wisegrid.eu

@WiseGRID_H2020

Opening

Antonio Marqués – Project Coordinator, Director of Technology ETRA I+D,

amarques.etraid@grupoetra.com

etra I+D https://www.grupoetra.com/ @grupoetra

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.

Project Achievements

Álvaro Nofuentes – anofuentes.etraid@grupoetra.com
Esteba Pastor – epastor.etraid@grupoetra.com

etra I+D

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.

Project Overview

etra I+D

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.

wiseGrid

Previous successful EU projects such as Nobel Grid Smart energy for people

42 months Duration

November 2016 Starting date

17,6 M€ Budget

Winners of the EUSEW 2018 Business Award

Winners of the EUSEW 2018 Citizens Award

Winners of the Good Practice of the Year Award – RGI Initiative

etra I+D Coordinator

H2020 Topic

Builds on results of

wiseGrid

Challenge

To put into the market a set of solutions and technologies to increase the smartness, stability and security of an open, consumer-centric European energy grid, with an enhanced use of storage technologies and a highly increased share of RES

5 Pilot sites

Kythnos & Mesogia – Greece

Terni – Italy

Crevillent – Spain

Flanders – Belgium

8 Countries 22 partners

Romania

UK

Germany

Greece

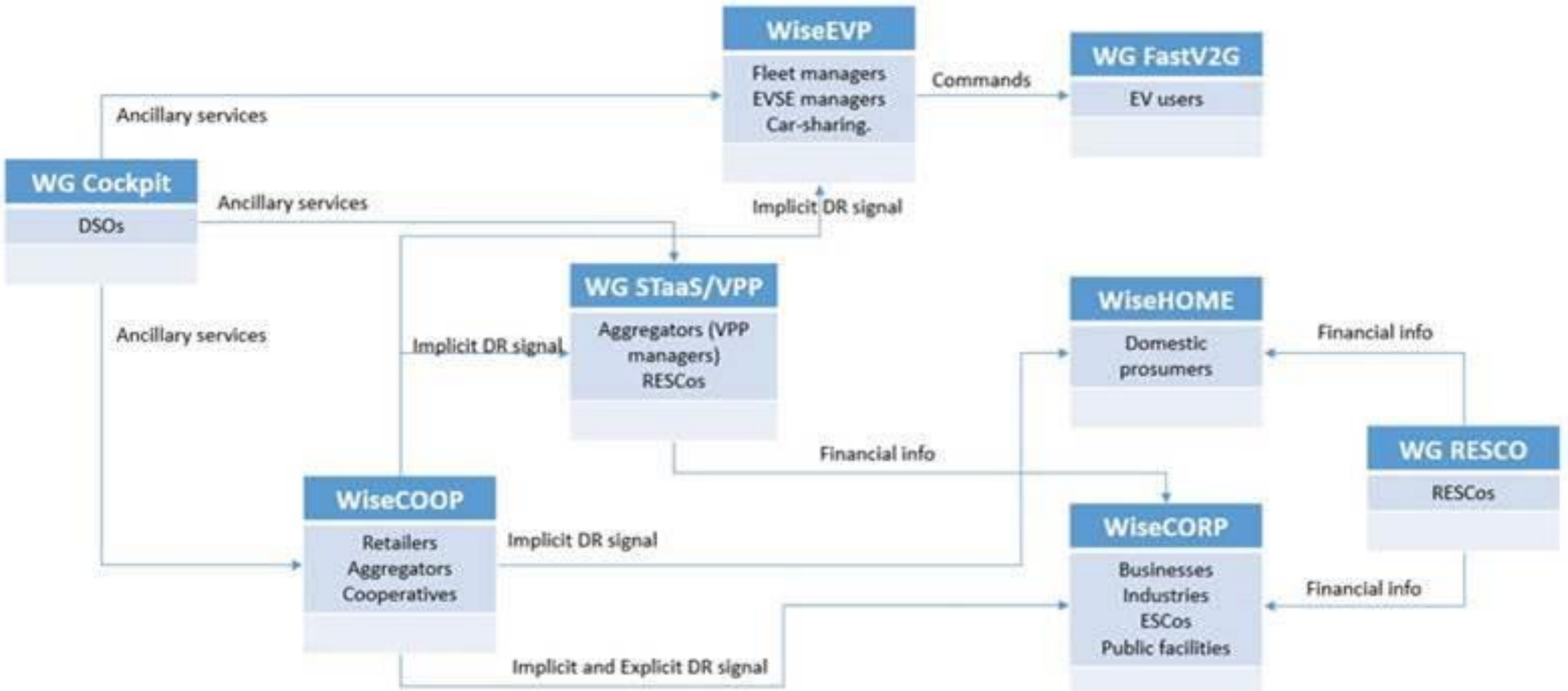
Belgium

Italy

France

Spain


WG Cockpit
WG IOP
WiseHOME
WiseCOOP
WiseCORP
WG STaas/VPP
WG RESCO
Retailer
WG FastV2G
WiseEVP


WiseEVP
Fleet managers
EVSE managers
Car-sharing.
WG FastV2G
EV users
Commands
Ancillary services
WG Cockpit
DSOs
Ancillary services
Implicit DR signal
Ancillary services
WG STaaS/VPP
Aggregators (VPP managers)
RESCos
Implicit DR signal
WiseHOME
Domestic prosumers
Financial info
WG RESCO
RESCos
Financial info
WiseCOOP
Retailers
Aggregators
Cooperatives
Implicit DR signal
WiseCORP
Businesses
Industries
ESCos
Public facilities
Financial info
Implicit and Explicit DR signal

WISEGRID COOPERATION

Business models
Data management
Regulations
Customer engagement

bridge HORIZON 2020

ETIP SNET

Elsa

Nobel Grid
Smart energy for people

SMARTV2G

wiseGrid

Interreg North-West Europe cVPP

BUURZAME STROOM

Appuntamento con l'Energia

MATCHUP

Compile

crossbow

coordiNET

FLEXCoop

planet

HORIZON 2020

TECHNOLOGY DEMONSTRATORS EVENTS / DISSEMINATION OTHER KNOWLEDGE

Pilot Sites: Technical demonstrations

etra I+D

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.

WG Cockpit

WiseHOME

WiseCORP

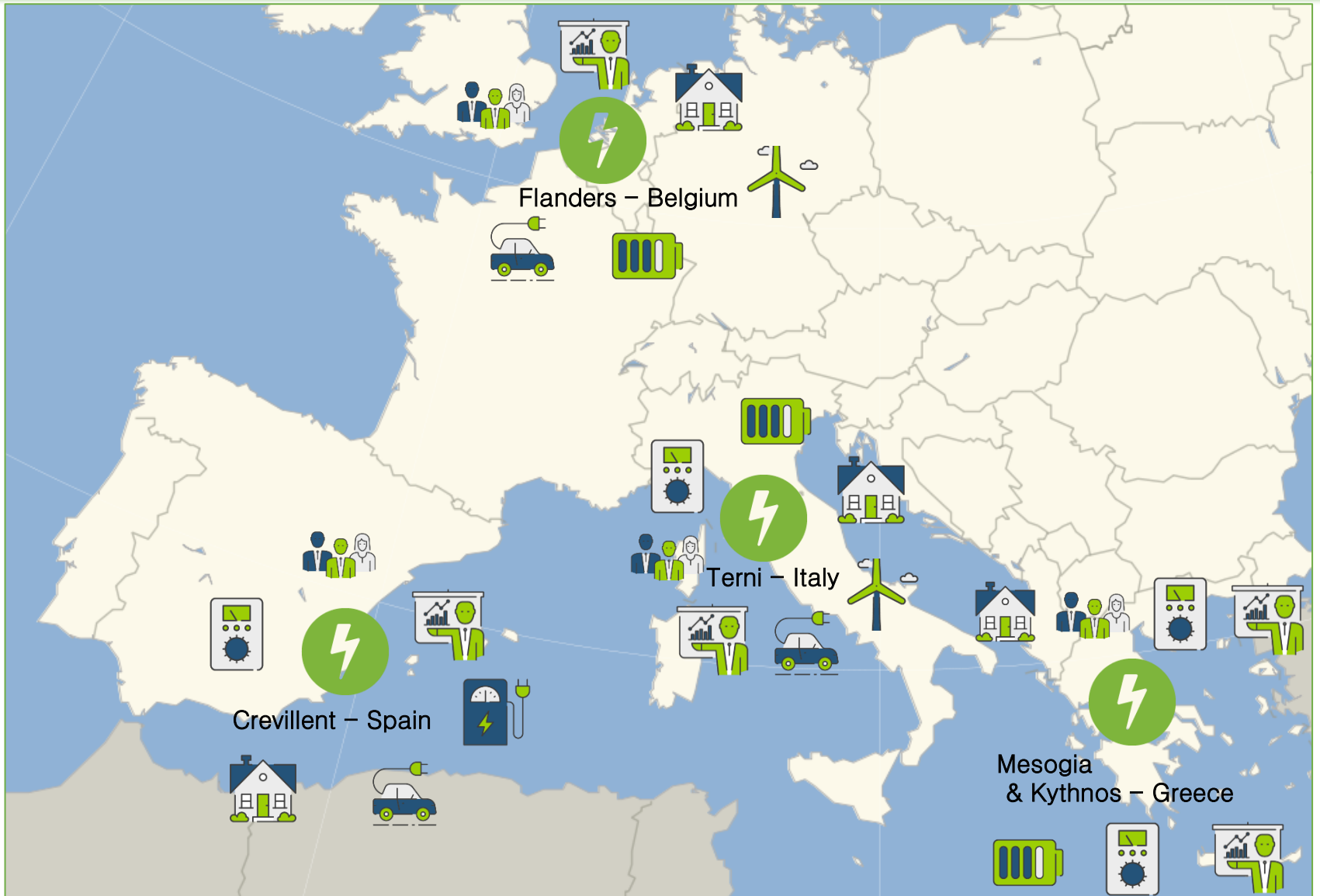
WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO



WG Cockpit

WiseHOME

WiseCORP

WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO


ENERCOOP
cooperativa valenciana electrica
francisco de asis


FastV2G
74%

WG Cockpit

WiseHOME

WiseCORP

WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO


PARTAGO
ELEKTRISCH AUTODELEN
COÖPERATIE
1·TJE·190


OXFAM
Ververij

WG Cockpit

WiseHOME

WiseCORP

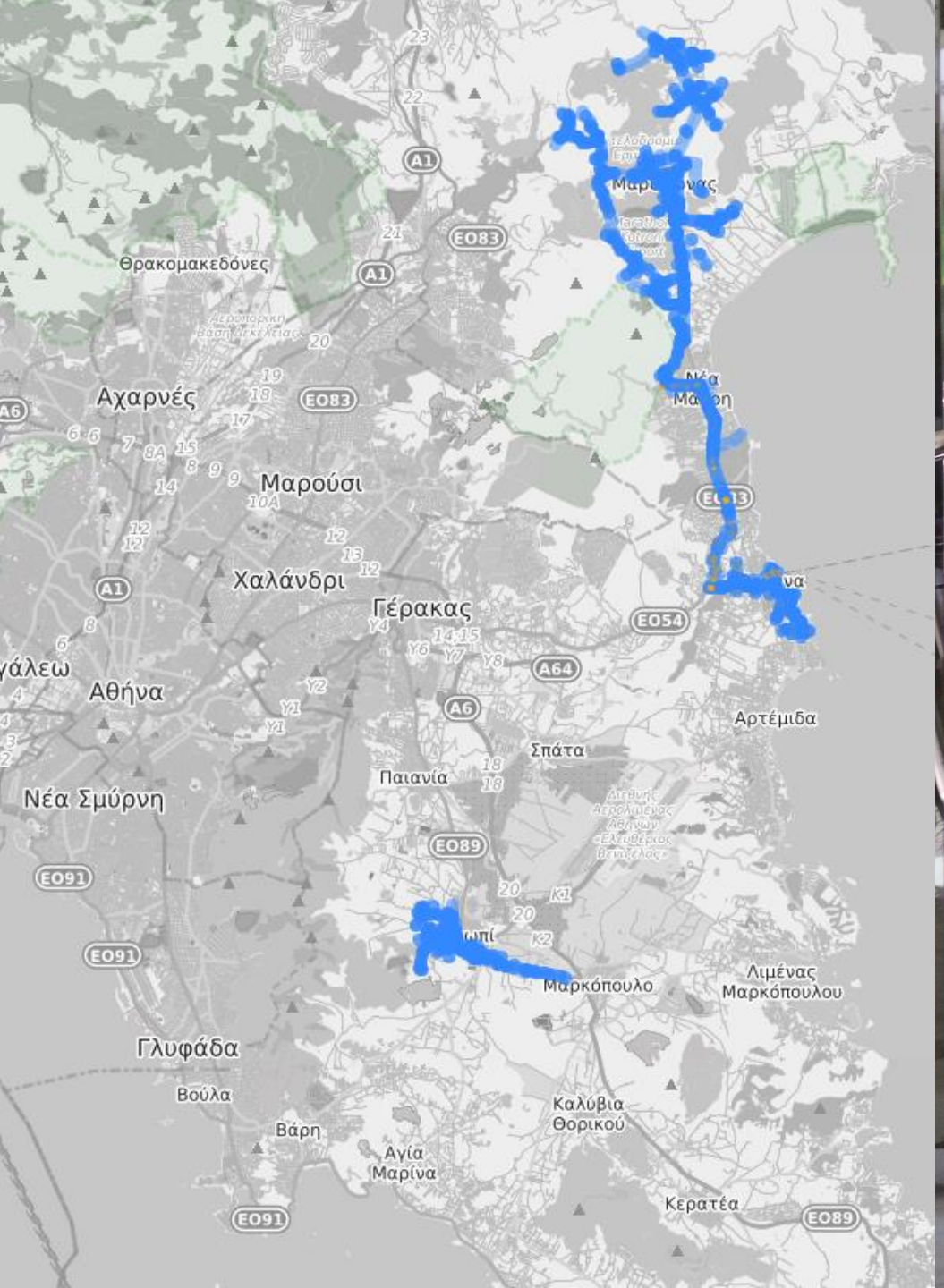
WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO


Θρακομακεδόνες
Αχαρνές
Μαρούσι
Χαλάνδρι
Γέρακας
Αθήνα
Νέα Σμύρνη
Παιανία
Σπάτα
Αρτέμιδα
Μαρκόπουλο
Λιμένας Μαρκόπουλου
Γλυφάδα
Βούλα
Βάρη
Αγία Μαρίνα
Καλύβια Θορικού
Κερατέα
Α1
ΕΟ83
ΕΟ54
ΕΟ89
ΕΟ91
Α6
Α64


ΔΕΔΔΗΕ
ΔΙΑΧΕΙΡΙΣΤΗΣ ΕΛΛΗΝΙΚΟΥ ΔΙΚΤΥΟΥ
ΔΙΑΝΟΜΗΣ ΗΛΕΚΤΡΙΚΗΣ ΕΝΕΡΓΕΙΑΣ Α.Ε.
Διεύθυνση Δικτύου


neuron

WG Cockpit

WiseHOME

WiseCORP

WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO


socomec
STEP POWER

WG Cockpit

WiseHOME

WiseCORP

WG Fast V2G

WiseEVP

WiseCOOP

WG STaaS/VPP

WG RESCO


ASM Terni S.


Producer
Consumer
Fiume Nera


emotion

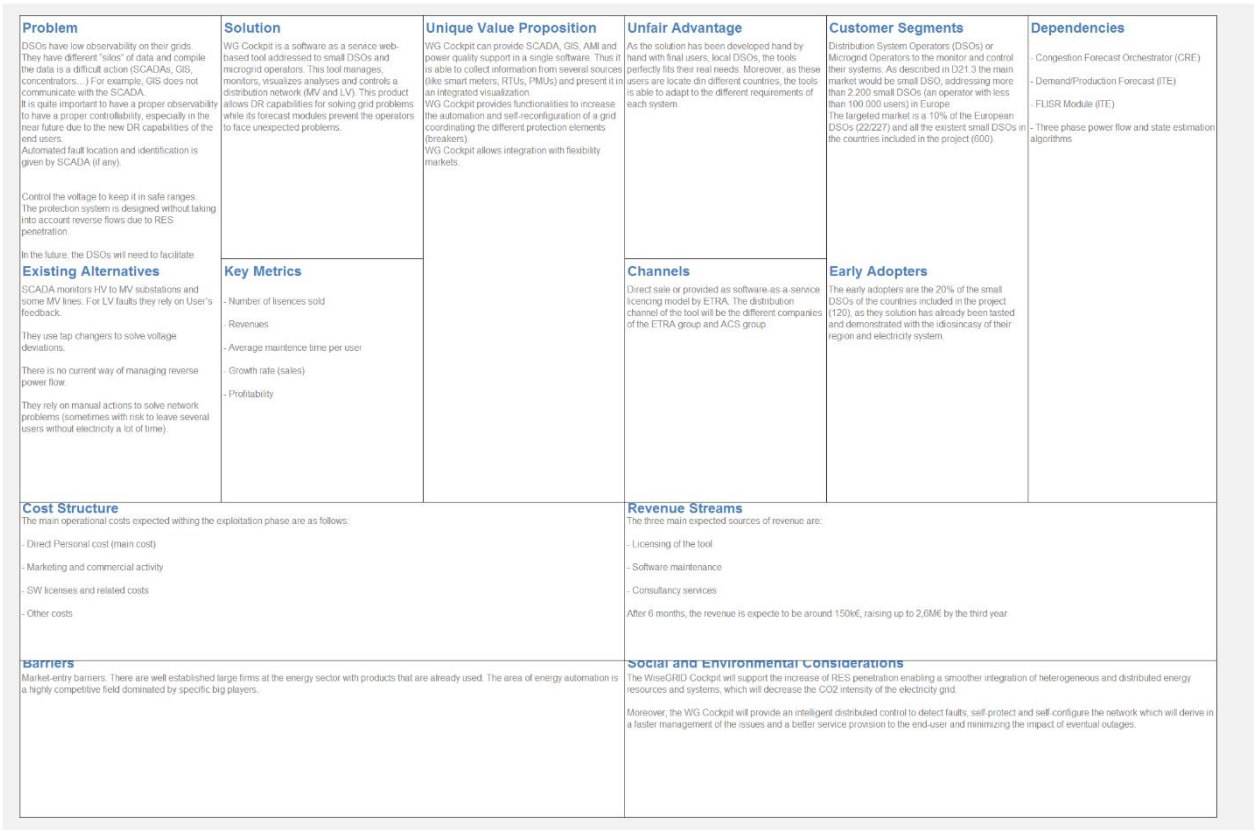
Replicability potential

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.

Business models and Market analysis

- Continuously updated market analysis

- Thorough business model study
  - Key Exploitable Results identification
  - Exploitation Strategy Seminar (ESS)
  - Lean Business Model Canvas
  - Characterization tables
  - Risk analysis



Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments	Dependencies
DSOs have low observability on their grids. They have different "silos" of data and compile the data is a difficult action (SCADAs, GIS, concentrators…) For example, GIS does not communicate with the SCADA. It is quite important to have a proper observability to have a proper controllability, especially in the near future due to the new DR capabilities of the end users. Automated fault location and identification is given by SCADA (if any). Control the voltage to keep it in safe ranges. The protection system is designed without taking into account reverse flows due to RES penetration. In the future, the DSOs will need to facilitate	WG Cockpit is a software as a service web-based tool addressed to small DSOs and microgrid operators. This tool manages, monitors, visualizes analyses and controls a distribution network (MV and LV). This product allows DR capabilities for solving grid problems while its forecast modules prevent the operators to face unexpected problems.	WG Cockpit can provide SCADA, GIS, AMI and power quality support in a single software. Thus it is able to collect information from several sources (like smart meters, RTUs, PMUs) and present it in an integrated visualization. WG Cockpit provides functionalities to increase the automation and self-reconfiguration of a grid coordinating the different protection elements (breakers). WG Cockpit allows integration with flexibility markets.	As the solution has been developed hand by hand with final users, local DSOs, the tools perfectly fits their real needs. Moreover, as these users are locate din different countries, the tools is able to adapt to the different requirements of each system.	Distribution System Operators (DSOs) or Microgrid Operators to the monitor and control their systems. As described in D21.3 the main market would be small DSO, addressing more than 2.200 small DSOs (an operator with less than 100.000 users) in Europe. The targeted market is a 10% of the European DSOs (22/227) and all the existent small DSOs in the countries included in the project (600).	- Congestion Forecast Orchestrator (CRE) - Demand/Production Forecast (ITE) - FLISR Module (ITE) - Three phase power flow and state estimation algorithms
Existing Alternatives	**Key Metrics**		**Channels**	**Early Adopters**	
SCADA monitors HV to MV substations and some MV lines. For LV faults they rely on User's feedback. They use tap changers to solve voltage deviations. There is no current way of managing reverse power flow. They rely on manual actions to solve network problems (sometimes with risk to leave several users without electricity a lot of time).	- Number of lisences sold - Revenues - Average maintence time per user - Growth rate (sales) - Profitability		Direct sale or provided as software as a service licencing model by ETRA. The distribution channel of the tool will be the different companies of the ETRA group and ACS group.	The early adopters are the 20% of the small DSOs of the countries included in the project (120), as they solution has already been tasted and demonstrated with the idiosincasy of their region and electricity system.	
Cost Structure			**Revenue Streams**		
The main operational costs expected withing the exploitation phase are as follows: - Direct Personal cost (main cost) - Marketing and commercial activity - SW licenses and related costs - Other costs			The three main expected sources of revenue are: - Licensing of the tool - Software maintenance - Consultancy services After 6 months, the revenue is expecte to be around 150k€, raising up to 2,6M€ by the third year.		
Barriers			**Social and Environmental Considerations**		
Market-entry barriers: There are well established large firms at the energy sector with products that are already used. The area of energy automation is a highly competitive field dominated by specific big players.			The WiseGRID Cockpit will support the increase of RES penetration enabling a smoother integration of heterogeneous and distributed energy resources and systems, which will decrease the CO2 intensity of the electricity grid. Moreover, the WG Cockpit will provide an intelligent distributed control to detect faults, self-protect and self-configure the network which will derive in a faster management of the issues and a better service provision to the end-user and minimizing the impact of eventual outages.		

Regulatory analysis and standardization

- Regulatory barriers analysis of all European countries

- Continuously updated progress on contribution to standardization
- CEN/CENELEC Workshop on: “Reference model for distribution application for microgrids”: WS WiseGRID
  - KOM: 17/02/2020
  - Internal and external consortium partners

Dissemination

- Large citizen engagement

  Demonstration sites involve more than 1700 users

Dissemination

3 WINNING AWARDS

Business Category Award EUSEW2018

Citizens Category Award EUSEW2018

Good Practice of the Year Award

Thank you!

Esteban Pastor Calatayud

Álvaro Nofuentes Prieto

www.grupoetra.com

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 731205.