



FLEXICIENCY



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the *European Union's Horizon 2020*
research and innovation programme
under grant agreement No 646482

FLEXICIENCY

energy services demonstrations of demand response,
FLEXibility and energy **effi**CIENCY based on metering data

EUW, WIEN 3-5 November 2015





Outline

- **Project Overview**

- *Vision, Objectives, Partners and budget*

- **Project Proposition**

- *Areas of Services, Proposed Architecture, The 5 Demonstrations*

- **Project Impact**

- *Expected impacts, Timeline*





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The FLEXICIENCY project VISION

To push forward energy efficiency and new market opportunities



“New determination opening up new opportunities and perspectives”

“Higher Market Competition and Openness”

“New roles for DSOs alongside traditional activities”



FLEXICIENCY PROJECT

Major DSOs working with Market players on a technical model to concretise this vision

- ❑ **DSOs** and related platforms **neutrally facilitating** the development of **an open market for services** by making available “real time” metering data to players
- ❑ **Service Providers** and related platforms **offering new services** to the customers and taking new business opportunities
- ❑ **EU market place** (virtual ICT environment) for a **cross-country and cross-player access to services** at European level
- ❑ Use of **open standards interfaces and protocols** to avoid the risk of vendor lock-in and limit costs





The FLEXICIENCY project OBJECTIVES

Accelerating the deployment of new services

Overall Objective:

To demonstrate that the **deployment of novel services in the electricity retail markets** can be accelerated thanks to an open *EU market place* for standardised interactions among all the **electricity stakeholders**, opening up the energy market also to new players at EU level.



Accessibility of smart meter data made available by DSOs in “real-time” to all actors

- **DSOs’ Platform**, neutrally providing metering data at given frequency and facilitating market services
- **Service Platform** for innovative service provision in the market



Definition of a **standard data model and APIs¹** for data exchange at EU level

- **EU market place** for **cross-country and cross-player interactions** in an open and **standardised way**

¹Application Programming Interfaces



Recommendation for Regulators and Policy makers towards **efficient energy markets**

- Clear framework defining the **relationships between players** to support new services, addressing replicability





The FLEXICIENCY project PARTNERS

Successful project in the first round of the Horizon 2020 calls, bringing together relevant DSOs, Retailers and Market Players in Europe

WP ENERGY CALL : LCE 7 2014 - *Distribution Grid and Retail Market*

BUDGET:
€ 19.115.935,65

EC FUND:
€ 13.946.741



Feb 2015 → Jan 2019





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The FLEXICIENCY project SERVICE AREAS

Three main areas

*Metering data provided in "real time" to any player
under customer consent by DSOs
as facilitator of new market services*

1

Energy Monitoring →
*Enhance
Customer
awareness*



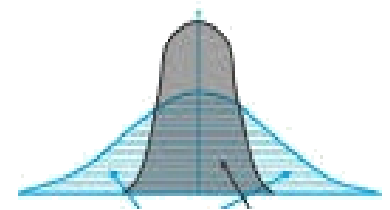
2

**Energy Efficiency
Services →**
*Demonstration of
Local Energy
Optimisation*



3

**Flexibility Service
Procurement →**
*Demonstration of
System Energy
Optimisation*



New Energy Services on Data

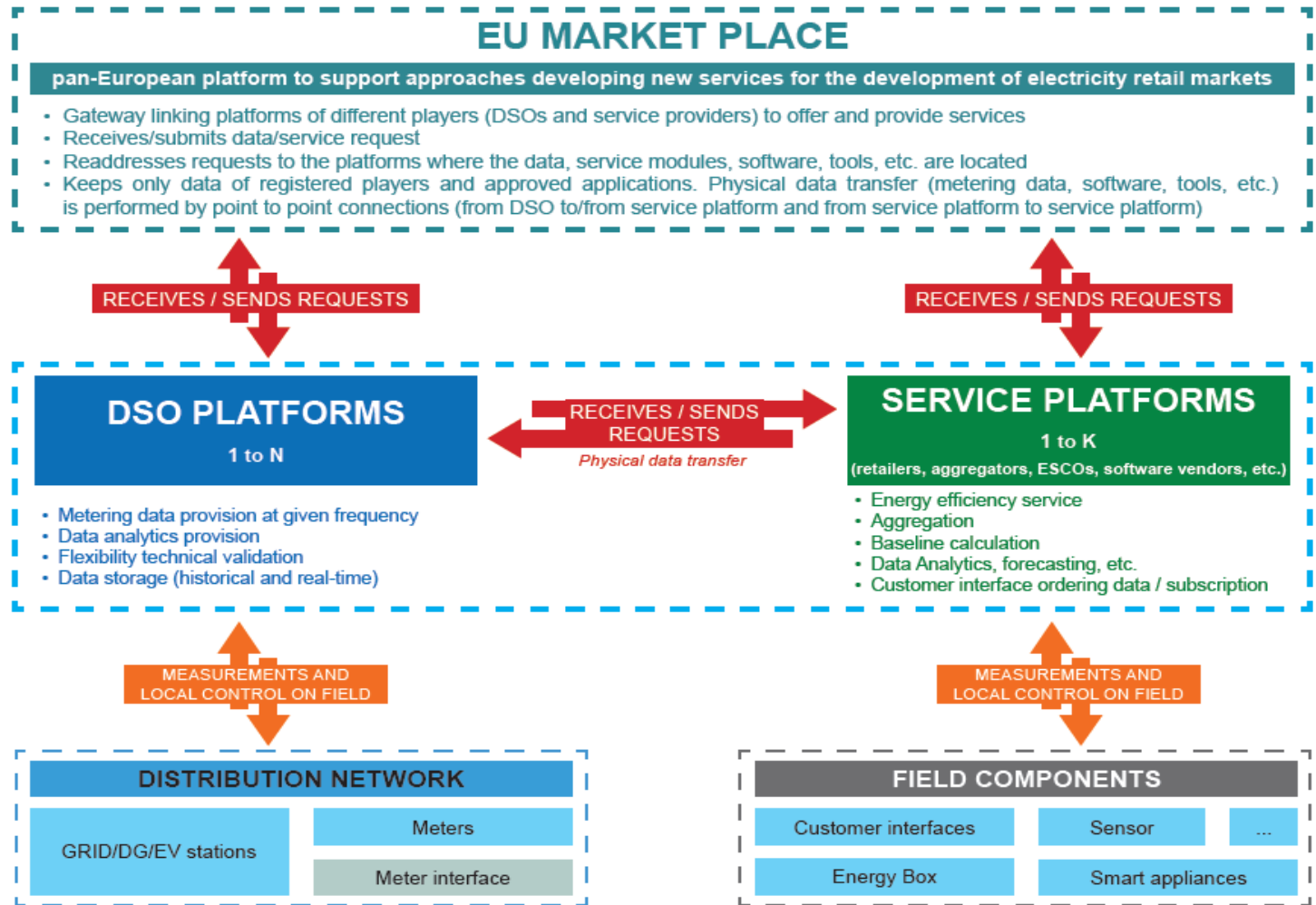




The FLEXICIENCY project ARCHITECTURE

To realize the project vision and new services

- 1 REPLICABLE
- 2 FLEXIBLE
- 3 VIABLE
- 4 MODULAR



Technical model applicable all over Europe, following a modular approach





The FLEXICIENCY project DEMOS

5 large-scale demonstrations to validate the architecture

DEMO 1: ITALY

Demonstration of Advanced energy monitoring (5,000 LV customers) and local energy control services (500 LV customers) in the area of Milan.

DEMO 2: FRANCE

Validation of advanced monitoring and local control (demand response) services and of the *European market place* across countries: a UK-based player active in DR operating in the French market.

DEMO 3: SPAIN

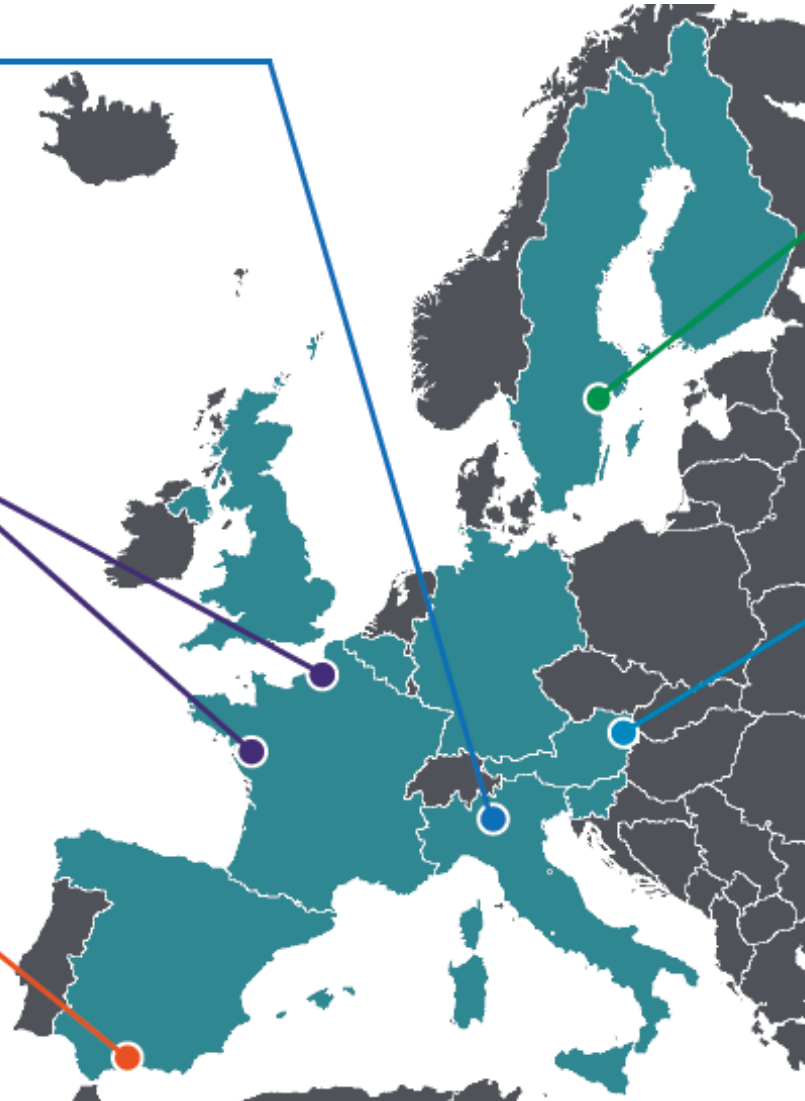
Validation of added value services in the case of a particular consumer, i.e. a municipality (City of Malaga).

DEMO 4: SWEDEN

Demonstrations of Advanced Energy monitoring with alerts and/or Energy Advice to a larger customer group. Local Energy control services to a smaller group in the Stockholm area.

DEMO 5: AUSTRIA

Demonstrations of advanced monitoring and local control services to residential and small commercial customers (yet without smart meters) and demonstrate aggregation of flexibility of small customers (including prosumers) through simulations. To demonstrate demand response and DG flexibilities of commercial and industrial customers by an independent EU aggregator.





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The FLEXICIENCY project IMPACT

And how these impacts can be ensured

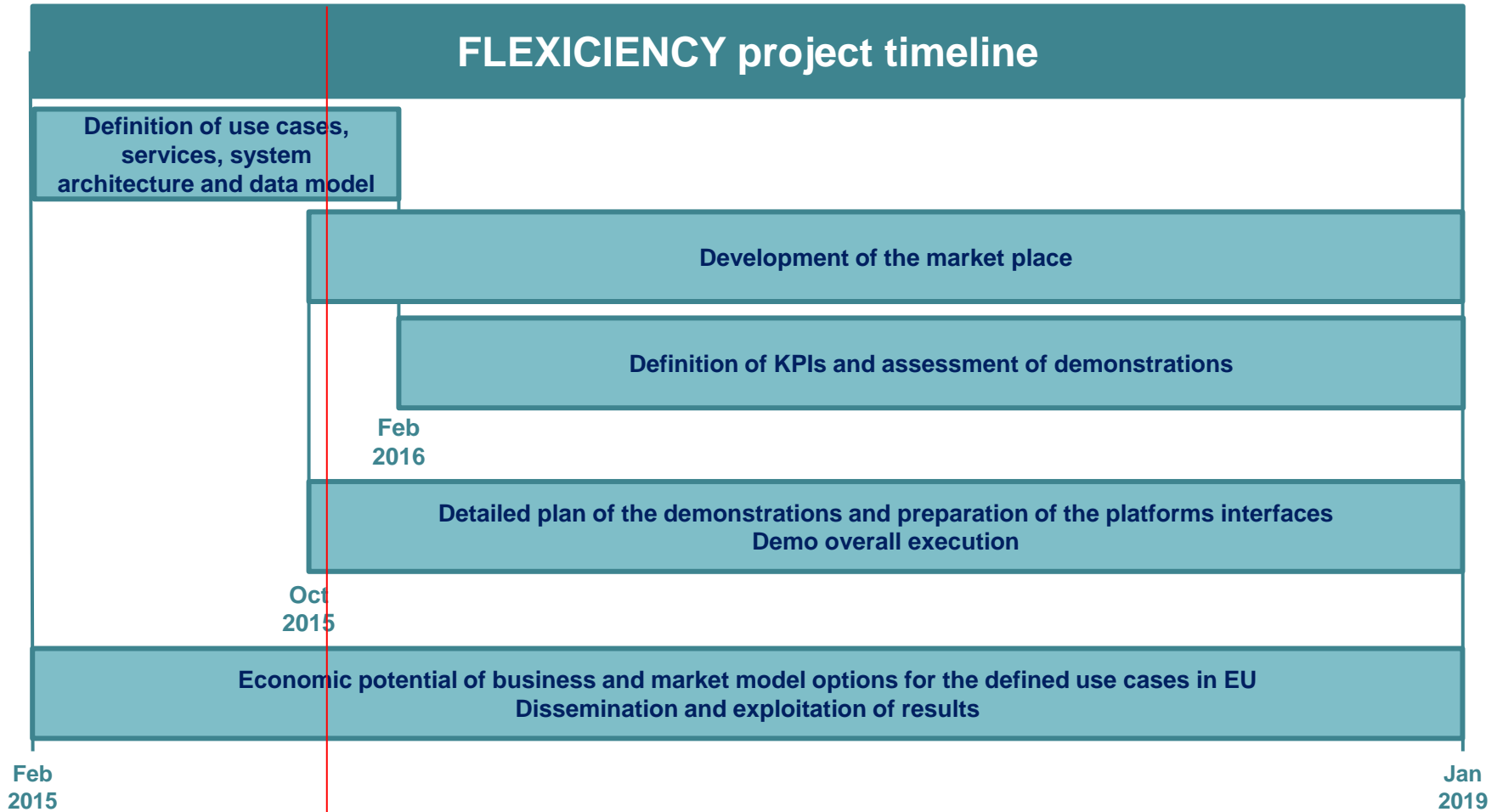
- ✦ **Supporting active demand widespread adoption**
 - ✦ **Delivering new IT based services and tools**
 - ✦ **Enabling an open market for service deployment**
 - ✦ **Facilitating new markets**
- ✦ **Accelerating the implementation of new policies/rules/legislations**
 - ❖ *by demonstrating how active demand services can be facilitated and fully realised by the provision of real time metering data by DSOs, within a modular, flexible and replicable architecture*
 - ❖ *by developing a EU market place for service/data requests exchange*
 - ❖ *by investigating possible options for business models and commercial viability of the defined use cases and services*
 - ❖ *by contributing to standardization of data models and identification of possible lacking or grey areas for harmonisation of EU legislation*





Project timeline

FLEXICIENCY project timeline





THANK YOU!

For further information please contact:

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or visit the project website

www.flexiciency-h2020.eu/

...and follow us on the main social networks

