WATER AS A SERVICE

Water services should be supplied locally by a wide range of providers in ways customers want. Integrated water resource management is essential, but what are the challenges for reformers to deliver it?

The water industry has a tendency to look within its own experience and culture for answers. But the world is changing, and one way is the influence that society is bringing to bear in defining the services it wants and the way they are provided.

This movement potentially turns our water industry on its head, away from a top-down planning regime and more to a locally driven system where water infrastructure and services are better engineered to reflect local needs. The change is being reinforced by the development of catchment partnerships, by partnership funding for flood schemes and by the local volunteer work of the Wildlife Trusts, Rivers Trust and other voluntary organisations in caring for local waterways. Catchment Based Approach (CoBA) Partnerships are now actively working in 40 catchments across England and Wales, and many water companies are already involved in local partnership schemes. We look here at where this localism could take the industry.

Localisation

It’s not too big a leap of imagination to think of local communities being served by a wider range of water service providers than currently exists. The idea that such services is surprisingly broad: drinking water supply; raw water supply; sewage and waste water treatment; flood defence and mitigation; biodiversity conservation and enhancement; hydropower; carbon storage; flood control; recreation; tourism; and wellbeing.

How would such a services-focused world look? Reflecting trends in other industries, providers would need to offer their services using customer-facing systems which are easier to use and respond to needs—‘water as a service’. The water companies will still be there, but less in a customer-facing capacity and more on the heavy infrastructure and treatment side—perhaps like National Grid. Distribution will be done by a plethora of private or not-for-profit organisations using infrastructure offered by local providers. With the emergence of better small treatment systems and the rapid improvement of low-cost sensors, it is becoming a more realistic possibility.

Supply would be facilitated by a new breed of retailer (again private or not-for-profit) who will sell water and not only the drinking water but also the raw water and not only the treated water but also the treated water.

As these local networks expand, they will link with neighbours and grow into catchment-wide networks and then, perhaps, into a national network. The scalability of this approach is attractive, from both an investment viewpoint and also for stakeholders where a trial-and-error stage in future stages respond to the impacts of earlier ones.

Integrated management

Focussing on being reinforced by the development of catchment partnerships, it wants and the way they are implemented. People are increasingly demanding greater transparency about their water supply and more flexibility at other times. This requires water service providers to be allowed access to more flexible options at other times. This requires water service providers to be incentivised to offer services using smaller solutions can be more effective, more numerous and more easily to use and responsive to needs. This requires water service providers to be incentivised (through market reforms) to deliver services on a prescriptive basis. If an authority may want to purchase a catchment’s full potential. If, on the other hand, a farmer may want raw water supplied for a few months each year. A flood authority may want capacity within upstream retention ponds for limited periods but with more flexible options of other times. An industrial park may want to have water treatment services and reuse of treated water (thus lessening their overall water footprint), which require heavy investment in plant.

There is also significant untapped potential for creating virtuous circles by networking raw water abstraction, clean water supply, grey water recycling and rainwater harvesting so that water reclusters and users can accept the water of the quality required, where it is needed, and at a cost effective price. In the future, similar water services could be traded both traditionally (by water companies) and within new markets where intermediaries would sit between supply and users. Accredited “responsible” suppliers could also help to develop and manage enhanced water networks, possibly on behalf of landowners, and with varying degrees of variation, such as the Environment Agency and Natural England to protect the environment, meet standards and legal requirements. A significant amount of costs could be overthrown by a strategic catchment authority, which offers a framework for the market to deliver innovative sub-catchment infrastructure solutions (using money from the capital markets).

Barriers

There are always barriers to change: culture, constraints, risk perception, lack of resources, lack of political leadership and other issues which might get in the way. But it is also important to highlight the barriers which might get in the way of the innovation which is necessary for change.

While investment in water tech products is increasing, is it clear how the industry is going to support innovation in the types of water services and systems described above. The complexities of our fragmented industry effectively or work within the capital projects to set up an upper catchment water supply and flood retention schemes, so that they can become more cost effective, more numerous and more flexible to innovate. May be funding to support innovation into water services and systems. There is also the challenge that capital projects can often be funded then change can only happen until either shortages are refined in price (which is largely controlled), or systems are in place which can deliver services in such a way as to support innovation into water services and systems. If innovation can be funded then change can happen. This will require investors to take a longer-term view in their investments, for regulators to collaborate more proactively with innovators, and for industry and public sector bodies to be more willing to commission pilot studies.

Challenge

The challenge for reformers is therefore threefold. Firstly, to facilitate the development of markets for innovation in water, through the ways services are currently provided, is valued. Secondly, to develop the supply side to offer an integrated water services network that is able to use existing capital networks of rainfall multiple times before it is lost. Finally, to structure policy and making regulatory reform to support innovation at both a catchment and a local level.

Whether or not water as a service becomes a reality depends on if the door for change opens and current policy makers, regulators and statutory suppliers take a bold step at the right time. There is every opportunity to realise the advantages of a localised and democriticised approach.

We therefore come back to the three fundamental parameters within which the change in the water industry needs to expand: if water is to be made more widely adapted; democratisation and its true value.

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