



Richard Kelly, managing director of EMS (centre left) and Mike Berry (centre right) explain the EMS improvement programme to visitors from the railway industry

Treating them lean

Welsh Water has engaged a consultancy to help it deliver smoother operations at two water treatment plants, a model that other sectors are learning from. EMS's Kate Munglani explains

Currently ranked amongst the best for customer satisfaction on Ofwat's industry league table, Dŵr Cymru Welsh Water (DCWW) is the first water utility in the UK to introduce a unique reliability programme, facilitated by operations management consultancy EMS. The programme combines elements of good practice that originated in the aircraft industry with 'lean manufacturing techniques' that were first introduced in the Japanese Car industry.

The programme branded internally as Operating Lean, has already produced dramatic results on the clean water side of the business and as a result will be rolled out to every one of Welsh Water's sites providing drinking water to over 1.3M customers in the next three years.

Mike Berry, operating lean delivery manager said: "This programme is now an integral part of our operations strategy. It became apparent early on that this new approach was achieving really significant results."

DCWW's wastewater operations department and EMS are now working together to introduce the same programme on that side of the business.

Dave Davies, local asset manager for wastewater services said: "We are working closely with EMS. This project will dovetail into other projects such as operational work management and sludge tanker logistics

and will benefit both customers and the environment."

EMS Consultancy has experience improving productivity and bringing about cultural transformation across a wide range of sectors. The format of the EMS programme involves selecting one or two pilot sites and teaching a diverse multi-skilled team during implementation.

Once the skills have been transferred to the team and they have adopted the new ways of working, the process can be repeated by them across other sites to sustain and improve on what has already been achieved. LeanRCM has been adopted by many industrial sectors, recognising that equipment reliability not only encompasses avoiding breakdowns, but has a major impact on safety, quality, customer service level, costs and equipment life cycle costing.

Business benefits

At the Welsh Water clean water sites, Bretton and Talybont, the programme has had an impact on costs and has allowed for greater planning. As a result the utility is now able to optimise its proactive operational maintenance and more effectively target capital intervention, thus providing an improved outcome on yearly targets.

Cost reduction has come from a range

of efficiency and process improvements. At Bretton water treatment works (WTW), the programme reduced high level alarms by 30% during the first four months of implementation and this has been maintained. This results not only in reduced overtime and stoppages but ensures a constant flow of clean water exiting the plant.

At Talybont in south Wales, significant cost benefits are also being realised due to reduced call outs. The process has also highlighted areas of the site that would benefit from investment for the future.

A by-product of the LeanRCM approach has been to ensure all critical spares required on the site are identified so that they are available to hand or at very short notice. This significantly reduces risk and downtime of the works.

"The process EMS has taken us through has resulted in greater consistency because everything we do has now been formalised. Magnetic signs and other visual aids have been placed at key points around the site, and a status board that can be understood by any member of the operations team is in the main lobby, meaning we have made it very hard to get things wrong," said Berry.

LeanRCM introduces condition monitoring techniques carried out by operators and maintainers, to capture and rectify the faults before the equipment fails. Welsh Water