

Investing for tomorrow – macro (IFTM) | background

A summary of IFT research in 2021 and 2022

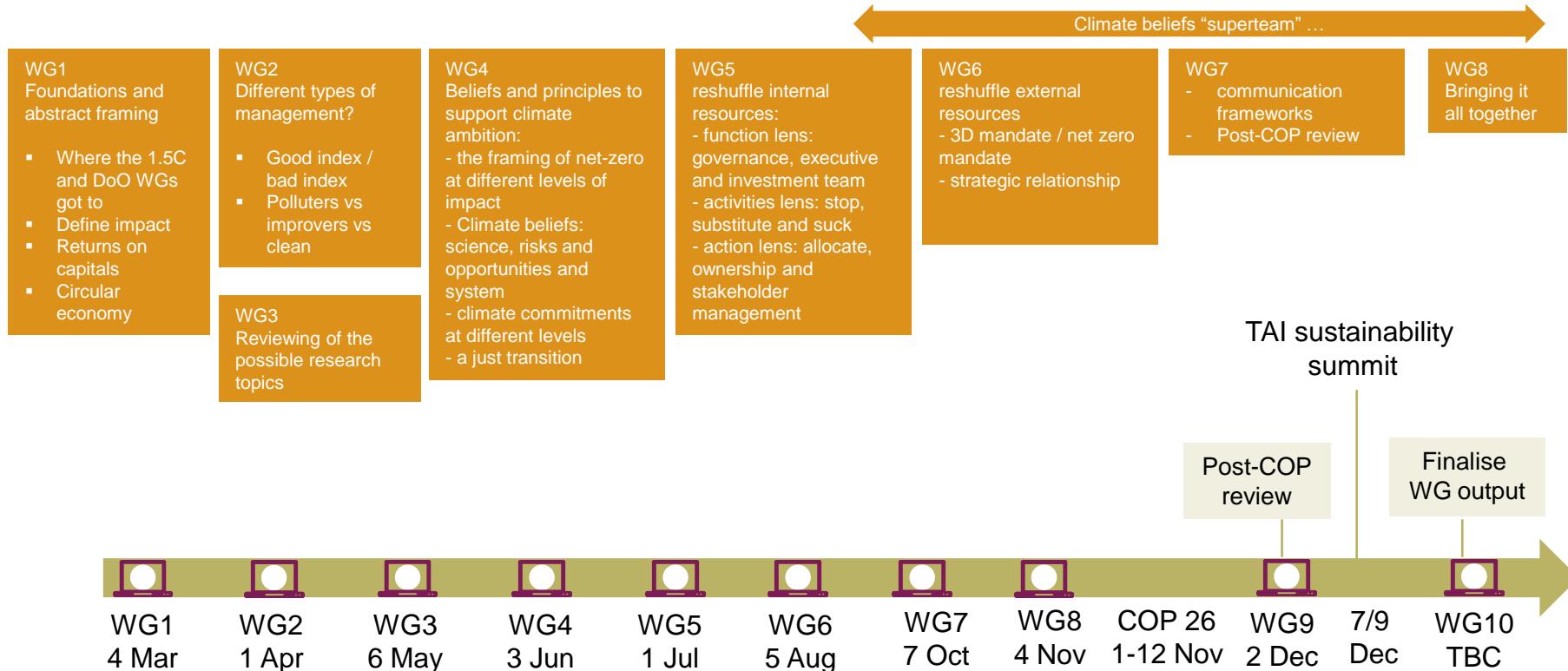


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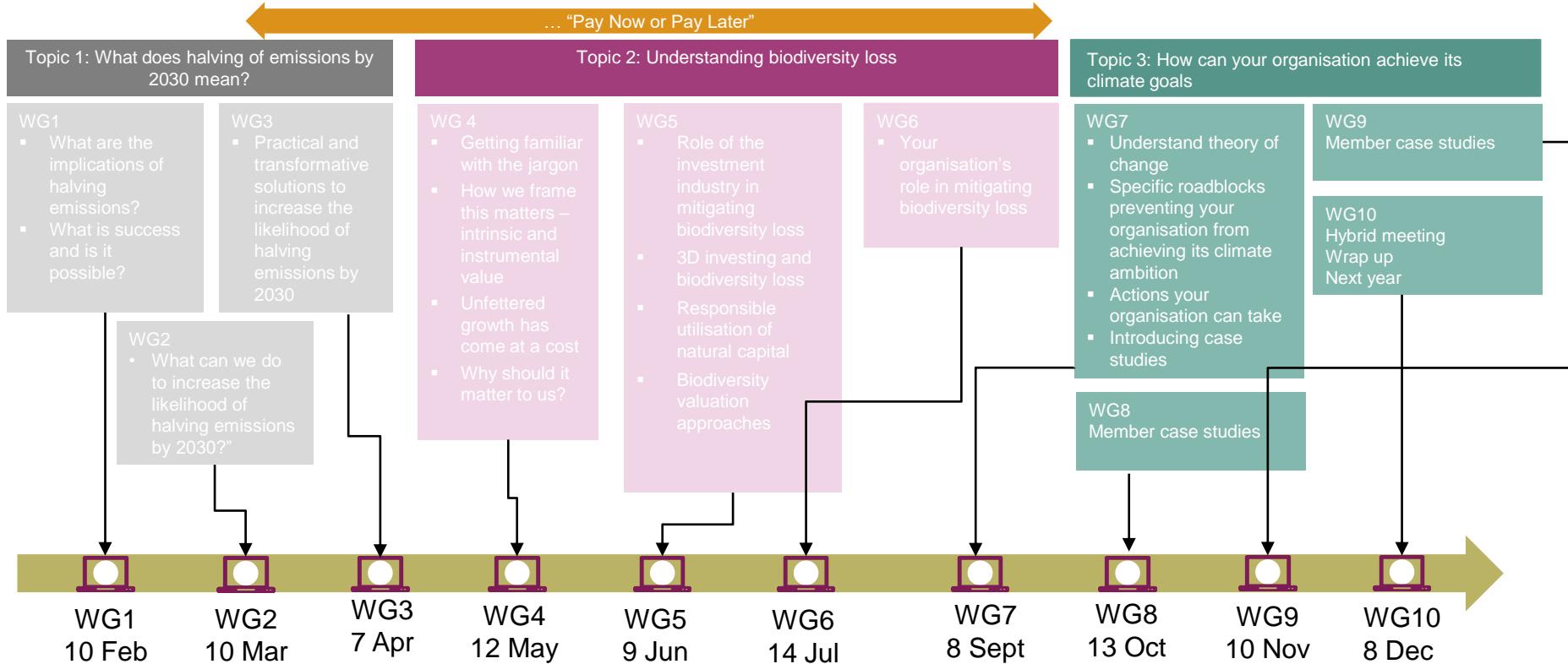
Overview of the Investing For Tomorrow (IFT) journey

IFT Climate 2021

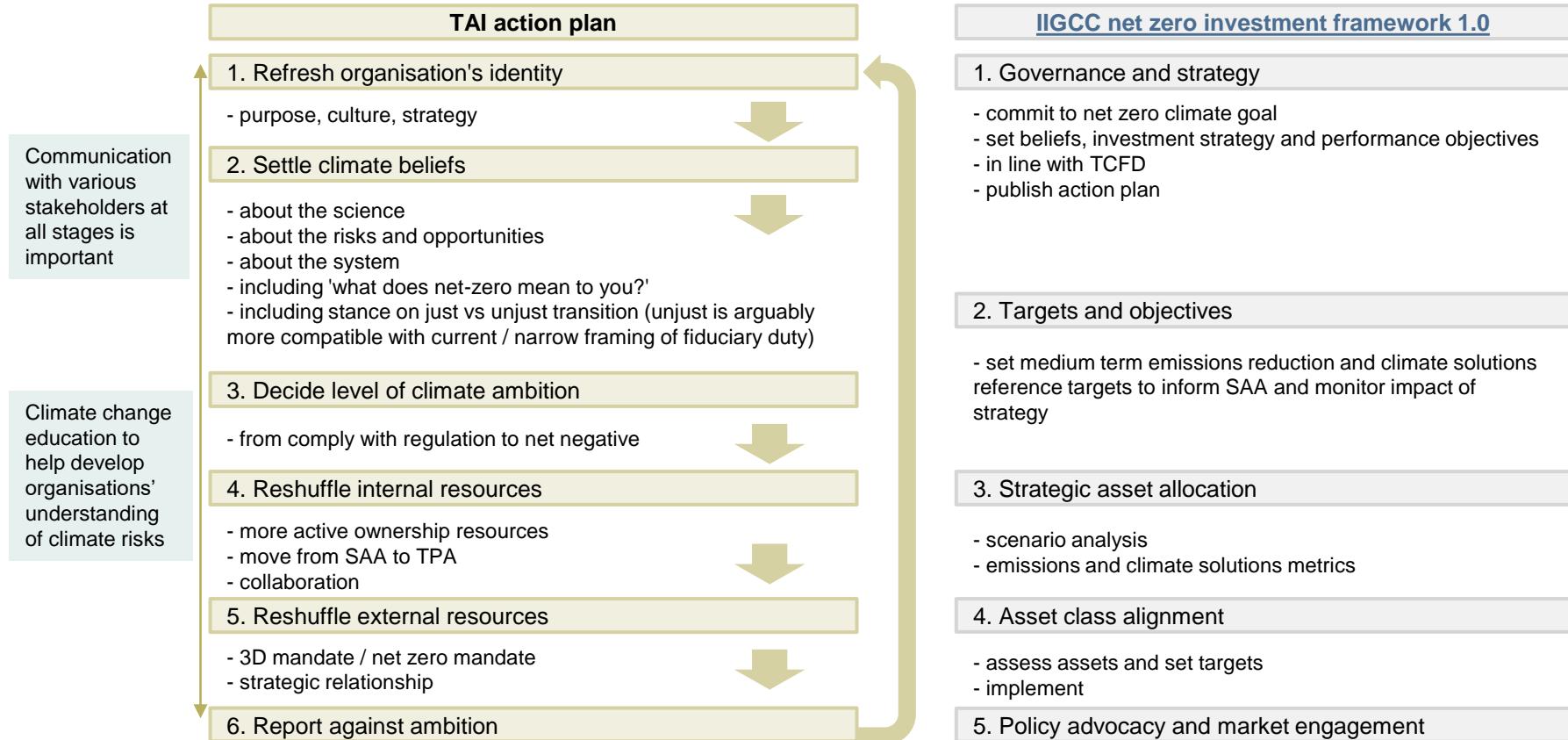


Overview of the Investing For Tomorrow (IFT) journey

IFT Environment 2022



Investing for tomorrow – six step action plan for changing the climate trajectory



Motivating climate action

Motivating climate action

Challenges

- Transition to a low carbon economy framed as a cost relative to a “no effect from climate change” baseline
- Data/evidence is viewed as insufficient for taking action
- Existing climate models suffer from some or all of the following challenges
 - Calibrated to historical underestimation
 - Overly simplified view of physical risks (e.g. only activities taking place outdoors are impacted by extreme weather)
 - Assuming linear/smooth relationships; inability to capture climate “tipping points”
- As a result physical risk impacts are generally underestimated as are the benefits of transition

TAI contribution

- Frame climate action as a choice between transitioning the economy or transitioning the climate
 - ie the “no climate change” baseline does not exist
- Define scenarios for climate action (pay now) and climate inaction (pay later) that can be compared to each other
- Survey the available evidence at 1.2C warming of escalating physical risk impacts to confirm that there is already enough evidence to justify action
- Attempt to “correct” for the weaknesses in climate models to establish more realistic estimates of the impact of climate action/inaction on financial assets

Key output: [Pay Now or Pay Later?](#)

A “no impact from climate change” baseline does not exist

We can either:

- Make material effort towards the **transition of the economy** and achieve a (relatively) low expected temperature increase, with constrained damages from physical risks; or
- Make low effort towards the economy transition and instead **transition the climate** resulting in high expected temperature increases, with increased damages from physical risks

Category	Scenario	Physical risk		Transition risk		
		Policy ambition	Policy reaction	Technology change	Carbon dioxide removal	Regional policy variation ⁺
Orderly	Net Zero 2050	1.5°C	Immediate and smooth	Fast change	Medium use	Medium variation
	Below 2°C	1.7°C	Immediate and smooth	Moderate change	Medium use	Low variation
Disorderly	Divergent Net Zero	1.5°C	Immediate but divergent	Fast change	Low use	Medium variation
	Delayed transition	1.8°C	Delayed	Slow/Fast change	Low use	High variation
Hot House World	Nationally Determined Contributions (NDCs)	~2.5°C	NDCs	Slow change	Low use	Low variation
	Current Policies	3°C+	None – current policies	Slow change	Low use	Low variation

Colour coding indicates whether the characteristic makes the scenario more or less severe from a macro-financial risk perspective^a

- Lower risk
- Moderate risk
- Higher risk

Source: NGFS, [NGFS Climate Scenarios for central banks and supervisors](#), 2021, p. 9

Weaknesses in existing climate models and related analysis

Historical underestimations

- Historically, many climate scientists' predictions have been conservative, and effects of climate change have occurred sooner than expected or on a larger or more intense scale
- This leads to climate scenarios that do not consider outcomes, such as tipping points and feedback loops, where one negative effect worsens itself or another

Path dependency and the irreversibility of time

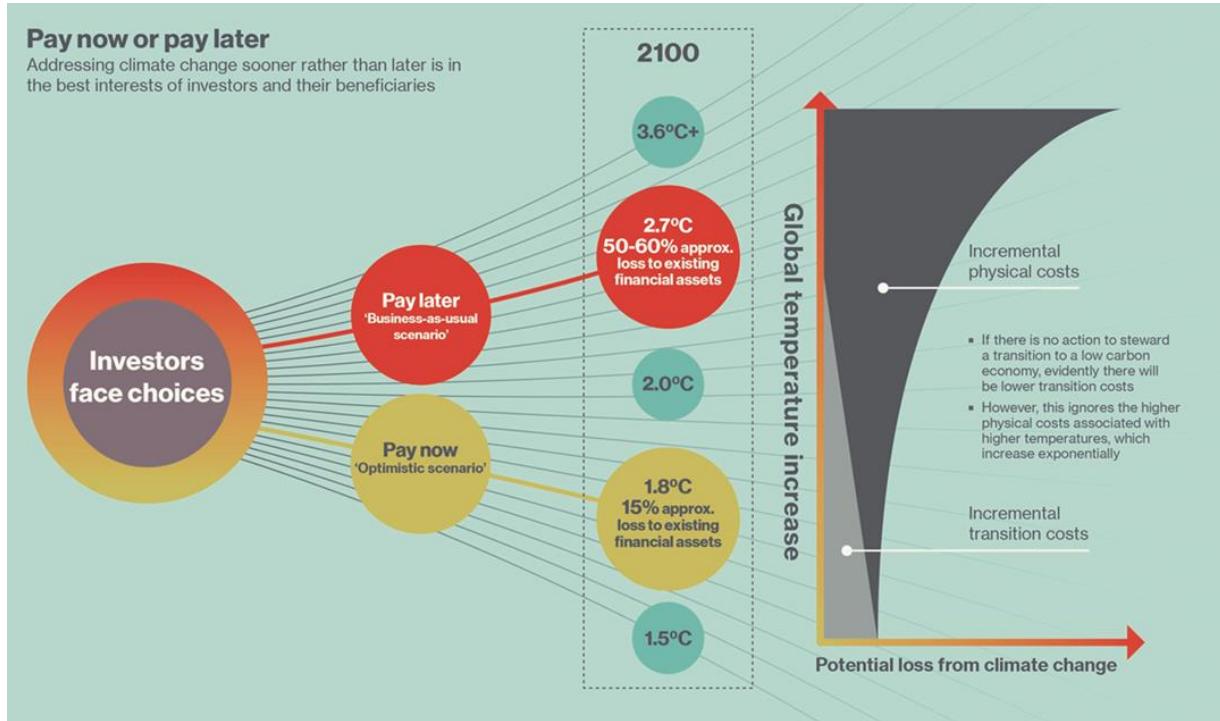
- Path dependency shows that the decisions taken in the short term will determine what long-term outcome is possible
- The irreversibility of time shows that we only get to make those decisions once; we cannot go back and amend them

Climate tipping points

- Large parts of the climate system that can pass tipping points are called 'tipping elements', and it is also possible to tip the entire climate system
- These tipping points have a significant probability of occurring at current warming levels and a high probability at 2C or above
- The crossing of one tipping point can trigger a cascade of further tipping points
 - For example, the collapse of the AMOC would fundamentally change the European climate, raise sea levels in the North Atlantic by 1m, and disrupt monsoons around the tropics
- We are taking a climate system that has provided a pleasant niche in which humans have thrived, and moving it into a new state – hotter, more dangerous and less pleasant – with no path back
- This calls for grown up risk management and sharp thresholds to be built into our models' damage functions

Impact of climate action vs inaction on financial assets

It is preferable to pay now than pay later



Refreshing organisational identity/purpose

Incorporating climate in organisational purpose

Challenges

- Many organisations have made a net zero commitment but do not fully understand the implications of this
- The compatibility of climate and broader sustainability goals with fiduciary duty continues to be contested
- Even when there is motivation to adopt real world climate goals a number of practical roadblocks prevent real progress

TAI contribution

- Emphasise that real world emission reductions (should) be the focus of net zero commitments
- Develop the “stop, substitute, siphon” framework for high level actions
- Validation that climate considerations can/should be incorporated within fiduciary duty
- Set out principles/beliefs/priors consistent with incorporating climate into organisational goals
- Identify key blockers to further progress as indicators for where further action is required

Key output: [How do we get there? | a roadmap for asset owners to set and meet their climate objectives](#)

Investors are part of the economic system that must address climate change

Limiting temperature increases = staying within the (cumulative) carbon budget

1.5C carbon budget will last ~ 9 years at current emission levels

Approximate global warming relative to 1850–1900 until temperature limit (°C) ^a	Additional global warming relative to 2010–2019 until temperature limit (°C)	Estimated remaining carbon budgets from the beginning of 2020 (GtCO ₂)				
		17%	33%	50%	67%	83%
1.5	0.43	900	650	500	400	300
1.7	0.63	1450	1050	850	700	550
2.0	0.93	2300	1700	1350	1150	900

Source: IPCC

The stop, substitute, siphon framework defines high level activities for changing the climate trajectory

1. We have to stop emissions

- Writing down otherwise realisable value (c.f. paying an insurance premium to protect the value in the rest of the portfolio)
- Divestment is not the answer
- Reallocate the carbon budget to building required clean infrastructure (i.e. shut down bad business models even faster)

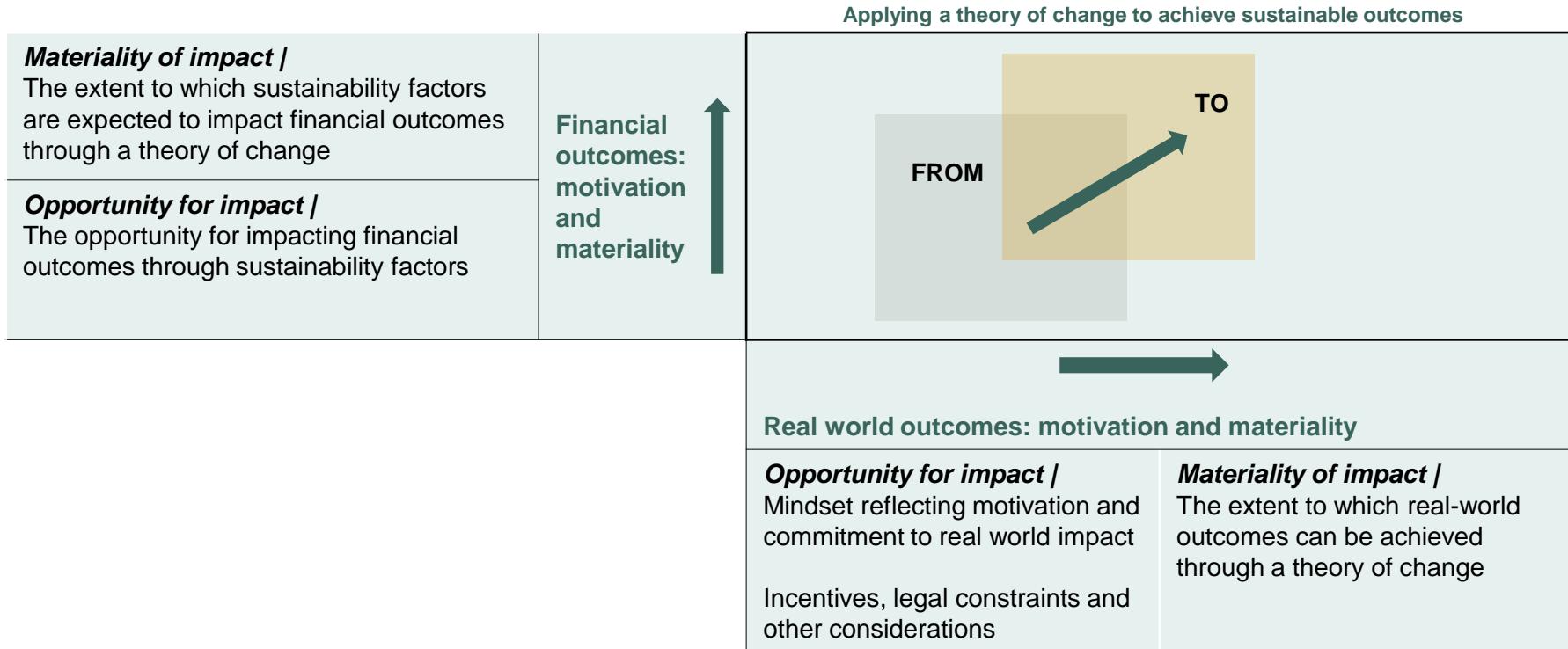
2. We need to substitute for the stopped activity

- Start with clean energy and electrifying the economy
- Fund alternatives to other carbon-intense activities e.g. build with wood rather than cement and steel
- Is this about starting to fund a circular economy?

3. We need to remove emissions from the air

- Fund and scale (private) (NETs)
- Engage public entities to fund and scale NETs

Incentives, motivation and opportunity to achieve sustainability outcomes



Incorporating climate considerations within the fiduciary window

“RAG” analysis on climate and the fiduciary window

	Factors	Comments	RAG analysis
Financial outcomes	1. Opportunity	Are there appropriate and accessible opportunities to have an impact?	
	2. Materiality	<ul style="list-style-type: none"> Extent to which you can have an impact on climate through sustainability strategies How this impact translates into positive financial outcomes Whether financial benefits will accrue to my fund 	
Real world outcomes	3. Motivation	<ul style="list-style-type: none"> Does my organisation have the vision to support commitment to act? Does my organisation have governance bandwidth to act? Are my motivations consistent with key stakeholders like fund members, employees? 	
	4. Incentive	<ul style="list-style-type: none"> Legal parameters Licence to operate Reputational risk 	

IFT Climate 2021 WG views on future context

- Over the next five years, the investment industry will become more purposeful and be more multi-stakeholder orientated [+0.9]
- Fiduciary duty is likely to evolve differently in different jurisdictions as a result of regulator interventions and is likely to be defined less narrowly [+1.2]
- Asset owners [+0.8] and asset managers [+0.8] pledging to achieve net-zero will have a significant influence on investee companies
- More asset owners will move from climate-risk-focused to be climate-objective-aligned in the next five years [+1.0].

Assessing readiness to achieve climate goals

Statements supporting setting sustainability goals alongside financial goals

Financial outcomes: materiality and motivation		Real world outcomes: materiality and motivation	
1. Systematically considering climate risk will lead to more complete analyses and better-informed investment decisions	6. My organisation can achieve both significant positive financial and real-world outcomes through a strategic response to climate change	11. The jurisdiction in which my organisation operates gives us sufficient flexibility to integrate climate risk as part of our fiduciary responsibilities	16. Sustainability in investing is broader than considering ESG factors, and includes sustainability of the economic and financial system
2. The market is unable to accurately price systemic risks such as climate change	7. Assets that account for climate risk will produce higher risk-adjusted returns than other assets over the long term	12. Our board plus internal team have sufficient resource (time and expertise) to achieve our climate goals and align with best practices	17. The returns our members need can only come from a system that works, and so working on the resilience of the financial system should be part of our mission
3. We are able to adequately measure and manage the impact of climate change on our portfolios	8. Appropriate oversight of asset managers' integration of climate risk into investment analysis and decision-making will significantly improve manager selection and portfolio performance	13. Our board plus internal team have the right social capital practices (leadership, culture and governance) to achieve our climate goals and align with best practices	18. The benefits paid to our end investors are worth more in world that is pleasant to live in so working on positive real-world impacts should be part of our mission
4. We are able to adequately measure and manage the impact of our portfolios on climate change	9. The execution of ownership rights including engagement can significantly influence the performance and risk of investments over time	14. We focus substantially on our social license to operate, long-term sustainable value creation for stakeholders and leaving a lasting legacy	19. Paris aligned and net zero ambitions are about our organisation playing our appropriate part in the just transition to a carbon zero world in which climate changes and temperature rises are limited
5. There are appropriate climate solutions and products available to meet our financial goals	10. The benefits of incorporating our climate beliefs into the investment process are likely to outweigh the cost of doing so	15. There is a sufficient solidarity in the industry among our peers to support our climate outcome goals and protect reputational risk	20. Net zero ambitions are about us aligning our strategy and policies with members' financial and real world outcome interests

Roadblocks to progress

Outputs from a survey of IFT Environment 2022 WG members

Financial outcomes: materiality and motivation	<p>Limited standardisation/poor measurement frameworks</p> <p>Data transparency and availability</p> <p>Lack of suitable sustainability solutions/financial instruments</p> <p>Unfavourable incentive structures</p>	<p>Tracking error</p> <p>The costs of integrating ESG risks outweigh the benefits</p> <p>Free riders – benefits accrue to everyone not just my fund</p>
Real world outcomes: materiality and motivation	<p>Insufficient member/client alignment</p> <p>Short-termism/lack of vision</p> <p>Insular leadership</p> <p>Lack of understanding/knowledge</p> <p>Fiduciary duty limitations</p>	<p>Peer support/reputational risk</p> <p>Lack of collaboration</p> <p>Social licence to operate</p> <p>Competitive disadvantage for first movers</p> <p>Governance (time and expertise) resource constraints</p>

Climate beliefs

Climate beliefs

Challenges

- Climate change is a multi-faceted issue that requires a systems-thinking mindset which requires additional expertise and/or training
- Existing investment beliefs are not ambitious or transformational enough to lead to the actions required to change the climate trajectory
- Different stakeholders within a given organisation will have different priors and views which inform their beliefs

TAI contribution

- Establish a subgroup of the IFT working group to develop a set of climate beliefs ensuring diversity of background, job role/context, expertise etc...
- Aim to be visionary and transformational rather than pragmatic and incremental
- Started with a potential “long list” of climate beliefs and use a “superteams” approach to narrowed down to a set of six collectively-settled beliefs
- Document the process as well as the beliefs themselves

Key output: [Investment beliefs to change the climate trajectory](#)

Setting the stage

- A +1.5C world could be reached as early as 2027. Considering irreversible tipping points, the global economic system will be severely restricted in its ability to mitigate climate change after that point.
- 2021 has seen a significant increase in asset owners and asset managers committing to net-zero by 2050 by signing up to the Net-Zero Asset Owner Alliance (NZAOA), Net Zero Asset Manager Initiative (NZAMI) and Glasgow Financial Alliance for Net Zero (GFANZ), amongst others
- Climate beliefs will reflect and support an organisation's climate ambition, and vice versa. They both build on each other.
- The climate beliefs described here have been created by the IFT climate beliefs sub-group. They are deliberately ambitious, and designed for an asset owner that wishes to use its investments to help change the climate trajectory / build the net-zero economy
- The actions and implications which flow from these beliefs should be based on organisational context and resources.
- The process of generating these beliefs was as important as the beliefs themselves. Concept of superteams is an important enabler

Questions before embarking on a climate beliefs journey

1. Does your organisation see itself as an interconnected part of the global economic and climate system?
 - Systems thinking focusses less on the component parts of a system and more on how a system's constituent parts interrelate
 - The investment conventions we operate under emphasise reductionism, where we break the whole into its components, seek to understand those components, and then build back up; e.g. to think about diversifiable idiosyncratic risk and hedgeable systematic risk, but not to think about unhedgeable systemic risk (like climate) where the whole system is brought down.
2. How does your organisation view climate change?
 - Do you see climate change as inconvenient? As a real risk to be managed, alongside all other risks? Or as an emergency that should be prioritised?
3. What does 'decarbonising' mean to you?
 - Because we control our portfolios and do not control real-world activity, there is a constant temptation to decarbonise our portfolio and believe we are making a difference
 - However, a decarbonised portfolio will still be exposed to the physical risks associated with a 3C+ economy
4. Could there be any unintended consequences of solely focusing on climate change?
 - Climate change is also about our relationship with nature (deforestation, changing land use etc) and about our relationships with each other
 - Climate change also has linkages to inequality, e.g. how are the smaller budgets of emerging economies meant to be divided between adapting against physical risk, transitioning their energy infrastructure and developing their economy?
5. Do you think fiduciary duty allows us to do anything about climate?
 - The investment industry finds itself caught between the progressive views of society (its customers who want both decent returns and a world worth living in) and the lagging interpretations of fiduciary duty

Six investment beliefs to change the climate trajectory

We **must** act

- We believe climate change is an emergency and we are part of the economic system that must address this

We **will** act now

- We have all the evidence we need to act

Acting now, while costly, **will** be cheaper

- Acting ambitiously now will incur costs, but these will be materially less than those arising from a late transition or no transition at all

We **will** invest differently

- We believe the only way to change the climate trajectory is to adopt the stop, substitute and siphon framework

We **will** think differently

- We will invest to create the future we all need which requires establishing new investment conventions

We **must** collaborate

- We will actively participate in the collective action required to address climate change

Resulting actions

Baseline actions for all organisations adopting TAI's climate beliefs

Internal

1. Review and refresh organisational purpose, vision and mission statements to manage the transformational change
2. Make a net-zero declaration with clear timelines and project plan
3. Take steps to decarbonise own operations
4. Build necessary resources and capabilities to manage organisational change
5. Expand risk management framework to a systems-context and incorporate non-financial factors
6. Look beyond pure market price signals to construct portfolios and consider other factors which ensure a carbon neutral economy
7. Take steps to lengthen investment time horizon and adopt actions which favour early transition
8. Develop scorecard reporting to demonstrate progress made on move to net-zero economy and impact

External

9. Strengthen engagement and voting policy. Actively engage with high waste companies/sectors to steer them towards greener solutions (with possible threat of divestment)
10. Be vocal about climate change being an emergency with all stakeholders and external parties (such as regulators, potential service providers, and the press)
11. Join and/or increase our support of collaborations eg CA 100+

Setting a level of climate ambition

Setting a level of climate ambition

Challenges

- The commitment statements for most net zero alliances (NZAMI, NZAOA etc...) are expressed in terms of reducing emissions in the real economy but most investor goals are expressed in terms of self-decarbonisation
- To date, the success of “ESG investing” has been defined in terms of being “less bad” or “better than previously”, i.e. in relative rather than absolute terms
- However the climate emergency is defined in absolute terms (i.e. the carbon budget sets a finite boundary) → there is a need to carefully define what “success” looks like

TAI contribution

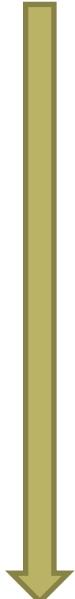
- Set out potential “meanings” of a net zero pledge to investors
- Define different levels of climate ambition and ambition statements associated with these
- Identify the discontinuity on the spectrum where focus shifts from the portfolio to the economy
- Define the targets that investors at different levels of climate ambition should target

Key output: [Our house is on fire?! Should we do something?](#)

Potential “meanings” of a net zero pledge

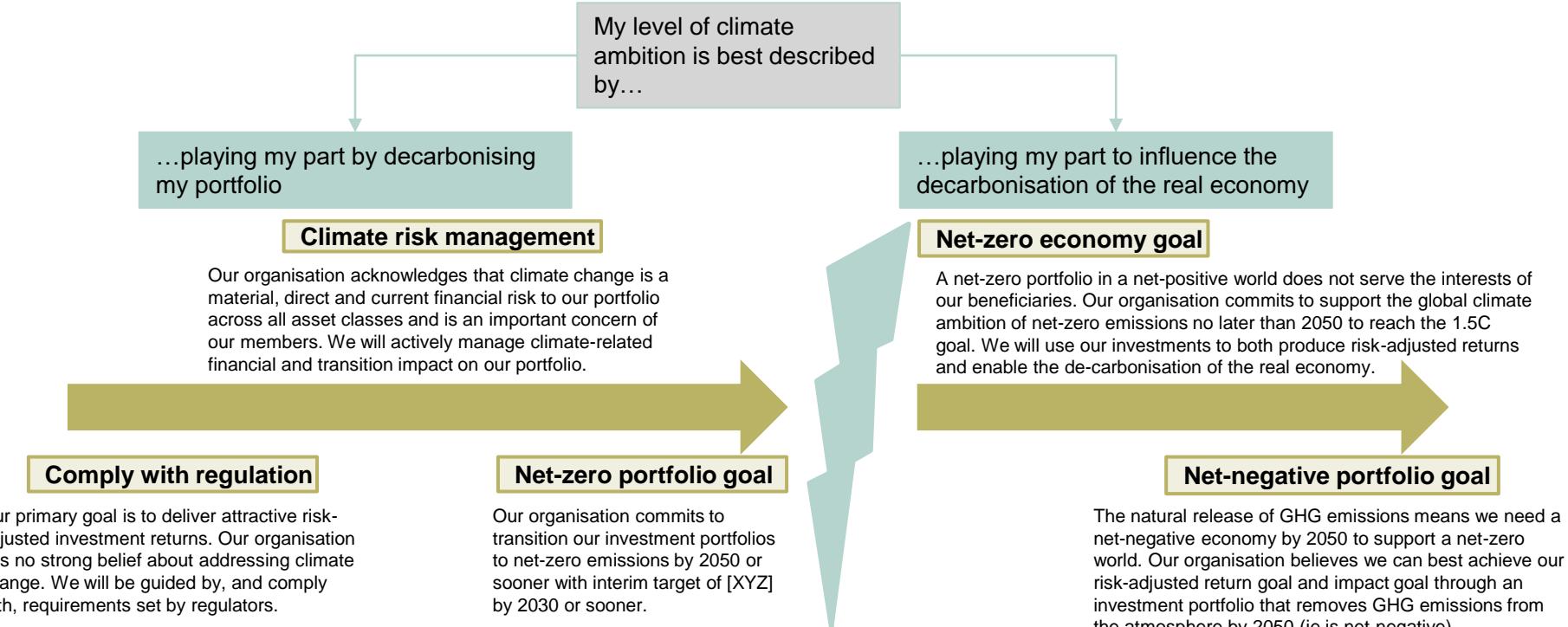
Least impactful

1. Protecting my portfolio against physical risks or transition risks
2. Protecting my portfolio against both physical and transition risks
3. Reducing my portfolio’s GHG emissions to net zero, irrespective of overall economy’s emissions whilst protecting my portfolio against both physical and transition risks.
4. Reducing my portfolio’s GHG emissions to net zero, in line with overall economy’s emissions reductions whilst protecting my portfolio against both physical and transition risks.
5. Using my portfolio to influence the economy so that both the economy and my portfolio decarbonise at the required rate whilst protecting my portfolio against both physical and transition risks.
6. Accepting a short-term rise in my portfolio’s GHG emissions as I invest in climate solutions to better secure a net-zero economy, and portfolio, in the longer term



Most impactful

Climate ambition spectrum



All net zero “alphabet soup” (NZAMI, NZAOA etc...) pledges are (supposed to be) to the right of the “lightning bolt”

Climate targets for different levels of climate ambition

Multiple targets are required

- Reflects the multi-faceted nature of climate issues
- At higher ends of the ambition spectrum climate targets need to go beyond self-decarbonisation – other dimensions that could be considered are:
 - Portfolio alignment – the degree to which the assets in a portfolio are on a projected WB2C pathway
 - Transition finance – contribution to real world emission reductions
 - Engagement – active ownership and stewardship
- “Do what we can, with what we’ve got” → focus targets on the levers available to investors, e.g.:
 - New primary investment = transition finance
 - Increase ownership resources and engage more actively = engagement and increasing alignment

Climate targets consistent with different levels of ambition

Ambition level	Carbon	Alignment	Transition Finance	Engagement
Comply with regulation				
Climate risk management				
Net zero goals				

Legend



Investors with this level of climate ambition should set targets in this category

Investors with this level of climate ambition should consider setting targets in this category

Investors with this level of climate ambition may consider setting targets in this category

- Targets are focussed on the impact of the portfolio on climate outcomes (which the investor can influence) rather than the impact of climate on the portfolio (which is an outworking of system-wide climate action/inaction)
- Climate performance should ultimately be driven by bottom-up progress rather than asset allocation changes (“shuffling ownership rights”)

Addressing internal resources

Addressing internal resources

Challenges

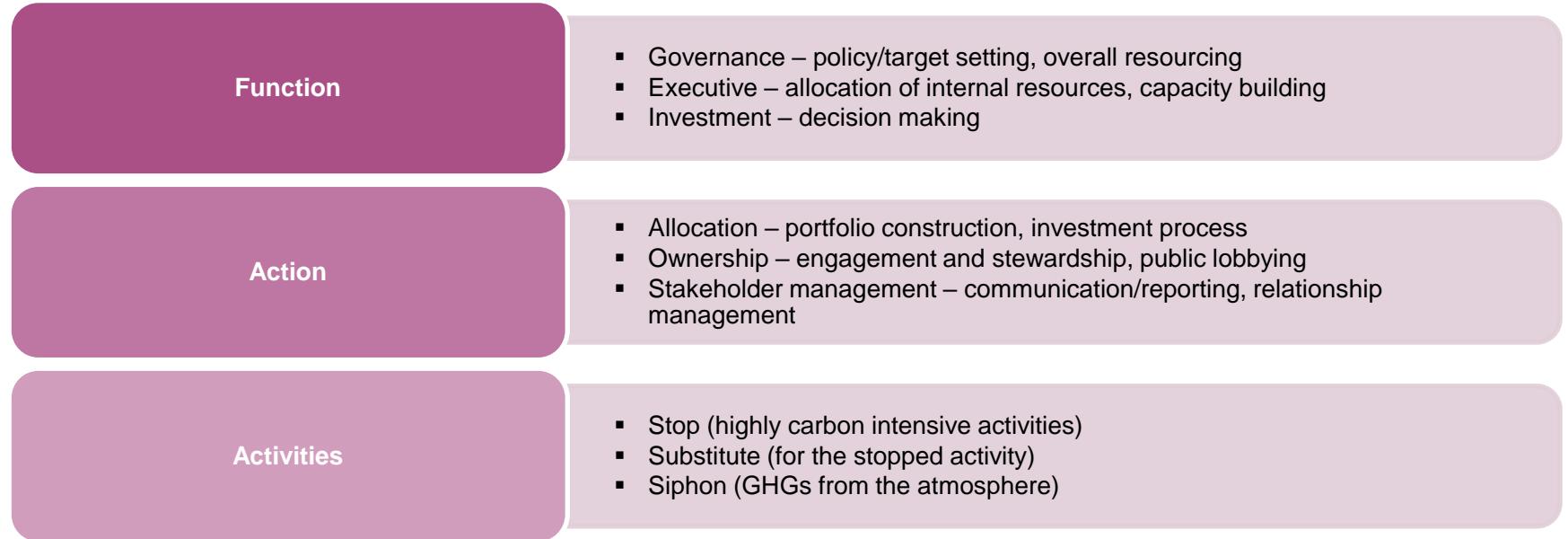
- Resources and governance budget represent a material constraint to climate action
- The climate challenge can seem overwhelming leading to decision paralysis

TAI contribution

- Define a set of lenses through which to view the climate challenge to make the problem more manageable
- Translate “right to left” thinking (transformational outcomes) into “left to right” solutions
- Identify a (non-exhaustive) set of actions that most investors could implement to contribute to decarbonisation of their portfolios
- Identify a (non-exhaustive) set of actions that most investors could implement to contribute to decarbonisation of the real economy

Key output: [We've decided to address climate change | getting our own house in order](#)

Lenses through which to view the climate problem



Thinking right to left

The transformational outcomes....

- The right-hand position is the year 2030, and we have successfully halved emissions
- Investment portfolios contain assets where:
 - High carbon-emitting companies have (probably more than*) halved their emissions. Efficiency gains are unlikely to deliver the reductions required, so this implies a fall in sales volume. Unless price rises substantially this means a fall in revenue which, via leverage, could threaten viability. ['stop']
 - Primary investment has occurred to create or grow assets and/or businesses that substitute for the emitting activities that have been reduced ['substitute']
 - Capital has been allocated to negative-emission technologies – for nature-based solutions this is likely to have been a change of ownership, and primary investment (venture capital) for new technologies ['siphon']
- Investing differently to change the climate trajectory will more likely than not result in loss of capital value (lower returns and/or higher costs of operation) over the short term

Thinking left to right

Practical solutions to contribute towards the halving emissions by 2030

Resourcing	More investment in people + culture + technology + systems	<ul style="list-style-type: none">▪ Strengthening your ability to create change and/or manage transformational change▪ It's about increasing the pool of talent (\uparrow headcount + more training), higher synergies (better information sharing + decentralised decision making) and right incentive structures
Stewardship	More assertive and ambitious stewardship	<ul style="list-style-type: none">▪ UN PRI calls this active ownership 2.0▪ More clarity on corporate political engagement▪ Encourage vote on climate transition plans; strengthen proxy voting directives▪ Prioritises concrete outcomes rather than processes
Collaboration	Purposeful collaboration with intent to drive change	<ul style="list-style-type: none">▪ Focus on few strategic partnerships which will build strategic capital to drive real change▪ Get involved in strategic coalitions that will help move the needle alongside peer funds▪ Build collaborations which increase influencing power in a resource-efficient manner

Actions targeted at decarbonising the portfolio

Functional lens

Action lens

Governance

1. Appoint climate expert(s) to board and/or independent climate advisors
2. Increasing time allocation to climate on governance agenda and/or new climate committee
3. Determine if internal resources are adequate given fund's size and organisational preferences and beliefs, including buy vs build decision

Allocate

7. Move along the spectrum away from strategic assets allocation (SAA) towards total portfolio approach (TPA)
8. Move to 3D-lite mandates for managers
9. Consider divestment from high emission assets without adequate transition plans

Executive

4. Increase/reallocate internal resources between allocate, ownership and stakeholder management
5. Set climate training policy

Ownership

10. Improve engagement and voting policy and/or employ overlay specialist
11. Join at least one climate collaboration group
12. Increase public policy engagement

Investment team

6. Enhance investment decision making with better climate data and analytics

Stakeholder management

13. Improve climate communication and reporting policy
14. Alignment (on climate) among governance board, executives, the investment team and third party providers
15. Manage relationships and communication among members, sponsors, internal team and external providers
16. Produce a public statement of the organisation's forward looking plan on decarbonisation

Actions targeted at decarbonising the real economy

	Allocate	Ownership	Stakeholder management
Stop	<p>17. Do not subscribe to new capital raisings (inc debt)¹</p> <p>18. Underweight emitters¹</p>	<p>24. Force transition on the unimprovable (eg no new fossil fuel exploration, no new fossil fuel infrastructure, wind-down/net-zero plan)</p> <p>25. Encourage transition for the improvable</p> <p>26. Amplify voice (collaborate or overlay)</p> <p>27. Lobby public sector</p>	<p>30. Create and publish policy(ies)</p> <p>31. Publish investment case justifying actions to stop emitters</p>
Substitute	<p>19. Overweight substitutes¹</p> <p>20. Subscribe to new capital raisings¹</p> <p>21. Primary investment, including public-private partnerships – renewables capacity, distribution, electrification, energy efficiency, replacement technologies (can be old (eg wood) or new (eg hydrogen))</p> <p>22. Track changing consumer preferences</p>	<p>28. Support substitutes ('be a good, long-term owner') – encourage, advise, provide network introductions</p> <p>27. Lobby public sector</p>	<p>32. Ensure any 'carbon hump' does not breach pre-agreed decarbonisation pathway</p>
Siphon	<p>24. Primary investment into carbon capture and storage (eg <u>Sky Diamonds</u>) [apply usual future economic viability filter]</p>	<p>29. For climate investments, trust existing private market model (GP ownership decisions), or create new buy-and-hold platform</p> <p>27. Lobby public sector</p>	<p>32. Ensure any 'carbon hump' does not breach pre-agreed decarbonisation pathway</p>

1. Oil majors present a particular challenge as they could be raising capital for their renewables business while still spending capital on exploration for fossil fuels. Emitters with a valid decarbonisation plan and/or making a contribution to the decarbonisation of the real economy should not necessarily be underweighted.

3D climate/net zero mandates

3D climate/net zero mandates

Challenges

- Climate ambition at any level introduces an additional dimension of success for an investor
- Traditional 2D (risk/return) investing does not incorporate climate goals
- Managing to two unintegrated objective functions is challenging and it is possible that climate goals and traditional financial goals may come into conflict

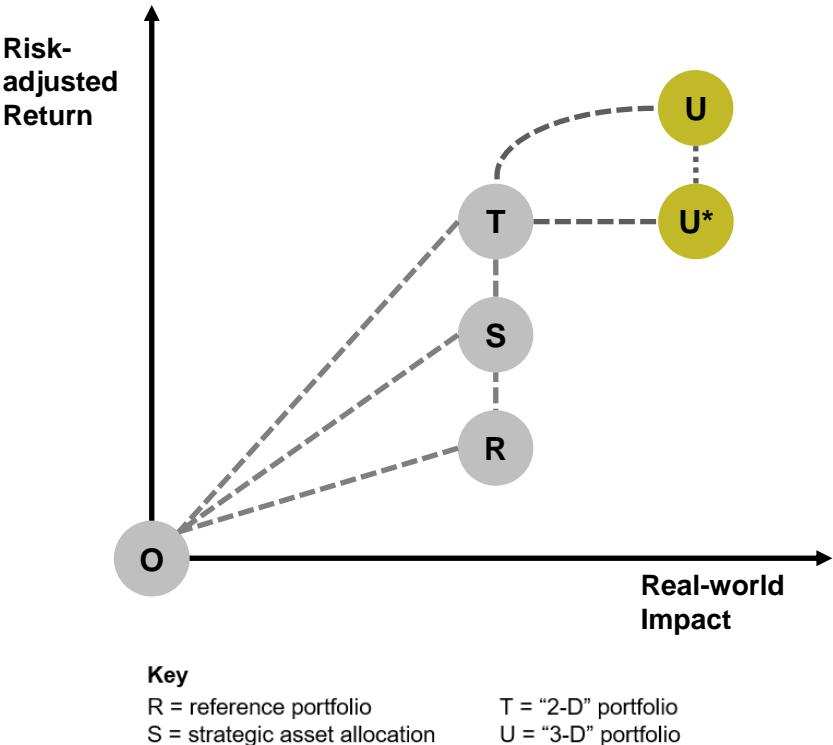
TAI contribution

- Reconcile climate goals with fiduciary duty/"best financial interests" using systems thinking
- Set out the elements of a 3D mandate and what these mean in the context of climate goals
- Describe how a 3D mandate might be operationalised in practice
- Highlight the benefits of a Total Portfolio Approach (TPA) in achieving climate goals

Key output: [3D net-zero mandates](#)

A 3-D mandate

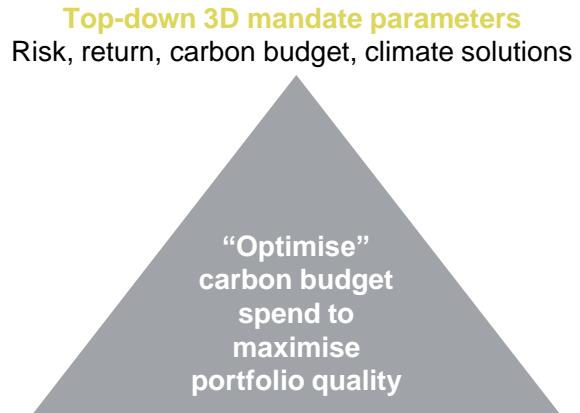
- Traditional “2D” thinking aim to maximise risk adjusted returns relative to a simple reference portfolio
- Under a 3D mandate the aim is to add to risk-adjusted returns by improving the underlying beta
- Fiduciary duty means the minimum goal is to achieve the same risk-adjusted returns but with additional impact (U^*)
- It is expected that investing with positive impact should actually improve risk-adjusted returns (U) by improving overall system-level outcomes
- TAI’s “Pay Now or Pay Later” research indicates that taking action to improve real world climate outcomes results in a significantly lower loss to financial assets than inaction on climate issues supporting the idea that $U > U^*$



Elements of a 3-D net zero/climate mandate

	Mandate element	Description	Lite	Full
	1. 3D goals	<ul style="list-style-type: none"> The portfolio and strategy seeks to integrate risk, return and decarbonisation 3-D “lite” likely focussed on self-decarbonisation, 3-D “full” on real world emissions 	✓	✓
	2. Total portfolio thinking	<ul style="list-style-type: none"> Only applicable to whole-fund mandates (eg delegation to OCIO); otherwise AO retains responsibility for total portfolio thinking 		
	3. Strategic partnership	<ul style="list-style-type: none"> Flow of IP from AM to AO – e.g. strategy ideas, new mandate ideas Not all AMs will be/need to be considered a strategic partner 	?	?
	4. Core sustainability strategies	<ul style="list-style-type: none"> ESG fully integrated into all investment decisions to support value creation Active ownership and engagement a baseline expectation for all AMs 	✓	✓
	5. Impact strategies	<ul style="list-style-type: none"> Targeting and achieving real-world decarbonisation outcomes Combination of systems thinking, UO strategies and stop/substitute/siphon 		✓
	6. System-level engagement	<ul style="list-style-type: none"> Define expectations for addressing systemic climate risks (and broader connected risks) in a portfolio, e.g. AM involvement in collaborations and public lobbying 	?	✓
	7. Score-card monitoring	<ul style="list-style-type: none"> Combination of hard and soft measures Multi-dimensional – efficiency, robustness, implementation skill, climate impact 	✓	✓
	8. Other mandate details	<ul style="list-style-type: none"> Includes fees; service level agreements; collaboration terms; termination terms; perhaps expectations for governance and culture 	✓	✓

Operationalising a 3-D climate mandate



Portfolio construction

- Identify dimensions of portfolio quality
- Articulate acceptable tradeoffs between portfolio quality factors
- Define desired contribution to risk, return and climate goals from each portfolio building block

Bottom-up assessment

- Best in class climate integration incl climate KPIs where possible
- Minimum and rising bar for the above
- Strategic partnerships to develop better mandates, identify climate solutions etc...

The benefits of TPA in the context of a 3D mandate

Strategic Asset Allocation		Total Portfolio Approach	Implications for incorporating climate ambition
Strategy	Benchmark asset allocation	Total portfolio return target, risk profile and a range of other “budgets” (e.g. sustainability, illiquidity, complexity)	Expressing strategy via a set of “budgets” under a TPA process allows the articulation of a carbon budget consistent with climate goals
Measure of success	Outperformance vs the SAA benchmark using narrow measures of performance	Total fund risk-adjusted return and contribution to wider goals (e.g. sustainability/ impact) through use of a balanced scorecard	Success against a net zero ambition (including UO goals) can be more easily incorporated via TPA into a 3D investment mandate
Opportunity set	Opportunity set defined by asset classes, opportunities outside predefined “buckets” often not considered for inclusion	All assets pre-qualify for consideration on equal terms and are considered on their merits	Future climate solutions may not fit typical asset class buckets – a TPA process ensures these do not “slip between the cracks”
Building blocks	Asset classes are the primary building blocks; focus on capital allocations	Opportunity-level competition for capital/risk budget; contribution to total portfolio risk factor exposures gain prominence	TPA completely integrates top down and bottom up which is key as most actions required will occur within asset classes
Decision making	Optimise vs benchmark within each asset class bucket, typically constrained by tracking error limits	Multiple lenses drive allocation decisions; contribution from value-adding “levers” aligned to beliefs and comparative advantage	The climate lens for portfolio quality under TPA allows the best and most aligned “spend” of the carbon budget to be determined
Frequency of change	Calendar-based updates to the SAA, often agreed by the board; generally not calibrated to current conditions	Real-time decisions made by executive team to build the best portfolio to achieve objectives based on market conditions at a point in time	A real time TPA process combined with a well-resourced executive facilitates key engagement and collaboration activities
Implementation	Implemented by asset class teams or external managers leading to siloes, implementing managers used in narrow role of adding alpha	Implemented by a single team working collaboratively, implementing managers used in the broader value-adding roles	TPA more easily facilitates coherent engagement across the portfolio (eg equity and credit) and the broader use of managers to add value via sustainability factors (eg better indices, longer term mandates)

Reporting against climate ambition

Reporting against climate ambition

Challenges

- Existing climate reporting frameworks can be uninformative and/or misleading
- Climate is a multi-dimensional problem → multiple metrics/balance scorecard required
- Translating measurement into progress against ambition and corrective action is challenging
- Climate data and metrics are imperfect and constantly evolving/changing

TAI contribution

- Establish principles for climate impact reporting
- Set out the key categories, use cases and requirements for climate metrics
- Identify which metrics are most important at different levels of climate ambition
- Highlight priority areas for future improvements in climate data and metrics

Key output: [Reporting and communication](#)

Principles for impact reporting

Update to the work from the 2020 1.5C portfolio working group

1. The purpose of the impact report should be stated clearly
2. The milestones or interim targets should be clearly defined (level and timescale)
3. The actions taken to achieve targets should be documented – investor contribution
4. The metrics/evidence reported should allow simple assessment of progress, or not, towards targets – company impact
5. The complexity of subject requires multiple, complimentary metrics to be shown
6. Be transparent about any limitations/challenges inherent in what is being reported upon
7. The impact dashboard is incomplete without a supporting narrative [Narrative should also equip readers on how to interpret metrics]
8. Be open to evolving the dashboard overtime [i.e. expanding the breadth and depth of measurement framework]

Categories of climate metrics

The E-CART(P) framework

Categories of climate metrics

Category	Dimension	Description
Cross-cutting	Engagement	Investor contribution to the positive impact created by the investments in its portfolio
Impact of the portfolio on climate change	Carbon	Current portfolio emissions and/or emissions intensity
	Alignment	Proximity of underlying assets to plausible pathways to a well below 2 degree world
	“Real world”/transition Finance	Contribution to emission reductions in the real economy
Impact of climate change on a portfolio	Transition Risk	Portfolio exposure to climate transition risks
	Physical Risk	Potential cost/benefit from acute and chronic physical perils in a “business as usual” scenario

Potential uses of data and analytics

- Assessment of climate-related risks to a portfolio and the broader system
- Assessment of the likely impact of specific investment strategies – i.e. stop vs substitute vs siphon
- Allocation of capital in line with climate objectives
- Facilitation of engagement with companies/assets to drive changes in the climate trajectory

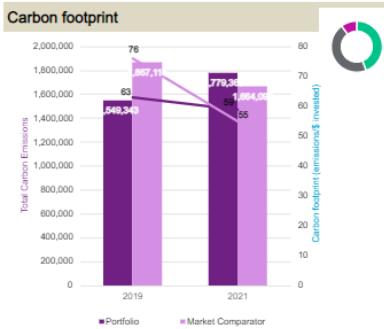
Criteria/requirements for climate metrics

- Forward looking – consider likely direction of travel and credibility of stated plans/efforts to align
- Decision useful – allow comparison of companies and portfolios, track progress over time, incentivise transition
- Robust – analytically rigorous, consistent with climate science
- Broad coverage – multi-asset, multi-sector, multiple use cases
- Actionable – transparent methodology, feasible to calculate

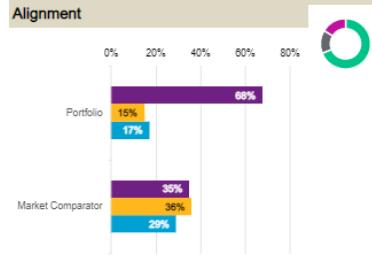
Example climate dashboard

Evolution of the TAI climate impact dashboard from the 2020 1.5C working group

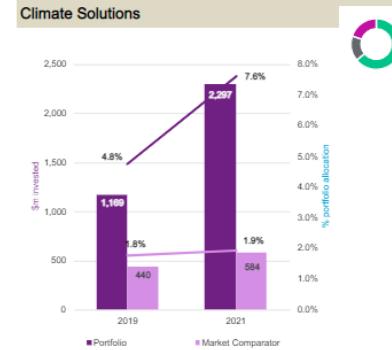
Impact of portfolio on climate change



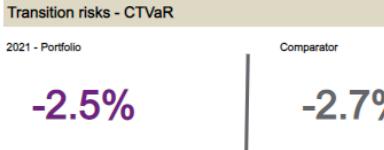
Alignment



Climate Solutions



Impact of climate change on portfolio



Physical risks

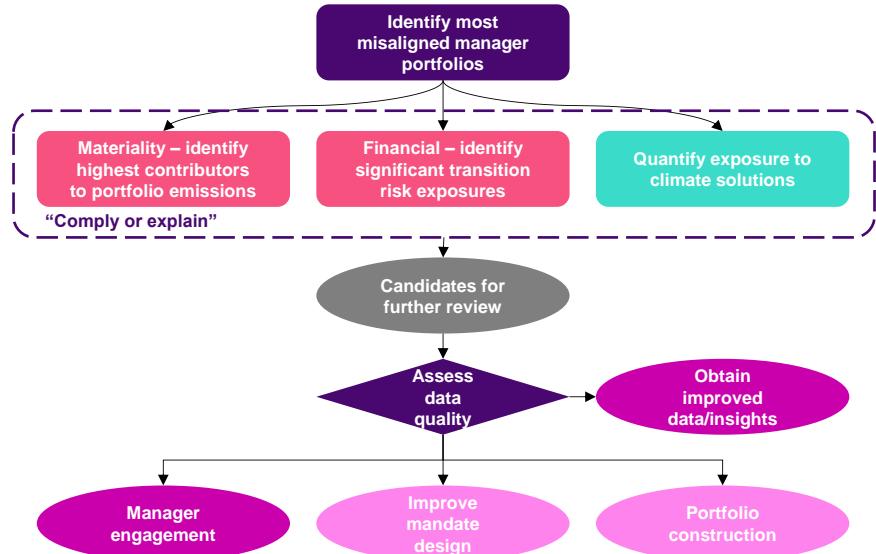


Source: WTW

Taking action based on climate measurement

WTW case study on using climate dashboards

Framework for determining actions



Example action plan

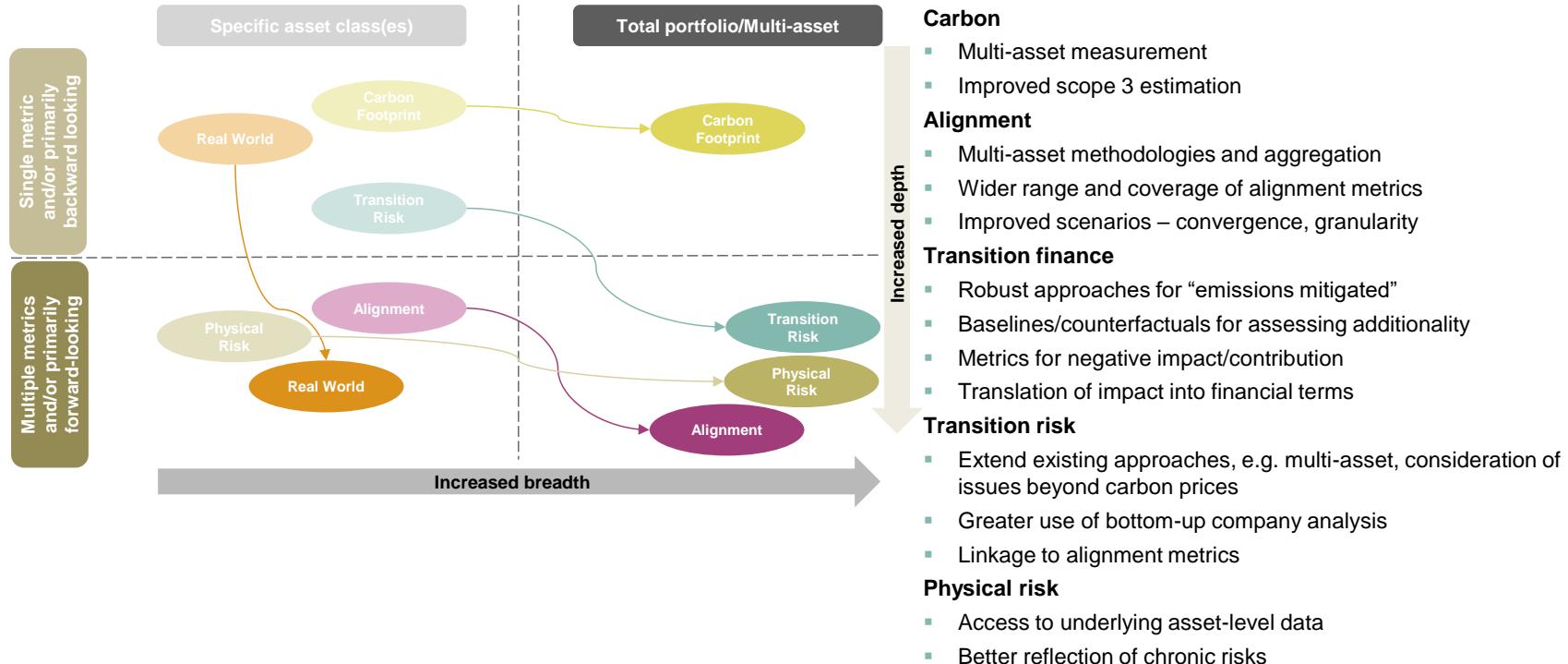
Asset Class	Manager	Level of misalignment	Contribution to misaligned emissions	Transition risk exposure	Climate solutions	Data quality	Suggested management action
Equities	Manager 1	Low	Medium	Medium	Medium	High	No near-term action
Equities	Manager 2	Medium	Medium	Medium	Medium	High	No near-term action
Equities	Manager 3	Medium	Medium	Medium	Medium	High	No near-term action
Real Assets	Manager 4	Low	Medium	Medium	Medium	High	No near-term action
Real Assets	Manager 5	Medium	High	High	High	High	High priority engagement target
Credit	Manager 6	Medium	Medium	Medium	Medium	High	Low priority engagement target
Credit	Manager 7	Medium	Medium	Medium	High	High	Medium priority engagement target
Credit	Manager 8	Medium	Medium	Medium	High	High	High priority engagement target
Credit	Manager 9	Medium	Medium	Medium	High	High	High priority engagement target
Diversifying Strategies	Manager 10	Medium	Medium	Medium	Medium	Low	Prioritise data quality improvements

Key: Low Medium High

Source: WTW

Areas for improvement in climate measurement

Improving breadth (coverage, multi-asset) and depth (multiple, forward-looking) of climate metrics



Limitations of reliance and contact details

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