Getting the claims right

The role of compensation in corporate climate claims

Compensate

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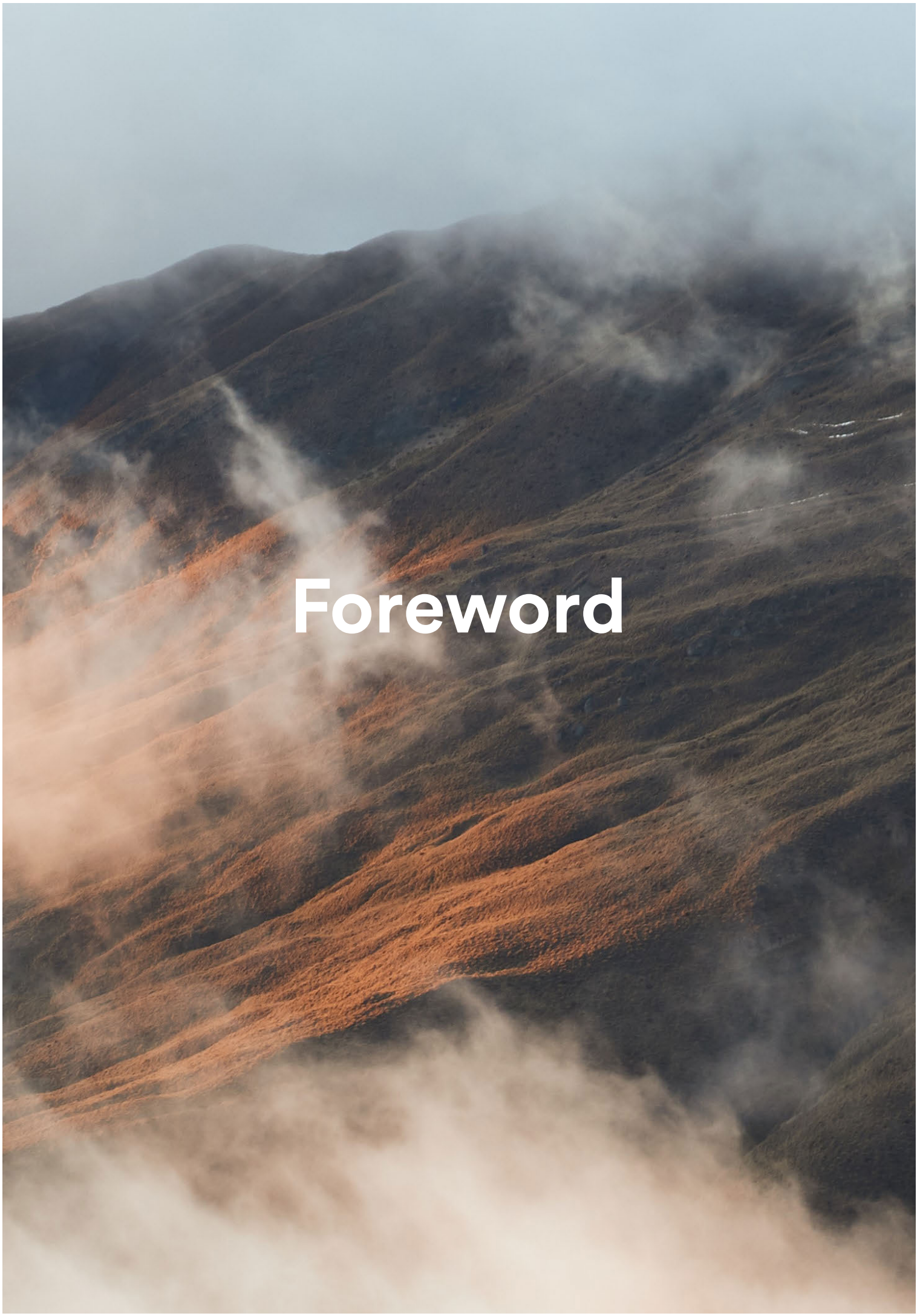

Foreword

Foreword by the author

I began to work with climate issues over 10 years ago, advocating for climate justice on behalf of civil society organisations. Back then, I was not only up against politicians that were unwilling to recognize the urgency of the climate crisis, but also corporations that were defending the status quo.

In recent years things have changed dramatically. Now when I meet politicians and top decision makers, I commonly find that corporations are echoing the demands of climate activists. It's now mostly the politicians who are holding back the needed changes. Corporates are increasingly on the side of climate science.

The game changer was the 2018 IPCC 1.5 degree report. It seems to have been a wake-up call for the corporate community. There is no business on a dead planet is something that many corporate leaders recognized after the groundbreaking report. Swiss Re has estimated that 55% of global GDP depends on high-functioning biodiversity and ecosystem services.

Since 2018 we have seen a huge surge in corporate climate action. Especially in the realm of making carbon neutrality or net zero commitments. A large company without a carbon neutrality or net zero target is becoming more and more rare.

But setting targets is not enough. They have to be followed through by actions. And this is where the picture is much less rosy. Countless recent reports show that companies are not living up to their promises. Not even close. Setting net zero targets that are decades away has not led to immediate action.

A big part of the problem is that we lack common definitions of the most used corporate climate claims like carbon neutrality or net zero. There is also very little transparency behind these claims. This can easily lead to greenwashing.

“How can companies be held accountable if we don't agree on the definitions of climate claims and we don’t have transparency into how they are constructed?“

Empty promises won’t affect the amount of greenhouse gases in the atmosphere.

Contrary to some views that corporate climate claims should be banned, I think we should work on finding common definitions and increasing transparency. Ideally, corporate climate claims can be a tool to keep companies accountable for their role in mitigating the climate crisis.

This white paper was born out of a need to define pathways to reach carbon neutrality and net zero on a corporate level. Pathways that are aligned with climate science and the targets set in the Paris Agreement. I hope readers will find this as a useful tool in their efforts to make high integrity climate claims.

Niklas Kaskeala,
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Compensate

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Compensate

Compensate offers businesses and individuals easy access to high-quality carbon projects. Compensate consists of Compensate Operations Ltd, which runs the day-to-day business operations of the group, and the nonprofit Compensate Foundation, which focuses on advocacy work to improve the integrity of the voluntary carbon market. Compensate Foundation fully owns Compensate Operations Ltd.

Compensate was established in 2019 by Finnish entrepreneur and former member of parliament, Antero Vartia. Today, Compensate works with partners in Europe and North America and is building a carbon marketplace based on full transparency and high integrity to set a new standard for the carbon market industry.

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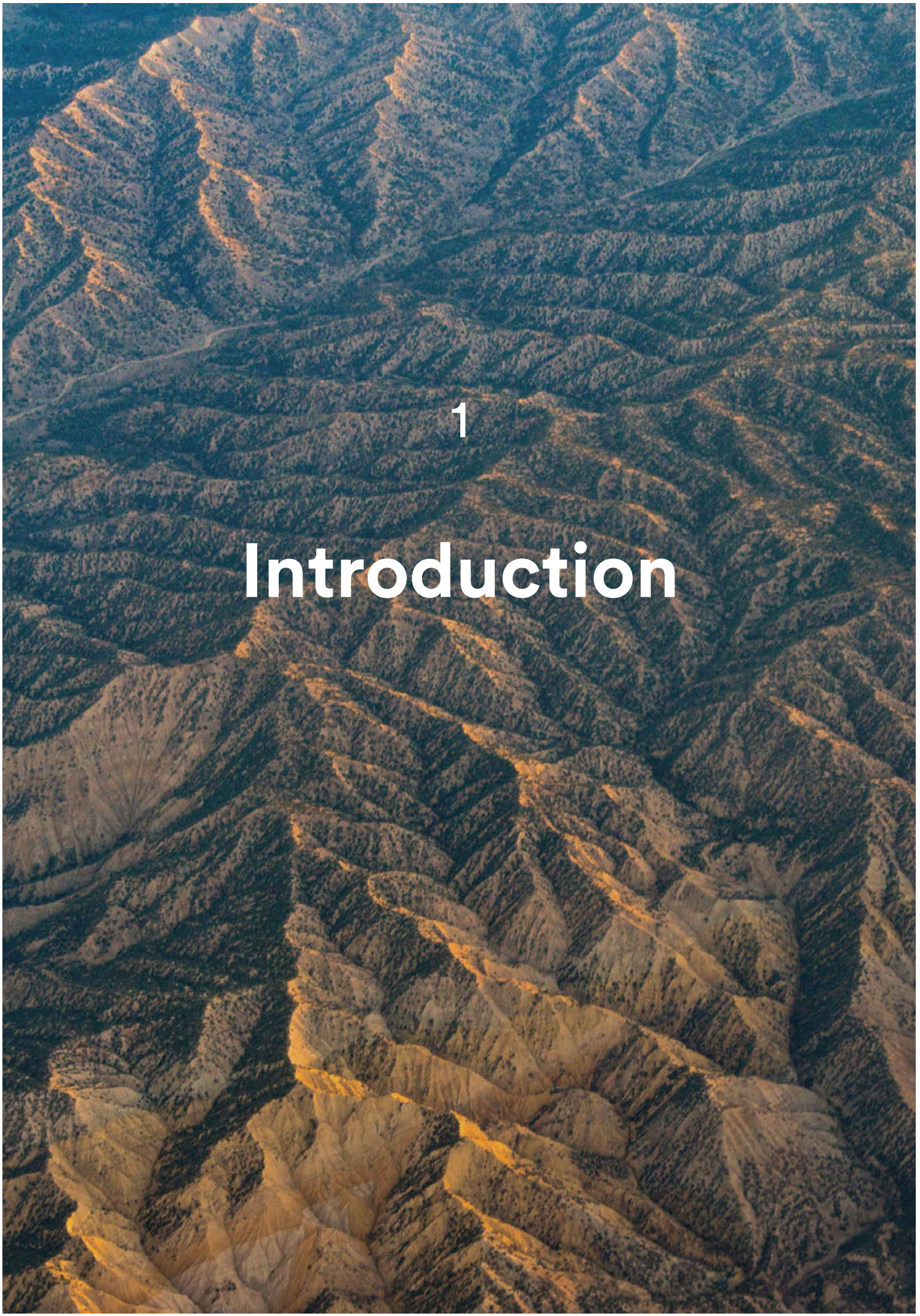


1

Introduction

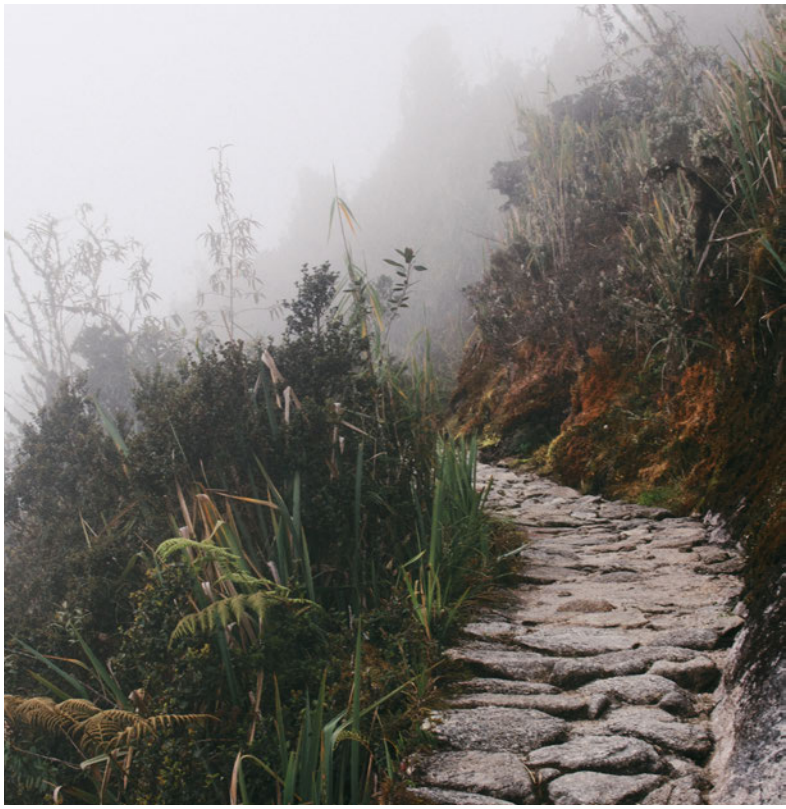
Introduction

The climate crisis is the defining issue of our time. It's perhaps the biggest challenge humanity has ever faced. The Intergovernmental Panel on Climate Change (IPCC) said in the second part of the Sixth Assessment Report released in February 2022, that humans and nature are being pushed beyond their abilities to adapt.

UN Secretary General Antonio Guterres described the report as an "atlas of human suffering". He has no doubt as to where the blame lies. "The facts are undeniable. This abdication of leadership is criminal. The world's biggest polluters are guilty of arson of our only home."

Corporations produce just about everything we buy, use, and throw away and have played a huge role in driving the climate crisis. The CDP (formerly known as the Carbon Disclosure Project) has estimated that just 100 companies have been the source of more than 70% of the world's greenhouse gas emissions since 1988.

It is clear that corporations are a major contributor to the climate crisis. But they can also be one of the keys to solving the crisis. Achieving the United Nations Sustainable Development Goals (SDGs), which also include clean energy and climate action, might in fact open up market opportunities worth at least 12$ trillion and create 380 million jobs by 2030.



Without ambitious corporate climate action, we will not limit global warming to the 1.5 degree limit set in the Paris Agreement.

Corporate climate claims such as carbon neutrality and net zero structure and define corporate climate action nowadays. While these terms and claims are very useful in understanding the ambition level of corporate climate action, there is ambiguity and often little transparency in how these terms are defined. This can easily lead to greenwashing.

In order for corporate climate claims and targets to be relevant in the fight against the climate crisis, we need to understand how they are constructed. We need to find common definitions for corporate climate claims and increase transparency around them.

“Ideally corporate climate claims would be a tool to keep companies accountable for their role in mitigating the climate crisis.”

Transparency and understandability would help consumers to make responsible choices. It would help critical stakeholders to address companies that are merely greenwashing.

This white paper will take a closer look at mainly two important climate claims that are made by corporations and other private organisations: net zero and carbon neutrality*. The less commonly used claims like climate positivity and carbon negativity will also be briefly discussed.

The primary focus of the white paper will be on defining the role of compensation as a tool to fulfil corporate climate claims. All climate claims are a balance between actions to reduce emissions and actions to counterbalance emissions with some sort of compensation.

Carbon neutrality vs. Climate neutrality

* Carbon neutrality and climate neutrality are considered in this white paper as almost synonymous as they differentiate mainly through the scope of which greenhouse gases and other climate affecting human activities are accounted for. Thus sections discussing carbon neutrality can be considered to apply for most parts also for climate neutrality.

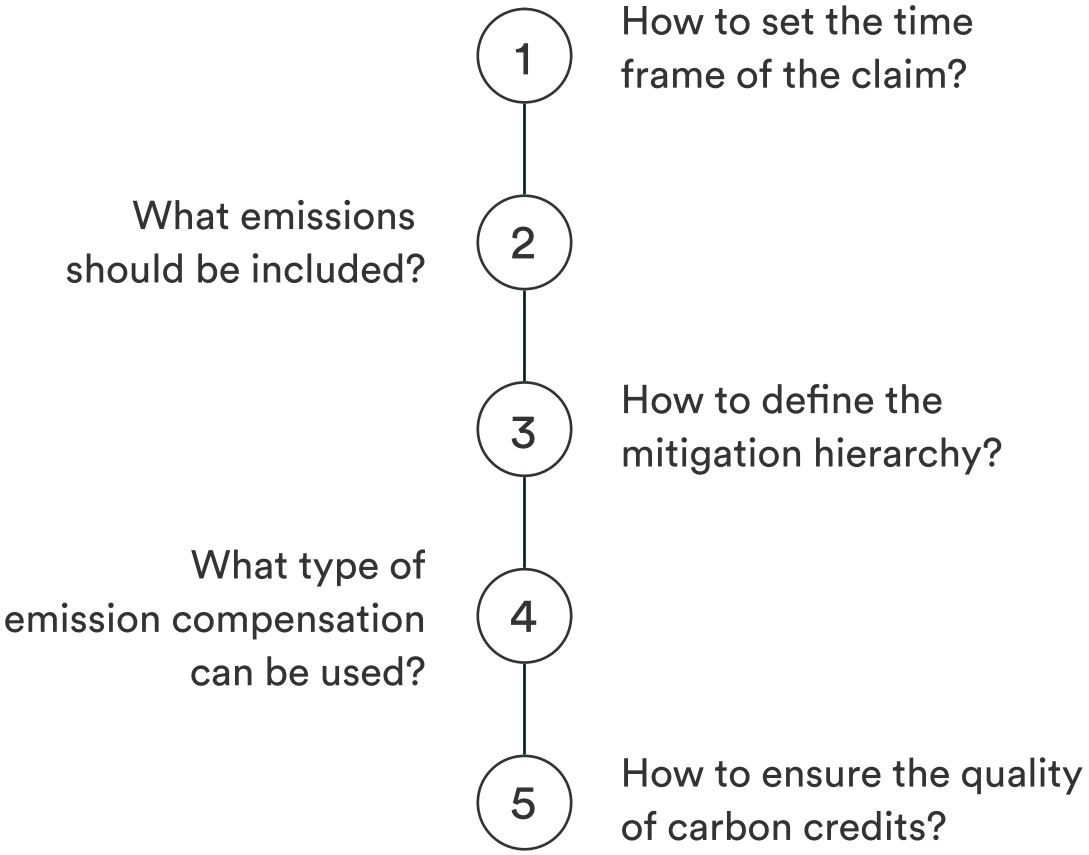
** CO_2e means carbon dioxide equivalent. All greenhouse gas emissions are accounted for, and expressed in CO_2e.

But how to build a sustainable ratio between emission reductions and compensation and how to make sure that compensation actually delivers on counterbalancing remaining emissions? These questions will be examined more closely.

Regarding net zero claims, the white paper will focus on two leading standards, the Science Based Targets initiative (SBTi) and the Race to Zero Campaign and how they address the above-mentioned key questions.

Carbon neutrality claims have less standardisation and there is a lot of variability on how these claims are constructed. The white paper introduces Compensate's views on how to construct a high integrity carbon neutrality claim, that can be used alone or aligned with a net zero target.

We will explore how to make net zero or carbon neutrality claims especially through answering five key questions:



IPCC definitions

The IPCC, or the Intergovernmental Panel on Climate Change, is an intergovernmental body of the United Nations responsible for advancing knowledge on human-induced climate change. Even though the IPCC has not defined how climate claims can or should be used in a corporate context, it is useful to have a look at how the IPCC defines net zero, carbon neutrality and climate neutrality:

→ **Net zero** is when anthropogenic (=human caused) emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals of greenhouse gases over a specified period.

→ **Carbon neutrality** is when anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2 removals over a specified period.

→ **Climate neutrality** is a state in which human activities result in no net effect on the climate system. Achieving such a state would require balancing of residual emissions with emission (carbon dioxide) removal as well as accounting for regional or local biogeophysical effects of human activities that, for example, affect surface albedo or local climate.

As we can see, the different terms differ mostly according to the scope of greenhouse gases and other climate warming effects that are taken into account. It is also important to note that only anthropogenic (i.e. human caused) emissions, removals or other climate changing effects are considered. This emphasises that the climate crisis is a human caused phenomenon and requires human intervention to mitigate it.

↓ Next: **2 Corporate standards for net zero**

2

Corporate standards for net zero

- → Science Based Targets initiative
- → Race to Zero
- → Net zero claims are not always translating into action
- → The role of compensation is not clear

Corporate standards for net zero

The two most popular climate claims, that corporations and other private actors use, are by far carbon (or climate) neutrality and net zero. Carbon neutrality and the related climate neutrality claim is often used to communicate to consumers, while net zero has become the buzzword of the corporate responsibility world.

Science Based Targets initiative

When it comes to defining net zero, the Science Based Targets initiative (SBTi) provides one of the most robust frameworks. The SBTi is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). It has in recent years become one of the leading climate action frameworks in the corporate sector by providing companies a framework to align themselves with climate science and the goals set in the Paris Agreement.

The SBTi standard has already had a significant impact on corporate plans as more than 2000 mainly large companies and financial institutions are working with SBTi to reduce their emissions in line with climate science. The SBTi is constantly evolving by developing its guidance.

For instance, in March 2022, the SBTi updated its fossil fuel policy to no longer accept commitments from these companies.

After wide stakeholder consultations, the SBTi published its Net-Zero Standard in October 2021.

SBTi Net-Zero Standard:

1. Focus on rapid, deep emission cuts covering a company's entire value chain emissions, including those produced by their own processes (scope 1), purchased electricity and heat (scope 2), and generated by suppliers and end-users (scope 3). In order to reach net zero, companies will need to reduce their value chain emissions by 90-95%.

2. Set near- and long-term emission reduction targets by taking action already today. Having regular milestones in emission reduction on the way to net zero by 2050 will help keep companies on track.

3. No net zero claims until long-term targets are met. Companies need to first reduce 90-95% of their value chain emissions and neutralise the residual emissions with carbon removals and only then make the net zero claim.

4. Go beyond the value chain by making investments outside a company's science-based targets to help mitigate climate change elsewhere and keep the temperature rise below 1.5C. In practice, this could translate into purchasing carbon credits on the voluntary market. The SBTi strongly emphasises that these beyond value chain climate actions should be in addition to deep emission cuts, not instead of them.

Race to Zero

The United Nations-led Race to Zero Campaign, launched in 2020, is working with businesses, cities, regions, investors, and financial and educational institutions to commit to achieve net zero carbon emissions by 2050 at the latest. Thus far over 5 000 businesses have signed the campaign pledge.

Race to Zero definitions:

- **Net zero:** When an actor reduces its emissions following science-based pathways, with any remaining GHG emissions attributable to that actor being fully neutralised by like-for-like removals (e.g. permanent removals for fossil carbon emissions) exclusively claimed by that actor, either within the value chain or through purchase of valid offset credits.

- **Climate neutrality:** When GHG emissions or other activities with warming effects attributable to an actor are fully compensated by GHG reductions or removals, or other activities with cooling effects, exclusively claimed by the actor, such that the actor's net contribution is zero, irrespective of the time period or the relative magnitude of emissions and removals involved.

- **Carbon neutrality:** When CO_2 emissions attributable to an actor are fully compensated by CO_2 reductions or removals exclusively claimed by the actor, such that the actor's net contribution to global CO_2 emissions is zero, irrespective of the time period or the relative magnitude of emissions and removals involved.

→ **Climate positive (net negative):** When an actor's greenhouse gas removals, internal and external, exceed its emissions and any removals are "like for like." Must be specified over a declared time period, and whether removals and emissions are cumulative or represent only the time period specified.

→ **Carbon negative:** When an actor's carbon removals, internal and external, exceed its emissions and any removals are "like for like." Must be specified over a declared time period, and whether removals and emissions are cumulative or represent only the time period specified.

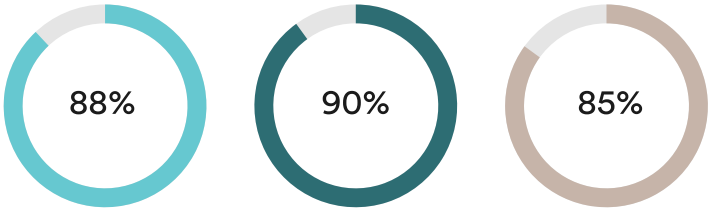
Net zero claims are not always translating into action

As we can see from the definitions listed above, applying claims like net zero and carbon neutrality in a corporate context is a complex exercise. More complexity is added through the non-standardised use of these terms by corporate actors. Even Race to Zero says that the definitions are not meant *"to mandate standardisation, but rather to suggest opportunities for convergence as a way to reduce communication friction and improve understanding across our community."*

Despite some ambiguity about definitions, more and more companies are committing themselves to a net zero target. Most are aiming to reach net zero emissions by 2050, which is also the target year for global emissions to reach net zero if we are to limit global warming to the 1.5 degree goal set in the Paris Agreement.

Net zero targets set by countries, regions or cities, already cover 88% of total global emissions, 90% of global GDP, and 85% of the world's population. According to Net Zero Tracker, 699 companies, out of the 2,000 largest publicly-traded companies in the world by revenue, have made net zero commitments.

Global net zero coverage



Emissions **GDP (PPP)** **Population**

Net zero companies

699 / 2000

2,000 largest publicly-traded companies in the world by revenue

The Oxford Dictionary describes net zero as a target of completely negating the amount of greenhouse gases produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.

However, in a business context, the definition of net zero varies considerably and there is ongoing debate about its definition. The University of Oxford conducted stakeholder interviews in 2020 and found that there was some consensus that targets should cover all emissions and reach zero by 2050. In contrast, the stakeholder interviews did not find a common view on, for example, how milestones should be set and what is the role of offsetting or compensation.

So far, net zero targets haven't really guided immediate climate action. The consulting company Accenture estimated that

only 5% of European listed companies with a net zero target have reduced their emissions at a pace consistent with reaching net zero by the target date that they have set.

The Corporate Climate Responsibility Monitor, a joint report from Carbon Market Watch and NewClimate Institute, recently found that

major companies routinely exaggerate or misreport their progress towards net zero targets.

Another concern is that without intermediate targets and concrete measures, setting a net zero target decades from now can just be a tactic to delay taking immediate action. Urgent emission reductions can be postponed without any certainty that, as the net zero target year approaches, the companies will have the capacity to implement the needed quick emission reductions or carbon sequestration.

Very recently there has also been positive news about corporations living up to their commitments. According to a survey of 166 companies done by Climate Action 100+ in early 2022, some corporate players have demonstrated progress in pledging more ambitious long-term, high-level climate goals. But at the same time, the surveyed companies still lag in the setting of more detailed commitments to align their strategies with a 1.5C scenario.

Regulators have recently also woken up to the problems with loosely defined climate claims. The European Commission published in March 2022 a new proposal to better regulate what companies can and cannot say to their customers, with a specific focus on climate impact and preventing greenwashing. Similar regulation has been proposed in the US by the Securities and Exchange Commission.

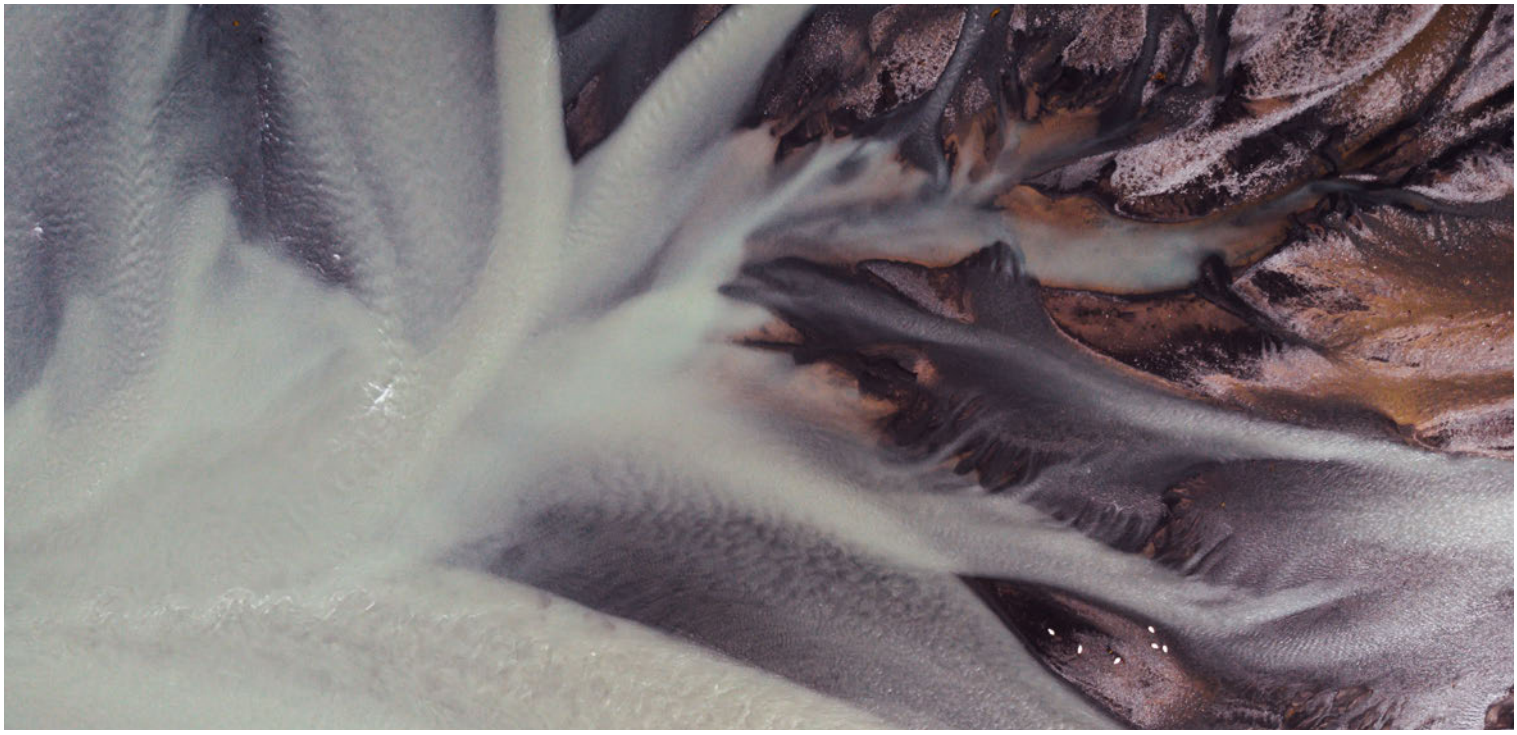
The role of compensation is not clear

According to the *"Taking Stock: a global assessment of net zero targets"* report published in spring 2021,

only about half of the companies that set net zero targets had taken a position on whether voluntary emission compensation could be used to meet the target.

A major concern with the use of compensations is that they will allow emissions to continue without structural changes to the business.

A 2021 Greenpeace report estimated that, due to limited carbon sequestration methods, they will only be sufficient to meet the compensation needs of sectors where emission reductions are most difficult to achieve, such as heavy industry and aviation.



A 2021 study published in Nature estimated that, given the various constraints, increasing carbon sequestration in forests and soils will only be enough to increase natural carbon stocks by about 100-200 gigatonnes this century. This additional carbon sequestration would only prolong our remaining time to limit global warming to the 1.5 degree goal set in the Paris Agreement by a few years.

A more recent study also published in Nature in March 2022 argues that there is a climate benefit associated even with temporary nature-based carbon storage, but only if implemented as a complement (and not an alternative) to ambitious fossil fuel CO_2 emissions reductions.

It is clear that we need more precision about the role of compensation in climate claims. But equally important is the type of compensation that can be used.

↓ Next: **3 Net zero vs. carbon neutrality**

3

Net zero vs. carbon neutrality

Net zero vs. carbon neutrality

Net zero and carbon neutrality claims have in recent years started to diverge into different paths in terms of how they are constructed. In particular, the credibility of carbon neutrality achieved through compensation alone has become highly questionable.

A carbon neutrality claim could be, in theory, made without any emissions reduction at all and just rely on compensating. Net zero standards have begun to emphasise the primary role of emission reductions. And rightly so.

While companies claim they only purchase carbon credits for offsetting unavoidable emissions, there is little transparency on companies' efforts to reduce emissions from operations, and how much of their climate targets are achieved by offsetting.

Far reaching decarbonisation should always be the number one priority of any climate action and compensation should only cover residual emissions.

It is known that emissions stay in the atmosphere for 300-1000 years, whereas trees, that are used to capture carbon in many offset projects, can sequester CO_2 for several decades or until they are logged and burned, then releasing all the CO_2 back into the atmosphere. This is why the best way to mitigate companies' climate impacts is to reduce emissions.

Aligning emission reduction pathways with the goals of the Paris Agreement, as in the Science Based Targets framework, puts compensation "in the right place", as a last resort solution when all reasonable measures to reduce emissions have already been exhausted.

That having been said, a company's journey to net zero can start by achieving carbon neutrality by compensating. In order to keep temperature rise below 1.5°C, companies are encouraged to purchase carbon credits in parallel with their emission reduction efforts in line with their net zero targets, to compensate for emissions released during decarbonisation. In the SBTi Net-Zero Standard this is referred to as *"Abatement or removals beyond a company's value chain"*.

↓ Next: **4 Constructing high integrity net zero or carbon neutrality claims**

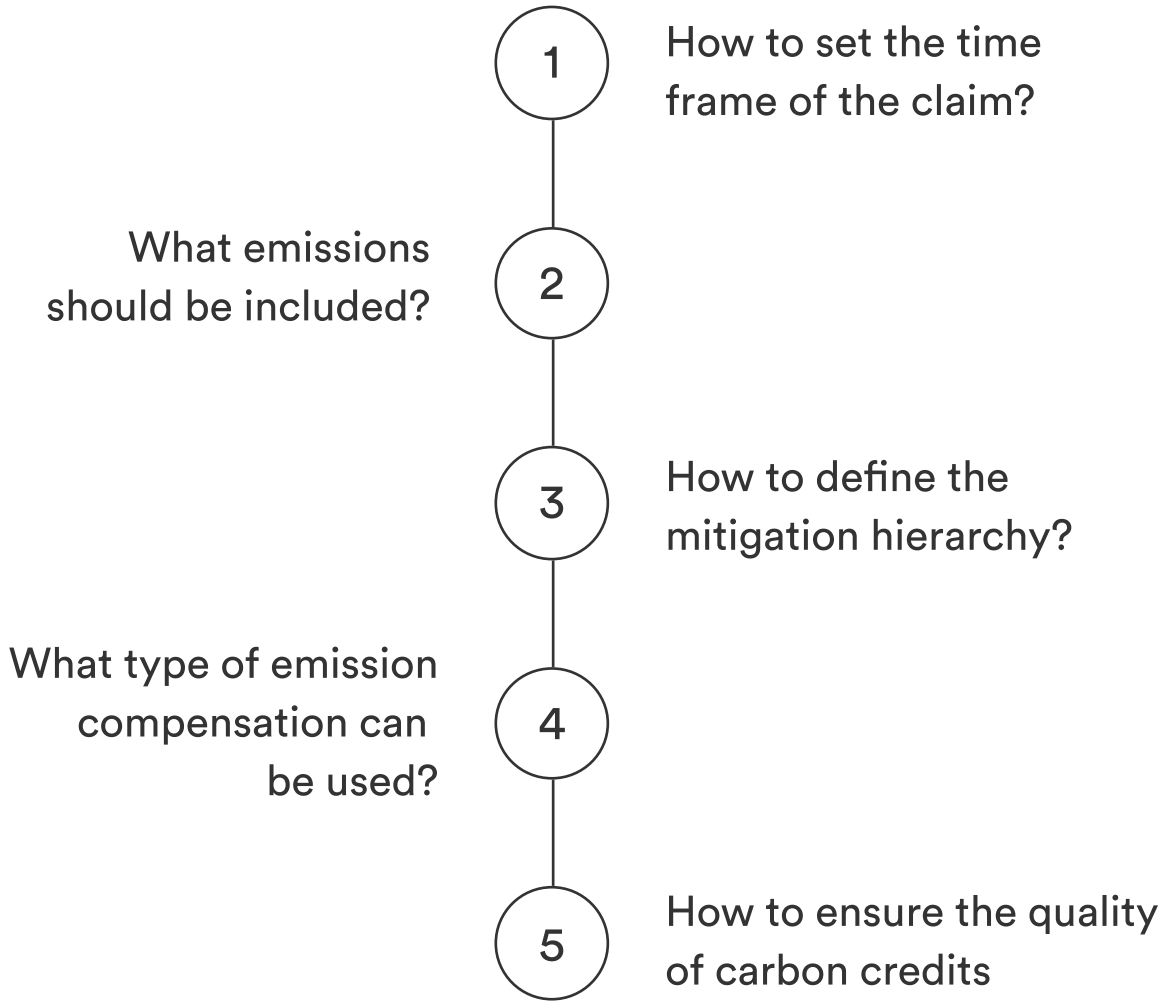
4

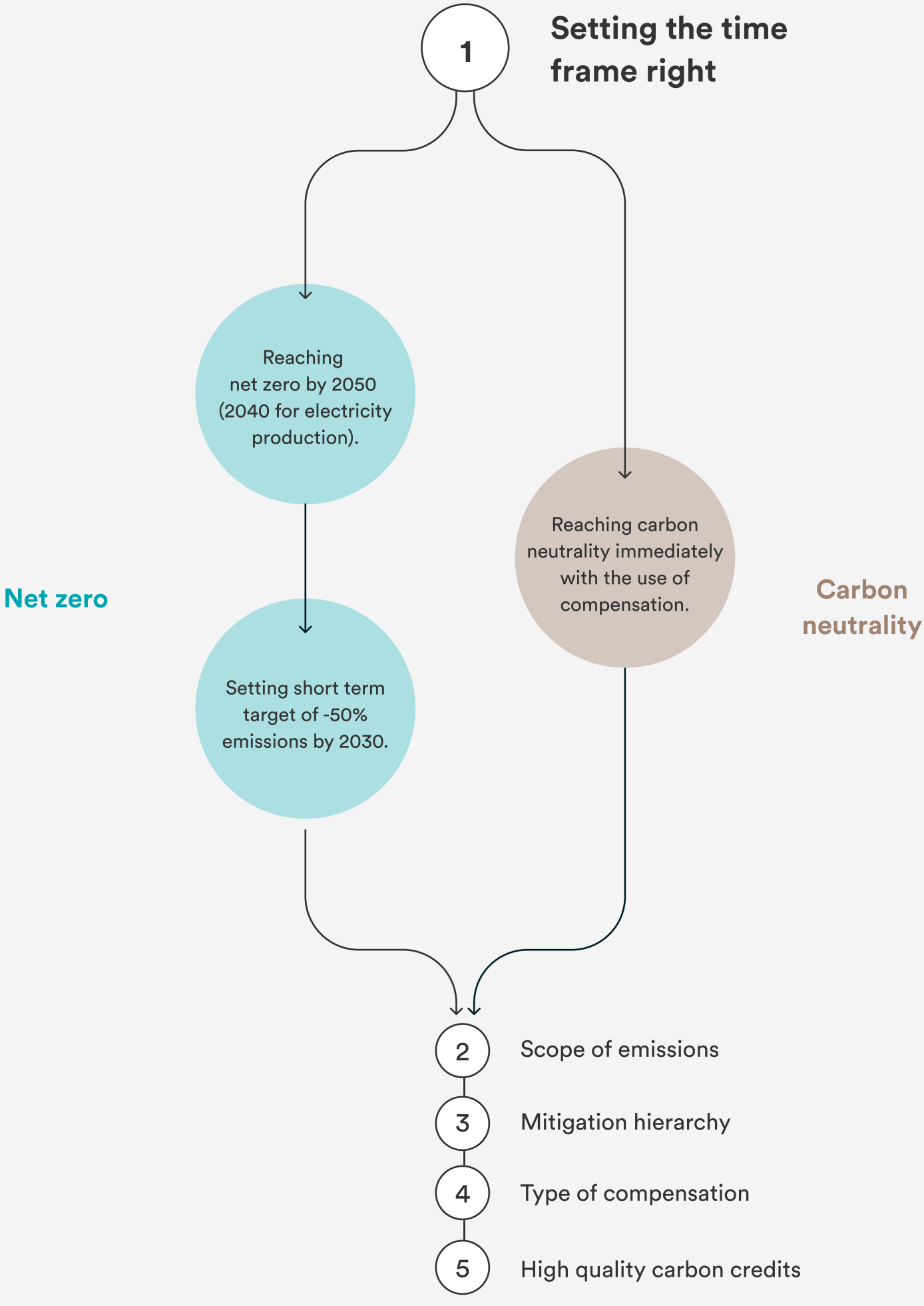
Constructing high integrity net zero or carbon neutrality claims

- Setting the correct time frame
- What emissions should be included?
- Mitigation hierarchy
- Type of compensation used
- How to ensure the quality of carbon credits?

Constructing high integrity net zero or carbon neutrality claims

In order for net zero or carbon neutrality targets and claims to be relevant in tackling the climate crisis, they need to be properly defined. Answering these five questions will help companies set a high integrity pathway to net zero or carbon neutrality:




1
Setting the time frame right
Reaching net zero by 2050 (2040 for electricity production).
Setting short term target of -50% emissions by 2030.
Net zero
Reaching carbon neutrality immediately with the use of compensation.
Carbon neutrality
2
Scope of emissions
3
Mitigation hierarchy
4
Type of compensation
5
High quality carbon credits

1 Setting the correct time frame

Net zero

Although the typical target year for net zero targets in 2050 is rooted in the 1.5 degree IPCC report published in 2018, in practice the target years set by companies vary depending on, among other things, the industry.

According to the Science Based Targets criteria, net zero must be reached by 2050 at the latest, although electricity generation will have to reach net zero by 2040. Climate Action 100+, which represents investors in climate action, has also announced that it expects electricity companies to set a net zero target by 2040. Similarly the Race to Zero sets 2050 as the latest date when net zero has to be reached.

Companies also need to establish a base year to track emissions performance consistently and meaningfully over the target period. According to SBTi, the following considerations are important for selecting a base year:

- Scope 1, 2, and 3 emissions data should be accurate and verifiable.
- Base year emissions should be representative of a company's typical GHG profile
- The base year should be chosen such that targets have sufficient forward-looking ambition.
- The base year must be no earlier than 2015.

Setting a net zero target that is decades in the future runs the risk that the target remains a one-time declaration or campaign promise that won't lead to any practical action in the near future. This would obviously undermine the urgency of mitigating the climate crisis. Thus setting intermediate targets are essential for the net zero target to have a direct impact on emissions.

Science Based Targets requires that corporations aiming at reaching net zero emissions by 2050 at the latest, must also commit to short term measures that reduce emissions by 50% by 2030. The same baseline year should be used for the net zero target year and for the short term target.

Carbon neutrality

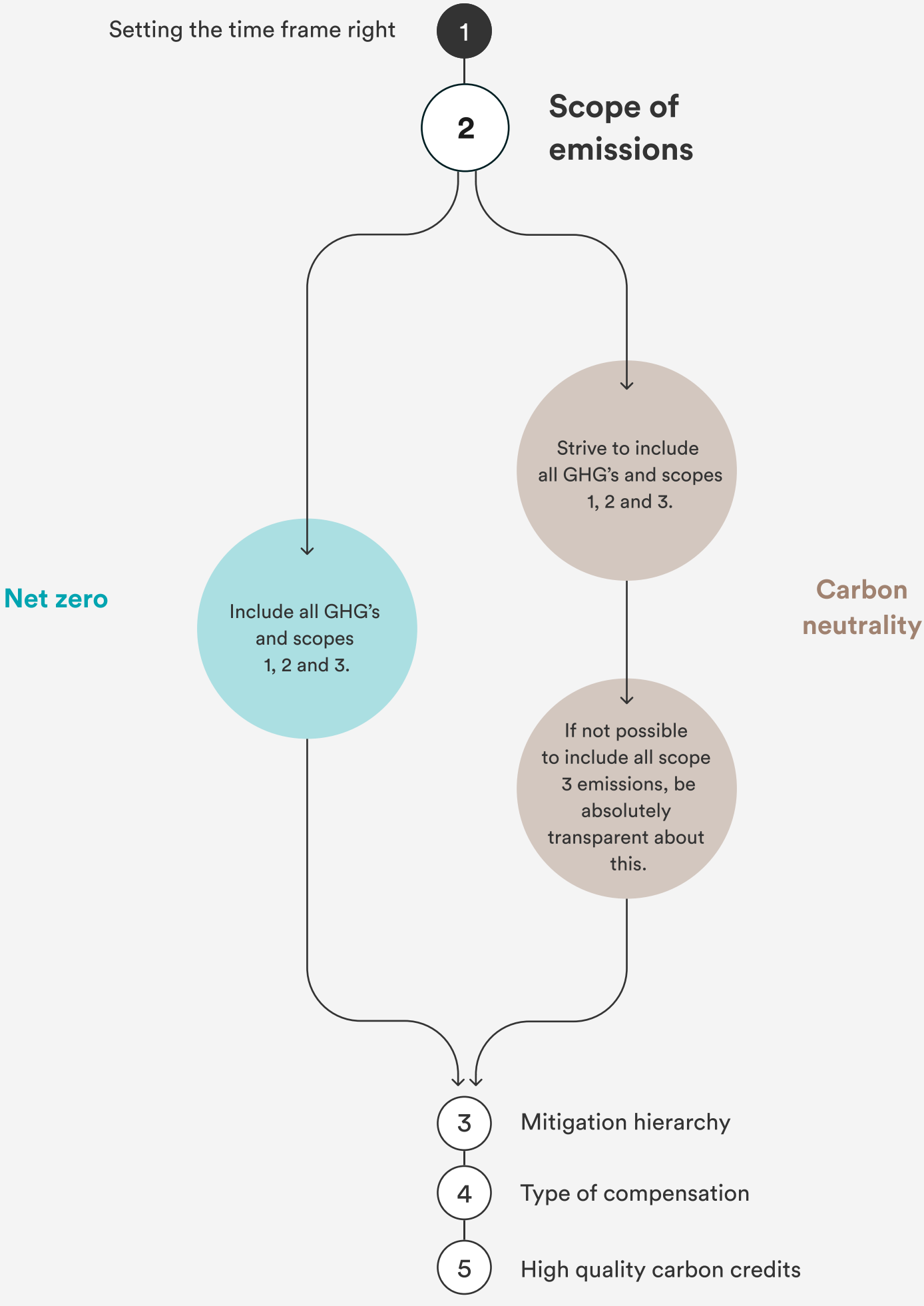
There is no set date for when a carbon neutrality target should be reached. Given the urgency of the climate crisis,

Compensate firmly believes that carbon neutrality should be reached immediately with the appropriate use of compensation.

If we are allowed to add CO_2 into the atmosphere, the least we should do is take responsibility for those emissions. There is already too much CO_2 in the atmosphere. 'Safe' CO_2 levels were surpassed in 1987 and humanity has since accumulated a carbon debt of 2500 gigatons. Why wait to reach carbon neutrality years from now, if we already possess the means to do it today?

But compensating can't be the only measure with which we can reach carbon neutrality today.

More on that when we dive into the mitigation hierarchy in the following sections.

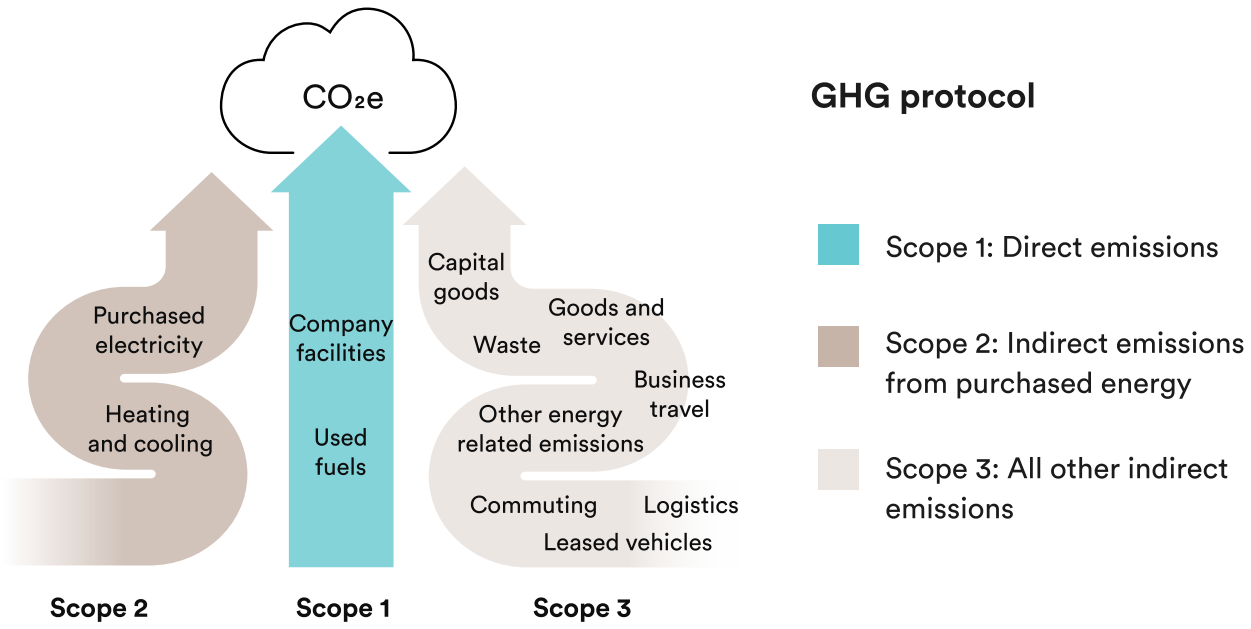

Setting the time frame right
1
2
Scope of emissions
Strive to include all GHG's and scopes 1, 2 and 3.
Net zero
Include all GHG's and scopes 1, 2 and 3.
Carbon neutrality
If not possible to include all scope 3 emissions, be absolutely transparent about this.
3
Mitigation hierarchy
4
Type of compensation
5
High quality carbon credits

2 What emissions should be included?

Net zero

It is essential for the credibility of a net zero target to define what is meant by emissions. Both the Science Based Targets initiative and Race to Zero are clear that the net zero target should cover not only just CO_2 emissions, but all six greenhouse gases covered by the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), and sulphur hexafluoride (SF_6). Additionally nitrogen trifluoride (NF_3) emissions should also be included.

It is also very important to define which emissions fall within the target. In the case of corporate emissions, scope 1, 2 and 3 emissions under the so-called GHG protocol are typically referred to. Scope 1 covers direct emissions from company-owned or controlled sources, Scope 2 indirect emissions from the generation of purchased energy, and Scope 3 all other indirect emissions from the company's value chain.



Scope 3 is further subdivided into so-called upstream and downstream emissions, depending on whether the emissions are related to the companies' own purchases or are only generated during the use or decommissioning phase of the products. How emissions are distributed at different stages of the value chain depends largely on the industry.

A company's own acquisition and investment decisions and other choices directly affect its scope 1 and 2 emissions and scope 3's upstream emissions. Through product development, it also has the opportunity to influence the downstream emissions of scope 3. When net zero targets are typically set quite far away, even decades away, emissions throughout the value chain can be considered to be under the control of the company.

Scope 3 emissions must be included in the Science Based Targets net zero claim. However, full coverage of all scope 3 emissions is not required even in the Science Based Targets criteria, where the long-term net reduction target should cover 90% of scope 3 emissions. Race to Zero is more vague in its terms, as it states that scope 3 emissions should be included when they are significant and they can be reliably estimated.

Carbon neutrality

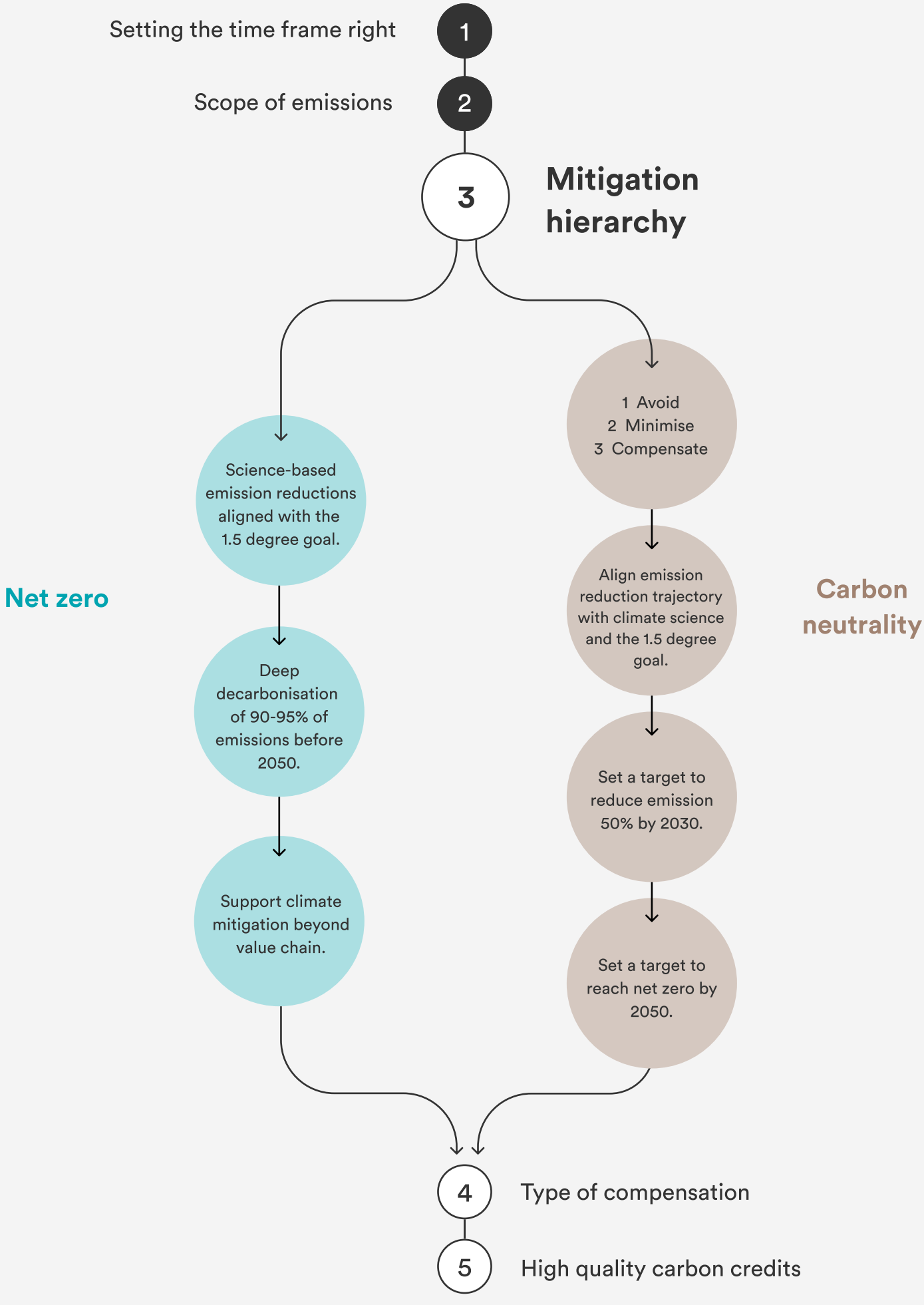
For a corporate carbon neutrality claim to be credible, it should cover all scopes of emissions. All GHGs can also be included, thus expanding the claim to CO_2 equivalency (CO_2e) or climate neutrality (see page 11 for difference between carbon neutrality and climate neutrality).

Scopes 1 and 2 are easy to define in most cases, but scope 3 is where the challenge lies. It is not uncommon to see carbon neutrality claims where scope 3 emissions are completely excluded. Scope 3 is usually the largest source of emissions, culpable for as much as 90% among certain types of companies. Thus including accounting for them in corporate climate targets is essential.

The bare minimum requirement for companies making a carbon neutrality claim, is to be extremely transparent about what scopes are included.

Making a carbon neutrality claim without any Scope 3 emissions is not credible.

Thus companies should strive to include scope 3 emissions whenever they are significant and can be reliably calculated. Most upstream scope 3 emissions fall under this category.


Setting the time frame right
1
Scope of emissions
2
3
Mitigation hierarchy
Net zero
Science-based emission reductions aligned with the 1.5 degree goal.
Deep decarbonisation of 90-95% of emissions before 2050.
Support climate mitigation beyond value chain.
1 Avoid
2 Minimise
3 Compensate
Align emission reduction trajectory with climate science and the 1.5 degree goal.
Set a target to reduce emission 50% by 2030.
Set a target to reach net zero by 2050.
Carbon neutrality
4
Type of compensation
5
High quality carbon credits

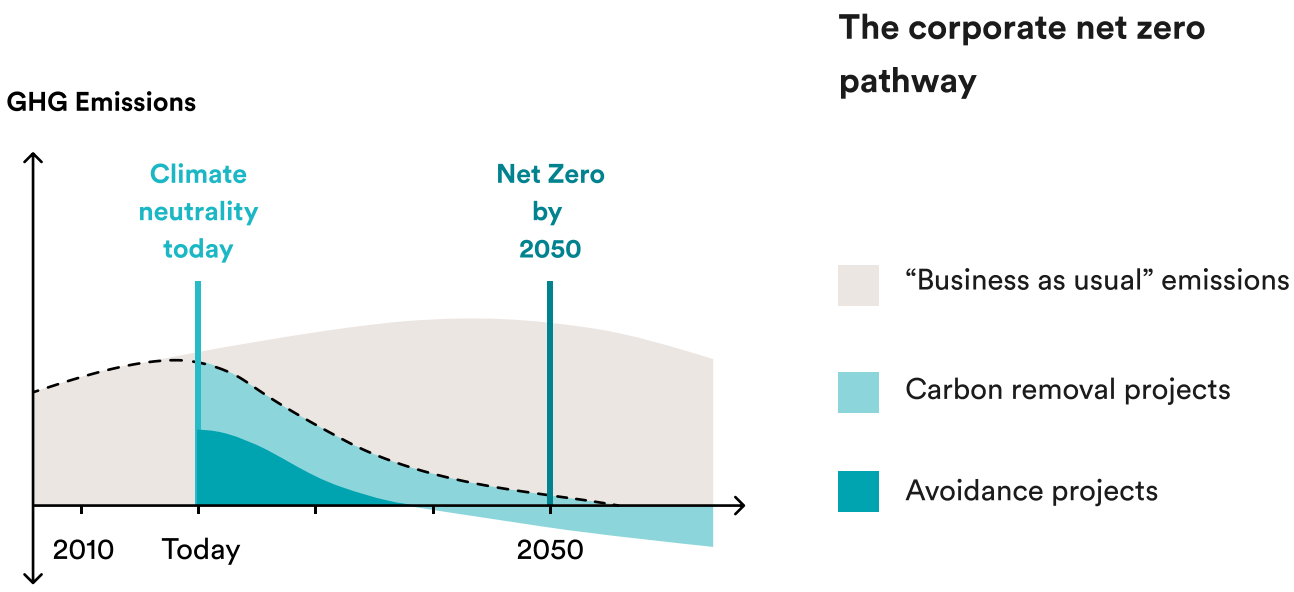
3 Mitigation hierarchy

Net zero

Net zero is not the same as absolute zero, where no emissions occur. In the net zero context some emissions still occur but they are offset by measures that counterbalance them, thus resulting in a net zero impact on the climate.

Race to Zero states that in a net zero framework, emissions reductions should follow *"science-based pathways"*. SBTi goes further in defining what these pathways should be, by stating that emissions should be reduced to a *"residual level in line with 1.5°C scenarios by no later than 2050"*. In practice the SBTi approach means that most companies will have to reduce emissions by at least 90-95%.

It is important to note that both Race to Zero and SBTi emphasise that no net zero claim can be made until emission reductions reach a certain level.



In the case of SBTi that means reaching “deep decarbonisation of 90-95% before 2050”. When that point is achieved, companies need to reach net zero by “neutralising” the remaining unabatable emissions through carbon removal.

It is thus clear that these leading net zero standards strongly emphasise the primary role of emissions reduction in achieving net zero. Aligning emission reductions with climate science and the 1.5 degree goal set in the Paris Agreement is the most important step in reaching net zero. Compensation, or neutralisation in the case of SBTi, is meant for only a very small amount of unabatable emissions.

Even though compensating does not play a key role in reaching net zero it doesn’t mean that companies shouldn’t use the voluntary carbon market to support further climate action. SBTi strongly recommends that companies invest in climate mitigation beyond their value chains on the road to net zero, but this must be in addition to, not instead of, deep emission cuts in line with science.

Carbon neutrality

There is less standardisation around the mitigation hierarchy when it comes to carbon neutrality claims. At a high level, companies should abide by the following hierarchy: 1) avoid emissions, 2) minimise unavoidable emissions, 3) compensate for remaining emissions. But this can be interpreted in many different ways and it leaves too much room for ambiguity.

Compensate strongly believes that a high integrity carbon neutrality claim should be aligned with climate science.

Aligning a company's emissions reduction trajectory and measures with a science-based net zero target, as described above in the previous section, also solves the mitigation hierarchy question for a carbon neutrality claim.

So the first step is to commit and undertake measures to reach a science-based net zero target. This also includes making rapid emission cuts now, and halving emissions by 2030 as prescribed in the SBTi net zero standard.

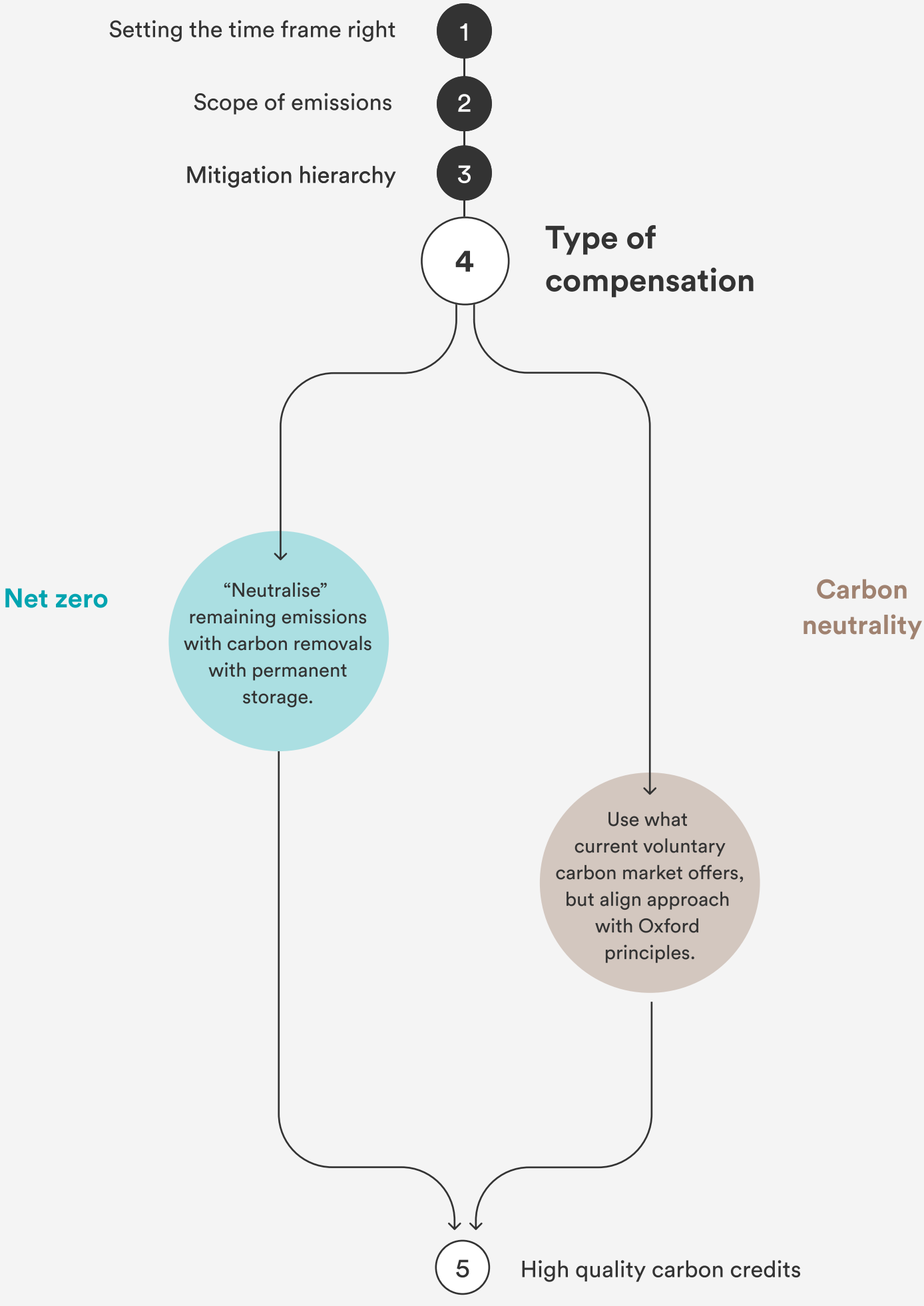
Where a net zero claim and Compensate's definition of a high integrity carbon neutrality claim differ, is that a carbon neutrality claim can be made today with the use of compensation, as long as emission reduction measures are aligned with science-based targets, while a net zero claim can only be made when up to 90–95% emission reductions have first been reached.

It is crucial to note, however, that using the voluntary carbon market to compensate emissions today, should have no impact on a company's science-based emission reduction trajectory and measures.

Emission reduction needs to be locked into a pathway that is aligned with climate science and the 1.5 degree goal. Compensation is always supplementary to these measures, not a substitute for them.

But as discussed in the section on time frames, there is also no reason to wait for a moment when a certain level of emission reductions have been achieved, before voluntary carbon markets and compensation can be used. Considering the urgency of the climate crisis, compensation can and should be used immediately to take responsibility for our present day emissions. Considering our huge carbon debt, compensation is also a useful tool to take responsibility for historic emissions.

It is important to note that carbon neutrality doesn't have to be an end goal for corporate climate action. But rather, it can be a first step on the way towards a more long term net zero target. The role of compensation will just evolve and diminish along the way to net zero.


Setting the time frame right
1
Scope of emissions
2
Mitigation hierarchy
3
4
Type of compensation
Net zero
“Neutralise” remaining emissions with carbon removals with permanent storage.
Carbon neutrality
Use what current voluntary carbon market offers, but align approach with Oxford principles.
5
High quality carbon credits

4 Type of compensation used

Net zero

Any type of compensation is generally valid for a carbon neutrality claim, but the net zero target is generally considered to require compensation based on the removal of carbon from the atmosphere by human activities.

The SBTi Net-Zero Standard states that remaining emissions must be *"neutralised by removing carbon from the atmosphere into permanent storage."* Even though SBTi uses the term *"permanent"*, at the moment it approves many nature-based removal methods like afforestation or planting mangroves, that are not considered as permanent as many engineered approaches to carbon removals.

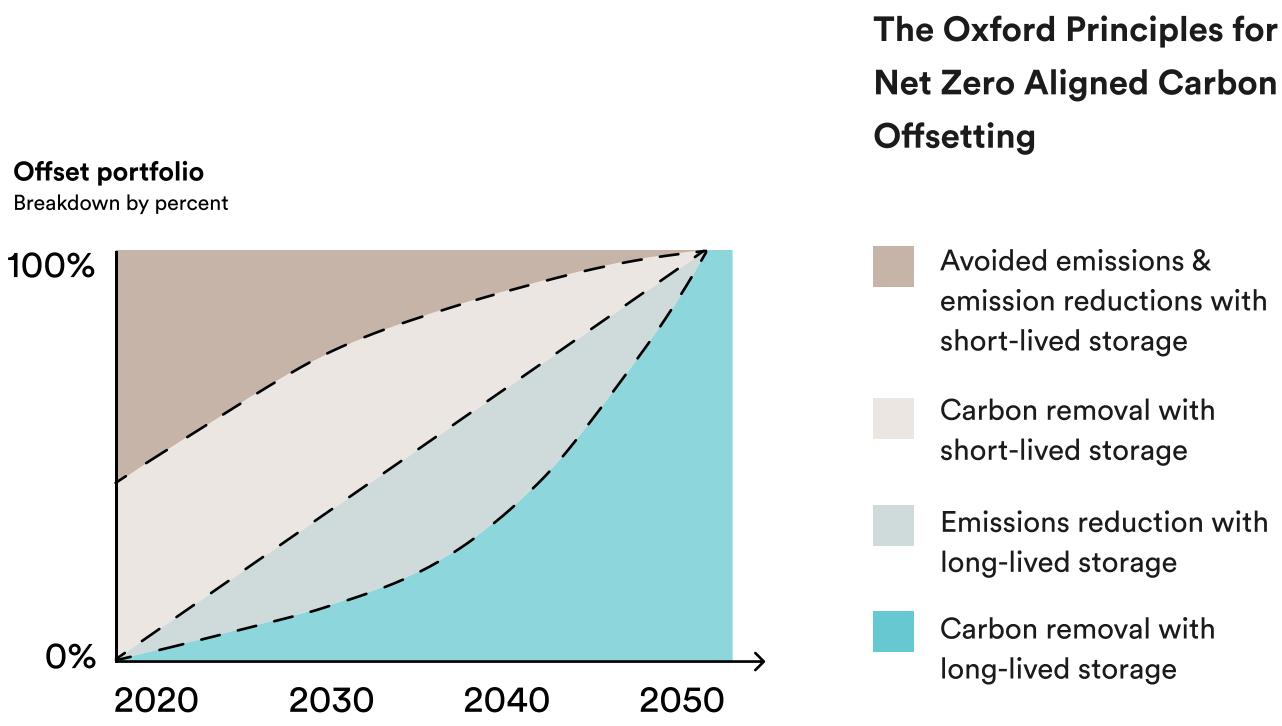
Avoided emission projects reduce emissions compared with a business as usual baseline scenario. Projects that protect forests from deforestation or replace fossil fuel energy with renewable energy fall under this category. In these projects current emissions are reduced by improved alternatives, but existing CO_2 is left untouched.

Carbon removal projects absorb additional CO_2 back from the atmosphere. These include nature-based projects where carbon is sequestered and stored into biomass like trees, seagrasses or soil. There are also engineered methods to remove carbon such as direct air capture and storage.

The Oxford Principles on Net Zero Aligned Offsetting has taken a similar approach. According to the principles companies should:

- → shift offsetting towards carbon removal, where offsets directly remove carbon from the atmosphere;
- → shift offsetting towards long-lived storage, which removes carbon from the atmosphere permanently or almost permanently; and
- → support for the development of a market for net zero aligned offsets.

The required shift to longer lived storage of carbon can be illustrated by this graph:



In practice, what kind of compensation is available to reach the net zero target depends largely on the target year.

Compensation based on, for example, carbon capture directly from the air and geological storage is unlikely to be widely available in 2030, making it difficult to avoid worse alternatives such as increasing carbon stocks in forests. Instead, the net zero targets for 2050 should aim at long-term storage of carbon sequestered from the atmosphere.

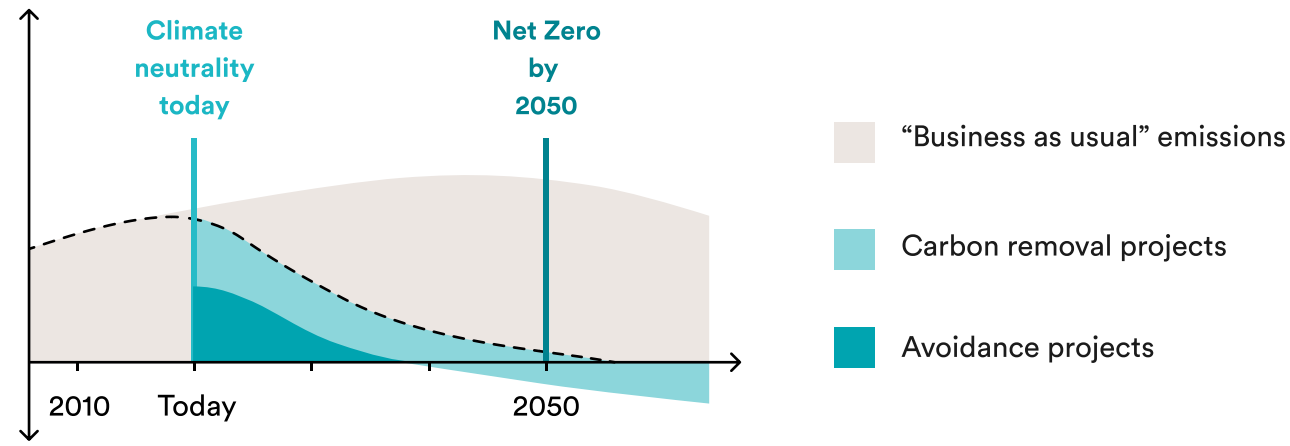
Carbon neutrality

As carbon neutrality claims can and should be made already today, companies have to rely on what the voluntary carbon market has to offer in the present. Avoided emissions projects with short-lived storage make up the vast majority of carbon credits available on the current market. Removals are only five percent of the market today. Companies must operate in this reality.

However,

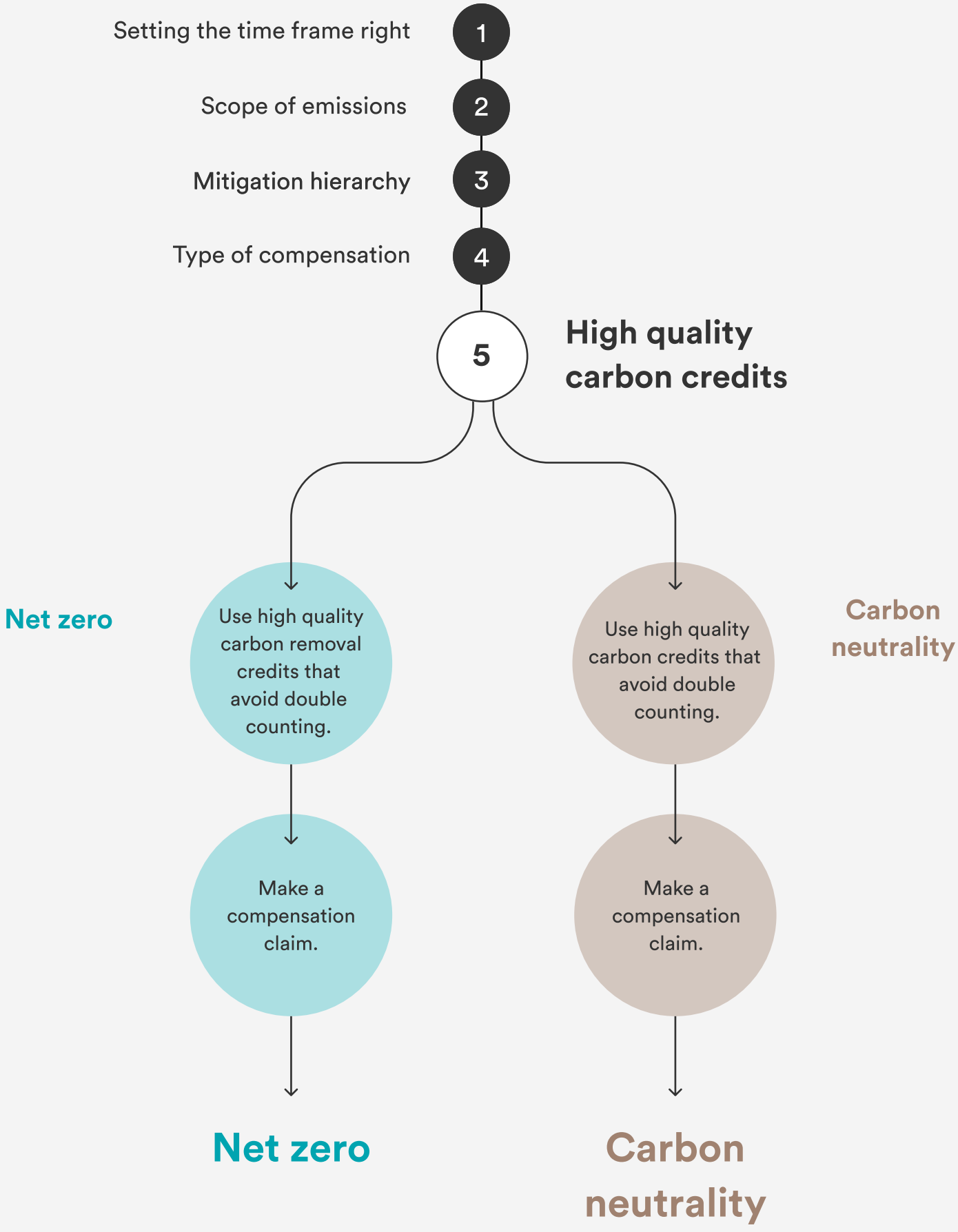
Compensate fully agrees on the Oxford Principles and strongly recommends companies to develop their compensation approach accordingly.

The corporate net zero pathway



Compensate's own portfolio of carbon projects follows the Oxford Principles and already includes 50% removal projects. Compensate has also started to gradually phase out avoided emissions projects with short-lived storage. Increasing the share of both avoided emissions and removal projects with long lived-storage is also a priority in developing Compensate's dynamic portfolio of carbon projects.

The third part of the IPCC Sixth Assessment Report, that focuses on how to mitigate the climate crisis, also emphasizes the need for carbon removals. According to the report, not even radical emissions reductions are enough anymore. Methods for removing CO_2 from the atmosphere are "unavoidable" if the world is to reach net zero – both globally and nationally.


Setting the time frame right
1
Scope of emissions
2
Mitigation hierarchy
3
Type of compensation
4
5
High quality carbon credits
Net zero
Use high quality carbon removal credits that avoid double counting.
Make a compensation claim.
Net zero
Carbon neutrality
Use high quality carbon credits that avoid double counting.
Make a compensation claim.
Carbon neutrality

5 How to ensure the quality of carbon credits?

Both net zero and carbon neutrality claims need to be constructed with high quality carbon credits regardless of if they are based on avoided emissions or carbon removals.

Acknowledging the flaws of the current market

Compensate's previous white paper "Reforming the Voluntary Carbon Market" highlighted worrying quality issues that the current market has. It also introduced Compensate's unique approach to navigate a fundamentally flawed market. The white paper received a lot of attention and has been featured in several respected media outlets, including Bloomberg, Quartz, Carbon Pulse, Nikkei, Business Green, Business Insider and Sifted.

In early 2020 Compensate, together with its independent Scientific Advisory Panel, created a sustainability criteria to screen and evaluate forest-based carbon projects. The criteria helps Compensate choose projects that have a positive impact on the climate, but also on biodiversity, human rights, and for local communities.

Over the past two years, Compensate has screened and evaluated over 150 carbon projects. We have seen that over 90% of projects fail basic sustainability checks. Almost all evaluated projects are verified under international carbon standards like Verra, Gold Standard or Plan Vivo. The vast majority of evaluated projects have been nature-based, mostly either forest protection or afforestation/reforestation projects.

The reasons why projects fail vary, but are all equally alarming. Some projects cannot be considered additional, others have serious permanence risks.

Some have unreliable baselines, because assumed deforestation is largely inflated. Worryingly, many projects also cause serious human rights violations.

It is evident from Compensate's experience that the voluntary carbon market has much work to do.

The market must acknowledge these current flaws and understand the risks associated with carbon neutrality and net zero claims.

It is not easy to estimate the climate impact of compensating tied to net zero or carbon neutrality claims, simply because the quality of carbon projects varies significantly. Overestimating the climate impact of projects can lead to misleading estimations of the amount of avoided emissions or CO_2 removed from the atmosphere.

In theory, fulfilling corporate net zero or carbon neutrality pledges should lead to a reduction of CO_2 in the atmosphere, but in practice the result could as well be an increase in CO_2 instead. The net increase in emissions is the result of using low quality carbon credits that claim to have climate benefits, but in reality do not change the amount of CO_2 in the atmosphere. The outcome is that companies keep emitting CO_2 into the atmosphere and these emissions are not counterbalanced by the carbon projects they buy credits from.

While quality varies tremendously, especially when it comes to nature-based solutions, this is not something carbon credit sellers or resellers necessarily tell buyers. Disclosing such information is not in the seller's best interest, as selling low quality credits could undermine their reputation. Sometimes, sellers are not even aware of the quality of the credits they sell.

When challenged on the quality of credits, businesses and offset providers stand behind the international standards as a means of assuring the quality of the offsets. But as Compensate has discovered, not even the most renowned international standards can guarantee real climate impact.

What does all this mean for those looking to use carbon credits to make a credible net zero or carbon neutrality claim?

Compensate has developed a unique solution to mitigate the flaws of the current market. It includes strict criteria for projects, in-built overcompensation, and a diverse portfolio of projects to mitigate risks.

The approach will be presented in more detail in the following chapter that presents the Compensate Credit.

Avoiding double counting

Under the Paris Agreement, post-2020, each country is to report on its climate actions, and progress towards the set climate targets or the Nationally Determined Contributions (NDCs). This has implications for many of the projects selling carbon credits on the voluntary carbon market.

After 2021, all carbon projects will automatically contribute towards their host country goals under the Paris Agreement if the specific project type is included in the country's NDC. For instance, if the land use sector is in the NDC, the sinks from any forest-based carbon projects will be counted towards achieving the NDC.

When a compensation claim is made, that statement should be grounded in truth. It is simply not acceptable to make a compensation claim using emission reductions or removals that have already been counted and claimed by the host country of the project. Contrary to the intention, this in fact results in a net increase of emissions in the atmosphere as only 1 tCO_2 has been avoided or removed instead of 2 tCO_2 - one by the company and one by the host country.

If a company claims to be carbon neutral through carbon credits that are also counted into the project's host country goals, as far as climate ambition is concerned, the company hasn't actually done anything extra. On the other hand, double counting can also disincentivize countries from implementing much needed climate action.

Either the so-called carbon inventories and reporting done by the host countries must be able to adjust to offsetters' claims, or the claims made by the companies must be adjusted.

The first option means implementing national registries of all voluntary carbon offset projects and deducting them from national greenhouse gas inventories and climate targets. These are called “corresponding adjustments”. This means that these CO_2 reductions or removals will not contribute to the host country’s national climate targets. In this way, emission reductions or removals will only be claimed once: for instance, in the case of corporate offsetting, only by the company making the compensation claim.

Corresponding adjustments would also mean that private climate action using carbon credits would go beyond what is already set in national policies. To be truly impactful, offsetting should always be additional to national climate targets for an increase in overall climate ambitions.

Another solution to the double counting issue would be differentiating claims into offset claims and “contribution claims”. Under the contribution model, companies would finance climate action and help countries meet their climate targets without making a compensation claim.

Compensate welcomes the contribution model. This would allow projects to be financed either by issuing carbon credits or through support for climate action and ecosystem services without the need to count towards achieving a net zero or climate neutrality target. However, this has to be very clearly understood by the companies using these credits. They would thus still need to use adjusted credits to reach a net zero or a carbon neutrality claim.

At Compensate we believe in sticking to the truth. Double counting has to be avoided either through corresponding adjustments or by using an alternative contribution claim.

At this point in the ever worsening climate crisis, there is simply too much at stake to make empty promises.

↓ Next: **5 The Compensate Credit**

5

The Compensate Credit

The Compensate Credit

Making a credible claim with current market standards for carbon credits is challenging. Compensate has created a unique solution to tackle the most crucial flaws that the current voluntary carbon market has. It is called the Compensate Credit.

The Compensate Credit is a high quality carbon credit that builds upon international standards, like Gold Standard and Verra, but goes even beyond them. It is based on a diverse portfolio of carbon projects that meet tight criteria related to climate integrity, biodiversity, social justice, and human rights. The credit has an in-built overcompensation that mitigates risks related to carbon projects and provides a more robust compensation claim compared to standard carbon credits.

Diverse portfolio

Like investment managers managing a fund to deliver the best value, Compensate creates a “meta-credit” by managing a diverse carbon project portfolio to deliver the best possible climate impact. This portfolio allows Compensate to maximise its clients’ investments into carbon projects. Diversification serves also as further mitigation against the risks associated with any given project.

The portfolio is diverse and dynamic, making it possible to mix a wide range of project types with different prices, while regularly monitoring and replacing existing projects with better ones. Currently, the portfolio consists of a selection of nature-based projects, including forest conservation, afforestation and reforestation, blue carbon and biochar. The share of each project is determined by the project's climate integrity score and its price, allowing for the best impact-cost ratio.

80% of the portfolio focuses on established nature-based methodologies, including forest conservation, reforestation and afforestation projects. 20% is dedicated to innovative carbon capture methods.

Commitment to Oxford Principles

Compensate is committed to developing the portfolio according to the Oxford Principles on Net Zero Aligned Offsetting. The portfolio is already split 50/50 between avoided emissions and carbon removal projects. Compensate has also started to gradually phase out avoided emissions projects with short-lived storage. Increasing the share of both avoided emissions and removal projects with long-lived storage is also a priority in developing Compensate's dynamic portfolio of carbon projects.

Strict project criteria

Compensate has, in co-operation and with guidance from its Scientific Advisory Panel, formed a criteria for evaluating all projects that are included in the portfolio. All projects are evaluated on climate impact, biodiversity, social justice and human rights. 90% of projects evaluated have thus far been excluded from the portfolio as they do not meet Compensate's criteria. Almost all evaluated projects are verified under international carbon standards like Verra, Gold Standard or Plan Vivo.

Innovative project types, like biochar, soil carbon, blue carbon (underwater carbon capture), are evaluated in a simplified manner, as these methodologies are still emerging and do not yet meet the strict criteria used for established methodologies. Compensate wants to incentivize the development and market access of these new methodologies, knowing their vast potential in helping solve the climate crisis and the many limitations of more traditional projects. By investing in innovative carbon capture, Compensate helps its clients not only compensate for their emissions with methodologies that would otherwise remain quite expensive, but also supports these modern solutions to fight climate change.

In-built overcompensation

In theory, each carbon credit sold on the voluntary carbon market is worth one tonne of CO_2. However, due to the many uncertainties in carbon projects, which are not always rigorously taken into account or mitigated, Compensate can't be confident that one standard carbon credit really equals one tonne of CO_2 either as avoided emissions or as CO_2 removed from the atmosphere.

Compensate's strict evaluation process includes scoring projects in order to estimate the real climate impact of one carbon credit. This results in a project-specific climate impact score. For instance, for a project with an impact score of 0.7, one credit is equivalent to 0.7 tonnes of CO_2. In order to provide a robust offsetting claim, Compensate overcompensates by purchasing enough credits to reach a real impact equivalent to one tonne of CO_2. This overcompensation mechanism is incorporated in the Compensate credit.

No double-counting

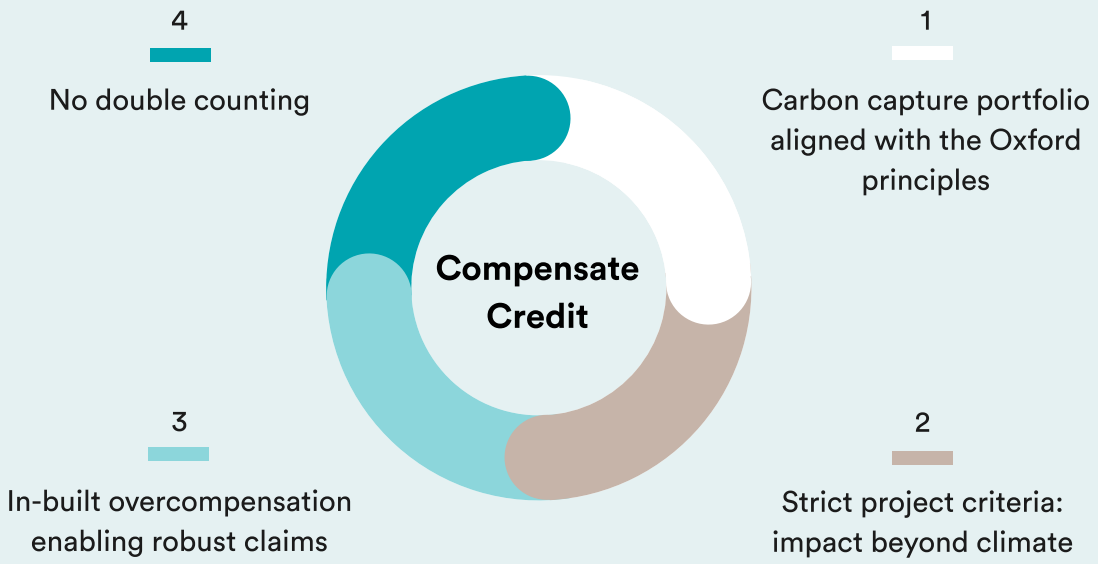
Compensate makes sure that buyers of the Compensate Credit can make a credible compensation claim. This requires avoiding double counting.

Double counting refers to a situation where two parties claim the same carbon removal or emission reduction.

Commonly, the two claiming parties are an organisation offsetting its emissions and the host country of the project trying to reach its nationally determined contribution (NDC), or climate target, under the Paris Agreement.

Compensate avoids double counting by selecting projects in countries that apply so-called corresponding adjustments for credits sold on the voluntary carbon market. For the time being Compensate also uses pre-2020 credit vintages that are not affected by the Paris Agreement carbon accounting rules. Compensate can also select projects that operate in sectors where that host country does not have mitigation targets.

The Compensate credit is a new type of carbon credit that is built on four key elements:



1 A “meta-credit” built with a portfolio of carbon projects

- Risks related to especially nature-based projects are mitigated by a large portfolio of projects (typically 10-12 projects).
- Consists mostly of Gold Standard and Verra certified projects, but also smaller standards like Plan Vivo and Puro.Earth.
- Dynamic portfolio that is aligned with the Oxford Principles of Net Zero Aligned Offsetting. The portfolio currently consists of 50% carbon removal projects and 50% avoided emissions projects.
- 20% of projects are innovative solutions to carbon removal, thus supporting innovation and new technologies to enter the market.

2 Strict project criteria

- All projects meet Compensate's strict project evaluation criteria related to climate integrity, biodiversity, social justice, and human rights.
- Through diverse project types, the Compensate credit supports all the Sustainable Development Goals of the United Nations.

3 In-built overcompensation enabling robust claims

- Compensate's project evaluation criteria are used to score each project to determine the necessary overcompensation for that project.
- The share of each project is based on its climate impact score: providing the best impact-cost ratio.

4 No double counting

- Projects are located in countries that apply corresponding adjustments for credits sold to the voluntary carbon market,

or

- Compensate uses credit vintages that are not affected by the Paris Agreement carbon accounting rules,

or

- Projects are in sectors where that host country does not have mitigation targets.

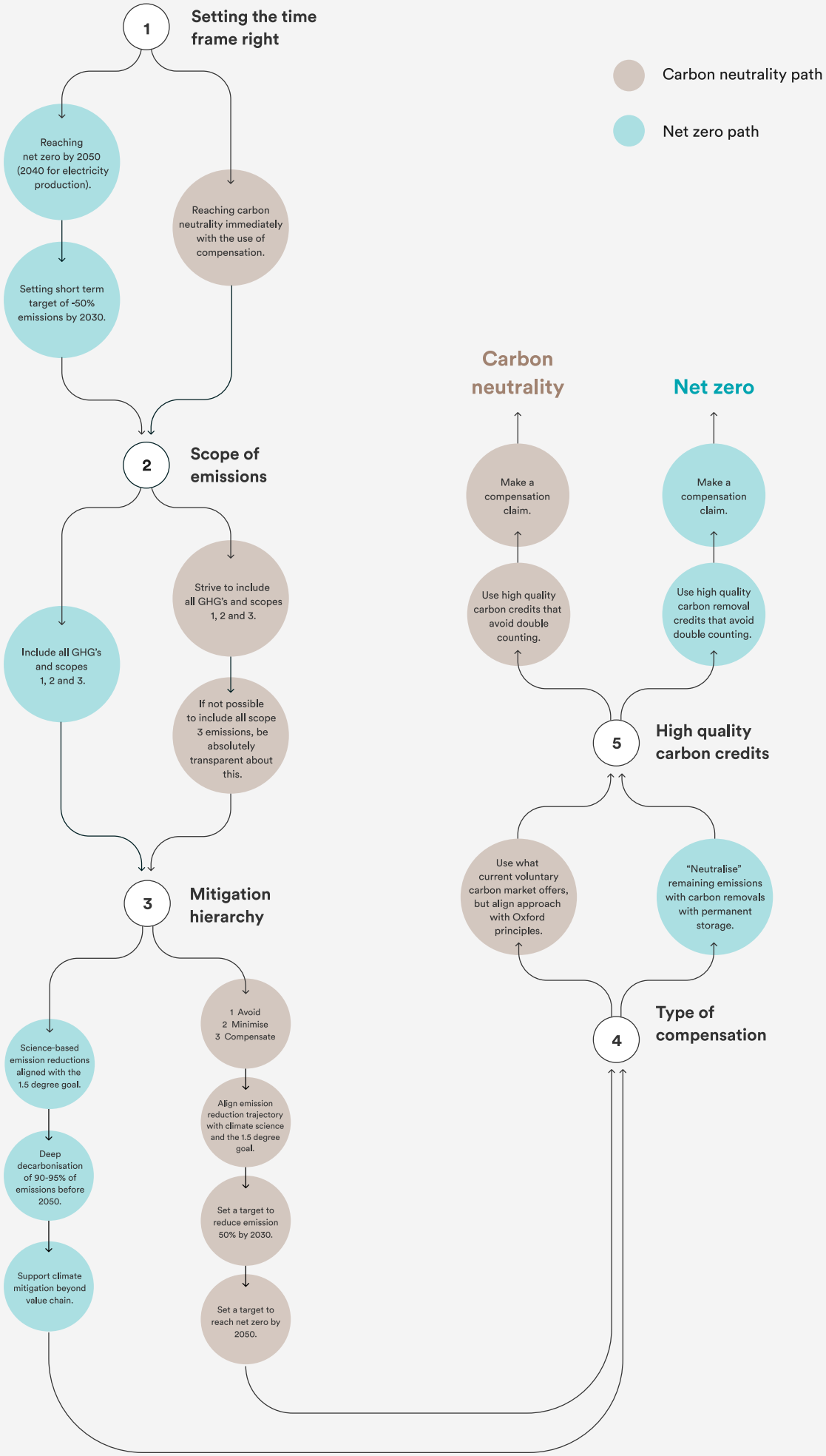
↓ Next: **6 Summary**

6

Summary

Summary:
Pathways to net zero and carbon neutrality

As this white paper has illustrated, making a net zero or carbon neutrality claim requires answering five key questions. If companies make high integrity choices when answering these questions, it will open up a pathway to a credible claim. These pathways are summarised in the following graph.


Carbon neutrality path
Net zero path
1
Setting the time frame right
Reaching net zero by 2050 (2040 for electricity production).
Setting short term target of -50% emissions by 2030.
Reaching carbon neutrality immediately with the use of compensation.
2
Scope of emissions
Include all GHG's and scopes 1, 2 and 3.
Strive to include all GHG's and scopes 1, 2 and 3.
If not possible to include all scope 3 emissions, be absolutely transparent about this.
3
Mitigation hierarchy
Science-based emission reductions aligned with the 1.5 degree goal.
Deep decarbonisation of 90-95% of emissions before 2050.
Support climate mitigation beyond value chain.
1 Avoid
2 Minimise
3 Compensate
Align emission reduction trajectory with climate science and the 1.5 degree goal.
Set a target to reduce emission 50% by 2030.
Set a target to reach net zero by 2050.
Carbon neutrality
Net zero
Make a compensation claim.
Make a compensation claim.
Use high quality carbon credits that avoid double counting.
Use high quality carbon removal credits that avoid double counting.
5
High quality carbon credits
Use what current voluntary carbon market offers, but align approach with Oxford principles.
"Neutralise" remaining emissions with carbon removals with permanent storage.
4
Type of compensation

7

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Sources and further reading

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