



Guide to Scope 3 Reporting in Commercial Real Estate

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Advancing Net Zero Programme Partners

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Contents

Contents	3
Foreword	4
Introduction	5
Purpose	5
Background	6
Greenhouse Gas Protocol	6
Document structure	7
1. Scope 3 in Commercial Real Estate	8
What are scope 3 emissions?	8
Commercial benefits of scope 3 reporting	10
Drivers for scope 3 reporting in CRE	11
2. Screening in Commercial Real Estate	12
Getting started	12
Screening process	14
Relevance criteria	20
3. Interpretations for Commercial Real Estate	22
Guiding principles for accurate accounting	22
Estimating supply chain emissions	25
Accounting for the transfer of new buildings	26
Accounting for the transfer of existing buildings	30
Estimating tenant energy use	32
Scope 3 reporting over time	34
Future Development	36
Providing feedback	36
Scope 3 emissions reductions	37
References	38
Appendix A: Development Process	39
Appendix B: Map of Reporting Initiatives Against Scope 3	40
Questions & Feedback	42

Foreword



Awareness of the climate crisis has grown exponentially, culminating in the UK Government legislating for net zero emissions by 2050. Growing scrutiny from investors, insurers and lenders, and changing consumer demand are all forcing businesses to address their carbon footprint.

Many commercial real estate (CRE) companies have become well-versed in reporting and reducing the impacts of their own operations, but eliminating all climate impacts requires them to consider the emissions arising up and down their value chains – otherwise known as scope 3 emissions. These can amount to 85% of CRE companies' total carbon footprint, and represent the most significant commercial risks and opportunities posed by climate change to their business models. So, understanding these risks through accurate and consistent measurement, evaluation and reporting should improve both business resilience and reputation.

UKGBC's guidance document aims to improve understanding around scope 3 emissions in the CRE sector and encourage greater collaboration with suppliers and customers. The scale and urgency of the climate crisis requires a step change in mindsets and behaviours. Working closely with stakeholders across the value chain is the only way we can achieve the systems change required for the rapid decarbonisation of our built environment.

A handwritten signature in black ink that reads "Julie Hirigoyen".

Julie Hirigoyen
Chief Executive, UKGBC

Introduction

PURPOSE

This guidance is intended to improve the knowledge and understanding of scope 3 emissions reporting for commercial real estate companies (CRE) and the wider sector. It offers sector-specific guidance that has been developed through a multi-stakeholder engagement process, including building developers, owners, operators and investors.

There is currently a limited understanding on the scale of scope 3 emissions in the CRE sector, as identified by UKGBC through stakeholder workshops and surveys. This is due in large part to a lack of sector-specific guidance for scope 3 reporting using the Greenhouse Gas Protocol's *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*¹ (GHG Protocol).

This has led to limited scope 3 reporting and missed opportunities for driving emissions reductions. Additionally, a general lack of consistency means reporting companies may apply poor screening exercises, undertake incorrect assessments and, ultimately, under-report scope 3 emissions.

This guidance has been specifically developed to build consensus and promote common approaches to reporting scope 3 emissions. It aims to provide clarity on interpreting the GHG Protocol for CRE companies and enable consistency in reporting across the sector. It is intended to advance the agenda of scope 3 reporting by

providing information to increase the overall number of CRE companies carrying out reporting, and to improve consistency in the approaches used.

Ultimately, a greater understanding of scope 3 reporting should help to increase its influence on business decision making and interventions to drive emissions reductions. This should also be supported by wider initiatives within the sector, which includes the Task Force on Climate-related Financial Disclosure (TCFD)² and the Science Based Targets initiative (SBTi)³.

This guidance provides consistent reporting approaches that have been developed in line with currently available resources and in consultation with stakeholders. There are clearly areas requiring further refinement to address issues specific to the CRE sector, and this document highlights specific topics for future development throughout. Feedback from practitioners when applying the guidance is welcomed to help increase reporting accuracy and robustness.

BACKGROUND

In June 2019, the UK Government introduced a target to reduce emissions to net zero carbon by 2050. This is in line with the ambitions of the Paris Climate Agreement and the recommendations of the IPCC to limit global warming to 1.5°C and avoid the most catastrophic impacts of climate change. This enormous challenge can only be tackled by governments, businesses and civil society working together to take ambitious action to radically reduce emissions.

The operation of buildings account for around 30% of UK emissions, mainly from heating, cooling and electricity use, while the direct emissions from construction activity contribute a further 3%.⁴ CRE companies have a clear role to play in addressing these emissions, and influencing all other emissions associated with the to design, construction and management of our built environment.

Listed companies are currently required to report on their direct emissions and electricity use – scopes 1 and 2 – under mandatory greenhouse gas reporting but reporting on scope 3 emissions from the wider value chain is currently voluntary. In order for a CRE companies to take a lead in achieving net zero and driving change throughout the value chain, it is vital for companies to measure and report on scope 3 emissions to understand their full impact on climate change.

GREENHOUSE GAS PROTOCOL

The Greenhouse Gas Protocol's *Corporate Value Chain (Scope 3) Accounting and Reporting Standard* (GHG Protocol) is the internationally accepted method for companies to account for scope 3 emissions. This guidance aims to assist CRE companies with the application and interpretation of that standard.

From section 1.9 'Sector guidance' of the GHG Protocol:⁵

The development of sector-specific implementation guidance and tools can drive more consistent corporate GHG measurement, reporting, and performance tracking practices for a particular sector. Helpful sector-level information could include guidance on interpreting the standard for a specific sector, guidance and tools for calculating emissions from sector-specific activities, recommended performance metrics, specific guidance for identifying the largest sector emissions sources, and suggested data sources and emissions factors.

Sectors should develop guidance through an inclusive multi-stakeholder process to ensure broad acceptance and facilitate increased consistency and credibility.

This guidance is intended to meet the suggested sector-specific guidance requirements, as set out in the GHG Protocol. It builds upon the GHG Protocol to promote additional completeness and consistency in the way CRE companies account for, and report on, scope 3 emissions.

This guidance should be considered as a supplement to the GHG Protocol and should be read in conjunction with the more detailed *Technical Guidance for Calculating Scope 3 Emissions*.⁶ document when undertaking calculations.

Following the launch of the guidance, UKGBC will review the option to pursue a "Built on GHG Protocol" mark which is a formal endorsement from the World Resources Institute.

DOCUMENT STRUCTURE

This guide has been developed with a logical structure from an introductory level of information through to more advanced. Sections 1 and 2 are suitable for a non-technical audience, whereas a working knowledge of the GHG Protocol will assist in understanding section 3.

Readers are encouraged to navigate to sections of the document that are most relevant to their needs. An overview of the sections is provided below.

Level of information	Section
Introductory  Technical	1. Scope 3 in Commercial Real Estate An introduction to what scope 3 emissions are, their contribution to climate change and the importance of scope 3 reporting for CRE companies.
	2. Screening in Commercial Real Estate A starter's guide for CRE companies when undertaking scope 3 reporting – helpful for beginners and a refresher for those more advanced.
	3. Interpretations for Commercial Real Estate Recommended approaches to accurately account for key activities undertaken by CRE companies – suitable for those already reporting and intended to improve consistency across CRE reporting companies.

1. Scope 3 in Commercial Real Estate



WHAT ARE SCOPE 3 EMISSIONS?

Greenhouse gas emissions that occur directly due to a company's activities or indirectly from its use of energy are known as scope 1 and scope 2 emissions, respectively. All other greenhouse gas emissions that occur due to its activities, but which it has no direct ownership or control over, are known as scope 3 emissions.

Scope 3 emissions typically account for over 85% of a CRE company's entire footprint.⁷ Some examples include:

- A building developer reporting emissions from construction materials used in a new building
- A building owner (lessor) reporting emissions from the energy use of a tenant (lessee)
- An employer reporting emissions from employees commuting to work

In all these examples, a reporting company would not directly own or control these emissions sources but would have some level of influence over them. Accordingly, it is important for companies to understand the complete footprint from their company's activities by undertaking scope 3 reporting.

The CRE sector has a relatively good understanding of scope 1 & 2 emissions which has recently been supported by UKGBC's 'Net Zero Carbon Buildings: A Framework Definition'.⁸ However, the sector's

understanding of scope 3 emissions is still emerging despite the potential opportunity it offers for emissions reductions. This guidance aims to advance the agenda on scope 3 emissions and unlock opportunities to drive these emissions reductions.

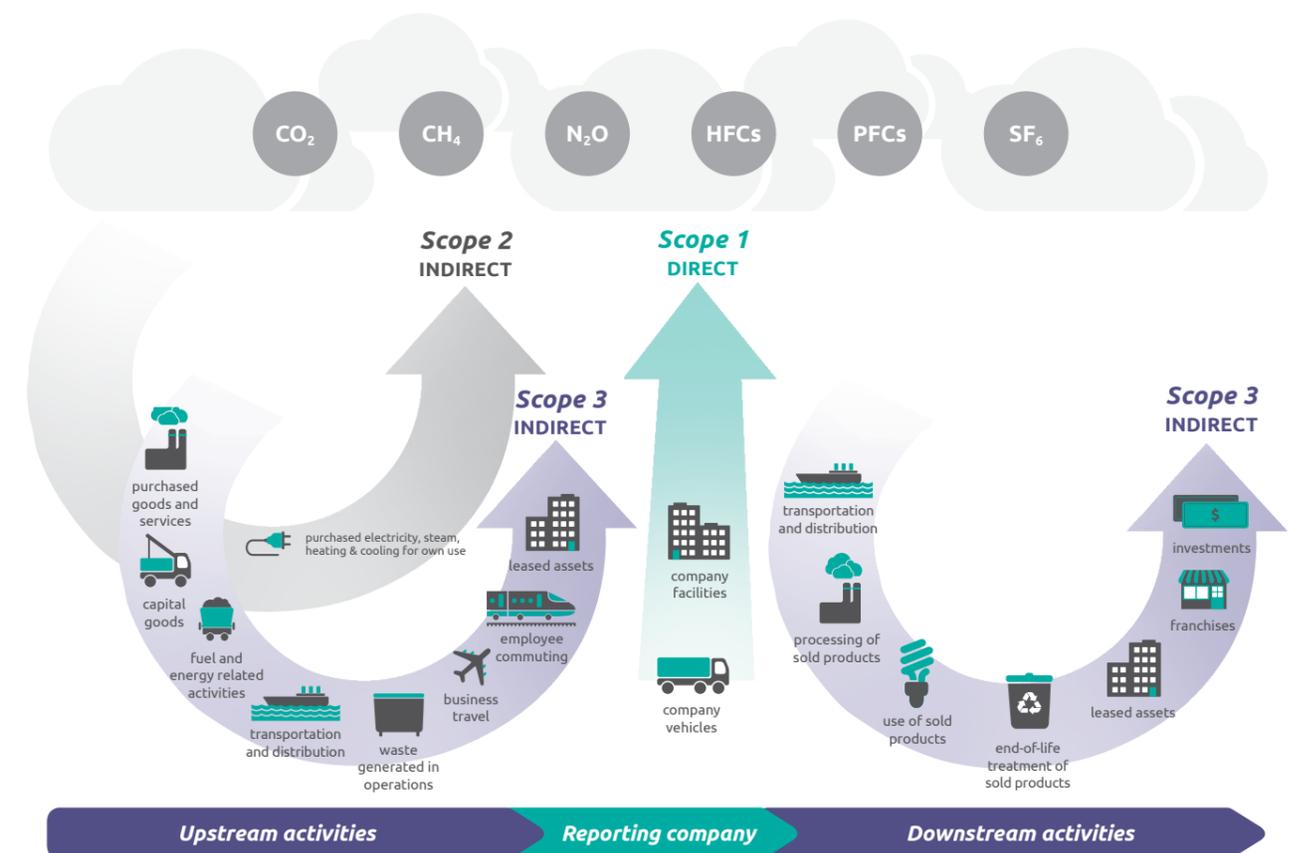
Operational control

Most CRE companies will report scope 1 and 2 emissions using the 'operational control' approach. This is defined as "having the ability to introduce and implement operating and/or environmental policies and measures".⁹ Where this approach is used, it should be extended to scope 3 reporting as well to maintain consistency.

Using this approach, emissions from any asset a company controls are included in its direct emissions (i.e. scope 1), but emissions from any asset a company wholly or partially owns but does not control (e.g. investments) are excluded from its direct emissions and should be included in its scope 3 inventory. Please see section 5.2 'Organizational boundaries and scope 3 emissions' of the GHG Protocol¹⁰ for further detail.

The guidance set out in this document is based on the operational control approach, however any CRE company using an alternative approach (i.e. financial control or equity share) should adjust this guidance to remain consistent with their chosen approach.

Overview of GHG Protocol scopes and emissions across the value chain © World Resources Institute



COMMERCIAL BENEFITS OF SCOPE 3 REPORTING

1 Understand potential impact



Understanding the impact of scope 3 emissions – on average 85% of total emissions for a CRE company¹¹ – can help identify hotspots and prioritise emissions reduction efforts.

2 Manage climate risk



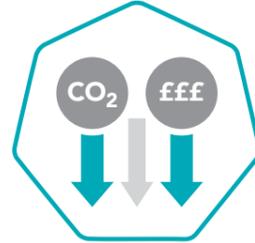
Reporting scope 3 emissions can enhance stakeholder reputation through disclosure of the management of climate risk – an area of growing concern as highlighted by the Task Force on Climate-related Financial Disclosures (TCFD).

3 Demonstrate climate action



Reporting scope 3 emissions can demonstrate to stakeholders environmental stewardship in limiting global warming to 1.5°C – in alignment with the Science Based Targets initiative (SBTi).

4 Reduce operational expenses



Reducing scope 3 emissions also reduces costs through improved supply chain efficiency and reduction of material, resource, and energy use.¹²

5 Improve collaboration with value chain



Scope 3 reporting enables a CRE company to partner with suppliers, customers, and other companies in the value chain to achieve emissions reductions.

6 Improve engagement with tenants



Scope 3 reporting supports a building owner or manager to engage with their tenants on energy management and can lead to improved customer relations.

DRIVERS FOR SCOPE 3 REPORTING IN CRE

For companies targeting carbon as a major risk in their business model, a deeper understanding of where carbon is found within the value chain is critical. The benefits of accurate measurement, wide internal and external engagement, and overall reduction in scope 3 emissions will improve business resilience and reputation.

An increasing number of initiatives are being introduced to the market which highlight the importance of scope 3 reporting for CRE companies. These initiatives are beginning to capture the true extent of the CRE sector's footprint and will help move the sector further along the path to meeting global emissions targets:

- **Streamlined Energy and Carbon Reporting (SECR)**¹³ was introduced in April 2019 and has become mandatory for quoted and large unquoted (LLP) companies, affecting approximately 12,000 companies in the UK. Scope 1 and 2 emissions will be mandatory, with some scope 3 emissions also a requirement. This includes emissions from business travel in rental cars or employee owned vehicles where the company is responsible for purchasing the fuel. Other scope 3 emissions will remain voluntary.
- **CDP (formerly Carbon Disclosure Project)**¹⁴ has been encouraging companies to report scope 3 emissions for over a decade. Many CRE companies currently report to CDP annually, with business travel and waste generated from operations being the top reporting categories (see image below).
- **The Global Real Estate Sustainability Benchmark (GRESB)**⁹ introduced mandatory scope 3 reporting in 2018, with limited focus to begin with. This includes emissions from tenant controlled areas, from electricity purchased by tenants, and from indirectly managed assets. Other sources of scope 3 emissions are not currently required.
- **The Science Based Targets initiative (SBTi)**³ encourages companies to set targets in line with the required emission reductions necessary to stay below the 1.5°C limit to global warming. Scopes 1 and 2 are required reporting, as well as a scope 3 screening exercise, whereby if scope 3 emissions exceed 40% of the company's total footprint, a reduction target is applied.

A CRE company can benefit from scope 3 reporting by using its outputs to feed into these four reporting initiatives and many others. In addition, data being collected from existing reporting initiatives can be used to feed into scope 3 reporting to ease the data collection process.

Further detail on how these reporting initiatives interface with scope 3 reporting is provided in [Appendix B: Map of Reporting Initiatives Against Scope 3](#).

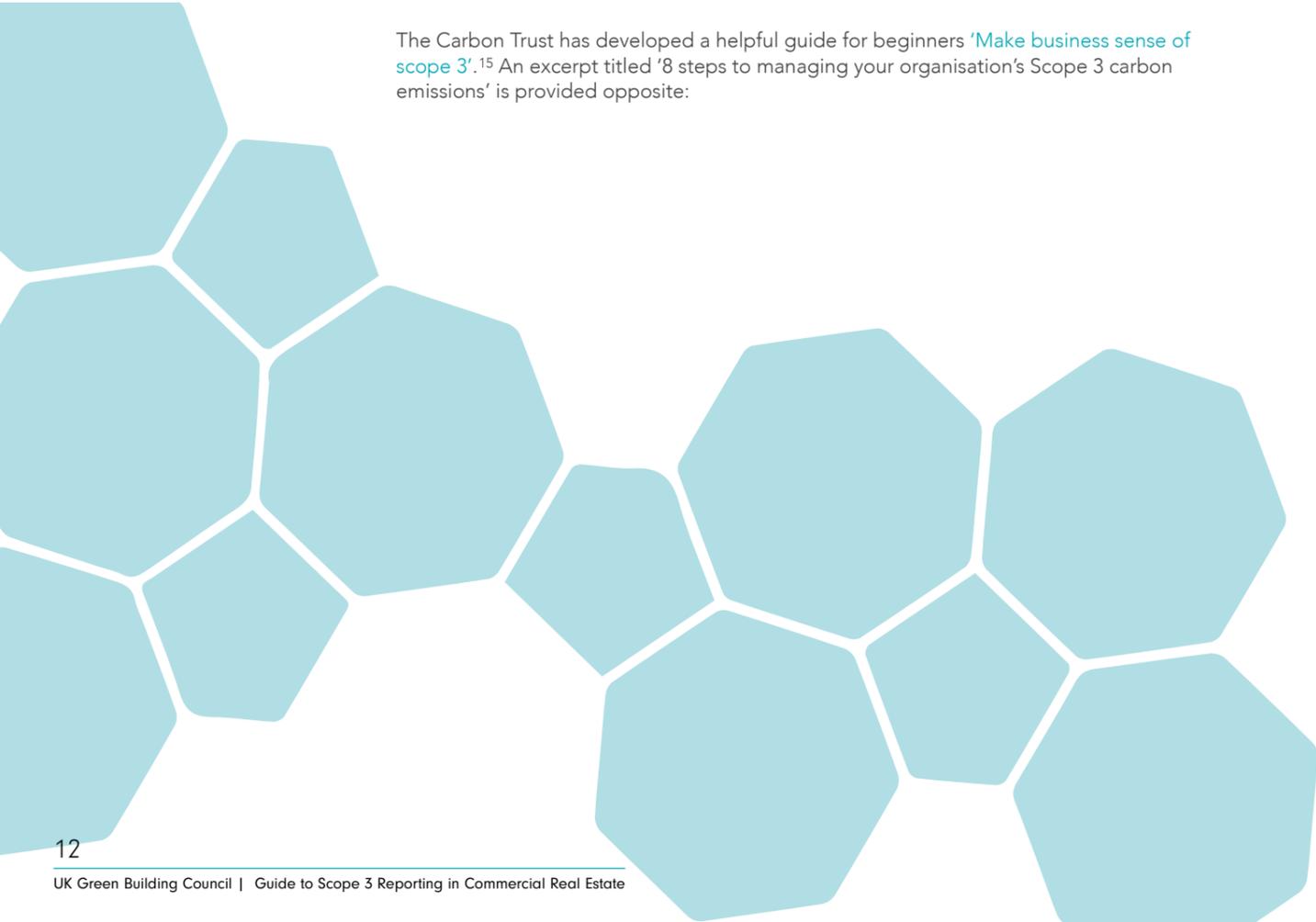
2. Screening in Commercial Real Estate



GETTING STARTED

For any CRE company beginning its scope 3 journey, it is important to take a manageable approach to avoid being overwhelmed by the reporting process. This includes taking a 'wide but shallow view' to appreciate the extent of emissions and considering what is 'important' – how big an emissions source is and what level of influence the company has over it.

The Carbon Trust has developed a helpful guide for beginners 'Make business sense of scope 3'.¹⁵ An excerpt titled '8 steps to managing your organisation's Scope 3 carbon emissions' is provided opposite:



Best practice is to:

- 1 Keep a focus on business needs and value generation that can be derived from measuring and interpreting scope 3 emissions.
- 2 Understand what existing data can be used, and how easily additional data can be obtained.
- 3 Start with a very wide, but shallow view to have an initial understanding of how to focus efforts, by taking 'amount bought' and 'amount sold' multiplied by the most applicable emission factors.
- 4 Then where appropriate engage with companies/customers, obtaining primary data, collaborating in person at an appropriate level of detail and scope, by either:
- 5 Continually build out 'important' areas to understand in more detail, upon which to build out reduction plans,

And/or

- 6 Focus in depth on a few most important products/categories, using product footprinting or value chain optimisation approaches to understand in detail how to move from the current state to a more profitable and more sustainable future state – and then extrapolate key findings to other products/categories as applicable.
- 7 Ensure suppliers feel part of a 'value chain enterprise' working together with other companies to improve the efficiency of products to meet end-consumer needs.
- 8 Put information into the hands of decision makers about how their decisions impact the total value chain, not just their operations; and change their KPIs to reward them for optimising the total and not their part of the value chain.



SCREENING PROCESS

The GHG Protocol sets out 15 reporting categories for scope 3 emissions that are categorised into upstream and downstream emissions:

- **Upstream emissions** refer to those related to purchased or acquired goods and services.
- **Downstream emissions** refer to those related to sold goods and services.

Screening is a high-level evaluation to identify the categories that are most relevant to the reporting company. Table 1 provides an overview of these categories and summarises the findings from a general screening for CRE companies. Any company undertaking scope 3 reporting should use this table as a starting point before undertaking their own screening process.

Each reporting category in Table 1 is described according to the following:

Column Heading	Description
GHG Protocol Reporting Category	Reporting category description as per the GHG Protocol.
Relevance	Likely relevance of that reporting category for: <ul style="list-style-type: none"> • Developers – any entity constructing a new building; and • Owners – any entity that owns, operates, manages, or invests in buildings.
Activities Reported	The most material activities that are likely to be reported for a CRE company.
Data Collection	Data that should be gathered when undertaking scope 3 reporting for the first time i.e. 'low-hanging fruit'. Please note that these data collection points are recommendations for an entry-level reporting company and that data quality should be improved over time.
Emission Factors	Available sources of emission factors for the activities reported. Please note that the sources listed are not exhaustive.

Table 1: GHG Protocol reporting categories

GHG Protocol reporting category	Relevance		Activities reported	Data collection	Emission factors
	Developers	Owners+			
Upstream activities					
1. Purchased goods and services – Emissions from the extraction, production, and transportation (i.e. cradle-to-gate emissions) of goods and services acquired by a company in the reporting year, not otherwise included in another upstream category.	Low	Medium	Any operational expenses related to the company's activities, excluding capital expenditure. For building developers, any costs allocated to an asset register should be considered capital expense and included in '2. Capital goods'. For building owners, spend may be largely on facilities management, contractors, lawyers and consultants.	Request a breakdown of spend for the reporting year from procurement team, broken down by procurement category and/or supplier. Be sure to subtract spend for areas that have already been reported, e.g. energy costs, or that can be reported more specifically in other upstream scope 3 categories such as upstream transportation and distribution.	<ul style="list-style-type: none"> Spend-based emission factors (CO₂e/\$) from Quantis Scope 3 Evaluator;¹⁶ DEFRA emissions factors¹⁷ based on spend per industry category (CO₂/£) (Table 13 Indirect emissions from the supply chain); or Software solutions for embodied carbon: ecoinvent,¹⁸ GaBi,¹⁹ ICE Database.²⁰
2. Capital goods – Extraction, production, and transportation of capital goods purchased or acquired by the company in the reporting year. Capital goods are goods, e.g. plant, property, and equipment that the company uses to provide its service and would include buildings.	High*	Medium*	Any capital expenditure related to the company's activities, excluding operational expenses. For building developers and those buying new builds, it is likely that a large component will be the embodied carbon of the new building e.g. construction materials such as steel and concrete.	Using your spend data, understand the breakdown of operating and capital costs. Alternatively, speak to finance for a list of capital goods. This list should include the date the good was acquired, so that embodied carbon from the capital goods acquired in the reporting year can be calculated.	<ul style="list-style-type: none"> Spend-based emission factors (CO₂e/\$) from Quantis Scope 3 Evaluator;¹⁶ DEFRA emissions factors based on spend per industry category (CO₂/£) (Table 13 Indirect emissions from the supply chain);¹⁷ or Software solutions for embodied carbon: ecoinvent,¹⁸ GaBi,¹⁹ ICE Database.²⁰
3. Fuel and energy related activities – Extraction, production, and transportation of fuels and energy purchased or acquired by the company in the reporting year, not already accounted for in scope 1 or 2.	Medium	Medium	This would include the well-to-tank and transmission and distribution losses from fuels and electricity purchased.	Electricity and fuel figures as reported in the reporting company's scope 1 and 2 footprint.	Government emission conversion factors for greenhouse gas company reporting ²¹
4. Upstream transportation and distribution – Transportation and distribution of products purchased by a company in the reporting year between suppliers and its own operations (in vehicles and facilities not owned or controlled by the company).	Medium	Low	Emissions from logistics for developments or pre-fab logistics paid for. Any courier or other logistics services. <i>Please note, some of these emissions may already be included within '1. Purchased goods and services' and '2. Capital goods'.</i>	Speak to the procurement team or use spend data to find out if any logistics were procured in the reporting year. Request mileage data from the supplier as data is often readily available.	Government emission conversion factors for greenhouse gas company reporting ²¹
5. Waste generated in operations – Disposal and treatment of waste generated in the company's operations in the reporting year (in facilities not owned or controlled).	Low	Low	Waste from own operations and developments where the company has the ability to implement policies to influence waste generation.	<ul style="list-style-type: none"> Quantity of waste produced broken down by disposal route. This can often be easily obtained from waste collection providers and landlords. Waste data from any construction projects. <i>Please note, this category only includes emissions from waste generated in own operations, so including tenant waste is optional but useful for GRESB.</i>	Government emission conversion factors for greenhouse gas company reporting ²¹
6. Business travel – Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the company).	Low	Low	Emissions from flights, taxis, rail and personal vehicles.	Business travel is often procured through a central system, and travel providers often readily provide data to enable companies to calculate emissions. The data required would include, where applicable: <ul style="list-style-type: none"> Mode of transport; Origin and destination, including country; Distance of journey; Class of journey. 	Government emission conversion factors for greenhouse gas company reporting ²¹
7. Employee commuting – Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the company).	Low	Low	Regular journeys by employees from home to work by car or public transport.	Information on employee commutes is sometimes collected by HR. Consider conducting a travel survey if you feel there is opportunity to reduce employee commuting emissions. In the absence of this information, government bodies often publish information on commuting patterns. For UK employees, the Department for Transport publishes details on commuting trends which can be used to estimate travel.	Government emission conversion factors for greenhouse gas company reporting ²¹

GHG Protocol reporting category	Relevance		Activities reported	Data collection	Emission factors
	Developers	Owners+			
8. Upstream leased assets – Operation of assets leased by the company (lessee) in the reporting year and not included in scope 1 and scope 2 – reported by lessee.	Low	Low	Emissions from office space leased from other companies not already included in scope 1 or 2.	Electricity and fuel use data can be requested from the landlord or energy supplier. Floor area can be used as a benchmark if this information is not available. See “downstream leased assets” for more information on these benchmarks.	Government emission conversion factors for greenhouse gas company reporting²¹
Downstream activities					
9. Downstream transportation and distribution – Transportation and distribution of products sold by the company in the reporting year between the company’s operations and the end consumer (if not paid for by the company), including retail and storage (in vehicles and facilities not owned or controlled by the company).	Unlikely to be applicable	Unlikely to be applicable	Unlikely to be applicable as any assets sold would probably not be transported. However, any entity that sells ‘products’ requiring transportation would need to account for this e.g. kit homes, prefabricated modules.		
10. Processing of sold products – Processing of intermediate products sold in the reporting year by downstream companies (e.g. manufacturers).	Unlikely to be applicable	Unlikely to be applicable	N/A		
11. Use of sold products – End use of goods and services sold by the company in the reporting year.	High*	Low	For building developers, expected operational emissions for any buildings sold over their lifetime (module B, as per the RICS Professional Statement), accounted for in the reporting year. For building owners (including operators and managers), tenant emissions should be included in ‘13. Downstream leased assets’.	<ul style="list-style-type: none"> • Details of assets sold • Expected lifetime of assets (60 years is the indicative lifetime as per EN15978 and RICS Guidance) • Expected energy consumption of assets 	Government emission conversion factors for greenhouse gas company reporting²¹ plus an understanding of future grid emissions factors.
12. End-of-life treatment of sold products – Waste disposal and treatment of products sold by the company (in the reporting year) at the end of their life.	High*	Low	For building developers, expected end-of-life emissions for any buildings sold (module C, as per the RICS Professional Statement), accounted for in the reporting year.	<ul style="list-style-type: none"> • Details of assets sold, including material use within building • Expected disposal / reuse rate • Expected disposal method 	Government emission conversion factors for greenhouse gas company reporting²¹ plus an understanding of future grid emissions factors.
13. Downstream leased assets – Operation of assets owned by the company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor.	Low	High*	For building owners (including operators and managers), the emissions from the assets leased to other organisations over the reporting year. These companies may have a high level of influence over the tenant emissions arising from energy use in leased spaces.	Where tenant energy use data is readily available, these figures should be multiplied. Where tenant use data is not readily available, please see the ‘ Estimating tenant energy use ’ section of this guidance.	Government emission conversion factors for greenhouse gas company reporting²¹
14. Franchises – Operation of franchises in the reporting year, not included in scope 1 and scope 2 – reported by franchisor.	Unlikely to be applicable	Unlikely to be applicable	N/A		
15. Investments – Operation of investments (including equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2.	Low	Low	This applies where the company has indirect funds or is a minor or J/V partner and would include operational emissions of those investments in the reporting year, if material.	Where tenant energy consumption data is readily available these figures should be multiplied. Where tenant consumption is not readily available, please see the ‘ Estimating tenant energy use ’ section of this guidance.	Government emission conversion factors for greenhouse gas company reporting²¹

+ Please note that building ‘owners’ is a general term incorporating any entity that owns, operates, manages or invests in a building.

* Please see section ‘[3. Interpretations for Commercial Real Estate](#)’ for additional detail on accounting for company activities under these reporting categories.

RELEVANCE CRITERIA

Following the screening process, a company should determine which of the scope 3 reporting categories are relevant by assessing sources against the criteria in Table 2. The results from this assessment will enable the reporting company to focus its best efforts on the most relevant sources of emissions.

In all cases, reporting companies should account for all relevant scope 3 emissions to provide an accurate understanding of their entire footprint. Even sources of emissions over which the company has limited influence should still be accounted for where it has a material scope 3 value. Where data is completely missing and cannot reasonably be estimated, it should be noted.

Table 2: Criteria for identifying relevant scope 3 activities (Table 6.1 from GHG Protocol)

Criteria	CRE Interpretation
Size	Emissions that are expected to make up a significant portion of the company's total scope 3 footprint.
Influence	Scope 3 emissions, by definition, are indirect emissions outside of a company's operational control with limited levels of influence. Despite this, priority should be given to emissions sources where a company has a higher likelihood of undertaking actions to reduce these emissions.
Risk	Emissions that contribute to a company's potential climate change risk exposure. It is important to consider the following items: <ul style="list-style-type: none"> Regulation, i.e. climate change legislation that might be introduced which could impact suppliers or customers; Supply chain costs and reliability, i.e. increased costs that are passed to the company, or climate change impacts affecting supply chain availability; Product and technology, i.e. increased or decreased demand due to market changes; Litigation, i.e. climate change related court cases against any company in the value chain; Reputation, i.e. negative reactions from stakeholders or media related to greenhouse gas management practices, emissions in the value chain.
Stakeholders	Emissions that have a specific importance to stakeholders such as employees, customers, suppliers, investors, or society.
Outsourcing	CRE companies perform some activities in-house (which would be accounted for in scope 1 & 2) or outsource them to other organisations. When outsourced, the reporting company should include the activities undertaken by the outsourced organisations in their own scope 3 footprint.
Sector guidance	Emissions that have been identified as significant by sector-specific guidance, for example, RICS Professional Statement. ²²

Worked example

As an example, a CRE company might look at its operational waste to understand whether this source of emissions is relevant. A worked example is provided below.

Criteria	Questions to determine relevance	Relevance Rating (1 – 10)
Size	What portion of my expected scope 3 footprint do I expect these emissions to account for? Please note, this can be a 'chicken and egg' situation as it is only after a scope 3 reporting exercise that the size of an emissions source will be revealed. All relevant emissions sources should therefore be estimated to answer this question.	3
Influence	Can I implement policies to reduce waste in my operations? Can I implement recycling programmes? Can I influence waste management companies to improve waste treatment methods?	7
Risk	Is there a risk that waste management companies might be subject to legislation?	8
Stakeholders	Do my employees, customers, suppliers, investors, or society care about reducing these emissions?	9
Outsourcing	Do other CRE companies typically manage waste internally?	1
Sector guidance	Have guidance documents highlighted emissions from waste as being important to account for?	4
Relevance rating (average)		5.3

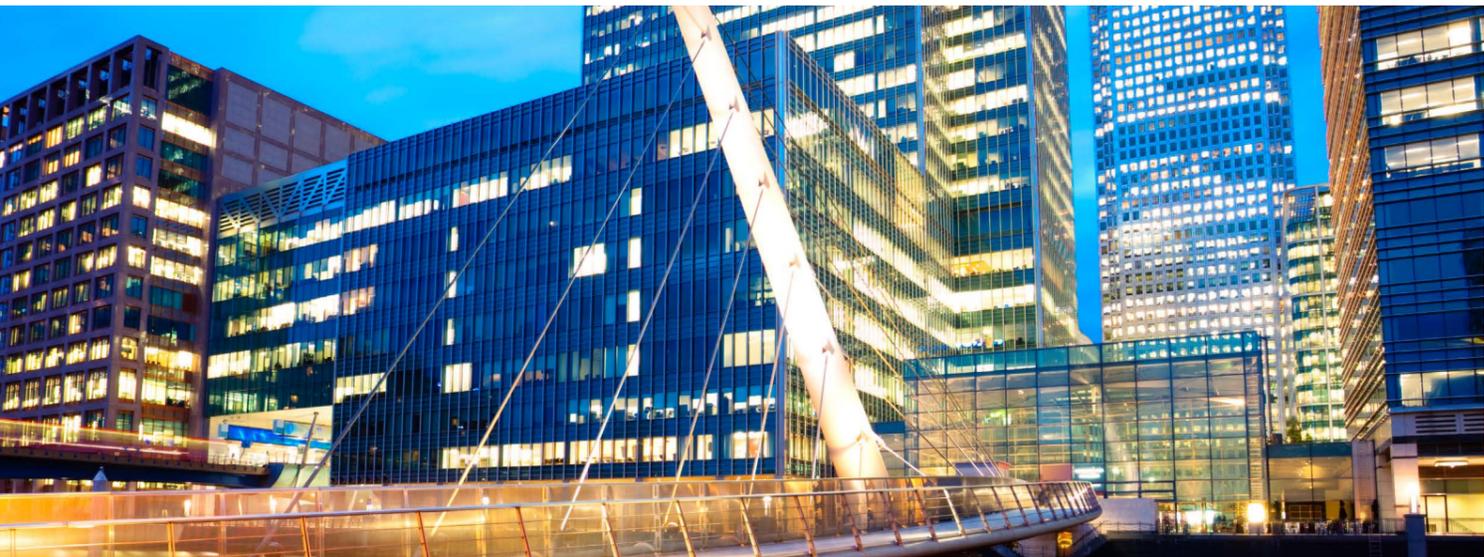
The results of this assessment have determined a relevance rating of 5.3. This rating will be relative to ratings from other emissions sources in the company and an overall analysis should be undertaken to determine which emissions sources to prioritise.

GHG Protocol Scope 3 Evaluator

Scope 3 reporting is an iterative process of collecting data, assessing data quality and improving data quality. For beginners, a two-stage approach can be undertaken to understand where to focus best efforts on improving data quality.

The GHG Protocol's [Scope 3 Evaluator](#)²³ tool allows companies to undertake a streamlined quantification of scope 3 emissions in the first year before collecting primary data (rather than costs, estimates, assumptions) in subsequent years for the material emission categories (e.g. it may be that only 3-4 of the 15 reporting categories account for >80% of total emissions).

3. Interpretations for Commercial Real Estate



GUIDING PRINCIPLES FOR ACCURATE ACCOUNTING

This section provides guidance on how to accurately account for scope 3 emissions, following the screening process and relevance assessment.

In order to best apply the GHG Protocol for the CRE sector, interpretations from it have

been made for five key activities related to CRE companies, listed below. For these key activities, the guidance outlines the relevant reporting category from the GHG Protocol, recommended interpretation/approach to account for the activity, and discussion on how this approach has been determined.



Estimating supply chain emissions



Accounting for the transfer of new buildings



Accounting for the transfer of existing buildings



Estimating tenant energy use



Scope 3 reporting over time

The GHG Protocol's core principles (see section '4. Accounting and reporting principles') have been used to inform these interpretations:

GHG Protocol Principles	CRE Interpretation
Relevance	<p>CRE reporting companies should report all relevant impacts within their value chain.</p> <ul style="list-style-type: none"> Also see 'Relevance criteria' for determining which scope 3 emission sources are relevant.
Completeness	<p>CRE reporting companies should report on all relevant company activities to provide an accurate understanding of their complete footprint, even where data needs to be estimated. Where data is completely missing and cannot reasonably be estimated, the activity should still be noted.</p>
Consistency	<p>CRE reporting companies should use a consistent set of approaches to reporting, and this guidance recommends approaches to establish greater consistency for the CRE sector.</p>
Transparency	<p>CRE reporting companies will apply different approaches and should disclose these to allow the market to appreciate the level of accuracy for their scope 3 emissions.</p>
Accuracy	<p>CRE reporting companies should use their best efforts to use good data and emission factors, and to improve the robustness and accuracy of any estimated emissions over time.</p> <ul style="list-style-type: none"> Also see 'Screening process' for recommended emission factors.



Future development

Specific topics requiring additional engagement with the sector have been highlighted as areas for future development. Further guidance will need to be developed over time to increase the accuracy and robustness around the recommended approaches. Each of these approaches will require testing by reporting companies to appreciate whether this represents a 'best fit' for the sector, or if the approach needs to be adapted in the future. However, the approaches are currently recommended to all CRE companies to help move towards reporting consistency within the sector.

Public disclosure

The public disclosure of scope 3 reporting is encouraged to promote transparency and help build consensus on consistent approaches. Some best practice examples of scope 3 reporting within the sector are provided below for reference:



Carbon footprint²⁴



Sustainability Performance and Data 2019²⁵



Carbon transparency²⁶



Performance against our capitals 2017/18²⁷

ESTIMATING SUPPLY CHAIN EMISSIONS

GHG Protocol Reporting Category	Interpretation for CRE
1. Purchased goods and services	For a building developer, this will relate to all supply chain emissions required for the design and delivery of a new building. Whilst this category of scope 3 emissions will be significant during any reporting year(s) of construction, access to supply chain data may be difficult to obtain.

Table 3 outlines methods to calculate supply chain emissions ordered by level of accuracy. A company should always aim to improve the accuracy for all scope 3 reporting data, by graduating to improved methods over time (moving up the table).

Table 3: Methods for accounting for supply chain emissions

Accuracy	Calculation Method	Detail
High ↑	Supplier specific method: Use of product-level cradle-to-gate GHG inventory data from goods or services suppliers.	Engage with key suppliers across each product to obtain product-specific life cycle assessment information.
	Hybrid method: Specific emissions data from key suppliers and, where there are gaps, using this data to extrapolate across the procurement category by volume or spend.	If unable to obtain specific LCA information from key suppliers, the company should seek LCA information from one supplier for each product category and extrapolate out using volume data unless any reason is known that would make this an inappropriate assumption.
	Average data method: Utilisation of volume and quantity data associated with products and product emission factors from LCI databases, e.g. ecoinvent.	Procurement should provide the volumes and quantities purchased per product category and with some additional detail it may be possible to match the products purchased with appropriate industry average emission factors.
	Spend based method: Utilisation of spend emission factors (as done in this screening exercise).	If more specific emissions factors are not available, the company can estimate emissions for goods and services by collecting data on the economic value of goods and services purchased and multiplying it by relevant secondary (e.g., industry average) emission factors (e.g., average emissions per monetary value of goods).
Low	Extrapolation of emissions based on similar or other appropriate category spend and emissions data.	Where there are gaps, we can use the emissions calculated via all methods above and extrapolate out to cover the remaining spend of purchased goods and services.



ACCOUNTING FOR THE TRANSFER OF NEW BUILDINGS

The following guidance sets out the recommended approach when a speculative developer constructs a building to sell to market. This builds on the GHG Protocol's approach where a developer is treated as the 'manufacturer' and the building as a 'product'. Given the developer has the greatest level of influence over the building's whole life emissions, these should be accounted for within its scope 3 reporting the year in which the building is sold.

Where a developer constructs a building to own/manage it in the long term, the building is not treated as a 'product' and the below guidance does not apply. This is on the basis that the leased spaces within the building are treated as the entity's 'product'. The guidance '[Accounting for the transfer of existing buildings](#)' should be applied for these buildings if/when transferred.

Guidance for the building developer (seller)

GHG Protocol Reporting Category	Interpretation for CRE
11. Use of sold products	<p>The building is treated as a 'product' and the scope 1 and 2 emissions (energy use; module B6) of future building occupiers should be included in the developer's scope 3 reporting the year in which the building is sold.</p> <p>The future energy use should be modelled for the lifetime of the building, typically nominated as 60 years.</p>
12. End-of-life treatment of sold products	<p>The building is treated as a 'product' and the end-of-life treatment of the building (module C) should be included in the developer's scope 3 reporting the year in which the building is sold.</p> <p>The end-of-life treatment should be determined through a whole life carbon assessment, undertaken in line with the RICS Professional Statement.</p>

Guidance for the first building owner (purchaser)

GHG Protocol Reporting Category	Interpretation for CRE
2. Capital goods	<p>The building is treated as a 'capital good' and emissions from the extraction, production, and transportation of the new building should be included in the purchaser's scope 3 reporting the year in which the building is purchased.</p> <p>The emissions from the extraction, production, and transportation of the building is considered aligned with LCA modules A1 to A5 (as per the EN 15978 standard), also referred to as 'upfront carbon'.</p>

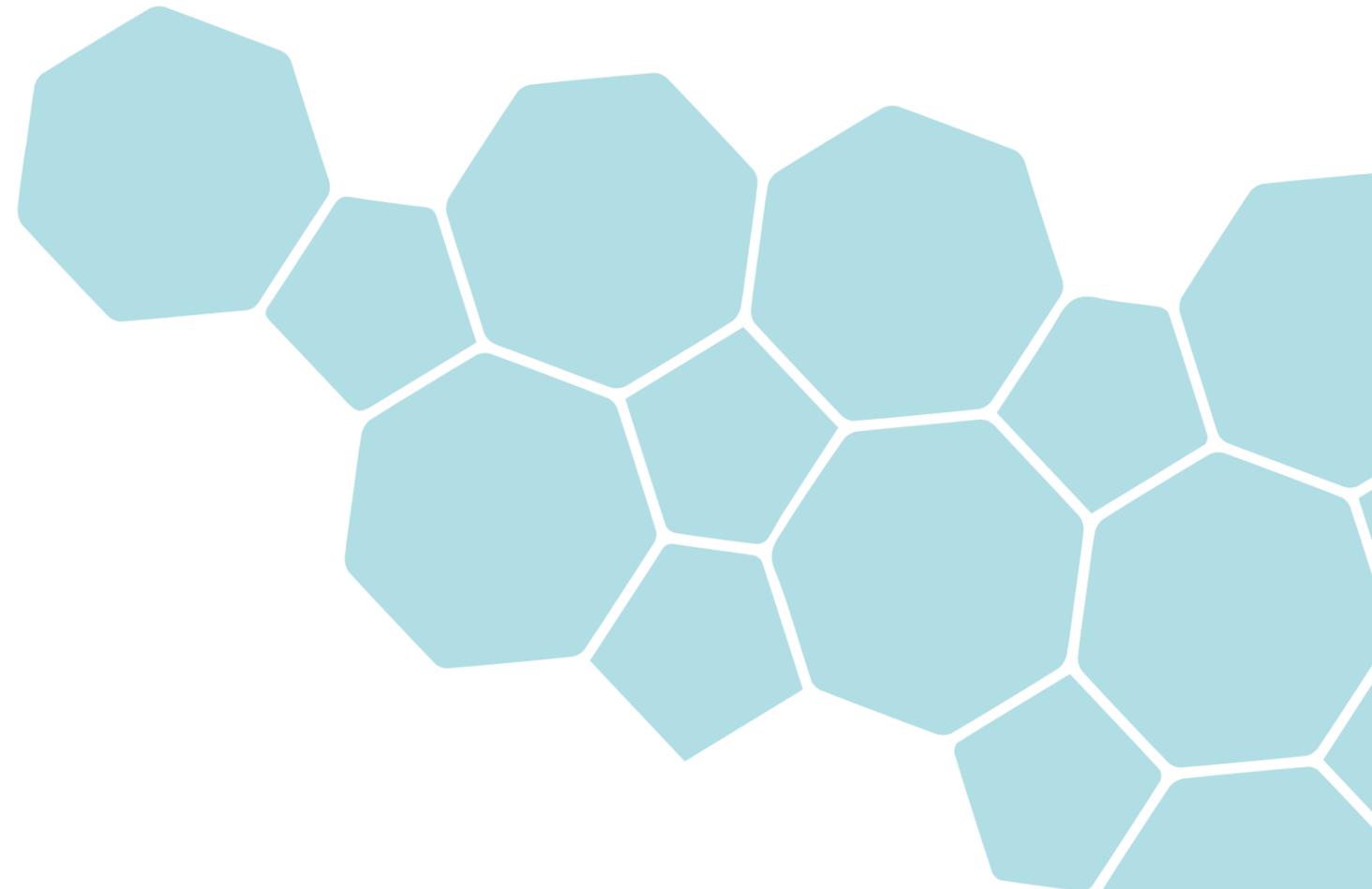
The developer of a new building will have a significant level of influence over the building's whole life emissions at the design stage, so these should be accounted for in its scope 3 reporting the year in which the building is sold. This encourages the mitigation of these emissions in the first instance at design, before considering any form of reductions in-use.

Equally, the first building owner can have influence on the design or procurement of a new building to minimise upfront carbon, so it is considered acceptable for this entity to account for these emissions in the reporting year in which the building is purchased. This should create demand for the design and delivery of buildings with low upfront carbon.

Please note, it is accepted that this approach will result in double-counting by both the building's developer and the owner of the building at the point when these emissions occur. This is deemed reasonable, as it will only serve to strengthen the drive for buildings with reduced upfront and whole life emissions.

When the first building owner sells the building, all subsequent owners will have a significantly reduced level of influence over the building's future whole life emissions. Accordingly, the building should be treated as an existing building and the guidance '[Accounting for the transfer of existing buildings](#)' should be applied.

If the building's upfront carbon data is readily available, then the owner selling the building could include these for completeness. Any future emissions incurred in use (e.g. operational energy, embodied carbon) will be accounted for by the future building owner as they occur.



Worked example

A developer constructs a new building in years 1-3 and sells it to the first building owner at practical completion in year 4. The below table highlights the relevant reporting categories affected over this timeline for both the developer and building owner. Please note, this is an illustrative example and only relates to the applicable reporting categories for the example building only, not any other company activities.

Reporting Category – for developer	Year/Likely impact				
	1	2	3	4	5
Upstream Activities					
2. Capital goods	Medium ¹	Medium ¹	Medium ¹		
3. Fuel-and-energy-related activities	Low ¹	Low ¹	Low ¹		
4. Upstream transportation and distribution	Medium ¹	Medium ¹	Medium ¹		
5. Waste generated in operations	Low ¹	Low ¹	Low ¹		
7. Employee commuting	Low ¹	Low ¹	Low ¹		
Downstream Activities					
11. Use of sold products				High ²	
12. End-of-life treatment of sold products				High ³	

Notes:

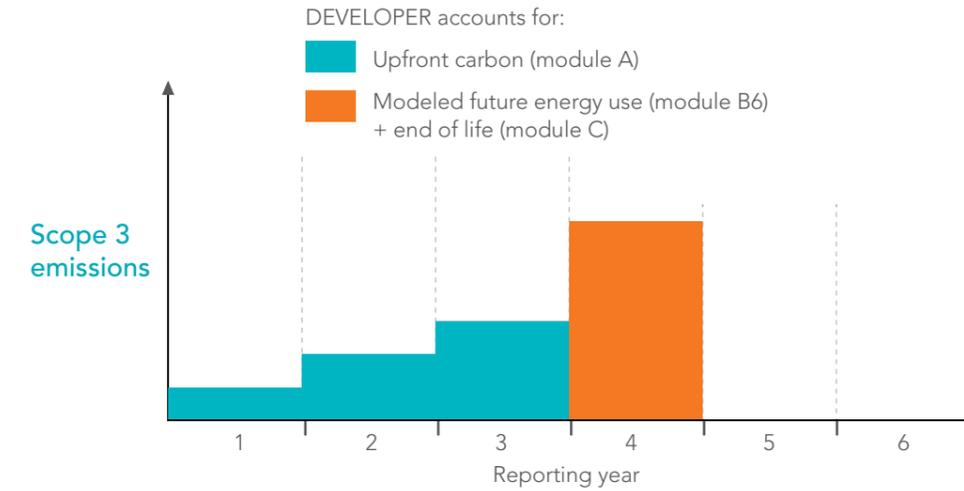
- All emissions related to the construction of the building.
- Future energy use modelled for the lifetime of the building, reported the year in which the building is sold.
- End-of-life treatment of the building, reported the year in which the building is sold.

Reporting Category – for building owner	Year/Likely impact				
	1	2	3	4	5
Upstream Activities					
2. Capital goods				High ⁴	
Downstream Activities					
13. Downstream leased assets				Medium ⁵	Medium ⁵

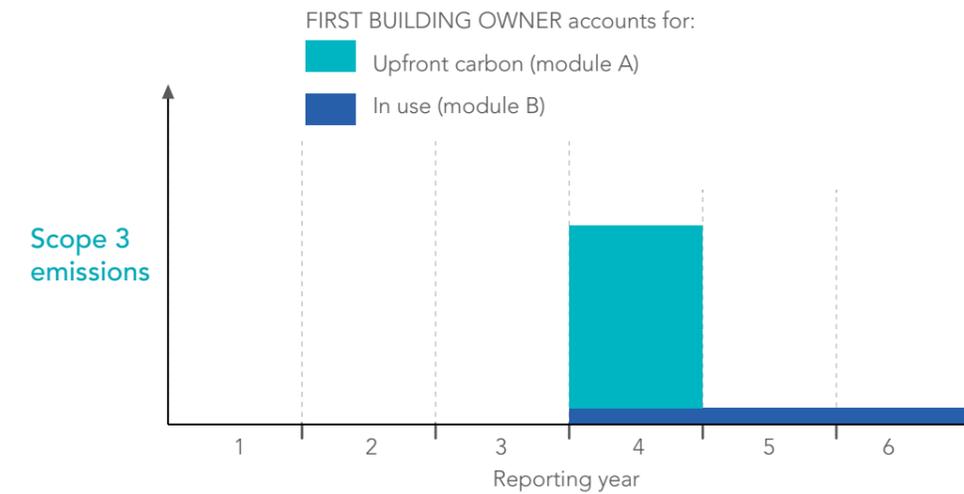
Notes:

- The upfront carbon of the building, reported the year in which the building is purchased.
- The energy use of tenants leasing space within the building, reported on an ongoing basis.

Developer reporting profile: building construction in years 1-3 and sale at practical completion in year 4



Building owner reporting profile: building purchase in year 4 at practical completion followed by ongoing operation





ACCOUNTING FOR THE TRANSFER OF EXISTING BUILDINGS

The following guidance sets out the recommended approach when an existing building (already on the market) is transferred to a new owner.

Guidance for the building seller

GHG Protocol Reporting Category	Interpretation for CRE
11. Use of sold products	The building is treated as a 'product', however the scope 1 and 2 emissions (energy use; module B6) of future building occupiers should not be included in the scope 3 reporting.
12. End-of-life treatment of sold products	A building is treated as a 'product', however the end-of-life treatment of the building (module C) should not be included in the scope 3 reporting.

Guidance for the building purchaser

GHG Protocol Reporting Category	Interpretation for CRE
2. Capital goods	The building is treated as a 'capital good', however emissions from the extraction, production, and transportation of the building should not be included in the scope 3 reporting.

Strict interpretation of the GHG Protocol would require the accounting of all whole life emissions for every buildings sold as well as the accounting of all cradle-to-gate emissions for buildings purchased. However, it is currently difficult for the CRE sector to gather accurate data on whole life impacts for existing buildings.

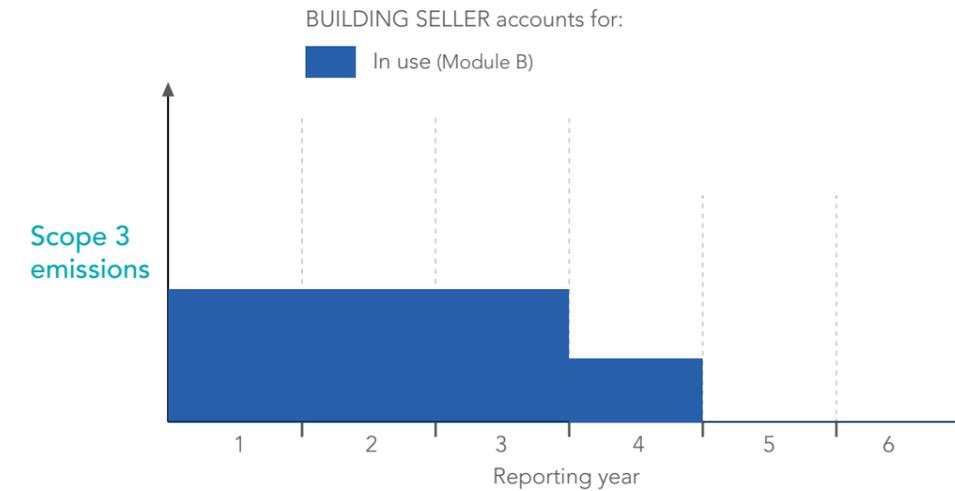
This guidance therefore recommends that the whole life emissions of existing buildings are not accounted for by the building seller or purchaser at the point of transfer, as this would add a significant level of complexity to current scope 3 reporting. If the CRE sector was able to accurately account for these emissions, it would be possible to transfer these to any new building owner at the point of transfer.

For new buildings, data for whole life emissions is more likely to be available and the guidance under '[Accounting for the transfer of new buildings](#)' should be applied.

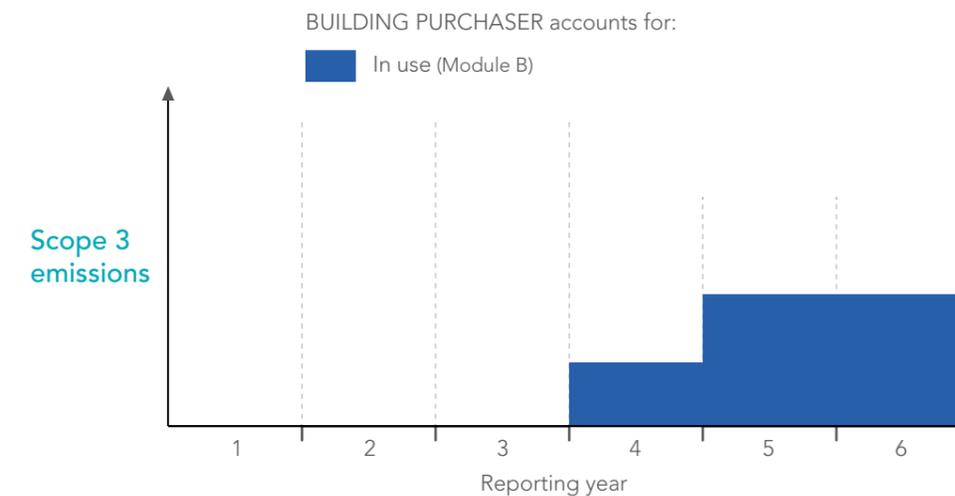
Worked example

An existing building owner sells a building in year 4 – no scope 3 emissions are transferred between seller and purchaser. Only the in use emissions are accounted for by each entity.

Building seller reporting profile: building sold in year 4



Building purchaser reporting profile: building purchased in year 4

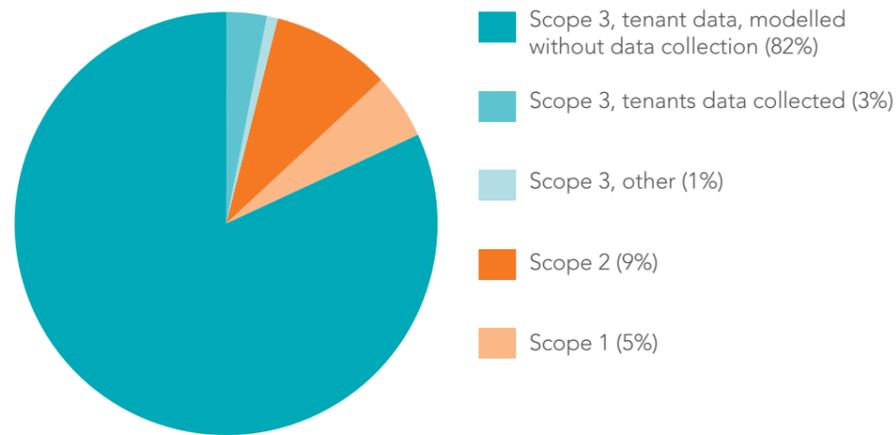




ESTIMATING TENANT ENERGY USE

GHG Protocol Reporting Category	Interpretation for CRE
13. Downstream leased assets	For a building owner, operator or manager, this relates to any tenant energy use in leased spaces. Whilst this category of scope 3 emissions is typically the largest for these types of CRE companies, access to actual data is often not readily available.

Example of estimated data from IPUT's 2018 Sustainability Report © IPUT²⁸



Where actual tenant energy use data is not available, a robust estimation methodology should be applied to determine the relevant scope 3 value. A reporting company should use any available data before applying the most suitable estimation methodology. A list of potential estimation methodologies is outlined in Table 4.

A CRE company should always disclose the estimation methodology (or mix of methodologies) used in the data qualifying notes and specify the amount of actual vs. estimated data. This will create greater transparency amongst CRE companies and help to develop consistent approaches.

Table 4: Estimation methodologies for tenant energy use

Accuracy	Methodology
High  Low	Use actual data for all tenant energy use. In practical terms, this will be difficult (or near impossible) to achieve, but should become more feasible over time.
	Where total energy use of the building is known (i.e. landlord procured), break this down for separate tenancies, e.g. by floor area, tenant use etc.
	Use historic tenant data as a proxy and extrapolate using key variables e.g. seasonal, occupancy levels.
	Calculate per person energy use based on a similar tenant, e.g. tenant use, building age/type, geographic region.
	Use industry benchmarks based on floor areas e.g. Real Estate Environmental Benchmark, ²⁹ CIBSE Energy Benchmarks, ³⁰ Design for Performance ³¹
	Use modelled design stage data, supplemented by an uplift and/or energy in use data.

Future development

In future, there should be a refined list of approaches to estimating tenant energy use which have been developed through consensus with the CRE sector.

Additionally, GRESB currently does not accept estimated tenant energy use data in its reporting, resulting in these emissions often being overlooked. If GRESB were to allow estimated data, this would increase the importance of CRE companies engaging and collaborating with tenants to reduce energy use. The CRE sector should review GRESB's position and consider whether to advocate for estimated tenant energy use data to be accepted.



SCOPE 3 REPORTING OVER TIME

Scope 3 reporting is a time-bound analysis of a company's activities within a reporting year. Some company activities will vary year-to-year and others will remain fixed, with proportional influence on its scope 3 value. In general terms:

- **Fixed activities** have consistent impact and should be easier to track and target for reduction activities e.g. tenant energy, staff travel.
- **Variable activities** have short term, high impact, and should be compared against other similar company activities e.g. developer constructing a new building, investor purchasing a new building.

For a developer, the embodied carbon from constructing a new building represents a significant variable activity which will have a high impact on scope 3 emissions in the year(s) of construction. When the new building is sold, the whole life emissions for that building (modelled energy use and end of life treatment) will represent another significant variable activity in the year of sale.

Whilst accounting for these scope 3 emissions will enable the developer to reduce these emissions to the greatest extent possible, they will need to be considered alongside all of its other company activities. A company's total scope 3 emissions will combine all of its activities into a single

scope 3 value for that reporting year. For example, the embodied carbon from a new building will be added to the tenant energy and staff travel in that year.

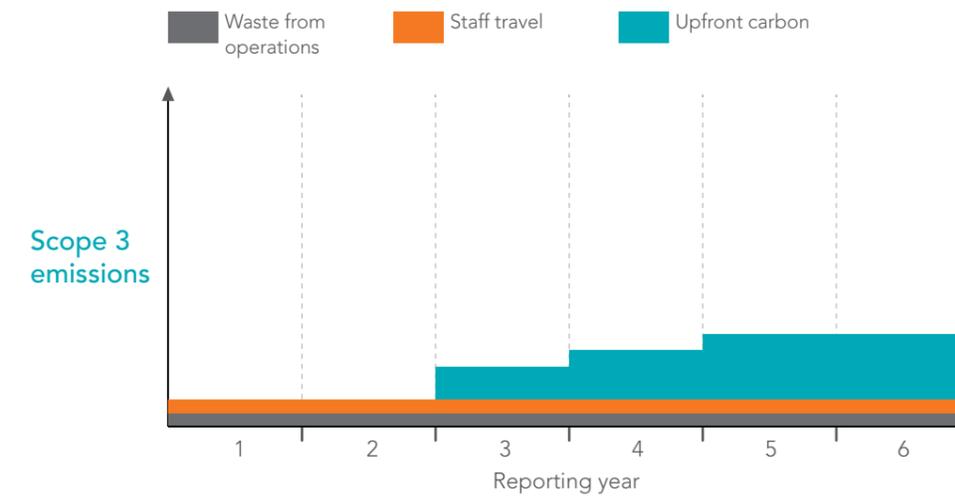
Due to this aggregation, fixed and variable activities should be evaluated separately to provide a better understanding of the company's performance. A different intensity factor should be applied to appreciate the year-on-year performance of these activities, for example:

- A fixed activity – staff travel – could be reported based on number of staff i.e. tCO₂e/per staff member. In this way, progress in emissions reductions based on improved staff travel policies or similar can be seen, rather than this being diluted by high impact, variable activities.
- A variable activity – construction of a new building – could be reported based on the delivered floor area in that year i.e. tCO₂e/m². In this way, progress in emissions reduction based on improved manufacturing methods or better selection of materials can be seen, rather than this being diluted by ebbs and flows of low impact, fixed activities.

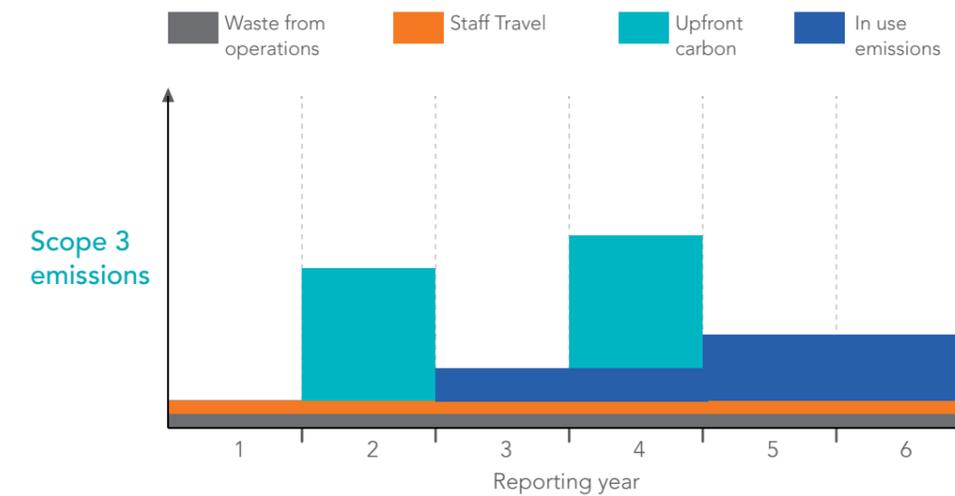
In addition to this, a five-year rolling rate of both fixed and variable activities should be used to normalise peaks and troughs and observe the overall trend of the company's activities.

Worked examples

Developer reporting profile: undertaking large construction works from years 3-6 which will increase the total impacts



Investor reporting profile: purchasing new buildings in years 2 and 5 will account for the construction impacts in the year of purchase



Future Development



PROVIDING FEEDBACK

The guidance presented in this document is based on currently available resources and direct engagement with stakeholders from the CRE sector. This guidance is intended to be developed over time as practitioners review and apply the recommendations set out.

Any practitioners applying this guidance are encouraged to provide feedback to help improve it. If you would like to provide feedback, please email ANZ@ukgbc.org.

There are some specific topics requiring further engagement to ensure the interpretations from the GHG Protocol and recommended approaches are appropriate.

In addition to this, UKGBC will review the option to pursue a [Built on GHG Protocol](#)³² mark for the guidance following its launch, which is a formal endorsement from the World Resources Institute.

SCOPE 3 EMISSIONS REDUCTIONS

The focus of this guidance is to enable CRE companies to undertake scope 3 emissions reporting in the first instance, and for this to be used to inform emissions reduction strategies. Over time, there could be an opportunity for sector-wide guidance on reduction strategies, however this was out of scope for this project.

CRE companies are encouraged to use scope 3 reporting in tandem with the outputs from the [Science-Based Targets for Buildings \(SBT4buildings\)](#)³³ project to inform reduction strategies. This project is currently being undertaken by the World Business Council for Sustainable Development to assist CRE companies with setting emissions reductions targets in line with their own ambitions and the Science Based Targets initiative.

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Appendix A: Development Process

Advancing Net Zero campaign

The Paris Climate Agreement represented a turning point in efforts to tackle climate change with a commitment to limit global temperature rises to between 1.5 and 2 degrees. To meet this challenge, the World Green Building Council (WorldGBC) established the **Advancing Net Zero Campaign** in 2016 which is calling for a net zero carbon built environment.³⁴

UKGBC has launched the **Advancing Net Zero programme** to help drive this transition to a net zero carbon built environment in the UK. The programme is kindly supported by Lead Partners the Redevco Foundation and Programme Partners BAM Construct UK, Berkeley Group, Grosvenor Britain & Ireland, Hoare Lea and JLL.

CRE scope 3 reporting guidance

As part of the Advancing Net Zero programme, UKGBC undertook a project to improve the CRE sector's knowledge and understanding of scope 3 emissions reporting. The main output of the project, this guidance document, was developed through a multi-stakeholder engagement process in the first half of 2019. The engagement activities included:

- **Scope 3 roundtable (February)** – UKGBC convened a group of subject experts to outline the main challenges faced by the CRE sector when undertaking scope 3 reporting.
- **Survey to BBP Members (March)** – BBP issued a short survey to its Members (representing over £200bn assets under management) to understand key priorities for the guidance.
- **Industry workshop (late March)** – UKGBC hosted a public event to gain feedback on the initial outline of the guidance from stakeholders in the CRE sector.
- **Public consultation process (May)** – UKGBC undertook a public consultation process to gain feedback on a full draft of the guidance document.

UKGBC worked with member companies Carbon Credentials, HS2 and TFT to produce the guidance, and the project was supported by BBP, BPF and RICS.

Report authors

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With special thanks to the UKGBC Advancing Net Zero Programme Partners

Lead Partner:	The Redevco Foundation
Programme Partners:	BAM Construct UK, Berkeley Group, Grosvenor Britain & Ireland, Hoare Lea and JLL
Report Supporters:	Better Building Partnerships (BPP), British Property Federation (BPF), Royal Institute of Chartered Surveyors (RICS)

Appendix B: Map of Reporting Initiatives Against Scope 3

Reporting initiative (Voluntary or mandatory)	Emission scopes	Reporting boundary	Where should scope 3 emissions be reported?	Which scope 3 categories are reported?
RICS Professional Statement: Whole life carbon assessment for the built environment ²² Voluntary for construction clients Mandatory for RICS members	Scope 1 & 2 (operational emissions of the building – module B6). Scope 3 (embodied emissions in materials, transport, assembly, maintenance, repair, deconstruction – modules A, B1-B5, B7, C, and D).	Uses the EN 15978 modular approach. Boundary of the calculation is selected by client (cradle-to-gate etc).	At company discretion. Best practice indicates sharing of the data with the RICS Embodied Carbon database. Leading CRE companies also publish whole life or embodied carbon data in sustainability reports, sustainable development briefs and on the company's website.	Module A: Product and construction stage (2. Capital goods) Module B6: Operational energy use (11. Use of sold products) Module C: End of life (12. End of life treatment of sold products)
CDP ⁷ Voluntary	Scope 1, 2 and 3 reported separately and annually.	Organisational boundary options: • Financial control • Operational control • Equity share • Other	Annual CDP questionnaire is used.	At company discretion
Science Based Targets initiative (SBTi) ³ Voluntary	Measurement of scope 1, 2 and 3 is mandatory.	Uses same boundary as CDP	Targets ratified by SBTi and published on SBTi website.	A scope 3 screening exercise is undertaken to understand which emissions are significant. The GHG Protocol is used to measure scope 3 emissions and all categories are calculated. Where scope 3 comprises more than 40% of total emissions footprint, a reduction target must be applied.
Task Force on Climate Related Financial Disclosures (TCFD) ² Voluntary	Disclose scope 1 & 2, and, if appropriate, scope 3 emissions, and the related risks.	Uses same boundary as GHG Protocol	Disclosures to be included in annual financial reporting.	Use of GHG Protocol is required and reporting is aligned to CDP. Scope 3 only reported if appropriate to the business.
Global Real Estate Sustainability Benchmark (GRESB) ⁹ Voluntary	Scope 1, 2 and 3 reported separately and annually.	Organisational boundary options: • Financial control • Operational control • Equity share	GRESB questionnaire to be completed annually and results published on the GRESB website.	Tenant emissions (13. Downstream leased assets)
Streamlined Energy and Carbon Reporting (SECR) ¹³ Mandatory for scope 1 and 2 Voluntary for scope 3	Scope 1 and 2 (mandatory). Scope 3 (recommended) reported annually.	TBC	Emissions reporting to be included in annual financial reporting.	Business travel (recommended) (6. Business travel)
ENCORD Construction CO₂e Measurement Protocol ³⁵ Voluntary	Scopes 1, 2 and 3 reported annually.	Organisational boundary options: • Financial control • Operational control • Equity share • Operational control is recommended.	At company discretion.	At company discretion
PAS 2080 Carbon Management in Infrastructure ³⁶ Voluntary	Scope 1, 2 and 3 reported in one-off calculations and cyclical according to the management framework.	Uses the EN 15978 modular approach adapted for infrastructure projects (includes guidance on inclusions/exclusions within asset owner/manager control or influence).	No reporting required.	At company discretion

Questions & Feedback

This guidance is intended to build consensus on consistent approaches to scope 3 reporting for the CRE sector. We welcome input from any interested stakeholders on this or future versions of the guidance to help achieve this aim.

If you have any questions on the guidance or would like to provide feedback, please email ANZ@ukgbc.org



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