

Policy and regulatory risk in public utilities:

Two exercises for resilience

Fair for the Future Project
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Sustainability
first

Introduction

- Utility companies operate in a **'disrupted world'** amid a complex web of social and environmental issues.
- **Social and environment risks** are dynamic and can be **financially material** to a business. Some utility companies are already reshaping their businesses models in response (eg changing their Memorandums and Articles of Association).
- Companies must understand and address this wider **context**, otherwise policy and regulatory risks will increase.
- Unchecked, **policy and regulatory risk** can become political and increase **uncertainty** even more. This is hard to measure, making planning and expectation management challenging.
- Risk and uncertainty affect the **resilience** of organisations. They also indicate where opportunities for **future value creation** may lie.
- Utility companies need to examine the **full range** of risks that they face and assess the resilience of their strategies in different scenarios.
- **This slide deck is here to help utility companies do this.** It provides two practical exercises to address policy and regulatory risk and develops a framework to help companies become more resilient and make the best decisions possible for the public interest.

What to expect in this slide deck: analysis, scenarios and exercises

PART 1: Analysis of policy & regulatory risk and scenarios

- This section identifies a number of **key risks** that may be faced by UK utilities. Risks will, however, vary by sector/subsector and by company. For example, net zero and related technologies may be an opportunity for electricity, a cost for water, and an existential threat for gas.
- It analyses **how risks tend to evolve**, relative to the pace of policy and regulatory responses, drawing on thinking from the World Business Council for Sustainable Development and Sustainability First's own research on **dynamic risk factors in utilities**.
- We also offer a range of political '**big picture**' **scenarios**. Scenarios may result from external risk factors or internally from utility companies' actions.

PART 2: Exercises to help companies assess policy and regulatory risks

These exercises can help companies to more actively address policy and regulatory risk and develop a framework to help them become more resilient.

- **Exercise 1:** Do you have a comprehensive view of the totality of the **risk landscape** for your company (politics, policy and regulation, social and environmental, plus Covid/public health)?
- **Exercise 2:** How will your business strategy and risk governance stand-up against different **scenarios**? And how can you work within a purposive business agenda ('Sustainable License to Operate') to increase resilience against different scenarios?

Background

- **Sustainability First** is a charity and think tank that aims to promote practical and sustainable solutions to improve environmental, economic, and social wellbeing in public utilities.
- This work is part of our major three-year **Fair for the Future Project**. This Project's aim is to enable utility companies, policy makers, and regulators to better address the politics of fairness and the environment.
- As part of this work, Sustainability First has carried out significant **research on risk and opportunity**.
- **Part 3** of this slide deck summarises this research. It draws on academic literature, primary research into existing utility company practice, changes in risk reporting, and roundtables with key stakeholders.
- The exercises in this slide deck are grounded in this extensive research.
- This pack is **aimed primarily at public utility companies**. However, companies cannot address social and environmental risk alone.
- Our forthcoming major Fair for the Future Project paper on the implications of the purposeful business agenda for policy and regulation will examine **how policy makers and regulators can better address social and environmental risks**.

PART 1:

Analysis and scenarios of policy and regulatory risk

Why do utility companies need to reconsider risk for resilience?

- Utility companies are operating in a **'disrupted world'** full of multiple, dynamic and frequently inter-connected social and environmental issues that can increase policy and regulatory risks.
- As we experience technological, climatic and societal disruption, conventional approaches to factoring in risk and uncertainty are becoming increasingly challenged by **four 'dynamic risk factors'**: climate and the environment, the consumer / citizen lived experience, civil society, and the media – particularly 'new' and social media.
- These social and environmental risks can become **financially material**. Growing **stakeholder pressure** and growing emphasis on responsible investing can amplify these risks further.
- Our research shows that many company risk frameworks have **not yet adapted to the new 'disrupted' landscape**. Public utilities will need to rethink, or consciously reaffirm, their approach to social and environmental uncertainty and risk.
- Sustainability First has identified the need for **four key shifts** in utility companies' treatment of risk: a **shift in time horizons**, a **shift in scope**, a **shift in approach**, and a **shift in governance and culture**.
- By adopting what we have termed a **'Sustainable Licence to Operate'**, a purposive business agenda, companies can create a proactive and permissive environment to respond to risks, address the politics of fairness and seize the opportunities of future value creation.
- There is a **strong onus on utility companies** in this area because they are providers of essential public services that are part of critical national infrastructure. As they use private capital to perform important public functions, they should have **high duties of purpose, engagement, customer loyalty and care to public interests**. As monopolies, they are also subject to regulation, which presents its own set of direct risks.

*These bullet points are explored in more detail in **Part 3** which sets out our research on risk in one place.*

Typologies of risk

Risk is often characterised as:

- **Operational:** Risks that fall under a business's control. They are important reputationally and if not managed properly can escalate. Examples include: health and safety and environmental emissions. Operational risks are typically governed through compliance, internal risk registers and audit and risk committees.
 - **Strategic:** Risks which often originate external to the business. How the company responds is key to determining the impact/degree of mitigation. Strategic risks and risk appetite should be the focus of, and governed by, the board.
 - **Existential:** A type of strategic risk, the handling of which may not be sufficient to avert major impact on business models.
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- In this slide deck, we focus primarily on **strategic risk**.
 - Operational risk is more frequently and routinely analysed through existing risk governance procedures, informed by internal audit. Strategic risks are covered less routinely and the tools for assessing them are evolving.
 - In a 'disrupted world' we are seeing dramatic changes to the landscape of strategic risk, especially in the social and environmental space.
 - Four factors are driving this: the pace of change; clustering and convergence; perfect storms; and the multiplier effect (see slide 25).
 - The next slide breaks down the strategic risk landscape for utilities.

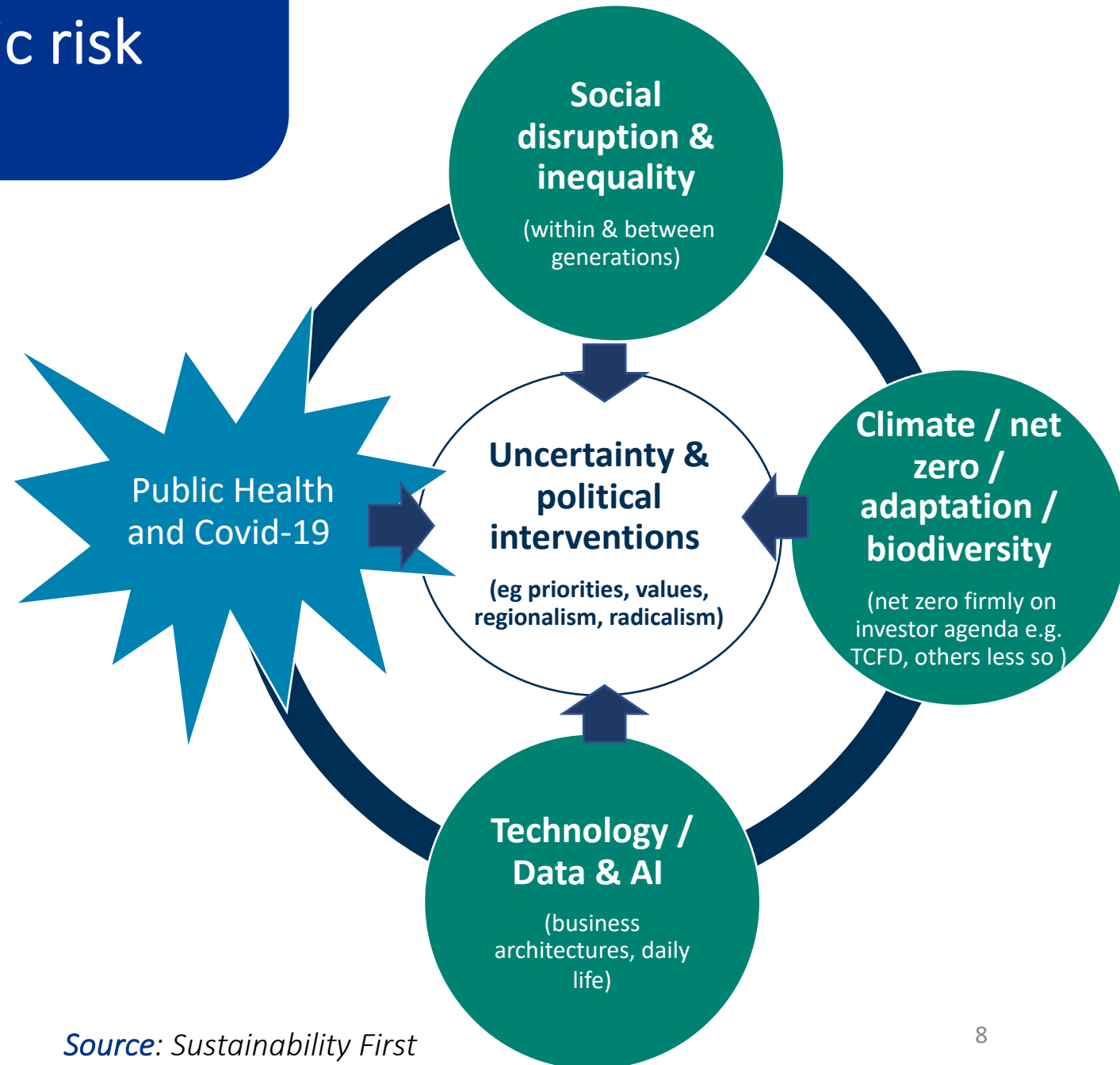
Understanding the strategic risk landscape for utilities

Four disruptors are reshaping the future. If unchecked, these can lead to radical uncertainty and political interventions.

All **four disruptors** have long-term impacts that are economic, social, and environmental.

Public health and Covid-19 – Covid-19 is having an immediate & critical impact on social and economic uncertainty.

Resilience – In order to be resilient, companies need to better understand these risks and make tough choices to balance managing them and consider trade-offs.



How social and environmental risks can become financially material

- Environmental and social issues are important not simply in themselves, but because mishandled or ignored they can become policy and regulatory risks, and in turn affect the bottom line.
- Sustainability issues can become financially material to a business – and this can be exacerbated if the business delivers essential services. The dynamic risk factors that can drive this in utilities are explored in slides 26-31.
- Furthermore, if policy and regulatory risks aren't managed they generate uncertainty, especially political uncertainty. Risks are future outcomes that can be quantified and determined reasonably objectively, whereas uncertainty cannot be quantified. In an uncertain environment, you don't know what to expect and therefore can't plan (see more on slide 24).
- One of the reasons why investors have become so keen on ESG (Environment, Social, and Governance) factors and data, is because it helps keep a track on escalating risks and can provide a shortcut to some elements of due diligence.
- Even small sustainability (ESG) risks can become magnified if either a) the company loses reputation from something else or b) a number of small issues accrue to create a strategic issue.

Resources: Roger and Serafeim: Harvard Business Review – [Pathways to Materiality: How Sustainability Issues Become Financially Material to Corporations and Their Investors](#) and Sustainability First's work on dynamic risk factors in public utilities (see more on slides 26-31 and 34)

Approaches to risk analysis and assessment

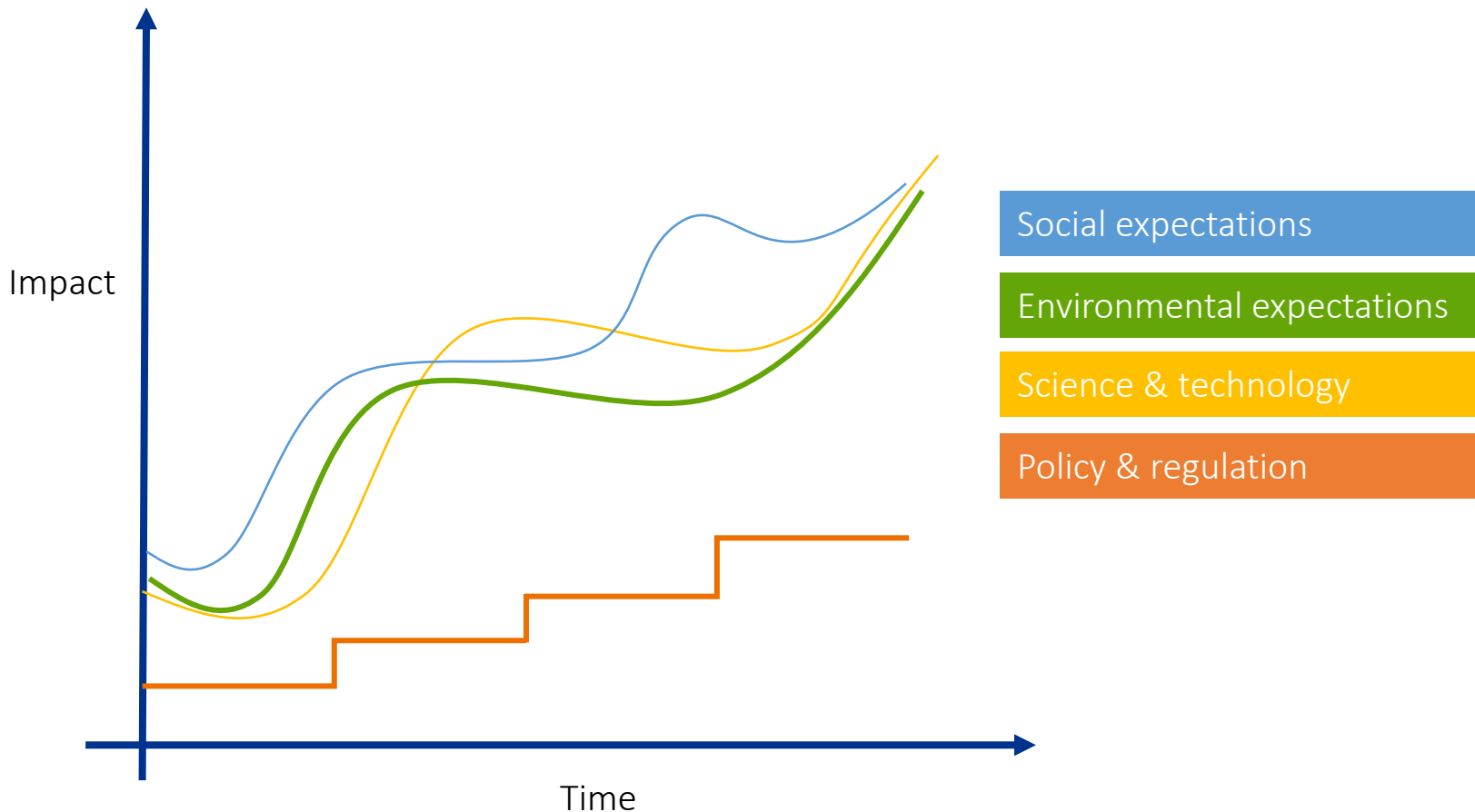
The following slides explore the nature of risks in a 'disrupted', regulated world:

- **Slide 11** explores how social and environmental risks come in non-linear waves that can be exacerbated by the tendency of policy and regulatory responses to lag events.
- **Slide 12** provides an overview of the risk landscape, setting out a *possible* range of social, environmental, technological, political and Covid / public health risks from a utility lens – using a traditional risk assessment of likelihood x impact. This is drawn from Sustainability First's knowledge of the sectors and analysis of 'dynamic risk factors' in utilities (see slides 26-31)
- **Slide 13** provides an example from the World Business Council on Sustainable Development of how traditional approaches to risk can be amended to reflect a more dynamic networked approach.
- **Slide 14** When it comes to risks like climate change, the past will not necessarily be a good guide to the future (see slide 39). This slide sets out some examples of the low probability, high consequence risks that are often understated or completely absent from traditional views of risk.
- **Slide 16** looks at a possible approach to scenarios, from a 'big picture' political standpoint. This forward-looking perspective is important to counteract the evolutionary aspects of many existing risk management processes that may not be wholly fit for purpose in a disrupted world.

These slides then in turn inform the exercises we set out in part 2

Policy/regulatory response to social and environmental risk

For companies, dealing with social and environmental risk and uncertainty through a regulatory compliance approach is necessary but not always sufficient because policy and regulation tend to lag behind other changes.

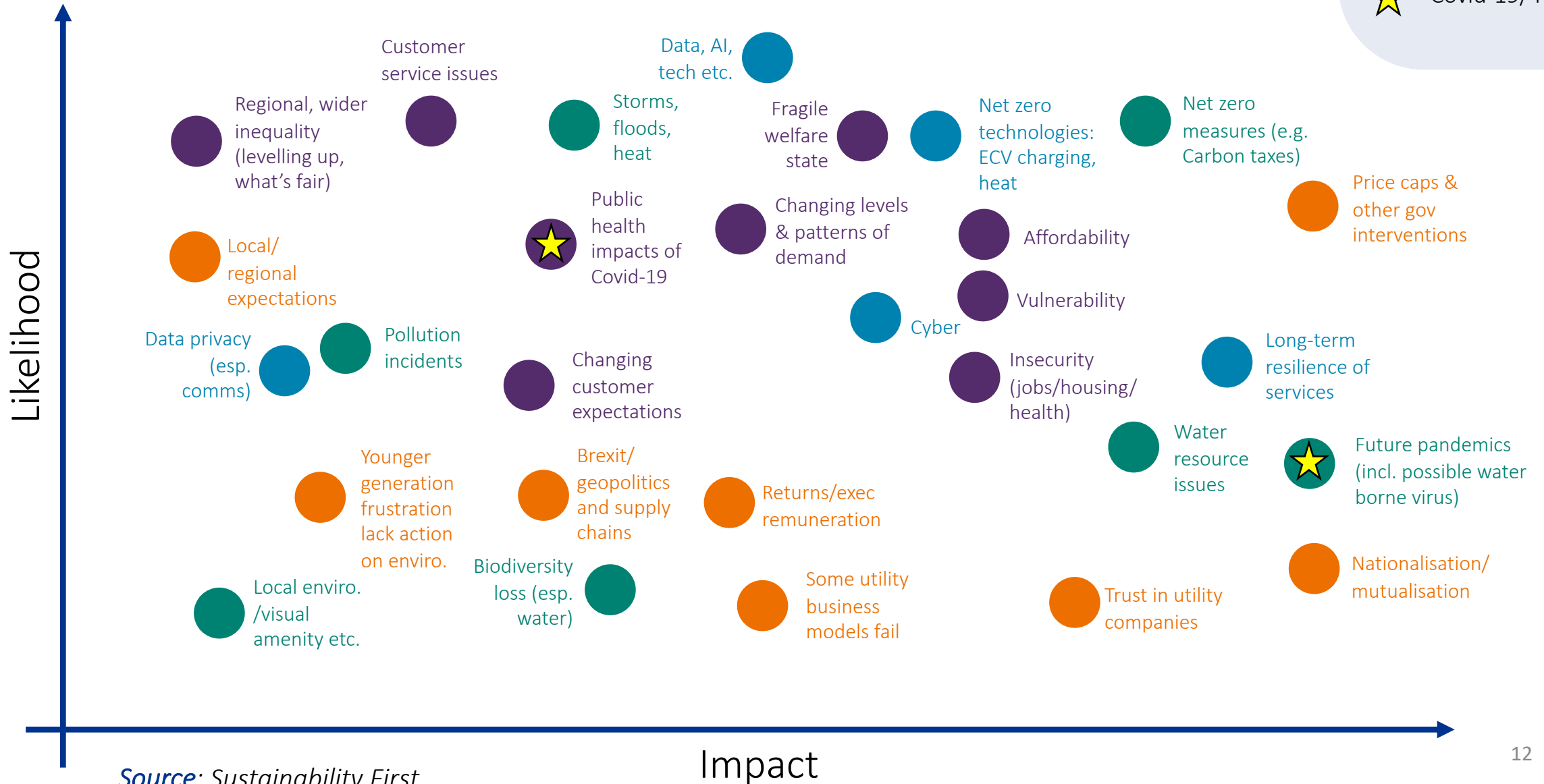


Source: Sustainability First

- Changes to policy and regulation tend to lag behind changing social and environmental expectations and advancements in science and technology.
- The former are reactive and linear, largely depending on fixed price control processes; the latter are non-linear, unpredictable, and disruptive.
- Slide 33 explores this in more detail, looking at sources of tipping points and why they are hard to predict.
- A regulatory compliance approach is therefore necessary but not sufficient to deal with these risks.

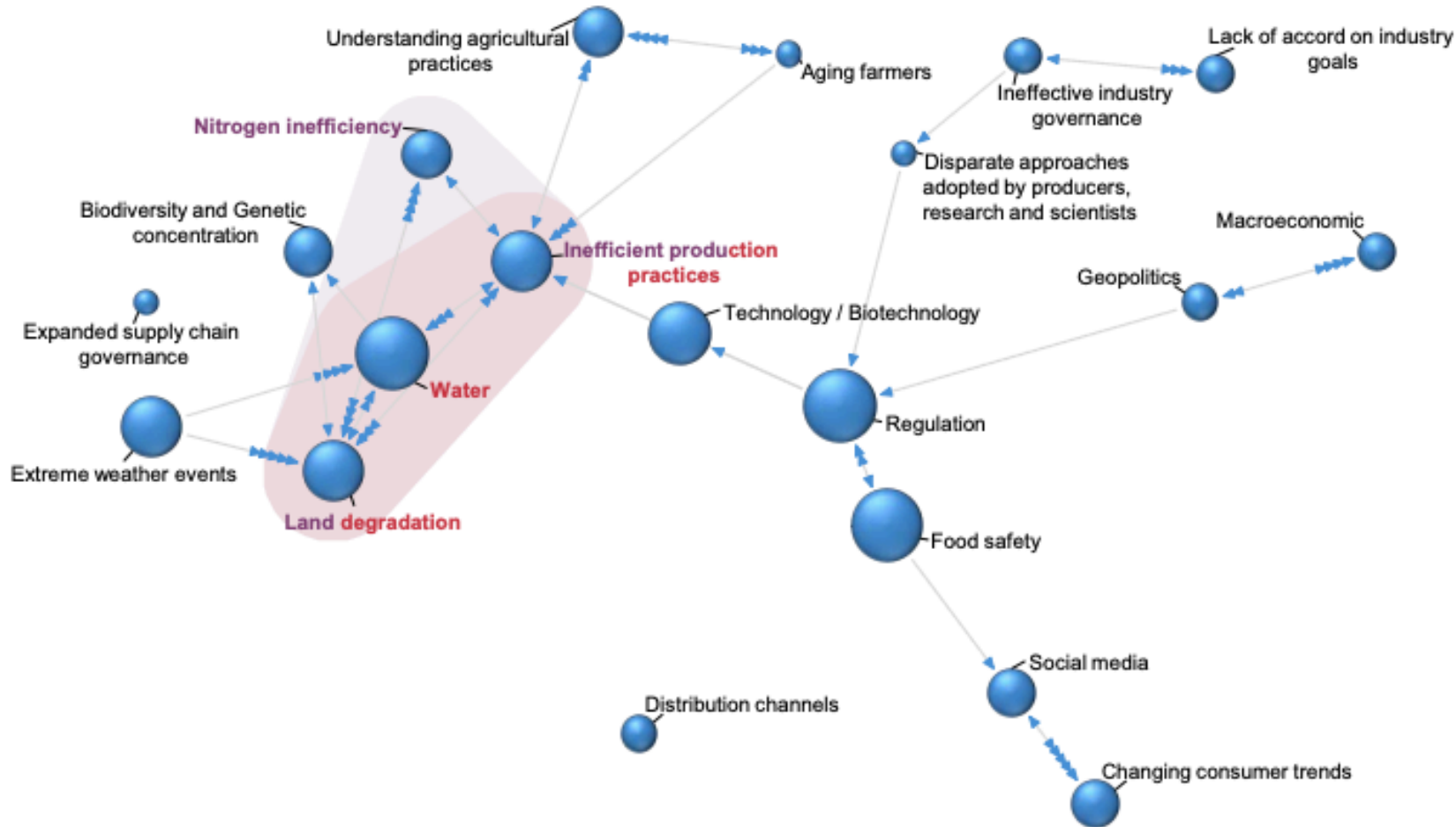
The Risk Landscape: A Possible Public Utility Lens

Key: Social
 Environmental
 Technology and data
 Political
 ★ Covid-19/ Pandemic



Dynamic Risk Assessment: An Example Network View

This graph is the latest thinking from the World Business Council for Sustainable Development. It provides an example from agriculture / land use of Strategic Risk as seen through a dynamic *network* approach.



Notes

- A network view captures the connections between risks.
- Social & environmental risks can often cluster together. A network view identifies these clusters of connected risks.
- Feedback loops between clusters can escalate these risks.
- Crises tend to come in pairs, e.g. drought may be compounded by high temperatures increasing demand for water.
- Our 'dynamic risk factors' set out some of the possible clusters / linkages in risks in utilities (see slides 25-30)

Why the past may not be a good guide to the future: Possible left field (high impact, low probability) risks

- Climate change accelerates dramatically: tipping points on sea temperature, methane from tundra, ice melts/sea level rise (Greenland, West Antarctic), drought.
- Climate adaptation starts to get the profile which mitigation has had to date – e.g. as result of next year’s climate change risk assessment, or on the back of increased profile for resilience in response to Covid-19.
- Covid tensions distract attention from climate change: net zero gently dropped, COP26 cancelled.
- Major technological breakthrough implies significant stranding of assets: e.g. fusion/storage.
- Cost of capital and inflation rise quickly; and/or...
- Credit crunch/bank failures.

Big Picture Scenarios: Possible political worlds

- These four 'big picture' scenarios have been selected to help companies test their risk management and approach.
- They represent four extreme possible political (with a small 'p') worlds and highlight how the social, environmental and economic factors that drive policy and regulatory risk may change in the future.
- Utility companies already carry out extensive resource scenario planning. These 'big picture' scenarios are intended to complement this existing work.
- Given the extent of disruption faced, and the fact that the situation is difficult to read, being prepared for different worlds is vital for resilience.
- The scenarios are designed to provide new insights into issues such as the: assumptions that underpin current planning; partnerships that may be needed to cope with disruption; supply chain resilience etc
- The next slide contains details on each scenario.

Scenario 1: Small state, highly deregulated

Scenario 2: Big state – policy determines targeted regulatory priorities

Scenario 3: Better world – values and wellbeing

Scenario 4: Up-ended world

Big Picture Scenarios: Possible political worlds

Key: Social
Environmental
Economic

Small state – highly deregulated

- Welfare & benefits support reduced. Northern poverty increases
- Insecurity, inequality and vulnerability rise. Increased non-payment bills
- Poor customer service for many – assets start to fail
- Data privacy issues as platform businesses exert influence
- Utility support for people in vulnerable situations increases to fill gap
- Net zero kicked into long grass / Don't deliver LCT
- Many biodiversity and local environment regulations scrapped leading to increasing habitat loss, pollution incidents and future epidemics
- Storm/flood/heat impacts/disruption increase as adaptation measures are cut
- W shaped recession
- Economic regulation rolled back & interventions ad hoc
- Focus on competition policy
- Innovation for high paying services
- Resilience of critical infrastructure declines – knock on economic impacts

Better world – values & wellbeing

- Utilities form partnerships with local authorities etc. to deliver support for struggling consumers and communities
- Utilities engage stakeholders and innovate for all
- Climate assemblies and citizens juries etc. ensure public is engaged in future planning at local and national levels
- Companies form partnerships with government (national & local), regulators & other stakeholders to deliver on net zero and other environmental / systems goals
- Citizens are educated/empowered on demand side/sustainable approaches
- Measures of wellbeing are redefined to also include public health and wider social and environmental outcomes (on top of GDP growth)
- Corporate governance reform to focus companies on purpose
- Ethical & principles-based regulation
- Utilities provide leadership as place makers & share learning

Big state - policy determines targeted regulatory priorities

- Basic protections for all – less onus on utilities to substitute for welfare state
- Centralisation leads to tension between Westminster and the nations / regions / mayors as to what to focus on in recovery and for future
- Net zero is prioritized but most other environmental commitments / protections cut back. Carbon taxes, bans on existing gas boilers, flaring, sewerage incineration etc.
- Some big low carbon and climate adaptation schemes to provide jobs
- U shaped recession
- Policy interventions in key areas of the economy with a focus is on the 4th Industrial Revolution, AI and data
- Existing energy retail business models broken - bankruptcies
- Innovation activity in other areas is reduced
- Government reps on utility boards & if sectors struggle to deliver desired outcomes, companies are nationalized / mutualised

Up-ended world

- Rule of law questioned
- Severe affordability constraints and widespread non-payment of bills
- Some utilities pick up pieces from struggling welfare state
- Intergenerational conflict
- Break-down of government/regulator/company/society compact
- Scottish Independence & Welsh Gov refuses to release water from reservoir
- Climate and biodiversity crises accelerate – on track to miss commitments
- Local environments degraded / environmental amenities sold / developed
- L shaped recession
- Economic frameworks / regulation ineffective – rules of game not clear
- Some parts of critical national infrastructure taken over by those with political vested interests
- Some utilities (with patient capital / investors) remain as islands of good practice but financial incentives to do this are severely limited

PART 2:

Exercises to help companies address policy and regulatory risks

Exercise 1: Understanding the risk landscape for utilities

Background

- Utility companies know that understanding the changing social and environmental context in which they operate is key to understanding policy and regulatory risk.
- However, integrating social and environmental risk or opportunity into more formal company processes is a challenge. Strategic risks can be crowded out by operational risks and crises/existential risks.
- As seen in the preceding slides, there are a range of shocks, risks, outcomes and opportunities facing public utilities. These will vary from company to company and sector to sector and the list presented is not exhaustive.
- Some risks may have a limited impact if a 'one-off,' but a far more significant impact if repeated.
- This landscape is interconnected and fast moving. Regulation and policy may well lag behind these fast-moving developments in a viral and technologically disrupted world.

Questions for Consideration

- 1) Which of the factors in slide 12 constitute the main risks (and potential opportunities) that you face? Is anything missing?
- 2) Do you understand how these factors are clustered, connected and changing in terms of your company?
- 3) Do you understand how these factors can become material to your business?
- 4) What can you do to control / mitigate the high impact, high probability risks?
- 5) What insights do you have to track the high impact, low probability risks?
- 6) Do you need to collect any new sources of data (eg on trends, risk drivers, your assumptions etc) to enable you to make different decisions?

Exercise 2: Responding to different scenarios

Background

- Exercise 2 looks at how well your business strategy and risk governance stands-up against different scenarios.
- The current risk landscape is hard to read. We are in an ‘unfrozen moment’ – a moment of rapid change in which key pieces of the jigsaw are still unfolding. This is the new norm in a ‘disrupted world’. Some things will be clarified in the next few years, others are unlikely to be.
- We are widely thought to be in the ‘decisive decade’ for the climate. Companies will need to move quickly when policy and regulatory decisions are made, as climate projections firm up, and when technologies and social attitudes move.
- This needs to move beyond resource-planning (e.g. the FES, Water Resources Long-Term Planning Framework etc.) and capture wider socio/environmental/economic/ political responses.
- Authentic public purpose can create room to adapt. In a crisis, actions driven first and foremost by a public purpose ethos are likely to provide a sound, initial response.

Exercise 2: Responding to different Scenarios

Questions for Consideration

- 1) How far do you test your business strategy and approach to risk and opportunity against different 'political' worlds – for example those in slide 16?
- 2) Which of those scenarios has the best fit for your current business strategy?
- 3) What might your organisation do to become more agile and to build resilience to: a) manage in all scenarios near-term; and b) act as a steward of your infrastructure and resources in all scenarios long-term?
- 4) Does your approach to risk governance enable or impede this agility? What may need to change? Does it give you a balanced view of the trade-offs you may be making, how your risk mitigations may interact and provide sufficient 'off-agenda' time for strategic discussions in these areas?
- 5) How can authentic public purpose be hard wired into your risk culture and mitigation so that you 'do the right thing' even if the data is incomplete or the rules aren't clear?
- 6) In building your purpose and adapting to a disrupted world, do you need to make any changes to your existing business strategy (eg in terms of skills / capacity / data / insights / innovation / stakeholder partnerships / leadership for the sector etc)?

PART 3:

Annexes: Sustainability First's Research on Risk

Contents

- A. 'Conventional' approaches to risk and uncertainty
- B. Characterizing risk in a 'disrupted world'
- C. Stakeholder interest in environmental and social risk
- D. How do utility companies currently treat social and environmental risk?
- E. Using environmental and social metrics to manage risk
- F. Developing and embedding a 'Sustainable License to Operate'
- G. Risk and uncertainty during the corona emergency
- H. Full list of Sustainability First resources on risk

Annex A. 'Conventional' approaches to risk and uncertainty

In 2018, Sustainability First published a discussion paper looking at conventional approaches to considering risk and uncertainty in utilities from three standpoints:

An economist's perspective: Political/regulatory uncertainty is a major issue for UK economic policy. This working note unpacks, at a high level, the distinction between uncertainty and risk from an economics standpoint and some of the implications of uncertainty for government, regulators, and regulated companies.

A governmental and regulatory view considers how the apparatus of government and regulation shape and manage risk in utilities. It proposes a 'typology' of risks, discusses key players, and provides a brief overview of how these risks can be triggered. It notes that political and regulatory risk is not new, but we are seeing a 'trend increase' in risk today.

A capital markets view identifies the different types of public infrastructure assets, types of investors in these assets, and the nature of political and regulatory risk for investors. It also looks at who owns public infrastructure assets today and implications for political and regulatory risk relating to fairness and the environment.

Four key drivers that are changing the landscape of social and environmental risks in utilities:

1. **Pace of Change** – fast and steep shocks to society and the economy, on top of rapid change in science and technology. Policy and regulation can struggle to keep up.
2. **Clustering and convergence of issues** - risk dependencies and fluid feedback loops can lead to rapid escalation of risks.
3. **Perfect storms** – shocks (like coronavirus) can lead to combination of unfavourable circumstances ('perfect storm') if you do not have the capacity in the system to respond.
4. **Multiplier effect** - unaddressed uncertainty and risk in one area may lead to exponential impacts in another.

Annex B. Characterizing risk in a 'disrupted world'

- As we experience technological, climatic and societal disruption, conventional approaches to factoring in risk and uncertainty are becoming increasingly challenged by four '**dynamic risk factors**':
 - **Climate and the environment**
 - **Civil society**
 - **The media**
 - **The consumer / citizen lived experience.**
- Sustainability First's working papers on these topics also contain **recommendations** for utility companies in terms of mitigating and reducing political and regulatory uncertainty and risk.
- Sustainability First's work has aimed to reframe the debate on how delivery on both fairness and the environment is impacted by political and regulatory uncertainty and risk.

The next four slides summarize the findings of these working papers.



The role of climate and environment

- **Climate & environmental risks** include: business carbon footprint, pathways to net zero, impact of climate change and adaptation, wider environmental risks from company operations (e.g. air pollution, wastewater treatment), and incident management.
- Risk is escalating in this area, most notably on carbon, but public expectations are changing and climate adaptation and biodiversity are becoming more important.

Utility companies can **mitigate and reduce** political and regulatory risk and uncertainty by:

- Understanding the company's *role in wider environmental ecosystems* (to deliver systems value)
- Forming *collaborations/partnerships* for joined up and systems solutions
- Helping to *shape policy and regulatory frameworks*
- *Innovation* to develop new business models and approaches to reduce climate & environmental impact
- *Scenario analysis* and *adaptive planning*
- Use of *data, transparency, monitoring* and *reporting*
- *Proactive communications* and deeper *cultural change*

Inadequate company and wider behaviour can **escalate** political and regulatory risks and uncertainty, such as:

- *Company failure to comply with existing environmental regulation*
- *Short-term nature of price control processes* and focus on price reductions for today's consumers
- *Lack of alignment* on commitments to climate & environmental policy at international, national, regional and local levels, and across government departments
- *Limited coordination* between regulators

The role of civil society

Civil society helps shape policy and regulatory risk regarding fairness and the environment.

Civil society can play a **role in addressing and reducing risks**, by:

- *Addressing democratic deficits* – With their local knowledge and close ties to communities, civil society groups can play an important role in improving utility company transparency and accountability.
- *Building trustworthy sectors* – By providing forums for people to have a say on issues, civil society groups can help lead to better decision-making and ensure utility companies are worthy of public trust and confidence.
- *Bridging boundaries* – The ability of civil society to straddle customer, citizen and environmental issues and network across geographies and decision-making siloes can help utility companies in addressing risk.
- *Navigating ambiguity and questions of judgement* – Civil society groups can provide fresh insights on emerging issues and areas that may be hard to quantify. They can also help in terms of ethical trade-offs and judgements that may need to be made, sharing risk and reward from a 'public benefit perspective'.



Civil society can also play a **role in increasing and escalating risks**, through:

- *Reputational and legal challenge* – This can result from poor corporate behaviour and/or a lack of transparency or responsiveness to civil society concerns.
- *Sector 'contagion'* – Civil society groups may make connections between different organisations (e.g. all utility companies being challenged following behaviour of the worst in the sector).



The role of the media

The advent of online and digital platforms has meant a seismic shift in the global media landscape.

The new media landscape represents **new policy and regulatory risks**:

- *Speed and range* – Dynamic nature of social media can create uncertainty.
- *Nowhere to hide* – Crises that may once have been managed internally may now find their way onto social media. This can cause reputational damage and increase likelihood of reaction from political actors & regulators.
- *Feelings over facts* – Stories can go viral, making a rational explanation of facts more difficult. 'Filter bubbles' can exacerbate confirmation bias and reduce the range of views heard about utility companies.

New media also represents significant **opportunity to mitigate against risk and uncertainty**:

- *Far reaching and more targeted messaging* – Companies can communicate to wider audiences with greater speed and clarity and at a relatively low cost.
- *Data driven insights to improve services* – Social media creates data about consumer views, preferences, experiences and behaviours, which can be used to monitor performance and improve services.
- *Platforms for new voices and more inclusive approaches* – Social media can be more 'democratic', enabling different groups of people to community with utility companies.
- *Amplifying public purpose* – Can be used to convey messages around accountability and transparency, fairness and environment.

The role of consumer / citizen lived experience

- The social/environmental/economic dimensions of essential services mean there is not always a clear distinction between individual consumer interests and wider / mutual citizen, community, and public issues.
- Analysing the practical 'lived experience' of consumers in the round can help us understand how consumer issues can become citizen, community and public issues.
- Utility companies need to redefine customer interests by shifting from transactional activity to considering wider consumer / citizen lived experience. Covid-19 has made this a critical issue.
- A lack of understanding of wider lived experience can lead to frustration that services are not being delivered in a fair way and, if unchecked, this could lead to wider ethical and political issues.

How consumer/citizen lived experience can better **address and mitigate** political and regulatory risk and uncertainty:

- *Get the service basics right* – poor customer service and low environment standards can erode trust
- *Understand consumer needs and how they differ* – be able to adapt services to meet changing needs
- *Engage your customers and relevant stakeholder representatives* and embed this activity
- *Ensure deeds match words*
- *Deal with problems and complaints in a sensitive and timely way*
- *Empower frontline staff to do the right thing*
- *Take a forward-looking approach* and build a picture of how consumer lived experience is changing
- *Innovate for all* (i.e. not just early adopters or the more affluent)

Annex B. Characterizing risk in a 'disrupted world' – common factors driving risks

Common factors that can ESCALATE social and environmental risks for utility companies

- Not doing the core job properly
- Not understanding different consumer needs/poor customer service and performance
- Insufficient incident response (extreme weather, cyberattack etc.)
- Lack of understanding of 'place'
- Mismatch of words and deeds
- Not on top of social media/24-hour news cycles
- Executive remuneration
- Not on top of political and regulatory responses/policy shifts
- Lack of leadership on 'boundary issues'
- Addressing legitimacy challenge
- Not addressing campaigning activity
- Legal challenge
- Extent of change in sectors
- Overarching global trends (e.g. climate change, data revolution)

Common factors that can MITIGATE social and environmental risks for utility companies

- Know your customer and carry out primary research
- Empower frontline staff to act and do the right thing
- Extend reach, get close to and engage customers and relevant stakeholder representatives.
- Bridging the gap between large companies and local communities.
- Improve incident prediction and response (e.g. through data and predictive analytics)
- Developing more inclusive approaches and innovate for all
- Give customers meaningful choice
- Form delivery partnerships
- Amplifying public purpose/values
- 'Frame' debates and capture public mood
- Using 'soft power' of third-party endorsement
- Partnerships to 'fill gap' left by regulators/government.

Technological developments

Technological development can be a source and mitigation of risk, and an opportunity.

- Technological change is disrupting existing services, business models, and regulatory frameworks (particularly in energy), as well as how consumers use and experience them. For example:
 - The rise of artificial intelligence (AI) and big data are changing business models and revolutionising business insights and operations
- In turn, technological change is challenging current approaches to dealing with risk. The fourth industrial revolution could become an existential risk for some utility companies (e.g. retail operations). Some are struggling to catch up with the pace of change.
- Companies will need to adapt to these changes, and evaluate their impacts on a continuous, rolling basis. Regulatory models and policy often lag behind.
- Other risks include: the deepening of existing inequalities and implications for customers in vulnerable situations, e.g. semi-skilled/low-skilled jobs in areas such as call centres becoming replaced by technology.
- However, technological development also presents huge opportunities for utility companies and means of mitigating risk.
- For example, technologies (e.g. blockchain, big data) enable bottom up and decentralised models of service delivery that help unleash the demand side.
- Significant technological strides have also already been made to enable the development of renewables and flexibility services.



Some key areas include:

- *Digitisation and telemetry* – smart meters, switching
- *Data interrogation and remote operation/optimisation*
- *Distributed energy* – storage, heat pumps
- *Carbon capture and storage (CCS)*
- *New options for carbon reduction* – electric vehicles, carbon-lite HGVs, SF6 reduction
- *The hydrogen economy* – gas, heat, transport
- *Robotics and laser technology*
- *Artificial intelligence (AI)*
- *Blockchain* – removing the need for retail intermediaries
- *Left field* – satellite imagery to detect water leaks

Tipping points

Tipping points are critical points beyond which significant, and sometimes unstoppable, change takes place.

Sources of tipping points:

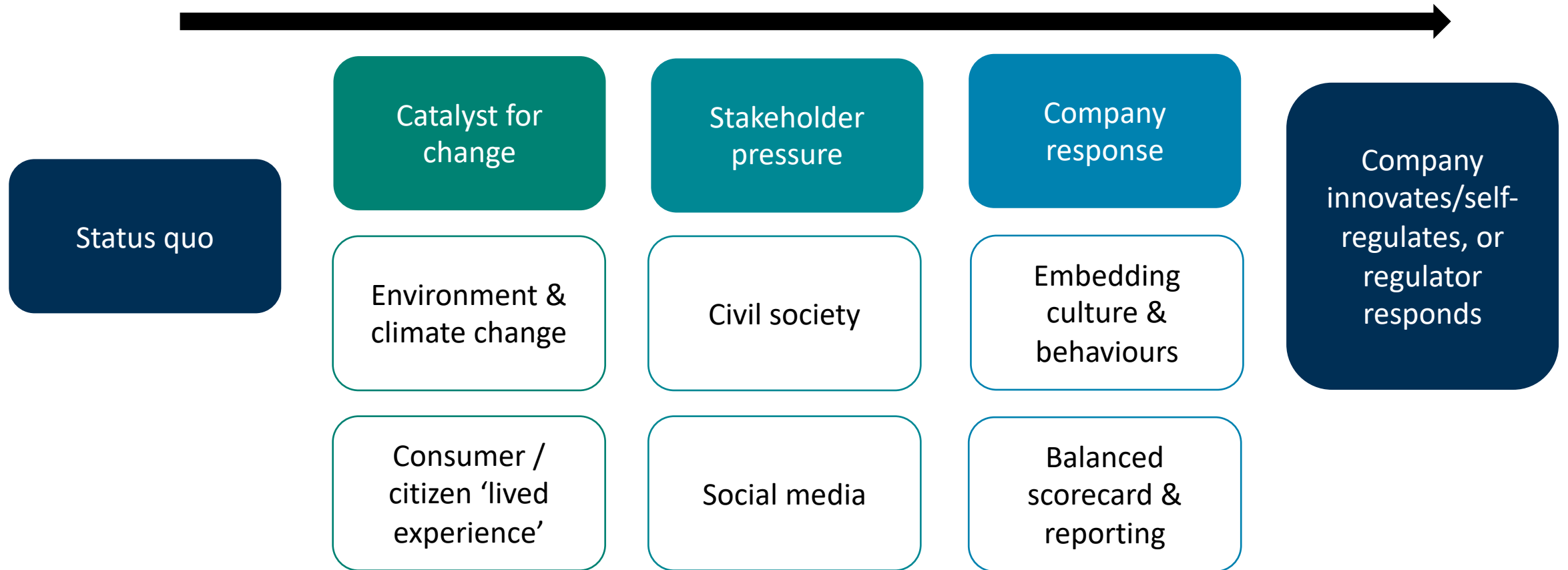
- **Technology comes in waves** – slow exploitation followed by exponential growth
- **Political bandwidth** can mean little action until pressure reaches a particular point – and then change becomes unstoppable (e.g. price cap, board pay/dividends)
- **Social media** echo effect / going 'viral'
- **Major one-off disruptions** in essential services - challenges for utility companies' reputation and legitimacy
- **Excessive focus on bottom line:** treasury department as profit centre with falling cost of capital relative to regulatory WACC
- **Climate and environment** tipping points – complex ecosystems and feedback loops

Why tipping points are hard to spot:

- **The past is not a good guide to the future**
- **Metrics**, and mindsets, tend to be **backward-looking** or **reactive**
- Risk analysis too often focused on evolutionary risk registers; **lack of forward-looking scenarios based on strategic risks**
- Does **profit** 'dull the senses'?

Given the unpredictability of tipping points, a regulatory compliance approach - which tends to lag behind social, environmental and technology change - is not sufficient to deal with these risks. See more on slide 11.

How social and environmental risks become financially material



Annex C. Stakeholder interest in environmental and social risk - emerging pressures

Utility companies' stakeholder groups go beyond customers and consumers to include regulators, policymakers, investors, wider publics and citizens, NGOs and civil society, the media, and future generations. Utility companies are facing growing interest in environmental and social risk amongst multiple stakeholder groups. This puts external pressure on utility companies to do more. Examples of interest/pressures from some of these include:

Consumers/Citizens *(see slide 37)*

- Step-change in public expectations around environmental & social issues esp. utility companies as public service providers
- Growth in climate/environmental activism (Extinction Rebellion, school strikes), and awareness of impacts of climate change and adaptation (2019 winter floods)
- Asks for tailoring of services to meet different needs of consumers, esp. those in vulnerable situations.

Investors *(see slide 36)*

- Growing emphasis on responsible investing from organisations/NGOs/investor bodies (UN PRI, TCFD, BRT) and individuals/business leaders (Mark Carney, Larry Fink).
- Mainstreaming of public purpose agenda. ESG criteria no longer 'add on' but integral part of reporting
- This was reflected in Sustainability First's engagement with investors in our 2019 roundtable and bilateral discussions

Policymakers

- Pressure from government to meet its 2050 net zero commitments and stronger emphasis from local authorities, many having declared 'climate emergencies'
- Changing political picture, such as widespread support for Labour's nationalisation proposals around 2019 election
- Brexit, incl legislative redesign of environmental protections

Regulators

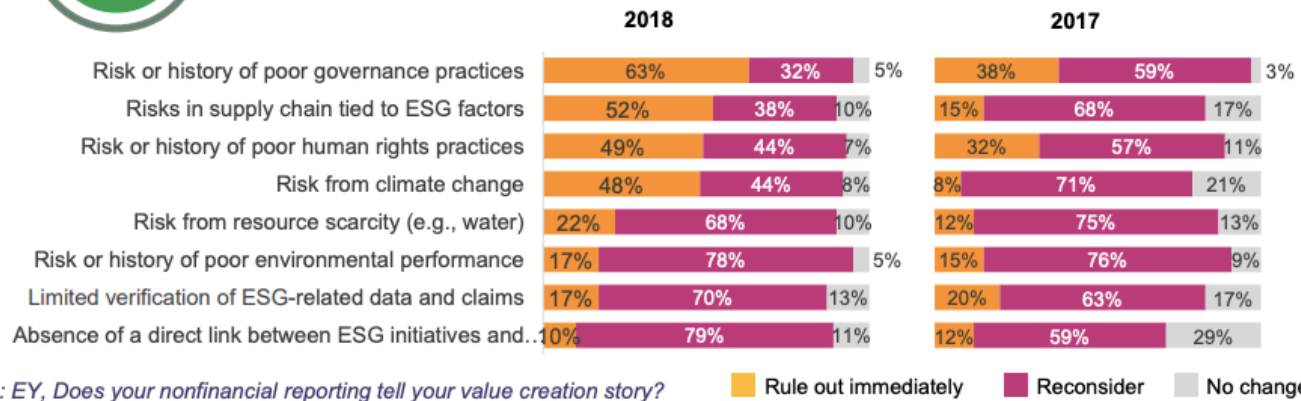
- Price control reviews (PR19 and RII02)
- Growing vulnerability agenda & pressure to reduce bill impacts
- Clear, public Ofgem commitment to net zero through its Decarbonisation Action Plan
- Consumer Challenge/Engagement Groups to embed ongoing engagement in utility company cultures

Stakeholder interest: investors

There is growing interest from investors in a company's ESG (environment, social, governance) performance:

97%

of institutional investors surveyed say they conduct an evaluation of target companies' nonfinancial disclosures



Key discussion themes from Sustainability First's investor roundtable :

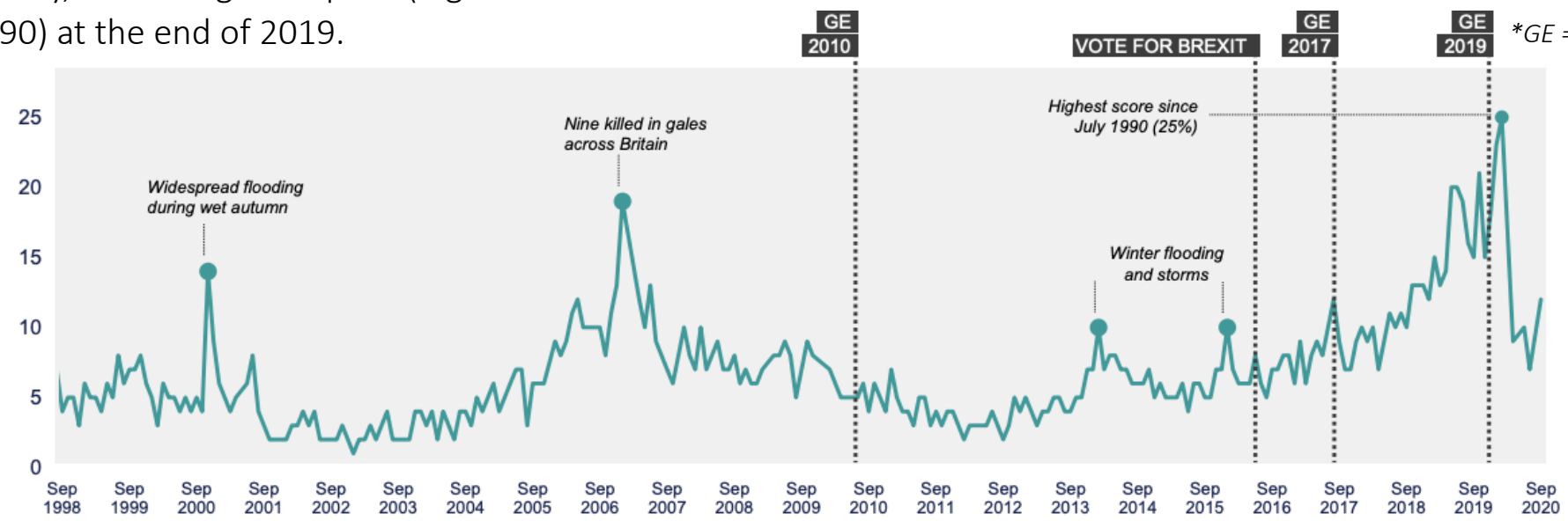
- **National variation** in how companies perceive Environmental, Social and Governance (ESG) risk
- **Metrics overload**: Metrics play a key part in successfully integrating environmental and social aims into utility companies, but there are over 120 different metrics.
- **Social factors** less frequently quantified and therefore currently less salient for some investors – but climate risk much more embedded.
- Taking **ESG factors** into account is now a matter of survival for companies and investors: a must-have, not a nice-to-have.
- But a lack of clarity on precisely how action on ESG can positively impact the shareholder 'bottom line'

Source: Lead. Transform. Succeed. World Business Council on Sustainable Business Development, Board Director Workshop: Enterprise Risk Management, 21 February 2020

Stakeholder interest: consumers/citizens

- We have seen a step-change in public expectations around environmental & social issues. In particular, an escalation in need as a result of the pandemic and the growth of climate action.
- The graph below shows that, up until the coronavirus pandemic, consumer/citizen interest in environmental issues had been steadily, and then more rapidly, increasing to its peak (highest level since 1990) at the end of 2019.

- Key themes of interest/pressure from consumers and citizens:
- **Deliberative fora** such as the Climate Assembly
 - **Formal consumer engagement** in price controls and by regulators and utility companies
 - Increasing leadership and engagement from **devolved regional and local voices**, such as local authorities and city mayors
 - **Predictive analytics and big data** providing greater granular and real-time insights into customer/citizen preferences



Source: Ipsos Mori [Issues Index](#), September 2020

Annex D. How do companies currently treat social and environmental risk?

Sustainability First examined how a sample of utility companies and their investors *currently* view social and environmental risks.

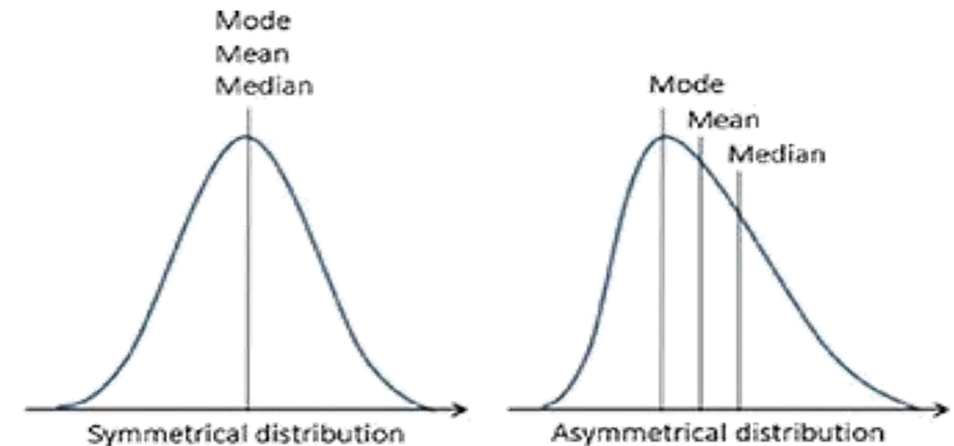
- **Environmental** → Utility companies have moved some way to accept and start to mitigate risks associated with environmental problems (esp. net zero in energy, and discharges and adaptation in water)
- **Social** → Social risks are less well articulated and understood, many go little further than 'health and safety' or conventional definitions of vulnerability (set by economic regulators). Some confusion between 'customer services' and 'social mission'. Little attention to risks experienced at community level.
- **Fairness** → Fairness dimensions appear as far as they relate to operational regulatory factors, not treated as material to the core business.

Four key shifts needed in the treatment of social and environmental risk:

- A *shift in time horizons* from static short-term → to dynamic, cumulative and long-term perspectives.
- A *shift in scope* from treating social and environmental issues as separate, ad-hoc, and one-off externalities → to a more holistic and integrated view that understands interdependencies between risks.
- A *shift in approach* from a reactive, compliance and process-based approach → to a proactive and strategic approach focused on risk and opportunity.
- A *shift in governance and culture* towards being values driven and understood throughout the company. An open and learning culture in which staff have 'license to challenge' on social and environment initiatives.

Limitations to business case approaches in a 'disrupted world'

- A business case approach to projects relies on assessment of costs and benefits through NPV.
- This approach is not well-suited for long term projects, portfolios of projects or risks that have 'long, fat tails'.
- These display **asymmetric risks** - e.g. 'black swans' - i.e. high impact / low probability events, climate risks and other tipping points (*see slide 33*)
- It also tends to assume that today's technologies and key trends from past continue (e.g. demand).
- We need to augment approaches with scenario analysis (*see example on slide 16*) and adaptive approaches.



Sustainability First will cover this further in an upcoming Fair for the Future Project paper looking at 'implications for policy and regulation'.

Annex E. Using environmental and social metrics to manage risk

Why metrics?

- To track and communicate delivery and performance - thereby to manage risk and create confidence. *Companies cannot manage what they cannot measure.*
- Four related audiences:
 - Internal: **Boards and Exec Directors.** To track performance, compliance and delivery, and spotting future risks.
 - **Investors/finance partners.** Increasingly important and required by many investors/potential investors (e.g. TCFD - Task Force on Climate-Related Financial Disclosures). Metrics should form part of annual report and accounts. They may also be an important element of due diligence.
 - **Regulators and policymakers.** To demonstrate compliance/performance against incentive measures and to inform decision-making.
 - External: **Stakeholders and consumers.** To inform and to secure trust by transparency.



Annex E. Using environmental and social metrics to manage risk

Metrics - Common features and calls for change:

Net zero/carbon: Carbon emissions reduction. Important to include product life cycle, supply chain, fleet, operational assets, and office estate if relevant.

Environment: Metrics in other areas are reasonably well established (e.g. waste, reuse, biodiversity, water use, air pollution, and visual amenity) although getting less attention than carbon metrics.

Social metrics: Poorly defined at present. Minimum: metrics for vulnerable customers and governance (e.g. modern slavery, gender pay gap). Need more on: regional data, wider affordability, connectivity, and digital exclusion.

Adaptation to climate change: Currently underplayed or limited. Resilience to increasing heat, storms, floods, drought, and sea-level rise, as well as knock-on effects from other sectors (e.g. energy outage from storms will impact on water).

Cultural: Responses to issues which could have implications for fairness/environment. Metrics might include staff survey information, but also extent of, and buy-in to, internal targets. Identifying where sustainability sits within organisation.

Annex F. Developing & Embedding a ‘Sustainable License to Operate’

As part of the ‘**Fair for the Future**’ project, Sustainability First has developed a framework to support public utility companies that want to adopt a public purpose approach to their business. This is an approach that:

- Recognizes the needs of people and planet before short-term profit.
- Ensures sustainable wellbeing – economic, environmental, and social.
- Is embedded within the business’s core functions.

Sustainability First has called this approach a ‘**Sustainable License to Operate**’

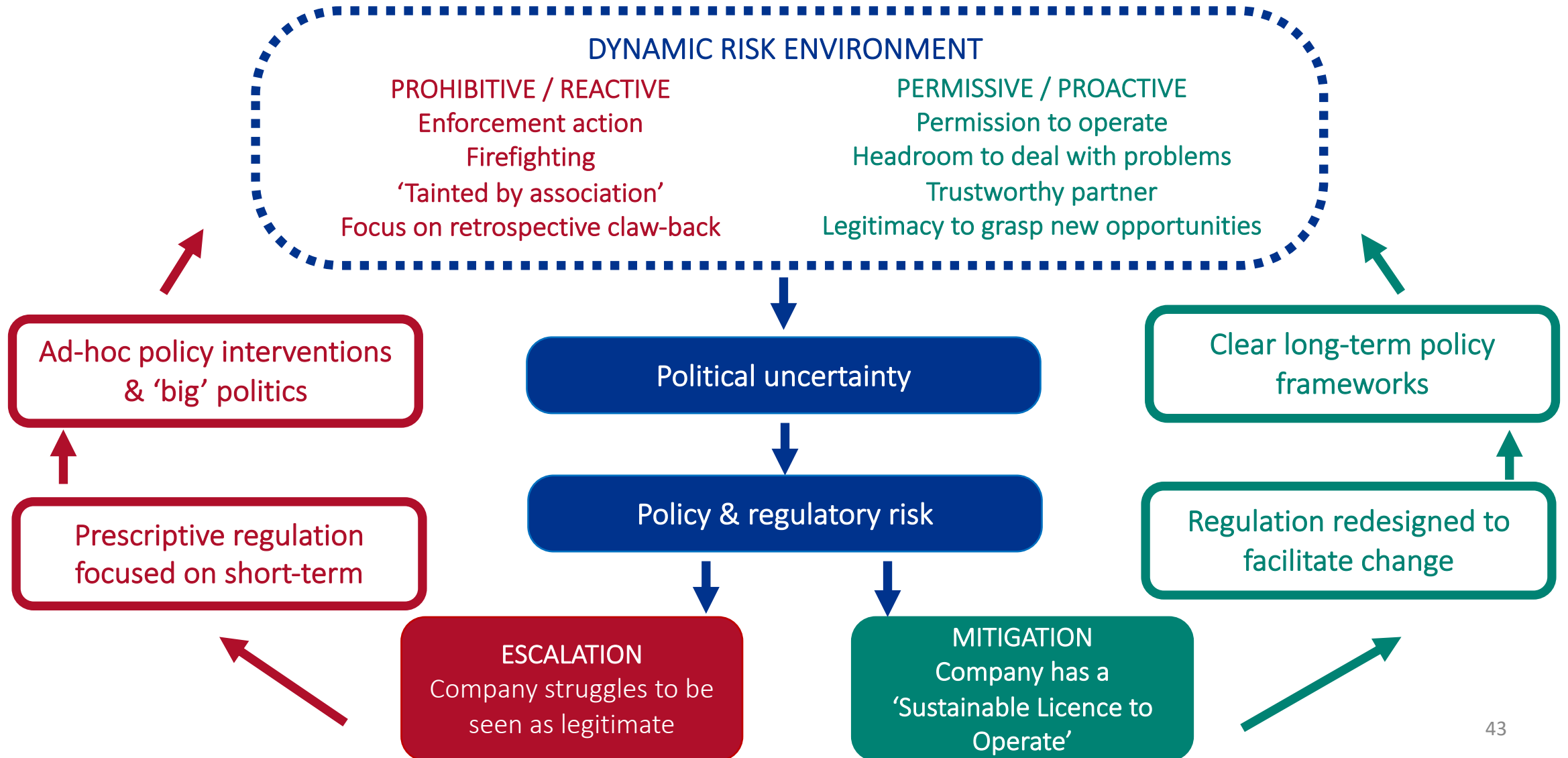
A ‘Sustainable License to Operate’ for mitigating risk

- In a ‘disrupted world’, utility companies need a clear long-term vision and resilience in order to navigate uncertainty. This changing context is also leading to new perspectives of what is ‘fair’.
- By embedding a ‘Sustainable License to Operate’, companies can create a permissive and proactive environment and culture around fairness and the environment. This in turn addresses and mitigates risk and uncertainty: such companies are more likely to do the right thing, and when there are problems, they have the trust and third-party endorsement to buy them time to get things right again.



Annex F. Developing & Embedding a 'Sustainable License to Operate'

A 'Sustainable License to operate' supports the creation of a proactive & 'permissive' environment to address the politics of fairness:



Annex F. Developing & Embedding a 'Sustainable License to Operate'

To support companies to implement a 'Sustainable License to Operate', Sustainability First published a ['How-To' guide](#). It provides a comprehensive and practical framework for utility companies as they move towards more sustainable and purposeful business models and practices. The guide contains sets of checklists for senior leaders to use to put their purpose into action. It also includes a set of deep dives and case studies, and analysis of the four key pillars.

Recommendations – The Foundations of a 'Sustainable License to Operate':

- ***An integrated approach:*** A purposeful business approach is integrated and embedded *across* the organisation.
- ***Stakeholder engagement:*** Ongoing and meaningful engagement with both customers and wider stakeholders to capture the views of future consumers and communities.
- ***Demonstrating delivery of public interest outcomes:*** Use of sustainability metrics to evidence how the company is delivering on its purpose and enable meaningful accountability.
- ***Focus on people and culture:*** People and culture are key to putting purposeful business into practice. Getting a diverse mix of skills, experience, backgrounds and ways of thinking is important to being able to address fairness issues.
- ***Flexible and enabling policy and regulatory frameworks:*** Work with policy makers and regulators to help shape the adaptive frameworks that are needed for a disrupted world.

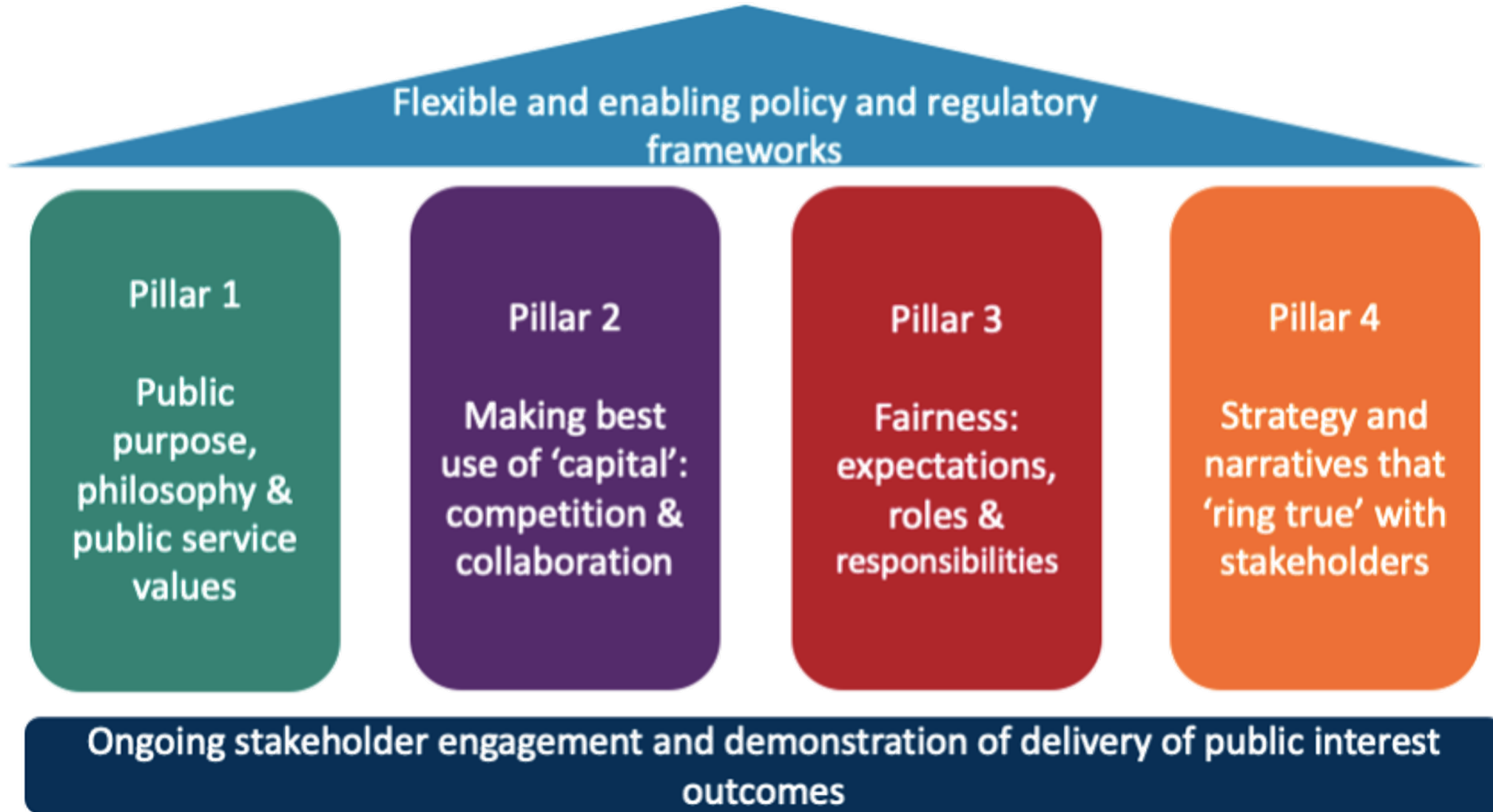


The 'Sustainable License to Operate' is built on four key pillars:

1. Public purpose and values
2. Making best use of 'capital' through competition *and* collaboration
3. Embedding fairness and clarifying roles and responsibilities
4. Developing strategies and narratives that 'ring true' with stakeholders

See diagram of pillars on next slide

Annex F. Developing & Embedding a 'Sustainable License to Operate'



Annex G. Risk and uncertainty during the Coronavirus emergency

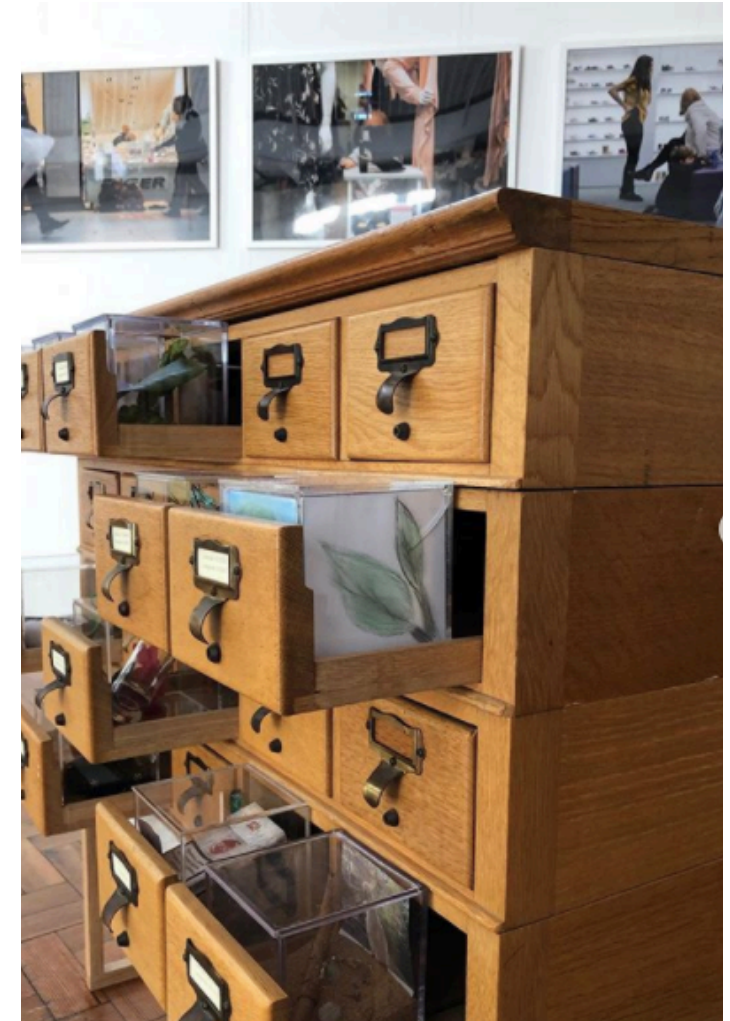


Checklist for boards and executive teams to support strategic thinking during the coronavirus emergency:

1. Do **purpose, values and culture** cut-through and inform your company's operational responses to the crisis?
2. **Strategic prioritisation**: do you have effective ways to look at the totality of risks and continue to consider long-term priorities?
3. **Risk interaction**: Do you and your team understand the dependencies of social and environment risks you face, including those arising from the crisis?
4. Which of your core **assumptions** on risk need urgent review?
5. **Opportunity**: might the crisis also offer new legitimacy for your work? Do you have the capacity and ability to innovate?
6. **Metrics on learning on social and environmental outcomes**: Do you have sufficient information, indicators and metrics to assess your performance on delivering these goals, and the associated risks, during the crisis?

Annex H. Full list of Sustainability First resources on risk

- Life in the pressure cooker: How do UK energy and water companies and their investors currently view political uncertainty and regulatory risk around fairness and the environment? – Discussion Paper ([link](#)) February 2020
- Political and Regulatory Uncertainty and Risk – The Role of Climate and the Environment – Working Note ([link](#)) February 2020
- SF / MIRA investor roundtable ([link](#)) October 2019
- Political and Regulatory Uncertainty and Risk – The Role of the Consumer 'Lived Experience' – Working Note ([link](#)) October 2019
- Political and Regulatory Uncertainty and Risk – The Role of the Media – Working Note ([link](#)) April 2019
- Political and Regulatory Uncertainty and Risk – The Role of Civil Society – Working Note ([link](#)) February 2019
- Political & Regulatory Uncertainty & Risk – Discussion Paper ([link](#)) October 2018
- Sustainability Metrics in Public Utilities ([link](#)) September 2020
- Risk and Uncertainty during the Corona Emergency: Checklist for Boards and Executive Teams to Support Strategic Thinking ([link](#)) April 2020
- 'How-To' Guide: Developing and Embedding a Sustainable License to Operate and a Purposeful Business Approach ([link](#)) September 2020



Artist: Sarah Strachan