

# Strategic Asset Management Partnership

## Northern Ireland Water PC10

by  
Gabriella Giuffre, Dott. Ing., MSc, CEng, MCIWEM, RMaPS

**O**n 1st April 2007, Northern Ireland Water (NIW) was established as a Government Owned Company (GoCo) with the Northern Ireland Authority for Utility Regulation (NIAUR) to act as an independent economic regulator for the industry. Pre 2007, NIW was a government department where funding was established from 'top-down' budgets.

NIW recognised that the new challenges such as Economic Regulation and the need to deliver increasing levels of efficiency focused on improving Customer Service required the business to embark upon a radical and ambitious business transformation programme. This transformation would facilitate NIW performing as an integrated asset management business to deliver water and wastewater services within an environment of comparative economic regulation similar to the water companies in England and Wales.

In 2007 OneAM, a team lead by MWH and including United Utilities, EC Harris and ICS Consulting was appointed by NIW to support the Company in its preparation and delivery of Northern Ireland's third Asset Management Plan (NIAMP3), and assist with the development and embedment of a best practice asset management approach.

NIW supported by OneAM delivered six projects under this strategic partnership:-

- NIAMP3;
- Asset Management Transformation Project (initially called the Asset Management Model);
- Corporate Asset Register;
- Asset Data Requirement;
- Strategic Capital Investment Management;
- Unit Cost Database.

The OneAM team supported NIW by providing skilled and experienced people, corporate knowledge and tools, and the latest technology to assure successful delivery of these NIW's projects.

### Northern Ireland Asset Management Plan 3 (NIAMP3)

NIW and OneAM working as an integrated team completed the Business Plan over the period of the Price Control (PC10) from 2010 to 2013. This effort included the delivery of key elements of the NIW's Business Plan with clearly defined deliverables and affordable interventions.

### Asset Management Transformation Project

The Asset Management Transformation Project was concerned with assisting NIW to deliver the transformation of the Asset Management Section and introduce a new methodology for strategic investment planning, known as the Business Investment Cycle (BIC).

The tools for this transformation were a Transformation Roadmap and a process model charting the entire asset management and investment planning cycle.

The BIC model included 14 key interfaces between the Asset Management, Finance & Regulation, Engineering Procurement, Customer Services and Operations directorates and provided the high-level framework for business processes that govern the operation of asset management and investment planning across the business.

The Asset Management Transformation project was responsible for

the design and implementation of these business process definitions within Asset Management and for the design of inter-directorate interfaces. It included development of:

- Key interface processes, data flows and ownership to enhance inter-directorate communication, accountability and to ensure that the required interactions within Asset Management process took place;
- Integration and analysis of whole-life asset information to identify patterns in past performance and to effectively model future performance forecasts, support efficient solution costing and the effective identification, prioritisation and optimisation of investment.

As a part of the project a detailed Asset Management Manual was created to formally document standards and procedures and support the embedding of asset management practice, including the BIC. This manual is web based and hosted on the NIW intranet site.

### Corporate Asset Register Project and Asset Data Requirement Project

The objective of the Corporate Asset Register (CAR) Project was to create a centralised Asset Inventory thus enabling NIW to obtain an overall view of its fixed assets and, significantly, facilitate the linkage to dynamic data held in other corporate systems, such as asset performance and costing data.

NIW delivered this challenging project by undertaking a set of progressive steps.

1. Creation of an Asset Data Hierarchy (ADH) for all NIW assets. The ADH provided NIW with a logical structure for recording water and wastewater assets and associated data to allow consistent recording and reporting of asset information.
2. Creation of NIW's CAR, a centrally maintained database which holds static information about all of NIW's assets, from a water valve to a water treatment works. Asset data is held in the CAR with a structure that based on NIW's ADH. The CAR allows alignment to and integration of asset data with a range of NIW's corporate data systems and is the backbone of NIW's corporate systems.
3. Uploading existing asset data from various databases into the CAR.

This point marked the completion of the CAR project and the start of the Asset Data Requirement (ADR) Project. Within the ADR project the OneAM team supported NIW by undertaking a comprehensive review of NIW's existing asset data to identify shortfalls in data required to satisfy current and foreseeable business and regulatory requirements.

### Strategic Capital Investment Management

Strategic Capital Investment Management (SCIM) is an investment management tool that supports the new Business Investment Cycle (BIC).

SCIM helps NIW to understand, analyse and choose which of its investment needs should be promoted by comparing proposed solutions using consistent selection criteria based on business, customer and regulatory requirements.

In addition to this SCIM provides a central repository for Needs (investment requirements) and Solutions. It automates the evaluation of these Needs and Solutions against agreed business constraints and drivers, known as Output Performance Measures (OPM), to identify the most effective use of NIW's funds across the business.

The system has an in-built investment optimiser. This optimiser was configured utilising weightings derived during workshops with delegates from NIW Operations, Engineering Procurement, Asset Management, and Finance and Regulation and influenced by feedback from NIW's Customer Engagement Surveys. The Team delivered this project by assisting with workshops facilitation and configuring the SCIM to NIW's requirements. The investment optimiser enables NIW to run multiple optimisation scenarios which, by modifying the investment portfolio requirements, enables understanding of how different targets and constraints affect potential business plans and/or programmes of work.

**Unit Cost Database (UCD)**

To meet regulatory requirements Water Companies Business Plans must demonstrate in detail that the cost build-up is directly linked to company and region specific costs to remove uncertainty of out-turn costs.

To satisfy this regulatory requirement NIW needed to demonstrate to NIAUR that the capital costs utilised by NIW in its regulatory

submissions are reflective of the actual costs being incurred.

The solution developed by NIW required a significant degree of re-alignment with business-as-usual activities to deliver real value.

On a day-to-day basis the UCD will be used to provide construction cost estimates for Engineering Procurement and Asset Management when they are developing proposals for new solutions. The UCD will also allow NIW to consistently benchmark its capital delivery contractors across Northern Ireland.

**Conclusions**

NIW successfully completed and submitted its first Business Plan submission under economic regulation in June 2009.

The OneAM team and NIW worked together as an integrated team to build capacity within NIW resources, maximise the value of relevant data, and mobilise flexible technology. NIW through this set of projects was able to quantify and justify funding requirements in line with its vision, mission, business objectives and targets, and drive out uncertainty in investment strategy and planning by using a consistent framework and approach with an accurate asset base. This ensures NIW delivers value for money to its customer and achieves regulatory requirements.

In recognition of the success with the implementation integrated best-in-class business investment cycle, NIW were awarded the "Utility of the Year" award in 2009.

*Note: The Editor & Publishers thank Gabriella Giuffre, Project Technical Leader with MWH for providing the above article for publication. ■*

