

Optimising Services Delivery in the Water Industry

SCADA/Telemetry & National Operations Management Centre

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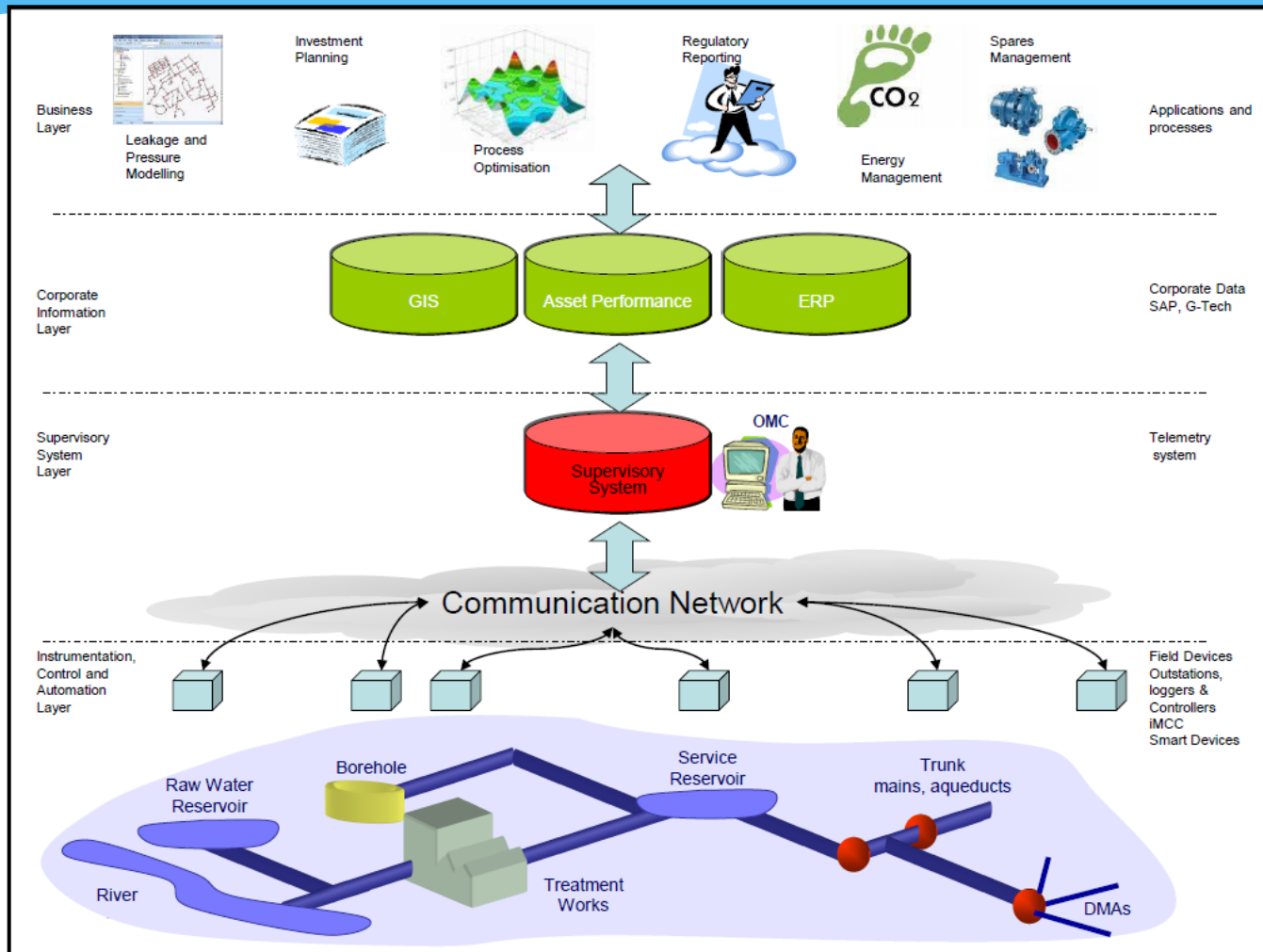


Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

What is Telemetry?

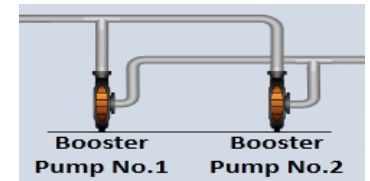
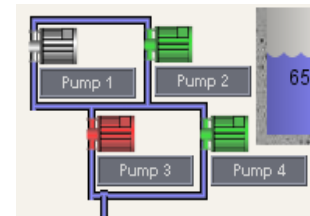
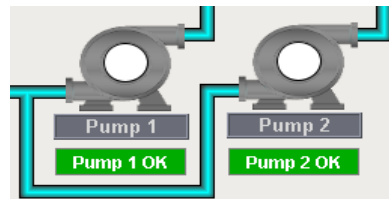
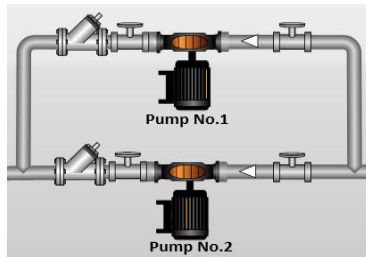
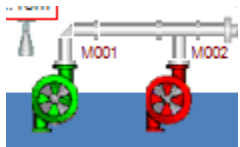
- * Measurement & Transmission of Data from Remote Sources
- * Network of field devices reporting data to a central system
- * Reporting tools to turn **data** into useful **information**

Telemetry System Overview




Current Situation

- * Existing “County-Wide” Systems
 - * Designed Individually
 - * Different Mimics
 - * Different Signals
 - * Different Naming Conventions



Current Situation

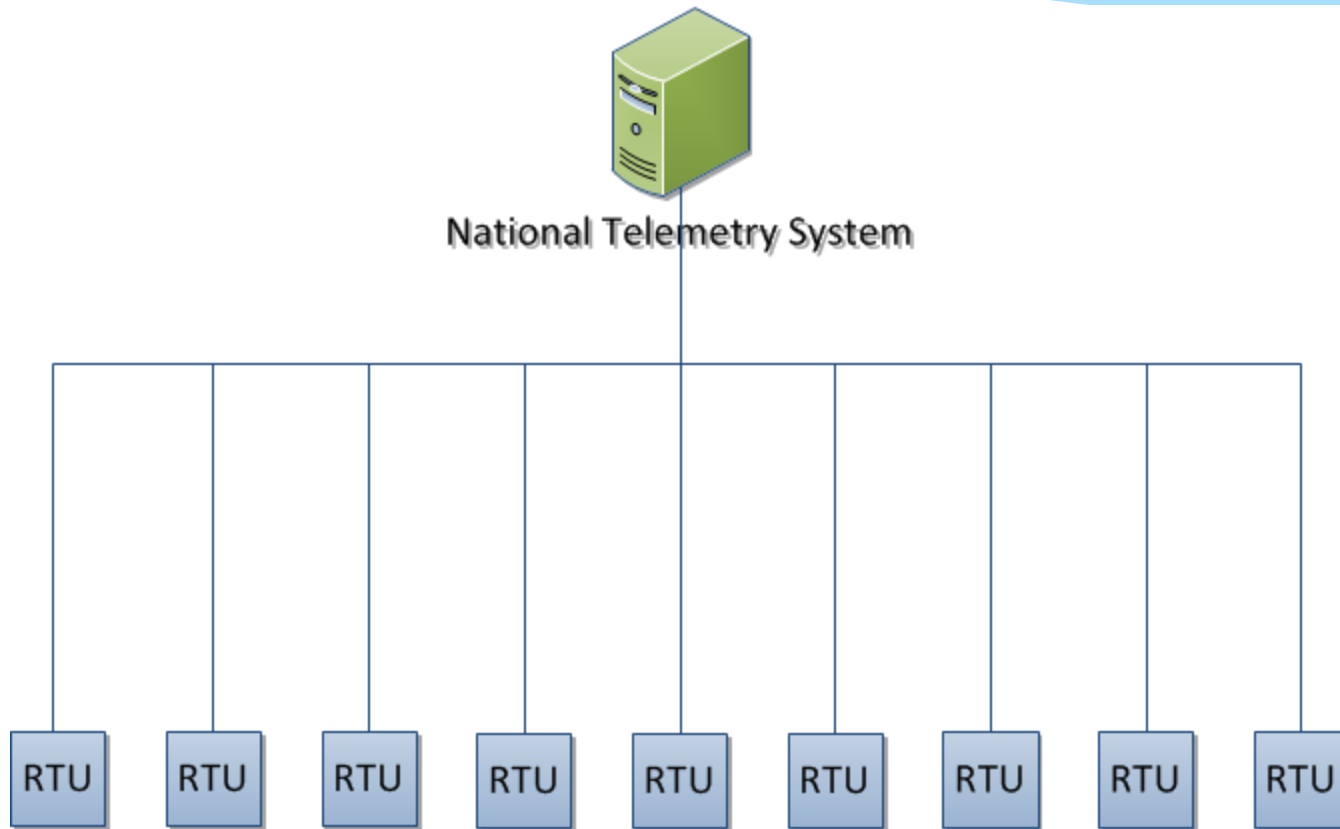
Report on all Chlorine Low Alarms in the last week?

- * Chlorine Res
 - * ClRes
 - * Chlorine
 - * FreeCl
 - * TotalChlorine
 - * Chlrne
- 
- * ChlorineResidual

Telemetry Strategy

- * Roadmap from where we are to where we want to be
- * Strategy & Business Case - 2015
- * Procurement & Implementation – 2016 onwards
- * Portfolio of Projects
 - * Leakage Management System
 - * RAM Policies
 - * National Telemetry System
 - * Communications Network

National Telemetry System

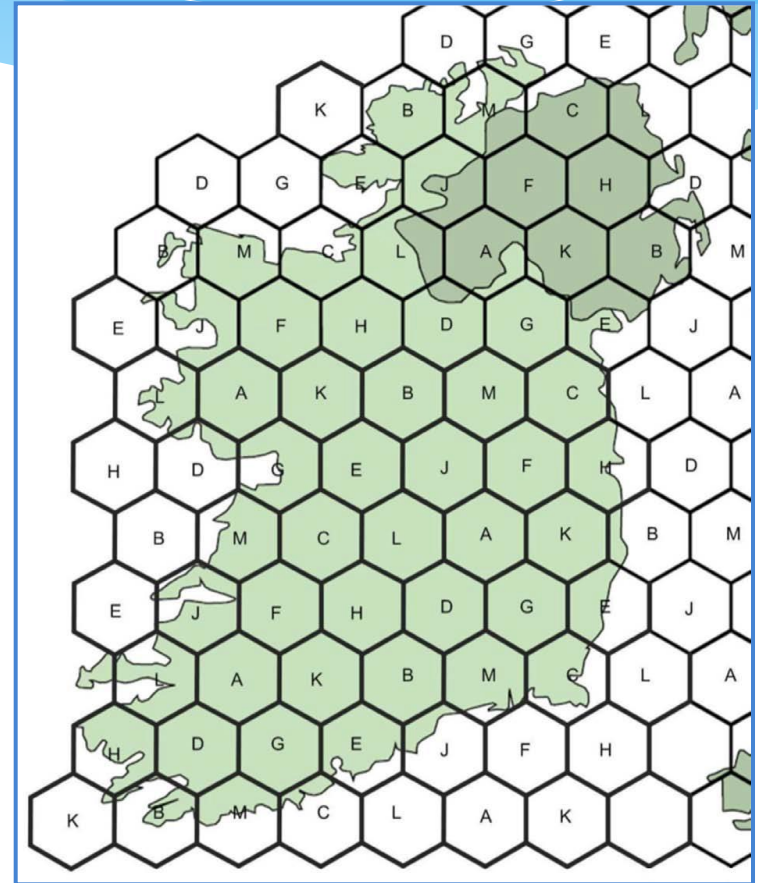


Data Logger Solutions

- * Machine To Machine (M2M) SIM Platform
 - * All SIMs to be issued by Irish Water
 - * Managed service with Web Administration
 - * Can roam onto all networks to provide better coverage.
- * Cloud Hosting
 - * All data transferred to Cloud
 - * Available to Local Authorities & Irish Water Leakage Management System

Radio Licensing

- * ComReg regulate use of Radio Spectrum
- * National Telemetry License obtained
- * 24 Frequencies used nationwide in a cellular structure.
- * Hundreds of radio outstations to be retuned



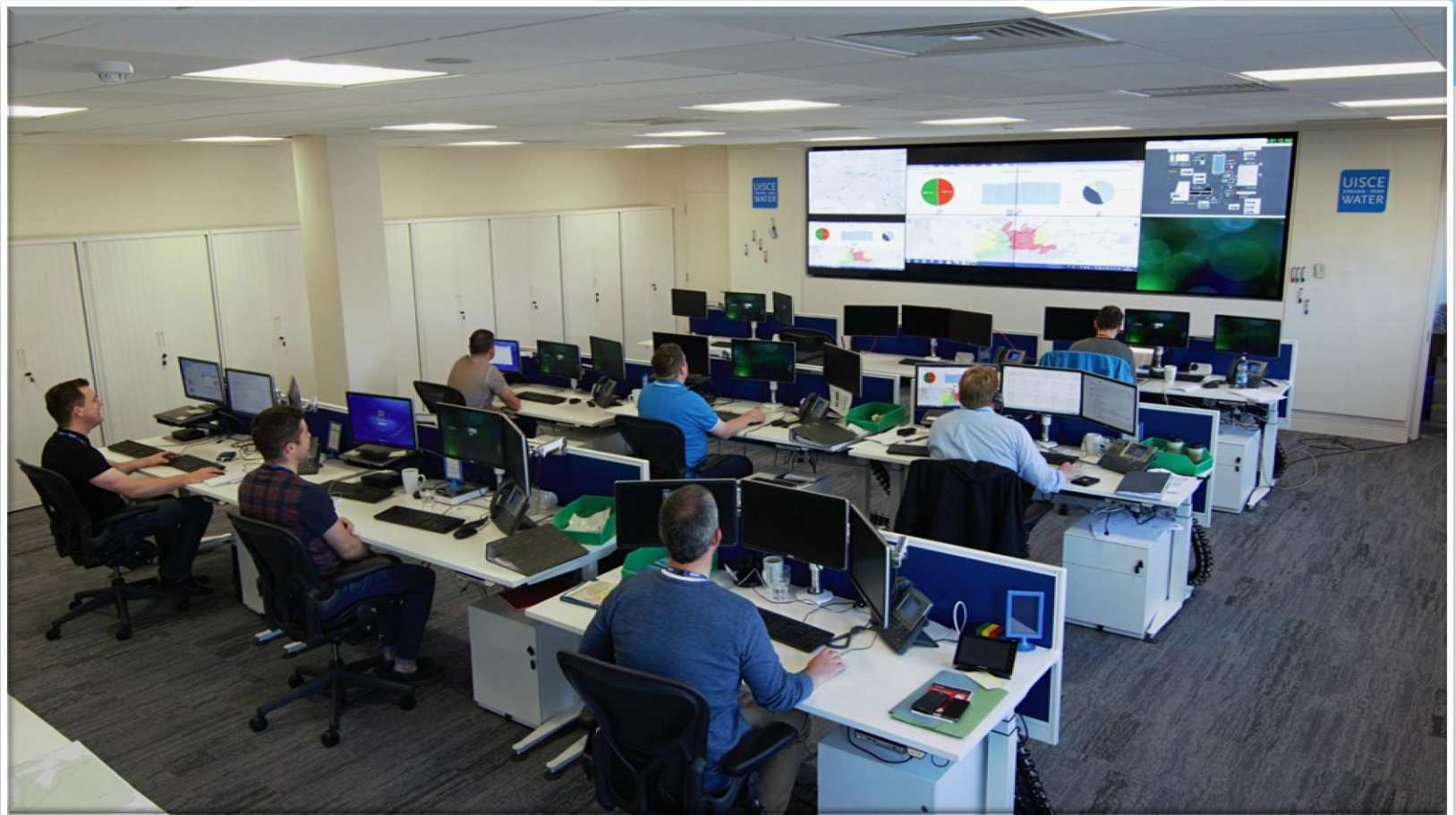
National Operations Management Centre

- * Irish Water have established a National Operations Management Centre (NOMC) in Colvill House (3rd floor)
- * Currently facilitates access to the existing “county-wide” systems for the wider business
- * Carry out reporting and data extracts
- * Provides a central point for real-time visibility of assets, offers Situational Awareness during extreme events

NOMC Temporary



NOMC New

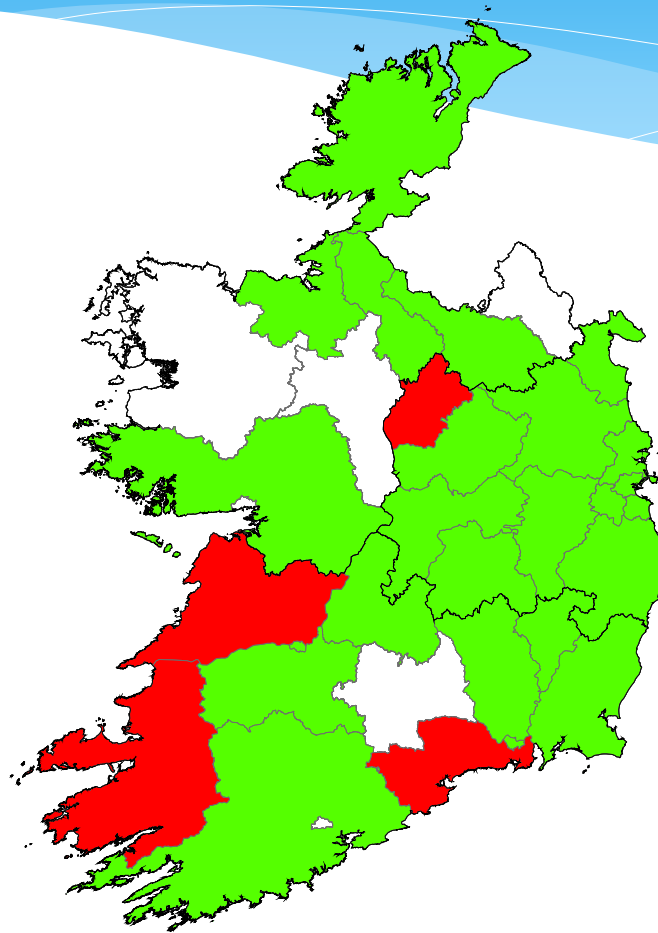


“County-Wide” System Availability in NOMC

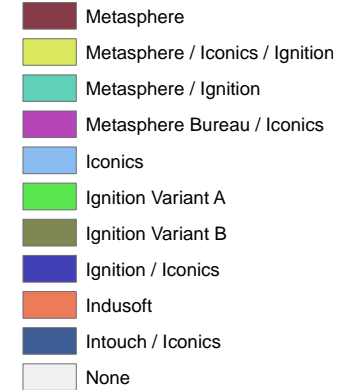
- * There are 36 “County-Wide” systems in place covering 28 (of 34) counties.
- * 6 counties have no “County-Wide” system in place.
- * Access to 30 systems covering 24 counties
- * No access currently possible to 6 systems in 4 counties
- * Various access methods used, including:
Internet, Citrix, VPN Client, LG-VPN etc..

Availability and Variability

Accessible from NOMC



System



Current Asset Coverage on systems available in NOMC

Function	Asset Type	% of total assets visible on a “County-Wide” system *
Water	Water Treatment Plant	45%
	Service Reservoir	60%
	Water Pump Station	32%
Waste Water	Waste Water Treatment Plant	13%
	Waste Water Pump Station	19%
		* Excludes DBO's

What is an alarm?

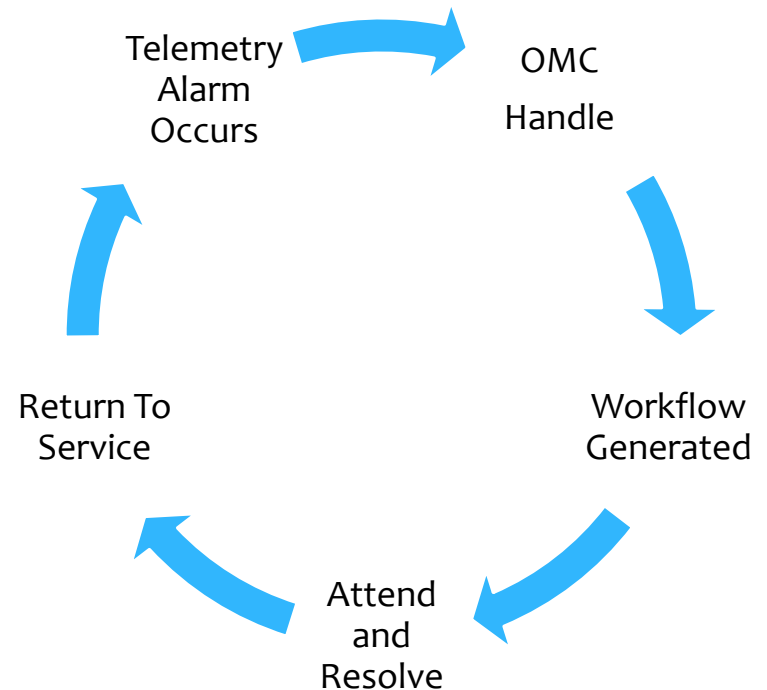
Key Alarm Principles

Alarms must have:

- * A defined purpose
- * A defined response

Alarms must be:

Relevant, Unique, Timely,
Prioritised, Understandable,
Advisory



Enduring Role of the NOMC

- * Principal Role will be the monitoring and handling of alarms generated by the National Telemetry System
- * Ultimately it will operate 24/7
- * Support Regional and Local Operations with asset operation

NTS and NOMC Benefits

- * The NTS and NOMC have complementary roles and will adopt a **policy** based approach with a focus on **standardisation** of **processes** and **systems**
- * This will introduce **consistency** for:
 - * Telemetry Signals and Instrumentation
 - * Reporting (Asset Performance)
 - * Asset Standards
 - * Alarm Configuration and Response (risk based)

NTS and NOMC Benefits

- * This approach will result in **reliable** and **relevant** data
- * Give meaningful **real-time visibility** of asset performance
- * Enable consistent and appropriate **response** to alarms
- * Timely interventions, ensuring regulatory **Compliance** and the protection of **Public Health**
- * **Evidence based** approach to support asset investment decisions