

## Portuguese DEMO

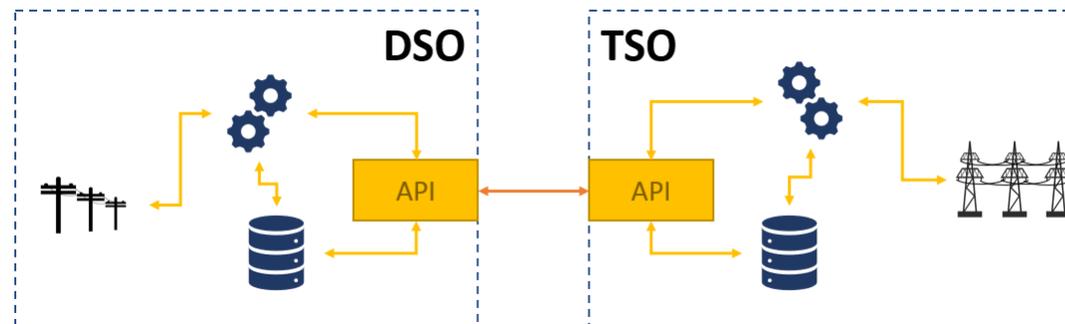
WP9 Portuguese Demonstrator  
11/01/2022



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# Exchange of Information between DSO and TSO for Operational Planning

- The increase in generation from renewable resources, with its uncertainty, and the increase in the use of electricity (due to EVs for example) means that system operators have to improve their strategies for managing the grid more efficiently in order to avoid unnecessary investments. In this call, our strategy is to optimize coordination between DSO and TSO by identifying and sharing the information that enables better operational planning for their networks. In order to share the information, a set of APIs and related services (potential links with existing systems, backend servers and databases) to enable a streamlined automated communication between system operators, namely the Portuguese DSO and TSO, need to be implemented.



# BUCs & SUCs of the Portuguese Demonstrator

BUC level

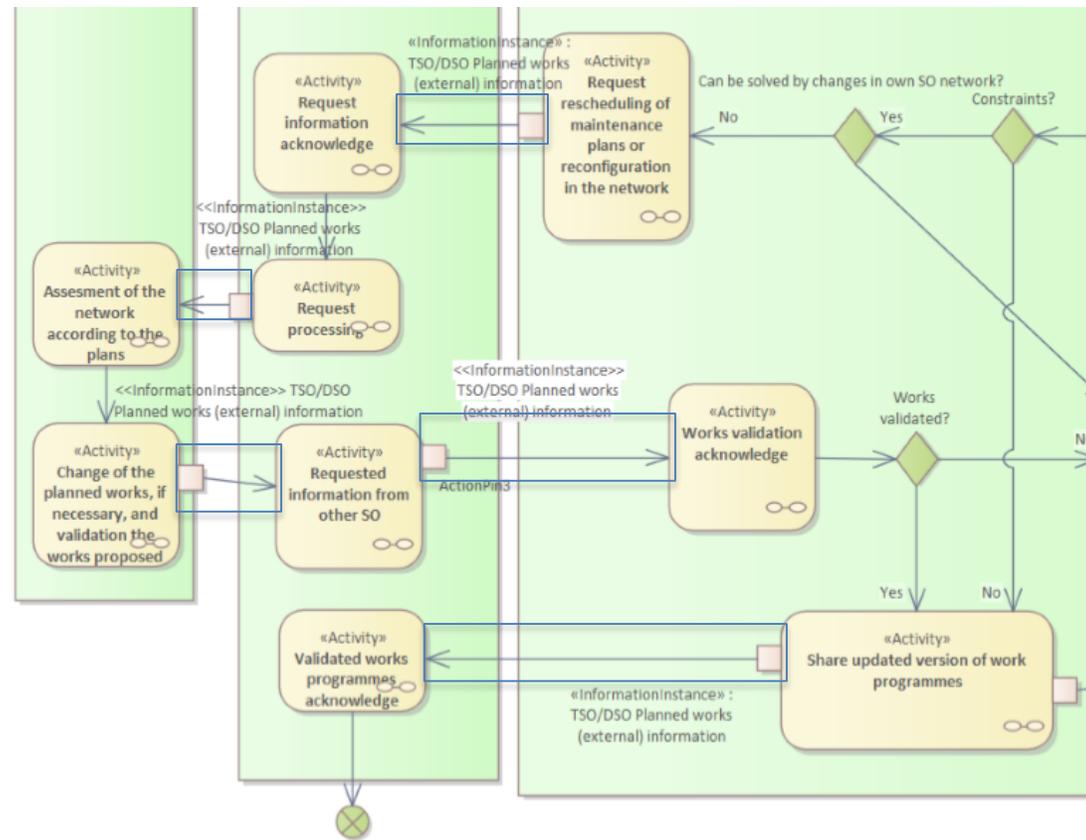
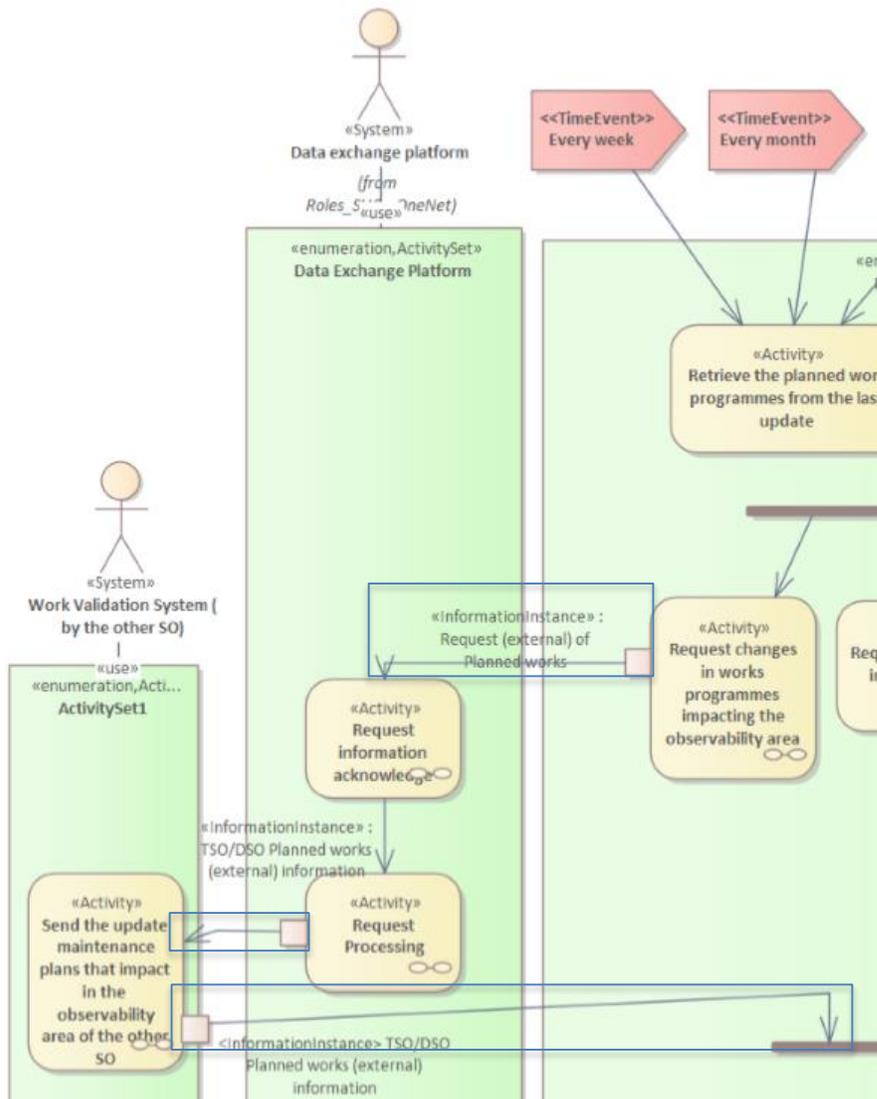
Exchange of Information between DSO and TSO for  
Operational Planning

SUC level

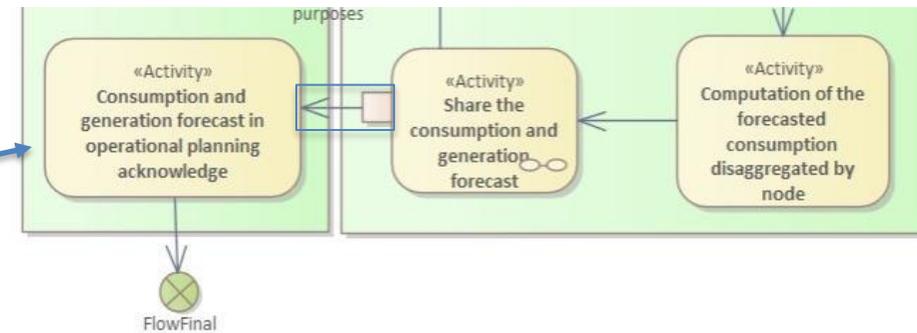
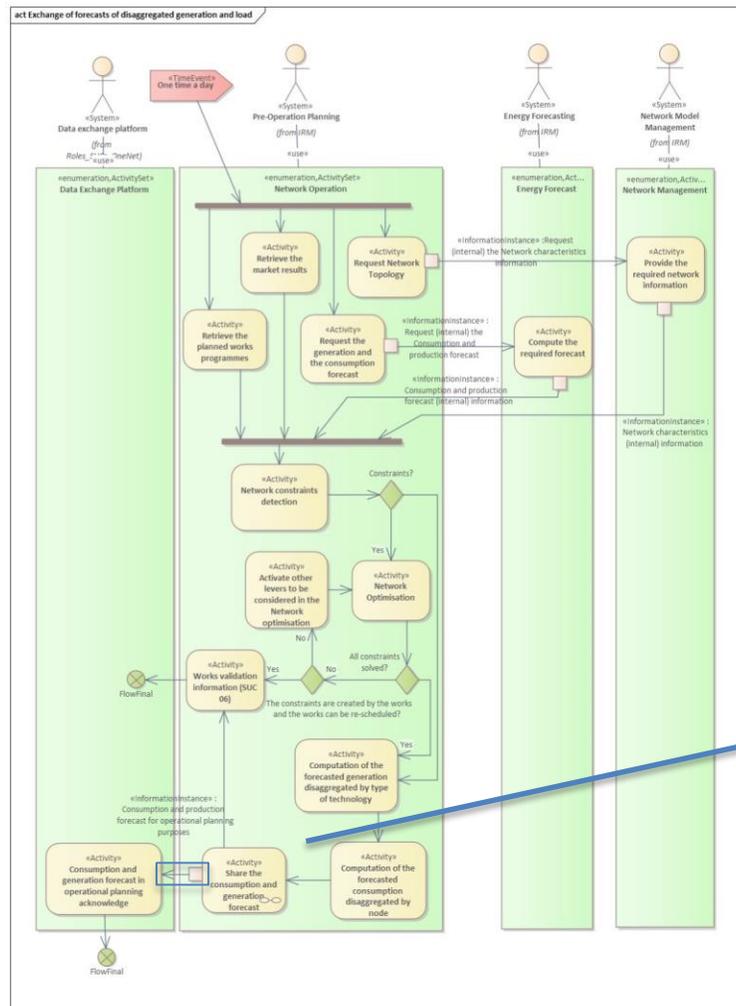
- **SUC06 – Maintenance plans information exchange**
- **SUC07 - Consumption and generation forecast information exchange**
- **SUC08 - Short-circuit levels information exchange**



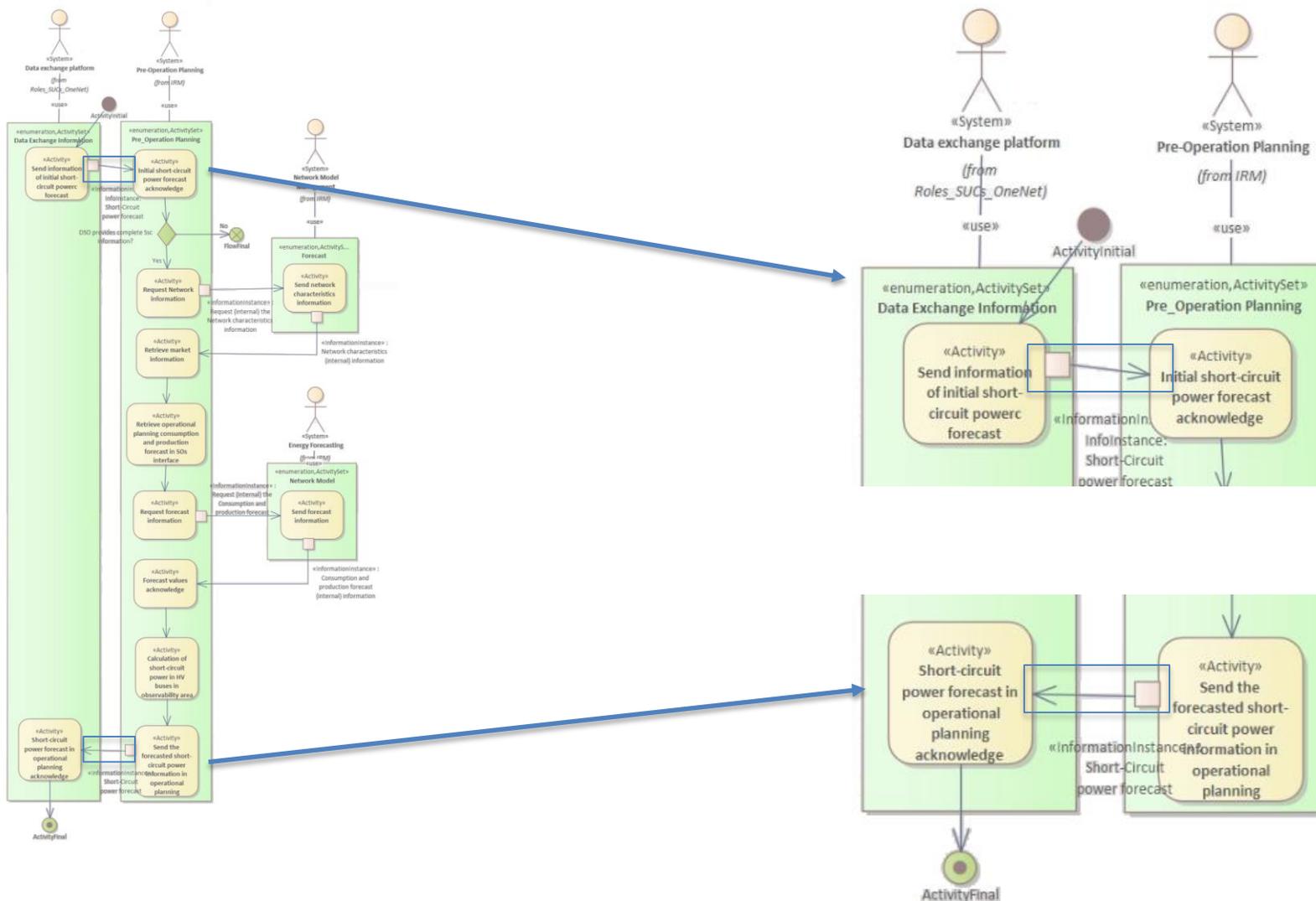
# SUC6 - Maintenance plans information exchange



# SUC7 - Consumption and generation forecast information exchange



# SUC8 - Short-circuit levels information exchange



# Requirements to share the information to be exchanged

- The web services will go through dedicated machines to isolate physically and logically from grid operators' production environment.
- The Portuguese partners envision the exchange of the operational planning data and respective forecast by using REST Architecture based Web-Services.
- The exchange of information between the TSO and DSO will have among 10-20 dedicated APIs that are responsible for gathering the specific information from the dedicated databases of each of the operators. Both operators have dedicated machines to host the web service.
- The REST Web-Services communication will follow the protocol standard IEC 62325-504, and the files/messages will be exchanged in XML or json format.

