Research, Innovation
and Community Implementation

George Ponton
Head of Research and Innovation
Who in the World Am I?
Ah, that’s the great puzzle!

- Lewis Carroll

George Ponton
Head of Research & Innovation
Disclaimer

The views expressed today are not necessarily the views of Scottish Water
Overview

• Scottish Water Overview

• Current Approach

• Alternatives

• Community Attitudes and Appetite
A Brief History

Statutory Body Formed in 2002

Merger of 3 authorities

£4bn of investment delivered

Improved Water Quality

Improved Wastewater compliance

Reduced Operating Costs

Reduced Customer Charges
Context

- 4th largest water company in UK
- £1bn annual turnover
- 5 million customers
- 2.1 billion litres of water per day supplied
- 1 billion litres of wastewater collected and treated
- 47,000 km of water pipes
- 50,000 km of sewer
- 1,837 wastewater treatment works
- 270 water treatment works
Our vision is to be:

Scotland’s most valued and trusted business, one that we can all be proud of.
Always serving Scotland

providing high quality affordable water

protecting and enhancing our environment

supporting Scotland’s communities and economy
Growing
Always seizing opportunities to add value
Horizons

Poo Power!

fibrecity

BioPower

Wind turbine

Car
We Provide A Universal Service – but should we?

• Water vs Wastewater

• Rural vs Urban

• Variable Service vs Variable Service Delivery
Why Change?

If we could reduce the per capita costs for rural communities then we could lower the overall average percentage of total population.
Water Service Managers or Water Cycle Managers

• Can we provide more sustainable services?

• Is there more opportunity for value recovery?

• Can we better protect & enhance the environment?
Alternative Water Supply Model?

- Rainwater catchment tank
- Bath & shower
- Washing machine
- Sinks
- WC
- Garden

[Scottish Water logo: Always serving Scotland]
Community Energy Potential

Household wastewater

Macerated bio-waste

Wastewater Treatment Works

Generated Power

Surplus power to community

Agricultural slurry

Co-digestion

Biogas

CHP

Sludge residue returned to farms
Resilient Community?
Barriers

- Institutional Arrangements
- Economic Drivers
- Political will
- Customer Attitudes
- Customer behaviours
- Legislation
Community Engagement

• Is a universal service desired / expected?

• What are the particular issues and what part can water cycle management play in addressing them?

• What level of involvement are you prepared to provide?
  – Own / operate / maintain

• What pilot communities can we identify and what partnerships do we need to manage and finance?