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This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 646482

Data accessibility to facilitate new energy services

November 2015

Technical barriers

Standards for data exchange

*There is **no unique standard format** for the exchange and processing of electricity consumption data*

More data accessibility

*Metering data made available for settlement, with limited **forwarding to other 3rd parties** (there are few infrastructures available that could facilitate this information exchange).*

Higher data resolution

***Data** generally available in low **resolution** and with considerable delays, often up to 30 days*

Key topics addressed in different options for data handling

- ***Data accessibility in a neutral way*** *while assuring security and integrity and* ***secure network management and real time operations***

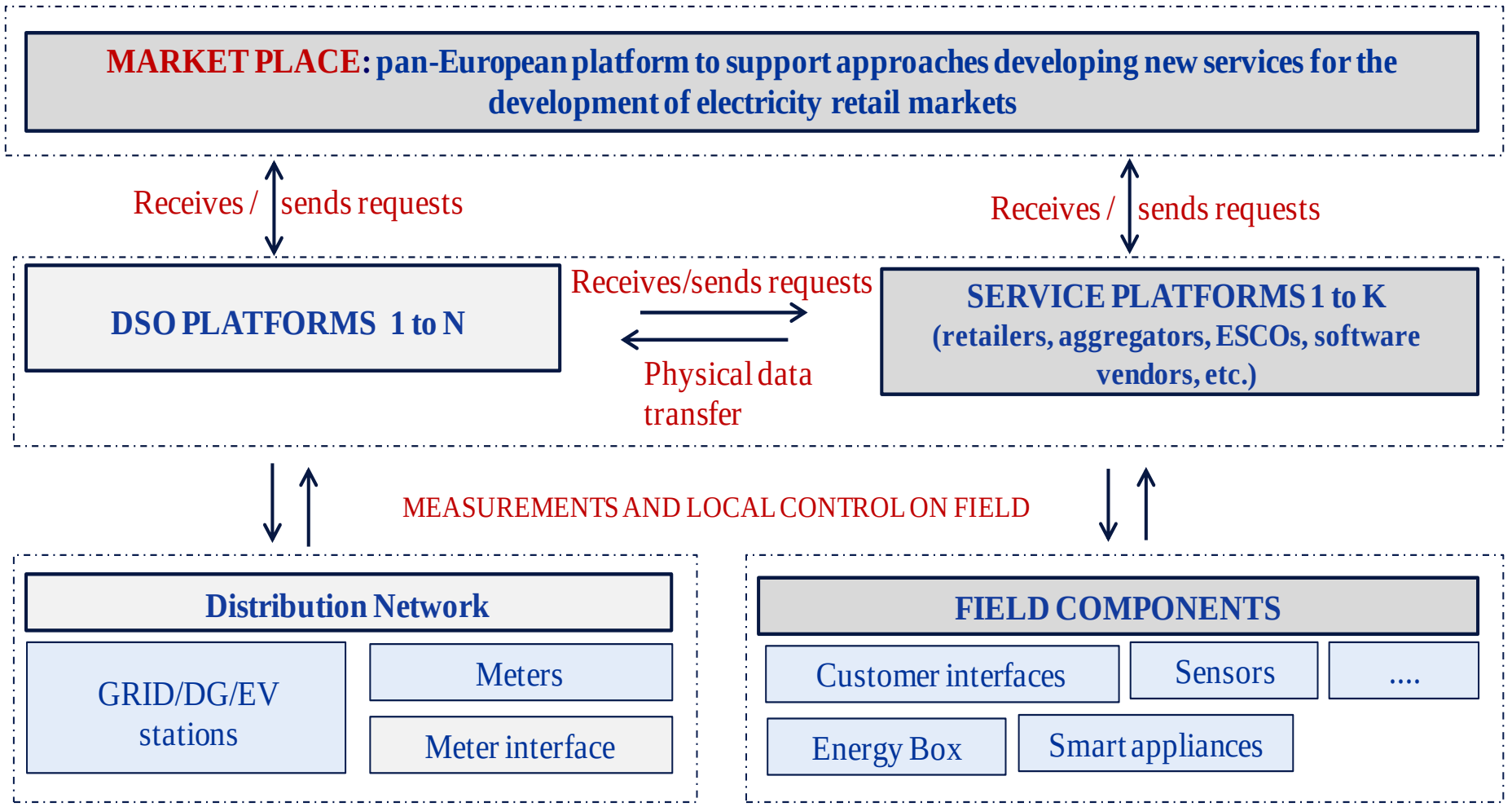
- ***Single market interface facilitating interactions*** *among relevant stakeholders and simplifying B2B relations also* in case of fragmented markets

- ***Remote data access to develop services*** *leveraging on IT infrastructures also in presence of diverse regulatory contexts*

Options on Data Handling under discussion

		KEY CONCEPTS
DSO as Market Facilitator Model	• **DSO as data hub**, collecting all the information and making it **neutrally available to several market players** which will provide innovative service to the end users	*Availability of DSO's metering data to all actors in a not discriminatory way*
3rd Party Market Facilitator Model	• **Regulated body** collecting consumptions data **as unique interface** to facilitate switching operations, billing adjustments, **to provide commercial data to market players** offering innovative services	*Unique interface facilitating B2B interaction in case of fragmented markets*
Data Access Point Manager (DAM) Model	• The **DAM is a market player** leveraging on a telecommunication infrastructure **to acquire and manage remote data accessibility** to develop value added services in a smart grid perspective	*Guarantee and manage remote data access to develop services*

A possible technical model



Main features

- *DSO makes available* ***metering data to the market in a non-discriminatory manner*** *(historical and close to real time) as* ***neutral regulated actor****.*

- *It is* ***up to the market parties to enrich these data with other information*** *to provide new services*

- *A* ***standardized and open environment accessible at EU level would:***
  - ***Limit the risk of indirect lock-in*** *as defining a common EU language*
  - *Contribute to* ***massive expansion of services as from data accessibility***
  - ***Address data integrity and security*** *as data are stored at DSO/Metering operator platforms and exchange kept point to point*
  - ***Avoid big data mgt issues*** *as data are not centrally stored but accessible anytime are needed*

FLEXICIENCY: EU funded H2020 project

Bringing together relevant DSOs, Retailers and Market Players in EU

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BUDGET:
€ 19.115.935,65

EC FUND:
€ 13.946.741

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Overall project objectives

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 APIs**[1] for data exchange at EU level

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

[1] *Application 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

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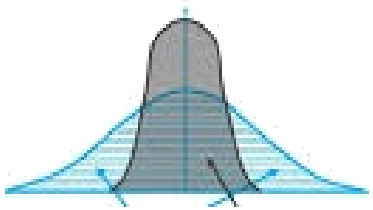
Areas of services enabling new DSO roles and creating new business opportunities in the market

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

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5 large-scale demonstrations

DEMO 1: ITALY

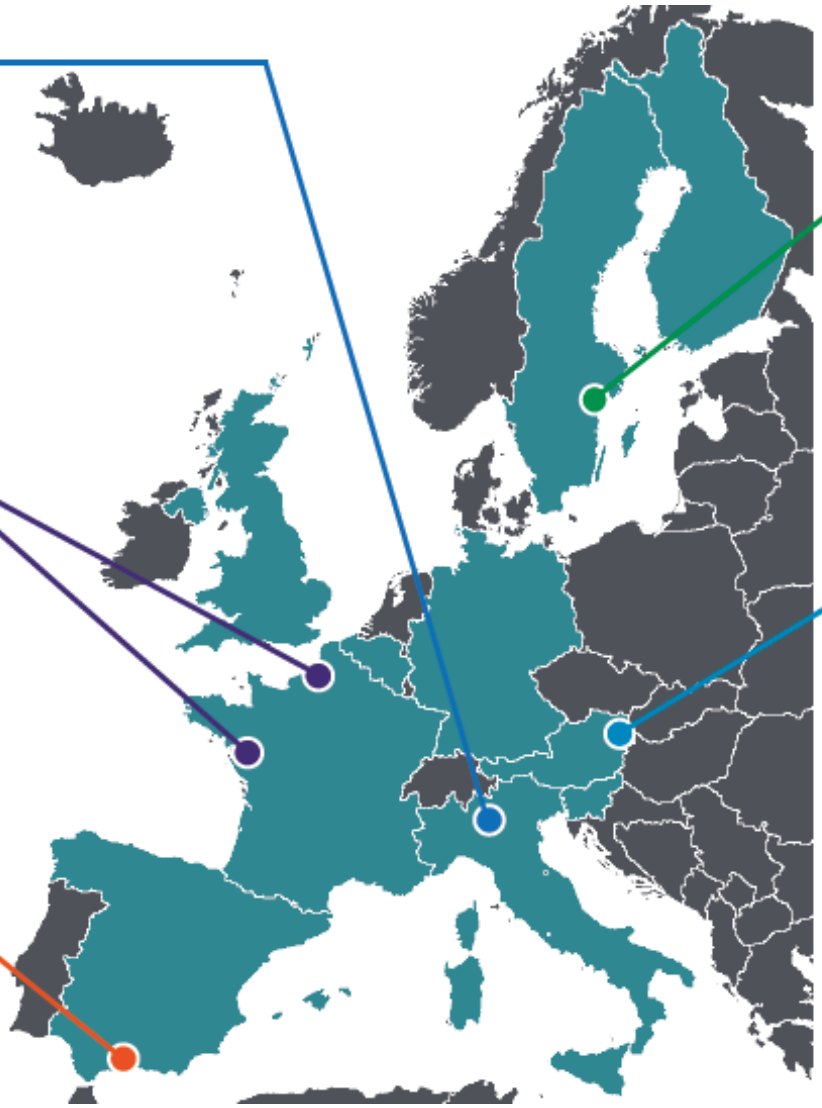
Demonstration of Advanced energy monitoring (**5,000 LV customers) and local energy control services (500 LV customers)** in the area of Milan.

DEMO 2: FRANCE

Validation of **advanced monitoring, local control 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 aggregation of flexibility of small customers** (including prosumers) through simulations. To **demonstrate DR and DG flexibilities** of commercial and industrial customers by an independent EU aggregator.

Expected Benefits

- Interoperable solutions and data accessibility foster **market competitiveness**, improve the **business case** and create **new areas of business** for new comers and existing players

Market

Customers

- Customers benefit from value added energy **services**, higher **transparency, greater offer** and **competition** in the energy market.

- DSOs as market facilitator and data manager, **evolving the future roles for network operators**
- **Flexibility exploitable as resource** for the electricity system

Electricity System

Policy and EV targets

- **DR** enabled as **important instrument** to take action on consumption, **towards energy efficiency and CO_2 reduction targets**
- Data accessibility benefitting retail **market functioning**

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