Results GREEN Engagement Program 2022

Global Real Estate Engagement Network

Finance Ideas & Almazara Real Assets Advisory

3 March 2023

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1 The Global Real Estate Engagement Network (GREEN)

Introduction to this report

The Global Real Estate Engagement Network (hereinafter: GREEN) is an engagement network of institutional investors (pension funds, insurance companies, asset managers). On recognition of real estate's contribution to climate risk and the consequences faced by the sector, the network was founded to utilize collective influence for effective engagement. Engagement is carried out on climate risk management practices of real estate funds. The engagement activities focus on both listed real estate (currently the FTSE EPRA NAREIT Developed index constituents) and non-listed funds (a selection based on the holdings of the participating members).

GREEN members perform engagement on financially material topics in real estate. In line with market standards, it aligns its engagement topics and approach with broadly accepted initiatives and frameworks like TCFD, EU Taxonomy, SASB and GRESB. The network also cooperates with asset managers and engagement providers that are not (yet) a member, wherever possible.

Broadly, engagement is carried out across four themes– this includes governance, implementation, building certifications, and climate risk disclosure. Each real estate fund is engaged on various topics, based on in-depth analysis of the fund and through in-depth one-on-one conversations.

GREEN has committed asset owners and asset managers with over EUR 2 trillion of total assets under management. There is an ongoing dialogue with other institutional investors that are interested to join.

Membership of GREEN increases both the efficiency and effectiveness of engagement, as doing engagement via GREEN provides economies of scale, and collectively more influence can be exerted on the strategy and sustainability policies of real estate funds.

GREEN serves as a collaboration platform for its members where they can access discussions with sustainable real estate managers and owners, and where they can collaborate to put out coordinated messages and collectively engage the real estate industry.

Moreover, GREEN provides secretariat support for investors, facilitates meetings, provides technical assistance, shares scientific research findings and creates opportunities for enhancement of engagement skills.

The Global Real Estate Engagement network has three groups of members:

1. Asset owners and managers with a sustainability/engagement team that will lead some of the engagements of the GREEN network (engaging-members)
2. Asset owners and managers without or with a limited engagement team that use the capabilities of engagement service providers (outsourced engagement members)
3. Service providers who engage on behalf of their clients (service provider members)

In this report Finance Ideas and Almazara, two of the engagement service providers, report on their efforts and results in engaging both listed and non-listed real estate funds/companies based on the GREEN investor statement. We also report on the progress of the GREEN initiative as a whole, as Finance Ideas and Almazara – together with you as a client - have been instrumental in setting up GREEN. GREEN's governance will be strengthened in 2023 as it will be incorporated into an independent not-for-profit legal entity (stichting) with an independent board. The servicing of engagement clients of Finance Ideas and Almazara will remain unchanged.

We would like to thank all our clients / outsourced engagement members of GREEN for their support and congratulate you on the impact you have made by being a launching member. We would also like to thank GREEN funders Laudes Foundation and Climate Works for their financial support, and the engaging-members of GREEN for collaborating with us in GREEN and making GREEN a truly Global Real Estate Engagement Network.

Finance Ideas & Almazara

Update on GREEN network / governance

The Global Real Estate Engagement Network (GREEN) has welcomed several new members in 2022 and has now grown to 19 members based in Europe and the US. GREEN continues its efforts to expand the network further, in order to increase its effectiveness, efficiency and global outreach. In 2022 the first pilot engagements lead by members with their own engagement capabilities (engaging-members) started, which for example included engagement dialogues with real estate companies: Alexandria and Welltower. GREEN also has been awarded a prize for Outstanding Industry Contribution from IPE Real Estate in the spring of 2022.

GREEN formed a steering committee to set the structure and governance of the network. Members of the steering committee were: Derk Welling (APG), Peter van den Tol (MN), Louise Kranenburg (Pf. Detailhandel), Paul Chandler (PRI), Vincent van Bijleveld and Maaike Hof (GREEN). The secretariat of GREEN started multiple working groups in 2022 to set up the initial framework of the engagement platform, which was then reported back to the steering committee for final approval. Three working groups were established, with differing goals:

1. One group worked on the governance structure, rules and code of conduct of GREEN
2. Another group worked on how to monitor and report on results from engagement
3. The third group worked on a methodology to select focus companies for engagement within listed real estate

All three working groups have successfully finalized their proposals and those were all approved by the steering committee. The steering committees and the working groups have enabled GREEN to set the final governance. This means that GREEN is currently recruiting board members. In addition, GREEN now has set the rules and code of conduct of the structure. If you would like to receive this or would like to have more information on board membership, please contact the GREEN secretariat. The methodology for defining the focus companies will be discussed further in the next chapter. Finally, GREEN has developed a dashboard that will enable members to easily set their engagement objectives and track their engagement progress. The University of Maastricht will independently validate this dashboard going forward.

GREEN has managed to secure 3-year funding from the Laudes Foundation and Climate Works – who also fund the Climate Action 100+ initiative – which enables GREEN to work on growing its membership base, improve the dashboard progress and coordinate the engagement process with its engaging members. GREEN welcomed Wellington, Neuberger Berman, Robeco, Centersquare, Trillium, Testina and Pf Hoogovens as new members in the last 12 months and strives to double its membership base in the next 12 months.

Focus companies for collaborative engaging-members within listed real estate

In the second half of 2022, the engaging-members of GREEN started their pilot collaborative engagements with real estate companies based on the GREEN investor statement. As the number of engaging-members of GREEN grew, the necessity of an objectively determined group of focus companies increased. When a new engaging-member joins the network, there should be clarity on which companies should be prioritized to be engaged collectively.

In a total of three working sessions, a methodology for selecting focus companies was formulated based on the investor statement asks and the following starting points:

- GREEN wants to have a shortlist of focus companies that new members can choose from;
- GREEN wants to prioritize the collaborative engagement with companies that are behind compared to their peers, to show these companies that a large group of investors is aligned on the GREEN investor statement. However, GREEN should not rule out including followers & leaders in the collective engagements;
- GREEN wants a good diversification in the list of focus companies in terms of sector and location.

The methodology that resulted in the focus list can be described as follows:

- First, it was predetermined how large the final list of focus companies should be. For every sector (eight in total) and every region (3 in total), we aimed to select 3 focus companies;
- The initial group of funds was collected from the FTSE EPRA NAREIT Developed index;
- As impact might be too marginal when companies are very small, GREEN selected the largest 120 companies by market size to further investigate;
- The first filter applied to this selection of companies was to remove all companies that have energy reduction targets. However, companies with energy targets that were extremely low in terms of ambition were not removed;
- Companies that have set a target that is approved by the Science Based Targets initiative were filtered out of the focus companies' group;
- The applied filters did not always lead to a selection of three funds, for each sector and region combination. Therefore, for all remaining funds their exact energy/CO2 targets, whether they include scope 3 emissions for their CO2 targets and how ambitious the targets are, were evaluated, based on which the focus companies were selected. In some sector/region combinations, there were fewer than 3 candidates so these companies can obviously not be considered “behind” their peers. Also, not having targets in place does not necessarily mean a company is not implementing ambitious carbon and energy reduction plans as well as having targets doesn’t necessarily mean a company has a credible implementation plan. The focus company list should therefore not be viewed as a ranking.

Update on progress reporting: dashboard

Engagement reporting has historically been aimed at measuring progress, and so has the first (2021) GREEN engagement report.

As climate risk become increasingly apparent, progress is not good enough anymore; real estate needs to achieve more absolute science-based targets in order to mitigate transition-risks.

The expansion of the GREEN network also required an objective scoring mechanism and an easy way of monitoring progress of engagements. With the introduction of the monitoring dashboard, prepared for both listed and non-listed funds, GREEN has realized that objective.

The new methodology for assessing the performance of a fund is relatively simple. First, the major topics as outlined by the Investor Statement are considered as the main indicators:

- Governance
- Implementation
- Certification
- Climate risk disclosure

For each of these categories, a number of indicators are defined, with which a fund/company either complies (1) or not/unknown (0). An easy example would be the indicator 'Net Zero commitment': if a fund is committed to Net Zero on scope 1-3, the indicator is 1 if not, 0. There are a total of 52 indicators. Please see the appendix for a full overview of the indicators.

The goal of the dashboard is not to create an overall score for real estate companies and funds but rather to identify points for improvement as well as track progress of the engagements. It is not necessarily true that a fund with 20 points is performing worse than a fund with 30 points as some indicators might be more relevant to investors than others.

To monitor progress made during engagement meetings, milestones are assigned to each indicator that was discussed, similarly to last year. For an overview of these milestones, please refer to the appendix.

The new methodology provides GREEN with a relatively objective way of assessing funds, tracking progress of conversations and tracking progress of funds' actual performance.
The assessments will also allow GREEN to compare the performance year over year, so enables monitoring of actual improvements made in the real estate industry over time, and better checking whether commitments being made are being adhered to.

For non-listed funds, the GREEN secretariat has prepared the assessment score of the dashboard. On the listed side, the assessment score of the dashboard was prepared and validated by the University of Maastricht, for all funds that GREEN seeks to engage.

The results of the dashboard which are presented in this report, are all non-listed funds that we currently engage with (20) (refer to chapter 3 with results on non-listed engagement). For listed funds, the results which are presented are for all assessed companies (60). Please refer to chapter 2 to see these results.

2 Summary of results

Activities and results of 2022

Overall results

During the reporting period, the following activities have been undertaken:

- Engaged intensively with 36 listed large cap companies in one-on-one conversations
- Engaged intensively with 19 non-listed funds in a total of 29 conversations
- Sent out individualized engagement surveys (including the investor statement) on the topic of climate risk management to 284 listed funds, made 80 follow up calls which resulted in a total of 77 complete responses.
- Attended numerous conferences within the real estate industry to spread the message about the network and the investor statement asks, such as PRI, IPE Real Estate, Top 1000 funds, Financial Investigator- Seminar 'Duurzaam beleggen in Real Assets', Nareit and EPRA events, IPCC events, PensioenPro jaarcongres, and RELPI Europe.
- Published an article on climate risk management in a magazine dedicated to pension funds
- Strengthened our voice within the real estate sector by participating in advisory groups of well established industry standards such as the Carbon Risk Real Estate Monitor (CRREM) , the Science Based Targets initiative (SBTi) and the EU Energy Efficiency Financial Institutions Group..
- Submitted responses to INREV, GRESB, CRREM and Urban Land Institute policy questionnaires

In the first year, a total of over 145 funds and companies were engaged/responded of which 31 large cap, 97 small cap and 17 non-listed companies. In the second year, the total number of funds and companies engaged stands somewhat lower, at 132 but the amount of funds engaged intensively has been higher, with 55, compared to 48 in 2021.

Large cap engagements

Over the past year, we have engaged with a total of 36 large cap companies. In total, we have been able to schedule an engagement call with 44 real estate companies since the start of our outreach two years ago.

There are some companies in our top 60 that we have not been able to reach. We have tried to reach these companies in numerous ways including calling/emailing in their native language (including Japanese and Chinese) and asking other green engaging-members to introduce us to these companies. We are scheduling calls with some of these companies in the coming few months and expect to be able to schedule a call with the majority of these companies over the next reporting period.

Overall, the assessment within our newly devised dashboard shows that companies still have a long way to go. The average amount of indicators companies have fulfilled is 15 out of 52 indicators. The company with the most indicators has fulfilled 27 out of 52 indicators, while the company with the least amount of indicators has fulfilled only 1.

Companies lack most in their formulation and disclosure of implementation plans, as well as in disclosure of risk analyses (for both transition and physical risks). For a full overview of results for listed engagements, see chapter 3.

In terms of engagement findings, we found an increasing number of companies committing to science-based targets (mostly SBTi) and more companies looking at assessing climate risks using CRREM. However, we have also noticed that some companies remain reluctant to setting Net Zero and scope 3 emission targets and to take deep retrofit measures to improve their assets. In some cases this has to do with lease structures (triple net leases), but mostly it seems to be because pressure from investors and regulation differs greatly regionally.

Note: for an overview of terms and definitions, please see the glossary in chapter 7

Activities and results of 2022

Many companies indicate that there is a lack of attention to sustainability by investors and some even receive pushback from investors when considering implementing measures. This is particularly the case for measures which have a long term pay-back time, for example to electrify heat. European funds would mostly agree that deeper retrofits including electrification of heat are required, but many still lack implementation plans. Compared to last year, the leading US based REITS now also start to realize that electrification of heat will be a necessity to reach a true CRREM/Paris aligned building and to mitigate transition risks

We also encourage companies in almost any conversation to draw up asset level sustainability plans, which would be the ultimate implementation plan for achieving long term targets. Unfortunately, although some companies claim to be working on such plans, we have yet to see an example of one of these plans from a listed real estate company (we have in non-listed), although we have seen a company make plans per property type (based on age, location etc.).

Embodied carbon, similar to last year, is an underdeveloped topic for many companies. Most companies focus on reducing operational carbon emissions and have put embodied carbon lower on their prioritization list. Still, there are good examples out there of companies that do set targets on embodied carbon and monitor their progress. Particularly in Asia, those companies that focus on development seem to be further ahead in measuring embodied carbon.

We notice that there are more companies who disclose the number of tenants that have science based/net zero targets. Especially in the office space there is clear tenant demand for Paris aligned buildings. And some retail tenants are also committed to net zero. However, in single tenant triple net lease contracts, especially in the US, there are still a lot of tenants reluctant to share data, let alone cooperate to reduce the energy and carbon intensity of the building.

Small cap companies

For small cap companies, we engaged via individualized surveys on a number of topics, all relating to the topic of climate risk management. The survey is individualized per company. In total, 284 companies have been approached, and a total of 77 responses were received. This has led to a response rate of 27%. We have sent over 1500 emails and tried calling over 80 funds to inform them about the GREEN investor statement and to convince them to participate in the survey.

Compared to last year, we have received fewer responses to the survey, both in terms of absolute numbers (77 compared to 97) of responses as well as the relative response rate (27% compared to 38%). The main reason for the lower response rate is that surveys were sent out later than last year, to make sure that the latest GRESB results were incorporated into the survey. This resulted in the survey being sent out during the companies reporting period. We will evaluate how we can improve the timing for the survey next year.

Results of the survey show that the small cap REITS are improving in terms of target setting and performance data disclosure:

- Targets have been set by 73% of the response group (56% in 2021), and half of this group have set science-based targets.
- 95% of the companies who have not set any targets yet, have the intention to set targets.
- 84% of the response group is disclosing energy/GHG performance data (2021: 71%), while the remaining funds will also start disclosing this data in the coming year.
- 39% of the response group are using CRREM or an equivalent tool and half of this group are disclosing their results.
- 76% will formulate asset-level plans and the majority of this group aims to formulate asset-level plans for more than 75% of the portfolio.
- 71% of the response group has a building certification rate of less than 75% of the portfolio and more than half of this group does not aim to increase the coverage to more than 75%.

Note: for an overview of terms and definitions, please see the glossary in chapter 7

Activities and results of 2022

Non-listed engagements

In the non-listed space GREEN has engaged with a total of 19 funds. GREEN had a total of 29 engagement meetings with them, either online or face-to-face.

We have prepared an assessment for all non-listed funds of how many indicators they meet the requirements for. On average, these funds meet requirements for 20 out of 52 indicators. Compared to listed companies, non-listed funds vary more in the number of indicators they meet requirements for, varying from 8 to 39.

Most funds acknowledge the relevance of setting targets for reducing CO2 emissions. A significant part of the funds has committed to a net zero target, including scope 1, 2 and 3. Although, there are still funds (mostly US based) with only a scope 1 and 2 net zero target. They are hesitant to include scope 3, because they feel this is outside their direct sphere of influence and they typically don't feel much pressure from investors. Embodied carbon is a major source of scope 3 emissions. This topic is often discussed with funds, but there is almost no non-listed fund (in our program) actively considering this topic, let alone set targets and implementation pathways.

Real estate funds lack most in their formulation and disclosure of implementation plans, as well as disclosure of risk analyses for both transition and physical risks. Although we see more implementation plans than on the listed side. While many funds are considering using CRREM to map out their transitional risk exposure, a small part is currently using the tool and disclosure of results is limited. We do see an increase in the number of funds disclosing results of their physical risk analysis. But detailed risk mitigation plans are lacking. For a full overview of results of non-listed engagements, see chapter 4.

Note: for an overview of terms and definitions, please see the glossary in chapter 7

3 Non-listed engagement results

Non-listed engagement 2022

Monitoring milestones of engagements

Not in progress topics*	in progress topics*	Achieved topics*
6	127	20

29 Engagement meetings

19 Funds engaged

153 Topics monitored

Assessment of 19 non-listed funds

75% have committed to Net Zero on scope 1-3, and 40% has an intermediate science-based target

75% are doing physical risk assessments for their portfolio, and 50% disclose results on portfolio level

30% have credible implementation pathways. 10% currently have asset level sustainability plans

Only 50% seems to be on track according to CRREM decarbonization pathways. The rest is not on track or data is insufficient

Assessment funds non-listed engagement

Non-listed status quo

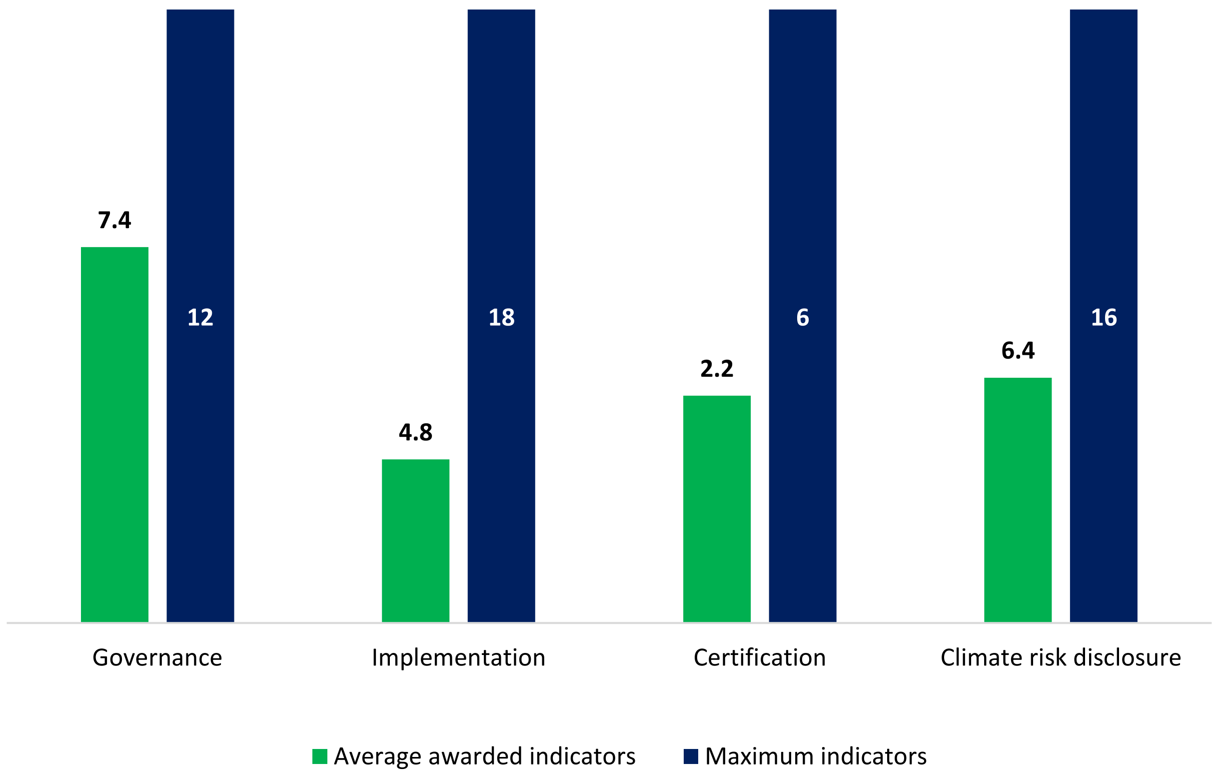
The graph displays the average awarded indicators of all non-listed funds engaged. The awarded indicators are displayed for each main topic of engagement and are compared against the maximum achievable amount of indicators.

Overall, most funds are awarded most on governance and certification indicators. Many funds have a good set of targets, although not always Science-Based. Only 10% of the funds engaged have an embodied carbon target and also 10% have a green lease target. 65% of the funds have a certification coverage target and have a significant part of their portfolio already certified.

Funds can improve most on implementation and climate risk disclosure. Many funds lack long term implementation plans. We see a lot of funds starting to work on their asset level sustainability plans now. We haven't seen much detailed implementation pathways yet.

In general, funds do not disclose much information on climate risk, both physical risk and transitional risk. 50% of the funds engaged have done a physical risk analysis and disclosed it. Only 15% disclosed the adaptation measures being implemented for assets at risk. Only 20% of the funds disclosed stranding years of the assets in portfolio.

Assessment scores (n=19)



Note: for an overview of terms and definitions, please see the glossary in chapter 7

Main findings non-listed engagement (1)

Engagement results

GREEN has intensively engaged with a total of 19 funds over the reporting period. In this second year of engagement, conversations with funds moved from better understanding targets and obstacles to focus and engagement on themes and topics where funds are lagging in terms of net-zero risk and physical risk. We outlined our expectations about these topics and focused on challenges and points for improvement that were specific to the fund. In this second year, with a better understanding of the different sectors and regions, we intensified our engagement, encouraging funds to meaningfully step up their climate risk management efforts.

Overall, all funds acknowledge the importance and urgency of climate risk management. In comparison with listed real estate companies, non-listed funds often are more open to our ‘asks’ which shows from the low number of topics that are defined as not in progress in the previous slide. 6 out of 153 topics are not in progress for non-listed, whereas 57 out of 230 topics are not in progress for listed companies.

At the same time, however, clear differences exist in terms of ambitions, target setting and execution, throughout all sectors and regions. A few of our findings are highlighted below.

Target setting

Most funds acknowledge the relevance of setting targets for reducing CO2. Whereas most (14 out of 19) funds are now committed to operationally be Net Zero on scope 1-3 by 2050 or earlier, other funds (mostly US based) are reluctant to commit to Net Zero Scope 3 targets, and choose to follow ULI Greenprint guidance, which is limited to Scope 1-2. These funds are hesitant to commit to Scope 3 targets as they consider these emissions as outside their direct sphere of influence. Given the high share of Scope 3 emissions (i.a. tenant emissions and Embodied Carbon) as a percentage of total emissions in real estate, we insist that Scope 3 targets should be part of any climate risk policy.

US companies and landlords typically do not experience as much pressure from investors, regulators or tenants to boost their climate risk programs as European companies do. They often feel that only regulation will push them to take measures to reach Net Zero. Their approach in setting targets is to first assess their capability of reducing emissions, which then becomes the target, as opposed to most European companies and (non-listed) funds, who commit to Net Zero as an aspirational target and then figure out how to get there.

Embodied carbon

Embodied Carbon is, next to tenant emissions, a major source of Scope 3 emissions. Even though the construction industry is looking to reduce embodied carbon i.a. through recycling and through the use of lower embodied carbon materials, embodied carbon over the lifespan of a real estate asset still accounts for well over 70% of total carbon emissions. Almost no funds actively consider this topic, let alone set targets and implementation pathways. To the extent they do, they rely heavily on the use of Carbon Offsets. We encourage funds to set targets and try to set a baseline of embodied carbon emissions.

Climate risk assessment

In order to assess transition risk exposure, we encourage funds to use the CRREM tool. Some funds are currently disclosing to some extent results of their CRREM analysis, but many more are considering using the tool, keeping in mind the fact that SBTi plans to integrate CRREM’s targets. Still, we encounter many funds that lack insight into their data and therefore are not able to perform a risk analysis. Those that do, still seem somewhat reluctant to share the data with investors.

Note: for an overview of terms and definitions, please see the glossary in chapter 7

Main findings non-listed engagement (2)

In terms of physical risks we see an increase in the number of funds that report on portfolio level outcomes of their risk assessment. In line with our suggestions, many companies use physical risk assessments as a screening tool to know what assets to investigate more thoroughly. While the exposure of physical risks is disclosed more often now, especially on aggregated level, the adaptation measures companies take are mostly anecdotal. Companies do not show for example what percentage of assets is protected against certain risks and how they are protected, nor do they disclose their plans for tackling assets that are exposed to certain risks.

Implementation plan

In our analysis of funds' sustainability reports, we found that implementation plans are the single biggest shortcoming in companies' climate risk management efforts. Although we see more implementation plans than on the listed side. While an increasing number of companies looks to disclose consumption data, risk analyses and set targets, an implementation plan with intermediate targets and a CAPEX / deep Retrofit budget is often incomplete or lacks granularity. Funds need to finish these plans, but also need to take these into action and start working on the performance. While asset level sustainability plans are still lacking for some (but not all) funds, we do notice differences between funds in the type of measures they are looking to implement. Some only take low hanging fruit measures that have short payback periods, such as LED lighting. Some plan to do deep retrofits, trying to implement these in the business plans of the assets.

Regulatory/investor pressure

Regulatory as well as investor pressure to tackle climate risks strongly influences funds' level of ambition. Typically, Europe, and more specifically the EU, has seen an abundance of legislative initiatives which ensures that investors and landlords have climate risk at the top of their minds, if not out of environmental concern, then at least from a compliance point of view. Although in the US the SEC has issued draft regulation for listed companies and certain states have environmental legislation, regulatory pressure is less well developed there compared to other regions. Not all tenants are committed to taking sustainability measures, or to sharing energy consumption data. Broadly, US tenants are less motivated than European ones, and tenants that are part of a listed company are more positively inclined towards climate risk mitigation.

Data disclosure

All funds are looking to increase data coverage of energy consumption in their portfolio. Insight into data consumption also serves as a basis of assessing how much the assets need to improve and what measures should be taken. However, due to sector-driven limitations, country-by-country legal differences, and pushback from tenants to share data out of privacy reasons, some funds are better able to get insight into consumption data than others. Most office and residential companies have good insight into their energy consumption, whereas retail and Triple Net Lease funds struggle to get this data.

We also often asks for asset level disclosure of consumption data when funds do already have decent insight into their consumption. While aggregate data in many cases are available (e.g. through the annual GRESB report), there is a reluctance to share granular, asset-level data. Many funds consider disclosing this data as a risk, and are hesitant to share detailed data as it might be misinterpreted.

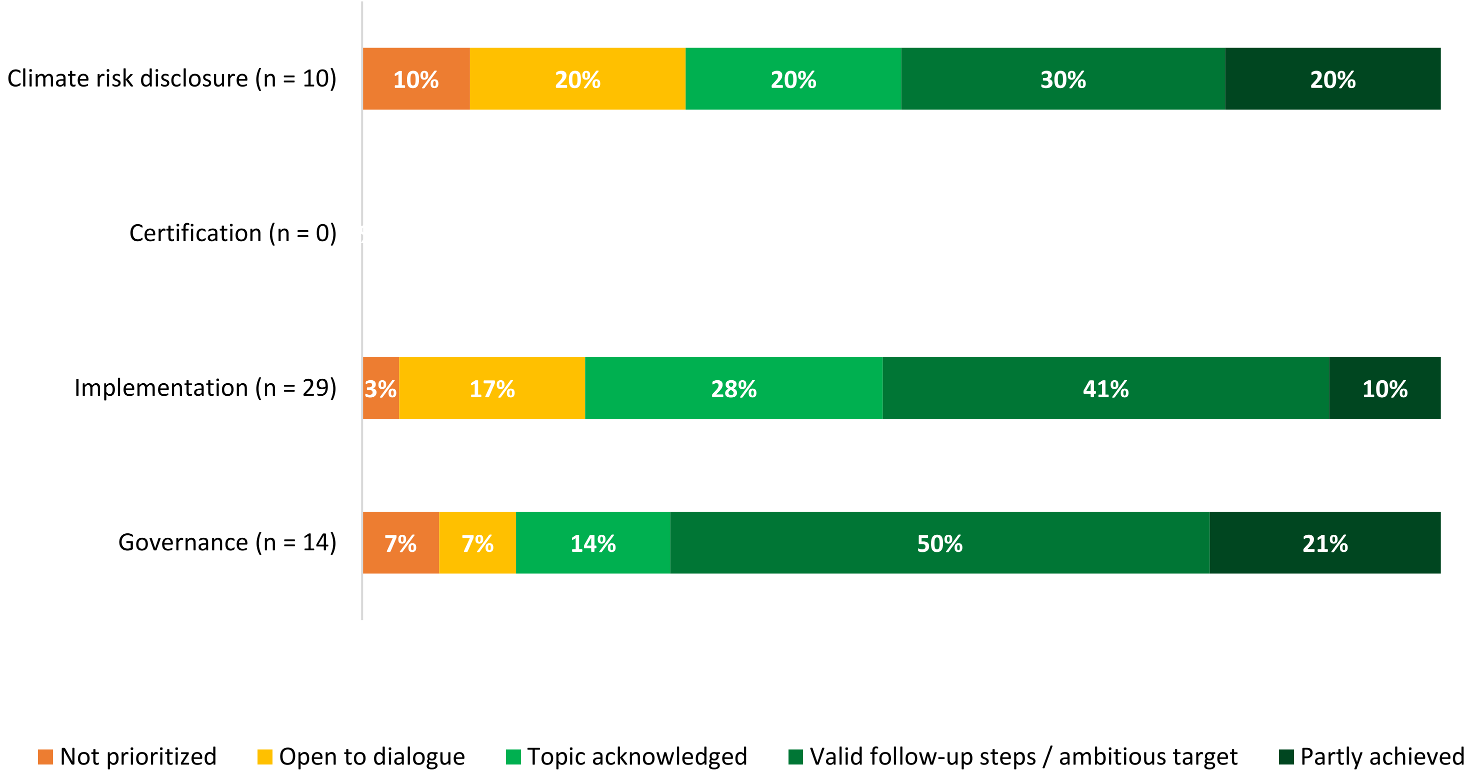
Note: for an overview of terms and definitions, please see the glossary in chapter 7

Milestones engagement Pension fund Hoogovens

The graph on the right displays the engagement topics discussed and milestones identified during conversations for the six funds of Pension Fund Hoogovens.

Most discussed topics are intermediate and long term CO2 targets, implementation plans on portfolio and asset level, and physical risk disclosure. We focused the conversations on actual implementation plans first before asking for certification, which is why this topic was not discussed.

In general, for Pension Fund Hoogovens, most funds are already actively working on the topics that we addressed during conversations. We now need to see proof of their work in the next sustainability reports.



Note: For a full overview of milestones and their definitions, please see the appendix in chapter 8
Note: for an overview of terms and definitions, please see the glossary in chapter 7

4 Glossary

GREEN Glossary (1)

Asset-level sustainability plans: long-term refurbishment and renovation plans, on an asset-level basis, with the objective of improving the energy/GHG performance of the assets in line with Net Zero ambitions according to decarbonization pathways such as CRREM. Such a plan should include expected reductions in energy/GHG intensity, CAPEX estimates, and a timeline for the investments.

Building certifications: certificates that document and rate the performance of a development or a standing investment project from a sustainability perspective.

Carbon dioxide (CO_2). A principal greenhouse gas that is a by-product of burning fossil fuels such as oil, gas and coal, of burning vegetation or of industrial processes such as cement production.

Carbon-dioxide equivalent (CO_2e). Greenhouse-gas emissions with the same global warming potential as one metric ton of carbon.

Carbon capture. The process of capturing carbon-dioxide emissions from sources like coal-fired power plants and either reusing or storing it so it will not enter the atmosphere.

Carbon offset. An action or activity (such as the planting of trees) that avoids, removes or captures carbon dioxide or other greenhouse gases emitted into the atmosphere. Genuine carbon removal is to be distinguished from offsets that simply avoid carbon emissions. Offsets do not reduce a real estate asset's exposure to **operational carbon**. Offsets may be required to neutralise the **embodied carbon** of materials used in developments, refurbishment, fit-out and maintenance in the short to medium-term while supply chain partners work to decarbonise.

Carbon sequestration. The process of capturing and storing carbon dioxide that gets into the atmosphere.

Climate Risk: See **Physical risk** and **Transition Risk**

CRREM: The Carbon Risk Real Estate Monitor (CRREM) provides the real estate industry with **science-based** decarbonization pathways aligned with the Paris Climate Goals of limiting global temperature rise to 2°C, with ambition towards 1.5°C. CRREM uses operational GHG emissions (and energy consumption) divided by floor area coverage to determine an individual asset's intensity-based transition pathway. This details how specific assets need to become more efficient in order to align with certain transition scenarios. Each pathway extends to 2050 and is composed of annual trajectories of building-related carbon- and energy-intensities, expressed in kWh per m2 and CO_2 per m2, respectively.

GREEN Glossary (2)

Greenhouse Gas Protocol. A global standard for measuring and managing greenhouse-gas emissions. The standard assesses three so-called scopes of emissions: **Scope 1** (direct emissions), **Scope 2** (emissions from purchased energy) and **Scope 3** (other indirect emissions).

Investor Statement*:* A statement issued by GREEN signatories, outlining four actions on climate change and sustainability for real estate funds and companies.
1. Enhance disclosure on the robustness of companies' business plans in different climate scenarios.
2. Implement a strong governance framework for climate change and sustainability, including ambitious target setting aiming for 1.5 degrees pathway.
3. Develop science-based transition pathways to help meet Paris Agreement goals.
4. Promote certified and standardized green building certifications across the portfolio.

Net-zero target. A clearly marked pathway to reduce greenhouse-gas emissions in line with the Paris Agreement goal of limiting global warming to well below 2°C above pre-industrial levels by the end of the century. With regard to real estate, **net zero carbon** is when the carbon emissions emitted as a result of all activities associated with the development, ownership and servicing of a building are zero or negative. This definition encompasses the entire life cycle of a building, including construction, operation, refurbishment, and demolition, and includes emissions associated with whole-building energy use during the operational phase (**operational** carbon) as well as emissions embodied in building materials during the construction phase (**embodied** carbon).

Paris Agreement: A legally binding international treaty on climate change, adopted by 196 parties in 2015, which is aimed at limiting global warming to a maximum of well below 2°C, but preferably to 1.5°C, above pre-industrial levels by the end of 21st century.

Paris-aligned/Paris proof strategy: A strategy that is demonstrably in line with the goals formulated in the Paris Agreement.

Physical climate risk. Risk associated with the physical impacts of climate change on companies' operations, whether from a rise in sea levels or extreme weather such as floods, storms, droughts or wildfires.

Retrofits: Changes/improvements to a building's systems or structure after its initial construction, often implemented with the intention of improving the energy /CO2 efficiency of the structure.

GREEN Glossary (3)

Science Based Targets: GHG reduction targets that are determined by measuring a company's or asset's greenhouse gas emissions for an agreed-upon base year and establishing a target year by which to reduce them, then calculating the necessary annual percentage reduction to reconcile the two. The Science based Target initiative (SBTi) follows the requirements of the **Greenhouse Gas Protocol** to make sure that greenhouse gas emissions are appropriately accounted for in a consistent and comparable manner. SBTi does not allow **carbon offsets** in achieving their science-based target, instead requiring companies to reduce emissions through "direct action within their own boundaries or their value chains. The emissions related to materials, used in developments, refurbishments or even maintenance, should be the only areas which a progressive Net Zero programme will require third party carbon removal projects to offset. **CRREM** is an example of a science-based approach, specifically aimed at the real estate sector.

Scope 1 emissions are those that come directly from a company's operations, like running a factory.

Scope 2 emissions are those caused by the generation of purchased electricity.

Scope 3 emissions encompass those that come from across a company's or asset's value chain, such as the emissions of the suppliers (e.g. **embodied carbon** generated through real estate development) or the emissions that result from use of a company's products by customers, e.g. tenants.

Stranded assets: Assets that will become economically unviable because they do not meet CO2/energy efficiency demands and market expectations.

Transition climate risk: Climate risk associated with transitioning to a net-zero economy, such as shifts in policy, technology or changes in supply and demand: Brown Penalty vs Green Premium

Triple Net Lease: the tenant pays all the expenses of the property, including real estate taxes, building insurance, and maintenance.

5 Appendix

GREEN engagement process: engagement themes

GREEN optimizes collective influence to align with the sustainable and responsible priorities of its members on climate risk management. Following scientific evidence, real estate engagement is carried out on financially material topics. These material topics are mainly in accordance with the Investor Statement and can be broadly categorized into four overarching engagement themes – Governance (including target setting), Implementation plans, Certification and Climate risk disclosure.

Governance

The objective of this theme is to organize the governance in such a manner that it encourages alignment with long term Net Zero goals. Engagement within this theme is largely focused on setting targets at individual asset level that are compliant with science-based transition pathways like the Science Based Targets initiative (SBTi) or, preferably, the Carbon Risk Real Estate Monitor (CRREM) for all assets. Funds should incorporate intermediate goals to reduce energy intensity and greenhouse gas emissions compatible with the Paris Agreement's goal of limiting global warming to well below 2 degrees above pre-industrial levels and aiming for 1.5 degrees.

Implementation plans

Implementation plans are required for both transitional as well as physical risk reduction. On the transitional risk side, GREEN members encourage funds to devise asset-level sustainability improvement plans. Such a plan sets out, on an asset-level basis, the long-term refurbishment as well as the renovation plans, with the objective of improving the energy/GHG performance of the assets in line with Net Zero ambitions according to decarbonization pathways such as CRREM. These plans should also include deep retrofits and preferably make use of (future) internal carbon prices.

On the physical risk side, GREEN members expects companies and funds to ensure adjustment and preparedness to expected physical climate impact. As the effects of physical climate change increase in frequency and severity, physical risks will become ever more daunting. In response, real estate funds should formulate a physical risk policy, carry out physical risk assessments on an asset-level, analyze the adaptive capacity of their assets and develop mitigation plans.

Climate risk disclosure

This theme focuses on increased collection and disclosure of asset-level data, focusing specifically on energy consumption and GHG emissions data along with location specific data. GREEN members recognize that without greater data availability, risk management processes are subject to a higher degree of uncertainty. For investors, it is of the utmost importance to be able to analyze real estate assets and portfolios against science-based transition pathways. Consequently, real estate companies and funds should collect and disclose their Scope 1, 2, and 3 emissions' progress in the context of these pathways and/or at least disclose energy- and carbon-intensity data per property type for each country. Moreover, real estate funds and companies should disclose Scope 3 emissions at the organization-level as data becomes available to the issuer, understanding data access of indirect business emissions/activity remains an in-progress issue. Next to this, GREEN members also encourage funds and companies to share their assessments of transitional and physical risk exposure in detail, including both the outcomes as well as the methodologies used.

Certifications

GREEN members encourage 100% building certification to increase transparency into sustainability performance of real assets. Voluntary green building certification schemes such as BREEAM In-Use, and LEED-EBOM, capture a broad range of sustainability issues at individual building level, for example, by measuring and promoting the resilience of individual assets. GREEN urges real estate funds and companies to set building certification targets and to acquire building certifications for the full portfolio.

GREEN Monitoring Dashboard 1 (Governance)

1	Governance	Definition
1.1	Net zero commitment	The fund has committed to Net Zero in the long term but before or at 2050 (including scope 3 emissions).
1.2	Science-based target	The fund has set a CRREM or if if not available an SBTi aligned target. Alignment with a government target is not sufficient.
1.3	Energy target	The fund has set an intermediate energy reduction target. This target should be directly linked to either energy intensity (expressed in kWh per square meter or another measure of area), like-for-like emissions, or absolute emissions. It should also include both the common as well as the tenant area
1.4	CRREM energy target	The fund has set an energy target that is aligned with CRREM decarbonization pathways relevant for the specific sector a fund is active in
1.5	GHG target	The fund has set an intermediate GHG reduction target (no later than 2035)
1.6	Scope 3 target	The fund has included scope 3 in their intermediate GHG reduction target, specifically referring to tenant consumption (leased asset), for which 100% should be included in the target. If most (>80%) tenant energy consumption is included in scope 2, there is no specfic requirement for the category of scope 3 emissions to be included in the scope 3 target.
1.7	Embodied carbon target	Fund has incorporated an embodied carbon target in their investment decision making for new constructions and/or retrofits.
1.8	Green lease target	The fund has set a target on increasing their green leases within the portfolio (unless green lease coverage is > 90%)
1.9	Target data coverage	The fund has set a target on increasing data coverage > 90% or targets data coverage through the implementation of green leases or tenant collaboration programs for > 90%
1.10	Sustainability working group	The fund has a sustainability working group or structured processes that monitor the achievement/implementation of the sustainability strategy, of which the members include someone of senior management or the board
1.11	Remuneration	Remuneration of senior management also incorporates sustainability topics/targets aligning with the firm's stated energy/GHG goals
1.12	TCFD reporting	The fund has implemented the TCFD recommendations into reporting or a separate TCFD report

GREEN Monitoring Dashboard 2 (Implementation)

2	Implementation	Definition
2.1	Implementation pathway	The fund disclosed their strategy and has set out what the key elements/approaches are to reach their GHG/Net Zero target. Energy efficiency/on-site renewables should be prioritized in this strategy. If procurement of green electricity or offsets are an integral part of this strategy, this indicator should not be scored. Prerequisite for this indicator is that a fund has formulated a GHG/Net Zero target
2.2	Measures	The fund has more concretely defined point 2.1, broken down by used measures
2.3	Deep retrofit measures	In its renovation plans, the fund does not only implement 'low hanging fruit' measures, with payback periods only up to about 6 years, but also implements deep retrofit measures. The use of deep retrofit measures should be specified as an integral part of the fund's long-term planning in order for the indicator to be scored
2.4	Pathway	The fund has translated its renovation plans for at least the coming three years into energy or GHG reduction expectations. So, the fund must be able to show its estimated reduction (on portfolio level) of energy or GHG intensity for the coming three years based on the measures the intend to take. Score 1 if the fund has asset level sustainability plans in place, as these plans are more elaborate
2.5	Energy audits	The fund has carried out energy audits for its assets, which show the possible measures that can be taken to in line with an eventual Net Zero target. The fund should have carried out energy audits for a representative part of their portfolio (e.g. a fund might have homogeneous assets, which therefore does not require them to do energy audits for all assets). A fund should either explain in detail how they have carried out their energy audits and what the results are, or they should be able to disclose an example.
2.6	Asset level plans	The fund has developed asset level plans, which determine what measures will be implemented per asset to get to their eventual Net Zero target and what reduction will be achieved through the implementation of these measures. The fund should be able to disclose an example of an asset level plan, and should have the intention of making asset level plans for all assets that run a risk of stranding before 2050
2.7	Timeline	The asset level plans are supported by a timeline, indicating what year the measures will be implemented. Timeline should be at least made until 2030.
2.8	Sustainability CAPEX	The fund has reserved a budget that is available for sustainability measures. This could but does not necessarily have to be translated into CAPEX projections on portfolio level. It can also be verified when a fund explicitly commits to making sure enough capital will be available to spend on achieving their long term GHG/energy target
2.9	CAPEX projections asset level	The fund has formulated CAPEX projections, indicating what costs will be made for each asset or even for each measure. The CAPEX projections should not be general but aimed at achieving energy/GHG targets. The fund should also at least disclose an example.
2.10	Return requirements	Sustainability investments are assessed using a hurdle rate that is lower than for regular investments. An example of this could be the use of an internal carbon price
2.11	Embodied carbon assessment	Fund has has assessed the embodied carbon emissions for some developments. The fund should at least disclose an example of the outcomes of this assessment.
2.12	Embodied carbon strategy	Fund has formulated a strategy that sets apart how they will achieve their embodied carbon target. This strategy should include concrete measures that reduce the embodied carbon emissions.
2.13	Green leases	The coverage of green leases within the portfolio is over 75%. Green leases should at minimum include 'metering', unless energy data coverage is already >90%
2.14	Physical risk assessment	Fund has carried out a physical risk assessment on asset level for its entire portfolio. A fund should have plotted the portfolio on different risk maps to determine their physical risk exposure, or they should have gotten help from external consultants/insurance companies to determine the risk exposure of their portfolio. The fund should have carried out the assessment for a representative part of their portfolio (a fund might have homogeneous assets in terms of the asset itself and their location, which therefore does not require them to do the assessment for the entire portfolio)
2.15	Local risk maps	Use of local physical risk maps or specialized consultants/insurance companies to help assess physical risk exposure
2.16	Adaptation measures	Fund has implemented adaptation measures for their assets or has formulated a plan on how they will increase the resilience of their assets. Anecdotal examples don't count.
2.17	On track energy	The fund is demonstrably on track to follow the planned pathway, on or ahead of of the CRREM curve (intensity per sector/country) or SBTi if no CRREM available. Prerequisite is disclosure of intensity data (energy)
2.18	On track GHG	The fund is demonstrably on track to follow the planned pathway, on or ahead of the CRREM curve (intensity per sector/country) or SBTi if no CRREM available. Prerequisite is disclosure of intensity data (GHG)

GREEN Monitoring Dashboard 3 (Certification)

3	Certification	Definition
3.1	Energy label coverage	Energy label coverage is > 90% for standing investments
3.2	Medium certification coverage	Certification coverage over 50%. Refers to buildings in construction for developing companies. For all other companies, certification coverage refers to the standing investments. Certification is here defined as multi-criteria certification only (e.g. no EPC labels)
3.3	High certification coverage	Certification coverage **over 90%**.Refers to buildings in construction for developing companies. For all other companies, certification coverage refers to the standing investments. Certification is here defined as multi-criteria certification only (e.g. no EPC labels)
3.4	Certification coverage target	Target to increase certification coverage over 90%.Refers to buildings in construction for developing companies. For all other companies, certification coverage refers to the standing investments. Certification is here defined as multi-criteria certification only (e.g. no EPC labels). If the company achieved it already, earn 1 point.
3.5	Asset level certification data	The underlying data points of the certificate are disclosed on an asset level basis
3.6	High certification performance	High certification score (best or second-best score for TIER one certification schemes) for at least 50% of the portfolio. TIER one certification schemes include: LEED EBOM, Green Star, BREEAM in-use, CASBEE, and BCA Green Mark

GREEN Monitoring Dashboard 4 (Disclosure)

4	Climate risk disclosure	Definition
4.1	Actual or esimated data	At least 80% of the measured energy consumption data is actual data measured on asset level, not estimated. Asset level here means per building, not necessary to have data on indivdual unit (tenant) level. Prerequisite is that the total energy data coverage is at least 50%
4.2	Medium energy data coverage	>20% disclosure of energy intensity.
4.3	High energy data coverage	>80% disclosure of energy intensity
4.4	Detailed data disclosure	> 80% detailed disclosure of GHG and/or energy intensity. For single-family residential funds, disclosure of intensity data on location (city or district) level and sector level is sufficient. For multi-family residential funds and all other sectors, disclosure should be on asset level (not on individual unit level)
4.5	Medium GHG data coverage	>20% disclosure of GHG/energy intensity (scope 1/2/3)
4.6	High GHG data coverage	>80% disclosure of GHG intensity (scope1/2/3)
4.7	Scenario analysis	Dicslosure of CRREM or similar transition scenario analysis (e.g. SBTi) on portfolio level. It is only required to disclose the status quo of the portfolio, it's not necessary to also show how the portfolio improves
4.8	Detailed scenario analysis	Disclosure of CRREM or similar transition scenario analysis (e.g. SBTi) on asset level
4.9	Stranding year disclosure	Disclosure of current average stranding year related to the CRREM pathways
4.10	Physical risk assessment disclosure	Disclosure of whether a physical risk assesment has been performed (see 2.14 for definition), high level conclusions on the risk exposure and the planned or implemented mitigation measures
4.11	Portfolio Level physical risk exposure	Portfolio level disclosure of physical risk exposure (for different types of risk). The fund should disclose the outcomes of the assessment for a representative part of their portfolio (a fund might have homogeneous assets in terms of the asset itself and their location, which therefore does not require them to do the assessment for the entire portfolio)
4.12	Detailed level physical risk exposure	Sector and location level or asset level disclosure of physical risk exposure (for different types of risk). The fund should disclose the outcomes of the assessment for a representative part of their portfolio (a fund might have homogeneous assets in terms of the asset itself and their location, which therefore does not require them to do the assessment for the entire portfolio)
4.13	Assessment methodology	Disclosure of used physical risk assessment method
4.14	Asset level physical risk adaptation	Disclosure of adaptation measures being implemented for 'at-risk assets', or at least a few examples.
4.15	Return requirements disclosure	The fund discloses its assessment of sustainability investments, including the return requirements, regardless of how these requirements match those of regular investments
4.16	Geo-coordinates	Asset level disclosure of geo-coordinates or address

GREEN engagement process: monitoring milestones

Once a fund is engaged, progress and results are monitored through milestones, which are displayed in the table on the right. These milestones are tracked in the dashboard for all large cap companies and each of the selected non-listed funds.

If a fund/company is asked about a certain indicator that is assessed in the dashboard and provides their view on this ‘ask’, a milestone will be assigned to the indicator. These seven milestones range from not being open at all to achieving the requirement of the indicator. By using the same indicators for assessing a fund pre-engagement as monitoring the progress of the conversations post-engagement, we enable ourselves to track whether discussed engagement topics will be improved on in the future.

For the purpose of reporting, we have also assigned a color code to each of the milestones so we can easily say how many indicators are in progress and how many indicators are achieved.

After a particular indicator reaches conclusion and is achieved, a new engagement topic will be selected for the next conversation.

Milestone	Definition	Color code
Not open to dialogue	Fund does not regard the topic as being relevant to them	not in progress
Not prioritized	Fund will not look at it (for now)	not in progress
Open to dialogue	Fund is willing to discuss possible approaches to address the topic	in progress
Topic acknowledged	Fund is currently discussing how to approach / has done some background research to determine their approach	in progress
Valid follow-up steps / ambitious target set	Fund is actively taking steps to address the topic currently / has set an ambitious target to address the topic	in progress
Partly achieved	Results are achieved but the quality or ambition is not completely in line with our ask / results are achieved but not disclosed yet	achieved
Results achieved	Results are achieved and disclosed	achieved

GREEN Members and Engagement Providers

As of February 2023, GREEN consists of a total of 19 members, with their logos displayed on the right. This means that since last year, a total of 11 members have joined the network.

A distinction is to be made between the GREEN engagement members, for whom both Almazara and Finance Ideas (the service providing members) carry out the engagements, and the GREEN engaging members, who carry out one or two engagement projects themselves with listed companies.

Not all GREEN engagement members are subscribed to both listed and non-listed engagement. For those that are subscribed to listed engagements, some of the engagements may be carried out by GREEN engaging members, with oversight of the GREEN secretariat (Finance Ideas).

Outsourced Engagement members

GREEN engaging members

Service providers executing engagements

GREEN secretariat (listed real estate collaboration)

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