

Innovation Consultation
Ofwat
21 Bloomsbury Street
London
WC1B 3HF

19th September 2019

Innovationconsultation@ofwat.gov.uk

Dear Sir/Madam

WRc, as the current Centre of Innovation in the UK water sector welcomes the Ofwat innovation initiative. The challenges facing the industry today are different to those that faced the industry on privatisation in 1989 therefore the solutions must be different.

WRc supports the creation of a fund as an important “first step” towards re-igniting and energising innovation in our sector. As a company that prides itself on collaboration and customer engagement, we also welcome the focus placed on these values in the consultation document. WRc believes that the fund has the potential to drive transformational change in innovation assuming it operates within the existing structure of the sector and does not introduce further complexity into a fragmented picture.

Please find attached our detailed response to the innovation consultation and would I welcome the opportunity to attend any follow-on workshop on behalf of WRc.

Kind Reg

Mark Smith
CEO

Tel:
Mob:
E-mail:
Website:

www.wrcplc.co.uk



Fine to Flush certification with WRc

Email finetoflush@wrcplc.co.uk for more information
<http://www.wrcplc.co.uk/fine-to-flush>

Latest news from WRc

<http://www.wrcplc.co.uk/whats-going-on>



Q: 1 What are the main barriers to innovation in the sector and why?

The water sector has existed in its present form (regulated privatisation) for 30 years and for the majority of that period of time, it has constructed and managed large assets to deliver the required business plans.

For innovation to happen; motivation, opportunity and capability need to align.

The **motivation** to innovate has not been strong: Due to the amount of construction required to improve the asset base, and the long life expectancy of the majority of assets, the sector has developed a procurement model which is framework based and predicated upon entering into long-term relationships with Tier 1 design consultants and contractors. These frameworks have been awarded mainly on the basis of the supplier being able to deliver a large capital programme for the best price in a fixed time. In reality, this has resulted in a slow start followed by a rush to build assets. The pace of projects meant solutions were driven more by asset standards than by disruptive innovations. Furthermore, these frameworks are large, complex and confidential and are inflexible in their ability to absorb new technology and/or business processes. Furthermore, the frameworks are paid on a time reimbursable basis, and there is a significant dis-incentive to bring new thinking through the frameworks which may not fit into this model.

There has been limited **opportunity** to innovate: fixed business plans with expected/known outputs and/or outcomes with penalties for failure has driven the companies into the arms of slow, safe capital solutions. Furthermore, the regulatory model has encouraged capex solutions over non-build solutions. This has not changed, even with the introduction of Totex as the sector is geared towards asset construction. As a regulated privatised industry, the sector has taken a very conservative attitude to "risk". As the guardian of the public water supply and sewerage operator, this is a prudent view. However, it has not succeeded in driving the improvements required to develop a 21st Century sector. Risk of failure, either compliance or financial, is so heavy that any potential upside from implementation of a successful innovation is dwarfed and the conservative line of least resistance in procurement is inevitably followed. This has resulted in multiple testing and pilot requests, access to assets being denied and the ever increasing demands for "proven innovation" being demanded. As a result the supply chain excitement in the water sector has been turned off.

The **capability** to absorb and implement innovations has been eroded over time: company operational budgets (OPEX) have been steadily reduced over each amp. This has resulted in the company R&D departments either being closed or severely de-funded. The operations model has also evolved to one of minimum compliance at minimum cost. The ability of the companies to process, assess and implement innovations is severely depleted due to the small size of the innovation departments that are often at arms-length from the operations. This has resulted in the supply chain being directed to the Tier 1 contractors as a way to implementation but this has failed in most cases for reasons outlined above. Furthermore, the capital maintenance programme has evolved into one of like-for-like replacement with improvements only following regulatory interventions (e.g. pollution and flooding incidents or leakage increases). The amount of operational data collected and acted upon was reduced dramatically and although not we are swamped with data, the knowledge to utilise that data effectively is largely contracted in from outside the sector. Procurement departments have become ever more staffed with experts who know the cost but not the value of products and services. Innovation services are asked to bid as if commodities with little flexibility to absorb new thinking in developing solutions. Innovation is treated as an unnecessary luxury in the delivery of solutions.

Q:2 Do you think that the financial support cited in section three is required to stimulate innovation in the sector? If so, what do you believe is the appropriate amount of funding and why?

Any financial support directly targeted at stimulating innovation in the sector is welcome. Section 3 mentions transformational innovation as being the targeted focus of any such funding and if so, it is important that the finances are directed towards projects that are of benefit to the whole sector rather than specific local or regional issues. Sufficient funding is available within the business plans for companies to address any specific local issues.

The funding required to generate the required excitement within the industry has to be secure and long-term. Any claw-backs at the end of the funding would introduce uncertainty into the supply chain and prove unhelpful.

The funding needs to be targeted at solving national problems facing the sector. UKWIR has a set of 12 challenges facing the sector and we believe that these could be used as the basis of setting competitions which invite applications for funding. However we also foresee that some of these research objectives are long term issues, and there remains a need for a more dynamic prioritisation process that represents localised challenges for small Water only companies as well as largely more integrated businesses.

The fund should also give consideration to off grid solutions and suppliers that are not governed through traditional water company structures to encourage decentralised solutions where these are proven to be in the public interest.

We consider the suggested fund of £200M to be modest with little impact to the average customer bill (<0.4%) and would be sufficient to develop a stimulus for transformational innovation provided the governance of the fund was effective, transparent and independent of direct water company agendas.

Centralisation of funds could well be subsidised through existing planned expenditure in current business plans to greater effect.

Q:3 Do you agree that our proposed draft principles for additional financial support will effectively safeguard the interests of customers?

As stated above, the £200M fund must be deployed to help the sector achieve transformational innovation. While the safeguarding of customers is very important, innovation has an inherent risk that makes it very difficult to actually guarantee results. Assured of steady financing, innovators in the supply chain (primarily SME's) can afford to take the long view and pursue breakthrough technologies or processes that might not pay off within a 5 year cycle but might ultimately be of enormous value for society.

If the fund is connected in to the normal business plan of the regulated utilities with potential claw-backs, it would be undermined before it gets going. Therefore the size of the fund (£40M/year over 5 years) should be sacrificial and trust placed in the supply chain to use it well.

To develop this point further, we are calling for a truly independent governance of the fund. It should be managed through an independent body with a lean governance structure and a target of no more than 2% of the fund to be deployed on administration.

The fund should be overseen by an independent board consisting of key stakeholders including Ofwat, Defra, WaterUK, Future water Association, British Water; BEIS and have an independent chair from outside the sector. The chair should be appointed for 1 or 2 years to keep it fresh. The board should be tasked with enduring full transparency of programme management. The board should meet

quarterly and should adopt the Local Enterprise Partnership model of meeting in public with published minutes.

All project management should rest within the project and equate to 15% of the project costs. Each project should progress against milestones to the board at each meeting. The board would reserve the right to re-direct funding IF sufficient progress was not being made against pre-agreed milestones.

Q:4 What are your views on the collectively funded innovation competition model which we describe in section three? What other considerations not highlighted should we take into account in designing/implementing the competition?

The model proposed in Section 3 has some major advantages such as ensuring the innovation is not just about the development of new technologies but can also be about having the right business processes and people in place, indeed both are required. Transformational innovation in the sector must include full-scale applications and therefore the water utilities are key stakeholders. However, any model that insists on a proportion of project costs coming from sponsor companies will inevitably bring “business-as-usual” utility business procurement practices and risk appetites into play. Indeed, the Gas and electricity NIA projects have struggled under the weight of BAU project management techniques being applied.

We propose that the fund should be completely independent of water utility normal operations.

The first action of the fund will be to develop the challenges that the fund will address. This should be done using the start point of the UKWIR big questions and an expert Technical committee drawn together to set the challenges. This preparation work is critical to the success of the fund and can be carried out at the same time as the project governance can be developed, say 6 months after fund launch.

The fund should launch invitations for funding internationally based on those challenges and assess each outline proposal against a number of set criteria such as:

Each proposal should have, among others:

1. at least 2 sponsoring Water Utilities
2. at least 25% of funding should be allocated to SME's delivering on central governments procurement guidelines with specifically ring fenced funds to reduce risk exposure¹
3. a clear development, implementation and timeline to pass/fail defined

If the technical committee is convinced of the outline proposal, a fund-appointed project sponsor should be appointed and money allocated to develop the detailed proposal which will then return to the committee for final sign-off.

Q:5 What are your views on the end-of-period innovation roll-out reward we describe in section three? What other considerations not highlighted (e.g. whether it should be collectively funded or individually funded) should we take into account in designing/implementing the reward?

The end-of-period roll-out reward again will not provide the security of funding that the sector needs to stimulate innovation. Our concern is that “claw-back” and reward contracts will be unnecessarily complex and waste significant time, resources and funding on risk diversion activities.

¹ <https://www.gov.uk/government/publications/2010-to-2015-government-policy-government-buying/2010-to-2015-government-policy-government-buying#appendix-1-making-sure-government-gets-full-value-from-small-and-medium-sized-enterprises>

Q:6 What other potential alternative mechanisms for funding/ rewarding innovation not discussed do you think we should be considering?

We believe that regulators should in addition have a duty to develop resilience dividends – this approach proposed by organisations such as the Rockefeller Institute, rewards organisations for developing systems that help the sector and wider community to become more resilient.

WRc believes that a ‘resilience dividend duty’ alongside the innovation fund would increase customer engagement. As a result Regulators could work with the utilities and supply chain to develop methodologies that allow companies to report annually against a resilience measure, designed for example to capture the number of “avoided” incidents as a result of actions taken – such as schemes in place, or innovations deployed. These could then be measured for example against challenging climatic/weather related conditions e.g. severe cold spell, but with xx thousand fewer customers affected than in a previous year, or a long drought period.

WRc believes that such a duty would go beyond the existing ODI system and the proposed innovation funding mechanism outlined. Success would be measured by the number of major events avoided (flooding, interrupted supply, drought etc). In this way the innovation fund would achieve a great deal more than simply bringing innovation into the sector, and would therefore be more openly ‘transformational’.

We argue that the ‘resilience dividend’ approach would support creative thinking, stimulate new ideas and innovation and the drive the achievement of a more dynamic, agile supply chain.

Q:7 Do you think the potential industry activities discussed in section four could help drive innovation? Are there other activities not identified which you think the industry should be considering?

We support the approach outlined in section four, specifically:

Sector Wide Innovation Strategy

As stated above, the framework for approaching this joint initiative should be the UKWIR (UK Water Industry Research) 12 big questions as they are agreed widely and focus on the sector wide challenges of leakage, asset maintenance, pollution, flooding etc.

Centre of Excellence

There is a need to establish a water sector Centre of Excellence to ensure standards of innovation and implementation of innovation are constantly being driven forward. There are many physical test centres across England & Wales that exist already; WRc being one and the universities specialising in water and the various trade associations and research bodies. Therefore we feel it imperative that the fund does not embrace a 1980’s style bricks and mortar solution and build such a centre. Indeed we, among others, would consider any such subsidised entity as counter-competitive to these existing businesses. The Centre of Excellence should be virtual and act as a ‘coordinating’ system for activity and knowledge in the sector.

The centre of excellence should operate an “approval” scheme for new innovations to be rigorously tested once and then certified as fit-for-purpose. The testing should be done through various accredited testing centres and the scheme managed by the CoE for the water sector.

Q:8 Do you think the proposals in section five will help drive innovation? Are there other activities not identified which you think Ofwat should be considering?

In addition to the fund, WRc believes that the England & Wales water industry must declare itself “open for innovation”. It is recommended that a portion of the fund be set aside for an annual International Water Innovation Congress. The congress would act as a lightning rod to reinject energy into a moribund sector.

Final Comment WRc would like to see greater cooperation and coordination of regulatory functions among the utility regulators. Such an approach would focus priorities, for example bringing IT/Telecoms infrastructure up to current standards across the whole country, this would greatly help to support the digital revolution which is beginning in the water sector but which needs to accelerate in order to meet the challenges the sector faces through introduction of existing new technologies and those that may arise through the innovation fund over the next 10 years, particularly related to climate change.