

Energy Savings from Intelligent Metering and Behavioural Change

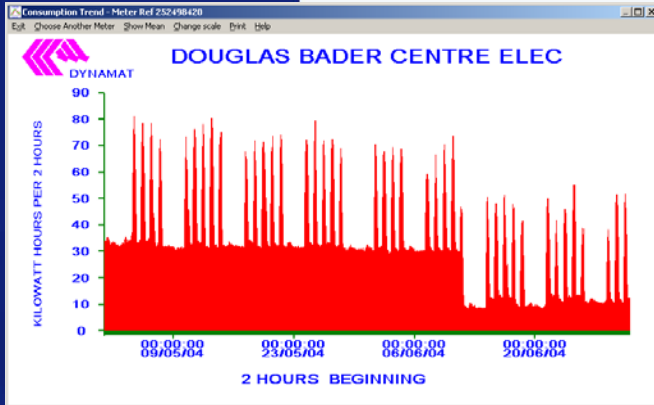
Intelligent Metering

EIE/04/107/SO7.38635

January 2005 - December 2006

Project summary

Intelligent
Metering



Intelligent metering analyses half hourly monitored data to identify activities to change the behaviour of building owners and tenants resulting in energy and water savings.

- ▶ The Intelligent Metering project involves partners in Austria, Denmark, Germany and the United Kingdom. Intelligent metering is being used to obtain half hourly energy and water consumption data for selected local public buildings.
- ▶ The project aims to demonstrate and promote the savings available from the use of intelligent metering and training occupants in public buildings and to show that these savings can be achieved at little, or no, additional cost.



Objectives and main steps

*Intelligent
Metering*

The overall objective of the project is to maximise the energy savings available across Europe through the use of intelligent metering and behavioural changes of building occupants.

Activities:

- ▶ Energy and water use in local authority buildings including offices, schools, sports/leisure facilities and community centres is being monitored.
- ▶ This data is being processed to identify actions and associated savings. Training is being provided to the building users and the results of the training are being analysed.
- ▶ Best practice methodologies and approaches for replication of the concept are being developed for dissemination.

What is Intelligent Metering?

Intelligent
Metering

Meters



Data Bird
Local Logger



Radio
Antenna



Computer



Modem



Central Receiver /
Data Logger





What are the benefits?

- ▶ **Financial savings**
 - Better energy management leads to cost savings
- ▶ **Better comfort**
 - Possible to improve comfort levels in buildings
- ▶ **Educational benefits**
 - Education benefits from learning about energy and sustainability for schools taking part in the project
- ▶ **Staff development**
 - Training on energy saving and use of sustainability educational material can be used for staff development
- ▶ **Environmental benefits**
 - Savings in energy use and related emissions

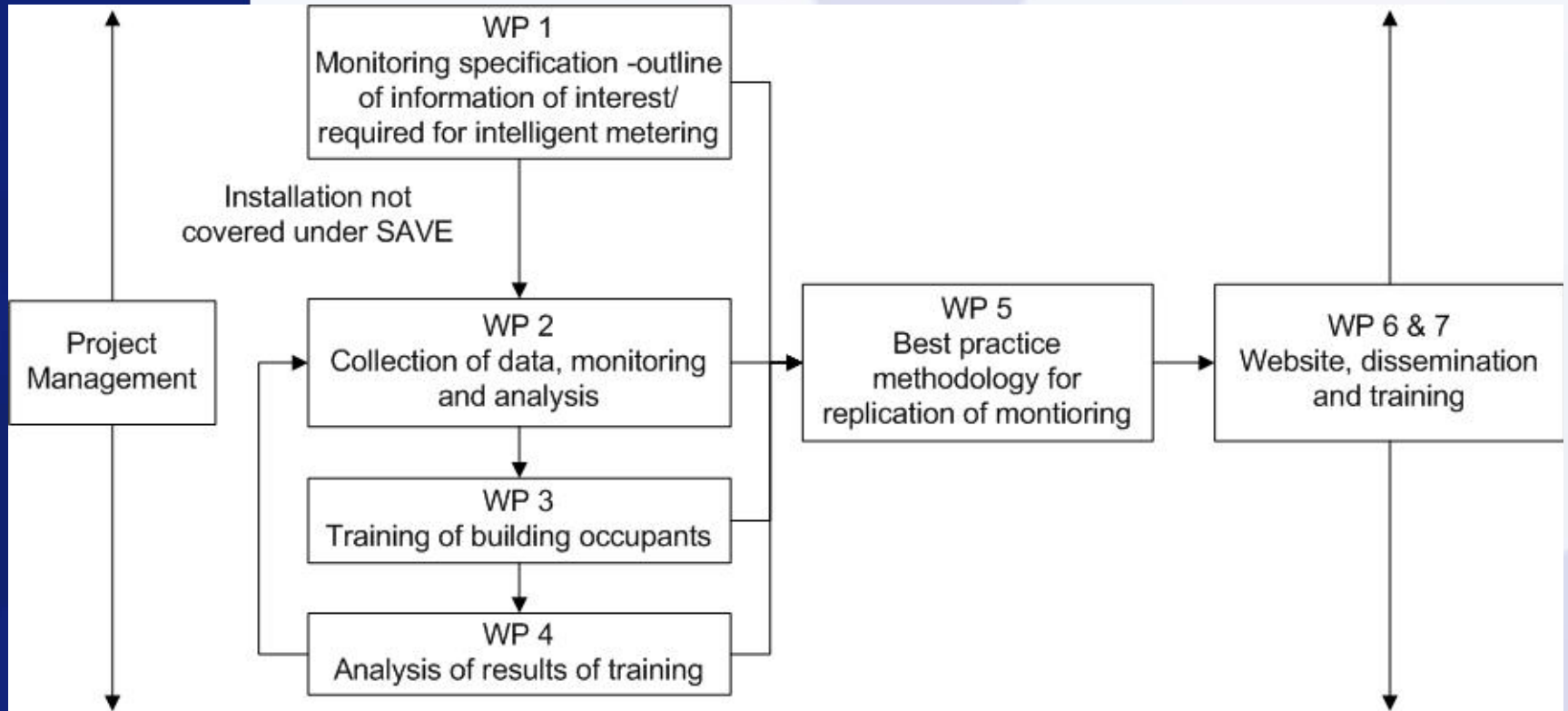
Expected results

Intelligent
Metering

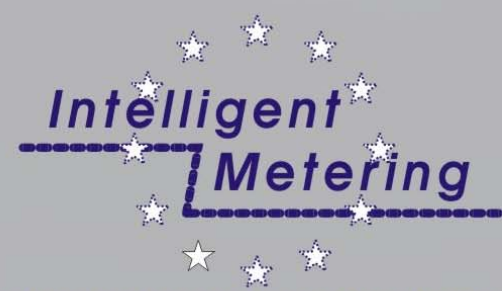
- ▶ Intelligent metering showing 30% energy savings in about 70 public buildings of all types
- ▶ Building occupants in each monitored building trained in energy efficiency
- ▶ Development of a best practice methodology for intelligent metering
- ▶ Widespread understanding and knowledge of the intelligent metering approach
- ▶ Development of a framework for ongoing training



Workplan



Main outcomes and lessons learned



- ▶ Detailed energy and water consumption monitoring has been taking place for up to 70 public sector buildings in 4 European countries (offices, schools, sports centres and community centres)
- ▶ The data has helped with the use of a training package with occupants of the buildings using intelligent metering
- ▶ Demonstrating energy savings that can be achieved through the use of intelligent metering and behavioural change from training building occupants

Assessment of the actual impact of the project

Intelligent
Metering

- ▶ Improving energy efficiency through the project is helping reduce operational costs and greenhouse gas emissions
- ▶ The project is demonstrating the potential that small changes in behaviour and the use of a building can have in reducing energy costs for buildings
- ▶ Large replication potential because of the energy savings which can be achieved at no/low cost



Relevance of the action



Intelligent
Metering

- ▶ It contributes to VKA1 Multiplying success in buildings, helping to improve the measurement of energy performance, and demonstrating public authorities promoting good practice in buildings
- ▶ The project is demonstrating the energy savings available at low cost from existing buildings by using intelligent metering and training building occupants
- ▶ Objectives of the project support the Directive on the Energy Performance of Buildings



Partners and contact



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Project website:

www.intelmeter.com