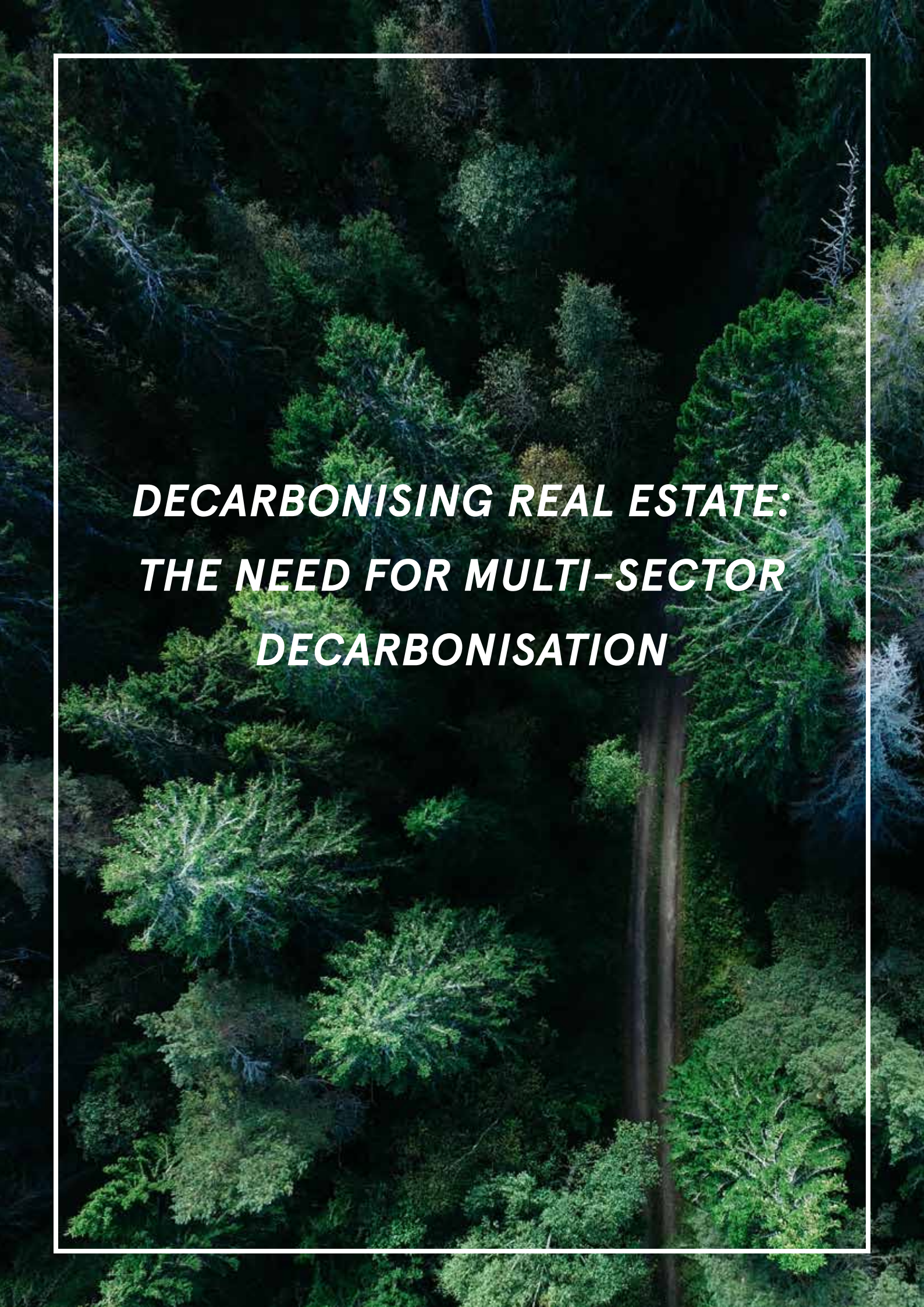
# CARBON IMPACT QUARTERLY



# DECARBONISING REAL ESTATE: THE NEED FOR MULTI-SECTOR DECARBONISATION

# CONTENTS



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# KEY TAKEAWAYS

- Real estate is one of the highest emitting sectors in the global economy and can account for up to 40% of global emissions.
- As it stands, the real estate sector is not on course to meet its decarbonisation goals by 2050.
- Real estate cannot be decarbonised without the decarbonisation of key material industries such as steel & cement.
- Finance has a crucial role to play in the transition – the real estate sector can only become more energy efficient and more sustainable through additional investment.
- The decarbonisation of the real estate sector brings innovation, diversification, and investment opportunities.
- Regulations are increasing pressure on the real estate sector to decarbonise, and the risk of stranded assets is increasing.
- Initiatives and tools have been developed to help stakeholders to take financial decisions and monitor progress.

# INTRODUCTION

This report seeks to demonstrate real estate's role in global emissions, how to decarbonise it, and what investors can do to identify companies most ready to transition. Real estate is one of the highest emitting sectors in the global economy and can account for up to 40% of global emissions[1]. As it stands, the real estate sector is not on course to meet its decarbonisation goals by 2050. Therefore, it is understandable that real estate is firmly in the crosshairs of the EU's climate protection strategy, due to its high associated CO2 emissions, as well as its energy consumption. But the sector has largely lagged on climate-related disclosures and mitigation strategies. Only in the last 12-18 months have real estate companies begun reporting their taxonomy alignment, which has made it difficult for investors to analyse real estate companies from a carbon perspective. Even then, the taxonomy itself does not necessarily help to reduce CO2 emissions, since it has not set any relative target, and deals primarily with new assets, as opposed to the old existing stock. In a recent PWC report, climate change was only deemed of `moderate importance' for the sector, where construction labour costs, material costs and interest rates were all deemed of `great importance'[2].

In the short term, the cost of decarbonisation is a topic of serious concern for real estate companies and investors. This issue has only become more poignant as interest rates rise and the cost of materials increases as well. However, it is important for real estate companies and investors to also think about the cost of inaction and the failure to adapt their assets to the dangers of climate change. Deloitte estimates that the cost of inaction on climate change could cost the world's economy $178 trillion by 2070. Given that real estate forms a key component of the world economy, one can expect the sector to represent a considerable chunk of that value. However, at the moment it is only transition-risk mitigation that has existing avenues for returns, with physical risk failing to be adequately priced in. Despite this, insurance premiums for weather and climate-related damages are on the rise. In Australia, some individuals and businesses are now unable to obtain insurance in flood-prone areas. Hence, it is vital for real estate companies and investors to price in physical climate risk.

The first part of this paper will explore the real estate ecosystem, which is sometimes seen as a melting pot of companies fulfilling a variety of functions in a plethora of sectors and sub-sectors. The next section will elaborate on the sources of emissions from the real estate sector. The third section will explore why it is necessary to decarbonise, focusing on both the regulatory pressures as well as the market opportunities arising from greener real estate. Fourthly, the paper will explore the different non-governmental organisations (NGOs), sector players, labelling organisations and frameworks active in the market. Lastly, this paper will show an example of La Française's Climate Transition analysis.

(1) Jones, R., `Building the Green Future – Real Estate & ESG', Exane BNP Paribas, 2020.
(2) https://www.pwc.com/us/en/industries/financial-services/images/pwc-emerging-trends-in-real-estate-2023.pdf

# 1 – LISTED REAL ESTATE ASSETS IN THE CLIMATE TRANSITION

## a – The Real Estate Ecosystem

It is important to differentiate between real estate and infrastructure. Infrastructure assets are the physical networks that industries, regions and individuals need - such as energy, transport, water, minerals and digital information. On the other hand, real estate provides a good or service in a fixed location and constitutes the land and the structures on it; for example, an office, a warehouse or housing.[3]

In practice, the real estate ecosystem constitutes a melting pot of real estate construction companies, property and facility managers, leasing companies, financing companies and REITs. The disparate value chain also makes emissions attribution difficult to place, and most real estate companies have different decarbonisation goals according to the percentage of their portfolio which is either directly or indirectly controlled.

**Real Estate Owners**

These can be private equity companies, pension funds, or high net worth individuals. Real estate can also be owned through a Property REIT, which is type of entity that invests in real estate through property or mortgages.

- Klepierre
- Adler
- Vonovia
- Simon Property group

**Residential**

This is real estate used specifically for housing.

- Vonovia
- Korian
- Adler

**Real Estate Manager**

Advisors that manage real estate assets with agreed-upon performance and value objectives.

- Aroundtown
- Cofinimmo
- Vonovia

**Warehouses**

This type of real estate constitutes the logistics and storage arm of any business involved in trade or storage.

- First Industrial Realty Trust
- JLL
- McCraney

**Tenants/Occupants**

- Private renters
- Elderly care patients
- Shops
- Cafés and restaurants
- Businesses

**Retail**

This refers to real estate used for shops, cafés, restaurants etc.

- Unibail Rodamco Westfield
- Simon Group
- Covivio

**Office**

This is real estate specifically for businesses.

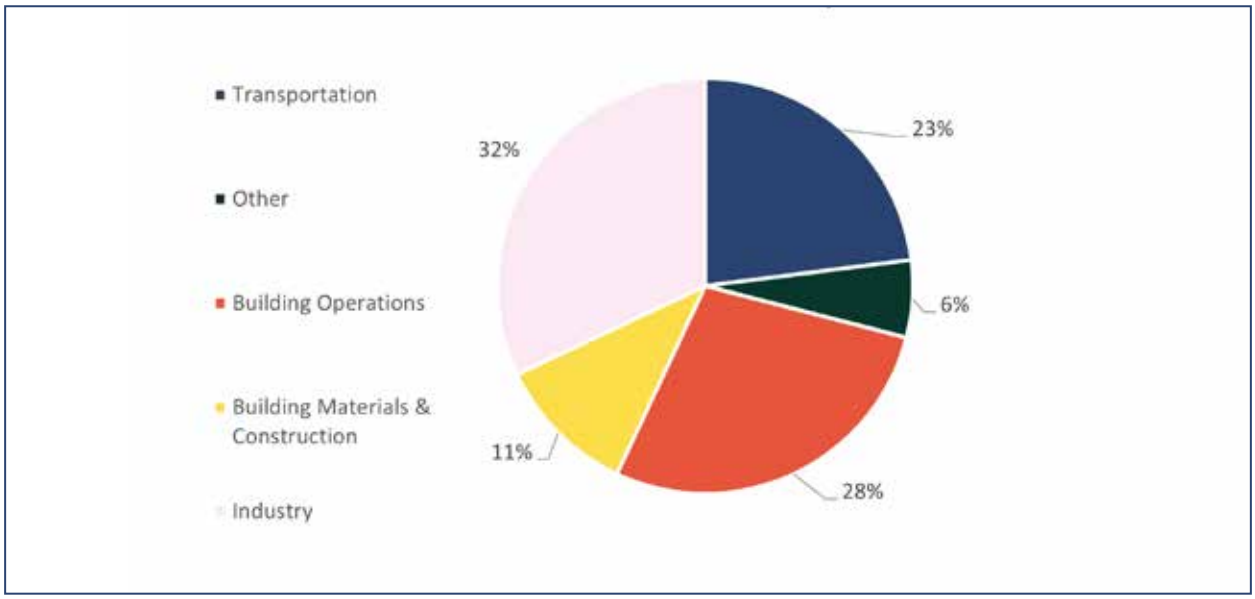
- TOG
- JLL
- CBRE

(3) https://www.investopedia.com/articles/stocks/11/real-estate-infrastructure-asset-allocation.asp#:~:text=Two%20optimal%20alternative%20investments%20are,water%2C%20and%20electric%20systems

## b – Emissions from the Real Estate Sector

The world needs all newly constructed buildings to be net zero by 2030, according to PCAF. Building materials and building operations (embodied and operational emissions, respectively) represent a huge source of emissions globally:

### Figure 1: Global Alliance for Buildings




In Europe, the building sector contributes to approximately 36% of Green House Gas (GHG) emissions, and nearly the entire building stock is considered energy inefficient[4]. The average building renovation rate is less than 1% across EU member states, and it is estimated that 275 billion euros of additional investment is needed per year, in order to achieve the 55% GHG reduction target of the EU Renovation Wave by 2030 vs 1990 levels[5].

There are three emissions terms to be aware of for the real estate industry:

**Whole Life Carbon/ Life Cycle Emissions** – this refers to the practice of considering emissions from cradle to the grave, incorporating all emissions along the complete value chain, including embodied and operational emissions.

**Embodied Emissions:** carbon emitted in the construction phase of a building. Eg steel, cement, transport, waste.

**Operational Emissions:** emissions generated during the operation of a building. Eg. Heating, water, waste.

Whole-life carbon emissions represent both embodied and operational emissions. Embodied emissions are comprised mainly of the materials that are used during the construction process

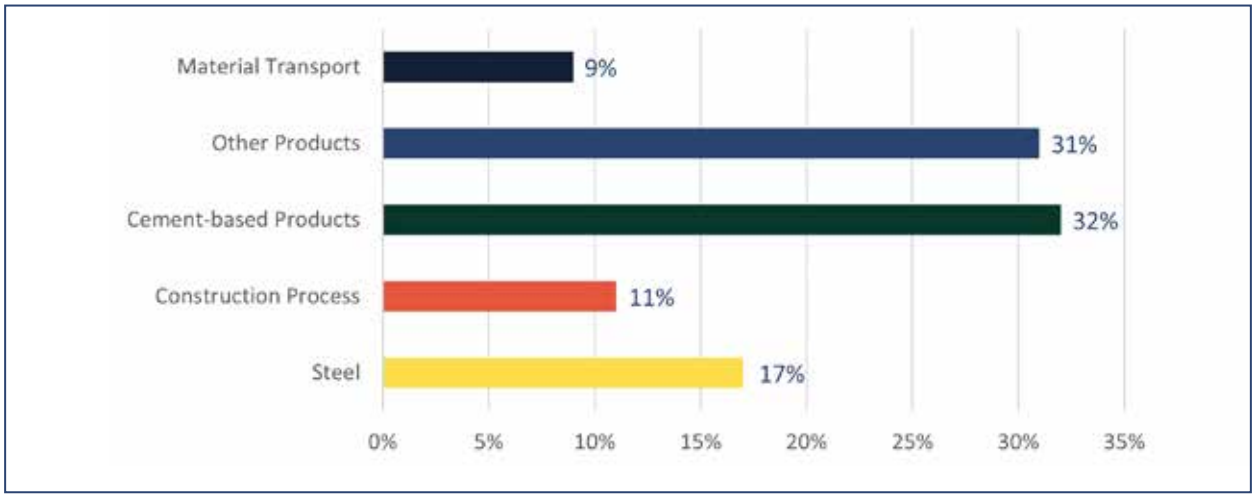
(4) https://carbonaccountingfinancials.com/files/downloads/pcaf-guidance-on-financing-the-net-zero-building-transition.pdf
(5) PCAF Guidance on Financing the European Building Transition to Net Zero.

of a building. Embodied carbon tends to be more difficult to decarbonise, as it relies on a few core materials that are heavy emitters, such as cement and steel, which represent a significant portion of the GHG emissions during the construction of a building.

The two most commonly used materials in building properties are concrete and steel, where concrete includes cement and other cement-based products. Most notably, the cement component in concrete, accounts for more than 95% of the total emissions in building concrete and releases around 600kg of CO2 per tonne of product. This means that reducing the use of cement, as well as decarbonising the cement sector itself is a key lever for the overall decarbonisation of the real estate sector. However, cement demand is expected to increase by approximately 20% by 2050[6].

Steel constitutes another core material used in the construction process, with annual production of 1.8bn tonnes, which induces 3.3 billion tonnes of CO2. Fortunately, there are more options for the decarbonisation of steel. 31% of current steelmaking capacity, and growing, uses electric arc furnaces, which can be powered by a renewable grid. However, many of the levers for the decarbonisation of cement lie in technology which is not yet proven at scale, such as carbon capture and storage (CCS). The emissions weight of steel and concrete during the construction process can be seen below:

## Figure 2: Split of GHG emissions during the construction process



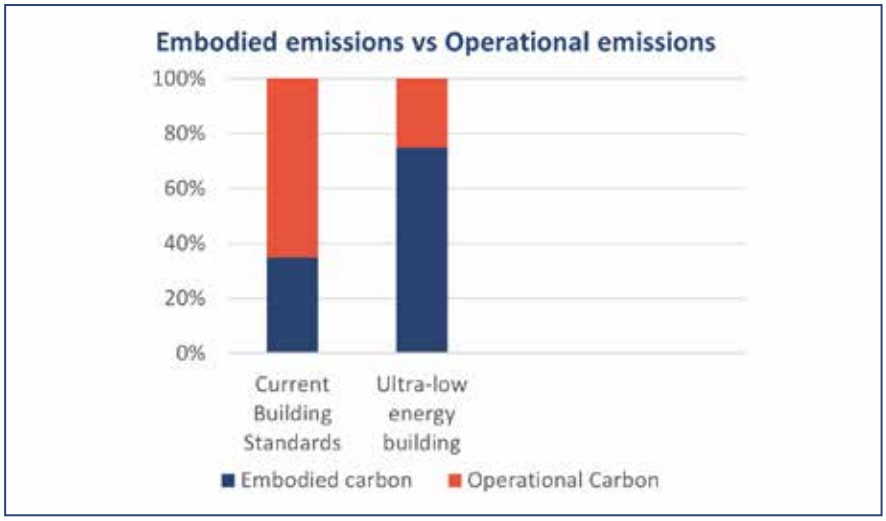

Source: MPDI, Kepler Chevreux

Operational carbon emissions are targeted by the EU's goal for all buildings to be powered by 100% renewable energy by 2050. Operational carbon emissions targets also focus on efficiency. Efficiency is centred around the 'building envelope', which refers to the walls, floor, roof and windows, that together form the separation between the exterior and interior of a building; whereby in a multi-party house, floors, walls and ceilings shared between flats also count towards the building envelopment.

There are also differences in the emissions of residential buildings versus office buildings or retail real estate. And for each type of real estate, there are differences in the percentage of emissions that are embodied as opposed to operational. For a typical office building, the lifecycle GHG emissions are roughly 34% embodied carbon and 66% operational.
However, if an office building is constructed as an ultra-low energy building (lifecycle CO2 emissions of roughly 700 kg per square meter), operational GHG emissions account for only 28% of GHG emissions. This situation can be even more pronounced for medium-scale residential buildings, where the embodied/operational split changes from 33%/67% to 23%/77%, respectively[7]. Embodied emissions are soon expected to outweigh operational emissions, as the overall stock of buildings increases.

(6) https://sciencebasedtargets.org/sectors/cement
(7) KECH – ESG Continues to Rock Property

## Figure 3: Embodied emissions vs Operational emissions




Source: LETI, Kepler Chevreux

> Real estate is a real asset. In this sense, it is relatively straightforward to measure its greenhouse gas emissions, but it is necessary to agree on (i) the scope of the measurement, (ii) how to measure it and (iii) to ensure that all stakeholders cooperate in this process.
>
> In most cases, owners/users measure only the greenhouse gas emissions related to the operation of the building (scope 1 and 2). Life Cycle Assessments, which take into account the GHG emissions of the entire life cycle of the building, are still rare at present, even if they are becoming more widespread for new buildings under regulatory constraints. The choice of factors for converting energy consumption into GHG emissions is not harmonised within Europe, and too often still seems to be the result of a political decision rather than being dictated by observation of reality. The collection of data necessary to estimate GHG emissions depends on exchanges between landlords and tenants, which are too often in Europe in the blind spot of legislation.
>
> These various obstacles should not prevent companies from keeping carbon accounts linked to the ownership/occupation of real estate. On the other hand, it is essential to clearly display the share of actual data and the share of estimated data.

***Virginie Wallut,***
***Director of Real Estate Research and Sustainable Investment***
***at La Française Real Estate Managers***

# c - Why Decarbonise?

## REGULATIONS

In addition to the planetary climate emergency, there is a raft of new legislation requiring real estate companies to undertake significant action on climate reporting and decarbonisation strategy. As of 2023, real estate companies need to report on their eligibility and alignment on 6 EU environmental objectives, in addition to the 'Do no significant harm' principle as part of the EU Taxonomy.

The New EU Energy Performance of Buildings Directive (EPBD) seeks to create a pathway for Europe to achieve zero emissions and fully decarbonise its building stock by 2050. The key pillars of this directive include a focus on the 'deep renovation' of Europe's building stocks, with the priority being the renovation of the least energy-efficient buildings. The EU targets that all new buildings must have zero emissions by 2030. They also target that all new buildings must rely on 100% renewable energy by 2050, to decrease operational emissions. In 2020, the EU also set out the 'Renovation Wave', an action plan to double the annual energy renovation rate of residential and non-residential buildings by 2030. This specifically targets the c. 90% of current housing stock which will still exist in the EU in 2050.

In the US, pressures for greater Environmental, Social and Governance (ESG) disclosure by real estate owners and investors are intensifying due to efforts both from industry groups like the National Council of Real Estate Investment Fiduciaries (NCREIF) and the Pension Real Estate Association (PREA), as well as the Securities and Exchange Commission (SEC). The Inflation Reduction Act expanded the 179D Energy Efficient Buildings Tax deduction, increasing the deduction from $1.88 per square foot to $5 per square foot, with a maximum allowable benefit of 250,000 square feet.[8] In addition, the 179D incentive was also modified so that REITs could use the deductions. Another piece of the legislation that will help commercial real estate owners is the commercial tax credit extension for solar panels to 2034. This allows a maximum tax saving of 30% of whatever the solar panels cost the real estate business.

These are the carrots, but what about the sticks? New York's Climate Mobilisation Act has established a cap-and-trade market, which fines owners $268 per ton of carbon emitted over a defined limit, measured in emissions per square footage.[9] However, this sort of legislation remains at a very local level and will be unlikely to reach the federal level for quite some time.

In the UK, the 'Code for Sustainable Homes' was a voluntary scheme, which has now been scrapped. However, if the UK is to meet its net zero carbon homes targets, then schemes like these will need to become reinstated and made mandatory. The implementation of the Green Homes Grant, which has largely been seen as a failure, will need to be reinvigorated in order to meet key renovation targets.

There are a number of challenges the financial industry faces in helping to facilitate the decarbonisation of real estate. Firstly, most building projects in the EU are small in size, meaning that it is difficult to decarbonise the building sector at scale. Secondly, there is a general lack of awareness in the real estate sector on the benefits of decarbonisation. For example, many real estate managers overlook the potential energy cost savings, which are outlined in the following section.

There is also a lot to be said about the impact on brand. Increasingly, real estate companies, and listed companies in general are viewed more favourably by investors if they have positive

(8) https://www.propmodo.com/will-the-inflation-reduction-act-accelerate-decarbonization-within-the-real-estate-industry/
(9) www.sustain.life/blog/climate-crisis-real-estate

ESG credentials. With many asset managers now having committed to the Net Zero Asset Managers Initiative, there is a requirement for them to decarbonise their portfolio emissions, and therefore they cannot afford to have carbon intensive real estate companies in their funds.

## MARKET OPPORTUNITIES

In 2019, the International Finance Corporation (IFC), highlighted that green buildings represent an investment opportunity worth $24.7 trillion in emerging markets alone. Green buildings already command a rent premium. In 2020, sales premiums for LEED 2009 certified buildings were 35%, 31% for Energy Star 2009 and 14.7% for BREEAM 2014. Rental premiums were 24.5% for BREEAM 2015, 10.6% for LEED 2014 and 16.4% for Energy Star 2014. On energy specifically, as far back as 2013, a European study found a 0.45% improvement in value for each one per cent improvement in energy consumption[10]. Indeed, some investors working with CRREM already state that they would require a risk-premium for properties with a poor carbon footprint[11]. ShareAction points out that a 10-year delay of measures aimed at improving the sustainability of building envelopes would come at a price of roughly $2,500 billion, due to higher energy demand.

On the materials side, Bloomberg estimates that the green building materials market will be worth more than $653 billion globally by 2028 at 10.5% CAGR. One of the major players in the sector, Kingspan Group, who makes insulation and building efficiency products, targets net zero carbon manufacturing by 2030. Given that 80% of British building stock that will exist in 2050 is already built[12], retrofitting will be a big part of the solution to achieve net zero.

**Other Points to Consider: Circular Economy, Natural Capital & UN SDGs?**

Real estate companies are also coming under increasing scrutiny with respect to natural capital. New regulations mean that real estate companies must also prove that they are biodiversity net positive. Whilst many real estate companies undertake miscellaneous projects, such as insect holes, bat boxes and wildflower planting, these are often not part of a concerted strategy. Instead, they form part of a mish-mash of ad-hoc Corporate Social Responsibility projects.

Another key issue for real estate is waste, recycling and the implementation of a circular economy. Construction and demolition waste accounts for over a third of all waste generated in the EU. For EU Member States, the level of recycling and recovery of construction and demolition waste varies widely from just 10% in some Southern European states, to 90% in the Nordics. The EU has recognised this problem, and so the new Circular Economy Action Plan (CEAP) was adopted in March 2020 and includes measures to ensure Europe's transition to a more circular economy. However, progress by companies on EU legislation and initiatives has been pitifully slow. Despite the Waste Framework Directive being introduced, municipal waste generation has increased over the last decade, with most of that being construction and building waste.

Investment companies also have an increasing appetite for companies that articulate their development strategy with the United Nations Sustainable Development Goals (SDGs) in mind. It provides the industry with an additional framework to demonstrate positive impact. Green buildings can even improve human health through providing optimized indoor environments. For example, a study by Harvard University found certified green buildings improved cognitive performance by 26%[13].

(10) https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2021/07/green-premium-real-estate/

(11) CRREM, https://www.gresb.com/nl-en/insights/eu-backed-carbon-risk-real-estate-monitor-crrem-to-identify-and-measure-ghg-reduction-targets-and-opportunities-aligned-with-the-paris-agreement/

(12) UK Green Building Council, https://www.ukgbc.org/climate-change-2/

(13) https://www.hsph.harvard.edu/c-change/news/the-impact-of-green-buildings-on-cognitive-function/

# 2 – A LOOK AT THE SECTOR PLAYERS AND COUNTERPARTIES

## a – Sector Initiatives and the work done

In the world of sustainable real estate, several actors help the industry strive towards a better vision of the future. There are a multitude of companies, NGO's and frameworks that help improve transparency, accountability and ambition for real estate decarbonisation.

The Global Real Estate Sustainability Benchmark (GRESB) is an investor-led organisation that produces an internationally recognised benchmark to track environmental, social and governance (ESG) performance for real estate assets. It works in collaboration with the industry to provide standardized and validated data to capital markets. In 2022, more than 1,820 entities participated in the real estate benchmark by disclosing key environmental data. This represented an increase of 20% of participants between 2021 and 2022. GRESB data is now used by 170 institutional and financial investors with more than $51 trillion in assets under management. In the surveys, participants report on energy, GHG, waste, water and building certification at the asset level.

The Partnership for Carbon Accounting Financials (PCAF) is a global, industry-led initiative of financial institutions that develops a harmonized approach to assess and disclose GHG emissions associated with investments, also known as financed emissions. In May 2022, PCAF published its Draft Technical Guidance for Public Consultation in partnership with GRESB and the Institute for Real Estate Economics. Currently, over 250 financial institutions have committed to the initiative. PCAF collaborates with several organizations, institutions and coalitions, including CDP, the Science-Based Targets initiative (SBTi) and the UN-convened Net-Zero Asset Owner Alliance (AOA).

The Carbon Risk Real Estate Monitor (CRREM) project has derived decarbonisation pathways from the ambitions of the Paris Agreement to make region- and property-type-specific trajectories. Real estate assets and portfolios can benchmark themselves against those trajectories. These pathways, while primarily alignment tools, may also be used as proxies for "transition risk" (in this case, the risk of assets being stranded due to regulatory changes or market obsolescence) insofar as the covered nations follow similar decarbonisation strategies. CRREM's scope covers most global real estate markets, from residential to commercial. The project provides the industry with appropriate science-based carbon reduction pathways at the building, portfolio and company levels.

Since 2021, the three organisations have worked together for a common framework to help financial institutions measure and understand emissions from the real estate they are financing. The partnership will allow financial institutions to "formulate, set and implement forward-looking targets in relation to their financed emissions"(14).

The trio is now working on technical guidance on the accounting and reporting of financed GHG emissions from real estate operations. It will help to create a common language between investors and real estate companies. By providing a consistent set of metrics for reporting GHG emissions, the guidance will also help address greenwashing in the sector.

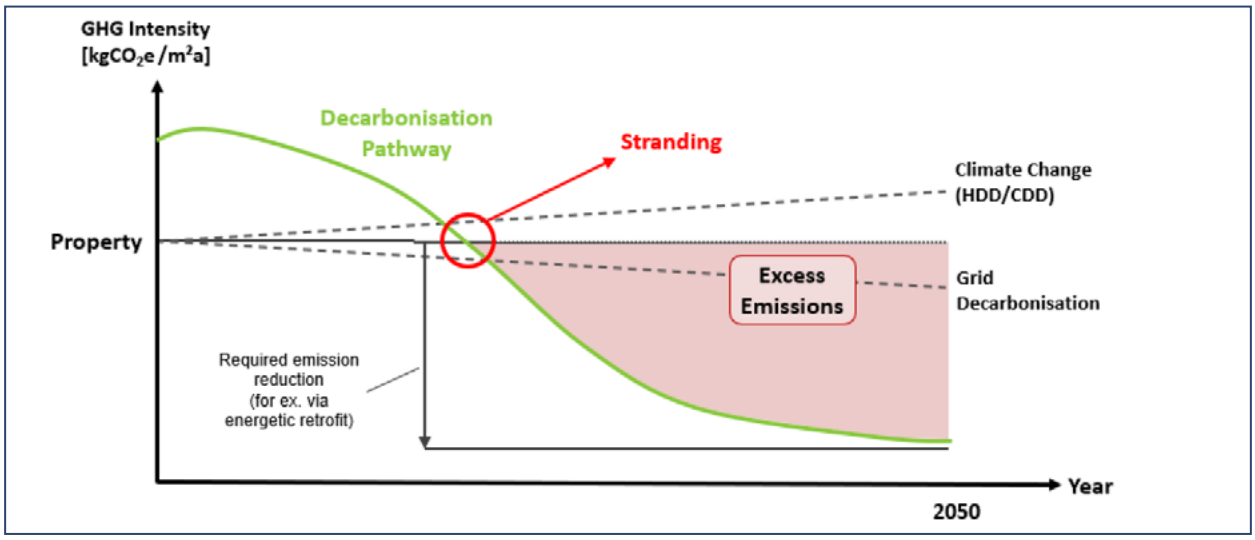
(14) GRESB, https://www.gresb.com/nl-en/insights/gresb-crrem-and-pcaf-join-forces/

## b - CRREM tool

CRREM pathways are integrated into an excel-based software which enables investors, lenders and other stakeholders to analyse assets and portfolios with regard to transition risk, including Paris-alignment and identifying assets with high physical risks due to noncompliance with pathways. The software also provides analysis of retrofits and offers an independent solution for strategic planning, benchmarking, management of GHG-related aspects and meeting reporting requirements for initiatives such as the TCFD.

The 'stranding diagram' is a key output of asset-level analysis in the CRREM tool. This feature allows users to assess the performance of individual assets against 1.5°C aligned decarbonisation and energy-reduction pathways. The tool calculates the asset's baseline performance and provides an estimated date of 'stranding', which represents the point in time at which the asset would become commercially unviable if no actions were taken to address its carbon footprint. The asset-level analytics within the CRREM tool provide valuable insights into the impact of transitioning to a low-carbon economy and enable users to identify the assets most at risk of stranding. By doing so, stakeholders can make informed decisions about the future of their portfolios, prioritize investments in low-carbon solutions and ensure alignment with decarbonisation goals.

### Figure 4: Stranding diagram presenting required emission reduction for a building (black curve) to be aligned with the Paris agreement (green)



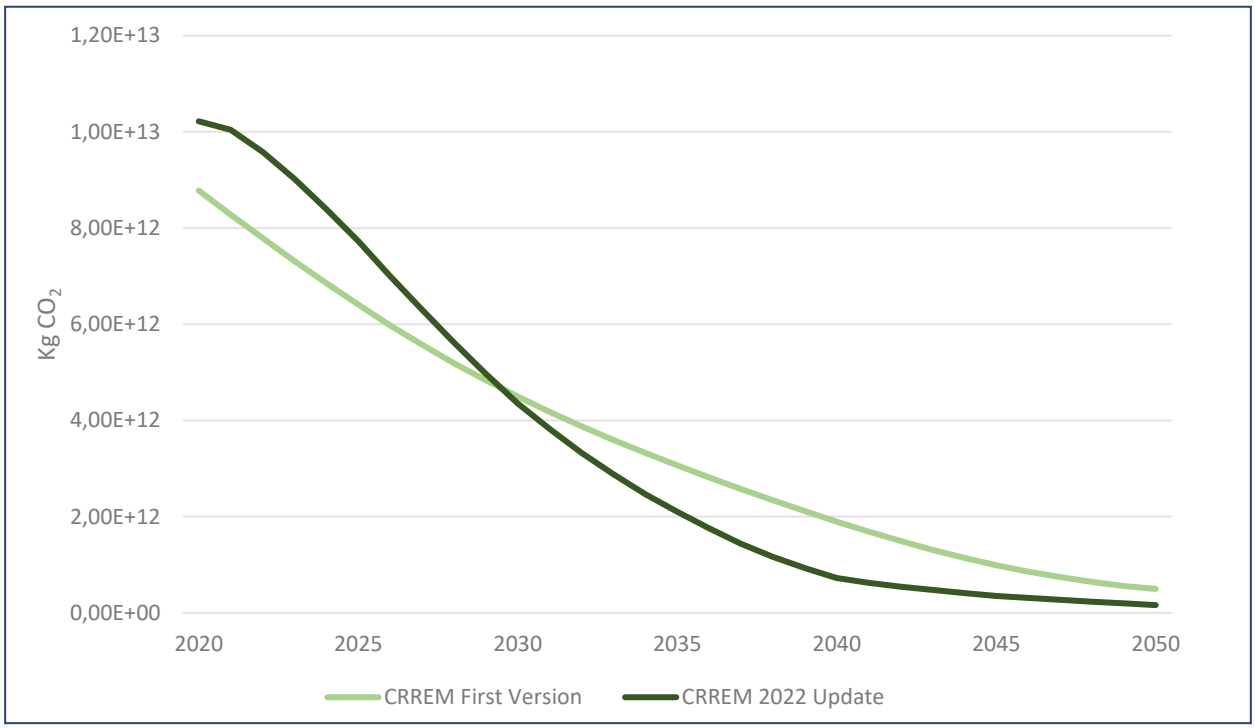

Source: CRREM 2022

CRREM collaborates with the SBTi to provide fully aligned 1.5°C decarbonisation pathways for the real estate sector. As part of its target-setting methods, the SBTi provides emissions reduction pathways for several sectors, which companies must use in calculating their science-based targets. For buildings, the SBTi has provided global commercial and residential pathways for in-use emissions for several years. Since January 2022, the two technical teams have been collaborating to form one major global standard for the operational decarbonisation of real estate holdings which investors and other market participants can rely on. They also integrated potential changes resulting from a public consultation they conducted during the summer of 2022. More recently, in January 2023, the collaboration published its updated CRREM-SBTi decarbonisation pathways, aligned with 1.5°C. It covers the residential and commercial real estate sectors across North America, Asia-Pacific and Europe.

CRREM recently updated the decarbonisation pathway baseline from 2018 to 2020. This was because the sector overshot the required reduction in 2018 and 2019, meaning the pathways

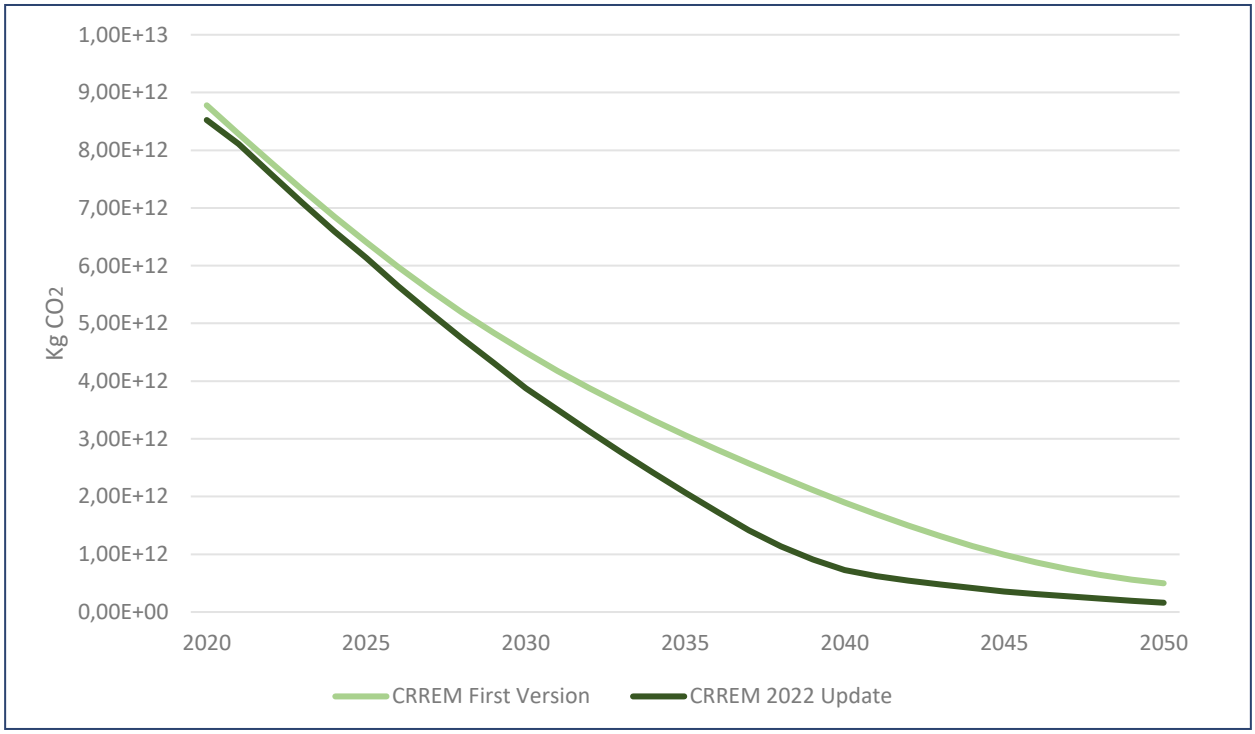
needed to become steeper from a higher starting point in 2020. Whilst they have good data granularity for Europe, the same cannot be said for the U.S. and China, and hence these are key areas of improvement.

## Figure 5: Global building sector CO² – only pathway (absolute emissions, update including transmission and distribution (T&D) losses



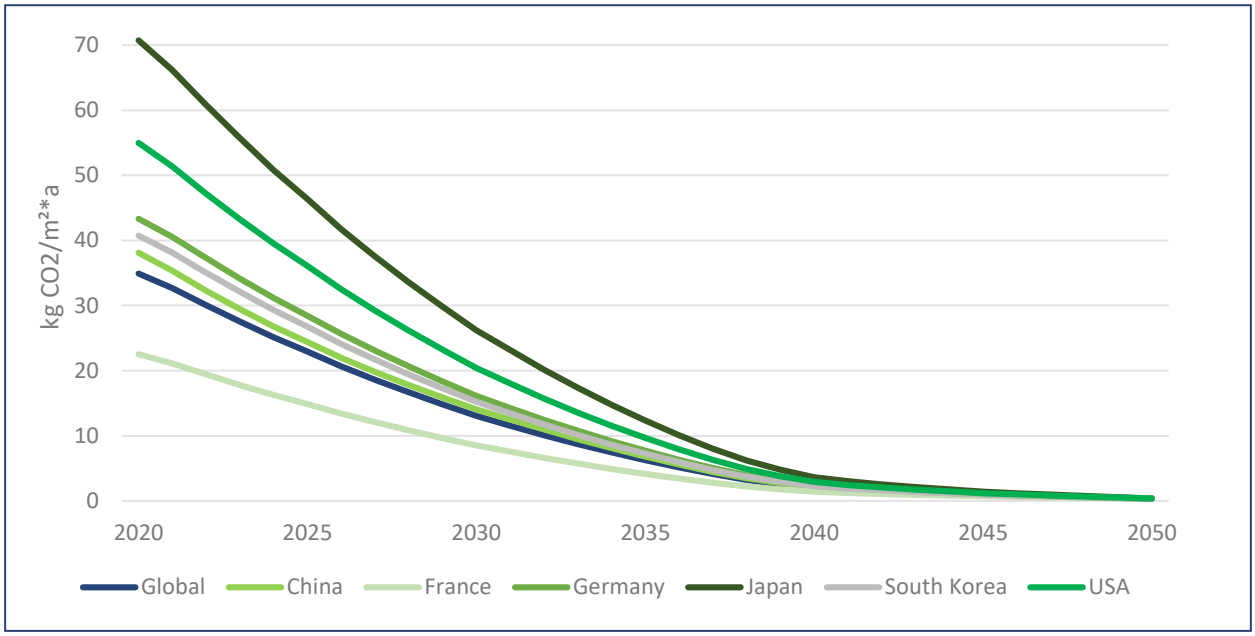

In order to align with the SBTi, CRREM must exclude transmission and distribution losses. These losses, which are a result of the inefficient transfer of electrons, occurs at each stage along the energy supply chain, from the turbine to power at your home or office.

## Figure 6: Global building sector CO² – only pathway (absolute emissions, update excluding transmission and distribution (T&D) losses



The report also allows us to have a complete view of a country-specific carbon intensity pathway. We see that France, as a country, is below the global trend. This is mainly due to the low rate of growth in new floor space in the country, which allows lower reduction requirements per m² of floor space. Adding new floor space at an increasing rate, even in energy efficient buildings, would increase the absolute emissions of a country. Therefore, the efforts to reach net zero would need to be greater.

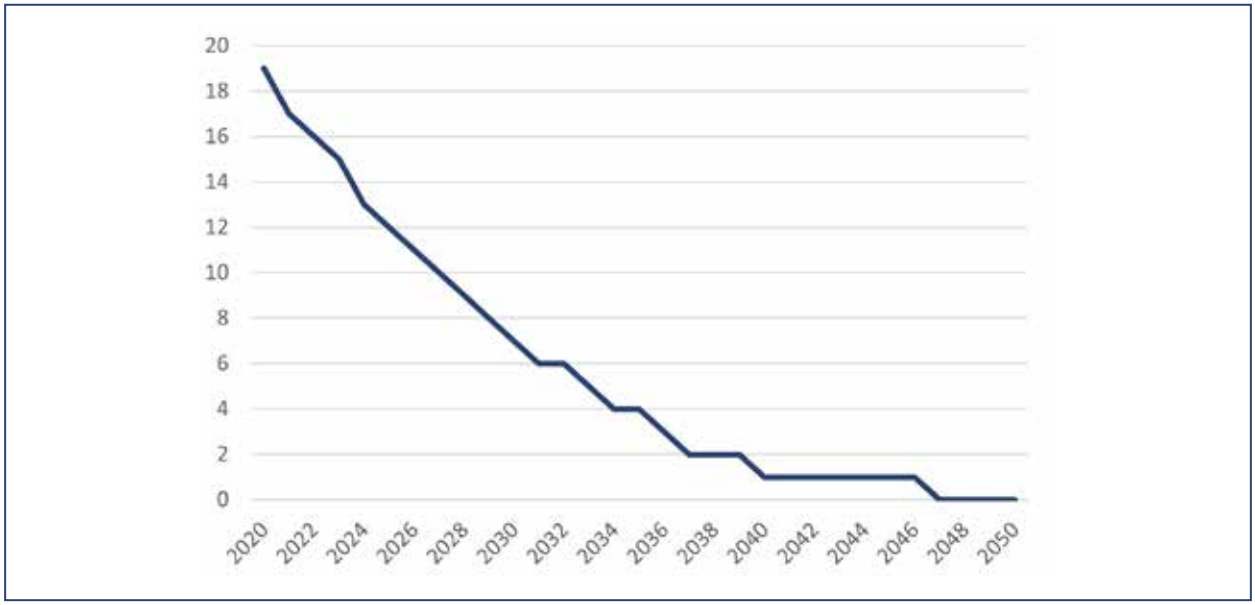
## Figure 7: Convergence of the carbon-intensity pathway of the building sector in individual countries to the global pathway (1.5°C scenario)




Source: CRREM

Whilst France had an intensity of 19kgCO2/m² for a single family residential home in 2020, it must decrease to 7kgCO2/m² by 2030 and to 1kgCO2/m² by 2040 before achieving net zero. This reflects the importance of retrofitting in the EU and in France in particular.

## Figure 8: Residential single family CO2 intensity pathway, (kgCO2/m², excluding T&D losses)




Source: CRREM and La Française AM

## c – Sector Actors and the Certification System

Currently, commercial property owners in many jurisdictions are required to assess the sustainability performance of their assets in at least one way. However, governments are advocating for such assessments to become mandatory. For example, In France, the law (Dispositif Eco Energie Tertiaire) requires owners and tenants of commercial real estate assets to report on their energy consumption every year in order to check progress in achieving energy reduction targets. In most European countries, the energy performance must be transmitted to the tenant/buyer prior to any rental or sale. In the Netherlands and the UK, it is impossible to sell or rent out properties with a poor energy performance level (based on the Energy Performance Certificate).

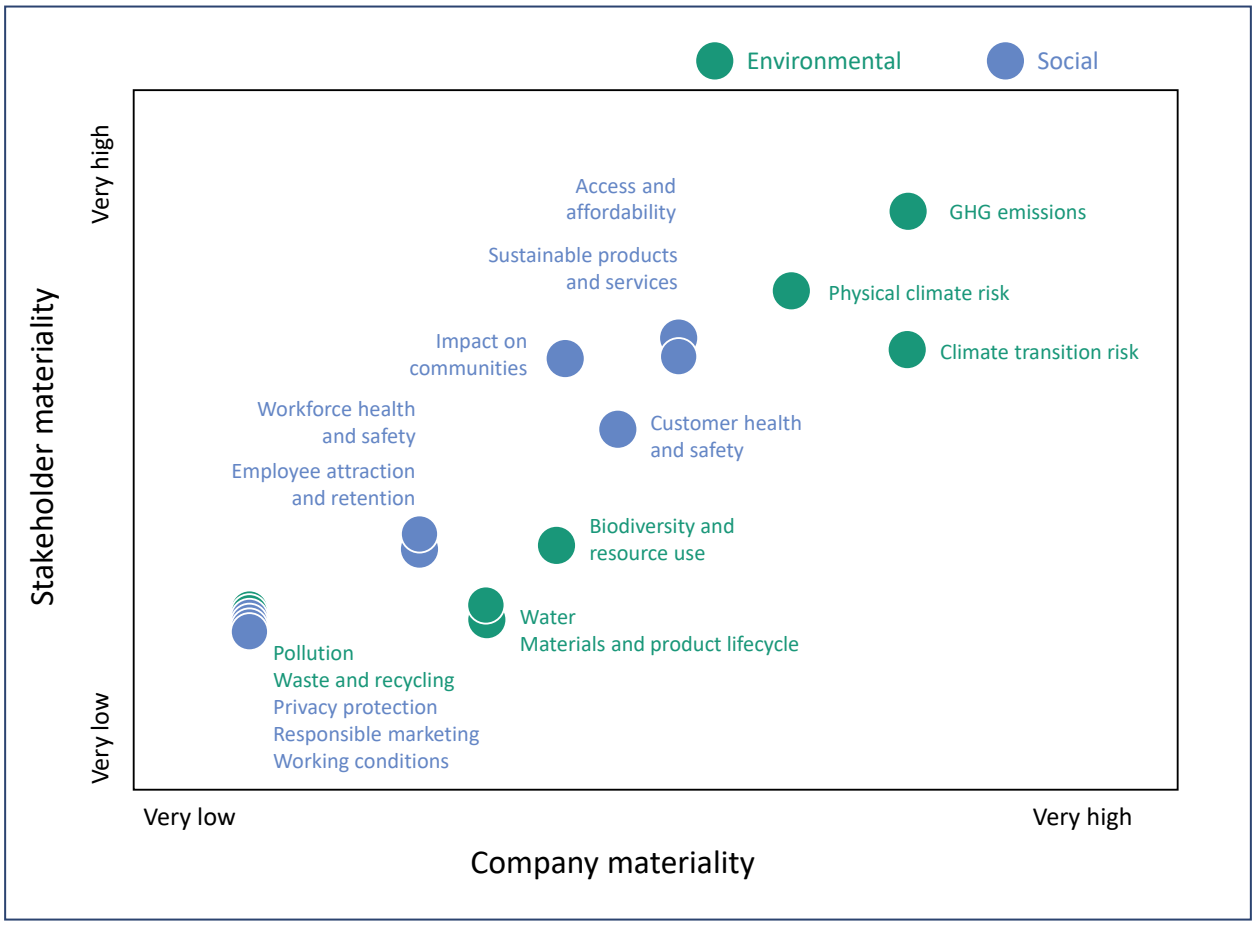
At the building level, there are several different certifications that a listed real estate company can certify its assets through, in order to prove their commitment to decarbonisation. The importance of these certifications has increased in recent years due to several factors: an increasing number of investors who refuse to purchase an asset without any certification, a growing concern over ESG matters from tenants, and a necessity for real estate companies to differentiate themselves from competitors.

There are different certifications, which measure sustainability in different ways and attest to properties being designed, built or managed in accordance with sustainability principles. Standards include LEED (North America, Asia), BREEAM (worldwide, especially UK), HQE (especially France), DGNB (especially Germany) and CASBEE (especially Japan). Most of them take into consideration metrics regarding carbon emissions, the whole life cycle performance of the asset, health and social impacts, circularity and resilience, biodiversity, disclosures and reporting.

However, there are financial benefit too; LEED buildings have reported almost 20% lower maintenance costs than typical commercial buildings. A new type of certification such as the China-developed RESET, is using sensors to monitor indoor air quality, energy, materials and water performance. The various certifications and the differences between them, as well as the specific requirements related to each country, can pose challenges for international investors. However, this diversity is important in addressing the unique sustainability challenges of the different geographic locations. The certification bodies consider the specificities of each location, such as flood or drought risk, when determining eligibility for certification.

# 3 – LISTED ASSETS, REAL ESTATE SECTOR ANALYSIS AT LFAM

## Figure 9: La Française Asset Management, Real Estate Environmental and Social Materiality matrix




La Française Asset Management (AM) invests in several real estate companies through financial markets. As a responsible investor, we identify the most important ESG risks and considerations before investing in a company. We aim to invest in companies that focus on ESG holistically and have a sustainability strategy and roadmap. The assessments are customised for each sector but are broadly divided into 4 main sections: environmental analysis, social impact analysis, governance analysis and impact analysis that focuses on SDGs.

It is clear that real estate investors play a critical role in the decarbonisation of the real estate sector. But what risks are most material for stakeholders within the real estate sector? Real estate investors have a responsibility to consider the potential environmental impact of the properties they invest in and to invest in sustainable real estate assets. Therefore, it is important for investors to understand the most significant risks associated with the sector and to ensure that they are making informed decisions. La Française AM has taken this into consideration and has developed its own methodology regarding materiality in the real estate sector. As such, the asset manager weighs the environmental and social risks and opportunities associated with real estate investments. La Française AM recognises the importance of monitoring key carbon-related metrics in the real estate sector. To this end, the company tracks various data such as carbon emissions, energy efficiency, carbon-neutral target and net –zero target year. The table below shows a comparison of green certifications and decarbonisation targets for

the real estate sector. The table reveals a sector, highly fragmented in terms of ambition and progress. Some companies and properties are setting ambitious targets for decarbonisation and sustainability, while others have yet to embrace these concepts. The disparity underscores the need for investors to remain vigilant in their assessments and to support companies that are leading the way in terms of decarbonisation.

Carbon neutrality can be defined by the action of mitigating greenhouse gas emissions through offsetting. The approach balances the emissions released with those avoided or extracted from the atmosphere. Any offsets purchased and retired must be of high quality and additional. On the other hand, net zero carbon is minimizing emissions over time and treating offsets as a last resort. The SBTi requires deep decarbonisation of 90-95% before 2050[15] and only at that point can a company neutralize any limited residual emissions, through offsets, that they are not able to eliminate.

## Table 1: Carbon Targets for the Real Estate sector

| Company | Activity | % of buildings HQE/ BREEAM accredited | kWh/ sq.m | Scope 1 + 2, 2021 (ktCO² eq.) | Scope 3, 2021 (ktCO² eq.) | Carbon Neutral Year | Net Zero Year |
|---|---|---|---|---|---|---|---|
| Unibail-Rodamco-Westfield | Retail | 72 % | 118 | 40 | 2,700 | No target | 2050 |
| Covivio | Retail | 83 % | 56 | 20 | 420 | 2040 | No target |
| Klepierre | Owners | 100 % | 79 | 18 | 69 | No target | 2040 |
| Gecina | Offices, residential | 87 % | 190 | 180 | 117 | 2040 | No target |
| Icade | Healthcare | 68 % | 377 | 9 | 310 | No target | 2050 |
| Prologis | Logistics | 11,7 % | - | 6 | 3,704 | No target | 2030 |
| Aedifica | Healthcare | - | 169 | 0,22 | 50 | No target | 2050 |
| Cofinimmo | Manager | 6 % | 165 | 10,3 | 40 | No target | No target |
| LEG Immobilien | Residential | - | 158 | 196 | 115 | 2045 | No target |
| Vonovia | Residential, owners, manager | - | 338,6 | 754 | 118 | 2050 | No target |
| TAG Immobilien* | Manager | - | 136 | 186 | - | 2045 | No target |

** Estimations based on disclosed data*

2030 2040 2045 2050 No target

(15) https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf

# CASE STUDY:
# MAJOR PLAYER IN RETAIL REAL ESTATE, 2021

This case study is of a major player in the retail real estate sector, which we judge to be making reasonable process with respect to decarbonisation but which has some important areas that need addressing in order to be considered a leader in the sector. Our analysis is primarily based around the TCFD framework, through which we delve into what we believe are key points to look out for when assessing listed real estate companies.

## Governance

The real estate company in question has a somewhat unconvincing sustainability governance structure, which does not hold itself to account with respect to its decarbonisation strategy. Its sustainability governance structure is directed by a CSR Strategic Committee. Whilst many investors see the 'CSR' acronym as a somewhat siloed 1990's initiative, many French companies use this term and so it is not a cause for immediate concern. However, the fact that the committee is comprised primarily of members of senior management with no obvious ESG or sustainability expertise does warrant some further investigation. Indeed, although the leader of the committee has 'Sustainability Officer' in his/her title, the individual in question has no apparent sustainability or climate change expertise.

The company discloses a supervisory board members skills matrix, and whilst one individual has demonstrable experience in ESG issues, the rest of those who claim such experience do not clearly demonstrate it. This is typical of many listed real estate companies, since the necessary skills are in shortage. In this case, we would like responsibility for ESG, and decarbonisation in particular, to sit at the Board level, rather than at the management level. A dedicated CSR team is responsible for supporting implementation of committee initiatives, which is a strong component of any sustainability governance structure.

Remuneration provides a key incentive, for managers across the organisation, to decarbonise. The company recently increased the weight of sustainability metrics in the long-term component of remuneration from 10% to 20%, half of which is directly linked to GHG emissions reductions; a standard largely in line with peers.

So, on the governance side, there is a mixed picture on this particular company. Remuneration supports decarbonisation, whereas the governance structure seems to weaken it to a certain extent.

## Risk Management

The company in question aims for all development projects to account for long-term climate risks by 2025, and for all standing assets to undertake a full climate change risk plan by the end of 2022. The company also commissioned a full physical and transitional climate risk scenario analysis, according to the TCFD framework. Interestingly, the company used scenarios RCP4.5 and RCP8.5. Either the company has a somewhat pessimistic view of the trajectory of the planet overall, or they could potentially not see any major credit risk for a lower representative concentration pathway. The details of the methodology disclosure are beyond what we might expect compared to their peers, as the latter have also used CRREM to analyse the risk of stranded assets across its portfolio, as well as disclosing the percentage of portfolio at risk. Therefore, we can conclude that this company takes climate risks seriously.

## Strategy & Initiatives

The strategy implemented by the company is based on a commitment to decrease its scope 1, 2 and 3 emissions by 50% by 2030, and its scope 1 and 2 emissions by 80% by 2030. Those targets have been approved by the Science Based Targets initiative and an independent third party is verifying the ESG data. The ambition is focused on three thematics such as spaces, communities and company human capital. They aim to design sustainable buildings, improve their eco-efficiency, develop connectivity and sustainable mobility, while integrating nature and biodiversity. During the process, they also take into consideration local communities and stakeholders and seek to promote responsible consumption.

The group has received recognition for several achievements in sustainability. It is considered a leader among real estate players, with 40% of its total debt issued as Sustainability-linked bonds. Furthermore, the group has achieved the highest levels of BRREAM certification for 90% of its assets, further demonstrating its commitment to sustainable practices.

## Metrics & Targets

As of the end of 2021, emissions for the group totalled 2.7 million tonnes of CO2 which is a reduction of 46.5% compared to the 2015 baseline of 5.2 million tons of CO2. Here, the choice of baseline is always of interest, since a baseline year that has high emissions will be relatively easy to decarbonise compared with a baseline year where emissions were particularly low. Most companies use a baseline year of 2019, as it is before COVID, when operations were significantly altered. Their sustainability strategy in this case was launched in 2016, which explains the use of a 2015 baseline year. In order to achieve a reduction of emissions of 80% by 2030, the group established a series of targets and publicly disclosed its metrics and progress, allowing for better risk and opportunity management by the company and its stakeholders.

| **Targets** | **2021 Progress,** 2015 baseline |
|---|---|
| **Design sustainable buildings** | |
| · Reduce emissions from construction by -35% by 2030 (KgCO2/m²) | -11.45% |
| · 100% development projects to integrate a circular economy design solution by 2025 | N/A* |
| **Improve eco-efficiency** | |
| · Reduce emissions from operations by -80% by 2030 (KgCO2/m²) | -55.5% |
| · Improve the energy efficiency of our assets by 30% by 2030 (kWh/m²) | -15% |
| **Develop connectivity and sustainable mobility** | |
| · Reduce emissions from transport by -40% by 2030 (KgCO2/visit) | -5.5% |
| · 50% visitors to access Group assets by sustainable means of transport by 2030 | 37% |
| **Integrate nature and biodiversity** | |
| · 100% new development projects to achieve a biodiversity project to achieve a biodiversity net gain by 2022 | N/A* |
| · 100% development projects to implement a biodiversity action plan by 2022 | N/A* |

** Data not available. The requirement for the study of those risks and solutions faced by development projects has been added in the Group sustainability brief in 2020 and will be closely monitored through a dedicated assessment tool.*

The company is making good progress towards reducing its emissions, particularly in its operations, thanks to retrofitting and the use of energy-efficient appliances. It is also on target to ensure that 50% of its visitors access its properties and malls using sustainable transportation, having achieved 37% in 2021.

However, we noticed that there are some missing performance targets with no information on their progress. We hope to see this information in their next report as it affects the company's carbon impact score and undermines the confidence of investment firms in their commitment to sustainability.

# CONCLUSION

This paper has sought to show real estate's impact on global GHG emissions, how it can decarbonise, and what investors can do to help identify those listed real estate companies most ready to transition. Given the real estate sector's near 40% attribution to global GHG emissions, it is vital that this sector is tackled quickly and robustly. As a result, NGOs, corporates and regulators alike must come together to ensure the rapid and permanent decarbonisation of the sector.

Clearly, in order for the real estate industry to reduce its emissions, so must cement and steel manufacturers. Whilst steel has a clearer pathway, it is difficult to see a similar path for cement without significant technological advancement, which must outpace the expected increase in overall demand. However, emphasis around the building 'envelope' is also a vital lever for emissions reduction, and we expect a reinvigoration of policies and incentives to improve building efficiency. This does however require additional buy-in from the building user, which is perhaps the most important stakeholder in the process of decarbonisation.

Regulations, subsidies and taxes continue to come to the market in abundance. Regulations around disclosure are particularly important for ESG-oriented investors, and disclosure through the EU Taxonomy will allow investors to more accurately identify those companies in the best position to decarbonise in the future. Numerous initiatives, frameworks and certifications have been developed that will help support this and allow companies to set targets around industry specific frameworks. The percentage of buildings certified to LEED, BREEAM and other such standards should be a key determining factor when looking at listed real estate companies for decarbonisation progress. Not only will these initiatives drive climate mitigation efforts, but they also create an environment of significant financial opportunity. Those listed real estate companies that are able to decarbonise their portfolios will be able to charge 'green' premiums, and thus achieve a higher revenue stream.

In terms of identifying which listed real estate companies are most ready to transition and decarbonise, the disparate tapestry of the market makes it difficult to compare companies. Their ability to decarbonise depends on a variety of factors, such as the mix of office, retail and residential buildings in their portfolio, as well as the locations (geography) of the assets. The publication of final deliverables of the Science Based Targets initiative's[16] sector guidance for buildings will be a key catalyst for the real estate industry, but this is not due until October 2023.

Overall, for the decarbonisation of the listed real estate sector to be a success, financial institutions must support their transition. Our framework is one example of a template for understanding those companies that are most ready to transition.

(16) Science Based Targets Initiative, accessed at: https://sciencebasedtargets.org/sectors/buildings

# **TABLE 1:** data sources

- **Unibail-Rodamco-Westfield Universal Registration Document 2021, Accessed at:** https://cdn.urw.com/-/media/Corporate~o~Sites/Unibail-Rodamco-Corporate/Files/Homepage/INVESTORS/Regulated-Information/Registration-Documents/EN/20220324-2021-Universal-Registration-Document_EN.ashx?revision=3afc39dc-446d-4925-b3a7-a687f16e0928

- **Klepierre Universal Registration Document 2021, Accessed at :** https://www.klepierre.com/en/finance/document-d-enregistrement-universel-2021

- **Gecina Universal Registration Document 2022, Accessed at:** https://www.gecina.fr/sites/default/files/2023-02/gecina_-_universal_registration_document_urd_2022.pdf

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- **Prologis ESG Data Microsite, Accessed at:** https://www.prologis.com/sustainability/esg-data

- https://aedifica.eu/wp-content/uploads/2022/06/AED_CSR-Report_2021_EN_2022-06-09_LV.pdf

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- **Cofinimmo Universal Registration Document 2021 :** https://reports.cofinimmo.com/reports/9/en/report.pdf

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