Preliminary outcomes

Preliminary conclusions of the project and the possibilities for replication

26th/27th June 2014

Piotr Zietara, Bax & Willems

Main points

Energy savings are possible but… home energy management system needs to be **simple and affordable**

Tenants have **low interests** in initiatives proposed by social housing companies

Social housing - **effective channel for ICT based services** introduction on a large scale in the residential sector

Clear objectives

*"…a cost-effective, easy replicable **ICT-based** services that significantly reduce energy and water consumption **in social housing**"*

- Energy and water consumption reduction between **15% and 20%**
- Deepen insights into **social aspects** of energy consumption patterns
- Demonstrate **socio-economic viability** of ICT-services

12 partners and 3 pilot sites

Bax & Willems Consulting Venturing

CN

BOTKYRKABYGGEN

RBH Rochdale Boroughwide Housing

SMARViS SMART METERING SOLUTIONS.

ARMINES

SIEMENS

acciona

Söderenergi

AQUALOGY Where water lives.

ECA-SOFTWARE

GDF SUEZ

- Botkyrkabyggen (Tuna, **Sweden**)
  108 apartments, (Pilot group:64)
- Cité Nouvelle (Ecully, **France**)
  66 dwellings (Pilot group: 40)
- Rochdale (**England**)
  9 dwellings

Pilots in Sweden, France and England

Tablet interface provides real time consumption data

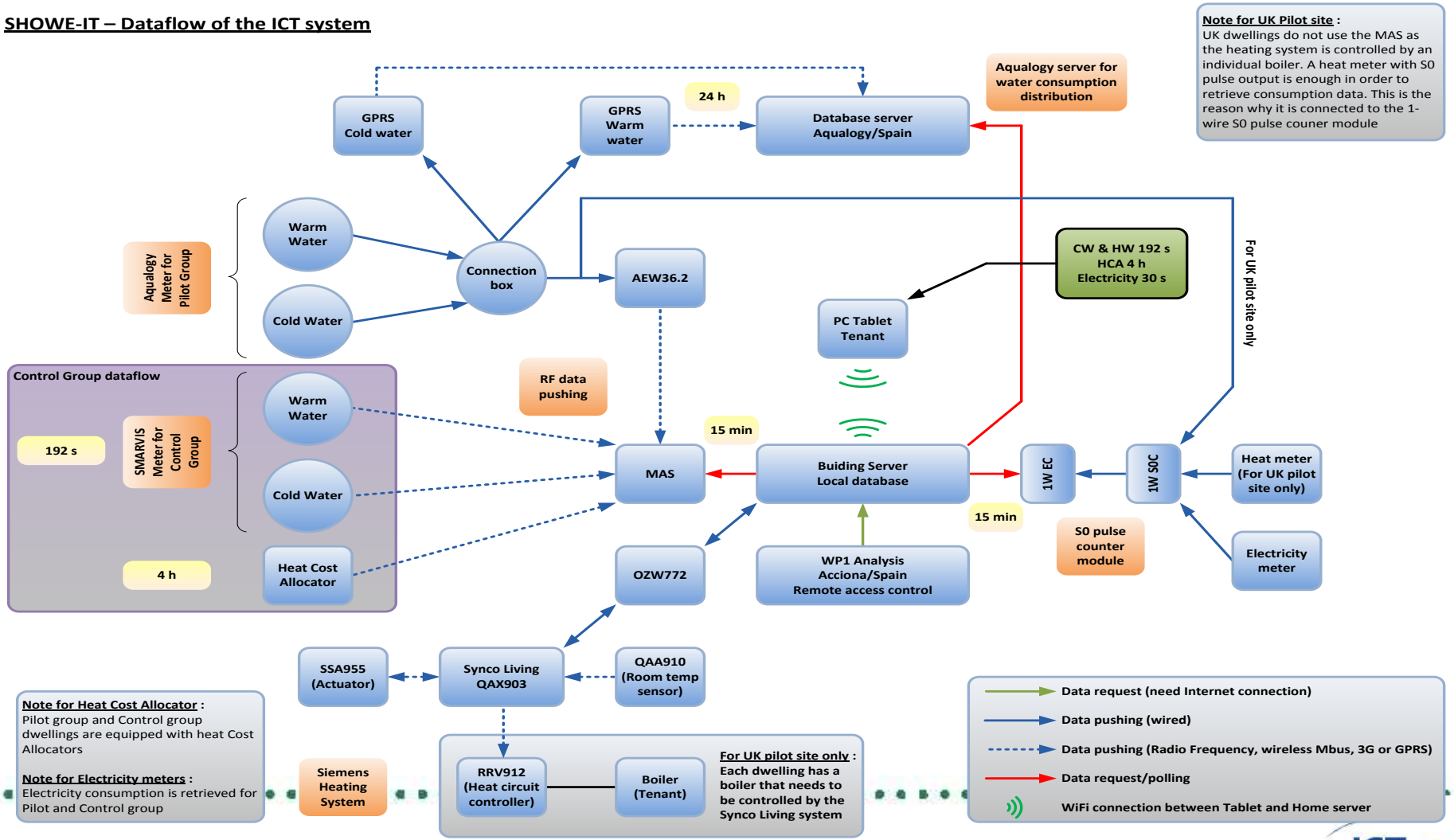
The project has the pilot and control groups

Pilot Group	Control Group
Electricity consumption Cold & hot **water** consumption **Gas** real time consumption **Heating** **Training** sessions	
In-home display **(tablet)** (Near) **real time** metering Heating **remote control** Water **uses identification**	

Outcome I

Energy savings are possible but… home energy management system needs to be **simple and affordable**

High complexity of a home energy management system…



Variations of the buildings infrastructure

Electricity :

-meters in different places
(staircases, basement, dwellings)

-different types of meters

-UK: need for SO pulse meters

-France: secondary meter with existing tariff meters

Gas:

-France: communal heating

-Sweden: district heating (no gas)

-UK: variety gas meters in different places
(7 variations of gas meters)

Heat metering:

-France and Sweden: Heating Cost Allocators

-England: heat meters in boiler circuits

Server:

- UK: buildings are far away from each other – local mini server with 3G connection

Complex systems are difficult to install

SHOWE-IT Technical Coordinator:

*"The installed components were **new to the market** (in Sweden) with the result that the installers are unfamiliar with them. This has led to many **difficulties** in diagnosing problems during and after installation, as a result **of 'learning by doing'.** "*

ICT systems need to be simpler and affordable

Easy to use

Plug-and-Play

Outcome II

Tenants have **low interests** in initiatives proposed by social housing companies

Tenants are difficult to engage in initiatives proposed by social housing companies

- Lack of trust between the tenant and SHC
- Suspicion of metering (case of UK)
- ICT technologies provided are below the expectations
- Financial incentive not always clearly visible (who pays the bill?)

but….

- cautious about the “waste of energy”

Outcome III

Social housing - **effective channel for ICT based services** introduction on a large scale in the residential sector

Households overspend on their energy usage

Households overspend on their energy usage

- Only **47% of consumers** in the EU know how much they consume
- Consumers have **a poor knowledge** and understanding of their current electricity agreement
- **41% do not know** if they have the cheapest tariff
- **6.2% of consumers** have switched supplier within the last 2 years

Source: The functioning of retail electricity markets for consumers in the European Union. 2010

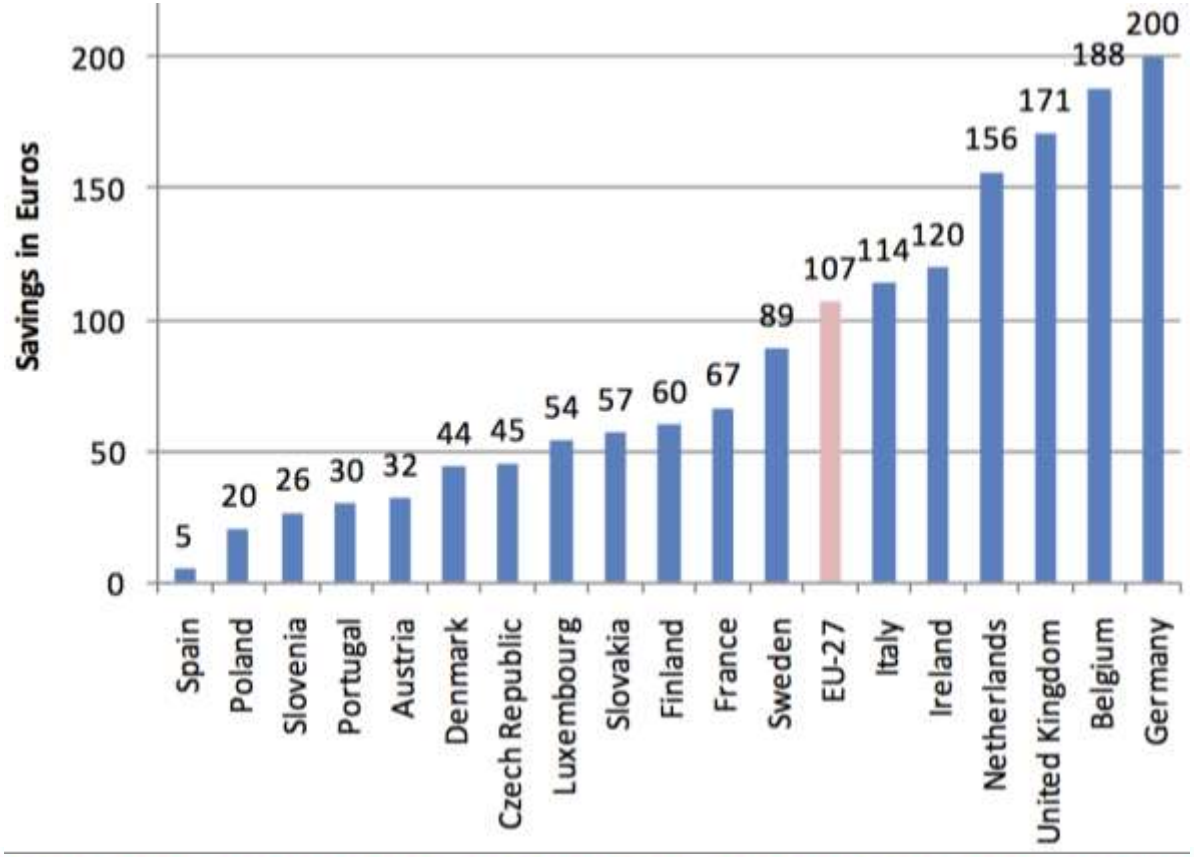
Consumers do not take advantage of opportunities for cheaper tariffs

- Consumers are generally **poorly informed** about the market
- The markets are **not very transparent**
- Consumers are **not very active** in terms of comparing alternatives
- They have **limited experience** using price comparison tools

Source: The functioning of retail electricity markets for consumers in the European Union. 2010

Switching an energy supplier can result in savings

on average in EU **- €107** annually



Source: The functioning of retail electricity markets for consumers in the European Union. 2010

Currently utilities are the most active players on the market

British Gas
Looking after your world

Eneco

Utilities as providers of ICT energy management systems?

Utilities interests

Energy sales

Consumption reduction

retaining customer loyalty ?

Simple ICT system can facilitate a choice of an optimal energy tariff

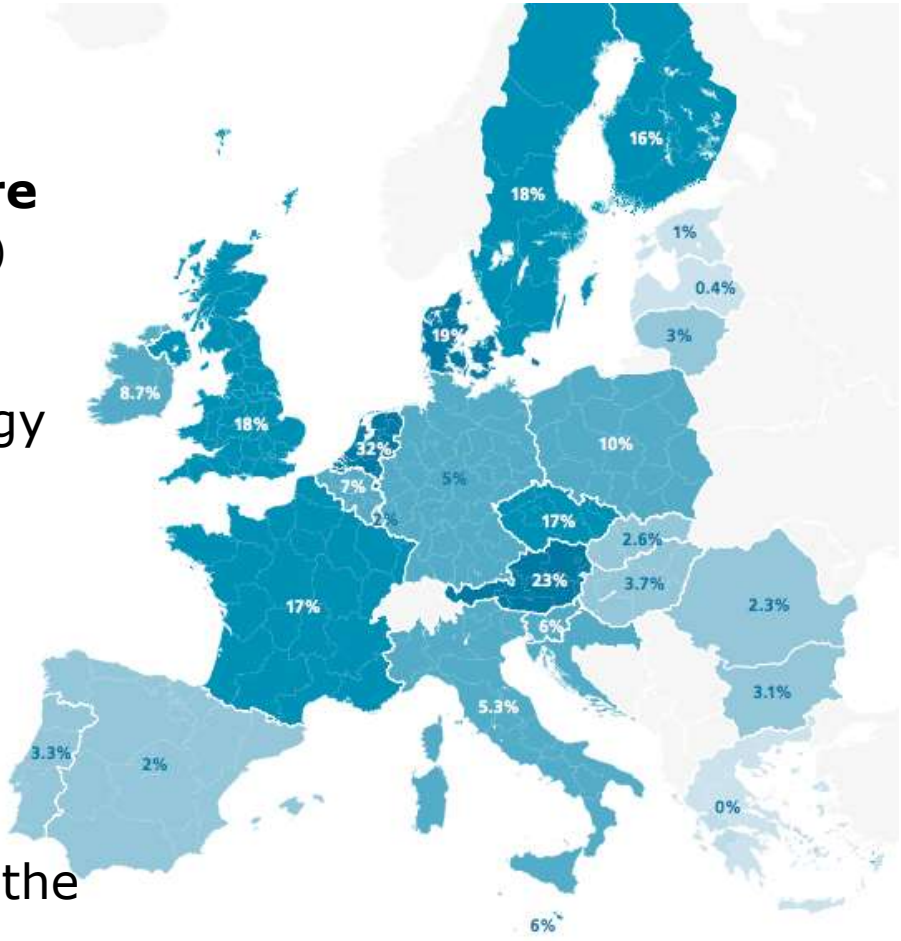
- Low cost
- Plug-and-play
- Measure the energy consumption
- Recommends the most suitable tariff

Additionally:

- Peak/off-peak indication
- Online feedback of the energy consumption

Large-scale rollout in the social housing sector

- **12%** of European housing stock
- Suitable **organizational structure** (up to 40,000 dwellings per organization)
- High interest in reducing the energy consumption (**social mission**)
- Acceptable within social housing **investment capacities**
- Ability to **facilitate** free choice of the most suitable energy provider



Piotr Zietara
Bax & Willems Consulting Venturing
Roger de Lluria 120
08037 Barcelona, Spain
tel +34 93 476 04 44
e-mail p.zietara@baxwillems.eu