

# integrid

Demonstration of **Intelligent** grid technologies for renewables **Integration** and **Interactive** consumer participation enabling **Interoperable** market solutions and **Interconnected** stakeholders

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6<sup>th</sup> Innogrid2020+ Brussels, June 27<sup>th</sup> 2017

Pedro Godinho Matos – Project Coordinator

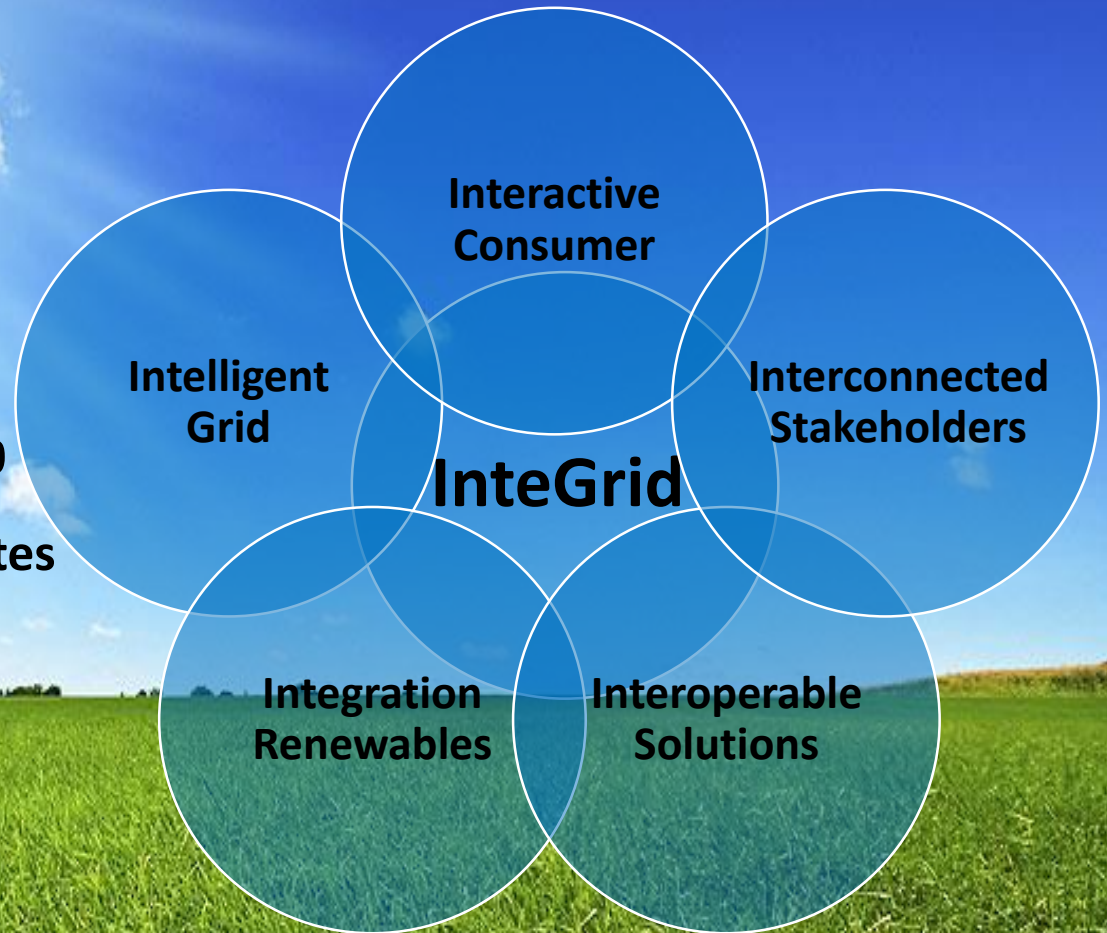
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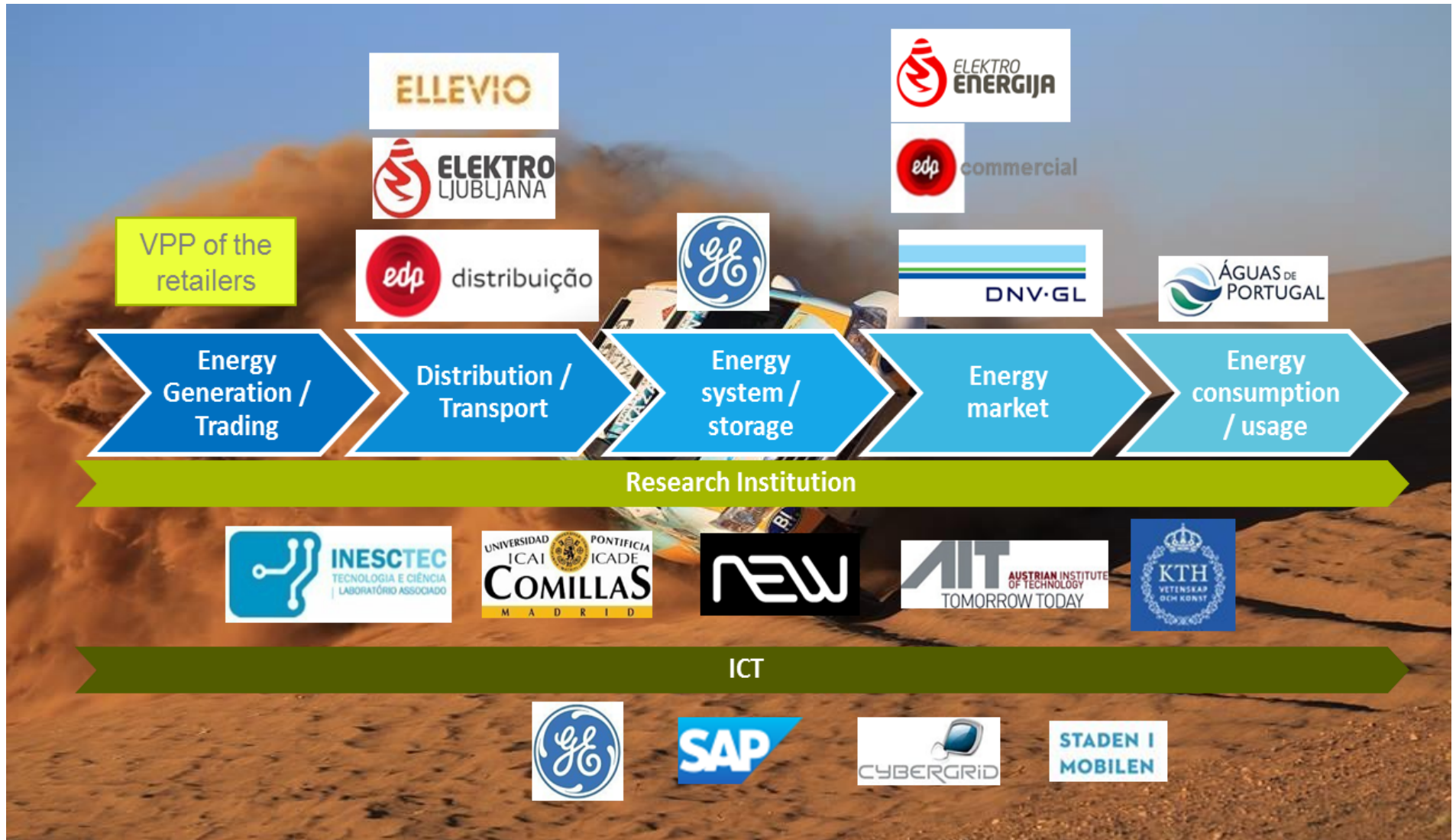
# InteGrid Overview

## In a nutshell:

- **Coordinator: EDP Distribuição**
- **Budget: 15 M€**
- **From January 2017 to June 2020**
- **14 Partners from 8 Member States**



# InteGrid Consortium





# InteGrid Main Objectives

How DSOs enter the energy market and to management

# DEMONSTRATE

the use of new data

interaction with different stakeholders.

# InteGrid Demos

## Lisbon District, Portugal: “From smart grid to disruptive business models”

- Large-scale, predictive and integrated management of the distribution grid aiming at combining new DER with existing assets, including customer’s flexibility
- Demonstration of the combined operation of DER and advanced grid automation



## Ljubljana, Slovenia: “Self-sustainability facilitation”

- Integration of existing systems like demand response, EV management, batteries and SCADA into a micro-grid concept that will support self-sustainability of residential prosumers, business prosumers or communities
- Upgrade VPP with LV/MV optimization, control and forecasting algorithms and integration with market hub for exchange of flexibility and validation



## Stockholm, Sweden: “Consumer engagement towards sustainability”

- City environment with high load factor and demand on reliability
- Generation 2 smart substations
- DR with engaged prosumers by providing energy forecasts that facilitate home automation and better decision (incl. contextualized feedback)

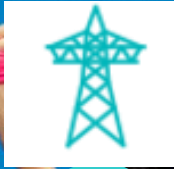


# InteGrid Major Areas of Impact

## Grid Market-Hub



## Grid Management



## Customer Engagement

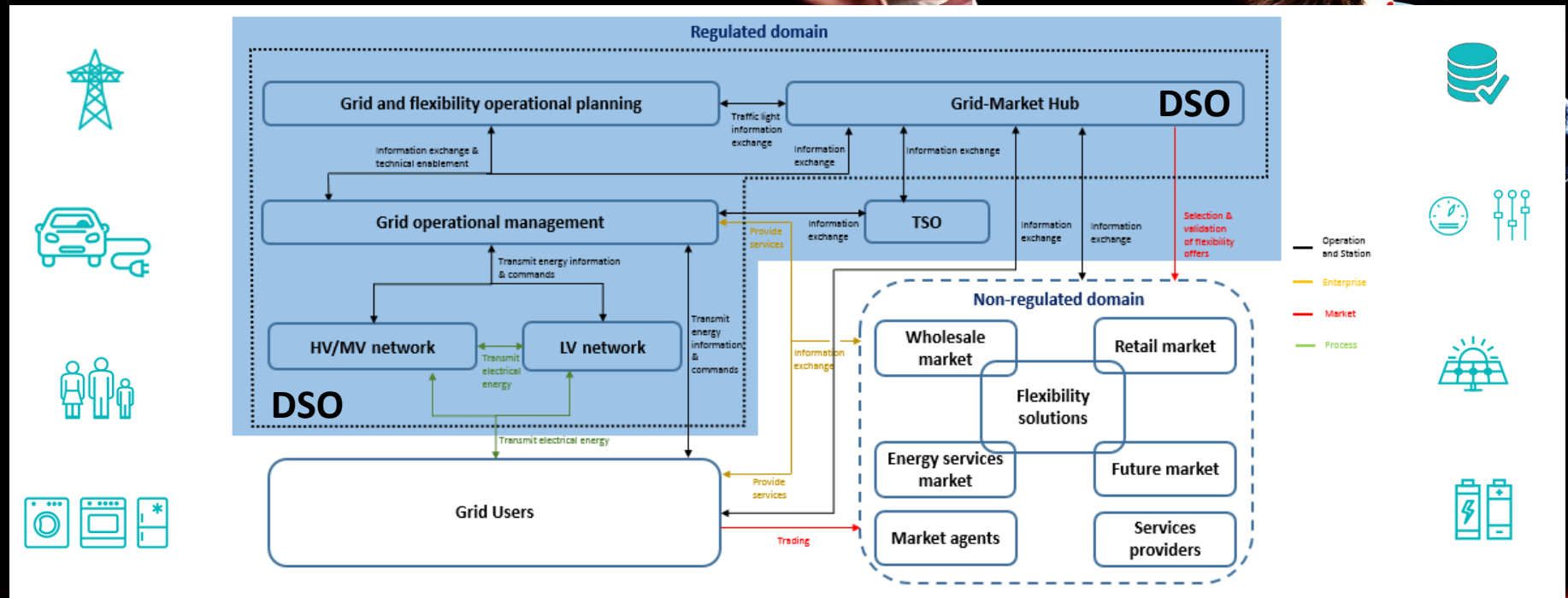


- ✓ **Loc** ✓ **Traffic light concept (D2D)**
- ✓ **Vol** ✓ **Active House— Comfort / Convenience and Dynamic Pricing**
- ✓ **Act** ✓ **F** ✓ **LocalLife— Behavioral Demand Response via local social network** network nodes
- ✓ **DS** ✓ **II** ✓ **Smart Homes— Smart home and Home Energy Management System** v DER
- ✓ **En** ✓ **A** ✓ **Price and environmental forecasting signals** 'PP and storage units
- ✓ **En** ✓ **C** ✓ **Top-down and Bottom-Up User Engagement Mechanisms**
- ✓ **Residential Energy Resources Sizing (B2C)**



# InteGrid Grid-Market Hub

**Grid – Market Hub [Deliverable 6.1]:** defined as “... *a solution to support the provision of services in a neutral standardised way between DSOs (primary actor of this central platform) and stakeholders like retailers, TSOs, aggregators, group of consumers and energy services providers.*”



**Is an enabler of non-regulated services from service providers that can grow around the gm-hub ecosystem, including both wholesale and retailing markets, as well as energy services trading like energy efficiency, consumer engagement and gamification and forecasting**

# InteGrid Next Steps...

**2017:** Establish Use Cases, System Architecture, Grid Market Hub, Customer Engagement

**2018:** Develop, Install and Integrate InteGrid solutions in Demo Sites

**2019:** Perform Field Demonstrations

**2020:** Build CBA, SRA, Business Models  
Share Recommendations



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Thank you!

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distribuição

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