

Innovation Needs Assessment on Wireless Sensor Networks as a Platform Technology



Project Acronym: WSN INA
Project Details: Wireless Sensor Networks as a Platform Technology (WSN INA)
Start Date: September 2013
Duration: 7 Months
End Date: April 2014



Project Description

The project team aimed to examine the market, technology, commercial and behavioural challenges and opportunities that exist with the use of Wireless Sensor Networks (WSN) in enabling energy efficiency. In simple terms the aim was to understand why wireless sensor networks are not as ubiquitous as one might expect. The work has been done in the form of an Innovation Needs Assessment (INA) study for the IERC. This INA focussed specifically on understanding the drivers and constraints for how WSN can be developed as a platform technology in enabling energy management and efficiency applications and therefore enabling WSN play a wider enabling role compared to today's small scale deployments for niche applications.

Project Achievements & Impacts

The project team has studied WSN adoption, challenges and opportunities in three use cases, covering commercial buildings, home networks and smart cities. The study examined each use case against four criteria of energy, cost, interference and computation.

The work has been completed and a final report is available to members. In summary, the areas that warrant further focus are:

1. Power management in wireless sensors and across the WSN remains a challenge. Innovations in design and operation are needed.
2. To enable widespread adoption, a holistic tool chain to support stakeholders from design through deployment, routine maintenance and upgrade should be explored.
3. Security where WSN are monitoring and/or resulting in activation decisions for critical building infrastructure needs further research.

Participating Research Organisations

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