Capitals-Based Incentives

A contribution to the PR24 Future Ideas Lab

July 2021

Executive Summary

Capitals-based incentives

The paper is intended to inform Ofwat's PR24 methodology, and address the question:

"What, if any, could the role of the price review be in encouraging or incentivising companies to better deliver public value?"

As an entry into the PR24 'Future Ideas Lab', the paper is an initial thought piece, and is intended to stimulate and encourage debate for the sector.

We explore the **current state of play** in terms of how wider value is understood, measured and incorporated in government policy, regulatory mechanisms, investors' choices, and water company activities such as decision making and reporting. We focus on value in terms of the Six Capitals approach, as defined by the Integrated international Reporting Council.

We then look at the **drivers for change**. For the water sector, there's considerable 'pull' from impact investors for greater alignment between environmental and social outcomes and financial incentives.

We then explore the **regulatory incentive framework**, and how this could evolve from the current status quo towards value-led incentives.

Within this, we explore how **targets** could be set with reference to wider value creation, and how **incentive** rates could be developed, whilst still ensuring customers are protected by a guaranteed minimum level of service in key areas.

Finally, we consider the technical, regulatory and organisational **enablers and considerations** for a Capitals-based incentive framework and highlight several opportunities for future development of the concepts.

We conclude that the PR24 regulatory framework offers a **timely opportunity** for evolution in the incentive framework. The **prerequisites for implementation are already in place** for a Capitals based approach to value-led incentives. Initiatives such as standardised valuation research and investment planning frameworks provide a means of accelerating the sector's progress on a common basis. We also **suggest further work** for the sector to consider.

Introduction

The purpose of the paper is to explore the potential and options for incentivising wider social and environmental value in the regulatory framework, and outline the key considerations and practicalities for adopting a Capitals-based approach to Outcome Delivery Incentives.

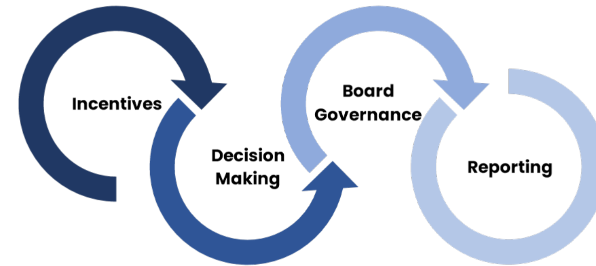
The paper is intended to inform Ofwat's PR24 methodology, and address the question:

"What, if any, could the role of the price review be in encouraging or incentivising companies to better deliver public value?"

Yorkshire Water appointed **ARUP** and its associated partners, **ARC Ltd** and **Navigate Infrastructure Consulting**, to understand and develop the scope and the case for using Social, Natural and wider Capitals in the PR24 regulatory incentive framework. The work has been undertaken in collaboration between Yorkshire Water and partners and is intended to set out initial thoughts in this area, to challenge and encourage the development of the PR24 regulatory method.

Role of the Price Review

Price reviews do far more than simply reviewing prices. They set the sector's incentives and targets, which drive companies' behaviours. This includes the basis for their decision making, the considerations in Board governance, and the focus and content of reporting.



Exploring value-based incentives could create or encourage a process in the companies which aligns all of these activities around delivering greater value for society and the environment.

Introduction

Scope and Structure

The paper is structured into six parts:

- **the current state of play**
    - how is wider Capitals value currently applied in regulatory policy, incentives and investment decision making?
- **the drivers for change**
    - what are the societal, regulatory, investor and resilience demands for incentives?
- **options for incentivising value**
    - what do the options for regulatory incentives look like and what are their key characteristics?
- **wider stakeholder views**
    - what other perspectives could be considered in developing Capitals incentives?
- **implications for the sector and enabling actions**
    - what are the regulatory, organisational and technical enablers for the sector?
- **possible future work**
    - how can the concept be developed further?

The current state of play

Introduction

Understanding 'wider value' and bringing it into the realms of policy, regulation and decision making is a considerable and longstanding challenge. Avoiding unintended consequences, fully reflecting externalities, genuinely representing social and environmental impact – these are all reasons to have an objective, consistent and common way of defining and measuring value beyond simply prices and profit.

The terms **Social** and **Natural Capitals** first appeared in the early 20th century and have been in general use since the 1990s, when sustainability thinking developed the concepts into workable, multi-Capitals frameworks.

Although care needs to be taken not to extend the metaphor too far (not all Capitals are equal – there are no other Capitals without Natural Capital), it is proving to be useful as a coherent means of expressing and quantifying wider value. It has been particularly helpful for the water sector, as Ofwat's 2020 discussion paper on public value notes:

"Water companies have a clear socio-economic and environmental footprint as one of a handful of key long-term stakeholders in the areas they operate in".

The recent Dasgupta review (2021) argued that Natural Capital needs to enter financial decision-making in the same way buildings, machines, roads and skills do, to achieve more sustainable investment outcomes.

The same argument also applies to other forms of Capital. To drive decisions that will benefit customers, communities and the environment, we first need to recognise the roles they play in the value creation equation, both in terms of input and outcomes. A multi-Capitals lens helps improve the measures of economic success, through which better societal return on investment can be realised.

Ofwat's current 'Creating tomorrow, together' consultation is, among other aspects of its PR24 methodology development, seeking views on how value can be created for customers and communities through the outcomes framework.

So, what do we mean by "value" and the "Six Capitals"?

The current state of play

Capitals as the framework for understanding 'value'

The concept of multiple Capitals beyond Financial Capital is not new, it has been in existence for several decades. Recently, the **International Integrated Reporting Council's Six Capitals model** (IIRC, 2013) has become the standard approach as a result of the structure and rigour it has applied to reporting. The Six Capitals are understood as:

Financial Capital is broadly the pool of money available to an organisation and includes both debt and equity finance. This description of Financial Capital focuses on the source of funds, rather than its application, which in turn results in the acquisition of Manufactured or other forms of Capital.

Manufactured Capital refers to material goods and infrastructure owned, leased or controlled by an organisation that contributes to production or service provision, but is not the output itself e.g., tools, technology, machines, buildings and all forms of infrastructure.

Human Capital is the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.

Intellectual Capital is the group of knowledge assets that are attributed to an organisation and most significantly contribute to an improved competitive position of the organisation by adding value to defined key stakeholders.

Natural Capital refers to the elements of nature that directly or indirectly produce value to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions.

Social Capital refers to networks together with shared norms, values and understandings that facilitate co-operation within or among groups. It refers to the community or societal level of value.

The current state of play

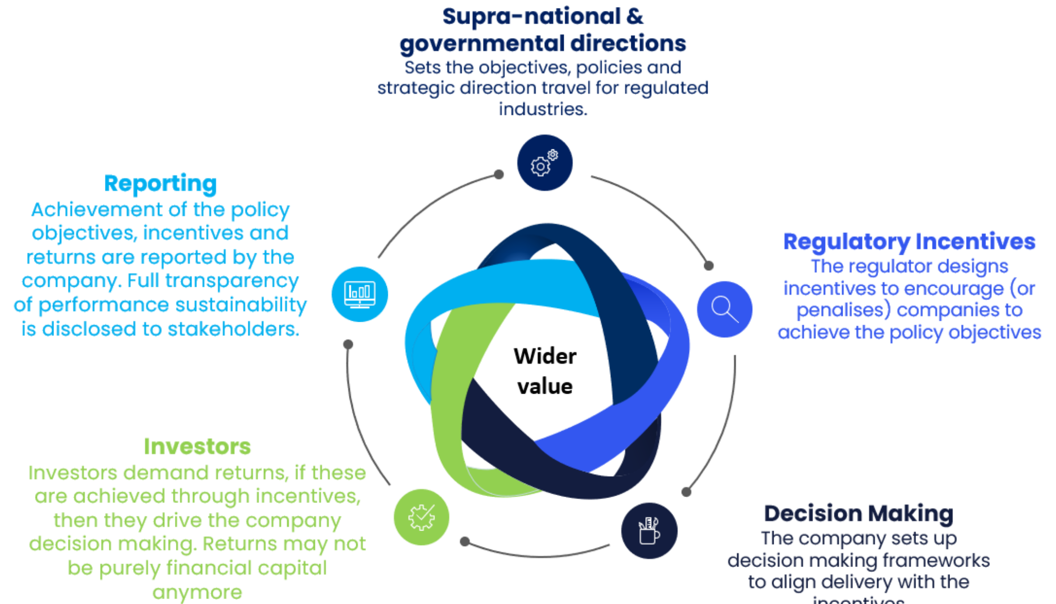
Key areas in which Capitals are applied

The concept of Capitals is already used in various stages of policy making, business activity and reporting. The diagram illustrates the key areas where the Capitals are currently influencing activity for the water sector and more widely.

It also shows flows and interaction between government setting policy, regulators incentivising, companies making decisions, investors choosing opportunities, and the reporting of outputs and returns.

As set out in the following section, supra-national and government policy are currently highlighting the need for greater delivery of wider Capital value, and there is a strong demand from investors to understand the connection between sustainability and financial risk and opportunity.

There is a clear opportunity with the development of PR24 for regulatory incentives in the water sector to compliment and enhance the other stages.



The current state of play

International and Government Policy

While significant progress has been made in recent years in creating a common language for understanding value through the Six Capitals framework, there is a further realisation at global, supra-national and governmental scale that there needs to be further convergence in the metrics being used to define value, not least for investor and regulatory comparability.

Recent initiatives include:

- the United Nations developing a System of Environmental Economic Accounting (SEEA),
- the European Union developing its Taxonomy, a common classification system for sustainable economic activities,
- the Organisation for Economic Co-operation and Development (OECD) publishing 'Biodiversity, natural capital and the economy'
- the United Kingdom's Office of National Statistics developing natural capital accounts, and recent BS8632 Natural Capital Accounting for Organisations.

There is an emerging consensus that organisations need to become purpose-led and to deliver public value, with a corresponding need for how that can be defined and articulated in decision making. This theme was picked up in Ofwat's 2020 discussion paper on public value.

Similarly, Defra's 2017 Strategic Policy Statement (SPS) expected companies to achieve best value over the long term by including "options where water and wastewater systems could be used to provide wider benefits to the economy, society and the environment". It required Ofwat to encourage:

> **"sustainable use of natural capital and encouraging water companies to have appropriate regard to the wider costs and benefits to the economy, society and the environment"**

Indications for the 2022 SPS are that it will include a further emphasis on wider capital value, nature-based solutions and ensuring investability to attract investors with a long-term view.

The current state of play

Regulatory Policy

In utility regulatory policy, Ofgem introduced the concept of a Consumer Value Proposition (CVP) in the 2020 RIIO-2 price control for transmission and for gas Distribution Network Operators (DNOs).

In the RIIO-ED2 Business Plan guidance (2021), Ofgem has re-established the CVP as part of the Business Plan Incentive. It also requires DNOs to assess Natural Capital flows from projects and the NC stocks from sites.

Ofgem also endorses the standardisation of values and environmental and social inputs, recognising “the importance of fixing some of these input values early, as they feed into key decision-making tools that DNOs require to build their Business Plans”.

Ofgem’s new Annual Environmental Reporting requirements on DNOs (RIIO-2 FD 2020) mean that guidance is now needed on common reporting metrics and definitions.

For the water sector, there are also well established environmental regulatory policies for Natural Capital degradation, with statutory fines for poor compliance against EA and DWI drivers.

However, there are currently no formal economic or environmental regulatory mechanisms which explicitly incentivise delivering greater natural, social or wider value, or recognise the Six Capitals as an accounting basis.

During the 2019 Price Review process, companies were provided with cost allowances and performance targets and incentives (PCs and ODIs) which arguably focussed on improving traditional concepts of efficiency and productivity, rather than wider value creation.

Cost allowances were set for a short-term five year horizon, based on historical needs and expenditure across the industry. While this ensured that customers were protected for paying for the services they receive, it did not incentivise longer term sustainability or reflect changing infrastructure needs, nor did it guarantee the best value (rather than least cost) from the sector’s activities.

The current state of play

Similarly, the majority of PCs and ODIs were set annually within the five year period, with a limited number given five year targets - but none were applied over the long term or spanning multiple price review periods.

For the common PCs (applicable to all companies), the ODIs tended to be based on customer valuations, so an element of value or 'benefit' did form part of the incentive framework.

While theoretically the mechanism should incentivise companies to deliver additional performance if it is of value to customers (i.e. where the marginal costs are lower than the marginal benefits), in practice this may not be the case as:

- marginal costs are difficult to identify accurately, particularly where they are relevant for multiple benefits;
- marginal valuations are based on companies' individual research, which inhibited Ofwat's ability to compare ODI rates across companies. As a result, adjustments were made to the ODI values which may have significantly distorted the incentive.

While wider Capitals value was not a core feature of the regulatory incentive framework at PR19, a review of the England and Welsh water companies plans and their annual reports, shows that:

- all the companies already have, via their PCs, some coverage of metrics across the Capitals on which they report, even if they have not formally adopted a Capitals approach or terminology;
- many companies have reputational ODIs explicitly phrased in Capitals language (one company, UU, has such a financial ODI);
- although most of the existing metrics which are reported focus on flow, some companies also have metrics that monitor the health of their multi-Capitals stock;
- Financial, Manufactured, and Natural Capitals are areas where metrics are more mature; Social and Human Capital metrics are emerging fast; and Intellectual Capital metrics are still in a very early stage of development and convergence.

The current state of play

Examples of existing Capitals PCs and ODIs at PR19
Several companies do have explicit Natural and Social Capital PCs in AMP7:

United Utilities: Natural Capital PC:
UU's PR19 plan included a Natural Capital PC with a financial ODI, to support delivery of greater value from Natural Capital benefits over and above those already required by the WINEP.

As UU notes, "the ODI recognises a limited set of natural capital benefits, including water quality, flooding, climate regulation, biodiversity, recreation/amenity and health & wellbeing. The set of benefits that were in scope were deliberately set conservatively as the ODI was novel at the time."

Anglian Water: Natural & Social Capital PCs:
Anglian Water recognises that a number of important elements of Natural Capital and Social Capital already have separate Performance Commitments, listing 6 existing PCs contributing to Natural and 17 to Social Capital.

To support these existing PCs, the Natural Capital PC is a basket of metrics that includes relevant elements which are not already individual PCs. Similarly, the Social Capital PC is a basket of metrics, such as community investment and engagement, trust, and relationships with suppliers.

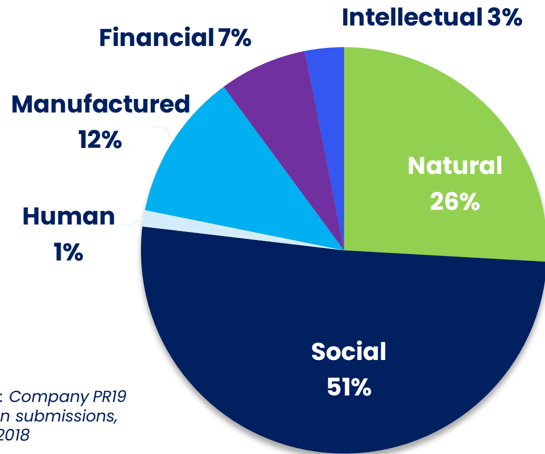
Yorkshire Water: Creating Value PC:
Yorkshire Water included a PC that monetises the cumulative additional environmental, social and financial benefit which the company creates from resources currently under-used or classified as waste. The benefits are quantified as net economic value created by implementing approaches that improve resource use, in terms of the Six Capitals value created.

Yorkshire Water: Integrated Catchment Management PC:
The PC has a reputational ODI to formally develop, agree and implement Natural Capital Operator management plans, to optimise sustainable use and management of Natural Capital and decision making in 3 trial catchments. The Natural Capital Operator management plan will be developed and agreed, and provide a publicly accessible geographic information system, showing evidence collated, relevant Six Capitals stocks, internal and external stakeholder pressures, and investment areas.

The current state of play

PR19 Incentives
While the previous examples illustrate 'one off' or individual Natural and Social Capital PCs, the vast majority of PCs are focussed on individual services. It is however possible to link the full range of existing AMP7 PCs to the Six Capitals.

An initial analysis of the proposals put forward in the companies' 2018 business plans, shows all PCs can be indicatively mapped to a primary Capital.

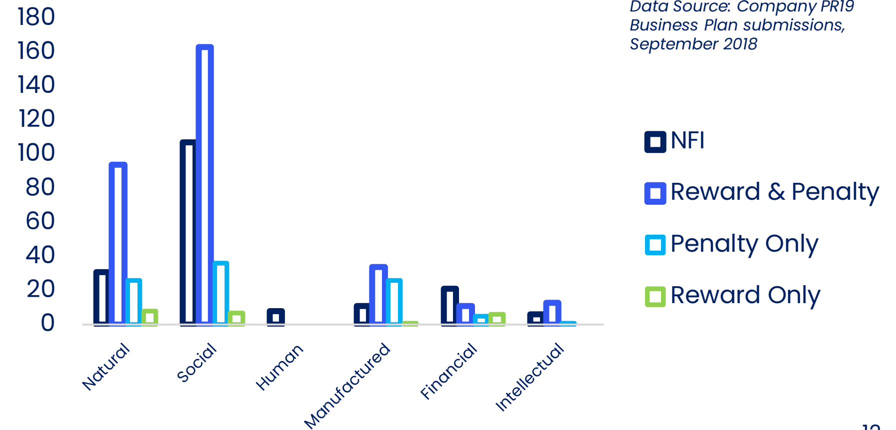


Data Source: Company PR19 Business Plan submissions, September 2018

Natural and Social Capitals feature heavily as these relate to the traditional service targets (such as supply interruptions) or environmental measures (such as river water quality or pollution incidents).

The majority of the Social Capital PCs map to the common regulatory commitments, with the other Capitals made up of bespoke, company formulated PCs.

The diagram below shows the type of incentives applied to the PCs within each of the Capitals.



Data Source: Company PR19 Business Plan submissions, September 2018

The current state of play

Decision Making
While the water sector has these individual service based PCs and ODIs from PR19, the challenges it now faces are "wicked problems", such as maintaining resilience in the face of climate change, while simultaneously decarbonising its activities, achieving net biodiversity gain and supporting a levelling up of our society – **a Gordian tangle** which we are unlikely to be able to buy and build our way out of using only Financial and Manufactured Capitals.

The sector has evolved the role of value in its decision making over several decades. From simple multi-criteria analyses in the 1990s, via the appearance of customers' valuations in the early 2000s, several companies now apply the Six Capitals in their investment planning or even their optimisation Cost-Benefit analyses.

These appear in a range of ways, from case-by-case appraisals through to systemised application across all (not just manufactured) assets and interventions.

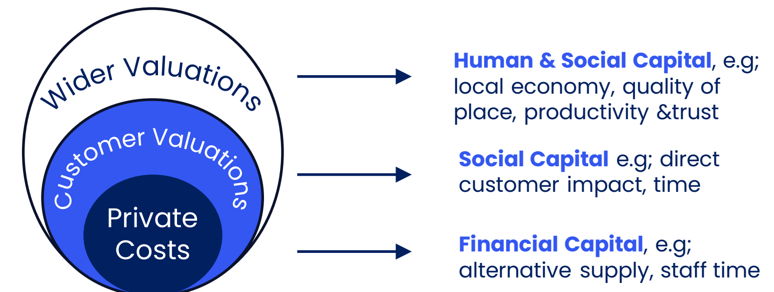
The central feature of value-based decision making in the sector, be that using customers' valuations alone or alongside values for multi Capitals goods and services, is the use of a **value framework.**

In a value framework, metrics are defined for customer, environmental and societal performance, and then used to articulate both the risks and the benefits of investment options in monetised terms.

Value is assigned to each metric. For the last 15 years or so, the value components for each metric have been

- a company's own (private) costs
- **and** customers' valuations,
- **or** in some instances socio-environmental valuations from literature (e.g. illness, injury, nuisance, disruption).

Moving to wider Capital values enables the use of customers' valuations **in addition to** valuations from the literature for additional benefits. This allows the full value to be identified, for example for supply interruptions:



The current state of play

Decision Making

The key to unlock the ability to identify and incorporate wider values is to avoid overlaps between customers' and wider valuations from research literature.

This can only be achieved where customer valuation research is designed specifically to elicit and separate the degree of **use and non-use value** captured in a customer's preferences.

This is a significant conceptual shift in decision making as it provides not only the societal and environmental value of managing risks, it enables investment planners to identify opportunities and the wider value that these can create.

For example, reducing risk of sewage escapes (flooding of properties, pollution incidents) can be managed by bigger pipes (Manufactured Capital), or by taking the opportunity to blend in nature-based solutions (Natural Capital), or behavioural campaigns on sewer use (Social Capital). Under the PR19 regulatory framework, only the lowest cost solution within the 5 year period would incentivised, rather than the best value over the long term.

Investors

There is a growing appetite for 'impact investment', where there is a clear understanding of the wider non-financial returns of investment options as well as the traditional monetary returns.

Wealth asset managers such as Blackrock are advocating reallocating Financial Capital into businesses, funds and bonds with a responsible social and sustainability focus.

In Ernst and Young's 2017 Global investor survey, 92% of investors agreed or strongly agreed with the statement that "**Public company CEOs should lay out an explicit strategy each year for long-term value creation and directly affirm that the company's board has agreed it**."

Demand for Environmental, Social and Governance (ESG) investment vehicles far outstrips supply, growing from \$3 trillion in 2010 in the US to between \$11.6t and \$30t in 2018, with 'E' the fastest growing element in that (up 57%). Climate change and carbon are biggest component within this, with sustainable resources on the rise as a contributor to ESG growth. Green Bonds increased by 25% from 2017 to 2018 on the London Stock Exchange.

The current state of play

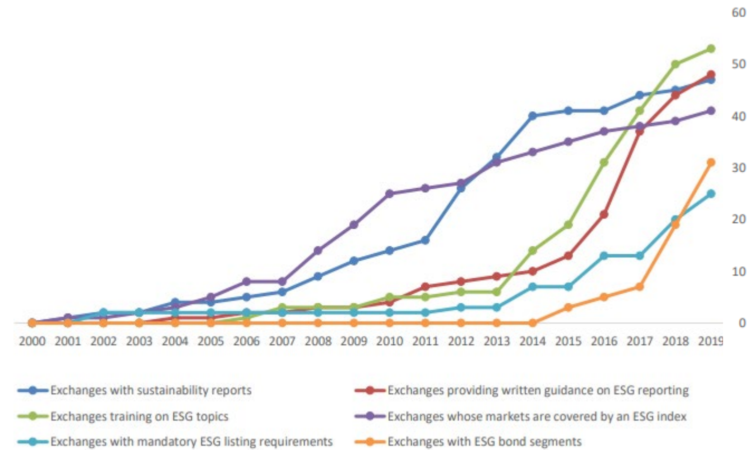
Investors
For the water sector, Green and Sustainability Bonds have proven to be successful innovations, being greatly oversubscribed. Yorkshire Water released a sustainability bond in 2018 that was oversubscribed by five times on the LSE's Green Bond segment. Anglian Water now has six Green Bonds.

As noted by the IIRC, investors are driving performance in this area: "progressive investors from the UK, Netherlands and Australia have already indicated their support for Integrated Reporting… the management processes reflected in this reporting can drive the development of more sustainable and stable businesses in the longer term."

Similarly, Deutsche Bank Asset Management notes:

"We are aware of many more ESG issues than we were in the past, but the ESG ratings we have today still only really give you a general feeling of performance, not a direct financial cost or benefit. **We need companies to take the information behind those ratings and make the links to value creation and destruction.**"

Increase in Stock Exchanges Sustainability Activities (Sustainable Stock Exchange Initiative report, 2019)



The graph illustrates the remarkable increase in the number of stock exchanges over the last 20 years that have introduced ESG related activities.

The current state of play

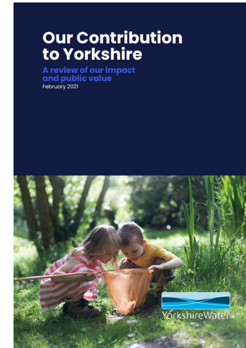
Reporting

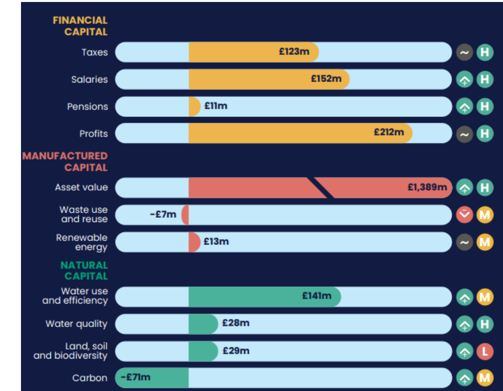
Globally, the need to have a single coordinated solution of a framework and standards is recognised, and the five main bodies (GRI and SASB standards, CDSB and CDP frameworks, and the IIRC's <IR> reporting framework to connect these) are working together to deliver this.

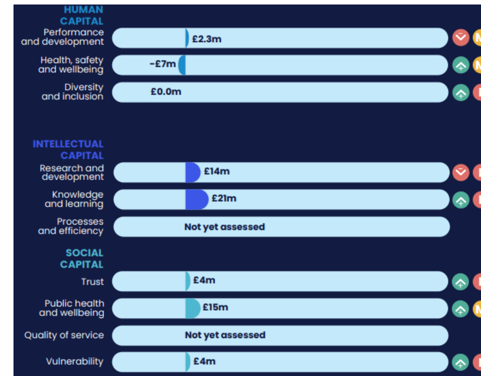
The reporting of Capitals and wider value creation is well developed, particularly in the water sector in England and Wales. For instance, Yorkshire Water has been reporting its multi-Capitals impacts since 2015 in the "Our Contribution" annual reports.

These reports quantify the economic value of the company's contribution in the form of the Six Capitals. Whilst not all of the impacts can be quantified financially, the assessment demonstrates the company is making a strong and growing net-positive contribution to society.

The use of the Six Capitals reporting is also driving customer and wider stakeholder interest and understanding of the company activities beyond what's reported through traditional regulatory and statutory accounts.







The current state of play

Reporting

Other water and wastewater companies (WaSCs) also publish similar annual reports considering the multi-Capital impact of their businesses, such as sustainability reports and integrated annual reports.

A brief review of the England and Wales' WaSCs shows that about half the companies have already adopted the formal multi-Capital concept as the basis on which to define their impact.

The table overleaf summarises the coverage of these reports in terms of whether a Capitals concept has been formally adopted by the company and features in reporting; if Capitals are used in decision making; and if metrics exist for stocks and/or flows of Capitals and valuations are attached to those metrics.

The current state of play

Reporting

	Use the capitals concept	Use the capitals in reporting	Use capitals in decision making	Metrics for capitals stocks	Metrics for capitals flows	Assign values to capitals metrics
Yorkshire Water	Developed	Developed	Developed	Developed, some gaps	Developed	Developed
Anglian Water	Developed	Developed	Partial coverage	Partial coverage	Developed	Partial coverage
United Utilities	Partial coverage	Partial coverage	In development	Developed	Developed	In development
Northumbrian Water	Developed	Developed, some gaps	Not apparent	Partial coverage	Partial coverage	Partial coverage
Wessex Water	Developed	Partial coverage	In development	Not apparent	Not apparent	In development
Severn Trent Water	Not apparent	Partial coverage	In development	Not apparent	Not apparent	Not apparent
South West Water	Developed	Partial coverage	In development	Not apparent	Not apparent	In development
Southern Water	Developed	Partial coverage	Not apparent	Not apparent	Not apparent	Not apparent
Thames Water	Developed	Partial coverage	Not apparent	Partial coverage	Partial coverage	In development
Welsh Water	Partial coverage	Partial coverage	In development	Not apparent	Not apparent	In development
Hafren Dyfrdwy	Not apparent	Partial coverage	Not apparent	Not apparent	Not apparent	Not apparent

Key

- Developed
- Developed, some gaps
- Partial coverage
- In development
- Not apparent

Additionally, Scottish Water from 2018-19 and Northern Ireland Water from 2019-20 have also made their integrated annual reports on a Six Capitals basis, in line with the IIRC's Six Capitals Reporting Framework.

The drivers and opportunities for change

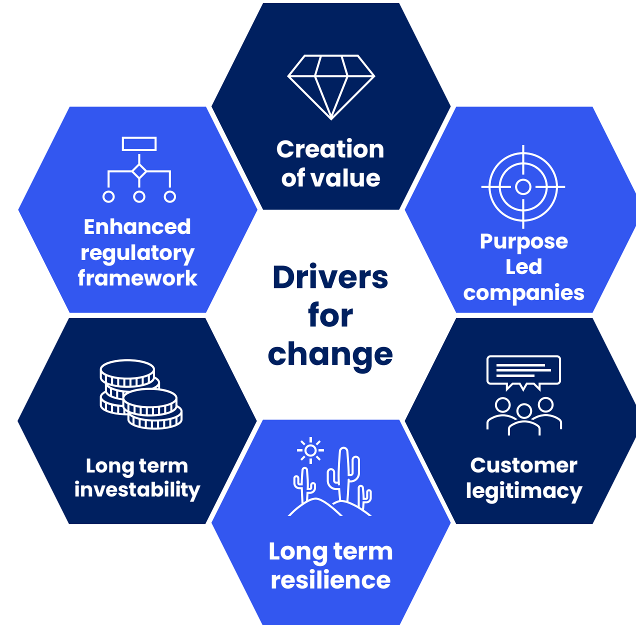
Introduction

The previous section explored the current state of play in terms of how wider value is understood, measured and incorporated in government policy, regulatory mechanisms, investors' choices, and water company activities such as decision making and reporting.

The following section examines the potential drivers and opportunities for change from the current state to the future.

For the water industry, there is a strong and growing demand from investors to understand the connection between sustainability and financial risk and opportunity, along with how business contributes to achieving the Sustainable Development Goals (SDGs).

This demand is matched by the appetite from regulators, policymakers and the accounting profession to respond.



The drivers and opportunities for change

Being a Purpose Led Industry & Customer Legitimacy

The water sector is constantly evolving and adapting to a changing world. As it grapples with new areas of focus such as resilience, social purpose and CSOs, a Capitals-based outcomes and incentives framework can help drive behaviour change and measure success.

There has been a growing number developments in recent years in the UK water industry signalling the sector's desire to become more purpose-led, outcomes-driven, and long-term focused for its customers, communities and the environment.

This is coupled with the emphasis on resilience and the need to mitigate against and adapt to the climate emergency. These drivers require a shift in mindset to make use of and account for the multi-Capitals which underpin an organisation's value creation, and an enhanced regulatory framework that can foster the right behaviours and actions.

Being purpose-led provides the focus for value creation and helps strengthen customer legitimacy. This aligns well both with the sector's Public Interest Commitment and (following on from the 2020 Brydon Review) with the recommendations of BEIS' March 2021 White Paper on 'Restoring Trust in Audit and Corporate Governance', which recognises that the privatised water companies are public interest entities (PIEs).

Ensuring long-term resilience

Recognising the natural, social, human and intellectual assets fundamental to an organisation's value creation will help companies make business decisions that are more sustainable and enable returns over the long-term.

Meaningful, forward-looking audit and reporting is a key thread in both the Brydon Review and the current BEIS White Paper proposals – for instance, requiring an annual Resilience Statement, setting out how directors are assessing the company's prospects and addressing challenges to its business model over the short, medium and long-term, including risks posed by climate change.

The drivers and opportunities for change

Enabling long-term investability

Investors are alive to the ever-changing market and the issues that are pivotal to creating enduring value. They are increasingly active in seeking more sustainable investment choices, one 2018 estimate putting a figure of over $30 trillion in assets under management where ESG (Environmental, Social and Governance) criteria in investment analysis and portfolio selection are applied.

However, investors face challenges in accessing consistent and transparent information on which to base their investment choices.

A recent paper published under the UN's Principles for Responsible Investment (Christensen et al, 2020) highlighted that the financial sector is lacking a common approach to assessing sustainability and ESG performance.

This issue is widely recognised and as noted earlier in this paper, has led to the welcome collaboration of the five key frameworks and standards setters, the GRI, CDP, CDSB, SASB and IIRC to synthesise a global corporate reporting approach.

Converging on a common basis for assessing value creation in the water sector will strengthen the long-term investability of the sector, as global investors' increasing demand for ESG and impact investments demonstrates. The Natural Capital Committee's 2nd Report to the Economic Affairs Committee recommended that government should incentivise private investment in Natural Capital.

At the same time as improving the sector's transparency for investors, a common approach to assessing value would also provide a solid basis for regulatory comparability, both within the water sector and across other sectors.

There is an opportunity for Ofwat to take the lead among its fellow regulators in the UK Regulators Network on how Capitals could feature in regulated sectors' decision making, particularly in the context of the National Infrastructure Commission's recommendations for regulation.

The NIC's next National Infrastructure Assessment (due in 2023), is due to consider Natural Capital as part of its work on the key themes of Net Zero and climate resilience. Advancement of a Capitals-based reporting and incentive framework at PR24 would demonstrate the water sector's progress in this area.

The drivers and opportunities for change

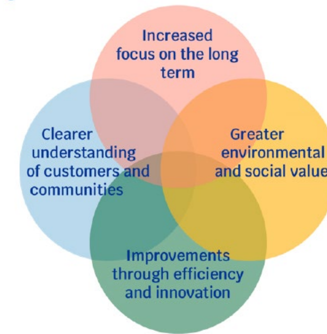
Enhancing the Regulatory Framework

UKWIR research this year into the effectiveness of the regulatory framework has highlighted that there is consensus across the water sector for the regulatory framework to develop a stronger focus on long-term incentives to protect future generations and the environment.

Both the PR19 lessons learnt (‘PR24 and beyond: Our reflections on lessons learnt from PR19’, Ofwat 2020) and Competition & Markets Authority (CMA) arguments laid out over the last year have highlighted areas in need of change in the regulatory process, such as the need for cost assessment approaches to adequately reflect future industry challenges including resilience and climate change.

The CMA also noted the potential for the current price review framework to promote ‘short termism’ in investment decisions, as neither costs allowances or performance commitments incentives currently reflect a longer-term view than the 5-year cycle.

The recent Ofwat consultation for the PR24 framework, ‘Creating Tomorrow, Together’ also acknowledges this, and sets out an increased focus on greater environmental and social value over the longer term as part of its goals for the price review.

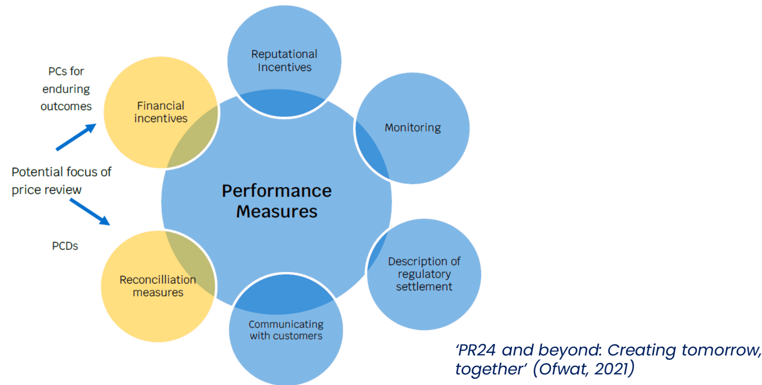


‘PR24 and beyond: Creating tomorrow, together’ (Ofwat, 2021)

Taken together with Ofwat’s desire “to move towards a more outcomes-focused WINEP that encourages…broader catchment management and nature-based solutions to deliver multiple environmental and social outcomes”, this points to an increasing need for regulatory mechanisms that explicitly encourage wider value creation.

The drivers and opportunities for change

The Ofwat 'Creating tomorrow, together' consultation also sets out proposals for modifying the approach to performance incentives. In line with the overall aim to reduce complexity, Ofwat has proposed that the existing PCs are categorised into 'types', of which only a common subset become financial incentives specified in the price review.



'PR24 and beyond: Creating tomorrow, together' (Ofwat, 2021)

The overhaul of the framework to bring greater clarity and consistency across the industry creates a clear opportunity to update the incentive framework to consider wider value creation, and to align investor, customer and company interests.

As well standardising the performance incentives across the industry, Ofwat is also considering how the incentive rates themselves are set.

Previously, companies have been responsible for conducting their own primary and secondary valuation research (such as willingness to pay and benefits transfer) to inform the incentive rates. However, this led to wide variation in the rates at PR19 that couldn't be easily explained across companies.

Similarly, the difficulties in identifying accurate marginal costs for individual service changes also undermined the calculation and comparability of ODI incentive rates. As a result, some of the key ODI rates were adjusted by Ofwat during the PR19 determination process.

These factors significantly weakened the link between water company performance (i.e. change in individual PCs) and the value assumed to be delivered (or foregone) by customers through incentive rates.

The drivers and opportunities for change

For PR24, Ofwat is considering moving to a standardised customer research approach to calculate incentive rates to address the weaknesses. Ofwat has also proposed removing the marginal cost element from the individual ODI calculations.

While it is difficult to see how these changes in themselves would address the wider problem of linking wider value to company performance in the current incentive framework, it does provide a significant opportunity for the regulator to specify valuation research in a way which would allow a fully standardised Six Capital valuation framework to be created for PR24.

As well as the opportunity for the national research to contribute to a standard and comparable incentives, it is also important to consider the role customers' valuations in decision making and reporting.

First applied in PR04, customers' valuations were originally used to inform investment decision making through Cost-Benefit Analysis (CBA). Since then, valuations have evolved in how they are applied as well as improvements in how they are elicited.

For PR19, valuation research used new techniques such as behavioural experiments and insights on revealed preference, as well as clear distinctions between 'use' and 'non-use' values (i.e. where service improvement/failure directly or indirectly affects a user, or alternatively, where there is a wider existence, bequest or 'warm glow' factor). This allowed customers' valuations to be used additively with wider values from research literature by avoiding overlaps.

For PR24, any valuation research would, at a minimum, need to incorporate this rigour to ensure that Six Capitals or wider valuation frameworks are still possible.

The proposed national valuation research for PR24 would, as well as providing converged values for ODIs, also support the intention of the UKWIR 'Future of Asset Planning' project to deliver a common value framework for the sector and align companies' cost benefit analyses and estimations of value.

The recent review of Asset Management Maturity Assessment (AMMA) conducted by Ofwat suggests that almost all companies have, or are in the process, of adopting some form of Capitals approach to asset management planning.

Options for Incentivising Value

The previous section outlined the compelling drivers for recognising wider value creation through the Six Capitals in incentives. This section now considers the potential options for how this could be achieved in the regulatory framework.

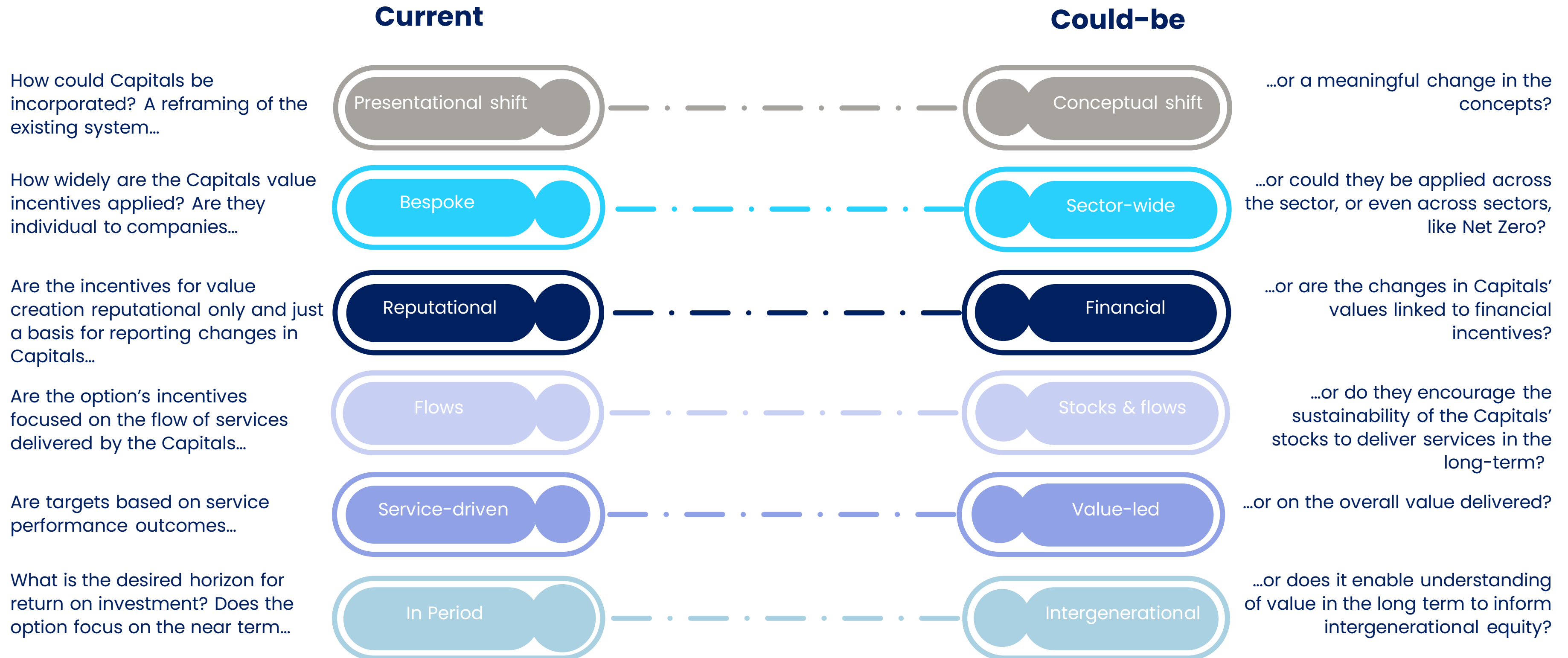
The potential options range from the current status quo (as implemented in PR19 and currently the delivery model for the industry through to 2025), to a more fundamental shift of concept where incentives are based on the stocks and flows of Capitals.

This section of the paper explores the key characteristics of the incentive framework and a Capitals-based approach, and how these might vary between the different options for implementation.

The following diagram illustrates the characteristics considered, followed by an exploration of how these could form potential options. The next section develops these options further.

Options for Incentivising Value

Characteristics of a Capitals-based incentive framework



Options for Incentivising Value

Re-frame, or change the thinking?

There are choices on how to bring Capitals into incentives. The most straightforward way would be to re-frame the **presentation** of PCs and map them against the relevant goods and services under the Capitals which they affect.

For instance:

- reducing pollution incidents touches on several aspects of Natural Capitals such as Amenity and Recreation, as well as Quality of Place under Social Capital;
- compliance with drinking water standards contributes to Trust and Quality of Place under Social Capital along with Health under Human Capital

This is essentially a continuation of the PR19 status quo with a slight shift in how PCs are categorised and reported. There are companies which have already adopted something similar in their sustainability reporting and decision-making approaches.

As the previous section demonstrates, it is possible to map existing PCs to a primary Capital.

A more fundamental **conceptual shift** in approach could be for targets and incentives to actually be set based on improvements in the Capitals value generated.

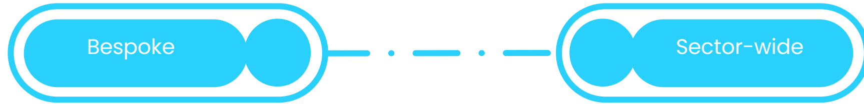
This would incentivise net value creation and ensure that the externalities associated with further improving performance are recognised, and that this better informs the trade-offs in decision making.

For both of these pollution incidents and drinking water quality examples, **how** those are delivered will determine whether additional value is created. Both could be delivered using Manufactured Capital interventions (e.g. traditional concrete build solutions for flow retention). But a conceptual shift towards value-based incentives would encourage combinations with other options. Nature-based solutions slow the flow and manage both the quantity and quality of surface water. These would bring wider value, for instance by providing carbon sequestration, biodiversity and additional wellbeing from greenspace, as well as being less resource consumptive and reducing embedded and operational carbon.

While a presentational shift might be easier to implement, it won't deliver the benefits of an incentive framework that has value creation as its conceptual aim.

Options for Incentivising Value

Standalone or common view? Reputational or financial?



There are various examples of Capitals-based PCs from PR19, which are primarily **bespoke** and reputational in the nature of their incentives. These are largely non-comparable, and are essentially voluntarily suggested by companies.

Towards the other end of the spectrum, a **sector-wide** set of Capitals-based incentives could be introduced. This approach would ensure consistency across the industry for the coverage of capital value generation in incentives.

Adopting an international standard approach for describing the incentives under the IIRC's Capitals could also help formalise which of the current bespoke PCs could be transitioned to common, sector wide incentives.

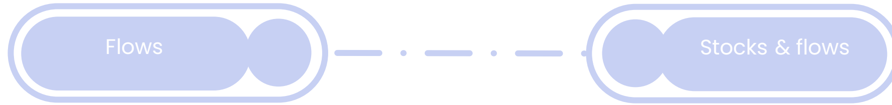
It would also help to identify where there are gaps in the current set of PCs from the perspective of protecting and generating value - for instance, PCs which relate to the Net Zero objective or for delivering for communities.

Almost all of the PCs in PR19 plans that relate to Capitals have **reputational** only incentives, and so primarily only drive reporting behaviour. However, moving to **financial** incentives for wider Capital creation would increase the incentive power and lead to bigger and faster responses from companies.

Placing financial incentives on Capital creation could be akin to incentivising "Outcomes", in that it would move company, investor and regulator attention to an aggregate level of activity and ensure that the overall balance of delivery was net positive.

Options for Incentivising Value

Change in value, or understanding the base stock as well?



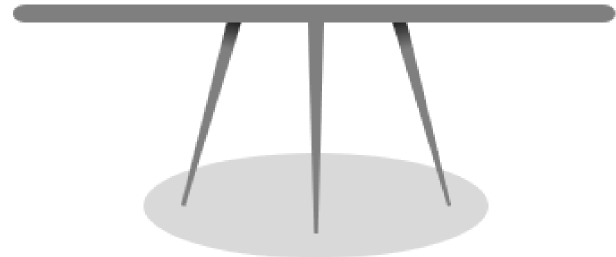
At present, those companies which publish ‘Our Contribution’ reports to show their impacts on multi-Capitals mostly report on **flows** of Capitals rather than both the **stocks** and flows of these.

Ideally, an understanding of stocks as well as flows would enable fair comparisons to be made across both the scale of companies and the nature of their operating areas e.g. those companies with large landholdings and therefore a large Natural Capital stock may have more scope to deliver great Natural Capital value in absolute terms. Similarly, more highly populated operating areas could have more scope to deliver more Social Capital value.

In the same way that having information on the scale and nature of Manufactured Capital asset stocks has informed cross-company comparisons, measuring the value delivered in proportion to the companies’ stocks across the other Capitals allows value comparisons to be made on a normalised basis for setting targets.

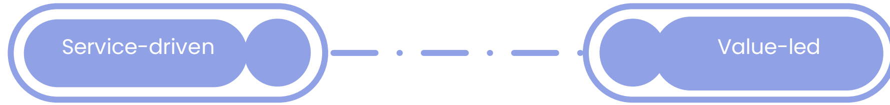
“Most accounting frameworks, in practice, focus on recording changes in flows, often neglecting changes in the underpinning assets (or stocks) from which they are derived… GDP epitomises this problem. Similarly, an organisation’s profit and loss accounts alone provide few insights into the state of its productive base.

Any reduction in the value of natural capital over time, as recorded in the accounts, can then be seen as giving rise to a corresponding requirement for a capital maintenance provision; the size of the provision should be the payment necessary to keep an asset or capital item intact through time. These maintenance provisions can therefore be thought of as a measure of the money that needs to be spent in order to maintain natural capital intact.”



Options for Incentivising Value

Service-driven or value-led?



The sector's performance to date has been framed in terms of delivering service and cost efficiency. Measures for planning and reporting service performance and costs, and the incentives for under or outperformance, have been developed on this basis.

The **service-driven** incentives regime has been a success in in delivering improvements in service to customers and levels of compliance over the last 30 years or so. However, as the previous sections set out, there is growing recognition that delivering public value needs to be at the heart of the sector's future direction. This is likely to be formalised by widening Public Interest Entities to include water companies following BEIS' current White Paper on restoring trust.

Given how dependent the water sector is on Natural Capital, setting PC targets on a standalone basis and without regard to wider value is clearly not a sustainable approach. For example, a narrow and near-term focus on driving leakage beyond the economic level, and on treatment process-driven compliance with tightened final effluent standards, is in conflict with government policy on Net Zero and creates larger harms for the wider environment than the immediate gains in the aquatic one. These kind of wider value considerations should be crucial to inform regulators in deciding whether to pursue 'single issue' policies or 'targeted challenges' for specific services.

The current incentives regime has undoubtedly been effective in improving service. Incentives are now needed to shift companies' behaviour from focussing on absolute service targets without regard to the 'how' these are achieved. The challenges the sector faces are complex problems which can not be addressed solely through traditional Manufactured Capital or even new technologies. Improved ways of working are needed, such as partnerships to deploy Natural and Social Capitals, and to enhance the Human Capital both of the companies and of the communities whose interest they serve.

This could be achieved by a move to **value-led** targets. Rather than creating conflicting priorities by setting individual PCs and restricting companies to only focus on the financial value they can create, a wider Capitals-based incentive framework that inherently recognises trade offs across the basket of company activities would lead to greater economic value.

Options for Incentivising Value

Service-driven or value-led?

However, the sector clearly needs to retain service standards and any shift towards a 'value led' incentive framework would still need to include a backstop of service standards to ensure customers are protected from any service failures.

Hypothetically, a values-based incentive could be two sided, in that:

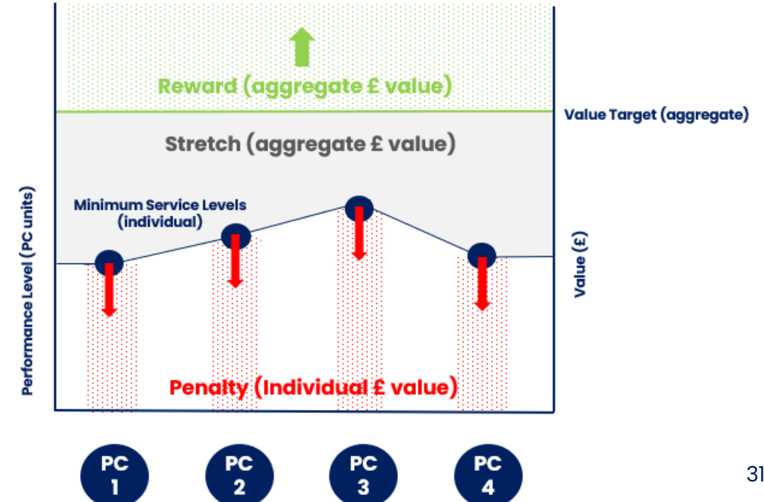
- 'minimum targets' for individual services could still apply, with penalties for underperformance
- an aggregate target (and incentive) based on value creation across the basket of services could be set for outperformance – i.e. a 'total value' target beyond which companies earn outperformance.

The **minimum service target** for individual services (e.g. leakage, sewer flooding etc) could be set in a range of ways, as currently:

- statistical approach using quartiles or averages
- incremental % changes
- alignment with base costs
- maintenance of existing service levels.

On the flip side, the **aggregate value target** could be derived from the monetised values of the goods and services under each Capital associated with the individual services. This would mean that the Value Target includes not just the value of the individual service performance but also the wider values in **how** that service performance is delivered, as noted earlier.

The following diagram illustrates the concept of aggregate value-led incentives with individual service targets & penalties:



Options for Incentivising Value

Service driven or values led?

Under such an approach, failure to achieve a minimum service target for an individual service (or PC) would result in a **penalty** for which the rate is specific to that PC (as is currently the regulatory approach).

However, to achieve **reward** under the value-led incentive, each of the individual minimum service targets for the individual PCs in the basket would have to be met, plus an additional increment of "stretch" in value.

To determine the **aggregate value target**, the current level of service would provide a monetised baseline against which the value generation could be measured. This baseline would form the monetised target, with an additional element of improvement providing the incentive for companies to deliver beyond the individual minimum service targets.

The stretch improvement in the total value target could be set using a range of methods:

- % improvement
- an aggregation of stretch targets for each of the individual measures in the basket
- an absolute value
- a normalised value, based on the stock of value for each company.

To enable an aggregate value target to be set across companies in a comparable way, an understanding of the current stocks of Capitals, as well as the future flows or changes in the stocks of Capitals for each company, would be required.

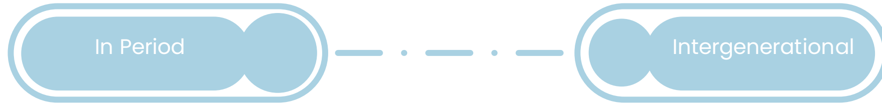
The incentive value itself would be equivalent to the monetised target, and could be derived from the standard industry common values (as informed by national customer research).

On achieving the aggregate value target, companies would then be able to earn a reward linked to the total value delivered. This would enable the concept of **'net value gain'** to be applied along the same lines as environmental net gain and would give companies the flexibility to make trade-offs between the different services to generate the best benefit for society overall.

The NIC (2021) has noted that an 'Environmental Net Gain' approach to infrastructure would be **"a positive approach that ensures losses of high value natural capital are minimised and mitigated while also providing opportunities to enhance natural capital"**

Options for Incentivising Value

Near-term or long-term?



Currently, there are very few PCs which look beyond the 5 year price setting period, and most are **in-period**, in that targets and incentives are set and recovered annually.

However, there is a clear recognition that taking a longer term perspective on planning and delivery will deliver greater **intergenerational** benefits.

Moving to a value-based incentives framework would explicitly require value to be estimated over the long term. Typically cost-benefit analysis requires discounting of investments over 40 years, as in the sector's agreed methodology.

Accounting aside, moving to a values-led approach would incentivise companies to focus on the impact of investment decision making on value. This in turn would mean the range of interventions which companies use would need to broaden, therefore driving innovation and new ways of working.

Traditional Manufactured Capital assets are very different from Natural Capital solutions. Both may be long lived assets, but will vary significantly in terms of how they are delivered and maintained over time, and also their ongoing expenditure requirements and performance benefits.

The current regulatory framework of in-period targets and incentives encourages companies to seek quick and certain solutions, which may deliver service performance and compliance in the short term, but could have negative Natural and Manufactured Capital costs over the long term.

A shift from 'supply side' type traditional Manufactured Capital interventions towards a portfolio blended with non-Manufactured Capital options, such as community- and nature-based solutions, would help improve the sector's ability to create and deliver value over the longer term.

Options for Incentivising Value

Options Creation

Creating Options with the Characteristics

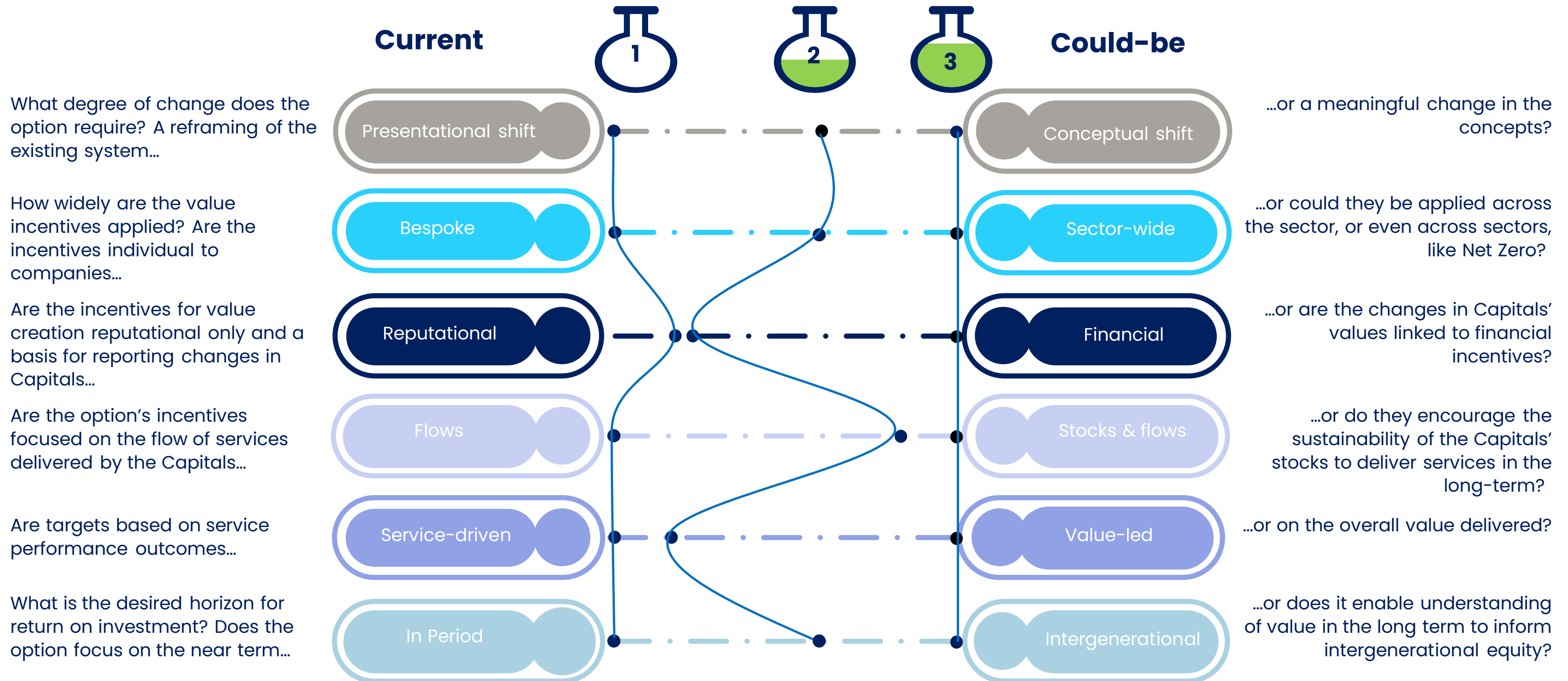
Having explored the key characteristics of potential incentives, these can now be combined into three distinct options for incentivising value creation.

The remainder of this section describes each of the options, using the characteristics outlined in the preceding section, and explores how each might work in practices.

The diagram on the following page illustrates the characteristics of each of the options.

Options for Incentivising Value

Options for the regulatory incentive approach



Options for Incentivising Value

Service-driven or values-led?

Option 1: Status Quo

Option 1 is based on the current performance and incentive approach from PR19.

PCs and ODIs are mainly service led, with a small number of direct Capitals-based incentives, which are almost entirely reputational.

Only Natural and Social Capital are reflected in these bespoke PCs, which were voluntarily proposed by companies.

In this option, PCs are set on an individual basis, with no explicit recognition of the trade-offs in value creation that may need to be made in delivery. There is a weak link between the cost-benefit analysis, and the incentive.

The Capital impact of company activity is reported, but there is no direct link to the regulatory framework or incentives, and is essentially a voluntary activity.

In Option One, there is no alignment between regulatory incentives, company decision making and reporting on a Capitals basis.

Option 1 in Practice:

In practice, Option 1 is reliant on companies' own understanding and commitment to generate value across the Capitals.

Some key Capitals based indicators, such as carbon or biodiversity, are entirely voluntary, and there is an uneven approach to financial and reputational incentives.

As service-driven improvements are the focus, it is unclear if companies overall are delivering more or less value across the Capitals, as it is neither measured or tracked.

There is very little incentive for companies to consider how to achieve service targets, beyond the existing regulatory cost efficiency incentive. Therefore negative externalities and wider value degradation may be occurring.

Options for Incentivising Value

Service-driven or values-led?

Option 2: Incremental Adoption

Option 2 represents a movement towards more systematic understanding and reporting of wider Capitals value, although it does not fundamentally change the way targets and incentives are set for companies.

As with Option 1, PCs and ODI would still be service-led in areas of key concern for customers. The package of PCs is predominantly common, industry comparable targets and ODIs.

However, bespoke PCs are replaced with a mandatory requirement to report, using a Capitals framework, the impact of companies' activities in delivering the PCs.

Reporting against the Capitals uses a standard, common set of metrics across the industry, and the impact monetised using an standard industry set of valuations for the Capitals.

In Option 2, companies reporting and decision making is aligned to a Capitals-based approach, but regulatory incentives are set independently.

Option 2 in Practice:

In practice, the mechanics of the PCs and incentives remain largely unchanged from the status quo, although the standardisation of targets and rates is increased.

The introduction of mandatory value-based reporting provides an initial step towards understanding the total impact of company activities, and therefore exposes any potential value degradation or trade-off in the delivery of services.

By requiring companies to report on a Capitals basis, it encourages rapid development of measurement and reporting techniques, and embeds Capital Accounting in decision making more systematically.

Shining a spotlight on the total value created also provides customers, investors and stakeholders with a much richer picture of the company activities. It also provides the basis for regulatory comparisons once reporting has standardised.

Options for Incentivising Value

Service-driven or values-led?

Option 3: Full Capitals Value-based Incentivisation

Option 3 represents a full shift towards incentivising Capitals value creation. Individual PCs are amalgamated into a basket of measures, with their total value forming the basis of the overall improvement target and reward incentive.

Customers are protected by minimum service targets on each of the individual measures in the basket. Failure to comply with the minimum service level would result in a penalty (or compensation) paid by companies to customers for that specific measure.

The Capitals measurement and valuations are standardised across the industry, with the overall value target and incentive based specifically on the stocks and flows of Capitals in the company region.

In Option 3 there is full alignment of a Capitals-based approach between regulatory incentives, company decision making, and reporting.

Option 3 in Practice:

In option three, companies earn a reward by meeting all the minimum service targets, and delivering an increase in overall Capital value. In this way, companies are incentivised to find the 'best benefit' investment solutions, rather than a least cost approach.

By shifting the incentive away from the individual PCs (as in the status quo), it moves focus up to an outcomes level - in the sense that the overall outcome is "improving value". It also allows companies to make trade-offs across the basket of performance measures, so that improvement is only driven where there is a net gain in value.

The aggregate value targets against which each company is incentivised would be on a normalised basis relative to its own Capitals stock, to ensure fair comparability across the sector of the value expected to be created.

Options for Incentivising Value

Wider stakeholder views

As part of the paper, a brief phase of stakeholder engagement was undertaken.

Perspectives on the potential options and characteristics for Capitals-based incentives were gathered from industry representatives in economic regulation, environmental policy, asset planning, governance and assurance. A mix of regulators, companies and investors contributed to the formation of the paper.

All discussions were held under 'Chatham House Rules' i.e. statements are not attributed to a single party.

A summary of the feedback and challenge is outlined on the following page.

Options for Incentivising Value

Stakeholder feedback and ideas

Implementation (how)

- We can't have a two tier situation where some companies choose to think about value, and others ignore it. The regulator needs to step in and demand it.
- Value based rewards make lots of sense – companies could make decisions about what's the best mix of improvements for their regions.
- At what 'level' is it practical to apply capitals? Project, company-wide or industry?

Scope (what)

- Is it right for customers to pay financial incentives on wider capital creation, rather than for services?
- It's difficult to see how Human or Intellectual capital could be incentivised in their own right, but if it's at a "total Capital value" level, then it could work.
- It's crazy to think that we don't actually know if the sector is doing more harm than good overall.
- It's the same idea as incentivising at an 'Outcome' level, just a bit more modern!

Linkages (with whom)

- While cross sector comparability may be a step too far for Ofwat, there is benefit for investors and for government in being able to do this. As investors, how else will we know how one sector performance against another?
- Could also align well with quality regulators' objectives on WRMP and WINEP.
- It could offer a genuine solution to how Ofwat and the quality regulators start talking the same language and plan on the same basis.

Timings (when)

- The question shouldn't be "can we do this for PR24", it should be "what happens if we wait till 2030?"
- What's pragmatic or possible in PR24 timescales?
- Option 3 as a first step is a challenge, but if the regulator demands it, then companies will have to do it.

Implications for the sector and enabling actions

The three Options outlined in previous section represent different degrees of opportunity, and consequently they come with differing degrees of effort and change required to bring them about.

To initiate further discussion of these concepts in the sector, we have outlined some of the areas of change that would be required, broadly split into developing a methodology which:

- has a coherent technical economic basis;
- addresses regulatory tests and scrutiny;
- is readily implementable on a common basis across all companies.

The examples we've outlined are not intended to be a definitive list and are presented as initial ideas that would require further development.

Implications for the sector and enabling actions

Technical Implications

- To move to Capitals-based, values-led incentives, there would need to be an agreed set of the core or common value metrics, including definitions and units of measure.
- Agreed values would be needed for the set of metrics, to ensure consistency and comparability for a wide range of stakeholders. As noted earlier in the paper, the national specification of customer valuation research would need to be consistent with enabling a Capitals methodology.
- There would need to be an agreed mapping of Capitals goods and services to PCs. Several companies have already done this, so converging these onto a common mapping is a readily achievable task. It may be that the UKWIR 'Future of Asset Planning' project intends to do this.
- Capitals accounting of stocks would need to be prioritised, using the agreed protocols produced by Defra's ENCA and the Capitals Coalition's Protocols for Natural, Social and Human Capitals.

Regulatory Considerations:

- Customer protections and backstops for services would still need to feature. A key conceptual shift will be to moving the improvement or "stretch" expected from companies in individual service, up to the aggregate value target. A similar conceptual shift occurred at PR09, where cost assessment moved from individual unit costs to an aggregation of 'base' and 'enhancement' costs.
- In setting targets and incentives on a value basis, there would need to be an understanding of whether this would need new PCs, a new balance of them and whether it gives an opportunity to reduce the number of PCs.

Organisational Enablers

- Moving to a Capitals-based incentive framework may incur additional measurement and reporting requirements for companies who are yet to adopt the Six Capitals approach.
- Similarly for companies which are yet to systematise approaches to cost benefit analysis, quantifying the total value impact of investment decisions on a Six Capitals basis may require additional asset management capability. Ofwat's recent AMMA assessment could help to identify leading practice and developing companies.

Conclusion

The paper is intended to inform Ofwat's PR24 methodology, and address the question:

"What, if any, could the role of the price review be in encouraging or incentivising companies to better deliver public value?"

In reviewing the literature for this paper, one statement from the GRI *et al* (2021) summed both the current state of play and the drivers for change:

> "…trends have combined over the last 12 months to accelerate progress towards the sort of comprehensive corporate reporting system that is urgently needed to direct capital to sustainable enterprise, ensure resilient and efficient markets and address the global challenges of inequality, loss of biodiversity and climate change".

It's clear that there is a strong consensus that 'public value' in its widest sense urgently needs to feature in decision-making processes to avoid unintended consequences from short term approaches that don't reflect social and environmental externalities.

Conclusions

The price review plays a pivotal role in that process, especially in the way incentives are set.

Incentives have the power to motivate and encourage behaviour and activity. For the water sector, incentives act as the link between **what** is in the best interests of public value and **how** companies make decisions in delivering water and wastewater services.

Currently, the combination of cost and performance incentives act together to drive companies to take decisions that prioritise the delivery of individual service improvements at the lowest cost.

While that may have been appropriate for previous periods, the challenges facing the sector now require a broader view of the best value today, and into the future.

While this paper has sketched a potential option for how the regulatory framework can evolve so that performance incentives become more value-led, rather than service-driven, it's only an initial exploration of what could be possible.

Capitals-based reporting and bespoke Natural and Social Capital PCs have already emerged from the sector in PR19. However, unless these approaches are adopted consistently and as part of the regulatory framework, then consideration of wider value will essentially remain a voluntary activity for the water industry.

The advent of PR24 offers a window of opportunity to develop these ideas further and respond to the demands for the sector to put the delivery of social and environmental value at its core. As David Black, Interim Chief Executive at Ofwat put it at a recent industry conference:

"Looking ahead to the future, Ofwat has a key role to play in promoting the sector to deliver greater value – for customers, communities and the environment. Too often Ofwat has the seen the environment as "extra" on top of service to customers. Whereas it is at the centre of the sector and companies have huge ability to enable gains - and there may well be direct benefits to customers too. This approach is reflected in our strategy with focus on companies delivering greater social and environmental value.

I am optimistic. It can be done. It must be done. But it is time to start now."

Conclusions

Future work

From several points of view - regulatory, long term planning, stakeholders - incremental change from the status quo will not progress the sector in any meaningful way towards achieving a coherent and consistent way of establishing and incentivising delivery of greater public value.

For developing the incentives framework at PR24, the sector needs to collaborate on a more extensive exploration of the implications of implementation, and the building blocks of capability required for them.

Further work towards this could include:

- further development of the concepts outlined in this paper of value-led incentives that also provide service protection. Full exploration of the structural options for setting targets and incentives using multi-Capitals based approaches could be appraised against the ability to deliver against the goals for the sector in the forthcoming Strategic Policy Statement from Defra.
- Ensuring the opportunities for coordinating an industry approach to value-based incentives are realised from ongoing initiatives and projects, e.g.
    - the specification for national research to inform ODI rates, so as to be compatible with applying a Capitals basis for value;
    - UKWIR's 'Future of Asset Planning' project delivering a common value framework in a form consistent with enabling Capitals value-based incentives;
- recommendations on fast tracking Capitals stocks accounting, e.g.
    - what the potential might be to apply recent thinking on how digital tools could provide rapid coverage of Natural Capital stocks, or
    - learning from those companies currently delivering commitments to Natural Capital accounting of their sites and catchments.

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