

## Innovation New thinking, new solutions



The UK water sector is in a period of exciting possibility for change and innovation. With AMP6 underway and new technologies reaching the market, there has never been a more important time to embrace innovation in the water industry.

### Embracing innovation

The adage 'innovation is the lifeblood of business' is testament to the value that new products and fresh thinking can bring to business. Innovation, whether in the form of new products, processes or services, does far more than simply generate new business: it also inspires confidence, unifies workforces and increases engagement.

While AMP5 saw the water industry take the lead in progressive procurement, this has been turned on its head in the latest regulatory period. AMP6's focus on driving down total expenditure (TOTEX) means water companies must shift their focus from a micro to macro view and from short-term opportunities to long-term goals if they are to deliver the required outcomes for their customers.

### Unlocking AMP6 success

Innovation will be key to unlocking the potential offered by AMP6. The most exciting and successful innovations will not be those created in a silo by one organisation, but rather those developed in partnership between water suppliers and their partners. The current push-pull model of sales and marketing will change. Instead of seeking solutions for problems that already exist, water suppliers will work with their suppliers to build products and systems that minimise the chances of problems occurring in the first place.



This approach will mean a wholesale change in the way companies do business. Half measures will not succeed here. To maximise performance in a Totex environment, many companies will need to fundamentally change their culture and ways of working.

Of course, innovation is not just about smart new products – it's also about applying smart new thinking in order to achieve desired outcomes. New skills will be required that involve finding 'no build' solutions to supply and quality issues. Similarly, when dealing with a specific challenge, water companies must also learn to step back and look at the bigger picture. Replacing old with new may not necessarily be the answer, and organisations that do not look at every other possible solution before purchasing new kit will find it difficult to justify their actions. Identifying how to do more with existing assets is the crux of AMP6.

Working with like-minded suppliers will be crucial to this process. Simply adding features to existing products, such as drives, will not improve outcomes unless suppliers, along with ALL end user stakeholders, work to challenge preconceptions of what is achievable. Delivering proof-of-concept trials, working with accurate comparative data, and a fail-fast approach will all be critical in ensuring that only relevant, evidence-based decisions are made.

# Best practice tips

## Innovation in pump systems



ABB has been innovating for the water industry for over 20 years, during which time it has introduced a number of award-winning products and services designed to generate the positive outcomes in the water industry.

### Water industry-specific drive

ABB's award-winning pump-specific drive features multiple smart functions to maximise performance:

- **Level control** - Prevents sediment build-up by randomly varying the surface level
- **Soft pipe filling** - Allows a pipeline to fill smoothly without pressure build up
- **Pump cleaning** - Runs the pump back and forward rapidly to clean the impeller
- **Multi-pump control** - Controls the flow rate within pumps running in parallel
- **Sleep and boost** - Detects pressure drops in the pipes and runs the pump to boost it.
- **Pump protection** - Prevents damage to pumping systems by identifying abnormalities
- **Flow calculation** - Determines the flow rate within a process
- **In-built logic control** - Pump operation is simplified without the need for expensive third-party equipment

### WIMES compliant motor

ABB's WIMES compliant motor offers a wide choice of motor designations and options for use in any motor-driven application in the water sector.

Every WIMES compliant motor offers greater protection against external conditions found in the water and wastewater industry. These range from a stainless steel nameplate to a frame made of high grade robust cast iron with a surface treatment to C3M corrosion tolerance according to ISO 12944-2: 2007.

### Packages

ABB's synchronous reluctance motor-drive packages offer the high efficiency benefits of permanent magnet technology together with the simplicity and service-friendliness of an induction platform. Each motor-drive package combines



proven stator technology, an innovative magnet-free rotor design, a best-in-class industrial drive and advanced software to offer a complete, optimised solution.

### Services

ABB offers a range of assessments that rapidly show the improvements to reliability, energy use and productivity that are possible when investing in a more efficient drive train.

#### Energy assessment

- Improves energy efficiency
- Lowers energy bills
- Reduces CO<sub>2</sub> emissions

#### Reliability assessment

- Identifies optimal maintenance strategy
- Reduces whole life cycle costs
- Improves plant output

#### Productivity assessment

- Improves process quality and reliability
- Increases productivity
- Minimises mechanical wear

### Legislations, regulations, directives, standards (LRDS)

ABB's engineering expertise helps customers keep abreast of all LRDSs that affect the water and wastewater industry.

### Recognition

2011	<b>Winner of the Technical Innovation of the Year Award, Pump Industry Awards</b> The sludge pump control function ACQ810 drive
2009	<b>Winner of the Innovative Product of the Year Award, Electrical Industry Awards</b> ABB introduces bespoke AC drive modules specifically for water and wastewater pumping systems
2009	<b>Winner of the Environmental/Energy Saving Award, Pump Industry Awards</b> ABB helps utility provider to improve the energy efficiency at one of its pumping stations from 68% to 87%
2009	<b>Winner of the Technical innovation of the Year Award, Pump Industry Awards</b> ABB introduces bespoke AC drive modules specifically for water and waste water pumping systems
2006	<b>Winner of Best Environmental Initiative of the Year, Electrical Industry Awards</b> Water company achieves a 65% energy saving by upgrading drives on its water process pumps to ABB drives

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