

Avon Pension Fund

Net Zero Review

Summary review for publication

19 October 2023

A business of Marsh McLennan

1. Review of progress to date on net zero
2. Levers and considerations: implementation of net zero
3. Accelerating net zero within the portfolio before 2050
4. Deeper dive: Decarbonisation, Stewardship & Alignment and Climate Solutions
5. Summary & next steps
6. Appendix

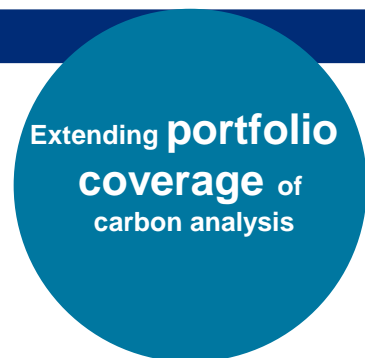
Agenda

Executive summary

Four strategic pillars

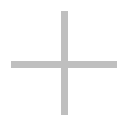
Key areas of progress to date:

- Listed Equity decarbonisation is ahead of target.
- Good progress on total fund climate solutions versus target (to have 30% invested in sustainable/transition aligned investments by 2025).

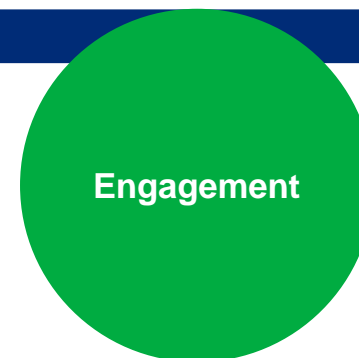


Total Fund

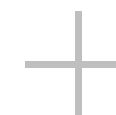
- **Total Fund decarbonisation:** Progress required to bring additional asset classes into target setting and take a “**whole of portfolio**” approach.
- **Private markets:** Use findings from the climate data exercise to explore whether target setting is possible given data availability within private debt, property and infrastructure.
- **Multi-Asset Credit:** Start the conversation with Brunel around underlying managers' progress versus pledges.



- Current total Fund **net zero target is 2050**.
 - Consider if an **accelerated target** is feasible while balancing portfolio decarbonisation and meeting fiduciary duty of the Fund.
- The Fund is in a position to set **new targets**:
 - **Alignment and stewardship** for listed equity portfolio.
 - **Decarbonisation target** for corporate bond portfolio.



- How to achieve targets is important, with **stewardship needed** to play a key role. Develop a more **formal engagement plan** for key emitters in the portfolio.



- **Selective divestment of fossil fuel companies is a theoretical option** for the Fund but implementation is a challenge due to pooling. Should be explored as part of a suitable governance framework.

Review of progress to date on net zero

Progress to Date

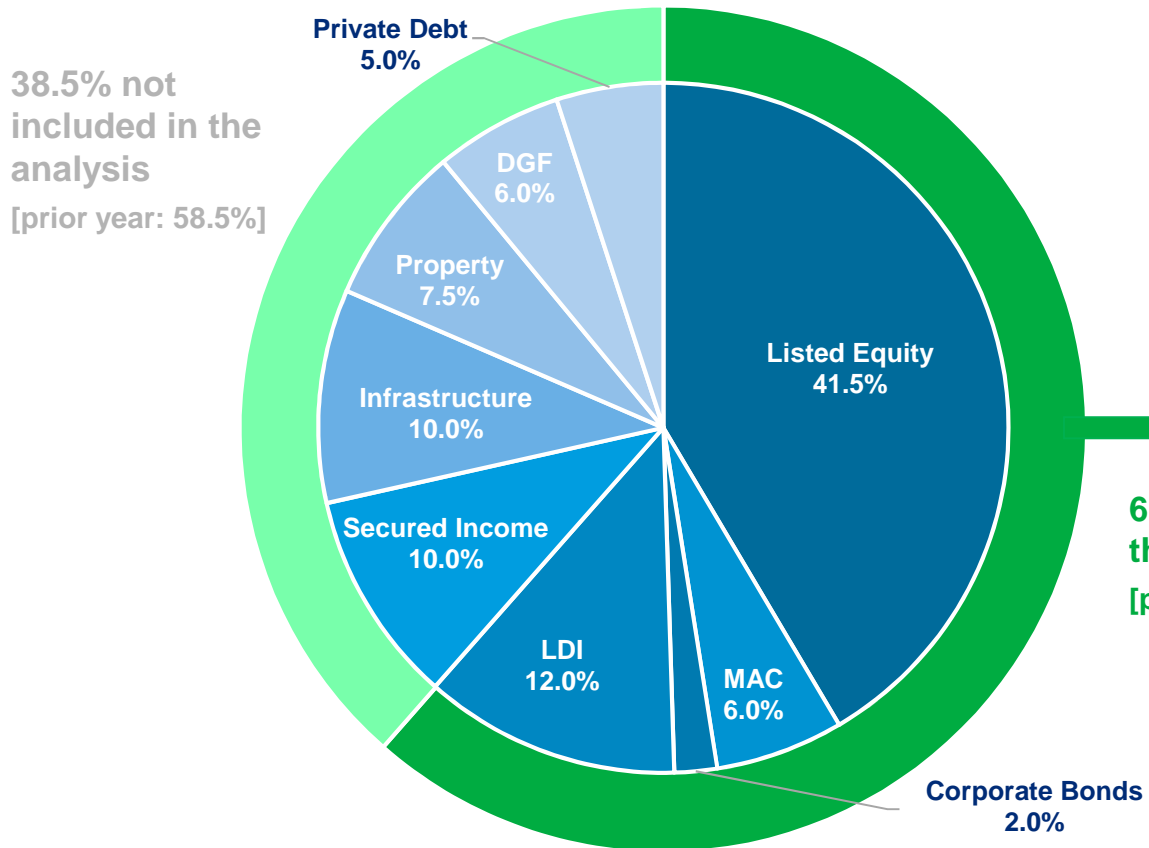
How ACT Analysis has been used to date



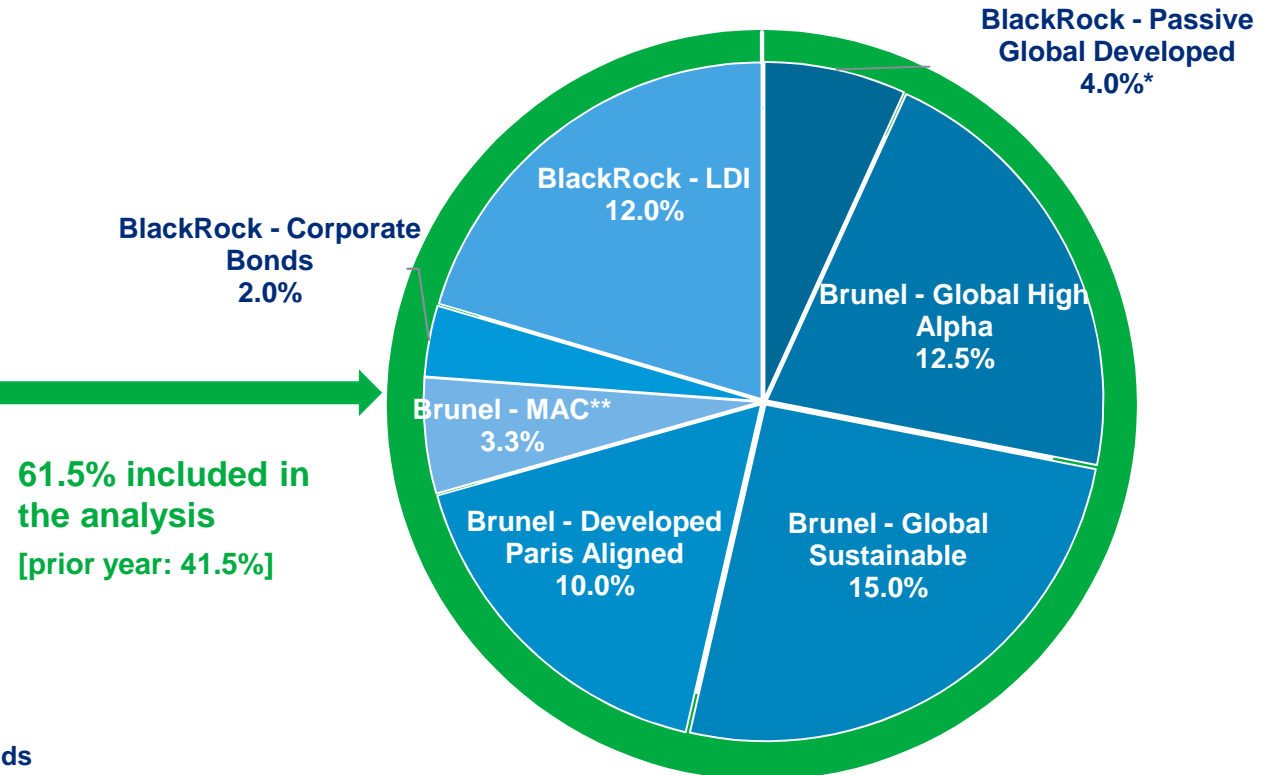
Support the Responsible Investment strategy and policy approach / Provide insight into transition capacity and monitor progress / Understand consistency with Brunel climate policy

Proportion of Holdings Analysed As at 31 December 2022

Fund strategic asset allocation as at 31 December 2022



Allocation by manager as at 31 December 2022



Notes: The data analysed excludes e.g. cash and derivative allocations within the funds analysed. Where there is partial coverage of a portfolio we scale up the Absolute Emissions to estimate coverage for 100% of the mandate.

*Sold following date of analysis

** The total SAA for the Brunel Multi-Asset fund is 6.0%. However, only the Corporate Bonds portion is being included in the analysis (c.3.3% of the total Fund's SAA).

Current Fund Targets in Place

Scope	Current Target
Total Fund	<ul style="list-style-type: none">• Total Fund target of net zero by 2050.
Total Fund + Renewable energy Infrastructure	<ul style="list-style-type: none">• Invest sustainably to support a Just Transition to a lower carbon economy with the aim of investing at least 30% of total assets in sustainable and transition aligned investments by 2025.• To invest 5% of total assets in renewable energy infrastructure.
Listed Equities	<ul style="list-style-type: none">• A listed equities decarbonisation target of net zero by 2050 underpinned by interim targets of:<ul style="list-style-type: none">- 43% reduction by 2025 (vs 2020)- 69% reduction by 2030 (vs 2020)• For listed equities to be 30% less carbon intensive than our benchmark.

Net Zero Approach

Summary of progress

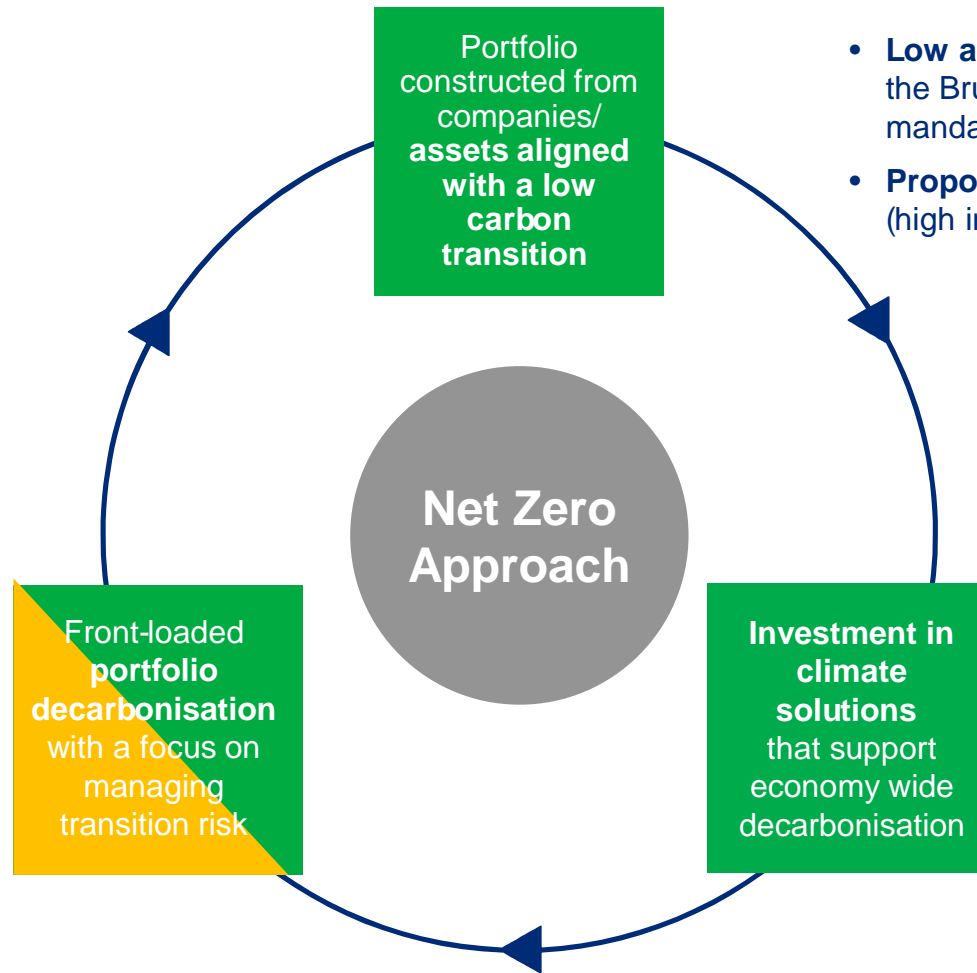


On Track



Progress Required

- **Further work required** to bring other asset classes into target setting.
- **Listed equity carbon footprint has fallen c.48.7%** over 2020-2022 and **ahead of target** decarbonisation pathway.**



- **Low allocations to Grey assets***, concentrated primarily in the Brunel - MAC and the BlackRock – Passive Global Dev. mandates.
- **Proposed alignment and stewardship targets** for material (high impact) sectors.

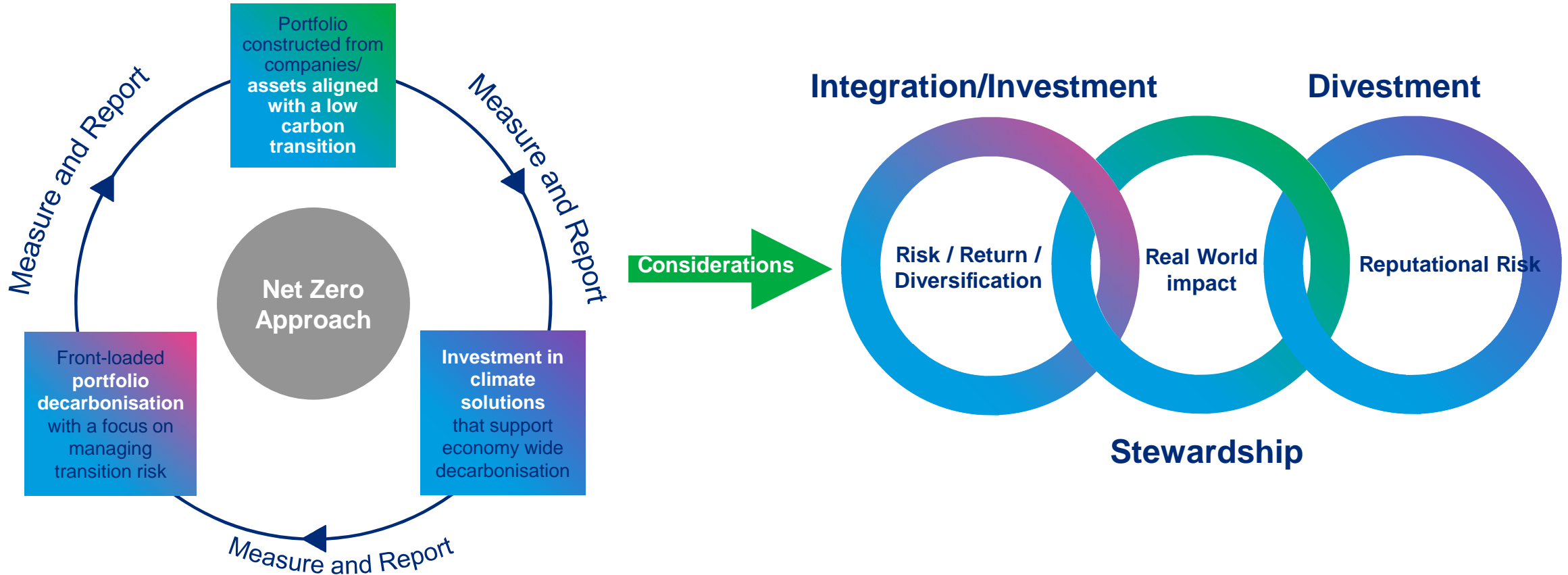
- The Fund has made allocations to the **Brunel Sustainable Equity Fund and Paris Aligned Equities**. The fund has also made commitments to **renewable infrastructure**.
- Total investments/commitments to sustainable investments = £2.3bn (c.44% of total Fund assets)

*Grey assets are not well aligned from a climate transition perspective, with high carbon emissions intensity. **These targets are ambitious and should be kept under review. In light of the wider set of targets proposed this year, there's a need to take a holistic approach to a whole economy transition.

Levers and considerations: implementation of net zero

Net Zero Approach

Key considerations & levers



- It is challenging to maximise every net zero approach as there are **trade-offs** associated. When applied in isolation, they may lead to unintended outcomes from a financial and sustainability perspective.
- Based upon the Fund's objectives and commitments to stakeholders, it is important to **establish priorities and strive for balance** which minimises financial implication (risk, return, diversification) and supports real world impact.

Key considerations & levers for implementation

Stewardship (Real World impact) and Divestment (Reputation): Options to consider



Portfolio

- Strategic asset allocation
- Asset class considerations
- Emerging themes

Solutions

- Climate solution / low-carbon / sustainability-themed exposures
- YoY tracking of green allocations
- Emerging solutions (e.g. Nature Based Solutions)

Integration

- Decisions informed by holistic analysis such as transition capacity, and multiple metrics, not only emissions
- Decarbonisation and wider climate targets
- Scenario analysis

Stewardship

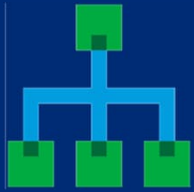
- Engagement principles and priorities framework
- Focus on the highest emitting, lowest transition capacity companies
- Sector-based engagement
- Participation in collaborative initiatives and engagement with policy/regulators

Divestment

- See next section

Effective monitoring and reporting should underpin these areas

Avoiding greenwashing with Net Zero investing



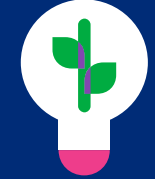
Underpin targets with rigorous analysis and monitoring



Understand the limitations (scenario modelling, data)



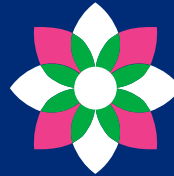
Push for better data, including scope 3



Take a whole of portfolio approach



Have credible implementation plans



Commit to transparent and accessible reporting



Take a holistic approach to net zero that considers real world change

All covered within ACT

More education and engagement with stakeholders likely to be required

Divestment & Exclusions

Fossil fuel divestment – to divest or not to divest?

Potential benefits and trade-offs

Potential benefits of divestment

Risk & decarbonisation: reduce portfolio exposure to ‘stranded’ assets and carbon intensity.

Escalation tool when engagement fails and companies are too slow to transition.

Limited return impact if divesting only impacts a small part of the portfolio?

Signal to market about Fund's ambition and views.

Increase cost of doing business if enough investors deny fossil fuel companies access to capital.

Trade-offs

Not sufficient for net zero as other sectors / companies are also carbon intensive.

Engagement more effective when tackling systemic and non-diversifiable issues like climate change?

Limits real world impact if no longer supporting high emitters to transition through engagement.*

What about demand? Investors still hold companies with strong demand for fossil fuels (e.g. energy utilities).

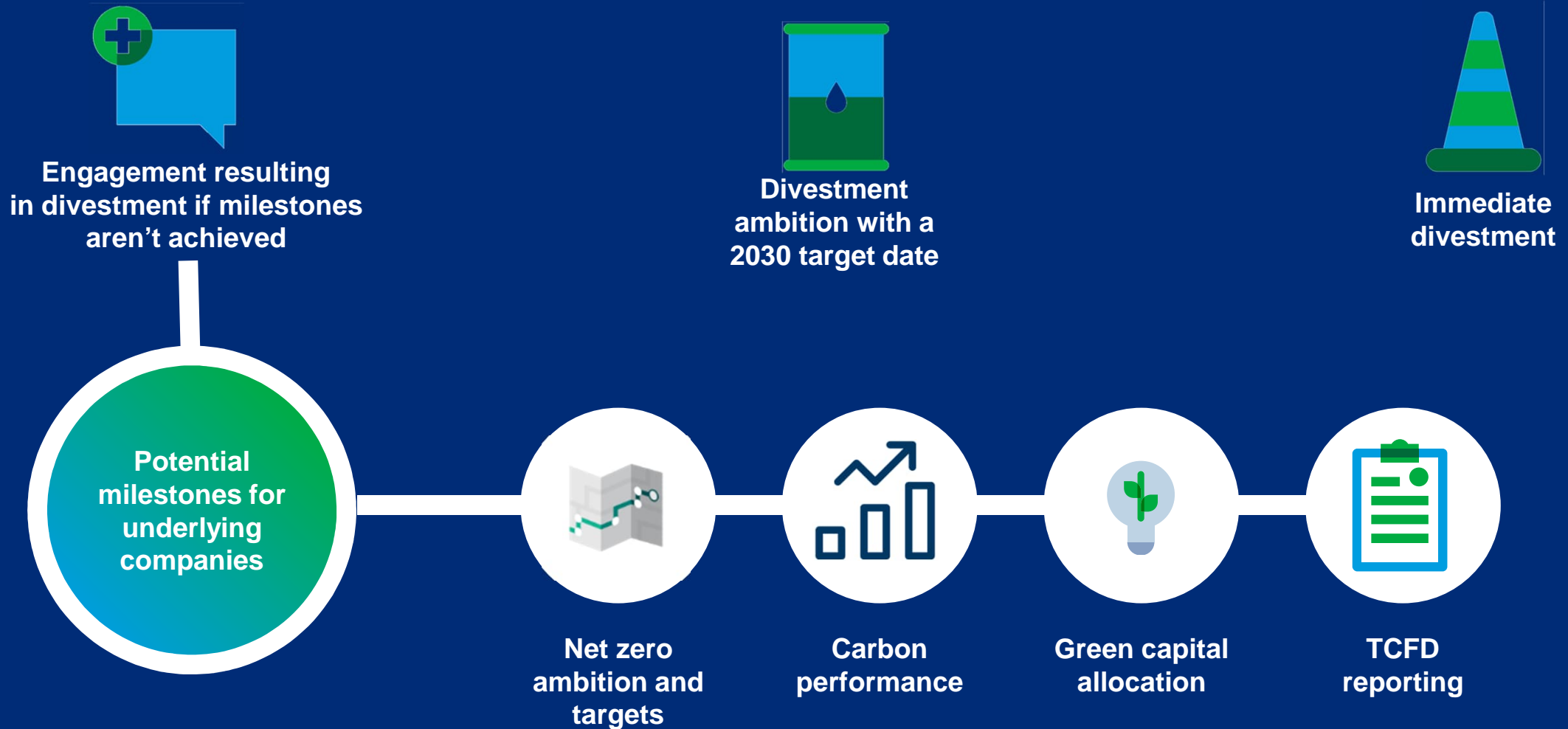
Inconsistent with fiduciary duty if reduced opportunity set impacts returns?

How to implement in a pooling context?

Divestment may be an effective tool when seeking **value-alignment**, where there is the risk of **stranded assets** and a **lack of opportunities for companies to transition to a sustainable business model**, or where investor has exhausted all other escalation options.

Different approaches to divestment

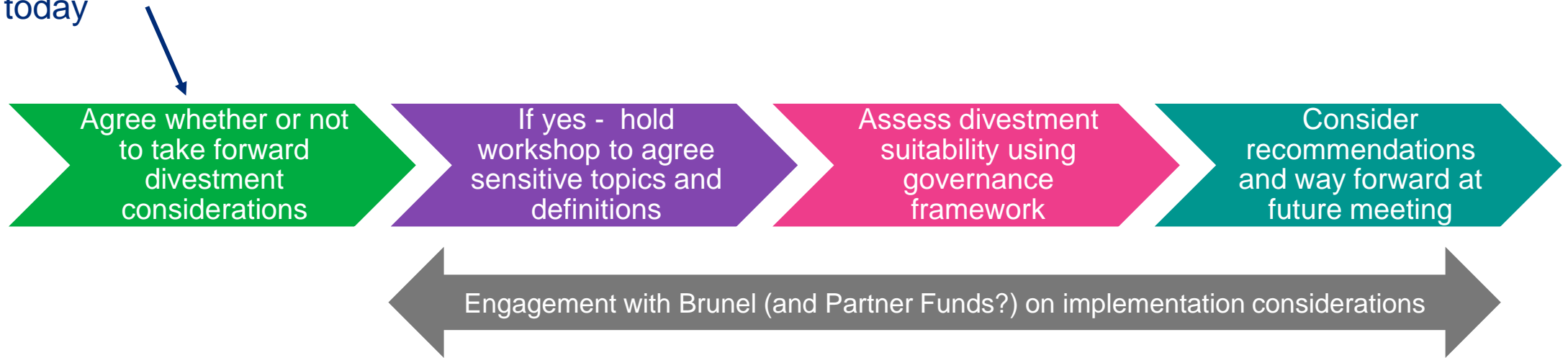
Three potential approaches



Fossil fuel exclusions

Next steps

Decision for today

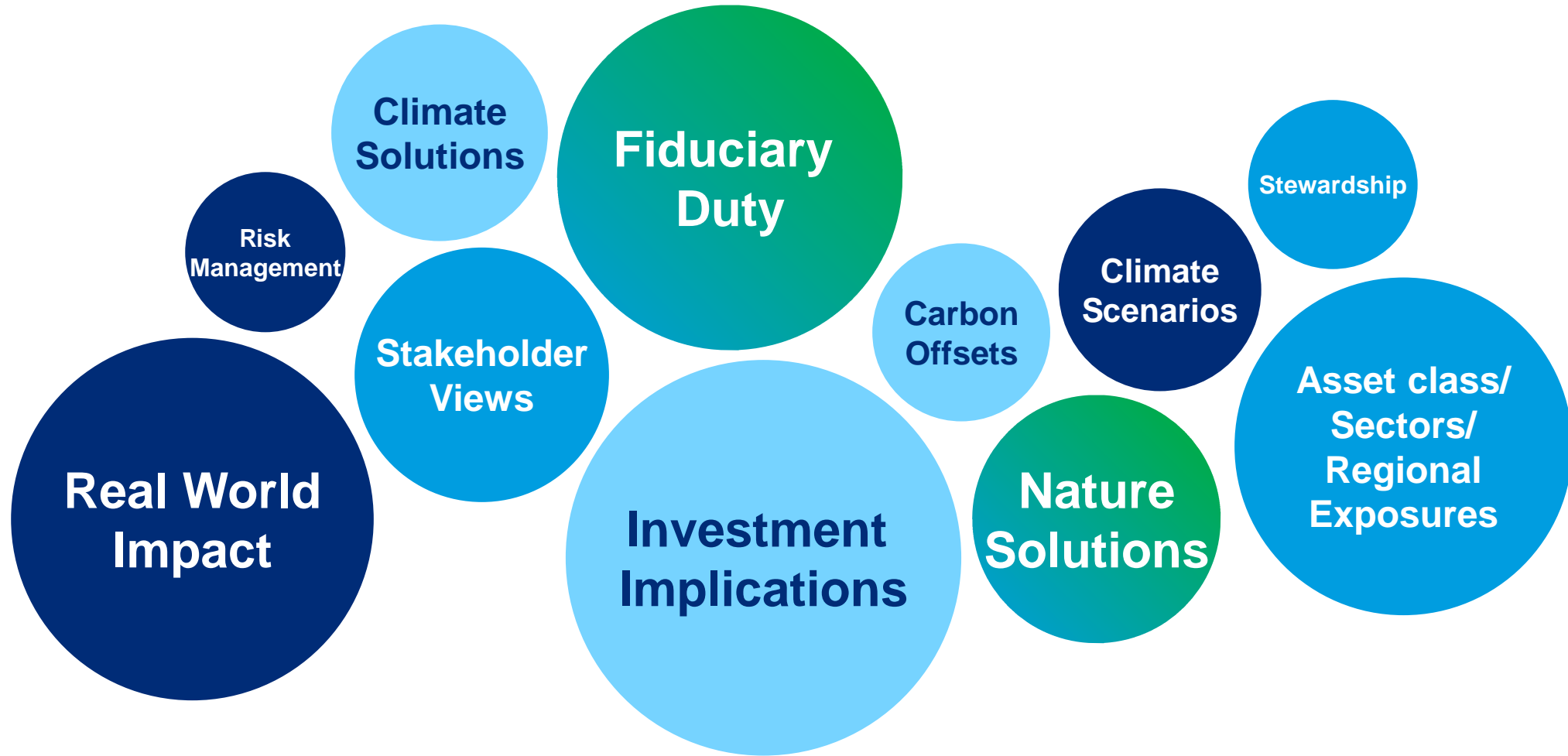


Divestment / exclusions approach should be reflected in Avon policy. Potential to engage other Partner Funds to form a collective approach for Brunel to implement.

**Targeting net zero before
2050**

Targeting Net Zero before 2050

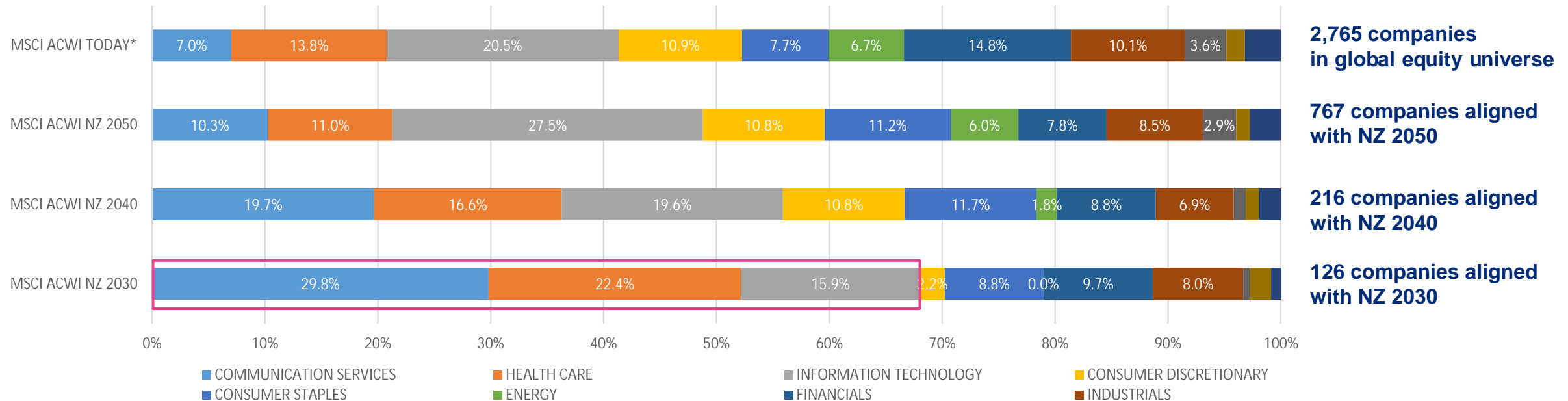
There are various considerations when seeking to accelerate the pace of decarbonisation



Targeting Net Zero before 2050

Quantifying the investment opportunity set

This chart compares the total number of companies in the MSCI ACWI investment universe to the number of companies with projected emissions consistent with net zero target dates of 2030, 2040, and 2050. **Accelerating the Net Zero target is likely lead to less diversification.**



68% of the NZ 2030 MSCI ACWI index is concentrated in Communication Services, Health Care and IT

As at 31 Dec 2022, only 126 companies (from a universe of 2765) had verified targets of being Net Zero by 2030, representing only 4.5% of the investable universe by number of companies or c.12% by market cap.

Diversified equity portfolios need to be constructed considering a wide range of issues, not just Net Zero.

*Analysis as at 31 Dec 2022. Based on MSCI data. Uses Scope 1 and 2 data.

Note: The 767 companies that have zero projected gross GHG emissions by 2050 (plus companies with an SBTi-verified target) account for 53% of MSCI ACWI by market capitalisation. The 126 companies that have zero projected gross GHG emissions by 2030 account for 12% of MSCI ACWI by market capitalisation.

Top 10 global companies with verified 2030 Net Zero targets

MSCI ACWI – who are they?

Top 10 companies by market capitalisation within the portfolio

COMPANY	SECTOR	PORTFOLIO WEIGHT
ALPHABET INC.	Communication Services	14.1%
JOHNSON & JOHNSON	Health Care	6.7%
SAMSUNG ELECTRONICS CO., LTD.	Information Technology	6.0%
META PLATFORMS, INC.	Communication Services	3.9%
TENCENT HOLDINGS LIMITED	Communication Services	3.8%
NOVO NORDISK A/S	Health Care	3.2%
ASML HOLDING N.V.	Information Technology	3.1%
ASTRAZENECA PLC	Health Care	3.0%
NOVARTIS AG	Health Care	2.8%
THE WALT DISNEY COMPANY	Communication Services	2.3%
Total	-	48.9%

Note: Analysis as at 31 Dec 2022.

The top 10 companies represent nearly 50% of the 'net-zero 2030' equity portfolio by market capitalisation. The construction process followed only includes scope 1 + 2 emissions; if scope 3 emissions were included, there would be 35 companies in the 'net zero 2030' portfolio.

Building net zero portfolios

Summary of Analysis

- We consider that the net zero 2045 or net zero 2050 portfolios achieve a sweet spot between balancing portfolio decarbonisation and meeting fiduciary duty of the Fund. This may change in the future should more companies adopt earlier net zero targets. Comparing 2050 to 2045 depends on the decarbonisation pathway, e.g. a 2045 target with a more gradual pathway may be preferable.

Consideration	Net zero by 2030	Net zero by 2035	Net zero by 2040	Net zero by 2045	Net zero by 2050	Headline comment
Traditional financial metrics						Under traditional portfolio analysis, the modelled outcomes are relatively similar
Portfolio diversification						The earlier the net zero date, the smaller the investment universe, with implications for sectoral/regional/company diversification
Rapid transition* in wider economy						The earlier the net zero date, the better the portfolio performs under a Rapid Transition scenario over the short- to medium-term
Failed transition (short term)* in wider economy						The earlier the net zero date, the worse the portfolio performs under a Failed Transition scenario over the short-term
Real-world impact						Opportunity for real-world impact through engagement and financing the transition increases as the net zero target date is extended
Implementation implications						Feasibility to implement the portfolio increases as the net zero target date is extended

* In terms of what is priced in today Mercer gives a 10% weight to a Failed Transition, 40% weight to an Orderly Transition, 10% to a Rapid Transition and 40% weight to a range of low impact scenarios.

Legend for table above

Relatively disadvantageous from an investment perspective	Relatively neutral from an investment perspective	Relatively advantageous from an investment perspective
---	---	--

Targeting Net Zero before 2050

Key takeaways



Top down analysis: Climate Scenario Analysis

Key takeaways from top down analysis of strawman portfolios with net zero target dates of 2030, 2035, 2040, 2045 and 2050

1. Taking into account a broader set of metrics, we consider that **the net zero 2045 or net zero 2050 portfolios achieve the sweet spot between balancing portfolio decarbonisation and meeting fiduciary duty** for the Committee at this time.
2. The adoption of a 2045 target (or retention of a 2050 target) would support the Fund's target to invest at least 30% of total assets in sustainable and transition aligned investments by 2025. It would also support the Fund's efforts to **explore further private market climate solution opportunities, including Nature-based Climate solutions.**



Bottom up analysis: Climate-related metrics

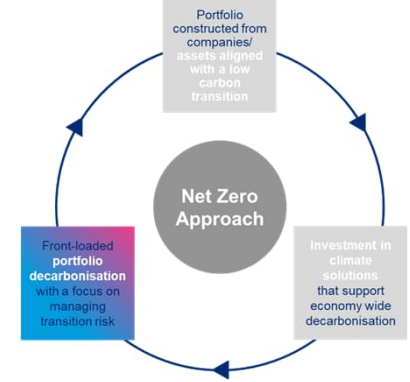
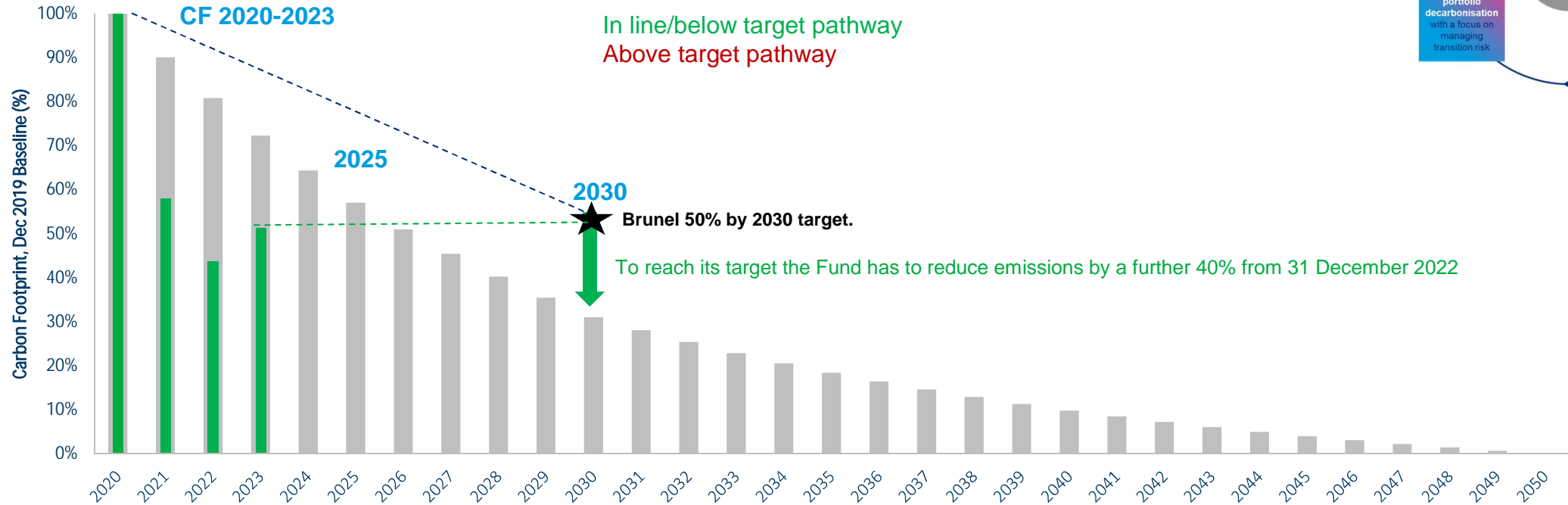
Key takeaways from bottom up analysis based on illustrative equity portfolios

1. The **number of companies/assets declines** as the net zero date is brought forward. Only 126 companies in MSCI ACWI have zero projected gross GHG emissions (scope 1 + 2) by 2030, accounting for 12.4% of the total MSCI ACWI by market capitalisation.*
2. Net zero equity portfolios are expected to result in a **loss in diversification** relative to the parent index.**
3. Increasing diversification through the addition of other companies introduces residual emissions that would need to be offset in some form. The purchase of offsets or forgoing return associated with the Fund not selling offsets generated through its assets will act to **reduce return**.***

Net Zero Approach

Portfolio Decarbonisation: Listed Equities

Transition Curve – Carbon Footprint



- The current target of 40% reduction between 2023-2030 broadly equates to Brunel’s 7% year-on-year target but has not been adjusted for decarbonisation within Brunel funds from 31 December 2019 to date.
- Strategic changes implemented after the latest analysis date, including an increased allocation to the Brunel Paris Aligned Benchmark fund, are expected to further drive decarbonisation.
- On balance we would recommend maintaining the current target, while recognising what has driven progress and the fact the target remains ambitious. Focus on achieving the target through underlying company decarbonisation, supported by stewardship. Going forward, decarbonisation attribution will be an important element of monitoring to understand what has driven results.

Need to ensure that transition risks are managed holistically rather than on a narrow emissions-only basis

Proposed Portfolio Decarbonisation Path: Corporate Bonds

BlackRock– Carbon Footprint



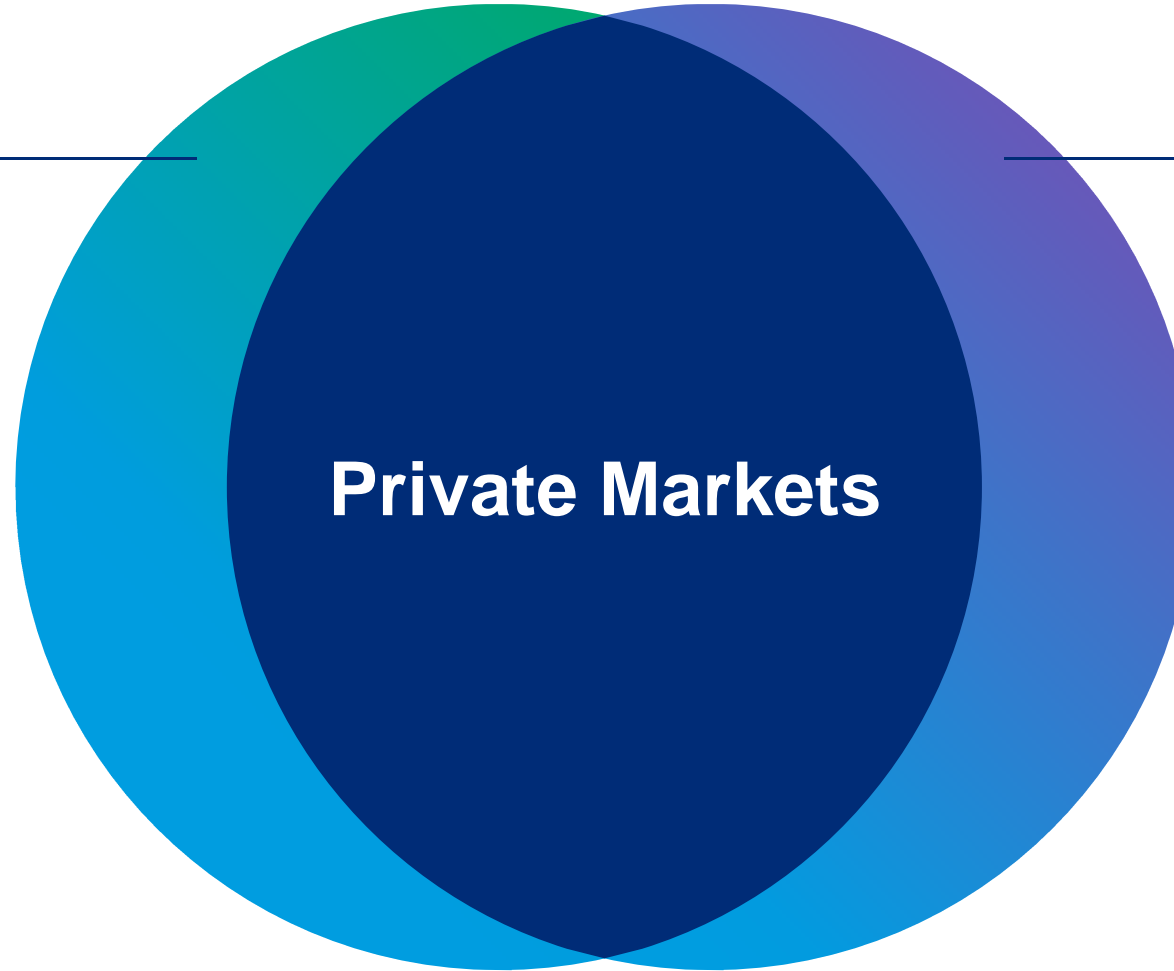
- Above is the proposed decarbonisation pathway for the BlackRock Corporate Bonds portfolio, shown on a Carbon Footprint basis, with a 2020 baseline.
- The proposed target is to reach **60% decarbonisation by 2030**. BlackRock Corporate bonds portfolio is ahead of this target as its Carbon Footprint has already considerably decreased from the 2020 baseline. BlackRock Corporate Bonds portfolio' Carbon Footprint was **153.7 tCO₂e/\$m as at 2020**, compared to **86.6 tCO₂e/\$m as at 2023 (43.6% decrease)**.
- To reach the 2030 target, the portfolio's carbon footprint has to decrease an additional 29%.

Portfolio Decarbonisation

Private Markets

Transparency and data remains a key challenge

But are seeing improvements in data availability across various private asset classes.



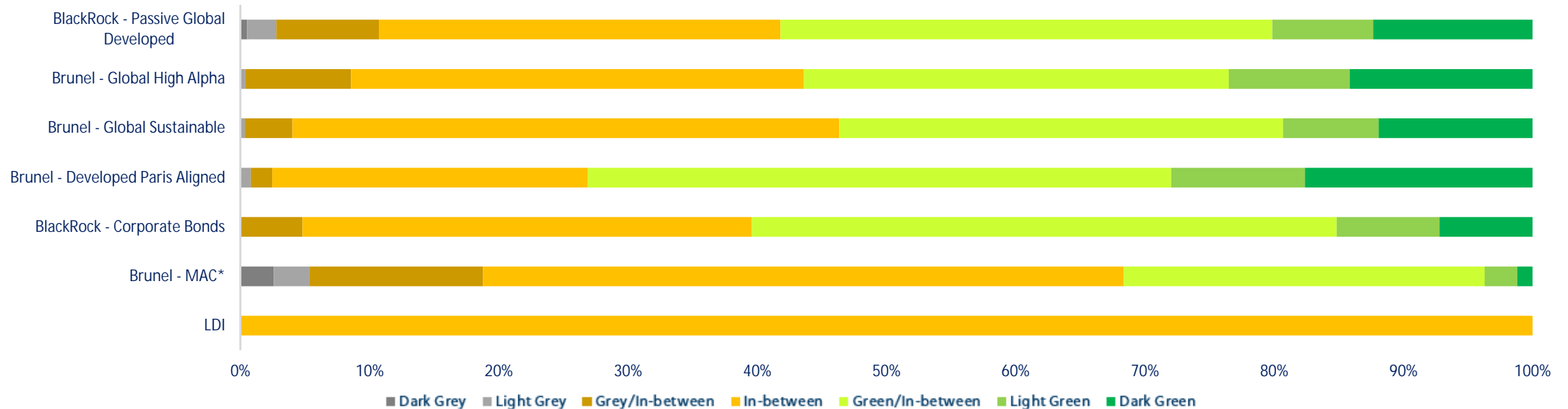
Net Zero guidance

IIGCC has produced much needed guidance for asset owners looking to set net zero targets for Real Estate, Infrastructure and Private Equity

While methodologies for private markets data have recently been developed, the timing of when data will be widely available remains unclear

Transition Alignment

- We present the transition alignment of the portfolio, to understand exposure to assets that are well aligned (“green”), a mix of intensities and transition capacity (“in between”) or not well aligned (“grey”) with the low carbon transition as well as the evolution since the first analysis.



Highlights & Questions

✓ Low allocations to Grey assets, concentrated primarily in the BlackRock – Passive Global Dev. and Brunel - MAC mandates.

✓ The funds display a range of transition capacities with the majority of each fund invested in In-Between assets.

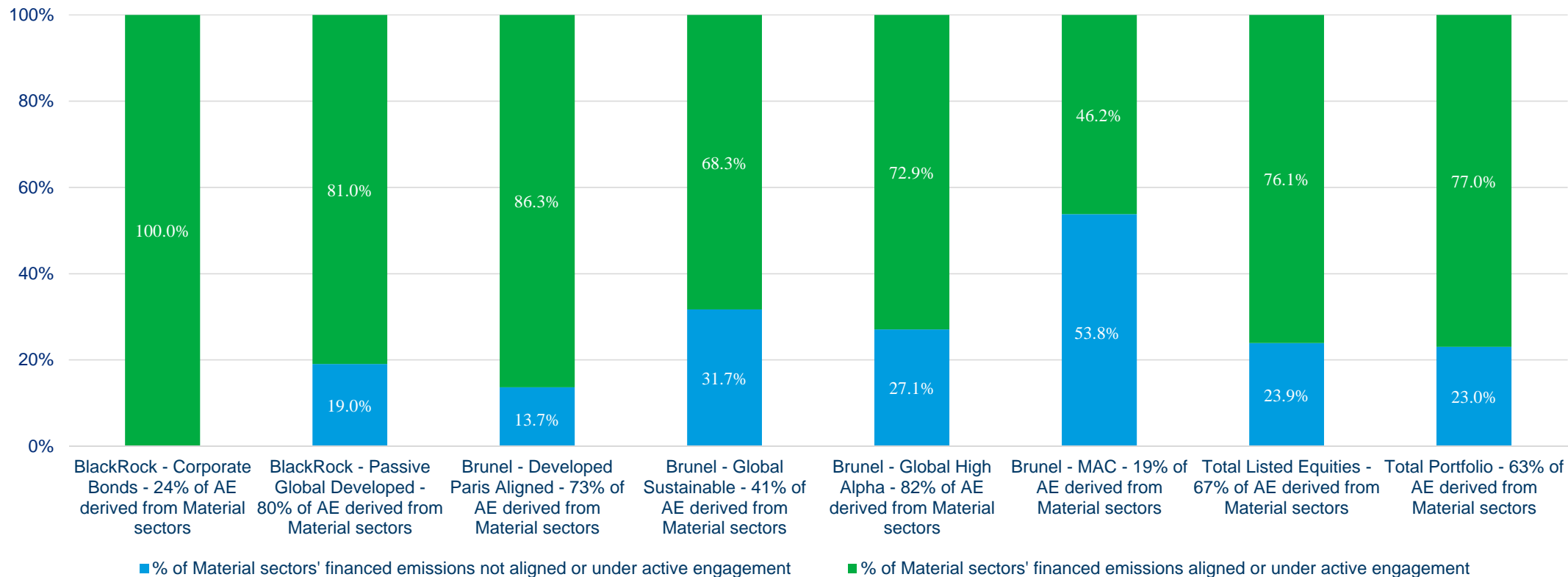
How are Brunel engaging with the most carbon intensive and Grey companies?

*Only the Corporate Bonds portion is considered in the analysis (c.55% of the MAC fund).

Notes: Figures may not sum due to rounding. Analysis captures carbon dioxide equivalent metrics. Where there is partial coverage of a portfolio we scale up to estimate coverage for 100% of the mandate. (see Appendix on limitations).

Transition Alignment: engagement priorities

Material Sectors' Financed Emissions not aligned or not subject to active engagement



- Companies have been assessed as **under active engagement** if they are within the list of companies captured within the Climate Action 100+ engagement list or are currently being engaged by Brunel. In respect of **alignment**, companies have been deemed to demonstrate evidence of alignment if they have approved SBTi targets or categorized as aligned by the Transition Pathway Initiative (“TPI”).

Most funds, with the exception of the Brunel MAC and Brunel Global Sustainable Funds, have over 70% of emissions from material sectors aligned or under active engagement (over 2022).

Key Recommendations

Transition alignment



Stewardship / Engagement

- Ensure 70% of financed emissions in material sectors are either aligned or subject to direct or collective engagement and stewardship actions for all listed equity by June 2024, increasing to 90% by June 2027.



Alignment

- 100% assets under management (AUM) in material (high impact) sectors in developed listed equities that are i) achieving Net Zero or ii) meeting a criterion considered to be aligned or iii) aligning by 2030, extending to developed and emerging markets by 2040.*
- Corporate bonds: all listed assets are i) achieving Net Zero or ii) meeting a criterion considered to be aligned or iii) aligning** by 2040.



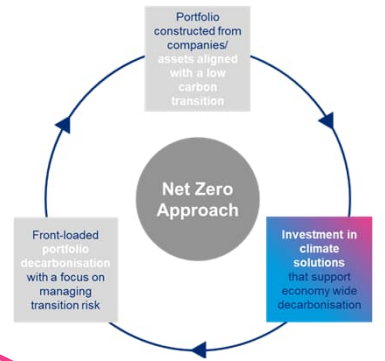
Engagement plan

- Officers to work with Brunel / Mercer to develop formal engagement plan

**Targets are consistent with IIGCC Net Zero Investment Framework.
Definition, implementation and monitoring of targets need to be explored further.**

Investment in Climate Solutions

Portfolio implications for accelerated net zero date

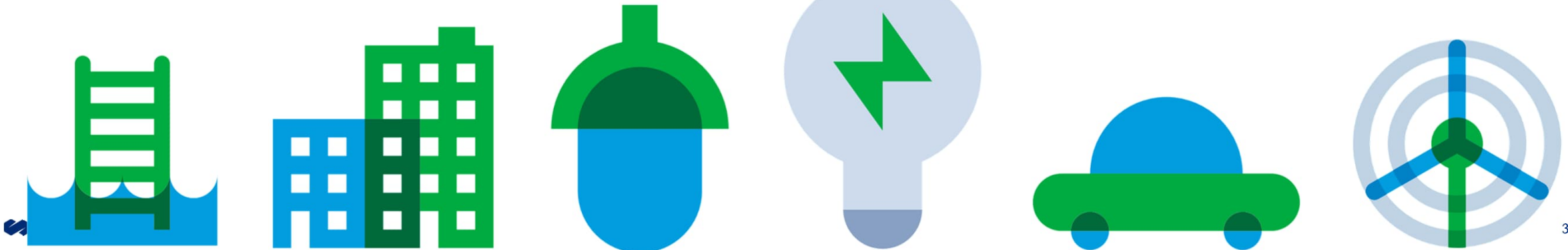


Higher allocation to net zero and net zero-aligned companies and those focused on climate solutions within listed equity portfolio

✓ Increased allocations to renewable infrastructure

(current commitments = 9-10% of total Fund assets)

Dedicated allocations to climate solutions including **nature-based** climate solutions within private market allocation



Investment in Climate Solutions

Evolving guidance - approach to classifying and calculating green revenues and green capex

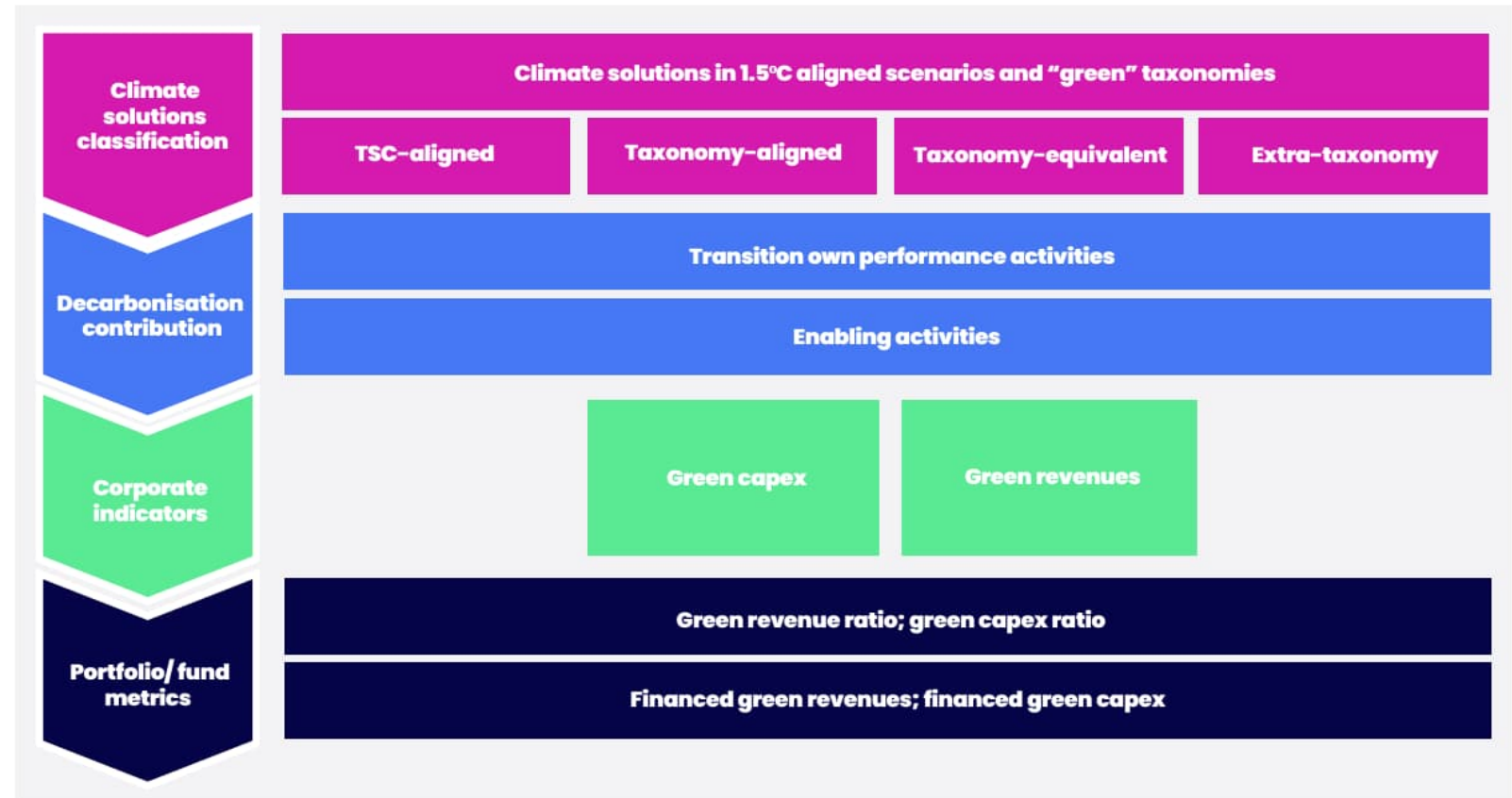
1. Solutions classification:

Identify and classify activities, products and services that contribute to emissions reductions using net zero screening criteria and/or local taxonomies.

2. Contribution type: Assess the type of contribution those activities make to decarbonisation.

3. Corporate indicators: Assess contribution of a corporate using revenue and capex data.

4. Portfolio/fund metrics: Aggregate corporate green activity up to portfolio or fund level.



Source: IIGCC Investing in climate solutions: listed equity and corporate fixed income, Sept 2023

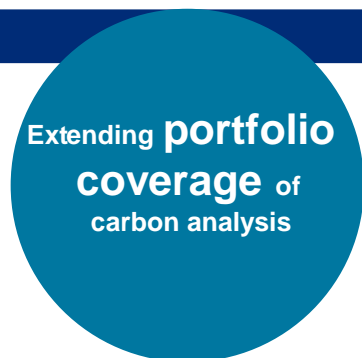
Summary & Next Steps

Summary

Four strategic pillars

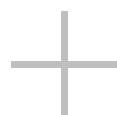
Key areas of progress to date:

- Listed Equity decarbonisation is ahead of target.
- Good progress on total fund climate solutions versus target (to have 30% invested in sustainable/transition aligned investments by 2025).

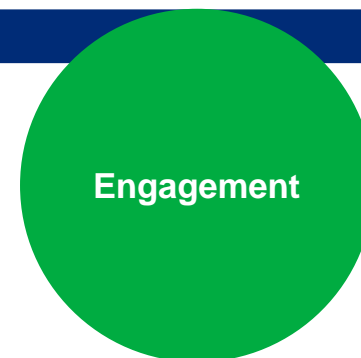
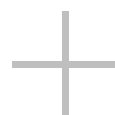


Total Fund

- **Total Fund decarbonisation:** Progress required to bring additional asset classes into target setting and take a “**whole of portfolio**” approach.
- **Private markets:** Use findings from the climate data exercise to explore whether target setting is possible given data availability within private debt, property and infrastructure.
- **MAC*:** Start the conversation with Brunel around underlying managers' progress versus pledges.



- Current total Fund **net zero target is 2050**.
 - Consider if an **accelerated target** is feasible while balancing portfolio decarbonisation and meeting fiduciary duty of the Fund.
- The Fund is in a position to set **new targets**:
 - **Alignment and stewardship** for listed equity portfolio.
 - **Decarbonisation target** for **corporate bond** portfolio.



- How to achieve targets is important, with **stewardship needed** to play a key role. Develop a more **formal engagement plan** for key emitters in the portfolio.



- **Selective divestment of fossil fuel companies is a theoretical option** for the Fund but implementation is a challenge due to pooling. Should be explored as part of a suitable governance framework.

Next Steps

Key decisions and recommendations

Accelerating targets

- Net zero by 2045/2050 balances portfolio decarbonisation and meets fiduciary duty of the Fund
- Proposed corporate bond target is 60% emissions reduction by 2030

Engagement Plan

- Develop a more formal engagement plan for key emitters in the portfolio

Selective Divestment/Exclusions

- Selective divestment/exclusions of fossil fuel companies is an option to be used in combination with stewardship

Other areas to take forward in the short to medium term:

Continue to evolve TCFD reporting for stakeholders, including climate impact

Develop approach to alignment and stewardship targets

Explore nature based solutions and evolve green solutions measurement

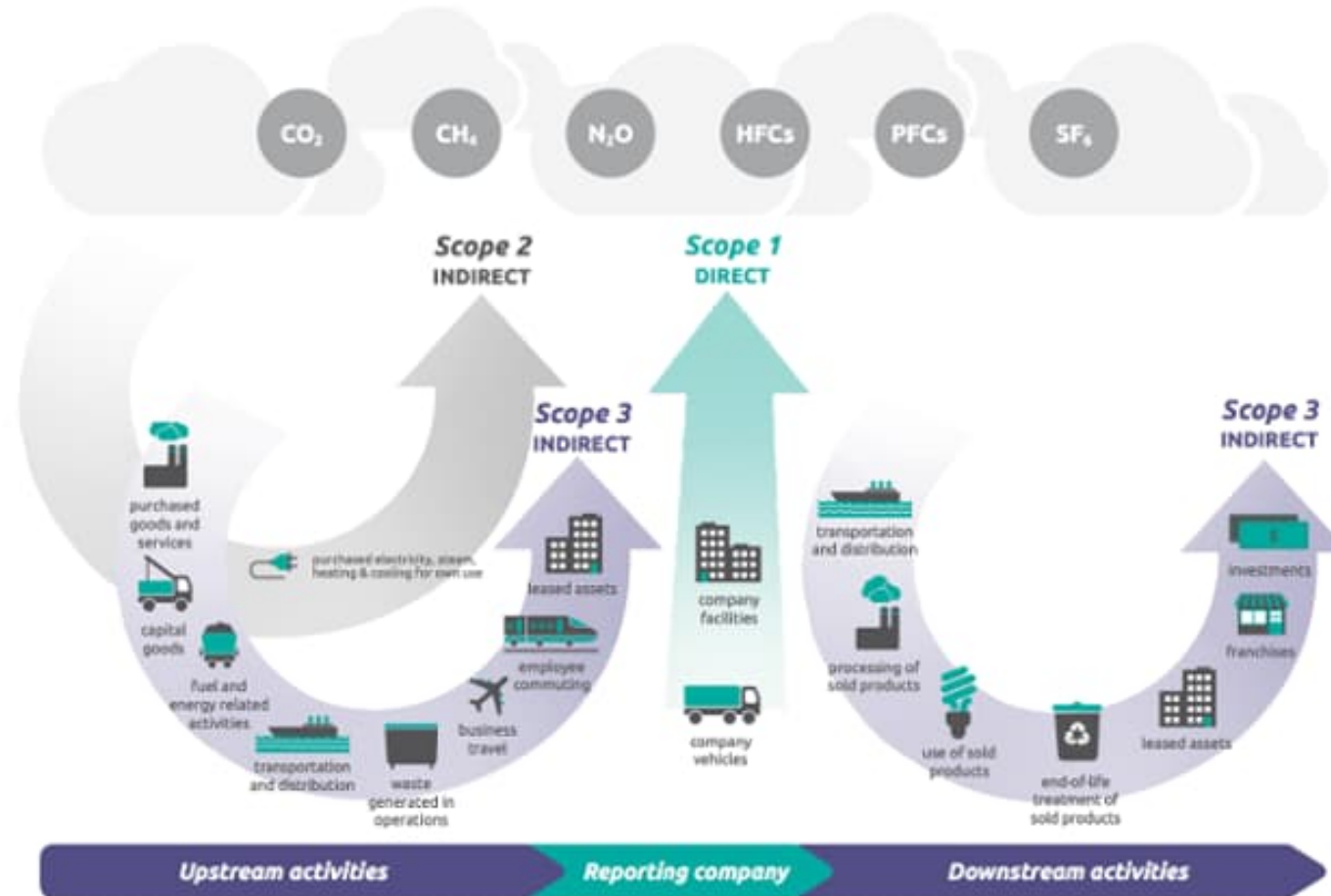
Extend approach beyond listed equity and corporate bonds



APPENDIX

Emissions Data

Understanding the Scopes



Low Carbon Transition

Portfolio Metrics Summary

Weighted Average Carbon Intensity (WACI)	Carbon Footprint
<ul style="list-style-type: none"> Operational carbon emissions Carbon emissions (Metric tons) / \$ Million revenue * portfolio weights Measures the portfolio's exposure to emissions-intensive companies 	<ul style="list-style-type: none"> Operational carbon emissions Carbon emissions (Metric tons) / \$ Million investment * portfolio weights Allows for portfolio decomposition and attribution analysis

Measures of 'current' emissions intensity

Absolute Emissions	Implied Temperature Rise
<ul style="list-style-type: none"> Operational carbon emissions [Carbon emissions (Metric tons) * value of investment/company enterprise value] * portfolio weights Measures the portfolio's exposure to companies with high absolute emissions 	<ul style="list-style-type: none"> The implied temperature trajectory of a company's operations Expressed as °C Allows for tilting of the portfolio towards companies with a <2⁰C implied temperature rise, to show alignment with the Paris Agreement ambition

Measure of absolute emissions

Measure of transition alignment

Decarbonisation – Emissions Metrics

Notes on the Analysis

- The analysis focuses on the Listed Equity portfolio and corporate bond and LDI holdings, showing contributions to Fund emission metrics. We assess carbon dioxide “equivalent” metrics.
- Caution should be exercised in interpreting individual data points, as in reality, emissions may differ, given the data coverage in the analysis is less than 100%. Where companies do not have data points, companies are assumed to have the same carbon metrics as the average of companies that we do have data points for, therefore we do not assume that companies have zero emissions because we do not have data for them.
- Emissions are likely underestimated as Scope 3 emissions are not included in the metrics presented within. Although we do present an overview of the attribution of Scope 3 emissions by fund and sector as part of our detailed analysis.

Scenario model limitations

Climate scenario modelling is a complex process, with associated modelling limitations. In particular:

- The further into the future you go, the less reliable any quantitative modelling will be.
- There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
- Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4oC physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
- Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.

Important Notices

References to Mercer shall be construed to include Mercer LLC and/or its associated companies.

© 2023 Mercer LLC. All rights reserved.

This contains confidential and proprietary information of Mercer and is intended for the exclusive use of the parties to whom it was provided by Mercer. Its content may not be modified, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's prior written permission.

The findings, ratings and/or opinions expressed herein are the intellectual property of Mercer and are subject to change without notice. They are not intended to convey any guarantees as to the future performance of the investment products, asset classes or capital markets discussed. Past performance does not guarantee future results. Mercer's ratings do not constitute individualised investment advice.

In addition, some of the underlying data has been provided by MSCI which is ©2023 MSCI ESG Research LLC. Reproduced by permission. Although information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness of any data herein. None of the ESG Parties makes any express or implied warranties of any kind, and the ESG Parties hereby expressly disclaim all warranties of merchantability and fitness for a particular purpose, with respect to any data herein. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein. Further, without limiting any of the foregoing, in no event shall any of the ESG Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

Information contained herein has been obtained from a range of third party sources. While the information is believed to be reliable, Mercer has not sought to verify it independently. As such, Mercer makes no representations or warranties as to the accuracy of the information presented and takes no responsibility or liability (including for indirect, consequential or incidental damages), for any error, omission or inaccuracy in the data supplied by any third party.

This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities and/or any other financial instruments or products or constitute a solicitation on behalf of any of the investment managers, their affiliates, products or strategies that Mercer may evaluate or recommend.

For Mercer's conflict of interest disclosures, contact your Mercer representative or see www.mercer.com/conflictsofinterestMercer



Mercer Limited is authorised and regulated by the Financial Conduct Authority. Registered in England and Wales No. 984275. Registered Office: 1 Tower Place West, Tower Place, London EC3R 5BU