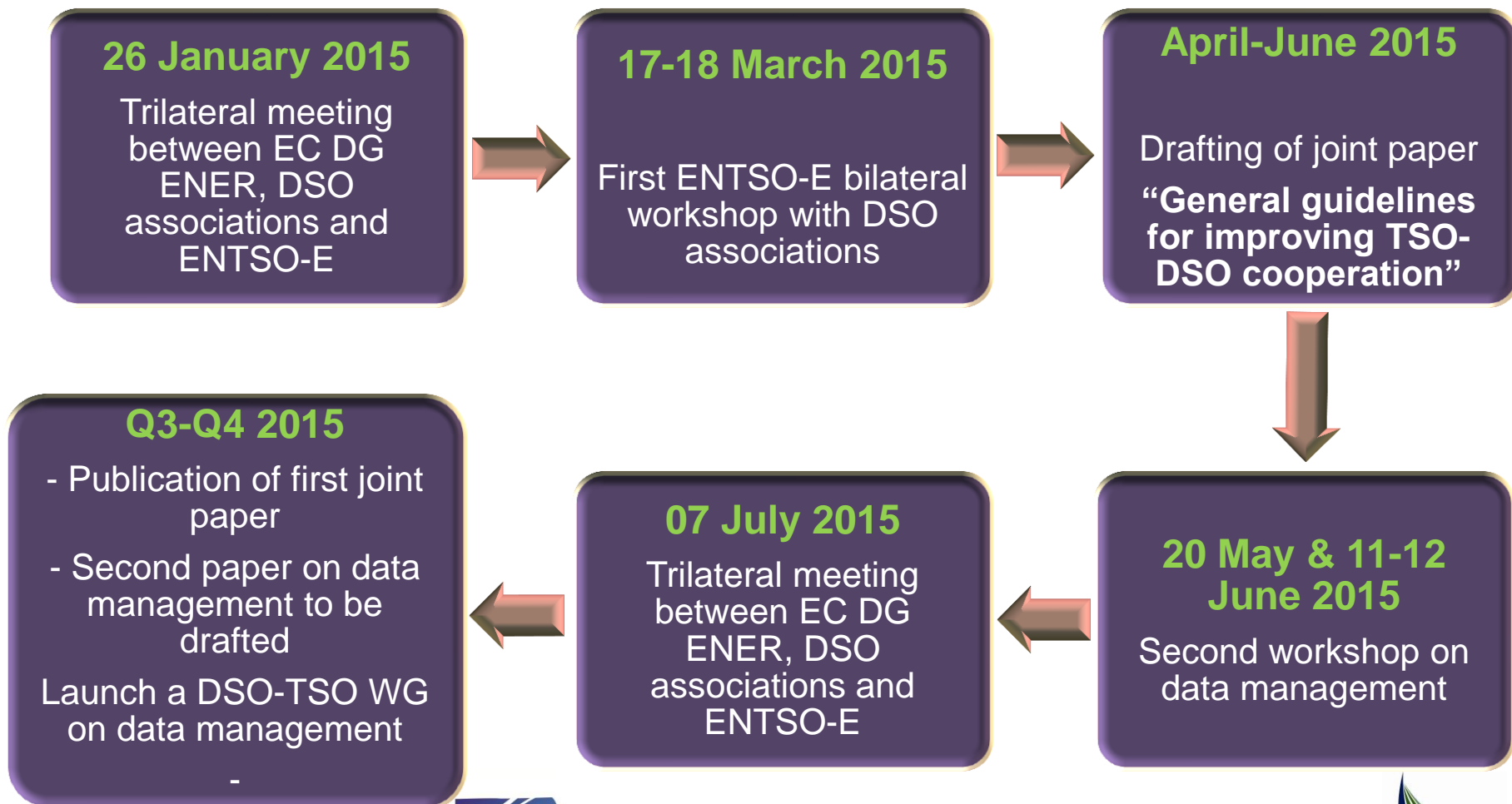


DSO/TSO Cooperation Platform



Timeline of events and actions



New challenges for TSOs and DSOs



An evolving environment needs **greater cooperation between TSOs and DSOs to solve their respective challenges** in a cost and efficient way.

The **challenges** to improve DSOs' and TSOs' cooperation :

- Uncoordinated access to resources
- Regulatory uncertainty
- Lack of grid visibility (insufficient bi-directional exchange)



Benefits of enhanced cooperation between TSOs and DSOs

Benefits to all players in the energy value chain :

- **Costumers**: enjoy at the lowest cost a high quality of service and security of supply
- **Markets parties**: improve the flexibility of the market and ease the integration of Distributed Energy Resources and Demand Side Response
- **Decision-making process**: better decision making and lower costs

Area to enhance a cooperation between TSOs and DSOs (1/3): Roles and responsibilities

- TSOs are responsible for overall system security via frequency control, cross-border congestion management and residual balancing.
- As grid managers, **both TSOs and DSOs are responsible for the secure operation of their respective networks**, which involves managing congestion and voltage of their grids.
- DSOs may also resort to local islanding when an MV line is disconnected from the system; in order to maintain the quality of service before the MV line is reconnected to the system.

Area to enhance a cooperation between TSOs and DSOs (2/3): Flexibility in the market

The **flexibility** resources can match different needs and create conflicting uses between :

- System balancing between supply and demand
- Network management

Market parties **should be able to access all markets** on a voluntary basis. Merit orders should be based on technical and economic optimisation.

In order to enable this :

- Measure flexibility (baseline calculation method might be developed)
- Investigate options for coordinating the use of flexibility resources (single market vs. coordinated market)
- DSOs investigate the potential use of reactive power from renewable to support voltage levels

Area to enhance a cooperation between TSOs and DSOs (3/3): Technical requirements

Areas of cooperation at the technical level:

1. Active and Reactive :

- Integrated T/D grid analysis at regional level
- Freedom to implement a mutually agreed tailored approach
- Selection of the best solutions for solving local challenges (TSO-DSO-DER)

2. Network planning procedures :

- Exchange DER forecast at the T/D connection point
- The citizens' acceptance construction project
- Technical requirements for new technologies and ancillary services
- Align the network planning at the TSO/DSO interface

3. System Operation :

- **Data and information exchanges** and agree on common procedures to doing so
- Assistance procedures (cascading principles between network operators)
- Coordinate real-time congestion management procedures (short-term) with integrated markets

Topics to be further developed – Next Steps

❖ Data management WG

- 3 TSO-DSO Workshops in Brussels on 26 October; 9 November; 7 December
 - Agreeing on a common terminology for the concepts.
 - Reaching a common understanding of data needs of market parties -TSOs and DSOs.
 - Collecting information and describing different models of data management across Europe
 - Highlighting best practice for data management and exchange in Europe
 - Proposing changes to the current market model described in the existing legislation

❖ Reactive power management

- TSO-DSO Workshops in Brussels in *January 2016*

❖ Active power management

- TSO-DSO Workshops in Brussels on *Spring 2016*

❖ Network planning procedure

- TSO-DSO Workshops in Brussels in *November 2015*