

# Building a Greener Singapore

October 2021

Life Is On

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## Foreword



## The Future of Singapore is Green

While there have been many negative implications from the global COVID-19 pandemic, a positive one has been the increased focus on sustainability issues, including environmental issues, in Singapore and around the world. The pandemic exposed our fragilities, weak spots in our defenses, and led to a widely reported but temporary reduction in carbon emissions for the first time in decades, which gave a taste for what was achievable in this area.

As a result, we have seen a marked acceleration in the focus by global governments, financial institutions, and private companies on environmental, social and governance (ESG) and sustainability, as well as increased interest among consumers of all ages.

Indeed, this report finds that in Singapore 83% of the business leaders we surveyed believe their organization's sustainability performance will be a potential barrier or opportunity to growth and success in the future. More than two thirds (69%) of local consumers also think companies should be prioritizing the environment over profits.

This momentum has been further accelerated by the release of The Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change

(IPCC) in August this year, which confirms unequivocally for the first time that humans are responsible for climate change, that much of the damage already done is not reversible for thousands of years, and that immediate and large-scale reductions in greenhouse gas (GHG) emissions are needed to limit global warming to 1.5 degrees Celsius.

The widespread global media coverage of this landmark report has led to high awareness of it, with 72% of Singaporeans aware of the report, and of these, 59% say that they are concerned about its findings.

In partial response to these market and societal dynamics, in February 2021, Singapore launched its Green Plan 2030. This wide-ranging plan has been developed in collaboration by the country's Ministries of Education, National Development, Sustainability and the Environment, Trade and Industry, and Transport. It provides a blueprint for 'building back better' in a post-COVID world, with the view of transitioning towards a more sustainable future in the way Singaporeans live, work, study, and play in the coming decade.

Formed around five pillars – City in Nature, Sustainable Living, Energy Reset, Green Economy, and Resilient

Future – some of the goals of the plan include planting one million more trees; increasing use of public transport to 75% and tripling the cycle path network; requiring all newly registered cars to be Electric Vehicles (EVs) by 2030; quadrupling solar energy deployment; developing Singapore as a green finance hub; and producing 30% of nutritional needs locally.

The plan has been well received, with 93% of Singaporeans who are aware of the plan supportive of it, and 83% of local business leaders saying their organization's sustainability plans are at least generally aligned to it.

However, despite this positivity, this report finds that many Singapore companies still face a long, but not impossible, road ahead to achieve their sustainability goals and make the operational and cultural changes required to meet their targets.

Across the board, a lack of confidence in preparedness and urgency, and low awareness around key sustainability initiatives can be observed – with less than half (43%) of business leaders saying their organization is currently operating in a sustainable way, and 36% saying they have comprehensive sustainability strategies and policies.

Slightly more, just over half (55%), of the business leaders surveyed say their organization has a stated commitment for achieving carbon neutrality, but only 40% have a

climate action plan that also addresses climate risk. The top barriers cited for developing a climate action plan, include moving from strategy to action (45%), financial constraints (44%), and culture change issues (34%).

Positive momentum is also seen around energy transition, resource use, and the use of technology to further sustainability ambitions. Six in 10 (61%) say their organization is performing strongly in efficient energy resource management and transition to more renewable energy sources.

And, despite less than one quarter of organizations saying that they feel very prepared (21%) to manage disruptions, 67% are using energy and/or sustainability programs to build organizational resilience, and disruptions have motivated many to invest further in digitization (60%); energy efficiency (57%) and purchasing renewable generation (53%).

As Singapore accelerates its green journey, this report finds that fundamental shifts in organizational culture, processes and structures will be required. With Singaporeans at the ready to tackle these challenges head-on, the future for Singapore as a green nation looks bright.



**Yoon Young Kim**

Cluster President

Schneider Electric Singapore, Malaysia, Brunei

# Introduction



This report presents and analyzes the findings of a survey of business leaders with sustainability responsibilities at over **500 organizations** and **500 consumers** in Singapore. The field work was undertaken in August 2021.



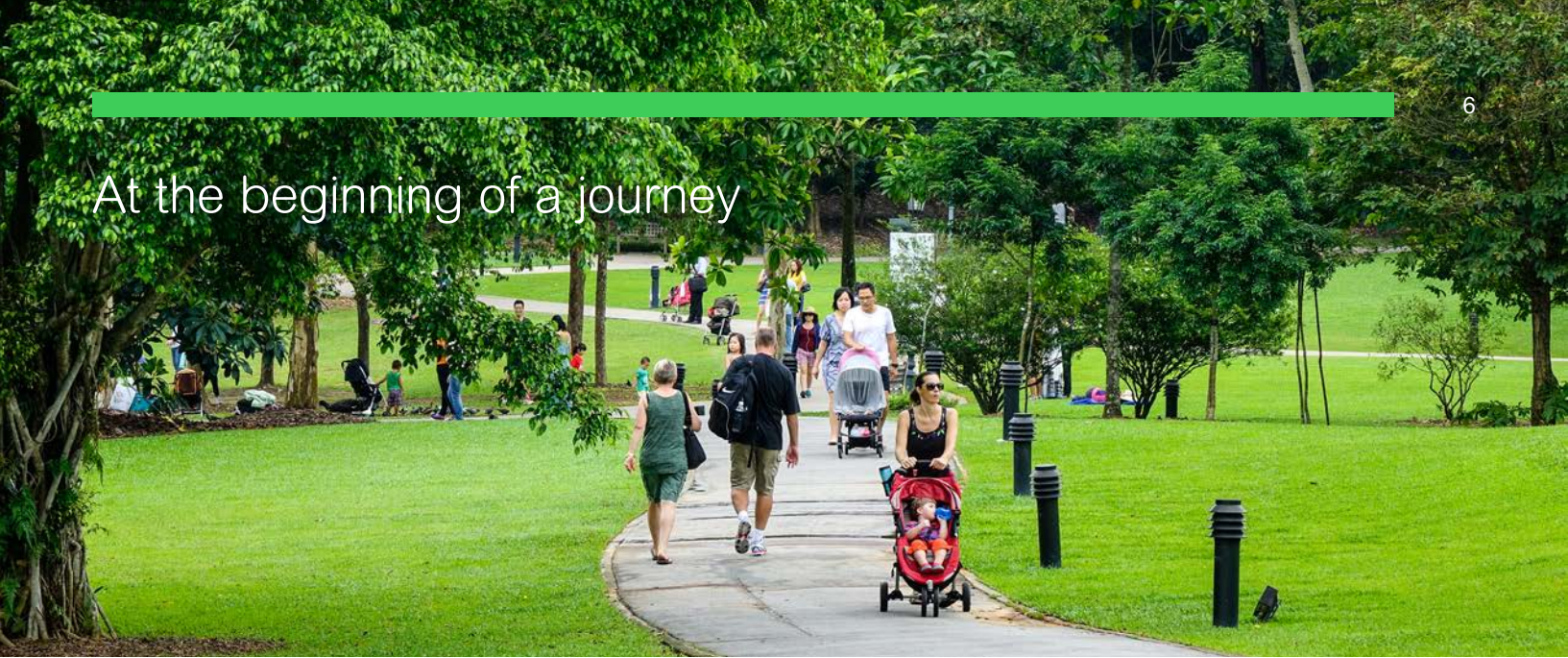
It aims to provide a deeper understanding of the attitudes and perceptions of consumers and business leaders around environmental sustainability as well as the level of preparedness of companies operating in Singapore.



The business leaders surveyed represent a broad range of industries including: Commercial Real Estate; Consumer Goods; Construction and Buildings; Energy; Finance and Banking; Food & Beverage; Education / School Administration; Government; Healthcare; Hotel, Hospitality and Tourism; Industries and Manufacturing; Media/Communications; Mining, Metals & Minerals; Non-Profit Organizations/NGOs; Oil and Gas; Professional Services; Retail & Apparel; Technology, Cloud, Data and Telecoms; Transportation; and Utilities.



# At the beginning of a journey



Our study finds that most organizations in Singapore are just embarking on their sustainability journey.

While the majority (83%) of business leaders interviewed believe their organization’s sustainability performance will become a potential barrier or opportunity to growth and success in the future, less than half (43%) think their company is currently operating in a sustainable way.

This perceived (or real) lack of progress is reflected in the finding that sustainability is still seen as a peripheral rather than a core issue for most Singapore companies, with just over a quarter (28%) of business leaders saying it is central to their business strategy. More than half of Singapore companies also currently do not have key

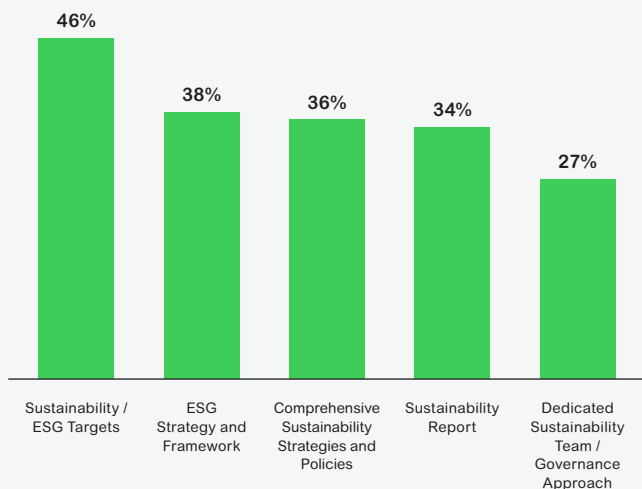
sustainability infrastructure, systems, and processes in place internally.

These views are reflected also in general societal views in Singapore. At present, 69% of Singapore consumers believe that organizations are performing at an average level at best in sustainability, with 20% saying corporate performance in this area is weak.

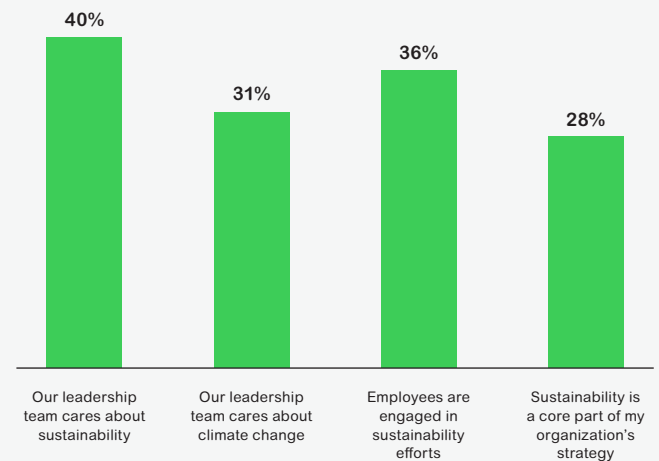
While 69% of Singaporeans say companies should be prioritizing the environment over profits, only 25% believe they are currently doing this.

Further to this, less than one third (30%) believe leaders of organizations in Singapore care about the environment.

**% of organizations with key tools for sustainability governance**



**% of Singapore business leaders who agree**



## Education required to increase alignment



Aligned with Singapore companies being at an early stage of their sustainability journey, our study finds that most business leaders in Singapore only have an average understanding of key sustainability terminology. Increasing this level of general understanding will be important for elevating sustainability priorities up the corporate agenda.

### Understanding of sustainability terms by business leaders

	Strong Understanding	Average Understanding	Limited or No Understanding
Sustainability	36%	50%	14%
Environmental, Social, Governance (ESG)	33%	48%	19%
Carbon Positive	32%	43%	26%
Carbon Neutrality	30%	47%	23%

A similar story is seen when looking at key sustainability initiatives, with the Singapore Green Plan 2030 having the highest general understanding among the local business audience, and Task Force on Climate-Related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB) the lowest.

### Understanding of sustainability initiatives by business leaders

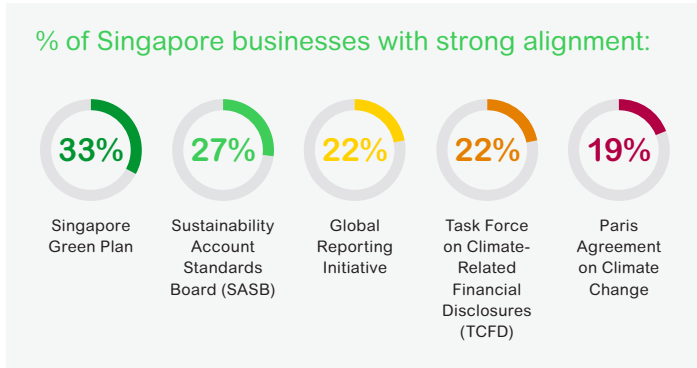
	Strong Understanding	Average Understanding	Limited or No Understanding
Singapore Green Plan	37%	47%	16%
Sustainable Development Goals (SDGs)	29%	48%	23%
Paris Agreement on Climate Change	28%	40%	32%
Net Zero	28%	39%	33%
Global Reporting Initiative (GRI)	27%	38%	36%
Task Force on Climate-Related Financial Disclosures (TCFD)	24%	42%	34%
Sustainability Accounting Standards Board (SASB)	24%	45%	30%

Naturally, low levels of understanding also corroborated with low levels of alignment with key sustainability initiatives and reporting frameworks, with less than a third of business leaders feeling their organization currently has strong alignment with the Singapore Green Plan, SASB, GRI, TCFD or the Paris Agreement.

While many of these initiatives are currently voluntary, as they are likely to form the foundations and blueprints for



future sustainability regulations, having an understanding of the requirements and implications of these initiatives is increasingly critical for every business leader.



Despite this lack of engagement and action, interestingly only one quarter (25%) of business leaders would indeed welcome increased compliance and regulation around ESG and sustainability and believe it's needed.

When looking at consumers in Singapore, despite their understanding of sustainability terms and concepts being lower than that of the business community's, they have high expectations of companies around sustainability, with around half saying that all companies should have energy GHG emissions reduction targets; a climate action plan; efficiency and clean energy targets; and sustainability / ESG targets. A further one in three believe these requirements should apply only to large companies.



**Task Force on Climate-related Financial Disclosures (TCFD)**

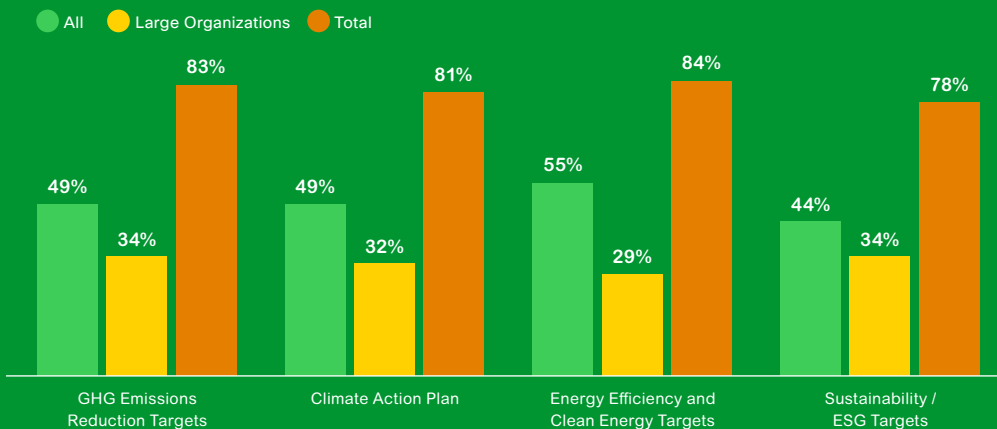
In June 2021, Finance ministers and central bank governors from the G7 countries, which account for over 32% of global GDP and over 23% of global greenhouse gas emissions, agreed to mandate climate-related financial reporting, aligned with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD). It places hopes for a global agreement to take place at the pivotal COP26 summit in Glasgow in November 2021.

The G7 nations committed to a “multi-year effort to deliver the significant structural change needed to meet our net-zero commitments and environment objectives in a way that is positive for jobs, growth, competitiveness and fairness”. Further commitments were made to embed climate change and biodiversity loss considerations into economic and financial decision-making.

In September 2020, New Zealand was the first country to announce mandatory TCFD-aligned climate-related financial disclosures. This was quickly followed by Switzerland, the UK, China and other countries.

Strong support is also seen among Singapore consumers for the country's Green Plan 2030. Of the nearly two thirds (64%) of Singaporeans who are aware of the plan, 93% are supportive of it.

**Consumers believe it should be mandatory for companies to have:**





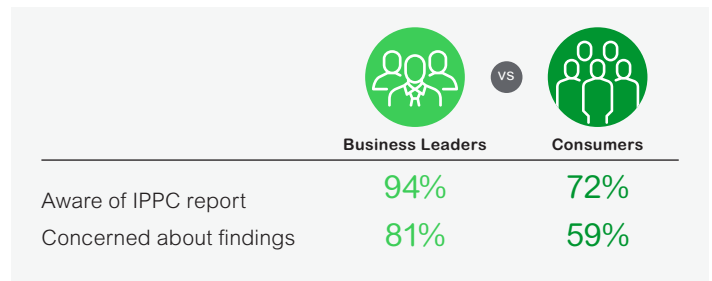
# Climate urgency



In the wake of the COVID-19 pandemic, an increase in extreme global weather events, and the release of The Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC), greater action and momentum was seen specifically around climate change.

Of those surveyed, 81% of business leaders are both aware of the IPCC’s report and concerned about the implications of its findings for their organization, with nearly one third (29%) feeling highly concerned. And it’s a similar story among local consumers.

Encouragingly in this environment, we see that more than half (55%) of organizations surveyed have carbon neutrality targets, and for 73% these targets are set for 2030 or earlier.



Unsurprisingly, far fewer have commitments for Science Based Targets (SBTI) at 29% or Task Force on Climate-Related Financial Disclosures (TCFD) at 23%.

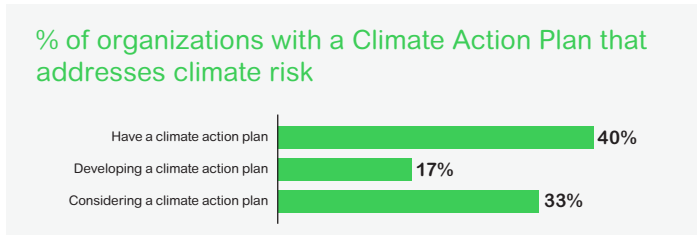
These targets are being treated seriously, with 79% of business leaders surveyed expressing that they are confident of achieving their carbon emissions targets, and one in five (21%) feeling very confident.

	Has Commitment	Pre- 2030	2030	2031-2049	2050	Beyond 2050
Carbon Neutrality	55%	27%	46%	20%	7%	1%
Climate Positivity	45%	29%	44%	18%	10%	1%
Net Zero	40%	28%	47%	14%	9%	1%

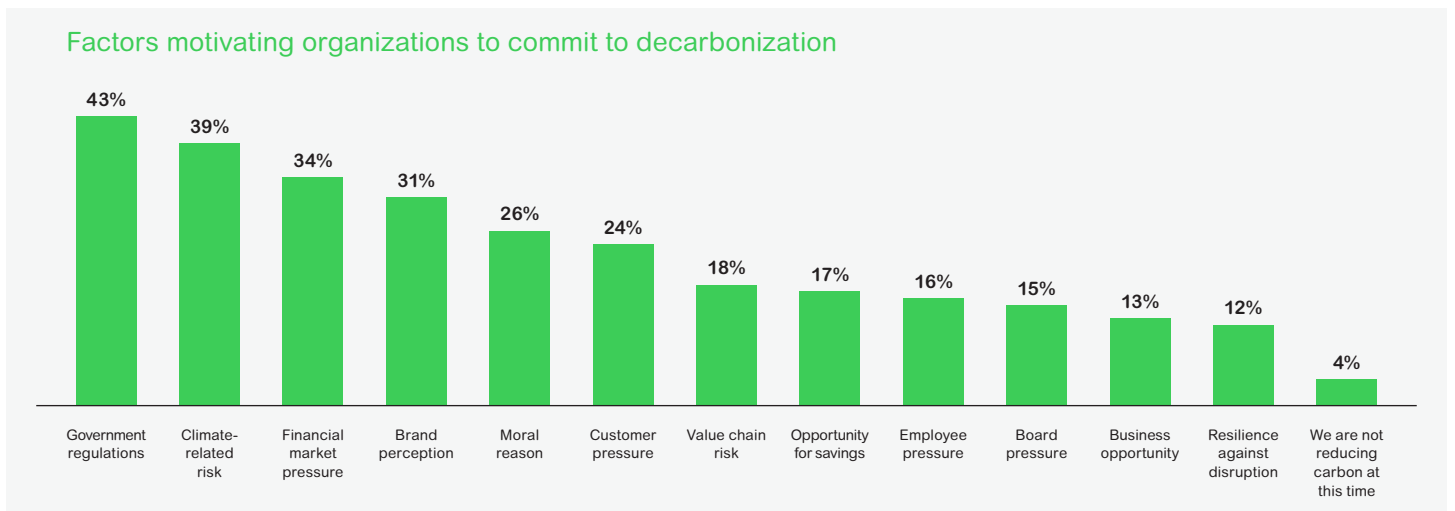




Beyond targets set, only four in 10 Singapore companies have a climate action plan that also addresses climate risk, but 17% have one in development and 33% are considering it. The top barriers to developing a climate action plan for organizations include moving from strategy to action, financial constraints, and culture change issues.

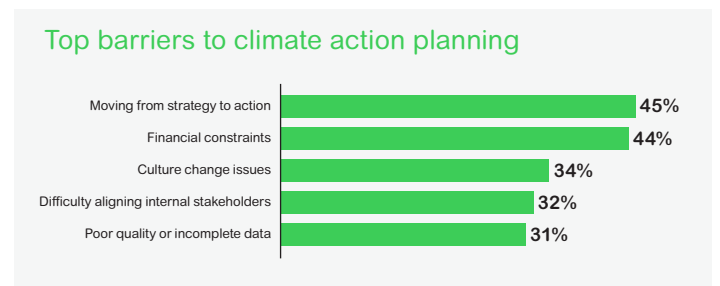


When looking at the top factors motivating Singapore companies to commit to decarbonization, the strongest are government regulation (43% ranked in top three); climate-related risk (39% ranked in top three); and financial market pressure (34% ranked in top three).



As the effects of climate change become increasingly apparent in our daily lives, this has naturally been a growing area of concern. An overwhelming 86% of Singaporeans are concerned about climate change, with one third (33%) saying they are extremely concerned.

The increasing bottom-line impacts of climate change are also likely to become strong drivers for Singapore companies to take action.







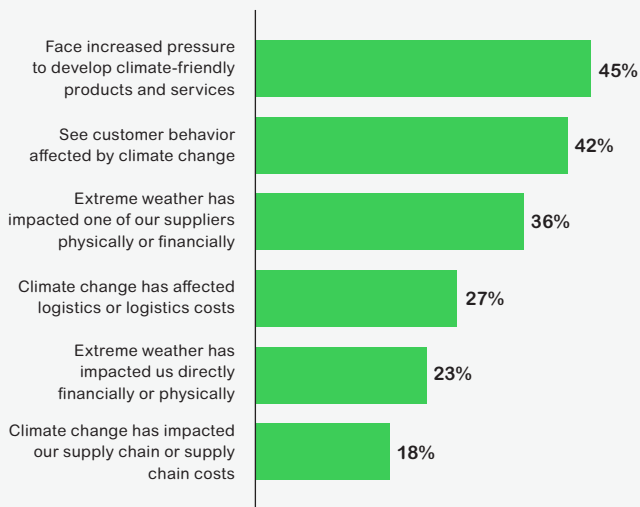
Companies globally do not have a plan to mitigate climate risks and take meaningful climate action

Looking beyond Singapore, a study of large companies globally by Schneider Electric conducted earlier in 2021, revealed 89% of companies either intended to or had already changed their business model in response to climate change. However, the survey results indicated that respondents were less familiar with practical solutions to immediately begin decarbonizing their carbon footprint. Some of the most immediately available and effective climate action solutions, such as Energy-as-a-Service (EaaS), renewable energy, microgrids, and circularity practices, were not well understood. As such, less than one quarter (21%) considered their organization to be significantly advanced in the adaptation of their business model to be more environmentally or socially responsive, with only 29% having plans in place to mitigate climate risks.

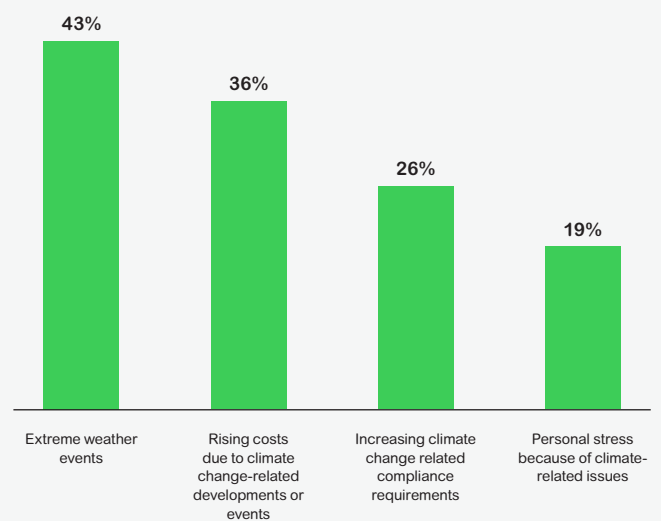
All business leaders surveyed say that their organization was impacted by climate change in some way in the past 12 months, with the highest impacts being greater pressure to develop climate-friendly products and services, changes to customer behaviour, and extreme weather impacting suppliers.

Singaporean consumers are also feeling the effects, with 82% saying the effects of climate change have directly or indirectly impacted them in the past 12 months, with the largest impacts from extreme weather events, and rising costs.

**Business leaders: How has climate change affected your organization in the past 12 months?**



**Singapore consumers: How has climate change personally affected you in the past 12 months?**



# Energy reset is a clear priority for companies



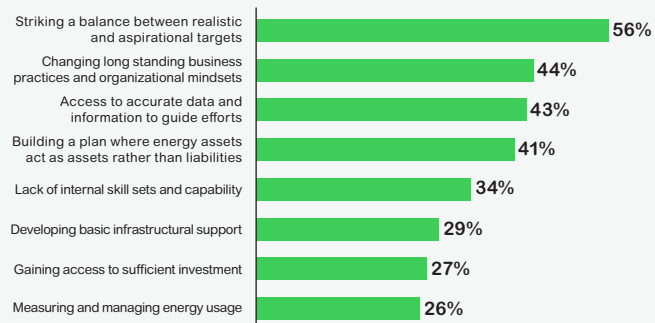
With 'energy reset' a key pillar of the Singapore Green Plan 2030, our study reveals this is a clear focus area already for many Singapore companies, with 61% of business leaders stating that their organization is already performing strongly in efficient energy resource management and transition to more renewable energy sources.

Additionally, 67% of respondents say they are also using energy and/or sustainability programs to build overall organizational resilience.

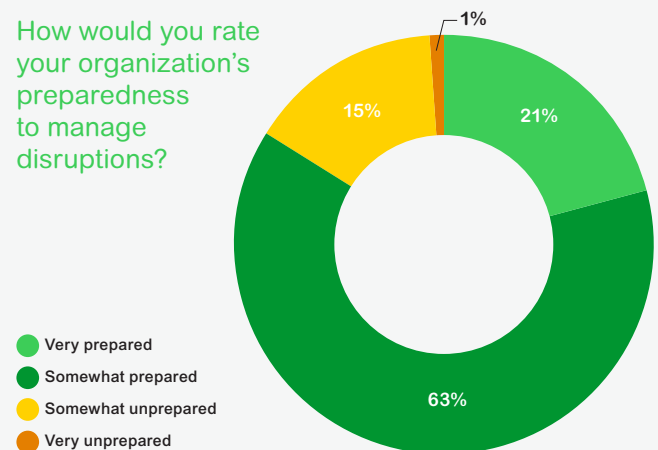
But this area is still not without challenges, with a broad range of issues being identified among the top three for companies over the 12 months. The most prevalent of these challenges include striking a balance between real and aspirational targets; changing long standing business practices and organizational mindsets; and having access to accurate data and information to guide efforts.

Also concerning, less than one quarter of organizations feel very prepared (21%) to manage disruptions, with 63% feeling somewhat prepared.

## % top three energy resource management challenges for organizations in Singapore in the past 12 months:



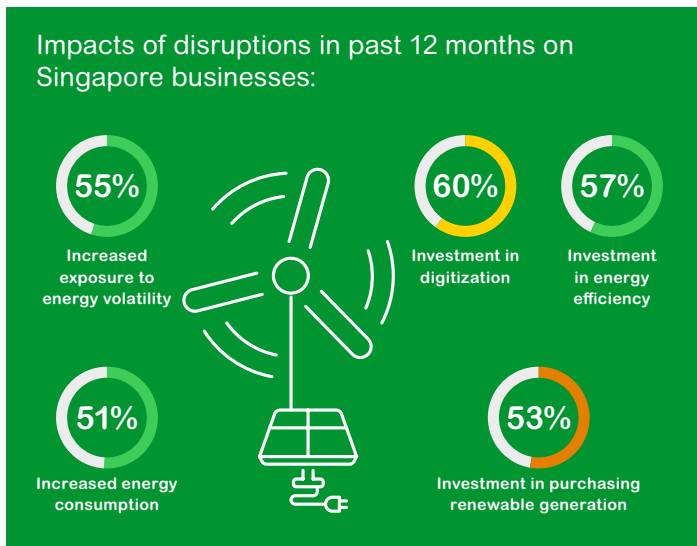
## How would you rate your organization's preparedness to manage disruptions?





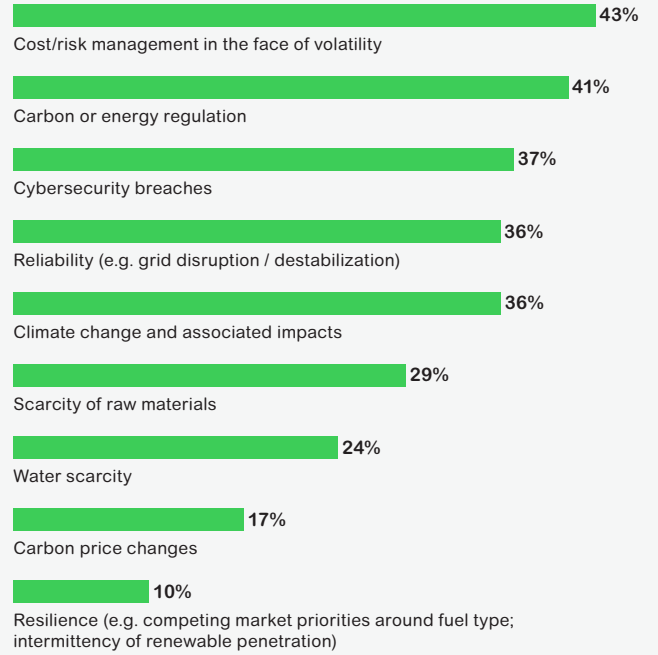
Over the past 12 months, when looking at energy consumption, disruptions increased exposure to energy volatility for over half of Singapore businesses (55%) and also increased overall energy consumption (51%).

These disruptions also motivated most Singapore companies over the same period to invest in key areas including digitization, energy efficiency, and renewable energy generation.



Regarding current or future risks to energy or resource supply, organizational concerns for Singapore companies are broad and varied with cost and risk management in the face of volatility and carbon or energy regulation the top future concerns.

### Which current or future risks to energy or resource supply is your organization concerned about?



# Singapore consumers supportive of convenient transitions

With the Singapore Green Plan 2030 setting in motion many evident changes for consumers in the country particularly, our study reveals that 88% of Singaporeans support Singapore transitioning to cleaner forms of energy generation. However, only 55% are supportive of this if it means higher costs for electricity bills.

A similar trend is seen with green buildings. While over half (53%) believe every building in Singapore should be a green building, and 47% prefer to work in a green building, only 26% would prefer to live in a green building if the cost is greater or doing so personally impacts their lifestyle. This viewpoint may partly be attributable

to motivation, with only 46% aware of the environmental benefits and 36% aware of the health benefits of green buildings.

When it comes to reducing carbon emissions in daily life, two thirds (66%) of Singaporeans say they are happy to do this where it is convenient for them, and only 27% are actively focused on doing so.

This was reflected in attitudes to innovations such as electric vehicles (EV), with less than half (45%) of Singaporeans planning to own one in the future, and over a third (37%) say they do not plan to own an EV.

**53%** believe every building in Singapore should be a green building

**47%** prefer to work in a green building

**26%** would prefer to live in a green building if the cost is greater or doing so personally impacts their lifestyle

**66%** Singaporeans say they are happy to reduce carbon emissions, where convenient

**27%** are actively focused on doing so

**88%** of Singaporeans support Singapore transitioning to cleaner forms of energy generation

**55%** are supportive of this if it means higher costs for electricity bills

**45%** Singaporeans planning to own an EV in the future

**37%** say they do not plan to own an EV



# Technology to play an increasing role

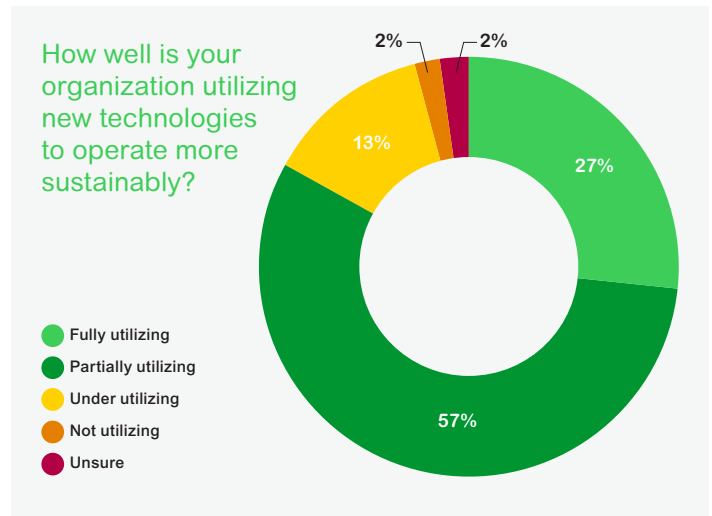


Advances in new technologies offer hope and possibilities for many of today's most critical sustainability challenges globally.

With 57% of companies in Singapore partially utilizing new technologies and technology solutions to operate more sustainably, and just over a quarter (27%) fully utilizing it, there is a large, untapped opportunity for technology to play a role in Singapore.

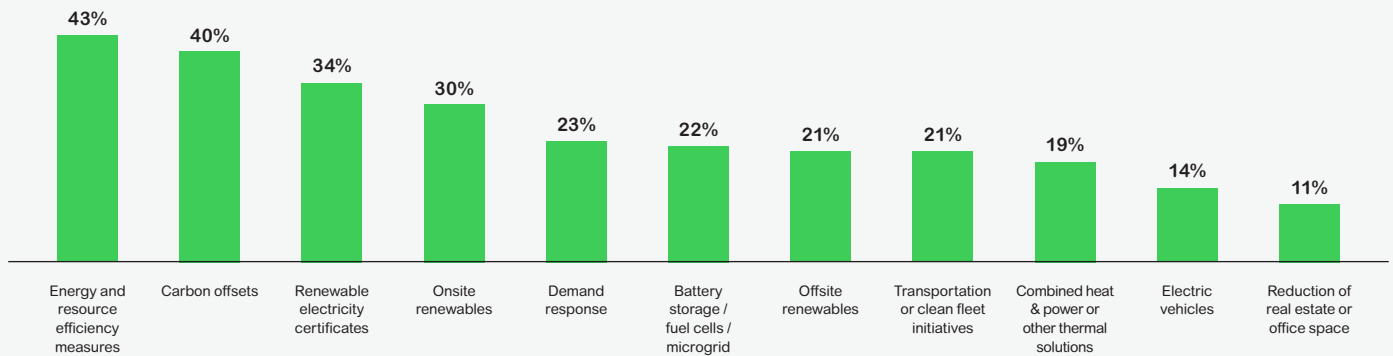
The top projects and technologies being employed to achieve energy goals in organizations in Singapore are currently energy and resource efficiency measures (43%); carbon offsets (40%); renewable electricity certificates and onsite renewables (30%).

Interestingly, despite the shift towards remote working in a post-pandemic world, reduction of real estate or office space is currently the least likely strategy employed in relation to energy goals, with EVs and combined heat and



power or other thermal solutions (CHP) also ranking low. We could reasonably expect this to change, for example uptake of EVs is forecast to increase dramatically in the coming decade globally.

## What projects or technologies are you using to help achieve your energy goals?





## Partnering Singapore Organizations on Their Sustainability Journey

As a global specialist leading in digital transformation of energy management and automation, Schneider Electric has been playing a crucial role in helping organizations in Singapore realize full efficiency and sustainability opportunities.

With a mission to be the digital partner for Sustainability and Efficiency, Schneider Electric is driving digital transformation by integrating world-leading process and energy technologies. Apart from providing end-point to cloud integration connecting products, controls, software and services, Schneider Electric enables lifecycle solutions from design and build to operate and maintain phases through a digital twin. Schneider Electric also delivers capabilities to enable integrated company management.

Schneider Electric supports all pillars of the Singapore Green Plan 2030 and its products and solutions cater to the needs of many

sectors in Singapore, including but not limited to Data Centre, Commercial Real Estate, Food & Beverages, Healthcare, Hotels, Life Sciences, Manufacturing, Oil & Gas, Residential Buildings and Transportation.

For example, Schneider Electric's EcoStruxure IoT-enabled solution has given Singapore's integrated resort, Marina Bay Sands, immense control over its energy usage, optimizing their operational efficiency and reducing its overall carbon footprint. Marina Bay Sands is also empowered with greater scalability to meet business demands and make better business decisions. Since 2012, Marina Bay Sands has reduced its carbon footprint by 34 per cent.

Schneider Electric has also helped Bollore Logistics Singapore achieve a significant reduction in its carbon footprint with an estimated 10% decrease in energy consumption. By incorporating Schneider Electric's digital solutions, the global leader in

international logistics and freight forwarding saw more efficient use of resources and improved financial performance. It also increased capability to deliver consistent and improved services and products, thereby increasing value to customers and all other stakeholders.

Schneider Electric is also enabling companies in Singapore to eliminate the world's most potent greenhouse gas, SF6, from primary distribution with its latest GM AirSeT switchgear, a green and digital medium-voltage technology for electrical networks. The new SF6-free switchgear empowers companies to reduce their environmental impact, and represents a cost-efficient and safety-oriented approach.

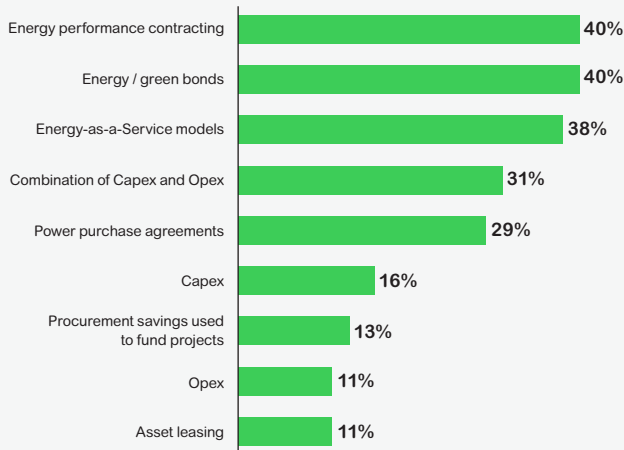


# Financing change

As economic and financial pressures mount in the wake of the global pandemic, funding the changes required to operate more sustainably, is likely to be a critical challenge for organizations everywhere, including in Singapore.

Our study finds that business leaders are thinking flexibly in this regard and planning to fund energy and sustainability initiatives from a broad range of sources.

## How do you plan to fund energy and sustainability initiatives in the future?



## Tapping grants and initiatives for green financing

With 'green economy' a key pillar in the Singapore Green Plan 2030, an array of grants and initiatives are available for companies looking to harness sustainability as a competitive advantage.

These include Enterprise Singapore's Enterprise Sustainability Programme which provides a suite of support for local enterprises who are interested to embark on sustainability projects to transform their business and capture the new opportunities in the green economy. At the same time, as Singapore grows its stature as a leading centre for Green Finance in Asia, initiatives to develop green financial and new sustainability solutions have also been unveiled.

Organizations can also tap industry and private sector initiatives that are contributing to a more vibrant and robust green ecosystem. At Schneider Electric for example, we are partnering with United Overseas Bank (UOB) on the U-Energy programme to accelerate and empower more businesses and homeowners through access to innovative digital solutions for better energy management and efficiency.

# Global Funding Shortfall in Achieving the Sustainable Development Goals

Funding remains a major challenge for the Sustainable Development Goals (SDGs) and combatting climate change.

Prior to the COVID-19 pandemic, financing was not increasing at a fast enough pace to fulfil the ambitions of the 2030 Agenda and this trend continues. Despite improvements, tax revenue, the largest source to fund public expenditure continues to fall short of needs in many countries.

Meanwhile, rising public debt and debt servicing costs, particularly in the poorest countries, is putting SDG financing levels under increasing pressure. The pre-COVID-19 USD 2.5 trillion annual SDG financing gap corresponds to about USD 500 billion for low-income countries and USD 2 trillion for other developing countries, or respectively 15% and 4% of GDP of additional spending per year. Since the start of the pandemic this funding gap is projected to increase by another USD 1.7 trillion. Moreover, it has been recently reported that developed countries failed to provide \$100 billion of annual financing to the Green Climate Fund, threatening the aim of limiting global warming to 1.5 degree Celsius.



The International Energy Agency (IEA) estimates that achieving a Paris-compliant energy transition will require around USD 3 trillion in investment annually, mainly in renewables and energy efficiency.

The significant funding required for a successful transition towards low-carbon and climate resilient development underscores the need and role of the private sector. Governments must actively engage the private sector to mobilize resources, knowledge and innovation in order to address climate change and promote sustainable growth. With COP26 on the horizon, the importance of climate change and sustainable development have been thrust high on the agenda and there is widespread recognition that addressing environmental challenges is vital to managing and mitigating business risks.

However, to ensure lasting positive change, private sector engagement needs to promote sound business models that not only deliver environmental protection but also outcomes which are financially feasible. Importantly, sustainability and climate change must be embedded into the heart of the private sector.

## Recommendations

- 1 Make Sustainability Central:** Building a strong sustainability approach requires company-wide participation and support, as well as buy-in from external partners and stakeholders. To achieve this, sustainability challenges must move from being peripheral issues to being central to an organization's strategy. This sends a strong signal around the intentions of a company, its plans for the future, and the actions required by every team member to achieve the company's vision of success.
- 2 Have the Right Resources:** For most organizations implementing a robust sustainability strategy requires fundamental organizational change. To ensure this change can happen thoughtfully and with minimal disruption, adequate investments in resourcing, processes, systems, and technologies are critical. In addition, companies need to have clear objectives and targets that clear and appropriate benchmarks and enable meaningful measurement to occur.
- 3 Climate is Critical:** As climate change becomes an increasingly pressing and present issue, having a climate action plan is no longer optional. Every company should ideally have a clear plan with targets for minimising emissions, and if need be, offsetting. Plans should also include risk management approaches and considerations as the effects of climate change increasingly impact how we live, work and play.
- 4 Today's Guidelines, Tomorrow's Regulation:** As sustainability challenges grow, it is increasingly important that business leaders raise their level of understanding and knowledge of the sustainability landscape and potential future changes that may impact their industry and business. In recent years it has been commonplace for international guidelines and standards to eventually become adopted as or mirrored in local sustainability regulations.
- 5 Technology Unlocks Possibilities:** Continued advances in new technologies offer new possibilities for organizations to optimize performance in areas such as emissions and waste management, as well as to measure and achieve sustainability targets. Smart, forward-thinking companies will view investment in technology as a core focus of their sustainability strategy. Increasingly government grants and programmes are also available to assist with the investments required, such as Singapore's \$180m Enterprise Sustainability Programme by Enterprise Singapore.



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