

The background of the slide is a photograph of an offshore wind farm. Several wind turbines are visible on a dark blue sea under a cloudy, overcast sky. The turbines have white nacelles and blades, with some showing red lights. The overall tone is blue and industrial.

MIGRATE – MASSIVE INTEGRATION OF POWER ELECTRONIC DEVICES

MIGRATE @ IRED Side Event Workshop

Vienna, Austria Oct. 2018

FACTS

Acronym: **MIGRATE**

Massive **I**nte**GR**ATion of power **E**lectronic devices

– Framework Conditions:

- + Duration of Project: 48 month (Project Start on 1st January 2016)
- + Budget: 17.9 mio. € for the consortium (16.8 mio. € Horizon 2020 funded)

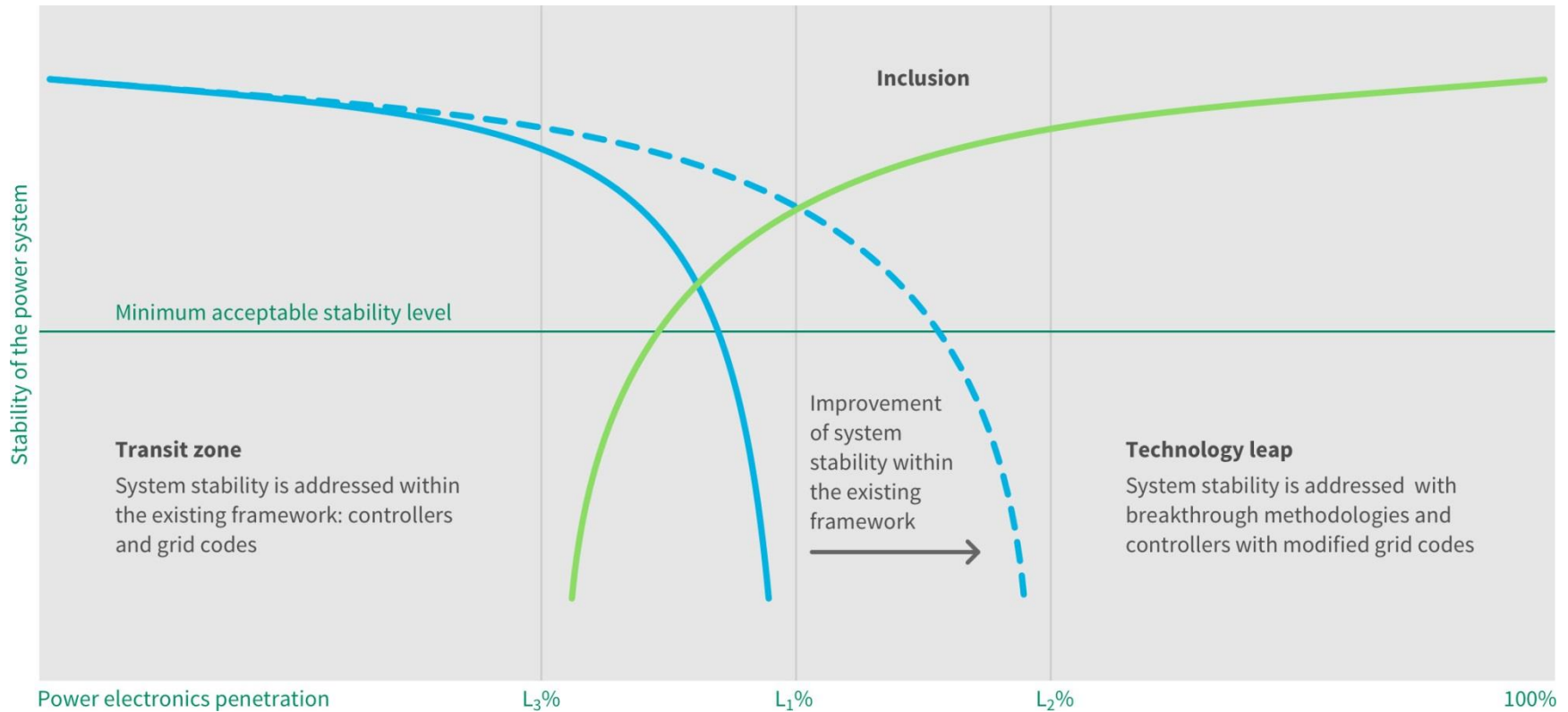


OBJECTIVE

The objective of MIGRATE is:

To develop and validate innovative, technology-based solutions in view of managing the pan-European electricity system experiencing a proliferation of Power Electronics (PE) devices involved in connecting generation and consumption sites.

OVERARCHING GOAL



EXPECTED IMPACT

Support to facilitate a low carbon energy system by

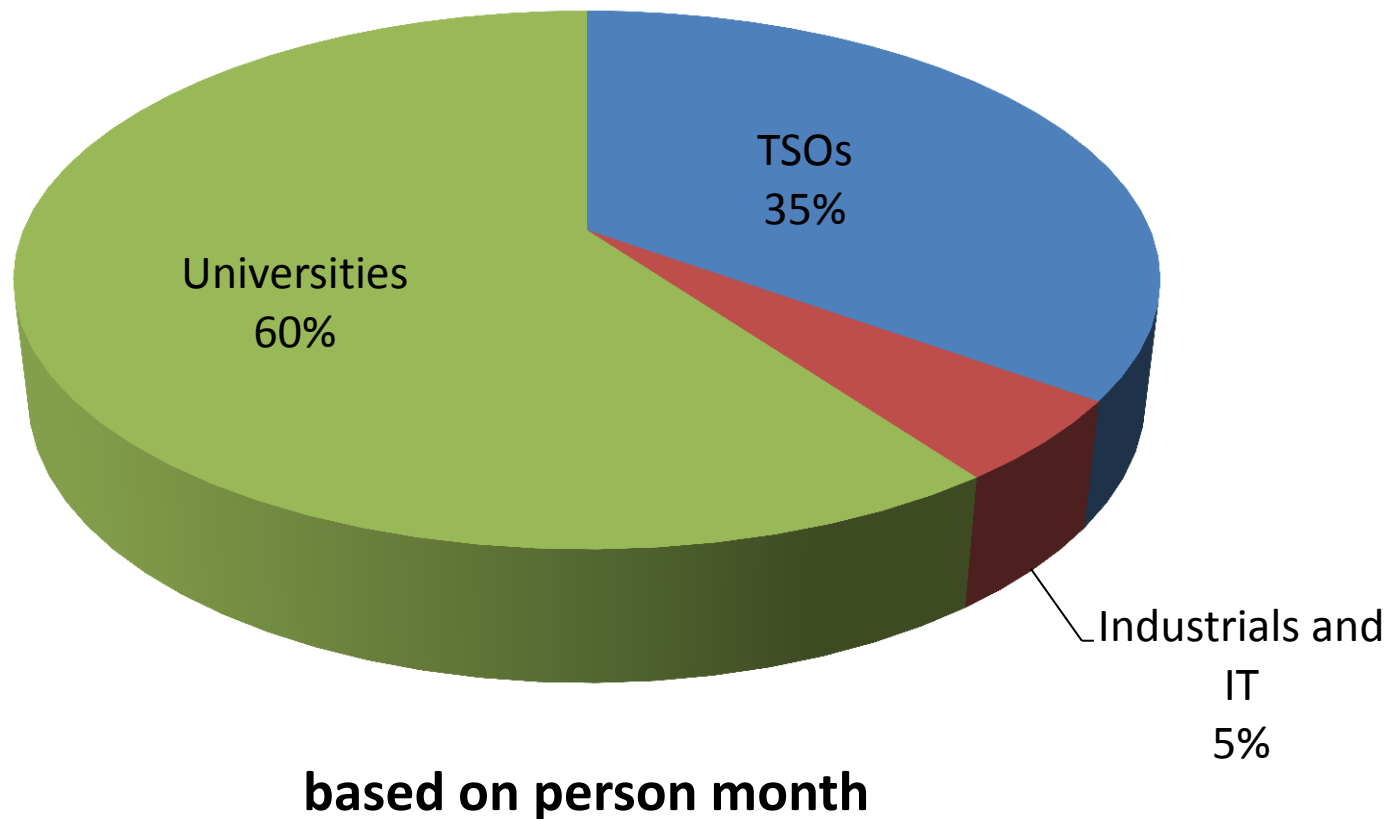
- + Maximisation of the amount of Renewable Energy Sources installed in the system while keeping the system stable.
- + Anticipation of future potential problems and challenges.
- + Clarification of the need of new control/protection schemes and possibly new connection rules to the grid

MIGRATE will provide requirements for future measures, methods and tools for a secure operation of the upcoming converter dominated power system.

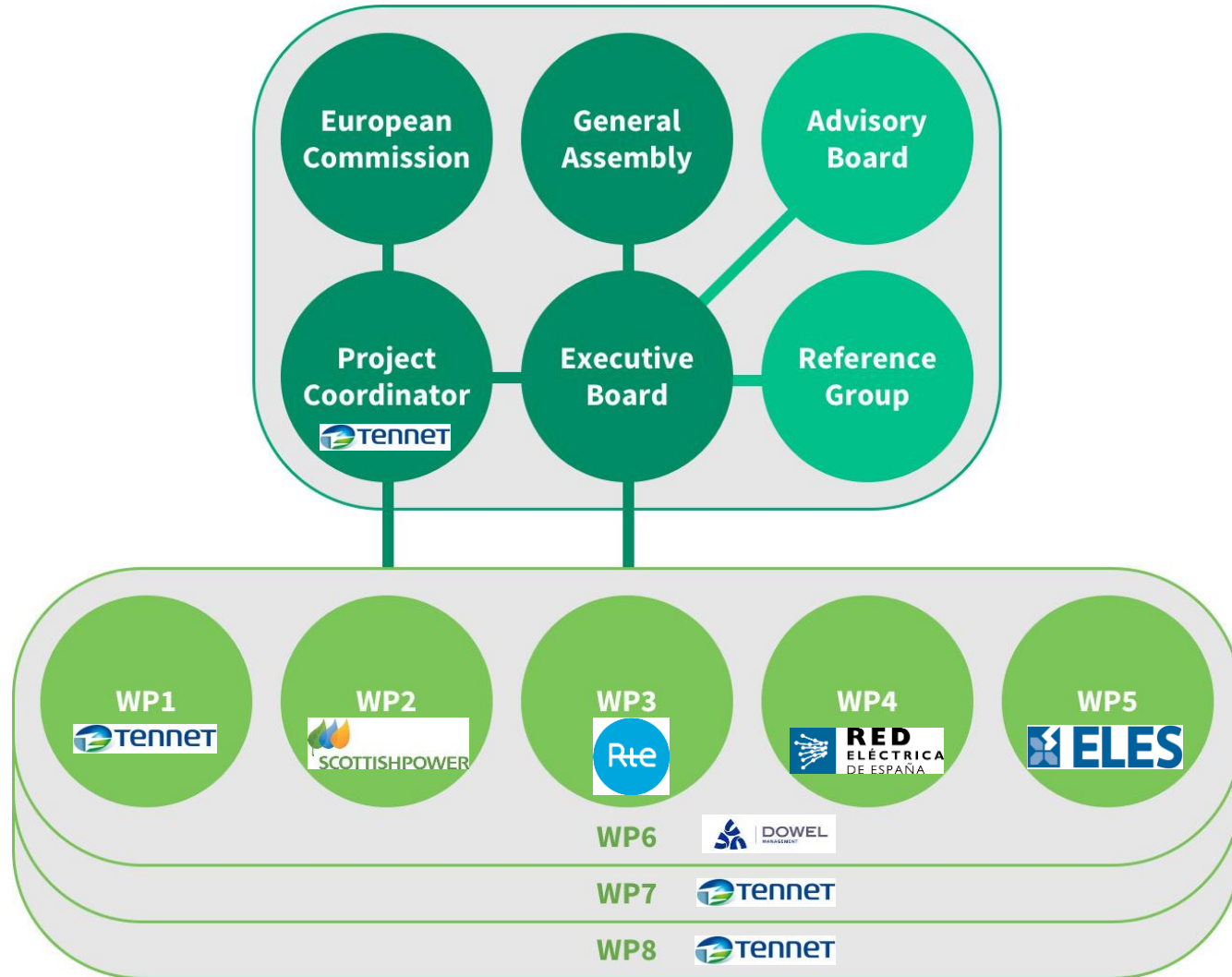
THE CONSORTIUM



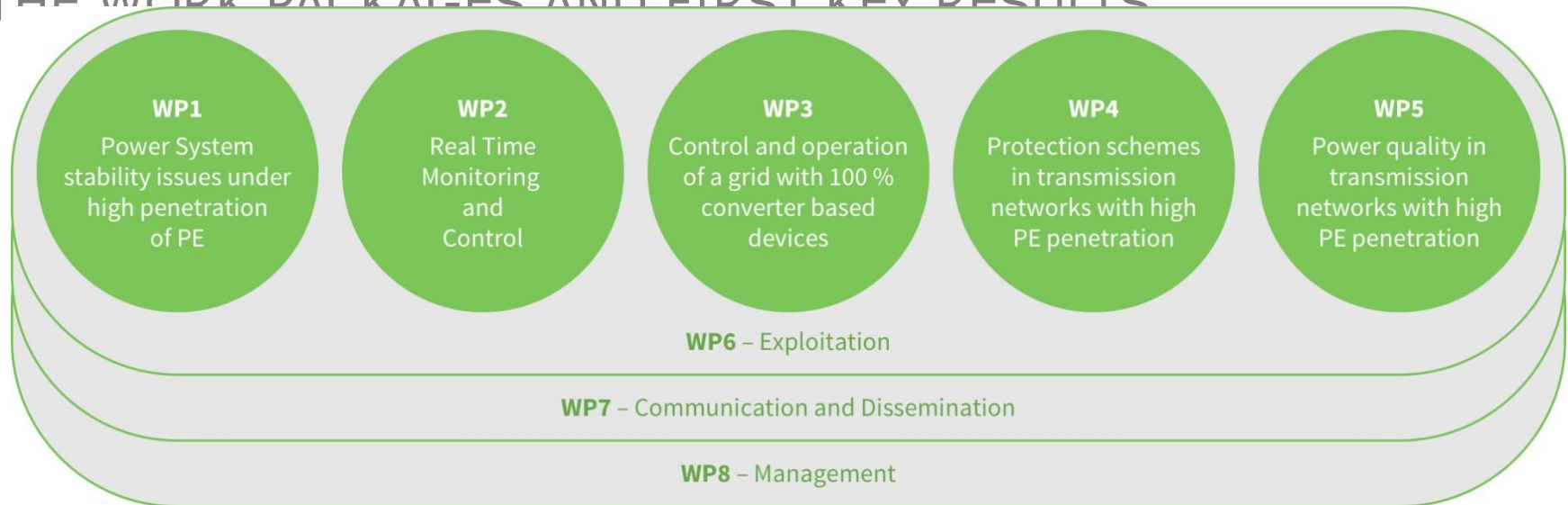
WORKLOAD PER TYPE OF PARTNER



THE GOVERNANCE



THE WORK PACKAGES AND FIRST KEY RESULTS



WP1: - Development of key performance indicators (KPIs) to estimate the distance to instability
 - A forecasting tool for PE penetration was developed

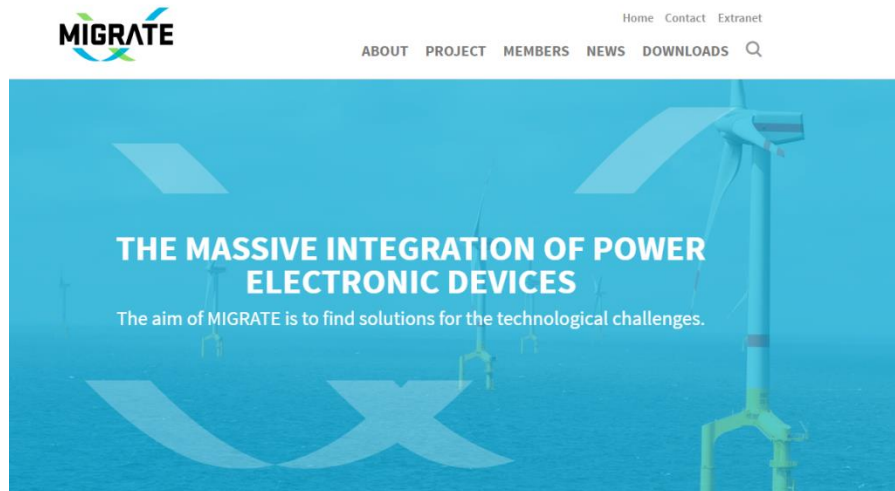
WP2: - has demonstrated through a series of pilot tests that inertia can no longer be considered to act as a single centre of inertia, but should rather be considered as several interconnected clusters of inertia.

WP3: - Development of 3 different grid forming controls.

WP4: - Distance Protection is the most affected protection function when high penetration of PE

WP5: - PQ disturbance analysis on the Irish grid (roughly 60%PE)

WWW.H2020-MIGRATE.EU



- Actual project news
- Subscribe the project newsletter
- Find all public Deliverables
- Learn more about the project
- Questionnaires for stakeholder involvement

The MIGRATE Project

AN EU-FUNDED PROJECT UNDER THE FRAMEWORK OF EUROPEAN UNION'S HORIZON 2020

MIGRATE stands for **M**assive **I**nte**G**RATI**O**n of power **E**lectronic devices and is an EU-funded project under the framework of Horizon 2020. The aim of MIGRATE is to find solutions for the technological challenges the grid is currently and especially in future faced with.



Thank you for your attention!

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