

Water Services Training Group

20th Annual Conference

Meeting Standards and Expectations in the Water Industry

Lyrath Estate Hotel, Kilkenny



An Roinn Tithíochta, Pleanála,
Pobail agus Rialtais Áitiúil
Department of Housing, Planning,
Community and Local Government

Meeting Standards and Expectations in the Water Industry

Managing Resources & Capability Building to deliver Customer Benefits

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Irish Water



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History of Water Conservation in Ireland



Rebuilding the Foundations



Benefits to Date



Capability Building



Key Messages

Government Funded Water Conservation Capital Programme €130M

Stage 1

- Asset data collection, mapping (GIS), modelling
- DMA Installation: district metering, telemetry and pressure control

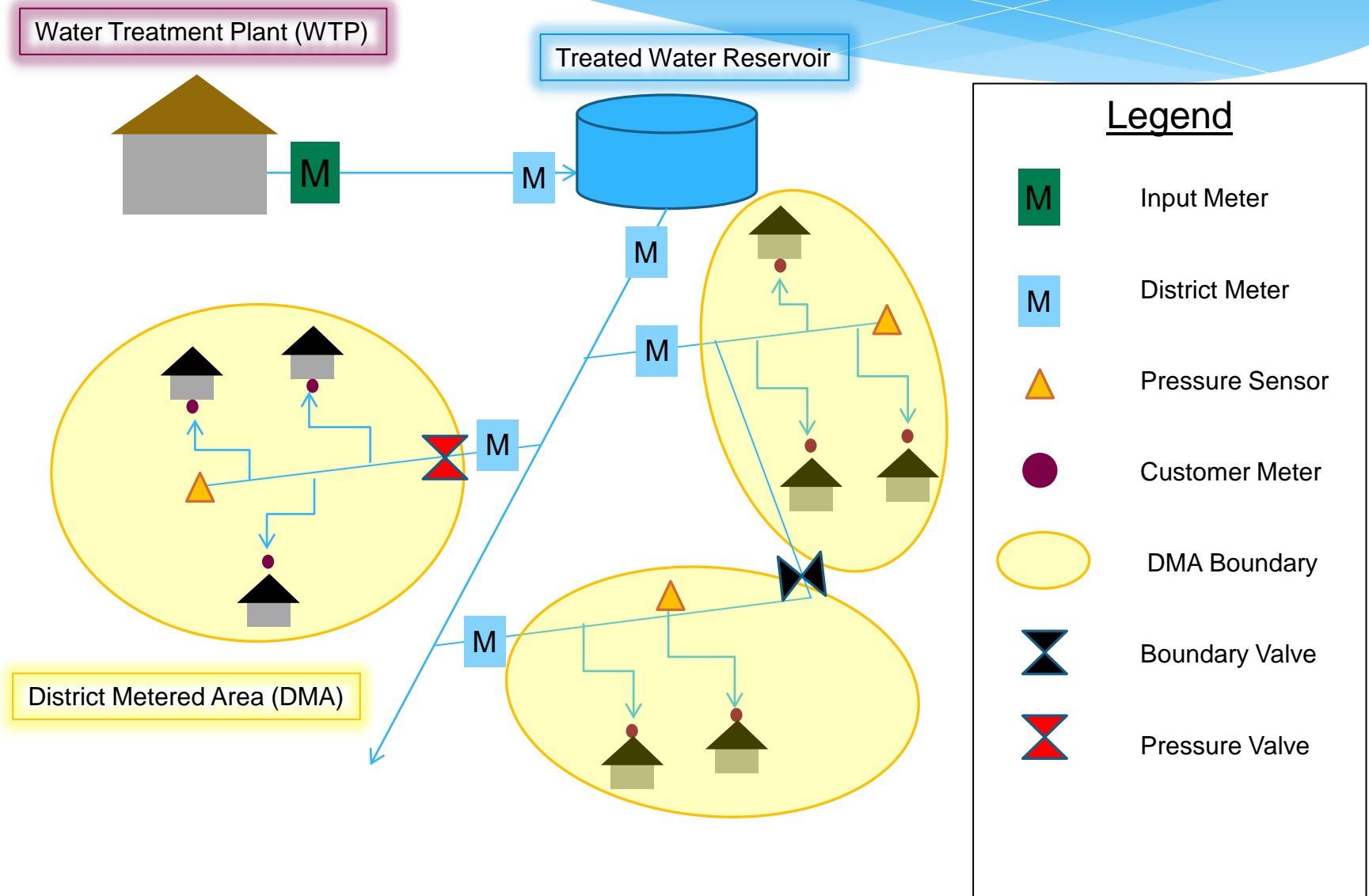
Stage 2

- Location and repair of leaks identified by Stage 1 systems
- Limited capital funding, Local Authorities instructed to sustain activity thereafter from own resources

Stage 3

- Rehabilitation and replacement of poorly performing watermains, informed by Stages 1 & 2

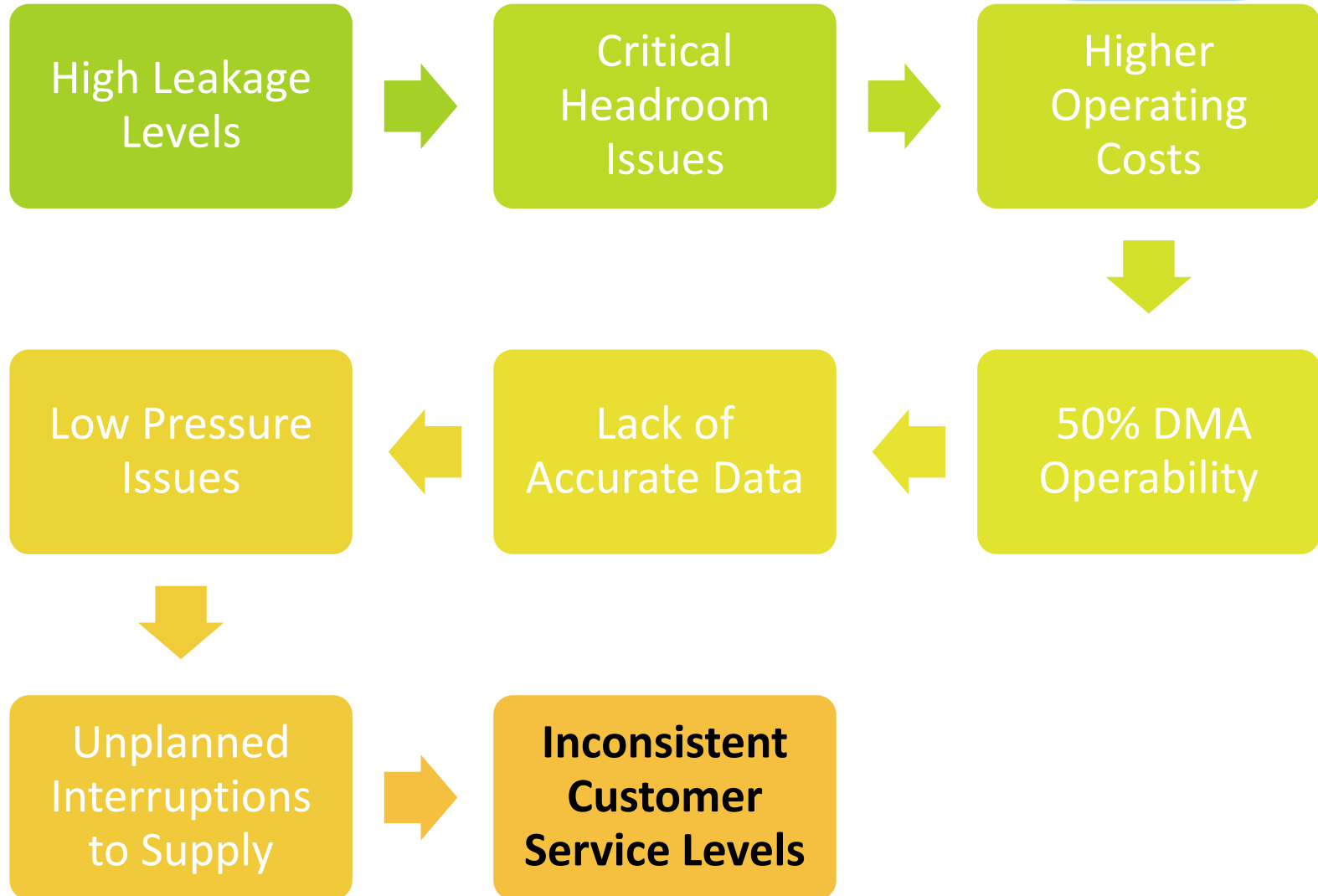
DMA Design



Leakage Control & Pipeline Renewals



Water Conservation: Day 1 Challenges



A National Water Conservation Strategy

Invest across the 4 Pillars of Leakage Management

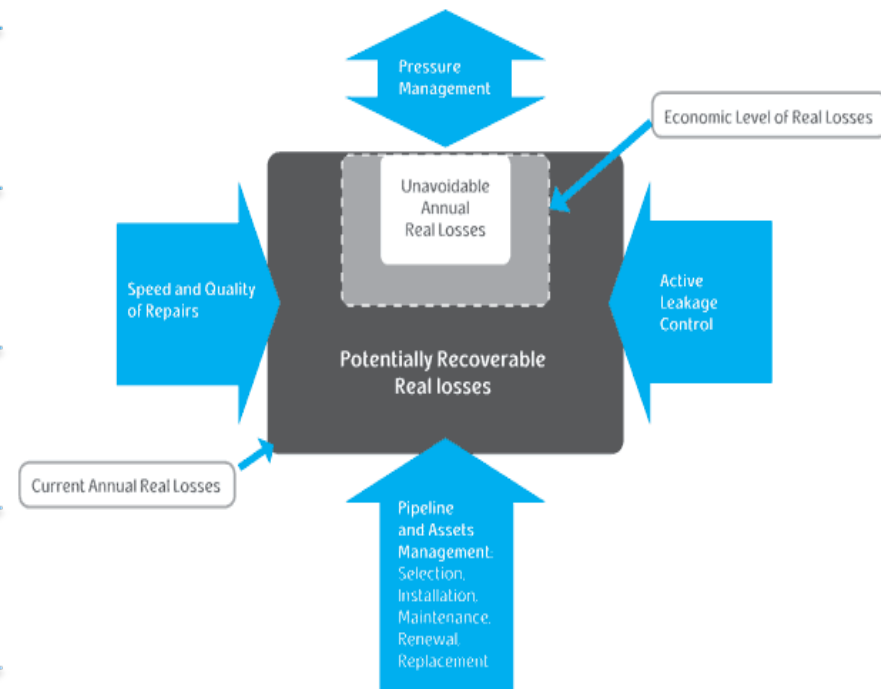
Defer Capital Investment & Improve Plant Performance

National Leakage Management System

Leakage Reduction Targets: 30 Megalitres/Day each year to 2021 and achieve SELL by 2040

Generate Opex and Capex Efficiencies

Support Our Customers: First Fix Scheme, Water Conservation Advice & Information



Building on the Foundations

- 90% KPI
- Replace Broken Assets
- Zero Pressure Testing

DMA Programme

- Standardise methodology
- Re-baseline leakage with domestic data
- Leakage Management System in 2017

Leakage Data & Systems

- Hydraulic Modelling Study
- Workshops with LA Operations teams
- 100+ new pressure managed areas

Pressure Management Programme

Domestic Meters Provide Rich Data

* Domestic Consumption



350-365 litres/prop/day

'All-In' averages

Provides a National Average for Metered Consumption

7% houses use SIX times the national average, driving First Fix

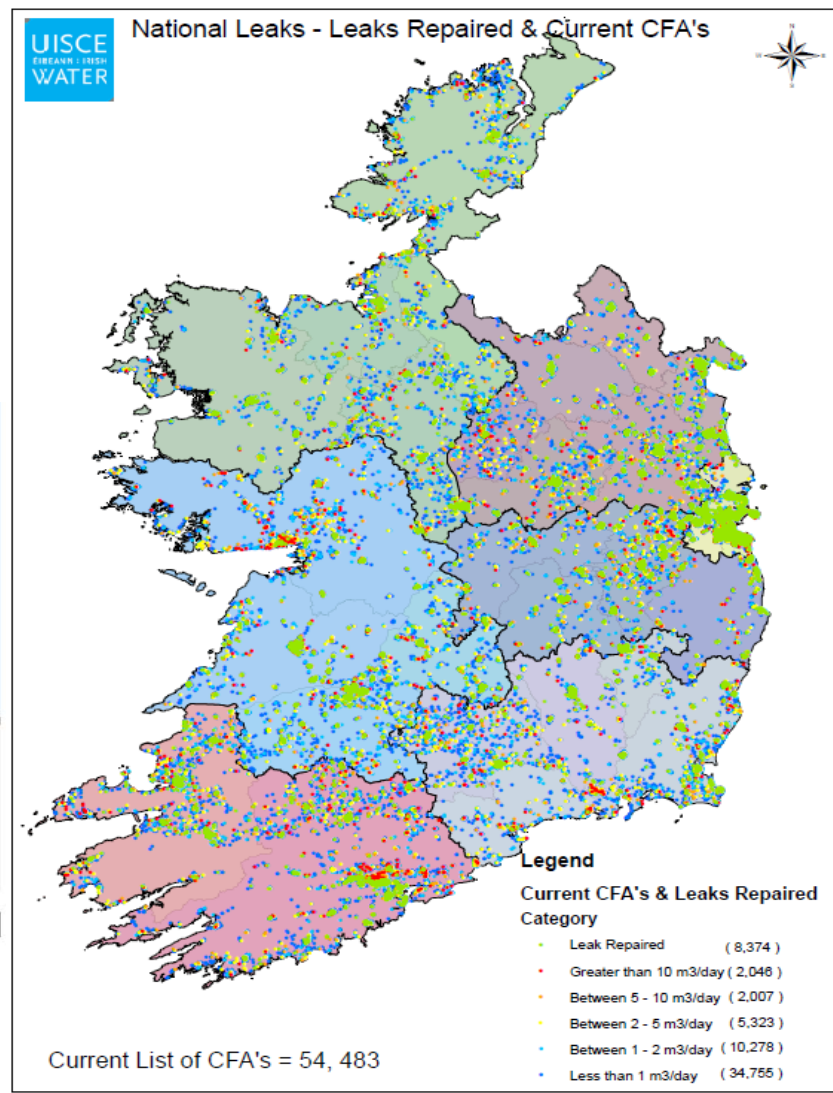
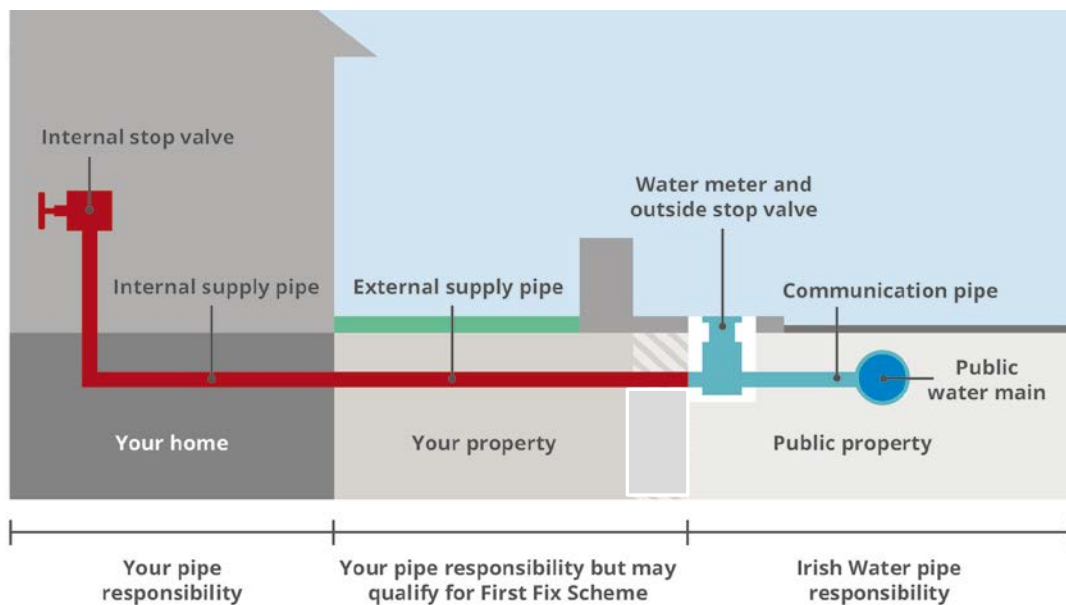
850,000 reads in 2016 enables move to metered data for leakage calculations

- * 'Per Property Consumption'
- * We have more to learn...
 - * Seasonality
 - * Peaking factors
 - * Behaviours

First Fix: Free Customer Leak Repairs

Q1 2016 Statistics:

- 850,000 meter reads
- 14,063 repairs completed
- Largest leak repaired: 77m³/day - enough to supply 210 houses for a day!
- Continuous Flow Alarm data available to LA WC teams on The Well LA Portal



What our customers are saying...

“Excellent, speedy service. Exceeded the call of duty. Crew fixing my leak outside the front door were mannerly, efficient and thorough. Irish public service has grown up.”

Eoin, Dublin

“Extremely helpful & friendly. Very happy with the experience and outcome.”

Rachel, Kildare”

“All the staff were courteous and professional. The work was completed with minimum disruption to the garden paving. It was checked in the days following completion for any leaks. A thoroughly professional job.”

Jim, Limerick

Benefits to Date

630km of
watermains
replaced to date

48.5 Million
Litres/Day saved
to date

73% DMA
Operability

Leakage Data
Improving

Positive
Customer
Experience



Leakage Reduction Targets

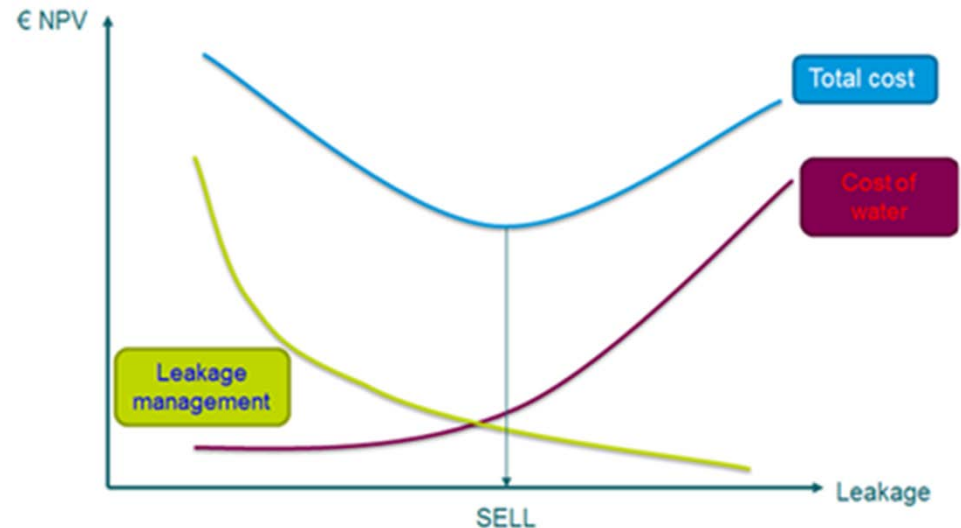
Interim Target:

30 Megalitres/Day each year to 2021

Long Term Target:

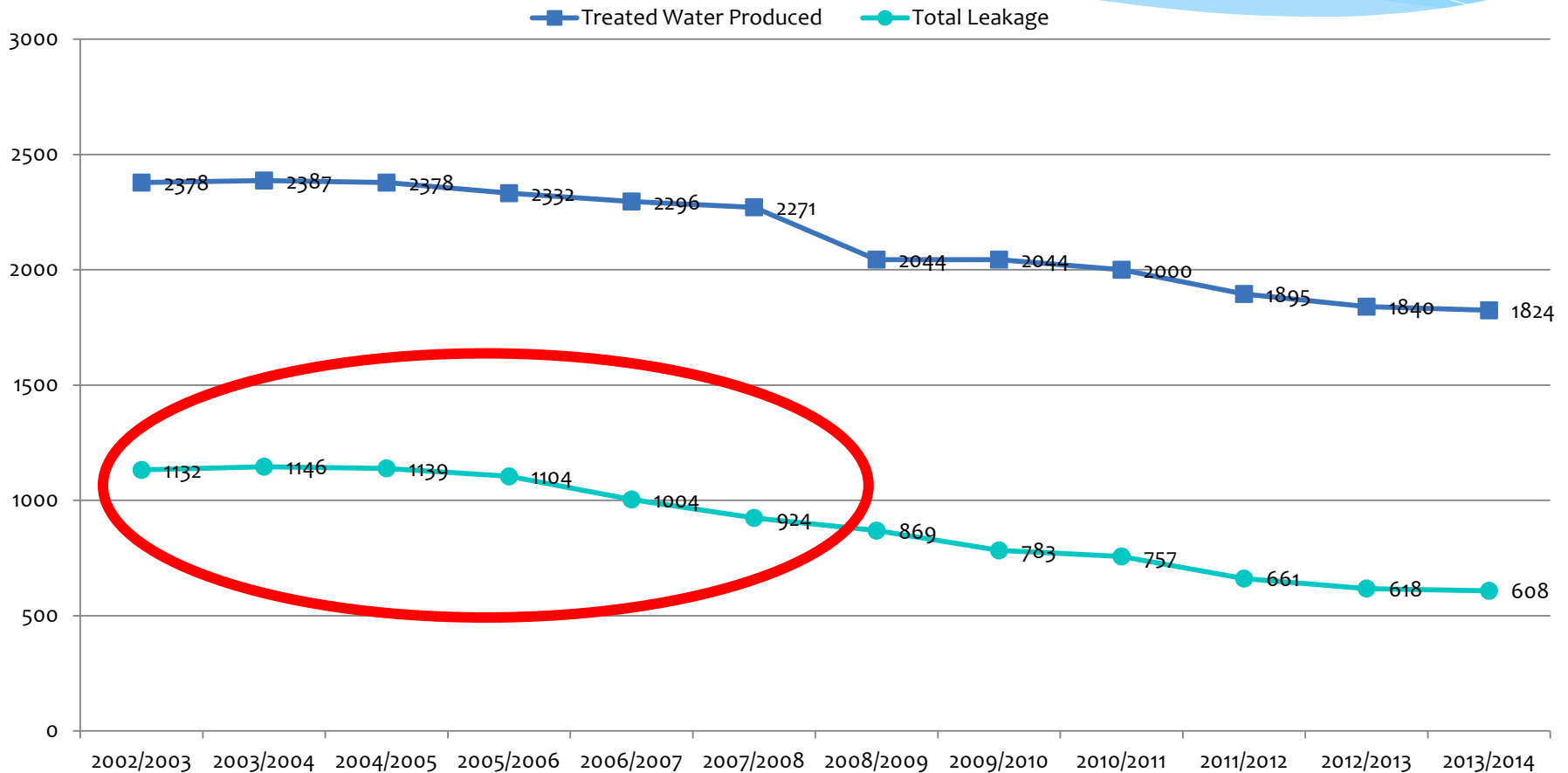
SELL - Sustainable Economic Levels of Leakage

Targets are Volumetric and set by Water Supply Zone

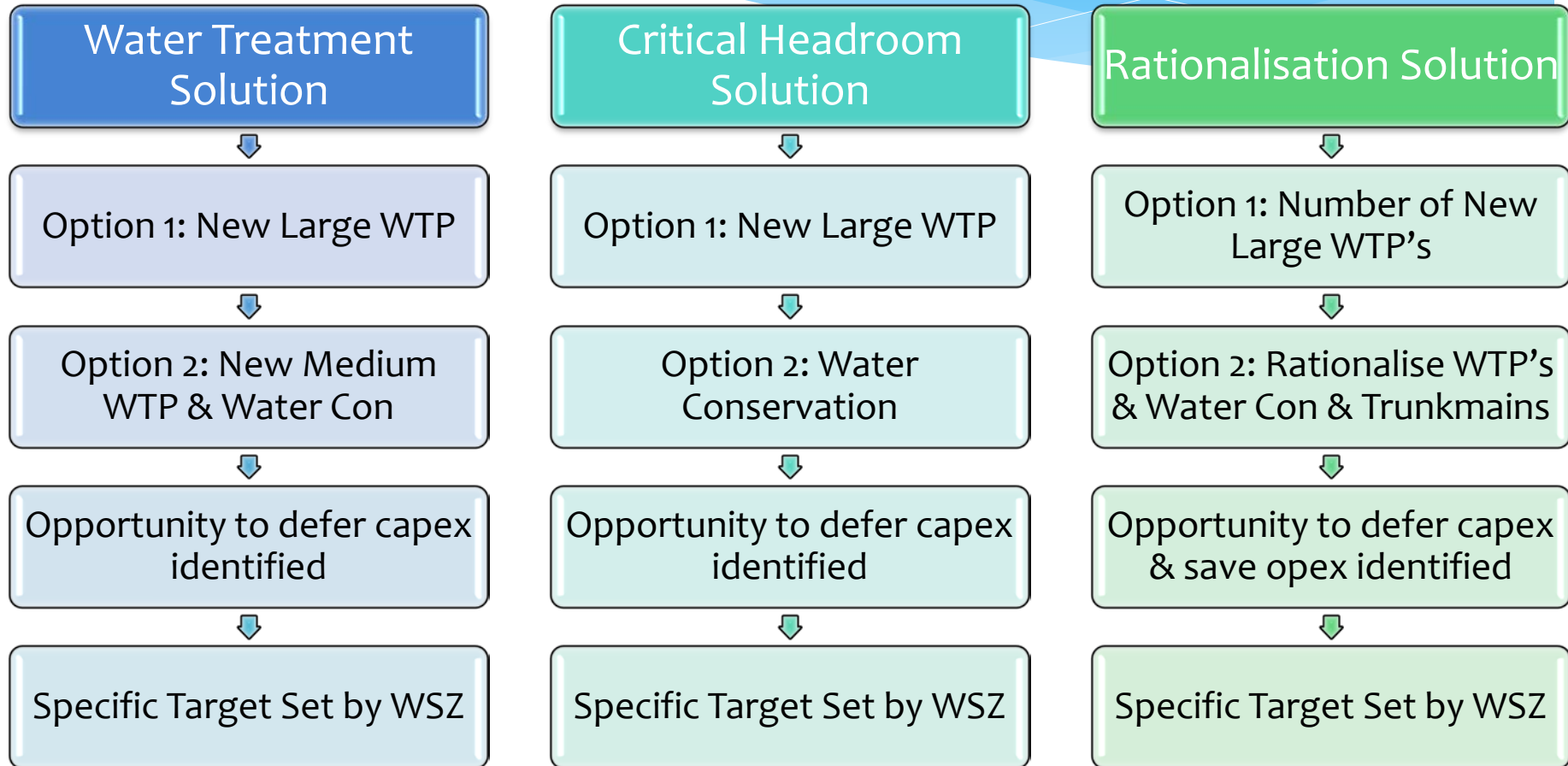


“Sustainable Economic Levels of leakage (SELL) is defined ‘as the level of leakage at which it would cost more (in operational, environmental and social terms) to make further reductions in leakage in the water distribution system than to produce the water from another source, where environmental, resource and social costs are fairly included.’

Comparison: Scottish Water achieved reduction of 208 Megalitres/Day in 6 years



Targeted Leakage Reduction Projects to support Strategic Objectives



IW Focus: Efficient Asset Delivery

Frameworks

- National and Regional Structures
- Supply Chain Analysis: standardisation, integration, off site preparation and construction

Contracts

- Incentivised & Performance Based (find and fix)
- Risk Share Reward Share (mains renewal)

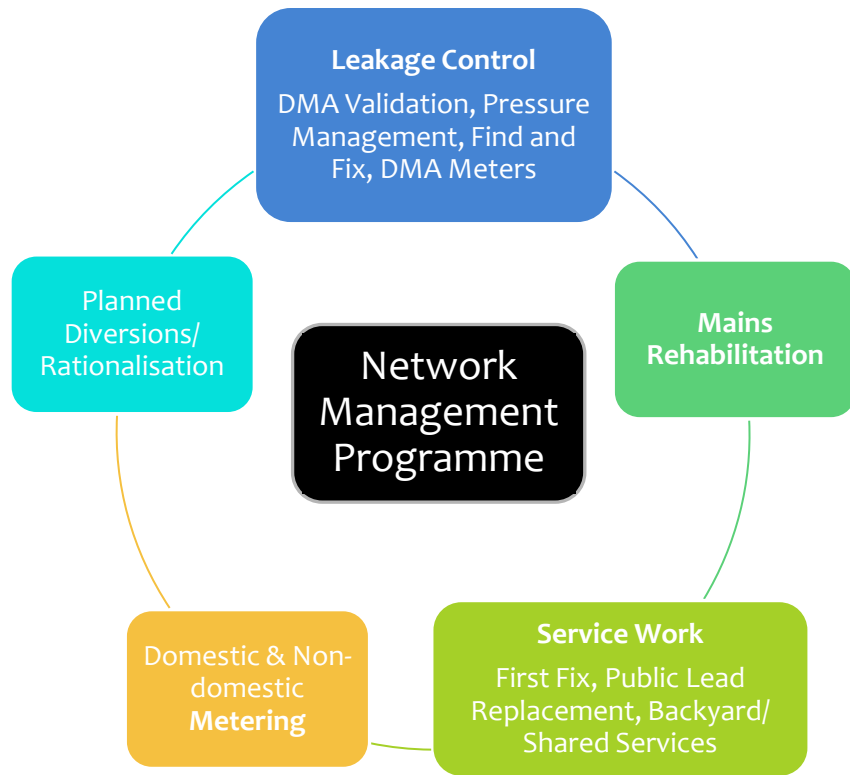
Quality

- Highly skilled construction workforce
- Risk management focus

Behavioural Change

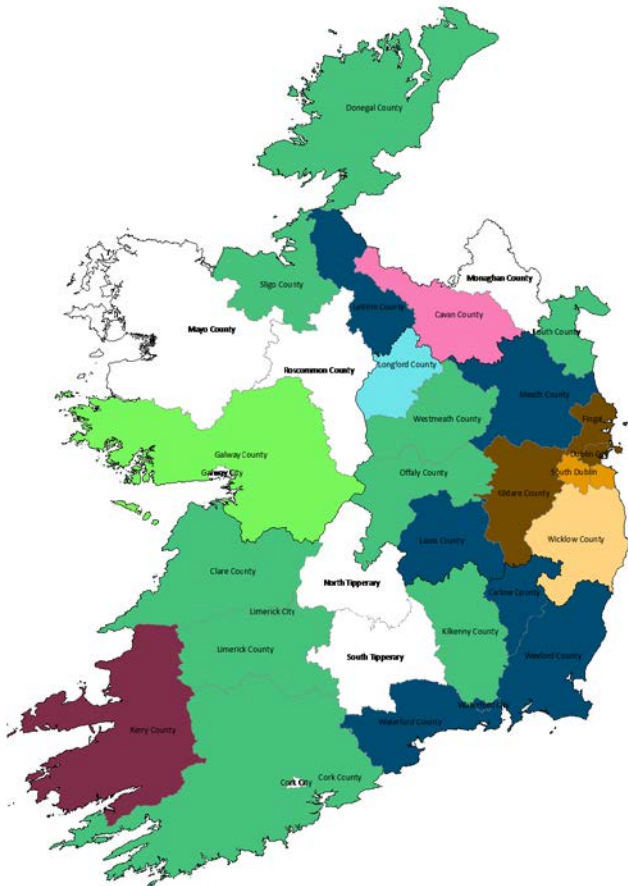
- Alignment of industry to the Business Plan
- Move to an integrated and collaborative approach
- Focus minds on Customer Service

Water Network Management Programme



- * Services and Works Term Contract
- * 8 geographical contract regions
- * Work through Irish Water Systems (Maximo, Click & Syclo)
- * Baselines and outputs measured against objectives
- * Estimated timeline to ramp up currently Q2 2017

Accurate Leakage Data & Systems



2014

- 34 methodologies
- Patchwork of vendors (graphic)
- Varying installation times and performance

2016

- Standard Calculations & Meter Data
- Leakage Data Team in Place
- Leakage Management System

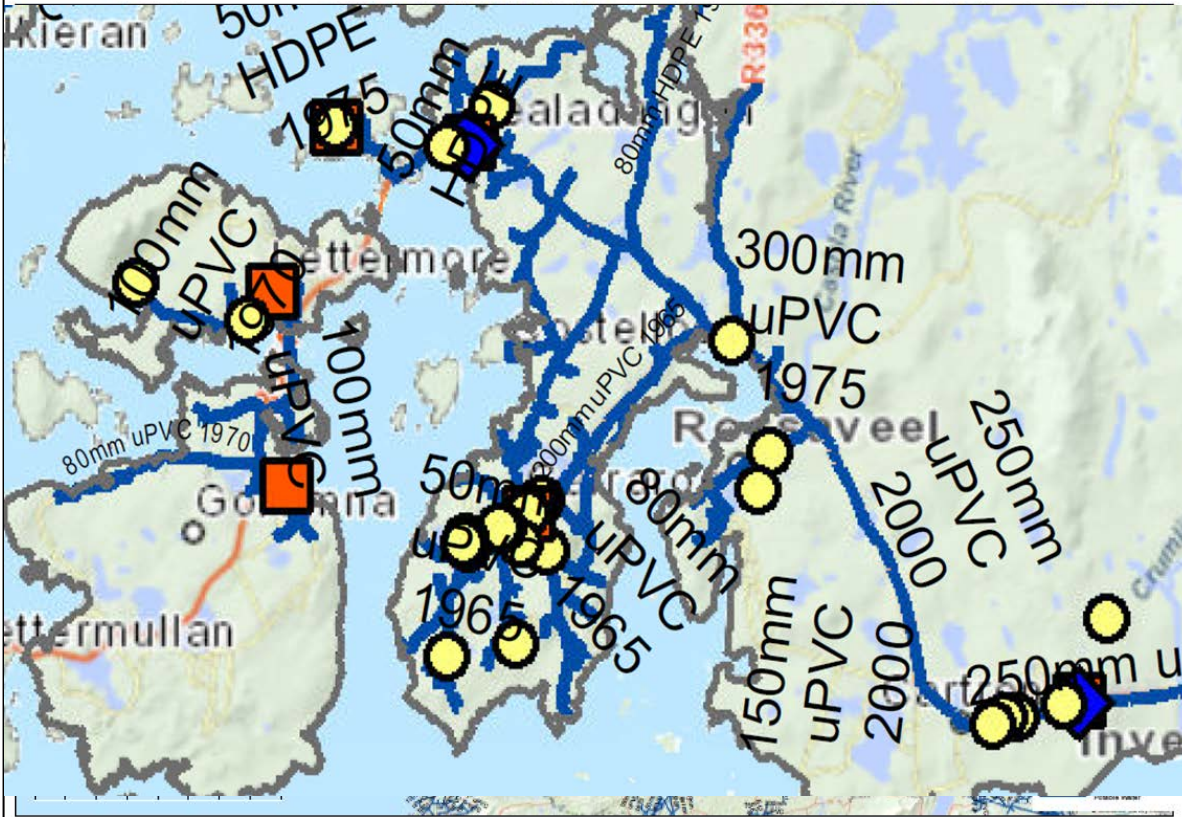
DMA
Operability &
Leakage Data

Locates
Leakage
Quickly

Measures
Savings
Achieved

Benefits of Maximo

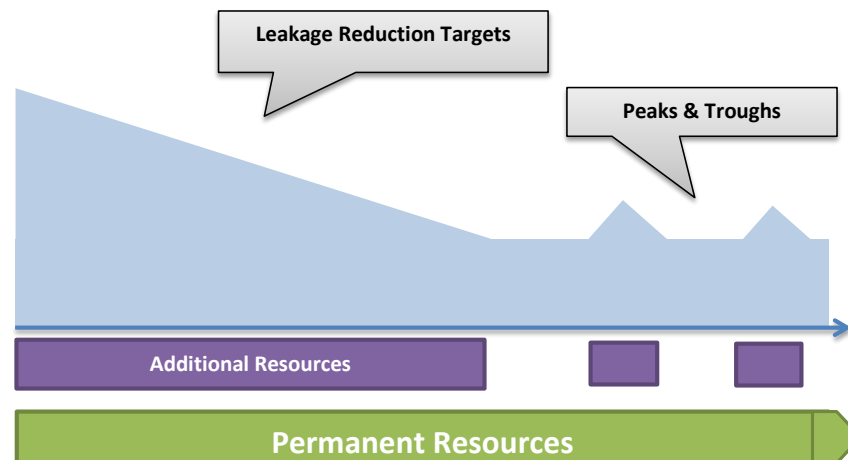
Visible Leaks and Bursts
Galway



- * Removes Manual Reporting through Leak Database & Databook
- * Identifies True Cost of Operational Funding to maintain leakage levels
- * Identifies high burst frequency watermains
- * Provides data to support Customer Service

Find & Fix Programme

- WRC Agreement for a 2 Year Pilot
- 100 no. Staff to create Dedicated Water Conservation Teams
- Supplemented by external support, working on a project basis
- Quickly reduce leakage levels and build capability and knowledge in-house
- Once SELL is achieved, permanent staff will maintain these lower levels of leakage
- WRC Working Group established
- Discussions on Roll Out have commenced



Key Messages

DMA
Operability &
Leakage Data

Locates
Leakage
Quickly

Measures
Savings
Achieved

Find and Fix
Programme

Builds In
House
Capability

Reduces
Leakage
Quickly

Maximo

Identifies
High Burst
Pipelines

Quantifies
Required
Budget