Counting to 3: Navigating Singapore's Scope 3 Emissions Journey Together

A joint report by Schneider Electric and the Institute of Singapore Chartered Accountants

July 2024

Schneider Electric

ISCA Global Mindset, Asian Insights

Executive summary

Singapore has been taking significant steps forward in emissions management and reporting. Starting from 2025, all listed companies in Singapore will be required to make climate-related disclosures based on local reporting standards, using the International Sustainability Standards Board (ISSB) sustainability standards disclosure framework. This move aims to enhance transparency and accountability regarding climate impact. Large non-listed companies will follow suit from 2027.

These requirements align with global trends, as other jurisdictions such as the European Union (EU) introduce similar mandates based off ISSB's framework. The new obligations will follow a phased implementation and necessitate assurance on Scope 1 and Scope 2 emissions immediately, with Scope 3 emission reporting coming online in 2026.

This report, **Counting to 3: Navigating Singapore's Scope 3 Emissions Journey Together**, by Schneider Electric and the Institute of Singapore Chartered Accountants (ISCA), analyses the perspectives of over 500 of Singapore's senior business leaders involved in developing the sustainability strategies for their organisations. These leaders represent companies ranging in size from Small and Medium Enterprises (SMEs) to large multinational corporations and come from a broad range of industries.

The study sets out to explore the insights of these leaders around emissions management and reporting overall and specifically the requirements relating to Scope 3 emissions, as well as the main challenges and barriers to progressing emissions reduction initiatives.

Throughout the study, findings show a correlation between a lack of understanding of key areas of management of greenhouse gas (GHG) emissions and weaker sustainability-related planning, sustainability target setting, and ultimately inaction to reduce GHG emissions.

In fact, less than 40% of respondents claim a strong understanding of Scope 3 emissions, with those in more senior positions more likely to indicate they have a strong knowledge of emissions management

than more junior counterparts. As an example, while 58% of Board Members and 51% of C-level respondents have a strong knowledge of Scope 3 emissions, only 27% of Senior Managers do.

Differences are also seen across roles and responsibilities, with the self-reported knowledge of those in Sustainability and General Management roles stronger than those in Operations & Supply Chain roles across the board.

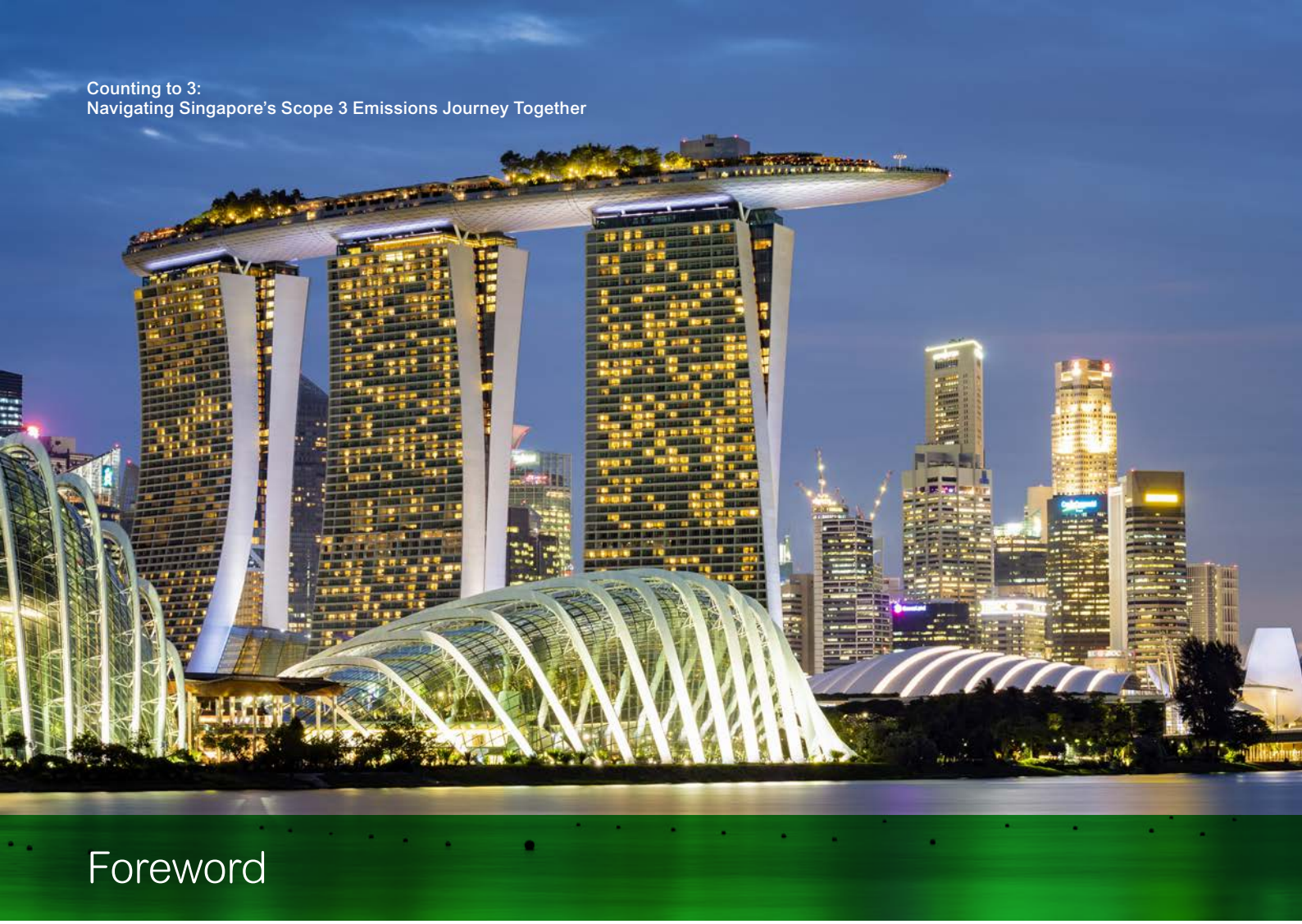
While over three quarters (76%) of business leaders say they have completed feasibility studies to better understand their organisation's readiness to measure, report, and manage its Scope 3 emissions, only 6% say their organisation is fully measuring and analysing Scope 3 emissions, lagging significantly behind Scope 1 (52%) and Scope 2 (30%) emissions.

As a result, confidence in meeting Scope 3 emissions targets is significantly lower, with only 27% believing these are highly achievable, compared to 40% for Scope 1 and 31% for Scope 2 emissions. Leaders from large businesses are significantly more likely to indicate they have set targets for Scope 3 (54%) compared with those at small businesses at 31%.

The report identifies four groupings of organisations in Singapore in relation to progress around managing Scope 3 emissions: **High Adopters** (10%), **Moderate Adopters** (30%), **Low Adopters** (38%), and **Emerging Adopters** (22%). From this analysis, the industries in Singapore identified as containing the highest proportion of High and Moderate Adopters combined are Consumer Goods, Energy & Mining, Healthcare & Pharmaceuticals, Financial Services, and Engineering & Construction.

Overall, a lack of human and financial resources, commercial motivation and access to fit-for-purpose technological infrastructure are highlighted by respondents as the top barriers to progressing Scope 3 emissions reduction agendas and initiatives. To overcome these challenges, the study provides six key recommendations for Singapore organisations. These include dismantling knowledge silos and education hierarchies by investing in training at all organisational levels, as well as upskilling and reskilling accountancy and finance professionals to take on Scope 3 reporting to address expertise and talent gaps.

Other recommendations encourage business leaders to act decisively to implement emissions data gathering protocols early as collation can be complex and time-consuming; prioritising efforts towards Scope 3 categories with material impact rather than those that are the easiest to obtain data for; communication and mutual understanding must be a priority in value chains to ensure companies of all sizes can work in lockstep together; and finally, adopting science-based target setting (SBTi), which is more likely to drive meaningful actions within organisations, helping define a clear and credible path for success.



Foreword

Alongside many other nations in the world, Singapore has set ambitious net zero targets. Unlike many other jurisdictions, it is backing up words with actions, and both the government and private sectors are making headway on numerous fronts.

Arguably the announcement earlier this year that climate reporting using the ISSB sustainability standards disclosure framework will be obligatory from early 2025 will drive a step change in these actions.

While there is no decision yet on smaller businesses, given the responsibility of governments worldwide to guide corporate behaviour through regulatory levers, it is a likely next step, and many more changes can be expected to follow as the focus on mitigating climate change increases.

These changes have the potential over time to significantly alter the dynamics of the business landscape, and this report finds that a large majority in Singapore have a long journey ahead to be ready to meet the standards that will be required.

Leaders from larger businesses are significantly more likely to indicate they have set targets for Scope 3 (54%) compared with those at small businesses at 31%. Also, when looking specifically at the 15 categories of Scope 3 emissions, we see varying stages of progress being achieved with management.

While barriers vary by size and industry, overall, more than four and 10 organisations cite a lack of talent, finances, a compelling business case, and technological infrastructure as barriers in advancing emissions management and reporting. These challenges are interconnect around the need for organisations to be able to gather and interpret accurate data in an efficient and timely way to successfully manage Scope 3 emissions. This is a core issue we are helping our customers across all industries in Singapore to solve.

If reporting requirements do migrate to small businesses, many SMEs will need government support to navigate the intricacies of mitigating Scope 3 emissions as well as fair support from larger

companies. Many are calling for subsidies and help to find the talent needed. However, based on the positive attitude of the vast majority of respondents, there is confidence the Singapore government will find innovative ways to support this important group of the business community.

As with all initiatives to tackle climate change, everyone needs to be in lockstep on this journey: government and private sector businesses of all sizes and across all industries. I hope this report shines a light on the most pressing areas that need to be addressed if we are to make the changes that will facilitate Singapore's path to net-zero.

We stand ready to play our part, partnering with organisations of all sizes as they continue on their journey.

Yoon Young Kim
Cluster President
Schneider Electric Singapore and Brunei

Message from the Institute of Singapore Chartered Accountants

We are delighted to collaborate with Schneider Electric to delve deeper into Scope 3 emissions management and reporting.

Sustainability is a megatrend that is reshaping the accountancy profession. In 2022, ISSB was established as a sister board to the International Accounting Standards Board (IASB)[1]. The IASB has been developing and publishing the IFRS, which is considered the de facto global language of financial reporting. Setting up the ISSB in a similar arrangement to the IASB reflects the important role of accountants in sustainability reporting.

Increasingly, organisations turn to the accountancy profession to fulfil important functions, such as sustainability reporting and assurance. This burgeoning of responsibilities offers a wealth of opportunities to the accountancy profession. To take full advantage of available opportunities, accountants must upskill and reskill to keep up with the latest developments in sustainability. It is also vital for the profession to acquire key insights into sustainability trends and patterns.

Recognising these needs, ISCA has been conducting research studies to identify the skills gaps and needs for accountants to take on more roles in sustainability.

While it is important to know how much profit an organisation makes, it is even more important to understand how the profit is being made. The accountancy profession is key to reporting sustainability performance to shed light on this. Having consistent and comparable sustainability reporting will help stakeholders make informed decisions in support of sustainability. As Peter Bakker, president of the World Business Council for Sustainable Development, once said, "Accountants would save the world".

At ISCA, we cannot agree more.

Kang Wai Geat
Divisional Director
(Professional Standards)
ISCA

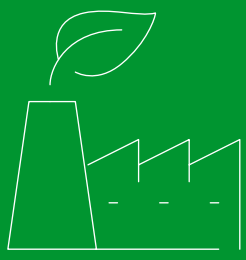
1. Both ISSB and IASB sit within the International Financial Reporting Standards (IFRS) Foundation.

Methodology

This report presents and analyses the findings of a quantitative survey of over 500 senior business leaders based in Singapore involved in the sustainability strategies for their organisations that was conducted in March 2024, as well as supplementary in-depth interviews with local senior sustainability and financial professionals.

The study sets out to explore the perspectives of these leaders on emissions management and reporting overall and specifically the requirements of managing and reporting on Scope 3 emissions, as well as the main challenges and barriers they are focused on progressing emissions reduction initiatives.

The respondents' roles are spread across General Management, Finance, Operations & Supply Chain, and Sustainability, at the seniority levels of Board Member, C-level, Director, and Senior Manager.



The organisations they represent range in size from SMEs to large multinational corporations. They also come from a broad range of industries: **Consumer Goods**; **Education and Professional Services**; **Energy & Mining**; **Engineering & Construction**; **Financial Services**; **Food, Hospitality and Tourism**; **Healthcare and Pharmaceutical**; **Information Technology**, **Technology and Communications**; **Manufacturing**; **Real Estate**; **Retail**; and **Transportation**.

Emissions reporting overview

Before delving into the findings from our research, it is worth pausing to gain a full appreciation for emissions management and reporting.

GHG are categorised by the Greenhouse Gas Protocol[2] into three groups: Scope 1 emissions are those that stem directly from an organisation's activities; Scope 2 emissions cover indirect emissions and largely consist of the carbon emitted from buying and using power – i.e. electricity to power manufacturing plants, or run the lighting in an office. Scope 3 emissions are those that come from upstream and downstream activities. For example, in the construction industry, these may consist of the emissions connected to the manufacture and transportation of cement, or steel, as well as how those products are disposed of when a building is torn down.

2. An initiative by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)

"In the past year, we see emissions reduction efforts intensifying beyond Scope 1 and 2 to Scope 3 as well. The widened scope reflects organisations' continuous commitment to sustainability targets. For instance, Ascott's parent company CapitaLand Investment Limited incorporated three new Scope 3 categories deemed material to its operations – Purchased goods and operations, Fuel- and energy-related activities, and Upstream transportation and distribution following the latest review of its full inventory of Scope 3 emissions."

Johnny Gao, Assistant Vice President, Sustainability, The Ascott Limited

Scope 3 emissions are harder to quantify because the information is bound up in supply chains which are beyond an entity's direct control and where blank spots around emissions data can exist – for example with suppliers that may not track emissions in detail.

For disclosure purposes, The Greenhouse Gas Protocol identifies 15 categories of upstream and downstream Scope 3 emissions, which we will explore further in this report. Measuring these emissions has numerous benefits, from the identification of sustainability opportunities and risks to providing organisations with the information they need to reduce their carbon footprint and support the global drive towards achieving net zero emissions.

"Scope 2 data can be generally associated to the electricity and water bill - therefore you could readily get that data. Scope 3 data in my industry comes from our logistics service providers who would be less forthcoming with disclosure or just give us a cost figure – if they are willing to do so."

Goh Yin Shian, Group Finance Director, Goodpack

"Most leadership seem to be aware Scope 3 is going to have a knock-on effect to their operations.

They know their customers are talking about it… their bankers are talking about it and therefore they need to have some appreciation of this topic."

Maria Teo, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

Definitions of upstream and downstream emissions categories

For more information, please see GHG Protocol's definitions here

	Category	Description
Upstream	**1:** Purchased goods and services	Extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2 – 8.
	2: Capital goods	Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year.
	3: Fuel and energy	Extraction, production, and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year, not already accounted for in Scope 1 or Scope 2.
	4: Upstream transportation and distribution	Transportation and distribution services purchased by the reporting company in the reporting year.
	5: Waste from operations	Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities not owned or controlled by the reporting company).
	6: Business travel	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).
	7: Employee commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company.
	8: Upstream leased assets and facilities	Operation of assets leased by the reporting company (lessee) in the reporting year and not included in Scope 1 and Scope 2 – reported by lessee.
Downstream	**9:** Downstream transport and distribution	Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company).
	10: Processing of sold products	Processing of intermediate products sold in the reporting year by downstream companies (e.g., manufacturers).
	11: Use of sold products	End use of goods and services sold by the reporting company in the reporting year.
	12: End of life treatment	Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life.
	13: Downstream leased assets and facilities	Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor.
	14: Franchises	Operation of franchises in the reporting year, not included in Scope 1 and Scope 2 – reported by franchisor.
	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.

Lack of knowledge a central issue

Education is critical for advancing Singapore's green agenda. We see correlations throughout the findings of this study that a lack of understanding of key areas of management of GHG emissions leads to weaker sustainability-related planning, sustainability target setting, and ultimately taking action to reduce GHG emissions.

Those who are more senior are generally more likely to say they have a stronger knowledge of emissions management than their junior counterparts. As an example, while 58% of Board Members and 51% of C-level respondents have a strong knowledge of Scope 3 emissions, only 27% of Senior Managers do.

Differences are also seen across roles and responsibilities. The self-reported knowledge of those in Sustainability and General Management roles is stronger than those in Operations & Supply Chain roles across the board. For example, 47% and 42% of those in General Management and Sustainability roles say they have a strong knowledge of Scope 3, while only 33% of those in Operations & Supply chain do.

The correlation between higher seniority and greater knowledge was viewed positively by interviewees. Senior executives might have more sustainability knowledge as they have more access to high level briefings on emissions management and strategies, the impact of regulatory implications, sustainability's impact on company valuation and shareholder returns, and their importance to organisations. Hence, stronger knowledge among those with higher seniority is seen as an enabler to meet future step changes for Scope 3 reporting requirements in Singapore. Change management will require both strategic understanding and the capability to implement changes; a stronger change management culture can be enhanced by understanding the 'why' behind sustainability. Hence, interviewees also noted that it is important to have more widespread sustainability knowledge across all functions and divisions.

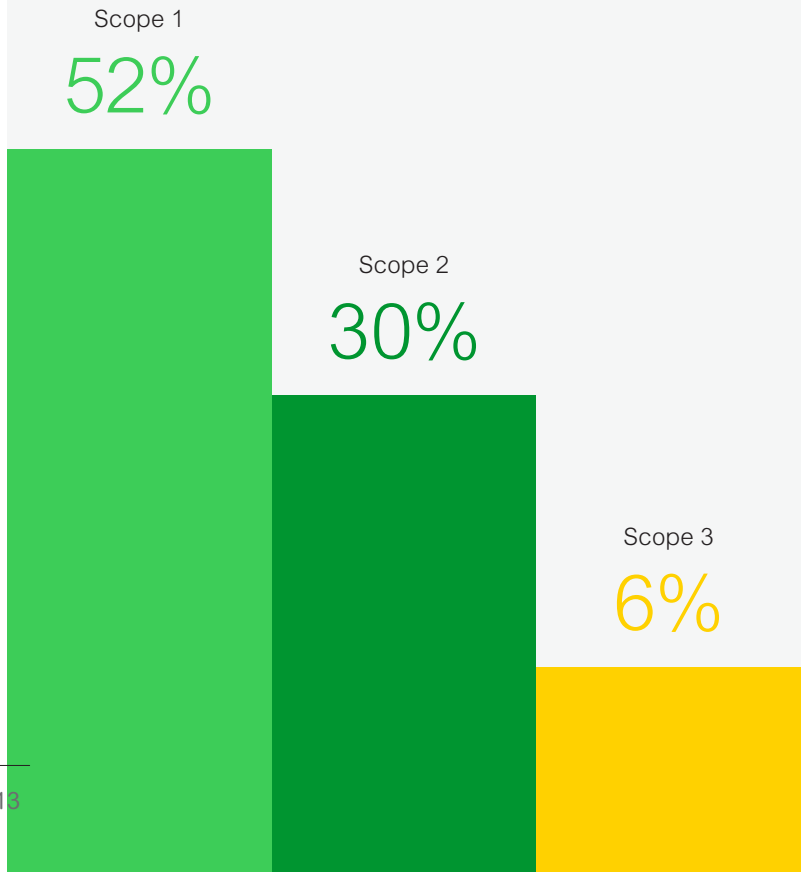
More action needed in measurement, management, and target setting

Higher self-reported knowledge correlates with better emissions management. There is a higher self-reported understanding in Scope 1, followed by Scope 2, and Scope 3, which strongly correlate with better emissions measurement and sustainability management. For instance, 52% of respondents' organisations are fully measuring and analysing Scope 1 emissions, this again drops off significantly for Scope 2 (30%), and Scope 3 (6%).

Target setting, and ideally setting science-based targets (SBTis), is particularly critical for driving meaningful action – this helps lay out a clearly defined path for organisations to manage the reduction of GHG emissions in a structured way.

Our study found that 42% of organisations have set a target for achieving Scope 1, 2 and 3 net zero

% fully measuring and analysing emissions



emissions, but only 32% have set net zero targets that they believe are achievable. Out of those that have not set targets, almost two-thirds (64%) believe their organisation should be doing so. Leaders from larger businesses are significantly more likely to indicate they have set targets for Scope 3 (54%) compared with those at small businesses at 31%.

Our interviewees suggested that organisations are less inclined to think about and tackle Scope 3 emissions amid other business priorities. They added that such short-term thinking is dangerous. This is because on average it can take 1.5 to 2 years to get data set-ups in place to measure and track any category of Scope 3 emissions. This is further complicated by the need to rely on third-party supply chain partners to provide this data. Because of this, companies might prefer 'ease' when it comes to deciding which of the 15 Scope 3 categories to prioritise. Depending on the company's industry and line of work, those categories with the easiest data access may advance more quickly.

The size of organisations influenced their sustainability journeys in two key ways. Larger organisations typically have more extensive supply chains, high reliance on third party sources, and substantial resources to shape the focal points of GHG emissions measurement and reporting. Smaller organisations, on the other hand, must work with limited resources; they also need to adapt to the changes required by the larger companies, especially if they are playing the role of a supplier to them. For smaller companies as suppliers, their GHG emissions measurement and reporting is often contingent on meeting the sustainability direction of larger companies. Hence, larger companies are key in shifting the sustainability perspective for smaller companies.

Our interviewees noted that sustainability efforts have been going both ways. Some larger companies are helping their suppliers with becoming sustainable through initiatives, such as subsidies, upskilling, and providing a basic reporting package to collaborate on key GHG emission areas. Smaller companies are also taking the opportunity to embark on sustainability to take advantage of new business opportunities, for instance, by providing solutions and becoming front runners in their respective fields.

GHG emissions target setting by scope and business size

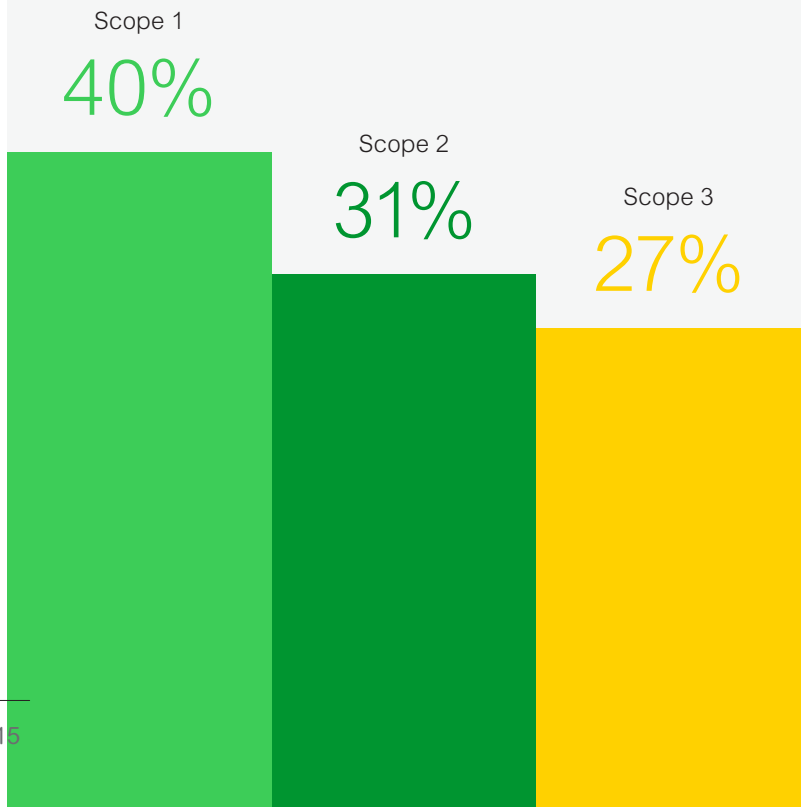
	Total	Small-sized business	Medium-sized business	Large-sized business
No set target date to achieve net zero and I agree with approach	21%	27%	24%	13%
Not set target date to achieve net zero and believe we should have	37%	42%	36%	33%
Combined not set	58%	69%	60%	46%
Set a date to achieve net zero and I believe it's achievable	32%	26%	32%	37%
Set a date to achieve net zero but don't think it's achievable	10%	5%	9%	17%
Combined set	42%	31%	41%	54%

Confidence in targets, approaches, and reporting is low

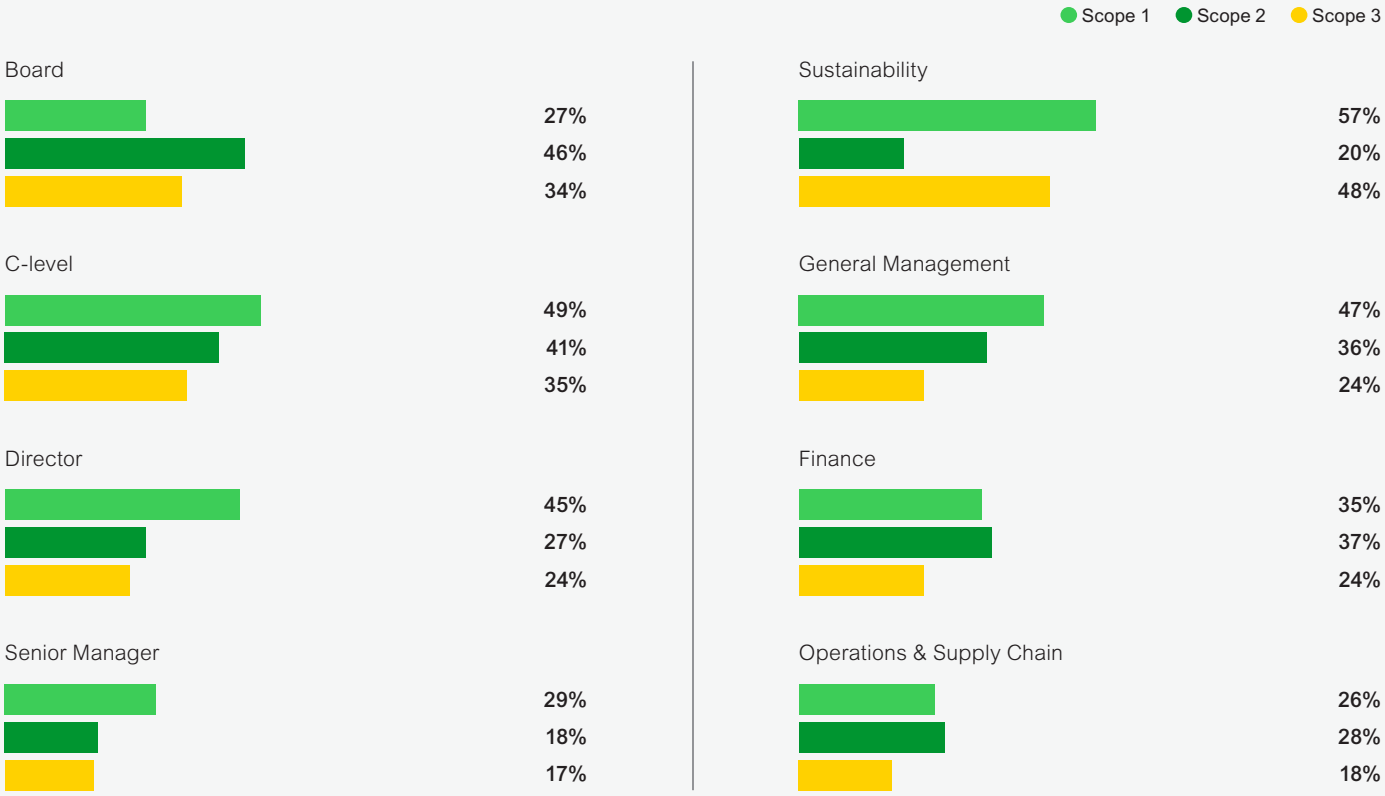
Achieving Scope 3 emissions reductions requires action from third parties or data from areas that have not been measured before, and this can present many unknowns. Hence, the level of control a company has over sustainability data from its suppliers can influence confidence in achieving sustainability targets for Scope 3 emissions.

Moreover, the sustainability targets set today are unlikely to be fulfilled by the same leaders. Companies often set emissions targets for 2030, 2050 or even 2100; this long runway means that it is unlikely for the same leaders to still be in their current roles to meet targets. For this reason, organisations may focus on what they know and address those areas, rather than embark on new areas.

% of respondents who believe targets are highly achievable in each Scope



% of respondents who believe targets are highly achievable, by scope



This may lead to a more focused approach to Scope 3; which could mean that some junior members do not see effort into sustainability in their areas of work. Hence, junior members may have lower confidence in achieving any sustainability targets.

When asked about the achievability of GHG targets in the present, four in five respondents (79%) believe that their GHG targets are aggressive enough. When self-benchmarking, less than half of respondents (45%) overall believe their organisation is leading most or all industry peers in its emissions management targets – but this varies widely by management level with 62% of C-level respondents believing this, compared with just 24% of Senior Managers. Similarly, those in General Management positions (59%) are significantly more likely to believe this than those in Operations & Supply Chain roles (26%).

"The small and medium enterprises are grappling with the issue of setting targets for their Scope 1 and Scope 2 emissions.

Without having these targets, they are unlikely to look at whether or not they should be tackling Scope 3.

In order to set that target, they first must start the quantification of Scope 3."

Maria Teo, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

When assessing this by level and role, again we see disconnects – with senior leaders as well as those in general management and sustainability roles typically more likely to believe that emissions targets are highly achievable, compared with more those at a more junior level and in operations and supply chain roles.

"Companies have a huge dependency on the ecosystem when they set net zero targets and develop plans to deliver these targets.

For example, if the national energy grid or the energy transition strategy of a country is not set up to achieve net zero, companies will be hindered by such limitations in the energy mix or energy grid, despite their best efforts.

Everyone in the value chain needs to be marching towards the same level of net zero ambition."

Eric Lim, Chief Sustainability Officer, UOB

Believe organisation is exceeding most or all industry peers

Board	49%
C-level	62%
Director	43%
Senior Manager	24%
Sustainability	41%
General Management	59%
Finance	51%
Operations & Supply Chain	26%

Benchmarking Scope 3 progress

Scope 3 presents the next frontier of emissions management and is still unchartered territory for many organisations in Singapore. While over three quarters (76%) have completed a feasibility study to better understand their organisation's readiness to measure, report, and manage its Scope 3 emissions, nearly two thirds (63%) say they are not currently measuring all categories of Scope 3 emissions that are relevant to their operations, with those in Operations & Supply Chain roles most likely to indicate this.

- Measuring all relevant categories: 37%
- Measuring but not for all categories: 39%
- Not measuring, but plan to in next 12 months: 21%
- Not measuring and no plans: 3%

Our research identifies four groupings of organisations in Singapore based on different stages of progress – **High Adopters**, **Moderate Adopters**, **Low Adopters**, and **Emerging Adopters**. This is based on their self-reported progress in managing Scope 3 emissions.

Organisations are grouped based on the extent of their Scope 3 reporting implementation as defined by the GHG protocol, which includes both upstream and downstream categories.

The four groups we have placed organisations into based on their progress are:

High Adopters: respondents working in organisations which are fully progressed in managing emissions in a majority (at least 8 out of 15) of categories. The High Adopters make up approximately 10% of our sample.

Moderate Adopters: respondents working in organisations which are fully progressed in managing emissions in between 5 and 7 activity categories. The Moderate Adopters segment makes up approximately 30% of our sample.

Low Adopters: respondents working in organisations which are fully progressed against between 1 and 4 categories. Low Adopters comprise 38% of our sample.

Emerging Adopters: respondents working in organisations which are fully progressed against no categories make up 22% of our sample.

Our segmentation based on progression against each of the 15 GHG emission categories is strongly correlated with both knowledge of managing GHG emissions and confidence in achieving Net Zero emissions by 2050.

For instance, amongst the High Adopters segment, 54% claim to have a strong level of awareness and understanding of what is involved in managing the various GHG emissions categories, compared with 39% of Moderate Adopters, 26% of Low Adopters and only 7% of Emerging Adopters. Conversely, 5% of High Adopters have limited or no understanding of how to manage GHG emissions, compared with 14% of Moderate Adopters, 27% of Low Adopters and 55% of Emerging Adopters. These results are shown below.

Similarly, there is a strong correlation between segment membership and stated likelihood of achieving Net Zero emissions by 2050. For instance, amongst the High Adopters segment, 58% claim to have a high likelihood of reaching Net Zero by 2050, compared with 39% of Moderate Adopters, 28% of Low Adopters and only 11% of Emerging Adopters. Conversely, just 3% of High Adopters claim limited or no chance of meeting Net Zero by 2050 compared with 15% of Moderate Adopters, 26% of Low Adopters and 52% of Emerging Adopters. These results are shown below.

Average awareness and understanding of emissions management

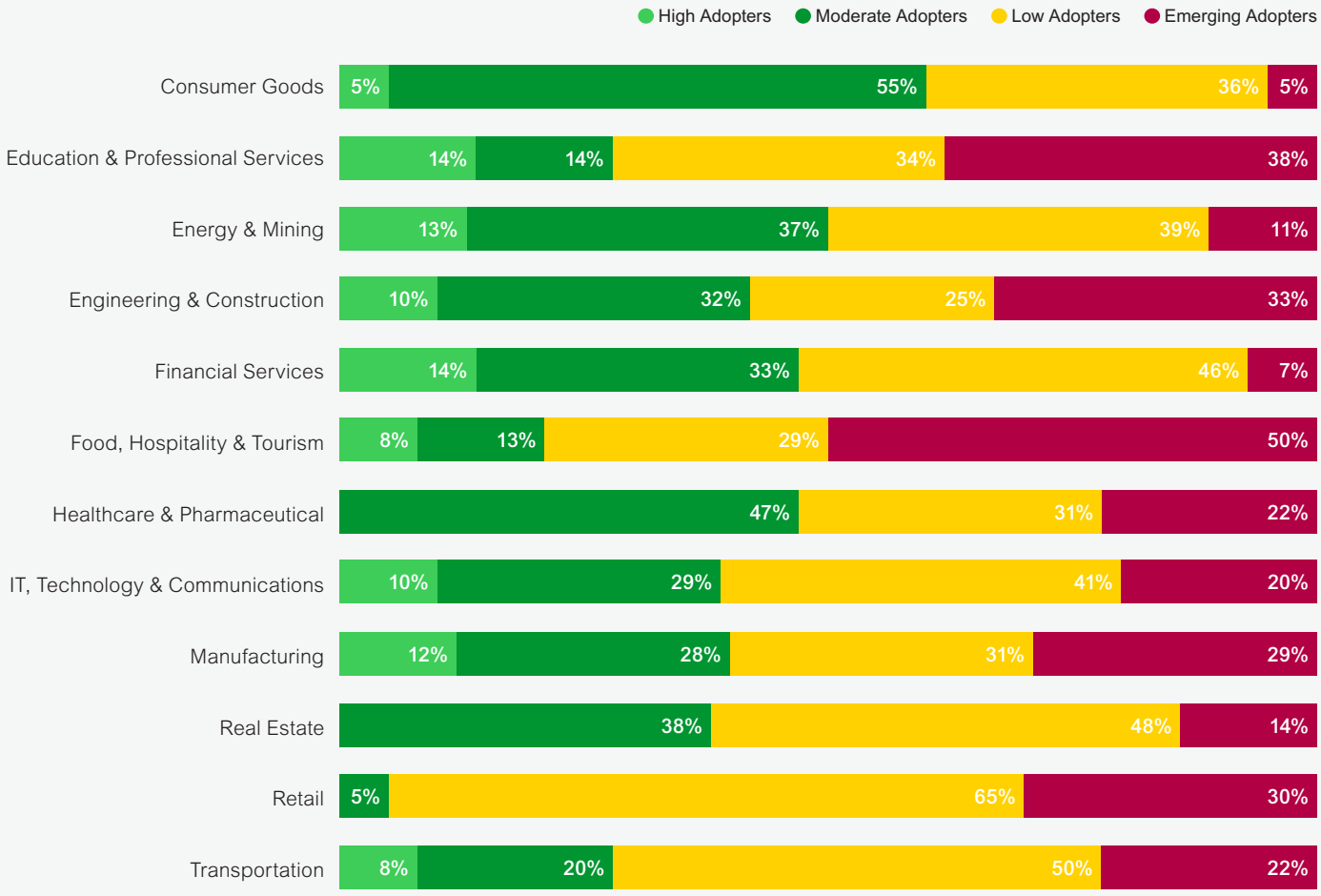
	High Adopters	Moderate Adopters	Low Adopters	Emerging Adopters
Strong awareness and understanding	54%	39%	26%	7%
Average awareness and understanding	41%	47%	47%	38%
Limited or no understanding and awareness	5%	14%	27%	55%

Average likelihood of achieving net zero emissions by 2050

	High Adopters	Moderate Adopters	Low Adopters	Emerging Adopters
High likelihood	58%	39%	28%	11%
Average likelihood	39%	46%	46%	37%
Limited or no likelihood	3%	15%	26%	52%

How does company size, scale, and industry impact progress?

High Adopters are more likely than others (46% compared with 32% for all respondents) to come from mid-sized organisations with between 250 and 999 employees and are much less likely. 83% of High Adopters (compared with 65% of all respondents) work in organisations with at least $100 million of annual revenue – they are consequently less than half as likely as other respondents to work in smaller turnover organisations. Our interviews suggest that mid-sized organisations could be self-reporting the best results because they are in an ideal position with sufficient resources to invest in decarbonisation and are small enough to be nimble to changes.



Moderate Adopters are more likely to be in the largest organisations by employer size with 43% working in organisations with at least 1,000 employees, compared with 36% overall. They were the least likely of all segments to work in mid-sized companies with between 250 and 999 employees (24% compared with 32% overall). 77% of Moderate Adopters (compared with 65% of all respondents) worked in organisations with at least $100 million of annual revenue – and they were consequently less likely to work in smaller turnover organisations. Our interviews suggest that large corporations may be less able to lead in Scope 3 emissions management and reporting, as they are heavily dependent on others in their value chain to meet their scope 3 readiness targets.

Low Adopters are the largest segment and likely to be mid-sized or smaller organisations. Their members are diverse and can be found across all segments. Low Adopters are less likely to be represented in the $1bn annual revenue category.

Those in the **Emerging Adopters** group are much more likely to work in smaller organisations, with 54% working in organisations with under $100m in annual revenue, compared with 35% overall.

When reviewing groupings by industry, those in Financial Services and Education & Professional Services have the highest proportion of High Adopters among them. Food, Hospitality & Tourism has the highest number of Emerging Adopters – at 50%. Based on the insights from our interviews, this may be attributed to the perceived necessity in certain industries to act in order to protect, maintain, and grow business operations and revenues, in the absence of regulatory compliance requirements.

Service firms operate in highly competitive environments where it is easy to switch vendors. Hence, service firms may be more acutely aware of the need to prepare for future customer requirements. Financial institutions will face complicated supply chain challenges since they act as financiers for a variety of companies and industries. Hence, they need to act more quickly.

Relationship with taking action to manage GHG emissions

Purchased Goods and Services is the upstream emissions category that is most likely to be developed by organisations across all groups, followed by Leased Assets and Facilities and Capital Goods for **High Adopters**; Employee and Commuting Activities and Capital Goods are the second and third highest ranking for **Moderate Adopters**; and Capital goods, Leased Assets and Facilities, and Waste from Operation rank second equal for **Low Adopters**. **Emerging Adopters** have not fully developed any upstream emissions categories.

We see similar patterns in downstream activities. For **High Adopters**, Investments, Leased Assets and Facilities, and Processing of Sold Products are the most likely to be fully developed; for **Moderate Adopters** the top three categories with development in sustainability vary slightly with Franchises leading followed by Investments and Processing of Sold Products; for **Low Adopters** the categories with the highest proportion of development are Investments, Franchises, and Transport and Distribution. Again, **Emerging Adopters** has not fully developed any Scope 3 downstream categories.

In general, overall downstream emissions management categories tend to be more developed than those upstream. **Investments**, **Purchased Goods and Services** and **Franchises** are the top three categories across both upstream and downstream activities. These three categories have areas where organisations can exert more control

% of organisations with fully developed Scope 3 missions management by category – Upstream activities

	Total	High Adopters	Moderate Adopters	Low Adopters	Emerging Adopters
Category 1: Purchased Goods and Services	32%	79%	46%	29%	0%
Category 2: Capital Goods	27%	63%	41%	19%	0%
Category 3: Fuel and Energy	19%	40%	34%	13%	0%
Category 4: Upstream Transportation and Distribution	21%	58%	31%	16%	0%
Category 5: Waste from Operations	23%	58%	33%	19%	0%
Category 6: Business Travel	26%	48%	37%	13%	0%
Category 7: Employee Commuting	23%	52%	44%	13%	0%
Category 8: Upstream Leased Assets and Facilities	20%	66%	33%	19%	0%

over supply chain decisions and able to gain sufficient sustainability data.

From the in-depth interviews conducted, **End of Life Treatment** was indicated as being likely to pose a key challenge for companies where product use is involved. **Business Travel** and **Employee Commuting** were also flagged as potentially more challenging areas owing to a lack of control and difficulty with mitigating emissions in these spaces, especially in relation to travel policies.

% of organisations with fully developed Scope 3 missions management by category – Downstream activities

	Total	High Adopters	Moderate Adopters	Low Adopters	Emerging Adopters
Category 9: Downstream Transport and Distribution	35%	71%	31%	18%	0%
Category 10: Processing of Sold Products	30%	69%	47%	15%	0%
Category 11: Use of Sold Products	22%	48%	45%	21%	0%
Category 12: End of Life Treatment	21%	56%	30%	19%	0%
Category 13: Downstream Leased Assets and Facilities	26%	69%	29%	18%	0%
Category 14: Franchises	26%	60%	53%	21%	0%
Category 15: Investments	23%	73%	51%	32%	0%

Relationship with achieving net zero emissions

We further explored the relationship between our four groups and their self-reported ability to achieve net zero emissions.

Two-thirds (67%) of **High Adopters** organisations believe there is a high likelihood of them achieving net zero emissions by 2050 in relation to their emissions from **Purchased Goods and Services**, with a further 31% believing there is an average likelihood of achieving net zero. At the other extreme, only 8% of **Emerging Adopters** organisations are highly confident in achieving net zero emissions for Purchased Goods and Services, with 44% claiming average likelihood and a similar proportion (43%) claiming limited likelihood. One in 20 Emerging Adopters organisations (5%) feel it is unlikely that they will achieve net zero emissions for purchased goods and services by 2050.

54% of High Adopters organisations believe there is a high likelihood of achieving net zero for **Transport and distribution** emissions by 2050. Interestingly, across three of our segments (High Adopters, Moderate Adopters and Low Adopters), our respondents report a slightly lower chance of reaching net zero emissions for this Scope 3 category, respectively 44%, 44% and 42%.

Looking at **Employee Commuting and Activities**, there is much more optimism about reaching net zero from this category of emissions. Only 3% of Low Adopters rate this outcome as not likely. This underlines the relative simplicity of eradicating emissions from this Scope 3 category.

A similar picture emerges when it comes to **Investments**. More than half (54%) of the respondents in our High Adopters, Moderate Adopters and Low Adopters organisations indicate that reaching net zero in this category is highly likely. This compares to just 13% of those in the Emerging Adopters segment. In addition, nearly half (48%) of the organisations in the Emerging Adopters grouping believe reaching net zero has a limited likelihood or was not at all likely.

For **End-of-Life** emissions, there is less optimism about the likelihood of reaching net zero in this Scope 3 category. High Adopters, Moderate Adopters and Low Adopters are much more likely to say that there is limited likelihood. For our Emerging Adopters, the picture is even dimmer; half (50%) think there is limited or no likelihood of reaching net zero.

Finally, respondents in the High Adopters segment are much more optimistic about net zero outcomes in **transport and distribution** than their peers in other segments. More than three in five (63%) believe it is highly likely compared to 37% of Moderate Adopters and 22% of Low Adopters. Unfortunately, the Emerging Adopters are much less positive; more than half (56%) report there is limited or no likelihood of achieving net zero in this category.

Knowledge levels by group – High Adopters stand out

As mentioned in earlier sections of this report, knowledge of emissions management is a critical starting point and group membership is closely correlated with it.

Respondents representing **High Adopters** organisations have either strong (73%) or average (27%) knowledge of Scope 1 emissions management. They are less likely to have strong knowledge (56%) or average knowledge (44%) of Scope 2 emissions management, and despite being in the High Adopters group, they are less likely to have strong knowledge in the more complex area of Scope 3 emissions management (37%), with over half having average knowledge (53%) and 10% having limited knowledge.

Amongst the **Moderate Adopters** group, knowledge of emissions management is also high in places, with three-quarters (74%) of Moderate Adopters claiming strong knowledge of Scope 1 emissions management at 41%, and 56% claiming strong knowledge of Scope 2 emissions and Scope 3 emissions management, respectively.

Amongst the **Low Adopters** segment, self-reported knowledge of emissions management was lower again, with 51% claiming strong knowledge of Scope 1 management activities, 37% claiming strong knowledge for Scope 2, and 39% for Scope 3.

Finally, amongst **Emerging Adopters** organisations, professed knowledge of emissions management is much lower than for the other groups, with only 15% of this segment claiming strong knowledge of Scope 1, 13% for Scope 2 and just 11% for Scope 3.

Challenges and barriers of different groups

Different segments share similar barriers to reducing Scope 3 emissions – lack of human and financial resources, commercial motivation and technological infrastructure. However, there are differences in impact, based on segment status, which are shown in the table below.

Amongst **High Adopters** organisations, the top 3 barriers are a lack of human resources / expertise (65%), commercial motivation / business case for the investment (58%), and financial resources (50%). For **Moderate Adopters**, the main barriers are a lack of human resources / expertise (57%), commercial motivation / business case (53%), and technological infrastructure (47%).

The same main barriers held for **Low Adopters**, 61% of whom cited lack of human resources / expertise (50%), and lack of technological infrastructure (45%). For **Emerging Adopters**, the main barriers are lack of technological infrastructure (55%), lack of commercial motivation / business case (49%), and lack of financial resources (46%).

Overall, respondents indicated strongly that with the new upcoming standards for Scope 3 reporting, sustainability and financial teams will work much more closely together. Finance professionals are in pole position to help interpret and apply the new standards as they are used to working with large data sets and understand the importance of accuracy and assurance. Forming these partnerships can help resolve some of the immediate resourcing challenges and leverage internal capability.

Barriers to achieving Scope 3 emissions reductions

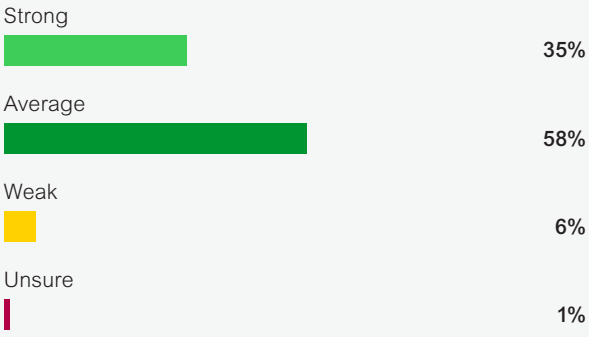
	Total	High Adopters	Moderate Adopters	Low Adopters	Emerging Adopters
Lack of human resources / expertise	50%	65%	57%	50%	44%
Lack of financial resources	46%	50%	45%	39%	46%
Lack of commercial motivation / business case for the investment	43%	58%	53%	61%	49%
Lack of technological infrastructure	41%	29%	47%	45%	55%
Lack of customer pressure	29%	38%	37%	38%	24%
Lack of available data	25%	6%	5%	13%	24%
Lack of regulatory requirements	24%	29%	33%	28%	29%
High business complexity	20%	25%	23%	26%	29%

Greater investment needed in technology and infrastructure to support better measurement and reporting

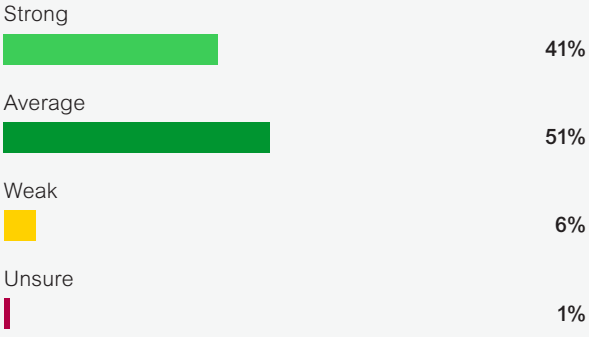
Amongst respondents whose companies are monitoring and reporting emissions (94%), just over one-third (35%) believe their emissions monitoring and reporting is strong, and this carries through to Scope 3 emissions measurement and reporting.

The main barriers to better emissions monitoring and reporting cited are a lack of enabling technological infrastructure to support improved monitoring and reporting (mentioned by 44% of companies), lack of financial resources and lack of a compelling business case to support better monitoring, and reporting (both mentioned by 43%

Average or below – Scope 3 emissions measurement



Average or below – Scope 3 emissions reporting



of companies). Lack of customer pressure 33%, lack of regulatory requirements (31%) and lack of the necessary human resources (30%) are also mentioned by around one in three companies.

Four in five business leaders in Singapore (81%) believe their organisation is investing adequately in emissions management measures, with finance and banking, real estate and consumer goods industries leading the way (each with over 90% believing they invest enough).

"The benefit that accountants have is they are very good at applying an accounting standard. Essentially greenhouse gas emissions is another form of accounting.

Accountants are well placed to review and to incorporate this into a larger accounting system."

Maria Teo, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

Adequate financial investment

Board	93%
C-level	92%
Director	81%
Senior Manager	61%
Sustainability	90%
General Management	88%
Finance	79%
Operations & Supply Chain	69%

Perceived adequacy of investment is directly correlated with seniority, with 93% and 92% of Board Members and C-level respectively, but only 61% of senior managers agreeing with this. The same is seen with job roles – with 90% of sustainability leaders agreeing with this but only 69% of those in operations & supply chain roles. As mentioned above, this could be due to organisations adopting a focus on some areas of sustainability.

Our interviewees forecast significant changes in the area of emissions reporting, beyond those that have already been announced. In addition, ISSB implementation will require a shift from reporting emission intensity metrics to reporting in absolute terms. Assurance requirements are also likely to become more commonplace, particularly with greater sustainability scrutiny in European markets.

Count on accountancy and finance professionals

Accountancy and finance professionals are in the foremost position to lead sustainability strategies. Organisations have begun counting on them to take on additional responsibilities in sustainability.

As corporate reporters, accountancy and finance professionals already have fundamental skills in financial reporting. They are familiar with applying accounting standards and ensuring that reporting is transparent, verifiable, comprehensive, independent, and fair. Accountancy and finance professionals are also proficient in data collation and analysis to provide meaningful explanations for informed decision making. These skillsets are transferable to sustainability reporting, including Scope 3 reporting. For these reasons, one of our interviewees describes the chief financial officer (CFO) role as having the "natural mandate to take on sustainability reporting".

"Companies will focus on what's the most important and readily available data.

That happens to be their Scope 1 and Scope 2 emissions.

The challenges come in measuring and reporting Scope 3 because they've not been tracking this sort of data."

Maria Teo, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

Sustainability also presents businesses with new opportunities. Accountancy and finance professionals can help unlock value from sustainability opportunities through a combination of financial and sustainability knowledge. For example, investing in renewable energy may require a large one-time investment. Accountancy and finance professionals can help justify this investment opportunity by showing long-term financial value, such as projecting revenue growth from the acquisition of new consumers concerned with sustainability; these consumers are often willing to spend more on sustainable products.

"Accounting professionals are in the right position to take on Scope 3 to make sure that it makes sense.

Accountants can ask the right questions, to look at reports and ask, 'How do I make it better?'"

Goh Yin Shian, Group Finance Director, Goodpack

"There's debate about how many areas of Scope 3 we need to include. We have 15 categories. What's the approach that the company is going to take?

The more categories of Scope 3 you include, the more effort it is going to take setting up that data system. This baseline must be set before you go on to do data gathering."

Maria Teo, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

Accountancy and finance professionals can also help businesses better identify sustainability risks. They have a keen understanding of internal controls. This is useful in assessing the quality of sustainability data collected, for example, the robustness, accuracy, and appropriateness. This would help organisations address the risks relating to data, which is an important facet in organisational assessments of sustainability risks.

Recommendations

1 **Break down knowledge silos:** Findings indicate the importance of knowledge as a catalyst for belief and a starting point for the progression of sustainability ambitions. However, knowledge of emissions management is currently unequally distributed by seniority and job scope within organisations. Business leaders must address knowledge silos as a priority, dismantling education hierarchies and balancing access through greater investment in training and internal resource capability building at each level of the organisation.

2 **Upskill and reskill accountancy and finance professionals for sustainability:** To address the lack of expertise, we recommend that organisations consider upskilling and reskilling accountancy and finance professionals to take on Scope 3 of GHG reporting. This would also build on and shore up sustainability skills, that would be useful to complement impending needs of sustainability reporting.

3 **Early bird catches the data:** With respondents citing 1.5 - 2 years as the average timeframe to put in place robust data curation capabilities, business leaders should not underestimate the time needed to gather credible supply chain emissions data nor the complexity that can come with it. Organisations must circumvent decision making inertia and move decisively to establish solid data gathering protocols early to avoid missing deadlines for changes in reporting requirements or getting caught out with new regulations.

4 **Materiality over ease:** There is often discomfort in change. Business leaders must avoid falling into the trap of prioritising efforts towards Scope 3 categories that are the easiest to obtain data for, at the expense of those that are more material. Thoughtful consideration to an organisations' industry and operations, and therefore impact, should be the basis for decision-making and intentional action to advance emission reduction goals.

5 **Value chains must move together:** Communication and mutual understanding must be a priority in value chains to ensure companies of all sizes can work in lockstep together. Large companies have a responsibility to understand the pain points that smaller suppliers may face during energy transition, finding practical ways to support them, and ultimately help shift their risk perspective regarding sustainability. Smaller sized companies have an obligation look ahead to understand what large companies may require of them in the future and seek assistance where required.

6 **Targets need to be science based:** To ensure a more robust and considered approach to emissions reductions targets, these should ideally be science-based. Business leaders who adopt science-based targets (SBTis) are more likely to drive meaningful action within their organisations, helping define a clear and credible path to sustainability success.

Acknowledgments:
Schneider Electric and The Institute of Singapore Chartered Accountants express their gratitude to the following individuals for their valuable contributions to the report: **Eric Lim**, Chief Sustainability Officer, UOB; **Johnny Gao**, Assistant Vice President, Sustainability, The Ascott Limited; **Goh Yin Shian**, Group Finance Director, Goodpack; **Maria Teo**, Associate Director (Sustainability & Climate Change Lead, Risk Advisory), CLA Global TS

Life Is On | Schneider Electric