

OneNet – Portuguese Demo

EPRI Workshop: Distribution – Beyond Pilots for Distribution Services

Session 3 - Using Distribution-Connected DERs to Solve Transmission-Level Congestions - Learning from projects

16/03/2023



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OneNet Vision

- To create a **fully replicable and scalable architecture** that enables the whole European electrical system to **operate as a single system**, where a **variety of markets** allow the **universal participation of stakeholders** regardless of their physical location – at every level from small consumer to large producers.



Knowledge base

OneNet brings together the knowledge and technology developed in other H2020 projects (e.g. CoordiNet and INTERRFACE)



Demo clusters

15 European countries will be involved in demonstrating OneNet's concepts and solutions at the regional and cross-border level



European consortium

OneNet brings together 72 partners, including two associations of European system operators



GRIFOn

OneNet will enable constant dialogue with all relevant stakeholders through the GRIFOn platform

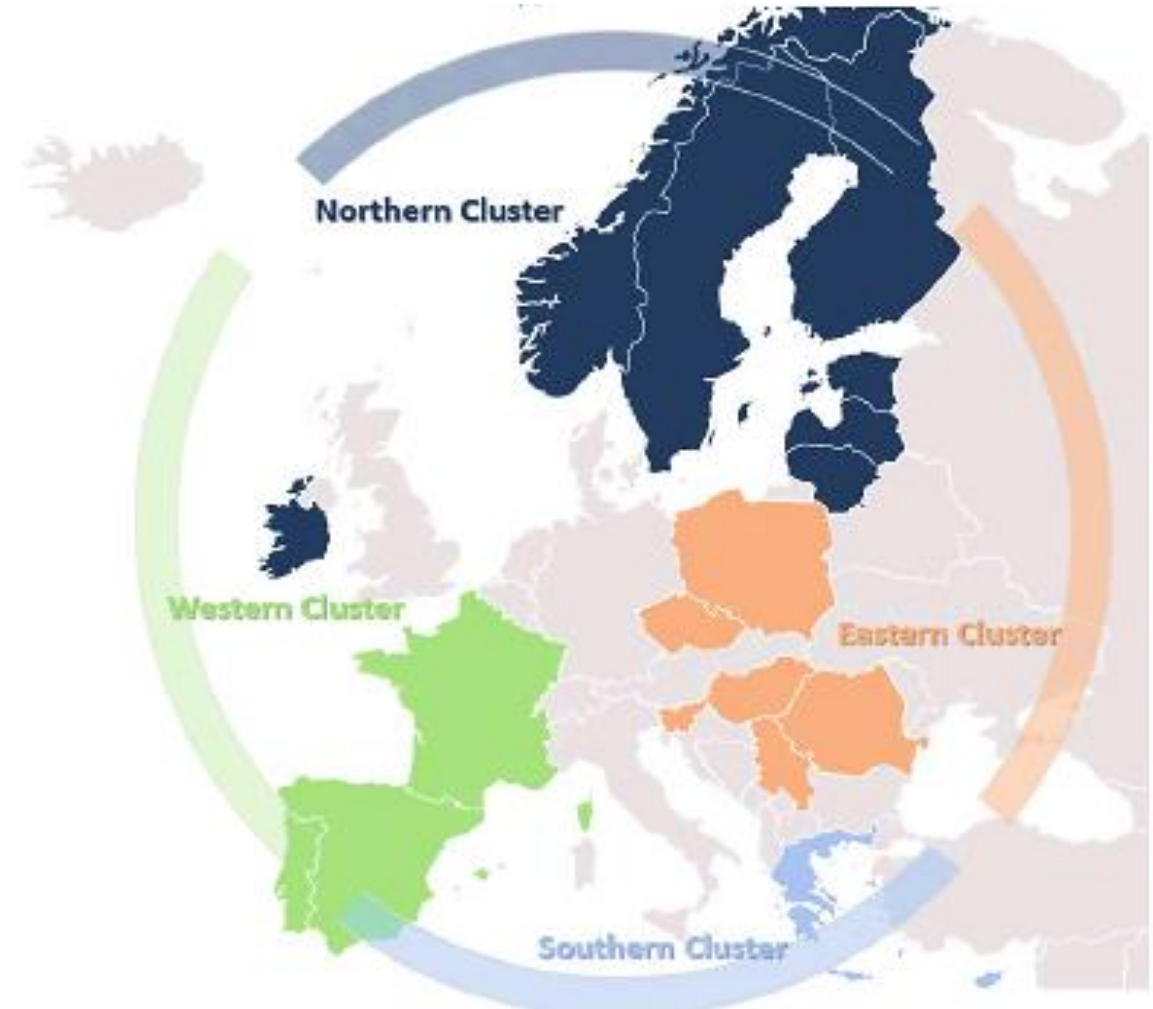
Western Cluster Overview

Involved Partners

Portuguese Demo	 Distribuição de Eletricidade	 Redes Energéticas Nacionais
		

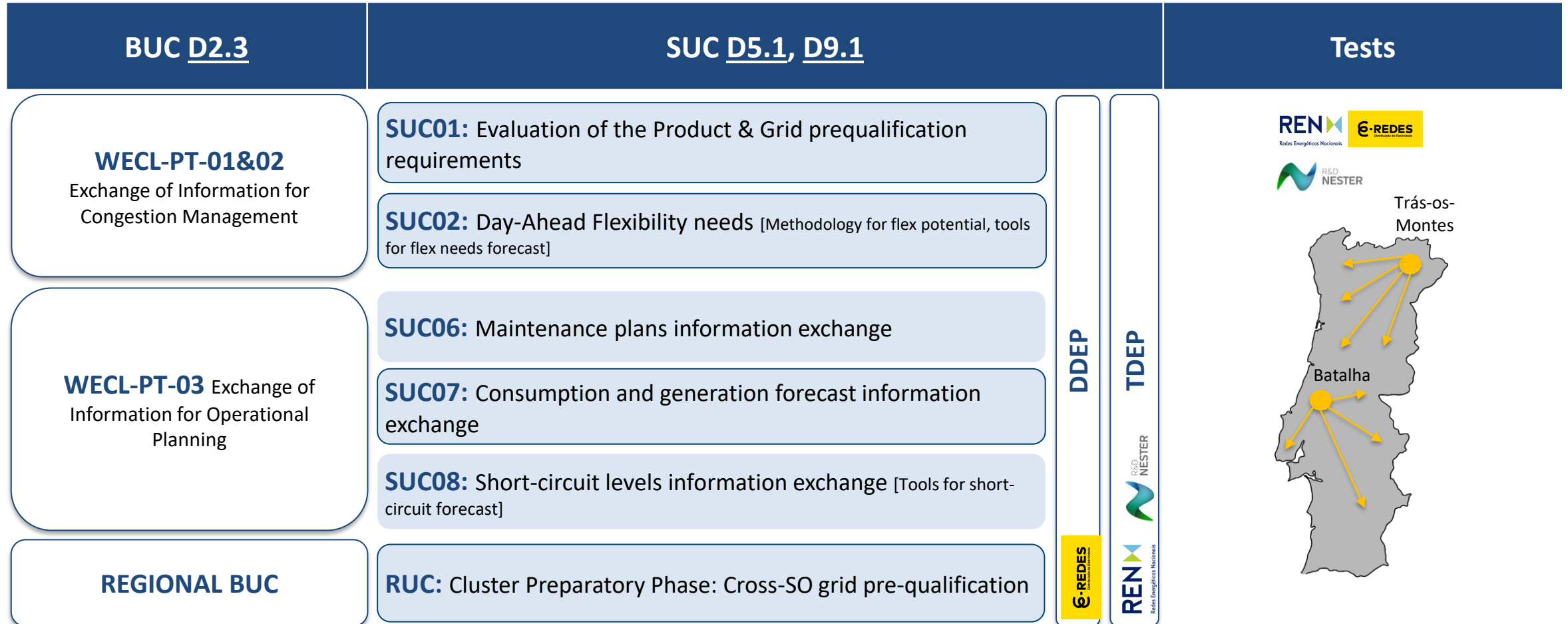
Spanish Demo	 Grupo Naturgy	 Grupo IBERDROLA	 UNIVERSIDAD PONTIFICIA ICAI ICAD E CIHS
		 Instituto para la Diversificación y Ahorro de la Energía	

French Demo	 L'ELECTRICITE EN RESEAU	
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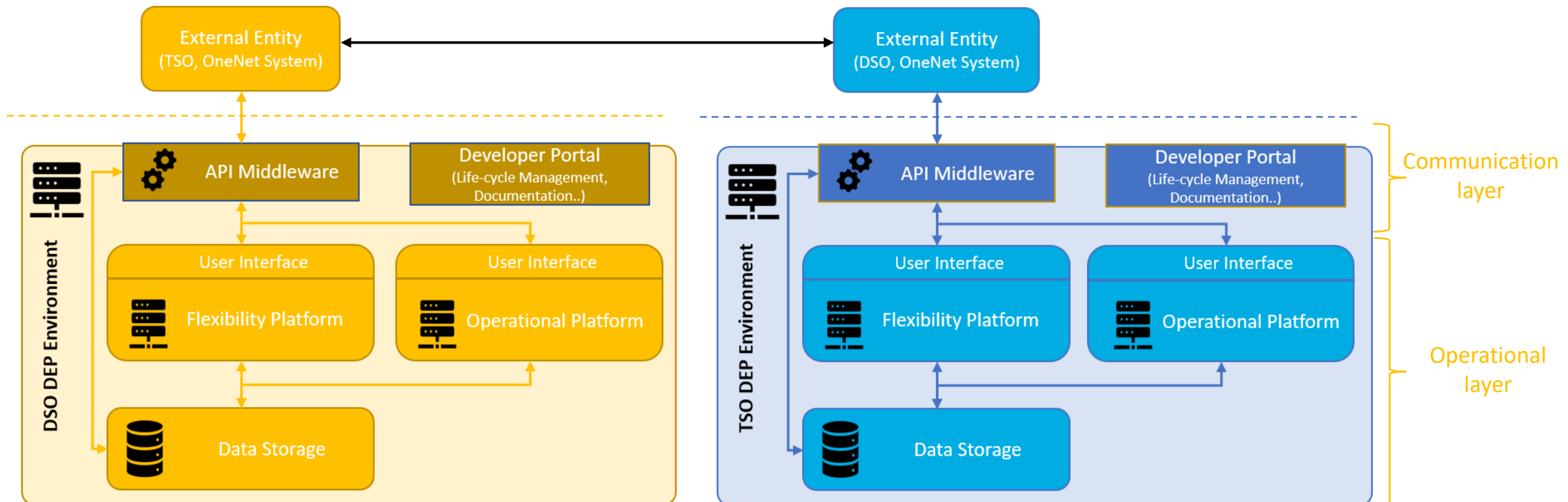
Portuguese Demonstration

An overview

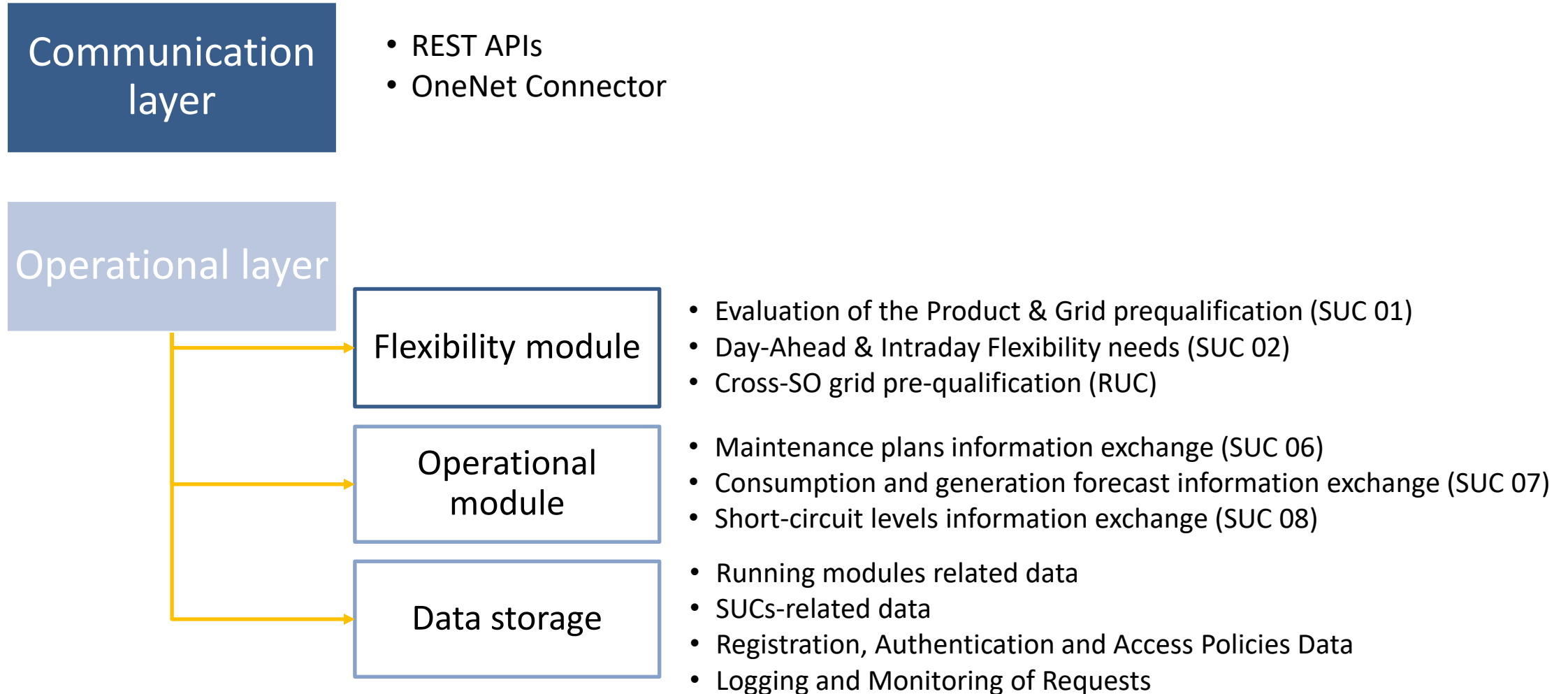


TDEP & DDEP architecture

- DEP is a cloud-based system that will serve as a gateway between the internal systems of the DSO and TSO with other possible external entities.

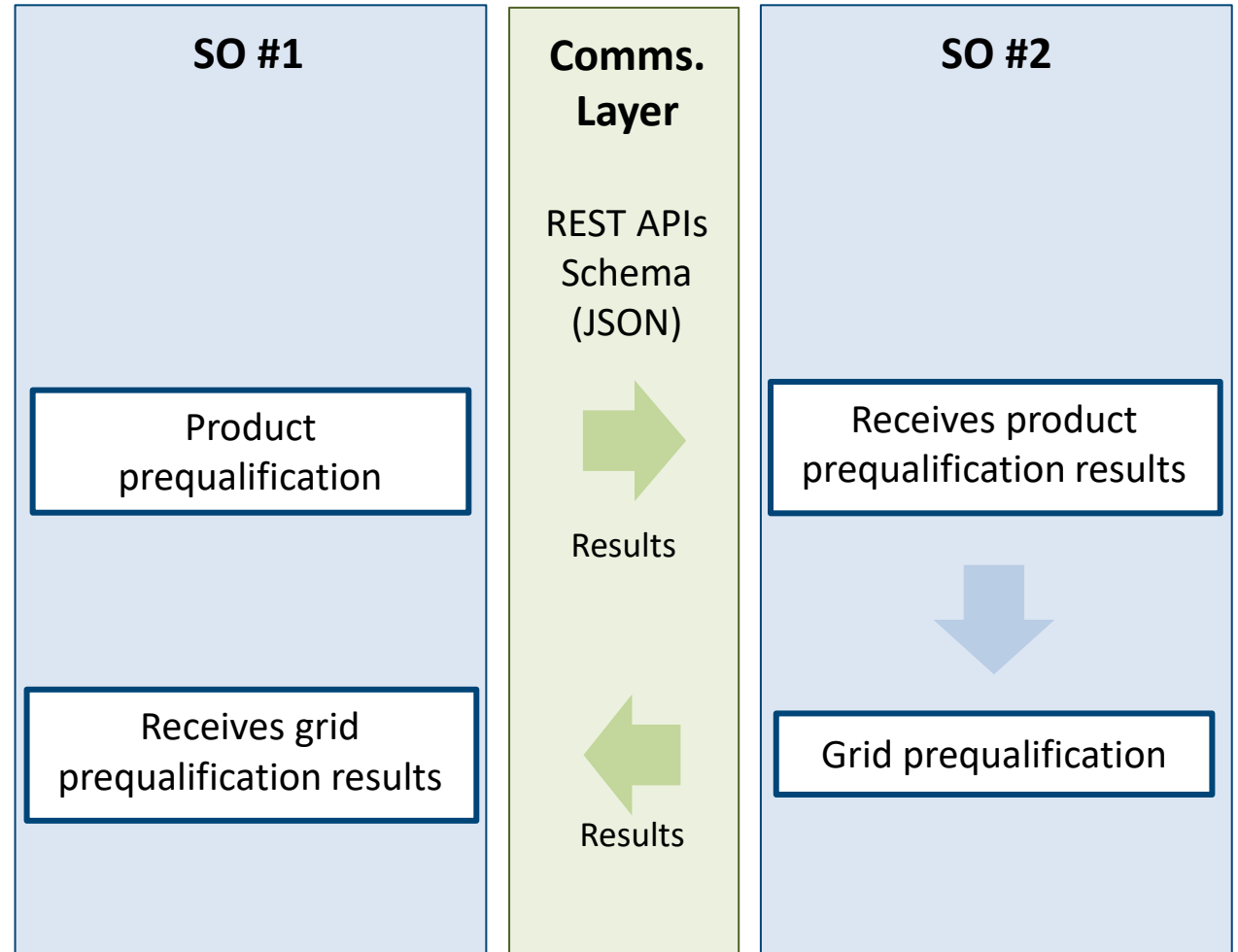


TDEP & DDEP architecture



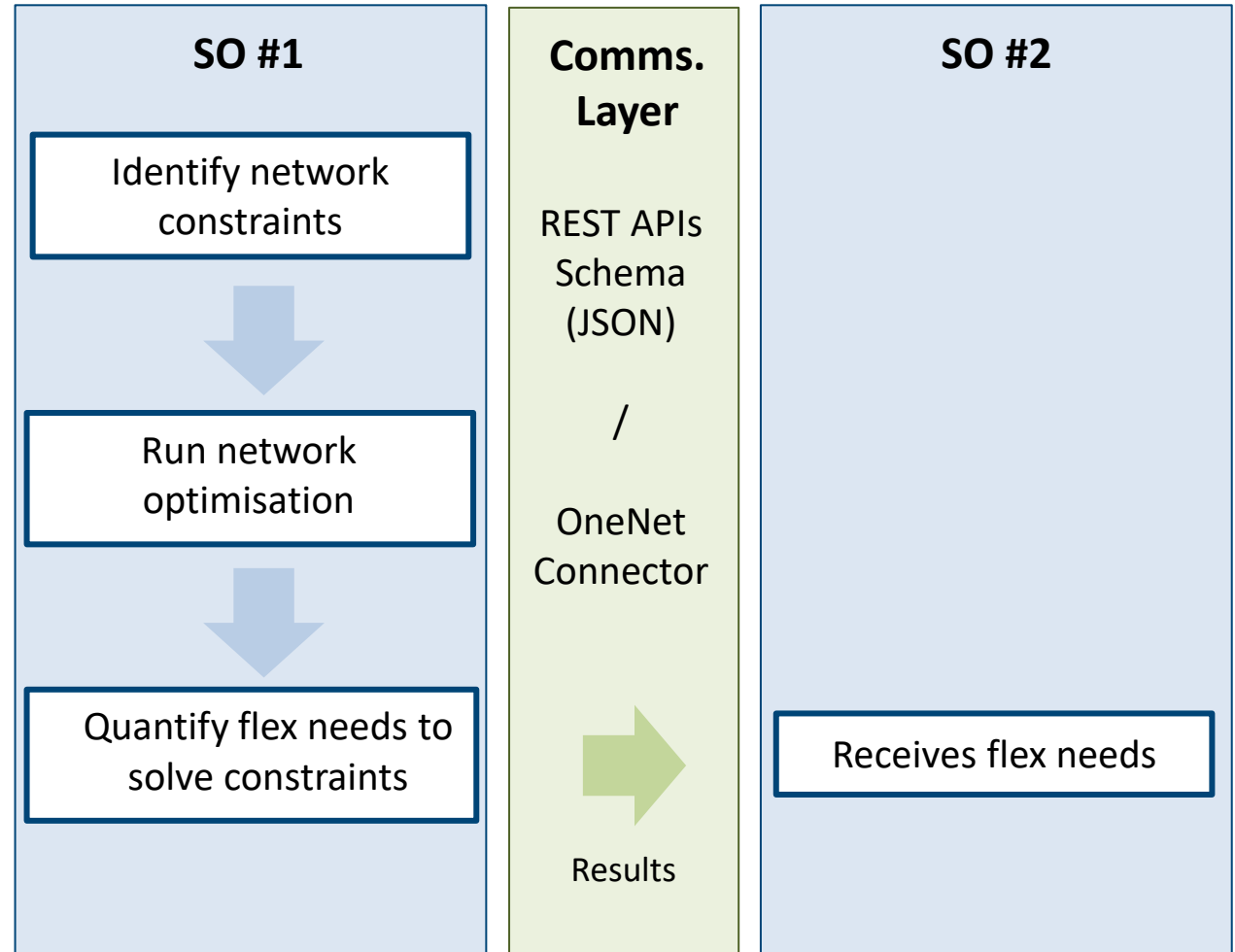
SUC01

- Aligns the data exchange between the DSO and the TSO when undergoing the assessment of a FSP prequalification.
 - Scenario 1 - Prequalification for FSPs connected to Distribution Grid
 - Scenario 2 - Prequalification for FSPs connected to Transmission Grid



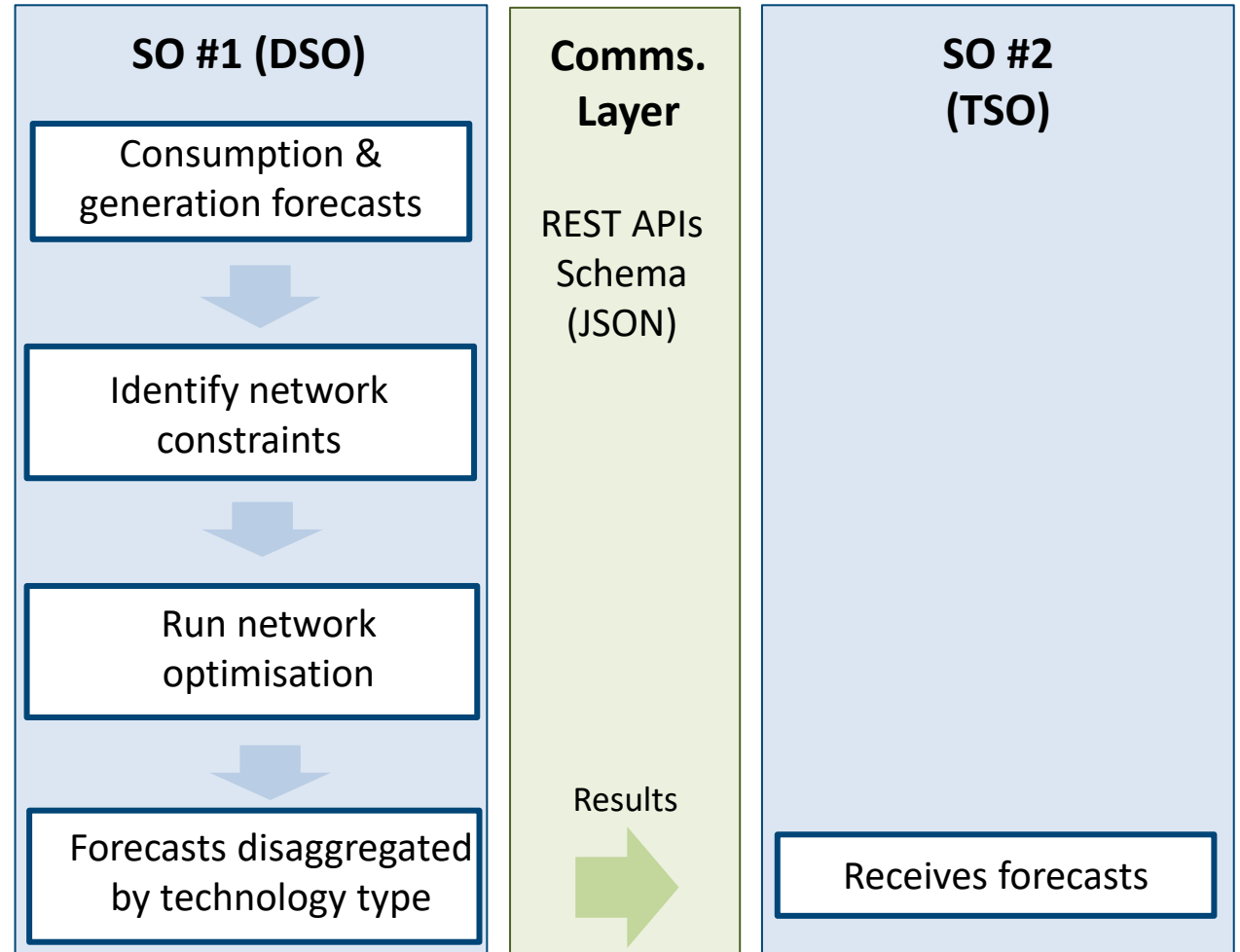
SUC02

- Aligns the data exchange between the DSO and the TSO on the flexibility needs.
 - Scenario 1 – Day-Ahead & Intraday Flexibility needs for DSO
 - **Scenario 2 - Day-Ahead & Intraday Flexibility needs for TSO**
 - Scenario 3 - Day-Ahead & Intraday Flexibility needs for DSO within OneNet System
 - **Scenario 4 - Day-Ahead & Intraday Flexibility needs for TSO within OneNet System**



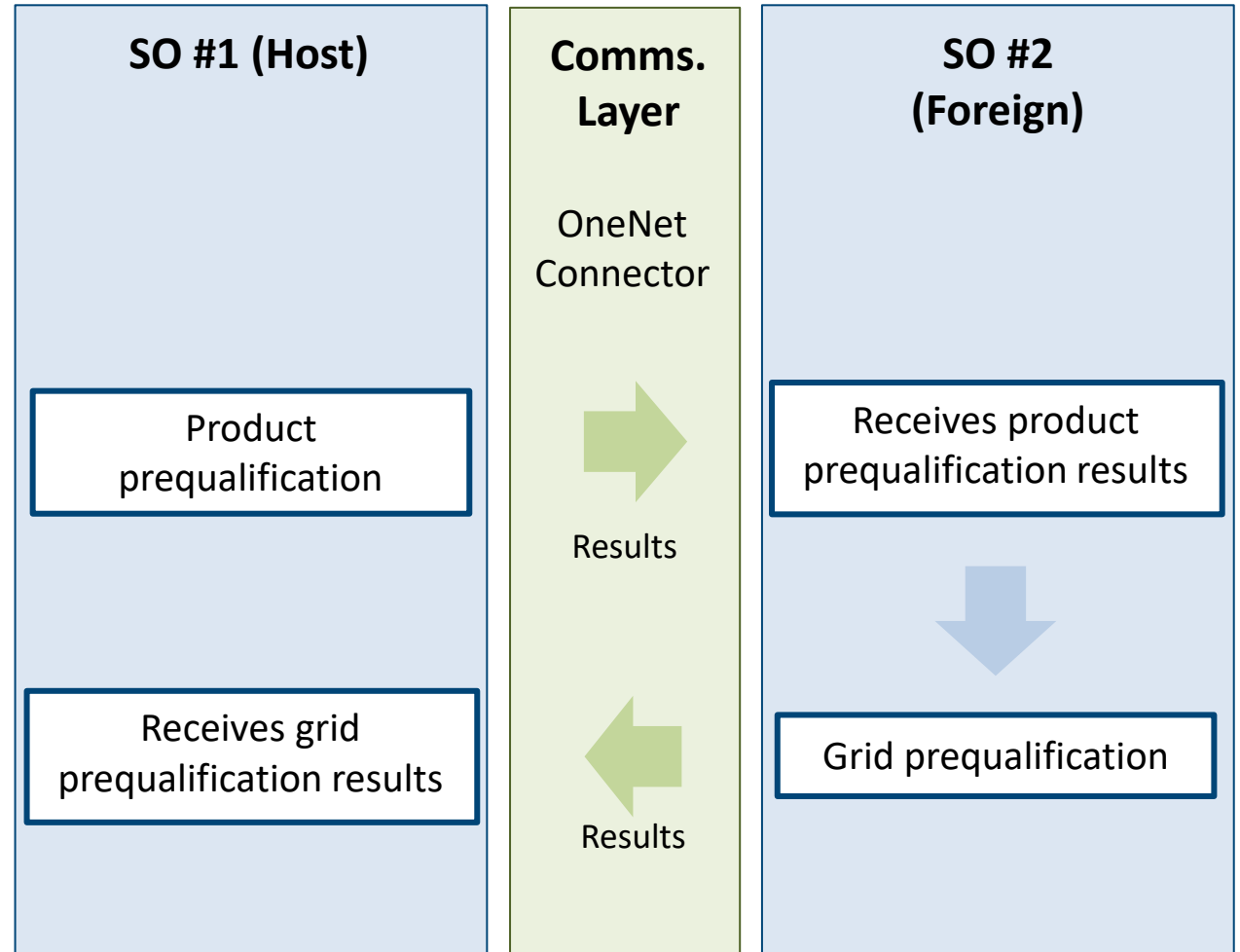
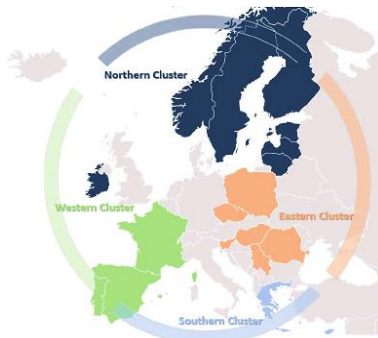
SUC07

- Aligns the data exchange from the DSO to the TSO on the consumption and generation forecasts.
 - Scenario 1 – Exchange forecasts of disaggregated generation and load



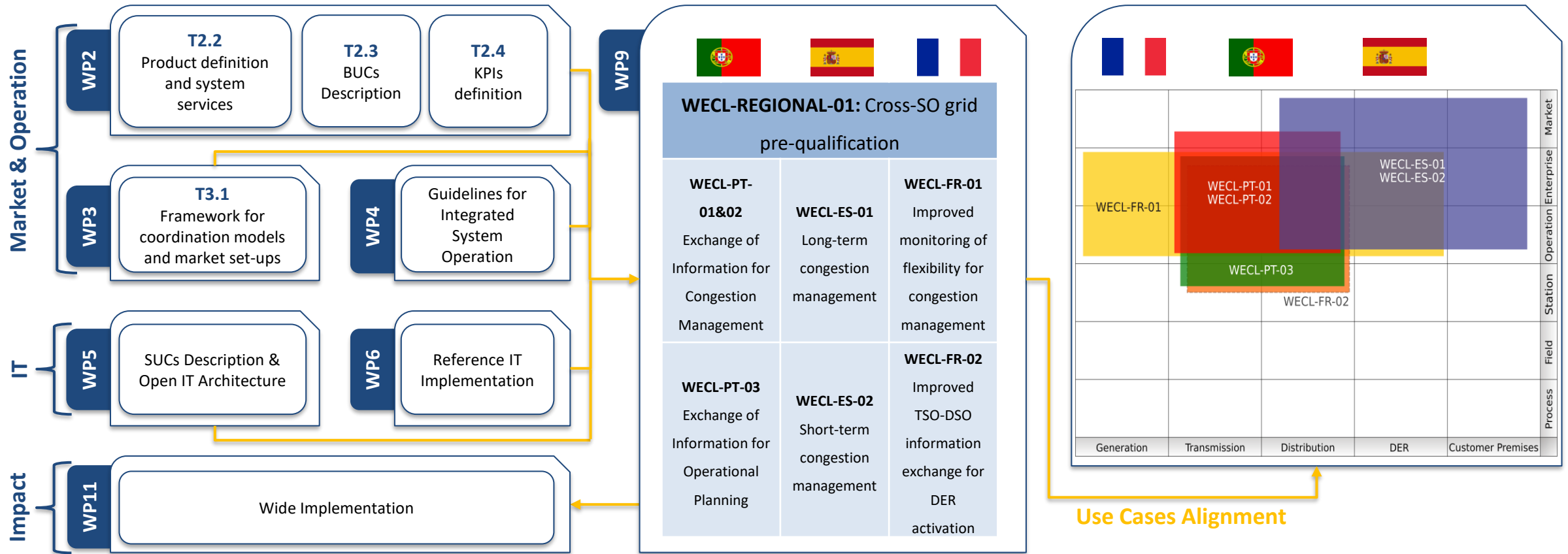
RUC

- Aligns the data exchange between the DSO and the TSO when undergoing the assessment of a FSP prequalification across borders.
 - Scenario 1: DSO as Host SO
 - Scenario 2: DSO as Foreign SO
 - Scenario 3: TSO as Host SO



Western Cluster Overview

Alignment within and outside WP9





Thank You

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