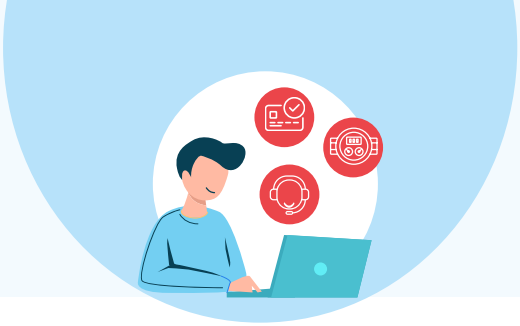
6. Automated control of water system ("ICAT")

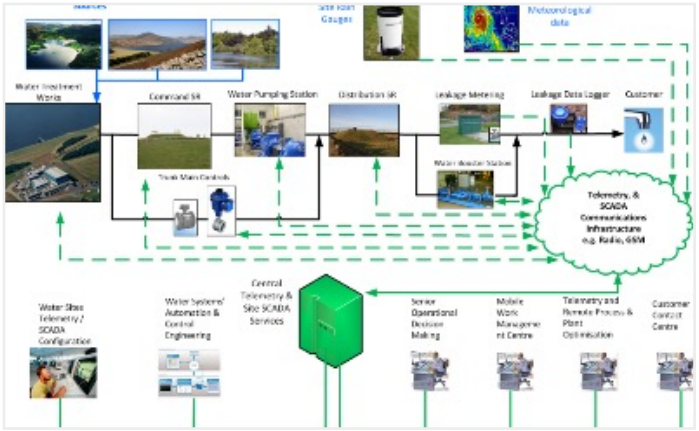


Situation

NI Water delivers circa 600million litres of clean, safe drinking water every day. This is treated by 23 Water treatment works and delivered to our customers through a network of water mains, pumping stations and service reservoirs.

To help ensure that this water is delivered by the most efficient and resilient means NI Water developed an Instrumentation Control, Automation and Telemetry (iCAT) strategy that relates to both water and wastewater treatment, distribution and collection systems

Action



The first phase of the strategy's implementation focused on delivering innovative, state of the art inlet control to approximately 160 of our gravity fed reservoirs. The NI Water in-house patented inlet control system provides an, automatic, optimised, remote and intelligent control system. The design is standardised across all sites enabling a single training programme and training manual as developed to be utilised. The construction being standardised realises capital efficiency gains. It adopts off site build principles which improves quality control.

The system is designed to automatically control (without the need for manual intervention), however during abnormal operations such as bursts or major incidents the remote operation of the control allows for a much quicker reaction, minimizing any customer impact.

There is also that added benefit that if these events were to occur during adverse weather times, there are health and safety benefits from not having to dispatch staff to the sites.

The next phases will see the implementation of the strategy to water pumping stations (WPS) and then integration of SR's and WPS into an overall control system.

Results

The advantage to customers is a more resilient water supply system. Specific benefits are described below.

Strategic

- Reducing OPEX to meet PC efficiency targets
- Efficient management of facilities
- Improved levels of service
- Minimise compliance failures
- Safe working environment, less site visits

Financial

- Reduction in volume/ frequency of overflows
- Reduction in overtime and truck rolls to make manual adjustments to set points
- A reduction in reactive base maintenance at service reservoirs
- Reduction in time spent at sites
- Increased Capital Efficiency (Avoided Costs)

Non Financial

- Reduction in number of reactive site visits to make manual adjustments to set points
- Improved resilience - increased overall network storage volumes
- Improved resilience: reduction in the amount of times a service reservoir reaches a low-low level triggering telemetry alarm