

Water Services Training Group

19th Annual Conference

Optimising Services Delivery in the Water Industry

Radisson Blu Hotel, Sligo, 3rd. September 2015



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Optimising Services Delivery in the Water Industry

Developing an Asset Management approach in a Public Water Utility

Geoff Aitkenhead
Executive Director
Scottish Water



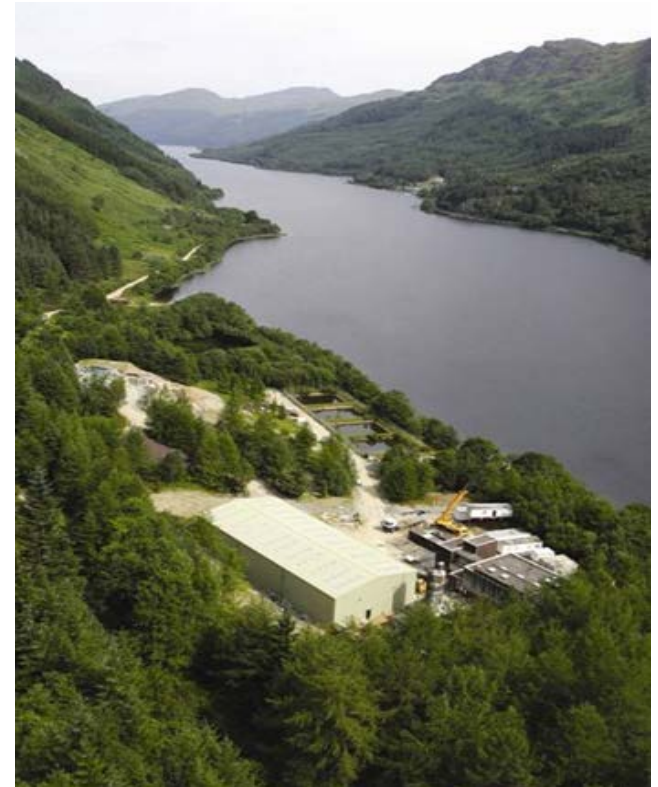
Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Agenda

- * Scottish Water Context
- * What is Asset Management?
- * Scottish Water's early asset management
- * Improving asset management
- * Scottish Water target operating model
- * Critical success factors

Managing our Assets - Context

- * Population served 5 million.
- * 256 water treatment works.
- * 1382 service reservoirs & water towers
- * 599 water pumping stations
- * 48,107km water mains
- * 1836 wastewater treatment works
(incl septic tanks)
- * 2156 wastewater pumping stations
- * 27 sludge treatment centres
- * 50,066km sewers



Managing our Assets - Context



Overall asset
value over
£55.92bn



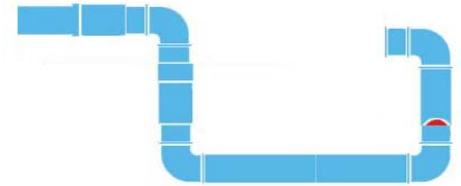
Other
£165m



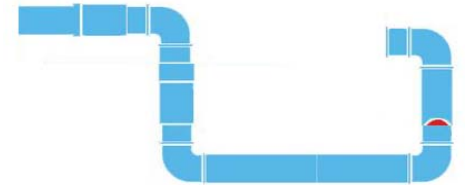
Non infra
water
£4.68bn



Non infra waste
water
£4.87bn



Infra water
£ 13.39bn



Infra waste water
£32.8bn

Managing our Assets - Context

SR10 Investment £2747m

- * No of projects = 5894

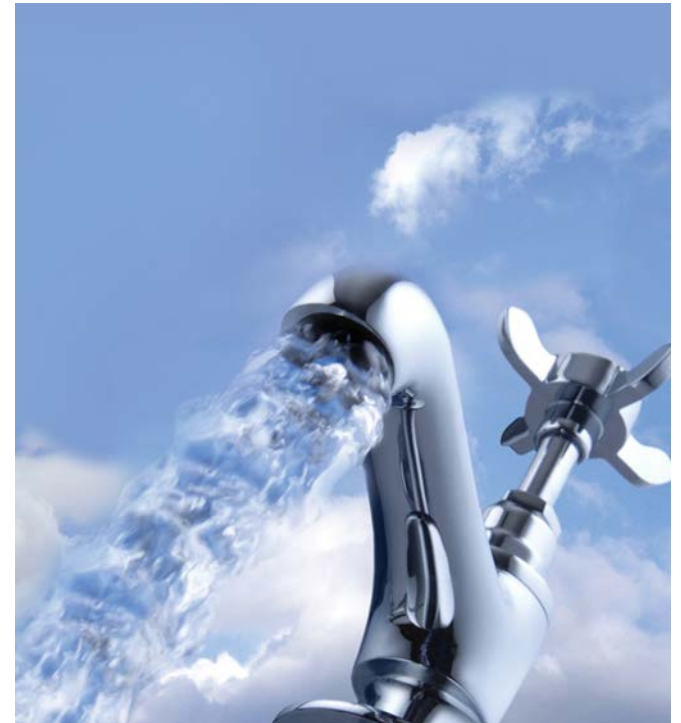
Distribution by value

- * <£1m = 5257
- * £1m - £3m = 414
- * £3m - £10m = 191
- * >£10m = 32
- * Capital Maintenance £220m pa
- * Implied Asset Life 255 years



Our early Asset Management

- * Priority: operating cost reduction
- * Investment: driven by EU Directives
- * Investment delivery outsourced
- * No long term strategies
- * Little understanding of risk

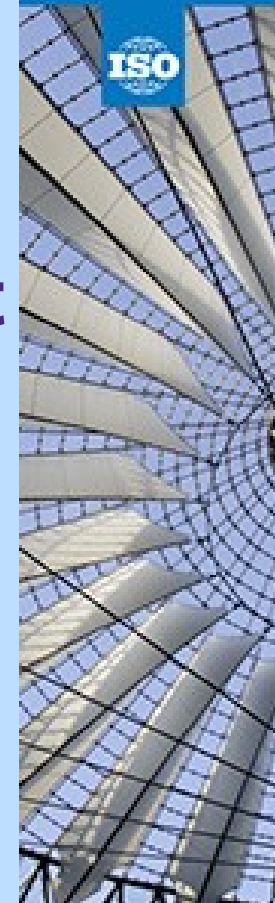


Headlines



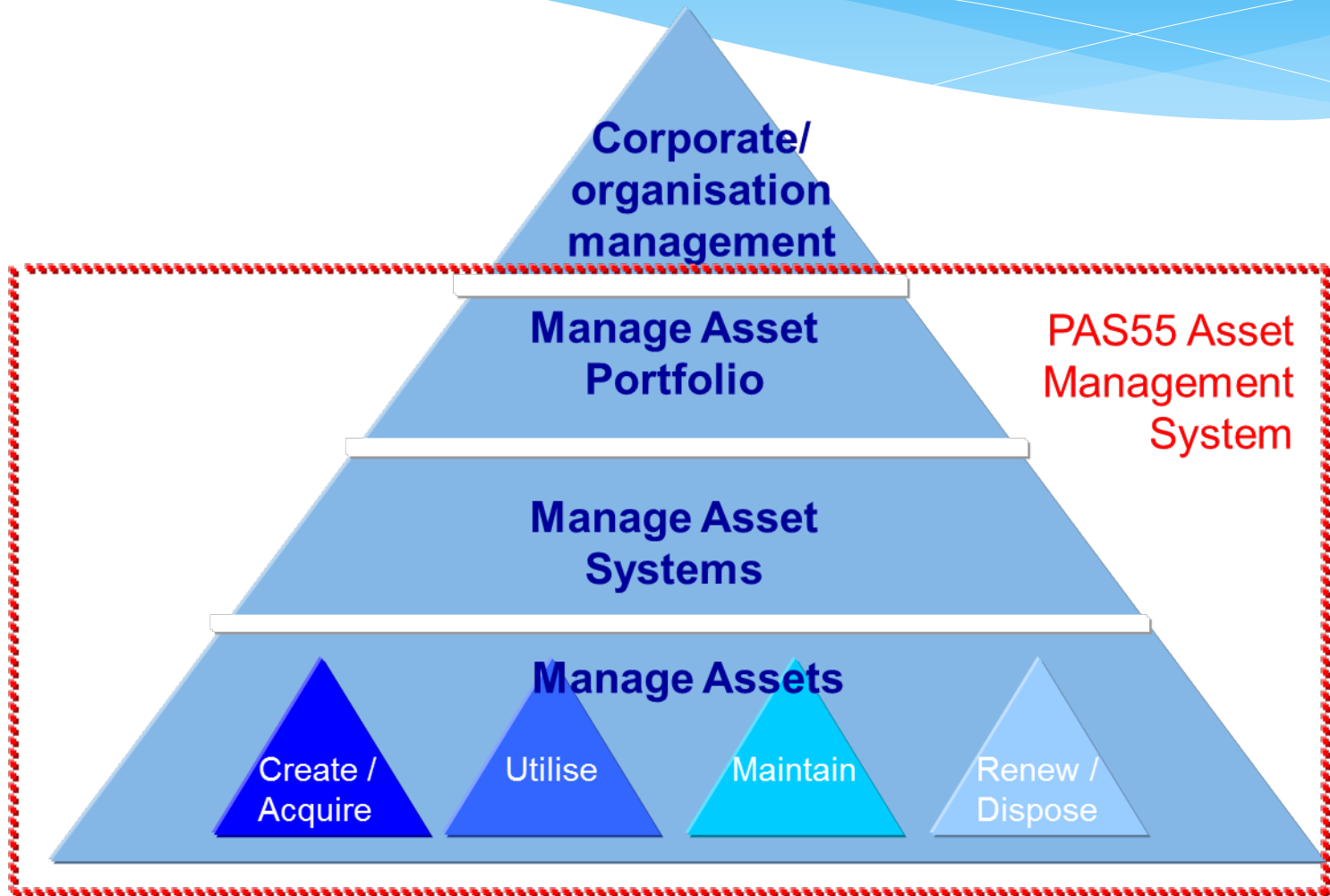
55000 Series Is Made Up Of

- ISO 55000
- provide an overview of asset management
- ISO 55001
- “requirements” for



The Standard Itself Is ISO55001

What is Asset Management?

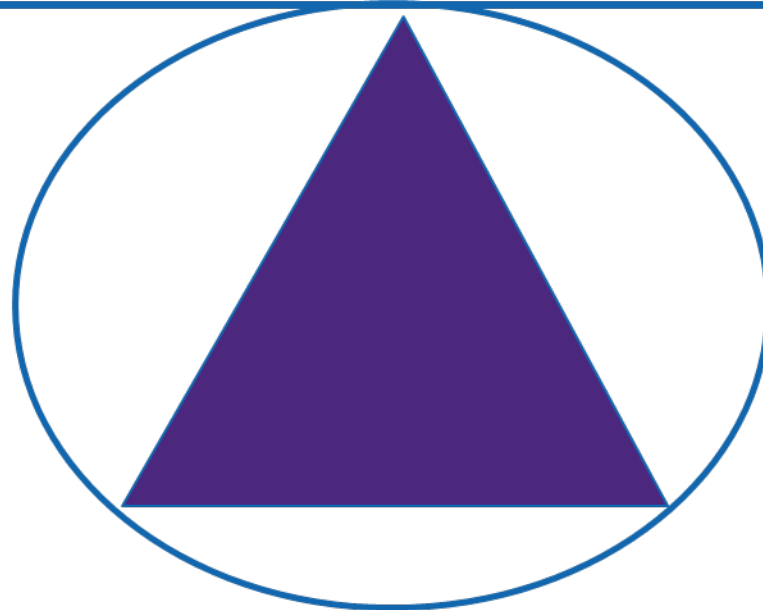


Asset Management is to Optimise.....

Risk

Performance

Cost



Improving Asset Management

- * Clear line of sight from Corporate Vision and objectives
- * Customer service focus and performance measures
- * Asset strategy team established
- * Began pursuit of ISO9001 and PAS55 accreditation
- * Established the principles of Asset lifecycle planning
- * Growing understanding of risk

Customer Service Performance Measures

Overall Performance Assessment (OPA)

- * Water Quality
- * Water Pressure
- * Unplanned interruptions to supply
- * Hosepipe restrictions
- * Leakage
- * Security of Supply
- * SOSI
- * Water pollution incidents
- * Non-compliant WWTW
- * % population served by non-complaint
- * Internal sewer flooding incidents – overload (IFOS)
- * Internal sewer flooding incidents – other causes (IFOC)
- * Properties at risk of internal sewer flooding
- * Wastewater pollution incidents
- * Sludge disposal
- * Assessed customer service
- * Customer contact

Understanding of Risk

Corporate Risk Register

Risk Appetite

Service Risk

Asset Risk

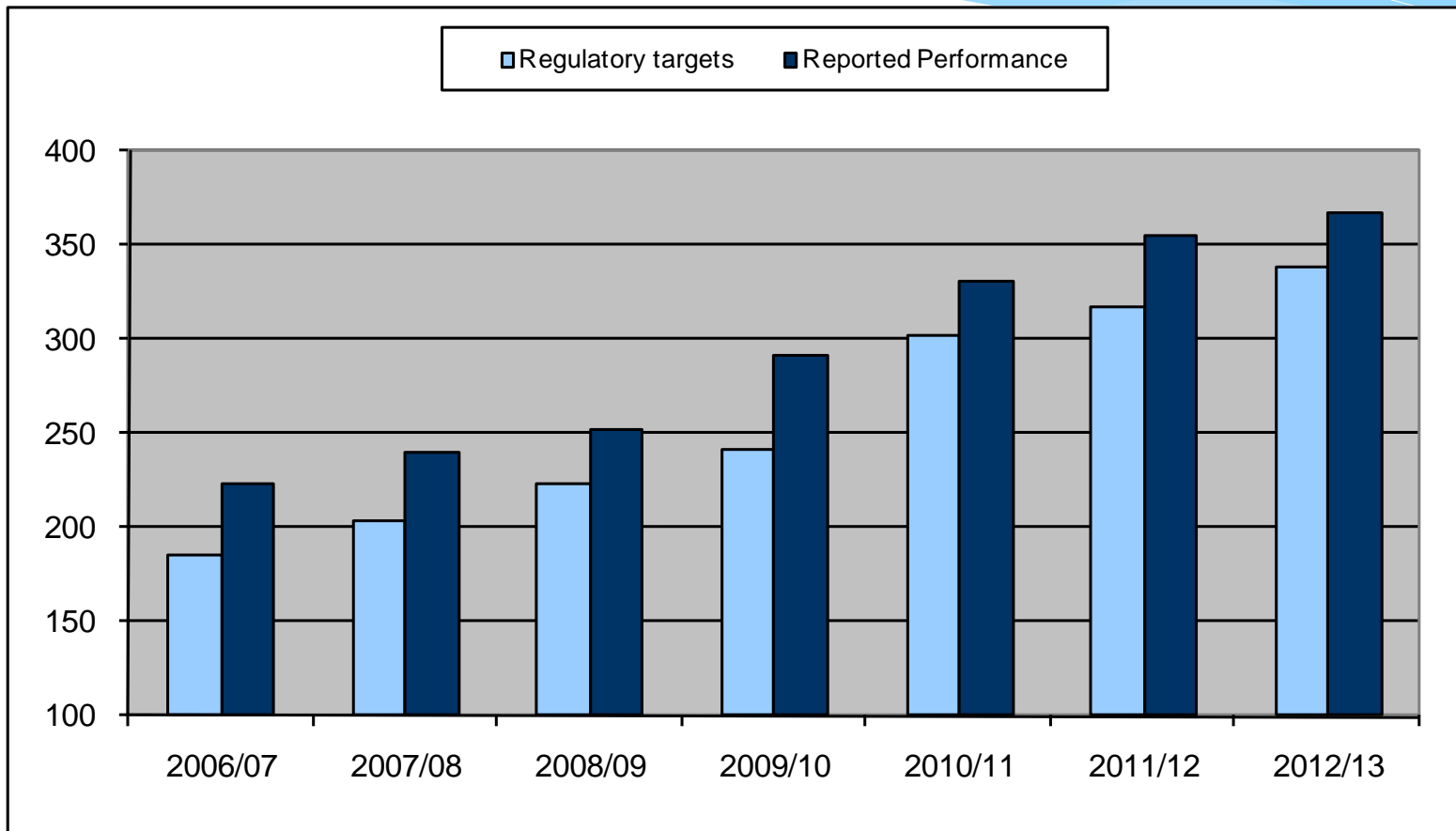
Criticality

Resilience

Reliability

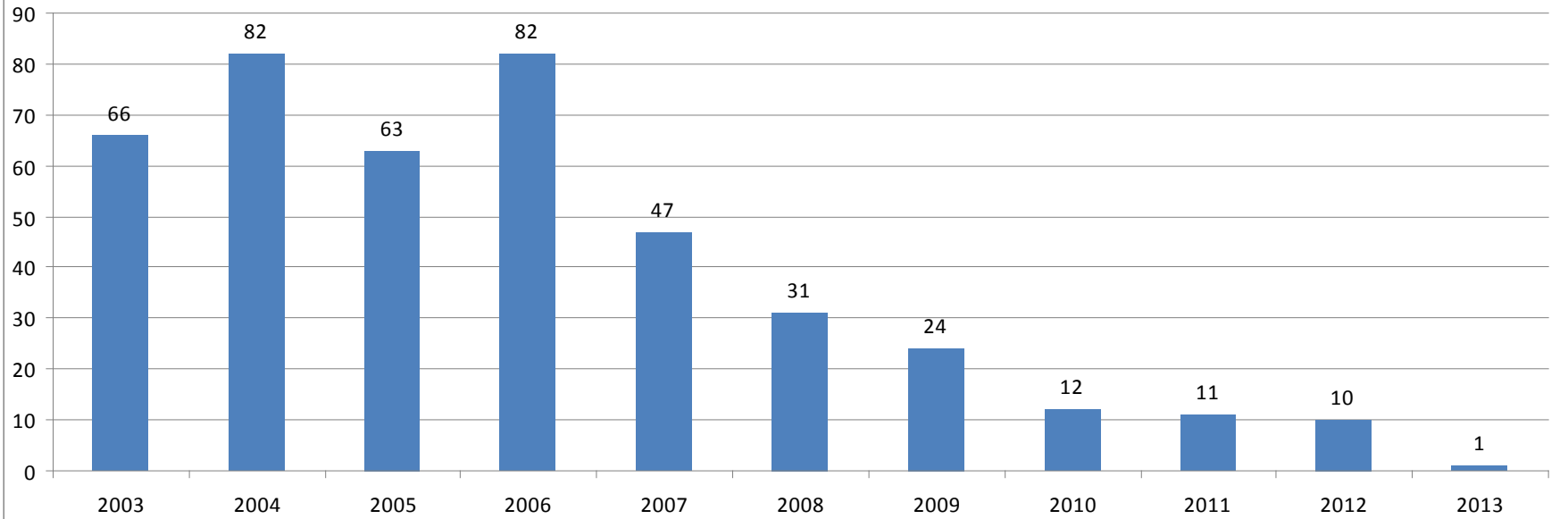


Performance Improvement Trends - OPA

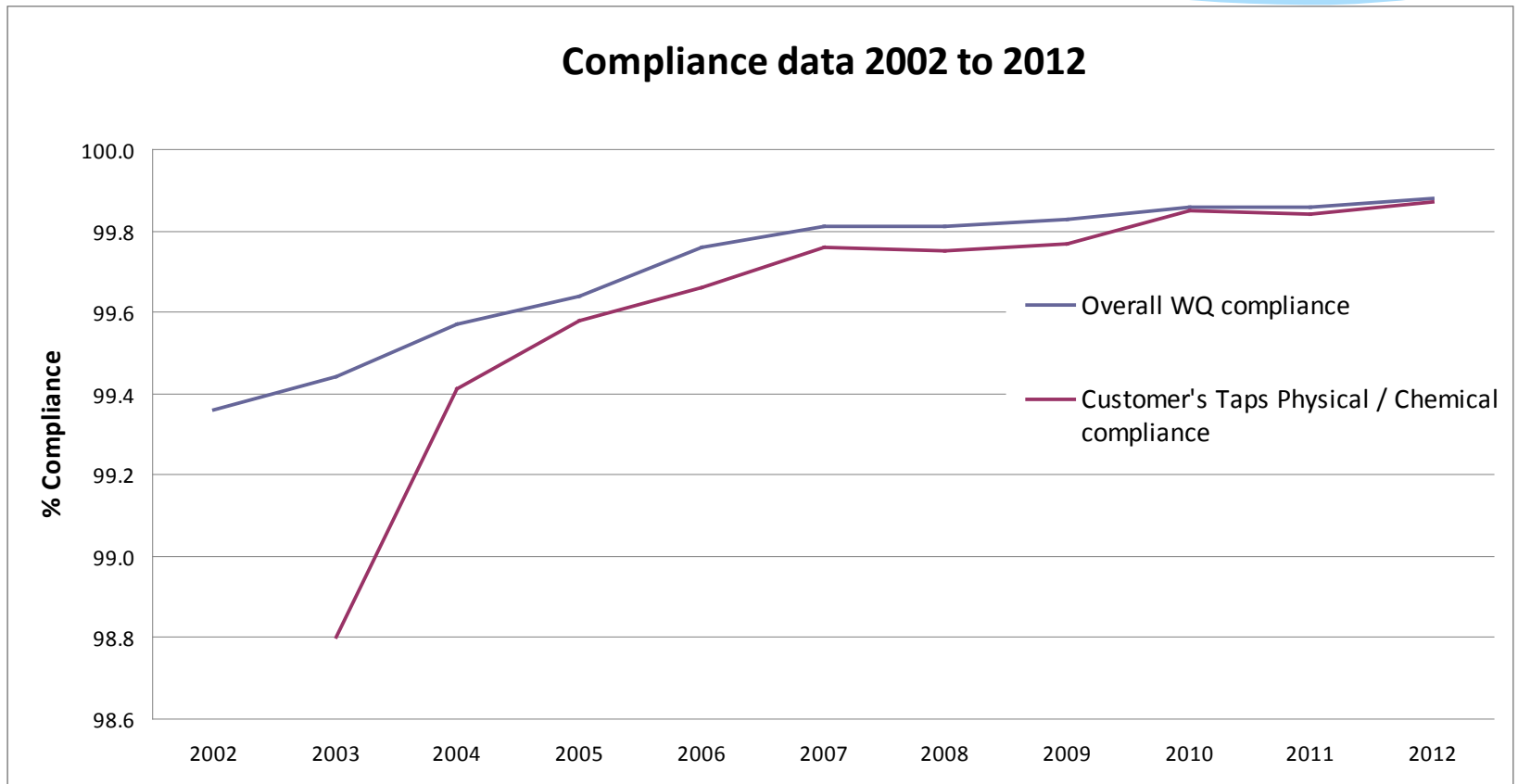


Improving Asset Management

Number of Failing WWTW



Improving Asset Management

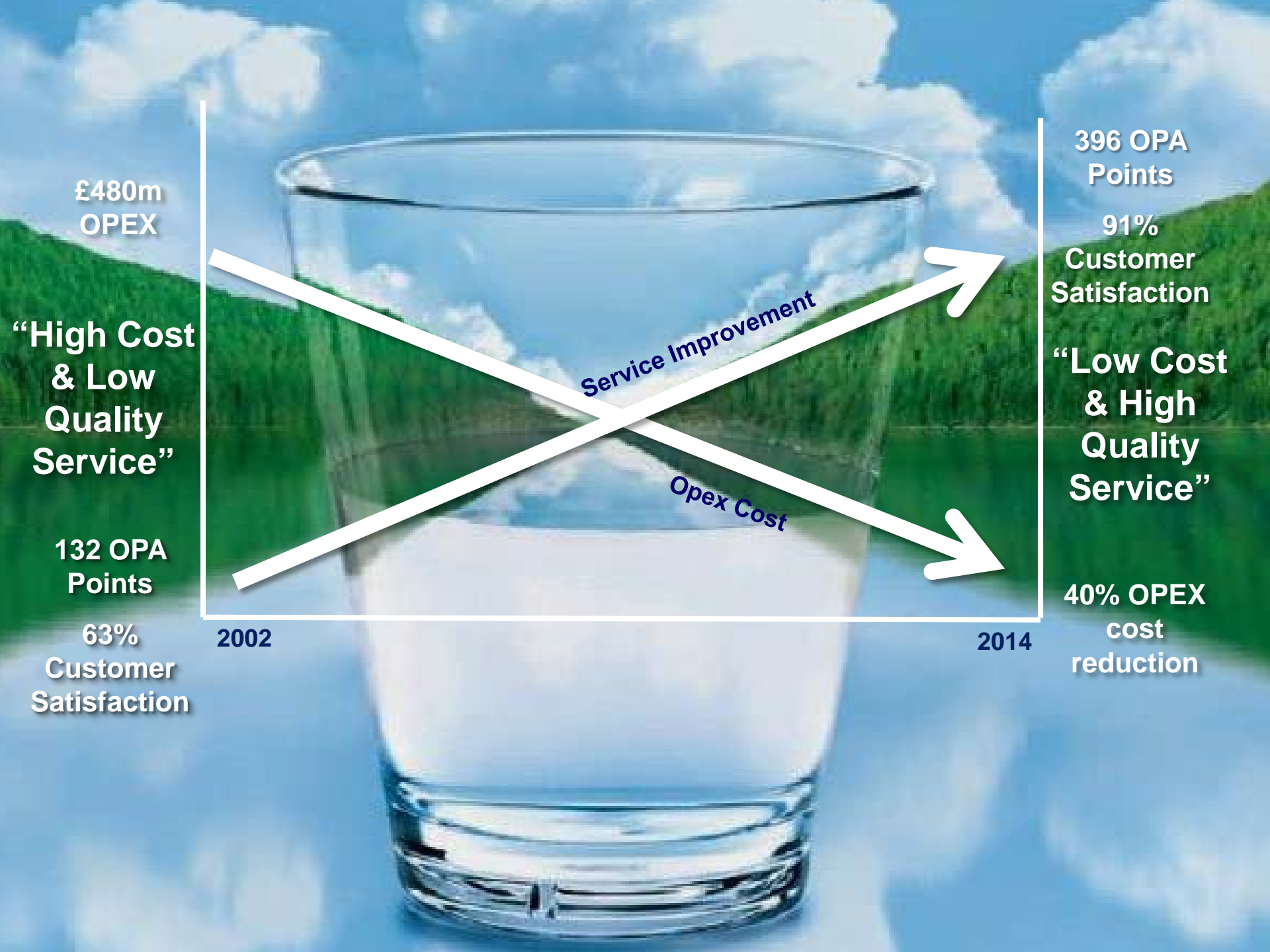


Scottish Water: Leading - Efficiency

Comparison with English and Welsh water companies based on OFWAT published average charges

Water and Sewerage Companies	Average Household bill for 2013/14
South West	£499
Wessex	£478
Southern	£449
Welsh	£434
Anglian	£434
United Utilities	£406
England & Wales average	£388
Yorkshire	£368
Northumbrian (North East)	£359
Thames	£354
Severn Trent	£335
Scottish Water	£334





£480m
OPEX

396 OPA
Points
91%
Customer
Satisfaction

“High Cost
& Low
Quality
Service”

“Low Cost
& High
Quality
Service”

Service Improvement

Opex Cost

132 OPA
Points

40% OPEX
cost
reduction

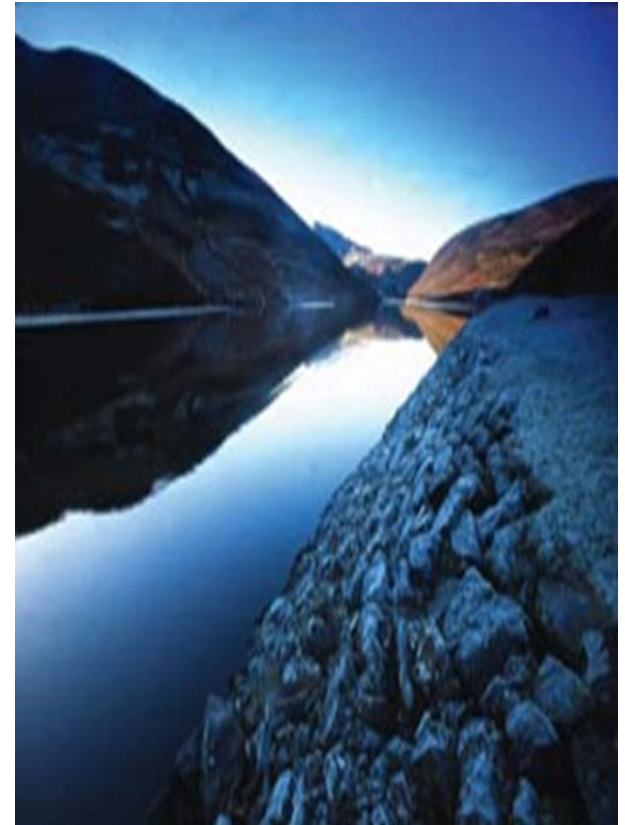
63%
Customer
Satisfaction

2002

2014

Continuous Improvement – Sustaining

- * Shift to activities led by service strategies
- * Predictive modelling – role of statistical analysis
- * Risk Aware – drive consistency
- * Pursuit of capital efficiency



Capital Efficiency



HM TREASURY



Infrastructure UK

Infrastructure Cost Review:

Main Report

December 2010

Effective Decision Making

- * Service Strategies
- * Asset and service risk
 - * Risk Analysis
 - * Predictive Analysis
- * Option selection
- * Investment Planning



Efficient Delivery

- * Programme visibility
- * Risk allocation
- * Deliver model
- * Productivity



Asset Management – Critical Success Factors

- * Line of sight
- * Strategies and Lifecycle Plans
- * Criticality, Risk and Prioritisation methods
- * Decision making
- * Data, information and knowledge management
- * Human factors
- * Innovation

