WINNING CLIMATE STRATEGIES

PRACTICAL SOLUTIONS AND BUILDING BLOCKS FOR ASSET OWNERS FROM BEGINNER TO BEST PRACTICE

Based on interviews with 22 leading asset owners, this report explores the current best practices landscape, identifies barriers, and presents a framework of ten building blocks for other asset owners introducing and developing climate strategies.

ShareAction»

ASSET OWNERS DISCLOSURE PROJECT

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ABOUT AODP AND SHAREACTION

The Asset Owners Disclosure Project (AODP) rates and ranks the world's largest institutional investors and assesses their responses to climate-related risks and opportunities. The ratings are made public, providing much-needed transparency for beneficiaries, clients, investors, and stakeholders, and emphasised through advocacy and direct engagement to drive change.

In June 2017, ShareAction announced an agreement to take over the reins of the Asset Owners Disclosure Project (AODP). The intention was to build on the strong foundations established by 10 years of experience carrying out climate-related investor analysis. As the only comprehensive, climate-specific, independent, non-self-selective assessment, AODP prides itself on being the world's benchmark of climate leadership in the investment system.

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FOREWORD

We are heading towards a major transformation. We either need to decarbonise our economies rapidly or cope with the damages caused by climate change. Tackling the climate crisis is much cheaper than suffering the consequences. Either way, the financial sector will face significant changes.

The seminal Paris Agreement gives the long-term imperative to reduce emissions to limit global warming to well below 2 degrees or just 1.5 degrees. For financial markets, it serves as strong guidance to align practices with the policy goals.

To meet the Paris targets, the world will need investments in cleaner infrastructure, technologies and solutions at an unprecedented scale. The financial sector can play a central role in enabling these investments.

Financial markets can allocate capital efficiently to its most productive use. This means integrating both climate risks and opportunities systematically to investment decision making and risk assessment.

For asset owners, this calls for better and more comprehensive data about companies' climate impacts and risk exposure, but also systematic frameworks to effectively utilise it. The recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) are the most prominent example, and we are happy to see them being endorsed by an increasing number of asset owners.

Yet, we are at an early stage. Integrating climate considerations in investment processes is relatively nascent and the learning curve has to be steep. Practices for capturing climate change in asset owners' processes are being continuously developed, which is why it is important to share learnings and best practices. As this survey suggests, asset owners of all sizes and regions can reach best practice standards.

Climate change poses both massive risks and lucrative opportunities. Asset owners in the vanguard are better positioned to understand them, and minimise risks while capitalising on the opportunities.

Mikko Kosonen
President
Finnish Innovation Fund Sitra

Mikko Kosonen, PhD (Econ), born 1957, has served as President of Sitra, the Finnish Innovation Fund, since 2008. Before that he held different leadership positions at Nokia, for example Senior Vice President of Strategy and Business Infrastructure. Kosonen is board member in Aalto University, Technology Academy Finland and the Foundation for Economic Education. He was awarded Honorary Professorship of Budapest Business School in 2012.

He has published several books and articles on strategic management, most recently Fast Strategy – How Strategic Agility will help you stay ahead of the game (2008) and New Deal at the Top – Harvard Business Review (2007), both with Professor Yves Doz.

EXECUTIVE SUMMARY

KEY

TCFD: Governance

TCFD: Strategy

TCFD: Risk Management

TCFD: Metrics & Targets

LEADERS ARE

This report explores the climate strategy journeys of 22 leading asset owners in nine jurisdictions and presents a range of key findings covering the current best practices landscape, common barriers, and a practical framework of ten building blocks relevant for asset owners including large and small pension funds, sovereign wealth funds, charities, and foundations, at earlier stages of their climate strategy journeys.

Our findings are drawn from in-depth interviews with a selection of asset owners who received a 'leaders' rating in our 2017 Asset Owners Disclosure Project (AODP) Global Climate Index. The asset owners interviewed vary considerably by size, location, and category. Our discussions covered a range of themes including the Task Force on Climate-related Financial Disclosures (TCFD) framework, culture, purpose, education, engagement, investment strategies, barriers, priorities looking forward, and practical advice for other asset owners.

The breadth of responses reveals a rich variety of innovative and creative approaches asset owners are currently pursuing to help manage both climate-related risks and opportunities in their investment practices. Our key findings are presented across three main sections:

1. Current best practices landscape
2. Common barriers
3. Ten key building blocks for other asset owners

This report will be of interest to all asset owners, investment consultants, asset managers, and regulators who are interested in managing climate-related risks and opportunities. It also sits in a series of reports and surveys AODP has and will be publishing on climate-related risks in capital markets, including the recently published insurance sector report.

SURVEYING THE BEST PRACTICES LANDSCAPE

This section explores ten common approaches through which leading asset owners are demonstrating innovation and creativity in their climate strategies, and highlights the many pathways toward best practice. The 10 key findings cover core TCFD-related themes (governance, strategy, risk management and metrics/targets) as well as other insightful areas including culture, purpose, education, engagement, and investment strategy.

1. Embracing senior leadership and education in their climate governance
2. Building organisational cultures that support responses to climate-related risks
3. Building meaningful relationships with members, savers and beneficiaries around climate-related issues
4. Publishing TCFD-aligned reports
5. Pursuing a 'whole of fund' approach in their climate strategies
6. Innovating in their low-carbon asset allocation
7. Driving commitments from asset managers on climate-related issues
8. Prioritising climate-related issues in their risk and investment analysis
9. Refining, escalating, and collaborating in their engagement with investee companies
10. Engaging on climate-related regulation and policy

Figure 1: Key findings from best practices landscape survey

Key finding 1: Leaders are embracing senior leadership and education in their climate governance

Strong leadership from the Board and senior management was commonly identified as a driving force behind leading climate strategies, with many also undertaking climate-related education and training. Leading asset owners are also exploring climate-related advisory groups, incentive schemes, and organisation-wide involvement.

Key finding 2: Leaders are building organisational cultures that support responses to climate-related risks

A significant number of respondents discussed the importance of their organisational culture in driving their climate strategies. Some key cultural dimensions include environmental, social and governance (ESG) and responsible investment backgrounds, entrepreneurship, and governance.

Key finding 3: Leaders are building meaningful relationships with members, savers and beneficiaries around climate-related issues

Leading asset owners are looking beyond traditional reporting avenues to help build meaningful relationships with their members around climate change. Some innovative approaches include undertaking member delegate programmes, climate-related events, transparency in their communications, and exploring more engaging narrative styles.

Key finding 4: Leaders are publishing TCFD-aligned reports

Some asset owners are leading by example in publicly responding to the TCFD recommendations by already publishing TCFD-aligned reports.

Key finding 5: Leaders are pursuing a 'whole of fund' approach in their climate strategies

All respondents are taking systematic and holistic approaches in their climate strategies, with the majority also incorporating various climate-related targets, and some incorporating the Sustainable Development Goals (SDGs).

Key finding 6: Leaders are innovating in their low-carbon asset allocation

Developing or integrating low-carbon indexes, exploring green bonds, and increasing investments in low-carbon illiquid assets are some of the most common approaches to low-carbon asset allocation.

Key finding 7: Leaders are driving commitments from asset managers on climate-related issues

Many respondents are proactively driving their relationships with external asset managers via selection and monitoring, creatively using metrics such as carbon footprinting, or applying climate-related targets.

Key finding 8: Leaders are prioritising climate-related issues in their risk and investment analysis

Leading asset owners are increasingly prioritising the transitional and physical risks associated with climate change in their risk and investment analysis. Many have also already undertaken first steps in scenario analysis and are integrating key findings into their climate strategies.

Key finding 9: Leaders are refining, escalating, and collaborating in their engagement with investee companies

Respondents are refining and escalating their climate-related company engagement by targeting core issues and sectors, and increasingly relying on influential collaborative initiatives such as the Climate Action 100+.

Key finding 10: Leaders are engaging on climate-related regulation and policy

Recognising the importance of a supportive regulatory and policy environment for a successful low-carbon transition, some respondents are prioritising regulatory and policy engagement in their climate strategies.

EXPLORING COMMON BARRIERS

This section explores seven common barriers commonly faced by respondents, relevant for all asset owners considering how to manage climate-related risks and opportunities.

COMMON BARRIERS

FACED BY LEADERS

1. Data quality concerns
2. Lack of momentum in regulation and policy
3. Perceived lack of low-carbon investment opportunities
4. Misaligned time horizons
5. Prevalence of traditional mind sets
6. Lack of confidence in asset managers
7. Language concerns

Figure 2: Common barriers faced by leaders

Barrier 1: Data quality concerns

Nearly all respondents raised concerns about climate-related data quality, on a variety of levels. The topic of scenario analysis was also commonly raised due to concerns around a lack of clarity and expectations for asset owners, and the investment-relevance of currently available scenarios.

Barrier 2: Lack of momentum in regulation and policy

Another dominant barrier raised by respondents related to climate-related regulation and policy concerns, mostly at national levels. Some leading asset owners have responded by prioritising policy engagement in their climate strategies.

Barrier 3: Perceived lack of low-carbon investment opportunities

Respondents offered mixed views around the availability of low-carbon investment opportunities. While some reported facing difficulties in finding enough investable opportunities, others noted they had faced no such issue. Some respondents also reported liquidity constraints as an issue where opportunities existed, in non-equity asset classes.

Barrier 4: Misaligned time horizons

Misaligned time horizons also featured as a barrier on a variety of levels, from the time horizons of different categories of climate-related risks to the time horizons between actors across the financial ecosystem (asset owners, asset managers, and investment consultants).

Barrier 5: Prevalence of traditional mind sets

Some respondents identified traditional mind sets as a barrier, such as investors who still consider ESG and financial performance as a trade-off, or trustees who still regard climate change as an ethical or political issue.

Barrier 6: Lack of confidence in asset managers

A lack of confidence in the climate-related stewardship or asset management services from the asset manager community was also identified as a barrier by a number of respondents.

Barrier 7: Language concerns

Some respondents noted concerns around the use of language and terminology in this field as a barrier, which have tended to be complex, historically focused and unable to connect with multiple audiences.

TEN KEY BUILDING BLOCKS FOR OTHER ASSET OWNERS

This final section offers a practical framework of simple, cost-effective, and impactful building blocks based on recommendations from our respondents for other asset owners, relevant for large and small pension funds, charities, and foundations, who are at earlier stages of their climate strategy journeys. The following building blocks are structured by TCFD themes.

Building block 1: Get educated on climate change issues

Becoming informed around the investment risks of climate change is a fundamental step in developing an effective climate strategy. Seeking assistance from external professionals (such as researchers, investment service providers and leading peers) helps to develop an internal knowledge-base and gain commitment. Sharing climate-related knowledge throughout the organisation also helps clear misconceptions and gain internal 'buy-in.'

Building block 2: Focus on climate governance

A strong climate governance foundation is also pivotal for developing a successful climate strategy, which can be developed through climate-related education, training, incentive schemes, and internal participation.

Building block 3: Focus on communication

Clear and simple communication with both internal and external stakeholders around climate-related investment issues can help gain commitment, strengthen relationships, and signal ambition.

Building block 4: Start now but follow a step-based approach

Our respondents emphasised how their leading climate strategies developed over years. Following a step-by-step approach also leaves appropriate room to learn from experience.

TEN KEY BUILDING BLOCKS

1. Get educated on climate change issues
2. Focus on climate governance
3. Focus on communication
4. Start now but follow a step-based approach
5. Develop a formalised climate-related strategic response
6. Start with small low-carbon investments
7. Consider climate change as an investment risk
8. Start supporting climate-related shareholder resolutions
9. Join a collaborative initiative
10. Start with carbon-footprinting your listed equity portfolio

Figure 3: Ten key building blocks for other asset owners

Building block 5: Develop a formalised climate-related strategic response

The simple process of collecting all climate-related initiatives into a single document helps identify strengths and weaknesses. Developing a more formalised climate-related strategic response with corresponding beliefs, goals, targets, objectives, and responsibilities helps to identify barriers and gain commitment.

Building block 6: Start with small low-carbon investments

Leading climate strategies often begin with small investments in low-carbon opportunities, which help to develop a stronger understanding of these investments before incrementally increasing over time.

Building block 7: Consider climate change as an investment risk

Considering climate change as a material investment risk helps to identify areas of portfolio risk exposure and guide climate strategy development.

Building block 8: Start supporting climate-related shareholder resolutions

Supporting climate-related shareholder resolutions is an affordable and effective way to begin company engagement on climate-related issues. Another step could involve introducing key climate-related issues into direct company engagement activities.

Building block 9: Join a collaborative initiative

Collaborative initiatives present an affordable way to influence systemic-level change beyond the reach of individual investors, build networks, share best practice, and gain valuable information.

Building block 10: Start with carbon-footprinting your listed equity portfolio

Undertaking carbon footprinting of listed equity portfolios (where services and methodologies are most developed) help to identify areas of climate-related portfolio exposure and develop literacy around carbon data.

Our assessment of the best practices landscape reveals how leading asset owners are responding proactively and creatively to the TCFD recommendations in their investment practices, with some also leading by example in their TCFD-aligned public disclosure. The variety of asset owners featured in our report, highlights how best practice is attainable for asset owners of all sizes, categories, and geographies. It should be noted, however, that there is always room for improvement, with even best practice respondents needing to continually review and reassess the effectiveness of their climate strategies.

Section two reveals some of the most common barriers faced by respondents, including data quality concerns, climate-related regulation and policy, a perceived lack of low-carbon investments, and a general lack of confidence in the asset manager community. Leading climate strategies, however, are taking a proactive approach to some of these challenges, whether by engaging with companies on improving climate-related disclosures, prioritising climate-related regulatory and policy lobbying, actively pursuing low-carbon opportunities, or holding asset managers to account on their climate-related products and services.

The last section offers a framework of simple and practical industry tested building blocks relevant for all types of asset owners at earlier stages of their climate strategy journeys. This framework recognsies that integrating climate related issues into an investment approach and practice is a journey, and like most initiatives, is most effective when undertaken in partnership with key stakeholders.

INTRODUCTION & PURPOSE

This report explores the climate strategy journeys of 22 leading asset owners for the purpose of surveying the current best practices landscape, identifying common barriers, and offering practical advice relevant for other asset owners including large and small pension funds, sovereign wealth funds, charities, and foundations.

A range of key findings were drawn from a series of comprehensive and qualitative semi-structured interviews with 22 leading asset owners, as identified in our Asset Owners Disclosure Project (AODP) 2017 Global Climate Index. Our in-depth discussions covered key TCFD elements (including governance, strategy, risk management and metrics/targets), as well as other valuable themes including purpose, and the role of organisational culture. We also asked respondents about barriers faced, priorities looking forward, and practical recommendations for other asset owners.

Our findings highlight how selected asset owners, who hold tremendous influence across the investment chain, are leading by example in their approaches to managing climate-related risks and opportunities. The variety of creative and innovative climate-related initiatives explored in this report are intended to both inspire and guide other asset owners, investment consultants, asset managers, and regulators who are interested in managing climate-related risks and opportunities.

This report also sits in a series of reports and indexes AODP has and will be publishing on climate-related risks in capital markets, including the recently published insurance sector report.

METHODOLOGY

In November 2017, we identified 29 leading asset owners (who received a 'AAA' or 'AA' ranking in our AODP 2017 Global Climate Index) and extended invitations by email to participate in this survey. Interviews were ultimately conducted with 22 asset owners (collectively holding over US$1.8 trillion in AUM) between February and April 2018.

The interviews followed a semi-structured format around ten core questions (see Appendix ii), which were developed in January 2018 in consultation with a small panel of industry experts. The questions were also formulated in consideration of the TCFD recommendations and range of key related publications as outlined in table 1.

The 22 asset owners interviewed vary considerably by size (in terms of AUM), location and membership category, as outlined in the charts below.

YEAR	COMPANY	PUBLICATION
2013	ShareAction	'The Green Light Report: Resilient portfolios in an uncertain world'
2015	GICCC	'Climate Change Investment Solutions: A Guide for Asset Owners'
2015	Mercer	'Investing in a Time of Climate Change'
2015	PRI	'Developing an Asset Owner Climate Change Strategy'
2016	EY	'Climate Change: The Investment Perspective'
2017	LAPFF	'Climate Change Investment Policy Framework'
2017	PLSA	'More Light, Less Heat: A Framework for Pension Fund Action on Climate Change'
2017	TCFD	'Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures'
2017	WWF	'WWF Climate Guide to Asset Owners: Aligning Investment Portfolios with the Paris Agreement'
2018	NMIF & IPCM	'Mapping of global responsible investment best practices'

Table 1: Overview of key publications addressing asset owners and climate change

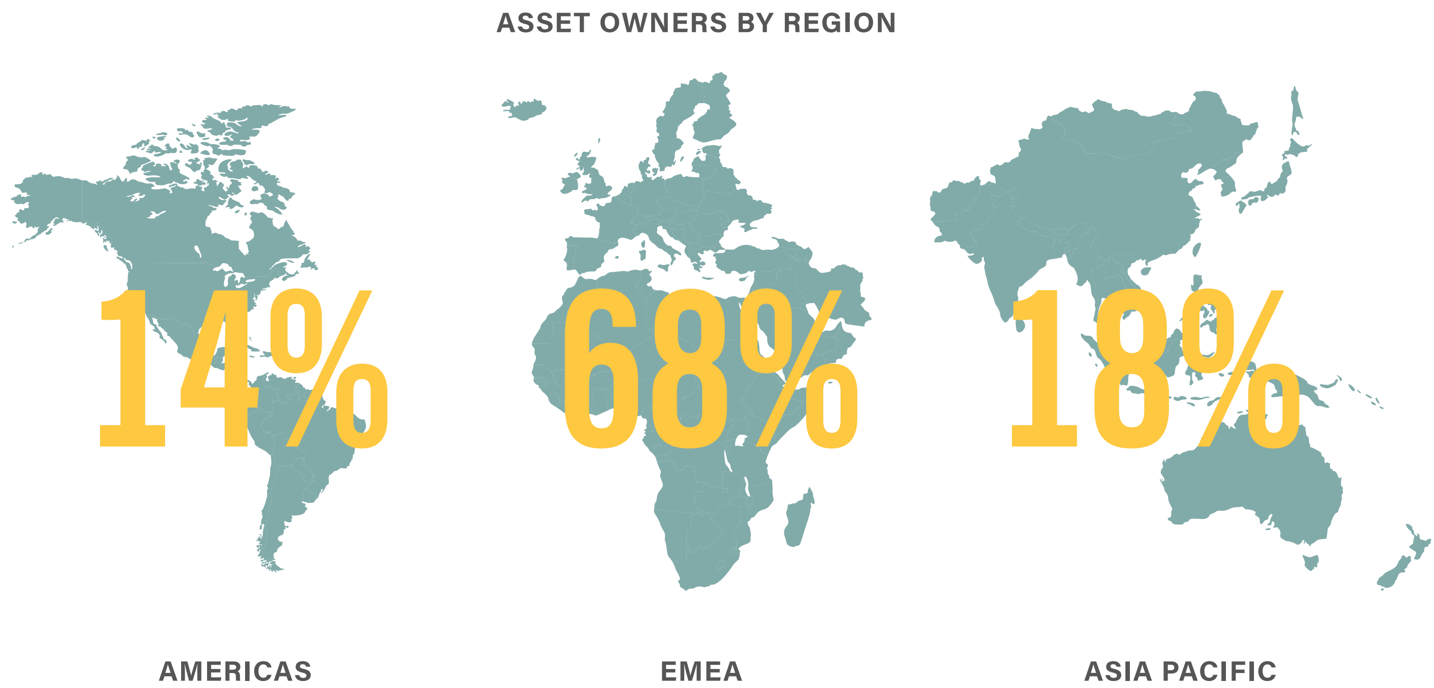

Figure 1: Asset owners by region

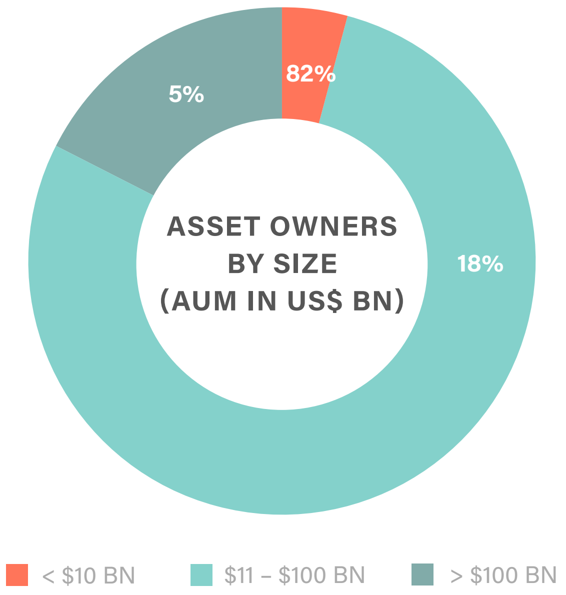

Figure 2: Asset owners by size (AUM in US$ BN)

ASSET OWNERS BY CATEGORY		
Public pension fund	9	41%
Sovereign pension fund	5	27%
Sovereign wealth fund	1	27%
Insurance company	4	18%
Faith based investor	2	9%
Corporate pension fund	1	5%

Table 2: Asset owners by category

LIMITATIONS

This research is subject to the following limitations. Firstly, there may be asset owners with leading climate strategies who fell outside the scope of our 2017 AODP Global Climate Index, and therefore not included in this report. Secondly, this survey does not include the seven asset owners who were extended invitations but did not participate. Thirdly, this survey may not cover asset owners who have evolved to a leadership level since our 2017 survey. And lastly, the semi-structured format of our interviews means that the amount of time focusing on particular topics varied between interviews. The focus of interviews was on specific issues of interest for each respondent.

KEY

TCFD: Governance

TCFD: Risk Management

TCFD: Strategy

TCFD: Metrics & Targets

BACKGROUND

This section explores the current landscape of best practices as demonstrated by 22 asset owners, recognised by their leading climate strategies. The following range of 10 key findings drawn from our interview responses examines both shared and unique approaches across TCFD-aligned themes (governance, strategy, risk management and metrics/targets) as well as purpose and the influence of organisational culture.

KEY FINDINGS

FINDING 1

Leaders are embracing senior leadership and education in their climate governance.

FINDING 2

Leaders are building organisational cultures that support responses to climate-related risks.

FINDING 3

Leaders are building meaningful relationships with members, savers and beneficiaries around climate-related issues.

FINDING 4

Leaders are publishing TCFD-aligned reports.

FINDING 5

Leaders are taking a 'whole of fund' approach in their climate strategies.

FINDING 6

Leaders are innovating in their low-carbon asset allocation.

FINDING 7

Leaders are driving commitments from asset managers on climate-related issues.

FINDING 8

Leaders are prioritising climate-related issues in their risk and investment analysis.

FINDING 9

Leaders are refining, escalating, and collaborating in their engagement with investee companies.

FINDING 10

Leaders are engaging on climate-related regulation and policy.

KEY FINDINGS

The following key findings explore how climate strategy leadership can take a range of approaches, highlighting that there is no single best approach. Some differences can be accounted for by factors including size, category, and location, however our analysis reveals a variety of areas where respondents are following shared approaches.

FINDING 1

Nearly all respondents emphasised the importance of leadership from senior management and the Board in their climate strategy journeys. Some noted how the process of formulating and installing a climate policy helped develop 'buy-in' and leadership from these levels, as outlined in case study 1.

Climate-related education and training also featured prominently in our interviews, particularly at the levels of senior management and the Board. Our analysis also reveals how leading asset owners are inviting climate-related education and training both from external experts as well as investor peers, as outlined in case study 2.

The Church Commissioners for England

The Church Commissioners
The Church Commissioners spent two years developing its climate policy, which involved extensive consultation between trustees and other investment-relevant parties within the Church of England. The faith-based investor found this intensive process helped to gain 'buy-in' from the trustees on the climate policy and also to integrate climate awareness into its 'way we think' culture.

First State Super
Australia's First State Super pension fund found its six-month process of developing a board-level climate policy valuable in helping gain commitment from the board. Once board-level 'buy-in' was gained, it was able to direct more ambitious climate-related activities such as undertaking in-depth thematic climate research pieces.

Penzioenfonds Zorg en Welzijn (PFZW)
The Dutch pension fund, PFZW, implemented a project called 'White Sheet of Paper', which involved board members discussing with expert stakeholders from around the world on how pension funds could provide good pensions and also contribute to a sustainable world. In our interview, PFZW commented the project had helped the board to take and develop ownership and gain 'buy-in' on its climate policy.

Beyond the governance approaches just outlined, our respondents revealed a variety of unique and creative climate governance approaches, demonstrating how leading climate governance can take a variety of forms, as outlined in table 2.

Établissement de retraite additionnelle de la fonction publique (ERAFP)
This year, ERAFP's board received a presentation from a leading peer asset owner on how it is taking climate-related issues into account. The board also received updates on the cutting-edge of new products and services yet to be represented in the market by service providers (such as footprinting and 2D trajectories). After these training and update sessions, management and the board undertake a brainstorming session to ensure they are well aligned with realising their climate strategy.

First State Super
Australia's First State Super has undertaken a number of 'parleys' around climate change (for which the board was invited) featuring presentations from external service providers with expertise in climate-related issues. The parleys discussed topics such as footprinting and stranded asset risk with the initiative helping to gain 'buy-in' from the board as well as stimulating discussion around how to incorporate the information into its climate strategy.

Case study 2: Climate-related education and training – ERAFP & First State Super

INNOVATION AND CREATIVITY IN CLIMATE GOVERNANCE	
Caisse des Dépôts (CDC)	CDC has established an external steering committee including representatives from technical climate change experts, green finance and company sectors exposed to climate change. Meetings of this committee occur prior to board meetings, with outcomes of the committee's meetings raised in board meetings.
New York State Common Retirement Fund (NYSCRF)	In early 2018, NYSCRF announced its new 'Decarbonisation Advisory Panel,' a committee comprising of investment, financial, environmental, energy and legal experts who will advise the Comptroller on how to best approach the handling of climate-related risks and opportunities by the fund. NYSCRF's governance structure is unique in that there is a single trustee, so this initiative can be seen as enhancing the range of valuable insights from multiple perspectives around climate-related issues available to the fund.
Pensionskassernes Administration (PKA)	PKA has a strong reputation for climate-related governance, underpinned by annual updates to the board on climate-related initiatives, a deeply embedded climate focus from senior management and board-level education on why climate change is an important issue. However, PKA's governance efforts are all purposely oriented towards the end goal of driving real actions, especially in asset allocation.
Unilever Pension Funds	To help engage across the organisation relating to the fund's ESG performance, Unilever's pensions team publishes a concise and visually engaging quarterly internal 'ESG dashboard' updates for all its stakeholders, which contains information regarding KPIs and their relationship to ESG polices and beliefs, active ownership activity, updates on exclusion policies, sustainability data from external providers and a qualitative section on areas for improvement.
Vision Super	Vision has set up an ESG Action Team, including the CEO, CIO, head of ESG and a fourth member who specialises in politics (the team is also seeking a new member from the environmental activism space). The team meets fortnightly and the CEO's involvement helps with driving quick action. Vision notes the initiative also reflects the 'buy-in' from the fund's senior level. The trustee is also working towards a detailed plan to becoming carbon neutral by 2050, which will include divesting from companies involved in mining and extraction, transportation, consumption of coal, oil and gas.
Wespath Investment Management	At the start of its climate strategy journey, Wespath developed an internal research document mapping global asset owners' best practices. Its analysis included assessing managers' strategic approaches to tackling climate-related issues, in addition to gathering and reviewing sell-side research. The resulting document was shared internally among the members of its investments Division, senior management and Board of Directors, and provided a helpful context to begin conversations related to climate change. These efforts led to the adoption of a formal 'low-carbon transition' core investment belief, designed to reflect Wespath's fiduciary approach to managing climate-related issues, and its systematic and holistic strategy regarding climate change.

Table 2: Innovation and creativity in climate governance

FINDING 2

Our interviews asked respondents how their organisational culture influenced the development of their leading climate strategies, and revealed a number of instances where organisational culture played a key role, as outlined in table 3.

HOW ORGANISATIONAL CULTURE INFLUENCES LEADING CLIMATE STRATEGIES	
Andra AP-fonden (AP2)	In our interview, Sweden's AP2 discussed its long-term sustainability-focused culture, embedded in all members across the organisation, as a factor in the successful development of its climate strategy. AP2 has developed a combined 'top-down and 'bottom-top' approach to its climate strategy, with all management levels aware of sustainability as a priority, and all levels of the organisation actively contributing to the development of the climate strategy (the new proprietary ESG indices were a bottom-up suggestion). AP2 also holds participatory ESG forums involving all staff members.
Fjärde AP-fonden (AP4)	In our interview, AP4 described that what helped drive progress in the early stages of its climate strategy development was its entrepreneurial culture, which allowed the fund to experiment with a variety of investment methods. This process helped to build up a valuable internal knowledge and experience bank, and also to gain engagement and commitment from all organisational levels.
Caisse des Dépôts (CDC)	CDC noted that its long history of responsible investment provided a solid foundation for the development of its climate strategy (by which time a background, structure and learning-curve had already been established).
New Zealand Super Fund (NZSF)	NZSF cites governance and transparency as two defining features of its culture, which have driven its leading climate governance initiatives. In addition to strong cross-department internal communication, the investment committee includes the head of responsible investment and the organisation displays strong climate leadership from senior levels including the Board, CEO and General Managers of the two investment groups. Continual climate-related education and training at a variety of organisational levels have helped built an internal knowledge bank, and all organisational levels are kept up to date with the status of the climate strategy development, reflecting their 'top-down' and 'bottom-up approach.
Unilever Pension Funds	When the global pension funds set up their ESG strategy, they take into account the work which the Corporate has undertaken. This has helped align the corresponding pensions' mission on climate issues. This cross-divisional influence is also facilitated by the inclusion of current and former Unilever PLC employees on the pension's trustee groups and investment committees. In our interview, Unilever also mentioned that some of the more 'exciting' areas of their climate strategy could only be pursued after having laid important groundwork such as education, integration into investment beliefs and building a strong governance foundation.

Table 3: How organisational culture influences leading climate strategies

FINDING 3

Since all climate strategies are ultimately for the benefit of pension fund members, savers, and beneficiaries, we asked respondents, where relevant, how they are engaging with their members around climate change issues. Our respondents described a number of tools commonly used to engage with their members, as outlined in table 4.

Our analysis identified a selection of respondents who are aiming beyond basic reporting and communicating initiatives to develop leading two-way relationship with their members around climate change issues, as outlined in table 5.

LEADING MEMBER ENGAGEMENT APPROACHES		
ABP	**Stichting Pensioenfonds (ABP)**	In our interview, ABP noted that since the formalisation of its responsible investment policy, the intensity of member queries on climate-related issues has settled, suggesting an establishment of trust. To further build trust with the members, ABP has been open to media attention via interviews, finding being 'open and vulnerable' has helped avoid mistrust or concerns around 'hiding something'.
pka	**Pensionskassernes Administration (PKA)**	Under PKA's 'active member democracy programme', members can run to become delegates (there are approximately 500 to date). The programme undertakes a series of dedicated conferences around a range of issues (including climate-related) with occasional presentations from relevant stakeholders. The programme helps ensure a two-way communication between PKA and its members, and that members' views are effectively channelled back to the board and senior management. PKA's head of responsible investment makes himself available to members directly (his contact details are online) to help ensure constructive and ongoing dialogue.
Wespath Investment Management	**Wespath Investment Management**	Wespath has focused on researching and refining its communication style for participation engagement. One element of its communication approach is to incorporate 'storytelling' related to both the financial and personal impact of its sustainable investing activities. In our interview, Wespath noted this helped to both humanize the role of investors in creating positive change, and to demonstrate the actions it has taken. Wespath further refines its approach by engaging with stakeholder advisory groups representing key demographics. These groups have helped guide sustainability-related communications, and provided insight into how these topics resonate with specific constituencies.

Table 5: Leading member engagement approaches

COMMON TOOLS FOR ENGAGING WITH MEMBERS AROUND CLIMATE-RELATED ISSUES

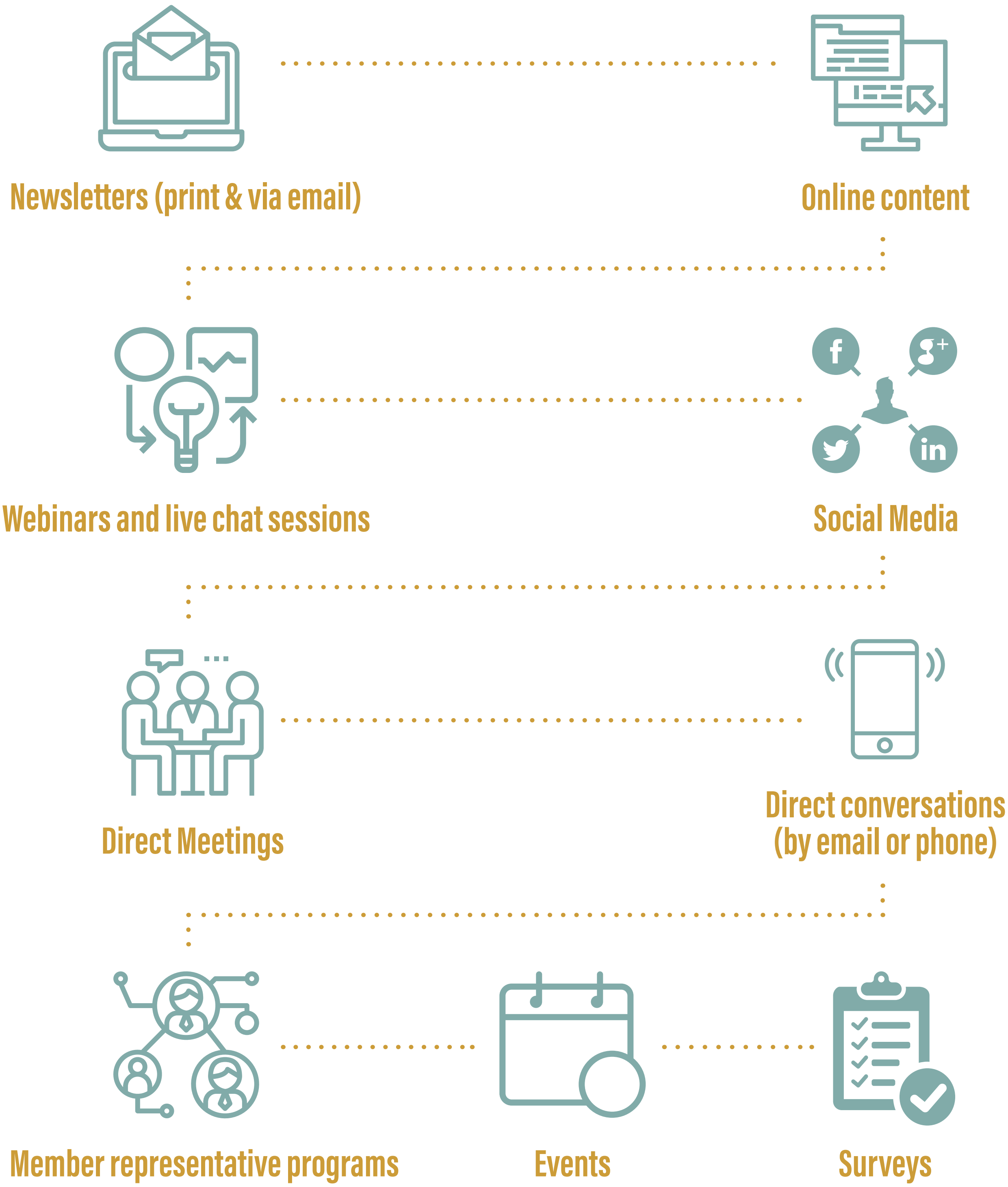

Table 4: Common tools for engaging with members around climate-related issues

In some cases, member engagement activities were found to have directly triggered the development of their leading climate strategies, as explored in case study 3.

First State Super
First State Super started looking into climate-related issues in 2015 in response to members' queries around climate-change and fossil-fuels. This prompted the pension fund into thinking about climate-change across its entire asset classes and regions in order to develop a holistic 'whole of fund' response.

Kommunal Landspensjonskasse (KLP)
KLP's climate strategy development was triggered by a client request to fully divest from fossil fuels. The request stimulated an internal discussion around a variety of perspectives (ethical, impact and financial) which culminated in a final conclusion to divest from coal (but not all fossil fuels) to help signal its support for the low-carbon transition.

Case study 3: Membership engagement triggering climate strategy development – First State Super and KLP

FINDING 4

Following the publication of the TCFD recommendations in June 2017, and recognising the influence of asset owners at the top of the investment chain, we asked respondents how they are planning on publishing TCFD-aligned reports, and received a variety of responses as outlined in table 6 below.

A small selection of respondents were found to be demonstrating best practice by already publishing TCFD-aligned reports, as outlined in table 7 opposite.

HOW ASSET OWNERS ARE APPROACHING TCFD-ALIGNED REPORTING
Integrating with annual or sustainable reporting
Via standalone TCFD-aligned reports
Piloting the recently TCFD-aligned PRI report framework
Via Article 173 (largely TCFD-compliant)
Via AODP survey responses (TCFD-compliant)
Via an internal TCFD update to members
Still thinking about how to respond

Table 6: How asset owners are approaching TCFD-aligned reporting

ASSET OWNERS WHO ARE LEADING IN TCFD-ALIGNED REPORTING

✓

Andra AP-fonden (AP2) released its first standalone TCFD report in early 2018

✓

Aviva published its second TCFD-aligned response in 2018

✓

The Church Commissioners for England has incorporated TCFD elements into its annual reporting.

✓

EAPF has reported on its TCFD-aligned activities in its annual reporting.

✓

LG Super has made its AODP survey response publicly available, considered to be TCFD-compliant.

Table 7: Asset owners who are leading in TCFD-aligned reporting

FINDING 5

Our analysis of interview responses found all respondents to be taking a 'whole of fund' approach in their climate strategies by systematically and holistically integrating climate-related issues into their investment practices. Respondents typically regard climate change as a material investment risk, are integrating climate-related issues into their enterprise risk management systems, and are undertaking a proactive approach to sourcing investable low-carbon opportunities. This key finding also considers how respondents are incorporating the Sustainable Development Goals (SDGs) into their climate strategies, and evaluates responses around purpose. Table 8 outlines common approaches respondents are taking in pursuing a 'whole of fund' approach in their climate strategies.

HOW ASSET OWNERS ARE PURSUING A 'WHOLE OF FUND' APPROACH IN THEIR CLIMATE STRATEGIES
1. Making a pledge to align their portfolio with a 2-degree scenario
2. Making ambitious portfolio wide commitments, goals and targets
3. Applying a universal owner perspective
4. Integrating climate factors into relevant investment decisions across asset classes
5. Recognising climate change as a long-term and material investment risk
6. Recognising the full spectrum of climate-related physical, transitional and litigation risks
7. Integrating risk analysis with company and policy engagement
8. Considering climate-related issues from a fiduciary perspective

Table 8: How asset owners are pursuing a 'whole of fund' approach in their climate strategies

Environment Agency Pension Fund

Environment Agency Pension Fund (EAPF)
EAPF was the first fund to commit to operating under a 2-degree target (its climate strategy also pre-dates the Paris Agreement). The UK pension fund has followed a value-driven investment approach to embedding low-carbon into every asset class and has to date invested over £1.1bn in social and sustainable investments. EAPF has set an ambitious target of investing 15% of the fund in low-carbon, energy efficient and other climate-mitigation opportunities by 2020 under the broader goal of investing 25% of the fund in clean and sustainable companies and funds across all asset classes.

LOCAL GOVERNMENT SUPER

Local Government Super (LG Super)
Australia's LG Super incorporates climate-related considerations into all relevant investment decisions across all of its asset classes and is increasingly taking a more active position in their portfolios. The systematic integration of climate-related factors involves applying negative screening (54 companies have been excluded on the basis of sourcing greater than 33% of their revenues from coal, mining, oil tar-sands mining and coal-fired electricity generation), positive screening (approximately $1bn has been invested in low-carbon opportunities across all asset classes) and high carbon overlays (whereby restricted stocks held in index or pooled trust investments are shorted against sustainable stocks). LG Super has also developed a comprehensive and sophisticated SRI Policy, which influences all other investment policies.

In our interview, LG Super mentioned that innovative products and perspectives (such as green bonds, low-carbon property and ESG integration) are a natural outcome of applying a fund-wide fiduciary perspective around climate change issues.

MAJORITY OF LEADING ASSET OWNERS ARE SETTING CLIMATE-RELATED TARGETS

Over half of respondents were found to be incorporating climate-related targets into their climate strategies (the majority of which are time-bound). Table 9 outlines the most common types of climate-related targets employed.

COMMON TARGETS SET BY ASSET OWNERS IN THEIR CLIMATE STRATEGIES
Low-carbon or sustainable development investment targets (by % of portfolio or absolute number)
Carbon emissions reduction targets (absolute or by asset class)

Table 9: Common targets set by asset owners in their climate strategies

Some common reasons for incorporating climate-related targets include communicating ambition to stakeholders, helping gain commitment from internal and external portfolio managers, and inviting opportunities from the low-carbon investment space. Some respondents noted that simply having a target was more important than having the 'right number' (which in some cases were developed arbitrarily or incrementally over time), with their target helping to symbolise and communicate their climate-related ambitions.

However, not all respondents felt comfortable in setting climate-related targets. Some common reasons include data quality concerns, being 'locked in' to low-carbon investments (that may not be seen as being in their members' best interests), and getting 'caught in the numbers.' These asset owners expressed a preference to focus more holistically on managing climate-related issues with some highlighting that all their investments (whether low-carbon or not) must satisfy the same performance and risk-return criteria.

Stichting Pensioenfonds (ABP)
ABP from the Netherlands has taken an innovative approach to incorporating carbon reduction targets into its relationship with its external managers. ABP worked in close partnership with its fiduciary (primary) asset manager, APG, to develop a carbon budget for all portfolios to help achieve its target of reducing CO2 emissions in their equity portfolio by 25% to 2020. Internal and external portfolio managers are free to decide where to allocate their portion of the carbon budget and ABP considers this approach to have been successful in not only integrating climate-related issues into investment-decision making, but building a 'shared view' all the way from the board to portfolio managers' desks. ABP has also set a target of investing an extra €5bn in renewable energy to 2020 (included in the broader commitment to investing €58bn in 'high sustainable development investments,' defined as social and environmental products and solutions by 2020).

Elo Mutual Pension Insurance Company
Elo Pension from Finland has committed to an ambitious target of mainstreaming climate-related issues into its portfolio by aiming to have allocated more than 50% of its direct equities, direct corporate bonds, infrastructure and real assets portfolios into 'positive impact' investments (defined as investments with positive social and environmental impacts via their products or services including renewable energy, energy efficiency, forest and other sustainable development solutions) by 2025. A service provider provides data on the proportion of revenue sourced from Sustainable Development Goal related activities, to help identify investment opportunities and track progress. To further support this ambition, Elo has set an additional target for all external managers to consider climate issues by 2020.

Case study 5: Targets driving climate strategies – ABP, Elo Mutual & PFZW (continues on next page)

Pensioenfonds Zorg en Welzijn (PFZW)
PFZW, also from the Netherlands, has set the ambitious targets of reducing the carbon footprint of its entire fund by 50% and quadrupling its investments in sustainable development solutions to €20bn by 2020. These ambitious targets are aimed at changing the 'real' economy and have helped drive its low-carbon investment initiatives and engagement across high carbon-risk sectors (where PFZW prefers to engage to drive positive change in favour over divesting).

Case study 5: Targets driving climate strategies – ABP, Elo Mutual & PFZW

PURPOSE BEYOND PROFIT: LEADERS ARE MINDFUL OF THE HOLISTIC IMPACTS OF CLIMATE CHANGE

To better understand the mind sets behind leading climate strategies, we asked respondents to elaborate around how they see the ultimate purpose of their climate strategies. Typically, respondents mentioned fulfilling their fiduciary obligations, while many affirmed they would support increasing low-carbon investments so long as the appropriate risk-return criteria were satisfied. Some respondents raised additional themes relating to purpose, as outlined in table 10.

COMMON RESPONSES AROUND PURPOSE OF CLIMATE STRATEGIES BEYOND FINANCIAL RISK-MANAGEMENT

- Achieving a positive impact on environment and society
- Contributing to a sustainable and liveable world
- Ensuring preservation of an enjoyable world for their members' retirements
- Fulfilling faith-based obligations
- Aligning with community expectations
- Being mindful of a 'just' transition (avoiding unintended consequences)

Table 10: Common responses around purpose of climate strategies beyond financial risk-management

INCORPORATION OF SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Recognising a growing interest by investors in the Sustainable Development Goals (SDGs), which include climate-related issues, we identified a number of instances where respondents raised how they were incorporating the SDGs into their respective climate strategies, as outlined in table 11.

HOW LEADERS ARE INCORPORATING THE SDGS INTO THEIR CLIMATE STRATEGIES

ABP	**Stichting Pensoienfonds (ABP)**	Since 2016, the SDGs have been a focus topic for ABP's climate strategy acknowledging that a significant proportion of companies in its portfolio contribute to the SDGs. ABP's new policy also explicitly outlines its intention to contribute to the SDGs by setting a target of committing €58bn to 'high sustainability investments' by 2020.
Environment Agency Pension Fund	**Environment Agency Pension Fund (EAPF)**	EAPF uses the Sustainable Development Goals (SDGs) at a high-level as a framework for strategic asset allocation, identifying megatrends, risks and opportunities and implementation at a pragmatic level.
elo	**Elo Mutual Pension Insurance Company**	As outlined in case study 5, Elo Pension has adopted an ambitious fund-wide target directly related to the SDGs.
ILMARINEN	**Ilmarinen**	Two years ago, Ilmarinen was the first asset owner to apply an SDG-related goal, which aims to increase investments in companies providing solutions to SDG related challenges from 6% to 12% of the revenues generated by its direct listed equities portfolios by 2020. To help achieve this goal it uses the services of an external service provider who supplies information around the proportions of companies' revenues related to the SDGs.
	United Nations Joint Staff Pension Fund (UNJSPF)	UNJSPF noted that the purpose of its climate strategy is to create a mutually beneficial outcome for both positive financial returns and sustainable impact consistent with the Sustainable Development Goals. The UNJSPF is proactively performing due diligence on a dedicated sustainable investment leadership portfolio, which will seek to unify innovative quantitative and fundamental alpha strategies within the overall investment process. However, the key fiduciary objective is not to forgo financial returns for the sake of immediate impact, but to be an investor with profitable and sustainable impact.
Pensioenfonds Zorg & Welzijn	**Penzioenfonds Zorg en Welzijn (PFZW)**	PFZW's primary asset manager, PGGM, has collaborated with APG in developing a 'taxonomy' around sustainable development investments, with a particular reference to 13 of the UN's 17 SDGs. This initiative is related to PFZW's ambitious target of quadrupling its investments in sustainable development solutions to €20bn by 2020.

Table 11: How leaders are incorporating the SDGs into their climate strategies

FINDING 6

Recognising that asset owners can play an influential role in driving the low-carbon transition via their investment activities, we asked respondents how they are pursuing low-carbon investment opportunities in their asset allocation approaches. Our analysis reveals a rich variety of creative and innovative approaches, from multi-asset class approaches to single-asset class approaches. Table 12 and case study 6 explore the range of multi-asset class approaches to increasing low-carbon investments.

HOW ASSET OWNERS ARE INTEGRATING CLIMATE-RELATED ISSUES ACROSS MULTIPLE ASSET CLASSES
▪ Negative screening (for example, % of revenue from fossil fuels)
▪ Positive screening (investing in sustainability leaders)
▪ Referencing the Sustainable Development Goals in asset allocation
▪ Integrating climate into ESG analysis for all investment decisions
▪ Use of low-carbon benchmarks across asset classes (eg. equity and fixed income)

Table 12: How asset owners are integrating climate-related issues across multiple asset classes

Aviva
Aviva factors climate-related issues into its ESG heat-map, which is updated quarterly and made available via Bloomberg to all analysts and fund managers. The ESG heat-map helps Aviva ensure climate-related considerations are factored into all investment decisions, and includes a composite carbon exposure metrics based on the carbon-intensity of business activities, the extent of operations with stringent carbon emissions regulations and the quality of a company's carbon management.

Établissement de retraite additionnelle de la fonction publique (ERAFP)
ERAFP's SRI approach, also called the 'best-in-class' approach, involves making investments by sector and asset class in those issuers considered best-aligned with sustainable development and the energy and ecological transition ('EET'). This approach reflects ERAFP's position as a 'universal owner', and allows it to invest in the best companies in each sector from a combined ESG and financial point of view.

Imarinen
Ilmarinen uses sustainability ratings (a composite based on multiple ESG ratings and data from external service providers and adapted with analyses and conclusions from internal and external sources) for listed investments (including both equity and corporate bonds), covering approximately 3000 companies. These ratings are viewed by portfolio managers alongside financial figures in their screens such as Bloomberg terminals. The ratings approach considers climate-related risks and opportunities as well as an exclusionary coal threshold (for companies who derive more than 30% of their revenues or energy production from coal, and have no credible improvement plan). Realised controversies and norm violations are also considered.

Case study 6: Multiple-asset class investment approaches – Aviva, ERAFP & Ilmarinen

LEADERS ARE DEVELOPING INNOVATIVE LOW-CARBON PRODUCTS

Our analysis found some respondents to be demonstrating creativity in incorporating externally sourced or internally calculated low-carbon benchmarks, as outlined in table 13.

INNOVATIVE EQUITY LOW-CARBON PRODUCTS AND APPROACHES DEVELOPED BY ASSET OWNERS

Andra AP-fonden Second Swedish National Pension Fund - AP2	**Andra AP-fonden (AP2)**	In early 2018, AP2 launched a pair of multi-factor ESG indices to guide its internally managed global equities portfolios (representing 29% of its overall portfolio) and set to replace the six indices currently used in this part of its portfolio. The proprietary indices are based on externally provided ESG data and based on extensive internal and external research (including academic).
Environment Agency Pension Fund	**Environment Agency Pension Fund (EAPF)**	In early 2018, EAPF launched a 'Low Carbon Sustainable Value Equity Mandate' with Robeco, investing £150m in a tax transparent fund with the approach designed to incorporate a sustainable low-carbon approach to value investing (investing in stocks with viable long-term business models that are trading at low valuations).
	New York State Common Retirement Fund (NYSCRF)	In early 2018, NYSCRF doubled its investments in its 'Low Emissions Index' (LEI) to $4bn. The index, developed in collaboration with Goldman Sachs Asset Management and launched in 2015, underweights the worst GHG emitters (based on CDP data) and increases investments in companies with lower emissions and returns that closely track the Russell 1000 index. The LEI reports to have a carbon footprint 75% lower than its benchmark.
NZSUPERFUND Te Kaitiaki Tahua Penihana Kaumātua o Aotearoa	**New Zealand Super Fund (NZSF)**	In 2017, NZSF reallocated NZ$950m of its NZ$14bn global passive equity portfolio by selling 297 companies highly exposed to carbon emissions and reserves and reinvesting the proceeds across the remaining lower-risk companies. The reallocation has resulted in the total fund's carbon emissions intensity being 19.6% lower, and its exposure to carbon reserves 21.5% lower than if the changes had not been made.
Univest Company Unilever	**Unilever Pension Funds**	In April 2018, Unilever launched its first illiquid 'impact fund' for their members, which focuses on sustainability and climate change and aims to deliver both financial and environmental returns. The fund is designed to achieve portfolio diversification across geographies and asset classes and focuses on companies expected to succeed in alignment with the low-carbon transition. The fund is offered as a complimentary strategy to more traditional market-based benchmarks, which are seen to lack a long-term focus and be underexposed to climate-related opportunities.

Table 13: Innovative equity low-carbon products and approaches developed by asset owners (continues on next page)

	United Nations Joint Staff Pension Fund (UNJSPF)	In 2014, UNJSPF launched two 'low-carbon' exchange traded funds (ETFS), which were developed in collaboration with State Street Global Advisers (the SPDR MSCI ACWI Low Carbon Target ETF, LOWC) and BlackRock (iShares MSCI Low Carbon Target ETF, CRBN). The two ETFs are now close to $300m. Both ETFs follow the same passive MSCI ACWI Low Carbon Target Index, and are also open to both retail and institutional investors. The ongoing long-term success of the low-carbon ETF strategy is built upon fundamentally clear scientific framework, but opting for vehicles, such as ETF's that propagate financial inclusion for all.
vision super	**Vision Super**	Vision offer its members the option of investing in a 'sustainable super solutions' product, a passively managed 100% low-carbon benchmark which has gathered a favourable response from members on account of both its low-cost and low-carbon features. The fund has continued to manage carbon intensity downwards over the 2017 financial reporting period. Vision has also directed its passive bond manager to exclude the more carbon polluting issuers from the credit part of its Australian index portfolio.

Table 13: Innovative equity low-carbon products and approaches developed by asset owners

EXPLORING OPPORTUNITIES IN GREEN BONDS

Other respondents are strategically exploring green bonds in their portfolio decarbonisation approaches. Though green bonds still face a range of challenges as an emerging asset class, some respondents are focusing not only on increasing their green bond holdings, but actively developing the green bond market as a whole, as outlined in table 14.

EXPLORING OPPORTUNITIES IN GREEN BONDS		
Andra AP-fonden	**Andra AP-fonden (AP2)**	In 2016, AP2 allocated 1% of its total strategic portfolio to green bonds, which it now considers as a standalone asset class.
AVIVA	**Aviva**	Green bonds are featured in Aviva's climate strategy second pillar ('investment in lower carbon infrastructure), with the insurance company having invested over £744m in green bonds, more than doubling their holding in 2016. Aviva has also taken an active approach to developing the green bonds market by investing in green bond themes, when consistent with their investment approach.
AP FJÄRDE AP-FONDEN	**Fjärde AP-fonden (AP4)**	Two of AP4's six climate strategy goals relate to green bonds. The first commits to supporting the development of the green bond market overall by being active in both primary and secondary markets, while the second commits to sharing their knowledge about green bonds with other investors.
	Caisse des Dépôts (CDC)	In 2017, the French Sovereign Wealth Fund CDC successfully issued its first green-bond raising €500m for a book widely oversubscribed (€1bn). The proceeds will be used to fund energy-efficient real-estate, renewable energies and site remediation.

Table 14: Exploring opportunities in green bonds

CAPTURING LOW-CARBON OPPORTUNITIES IN ILLIQUID ASSETS

Some respondents noted illiquid assets as an important area for increasing their low-carbon investments, such as infrastructure and real-estate, where they report to have identified the most low-carbon opportunities. One respondent also noted how these private market opportunities (where investors hold more influence than in listed assets) allow investors to take a proactive and long-term approach in steering these assets toward a low-carbon outcome.

Pensionskassernes Administration (PKA)
Danish pension fund PKA has strongly focused its low-carbon investment strategy on renewable and energy-efficiency infrastructure investments aligned with mitigating climate change. PKA has also set an ambitious target to have achieve 10% of its portfolio in low-carbon assets by 2020.

In 2012, PKA launched its own infrastructure fund, and to date approximately 8% of its entire portfolio are invested in low-carbon 'real-assets.' In our interview, PKA mentioned this approach also helps it relate to members, since its funds are directly invested in assets that one can actually go and see. To help support this approach, PKA has developed a dedicated team (including over 20 experienced energy experts) to help control risk and achieve attractive annual returns (between 13-15% since 2011). Furthermore, this approach has also helped achieve strong diversification and achieving a lower correlation between assets (considered especially significant after the lesson of highly correlated asset classes during the financial crisis).

Case study 7: Growing low-carbon 'real assets' – PKA

A number of respondents discussed how they are taking proactive approaches to increasing the low-carbon performance of their property and real-estate holdings, as outlined in tables 15 and 16.

COMMON LOW-CARBON INITIATIVES IN REAL-ESTATE AND PROPERTY
Benchmarking against the GRESB survey
Seeking building certifications
Engaging service providers to obtain building carbon footprint data
Developing methodologies to carbon footprint their property portfolio

Table 15: Common low-carbon initiatives in real-estate and property

BEST-PRACTICES IN REAL-ESTATE AND PROPERTY		
	Stichting Pensoienfonds (ABP)	ABP has helped to develop the GRESB survey, which is used to assess its real-estate investments as well as benchmarking fund managers between each other in regions, and also against themselves in terms of previous years (with set targets to improve each year).
	Aviva	Aviva uses the GRESB survey to better understand the climate resilience of individual properties and funds. In 2017, Aviva improved its overall GRESB scores for all 19 submitted funds and were awarded 7 Green stars in total (up from 5 in 2016).
	LG Super	LG Super has an internally managed green property portfolio, which has a strong sustainability focus driven by implementing energy efficiency, waste reduction and recycling, health and safety, environmental risk management and water conservation programs. Its portfolio has a 6 star NABERS Energy rating (representing market leading performance), a 5 star Green Star Performance rating and reports 44% reduction in electricity and 49% reduction in water use since 2009.
	Penzioenfonds Zorg en Welzijn (PFZW)	PFZW works with a service provider (who provides carbon footprint data for buildings around the world) to help find appropriate investments. PFZW also helped developing the GRESB standard to help get the right data and information for funds working in real-estate.

Table 16: Best practices in real-estate and property

EXPLORING OPPORTUNITIES IN EMERGING ECONOMIES

Some respondents also discussed how they are exploring low-carbon investment opportunities in emerging economies, as outlined in the case study below.

Kommunal Landspensjonskasse (KLP)
One of KLP's climate strategy initiatives involves pursuing private market opportunities in emerging economies (via collaboration with key local partners who share the same ambition and have a strong ESG awareness) with a focus on adding renewable energy capacity. To support this ambition, KLP has earmarked NOK1 billion for investment in renewable energy in frontier markets.

Local Government Super (LG Super)
In our interview, LG Super noted it has had good experiences investing in renewable energy in emerging economies (where lots of capital is required), which is also recognised as a helpful investment area for demonstrating commitment to actively driving the low-carbon transition.

Wespath Investment Management
Wespath invested $30 million in sustainable energy companies that help provide solar energy to communities in developing countries (including Mongolia, Kenya, India and Nicaragua) that are not connected to national power grids. It is one of the first institutional investors to make this kind of investment. Wespath's investment is part of its Positive Social Purpose Lending Program, which aims to have a positive impact on society and the environment while earning a market-rate return.

Case study 8: Exploring opportunities in emerging economies – KLP & Wespath

FINDING 7

Recognising the influence asset owners can have on their relationships with their third party service providers, especially asset managers, we asked respondents how they are engaging with these parties on climate-related issues. Our analysis reveals a variety of creative and innovative approaches respondents are taking in proactively engaging with intermediaries around climate-related issues. In some cases, respondents noted how intermediaries are beginning to take initiative by offering suggestions and recommendations relevant for improving their climate strategies.

COMPREHENSIVE APPROACHES TO ASSET MANAGER ENGAGEMENT

Many respondents disclosed how they are undertaking comprehensive and systematic approaches to engaging with their external asset managers around climate-related issues, from selection and monitoring to letting-go, as outlined in table 17.

COMPREHENSIVE APPROACHES TO ASSET MANAGER ENGAGEMENT		
Environment Agency Pension Fund	**Environment Agency Pension Fund (EAPF)**	EAPF currently undertakes a comprehensive integration of climate factors into its relationship with external asset managers, who are required to 'strive to operate to the best practice standards for RI and climate-risk relative to the mandate or service provided.' External asset managers are encouraged to sign up to PRI, CDP, the Paris Agreement and the Montreal Pledge and are also asked to directly support climate-related campaigns and opportunities External managers are also asked to perform scenario testing on relevant holdings as well as considering climate-resilience. All active mandates are required to integrate climate-related risks and opportunities and to undertake annual carbon and stranded-asset assessments. Once Brunel assumes responsibility for EAPF's investments, engagement with intermediaries is expected to become amplified, with climate-risk to be embedded across all asset classes and mandates for all of its clients, and the Transition Pathway to drive engagement priority plans (to be drawn up for each asset manager into clean engagement priorities), to be reported back on.
first state super	**First State Super**	First State Super are clear on its expectations of external managers in terms of reporting, starting with their IMAs. Managers are reviewed every two years on how they integrate ESG issues into their investments, in addition to continual dialogue to better understand the 'why' and 'what' aspects of their approach. First State Super recognises the 'journey' of asset managers integrating climate considerations, leveraging the performance of its leader asset managers to help drive improvements from those who are lagging. First State Super's 'weatherproofing' initiative also feeds into engaging with their managers around handling climate-related physical risks.

Table 17: Comprehensive approaches to asset manager engagement (continues on next page)

	LG Super	LG Super's Sustainable & Responsible Investment ('SRI') policy, a core element of LG Super's climate strategy and referenced by all investment policies, is integrated into all Investment Manager Agreements and manager reporting requirements. Managers also undergo six-monthly carbon audits and are required to provide case studies where ESG and carbon issues have influenced buy/hold/sell decisions. Every new fund strategy that is submitted to the investment committee for approval is required to have an ESG rating (including carbon). ESG reviews of managers also closely monitor the performance impact of negative screens, which have helped build confidence in developing a positive correlation between manager ratings and investment returns. LG Super also undertakes a rigorous approach to short-listing managers and undertaking due-diligence (in the private market space, LG Super are proactively seeking managers with IP capabilities).
	Vision Super	All manager appointments are made in consideration of climate-related issues when undertaking due diligence. Vision also monitors asset managers on the carbon performance of its equity portfolios on an annual basis or more frequently. Active managers are required to factor in the transition to a 2D aligned economy, and are regularly engaged on how climate-risks are factored into the assessment of particular portfolio positions. Vision also asks short-notice questions to asset managers to see how they are considering climate-risks, and are evaluated on the quality of and timeliness of their replies.
	Wespath Investment Management	Wespath incorporates climate factors into its annual ESG appraisal questionnaire (comprising 25 best-practice ESG indicators), which is used to inform ongoing monitoring and retention decisions regarding existing external managers. In our interview, Wespath noted that although its manager turnover is low, the appraisal process allows staff to deliver specific feedback and encourage ongoing progress regarding ESG integration. The appraisal helps Wespath better understand how managers are positioned for the low-carbon transition and reveals how ESG integration filters down from managers' organizational policies to everyday investment decision-making. This streamlined process allows Wespath to engage managers on ESG integration, build partnerships, create comprehensive manager profiles and clarify implications for lagging managers.

Table 17: Comprehensive approaches to asset manager engagement

CREATIVE USE OF METRICS AND TARGETS IN ASSET MANAGER ENGAGEMENT

Some respondents discussed how they are strategically using carbon footprinting data to engage constructively with their asset managers, as outlined in table 18.

USING CARBON FOOTPRINTING IN ASSET MANAGER ENGAGEMENT		
	ERAFP	ERAFP's selection process considers ESG criteria and asset managers are required to report each year on their carbon emissions. ERAFP receives additional research from a separate service provider (which computes the annual carbon footprint of their portfolio). The SRI team analyses both sets of data to identify any inconsistencies, which if identified, are used to challenge asset managers about their investment decisions. ERAFP has found this approach effective in ensuring confidence that its asset managers are comfortable with the climate strategies of the issuers they invest in.
	Unilever Pension funds	In its external manager selection and monitoring process, Unilever's pensions team undertakes a management evaluation framework questionnaire (containing 20+ questions), which addresses a variety of climate-related areas covering ESG integration, industry and public policy collaborative initiatives, and cases where sustainability information has been useful in investment decisions. Unilever also uses externally provided data on environmental factors to rate managers (by evaluating their portfolios), which enables comparison and also the identification of various topics to continue dialogue on.

Table 18: Using carbon footprinting in asset manager engagement

Other respondents discussed how they are incorporating climate-related targets into their asset manager relationships, as outlined in table 19.

USING CLIMATE-RELATED TARGETS IN ASSET MANAGER ENGAGEMENT		
	Stichting Pensioenfonds (ABP)	All of ABP's external asset managers are required to comply with the Responsible Investment policy and fall under a carbon budget (as developed in partnership with ABP's fiduciary (primary) external asset manager, (APG). This approach is unique in that external managers are allocated a portion of the total carbon budget they are required to invest within. Managers responsible for real-estate and infrastructure mandates are benchmarked against the GRESB survey both against peers in regions and themselves against previous years.
	Elo Mutual Pension Insurance Company	Elo Pension has set a target for all external asset managers to take climate into consideration by 2020. In our interview, Elo noted that the simple act of setting a target for their external asset managers aims to influence the development of the financial sector in a more sustainable direction. Elo also uses carbon data from an external service provider to review the carbon risk of portfolio managers.

Table 19: Using climate-related targets in asset manager engagement

DRIVING INNOVATION IN CLIMATE-RELATED PRODUCTS

In a small number of cases, responses discussed how they are prioritising the development of a new generation of climate-related products and services in their asset manager relationships, as highlighted in case study 9.

FINDING 8

Recognising how climate-related risks are becoming increasingly material to investment portfolios, a number of respondents discussed how they are prioritising climate-related issues in their risk and investment analysis. Table 20 outlines some of the most common approaches undertaken by respondents.

COMMON APPROACHES TO PRIORITISING CLIMATE CHANGE IN RISK MANAGEMENT SYSTEMS
Including or elevating climate-change in the general risk register
Developing and applying forward looking climate-risk methodologies (such as scenario analysis)
Undertaking carbon footprinting across asset classes
Exploring the physical risks from climate-change
Publishing TCFD-compliant public reports (see key finding 4)

Table 20: Common approaches to prioritising climate change in risk management systems

AP 7 – Developing new impact metrics

AP7's relationship with asset managers goes beyond the provision of managing services. In 2017, a tender was put out on how to measure and evaluate the real-impact for its green equity mandate. AP7's approach aims at 'unlocking' creativity in this space, especially in the absence of a standard methodology around measuring impact across the 'real economy.' This approach reflects AP7's belief that asset owners should assume proactive role in setting clear expectations and standards from external service providers.

Case study 9: Engaging with asset managers to develop new products

→ "One of the more challenging aspects of our climate change adaptation plan is understanding the risks in our portfolio as a result of the future potential and social impacts of climate change. We are close to finalising our portfolio assessment and "weatherproofing" any assets identified as high risk" – First State Super

Stichting Pensioenfonds (ABP)

ABP has recently classified climate-risk as a separate standalone risk category in its general risk taxonomy, elevating climate-risk to a status that will require structural risk management and reporting in the investment process.

Aviva

Climate-related risks are considered at the board level by the risk committee, which has developed a group-level risks spectrum (that tables risks from remote to proximate). Climate-risk is considered as a proximate risk on the basis that action is required now in order prevent climate-change from becoming a business risk in the future.

Case study 10: Integrating climate change into risk register – ABP & Aviva

APPLYING A FORWARD-LOOKING RISK ASSESSMENT LENS

Our analysis reveals that many respondents are moving toward a forward-looking approach in their climate-related risk assessments either by assessing the physical risks associated with climate change, or performing scenario analysis in line with the TCFD Recommendations.

The case study below outlines how a selection of respondents are prioritising physical-risk assessments in their climate strategies.

AP7
AP7 assesses its exposure to climate-related risks from a long-term universal owner perspective, and has built its portfolio to actively assume 'ownership' of the climate-related problems facing the 'real' global economy. From a climate-risk perspective, this has led AP7 to focus on addressing the direct physical risks stemming from climate change, and has prompted a systemic-oriented engagement approach to help align its portfolio with the physical risks associated with a Paris-aligned 2D scenario.

Environment Agency
Pension Fund

Environment Agency Pension Fund (EAPF)
EAPF's involvement in a study by Mercer helped it to assess physical impact risks across all asset classes.

EAPF are also collaborating with the actuarial industry in exploring the long-term expected impacts resulting from climate-change.

First State Super
A prominent feature of First State's Super climate strategy is its 'weatherproofing' programme, which is dedicated to better understanding climate-related physical risks and its expected portfolio impacts. The initiative stemmed from a desire to understand where their portfolios may potentially hold 'at risk' assets from severe weather events (including floods, sea level rises and hurricanes) and how to build in resilience and adaptation. This initiative looks at their asset holdings (across property, infrastructure and globally listed companies) to locate all operational sites in these high-risk locations.

Case study 11: Addressing the physical risks of climate change – AP7, EAPF & First State Super

Another important area respondents are taking a forward-looking approach to evaluating climate-related risks is via scenario analysis, as recommended by the TCFD Recommendations. Some respondents are exploring scenario analysis in collaboration with key research partners, while others are incorporating internally or externally developed climate-relevant scenarios into their in-house risk-assessments.

RESEARCH COLLABORATIONS AROUND SCENARIO ANALYSIS		
AVIVA	**Aviva**	In 2015, Aviva commissioned the Economist Intelligence Unit (EIU) to produce a report titled 'The cost of inaction: Recognising the value at risk from climate change', which considered a range of temperature scenarios. Aviva is also working with the 2 Degree Investing Initiative to analyse how close they are as an asset owner to achieving a 2D future, and have also applied the European Commission's Sustainable Energy Investment metrics to their equity and bond portfolios, which reveal both portfolios to be aligned to the Paris Agreement both now and in 5 years' time. These findings have also been fed into the investment strategy review of their businesses to help further shape their ongoing response.
AP7	**AP7**	AP7 has collaborated with other leaders (including PKA and PGGM, the primary asset manager of PFZW) with the think tank, Carbon Tracker, to develop the sector-specific scenario analysis report titled '2 Degrees of Separation' Report, which explores the transition risks facing the oil and gas sector under a low-carbon transition. AP7 is currently carrying out an engagement with companies targeted in the report with the scenario analysis being a basis for discussion on company's strategic CAPEX and climate change transition in line with the 2 degree target.
ILMARINEN	**Ilmarinen**	Ilmarinen has collaborated with the 2D Investing Initiative to undertake scenario analysis for three sectors within its direct listed equity portfolio, with new sectoral analyses being developed. The analysis has found that applying an IEA 2D scenario to 2020, its direct listed equity portfolio is already compliant for the power and fossil fuels sectors, however not for the automotive sector.
	New York State Common Retirement Fund (NYSCRF)	NYSCRF's participation in the 2015 Mercer study helped it to identify transition risks from high-emitting companies, which led to the development of their 'Low Emissions Index' products. The insights from the study also helped it to better understand what to look for and to plan for circumstances they perhaps hadn't previously considered.

Table 21: Research collaborations around scenario analysis

EXAMPLES OF HOW ASSET OWNERS ARE UNDERTAKING SCENARIO ANALYSIS		
	Stichting Pensioenfonds (ABP)	ABP conducted its first scenario analysis work in 2014, based on the International Energy Agency ('IEA') macro scenarios, which led to a qualitative assessment of risks and opportunities in their energy portfolio. Looking forward, ABP plans to further develop its approach to scenario analysis by applying not only 2D or well under 2D scenarios, but also a physical change scenario to help identify top risks. ABP also plans to develop a risk heat-map to help decide which risks are most pertinent according to scenario.
	Établissement de retraite additionnelle de la fonction publique (ERAFP)	ERAFP has measured the alignment of its equity portfolio's energy mix against the IEA's 2D scenario for 2030 and 2050, and found its fossil fuels holdings to already be aligned with the 2030 scenario (but not for its renewables holdings).
	First State Super	In 2015, First State Super undertook an extensive review of stranded assets in its portfolio (considered as those dependent on fossil fuels, exposed to carbon-pricing or tougher standards or vulnerable to new low-carbon technologies). The review involved establishing a scenario-based framework for identifying plausible future scenarios (four scenarios were applied roughly corresponding to the IPCC's transformation, policy coordination, policy fragmentation and inaction scenarios), as well as assessing the impact on specific regions, sectors and assets under each.
	Kommunal Landspensjonskasse (KLP)	In 2014, KLP undertook a review of stranded assets and risks in its portfolio (involving the use of various scenarios from IEA and IPCC), which led to the development of key tools within its strategy including its coal policy, carbon footprinting, engagement with high-carbon companies and the earmarking of capital for investing in new renewable opportunities.
	LG Super	LG Super reports to have considered and presented three IEA scenarios (new policies, current policies and 450) to the investment committee, which has helped to identify key issues such as declining growth in the coal industry and expected policy shocks. Considering these scenarios has also helped to formulate responses such as repositioning its strategic asset allocation and introducing a high-carbon sensitive screen.
	Penzioenfonds Zorg en Welzijn (PFZW)	PFZW reports to have developed relevant scenarios (incorporating technology, impact and policy factors) as a first step towards fully integrating climate-related issues in its investment activities.

Table 22: Examples of how asset owners are undertaking scenario analysis

FINDING 9

Our analysis reveals that the majority of respondents regard engagement with investee companies as a vital element of their climate strategies, with the tools and approaches adopted tending to vary in scope and purpose. Table 23 highlights the range of company engagement tools typically used to engage on climate-related issues.

MOST COMMONLY USED CLIMATE-RELATED COMPANY ENGAGEMENT TOOLS
Direct meetings (via letters, calls or meetings)
Engagement via an external service provider
Proxy voting (supporting climate resolutions)
Surveys
Co-filing climate resolutions
Collaborative initiatives

Table 23: Most commonly used climate-related company engagement tools

Établissement de retraite additionnelle de la fonction publique (ERAFP)
ERAFP's climate strategy combines its best-in-class investment approach with its collaborative engagement approach. To support its investment philosophy of investing in sustainability leaders across all sectors, ERAFP has undertaken strong engagement activities (via IIGCC) in lobbying for better climate-related governance, management and disclosure from companies.

First State Super
In 2014, First State Super commissioned an external service provider to undertake an analysis around its carbon footprint to help identify companies with potential stranded asset risk and high emissions exposure. The analysis fed directly into company engagement, to help better understand how these companies are managing the energy and emissions profile of their operations.

New Zealand Super Fund (NZSF)
In our interview, NZSF noted that its public policy engagement activities (around issues such as New Zealand government consultations on climate change and the integration of ESG issues into the New Zealand Stock Exchange Corporate Governance Code) provided a helpful platform for engaging with companies around climate change. NZSF also reviews how its managers are engaging on the issue of climate change and investment professionals responsible for direct private market investments are exploring how to integrate climate change into private company ESG governance across private asset classes.

Case study 12: Integrated company engagement approaches – ERAFP, First State Super & NZSF

COMPANY ENGAGEMENT INTEGRATED WITH OTHER CLIMATE STRATEGY ELEMENTS

A selection of respondents are strategically integrating company engagement with other core elements of their climate strategies including asset allocation, risk management, and policy engagement, as explored in the case study above.

→ "We welcomed the Paris agreement which was a great success, but only the first step. Now the commitments in the agreement need to be implemented and here we have identified corporate climate lobbying as a key to focus on in our governance" – AP7

GROWING ROLE OF COLLABORATIVE INITIATIVES

Nearly all respondents noted the increasing role that collaborative initiatives are performing in their climate-related investee company engagement approaches. Respondents with limited engagement resources tended to discuss collaborations as a cost-effective and impactful tool, which allows them to influence systemic-level outcomes otherwise beyond their reach. Other respondents noted the benefits of providing an 'asset owner voice' on company expectations, networking advantages, and access to valuable information. Table 24 outlines popular collaborative initiatives for climate-related company engagement.

POPULAR COMPANY ENGAGEMENT COLLABORATIVE INITIATIVES
Climate Action 100+
Coalition on Climate Change (IIGCC, AIGCC , IGCC & Ceres)
UN PRI (Principles for Responsible Investment)
CDP (formerly Climate Disclosure Project)
TPI (the Transition Pathway Initiative)

Table 24: Popular company engagement collaborative initiatives

The Church Commissioners for England

The Church Commissioners for England
A key feature of the Church Commissioners' climate strategy focuses around developing an assertive company engagement strategy, which focuses on key collaborative climate-related resolutions aimed at driving systemic change (such as the 'Aiming for A' and Exxon resolutions). In our interview, the Church Commissioners also described these resolutions as valuable in gaining commitment from large and influential asset managers around climate issues, as well as addressing cultural differences between regions at both corporate and asset management levels. The Church Commissioners note that all of its company engagement activities are delivered via collaborative initiatives on the belief that no single investor is able to change a company's strategy or drive progress on disclosure.

The Church Commissioners is also a founder of TPI (the Transition Pathway Initiative), an asset owner led systematic framework for assessing corporate alignment with the low-carbon transition (developed in partnership with the Grantham Institute at the London School of Economics). Other asset owners interviewed in this study associated with TPI include EAPF (also a co-founder), AP4 (supporter), Wespath (supporter) and PGGM (supporter, primary asset manager for PFZW).

Case study 13: A collaborative oriented climate strategy – The Church Commissioners

→ "The Church Commissioners are strong advocates of investor collaboration on climate change. We don't do anything alone. The more investors work together, the more influence they will have with policy makers and companies, and the more likely it is that they will help bring about the transition to a low carbon economy upon which the health of our economic, environmental and social system depends" – The Church Commissioners for England

COMPANY ENGAGEMENT FOCUSES ON KEY SECTORS AND ISSUES

Some respondents discussed how they are seeking impact in their company engagement practices by strategically targeting key climate-related sectors and issues, as outlined in table 25.

POPULAR SECTORS AND ISSUES TARGETED IN COMPANY ENGAGEMENT
Disclosure of emissions data
Climate strategies (including setting of robust Paris Agreement-aligned targets)
Climate-related risk assessment (including footprinting and scenario analysis)
Transition plans (for companies in high-carbon exposed sectors)

Table 25: Popular sectors and issues targeted in company engagement

AVIVA

Aviva

A strong element of Aviva's climate strategy is its company engagement. In 2015, Aviva identified 40 companies (identified as sourcing more than 30% of their business revenue associated with thermal coal mining or coal power generation) for focused engagement, which to date has resulted in 51 in-depth conversations. In its engagement, Aviva set out its expectations on governance, business strategy, operational efficiency, future investment plans and key climate-related issues. Aviva notes that despite some challenges engaging with companies in Asia, it has been encouraged by positive outcomes such as five companies committing to science based targets, some confirming mine closures and another inviting Aviva to feed advice into an early versions of its strategy. Aviva considers divestment as a last resort and only in cases where it identifies no prospects of positive change. In September 2017, two companies were added to its restricted list, for which it has since divested from active beneficial holdings wherever possible. The insurance company has also flagged that it is in the process of divesting from a further 15 companies, with another 6 companies classified for a final approach (the last stage before divestment). Aviva continues to engage with the remaining companies to encourage them to transition.

Case study 14: Engaging high-risk sectors – Aviva

AP7

A unique feature of AP7's climate strategy is its focus on holding companies to account against the goals of the Paris Agreement to the UN Framework Convention on Climate Change with the intention of driving behavioural change. Taking the perspective of a universal asset owner, AP7 actively identifies companies in its portfolio who are seen to be breaching the goals of the Paris Agreement either in terms of their policy lobbying activities or their business models (to date 70 companies have been excluded for various norms-breaches, 6 of those for climate issues). Complementing this approach is its targeted company engagement, which involves 'impact-focused' dialogue with over 100 companies covering topics such as oil exploration in the arctic, lobbying activities and the phasing out of fossil fuels from utilities companies.

AP7 has co-filed resolutions on oil companies' AGMs on this topic for a number of consecutive years in the US and recently filed a similar resolution at Rio Tinto's AGM. AP7 views the companies' annual general meetings as a forum to raise climate issues, influencing the conduct of individual companies in climate issues as well as bringing about a change in the entire market.

Pensionskassernes Administration (PKA)

In April 2018, PKA announced its divestment from 35 oil and gas companies on the basis that these companies were found to be misaligned with the goals the Paris Agreement. The divestment followed a process of focused engagement with 62 targeted oil and gas companies around their respective climate strategies and resulting financial risks. Of the remaining companies, 15 have been added to an observation list and 12 will remain in PKA's portfolio. The Danish pension fund has flagged the automotive industry as the next sector for review.

Case study 15: Defining company expectations in relation to Paris – AP7 & PKA

INNOVATION IN COMPANY ENGAGEMENT

Some respondents revealed unique, creative, and innovative approaches to company engagement, as outlined in table 26.

UNIQUE AND INNOVATIVE APPROACHES TO COMPANY ENGAGEMENT		
ILMARINEN	Imarinen	Ilmarinen takes a leading approach in bringing company engagement issues to public forums. The pension insurance company has arranged a Finnish Climate Workshop with carbon-exposed companies for the purpose of asking challenging questions around strategy and scenario analysis as well as sharing best-practice. Ilmarinen engages in healthy direct engagement with companies in Finland (raising issues such as reporting via CDP) and has found companies in Finland are willing to demonstrate their climate-related progress to investors and other companies. Also, Ilmarinen has participated internationally in climate-related resolutions and 2D-aligned initiatives.

Table 26: Unique and innovative approaches to company engagement (continues on next page)

	Pensionskassernes Administration (PKA)	PKA takes a creative approach by using proxy voting to evaluate the effectiveness of multi-year climate-related company engagements. If a company responds negatively to a climate-related resolution, it indicates the engagements have not resulted in positive change. PKA also promotes proxy voting on climate-related issues as a powerful tool to mobilise investors to speak with a single voice.
	Vision Super	Vision has taken advantages of proxy voting platform technology which allows it to isolate specific action themes (such as climate-related resolutions) out of thousands of resolutions, from which it formulates clear positions on a through case by case approach.

Table 26: Unique and innovative approaches to company engagement

FINDING 10

Recognising the impact of supportive regulation and policy on accelerating the low-carbon transition, a number of respondents discussed lobbying on regulation and policy as a key component of their climate strategies. One collaborative vehicle commonly raised was the Institutional Investors Group on Climate Change (IIGCC). Some respondents are undertaking focused campaigns aimed at driving progress in key regulatory and policy areas, as outlined in case study 16.

Caisse des Dépôts (CDC)
CDC held active discussions with the French government prior to Article 173 to ensure the regulation was practical, aligned and ambitious.

The Church Commissioners for England

The Church Commissioners for England
In our interview, the Church Commissioners discussed the importance of driving improvements in public policy (especially around the setting of economic incentives such as carbon pricing and aligning with the goals of the Paris Agreement) in accelerating the low-carbon transition. The faith-based investor has made public policy one of its climate strategy pillars, and is highly active in policy lobbying efforts via IIGCC, GIC and the PRI.

Établissement de retraite additionnelle de la fonction publique (ERAFP)
As part of its engagement programme, ERAFP has lobbied (via IIGCC) for the introduction of a price of carbon, and has also prioritised lobbying for the end of fossil fuel subsidies.

Vision Super
In response to uncertainty in Australia's energy policy, Vision submitted a letter to every federal parliamentarian in Australia asking for certainty and bipartisanship around energy policy and progress in transitioning to a zero-degree world. Vision is also involved with the UNPRI Tax Initiative recognising that unstable and shrinking tax bases have a negative impact on climate mitigation and adaptation initiatives.

Case Study 16: Focusing on regulation and policy – CDC, the Church Commissioners, ERAFP & Vision

BACKGROUND

This section explores seven common barriers commonly faced by our respondents in the development and implementation of their climate strategies, and considered relevant for all asset owners interested in managing climate-related issues.

KEY FINDINGS

COMMON BARRIER 1

Data quality concerns

COMMON BARRIER 2

Lack of momentum in regulation and policy

COMMON BARRIER 3

Perceived lack of low-carbon investment opportunities

COMMON BARRIER 4

Misaligned time horizons

COMMON BARRIER 5

Prevalence of traditional mind sets

COMMON BARRIER 6

Lack of confidence in asset managers

COMMON BARRIER 7

Language concerns

COMMON BARRIER 1: DATA QUALITY CONCERNS

Concerns around data quality clearly emerged as the most dominant barrier encountered by our respondents, as outlined in table 27.

COMMON DATA-RELATED BARRIERS FACED BY ASSET OWNERS
Data quality (especially around scope 3 emissions and coal data)
Data availability (available data out of date)
Data comparability
Most data still voluntary and not verified
Lack of forward-looking climate-risk methodologies
Lack of data around the physical impacts of climate-change
Lack of data around sustainable development
Challenges of applying carbon footprinting across asset classes
Expectations and available methodologies around scenario analysis
Lack of robust impact metrics
ESG ratings from service providers not correlated
Difficulties in translating ESG data into financial metrics

Table 27: Common data-related barriers faced by asset owners

Limitations around carbon footprinting were raised by many respondents as a barrier, generally on account of its backward-looking focus, dependence on estimated and incomplete data, and a lack of available methodologies for all asset classes.

Scenario analysis also emerged as a common area of concern, particularly around a lack of clarity and standardisation relating to how asset owners are expected to undertake and integrate scenario analysis in their climate strategies. Some respondents noted they found scenario analysis useful for education or strategy framing, but were not yet using scenario analysis for investment valuations. A lack of issue and sector-specific climate scenarios was also raised as a barrier behind the limited uptake of scenario analysis by asset owners.

COMMON BARRIER 2: LACK OF MOMENTUM IN REGULATION AND POLICY

Some respondents noted limitations around climate-related regulation and policy as a barrier in their climate strategies, as outlined in table 28.

As discussed earlier, some respondents are taking proactive steps in influencing regulation and policy to become more supportive of an accelerated low-carbon transition. One respondent emphasised the need for a regulatory "level playing field" across asset classes to prevent climate-risks simply being transferred from one asset class to another one with less regulatory oversight.

EXAMPLES OF REGULATORY AND POLICY CHALLENGES FACED BY ASSET OWNERS
General – Policy uncertainty around fiduciary duties and climate-related investment approaches
UK – Fragmented approach from regulatory bodies around climate-related regulation
Sweden – Regulation limiting public pension funds' investments in private markets
Australia – Energy sector policy uncertainty & challenges in lodging climate resolutions
Insurance – Solvency II

Table 28: Examples of regulatory and policy challenges faced by asset owners

COMMON BARRIER 3: PERCEIVED LACK OF LOW-CARBON INVESTMENT OPPORTUNITIES

Finding enough investable low-carbon opportunities was raised by a number of respondents as a barrier, though this perspective was not shared by all. Regarding green bonds, one respondent noted that they were unsatisfied with the quality of offerings from banks, prompting an internal review of what they consider a 'green' investment. Some larger respondents noted it was difficult to find low-carbon opportunities large enough for them to invest in, with one respondent indicating they were considering 'bundling' options to overcome this hurdle. Other respondents discussed the strong demand for low-carbon opportunities in private markets from both foreign and domestic investors, which limit their opportunities. Some respondents also reported liquidity constraints as an issue where opportunities existed, in non-equity asset classes.

However, some respondents noted they had experienced no issues in finding enough investable low-carbon opportunities to meet their needs. One respondent noted that once they had expressed an interest in these opportunities, they received an influx of requests and the idea of a shortage of such opportunities is more of a "human barrier". The respondent also noted in increase in service providers offering a mapping of low-carbon solutions', as a positive development.

COMMON BARRIER 4: MISALIGNED TIME HORIZONS

Misaligned time horizons also emerged as a common barrier shared by a selection of respondents.

One respondent referred to the challenge of addressing varying timelines across the range of climate-related risks and opportunities (transitional and physical), while another respondent referred to the typical 1-5 year time horizon of risk managers as misaligned with the expected physical impacts of climate change. Another respondent raised the issue of contrasting timelines between asset managers, consultants, and asset owners. The commonplace adoption of market-based benchmarks in investment practices was also raised by some respondents as a barrier, since these are not designed to factor in long-term issues such as climate change.

COMMON BARRIER 5: PREVALENCE OF TRADITIONAL MIND SETS

The prevalence of traditional mind sets in the financial system was also identified by some respondents as a barrier. One respondent discussed how they regularly encountered peers who still consider ESG and financial performance as mutually exclusive, while another noted the prevalence of trustees who still regard climate-related issues as an ethical or political issue.

COMMON BARRIER 6: LACK OF CONFIDENCE IN ASSET MANAGERS

A general lack of confidence in the asset management community around climate-related products and services was also raised by a number of respondents as a barrier. One respondent noted that they felt asset managers generally lacked a nuanced understanding of climate-risk approaches, while another expressed dissatisfaction with the climate-related stewardship services currently on offer. One respondent explained how some asset managers they had engaged with felt uncomfortable with advising clients in a more forward-looking manner, due to data quality concerns. Another respondent emphasised the need for asset owners to become more vocal in expressing their expectations of asset managers around climate-related products and services, to help stimulate development.

COMMON BARRIER 7: LANGUAGE CONCERNS

Some respondents highlighted the importance of language in successfully communicating progress around climate strategies as well as influencing more holistic and forward-looking mind sets. One respondent called for language to shift from obscure labels such as ESG and SRI toward a more 'SDG' aligned narrative, as more forward-looking and relatable to millennials. Other respondents called for language that is simple and clear for a range of audiences.

OTHER BARRIERS FACED BY ASSET OWNERS
Unable to determine the footprint of fixed income assets such as sovereign bonds
Cases when investors get too close to companies
Climate-related lobbying inconsistencies by companies
Stakeholders yet to fully embrace sustainable investing, ESG and sustainable development
Achieving consistency across various internal groups
Overall dissatisfaction with quality of corporate climate-related disclosure
Discriminating between material and non-material climate-related issues
Biased press
Failing to recognise climate change as an existential threat
Risk averse trustees

Table 29: Other barriers faced by asset owners

BACKGROUND

This final section presents a framework of ten key building blocks offered by our respondents for other asset owners including large and small pension funds, sovereign wealth funds, charities, and foundations. In our interviews, we asked respondents to draw from their experience to offer some practical, cost-effective, and impactful recommendations relevant for other asset owners at earlier stages of their climate strategy journeys. From the broad range of advice we received, we formulated the following ten key building blocks.

KEY FINDINGS

BUILDING BLOCK 1:
Get educated on climate change issues

BUILDING BLOCK 2:
Focus on climate governance

BUILDING BLOCK 3:
Focus on communication

BUILDING BLOCK 4:
Start now but follow a step-based approach

BUILDING BLOCK 5:
Develop a formalised climate-related strategic response

BUILDING BLOCK 6:
Start with small low-carbon investments

BUILDING BLOCK 7:
Consider climate change as an investment risk

BUILDING BLOCK 8:
Start supporting climate-related shareholder resolutions

BUILDING BLOCK 9:
Join a collaborative initiative

BUILDING BLOCK 10:
Start carbon-footprinting your listed equity portfolio

BUILDING BLOCK 1:GET EDUCATED ON CLIMATE CHANGE ISSUES

Becoming informed on climate-related issues was noted by the majority of respondents as a key step in their climate strategy journeys. Connecting with experienced climate-related professionals (including research experts, service providers and leading peers) was recommended as the easiest, most cost-effective and impactful way to gain valuable knowledge. Some respondents discussed how involving external experts helped to lend legitimacy to their climate strategy journey and gain internal commitment. Staying abreast of climate-related legal and policy developments was also recommended as climate awareness continues to become increasingly factored into the responsibilities of trustees. Sharing climate-related knowledge internally was also recommended for helping clear any misconceptions around climate change as a material investment risk and driving internal commitment.

BUILDING BLOCK 2: FOCUS ON CLIMATE GOVERNANCE

Building a strong climate-related governance framework was also recommended as a key step in developing an effective climate strategy. Many respondents emphasised the value of achieving ‘buy-in’ and leadership from senior management and trustees, with climate-related education and training recommended as helpful approach. Other respondents noted the value of developing climate-related investment positions, beliefs, and statements in their governance journeys. Some respondents recommended to “bring your organisation along with you”, with climate-related incentive schemes, training, and participatory involvement noted as helpful initiatives. The TCFD recommendations also provide a helpful framework for improving climate governance, such as strengthening board oversight and clarifying management’s role in assessing and managing climate-related risks and opportunities.

BUILDING BLOCK 3: FOCUS ON COMMUNICATION

Some of our respondents emphasised the importance of communication in delivering successful climate strategies, especially in gaining the attention of key internal and external stakeholders, and building constructive relationships with external service providers. Using normal and relatable language also helps to communicate on climate-related issues on a level that resonates with multiple audiences. Some respondents also advised to avoid the ‘political’ dimension of climate change in their communications by focusing specifically on the investment risks and opportunities.

BUILDING BLOCK 4: START NOW BUT FOLLOW A STEP-BASED APPROACH

Many of our respondents emphasised the importance of starting as soon as possible in developing climate strategies, and to follow a step-based approach (warning that trying to achieve too much too quickly could backfire and result in inertia). It is important to recognise that the leading climate strategies explored in this report developed over a period of years, generally following an iterative process of trial and error. A step-based approach also allows space to learn from experience, noted by respondents as a valuable part of the learning curve. One respondent noted the importance of establishing a sound climate-governance foundation before exploring more “exciting” areas such as low-carbon opportunities.

BUILDING BLOCK 5: DEVELOP A FORMALISED CLIMATE-RELATED STRATEGIC RESPONSE

Developing a formalised climate-related strategic response was recommended by some respondents, offering benefits such as identifying potential barriers and gaining commitment from key internal and external stakeholders. One respondent advised to begin collecting all climate-related activities into a single document, as it could reveal that more is already being done than initially realised. Developing a more formalised climate-related response also helps trigger internal conversations around climate-related investment risks. One respondent noted that developing clear goals, objectives, responsibilities, and targets can help gather commitment and momentum, while another recommended the TCFD framework as helpful for steering climate strategy development.

BUILDING BLOCK 6: START WITH SMALL LOW-CARBON INVESTMENTS

Some respondents recommended to start small with low-carbon investments, to help build a strong understanding of this investment category before escalating commitments. Equities (where the best data is available) and illiquid assets (where the most opportunities are emerging) were recommended as the most appropriate areas to consider.

BUILDING BLOCK 7: CONSIDER CLIMATE CHANGE AS AN INVESTMENT RISK

Other respondents recommended to start considering climate change from an investment-risk perspective. One respondent suggested to begin by assuming the Intergovernmental Panel on Climate Change (IPCC) scenarios are correct, and to apply this framework for examining portfolios for identifying risk-exposed regions, sectors, or asset classes. Another respondent recommended the Transition Pathway Initiative website as a freely available tool to help investors identify the sector-related climate-risks of companies in their portfolios. Exploring portfolio-exposure to fossil-fuels was recommended by another respondent, with coal the easiest place to start.

BUILDING BLOCK 8: START SUPPORTING CLIMATE-RELATED SHAREHOLDER RESOLUTIONS

Some respondents recommended to start voting in support of climate-related shareholder resolutions as a cost-effective and impactful entry point for engaging with companies on climate-related issues. Engaging with companies on improving their climate-related disclosure was also recommended due to the importance of data quality for successful climate strategies.

BUILDING BLOCK 9: JOIN A COLLABORATIVE INITIATIVE

Joining a collaborative initiative was recommended by nearly all respondents as an affordable and highly valuable element of their climate strategy journeys. Some benefits raised include access to valuable information, network building, sharing best practice, and driving engagement outcomes beyond the reach of any single investor. Highly recommended collaborative initiatives include the UN Principles for Responsible Investment (PRI), CDP (formerly Carbon Disclosure Project), the Institutional Investors Group on Climate Change (IIGCC), the Transition Pathway Initiative and the Climate Action 100+.

BUILDING BLOCK 10: START WITH CARBON-FOOTPRINTING YOUR LISTED EQUITY PORTFOLIO

Our analysis highlights how respondents are using their carbon footprinting data in a variety of creative ways, from setting targets to identifying portfolio-risk, and engaging with asset managers. Some respondents recommended to start with carbon footprinting in their equity portfolios, where the data and available products are most developed. Beginning carbon footprinting also helps develop carbon data literacy and, as just reiterated, can be used for a range of purposes. Some respondents suggested once footprinting had been undertaken some natural next steps could involve assessing stranded asset risks or undertaking forward-looking assessments such as scenario analysis.

PRIORITIES LOOKING AHEAD

This section covers the priorities outlined by the leading asset owners in developing their climate strategies over the coming months and years.

Nearly every respondent mentioned they would be stepping up their involvement in the Climate Action 100+ initiative over the coming year, reflecting the growth of collaborative initiatives in leading climate strategies. Some of the respondents directly involved with the Transition Pathway Initiative also noted they would be escalating the role of this initiative in their climate strategies.

Another popular theme respondents noted on their radars are the Sustainable Development Goals (SDGs), which are being monitored from a range of perspectives. These include following impact methodologies, assessing portfolio alignment with the SDGs, undertaking thematic research around selected SDGs, and seeking SDG-aligned investment opportunities.

Scenario analysis also emerged as a common theme, with many respondents noting they will be focusing on improving their scenario analysis approaches, still considered by many as a 'work in progress.' Some approaches include developing more sector-specific scenarios (beyond fossil fuels), exploring how to integrate scenario analysis into investment valuation, and improving the quality of underlying data.

Some respondents noted they would be focusing on other areas of their climate-related risk assessment approaches, such as exploring new ESG integration tools, improving carbon footprinting across all asset classes, and developing physical-risk evaluations for both sector and company levels.

Sourcing more low-carbon investment opportunities was also identified by a number of respondents, with some focusing on improving passive strategies and others are looking beyond the renewables space.

Other priorities raised in our interviews include monitoring regulation and policy, the TCFD framework, and engaging further with asset managers around climate-related issues.

Our research into the climate strategy journeys of leading asset owners offers a range of valuable insights, which are relevant for the wider investment community. Our first section reviewed how asset owners are responding to the TCFD framework, with some already leading the way in TCFD-aligned reporting. The diversity of respondents in terms of size, location, and category, also highlights how achieving best practice is possible for asset owners of all shapes and sizes. It should be noted, however, that there is always room for improvement, with even best practice respondents needing to continually review and reassess the effectiveness of their climate strategies.

Furthermore, our exploration of the role organisational culture has often played in influencing climate strategies should encourage other asset owners to be mindful of how their own cultures may assist or inhibit their own handling of climate-related risks and opportunities. Our consideration of purpose also highlights how leading asset owners have assessed climate-related issues from a fiduciary perspective, even though the law does not yet require it.

Our second section reviews some of the common barriers facing asset owners, with data quality concerns clearly emerging as the most dominant theme. This insight should prompt all actors in the financial community to reaffirm and escalate their efforts to improve the quality of climate-related disclosure from companies, as a key input for all climate strategies. Our interviewees also highlighted the need for further clarification around how asset owners are expected to undertake forward-looking scenario analysis, and the need for more financially relevant and sector-specific scenarios.

Many respondents continue to face significant low-carbon investment challenges resulting from a lack of supportive regulation and policy. This insight should prompt regulators and supervisors to ensure that their frameworks are supportive of a low-carbon transition and serve to facilitate, rather than limit, the ability of asset owners to supply much-needed capital. Such an outcome would also help address another related barrier, the perception of insufficient low-carbon investment opportunities. Some respondents noted challenges in finding enough suitable opportunities for their investment-willing capital. However, this perspective should be balanced with the experience of others who reported facing no such challenges in finding such opportunities.

A general lack of confidence in the asset management community was also identified by respondents, though some respondents reported asset managers taking initiative on climate-related products and services. Promisingly, some respondents are demonstrating leadership by setting clear requests and expectations of their service providers, which should remind other asset owners of the powerful and positive influence they can drive across the investment chain.

Our final section reviews a range of recommendations from respondents for other asset owners who are at earlier stages of their climate strategy journeys. The framework contains ten practical, cost-effective, and impactful building blocks designed to be of value for all asset owners, including those with limited resources. The framework emphasises that developing climate strategies is a journey, to be taken one step at a time, and, like most successful initiatives, are most effective when undertaken in partnership with key stakeholders. Achieving a financial system aligned with the goals of the Paris Agreement is clearly beyond the scope of any single actor, and will require collective and harmonised efforts toward realising this shared goal.

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APPENDIX I - LIST OF CASE STUDIES

Case study 1: 'Whole of fund' approaches – EAPF & LG Super
Case study 2: Targets driving climate strategies – ABP Elo Mutual & PFZW
Case study 3: Multiple-asset class investment approaches – Aviva, ERAFP & Ilmarinen
Case study 4: Growing low-carbon 'real assets' – PKA
Case study 5: Exploring opportunities in emerging economies – KLP & Wespath
Case study 6: Gaining board-level commitment – The Church Commissioners, PFZW & First State Super
Case study 7: Climate-related education and training – ERAFP & First State Super
Case study 8: Integrated company engagement approaches – ERAFP, First State Super & NZSF
Case study 9: A collaborative oriented climate strategy – The Church Commissioners
Case study 10: Engaging high-risk sectors – Aviva
Case study 11: Defining company expectations in relation to Paris – AP7
Case study 12: Membership engagement triggering climate strategy development – First State Super and KLP
Case study 13: Engaging with asset managers to develop new products
Case study 14: Integrating climate change into risk register – ABP & Aviva
Case study 15: Addressing the physical risks of climate change – AP7, EAPF & First State Super
Case Study 16: Focusing on regulation and policy – CDC, the Church Commissioners, ERAFP & Vision

APPENDIX II – LIST OF INTERVIEW QUESTIONS

1. What is the most exciting/innovative part of your climate strategy?
2. How would you describe the purpose of your climate strategy?
3. What barriers have you overcome in implementing your climate strategy?
4. How does your governance framework ensure the top levels of your organisation are fully
5. engaged with your climate strategy?
6. How are you ensuring your climate strategy is aligned with the interests of your beneficiaries?
7. What part of your engagement practices (with companies, policy-makers or members) would you consider best-practices?
8. How are you engaging with intermediaries (asset managers, investment consultants & proxy
9. advisors) to drive positive change on your climate strategy?
10. What are the key priorities for your climate strategy for 2018 and beyond?
11. What new initiatives do you expect to develop in this field in the coming years?
12. What key/easy steps would you recommend for other asset owners who are beginning their climate strategy journey?

DISCLAIMER

ABOUT SHAREACTION

ShareAction (Fairshare Educational Foundation) is a registered charity that promotes responsible investment practices. ShareAction believes that responsible investment helps to safeguard investments as well as securing environmental and social benefits.

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ABOUT AODP

The Asset Owners Disclosure Project (AODP) rates and ranks the world's largest institutional investors and assesses their responses to climate-related risks and opportunities. The ratings are made public, providing much-needed transparency for beneficiaries, clients, investors, and stakeholders, and emphasised through advocacy and direct engagement to drive change.

In June 2017, ShareAction announced an agreement to take over the reins of the Asset Owners Disclosure Project (AODP). The intention was to build on the strong foundations established by 10 years of experience carrying out climate-related investor analysis. As the only comprehensive, climate-specific, independent, non-self-selective assessment, AODP prides itself on being the world's benchmark of climate leadership in the investment system.

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