National Trust?
Context

- 2 gold mines
- 39 villages
- 88 castles
- 300 mansions
- 700+ miles of coast
- 2000 agricultural tenants
- 3749 oil tanks
- 5000 staff
- 29,000 buildings
- 42,000 ha of woodland
- 61,000 volunteers
- 250,000 ha of land
- 4.3 million members
- £6.5m Energy spend
- 15 million visitors
- and 61 pubs…
Where do you start from?
Energy
Experience in energy
Certificate chasing
How green is your mansion?
Typical property energy approach – Plas Newydd

Site audit
- Specialist survey
- Maintenance contract
- Optimisation BMS strategy
- Overhaul boiler
- Staff training
- Sub metering, meter monitoring

Dynamic heat loss model
- Hand dryer trial
- Full biomass feasibility
- Roof insulation
- Flange insulation
- Heat pump pre feasibility
- Smart metering

Heat pump full feasibility
- Low heat dynamic model
- Detailed M&E assessment and room by room heat loss
- Site re audit
- Hand dryer rollout
- LED lighting

2012
- 50kw PV installation
- Heat pump design and EIA
- Hydro pre feasibility
- Staff training
- New heat main and zonal design
- Conservation LED lighting
- Secondary glazing

- Marine source heat pump instillation
- Wind turbine feasibility
- New heat main
- Localised solar thermal
- Improving shutters and curtains
- Visitor centre heating - ASHP
- Fabric insulation – tea room
Clever stuff
Biomass
Photovoltaic
Looking forward
Trading

Non Traditional business model

Piclo

Virtual aggregation

Sunshine tariff

Utility scale