Overview of TCFD Reporting Requirements

Transport for London

Appendix 1

November 2021

EY

Building a better working world

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Executive Summary

Introduction

Due to the nature of the services that TfL provide, a broad range of stakeholders are demanding transparency on climate risks. TfL operates to deliver the Mayor Transport Strategy (MTS) and plays a crucial role in delivering other Mayoral strategies and plans. Ensuring alignment with national and mayoral targets (such as carbon neutrality for London by 2030) will require significant financial investment. The Audit Committee have recognised climate change as a principle risk for TFL and have asked for an external perspective on the Task Force on Climate-related Financial Disclosures ('TCFD') and its relevance to TfL.

This is not a detailed current state assessment of TfLs climate processes, nor is it a risk assessment of TfLs exposure to climate change. Instead, this report aims to provide TfL with an overview of climate risk reporting through the TCFD, its relevance to TfL as well as prospective next steps needed to make relevant climate related disclosures in future reporting cycles. We hope it provides good context and a basis on which to structure both a meaningful external disclosure as well as the processes and internal mechanisms needed to accomplish this.

The TCFD

The TCFD Framework was established to promote consistent climate-related financial risk disclosures for use by companies, financial institutions, and investors. It is structured in four thematic areas – Governance, Strategy, Risk management, and Metrics and targets - with eleven voluntary recommendations of what to include in financial disclosures.

The recommendations have gained significant momentum since the TCFD's establishment in 2017 and UK regulators are establishing them as a mandatory disclosure for company filings. Through disclosing against the TCFD recommendations company's are encouraged to develop their internal risk management and strategic planning processes in the context of a better appreciation of the long term climate risks posed to their business. It provides a range of stakeholders the information necessary to make informed long term capital allocation decisions.

The TCFD and its relevance to TfL

For TfL, reporting against the TCFD framework should be more than just about compliance with regulation. Climate risks pose a range of credible business risks that will have significant financial implications over the coming years. Building on work already done through its Adaptation Report, TfL should use the TCFD framework to better understand climate risk exposures and develop approaches to actively quantify their potential financial impacts. This will support the development of appropriate steps to mitigate the worst impacts of climate change and establish essential and sustainable financial planning.

Some of the key considerations as to why climate risks and TCFD reporting are critical to TfLs business:

1	TfL has significant climate risk exposure from both a physical and transition risk perspective	**Physical risks:** Acute and chronic risks to transport infrastructure and safety from flooding, overheating, and more. **Transition risks:** As the UK economy decarbonises, shifts in markets, technology as well as policies will have a significant impact on how TfL operates
2	Broader stakeholders, and attracting/ retaining the right talent	Different stakeholder groups, including the government, investor communities, TfL's employee base and the general public have growing expectations of how TfL should be approaching climate change
3	Alignment to the Mayor of London's Transport Strategy (MTS)	Alignment with the MTS is a critical priority for TfL. Transport and climate adaptation are central to the Mayor of London's vision and TfL will play a critical role in meeting both regional and national level targets. This will have significant financial implications.
4	Impact on important funding considerations	Understanding the magnitude of the future costs of adaptation and mitigation is very important for TfLs longer term viability and securing adequate funding from Mayor of London/DFT
5	Significant financial impacts and accounting implications	There is a growing pressure from regulators on both preparers of financial accounts as well as auditors to better incorporate climate risk considerations into financial accounts and reporting

Executive Summary (cont'd)

Good Practice reporting insights

The coverage of climate risk disclosures has increased significantly, but the quality of these disclosures lags behind. TfL should align with **best practice reporting principles across the TCFD Pillars** to ensure quality of their disclosures:

Governance

- Clear governance structure demonstrating board oversight and accountabilities

Strategy

- Clear description of impact on core strategy and decision-making, including scenario analysis

Risk management

- Clear integration and ownership of climate risks

Metrics and targets

- Clear targets and transparent methodologies of measuring progress over time

At the more mature end of TCFD reporting companies are able to identify potential climatic implications under different future conditions. Scenario analysis is used to do this and companies with more advanced TCFD reports are evaluating future state physical and transition risk impacts using the modelling of publicly available scenarios. This scenario analysis supports companies in quantifying climate risks and their impacts on financial statements. Through this, users of the information can better understand the financial impact of climate-related risks and the actions which companies are taking to mitigate these.

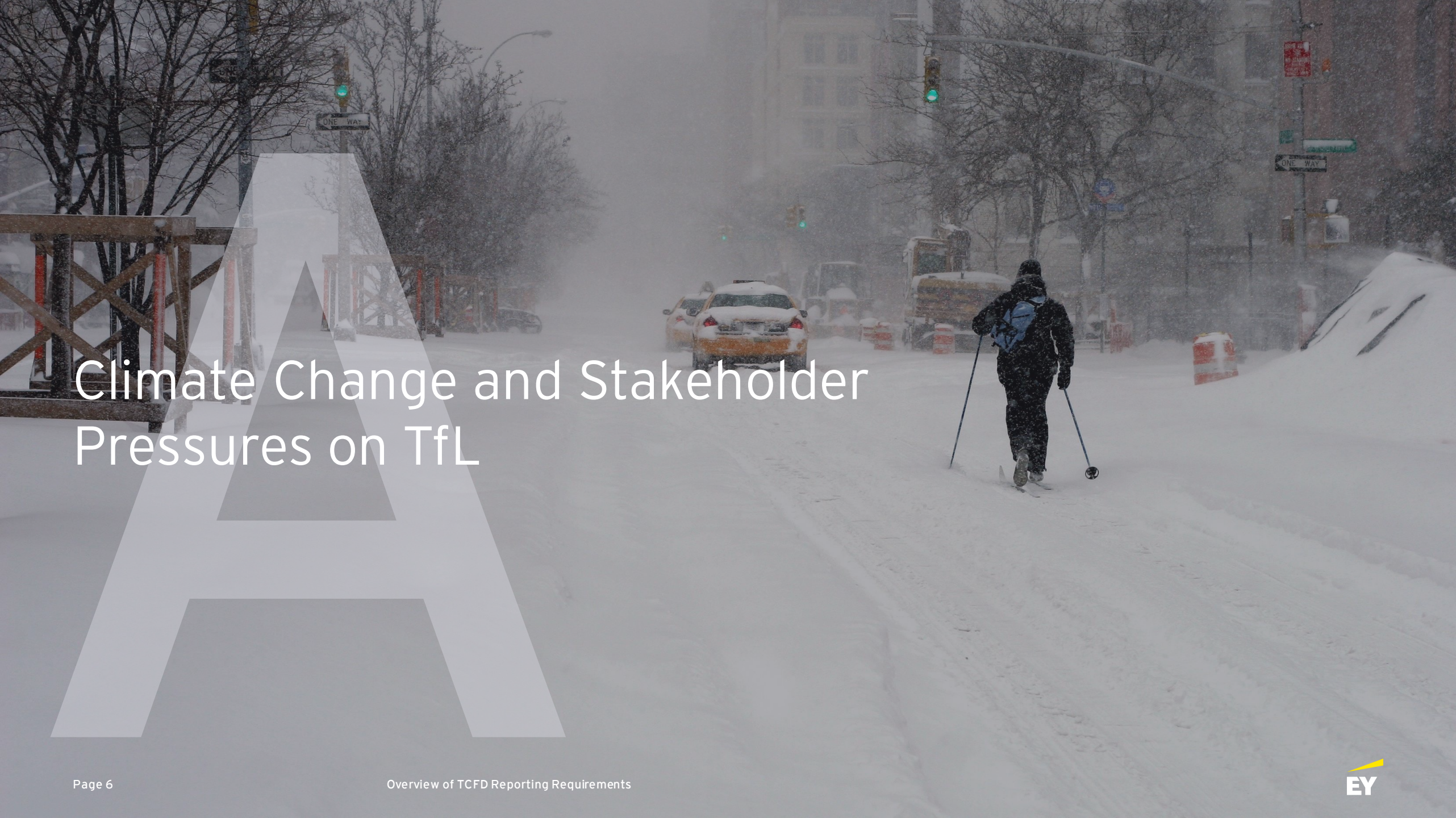
Key considerations for TfL

TfL has already taken key steps towards improved climate risk disclosures, in line with the TCFD recommendations. Your Corporate Environment Plan (CEP) and sustainability reports have identified climate change as a key priority for TfL and have set out various ambitions and roadmaps on how to achieve them. Your voluntary reporting against the Adaptation Reporting Power has included assessing your assets against climate risks with the next submission due in December 2021. TfL have also done work integrating climate risks into overall risk management, and raising the profile of climate change internally, such as through the work of the SHE Corporate Environment and City Planning teams.

There are still, however, some important considerations and next steps that TfL will need to focus on to lay the foundation for good practice TCFD reporting. This is particularly important in the context of ever-changing ambitions and requirements at national and mayoral level, as evidenced by the recent announcement by UK Chancellor Rishi Sunak, who announced the ambition for UK to become the first 'Net Zero Aligned Financial Centre' at COP26 this month, making it mandatory for firms to publish clear, deliverable plans to align with net zero. The core strategy of TfLs business will be increasingly impacted by climate change. Whether through further fleet electrification or redesigning significant parts of its infrastructure, the financial impacts will be wide ranging. In order to support core strategic decisions TfL must develop a clear understanding of what the risks are and how they will impact the business financially.

Key considerations for TfL relate to all four TCFD pillars:

Governance	Strategy	Risk Management	Metrics and Targets
▸ Coordinated governance structure ▸ Top level management ownership	▸ Effect on core strategy and long-term planning ▸ Coordinated climate strategic priorities	▸ Adequate integration of climate risks ▸ Leveraging existing disclosures ▸ Building on progress by existing teams	▸ Measuring progress against CEP ▸ Climate projections and scenarios ▸ Supply chain engagement ▸ Financial impact analysis



Climate Change and Stakeholder Pressures on TfL

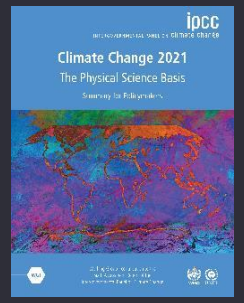
What the science says

The scientific community is unanimous in expressing the extreme risks posed by climate change, which will affect all geographies and sectors. Those sectors specifically reliant on physical infrastructure, such as transportation, will be most vulnerable to the physical impacts of climate change. The most recent report published in August 2021 by the Intergovernmental Panel for Climate Change (IPCC) has again emphasised the danger of delaying the implementation of more ambitious plans for the reduction of emissions and for adaptation, and finds that:

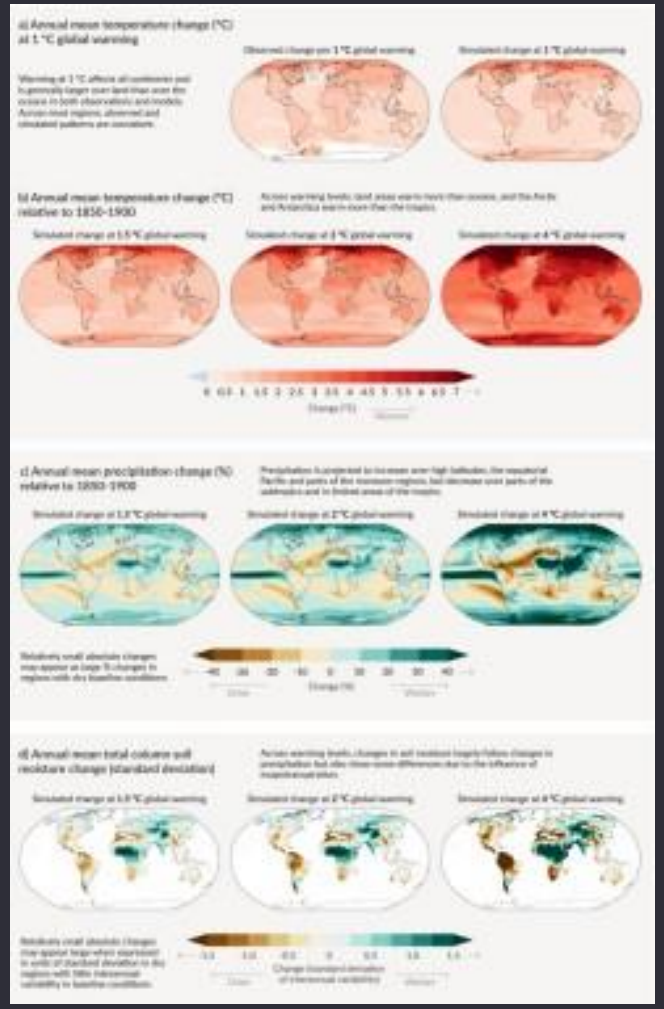
- Warming is increasingly faster
- Warming affects every region in the world, with increasing heat waves, longer warm seasons and shorter cold seasons
- Human actions still have the potential to determine the future course of the climate

The IPCC Report stresses that 'it is unequivocal that human influence has warmed the atmosphere, ocean and land'. While action is being taken and targets set by businesses and governments globally, **current commitments are not enough to limit global warming to 1.5 degrees Celsius** – the target set out by the Paris Agreement in 2015, a landmark agreement on climate change mitigation. This was clearly found by the UK Committee on Climate Change in a report in June 2021.

The **risks these changes in the global climate will bring are significant, and have to be factored into business reporting and strategy by organisations such as Transport for London (TfL) as early as possible**.



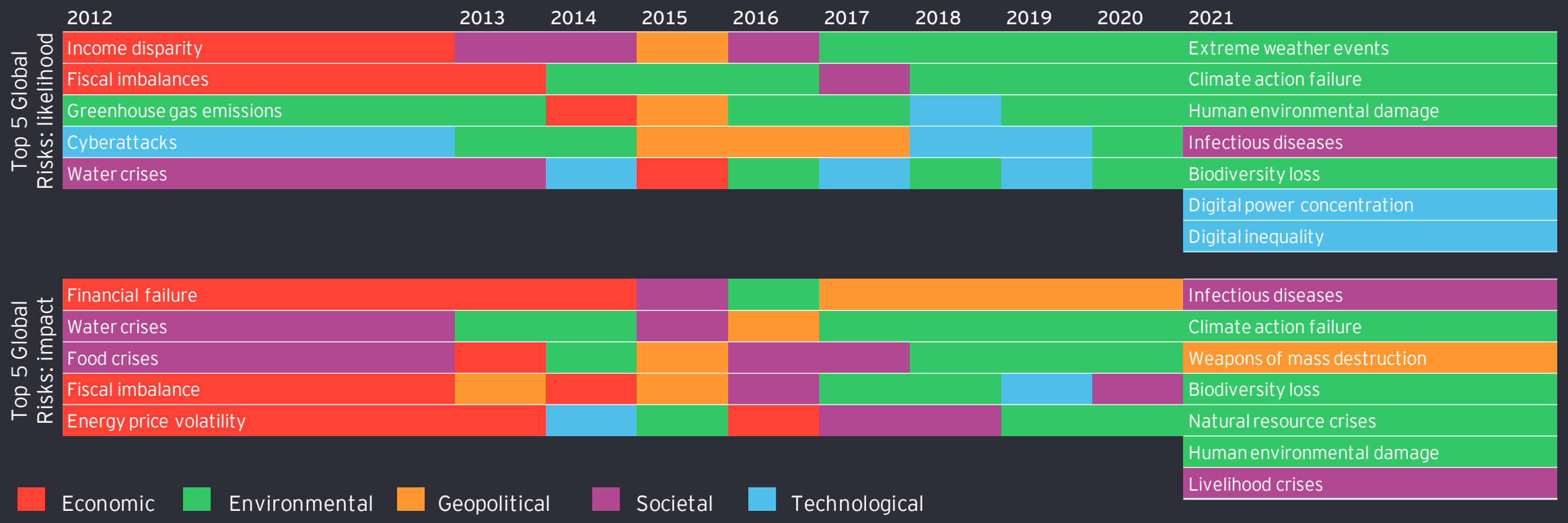
> It is unequivocal that human influence has warmed the atmosphere, ocean and land. The extreme risks posed by climate change are widespread, and rapidly intensifying.
>
> IPCC ARC 6, Summary for Policymakers, 2021



Source: Climate Change 2021, The Physical Science Basis, Summary for Policymakers, IPCC

Climate change poses unprecedented risks to individuals, business and global economic systems

The 2020 edition of the World Economic Forum (WEF) annual Global Risks Report found 'failure of climate-change mitigation and adaption' as its top risk in terms of impact. Additionally, for the first time the top five risks in terms of likelihood were all related to climate change and related environmental issues. In 2021, this was only disrupted by the inclusion of infectious diseases. Climate change clearly poses a significant risk to the world economy. Ultimately, if not addressed climate-related risks will impact the financial position, performance and prospects of all businesses.



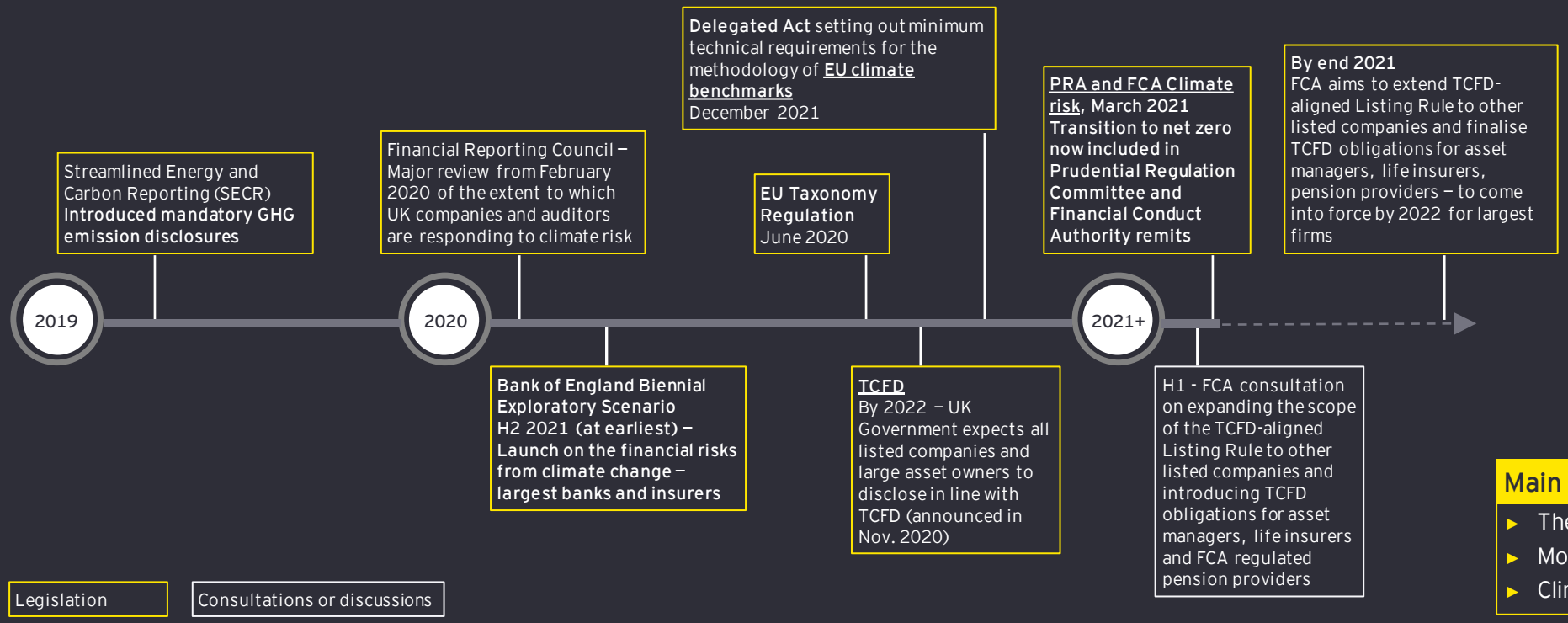
Sources: World Economic Forum Global Risks Reports, 2021

Government and regulators are responding and increasingly mandating disclosure of climate risks

In response to this understanding of the extreme risks posed by climate change, regulatory bodies are responding. New disclosure requirements on climate change risks are evolving, and both the UK and EU regulatory timeline is changing rapidly. The UK Joint Regulator and Government Taskforce has announced the UK's intention to make Taskforce on Climate-Related Financial Disclosures (TCFD) aligned disclosures mandatory across the economy by 2025.

While demands from regulators are increasing, the legal landscape remains fragmented and hard to navigate, posing further challenges. TfL are directly impacted by a number of national level and mayoral acts, policies and commitments. There is an opportunity to lead by example within the transport sector, signalling the forward looking nature of TfL's strategy as well as the value it brings to its broader stakeholders.

UK/European regulatory timeline



Main trends

- The shift from voluntary to mandatory
- Momentum and urgency
- Climate first, broader ESG follows

The Mayor Transport Strategy and London's carbon neutrality target are key drivers for TfL to engage with climate risk disclosures

Due to the nature of the services TfL provide, a broad range of stakeholders (including the general public) are demanding transparency and action on climate risks. TfL specifically operates to deliver the Mayor Transport Strategy (MTS) and plays a crucial role in delivering other Mayoral strategies and plans, such as the London Plan, Health Inequalities, Housing and Economic Strategies, and the London Environment Strategy. Ensuring alignment with these targets will require core strategic decisions and a significant financial investment. Examples of these include the timing of investments into fleet electrification and broader lower carbon infrastructure, as well as the incorporation of an internal carbon price or specific offsetting strategies.

Therefore, government and city-level climate and decarbonisation targets are a particularly powerful driver of engagement with climate risks and climate risk disclosures, such as the TCFD:

UK and Mayor's climate targets

- In April 2021, the UK government enshrined in law their ambitious target to **become net zero by 2050**. At COP26, UK Chancellor Rishi Sunak announced ambition for UK to become the first 'Net Zero Aligned Financial Centre', making it mandatory for firms to publish clear, deliverable plans to align with net zero
- Transport contributes about a quarter of London's carbon emissions. TfL are committed to playing their part in meeting the Mayor's target of **making London a carbon neutral city by 2030**

TfL vision on environment

- As per the Corporate Environment Plan (CEP), **TfL's central vision on environment is to be part of a zero carbon London**. Your Environmental Framework and Ambitions support this target
- **Achieving this vision will require an in-depth understanding of TfL's exposure to physical and transitional climate risks** under different climate scenarios. TCFD disclosures will support this required insight and build the foundation for including climate risk into long-term planning and decision-making

"We are committed to achieving the Mayor's goal of making London carbon neutral by 2030.

Transport for London Corporate Environment Plan 2021

Sources: TfL Sustainability Report 2021, TfL Corporate Environment Plan 2021

TfL Environmental Framework and Ambitions

TfL Climate Change and Adaptation Ambitions:

- Achieve zero-carbon emissions across our operations and head office buildings by 2030 – zero Scope 1 and 2 emissions by 2030 and zero-carbon emission bus fleet by 2037 or earlier
- Reduce carbon emissions across the lifecycle of our assets and infrastructure – set reduction target for Scope 3 emissions by 2022
- Work with our suppliers to reduce carbon across all products and services we procure
- Understand, prepare and adapt for climate change, now and in the future on our services, infrastructure, staff, contractors and customers

TfL's ambitions also include **going beyond minimum legal requirements** and striving for environmental best practice, benchmarked against peers.

B

Introduction to TCFD

Origins and evolution of the TCFD Framework

In response to increasing demands for climate-related transparency from investors, lenders, insurers, regulators, policy makers and other stakeholders in the financial markets, at the request of the G20 Finance Ministers and Central Bank Governors, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD).

- In 2017, the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.
- The recommendations outline climate-related considerations to be included in mainstream financial filings, which aim to enable stakeholders to allocate capital efficiently in alignment with a low-carbon transition, and can have a significant impact on investment decision-making.
- Key voluntary climate change reporting initiatives, such as the Climate Disclosure project (CDP), have aligned their questionnaires (including their transport sector-specific questionnaire) with the TCFD. In addition, the FRC has made climate-related financial disclosures mandatory across a number of geographies

> the TCFD provides recommendations for more effective climate-related disclosures enabling stakeholders to better understand risks, promoting more informed decision making.

Mark Carney
Governor of the bank of England
September 2015

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Chaired by Michael Bloomberg + 30 members on the TCFD

Recommendations released in June 2017

At the end of 2020, over 1,500 public- and private-sector organizations have announced their support for the TCFD

Including, global financial firms responsible for assets in excess of $150 trillion

Overview of the four TCFD pillars and 11 recommendations

The TCFD Framework is structured in four thematic areas – Governance, Strategy, Risk management, and Metrics and targets – with eleven voluntary recommendations of what to include in financial disclosures. This helps organisations understand and manage their climate-related risks, both physical and transitional, and opportunities (see detail in Appendix A).

The ultimate aim of the disclosures is to give readers a better idea of the financial impact of climate-related risks and the actions which companies are taking to mitigate or take advantage of these. The strategy pillar recommends that companies describe the climate-related risks and opportunities identified over the short, medium and long term, how they have impacted the business strategy and financial planning, and to describe the resilience of the strategy in light of different climate-related scenarios

TCFD elements	TCFD recommended disclosures
Governance	a. Board oversight
	b. Management's role
Strategy	a. Climate-related risks and opportunities
	b. Impact on the organization's businesses, strategy, and financial planning
	c. Resilience of the organization's strategy
Risk management	a. Risk identification & assessment processes
	b. Risk management process
	c. Integration into overall risk management
Metrics and Targets	a. Climate-related metrics in line with strategy and risk management process
	b. Scope 1, 2, 3 GHG metrics and the related risks
	c. Climate-related targets and performance against targets

Source: "Final Report: Recommendations of the TCFD on Climate-related Financial Disclosures," TCFD website, https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf

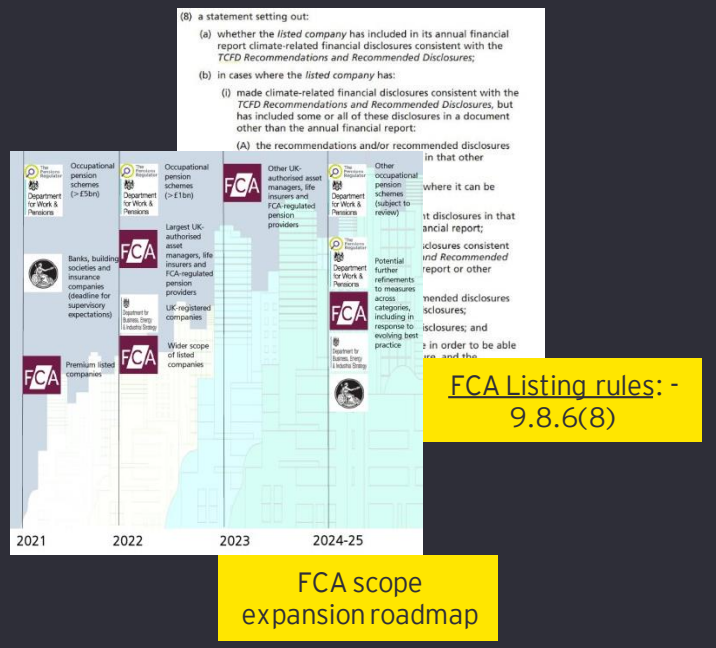
TCFD reporting requirements for TfL

The FCA has published a road map illustrating a path towards mandatory climate-related disclosures across the UK economy aligned with the recommendations of the TCFD. Currently, the requirements for reporting against the TCFD framework have been written into the Listing Rules1 – specifically section 9 (LR9), which is only applicable to Premium Listed entities[2]

TfL does not qualify as premium listed and is therefore not in scope for the current TCFD listing rules that will be effective for periods commencing on or after 1 January 2021.

Importantly, the Department for Business, Energy and Industrial Strategy (BEIS) is currently consulting[3] on expanding the scope to capture more entities – this has not yet been finalised, but we expect it to be implemented for future reporting cycles.

The FCA have consulted on extending the scope to all standard listed equity shares. Due to TfL's listed debt securities it is our view that TfL will fall into scope of the requirements in due course although this hasn't been part of a formal consultation as yet and is dependant on future actions of the FCA. However, because climate risks are pervasive across TfLs corporate structure and developing meaningful TCFD disclosures is both time and resource intensive, we would recommend TfL preparing for the TCFD recommendations as soon as possible



FCA Listing rules: - 9.8.6(8)

FCA scope expansion roadmap

FCA TCFD listing rule scope summary:

2021

Premium listed companies – Listing rule for a/c periods commencing on or after 1 Jan 2021

2022 Transport for London

Listing rule extended to other listed companies and large private companies as well as: asset managers, life insurers and FCA-regulated pension providers

2023

BEIS – Disclosure rules for smaller in-scope UK authorised asset managers, life insurers and FCA-regulated pension providers

> "Due to TfL's listed debt securities, it is our view that TfL will fall into scope of the TCFD requirements in future reporting cycles

1. Listing rules (disclosure of climate-related financial information) instrument 2020
2. FCA Listing rules Handbook – LR.pdf (fca.org.uk)
3. BEIS – Consultation on requiring mandatory climate-related financial disclosures

Relevance of the TCFD to TfL

Key considerations for why TfL should be reporting against the TCFD

For TfL, reporting against the TCFD framework should be more than just about compliance with FCA regulation. Climate risks pose a range of credible business risks that will have significant financial implications over the coming years. Using the TCFD as a framework and building on TfL's Adaptation Report, TfL should aim to better understand these risks and develop approaches to actively quantify their potential financial impacts. This will support appropriate steps to mitigate the worst impacts of climate change and establish essential and sustainable financial planning.

Below, and in more detail over the following slides, we highlight some of the key considerations as to why climate risks and TCFD reporting are critical to TfLs business:

1	TfL has significant climate risk exposure from both a physical and transition risk perspective	**Physical risks:** Acute and chronic risks to transport infrastructure and safety from flooding, overheating, and more. **Transition risks:** As the UK economy decarbonises, shifts in markets, technology as well as policies will have a significant impact on how TfL operates
2	Broader stakeholders, and attracting/ retaining the right talent	Different stakeholder groups, including the government, investor communities, TfL's employee base and the general public have growing expectations of how TfL should be approaching climate change
3	Alignment to the Mayor of London's Transport Strategy (MTS)	Alignment with the MTS is a critical priority for TfL. Transport and climate adaptation are central to the Mayor of London's vision and TfL will play a critical role in meeting both regional and national level targets.
4	Impact on important funding considerations	Understanding the magnitude of the future costs of adaptation and mitigation is very important for TfLs longer term viability and securing adequate funding from Mayor of London/DFT
5	Significant financial impacts and accounting implications	There is a growing pressure from regulators on both preparers of financial accounts as well as auditors to better incorporate climate risk considerations into financial accounts and reporting

1 Transport is a high risk sector from both a physical and transition point of view

Climate change is already having a detrimental effect on transport in London, and the financial investment required are high. Events such as recent flooding in London, which forced the closure of large sections of London's road and rail network, are only to become more frequent and intense. Similarly, the risk of overheating is increasing, as the Urban Heat Island effect makes the centre of London up to 10°C warmer than the rural areas around the city. Without adequate mitigation, climate change will reduce comfort, safety and reliability on public transport and will negatively affect London's economy. Moreover, the cost of implementing current decarbonisation plans and measures and required financial investment to reach public targets to become zero carbon is high, leading to a range of additional, transitional risks for TfL:

Transport for London

> "The key challenges to public transport posed by climate change include protecting rail assets and streets from flooding, managing heat on public transport, and maintaining service reliability in periods of extreme weather.
>
> Mayor of London Transport Strategy

Physical Risks

Acute Risk

- **Flooding** (tidal, groundwater, surface water): Frequency and severity of flooding increasing on TfL Network as UK winters becoming wetter.
- **Overheating:** Overheating on buses, trains, London Underground linked to technical failures and risk to staff and passengers. Exacerbated by rising average temperatures.
- **Drought:** Infrastructure damage and reduced ground stability from drying summers. Heavy rainfall after drought can destabilise embankments.
- **Storms:** Infrastructure damage from higher intensity, higher frequency wind and rainfall.

Chronic Risk

Risk of higher frequency and severity of the above due to shifts in climate patterns, particularly higher average temperatures, drier summers, and wetter winters.

Transition Risks

Policy and Legal Risks

UK Government mandating TCFD disclosures by 2023. Risk of Net Zero ambitions at Mayor- or Government-level changing (like with COP26 Chancellor announcement).

Market Risk

High implementation cost of current carbon reduction plan to achieve zero carbon target. Significant financial investment required into energy infrastructure, vehicles, etc. to meet targets.

Added risk from current short-term financial support and lack of ability to plan for long-term. Requirement for TCFD disclosures in order to access sources of private sector funding.

Inadequate insurance if adaptation measures are found inadequate.

Technology Risk

Need to adapt infrastructure to accommodate shift towards lower-carbon economy, e.g., around electrification.

Reputation Risk

Changing public perceptions and increasing demands for transition to a lower-carbon economy.

Opportunities

Resource efficiency

Opportunity to support electric vehicle infrastructure in line with fleet decarbonisation targets.

Energy source

Opportunity to continue move to cleaner energy sources, investing directly into renewable energy projects, and exploiting waste heat from tube.

Products/services

Opportunity to continue to be most mature low-carbon transport system in Europe, e.g., with greener bus fleet and Ultra Low Emission Zones.

Markets

TCFD disclosures enabling increased revenues through continued access to private sector funding once disclosures have become requirement.

Resilience

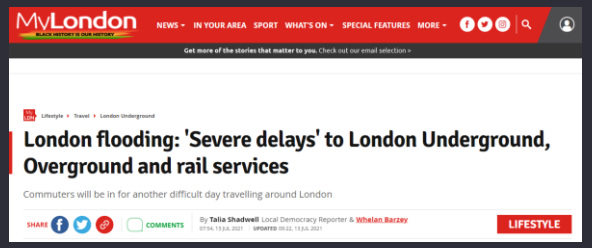
Avoiding higher cost of resilience over time, including synergies between greener infrastructure, pollution impacts, etc. Especially crucial given cost of implementing decarbonisation and adaptation plans.

Sources: MoL Environment Strategy, 2018; MoL Transport Strategy, 2018, TfL CEP 2021

2 Broader stakeholders, and attracting and retaining the right talent

A broad range of key stakeholders are demanding transparency on climate risks. Due to the nature of the service TfL provides, the general public and broader society is one of your most crucial stakeholders. In a similar way to any product/service, consumers are making purpose driven decisions when selecting transport services, seeking out lower carbon footprint options and from climate conscious providers. This includes your employees and future work force.

As highlighted previously, physical climate risks to TfL's infrastructure and London transport more broadly are becoming increasingly more visible. This will further intensify pressures from the general public and your employees.



Pressures from TfL employees and future talent:

As we heard from you, TfL employees are increasingly engaging with the topic of climate change, and climate change risks for TfL specifically. This is evidenced, for example, by your Staff Network Group on Sustainability.

Generally, purpose and value-driven engagement is becoming increasingly more important to employees, especially younger team members. Research by McKinsey & Co in early 2021 found that a purpose-driven organisation drives loyalty and reduces turnover by 25-50%. Extreme weather events, such as the July Flooding events experienced across London, intensify these trends. The same McKinsey & Co study finds that 80% of millennials want to work for a purpose-driven employer. This was found to have been exacerbated by the COVID-19 pandemic.

Understanding climate change impacts and building their consideration into day-to-day operations at TfL will, therefore, also be crucial in order to attract new talent from the market.

Source: McKinsey & Co, 2021

3 Alignment to the Mayor of London's Transport Strategy (MTS)

Alignment with the MTS is a critical priority for TfL. Transport and climate adaptation are central to the vision of the Mayor of London.

Adequately planning for risks resulting from climate change and investing in infrastructure that will be resilient over the long term will play a key part in meeting the MTS' expectations. It recognises the significant disruptions climate change already causes to London transport, including flooding events, heatwaves, droughts, and heavy rainfall increasing in frequency and intensity. It also calls for more London-specific insight and understanding into climate risks, to enable effective mitigation planning.

Policy 9 and Proposals 46 and 47 aim to address these challenges to the transport system, promising an effective response to extreme weather events, continued safe operation, and reliable, comfortable service. It directly references the importance of TfL as a channel to achieve these goals, which makes TfL's ability to understand, manage, and disclose climate risks and opportunities essential.

Relevant Policy and Proposals from MTS:

"

The Mayor, through TfL and the boroughs, and working with stakeholders, will seek to ensure that London's transport is resilient to the impacts of severe weather and climate change, so that services can respond effectively to extreme weather events while continuing to operate safely, reliably and with a good level of passenger comfort.

Policy 9

"

The Mayor, through TfL, will work with transport and other infrastructure providers in London to undertake a dedicated programme of research to understand and prioritise the risk of sever weather and climate change adversely affecting the operation of London's transport network and to minimise any such impacts on the most vulnerable user groups. TfL will lead this work for the transport sector in London.

Proposal 46

"

The Mayor, through TfL, will seek to undertake and implement an evidence-based programme of measures to adapt existing, and to design and build new, transport infrastructure to make it resilient to severe weather conditions and the effects of climate change.

Proposal 47

Source: MoL Transport Strategy, 2018

4 Impact on important funding considerations

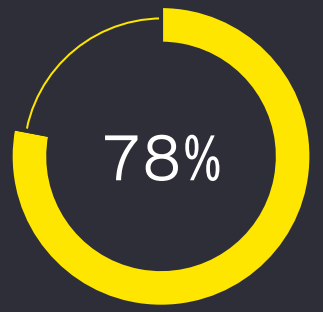
Climate risk is directly linked to funding considerations and access to capital. TfL is uniquely placed to help drive a strong and resilient future for London and continue supporting a more efficient, productive and sustainable city. However, this is entirely dependent on secure, long-term funding that enables it to commit to the next generation of improvements to address London's transport network needs.

There is a risk that current pressures on short-term financial support (greatly intensified by the COVID-19 pandemic and need for six-monthly emergency funding from the Department for Transport) will inhibit longer-term planning leaving TfL underfunded and unable to make the investments necessary to support London and the UK climate ambitions. Understanding the magnitude of the future costs of adaptation and mitigation is very important for TfL's longer term viability and securing adequate funding from the Mayor of London and DfT.

It is imperative that TfL, through its Financial Sustainability Plan and Long Term Capital Plan, is able to clearly communicate the likely future financial impacts of climate change. To do this, TfL will need to quantify the long-term investments needed to appropriately adapt to and mitigate the impacts of climate change.

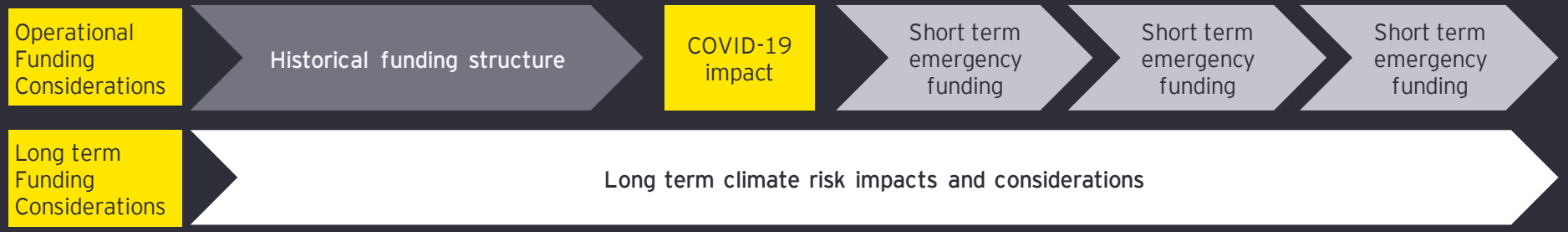
Climate disclosures along the lines of the TCFD have a crucial role to play in furthering the understanding of climate risks and future costs, and thereby ensuring access to capital. Developing the risk management and financial planning procedures framed by the TCFD will support TfL's financial planning considerations.

Climate considerations are also of increasing importance for securing future private sector funding. Investors are increasingly concerned with the risks surrounding climate change. According to EY's Investor Survey, climate risk considerations are now a key priority in capital allocation decisions across the economy, and more than three-quarters of those who make use of TCFD disclosures note it has a significant impact on investment decision-making.



More than three-quarters of those who make significant use of TCFD information say that it has a **significant impact on investment decision-making**

> "Better understanding and quantifying the financial impacts of climate change and establishing what investment is needed now to mitigate and adapt are crucial to establishing TfLs longer term financial viability



Short term operational funding considerations makes planning for longer term climate impacts difficult

5 TfL needs to understand financial impacts and accounting implications

The TCFD aims to support companies to quantify the financial impacts resultant of climate risk. Linked to this, **there is a growing pressure from regulators on both preparers as well as auditors to better incorporate climate risk considerations into financial accounts** and reporting. As expectation surrounding this intensifies, TfL will need to better quantify its climate risks and opportunities, and consider whether its front half narrative is consistent with what is presented in the back half accounts.

"

It is unclear how forward-looking assumptions and judgements applied in preparation of the financial statements are consistent with narrative discussion of climate change.

FRC (See Appendix A for full detail)

"

Climate reporting can no longer be simply a narrative report in the front end of financial statements. Climate change has irrefutable monetary impact and must be reflected as such in financial statements.

CDSB

"

Companies must consider climate-related matters in applying IFRS Standards when the effect of those matters is material in the context of the financial statements taken as a whole.

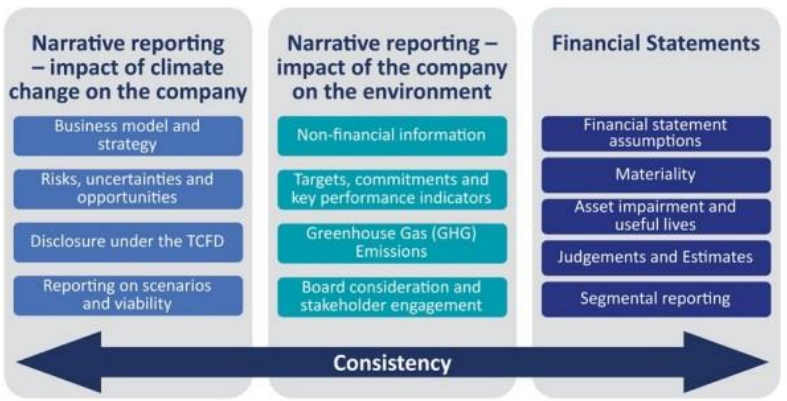
IFRS

Relevance of climate risk for financial reporting:

Even where disclosures are not required by a financial standard, we encourage TfL to evaluate and disclose financial implications arising from climate-related risks to address these growing expectations. These may include but are not limited to:

- Asset impairment, including goodwill (IAS 36)
- Changes in the useful life of assets (IAS 16; IAS 38)
- Changes in the fair valuation of assets (IFRS 13)
- Effects on impairment calculations because of increased costs or reduced demand (IAS 36)
- Changes in provisions for onerous contracts because of increased costs or reduced demand (IAS 37)
- Changes in provisions and contingent liabilities arising from fines and penalties (IAS 37)
- Changes in expected credit losses for loans and other financial assets (IFRS 7)

Figure 7.1: Overview of key considerations in respect of climate reporting within the ARA.[18]



Source: FRC Climate thematic review

D

Good practice reporting examples

Good practice and gaps in TCFD disclosures

Companies are approaching TCFD disclosures differently. Good practice TCFD reporting on each pillar includes (see Appendix B for more detail):

Governance

- Clear governance structures
- Reporting lines and leadership skills
- Process and plan over time

Strategy

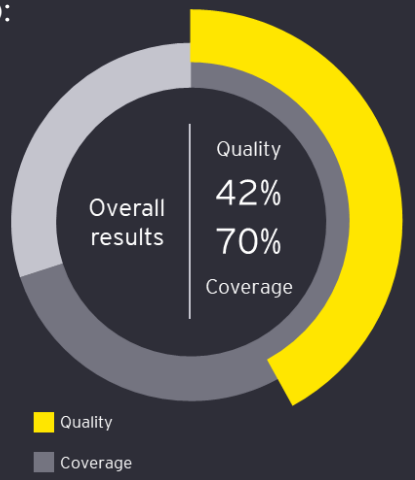
- Short, medium and long term horizons
- Likelihood and impact on business/financial planning
- Climate scenario analysis

Risk management

- Clear ownership of risks
- Prioritisation of risks
- Interconnectivity between climate risks
- Impact of climate scenarios

Metrics and targets

- Clear targets
- Transparent methodologies
- Decarbonisation pathways over time



TfL will need to consider these elements when building TCFD disclosures. EY's **2021 Towards TCFD Compliance Report** reviewed over 100 corporate annual reports of 31 December 2020 FTSE 100 and FTSE 260 reporters. It found that:

- Around **50% of the companies reviewed reported against all or most of the 11 TCFD recommended disclosures**
- Commonly, they **included a dedicated 'TCFD section'** within the annual report to describe climate-related impacts, though some took a more integrated approach to TCFD disclosures
- **Very few companies translated climate risk analysis into financial impacts** – a key objective of the TCFD recommendations – and almost no companies referenced it in their financial statements. The **disclosure of climate risks in the financial statements lags behind narrative reporting**

The TCFD recognises that most climate-related risks and opportunities will emerge over the medium and long-term and will be dependent on certain conditions. For TfL to avoid some of these shortfalls in current climate disclosures in the market, you will need to further **develop climate projections alongside the work TfL is doing to prepare for the Adaptation Reporting Power submission in December 2021. This will act as a tool to support the understanding of TfL's resilience under different future conditions.**

- Climate scenario modelling integrates physical climate risks, transition risk and key assumptions to generate future potential scenarios and their pathways. These scenarios can reflect a faster or slower transition depending on different rates of change of key parameters
- Commonly used climate scenarios are the IPCC scenarios (see right). A high climate scenario represents a future where more physical risks will be present for organisations, while a low scenario will expose an organisation to more transition risks as the world moves to a low carbon economy.

The TCFD suggests the development of **at least three distinct and plausible climate change scenarios**, including one adhering to the Paris Agreement, to test the resiliency of the organisation in different climate change futures.

Sources: EY's Global Climate Risk Barometer; IPCC Climate Scenarios

Some of TfL's peers are developing their approaches to climate risk disclosures

Your direct peers are still at an early stage of understanding their climate risk and disclosing them. Nonetheless, they are **increasingly engaging with climate risks and climate risk disclosures, including in the context of climate scenarios** (see Network Rail below):

Network Rail

- Resilience to climate change is one of Network Rail's **top 4 priorities**
- They are mapping all their assets against vulnerability to climate risks by 2024
- They are developing longer term adaptation pathways and scenarios and identifying the relevant investment requirements by 2029
- To achieve this, they plan to engage their people and leadership, step up measurement and systems and processes needed, leverage technology, and consider funding and planning needs
- There are already a number of metrics and targets in place, but plan to develop a more leading metrics and target to measure progress against a more resilient railway

Highways England

- In Highways England's Sustainable Development Strategy, climate risks and climate change adaptation are the number one consideration for their financial capital
- They recognise the crucial impact of climate change adaptation on their:
  - Asset management strategy
  - Strategic growth plans
  - Lean deployment strategy
- They also aim to maximise the benefits of engaging key stakeholders, as well as embed climate change considerations throughout their business
- Key actions of their implementation roadmap include raising the profile of the topic, enhancing environmental management systems and information, creating partnerships, and adapting supplier contracts to include environmental considerations

Sources: Network Rail Environmental Sustainability Strategy; Highways England Sustainable Development Strategy and Action Plan

Key considerations for TfL

Summary of key considerations for TfL to focus on in future TCFD reporting

TfL has already taken key steps towards improved climate risk disclosures, in line with the TCFD recommendations:

- You have an adaptation report in place, as well as sustainability and SHE reports. In addition, you voluntarily report to the Adaptation Reporting Power 3, which involves assessing climate risks to assets. Your Corporate Environment Plan (CEP) and sustainability reports have identified climate change as a key priority for TfL and have set out ambitions and roadmaps to be achieved. These cover emissions/carbon, materials, waste, biodiversity and more
- You are already partly capturing climate risks in your risk management processes, such as in your ERM system as level 2 risks. You have done work stress testing TfL's processes in the context of climate change and extreme weather projections
- The SHE Corporate Environment and City Planning teams have been proactive in raising the profile of climate change risks and adaptation measures. You have started bringing together key internal stakeholders where there are overlaps between teams and responsibilities
- Your employees are engaging with climate change more actively, such as through the Staff Network Group on Sustainability

These aspects present clear opportunities and should be leveraged when engaging with TCFD reporting to **close key gaps and translate this directly into good practice TCFD disclosures** ***(see detail on next slide)***:

Governance	Strategy	Risk Management	Metrics and Targets
▸ Coordinated governance structure ▸ Top level management ownership	▸ Effect on core strategy and long-term planning ▸ Coordinated climate strategy priorities	▸ Adequate integration of climate risks ▸ Leveraging existing disclosures ▸ Building on progress by existing teams	▸ Measuring progress against CEP ▸ Climate projections and scenarios ▸ Supply chain engagement ▸ Financial impact analysis
Good practice TCFD disclosure will require:			
▸ Clear governance structure demonstrating board oversight and accountabilities	▸ Clear description of impact on core strategy and decision-making, including scenario analysis	▸ Clear integration and ownership of climate risks	▸ Clear targets and transparent methodologies of measuring progress over time

Key considerations and opportunities for TfL to prepare for TCFD disclosures

Governance

- **Coordinated governance structure**
  TfL is a complex organisation with many disparate processes and systems to manage its assets and services. Climate risks are currently managed at divisional project level, as highlighted in Appendix A of the October Climate Change Adaptation Internal Audit report. TfL can work to consolidate a coordinated governance structure and clear ownership of climate risks that will ensure focused decision-making and action on climate planning and implementation

- **Top level management ownership**
  The quarterly Transport Adaptation Steering Group could be used to provide a more coordinated governance structure across TfL's business. Ensuring top level management visibility and ownership will be crucial, and will support communicating accountability externally as part of disclosures (such as TCFD)

Strategy

- **Effect on core strategy and long-term planning**
  Climate change will have significant impacts on TfL's core strategy and service offering. Its impacts should be factored into business strategy making and financial planning early on.
  In addition, TfL has set an ambitious goal to make London transport zero carbon, and is aligned with the Mayor's carbon neutrality target for 2030. To achieve these targets and their underlying ambitions, climate change considerations will have to be factored into long-term planning and decision-making, such as investment decisions

- **Climate projections and scenarios**
  Building on analysis based on climate projections and scenarios will further understanding of the varying outcomes on TfL's infrastructure and services

- **Coordinated strategic climate priorities**
  Strategic priorities on environment are spread across the organisation. TfL would benefit from establishing a unified, holistic strategy and action plan that consolidates these and gives authority to develop and implement a coordinated climate strategy.

Risk Management

- **Adequate integration of climate risks**
  TfL can work to ensure that Climate Change is appropriately integrated into the company level Enterprise Risk Management (ERM) system. Currently, TfL do not have an enterprise risk/level 1 set of risks dedicated to climate change, extreme weather or adaptation. Rectifying this would help ensure climate risks are adequately understood, communicated and factored into decision-making

- **Leveraging existing analysis and progress**
  TfL can leverage existing analysis of the climate-related risks facing the organisation, such as from the National Adaptation Programme, Adaptation Reporting Power 3, as well as TfL's Adaptation, Sustainability and other reports. Moreover, TfL can further develop the SHE Corporate Environment and City Planning teams' work understanding and managing climate risk exposures

Metrics and Targets

- **Measuring progress against CEP**
  The Corporate Environmental Plan (CEP) details TfLs energy and carbon strategy. Metrics and data processes could be developed that allow for better monitoring of TfLs progress against the CEP ambitions. Specifically those that relate to reducing emissions, furthering operational efficiency and successfully adapting to a changing climate

- **Supply chain engagement**
  In order to meet TfL ambitions to monitor key suppliers and decarbonise supply chains, clear procurement processes and performance metrics will be required

- **Financial impact analysis**
  TfLs adaptation report includes the first stages of financial impact analysis in relation to climate change. TfL should aim to further this to better appreciate the financial impacts of adaptation and mitigation plans as well as plans to meet net zero targets. Importantly, consideration should be given to how financial statements should reflect these.

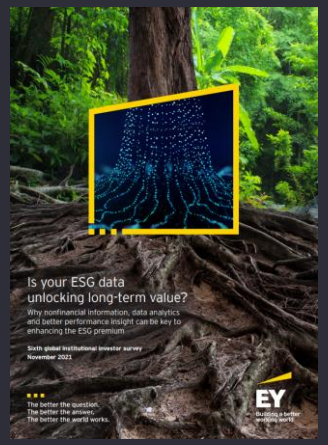
Good practice TCFD disclosure will require:

- Clear governance structure demonstrating board oversight and accountabilities
- Clear description of impact on core strategy and decision-making, including scenario analysis
- Clear integration and ownership of climate risks
- Clear targets and transparent methodologies of measuring progress over time

EY climate change capability and credentials – EY climate resources

In our annual flagship
Global Climate Risk Disclosure Barometer,

we assess the climate change disclosures of over 1,000 of the world's largest organisations to understand how companies are responding to the TCFD Recommendations.



Our annual flagship
Annual Institutional Investor Survey,

includes research that delves into investors' attitudes toward ESG information, nonfinancial reporting and its role in their decision-making – **including climate change reporting and performance.**

The Sustainable Impact Hub, launched in 2018, offers a virtual centre that offers a repository of leading-edge thinking and insights relevant to organizations and businesses that are seeking to create impact and accelerate action.

Topics covered in leadership and PoVs on the Hub include:

- Climate change strategy
- Green finance
- Climate disclosures
- Green EU deal
- Impact of COVID-19 on climate action
- TCFD reporting
- Carbon neutrality/net-zero

Subscribe to our Sustainability Matters podcast series

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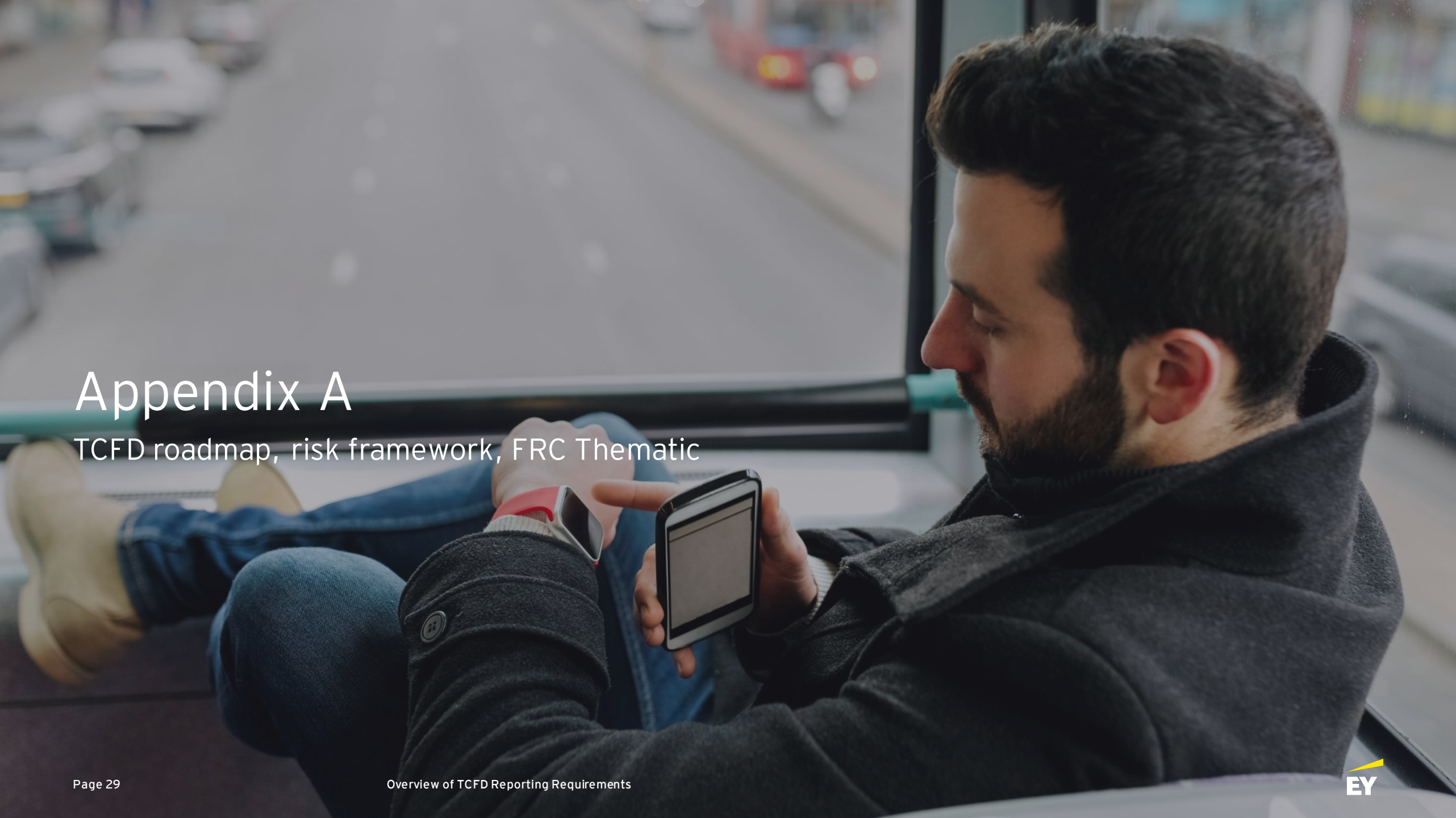


Appendix A

TCFD roadmap, risk framework, FRC Thematic

Detailed FCA Roadmap – TCFD disclosures across the full UK economy by 2025

Below we have summarised the full detail of the FCA Roadmap that sets out an indicative path towards mandatory climate-related disclosures across the UK economy aligned with the recommendations of the Taskforce on Climate-related Financial Disclosures.

		2021	2022	2023
FCA	Premium listed commercial companies	Premium listed commercial companies – new comply or explain Listing rule for a/c periods commencing on or after 1 Jan 2021		
FCA	Other listed companies	H1 2021 – consultation on extending Listing rule to wider scope of listed companies – and possible mandatory disclosure	Transport for London Listing rule extended to other listed companies	
BEIS	UK registered companies	Early 2021, consultation on changes to the CA 2006 to require TCFD disclosures in Strategic Report. Scope tbc but could use revised PIE definition. Regulations made mid-2021	Regulations to require TCFD disclosures in Strategic report – to include large private companies	Review of case for extension of scope and possible consultation
PRA	Banks, building societies and insurers	Banks, building societies and insurers (deadline for supervisory expectations) – no additional requirements proposed	Review of 2021 disclosures to determine whether additional measures required – possible consultation	
FCA	Asset managers, life insurers and regulated pension providers	H1 2021 – consultation on TCFD obligations for asset managers, life insurers and FCA-regulated pension providers – focus on decision useful information for clients and end investors	Disclosure rules for largest/most connected UK authorised asset managers, life insurers and FCA-regulated pension providers	Disclosure rules for smaller in-scope UK authorised asset managers, life insurers and FCA-regulated pension providers
DWP	Occupational pension schemes	Early 2021 – consultation on draft Regulations – aim to apply from Oct 2021 for Occupational pension schemes (OPS) (>£5bn)	Regulations to apply for OPS (>£1bn)	

In December 2020, the FCA issued a new Listing Rule requiring that, for accounting periods beginning on or after 1 January 2021, companies with a premium listing include a statement in their annual report and accounts (ARA) setting out whether they have made disclosures consistent with the recommendations of the TCFD, or to explain why they have not done so.

Complementary to the FCA's new rule is the proposal issued by the Department for Business, Energy and Industrial Strategy (BEIS) in March 2021, to mandate climate-related financial disclosures beyond premium listed entities to other public interest entities, AIM companies, large private companies and Limited Liability Partnerships (LLPs) for accounting periods beginning on or after 6 April 2022.

> "If TfL are to construct a good practice TCFD disclosure in future reporting cycles, immediate action is needed to build appropriate tools and processes.

▲ Expected/anticipated to be in force but subject to consultations, Parliamentary time, etc. ● Consultation or review planned

Sources: Roadmap towards mandatory climate-related disclosures and Interim Report of the UK's Joint Government-Regulator TCFD Taskforce

TCFD distinguishes physical risks, transition risks, and opportunities

The TCFD provides a taxonomy for climate-related risks and opportunities. Many of these are highly relevant to TfL.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Physical Risks

Acute Risk

Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods.

Chronic Risk

Chronic physical risks refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

Transition Risks

Policy and Legal Risks

Policy actions that attempt to constrain actions that contribute to the adverse effects of climate change or policy actions that seek to promote adaptation to climate change.

Increase in climate related litigation claims being brought before the courts.

Market Risk

Shifts in supply and demand for certain commodities, products, and services.

Technology Risk

Technological improvements or innovations that support the transition to a lower-carbon, energy efficient economic system.

Reputation Risk

Changing customer or community perceptions of an organization's contribution to or detraction from the transition to a lower-carbon economy.

Opportunities

Resource efficiency

Use of more efficient processes, reduced energy and water consumption, less waste resulting in reduced operating costs

Energy source

Use of lower emission sources of energy or decentralized energy sources providing reduced operational costs

Products/services

Development and/or expansion of low emission goods and services to increase revenue and expand market share

Markets

Increased revenues through access to new and emerging markets (e.g., partnerships with governments)

Resilience

Increased market valuation through resilience planning

Source: "Final Report: Recommendations of the TCFD on Climate-related Financial Disclosures," TCFD website, https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf

The FRC Climate Thematic Review

The FRC has completed a review of climate-related issues as they affect governance, reporting and audit, and the roles of a range of market participants. The key findings of their report are summarised below:

How are boards taking account of climate-related challenges?

It is the board's responsibility to consider climate-related issues, but there is little evidence that business models and company strategy are influenced by integrating climate considerations into governance frameworks.

How are companies developing their reporting on climate-related challenges?

An increasing number of companies are providing narrative reporting on climate-related issues. While minimum legal requirements are often being met, users are calling for additional disclosure to inform their decision making. Some companies have set strategic goals such as 'net zero', but it is unclear from their reporting how progress towards these goals will be achieved, monitored or assured. Consideration and disclosure of climate change in the financial statements lags behind narrative reporting. We identified areas of potential non-compliance with the requirements of International Financial Reporting Standards (IFRS).

How are auditors taking account of climate-related challenges?

The quality of support, training and resources provided to the audit practice varied considerably across firms. Firms also need to do more to ensure that their internal quality monitoring has appropriate regard for climate change considerations. Audits reviewed indicated that auditors need to improve their consideration of climate-related risks when planning and executing their audits.

How are professional bodies and audit regulators taking account of climate change in their regulatory responsibilities?

UK professional bodies, and audit regulators in the Crown Dependencies, are responding to climate change, but approaches differ in terms of substance and granularity regarding references to climate-related reporting and the impacts of climate change.

What do investors want to see?

Investors support the Task Force on Climate-related Financial Disclosures framework, but also expect to see disclosures regarding the financial implications of climate change. Investors are themselves facing a changing regulatory environment.

Appendix B

Detail on Good Practice examples and EY Climate Risk Disclosure Barometer

Examples of early stage and advanced peer TCFD disclosures

Disclosures on Governance

- Leading disclosure on climate-related strategy can include:
  - The reports of the relevant board committees should set out how they exercised oversight over climate change related disclosures
  - Explain the overall process and plan, in relation to progress towards full TCFD alignment and broader climate change targets with reference to a timeline *(see Fig.1)*
  - Ensure that stakeholder engagement reporting reflects all key climate-related matters discussed with shareholders and other significant stakeholders, and the impact this had on board decision making and discussions
  - Where a resolution on climate change has been passed in the year, explain the voting results and the views received from shareholders, as well as any actions taken and/or proposed by the company
  - Explain how addressing climate considerations is integrated into the board structure and committees; how the board has oversight of climate change; and management's process for considering climate-related issues, including key responsibilities and the cadence of reporting
  - Disclose a board skills matrix which includes climate competence *(see Fig.2)*
  - Where climate-related working groups or committees are set up, disclose the selection process for the climate expert or group, the expertise, skills and/or any relevant training members received
- Advanced disclosures integrate climate-related governance disclosures across the annual report

Sources: EY's Global Climate Risk Barometer

TCFD progress roadmap	2019	2020	2021
We have made significant progress in improving how we manage our environmental targets and climate-related risks and opportunities. However, we recognise that we can build on these priorities further, to continue enhancing our approach and strengthen the quality of our reporting.	• Launched ITV's Social Purpose strategy • Identified Group CFO as owner for climate-related risks • Set baseline for targets, including SBTs • Carbon neutral across Scope 1, 2 and 3 (for business travel only) • Updated ITV's global emissions data collection process • Launched the Green Team Steering Group • Established Environmental Governance	• Updated Environmental Governance structure • Created Climate Change Delivery Group chaired by Group CFO • Launched ITV's environmental 2030 targets, including SBTs and 100% renewable electricity target by 2025 • Set a Net Zero target by 2030 • Achieved a B rating for Climate Change for our responses in the Carbon Disclosure Project program • Started climate scenario analysis and identified key risks and opportunities with stakeholders • Developed a climate risk register	• Obtain verification for SBT from the SBT initiative • Complete climate scenario analysis quantification of climate-related risks • Finalise emissions reduction roadmaps for all business areas • Launched new global environmental data platform for emissions and waste • Establish business area environmental key performance indicators

Fig.1 ITV Roadmap of environmental governance structure

Board skills and experience

Topics	Olivia Garfield	James Bowling	Christine Hodgson	Kevin Beeston	Philip Remnant	John Coghlan	Dominique Reiniche	Angela Strank	Sharmila Nebhrajani
Strategy	●	●	●	●	●	●	●	●	●
M&A	●	●	●	●	●	●	●	●	
Corporate finance/treasury		●	●	●	●	●			●
Accounting		●	●	●	●	●			●
Regulation	●	●	●	●	●				●
Technology/innovation	●		●			●	●	●	●
Customer	●		●	●			●	●	
Brands			●	●			●	●	
Engineering								●	
Utility sector	●	●	●	●	●	●	●	●	
Environmental science, including climate change			●					●	
People management	●	●	●	●			●	●	●
Commercial procurement	●	●	●	●	●		●	●	
Construction/infrastructure delivery	●			●				●	
Large capital programmes	●	●	●			●	●	●	
Political affairs	●		●	●	●	●	●	●	●

Fig.2 Severn Trent board skills matrix

Examples of early stage and advanced peer TCFD disclosures (cont'd)

Disclosures on Strategy

- Climate change can be categorised as a principle risk in itself, a risk underlying another principle risk (e.g. business resilience), an emerging risk, or a cross-cutting risk
- Leading disclosure on climate-related strategy can include:
  - Describe what the business considers to be the short, medium and long term horizons, and associate climate-related risks and opportunities with the relevant time horizons
  - If climate change has not been identified as a principal risk, explain how directors challenged this outcome and the basis for their conclusion
  - Disclose the likelihood and impact of climate-related principal risk(s) and the significance of climate-related risks relative to other risks
  - Distinguish between physical risks (acute and chronic) and transition risks (policy and legal, technology, market and reputation)
  - Disclose the impact on the business and strategy on areas such as products and services, investment in research and development and operations
  - Disclose the impact on financial planning
  - Ensure disclosures on scenario analysis include the rationale for the scenarios selected, detail on the assumptions made in these scenarios, and the implications on resilience. Explain the impact of scenario analysis on board strategic decisions and financial planning
- Advanced disclosures integrate climate-related strategy disclosures across the annual report

Sources: EY's Global Climate Risk Barometer

Key gaps that remain around disclosures on strategy:

- Clear link to capital allocation plans as a response to climate risk (see Fig.1)
- Use of scenario analysis and planning (see Fig.2)

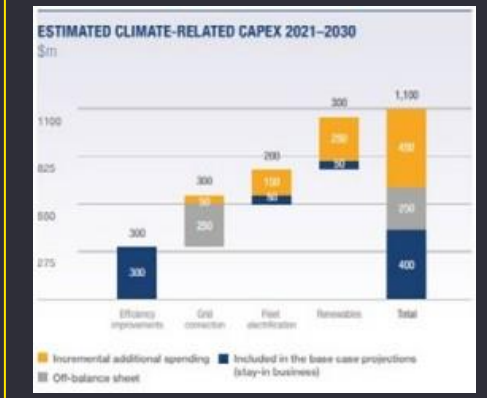


Fig.1 Polymetal capital allocation plans

Fig.2 Polymetal scenarios and time horizons

Examples of early stage and advanced peer TCFD disclosures (cont'd)

Disclosures on Risk management

- Fig.1 demonstrates prioritisation criteria for ESG-related risks
- Leading disclosure on climate-related risk management can include:
  - Reflect the impact of climate risk within the financial statements, such as in relation to forward-looking assumptions and judgments applied
  - Link each risk to a specific business area/risk owner
  - Bring out the interconnectivity between climate change and other principal risks
- Companies in high-risk industries should be explicit on how viability scenarios have considered the impact of climate change
- Advanced disclosures integrate climate-related risk management disclosures across the annual report
- EY can help companies strengthen their consideration of climate-related risks and their impact (per TCFD Strategy pillar), as well as integrating climate-related risks into the wider risk management processes (per TCFD Risk Management pillar) through our EY Enterprise Risk Management Tool

Criteria	Description	Relevance for ESG-related risks
Adaptability	The capacity of an entity to adapt and respond to risks	A risk may be significant and unpredictable; however, an organisation can build in adaptability mechanisms to respond to or absorb the risk. For example, in the 1980s, Shell diversified its portfolio and used scenario planning to prepare and adapt to potential oil price fluctuations that were generally considered unforeseeable.
Complexity	The scope and nature of a risk to the entity's success	Many ESG-related risks are interrelated, global, industry-wide and constantly changing. For example, health care companies are aware of the complex relationship between climate change and health. Climate change impacts may lead to potential disruptions to operations, whilst also leading to health impacts on individuals (increasing the demand for health care services).
Velocity	The speed at which risk impacts an entity	ESG-related risks are often emerging and unforeseen until swift events result in extreme consequences. Climate change impacts often manifest in the form of more extreme or frequent occurrences of known events, such as droughts and floods, and are best understood by studying longer temporal horizons than are usually associated with typical risk management.
Persistence	How long a risk impacts an entity	Risk severity should consider the extent to which the impact will be an acute, one-time impact (e.g., cyclones, hurricanes or earthquakes) versus a chronic issue that will cause ongoing impacts (e.g., sustained higher temperatures or droughts).
Recovery	The capacity of an entity to return to tolerance	Consider how quickly the business would recover if a risk occurred today. For some ESG issues, impacts are irreversible. For example, in the food, beverage and agriculture sector, the impacts of climate change have the potential to alter growing conditions and seasons, increase pests and disease, and decrease crop yield.

Fig.1 Application of prioritisation criteria to ESG-related risks (adapted from the COSO ERM Framework)

Sources: EY's Global Climate Risk Barometer

Examples of early stage and advanced peer TCFD disclosures (cont'd)

Disclosures on Metrics and targets

- Leading disclosure on climate-related risk management can include:
  - Explain targets clearly, e.g., what 'net zero' means, with reference to specific timeframes, base year, milestones etc. Provide a description of methodologies used to calculate targets and measures, including their boundaries.
  - Provide commentary in respect of the Streamlined Energy and Carbon Reporting (SECR) disclosures that is both transparent and meaningful
  - Disclose scope 3 emissions to demonstrate how well you understand the climate exposure of your value chain (See Fig.1 and 2)
  - Disclose decarbonisation pathways, especially given the increased scrutiny on how well companies prepare and contribute to decarbonisation solutions
- Advanced disclosures integrate climate-related metrics and targets disclosures across the annual report

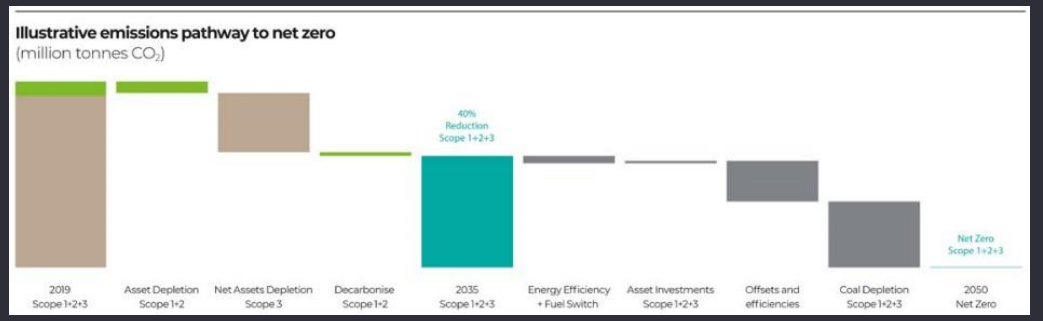
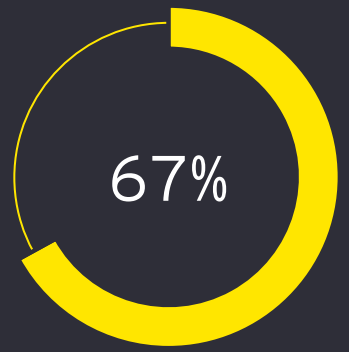


Fig.1 Barclays Scope 3 emissions disclosure

Sources: EY's Global Climate Risk Barometer

EY Climate Risk Disclosure Barometer results and insights

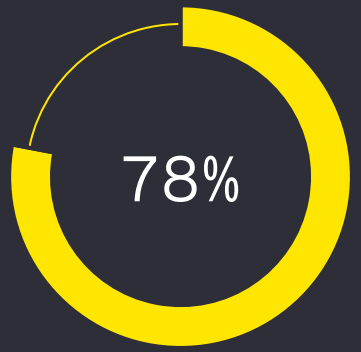
- The 2020 EY Global Institutional Investor Survey found that investors surveyed make significant use of ESG disclosures released using the TCFD framework and that this information has a significant impact on investment decision-making.
- Climate-related disclosures, as recommended by the TCFD, were cited as the most valuable ESG disclosure framework.
- Feedback also suggested that investors may increasingly expect companies to take a robust approach and be less accepting of "light-touch disclosures."



More than two-thirds of investors surveyed say they make "significant use" of ESG disclosures that are shaped by the TCFD.

The top three most valuable ESG disclosure vehicles as per 2020 EY Global Investor Survey

1. Climate-related disclosures in financial reports as recommended by the TCFD
2. Company disclosures based on what management believes is most material to the company's value creation strategy
3. Company-defined reports that integrate financial and nonfinancial information



More than three-quarters of those who make significant use of TCFD information say that it has a significant impact on investment decision-making.

Examines disclosures from over **1100+ companies** (majority of listed companies)

11 exposed sectors in 42 countries

Selected Sectors	Number of companies reviewed
Financial	292
Non-Financial	835
Total	1127

Disclosures made in **Annual, Sustainability** and **CDP Reports etc** published within the **2020 calendar year**

Companies were scored through a multi-tiered system including both the **coverage** and **quality** of the TCFD recommendations

Sources: EY's Global Climate Risk Barometer

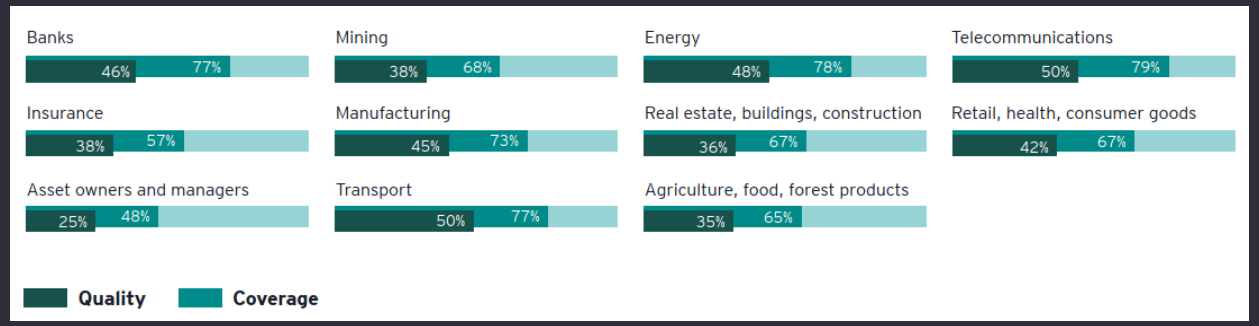
EY Climate Risk Disclosure Barometer results and insights (cont'd)

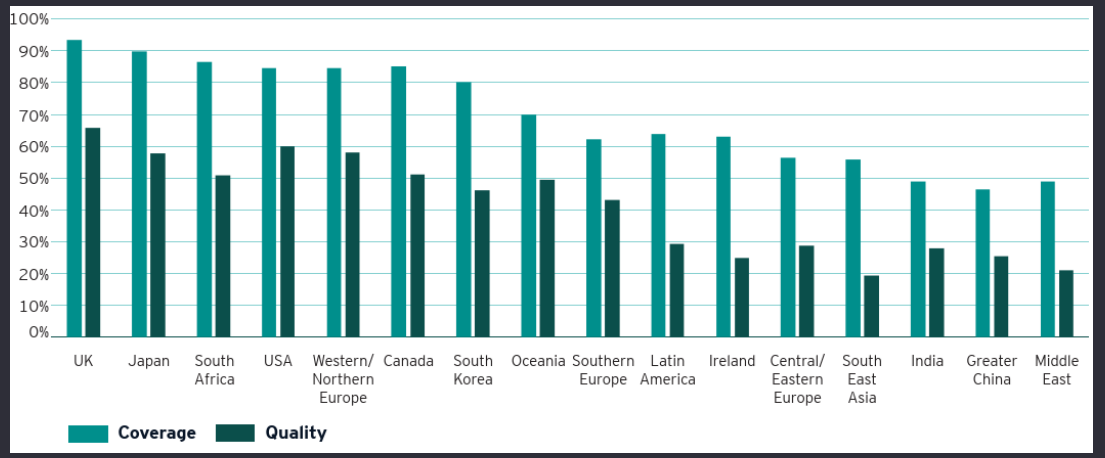
Overall results by sector

- Overall, some progress has been made in addressing climate-related financial disclosures and in line with previous results, coverage of disclosures remains ahead of quality.
- **Sectors with the most significant exposure** to transition risk generally scored higher for their disclosures. These include the banks, energy, manufacturing and **transport sectors**, but more widely encompass sectors with these conditions:
  - High emissions
  - Direct exposure to fossil fuel supply chains
  - Investments in the energy sector or with readily accessible low-carbon substitutes

Overall results by market

- The best and worst performing markets have **not changed significantly** from previous years.
- On average, **higher coverage scores for companies continue to be linked to the maturity of the markets**, where governments, shareholders, investors and local market regulators are active.
- The **UK is leading** on both coverage and quality of disclosures.



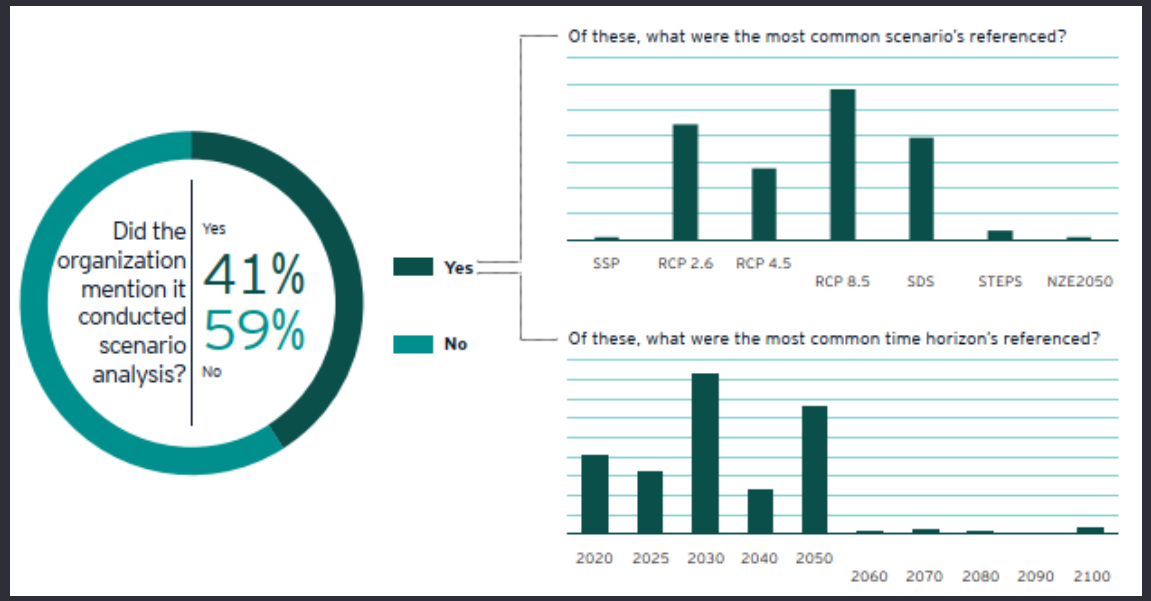


Sources: EY's Global Climate Risk Barometer

EY Climate Risk Disclosure Barometer results and insights (cont'd)

Results on scenario analysis

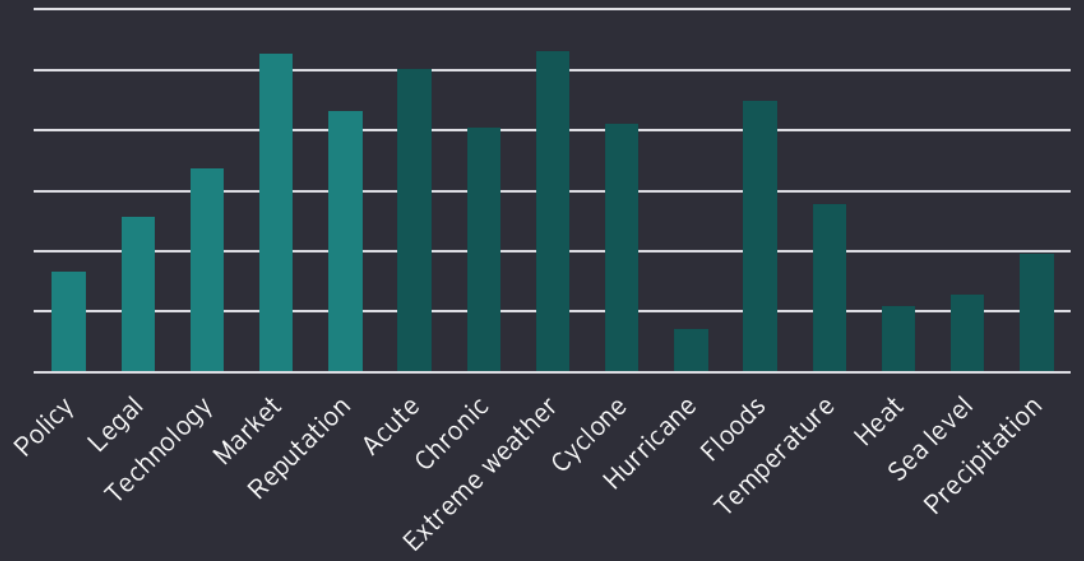
- **Only 41%** of companies assessed referenced that they have conducted scenario analysis, indicating companies are still struggling with the complexity of how they approach it.
- **RCP8.5** and **RCP 2.6** were the most common scenario's referenced, and **2050** and **2030** were the most common time horizon's referenced.



Results on risk management

- Approximately 60% of companies referenced physical or transition risks or both (as aligned to TCFD recommendations) in their risk commentary, with 55% of those referencing physical risk.
- Now the physical impacts of climate change are being witnessed more and more, companies are recognizing that they should prepare for physical risks, regardless of when an economy-wide transition occurs.

Most common risks referenced:



Sources: EY's Global Climate Risk Barometer

EY Climate Risk Disclosure Barometer results and insights (cont'd)

Although the results show year-on-year improvements in reporting, the research suggests most companies lack the internal capability to understand and act on their current and future exposure to climate risk and opportunity.

Reporting should connect better with risk and opportunity	Many organizations are reporting on metrics that don't correlate directly to risks. For example, disclosing Scope 1 and 2 emissions has no bearing on exposure to physical risks, such as a factory or data center being at increased risk of fire or flood. A more rigorous level of assessment will likely be required to develop the climate-related financial disclosures that drive behavioral change.
Climate scenarios critical to robust risk assessment	To satisfy their stakeholders, organizations should be able to articulate the relative size and time frame around physical and transition risks in their geography and industry, ideally constructing worst case, base case and most likely case scenarios.
Biggest emission-reduction levers in the value chain should be identified	Most organizations currently have opaque supply chains when it comes to carbon. It is incumbent on organizations to work with their suppliers and offer incentives to make them part of the decarbonization process. Just as organizations are examining their supply chains for human rights violations, they should be putting equal energy into analyzing and reducing supply chain emissions.

Organizations that fail to anticipate this potentially nonlinear disruption as the net-zero transition gathers pace may be exposed to climate-related risks and be underprepared for the associated climate-related opportunities.

As organizations consider their next steps toward climate adaptation, organizations should be able to answer the following questions:

- What is the extent of the risk and opportunity my organization is facing as a result of climate change?
- How should my organizational strategy change to respond to the identified risks and opportunities from climate change? And what strategic initiatives will be required?
- What should I do to execute on my decarbonization journey?
- How do I communicate with the market on the extent of my risks and opportunities, the proposed changes to my strategy and the progress on my decarbonization journey?

Sources: EY's Global Climate Risk Barometer

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