WHAT IS A LOCAL MARKET?
A local market is a new market place for electricity transactions grounded on a small community. This local market will be very suitable in places with high variability due to distributed energy resources and for integrating flexible loads like water boilers and heat pumps including others. Furthermore, they can be adapted to the different regulatory regimes and to the participants’ needs.

WHO IS GOING TO MANAGE THE LOCAL MARKET?
The local market place constitutes an arena for a new business role: the SESP, which represents the legal entity with the most central functionalities with respect to local market operation. Its main role is the organization of the local market. Additionally, the SESP offers services like comfort management, energy efficiency analysis, maintenance, failure detection and technical user support. The SESP offers services to all potential participants: consumers, producers, prosumers, community storage units, distribution system operators.

HOW TO ENABLE PARTICIPATION IN THE LOCAL MARKET?
The SESP ICT platform enables the interaction between all the market players as individuals and as part of a collective. Prosumers, distributed generators, distribution system operators and consumers exchange data with the SESP to optimally operate the system based on new local market rules.

EMPOWER CONCEPT & GOALS
The EMPOWER project aims to encourage and enable the active participation in local energy exchange. To do so, the project is designing an ICT platform for facilitating local electricity trading. EMPOWER assumes a local community of consumers, producers or prosumers who seek opportunities in an energy market situated in their own neighbourhood. Here energy, flexibility and other energy related services are traded. Community members will negotiate and trade contracts through a community controlled Smart Energy Service Provider (SESP) with the DSO, with their neighbours and other communities. Consumer and supplier flexibility will be properly and continuously credited together with energy sold and bought. Citizens that belong to the community will also be economically incentivized to install renewable energy and storage and take part which will allow to reduce greenhouse gas emissions and to increase the energy efficiency.

LEVERAGING THE LOCAL CITIZEN
The EMPOWER project:
- Defines a community for local trade of energy, flexibility and energy related services.
- Creates a trading system for continuous exchange of energy, flexibility and service contracts and any combinations of these.
- Designs an ICT platform for operating local markets.
- Implements and tests the ICT platform in three pilot sites.
- Offers communication services, like web access and mobile apps to participants to support their engagement to the ICT platform.

The ICT platform merged with the trading system will allow neighbours to participate in the local market sending and receiving offers for their energy resources like photovoltaic panels, flexible demand and storage units.

PROJECT ORGANIZATION
The Project is organized in nine work packages (WP):
WP1 Project Management is dedicated to lead the project, coordinate the WP, ensure the quality of the outcomes and organize general assemblies
WP2 Strategies, business models, regulation and policies translates the context where the Local Smart Grid infrastructure may take place into guidance and strategies for the specifications to be developed in WP3
WP3 Local Smart Grids (LSG) architecture generates the specifications of both the ICT platforms and of the possible market models.
WP4 LSG Communications platform develops the platform components for the communication infrastructure
WP5 LSG Control cloud develops of the platform components for the control cloud infrastructure
WP6 LSG Market design establishes the basis for the relationship between the different actors involved, from producers to consumers, energy distributors and SEPS.
WP7 Integration, pilots Deployment and Validation, where all the different elements and concepts will be integrated, tested and validated.
WP8 Exploitation and local policy strategies defines strategies to help the establishment of the Local Smart Grid and SEPS concepts in the territories, where local policies will acquire a fundamental importance in the achievement of the deployment.
WP9 Communication and Dissemination is in charge of designing and executing the corresponding activities that will help in empowering the project’s impacts and, as a result, boosting the exploitation potential.