



SHOWE-IT

“Real-life trial in Social Housing, of Water and Energy efficiency ICT services”

September 18th 2013 – Piotr Zietara

© Bax & Willems Consulting Venturing

Bax & Willems Consulting Venturing

C/ Roger de LLuria, 120 | T. +34 93 476 04 44 | info@bwcv.es
08037 Barcelona, Spain | F. +34 93 476 04 77 | www.bwcv.es

Main points

Tenants actively use the ICT system only if they have **financial incentives**

Home energy management system needs to be **simple and affordable**

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

SHOWE-IT is a demonstration project with 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

The project consortium consist of 12 partners and 3 pilot sites

Partners:

Bax & Willems
Consulting Venturing



SIEMENS

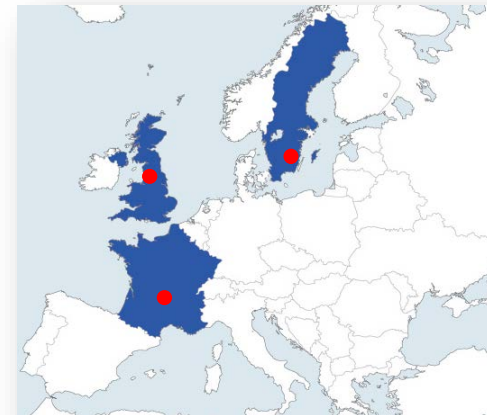


AQUALOGY
Where water lives.



Pilot sites:

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



Tablet interface provides real time consumption data

Show consumption per

Now

Day

Week

Month

Record usage



00:00:00



Indoor temp 19°C



Tips & Blog



Control Heating

Economy

Normal

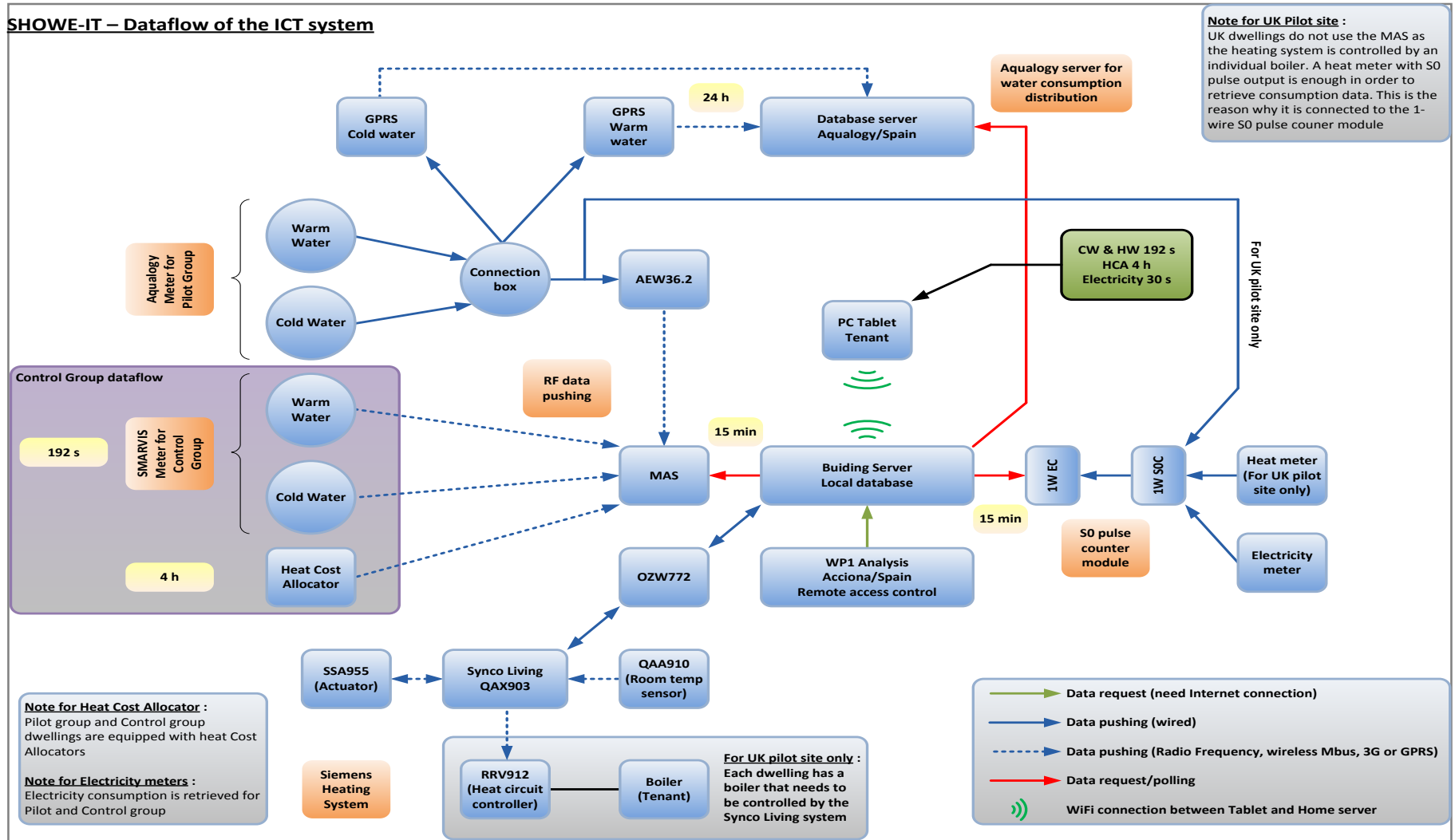
Comfort

Going Out

If you leave the tap running for one minute over 15 gallons of water will be lost.

SHOWE-IT covers high complexity of a home energy management system...

SHOWE-IT – Dataflow of the ICT system



The project has the pilot and control groups

Pilot Group

Control Group

Electricity consumption
Cold & hot **water** consumption
Gas real time consumption
Heating

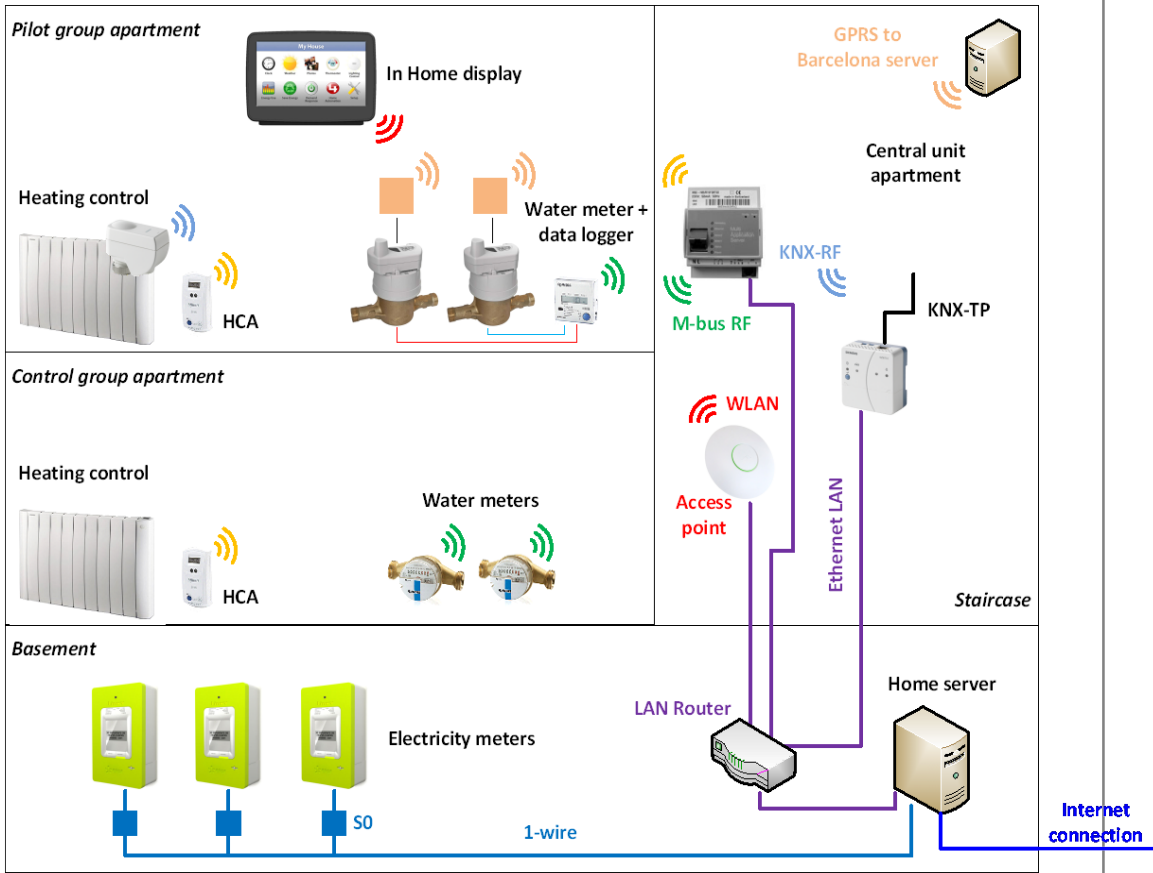
Training sessions

In-home display (**tablet**)

(Near) **real time** metering
Heating **remote control**
Water **uses identification**

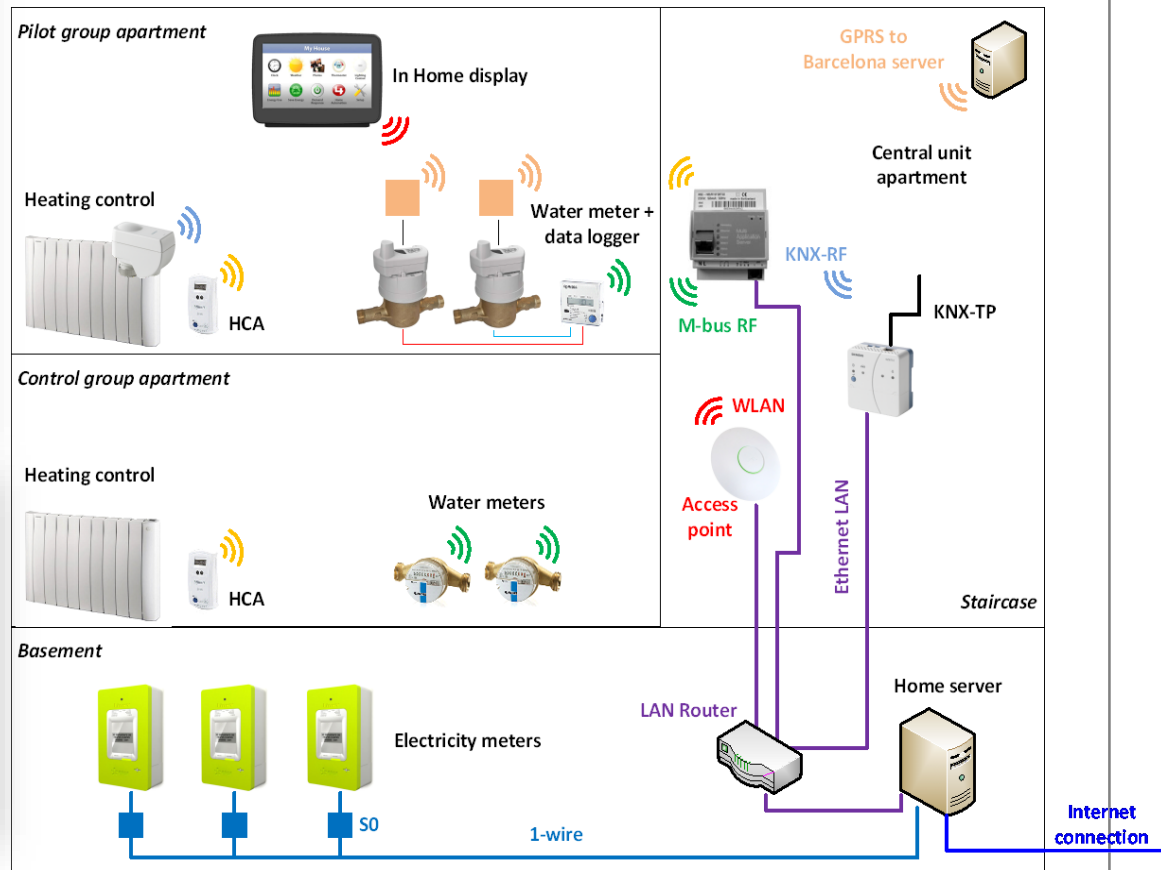
In Sweden the installation is 100% complete

Installation Status: 100%



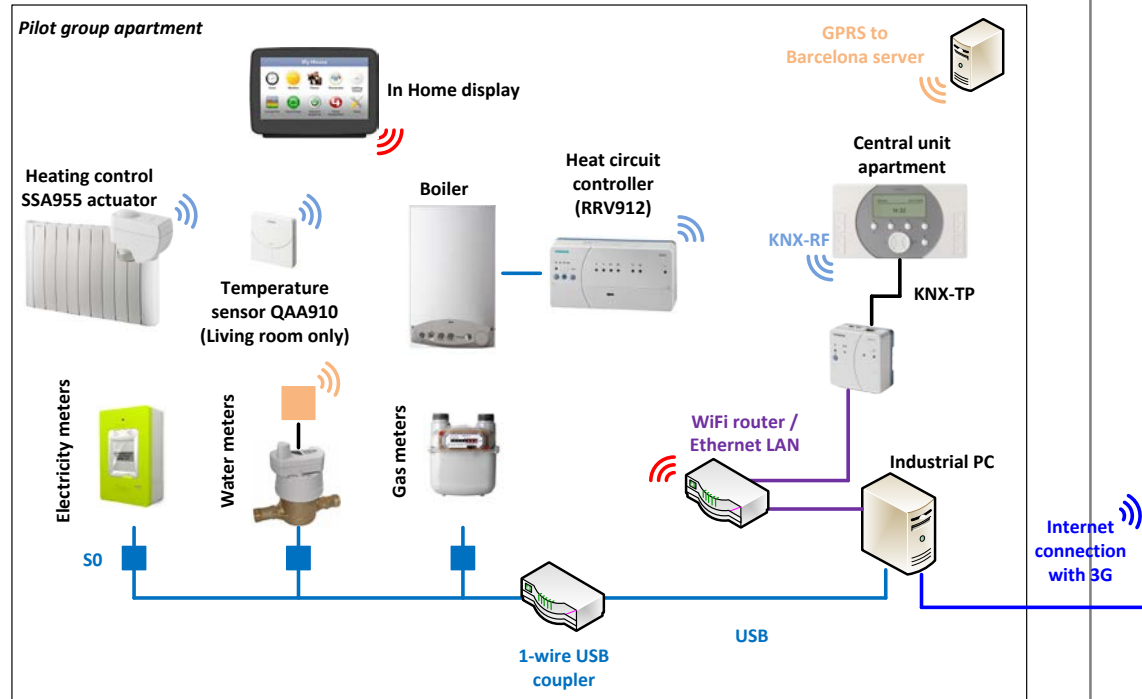
In France the installation is almost complete

Installation Status: 90%



In England the installation is 100% complete

Installation Status: 100%



Preliminary results of data analysis show savings in the energy consumption

In Sweden:

Heating 14% - 38%

Based on 1 month consumption – April 13

Electricity – savings

No exact estimate due to the holiday period.

For comparison the average saving in residential dwelling from all ICT projects: *

- Gaz : 12%
- Electricity : 8,4 %
- Hot Water : 6,9%
- Cold Water : 6,3%

*<http://eemeasure.smartspaces.eu/>



Tenants are not engaged unless they see clear financial benefits

Problems with engaging tenants in participation:

- Lack of trust between the tenant and SHC
- Suspicion of metering – the 'big brother' effect
- Lack of motivation
- No interest in sustainability
- Unwillingness to change lifetime habits



What matters: **financial initiative**

Variations of the buildings infrastructure led to the installation problems

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



32 Great Lee Walk



78 Bentley Street



82 Bentley Street



84 Bentley Street



86 Bentley Street



1 Bentley Street



2 Bentley Street



3 Bentley Street



4 Bentley Street

Knowledge and experience of the installers was proven to be relevant

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’**. ”*



Should we train installers or make the technology simpler?

Technology providers are already entering the residential market



Currently utilities are the most active players on the market



Utilities vs. social housing as ICT solutions providers

Utilities

- ✓ Huge network of potential costumers

Drivers:

- ✓ Energy Companies Obligations
- ✓ Energy sale
- ✓ Retaining customer loyalty



Social Housing

- ✓ On average 20-40k dwellings per organization

Drivers:

- ✓ Social mission – affordable living

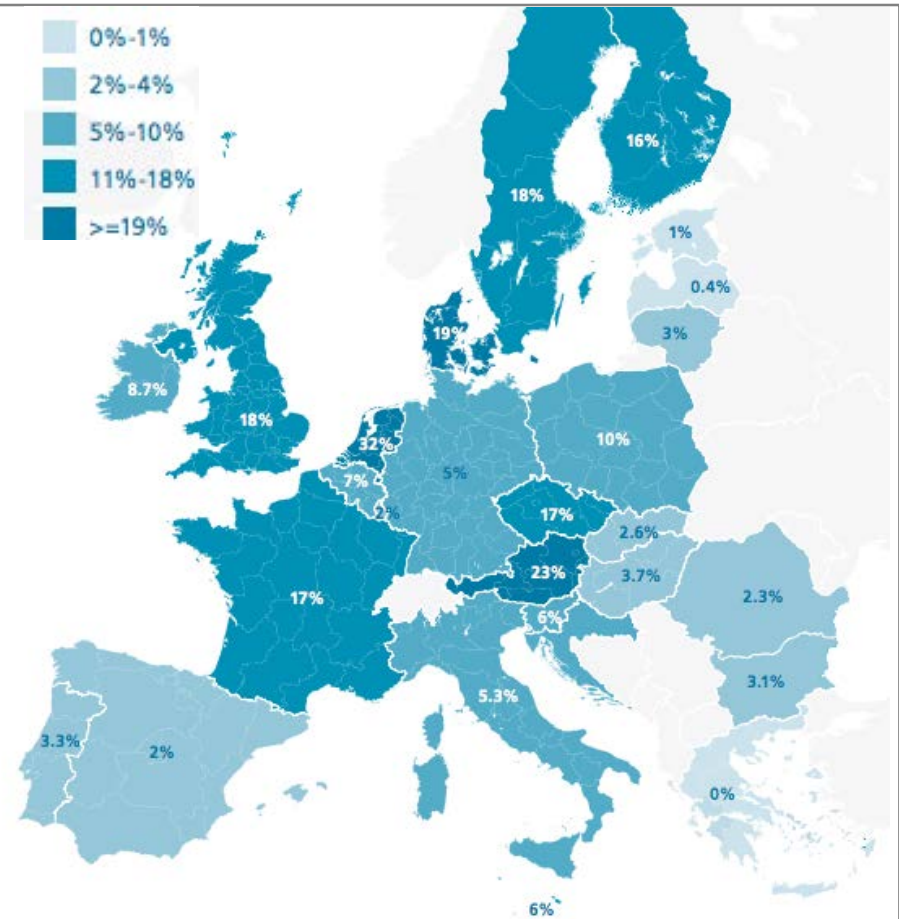
Social housing is well positioned for ICT systems introduction

- 12% of European housing stock
- Ability to facilitate **free choice of the most suitable energy provider**

Switch to the most optimal energy tariff brings **on average 12% savings**

- up to 300€ per year*

- Administrative support in switching the energy supplier



*based on UK market



Contact us!

Christian Hollmann

SHOWE-IT Project Coordinator

e-mail: Christian.Hollmann@botkyrkabyggen.se

AB Botkyrkabyggen



Piotr Zietara

Energy efficiency expert

e-mail: p.zietara@baxwillems.eu

Bax & Willems Consulting Venturing

Bax & Willems
Consulting Venturing