



# **SERVEing The Nation – Applying lessons from the SERVE Concerto project to Ireland**

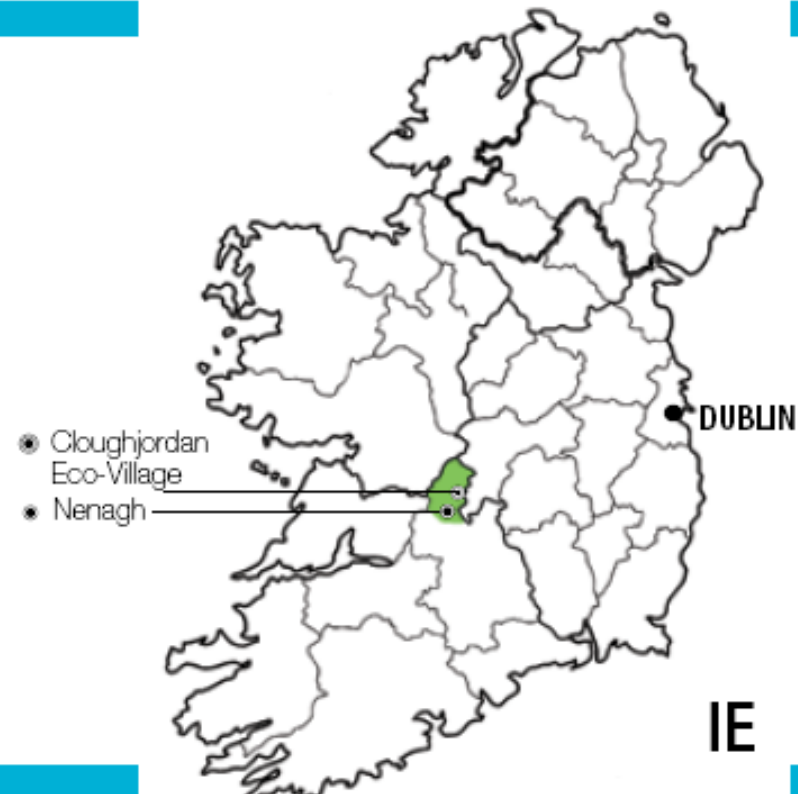
**SEAMUS HOYNE**

## SERVE REGION (GREEN AREA)

Home to this project: a rural region of 600 km<sup>2</sup>

### PARTNERS OF THE PROJECT

Limerick Institute of Technology, IE  
North Tipperary County Council, IE  
Tipperary Energy Agency Ltd, IE  
Sustainable Projects Ireland Ltd, IE  
Renewable Energy Management Services Ltd, IE  
Energy Consulting Network, DK  
Senergy Econnect Ltd, UK  
CIRCA Group Europe Ltd, IE  
FEDARENE, BE  
Surface Power Technologies, IE  
Ayuntamiento de El Franco, ES  
North West Croatia Energy Agency REGEA, HR



# SMART REGION



# CORE PROJECT ACTIVITIES

- ✕ **Retrofitting for Existing Houses and Buildings**
- ✕ **New Buildings**
- ✕ **Renewable Energy Supply**
- ✕ **Monitor** and prove results
- ✕ **Research** on socio-economic impacts and sustainable electricity options
- ✕ **Train/Educate** people





400  
Retrofits

50  
New Builds



73,000m<sup>2</sup>



600  
Wood Stoves

950 m<sup>2</sup>  
Solar Panels

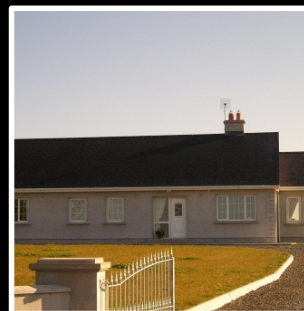


2,300kW  
Biomass



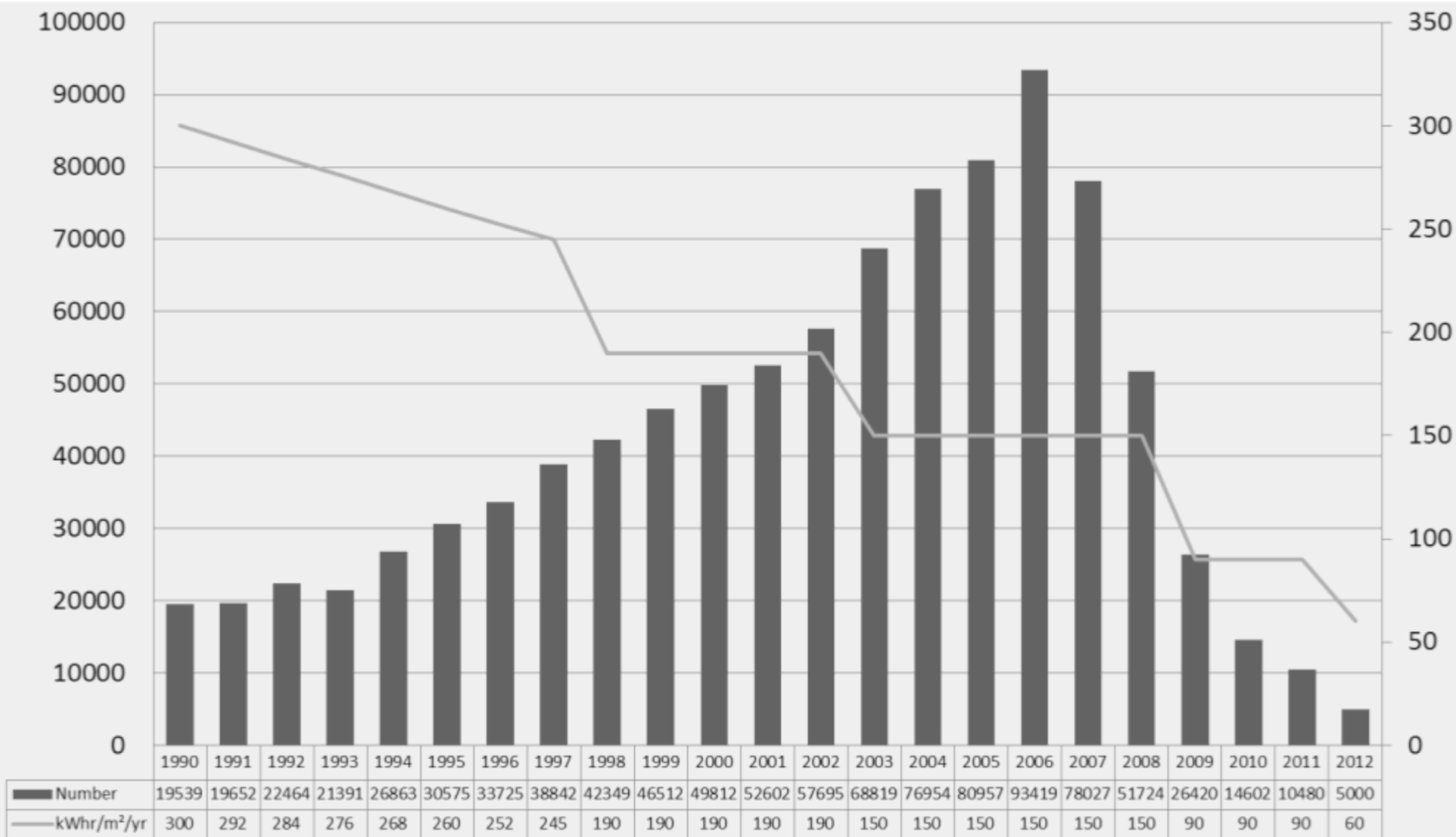
40,000,000  
pieces of Energy  
Data

100's of House  
Visits



Many Cups of  
Tea





# THE 2007/2008 SCENARIO

- *No supports for retrofitting of homes*
- *No standards for retrofitting*
- *Few trained personnel*
- *Limited exposure to new procurement models*
- *Limited energy performance data for residential sector*
- *Economic & Construction Sector collapse*

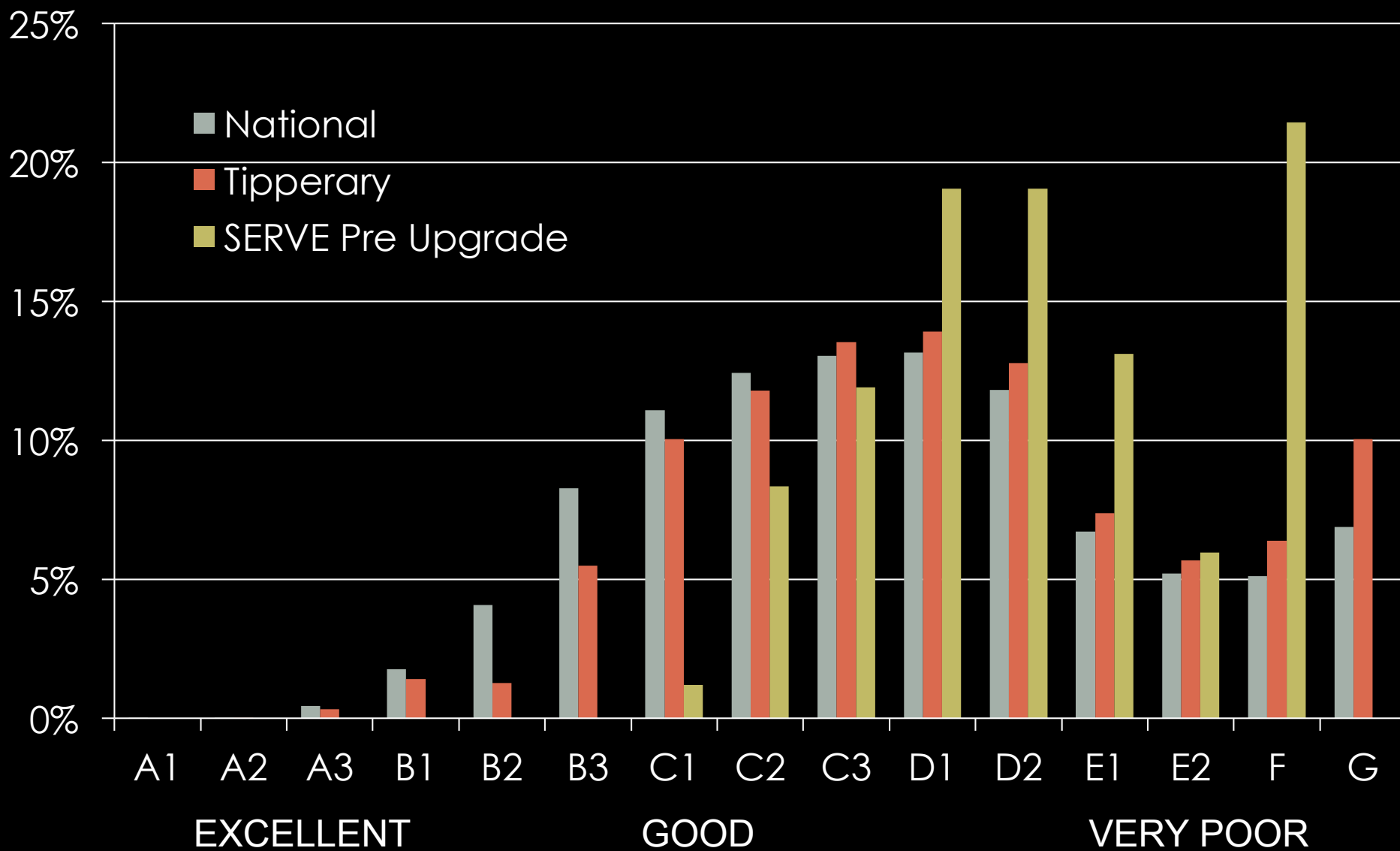
• **NO PROBLEMS THEN!**



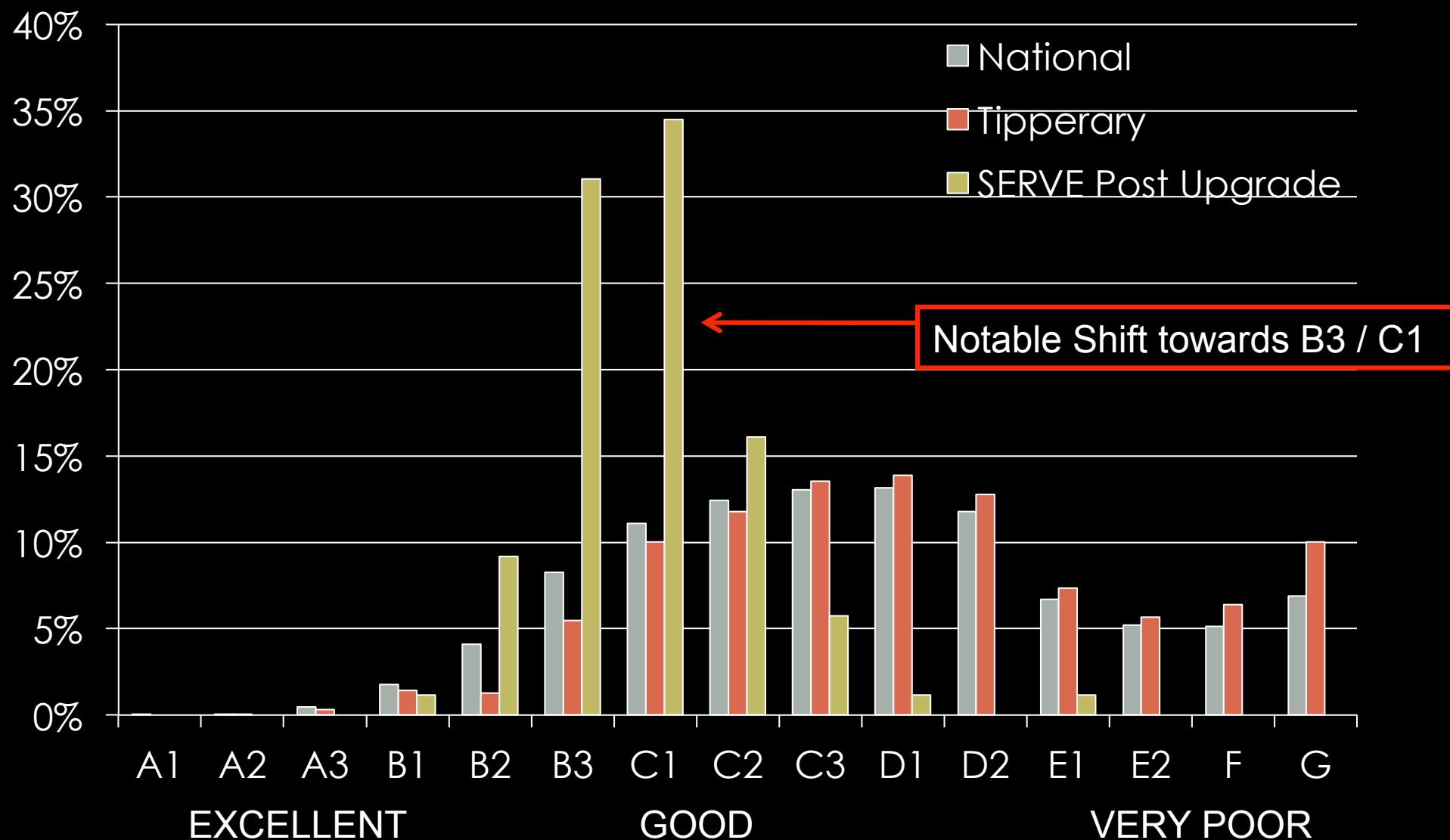




# SERVE MONITORED HOUSES – PRE UPGRADE



# SERVE MONITORED HOUSES – POST UPGRADE



# SERVE IMPACTS - RETROFITTING

- Quality Standards & Training interlinked
- Facilitated Peer Communication
- National Pilot
  - SERVE tested DEAP Methodology
  - Training and Auditing of BER Assessors
  - Heating Controls identified as key issue
- Savings of 92kWh/m<sup>2</sup>/yr per dwelling (40%)
  - National scheme 20%
- Average Investment levels of €7,660/dwelling, IRR 11%
  - National Scheme ~€3,000
- **640,000 homes require Deep Retrofit in Ireland**
  - **New Better Energy Finance Retrofit Scheme**

# PROCUREMENT



- Limited knowledge of ESCO Procurement in public sector
- SERVE developed and implemented range of Heat Supply Contracts
- Evolved into Benchmark for full ESCO development in Ireland
- Templates proven with Financial Controllers



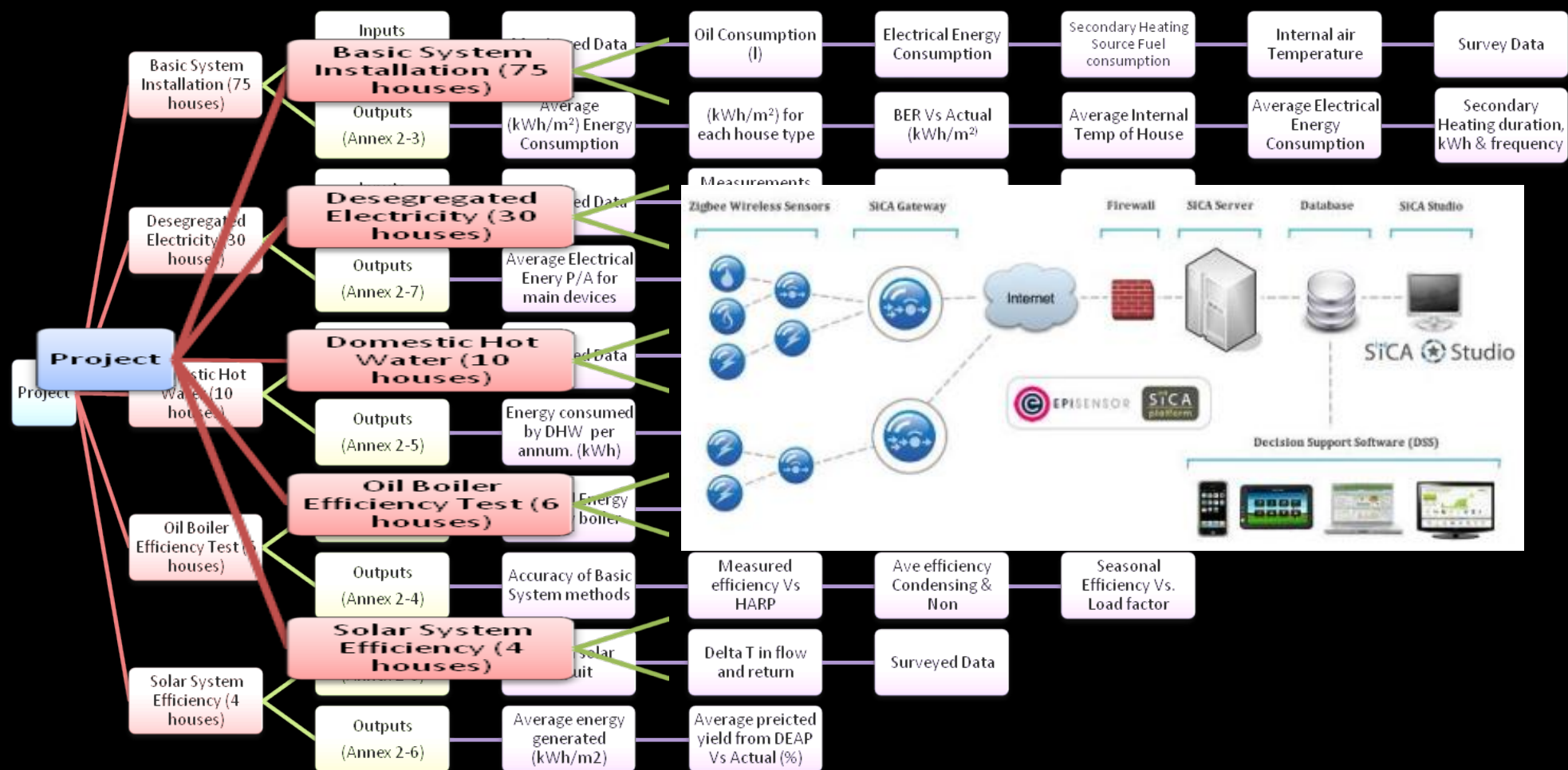
# HOLE IN THE ROOM!



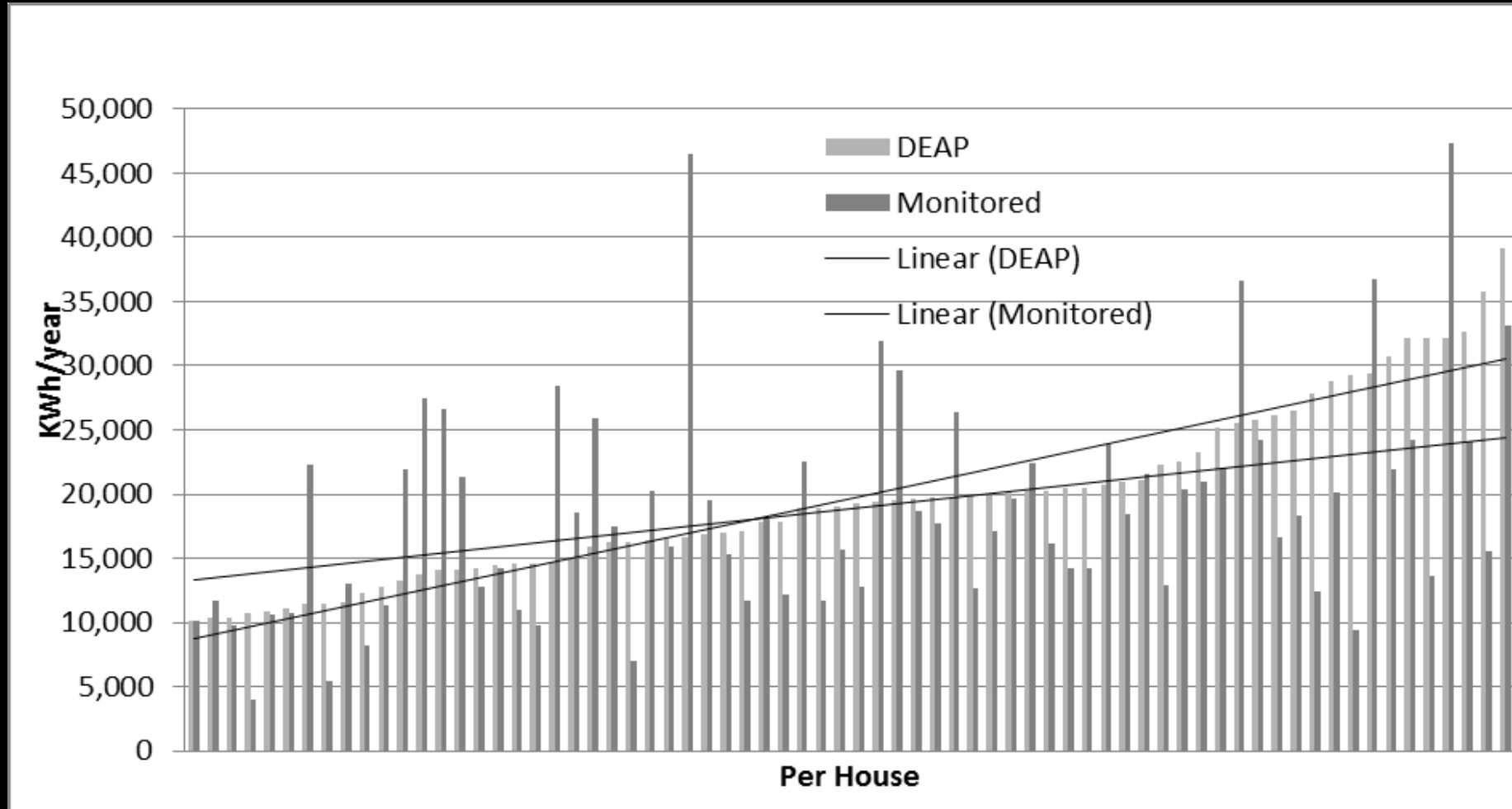
- Specific focus on elimination of the Open Fire!
- 2,300kW of wood stoves installed
- Technical standards developed
- Business development & elimination of low quality products



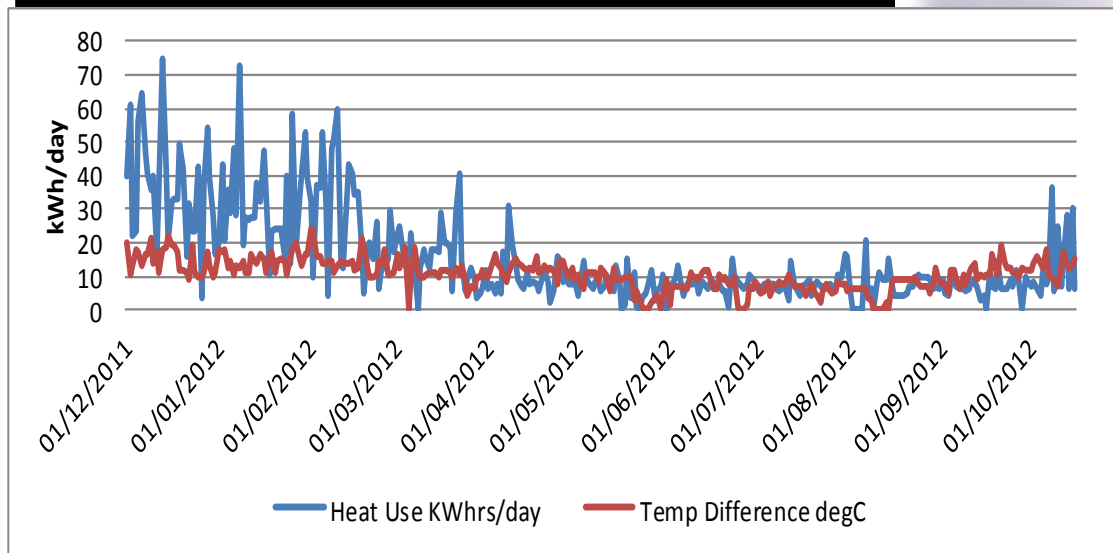
# SMART MONITORING



# ACTUAL VS PREDICTED CONSUMPTION



- Average of 13% difference between DEAP and Monitored
- Secondary Heating Fuel use significantly higher than predicted
- Building under heated compared to DEAP



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## Feedback, Suggestions, Bugreports



CONCERTO is co-financed by the European Union under the Research Framework Programme.

# SERVE ONE OF THE BEST IN CLASS

**www.concerto.eu**

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# NOW AND *THEN*

- **Now a National Retrofit Programme and Grant Supports which have many similarities to SERVE structures**
  - *No supports for retrofitting of homes*
- **200 construction people trained on quality standards**
  - *No training on retrofitting*
- **SERVE has 40 million data points on energy consumption in dwellings (retrofitted and new buildings)**
  - *No data on energy performance of dwellings*
- **1.5MW of biomass heating in place on Heat Supply Contracts. ESCO Model Development**
  - *No Biomass Heat Supply Contracts in Place*

# CONCLUSIONS



- Ireland will not achieve its retrofit and NEAPP targets without dramatic increase in rate and depth of retrofits
- Data as a means to drive change
- A workforce that understands quality



# THANK YOU

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