



indra

Press Release

INDRA IS DEVELOPING A SMART ENERGY PILOT IN BARCELONA FOR ARROWHEAD, THE MAJOR EUROPEAN R&D&i PROJECT FOR SMART CITIES


- **The consultancy and technology multinational will integrate an advanced energy efficiency system for buildings and an intelligent public lighting demonstrator into its urban platform**
- **With a budget of 80 million euros and the participation of 11 countries, Arrowhead is co-financed by the European Union and the Spanish Ministry of Industry and aims to increase energy efficiency and flexibility through automation**

Indra, the number one consulting and technology multinational in Spain and a leader in Europe and Latin America, is heading up development of a pilot that will integrate the latest Smart Building (energy efficiency for buildings) and Smart Lighting (intelligent public lighting) solutions within the framework of the Arrowhead project, the major European R&D&i initiative focused on developing technologies for providing advanced services in the cities of the future, or Smart Cities.

With a budget of 80 million euros and the participation of 78 organisations from 11 countries, Arrowhead is co-financed by the European Union and the Spanish Ministry of Industry, Energy and Tourism as part of the Artemis call for proposals in the seventh Marco Programme. The main objective of this project is to maximise efficiency and flexibility, increase energy efficiency and flexible usage of energy through cooperative automation in buildings and public infrastructures, manufacturing processes and the energy sector through the use of embedded technologies.

The project is being led by the University of Lulea (Sweden) and was launched in March 2013 with an expected duration of four years. Companies like Acciona, Techniker, Ford, Schneider, Honeywell and various universities and research centres are participating. It has 12 work packages, the first five of which focus on the development of pilots or demonstrators.

In this context, Indra is in charge of the design, implementation and deployment in Barcelona of a demonstrator made up of an advanced energy efficiency system for buildings within the scope of Smart Cities (Smart Building) and an intelligent public lighting solution (Smart

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Lighting). Both pilots, which are expected to be up and running in June 2015, will be integrated into an urban services platform.

Contribution of proprietary solutions

In the specific case of Smart Building, the pilot includes development of a system that will provide sensorisation, monitoring and intelligent control of energy consumption in real time to significantly reduce the energy footprint and help create models for related savings in buildings. The goal is to collect data through the deployment of sensors for detecting energy use, presence and humidity, among other variables.

To do this, it will employ diverse communication technologies and protocols, real-time monitoring and management of energy consumption, integration of renewable energies and electric vehicle recharging to control intelligent buildings. Along these lines, Indra expects to contribute proprietary innovations such as InMeter, its latest-generation intelligent meter, in addition to all the experience it has accumulated through its participation in innovation projects in the area of Smart Grids, such as Energos and Integris.

In turn, the intelligent public lighting pilot will include a street in Barcelona where sensors will be installed in street lights to monitor environmental data (light intensity, for example), energy consumption and mobility (road traffic, pedestrians, etc.). The street lights will incorporate LED technology to control light intensity based on all the monitored data.


Both pilots will be integrated in ATENEA – the Indra platform for controlling Smart Cities – which will manage the generated data to provide a complete vision of activity. This platform is based on the results of the European SOFIA (Smart Objects for Intelligent Applications) R&D&i programme, in which Indra was an active participant, and is being positioned as an integrating centre to centralise information from three major system modules: measurement and sensor equipment deployed across the city, service management modules being coordinated to provide global solutions for the city and, lastly, city analytical systems, which collect data from the aforementioned subsystems to provide critical information for city management.

Currently a working group has been set up to define, in coordination with the Barcelona city government, the buildings and public spaces in which to deploy the pilots.

Extensive experience in energy technologies for the cities of the future

Indra's extensive experience in providing technology services in cities enables it to offer a comprehensive integrated solution for smart cities that has been successfully implemented on numerous occasions around the world.

In the specific area of energy, Indra has a global strategy aimed at developing new technologies and solutions for energy efficiency and sustainability in generation, transmission and distribution, as well as in industrial, residential and transportation energy consumption. The company is involved in various projects for new smart infrastructures

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(Smart Grids) that ensure sustainable, secure and economical development, and it is working in an advisory capacity with the Spanish National Energy Commission on the development of smart grids.

It is also collaborating with the leading Spanish power companies in their highest-profile projects, whose products and knowledge are starting to be exported to other countries, especially in Latin America, such as Brazil and Peru. Specifically, in this last country, Indra designed the strategic plan for implementation of *Smart Grids* in the Peruvian electrical system for the government body that supervises investment in energy and mines (OSINERGMIN).

Indra and Gas Natural Fenosa jointly led the Energos R&D&i project aimed at developing methods and technologies for the grids of the future. It also participated with Gas Natural Fenosa in the European Union's 3E Houses project aimed at demonstrating and quantifying the contribution of ICTs to improving energy efficiency in homes through a pilot programme for subsidised housing in San Cugat del Vallés. And it is co-leading the ZIGAMIT project aimed at using the infrastructure being deployed for remote meter reading to offer services for integrated management of home comfort to residential customers.

It also participated in other R&D&i projects for developing new computer systems (grid model, real-time integration platforms and two-way communication solutions). A highlight in this area is an innovative remote management system, Smart Platform for Efficient Energy Distribution (InSPEED), for a new generation of intelligent meters (InMeter). Lastly, the technology company is also actively participating in working groups sponsored by the Ministry of Industry to promote the development of electric vehicles in Spain, in addition to collaborating in diverse research projects and initiatives with different agents and companies in the energy sector.

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Indra is the number one multinational consultancy and technology company in Spain and a leader in Europe and Latin America. Innovation is the cornerstone of its business and sustainability. The company has dedicated over €550 million to R&D&i in the past three years, making it a leader in Europe in its sector in terms of investment. With sales of approximately €3,000 million, nearly 60% of its revenue comes from international markets. The company employs 42,000 professionals and has customers in 128 countries.