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KPMG

February 2025

Driving Change

Climate Disclosure of Hong Kong Listed Companies in Key Sectors and the Road Ahead

Apparel

Food & Beverage

Home Products

Hospitality

Logistics

Transportation & Automobile

Foreword

The need to address climate change has never been more urgent. As the world faces the challenges of a warming planet, the private sector plays a key role in driving the shift to a low-carbon future. Businesses must adopt robust climate disclosures and transition plans to effectively communicate their decarbonisation efforts and adapt their operations to navigate the rapidly changing climate-driven business environments. Transparency is essential to fostering sound and efficient capital markets and shaping corporate behaviour and climate actions.

Hong Kong Special Administrative Region (HKSAR), as part of China, is closely tied to the broader Chinese economy. In recent years, both HKSAR and mainland China stock exchanges have introduced mandatory Environmental, Social, and Governance (ESG) reporting, aligned with the government's carbon neutrality agenda. While businesses have enhanced their ESG disclosures, accurately measuring and reporting emissions—especially Scope 3—remains challenging, particularly for companies with complex value chains. According to Hong Kong Exchanges and Clearing Limited (HKEX) 2024 Analysis of ESG practice Disclosure, the reporting rate of Scope 3 was only 50% for large-cap issuers[1].

This paper, *"Driving Change: Climate Disclosure of Hong Kong Listed Companies in Key Sectors and the Road Ahead "* is timely, as HKEX has started the implementation of the new climate-related disclosure requirements in January 2025. These new requirements highlight the growing demand for transparent and comprehensive climate reporting and the need for listed companies in HKSAR to align with global standards. This paper focuses on six sectors that shape our everyday lives, including Apparel, Food & Beverage, Home Products, Hospitality, Logistics, and Transportation & Automobile. These industries operate with complex, multifaceted supply chains, presenting distinct challenges and opportunities as they undergo the low-carbon transformation.

By embracing robust climate disclosure and aligning their business strategies with science-based carbon reduction targets, companies can not only future-proof their operations, but also unlock new avenues for sustainable growth and innovation throughout their value chains.

Boris Chan, *Head of Institutional Banking Group, DBS Hong Kong*

"Collaboration and shared knowledge in the world of business is key to driving innovative and impactful changes. The road to 2050 net zero is still a long way to go, and this transition needs to be responsible, just, and pragmatic. It may be tough, but it is definitely possible when we join hands together. DBS is committed to adding our strength to yours along this journey."

Raymond Ng, *Head of Clients and Markets, Hong Kong at KPMG China*

"Companies we talked to realise the importance of embedding sustainability in their business operations, but often they lack sufficient industry knowledge and resources to drive meaningful actions to collect data, not to mention setting realistic carbon reduction targets and transition plans. It is our goal to support companies' decarbonisation strategy development and achieve net zero targets together."

[1] Hong Kong Stock Exchange, "2024 Analysis of ESG Practice Disclosure". Retrieved November 2024, from https://www.hkex.com.hk/-/media/HKEX-Market/Listing/Rules-and-Guidance/Environmental-Social-and-Governance/Reports-on-ESGPD/esgreport_2024.pdf

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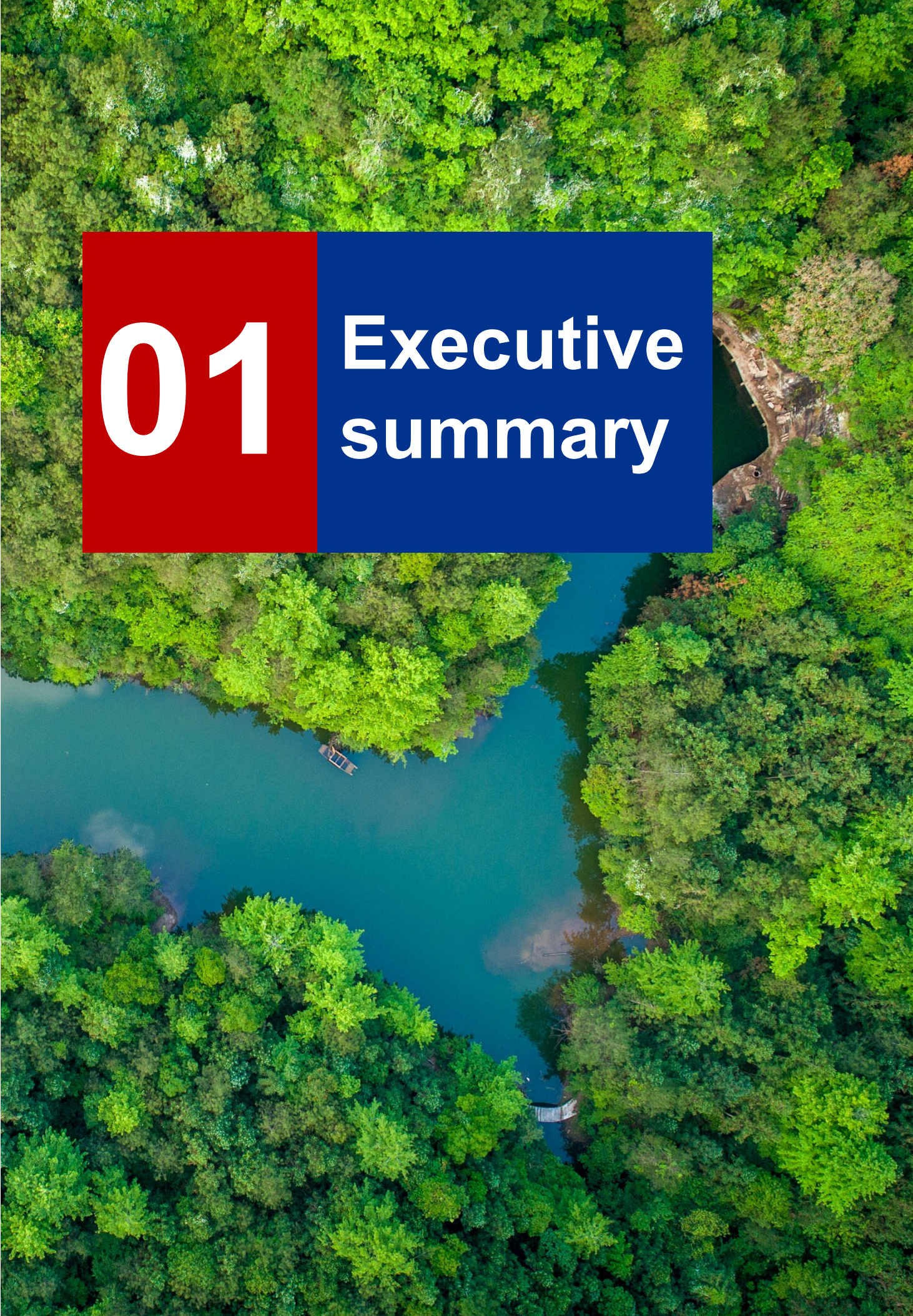
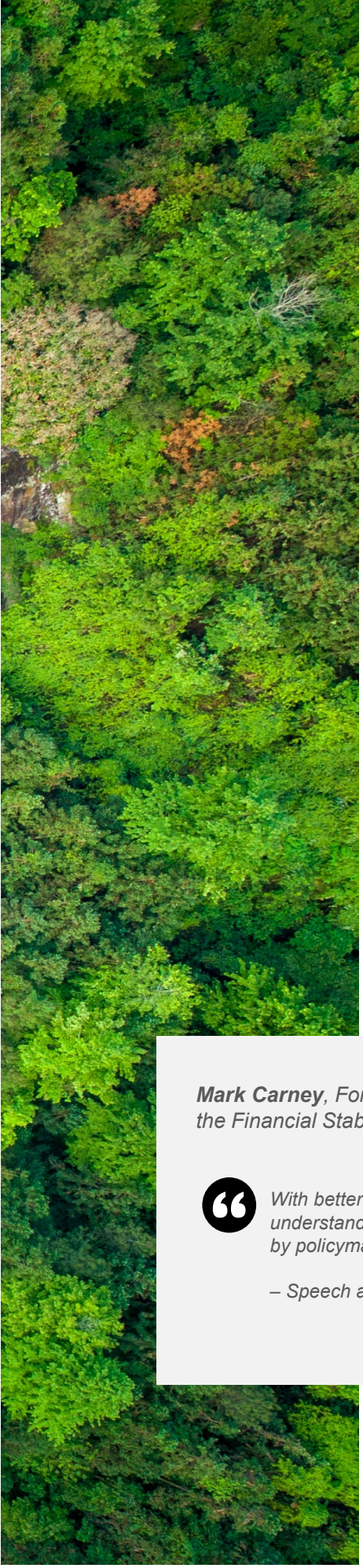


01 Executive summary



Regulatory demands and market expectations around climate-related disclosures are evolving rapidly. In April 2024, HKEX published its Conclusions on Climate Disclosure Requirements[2], enhancing climate-related disclosure requirements for listed companies to align with *International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures*[3]. These requirements have taken effective in January 2025, asking companies to make more granular disclosure of their governance, strategy, risk management, and metrics & targets for climate-related matters.

These ESG disclosure frameworks provide consistent and relevant reporting, enabling quantification and benchmarking of environmental and social impacts. With a review of the latest regulatory and market trends, particularly the disclosure requirements in HKSAR, we took a closer look into six sectors related to the consumer goods industry. Through a comprehensive desktop survey and a series of interviews of these sectors, we extracted insights from their current disclosure and low carbon transition status.

Our findings reflected major gaps of data, knowledge, and finance within three key areas, (1) GHG disclosure, (2) carbon reduction target setting, and (3) transition planning. In addition, our engagements with sector experts and corporate leaders had broadened our understandings of sector-specific decarbonisation journeys, including challenges and strategies.

While the consumer goods industry face its unique challenges and opportunities in the journey of decarbonisation, the crucial roles of GHG disclosure, carbon reduction target setting, and transition planning are also appliable to various sectors such as technology, manufacturing, services, and private enterprises. As these climate-related disclosure requirements are universally applicable, and climate change is equally important to all.

***Mark Carney**, Former Governor of the Bank of England and Former Chairman of the Financial Stability Board*

> *With better information as a foundation, we can build a virtuous circle of better understanding of tomorrow's risks, better pricing for investors, better decisions by policymakers, and a smoother transition to a lower-carbon economy.*
>
> *– Speech at Lloyd's of London, 29 September 2015*

[2] Hong Kong Stock Exchange, "Consultation Conclusions – Enhancement of Climate-related Disclosures under the Environmental, Social and Governance Framework". Published April 2024. Retrieved November 2024, from https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/April-2023-Climate-related-Disclosures/Conclusions-Apr-2024/cp202304cc.pdf

[3] IFRS, "IFRS S2 Climate-related Disclosures". Published June 2023. Retrieved November 2024, from https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures

Through the deep dive into some of the largest companies listed on HKEX in the six sectors, we have concluded three key findings.

Finding 1

The missing link:

more than half of companies are still silent on Scope 3 emissions.

60% of analysed companies have **not** begun reporting Scope 3 emissions due to the current stage of data availability and quality challenges, even though ~70% of greenhouse gas (GHG) emissions are under Scope 3 for most of the analysed companies.

This data gap is concerning as it obscures the industry's largest environmental impact and erodes stakeholder trust.

To address this, companies must urgently prioritise the measurement and reporting of Scope 3 emissions to enhance accountability and drive meaningful sustainability efforts.

Finding 2

Targets misaligned:

majority of companies lack science-based targets.

57% of disclosed targets are **not** science-based or aligned with international target-setting standards, even with an 88% disclosure rate on commitments to carbon emissions reduction in their ESG reports.

Carbon reduction targets without measurable progress could undermine the credibility of their sustainability commitments.

Moving forward, companies must adopt a more comprehensive approach by setting clear and measurable targets that includes all material emissions scopes, thereby ensuring real progress towards a truly sustainable future.

Finding 3

A call to action:

companies need comprehensive transition plans.

10% of the analysed companies are at mature level of transition plan in accordance with the 3As principles – Ambition, Action, and Accountability proposed by the Transition Plan Taskforce (TPT).

Without structured transition plans, companies may struggle to allocate capital for decarbonisation projects.

To tackle this issue, companies should create transition plans based on science-based, accountable, and transparent targets. As data quality improves, it will be crucial to refine their plans to align with the latest decarbonisation pathways.

From our research and interviews, the consumer goods industry has showcased five good practices.

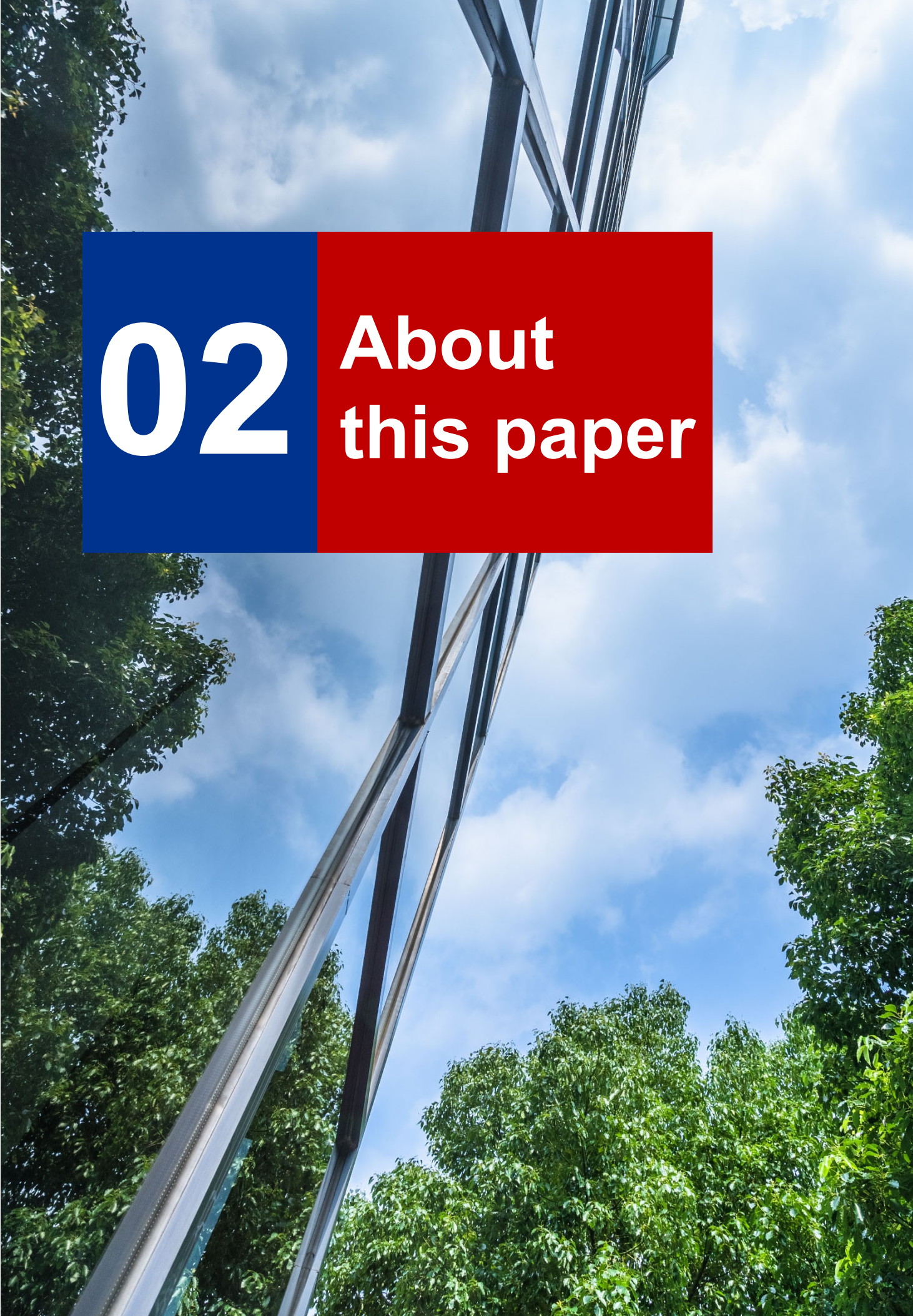
Amplifying supply chain visibility to pinpoint and address carbon emission hotspots is a critical step to drive meaningful sustainability impact.

Elevating sustainable sourcing as a strategic imperative to identify opportunities to enhance environmental and social responsibility across the value chain.

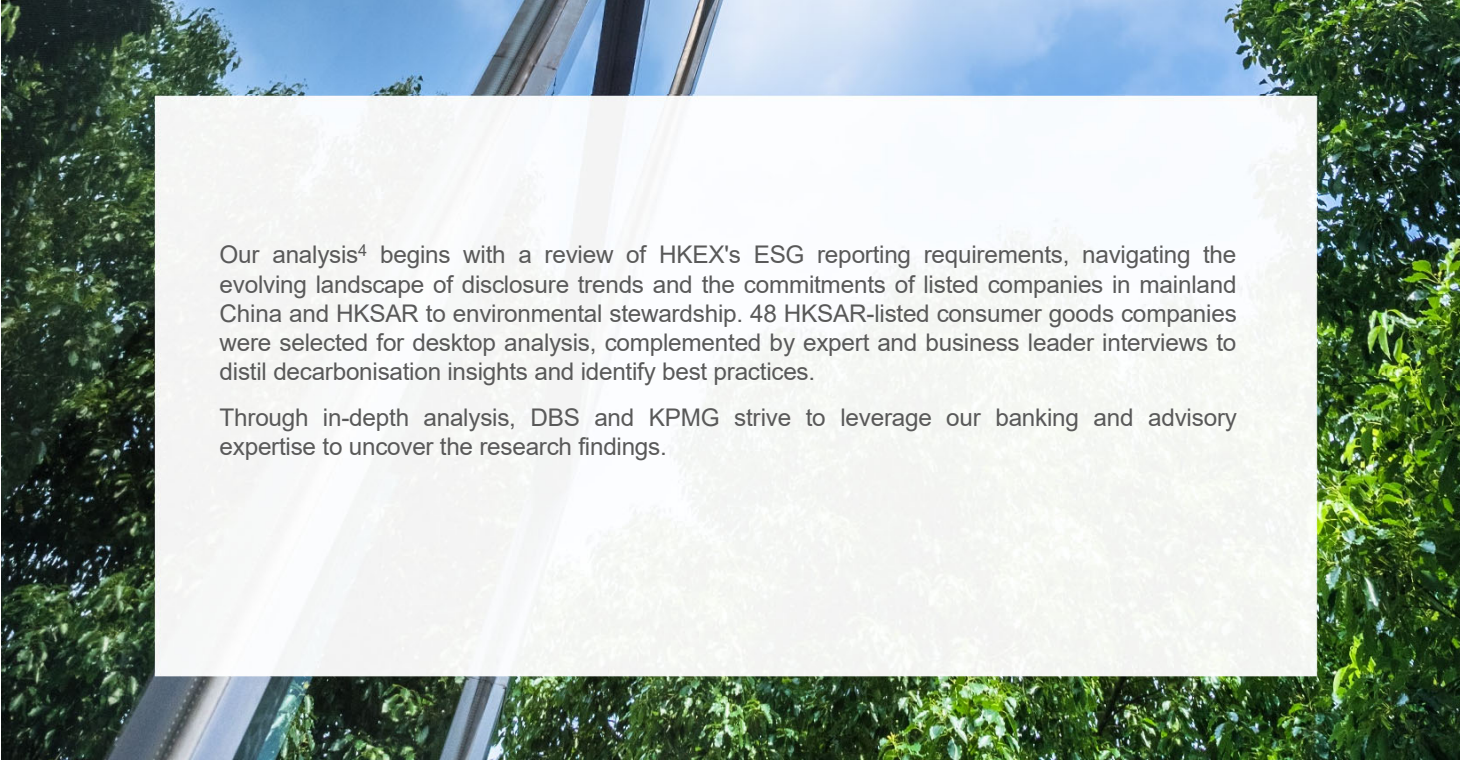
Fostering multi-stakeholder collaborations that catalyse collective and impactful initiatives to drive the sustainability agenda forward.

Channeling investments into renewable energy solutions as a transformative lever to decarbonise operations and future-proof the business.

Embracing circular economy principles to redefine waste as a valuable resource and to unlock innovative pathways to minimise environmental footprint.



02 About this paper



Our analysis[4] begins with a review of HKEX's ESG reporting requirements, navigating the evolving landscape of disclosure trends and the commitments of listed companies in mainland China and HKSAR to environmental stewardship. 48 HKSAR-listed consumer goods companies were selected for desktop analysis, complemented by expert and business leader interviews to distil decarbonisation insights and identify best practices.

Through in-depth analysis, DBS and KPMG strive to leverage our banking and advisory expertise to uncover the research findings.

Research Methodology

Step 1

Regulatory review

Existing and emerging sustainability-centric disclosure requirements demanded by the HKEX and incentives offered by the HKSAR government

Step 2

Market trend

Market trends analysis based on the ESG disclosure of the top 100 companies in mainland China and HKSAR

Step 3

Desktop survey

Desktop company survey of 48 HKEX listed companies within Apparel, Food & Beverage, Home Products, Hospitality, Logistics, and Transportation & Automobile sectors

Step 4

Interview

Selected company interviews to gain further sector-specific insights

Where we are

A closer look

Looking forward

[4] The key focuses of our analysis are centred around the disclosures of GHG emissions, carbon reduction target setting, and transition planning as they form the journey of companies' decarbonisation. Other topics such climate-related risks and opportunities are out of scope.

03 Where we are

Enforced by the HKSAR government, Hong Kong Monetary Authority (HKMA), The Securities and Futures Commission (SFC), and HKEX, companies listed on HKSAR have made substantial progress in making sustainability a core part of their business operations. The requirements for enhanced transparency of their sustainability disclosures are the next steps in the journey toward setting and meeting GHG reduction targets.

Roadmap on Sustainability Disclosure in HKSAR

The HKSAR government launched the roadmap on sustainability disclosure in March 2024, which sets out HKSAR's approach to require publicly accountable entities (PAEs) to adopt the International Financial Reporting Standards - Sustainability Disclosure Standards (ISSB Standards). It provides a well-defined pathway for large PAEs to fully adopt the ISSB Standards no later than 2028[5].

Sustainable Finance Action Agenda

Launched by HKMA in October 2024, outlining HKMA's vision to further consolidate HKSAR's position as the sustainable finance hub in the region[6].

Agenda for Green and Sustainable Finance

Released by SFC in 2022, setting forth the way forward for the SFC to support HKSAR ESG development[7].

Regulatory Evolution (HKEX)

2012

Issued the "Environmental, Social and Governance Reporting Guide (ESG Guide)", which introduced ESG reporting requirements for listed companies, albeit on a "comply or explain" basis.

2014

Intensified its ESG initiatives as these standards were integrated into its Listing Rules. This made ESG reporting become a requirement for all companies listed on HKEX, again based on "comply or explain" for certain provisions.

2016

Revised the ESG Guide, which became effective for financial years commencing on or after 1 January 2017. The revised guide broadened the scope of reporting and increased the obligations on companies to disclose ESG-related information.

2019

Published its latest update to the ESG Guide. Enhancements included mandatory disclosure on climate-related issues and relevant governance practices. These changes acknowledged the guidelines set forth by the Task Force on Climate-related Financial Disclosures (TCFD).

The outcomes of regulatory motivation are apparent – in a KPMG survey, results show that Chinese enterprises stand out as leaders compared with their global counterparts in ESG disclosure with 64% of them reporting in accordance with stock exchange guidelines[8].

[5] The Government of the Hong Kong Special Administrative Region, "Government issues vision statement on developing sustainability disclosure ecosystem in Hong Kong". Published March 2024. Retrieved November 2024, from https://www.info.gov.hk/gia/general/202403/25/P2024032500391.htm?fontSize=3
[6] Hong Kong Monetary Authority, "Sustainable Finance Action Agenda". Published October 2024. Retrieved November 2024, from https://www.hkma.gov.hk/media/eng/doc/key-information/press-release/2024/20241021e4a1.pdf
[7] Securities and Futures Commission, "Agenda for Green and Sustainable Finance". Published August 2022. Retrieved November 2024, from https://www.sfc.hk/-/media/EN/files/COM/Reports-and-surveys/SFC-Agenda-for-Green-and-Sustainable-Finance_en.pdf
[8] KPMG International, "Big Shifts, Small Steps". Published October 2022. Retrieved November 2024, from https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2023/04/big-shifts-small-steps.pdf

Regulatory requirements are evolving as companies make progress. In 2024, HKEX further tightened its ESG reporting requirements to align its *ESG Code* with *IFRS S2 Climate-related Disclosures.* The ESG Code asks listed companies to make more granular disclosure on ESG-related strategy and metrics & targets.

The HKEX ESG Code also plays a critical role in fostering a culture of responsibility while providing stakeholders with the information they need to support the transition to a low-carbon economy, including insights into how a company makes management decisions with ESG incorporated into its day-to-day business.

Following the consumer goods industry deep dive, we will further analyse how ready companies are today to adapt to these changes and the challenges of Scope 3 disclosures they face.

Effective date of HKEX ESG Code

	Large-cap issuers*	Non large-cap main board issuers	GEM issuers
Scope 1 & 2 GHG emissions	2025 – mandatory	2025 – mandatory	2025 – mandatory
New climate disclosures other than Scope 1 & 2 GHG emissions	2025 – "comply or explain" 2026 – mandatory	On or after 2025 – "comply or explain"	On or after 2025 – voluntary

*Hang Seng Composite LargeCap Index constituants.

Comparison between HKEX's ESG Guide (2012) and ESG Code (2025)

	Governance	Strategy	Risk Management	Metrics & Targets
ESG Reporting Guide	Board's oversight and governance, management approach and strategy, and how the Board reviews progress made against goals and targets for material ESG topics	Significant issues which have (or may have) impacts and actions taken to manage them	Process to evaluate, prioritise and manage issues (including risks to the business) Effectiveness of risk management and internal controls system	• Scope 1 & 2 emissions. • Waste • Energy consumption • Water consumption • Packaging materials used
Additional requirements in ESG Code	Board's oversight on climate risks and opportunities, frequency of discussion Consider climate in strategy oversight, major decisions and risk management Oversight of target setting and progress made, with links to executive remuneration Ensuring skills and competencies Role of management	Significant **risks and opportunities** in the short-, medium-, and long-term to the **business model**, strategy, and **cash flows** Current and anticipated effects of climate-related risks and opportunities on the issuer's **business model** and **value chain** Climate resilience based on **scenario analysis** findings Qualitative and quantitative current and anticipated **financial effects**	Process to identify, assess, prioritise, monitor and manage Extent of integration into overall risk management process	• Absolute Scope 3 emissions data • Amount of assets or business activities vulnerable to physical risk, transition risk, and those that align with climate opportunities • Amount of capital deployed towards climate • Internal carbon price • How climate is factored into remuneration policy Industry-based metrics from other ESG standards are encouraged (e.g. SASB / ISSB)

Implementation reliefs available subject to meeting conditions

04 A closer look

To gain a deeper understanding of the facts and logic behind the market landscape, we selected 48 companies listed on HKEX in the consumer goods industry, and reviewed their ESG reports together with executive interviews to understand their decarbonisation progress. The selected companies spanned six key sectors: Apparel, Food & Beverage, Home Products, Hospitality, Logistics, and Transportation & Automobile. This comprehensive approach allowed us to gain a nuanced understanding of the unique challenges and strategies employed by companies across the diverse consumer goods landscape.

Finding 1 **The missing link:** More than half of companies are still silent on Scope 3 emissions.

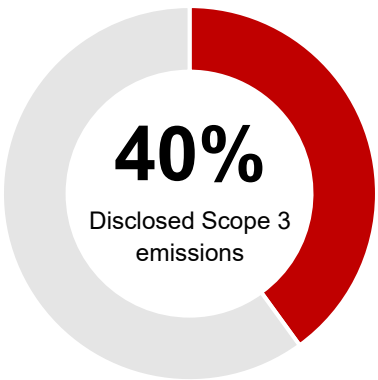
While all 48 selected companies disclosed their Scope 1 & 2 emissions, only 40% (i.e. 19) of them disclosed their Scope 3 emissions. Notably, among those companies that have already disclosed Scope 3 emissions, 63% of them showed that Scope 3 emissions accounted for more than 70% of their total GHG emissions. This finding underscores the importance of addressing Scope 3 emissions as a key lever in these companies' decarbonisation journeys. The significant contribution of Scope 3 emissions to the overall carbon footprint highlights the need for accounting them for decarbonisation actions, rather than just a narrow focus on Scope 1 & 2 emissions alone.

Scope 1 & 2

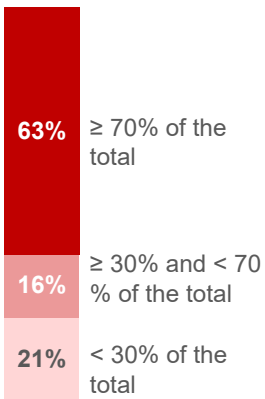
Scope 1 & 2 disclosure rate
% of companies, 2024, n=48

Scope 3

Scope 3 disclosure rate
% of companies, 2024, n=48



Scope 3 vs. total emissions
% of companies, 2024, n=19



Our analysis also revealed that among the companies studied, the Apparel and Logistics sectors have demonstrated relatively better records in disclosing their GHG emissions. However, a common challenge across all sectors was the low reporting rates for Scope 3 emissions. This deficiency underscores the widespread challenge for all companies to fully account for indirect emissions stemming from their value chain activities. To delve deeper into this issue, we conducted several rounds of interviews with the executives of the leading companies. These discussions aimed to further understand the rationale behind the limited Scope 3 disclosure, as well as to identify the key barriers and potential solutions to addressing this critical gap.

A representative from an Apparel company

Extra spending in ESG puts additional pressure on our small-to-medium-sized suppliers. With a small profit margin, they may compromise the quality of their products and services.

A representative from an Automobile company

There are no requirements from the regulators in mainland China forcing Scope 3 disclosure, so our focus is more on reducing emissions from our own operations (Scope 1 & 2).

A representative from a Food & Beverage company

We often face the challenges of our complex supply chains, with a large number of suppliers who still lack ESG awareness and knowledge, making collection of Scope 3 data extremely difficult.

A representative from a Logistics company

We began our calculation of Scope 3 in 2023 but have not made any disclosures because mandated Scope 3 disclosure will only take effective in 2025.

While calculating Scope 3 emissions presents challenges, particularly in coordinating with suppliers, the advantages of investing time and efforts with supply chain partners should not be overlooked. Here are some tips for companies to start their Scope 3 journey.

Five steps to start your Scope 3 calculation and reporting

01	Identify Scope 3 activities	Mapping the value chain into 15 distinct categories as set by GHG Protocol, and identify the Scope 3 activities that are included in those categories.
02	Set Scope 3 boundary	Accounting for all material Scope 3 emissions and justify any exclusions. For emission categories, companies shall account for each Scope 3 category according to the minimum boundaries provided by GHG Protocol.
03	Collect data	Collecting Scope 3 data requires effort from the company and stakeholders within the value chain. Companies could leverage technology to prioritise data collection efforts and strive to fill in any data gap in the long run to improve data coverage.
04	Allocate emission	Allocation is the process of partitioning GHG emissions from a single facility or other systems among its various outputs. When companies use primary data from suppliers or other value chain partners, they may need to allocate emissions.
05	Reporting	Disclosing information publicly on Scope 3 emissions. In particular, companies should include a list of Scope 3 categories and activities included in those categories, data source, and description of calculation methodologies.

According to the recent paper published by HKMA, there is a positive ripple effect from customer-driven ESG improvement along the global value chain network[9]. This means that when customers enhance their ESG practices, their suppliers' ESG performance would also be improved. As many suppliers are also customers of other suppliers in the global value chain network, these positive ESG impacts would spread to other companies in the network. This reinforces the importance of companies taking a collaborative, value chain-centric approach to emissions reduction. By working closely with suppliers and other value chain partners to drive ESG improvements, companies can unlock a multiplier effect that amplifies the impact of their sustainability efforts.

It should be noted that our data was gathered before the effective date of the HKEX's new requirements. With the new rules in effect, the discrepancy in data is expected to narrow, as all Main Board listed companies will be subject to the "comply-or-explain" provision for their Scope 3 emissions reporting regime from 1 January 2025, with large-cap issuers mandated to disclose their Scope 3 emissions from 1 January 2026 onwards.

Key takeaways

Challenges	Recommendations
• Companies lack access to Scope 3 data from their suppliers and customers, making it difficult for them to calculate full life-cycle emissions accurately. • Suppliers do not have sufficient budget to support the estimation of the company's Scope 3 emissions.	• Conduct supply chain sustainability assessments that can measure, and monitor supply chain emissions accurately. • Put in place mechanisms for GHG emissions mapping, identifying and prioritising decarbonisation activities, and engaging suppliers on decarbonisation. **What market leaders do:** ✓ Active knowledge transfer with suppliers to align on understanding of data needs. ✓ Help small and medium-sized suppliers install sensors for collecting Scope 3 data. ✓ Support suppliers who are more advanced in ESG with larger quantity of orders. ✓ Leverage the GHG emission calculation tools currently available in the market. For example, an online GHG emission calculator is available to assist companies to assess or report their GHG emission based on the levels of their actual activities[10] [11]. In addition, there are tools available to integrate ESG targets into the financial planning & analysis transformation process, aligning companies' financial and ESG strategic objectives[12].

[9] Hong Kong Monetary Authority, "Examining the Ripple Effect of Corporates' ESG Performance Along the Global Supply Chains". Published May 2024. Retrieved November 2024, from https://www.hkma.gov.hk/media/eng/publication-and-research/research/research-memorandums/2024/RM06-2024.pdf
[10] Hong Kong Securities and Futures Commission, "New Green Gas Emissions Calculation and Estimation Tools to Support Sustainability Reporting". Published February 2024. Retrieved November 2024, from https://ienv.hkust.edu.hk/news/new-greenhouse-gas-emissions-calculation-and-estimation-tools-support-sustainability-reporting
[11] Hong Kong Monetary Authority, "Greenhouse Gas Emissions Calculation and Estimation Tools". Published March 2024. Retrieved November 2024, from https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2024/20240326e2.pdf
[12] The KPMG Anaplan is a digital tool made to support the calculation of Scope 3 emissions.

Scope 3 emission examples per category by sector (1/2)

According to the GHG Protocol, there are 15 categories within Scope 3 emissions, the table below lists out a few examples per category by sector.

Category 1: Purchased goods and services	
Apparel	• Production, processing, and transportation of textile material • Packaging materials
Food & Beverage	• Production, processing, and transportation of food material • Packaging materials
Home Products	• Production, processing and transportation of material • Packaging materials
Hospitality	• Production, processing, and transportation of food and drink purchased by hotels and restaurants • Production, processing, and transportation of linens, toiletries, cleaning supplies, and other operational materials
Logistics	• Extraction, production, and transportation of fuels and materials used in Logistics operations (vehicles, packaging materials, etc.)
Transportation & Automobile	• Production, processing, and transportation of raw material in vehicle manufacturing (steel, aluminum, plastics, etc.)

Category 2: Capital Goods	
Apparel	• Production and transportation of machinery and equipment used in Apparel manufacturing
Food & Beverage	• Production and transportation of machinery and equipment used in Food & Beverage manufacturing
Home Products	• Production and transportation of machinery and tools used in the Home Products manufacturing
Hospitality	• Production and transportation of machinery and equipment used in the construction and renovation of Hospitality facilities
Logistics	• Production and transportation of machinery and equipment used in manufacturing and transportation of vehicles (trucks, ships, planes, forklifts, etc.)
Transportation & Automobile	• Production and transportation of machinery and equipment used in vehicle manufacturing and assembly

Category 3: Fuel and energy related activities	
All sectors	• Energy production: emission from the extraction, production, and transportation of fuels and electricity consumed • Energy losses: emissions related to energy losses during electricity transmission and distribution

Category 4: Upstream transportation and distribution	
Apparel	• Transportation of raw materials to processing / manufacturing facilities (air, rail, ground, etc.)
Food & Beverage	• Transportation of raw materials to processing / manufacturing facilities (air, rail, ground, cold chain, etc.)
Hospitality	
Home Products	• Transportation of raw materials to processing / manufacturing facilities (air, rail, ground, etc.)
Logistics	
Transportation & Automobile	

Category 5: Waste generate in operations	
Apparel	• Disposal of production, operation, and packaging waste
Food & Beverage	• Disposal and treatment of food waste and by-products • Disposal of packaging materials
Home Products	• Disposal of production, operation, and packaging waste
Hospitality	• Disposal and treatment of food waste • Disposal of general waste
Logistics	• Disposal of operation and packaging waste
Transportation & Automobile	• Disposal of production, operation, and packaging waste

Category 6: Business travel	
All sectors	• Employee travel for business purposes (air rail, ground, etc.)

Scope 3 emission examples per category by sector (2/2)

According to the GHG Protocol, there are 15 categories within Scope 3 emissions, the table below lists out a few examples per category by sector.

Category 7: Employee commuting	
All sectors	• Employee travel to and from work (including public transportation and private vehicles)

Category 8: Upstream leased assets	
All sectors	• Emission associated with leased properties where production or storage occurs

Category 9: Downstream transportation and distribution	
Apparel	• Distribution of products from warehouses or production facilities to retail stores • Delivery of products to consumers (last-mile delivery)
Food & Beverage	• Distribution of products from warehouses or production facilities to shops or restaurants • Delivery of products to consumers (last-mile delivery)
Home Products	• Distribution of products from warehouses or production facilities to retail stores • Delivery of products to consumers (last-mile delivery)
Hospitality	• Distribution of products to customers or other Hospitality venues • Transporting guests to and from the hotel, including shuttle services and taxis
Logistics	• Distribution of cargo containers
Transportation & Automobile	• Distribution of products to dealership locations / distribution centres • Logistics for parts: emissions from transporting spare parts to service centres

Category 10: Processing of sold products	
Apparel	• Processing of manufacturing and material handling (fabric treatment and dyeing, cutting and sewing, packaging, etc.)
Food & Beverage	• Processing of production and material handling (cooking, baking, packaging, etc.)
Hospitality	
Home Products	• Processing of manufacturing and material handling (cutting / shaping / assembling of wood, metal, plastics, etc.)
Logistics	• Energy used for heating, cooling, and lighting of warehouse operations
Transportation & Automobile	• Processing of manufacturing and material handling (cutting / shaping / assembling of steel, plastics, aluminum, etc.)

Category 11: Used of sold products	
Apparel	• Laundering of Apparel products
Food & Beverage	• Cooking and preparation done by consumers
Hospitality	
Home Products	• Cleaning, maintenance, and repair of Home Products
Logistics	• Maintenance and repairs of trucks, warehouses, containers, etc.
Transportation & Automobile	• Maintenance and repairs of vehicles

Category 12: End of life treatment of sold products	
All sectors	• Disposal of products (landfill, recycle, etc.)

Category 13: Downstream leased assets	
All sectors	• Company-owned space or capacity leased to customers

Category 14: Franchises	
All sectors	• Franchise operations that are not directly controlled by the company

Category 15: Investments	
All sectors	• Operations of investments • Financial assets held by the company

Finding 2 **Targets misaligned:** Majority of companies lack science-based targets.

Setting ambitious GHG reduction targets aligned with the Paris Agreement is important to companies as it demonstrates their commitment to decarbonisation. Putting such targets in place can enhance stakeholder confidence and help position a company strategically in an eco-conscious market while ensuring compliance with evolving regulatory standards.

In 2024, a KPMG market study of the top 100 companies in China found that many companies struggle to meet their green goals. Although 80% of the companies in the study had set carbon reduction targets, 23% of those companies had set targets with the ambition to align with the Paris Agreement, and only 15% had set science-based targets[13].

Base: Top 100 companies (based on size) in China - 89 based in mainland China, 11 based in HKSAR

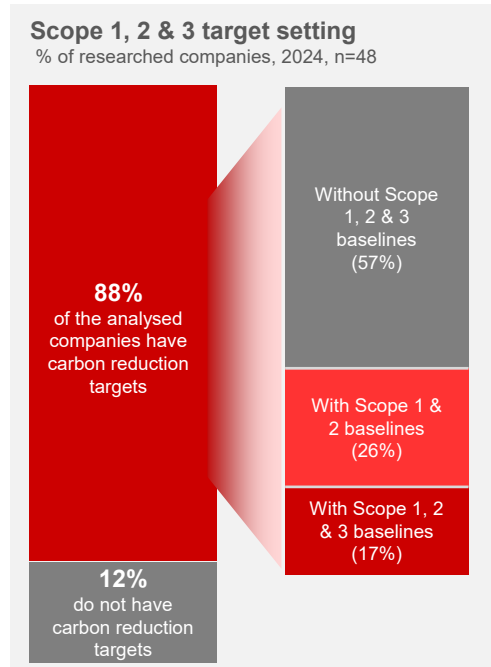
While various standards exist for companies to align their decarbonisation efforts, it is essential that these align with and are confirmable by scientific evidence. Targets are considered "science-based" when they are consistent with the latest climate science requirements to fulfil the objectives of Paris Agreement, which is to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels". It is crucial that companies adopt science-based targets with clear and credible pathways to align their emissions reduction efforts. Adopting science-based targets not only enhances the credibility of a company's sustainability efforts but also provides a robust framework for tracking progress and driving continuous improvement.

Targets are not "science-based" or grounded on a comprehensive understanding of their emission profile

Our research found 88% (i.e. 42) of the companies had disclosed carbon reduction commitments, among these 42 companies:

- 57% set targets without Scope 1, 2 & 3 baselines;
- 26% set targets with Scope 1 & 2 baselines; and
- only 17% set targets with Scope 1, 2 & 3 baselines.

The high rate of carbon reduction commitment contrasted with the relatively low adoption of science-based target-setting methodologies. For targets to be science-based, they must cover at least 95% of company-wide Scope 1 & 2 emissions. When Scope 3 emissions make up 40% or more of total emissions, companies must set one or more emissions reduction targets or supplier or customer engagement targets that collectively cover at least 67% of total Scope 3.

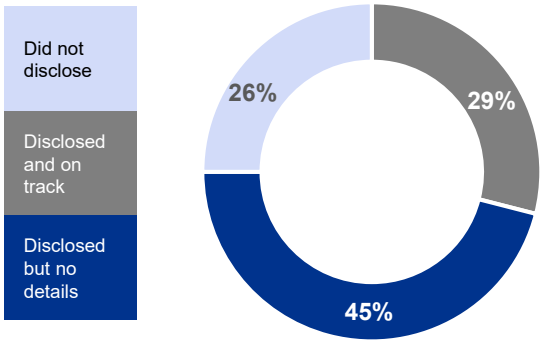


[13] KPMG International, "Big Shifts, Small Steps" defined enterprises in China as companies listed in both the Hong Kong (SAR) and mainland China stock exchanges. The standard to assess quality of targets, Science-Based Target initiative (SBTi) was the indicator for this particular survey, the 15% science-based target was referring to targets that are validated by (or submitted) SBTi.

Progress on GHG reduction is not properly tracked or disclosed

The next step after target setting is continuously monitoring and tracking progression against those targets. Among the companies that have set carbon reduction targets, we found that only 29% had disclosed their annual progress using quantifiable indicators with consistent measurements. In the absence of a mandatory carbon reduction target setting and progress disclosure, companies still have considerable leeway to continue business as usual.

Status of target tracking
% of companies, 2024, n=42



Some industry leaders have dragged their feet on tracking this progress. As we have seen from the interviewed companies, carbon reduction target tracking could be challenging due to several factors including changes of methodological approach in baseline calculations, changes in emission factors, and changes in supplier factors. In fact, according a survey conducted by Science-based Target Initiative (SBTi), 70% of respondents had to re-baseline their Scope 3 emissions in the last 5 years, with around 50% doing so because of methodological changes such as changing the type of method used[14].

This gap in communicating tangible progress towards achieving targets circles back to the quality of the targets set. If targets are not developed in line with established methodologies, reduction goals are unlikely to align with a company's actual emission profile. In turn, this deters the disclosure of performances that are not up to expectation.

Insufficient target disclosure may cloud the understanding of investors who value businesses' sustainability efforts and hence imposes difficulties for them to assess companies' climate performance.

A representative from a Logistics company

"We recognise the importance of carbon reduction target setting as it provides a clear objective for our decarbonisation efforts and allows us to effectively track our progress. This year, we are committed to adopting a science-based approach to establish our targets, grounded on robust GHG baselining."

A representative from an Apparel company

"We did not disclose our targets publicly, for the avoidance of not being able to achieve the target, hence we would like to take a few years to see the progress first."

[14] Science Based Targets, "Catalyzing Value Chain Decarbonization." Published February 2023. Retrieved November 2024, from https://sciencebasedtargets.org/resources/files/SBTi-The-Scope-3-challenge-survey-results

Key takeaways

Challenges	Recommendations
• Companies are uncertain what a good target looks like. • Companies lack expertise in establishing science-based targets, leading to hesitance in committing to actions. • Companies lack guidance and tools for measuring full value-chain emissions and navigating the complexities of setting and meeting carbon reduction targets.	• Leverage digital platforms that can identify, quantify, and manage targets and enable strong reporting and analytics so that management can make better, quicker, and more intelligent decisions that meet improved ESG performance objectives. • Leverage existing target-setting methodologies, e.g. SBTi, there are three steps to set science-based, transparent, and accountable targets (details below).

Three steps to set science-based targets, using SBTi as an example[15]

01 Choose a base year & target year

- Sign the "Commitment letter".
- Base year:
  - Verifiable data on Scope 1, 2 & 3 emissions
  - Representative of a company's typical GHG profile
  - No earlier than 2015
- Near-Term Targets must cover a minimum of five years and a maximum of ten years from the submission.
- Net-Zero Target (no later than 2050).

02 Set a science-based target: Scope 1 & 2 emissions

- Targets must cover at least 95% of company-wide Scope 1 & 2 emissions, as defined by the GHG Protocol.
- Targets may cover both Scope 1 & 2 separately or as a combined target.
- Only 1.5°C aligned emissions reduction targets are acceptable starting from July 2022.

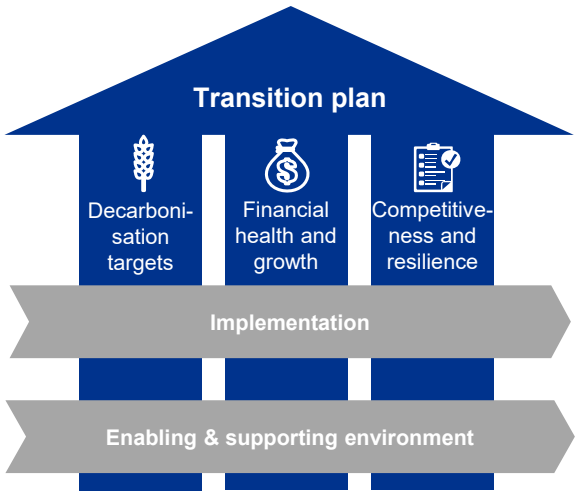
03 Set a science-based target: Scope 3 emissions

- The near-term targets must cover at least 67% of Scope 3 emissions, and long-term targets need to cover 90%.
- Options for Scope 3 target setting:
  - Separate targets for individual Scope 3 categories
  - A single target for total Scope 3 emissions
- Scope 3 is optional for the near-term targets if is it below 40% of total Scope 1, 2 & 3 emissions.
- Separate supply chain and customer engagement targets can be set.

[15] Science Based Targets, "Getting Started Guide for Science-based Target Setting." Published March 2024. Retrieved November 2024, from https://sciencebasedtargets.org/resources/files/Getting-Started-Guide.pdf

Finding 3 **A call to action:** Companies yet to craft comprehensive transition plans.

With science-based targets established, companies will need climate transition plans to clearly outline how they can implement actions to pivot its existing assets, operations, and business model, with a focus on real-economy emissions reductions. A creditable transition plan should outline further operating and capital expenditure on technology, research & development (R&D), and innovation.



Develop net zero transition plans with targets and specify how the targets can be reached, including strategic levers, operational transformation, capital expenditures and operation expenses.

Implement decarbonisation strategy that includes decarbonisation levers e.g. real economy, influencing organisation, portfolio composition and product mix.

Embed an enabling & supporting environment that is in line with implementation requirements, including transformation of people (skills, capabilities, culture, roles), data, processes, technology, and services.

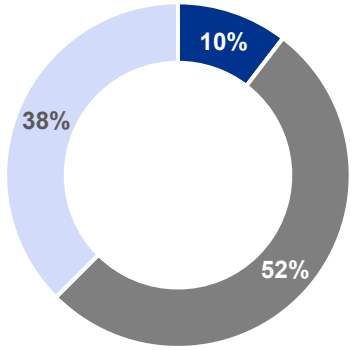
The transition plan should strike balance between long-term financial health, competitiveness, and resilience, and clear action plans for achieving companies' net zero ambitions, including plans for managed phase-out of financing for carbon-intensive assets. The transition plans should be Paris-aligned, robust, actionable and up-to-date.

To support companies develop transition plans, there are several standards available to take reference for. For instance, TPT was launched by UK Treasury in April 2022 to develop a gold standard for private sector. To evaluate the transition plans of the companies studied, we applied the Ambition, Action and Accountability (3As) principles recommended in TPT[16]. Using this framework, companies are categorised into mature, work-in-progress or immature.

Principles	Ambition	Action		Accountability	
Disclosure elements	**1. Foundation**	**2. Implementation Strategy**	**3. Engagement Strategy**	**4. Metrics & Targets**	**5. Governance**
Disclosure sub-elements	1.1 Strategic ambition	2.1 Business operations	3.1 Engagement with value chain	4.1 Governance, engagement, business and operational metrics and targets	5.1 Board oversight and reporting
	1.2 Business model and value chain	2.2 Products and services	3.2 Engagement with industry	4.2 Financial metrics and targets	5.2 Management roles, responsibility and accountability
	1.3 Key assumptions and external factors	2.3 Policies and conditions	3.3 Engagement with government, public sector, communities and civil society	4.3 GHG metrics and targets	5.3 Culture
		2.4 Financial planning		4.4 Carbon credits	5.4 Incentives and remuneration
					5.5 Skills, competencies and training

[16] Transition Plan Taskforce, "Disclosure Framework". Published October 2023. Retrieved November 2024, from https://transitiontaskforce.net/wp-content/uploads/2023/10/TPT_Disclosure-framework-2023.pdf

Maturity level of transition plan
% of companies, 2024, n=48



Maturity level / legend	Definition	Common elements (Numbers referencing the framework above)
Mature	Fulfilled most key elements of all three principles	Elements that are still missing with companies that are at mature level: 2.4; 3.1; 3.2; 4.2; 4.4; 5.4
Work-in-progress	Fulfilled partial elements of two principles	Disclosed elements are evenly spread out amongst the work-in-progress companies, though these elements are not commonly seen: 2.4; 3.1; 3.2; 4.2; 4.4; 5.4
Immature	Fulfilled few elements of one or two principles	Elements that are commonly seen with companies that are at immature level: 1.1; 1.3; 2.2; 2.3; 5.1; 5.2; 5.3; 5.5

Among the 48 companies we looked into, we found that **only 10%** of them are at mature level with their transition plans, 38% are at work-in-progress stage, and 52% still immature.

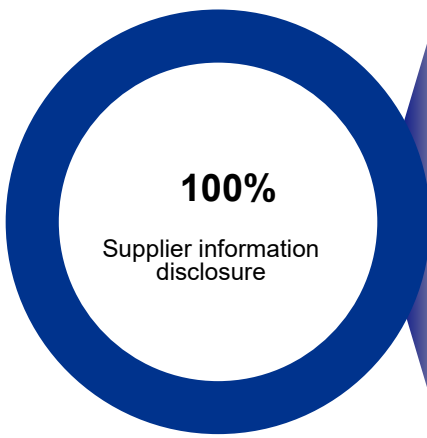
It is also important to note that the quality of a company's transition plan can have long-term implications that extend beyond the company itself. Some banks and investors have started incorporating climate-related risk evaluation into their credit evaluations and investment processes. This is often conducted using various tools such as climate / ESG risk questionnaires, Internal climate / ESG-related risk rating or scoring frameworks and enhanced due diligence & client engagement[17].

With a comprehensive transition plan in place, ESG leaders can then allocate capital into their decarbonisation initiatives

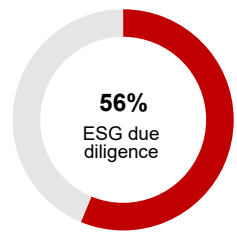
Supplier engagement

Policymakers, academics, and industry leaders in the consumer goods sector are grappling with the challenge of how to best realise the opportunities presented by the new post-pandemic supply chain model while also mitigating the climate-related risks. Companies in our survey have generally embedded ESG considerations in supplier engagement through conducting ESG due diligence, hosting ESG training sessions, and setting rectification requirements.

Company supplier engagement
% of companies, 2024, n=48

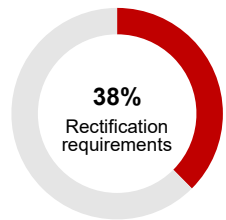


Common engagement types



Across all sectors, key due diligence scope include:
- Environmental & social responsibility
- Labour rights
- Health and safety
- Business ethics
- Product safety
- Sustainability management systems

Across all sectors, key training topics include:
- ESG-related knowledge
- Environmental & social practices
- Ethical compliance
- Labour rights
- Health and safety
- Production safety education
- Quality improvement



Across all sectors, key rectification process include:
- Set clear requirement
- Conduct on-site visit
- Provide directions and suggestions
- Track rectification process

[17] Hong Kong Monetary Authority, "Good practices on climate-related risk governance". Published August 2024. Retrieved November 2024, from https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2024/20240822e1a1.pdf

In addition, we found that some market leaders have adopted more proactive approaches to bring direct impacts to suppliers' sustainability practices. For example, companies worked with packaging suppliers to co-create new technologies that are more energy efficient. Some companies leveraged their purchasing power to encourage suppliers to reduce their carbon footprints.

The supplier interviews conducted highlight five noteworthy sustainability efforts being undertaken by the largest suppliers[18]:

- Scope 3 data collection: led by their customers, suppliers would also start to collect Scope 3 data from their suppliers in the lower tiers, this allows them to understand where their impact lies outside direct operations and enables them to set carbon reduction targets.
- Energy transition: many of the interviewed suppliers have started investing in renewable energy for their own operations, replacing fossil fuels with solar panels, wind turbines, geothermal systems, or other energy options.
- Supply chain management: suppliers can work on streamlining their supply chain to minimise transport-related emissions. This could mean choosing carriers based on their fuel efficiency, optimising routes, or even considering local sourcing to reduce long-haul transportation.
- Process optimisation: in sectors like Apparel, they have continued to implement manufacturing efficiency improvements within their manufacturing processes to reduce energy consumption and lower emissions. This might involve upgrading machinery, adopting leaner production methods, or using less water and raw materials.
- Employee training: leveraging support from their customers, suppliers are now educating employees on sustainability practices leading to behavioural changes that result in reduced energy use and waste generation.

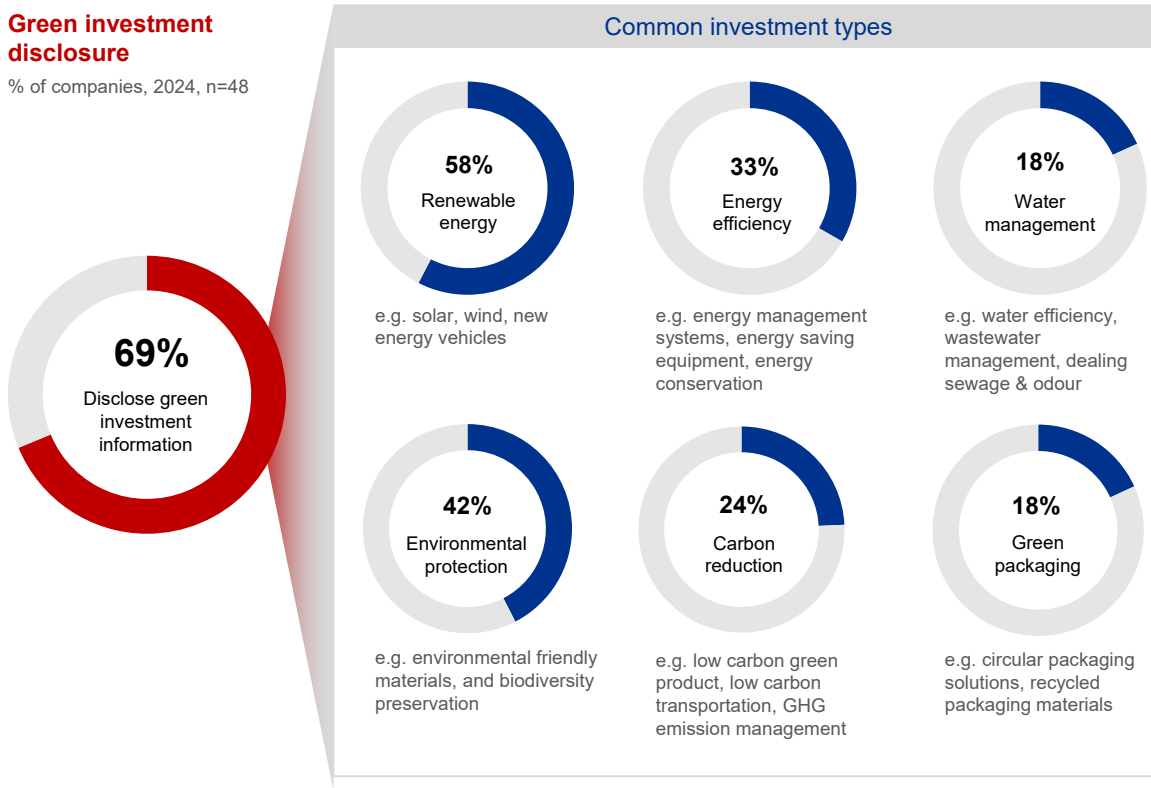
[18] The largest suppliers refer to most of the tier 1 suppliers that supply >60% of a single product or service to the company.

Green investment

This study also examined where companies are allocating their investment related to sustainability and low carbon transition. Among the 69% of companies that disclosed information on green investment, the top three investment categories are renewable energy, environmental protection implementation, and energy efficiency projects.

Green investment disclosure

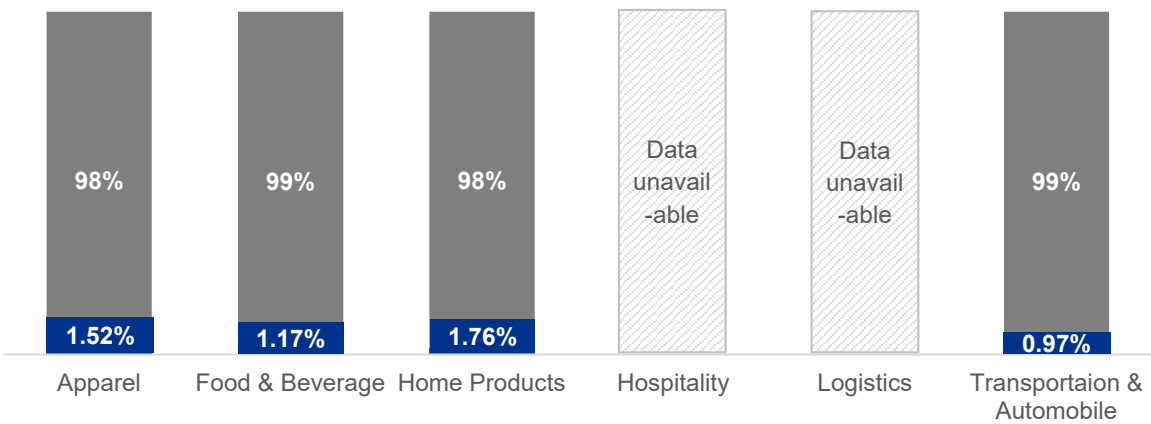
% of companies, 2024, n=48



For the companies that made detailed disclosures on green investment, on average, they allocate roughly 1 – 2% of their annual investment into green and sustainability-related initiatives. Noteworthily, disclosure on green investment amounts is still uncommon, as only 9 of the surveyed companies indicated the amount on green investments. Therefore, the actual green investment proportion might differ from the study finding due to statistical limitations.

Green investment amount by sector

% of total investment, 2024, n=9



The future of green investment made by companies is optimistic. The KPMG's 2021 CEO Outlook report found that 30% of company C-suite executives were planning to invest more than 10% of their revenues in sustainability programmes, demonstrating companies' willingness to make more financial endeavours in ESG related matters[19].

[19] KPMG International, "2021 CEO Outlook". Published September 2021. Retrieved November 2024, from https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2021/09/kpmg-2021-ceo-outlook.pdf

Sustainable finance

In our interviews, companies highlighted that limited budgets were a barrier to the low-carbon transition. As often the spending needed is significant, companies were open to exploring green financing options from banks and financial institutions to fund the decarbonisation efforts. However, our findings suggested only 17% of the researched companies have leveraged financial instruments for their sustainability endeavour. Among them, the majority used sustainable loans as a financing instrument, followed by green bonds.

Interestingly, none of the interviewed companies had utilised transition financing, a sustainable finance instrument dedicated to funding the transition from 'brown' to 'green', allowing carbon-intensive companies to finance their journey shifting away from fossil fuels. Nevertheless, with increasing market clarity on the definition of transition finance through published taxonomies and standards, including the Hong Kong Transition Finance Framework which is under HKMA preparation as of this writing, we expect more corporates will be able to access this financing option[20]. This will give more corporates the much-needed capital to fund technology upgrades, digital transformation, innovation, or even a full business pivot to reduce emissions.

Beyond transition or sustainable loan and bond financing, which typically focus on the capital needed for transitioning a company's own assets and operations, innovative financing solutions also exist with financial mechanisms to incentivise value chain decarbonisation. As we have seen previously, value chain (Scope 3) emissions are often the key contributor to a corporate's total emissions. Addressing these Scope 3 emissions is crucial for making headway in reaching net-zero targets. Such innovative solutions include customised sustainable or sustainability-linked trade or supply chain financing solutions.

However, our research suggests that these sustainable trade or supply chain financing solutions remain largely unexplored by the companies we interviewed. This represents a potential opportunity for these organisations to access additional financing mechanisms to support their broader sustainability goals and emissions reduction efforts across their value chains. The case study below showcases how brands in the fashion and Apparel industry are collaborating to drive industry-wide sustainability improvements with the help of financing.

A representative from a Home Products company

> *"Given the economic slump, we will focus our use of capital on core business lines, thus there will be less capital supporting ESG. In the face of increasing ESG regulatory requirements, we will need external financing channels for ESG initiatives."*

[20] South China Morning Post, "Hong Kong prepares transition finance framework to support development as an international green finance hub", Published on 26 Feb 2024. Retrieved January 2025, from: https://www.scmp.com/business/banking-finance/article/3253002/hong-kong-prepares-transition-finance-framework-support-development-international-green-finance-hub
[21] The Business Times, "DBS partners Future Supplier Initiative to decarbonise fashion sector". Published on 13 Jun 2024. Retrieved in January 2025, from www.businesstimes.com.sg\companies-markets\dbs-partners-future-supplier-initiative-decarbonise-fashion-sector%20\%20https:\hmgroup.com\news\major-brands-commit-to-innovative-collective-financing-model-to-decarbonise-the-fashion-sector

Hong Kong as green and sustainable finance hub

In support of the wider market engagement in the green and sustainable finance, the HKSAR government is taking a leading role. The 2023-24 Budget expanded the scope of the Government Green Bond Programme, which has been renamed as the Government Sustainable Bond Programme, to include sustainable projects, and to encourage investment in decarbonisation schemes. The following year, it raised the programme's borrowing ceiling to HK$500 billion[22] [23].

Government measures include the Green and Sustainable Finance Grant Scheme, which provide subsidies for eligible bond issuers and loan borrowers to cover their expenses on bond issuance and external review services, and the Green and Sustainable Fintech Proof-of-Concept Funding Support Scheme, which provides early-stage funding to technology companies conducting green fintech activities[24] [25].

Key takeaways

Challenges	Recommendations
• Companies are uncertain about what a good transition plan looks like.	• A comprehensive decarbonisation strategy should capture climate-related risks and opportunities. • Available tools to support transition plan evaluation: o SBTi: provide companies from all sectors with a clearly-defined sector-specific path to reduce emissions in line with the Paris Agreement goals[26]. o Carbon Risk Real Estate Monitor (CRREM): provides the real estate sector with science-based carbon reduction pathways at building, portfolio, and company levels and with a financial risk assessment tool to cost-effectively manage carbon mitigation strategies[27]. o Chatclimate.ai, an AI-tool launched by the World Wide Fund for Nature (WWF), University of Zurich and University of Oxford: for investors to identify 'greenwashing' in company net-zero transition plans. The tool assesses the robustness, feasibility, and credibility of these plans against science-based targets[28]. o Planet Tracker Transition Plan Assessment, a template for investors and lenders to determine the credibility of a company's climate transition plan[29].
• Suppliers do not have sufficient basic ESG knowledge to understand decarbonisation needs.	• Knowledge transfer driven by customers / companies via regular training and workshops to educate their suppliers on key ESG topics. • Conduct carbon footprint mapping to identify and prioritise decarbonisation activities.
• Companies lack sufficient capital to support their ESG goals.	• Investigate sustainable finance instruments that companies can leverage to support their decarbonisation ambition.
• Companies lack investment plans for capital deployment for climate-related risks and opportunities.	• Conduct climate scenario analysis to understand their financial impact on key risks; decide how capital should be allocated to different mitigation measures to manage these risks.

[22] The Government of the Hong Kong Special Administrative Region, "The 2023-24 Budget". Published February 2023. Retrieved November 2024, from https://www.budget.gov.hk/2023/eng/index.html
[23] The Government of the Hong Kong Special Administrative Region, "Government Sustainable Bond Programme". Published May 2024. Retrieved November 2024, from https://www.hkgb.gov.hk/en/sustainablebond/sustainablebondintroduction.html
[24] Hong Kong Monetary Authority, "Green and Sustainable Finance Grant Scheme". Published May 2021. Retrieved November 2024, from https://www.fstb.gov.hk/fsb/en/business/funding_schemes/green-and-sustainable-finance-grant-scheme.html
[25] Cyberport, "Green and Sustainable Fintech Proof-of-Concept Funding Support Scheme". Published June 2024. Retrieved November 2024, from https://greenfintechpoc.cyberport.hk/
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[27] Carbon Risk Real Estate Monitor. Retrieved November 2024, from www.crrem.eu
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[29] Planet Tracker, "Net Zero Transition Plan Assessment Template for Investors In Consumer Goods Companies". Published March 2023. Retrieved November 2024, from https://planet-tracker.org/net-zero-transition-plan-assessment-template-for-investors-in-consumer-goods-companies

05 Looking forward

Effective decarbonisation requires three key elements: accurate data, comprehensive knowledge, and adequate financial support. Our findings and analysis indicate that all three elements have gaps to bridge: a data gap concerning Scope 3 emissions profile, a knowledge gap in establishing effective targets and transition plans, and a financial gap needed to execute those plans.

Data gap
- Scope 3 data
- Decarbonisation progress tracking

Knowledge gap
- Scope 3 calculation
- Carbon reduction target
- Transition plan

Finance gap
- Capital planning
- Funds for ESG initiatives

The recent shift towards new requirements for climate-related disclosures is set to bring about a significant change in how companies disclose their climate data. This move could lead to more comparable climate-related disclosures, addressing the inconsistencies that have long plagued the industry.

Even though our observation shows that the current challenges are more towards Scope 3 data gaps, we can expect these gaps to gradually narrow with large-cap companies being mandated to disclose their Scope 3 emissions. With the availability of more data, companies will have less leeway to avoid target setting and progress tracking, leading to a more accountable and transparent approach to fulfil their environmental responsibilities.

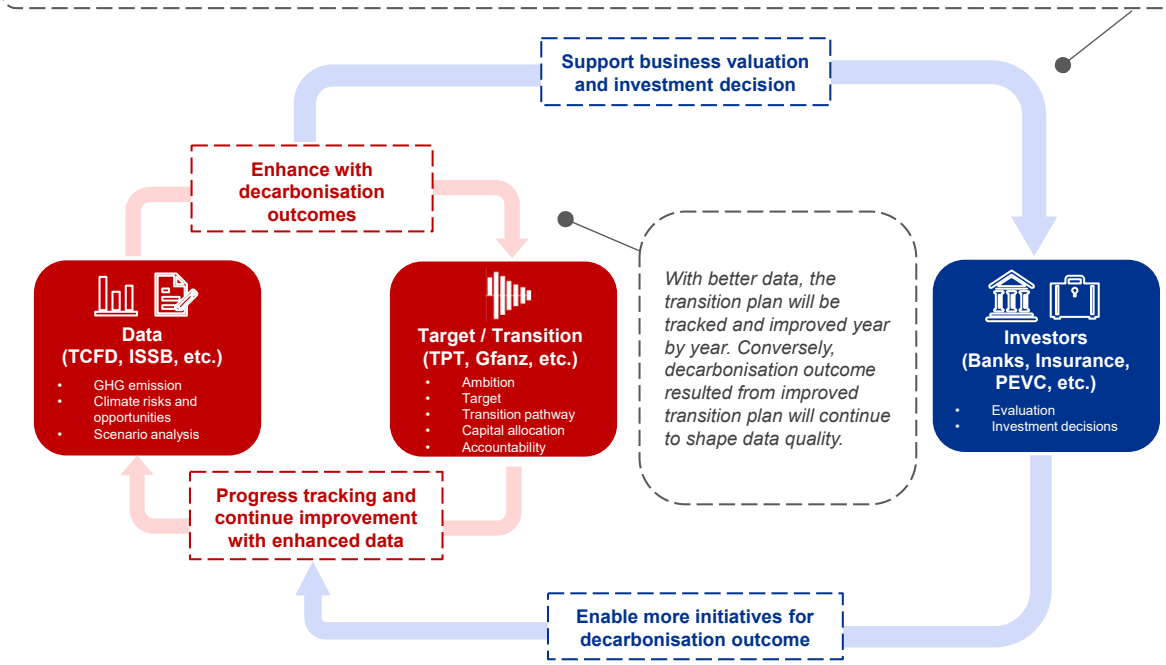
The convergence of more accurate data disclosures, science-based targets, and the anticipated capital needs for decarbonisation will become a reality, as companies continuously seeking to unlock the full potential of sustainability-led business transformation.

On the other hand, we believe the financial market would welcome high-quality climate reporting. Climate-related data and transition-related insights would mark a significant advancement into the valuation and risk assessment process.

For companies, now is the time to transform challenges to opportunities. By proactively bridging data and knowledge gaps, they will be able to attract greater capital support for new initiatives, driving effective transitions and ensuring sustainable long-term growth.

The virtuous circle of decarbonisation journey

By establishing a foundation of improved information, investors can make better-informed decisions with more accurate evaluation, which enables more initiatives for decarbonisation outcome.



About DBS

DBS is a leading financial services group in Asia with a presence in 19 markets. Headquartered and listed in Singapore, DBS is in the three key Asian axes of growth: Greater China, Southeast Asia and South Asia. The bank's "AA-" and "Aa1" credit ratings are among the highest in the world.

Recognised for its global leadership, DBS has been named “World’s Best Bank” by Global Finance, “World’s Best Bank” by Euromoney and “Global Bank of the Year” by The Banker. The bank is at the forefront of leveraging digital technology to shape the future of banking, having been named “World’s Best Digital Bank” by Euromoney and the world’s “Most Innovative in Digital Banking” by The Banker. In addition, DBS has been accorded the “Safest Bank in Asia“ award by Global Finance for 16 consecutive years from 2009 to 2024.

DBS has always put sustainability at the core. Our approach to sustainability is guided by a sense of purpose to create long-term value, by managing our business in a balanced and responsible way. We are one of the first banks to sign up to United Nations’ Net-Zero Banking Alliance, and we also became the first bank in Southeast Asia to announce a roadmap to becoming net-zero by 2050 by establishing decarbonisation targets across multiple sectors. These efforts have earned us recognitions, for example, as the “Best Bank for Sustainable Finance” in Asia by Global Finance and The Asset in 2024. These endeavours position us to guide capital flows and unlock sustainability opportunities for our clients.

DBS provides a full range of services in consumer, SME and corporate banking. As a bank born and bred in Asia, DBS understands the intricacies of doing business in the region’s most dynamic markets. DBS is committed to building lasting relationships with customers, as it banks the Asian way. Through the DBS Foundation, the bank creates impact beyond banking by supporting businesses for impact: enterprises with a double bottom-line of profit and social and/or environmental impact. DBS Foundation also gives back to society in various ways, including equipping underserved communities with future-ready skills and helping them to build food resilience.

With its extensive network of operations in Asia and emphasis on engaging and empowering its staff, DBS presents exciting career opportunities. For more information, please visit www.dbs.com.

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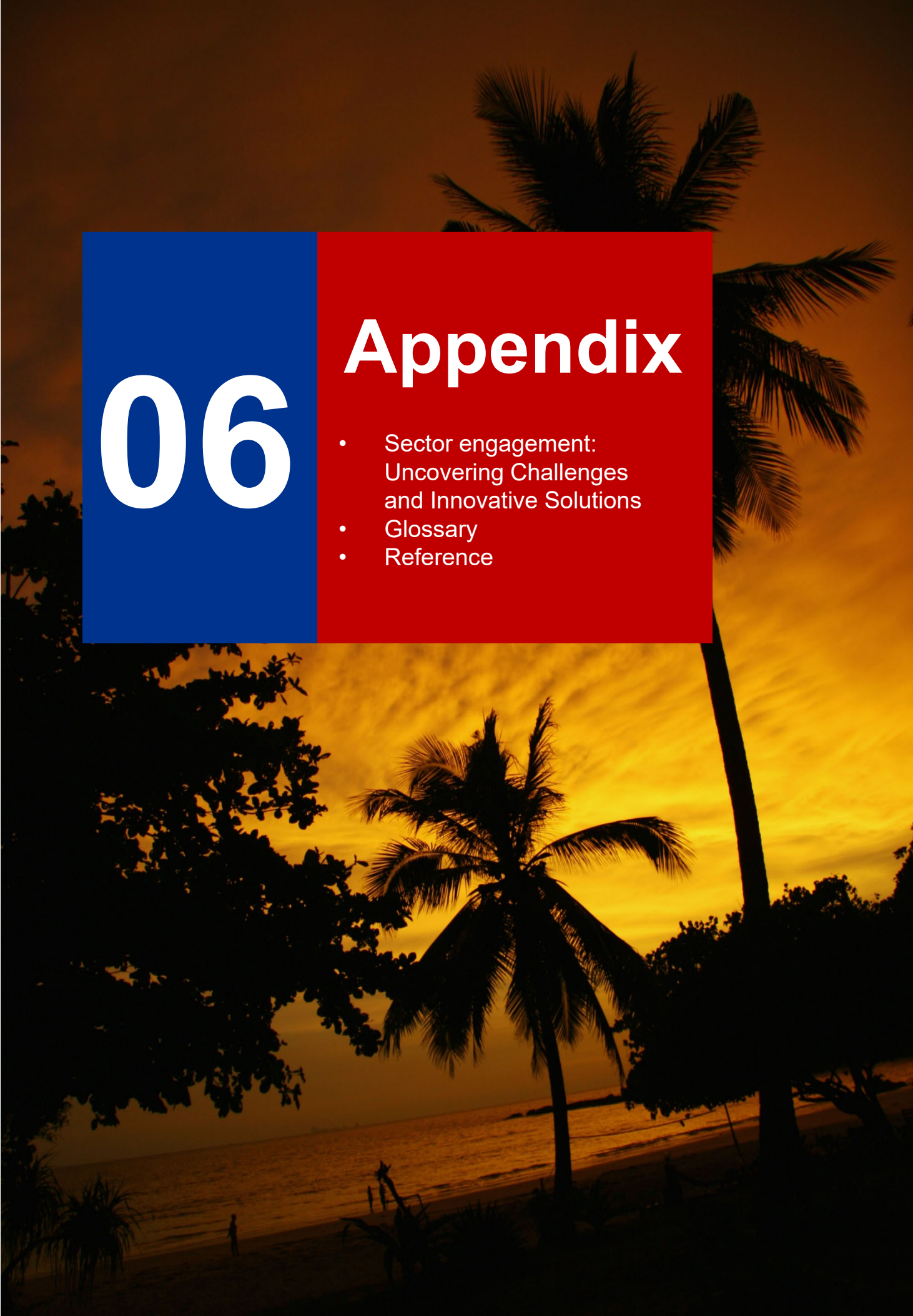


06 Appendix

- Sector engagement: Uncovering Challenges and Innovative Solutions
- Glossary
- Reference

Sector engagement – Apparel

The Apparel sector heavily relies on intricate global supply chains that often span multiple countries, are grouped in tiering categories, and involve numerous stakeholders. This complexity makes it challenging to implement consistent sustainability practices and acquire accurate data to monitor emissions across the entire supply chain, specifically for Scope 3 emissions. Market leaders have actively engaged their suppliers and enhance their supplier evaluation process to strengthen their supply chain transparency. Meanwhile, collaborating with other brands, non-governmental organisations (NGOs), and industry organisations can amplify efforts to decarbonise with shared best practices, resources, and innovations.

In addition, the production of textiles is resource-intensive, requiring significant amounts of water, energy, and chemicals, thus putting pressure on water usage and the emission from their own operations, impacting its Scope 1 & 2 emissions.

To better manage these emissions, market leaders have been leveraging energy management systems to monitor and control energy and water usage. Some companies have taken a step further to implement circular fashion with take-back programmes and designing Apparel for longer use and easier repair, thereby reducing the need for new materials and minimising waste.

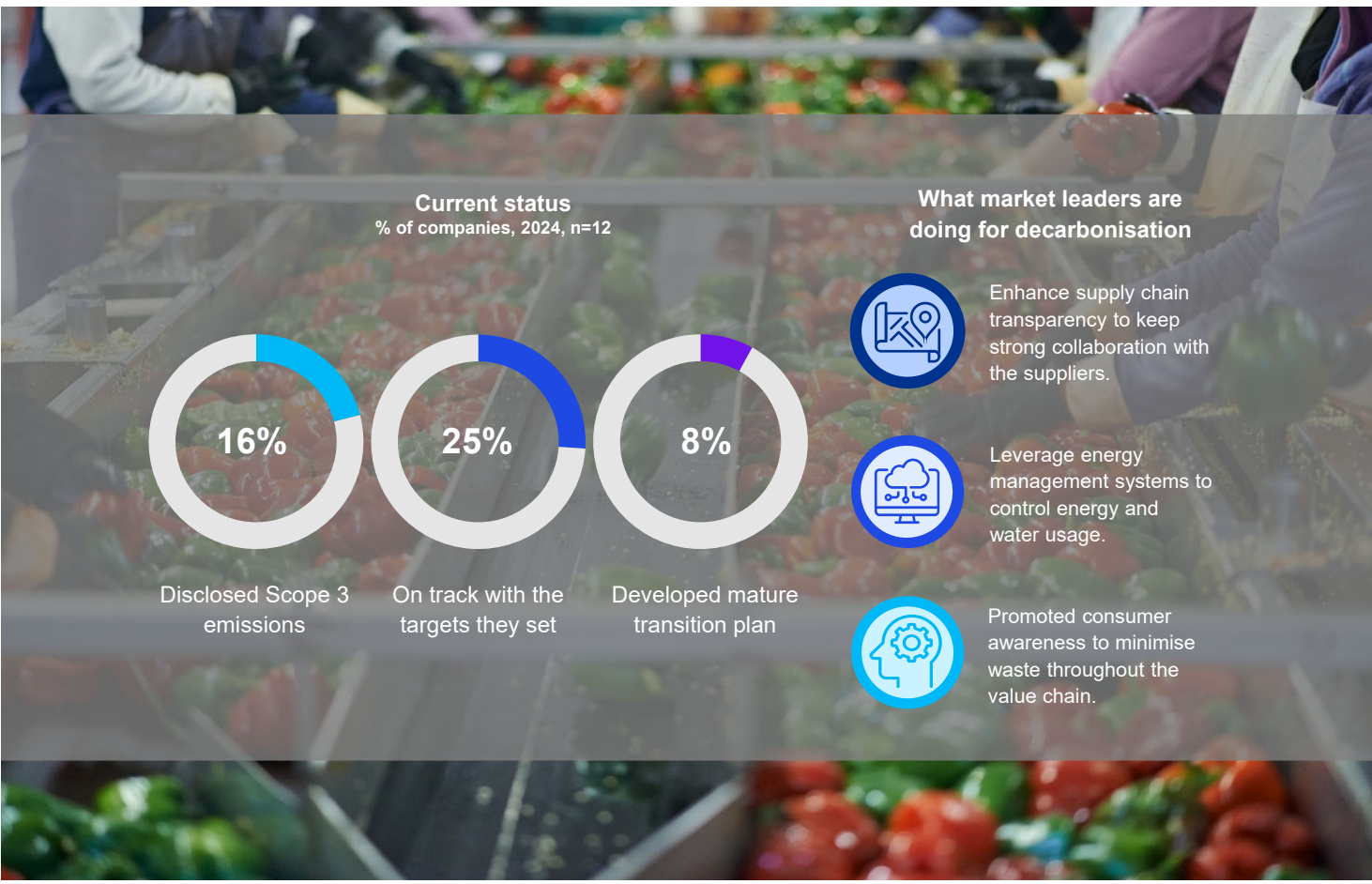
Furthermore, the prevailing consumer culture of fast fashion, characterised by rapid production cycles and low-cost garments, poses a significant barrier to decarbonisation. This demand encourages overproduction and waste, making it difficult for brands to adopt more sustainable practices without sacrificing profitability. Educating consumers about the environmental impacts of their purchasing decisions can drive demand for sustainable products.

Sector engagement – Food & Beverage

The Food & Beverage sector faces a long and complex supply chain that spans from agriculture, and processing to product distribution. Enhancing supply chain transparency will be the first step to addressing the challenge. Active supplier engagement and evaluation is key to ensuring strong collaboration with the suppliers.

The Food & Beverage sector is characterised by high energy and water demands, impacting its Scope 1 & 2 emissions, which complicate efforts to reduce GHG emissions. Market leaders have been leveraging smart energy and water management systems to monitor and control energy and water usage.

The entire lifecycle of food production involves significant energy, water, and land use that generates GHG emissions. It is particularly important to tackle food waste, which is a material ESG issue in the Food & Beverage sector due to resource inefficiency. At present, most of HKSAR's food waste is disposed of at landfills together with other municipal solid waste (MSW). In 2022, there were around 11,130 tonnes of MSW disposed of at landfills each day. Of these, about 3,300 tonnes (30%) were food waste, constituting the largest MSW category[30]. Market leaders have leveraged better inventory management practices, improved Logistics management, and promoting consumer awareness to minimise waste throughout the value chain. Programmes such as donating excess food to local charities or food banks and creating new products from unsold items are developed to repurpose surplus food that would otherwise go to waste. Such initiatives not only reduce waste but also contribute to community support and sustainability.



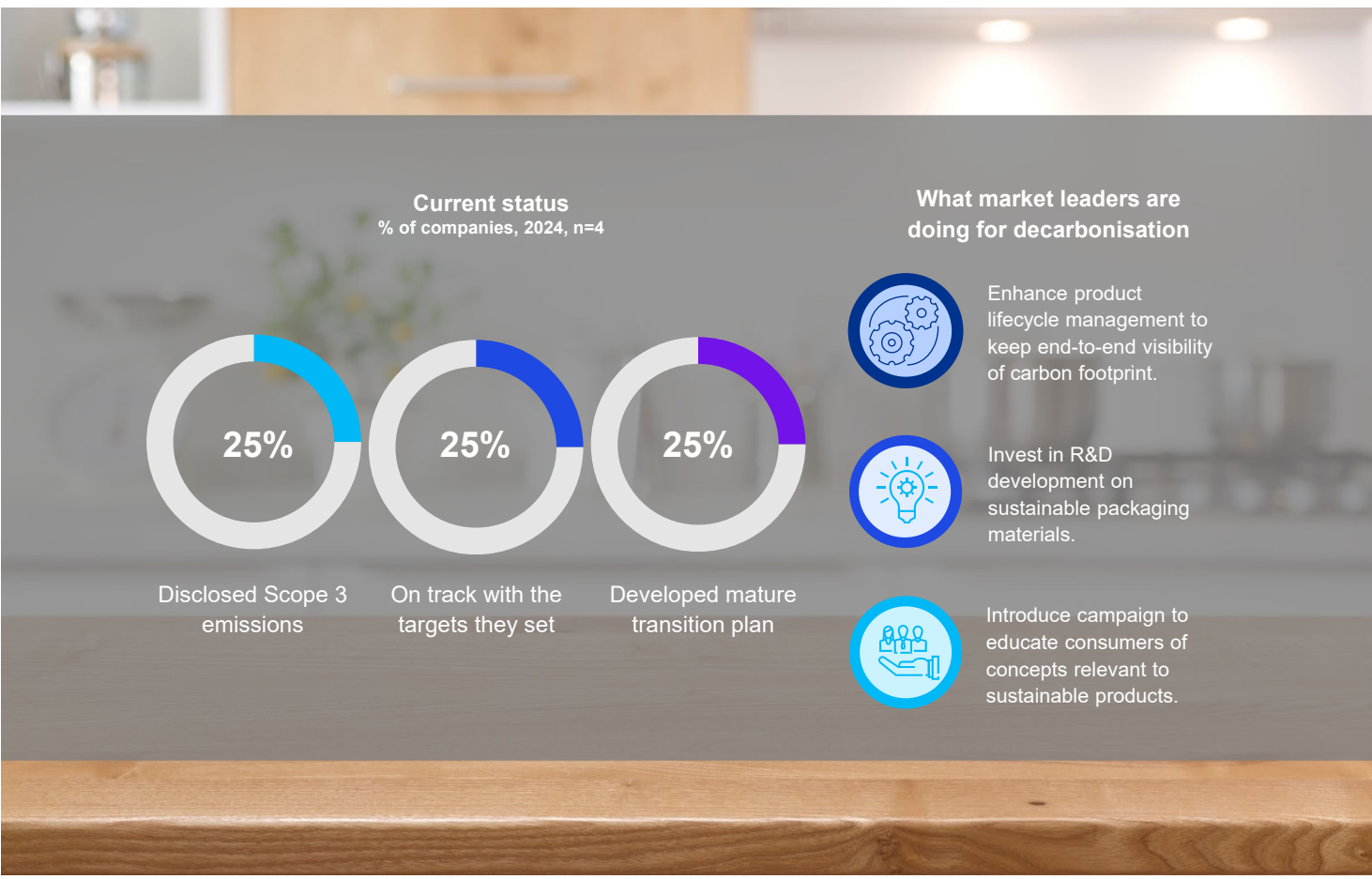
[30] Environmental Protection Department, "Food Waste Challenge". Published January 2025. Retrieved January 2025, from https://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/food_waste_challenge.html

Sector engagement – Home Products

Product lifecycle emission management spans from production, transportation, usage, to disposal. Many Home Products are made from materials that have high carbon footprints such as plastics, metals, and certain types of wood. Market leaders have started implementing Life Cycle Assessment (LCA) practices to help understand the environmental impact of their products from production to disposal.

Home Products often require more packaging for Logistics and product protection purposes. To address this issue, sustainable packaging materials should be prioritised, such as biodegradable plastics, recycled paper, plant-based materials. Reducing the size and weight of packaging can also contribute to less waste and lower emissions during transportation.

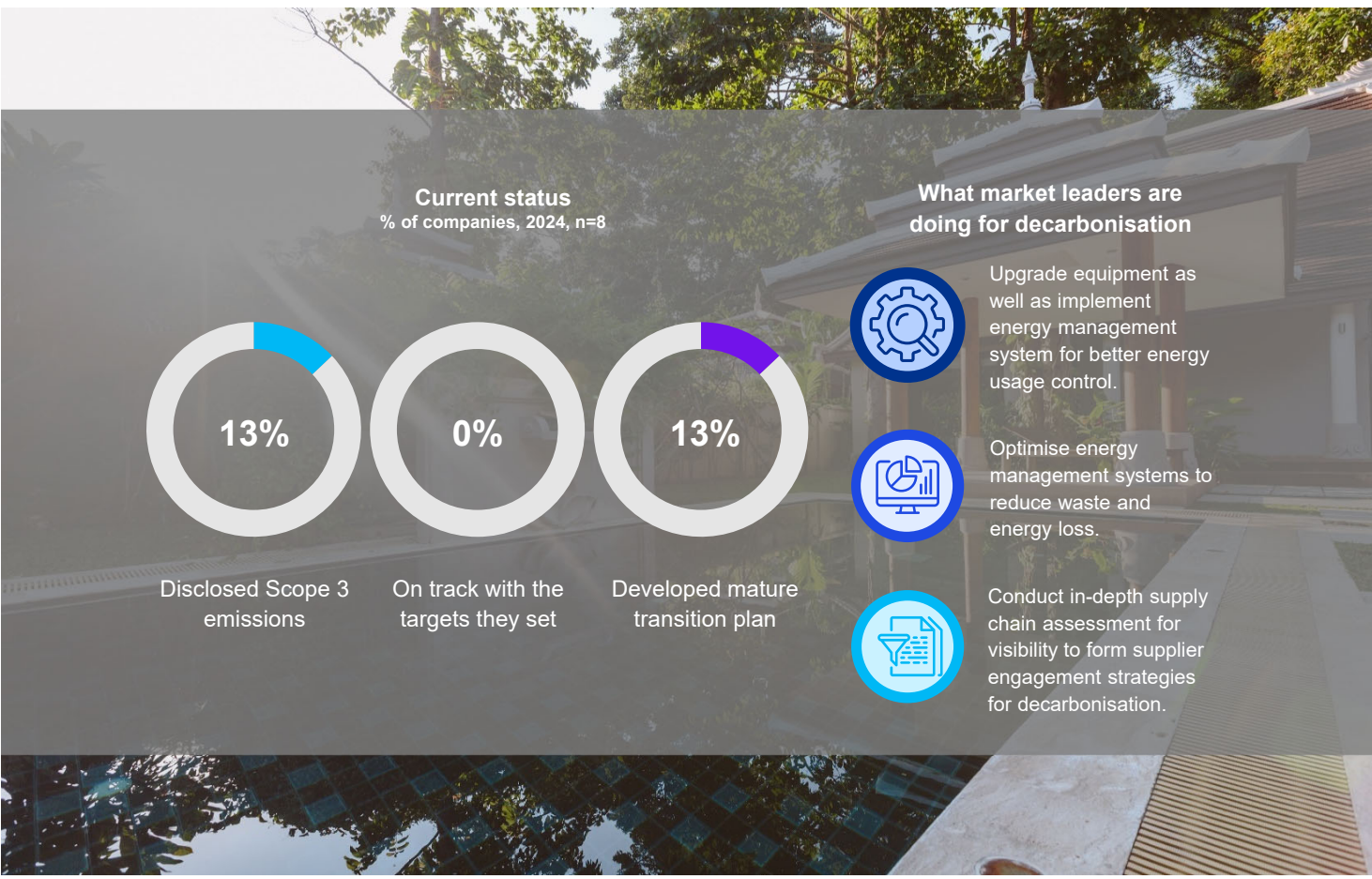
Moreover, many consumers still prefer traditional Home Products that may not be environmentally friendly. The challenge lies in shifting consumer preferences towards more sustainable options, which often come at a higher price point. Educating consumers about the benefits of low-carbon products and enhancing brand image with stronger ESG efforts is crucial for driving demand.



Sector engagement – Hospitality

Many Hospitality businesses face operational inefficiencies that contribute to higher emissions. For instance, outdated heating, ventilation, and air conditioning systems, as well as inefficient lighting and appliances, can lead to excessive energy consumption. Gradually upgrading the equipment as well as implementing an energy management system for better energy usage control can help reduce GHG emissions from excessive energy consumption.

Considering the diverse services (e.g. Food & Beverage, wellness programmes, entertainment) a Hospitality business offers, the complexity of its value chain could be a combination of many other sectors. An in-depth supply chain assessment will improve the transparency of the companies' current supplier profiles, to better form supplier engagement strategies for decarbonisation.



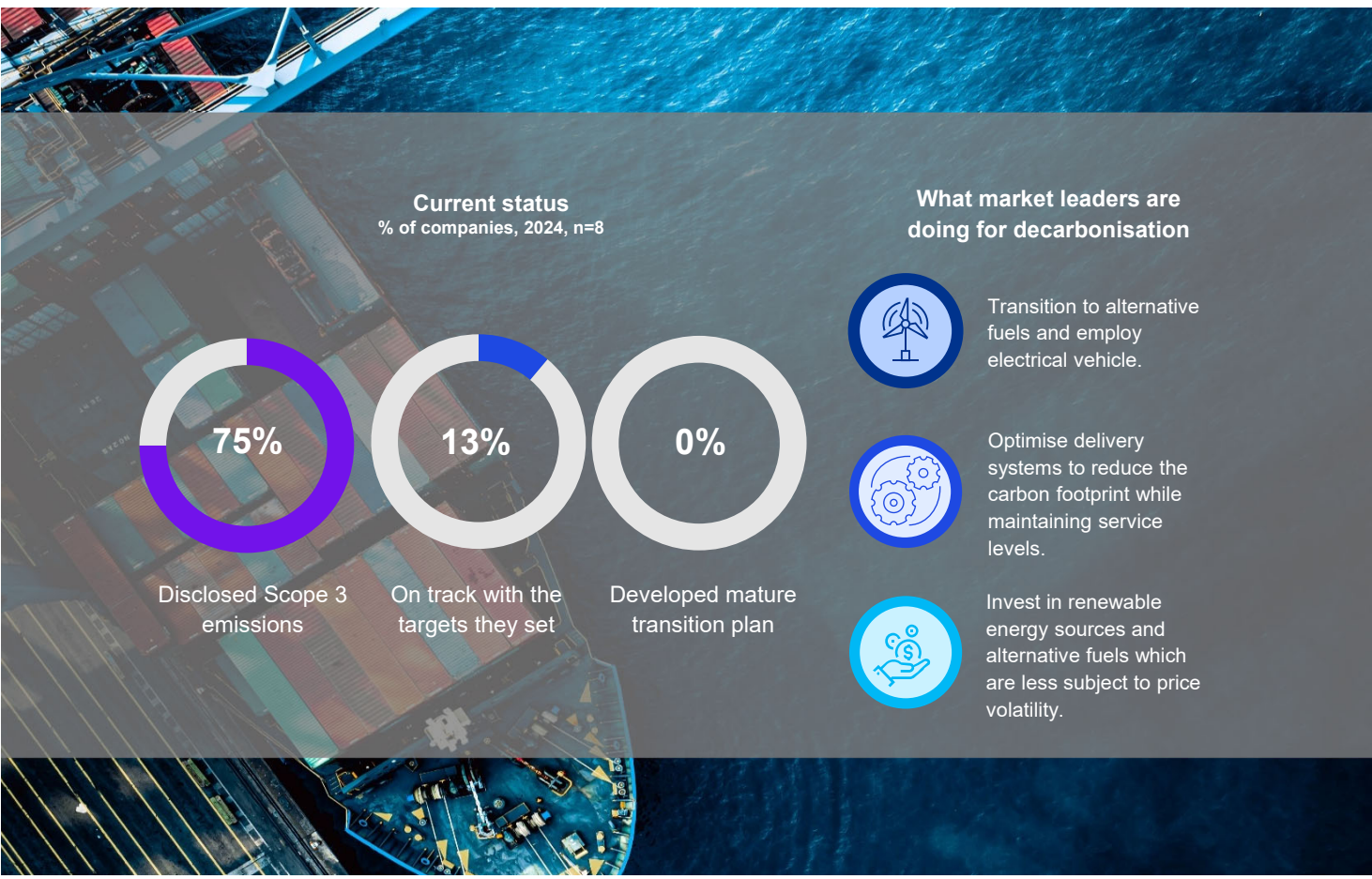
Sector engagement – Logistics

The Logistics sector makes over a third of global carbon dioxide emissions, making it the largest-emitting sector in numerous countries, according to the International Organisation for Standardisation (ISO)[31]. Reasons for high Scope 1 & 2 emissions include heavy reliance on fossil fuels. Industry players has started investing in renewable energy sources to reduce reliance on fossil fuels.

At the same time, market leaders have actively explored the adoption of alternative fuels such as biofuels, and hydrogen. Employing electrical vehicles and implementing advanced Logistics software can also help optimise delivery routes and reduce unnecessary mileage, thereby reducing emissions.

In addition, the rise of e-commerce from consumer shopping behaviours has led to more fragmented delivery systems, where packages are often small and dispersed. This can result in inefficient delivery routes and increased emissions per package delivered. This challenge lies in optimising these delivery systems to reduce GHG emissions while maintaining service levels.

Finally, price volatility in fuel and transportation can impact the ability of Logistics companies to invest in sustainable practices. Economic fluctuations can lead to prioritising short-term cost savings over long-term sustainability investments. Collaborating with suppliers and customers can support collective decarbonisation efforts with shared resources, knowledge, and best practices.



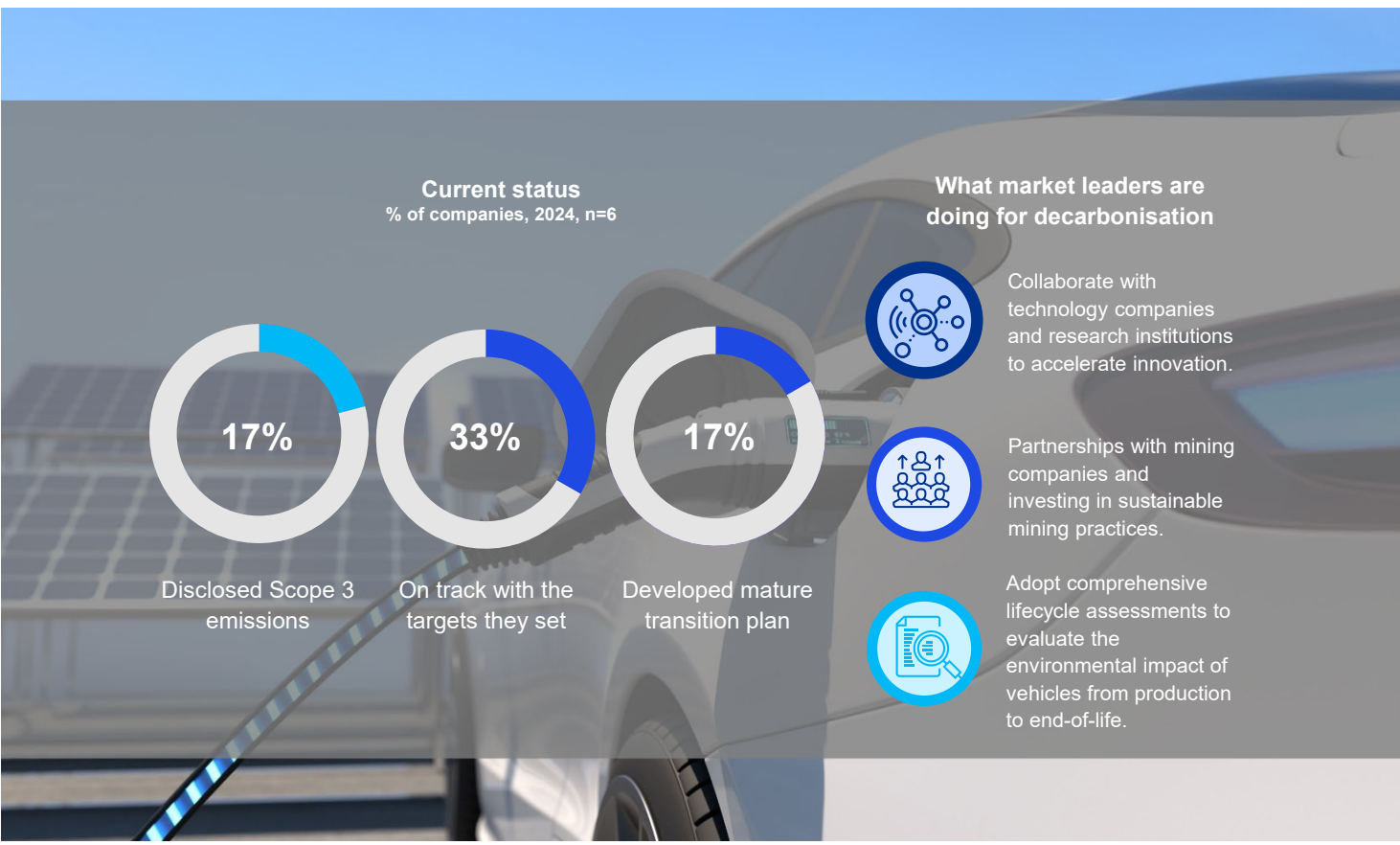
[31] International Organisation for Standardisation, "Towards a Net-zero Logistics Sector". Published January 2023. Retrieved November 2024, from https://www.iso.org/contents/news/2023/01/a-net-zero-Logisticssector.html

Sector engagement – Transportation & Automobile

Car manufacturers are producing more electronic vehicles (EVs) in response to market demand. The shift towards EVs requires increased amounts of raw materials, such as lithium, cobalt, and nickel, which are essential for battery production. The availability and sustainability of these materials pose significant challenges, as their extraction and processing can have substantial environmental impacts (e.g. GHG emissions, air pollution, biodiversity, waste, tailings, water and effluents).

Continuous investment in research to develop alternative materials is crucial to reduce reliance on critical raw materials. Although there is no shortcut in R&D, collaborating with technology companies and research institutions may accelerate innovation and bring new solutions to market more quickly. At the same time, partnerships with mining companies and investing in sustainable mining practices can also help secure a stable supply of necessary materials as well as maintaining supply chain transparency.

In addition to raw material and technology challenges, addressing carbon footprint of vehicles requires a comprehensive approach that considers emissions throughout the entire lifecycle – from production and transportation to usage and disposal. Implementing effective lifecycle assessments and management strategies can be challenging for manufacturers. Companies may need to adopt comprehensive lifecycle assessment practices to evaluate the environmental impact of their vehicles from production to end-of-life. This approach can help identify areas for improvement and guide decision-making towards more sustainable practices. Especially for end-of-life management, embracing circular economy principles can help reduce waste and emissions. This includes designing vehicles for easier disassembly and recycling, as well as establishing take-back programmes that allow consumers to return vehicles for responsible recycling and upcycling.



Glossary

Sector	Definition
Apparel	Companies engaged in the creation and retail of garments, shoes, and fashion accessories, offering a spectrum from essential goods to luxury products.
Food & Beverage	Companies engaged in the transformation, packaging, and delivery of raw food materials and semi-processed food products into consumable foods and beverages.
Home Products	Companies engaged in the manufacture, distribution, and sale of goods and services designed for domestic use, including home electricity, power tools, household appliances, etc.
Hospitality	Companies that provide food, drink, and accommodation for customers of restaurants, bars, etc. or guests at hotels.
Logistics	Companies that provide services in the movement and storage of goods, services, and information from the point of origin to the final consumer.
Transportation & Automobile	Companies engaged in the design, manufacture, and maintenance of vehicles, including cars, trucks, motorcycles, and buses, that facilitate the mobility of people and goods.

Abbreviation	Description
CDP	Carbon Disclosure Project
ESG	Environmental, Social, and Governance
EU	European Union
EV	Electric Vehicles
GDP	Gross Domestic Product
GHG	Greenhouse Gas
Gfanz	Glasgow Financial Alliance for Net Zero
HKEX	Hong Kong Exchanges and Clearing Limited
HKMA	Hong Kong Monetary Authority
HKPC	Hong Kong Productivity Council
HKSAR	Hong Kong Special Administrative Region
ICE	internal Combustion Engine
IFRS	International Financial Reporting Standards
ISO	International Organisation for Standardisation
ISSB	International Sustainability Standards Board
IPCC	The Intergovernmental Panel on Climate Change of United Nations
LCA	Life Cycle Assessment
SASB	Sustainability Accounting Standards Board
SBT	Science-Based Targets
SBTi	Science-Based Targets Initiatives
SFC	Securities and Futures Commission
SLL	Sustainability-linked Loans
SPTs	Sustainability Performance Targets
TCFD	Task Force on Climate-related Financial Disclosures
TPT	Transition Plan Taskforce
WWF	World Wide Fund for Nature

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Thank you