Project ID	DIP069		
Long Title	Open Dynamic System for Holistic energy Management of the dynamics of energy supply, demand and storage in urban areas		
Short Title	ODYSSEUS		
Keywords	Small; Urban; Multi-sector/Grid; Electricity; Heat; Transport; Power Quality & Grid Integration; Smart Grids; Demand Response; Active Network Management; LV Grid Monitoring; Stakeholder Engagement & Behaviour Change;		
Location (Town, Region, Country)	Manchester		England
Latitude and Longitude	53.48N	2.24W	
OSGB code	SJ 84 98		
Status	Complete		
Start Date	2012		
End Date	2016		
Description	Odysseus, a EU funded project under FP7, developed a decision support system (Open Dynamic System or ODYS) to support the management of energy supply, demand and storage in urban areas using an open integration platform. The project's objective was to increase neighbourhood energy efficiency and address issues of an "energy positive neighbourhood" (an area that produces more energy than it consumes yearly average). This was achieved by using a range of sources of energy e.g. wind turbines (enodes) and promoting energy exchanges. Enodes may be also energy users (e.g. street lighting or electric cars using and storing energy). The project developed an ICT tool to deliver modelling, analysis, monitoring and visualisation that evaluates the energy performance and emissions of buildings and neighbourhoods in the context of the emergence of energy positive neighbourhoods and smart grids. The goal was to provide a service for decision making by aggregating data from a range of sources in the Odysseus cloud platform providing a holistic overview of a neighbourhoods energy systems. The decision support system (ODYS) addresses the dynamics of energy supply and demand in neighbourhoods and optimise the use of energy beyond individual elements (for example, urban heat production and electrical vehicles) by enabling the integration of renewable energy sources and the connection to the electricity distribution grid. This takes advantage of variable tariffs and diversity of supply. It enables buildings or whole areas to have a dynamic energy profile card (dEPC). The project included two city pilots in Manchester and Rome. The Manchester pilot is a mature energy environment, whilst Rome is in the early stages of dealing with energy efficiency in public buildings.		

Sectors	Grid
Funding Sources	FP7-ICT
Budget £	€159,000 (UK element)
Partners	Manchester City Council
Energy vectors	Electricity, heat, transport
Scale (lab/site/ small/community/region/national)	Small
Technologies demonstrated	LV grid monitoring, smart controls, demand response devices, active network management, large-scale smart grid, network data acquisition
Economic models demonstrated	Time-of-use tariffs, new commercial models
Other concepts demonstrated	Demand response, grid constraint mitigation, generation-demand matching
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	
Datasets (incl. links)	
Website/social media	Broken link to project website http://www.buildup.eu/en/explore/links/odysseus-project-0
Information sources	https://cordis.europa.eu/project/rcn/105737_en.html