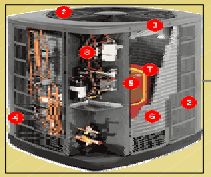
Technology Strategy Board

Internet-enabled Monitoring & Control of Homes and Buildings

(This project is part-funded by the Technology Strategy Board)

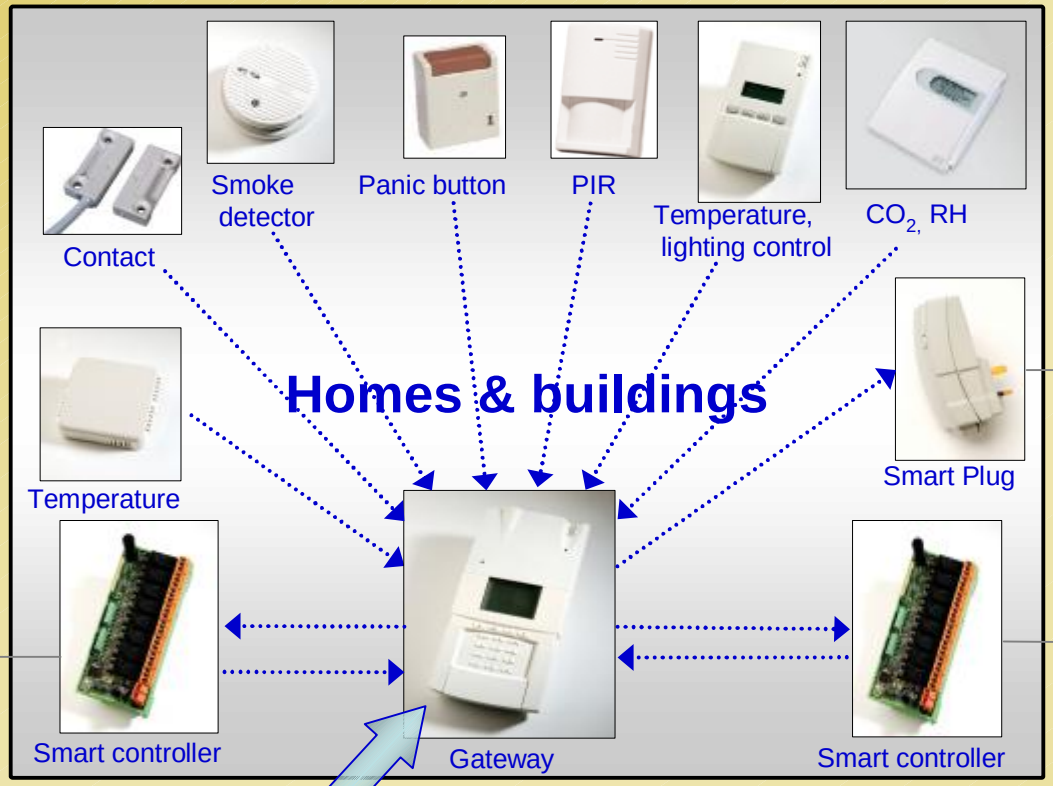
Solar cells



Heat pump

Wind turbine

CHP, boiler



Immersion heater

Washing machine

Lighting

Fridge

Air conditioner

Vent fan

Internet

EnTrak*

- ***Energy monitoring & feedback***
- ***Large scale energy management***
- ***Indoor environmental control***
- ***Care for elderly, infirm and vulnerable***
- ***Security & hazard identification***
- ***Demand management & control***
- ***Condition monitoring of RE & LCT***

*__EnTrak__: Energy and Environment Information system
(Developed by Strathclyde University)

Persimmon houses at Irlam near Manchester

- ***Homes for the future*** built by Persimmon
-'***Eco', 'Technology', 'Lifetime' houses***
- System (PV, Wind turbine, under-floor heating, geo-thermal heat pump, µCHP) ***condition monitoring***

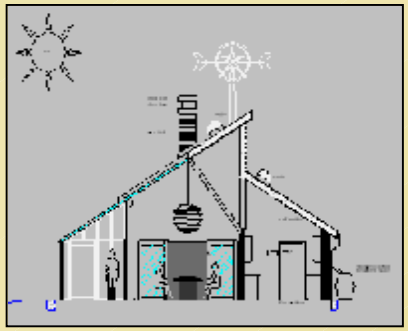
Construction village, Laing O Rourke buildings, located at Almondvale, Livingston

- Deploy 'smart' technology in site cabins
-Optimized control of energy demand to ***reduce temporary power requirement***
-Reduce local environmental impact

Retail building, Toby Carvery in Strathclyde Park, near Motherwell

- ***Remote energy management***
- Indoor environmental monitoring and control
- Plant condition monitoring

The Dundee 'Sun city' house



- ***Sustainable*** refurbishment of Janitor's house at a primary school
- ***Demand/supply matching and control*** (lighting, fridge, hot water storage, daylight utilisation)
- ***Condition monitoring of RE, LCT*** (i.e. solar collector, PV, wind turbine, geo-thermal heat pump)

Affordable rented houses at Kirkmichael, Ayrshire

- New housing suitable for various needs
- Independent living (security, affordability & safety)
- Potential to reduce institutionalised ***health care***

Project partners

Technology Strategy Board

Mitchells & Butlers

Dundee City Council Architectural Services

PERSIMMON

Ayrshirehousing

bre

LAING O'ROURKE

adam

University of Strathclyde Glasgow