ST Engineering

HARNESSING
TECHNOLOGY
**DEFINING
DISTINCTION**

SUSTAINABILITY REPORT
2023

Contents

ABOUT THE REPORT

- This Sustainability Report focuses on the sustainability strategy, practices, priorities, targets and performance of our operations across key markets during the financial year ended 31 December 2023.

- Unless otherwise stated, this Report covers all material business units that the Group have management control. For data where there is a qualification on the coverage, ST Engineering is progressively expanding the coverage to all businesses over time.

- This Report is approved by the Board and prepared in accordance with Global Reporting Initiative (GRI) Standards, Singapore Exchange Limited (SGX) Listing Rules 711A, 711B and Practice Note 7.6, Sustainability Accounting Standards Board (SASB) Standards – Aerospace and Defence, and references the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

- ST Engineering adopts the GRI Standards as it is the most widely referenced sustainability reporting framework and it addresses areas that are of interest to our stakeholders.

- SASB Standards focuses on the needs of investors and the Group adopts its disclosure requirements for Aerospace and Defence to provide our investors a clearer picture of our businesses.

- ST Engineering is a signatory of the United Nations Global Compact (UNGC) and is committed to the Ten Principles. This Report supplements our Communication of Progress.

- Stakeholders are advised to read the ST Engineering's Annual Report 2023 for more information on the Group's business and financial performance.

Feedback regarding the sustainability report can be sent to sustainability@stengg.com

Overview

ASSURANCE AND VERIFICATION

ST Engineering is committed to providing a balanced and accurate sustainability report to the extent possible. As we expand the collection and reporting of our ESG data globally, we will continue to enhance and fine tune relevant processes as requirements evolve.

Our Internal Audit team performed a review on the Sustainability Report for 2023 as mandated by SGX, and concluded that the requirements of SGX Practice Note 7.6 were generally satisfied whilst noting that compliance with TCFD recommendations will take place progressively as permitted under the said Practice Note. All recommendations highlighted during the internal review were taken into consideration during the development of this Sustainability Report.

The GHG emissions data reported by our Singapore entities is verified under ISO 14064-1:2018 Greenhouse Gases by Lloyd's Register Quality Assurance Ltd. We are progressively extending external verification for GHG emissions to all our material entities worldwide over the next few years.

Our intention is for the external verification and assurance of our Sustainability Report to be done progressively in stages.

View our External Assurance Statements

LIST OF ABBREVIATIONS

ABBREVIATION	DEFINITION
AI	Artificial Intelligence
AC	Audit Committee
CCWC	Climate Change Working Committee
CEO	Chief Executive Officer
CI	Continuous Improvement
CoSec	Company Secretary
CSA	Control Self-Assessment
DEI	Diversity, Equity and Inclusion
ECRs	Export Control Regimes
ERM	Enterprise Risk Management
ESG	Environmental, Social and Governance
ESRS	European Sustainability Reporting Standards
EXCO	Group Executive Committee
GEC	Group Engineering Centre
GHG	Greenhouse Gas
GISO	Group Information Security Office
GRI	Global Reporting Initiative
GSBC	Group Senior Business Council
GSSO	Group Strategy and Sustainability Office
GTO	Group Technology Office
GTT	Green Technology Taskforce
HQ	Headquarters
HR	Human Resources
IA	Internal Audit
IEA	International Energy Agency
IoT	Internet-of-Things
IPCC	Intergovernmental Panel on Climate Change
IT	Information Technology
ITC	Innovation and Technology Committee
KPI	Key Performance Indicator

ABBREVIATION	DEFINITION
MOU	Memorandum of Understanding
MRO	Maintenance, Repair and Overhaul
OEM	Original Equipment Manufacturer
OESC	Operational Excellence Steering Committee
OEST	Operational Excellence Specialist Team
PwD	Persons with Disabilities
PV	Photovoltaic
RITE	Research, Innovation, Technology and Enterprise Committee (formerly known as Research, Development and Technology Committee)
RFR	Recordable Frequency Rate
RSC	Risk and Sustainability Committee
RSR	Recordable Severity Rate
P2F	Passenger-to-Freighter
R&A	Group Risk and Assurance
R&D	Research and Development
SASB	Sustainability Accounting Standards Board
SDGs	Sustainable Development Goals
SFC	Strategy and Finance Committee
SGX	Singapore Exchange Limited
STEM	Science, Technology, Engineering and Mathematics
STESU	ST Engineering Staff Union
SWC	Sustainability Working Committee
TCFD	Task Force on Climate-related Financial Disclosures
T&Cs	Terms and Conditions
UN	United Nations
UNGC	United Nations Global Compact
WSH	Workplace Safety and Health

Sustainability Dashboard

ECONOMIC

● **R&D AMOUNT SPENT**

$411m
spent on R&D

● **SUPPLY CHAIN**

$810m
value of purchases from
SMEs in Singapore

ENVIRONMENTAL

● **SCOPE 1 AND 2 GHG EMISSIONS**

36%
reduction over 2010 base year

● **GREEN ENERGY**

12%
of electricity consumption
from global operations derived
from renewable energy

SOCIAL

● **CORPORATE COMMUNITY
CONTRIBUTIONS**

$2.3m
worth of community contributions
by the Group, employees and
other stakeholders

● **PEOPLE MANAGERS**

15%
of male employees
are people managers

14%
of female employees
are people managers

● **LEARNING & DEVELOPMENT**

30
average training hours
per employee

● **ACCIDENT RATE**

0.33
Recordable
Frequency Rate

2.93
Recordable
Severity Rate

GOVERNANCE

● **BRIBERY AND CORRUPTION**

Zero
substantiated cases
of bribery and corruption

RECOGNITION

Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA

Community Chest Awards –
Charity Platinum Award

Fifth
Consecutive Year

MRO Asia Pacific Awards 2023 –
Sustainability Initiative of the Year

SUSTAINABILITY IS IN OUR DNA...

Board Statement

The Board of Directors oversees the management, including the review of material environmental, social and governance (ESG) factors for ST Engineering and takes them into consideration when setting the Group's strategic direction.

We remain steadfast in positively impacting people's lives and the health of our planet by operating responsibly in our communities and the wider global ecosystem. We create value by addressing real-world problems, including those related to climate change, urbanisation, pandemics, public safety and evolving security challenges. We harness technology and innovation to enable a more secure and sustainable world.

In our efforts to decarbonise, we are focusing in the medium term on managing opportunities and risks related to climate change across our global units.

We link a range of operational, financial and non-financial key performance indicators to our material ESG factors to encourage the adoption of strategies and practices that are aligned to the sustainable and long-term success of the Group.

MESSAGE FROM GROUP PRESIDENT & CEO

Dear Shareholders,

A PURPOSE-DRIVEN GROUP

ST Engineering leverages technology and innovation to enable a more secure and sustainable world. Our sustainability journey is guided by our focus on long-term resilience and sustainable value creation for all our stakeholders, which includes our customers, employees, communities, shareholders, governments and suppliers.

Amidst a volatile and uncertain world where geopolitical tensions, extreme weather patterns and disruptions across industries are common, we remain committed to integrating sustainability into our strategy and operations in order to remain resilient.

DOING OUR PART

2023 has been a dynamic year marking several significant milestones in our sustainability journey:

- **CLIMATE:** We continue to monitor the risks and opportunities for the Group arising from climate change, in alignment with the TCFD framework. We stepped up efforts in reducing our GHG emissions to foster a sustainability culture amongst our employees; by encouraging environmentally friendly habits into their daily lives through events such as Green Day.

- **EMISSIONS:** We are on target to halve our Scope 1 and Scope 2 absolute GHG emissions by 2030 compared to 2010, as we continue our journey alongside global efforts towards net zero. In our global operations, our renewable energy generated 12% of the total electricity used.

- **HEALTH & SAFETY:** We had zero fatalities in our operations and continued to lower our major injuries year-on-year. As part of our Total Workplace Safety & Health efforts, we conducted regular safety walkabouts, helmed by our EXCO and GSBC members, and monthly wellness workshops to emphasise the importance of both physical and mental wellbeing of our employees.

- **PEOPLE:** We value our diverse global workforce and promote the professional and personal development our employees. We launched the Group's DEI commitment statement this year as part of our efforts to foster an inclusive workplace. To better embrace the adoption of new technologies, we launched a series of upskilling and retraining programmes for our employees. We also finalised our first Collective Agreement with our house union, STESU, in Singapore, allowing our graded employees to enjoy greater job mobility and career progression.

- **COMMUNITY:** We refreshed our three Corporate Social Responsibility (CSR) pillars to better focus our efforts and benefit the local communities we operate in. We serve our communities through a combination of volunteer work, skills-based contributions as well as in-kind and monetary support. In 2023, we contributed $2.3m to community causes.

- **DISCLOSURES:** We provide relevant disclosures in our Annual and Sustainability Reports for regulatory compliance in order to give our stakeholders good visibility of our business strategy. Our Sustainability Report is guided by global reporting frameworks such as GRI, SASB and TCFD.

- **DATA:** As we expand the collection and reporting of our ESG data globally, we will continue to enhance and fine tune relevant processes as requirements evolve, notably with the operationalisation of our Group-wide Sustainability Reporting Platform which was launched in December 2022.

ENABLING OUR CUSTOMERS

Our commitment to supporting our customers in their sustainability journey is underpinned by our target to increase our sustainability-linked revenue to more than $3 billion by 2026. This was announced at our Investor Day in November 2021. We continue to grow our current businesses to support our customers in three key areas:

- Reducing GHG emissions
- Solving urban and city challenges
- Growing the circular economy

Opportunities: As part of our sustainability journey, we have identified climate-related opportunities in areas related to energy management, new materials, carbon services and other emerging green technology applications. Our Business Areas continuously review and act on these opportunities by building on our existing capabilities and leveraging the strength of our diverse business. These efforts are complemented by group-wide initiatives such as In.Vent and Research Translation @ ST Engineering. These platforms help develop business ideas with growth potential and foster deeper collaboration with partners.
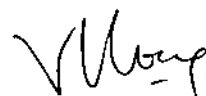
New Solutions: Our businesses continue to create a suite of sustainability-linked products and services such as AGIL® Intelligent Traffic Management Systems and AGIL® Smart Water Solutions. These solutions harness technologies while improving efficiency and reducing carbon emissions for our customers.

Supply Chain: We recognise the importance of a sustainable and resilient supply chain. In 2023, we established a supply chain resilience framework. Utilising the framework, we piloted studies across various business areas to assess and determine strategies to reduce supply chain risks arising from factors such as geopolitical tensions. Additionally, we incorporated ESG criteria into our suppliers' tender evaluation to build a more sustainable and resilient supply chain.

COMMITMENT TO THE JOURNEY

ST Engineering remains committed to sustainability, whether in our own operations, or through enabling our customers and other stakeholders. We seek to leverage our diverse capabilities and partner with innovative firms and institutions to deepen our expertise and broaden our offering of technologies, as we pursue greater sustainability in our businesses and operations globally.

Sincerely,

VINCENT CHONG SY FENG
GROUP PRESIDENT & CEO

29 February 2024

Our Sustainability Approach

SUSTAINABILITY FRAMEWORK

RESPONSIBLE GLOBAL CITIZEN

Doing Our Part
Building Trust & Managing Risks

ECONOMIC
ENVIRONMENTAL
SOCIAL
GOVERNANCE

ENABLER OF A SUSTAINABLE WORLD

Enabling Our Customers
Growing with Partners & Seizing Opportunities

The Group's success relies on creating value for our stakeholders in a sustainable manner. Our business processes are built upon our commitment to long-term thinking and considerations of multiple stakeholders while harmonising current customer needs with future global requirements.

We believe in doing our part by conducting our business sustainably, ethically and responsibly to build trust among our stakeholders while managing risks to our business. We strive to enable our customers on their journey by offering products and solutions that will help them grow and operate sustainably.

Our people and the communities we operate in are vital to our global success. We support inclusive development and foster an ecosystem that promotes the continuous growth of our business. We facilitate this by contributing to the communities that we operate in and investing in the development of our people.

Amidst volatile markets and an uncertain world, integrating sustainability into our strategy and operations is key to ensuring our businesses remain resilient and relevant.

OUR GOVERNANCE STRUCTURE

We believe that our success hinges on nurturing a sustainable culture within the organisation, led by committed leadership, and instilling a sense of responsibility amongst employees at every level.

The Board holds ultimate accountability, provides strategic direction and considers sustainability issues, including the management of material Environmental, Social and Governance (ESG) factors when formulating the Group's strategies and policies. The Board's Risk and Sustainability Committee (RSC) oversees risk, internal controls and sustainability matters.

The Group President & CEO (P&CEO), supported by the Group Executive Committee (EXCO), is accountable to the Board for the implementation of these strategies and directions. The Group Chief Strategy & Sustainability Officer ensures that sustainability is a core part of our business strategy, and that ESG considerations are integrated into our business strategies and plans.

Sustainability is the responsibility of every ST Engineering employee at every level. Our Business Areas' management teams and Group Functions play critical roles in shaping and executing our strategy. They work across the Group in key areas such as Technology and Innovation, Operational Excellence and Sustainability. They are enabled by an annual planning process which is underpinned by our strategic and financial planning processes as well as our governance and ERM systems.

| Ultimate Accountability |
| Board of Directors |

Strong, Committed and Accountable Leadership

| Oversight on Behalf of the Board |
| Risk and Sustainability Committee |

| Leadership |
| Group P&CEO, Group Executive Committee & Group Senior Business Council |

Responsibility of Every Employee at Every Level

| Direction & Execution |

Business Areas   Group Functions

Technology & Innovation   Operational Excellence   Sustainability
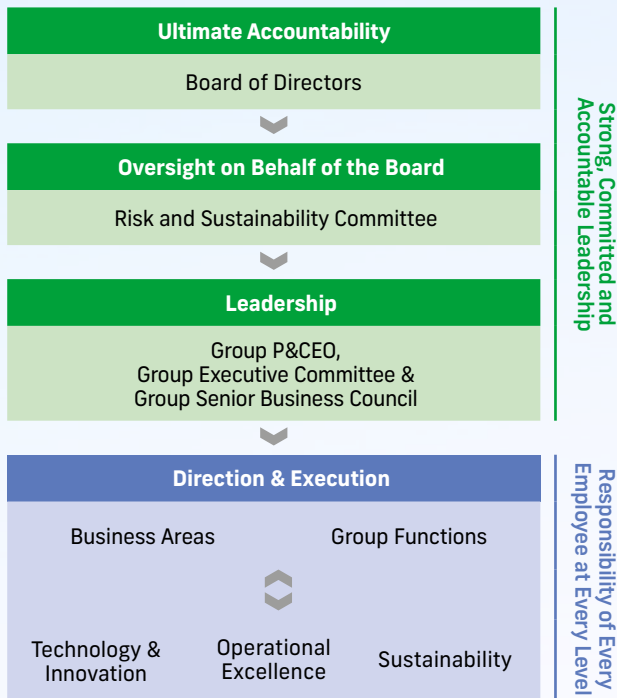
OUR COMMITMENT

We are committed to conducting our business in a responsible manner.

As a Group, we are committed to:

Protecting human rights and adhering to all labour laws and regulations where we operate.

Maintaining zero tolerance for unethical labour practices such as child labour, forced labour, slavery and human trafficking in any of our operations.

Prohibiting discrimination and harassment at our workplaces.

Supporting the right to freedom of association and encouraging effective communication and consultation with our employees.

Not designing, producing or selling anti-personnel mines, cluster munitions and white phosphorous munitions or any of their related key components.

Complying with all Export Control Regimes governing the export of Controlled Items in all jurisdictions we operate in.

Zero tolerance for fraud and corrupt practices.

Our commitments are guided by international human rights principles encompassed in the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, UNGC and the United Nations (UN) Guiding Principles on Business and Human Rights. Our policies, operations and relationships with our stakeholders reflect these principles of respecting people's dignity and their inherent rights.

Our Code of Business Conduct and Ethics forms the backbone of our commitment to ethical business conduct and regulatory compliance. We continue to commit to meeting all relevant regulatory and customers' contractual requirements, including those relating to cybersecurity, data governance and protection, and business continuity. In support of our Code of Business Conduct and Ethics, and good corporate governance practices, we established ERM and compliance policies and processes.

Beyond full compliance with legal and regulatory requirements, we align our management systems to international and industry standards. Our ERM policy provides directions for managing and reporting enterprise risks across the Group. This policy aims to build a robust risk management process which evaluates, monitors and treats enterprise risk in a holistic and integrated manner. Our processes adopt a precautionary approach, with risk identification being performed both at the initial stage and continuously as business or project progresses. Risk analysis comprises material internal and external evaluation to ensure that all aspects are considered.

HOW WE PRACTISE OUR COMMITMENT TO HUMAN RIGHTS

Suppliers
We expect our supply chain partners to adhere to business principles consistent with our own, outlined in our Supplier Code of Conduct. This includes the fair and ethical treatment of labour within their own companies, as well as that of their suppliers.

Customers
We offer products and services that generate a positive impact for our customers as well as the communities where they serve. This includes improvements in quality of life, health, safety and security.

Employees
All our employees are required to adhere to honest and ethical conduct and act in accordance with our Code of Business Conduct and Ethics. This includes treating each other with respect, and abiding by our core values of Integrity, Value Creation, Courage, Commitment and Compassion.

Read more about our Sustainability Approach on our website

MEASURING PERFORMANCE

We measure a range of financial, non-financial and operational Key Performance Indicators (KPIs). These have a significant impact on the resilience and sustained performance of our Group's businesses globally, whether in the short, medium or long-term. Our KPI areas include those indicated in the table below:

Financial Performance	• Revenue, Profit, Working Capital
People Development	• Diversity, Equity & Inclusion • Employee Engagement
Operational Excellence	• Continuous Improvement • Health & Safety • Procurement Savings
Technology & Innovation	• R&D Investments • New Products & Services
Sustainability	• GHG Emissions • Supply Chain Resiliency • Product Carbon Footprints
Cybersecurity	• Awareness & Compliance

Our Senior Management's remuneration is linked to the achievement of annual performance targets, including material risks and sustainability performance.

Read more about our Executive Renumeration Structure in our Annual Report

OUR CONTRIBUTION TO GLOBAL GOALS

ST Engineering is a signatory of the UNGC. We support its Ten Principles and are committed to advance the broader goals of the UN Sustainable Development Goals (UN SDGs). References on the practical actions taken to implement the UNGC principles in each of the four issue areas (human rights, labour, environment and anti-corruption) can be found in the UNGC index pages. We affirm our support of all 17 UN SDGs and identified six goals which correlate strongly with our practices, operations, and in the products and services we offer.

Six goals which we correlate strongly with

WE SUPPORT
UN GLOBAL COMPACT

SUSTAINABLE DEVELOPMENT GOALS

8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Read more about our Contribution to SDGs on our website

MATERIAL STAKEHOLDERS AND ENGAGEMENT

We believe that creating sustainable value for all our stakeholders is essential to the Group's long-term success. Regular stakeholders' engagement enables us to understand and address concerns while strengthening crucial relationships which our businesses rely on.

Material stakeholders are identified as part of the Group's Enterprise Risk Management process, based on the magnitude that these parties can impact or be impacted by the Group's activities.

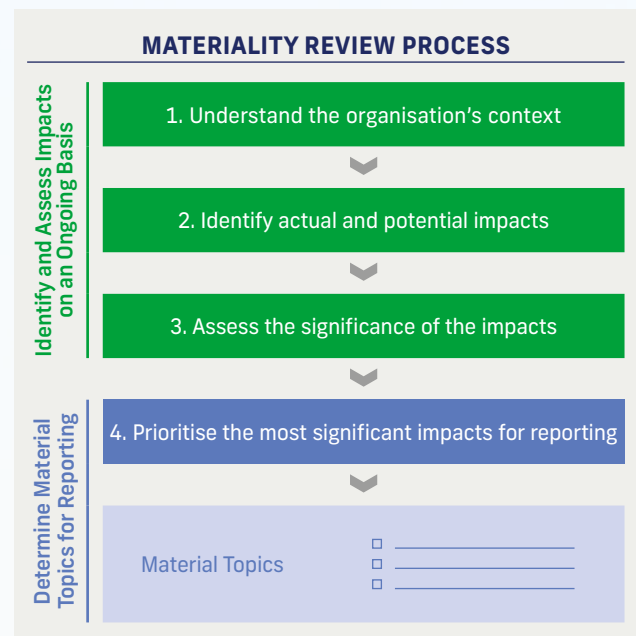| Stakeholder	Our Responsibility	Engagement Efforts
Customers	We forge enduring relationships with our customers and ensure that our products and services stay relevant, are safe and reliable, and meet their expectations. We do what it takes to understand our customers, their needs and their challenges. We work closely with them to co-create solutions that enable them to be more effective in their operations.	• Regular customer surveys • Company visits • Regular project review meetings • Technology seminars • Dialogue sessions
Employees & Other Workers	People are our most valuable asset. We focus our efforts in growing and enhancing their capability and capacity, strengthening a passionate and engaged workforce, and being at the forefront of people practices.	• Regular town halls • Annual business conventions • Continuous performance discussions • Team activities, including celebrations, team building and wellness initiatives • Implementing health and safety policies to protect them • News updates via our Corporate Intranet
Local Communities	We contribute to the development of our host communities. We act responsibly, protect the environment and contribute to our communities' well-being through our corporate community contributions. We also work closely with local government agencies to support their economic development imperatives that are in line with our growth plans. Where possible, we ensure that our health and safety policies, including pandemic precautions, protect our community beyond our workplaces.	• Corporate community contributions • Collaborations with educational institutions to develop STEM talent • Partnerships with SMEs
Suppliers & Collaborators	We cultivate strong, ethical and mutually beneficial relationships with suppliers and collaborators. Our worldwide partners are the cornerstones of our global businesses.	• Engagements with partners including strategic programmes with SMEs • Surveys and feedback sessions with suppliers on procurement policies
Shareholders & Investors	In line with our strong emphasis on corporate governance, we continue to build investor trust and confidence through open dialogue and two-way communication with shareholders and the investment community.	• Quarterly market update • Half-yearly financial results briefings • Investor conferences and roadshows • Investor Day • Annual General Meeting & Extraordinary General Meeting • Facility visits • Group and one-on-one meetings
Regulators & Governments	We disclose pertinent information in a clear and concise manner, and on a timely basis. We comply with legal and regulatory requirements in the jurisdictions where we operate in.	• Providing feedback to the public • Regulatory consultation exercises • Incorporate trends and learning points in our business through regular engagements with regulators and governments

Our Sustainability Approach

MATERIALITY ASSESSMENT

In assessing materiality, ST Engineering considers factors that impact our businesses and our stakeholders, from both the financial and non-financial perspectives. Our six material stakeholders include customers, employees and other workers, local communities, suppliers and collaborators, shareholders and investors, and regulators and governments. Our 10 material factors cover four broad areas of Economic, Environmental, Social and Governance.
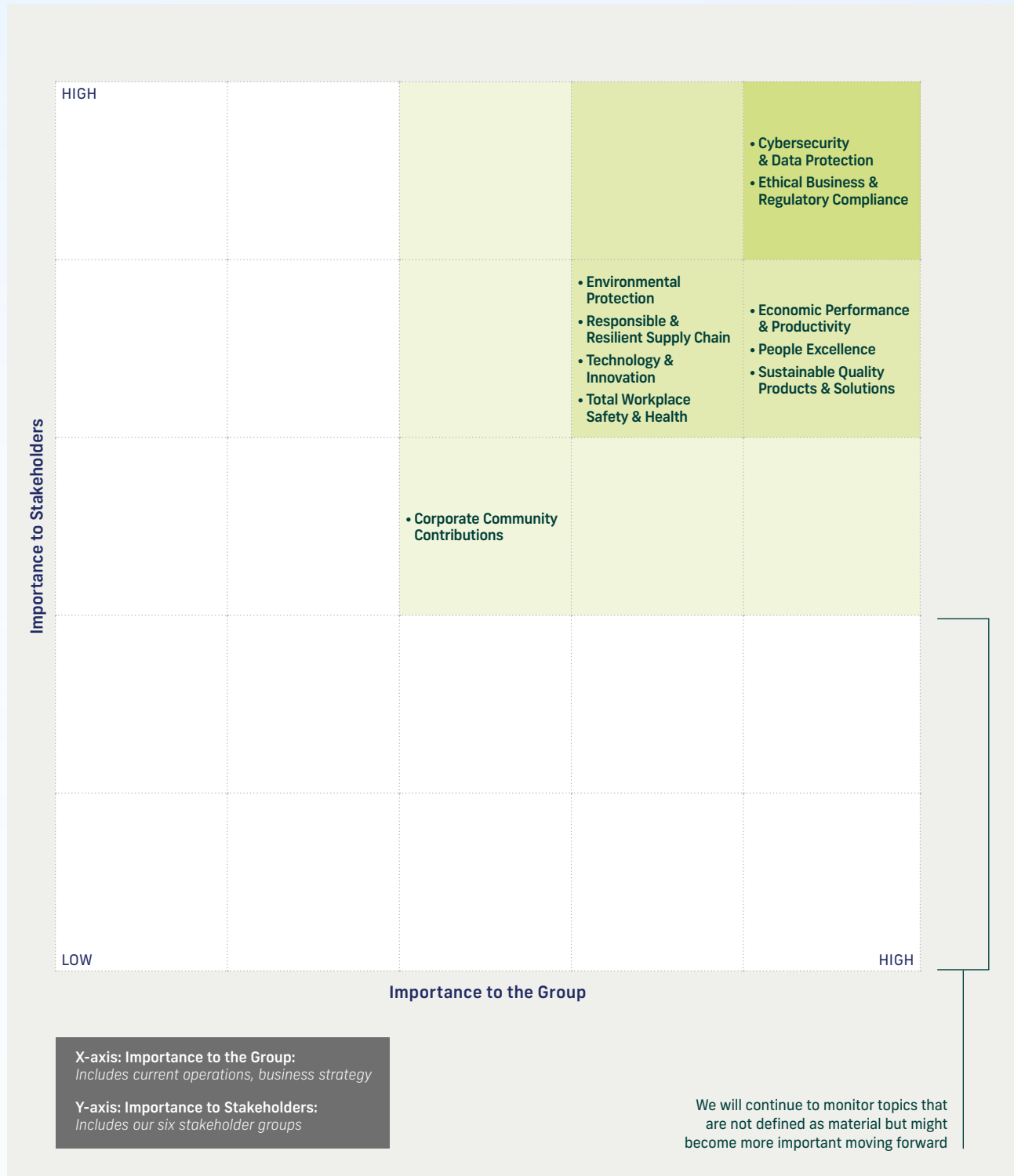
MATERIALITY REVIEW PROCESS

Our organisation's business and sustainability context form the foundation for identifying topics with actual and potential impacts. We performed internal assessments against external standards and disclosure requirements such as GRI Standards, SASB – Defence and Aerospace standards, SGX Core ESG Metrics and TCFD recommendations, and assess the significance (likelihood and severity) of the topics identified. Through a combination of surveys and interviews, we prioritised each topic by engaging with relevant stakeholders such as our employees, managers, senior management and our customers. This process is performed regularly, and the Group has identified 10 material factors spanning four broad areas of Economic, Environmental, Social and Governance. There are no changes to our material factors from the previous reporting period.

The management will review our material factors in 2024 alongside the Board. The review will incorporate double materiality concepts and metrics from the evolving regulatory landscape where applicable.

MATERIALITY REVIEW PROCESS

Identify and Assess Impacts on an Ongoing Basis

1. Understand the organisation's context

2. Identify actual and potential impacts

3. Assess the significance of the impacts

Determine Material Topics for Reporting

4. Prioritise the most significant impacts for reporting

Material Topics

MATERIALITY MATRIX

The responses to our survey also enabled us to assess the relative importance of each material factor to the Group and our stakeholders. The result was the Group's Materiality Matrix.

HIGH

- Cybersecurity & Data Protection
- Ethical Business & Regulatory Compliance

- Environmental Protection
- Responsible & Resilient Supply Chain
- Technology & Innovation
- Total Workplace Safety & Health

- Economic Performance & Productivity
- People Excellence
- Sustainable Quality Products & Solutions

- Corporate Community Contributions

Importance to Stakeholders

LOW   HIGH

Importance to the Group

X-axis: Importance to the Group:
Includes current operations, business strategy

Y-axis: Importance to Stakeholders:
Includes our six stakeholder groups

We will continue to monitor topics that are not defined as material but might become more important moving forward

Our Sustainability Approach

OUR MATERIAL FACTORS

	ECONOMIC			ENVIRONMENTAL	
	Economic Performance & Productivity	**Technology & Innovation**	**Responsible & Resilient Supply Chain**	**Environmental Protection**	**Sustainable Quality Products & Solutions**
Why it is Material	We are committed to delivering a sustainable and balanced triple bottom line of "People, Planet, Profit". Inclusive growth and productive value creation for our stakeholders are key to our long-term viability.	We improve lives and make the world more secure and sustainable through technology and innovation. Our ability to harness disruptive technology and direct our engineering expertise towards building innovative products and solutions, allows new business growth and differentiates us from our competitors.	We depend on a resilient and sustainable supply of goods and services to meet our business needs. We are committed to managing our suppliers ethically and working with them to ensure a responsible and resilient supply chain.	Climate change is an issue of urgency and importance. A low carbon business strategy is not only good for the environment, but also enables us to better respond to climate change related regulations and price volatilities of hydrocarbon resources.	Customers rely on us to meet their operational needs. Our products must be compliant with all relevant regulations and be safe to produce, operate and maintain. It must also be reliable over the product's lifecycle. In addition, our services must meet our customers' requirements and be delivered at the promised quality and within the committed turnaround time. Cities and organisations around the world are looking to minimise their carbon footprint while reducing operating costs.
How we Manage It	Our strategic planning community reviews the Group's strategy in the context of global trends and developments. We focus on operational excellence to ensure that we continue to add value to our stakeholders and have a positive impact on our communities. Productivity efforts are coordinated by the Group Continuous Improvement Office.	We manage technology and innovation at the highest levels, drive and coordinate efforts across our businesses, and embed it into our culture. The Group Technology Office (GTO) and Group Engineering Centre (GEC) identifies, develops, and leverages common competencies to increase our development strategy, speed and quality. The Innovation and Technology Committee (ITC) provides guidance and support to leaders of each business area.	Our procurement community champions the effective management of our suppliers to align business behaviours, drive greater efficiencies, streamline processes and build greater resilience. We work with our suppliers to embed responsible procurement principles into our processes.	Environmental efforts are coordinated by OEST – Environment. All our material business units in Singapore are certified to ISO 14001 Environmental Management Systems. Our global operations abide by relevant environmental regulations and requirements.	Our quality efforts are coordinated by OEST - Quality. The majority of our operations are certified to ISO 9001 Quality Management Systems or the equivalent. We design, manufacture and service our products in accordance with industry standards and meet all regulatory requirements. Sustainability and green considerations are incorporated into our products as well as in production processes and lifecycle support. We actively work with our suppliers and collaborators and regularly seek feedback from our customers.
UN SDGs	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION

OUR MATERIAL FACTORS

	SOCIAL			GOVERNANCE	
	People Excellence	**Total Workplace Safety & Health**	**Corporate Community Contributions**	**Ethical Business & Regulatory Compliance**	**Cybersecurity & Data Protection**
Why it is Material	We are only as strong as our people. With a capable, motivated and agile workforce, we are able to strengthen our talent pipeline to pursue sustainable growth.	We are committed to "Safety Before Profits". A safe and healthy workplace protects workers from injury, stress and illness, and reduces absenteeism and turnover. It also increases productivity and raises employee well-being. This duty of care extends to our visitors and contractors working within our premises.	We are committed to being a good corporate citizen in the places where we operate. Making a positive impact in our host communities is aligned with our core value of compassion.	We comply with applicable laws and regulations in the jurisdictions where we operate. We have zero tolerance for fraud and corrupt practices. In addition, we actively protect our data and those entrusted to us by our stakeholders.	Digital technology and highly connected economies and businesses bring new vulnerabilities from a proliferation of cyber threats. We protect our data and systems including those entrusted to us. We also comply with all applicable data protection laws and regulations in the various countries we operate in. Cybersecurity is an enabler for our businesses.
How we Manage It	Our people and culture strategy seeks to enhance our capability and capacity for growth, build a passionate and engaged workforce, and position us at the forefront of people practices. This proposition is realised through talent attraction and management, career development, diversity and inclusion, a fair reward system, work-life integration and harmonious union relations.	Workplace safety and health efforts are coordinated by OEST - Workplace Safety and Health (WSH). All our material business units in Singapore are certified to ISO 45001 Occupational Health and Safety Management Systems. Our global operations abide by relevant workplace safety regulations and requirements.	Corporate community contributions are coordinated by the Corporate Social Responsibility Committee. We measure, report and communicate our corporate community investments and philanthropy efforts.	The Group Risk and Assurance (R&A) function works with Group Legal to oversee matters relating to governance, risk and compliance. It has put in place a regulatory compliance framework to continually train our global workforce on our Code of Business Conduct and Ethics. The department also works with relevant functions and operations to strengthen compliance.	We focus on "People, Process and Technology" in managing cybersecurity risks. Cybersecurity in the Group is overseen by the Group Cybersecurity Committee and supported by the Group Information Security Office (GISO). The Group Data Governance Committee focuses on data governance and protection and comprises representatives from our business areas and Group Headquarters (HQ) functions.
UN SDGs		8 DECENT WORK AND ECONOMIC GROWTH 11 SUSTAINABLE CITIES AND COMMUNITIES		16 PEACE, JUSTICE AND STRONG INSTITUTIONS	

CLIMATE CHANGE

A WHOLE OF ST ENGINEERING EFFORT

ST Engineering recognises the impact of climate change and supports the efforts to address it, both globally and locally where we operate, by adopting a two-pronged approach of doing our part and enabling our customers. In our journey towards net zero, we do our part to reduce GHG emissions and adopt environmentally friendly practices in our business, as well as encourage our employees to inculcate similar habits in their daily lives. We develop products and solutions that will help our customers reduce their carbon footprint in their journey towards net zero.

We agree that the recommendations of TCFD are useful for our stakeholders. We reference the TCFD framework for our climate-related disclosures. This report addresses the disclosure recommendations of the four core elements of the TCFD framework.

OUR TCFD JOURNEY

2021

- Started TCFD journey
- Ensured inclusion of climate change in our business areas' strategies
- Conducted preliminary physical climate risk assessment on significant operating sites globally
- Set target to reduce Scope 1 and Scope 2 absolute emissions by 50% by 2030 compared to 2010 base year

2022

- Assessed key areas in existing practices against TCFD disclosure requirements and implications on our business
- Conducted climate scenario analysis for material portion of our business
- Incorporated findings into strategy, decision making and ERM approach

2023

- Continuous assessment and monitoring of risks and opportunities
- Act upon selected mitigation plans and opportunities
- Implemented an internal shadow carbon price on major capital expenditure
- Established roadmaps for development of product carbon footprint of our major products and services
- Stocktake of emissions reduction target and discussed approach to achieving net zero

Moving Forward

- Conduct regular climate risks and opportunities reviews

OUR GOVERNANCE: LEADERSHIP FROM THE TOP

Strategies and actions to address climate change are directed at the highest levels in ST Engineering. Our sustainability governance structure includes the Board and its relevant committees, Group EXCO, GSBC, SWC, and various working groups across our businesses and geographies. This ensures that climate-related risks and opportunities are effectively managed.

Ultimate Accountability & Oversight	Board of Directors		
Oversight on Behalf of the Board	Audit Committee	Risk and Sustainability Committee	Strategy and Finance Committee
Leadership	Group EXCO and GSBC		
Direction & Execution	Group Green Technology Task Force	Group Sustainability Working Committee	Group Strategy Community
Integration and Execution (BA Focused)	Business Area Technology & Innovation Communities	Business Area Sustainability Focused Teams	

In 2023, the Group's SWC was established to replace the CCWC as the key platform for integrating and executing climate-related efforts. The SWC integrates and executes our group-wide sustainability efforts spanning across all key areas of environmental, social and governance. The SWC comprises global operations leaders across all our Business Areas and is chaired by the Group Chief Strategy and Sustainability Officer and sponsored by the Group Chief Financial Officer.

Our Sustainability Approach

Our leaders at COP28

Photos: COP28 Singapore Pavillion

OUR STRATEGY: MINIMISING RISKS AND MAXIMISING OPPORTUNITIES

ST Engineering recognises the risks and opportunities presented by climate change to our business. We are committed to communicating our approach and strategies for climate mitigation, adaptation and resilience to our stakeholders. The global need to leverage technology and innovation to address climate change impact on businesses presents opportunities for the Group over the short, medium and long-term.

Maximising Opportunities

As part of our TCFD journey, we continuously review climate change opportunities in both our existing and emerging business areas. We identified opportunities and are exploring some areas such as energy management , composites recycling and applications, and technology-enabled carbon verification solutions.

Amongst our diverse sustainability-linked offerings is a range of climate-focused products and solutions. The three focus areas of our sustainability-linked businesses include:

Reducing GHG emissions	Our products and solutions reduce emissions by saving fuel, reducing waste, minimising road congestion and boosting energy efficiency.
Solving urban and city challenges	Our Smart City deployments and Internet-of-Things (IoT) -based connected solutions optimise operational efficiency, improve energy savings and maximise resource use. We also develop and deploy sustainable hybrid and electric transportation solutions.
The circular economy	We design, build, operate and maintain sustainable waste management and waste-to-energy facilities that support eco-friendly waste disposal, management and wastewater recycling. Additionally, our aircraft and ship conversions provide a new lease of life through repurposing and reuse, thus saving significant resources.

In line with COP28's theme of a Global Stocktake, the Group did a stocktake of our progress across our global operations towards our 2030 goal of halving Scope 1 and 2 absolute emissions from a 2010 baseline. We also took the opportunity to review our pathway to net zero. We identified three areas including optimisation of energy and resource efficiency, greener and renewable sources of energy, and initiatives for behavioural change. The areas identified apply to both prongs of our sustainability approach of doing our part and enabling our customers.

The opportunities identified build on our existing capabilities and leverage the strengths of our businesses globally. We continue to expand and improve our suite of sustainability-linked products and solutions such as our Passenger-to-Freighter (P2F) conversions, AGIL® Smart Digital Junction Suite and AGIL® Smart Water Solutions. This allows us to support our customers' decarbonisation goals and rising demands for transiting to a low-carbon economy.

The rising cost of carbon and increase in demand for products and services that optimise resource use and operational efficiency are strong drivers for businesses to push for a sustainability-focused mindset among employees. In 2023, the Group made steps in this direction by implementing an internal shadow carbon price on major capital expenditure, established roadmaps and embarked on the development of product carbon footprint for our major products and services.

We continue to identify and coordinate climate-related opportunities across the Group. Our GTO identifies and coordinates climate-related opportunities through technology scanning and trend identification, Research and Development (R&D) data gathering and analysis and formulation of group-wide initiatives. GTO also works in close partnership with GEC, Business Areas' leaders, the Group Strategy and Sustainability Office (GSSO) and ST Engineering Ventures. This leads to the development of new products, technologies and solutions for our global markets that are aligned with the Group's business strategy.

Minimising Risks

In assessing our physical and transition risks, the relevant climate scenarios helped us quantify the potential direct damages and operational risks to ST Engineering's assets and key suppliers. Consistent with the scope of our study, we selected scenarios relevant to our business, with a specific focus on commercial aerospace. We modelled the climate impact on assets utilising the 8.5 Representative Concentration Pathway scenario taken from the Intergovernmental Panel on Climate Change (IPCC), with a timeline of up to 2100. We also referred to Nationally Determined Contributions scenarios and utilised sector specific decarbonisation scenarios including International Air Transport Association Fly Net Zero for aviation for transition risks up to 2050. For our other businesses, we conducted a high-level analysis based on general decarbonisation scenarios such as the International Energy Agency (IEA) Net Zero Emissions by 2050 scenario and the IEA Sustainable Development scenario.

We concluded that the business impact of climate change to ST Engineering is low. However, in assessing the business impact of the energy transition, we identified three watchpoints:

Watchpoints	Description
Carbon Tax and Regulations	Monitoring carbon price and sector specific regulations as we are cognisant of the downstream effect from suppliers to the Group
Shifts in demand	Tracking sectorial structural shifts such as competitors' efforts to launch greener products and investing into climate-related business and technology opportunities
Supply Chain	Monitoring impact on supply chain due to climate change and other factors such as macroeconomic trends and regulatory requirements through our newly established supply chain resiliency framework

As part of our annual five-year strategic plan review, we include these watchpoints when considering sustainability-related risks and opportunities. This is discussed and endorsed by the Board's Strategy and Finance Committee (SFC) and forms the foundation for initiatives relating to climate change in subsequent years.

Moving forward, we will deepen our climate risk and opportunities review to cover all global operations while continuously monitoring and addressing climate risks across our value chain through various sustainability initiatives.

OVERVIEW OF SCENARIOS

Scenario	Description
"Status Quo" 2°C rise by 2050, 2.6°C by 2100	**Status Quo:** • Emissions continue to grow at business-as-usual rates • Carbon price increases by committed rates • SAF adoption remains at today's rate
"Nationally Determined Contributions" 1.8°C rise by 2050, 2.1°C by 2100	**Nationally Determined Contributions Aligned:** • Some decarbonisation actions taken • Based on published climate action plans
"Net Zero" 1.5°C rise by 2050, 1.4°C by 2100	**Net-zero Aligned:** • Emissions, carbon price, sustainable aviation fuel adoption changes in line with International Air Transport Association Fly Net Zero scenario

Note: Temperature rise compared to pre-industrial levels; International Air Transport Association, International Energy Agency, consultant analysis
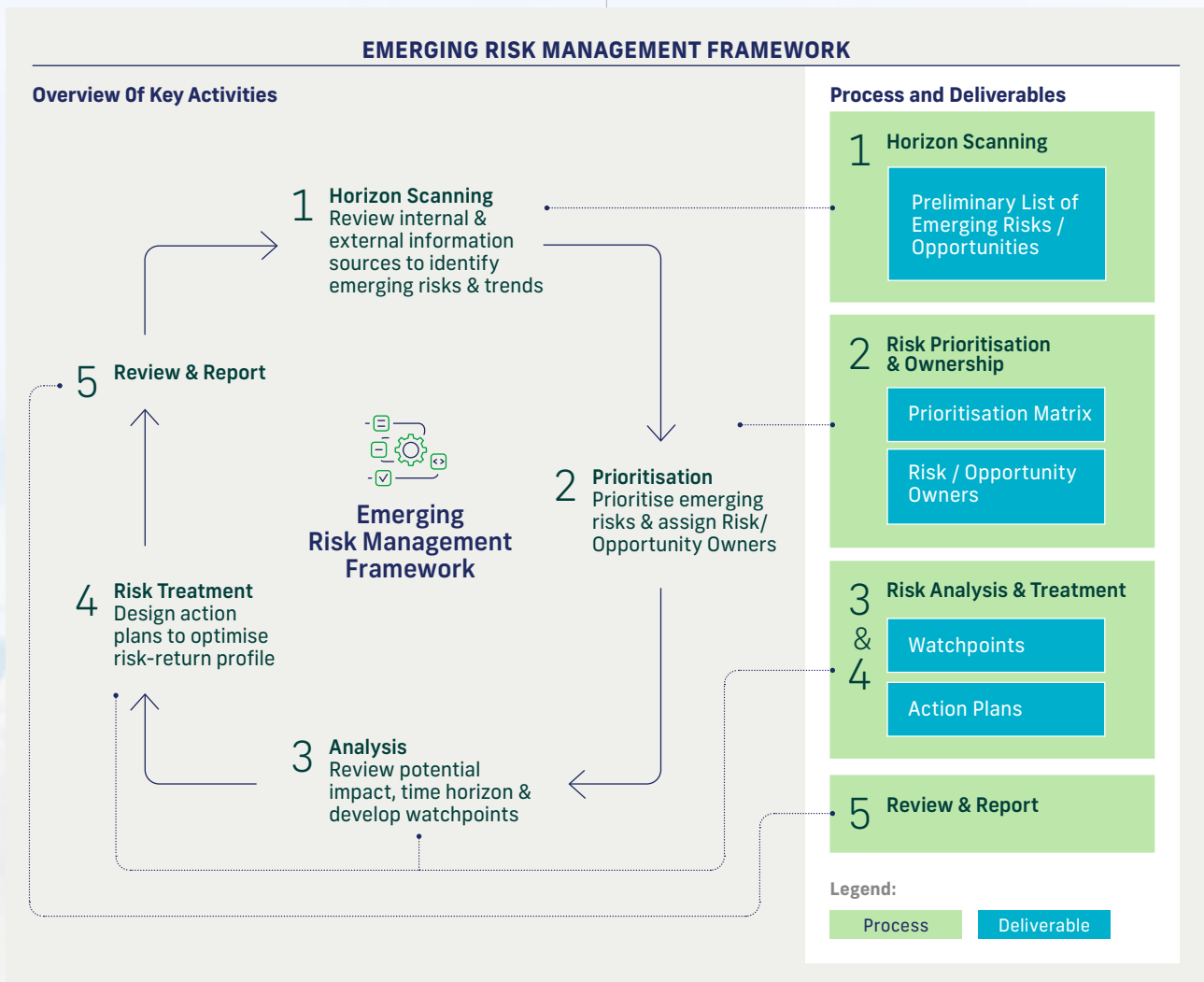
Our Sustainability Approach

**OUR RISK MANAGEMENT APPROACH:
STRENGTHENING PREPAREDNESS**

We recognise that climate change poses different types of risks to our business. These include physical risks, such as extreme weather, rising sea levels and increasing temperatures, which can disrupt or negatively impact our employees, assets, operations and supply chains. We also acknowledge the potential financial impacts that can result from transition risks, which include regulatory, market and reputational risks.

The R&A function provides leadership in the implementation of a Group-wide Enterprise Risk Management (ERM) Framework that allows risks to be identified, assessed, monitored and managed by the business leaders.

Emerging Risk Management Framework
In 2023, the Group formalised the Emerging Risk Management Framework to identify potential emerging risks which could impact our businesses. We will be conducting horizon scanning progressively across all the business areas. Established watchpoints for key emerging risks are monitored and communicated regularly to facilitate informed decision making. We also recognise the impact from both physical and transition risks on our business due to climate change. Each business area employs the risk likelihood and impact parameters to identify and assess their key risk exposures over the short, medium and long term horizons. The management of these risks involves the formulation of detailed action plans integrated into annual business budgeting and planning processes.

EMERGING RISK MANAGEMENT FRAMEWORK

Overview Of Key Activities

1 **Horizon Scanning**
Review internal & external information sources to identify emerging risks & trends

5 **Review & Report**

Emerging Risk Management Framework

4 **Risk Treatment**
Design action plans to optimise risk-return profile

2 **Prioritisation**
Prioritise emerging risks & assign Risk/ Opportunity Owners

3 **Analysis**
Review potential impact, time horizon & develop watchpoints

Process and Deliverables

1 **Horizon Scanning**
Preliminary List of Emerging Risks / Opportunities

2 **Risk Prioritisation & Ownership**
Prioritisation Matrix
Risk / Opportunity Owners

3 & 4 **Risk Analysis & Treatment**
Watchpoints
Action Plans

5 **Review & Report**

Legend:
Process   Deliverable

OUR METRICS AND TARGETS: TRACKING PROGRESS

Enabling Our Customers

Aligned with our purpose to harness technology and innovation to enable a more secure and sustainable world, we set a target at our 2021 Investor Day to increase our sustainability-linked revenue to more than $3 billion by 2026. This revenue target will drive our businesses to pursue products and solutions that would enable our customers' sustainability journeys, including reducing the impact of their operations to climate change.

Target of
>$3b
sustainability-linked revenue by 2026

Doing Our Part

ST Engineering has made steady progress in our decarbonisation journey. We have disclosed our GHG emissions since 2014. In 2021, we committed to halve our Scope 1 and 2 absolute emissions by 2030, with 2010 as a baseline. This is aligned with the aspiration of our major shareholder for the decarbonisation pathway of their portfolio. In 2023, we reduced our absolute GHG emissions by 36% compared to our 2010 baseline.

Key metrics on carbon emissions, energy usage, water usage and waste management are published in the Environmental Protection section of this Sustainability Report. Monitoring and reporting these metrics help us identify areas with highest climate-related risks and track progress towards our goals. Aside from environmental related metrics and targets, other relevant climate-related metrics and targets such as supply chain, are elaborated under the respective material ESG factors in this Sustainability Report.

OUR CONCLUSION

Our current TCFD-aligned analysis is as follows:

- **Low physical risk to our productive assets and people**

  We established process to regularly review impacts due to extreme climate and weather events.

- **Minimal impact to business in transition to low carbon economy**

  We continue to monitor emerging regulatory and tax issues.

- **Climate change presents opportunities for the Group**

  We target to increase sustainability linked revenue to over S$3b by 2026.

We have updated our Group ERM framework to incorporate climate-related considerations. We have also launched the Emerging Risk Management Framework to identify, analyse and recommend actions on emerging risks on the longer-term horizon. Our GTT will drive and coordinate efforts across our businesses to leverage the unique opportunities presented.

ECONOMIC

ECONOMIC PERFORMANCE & PRODUCTIVITY

An enterprise's growth, underpinned by sustainability, diversity, inclusiveness and productivity drives superior economic performance while generating meaningful employment and benefits for the local communities it operates in. Driving economic performance and productivity is a cornerstone of our business's resilience.

Continuous Improvement (CI) increases the productivity and profitability of our business. Over the years, our CI initiatives have helped us improve our processes, enabling us to work smarter and more efficiently.

OUR GOVERNANCE AND FRAMEWORK

The Group's economic performance is driven by the Group EXCO and is overseen by the Board. The Board receives monthly financial reports and meets quarterly to review our financial performance. The SFC reviews the Group's strategy in the context of megatrends and our competitive advantages annually. They are supported by our core corporate functions, including Group Finance and GSSO.

The Group's productivity efforts extend to all employees throughout the company. The Group CI office provides a coordinated approach to enhancing CI activities. Guided by our Group CI and Innovation framework and supported by CI councils and trained practitioners, we embed CI activities into our day-to-day operations to drive productivity.

Read more on our Sustainability Website

OUR COMMITMENT

We are committed to delivering a triple bottom line of 'People, Planet & Profit' through the integration of community impact and sustainability with our business and operations and returns to our shareholders.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Continue to increase year-on-year planned productivity savings by 5%	• We achieved productivity savings of $33m, which was 7% higher than that achieved in 2022	• Continue to increase planned productivity savings to reach $40m
• Enhance CI activities through further digitalisation and automation	• Implemented multiple CI activities involving digitalisation, automation and process improvement leading to enhanced productivity and performance	

OUR APPROACH

Continuous Improvement is at the Heart of our Heritage

Over the years, a culture of CI has helped us improve our processes, enabling us to work smarter and more efficiently. Our CI efforts have brought about a myriad of benefits such as optimising resources, reducing emissions, improving productivity and quality, and lowering operating costs.

We recognise the importance of having a strong CI culture throughout the Group. We continuously upskill our employees through CI training and create awareness through seminars and workshops. This approach encourages employees to actively seek opportunities to remove waste in our processes, improve productivity and enhance our economic performance.

Our Economic Performance Leads to Inclusive Growth and Value Creation

The Group's economic performance is material to our sustainability goals. We contribute economically to the communities we operate in through local procurement, direct and indirect employment, dividends paid to shareholders, taxes paid to governments, and investment in community programmes. Apart from our financial contributions, we also develop innovation capabilities, transfer know-how and technology to local small and medium-sized enterprises, and provide internship and training opportunities.

IN 2023, OUR CONTINUOUS IMPROVEMENT PROGRAMMES ACHIEVED

$33m

IN REALISED PRODUCTIVITY SAVINGS

In 2023, we achieved

$9.6b

in economic contribution

Group Economic Contribution	($m)
Bought-in materials and services	5,717
Employee wages, salaries and benefits	2,975
Dividends and interest paid	735
Government taxes and levies	125
Total	**9,552**

Economic
• Economic Performance & Productivity

**Enhancing Our CI Culture
through Cross Industry Sharing**
In 2023, we hosted visitors from SMRT
Institute at our aerospace facilities
in Singapore. As part of the visit,
we showcased how effective use of
technologies can improve efficiency and
productivity. We value opportunities to
share our experience in CI with like-
minded companies. We believe such
interactions go a long way in bolstering
cross-industry efforts, promoting best
practices and improving collaboration.

SMART Manufacturing Transformation
Our Land Systems business leveraged CI to complete their SMART Manufacturing transformation. The transformation focused
on three key pillars – Smart Design to Manufacturing, Smart & Lean Production and Smart Quality Inspection and Delivery. The
transformation allowed for digital validation of processes and all-round improvements in safety, efficiency, quality and cost.

Digitally Driven Process

Modeling and Simulation

Data Acquisition & Analysis

Robotics & Automation

Resource Optimisation

Automated Testing for New Software Release

Our Cyber business develops and maintains a secure email application for our customers. Traditionally, the release of a new version of software involves extensive testing over a period of 20 man-days. An in-house programme was developed to automate the testing process. This decreased the testing time required for each release, thereby achieving cost savings of approximately 50%.

Leveraging CI for Sustainability

Our Satcom business, ST Engineering iDirect, leveraged CI in their sustainability efforts at their Belgium laboratories. Analysing historical data, the team rolled out multiple initiatives such as temperature optimisation, automatic power management cycles and a dynamic energy purchasing strategy. This resulted in a 9% reduction in energy consumption over a nine-month period.

Development and Early Verification of Complex Autonomous Control Algorithm

Our Marine business develops complex autonomous control algorithm for auto berthing operations. The ability to perform early verification of the algorithm is key to project success. The development team uses software to simulate multiple scenarios and ensure robustness of the algorithm early in the development phase. Coupled with data collection during actual sea-trials, the team can verify and refine the simulations. This approach resulted in a reduction in the total number of sea-trials required.
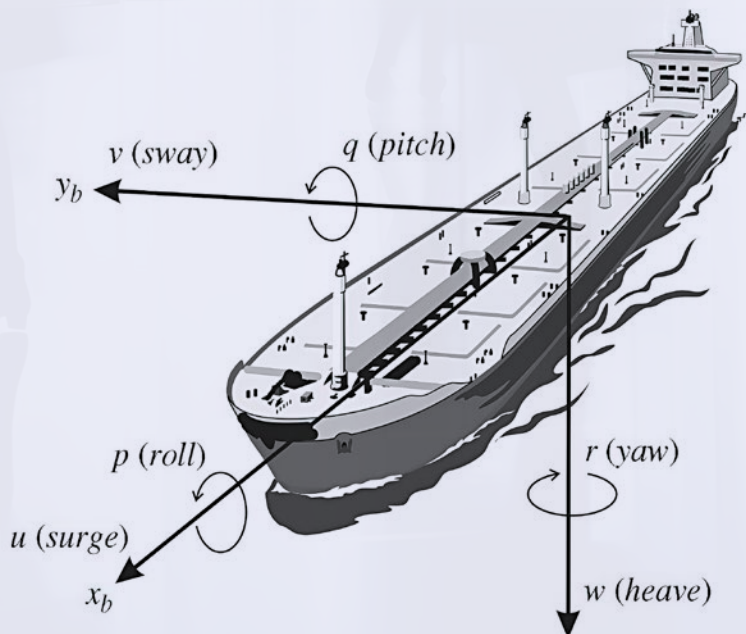
Economic

TECHNOLOGY & INNOVATION

Amidst an uncertain and volatile world, an enterprise's ability to leverage technology and innovation is key to its long-term success. Our continued commitment to investing in R&D and cultivation of an innovative culture ensures that technology and innovation are at the core of our business.

To achieve our aspiration of becoming a global technology, defence and engineering powerhouse:

- We leverage our strengths across Business Areas while building distinct capabilities

- We leverage external capabilities to accelerate innovation and keep up-to-date with new and disruptive technologies

- We focus on developing technologies that will place us at the digital and sustainability forefront

OUR GOVERNANCE AND FRAMEWORK

Our efforts to harness advanced technology and promote innovation that supports business growth are guided by the Board, particularly through its Research, Innovation, Technology and Enterprise (RITE) Committee (formerly known as Research, Development and Technology Committee). The RITE Committee sets policies and direction for major R&D investments and activities at the Group while promoting an innovative R&D culture. The RITE Committee also identifies areas of synergy and emerging technologies that enhance our core businesses and enable the development of new businesses. The RITE Committee is supported by our EXCO, Business Area Presidents and the Group Chief Technology and Digital Officer.

The Innovation and Technology Committee (ITC) comprising senior management representation from GTO, GEC and GSSO, provides guidance and support to the technology, engineering and strategic planning leaders of each business area. This ensures that R&D investments complement each business area's strategy and product focus. The ITC also coordinates Group-level technology and innovation policies and procedures, with inputs from relevant stakeholders as required.

Read more on our Sustainability Website

OUR COMMITMENT

We are committed to improving lives and making the world more secure and sustainable through technology and innovation. We have an ability to harness technology and direct our engineering expertise towards building innovative products and solutions. These strengths are at the core of our business success and help us fulfil our commitments.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Maintain R&D spend of up to 5% of our annual revenue, of which up to 75% is R&D in digital technologies	• We invested 4.1% of our revenue on R&D in 2023 covering many of our focused areas including a substantial portion in digital technologies • Through the Research Translation @ ST Engineering initiative, we have supported over 80 researchers who are currently engaged in 18 different translational research projects	• Maintain our R&D budget of up to 5% of our annual revenue to support business growth
• Identify new technologies to deliver future growth in line with our sustainability and digital strategy	• We have developed strategic technology roadmaps in new growth domains such as advanced materials, alternative energy, quantum technologies and future communications • We have appointed four distinguished professors in 2023 in the fields of quantum technology, wireless communication, advanced materials and autonomous systems	• Position ourselves for future technology adoption by focusing on the most promising new technology areas being explored

IN 2023, WE SPENT

$411m

ON R&D.

THIS TRANSLATES TO
A R&D INTENSITY OF

4.1%

OUR APPROACH

We Recognise the Importance of R&D
We believe in focused R&D investment that is in line with the strategy and product roadmaps that we have charted for business growth. We continuously monitor the latest developments and global trends and refine our strategy as needed to keep abreast with these changes.

Our R&D Efforts Are Driven and Coordinated Across our Businesses
R&D investments are identified by each business area to complement its business strategy, product focus and to develop its technological leadership.

Our GTO identifies and develops strategic technology capabilities, with a strong focus on advanced technologies that can be tapped upon by the various business areas. These include technologies such as quantum future communications, advanced materials and alternative energy.

Our GEC has five engineering competency centres, with a common pool of skilled engineers at the Group level, in data analytics, video analytics, cybersecurity, smart Maintenance, Repair and Overhaul (MRO) and autonomous systems of systems. We have been delivering solutions in these five areas through a common software platform with reusable components that increases their development speed and quality.

Read more on our Sustainability Website

Economic
• Technology & Innovation

We Encourage and Facilitate Innovation
Our innovation approach comprises driving synergies and deepening capability development within the Group, as well as leveraging external capabilities to accelerate innovation. We are focused on developing solutions that place us at the forefront of technology.

Drive Synergy and Deepen Capability Building
We focus on finding synergies in our existing products and services, and enhancing our capabilities in key technological areas. Efforts include:

- Improving our core engineering capabilities
- Forming strategic technology centres
- Setting up product development frameworks driven by business needs and opportunities.

We cultivate a culture of innovation through many initiatives. These include training employees on topics such as design thinking, organising webinars to drive cross-business engagement and collaboration, conducting design clinics, and organising our annual innovation competition – InnoChamp. We also have internal venture building programmes (In.Vent) to increase our Group's capacity to innovate and creating new businesses that will take us to our next phase of growth.

Spirit of Innovation Booklet
At ST Engineering's 2023 Annual Convention, we launched the Spirit of Innovation booklet which consolidates noteworthy innovations developed by the group to make the world a better place to live in. The inaugural booklet covers 24 technologies develops by ST Engineering which covers areas including 5G, the internet of things (IOT), cloud computing, cybersecurity, Artifical intelligence and digitalisation. This booklet also highlights how ST Engineering talents harness our advanced capabilities, tenaciousness and cooperative spirit to fuel innovation and create a more equitable and sustainable future for all.

Read more about our new products and solutions.

Broaden Outreach to Leverage External Capabilities
We complement our in-house R&D efforts by broadening our outreach to leverage external capabilities. This is achieved through four areas:

- **Open Lab** – We unlock value from both our business units and startups by providing a platform for them to engage each other and incubate solutions for markets of mutual interest.

- **Corporate Venture Capital** – We identify and invest in start-ups that present new business opportunity areas and disruptive technologies which are relevant to the group. A USD$150 million venture capital fund was established to enable ST Engineering to invest in start-ups with strong complementary competencies and new collaboration opportunities in selected areas of technology.

- **Research Translation @ ST Engineering** – We work with external partners to conduct translational research that can support our business needs. This accelerates the pace of innovation through knowledge transfer among our partners.

- **Industry Collaborations** – We collaborate with partners to accelerate product development by sharing industrial knowledge and expertise.

Expanding our Distinguished Professorship
In 2023, Prof José Ignacio Latorre, Prof Wang Dan Wei, Prof Tony Quek, and Dr Andrew Ngo were conferred as ST Engineering Distinguished Professors for their significant contributions in accelerating translation of research in the field of quantum technology, robotics, autonomous system, wireless communications, infrared technology and advanced materials.

These awards reinforce our commitment to pursue customer-centric R&D and to accelerate the development of technologies for real-world applications. We plan to expand the scope of our distinguished professorship to cover more areas including generative AI, cybersecurity and quantum machine learning.

RESPONSIBLE & RESILIENT SUPPLY CHAIN

ST Engineering's supply chain is key to maintaining our competitiveness and resilience. Our supply chain is complex and diverse due to the diversity of our businesses, as well as the multiple geographies we operate in. For example, our Singapore operations has over 9,500 active suppliers. Of these, 74% are based in Singapore, 8% in Asia, 8% in Europe, 9% North America and the remaining 1% in other parts of the world.

OUR GOVERNANCE AND FRAMEWORK

The Group Chief Procurement Officer oversees our procurement community which champions the effective management of our supply chain. Our procurement community is guided by our Responsible Procurement framework, which is built on three pillars – Supplier Conduct, Supplier Management and Supplier Relationship. This aligns our suppliers' business behaviours with ours, drives efficiencies, streamlines processes and enables visibility of our supply chain.

OUR COMMITMENT

We are committed to procuring goods and services sustainably and responsibly to meet our business needs.

Read more on our Sustainability Website

OUR APPROACH

We Do Not Procure Conflict Minerals
Our company's offerings are typically at the systems-level and we procure finished electronics products. When we do buy electronics components, we mostly do so at sub-system level, and from reputable contract manufacturers. Our Supplier Code of Conduct, which is also included in our purchase orders requirements, requires our suppliers to determine if their products contain conflict materials. Suppliers are to implement supply chain due diligence processes to identify sources and support efforts to eradicate the use of conflict minerals.

We Conduct Multi-Faceted Evaluations
We adopt various sourcing strategies, which include the use of weighted criteria for tenders. This ensures that suppliers are assessed fairly on technical and commercial merits. In 2023, we included ESG assessment as part of the overall tender evaluation criteria. This reinforces our expectations of our suppliers to adopt sustainability practices.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• To progressively include ESG elements as part of the tender award evaluation criteria	• Incorporated ESG questionnaire as part of supplier's tender evaluation criteria	• To define a standardised framework for quantifying Scope 3 emissions
• To develop a supply chain resilience framework	• Established a supply chain resilience framework and completed pilot analysis of a key product or project from each business area to assess supply chain risks	• To enhance supply chain risk monitoring capability

Our Supplier Code of Conduct communicates our business and ESG expectations to our suppliers. Our suppliers are expected to adhere to this code. We review and update our Supplier Code of Conduct periodically to reflect industry ESG practices.

We have incorporated ESG criteria into our supplier screening process to identify suppliers with high sustainability risks that include, but are not limited to, bribery and corruption cases, human rights violations, environmental violations and sanction violations. We identify these risks using an accredited third-party tool to screen both new and existing suppliers for ESG violations.

Suppliers that have been identified by our screening process as having ESG risks or who do not meet our expectations will be further reviewed, investigated and determined if corrective actions can or need to be taken. We will re-evaluate our business relationship with a supplier if they are unwilling to comply with our Supplier Code of Conduct, violate our ESG criteria or are unresponsive in implementing corrective actions highlighted during the screening process.

In 2023, we did not identify any supplier as having significant negative environmental or social impact.

Read our Supplier Code of Conduct

IN 2023, WE SPENT A TOTAL OF

$5.7b

ON OUR GLOBAL PROCUREMENT SPEND

We Partner with Our Suppliers for Growth
We engage suppliers through our supplier management programmes and maintain close relationships. We also believe in tandem growth with our suppliers and aim to procure locally where possible. Furthermore, we continuously collaborate and engage with local Small and Medium-sized Enterprises (SMEs) to expand their capabilities, and work with sustainability-conscious suppliers to improve their ESG focused practices. This continuous engagement ensures that our suppliers are in turn, able to support the Group's growth in technology, product capability and competitiveness. In 2023, our Singapore operations spent $810m with our local SMEs, which accounts for 20% of our total active supplier base.

Economic
• Responsible & Resilient Supply Chain

We Collaborate with Our Suppliers for Quality Products
ST Engineering expects our suppliers to deliver products and services that meet or exceed our quality standards and contractual requirements. Due to the diverse nature of the Group's businesses, individual business areas have Quality departments that enforce industry regulations and ensure that quality standards meet contractual requirements. Where required, regular quality audits are performed to ensure that our suppliers are able to meet expectations.

IN OUR SINGAPORE OPERATIONS,

56%

OF OUR PROCUREMENT SPEND WAS ISSUED TO LOCAL COMPANIES

OF WHICH

$810m

WAS SPENT WITH OUR SMALL AND MEDIUM-SIZED ENTERPRISES

Collaborating with Suppliers
Suppliers of our Commercial Aerospace's Passenger to Freighter (P2F) program are governed by our existing quality policies and project requirements. Basic aviation industry certifications such as AS9100 form the basis for supplier's Quality Management Systems. Additionally, products and services provided must be certified with civil aviation authorities. Regular visits by our operational team with our suppliers are held to deconflict issues and ensure on-time delivery of quality parts. Regular in-person quality audits and thorough receiving checks are performed by the operational team to ensure that products meet the required quality standards and project requirements.

We Set Ourselves Up for Resiliency

To better respond to supply chain disruptions, we established a Supply Chain Resilience Framework. This enables the Procurement team and Business Operations teams to adopt a consistent and standardised group wide approach to assess supply chain risks. Various risks factors such as geopolitcal, climate, financial and supplier risks are examined to determine strategies that minimise such risks. In 2023, we conducted pilot workshops to guide business stakeholders regarding assessments on some key products or projects. The programme will be progressively expanded across the Group.

Practising the Framework

One of our projects under Urban Solutions went through the assessment process. All critical components and subcomponents identified in the Bill of Materials were assessed using the newly developed resilience framework. Supply sources for these materials were also reviewed and assessed. From the assessment, high risks factors such as geopolitical tension,supplier-related risks among others were identified. Strategies were conceived alongside the operational team to mitigate the risks identified and ensure a resilient supply of components and subcomponents.

SUPPLY CHAIN RESILIENCE FRAMEWORK

Risk Visibility & Identification

- Identify key supply chain risks
- Conduct workshop with key stakeholders

Risk Qualification

- Identify top supply chain risk scenario
- Review supplier base, supplier criticality and assess impact

Risk Mitigation

- Determine plans & mitigation strategies
- Obtain management's approval

Risk Monitoring & Recovery

- Develop risk monitoring capacity
- Improve processes to support recovery

Environmental

ENVIRONMENTAL PROTECTION

An organisation's longevity and success are closely intertwined with the wellbeing of our environment. At ST Engineering, we strive to conduct our business responsibly without compromising the needs of future generations as we recognise the impact of environmental degradation and climate change.

OUR GOVERNANCE AND FRAMEWORK

The Group's environmental protection efforts are overseen by OEST – Environment team. Our OEST – Environment team supports the OESC Chairman who reports to the OESC Executive Sponsor. The OESC Executive Sponsor is currently our President, Commercial Aerospace who is a member of the Group EXCO. The team comprises representatives from each business area and spearheads key environmental initiatives across topics such as GHG Emissions, Energy, Water and Waste and are guided by our Environment policy and Environmental pledge.

Read more on our Sustainability Website

OUR COMMITMENT

We are committed to a pathway towards net zero and target to halve our absolute Scope 1 and 2 absolute emissions by 2030 compared to a 2010 base year. We strive to optimise use of resources such as water and energy, minimise waste and pollution, and be part of the circular economy.

OUR APPROACH

Shaping Our Culture
As part of the Group's sustainability journey, we believe it is critical to cultivate an environmentally conscious culture among our employees and help shape habits at our workplaces and the communities we live in. We facilitate this by organising various environmental initiatives for our employees.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Implement a sustainability reporting platform to improve the accuracy, traceability and transparency of our environmental data across our global units	• We have deployed our sustainability reporting platform globally and continue to operationalise the platform as we expand our business	• To enhance and fine tune data collection processes of our material IBUs GHG inventory by following the requirements and guidance of ISO 14064-1:2018 standard
• Optimise our building facilities to reduce our operational emissions	• Piloted a SMART Building Management System in one of our buildings powered by data analytics to enhance the air performance and efficiency leading to added reduction in GHG emissions in 2023	• Continue to quantify our Scope 3 emissions in another three categories

ST Engineering's Inaugural Green Day

In 2023, the Group organised our inaugural Green Day event. In commemoration of Singapore's founding Prime Minister's green city vision, 300 employees, led by Deputy Prime Minister Mr. Heng Swee Keat, our Chairman and Group P&CEO planted 100 research trees. This was further solidified with a $1 million pledge over five years for annual tree-planting activities, supporting Singapore's 'City in Nature' vision. As part of the event, employees also attended sustainability-focused workshops and embarked on a biodiversity trek which emphasised the importance of biodiversity and the urgent need to address climate change.

Raising Awareness on Biodiversity

On World Environment Day 2023, our Urban Solutions Business Area held a biodiversity walk at Rifle Range Nature Park. Additionally, in line with the World Environment Day 2023 theme of "Solutions to Plastic Pollution", participants brought along their own drinking bottles as part of a movement to discourage the use of disposable PET bottles.

Sustainability Champion Awards

We recognise outstanding efforts by our employees and business units that have integrated sustainability into our workplaces and businesses. At our 2023 Annual Convention, we acknowledged our Marine and Aerospace businesses for their efforts and contributions towards reducing GHG emissions. Moving forward, we plan to recognise more holistic ESG sustainability efforts by our business units and outstanding individuals.

Environmental
• Environmental Protection

We Are Guided by Global Best Practices and Local Laws and Regulations

We have robust environmental management systems that are based on well-established international standards. For example, in Singapore, our material business units have certified ISO 14001 Environmental Management Systems.

We continuously work towards obtaining external assurance for our environmental data. Our material Singapore business units' GHG emissions data are externally validated in accordance with ISO 14064-1 Greenhouse Gases by a reputable third-party certification body. We are working towards progressively obtaining external assurance of our global GHG emissions data.

We comply to all applicable environmental laws and regulations in the geographies we operate in. In 2023, we had no significant fines nor non-monetary sanctions related to environmental issues.

We Recognise the Impact of Climate Change and the Importance of Addressing It
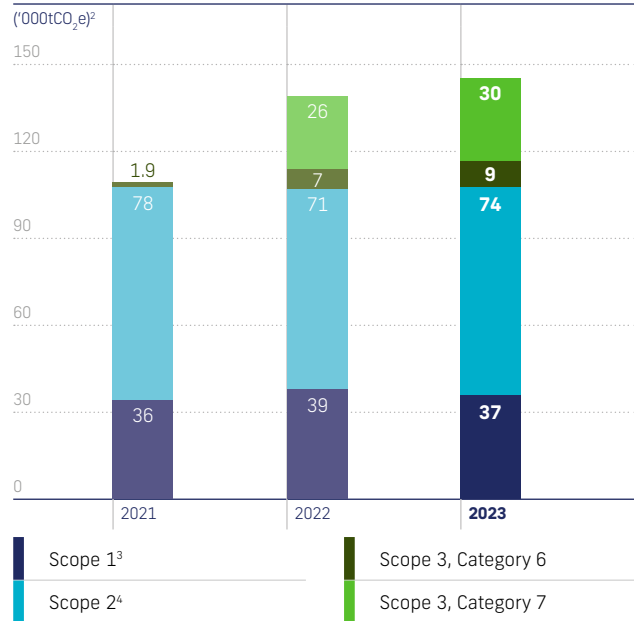
We are committed to a pathway towards net zero. We target to halve our absolute Scope 1 and 2 GHG emissions by 2030 compared to a 2010 base year. We prioritise using carbon reduction to reduce our emissions, before considering the adoption of neutralisation methods such as offsets and investments in nature-based solutions.

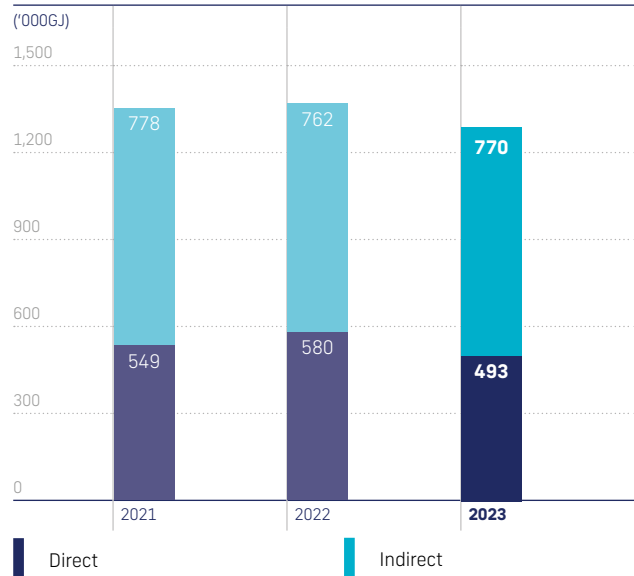We do our part in mitigating the effects of climate change. Our efforts include:

• Reducing our energy consumption by conducting energy audits and improving production energy efficiency

• Reducing Scope 1 emissions by:

– Optimising energy efficiency and replacing equipment and fixtures with energy efficient models when due for replacement

– Optimising our operational activities such as delivery runs, engine test cell usage and electrification of our vehicle fleet

• Reducing Scope 2 emissions by:

– Installing solar PV systems across our global sites

– Optimising and re-engineering our production and operational processes

– Optimising our facilities through the use of smart control and management systems

• Reducing Scope 3 emissions by:

– Reducing air travel and conducting virtual meetings where possible

• Preventing contamination of surrounding air by:

– Using air pollution control equipment such as scrubbers

– Monitoring and minimising stack emissions and the level of air pollutants

TOTAL EMISSIONS[1]

(CO_2e)[2]

	2021	2022	2023
Scope 3, Category 7		26	30
Scope 3, Category 6	1.9	7	9
Scope 2[4]	78	71	74
Scope 1[3]	36	39	37

Legend:
- Scope 1[3]
- Scope 2[4]
- Scope 3, Category 6
- Scope 3, Category 7

TOTAL ENERGY CONSUMED[1]

('000GJ)

	2021	2022	2023
Indirect	778	762	770
Direct	549	580	493

Legend:
- Direct
- Indirect

Notes:

[1] Data from TransCore Partners LLC, have not been reflected but will be included in subsequent years; Our divested units, VT Halter Marine, Inc (Halter Marine) and ST Engineering Halter Marine and Offshore, Inc. have been removed from prior year's data

[2] Direct GHG emissions from sources owned or controlled by the Group

[3] Indirect GHG emissions from the generation of purchased electricity consumed

[4] Indirect GHG emissions from business travel by air and employee commute

OUR TARGET
50% › **36%**

Reduction in absolute Scope 1 and 2 GHG emissions by 2030 from a 2010 baseline

The base year for our absolute Scope 1 and 2 GHG emissions calculations is 2010, as the Group established its initial GHG inventory process in 2009 for Singapore operations. We adopt an operational control approach when reporting our GHG emissions and energy data, which includes our international business units and acquisitions. The base year emissions were recalculated, where applicable, or estimated using proxies where needed.

We are progressively expanding the tracking and disclosure of our Scope 3 GHG emissions. In 2023, we have established our roadmap for expanding our Scope 3 data collection and disclosure.

In 2023, our GHG emissions intensity and energy intensity was 11 tCO_2e/\$million revenue and 219 GJ/\$million revenue. We continue to track intensity as a measure of our operational efficiency. We include the following gases for conversion to CO2 equivalent in our GHG inventory – CO_2, CH_4, N_2O, PFC_5, HFC_5 SF_6 and NF_3. Additionally, we take guidance from reputable sources for computation methodologies, conversion factors and calculation tools.

Read more on our Sustainability Website for our sources

Recognition of our Sustainability Efforts

The Group's Commercial and Defence Aerospace Business Areas received the MRO Asia Pacific Sustainability Initiative of the Year and National Environment Agency Energy Efficiency National Partnership Award for Excellence in Energy, Greenhouse Gas (GHG) Management (Honourable Mention).

Our Land Systems' business unit LeeBoy in U.S. received Duke Energy's Business Energy Excellence Award. This award by Duke Energy recognises LeeBoy's efforts for making significant impacts with the energy savings measures being implemented within their business.

Environmental
• Environmental Protection

DOING OUR PART

ST Engineering has made significant strides in our decarbonisation journey through the adoption of various carbon reduction initiatives.


Fleet Electrification
Due to the diverse nature of the Group, we have a considerable fleet of vehicles and ground support equipment across our Business Areas. The Group has begun electrifying our fleet of vehicles with a phased approach to ensure minimal disruption to our operations.

Harnessing Renewable Energy
Harnessing renewable energy is one of the Group's abatement levers in our journey to halve absolute emissions (Scope 1 & 2) by 2030 using 2010 as a base year. In 2023, 16% of our Singapore operations energy requirements was supplied by solar PV systems. Internationally, similar efforts are also underway. For instance, our Elbe Flugzeugwerke GmbH facility in Dresden, Germany, obtains 100% of their electricity from a renewable source.
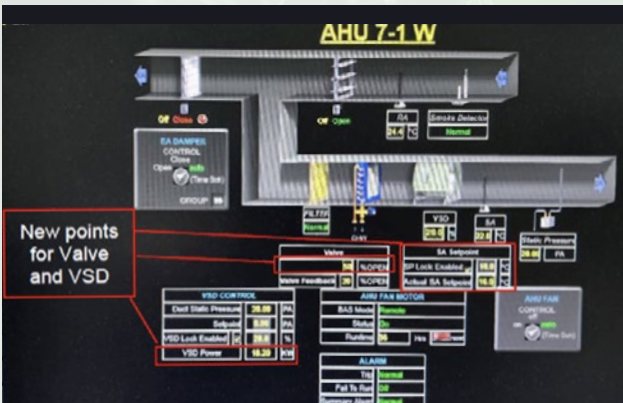
Optimising our Buildings
Our Digital Systems & Cyber business implemented a SMART Building Management System in our buildings that is powered by data analytics to enhance air performance and efficiency. This resulted in an emissions reduction of approximately 110 tCO_2e. These systems also improved air quality and relative humidity in our office buildings, providing a more comfortable environment for employees.

Automating using Sensors
Automation is a key area to tap on for improvements in resource use and reducing our operational emissions. In our Marine facilities, a suite of sensors was installed to regulate the use of lightings in carparks, common walkways, irrigation systems and washrooms.

We Use Water Efficiently

We use water from municipal sources. This is predominantly used for building and equipment cooling, cleaning, general sanitation, and operational activities, such as aircraft and vehicle washing.

We monitor water usage, impact and management in our operations. In our Singapore operations, we conduct environmental aspect and impact evaluations as part of ISO 14001 Environmental Management Systems. Based on the results of the evaluation, we implement control measures to mitigate our environmental impact such as raising awareness among our employees on the importance of water conservation and embarking on water recycling and conservation programmes.

We strive to reduce the water intensity of our business. In 2023, our water consumption intensity as a measure of our revenue was 138 m³/$million revenue. This was a decrease of 25% compared to our target of a 15% reduction in intensity from our 2015 base year. Our business revenue growth outstripped the absolute increase in water consumption. Hence, resulting in the lower water intensity but higher absolute water consumption.

WATER CONSUMED[5]

('000m³)

Year	Value
2021	638
2022	588
2023	796
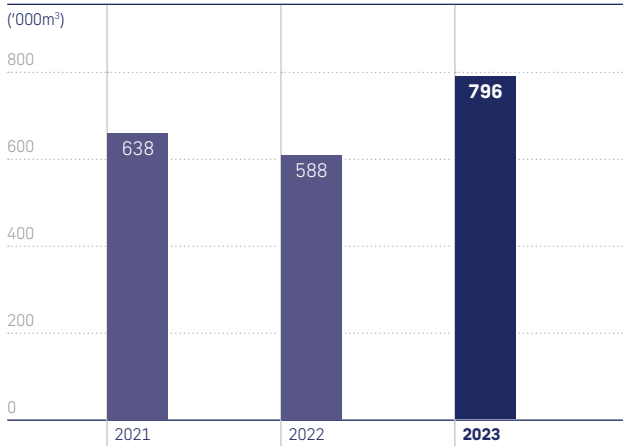
We continue to:

• Install water saving devices such as water thimbles and flow reducing valves
• Promote water conservation awareness through toolbox briefings and campaigns
• Perform regular checks to detect leakages in pipes and faucets
• Optimise our operations to reduce usage of water
• Install rainwater harvesting systems and look into water recycling

Note:

[5] Based on our water consumption in our material Singapore operations

We Manage Waste and Effluent

We strive to reduce waste generated in our business and regularly promote 3Rs (Reduce, Reuse and Recycle) initiatives. We redesign processes to reduce the generation of waste, toxic waste and effluent.

In our Singapore operations, we target to maintain a recycling rate of 50% or better. Recyclable waste materials are collected by licensed waste contractors for recycling. In 2023, our Singapore operations recycled 67% of 20,916 tonnes of waste generated. The recyclables included metal, wood, batteries, e-waste and paper products.

WASTE RECYCLED[6]	(%)
Blasting Grit & Cement	51.9
Waste Oil	30.9
Wood	11.5
Others	3.3
Paper	1.0
Metal	0.7
Plastic	0.5
Batteries & E-Waste	0.2

Any toxic waste generated is handled in accordance with local laws and regulations. For example, all toxic waste in Singapore is registered with the National Environment Agency's e-consignment system that allows for the tracking of the quantity, characteristics and movement of the toxic waste from the organisation to the collector, and finally to the disposer.

We adhere to all applicable laws and regulations regarding effluent discharge in the areas which we operate in. For example, in our Singapore operations, we comply to the minimum effluent standards set by the Public Utilities Board, National Environment Agency and the Maritime Port Authority, which differ depending on the type of waterbody that we are discharging to. We employ dilution tanks, sensors, oil interceptors and pre-treatment of our effluents prior to discharge to ensure that we meet all applicable regulations.

We Strive to be a Good Neighbour

We aim to mitigate the noise generated by certain segments of our operations. Our measures include:

• Keeping all noise within legal limits and within permitted hours
• Replacing noisy equipment with quieter models and providing sound insulation where applicable
• Monitoring and reviewing noise emission levels from our operations
• Conducting boundary noise checks in accordance with regulatory guidelines

Note:

[6] Based on waste collected and recycled in our Singapore operations

Environmental

SUSTAINABLE QUALITY PRODUCTS & SOLUTIONS

At ST Engineering, sustainable quality products and solutions seeks sustainable lifecycle developments from design; operational reliability and maintainability; to end-of-life management, through product renewal or recycling and waste minimisation.

Our goal for our suite of sustainability-linked products and solutions is to enable our customers on their sustainability journeys. We do this by developing innovative products and solutions, and improving our existing designs to be more sustainable while meeting the standards and specifications required by our customers. This supports the growth of our businesses as well as that of our customers in a sustainable manner.

OUR GOVERNANCE AND FRAMEWORK

The quality and safety of our products and services are paramount to our continued success. ST Engineering's leadership ensures global operations abide by the governance requirements of respective statutory and regulatory bodies. We have policies and procedures in place that enable us to deliver safe and reliable products and solutions to our customers.

OUR COMMITMENT

We are committed to timely delivery, responsive support, and high quality and safety standards. We strive to use environmentally friendly substances and materials in our products and solutions whenever possible and adhere to all regulatory requirements on the use of hazardous substances.

OUR APPROACH

We Promote a Quality Culture
Quality training modules are integrated into our new employee onboarding programme to promote the right quality processes and behaviours. Employees are trained to internalise the behaviours of Ability, Customer Focus, Teamwork, Integrity, Outperformance, Nimbleness and Safety.

We established a system Safety Community of Practice (COP) to aggregate system safety expertise across business areas. The COP seeks to enhance quality and safety in our products and solutions through cross learning of best practices.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Enhance efforts to promote activities to reinforce our quality culture	• Enhanced the publicity of the 7 Quality Behaviour tools with BA's stories on internal platforms such as email and staff portal	• To review and enhance customer focused measurement for quality products or services
• Increase the use of green technology in our products and solutions	• We have started estimating Product Carbon Footprint of key products as a first step, to identify approaches to further green our solutions and lower our overall carbon footprint	• To expand our Product Carbon Footprint exercise to cover more solutions and explore options to further reduce our overall emissions

World Quality Day

We regularly conduct Quality seminars to keep our employees updated on the latest requirements and industry best practices. This year, in conjunction with World Quality Day, quality and operational professionals across the Group gathered for "An Insight to Humanistic Approach to Quality and Risk" seminar. The seminar provided a platform to enhance quality management skills and share best practices across the Group.

Environmental
• Sustainable Quality Products & Solutions

We Adopt Global Quality Standards

We have robust quality management systems based on established international business and industrial standards. Majority of our operations are certified to ISO 9001 Quality Management Systems or equivalent. Our businesses adopts various ISO standards in accordance with respective business or industry specialisations where these standards apply. For example, Aerospace businesses are mostly certified to specialised quality standards like the AS9100 Quality Management Systems, which ensure these businesses are benchmarked to global airworthiness standards across the globe.
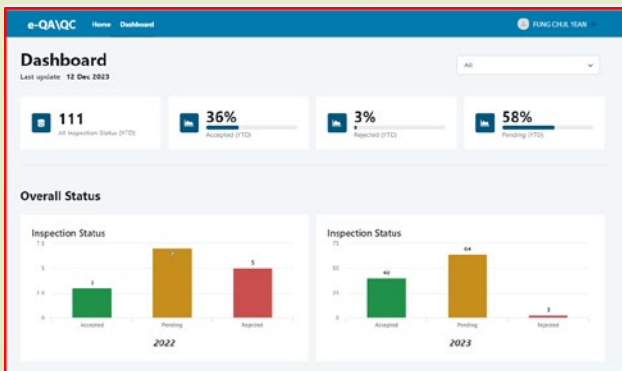
Improving Quality Control

Our Marine business developed a digital platform to improve quality control and audit inspections at critical locations. The new platform allows us to monitor overall project timelines and ensures the timely closure of inspection findings, yielding improvements in efficiency and communication between internal stakeholders and customers.

Improving Response Time through AckNow

To ensure that time-critical quality and safety information are disseminated and acted upon quickly, our Defence Aerospace business unit has developed AckNow, an in-house OutSystem mobile application. The application has enhanced the communication within their dynamic workforce both locally and overseas.

Automated Hull Inspection

One of the key functions of our Land Systems Business Area's Quality Division Team is to inspect and ensure manufactured hulls are of the right specification and are of quality. Conventional method of hull inspection using manual probing with laser tracker is time consuming and laborious. Using an Autonomous Ground Vehicle equipped with 3D scanning technology, the team reduced the inspection time from six days to just two days and enhanced the staff's competency levels in automation.

We Offer a Suite of Sustainable Products and Solutions

We consider sustainability to be a key factor in quality product development. We take into account the ecological impact and apply circular economy principles in areas of water and energy conservation, pollution minimisation, waste reduction and product recycling.

We continuously improve the sustainability attributes and quality of our existing suite of products by employing the use of new technologies to improve our operational processes, reduce GHG emissions and energy consumption. To support our customers in their transition to a low carbon economy, we work towards documenting the carbon footprint for our products and solutions.

In line with the Group's strategy, we focus our suite of sustainability products and solutions in key areas of reducing GHG emissions, solving urban and city challenges and promoting a circular economy.

ACCESS to Inclusive Air Travel

ACCESS is the world's first lavatory solution that can be expanded to bring about 40% more space to accommodate a passenger in a wheelchair and an accompanying caregiver. We obtained the Supplemental Type Certificate (STC) from the European Union Aviation Safety Agency (EASA) to implement ACCESS, our expandable cabin lavatory solution, on the Airbus A320 family. This marks a significant milestone for us as we bring to market a viable cabin interior solution for more inclusive air travel.

Electrifying the Paving Industry

Our Land Systems Business Unit LeeBoy, in U.S., recently demonstrated the electrification potential within the commercial asphalt paving sector with the launch of the 8520C E-Paver. With a 15-minute recharge time using a level 2 charger, the 8520C E-Paver is capable of deploying up to 19 tonnes of asphalt at the required site.

Converting to AUTONOMAST™

AUTONOMAST™ is a modular system that converts a manned vessel into an unmanned surface vessel for autonomous missions. The mast is fitted with various sensors, allowing the vessel to manoeuvre autonomously, intelligently and safely at seas. This can be tailored for different vessel types and sizes.

PEOPLE EXCELLENCE

People are the cornerstone of our business. Attracting and retaining employees, supporting their learning and development, taking care of their well-being, and promoting diversity and inclusion are key priorities for ST Engineering.

Our People Strategy focuses on three broad areas: renewing our capabilities and building capacity for sustainable growth, building a high-performing, engaged and global-ready workforce, and strengthening our people practices. In 2024, we strive to strengthen our global collaboration efforts to further our aspiration of building a global technology, defence and engineering powerhouse, and seek to enhance our global diversity and inclusion initiatives to foster a deeper sense of belonging and cohesion.

OUR GOVERNANCE AND FRAMEWORK

The Group Chief Human Resources Officer and the HR leadership team oversee the policies and facilitate the engagement on all people issues across the Group. The Group Chief Human Resources Officer reports directly to the Group President & CEO. He works closely with the Board, the Group EXCO and senior management to advise them on global best practices and the implementation of the Group's people policies.

Our Group Company Training Committee includes participation from ST Engineering Staff Union (STESU) and provides skills upgrading and retraining programmes for our employees.

Our Engineering Competency Management Framework identifies key competencies of various engineering domains, benchmarks existing technical capability and identifies areas for further development. This will facilitate stronger engineering career pathways in the Group.

Our Compensation and Benefits Framework is reported to the Board's Executive Resource and Compensation Committee. The Executive Resource and Compensation Committee has access to consultants to advise on market trends, and compensation and benefits matters. We also work closely with our employee unions on compensation and benefits issues.

OUR COMMITMENT

We are committed to investing in people development and building a steady pipeline of STEM talent to help us achieve our aspiration of becoming a global technology, defence and engineering powerhouse.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Strengthen people practices by taking targeted actions based on feedback from our employees in the Global Employee Engagement Survey 2022	• Two Taskforces were set up to develop Group-level action plans under the themes of "Connection & Communication" and "Well-being & Support", and to drive the implementation of various initiatives to improve employee engagement	• Strengthen our international collaboration efforts to further our aspiration of building a global technology, defence and engineering powerhouse
• Advance diversity and inclusion initiatives at the workplace to foster inclusion and belonging	• Curated management workshop, targeted training and outreach programmes, and • Developed a global DEI commitment statement that demonstrates our support for DEI at the workplace	• Enhance our global DEI initiatives at the workplace to inculcate a culture of inclusion, respect and belonging

OUR APPROACH

We Take Care of Our People
Holistic Approach to Health and Wellbeing
We adopt a holistic approach to the health and wellbeing of our people. This encompasses our employees' physical, social and emotional health. Aside from our management of the total workplace safety and health of our people, we also place importance on their wellbeing.

Read more on our Sustainability Website

We identified three focus areas that directly impact and strengthen the wellbeing of our employees.

- **Strong Bodies**
  Good health and energy enhance productivity and efficiency.

- **Strong Minds**
  Positive emotions and resilience improve mental capacity to overcome life challenges.

- **Strong Ties**
  Strong team spirit promotes cohesion and collaboration among our employees.

Our workplace wellness plans are regularly reviewed to ensure that the activities organised help enhance employee wellbeing and foster team bonding.

Freedom of Association
We respect our employees' fundamental rights to freedom of association, including the right to be members of trade unions. We do the following:

- Take guidance from national or local industrial relations laws and regulations

- Maintain strong relationships with the unions through frequent activities and dialogues to discuss, clarify and resolve issues, and seek buy-in on new initiatives

- Ensure our unions, where applicable, are represented in key committees such as safety, welfare and training so that concerns can be promptly surfaced and addressed

In Singapore, the Group recognises STESU as the collective negotiating body in respect of all the terms and conditions of service of the employees covered under the scope of the collective agreement. 33% of employees are represented by STESU and all employees are treated equitably regardless of their membership status.

STESU actively supports the Group's effort to introduce multi-skilling and re-skilling of our workforce to increase the productivity of the workforce for the benefit of the Group and its employees. The ST Engineering management continues to work closely with STESU on the initiatives to strengthen our engagement with employees and workers, and nurture union leaders for the future.

The Group may embark on organisational or operational changes in response to external and internal factors. In consultation with our unions, where applicable, such changes are communicated in a timely way to the affected employees. This will help them understand and prepare for the upcoming changes.

Social
• People Excellence

Strong Relations with Staff Unions

First Collective Agreement with STESU
ST Engineering signed the first Collective Agreement with STESU after the latter was formed in April 2021 and the agreement will be in effect for three years. The Collective Agreement reinforces our vision of ONE ST Engineering by providing more efficient management and flexibility in staff deployment across the Company and allowing our graded employees to enjoy greater job mobility and career progression.

ST Engineering – STESU Education Awards
ST Engineering and STESU held the inaugural ST Engineering-STESU Education Awards, supporting 70 of our employees' children in Singapore on their academic journeys. This is a testament to our unwavering commitment to make a difference in the lives of our employees and their children, and to nurture future generations through the power of education.

Skilled Trades Apprenticeship Program for MRAS employees
Middle River Aerostructure Systems (MRAS) in U.S. collaborated with their staff union to establish a Skilled Trades Apprenticeship Program, providing qualified employees on-the-job training to expand their skillset and the opportunity to be mentored by subject matter experts in their skilled trade. Participants are also able to obtain educational credits at a local community college to fulfill their certification requirements.

We Invest in People Development
We strive to improve performance, upskill and build a motivated workforce that drives the organisation's success.

Nurturing Leaders
Leaders are paramount in promoting organisational growth and success. Our Leadership Competency Framework is anchored on the following leadership dimensions:

- **Think global**
- **Drive performance**
- **Drive innovation**
- **Engage and inspire**

We plan our leadership succession by identifying key roles critical to the business as well as potential talents. Additionally, we provide targeted development programmes and flexible career tracks where employees can move between management or technical roles to gain exposure.

IN 2023, AVERAGE TRAINING HOURS PER EMPLOYEE

30 hours

Training, Development and Lifelong Learning
Growing and developing a qualified and experienced workforce is essential to achieving the Group's strategic objectives. We aim to build the capabilities of our employees for future readiness in an evolving global environment, and strive to empower them for success through comprehensive learning and development initiatives.

Company Training Committees
Company Training Committees were set up at respective Business Areas to provide relevant upskilling and reskilling programmes for our employees. This enables them to be better prepared for the opportunities and challenges in their respective industries as our businesses continue to evolve.

Training Future Managers
This year, our Guangzhou Commercial Aerospace facility introduced two phases of Supervisor Training Course for leadmen and above, helping participants master the basic skills and methods of management. A total of 48 employees participated in the course.

Engineering Competency Management Framework (ECMF)
We rolled out the ECMF for a pilot group of 600 engineers and their managers. These pilot participants will evaluate the effectiveness of the framework and competency system in charting their career development journey as engineering professionals.

Social
• People Excellence

Facilitating Connections, Collaborations and Global Experiences
We provide our employees with international exposure in order to excel in a globalised economy and promote collaboration efforts across the Group. Through our mentorship programme, we also ensure that there are ample opportunities for meaningful exchanges and learning between our employees with business leaders.

Mentoring Future Leaders
Our mentorship programme aims to provide high potential employees in ST Engineering with an avenue to seek guidance and support from more senior and experienced employees who can guide them along their career journey. This is to ensure that we develop and nurture future leaders who are equipped with the right skill sets and attitudes needed to succeed in ST Engineering.

" **I really appreciate all the advice and meetups with my mentor. She is more than just a mentor. Indeed, she is a good friend whom I can approach for both career and life advice."**

BOO KWOK YING *(left)*
Senior Executive
Group Strategy and
Sustainability Office
(Singapore)

TAN YING YI *(right)*
VP/Head Operations
Smart Security & Automation
Urban Solutions
(Mentor to Kwok Ying)

" **Being in a global technology, defence and engineering group, I relish the opportunity to learn from the various businesses that we have situated all around the world. Having a well-structured rotation programme gave me the opportunity to explore a diverse range of roles in new industries and locations within the organisation. Despite the steep learning curves, having the internal support and guidance from management, mentors and colleagues gave me the confidence to push myself out of my comfort zone."**

MARCUS TEO
Product Manager
ST Engineering iDirect
Satcom (U.S.)

" **I was given the opportunity to work at our MRO facility in San Antonio, Texas. Collaborating with my coworkers taught me how to navigate in a distinctly different work culture. This experience further fuelled my passion for the aviation industry and encouraged me to further my knowledge in this area. Beyond my professional responsibilities, I also seized the chance to go on many adventures during my leisure time. This assignment has expanded my global perspective of the company and industry."**

MADELEINE NG
Specialist
San Antonio Aerospace
Commercial Aerospace (U.S.)

Lifelong Learning
We comply with applicable local laws, regulations and guidelines for retirement and re-employment. We may offer extended employment or re-employment to employees who have reached the statutory retirement age. For example, in Singapore, an employee who retires upon reaching the statutory retirement age, may be re-employed on an offer and acceptance basis for special skills and/or project work. In keeping with our lifelong learning culture, relevant training will be provided to upgrade the skills of employees who are re-employed in different positions after their retirement age.

We Build a Passionate and Engaged Workforce
Listening to our employees is a critical part of our people engagement strategy.

These efforts are facilitated through regular townhalls, including our Annual Convention, and employee focus group sessions with our Group P&CEO and respective business leaders. The employee communication channels provide a platform for updates and dialogues on strategy, market developments and business issues, as well as people and policy matters. Such open conversations allow both the employees and leaders to gain different perspectives and allow us to collaborate more effectively together towards greater success.

Annual Convention 2023
This year's Annual Convention was the largest yet with almost 3,000 employees across 13 countries gathering virtually and physically in Singapore. This year's theme was "Collaborating for Global Growth & Profitability" and employees were updated on the Group's strategic direction to capture sustainable growth. They also engaged in conversations with business leaders on topics such as global talent development and mobility.

Global Employee Engagement Survey (EES)
We periodically conduct employee engagement surveys to provide employees with an additional platform to share their feedback. Following our Global EES, we set up two taskforces to develop Group-level action plans under the themes of "Connection & Communication" and "Well-being & Support". The taskforces had since proposed and drove the implementation of various initiatives to date, including enhanced recognition framework, two-way communication channels, upskilling and learning opportunities, employee wellbeing and cohesion programmes.

ST Engineering Land Systems Family Day
We believe that the families of our employees also play a key role in their well-being. Nearly 4,000 ST Engineering employees and their families enjoyed a memorable day at ST Engineering Land Systems Family Day, where they got to enjoy delicious food, fun games and exciting activities. In addition, guests had the unique opportunity to witness our work up close, gaining insights into the innovative Land Systems solutions that we proudly provide.

Social
• People Excellence

We Leverage Diversity, Equity and Inclusion (DEI)

Our DEI Commitment Statement

"We embrace diverse perspectives, backgrounds and experiences of our employees. We create an inclusive environment that provides equitable opportunities for our employees, enabling them to contribute to the best of their abilities."

We strive to build an environment that fosters mutual respect and creates opportunities for exchange of ideas, innovation and personal growth. We facilitate this through four key areas:

• **Gender**
We focus on building a gender diverse workforce where individuals have equitable opportunities to advance and grow at work through initiatives such as Women@ST Engineering and DEI training programmes.

• **Generation**
We foster an environment that facilitates cross-generation mindset and work practices to increase cohesion and knowledge sharing.

• **Geography**
We encourage the exchange of ideas and perspectives across diverse work cultures that leads to creative and innovative solutions.

• **Persons with Disabilities (PwDs)**
We nurture an environment where PwDs have fair opportunities for growth and development.

We are committed to fair employment practices, and comply with all national and local labour laws and regulations where we operate. We offer merit-based equal opportunities to all, including recruitment, compensation and benefits, performance management, training and skills development.

Management Workshop on DEI
We organised a DEI workshop where our senior leaders came together to learn about the latest DEI market practices and reviewed the progress of our collective DEI efforts. Participants also took part in a fireside chat with our EXCO members to discuss and share ideas on how we may further drive the DEI agenda in the organisation. The workshop ended with a time for personal reflection where the senior leaders reaffirmed their commitment towards fostering a diverse, equitable and inclusive work environment, and made personal pledges to drive DEI efforts.

Women@ST Engineering
Women@ST Engineering supports our diversity and inclusion efforts by inculcating an environment where everyone has equal opportunities to pursue their careers while balancing their work-life commitments. The initiatives cover areas such as family care-taking, professional enrichment, and health and wellness programmes.

In 2023, Women@ST Engineering organised the Women of Impact Fireside Chat for our employees. During the fireside chat, our leaders shared the various approaches that helped them break down gender barriers, garner respect, build supportive networks and drive positive change, in the hope that it would inspire the audience to do the same.

Women@Work
In 2023, we launched the Women@Work initiative in U.S., an extension of Women@ST Engineering, to better serve the needs of our female employees. It aims to support our female employees to reach their full potential in their careers and personal lives through raising awareness of the importance of gender diversity and launching initiatives such as support groups and mentorships.

We Do Not Condone Discrimination or Harassment
We are committed to providing all employees with a conducive workplace environment that is free from harassment, discrimination and other prohibited conduct. We do not condone personal bias or prejudice and advocate for fair recognition. We do not discriminate according to age, race, nationality, religion, gender or marital status.

We uphold Principle 6 of UNGC on eliminating discrimination:

- We recruit and select employees based on merit, such as skills, experience or ability to perform the job regardless of age, race, gender, religion, marital status, family responsibilities or disability

- We treat our employees fairly and with respect and dignity

- We provide our employees with equal opportunities for training and development based on their strengths and needs

- We reward employees based on their ability, performance, contribution and experience

Our employees are guided by our Code of Business Conduct and Ethics. A vital tenet of our Code of Business Conduct and Ethics is to promote non-discrimination and anti-harassment at the workplace. Our employees develop an understanding of the different types of discrimination and how it can affect the workforce through our training session on our Code of Business Conduct and Ethics. In the event of a validated discriminatory or harassment case, corrective or disciplinary action will be taken.

Similarly, our suppliers are guided by our Supplier Code of Conduct that requires them to respect fundamental international principles regarding non-discrimination, anti-harassment and fair employment practices.

The Company adheres to the principles of fairness, impartiality and confidentiality in its handling of grievances. We provide a safe channel for employees to raise issues which are promptly looked into and addressed to build trust and maintain industrial harmony. No individual will suffer reprisals or retaliation for reporting genuine grievances, making complaints or participating in an investigation. Management at all levels, supported by their respective HR teams, is responsible for ensuring that we provide a work environment free from discrimination or harassment.

In 2023, we had no cases of discrimination lodged. Grievances due to harassment, discrimination and other prohibited conduct are managed according to our grievance management process which governs the reporting and handling of employee grievances. This ensures that all cases are promptly investigated and resolved.

We Reward Performance
We adopt a performance-based approach with direct linkage between performance and rewards. In the short and medium-term, sustained contributions are rewarded through a pay-for-performance principle where the Group's KPI, business area goals, individual performance, internal equity and industry practices are considered.

Performance Management
Annual performance appraisal sessions serve as a platform for employees to discuss their work progress and career aspirations with their supervisors. Our annual performance management process involves goal setting, continuous performance reviews and full-year assessments against targets.

During their annual performance review, all employees with direct reports are evaluated on their people management skills and outcomes. These include line managers in each business, those leading horizontal functions, as well as those with supervisory responsibilities in ad hoc teams.

Compensation and Benefits
Our Group Compensation and Benefits Framework includes short, medium and long-term financial and non-financial performance targets to motivate and reward employees for creating sustainable stakeholder value.

Compensation and benefits programmes are reviewed regularly and benchmarked against their respective markets using global market surveys and consultancy firms. This ensures that we are internally equitable, market competitive and in compliance with nationally or locally mandated requirements.

Share plans are available to incentivise eligible employees. We also reward creative solutions and contributions by employees through various business and employee recognition awards to celebrate role models and our employees' innovative spirit.

ST Engineering has established a strong link between employee remuneration and our ESG performance. ESG goals and targets have been incorporated into the Group's KPI scorecard, which all employees, including ST Engineering's senior management, are assessed against. The Group's KPIs determine the variable bonus pool for employees.

The Group's employee benefits are provided in accordance with local regulations and aligned to local employment practices. These may include but are not

Social
• People Excellence

limited to annual leave, marriage leave, family care leave, parental leave, compassionate leave and medical leave. They also include insurance for medical, life, personal accident, work injury compensation and business travel. Our retirement provisions are in accordance with local legislations.

Our Flexible Work Arrangement policy provides flexibility in work hours and work arrangements, such as part-time working options and work-from-home arrangements.

Read about our Employee Benefits Scheme in our Annual Report

We Attract and Nurture Talent
Our talent attraction and management efforts focus on engaging, assessing and hiring diverse and qualified candidates based on the specific skills, knowledge, and experience they can bring to the job.

We widen our talent search via social media posts or through the various networking groups instead of relying only on job postings, outreach and referrals. Our detailed job descriptions and specifications define goals, accountability, and success measures of the role. This targeted strategy has made ST Engineering one of the most attractive employers in the market.

We also focus our efforts on nurturing future generations in the communities we operate in. This ensures that we grow our local talent pipeline and workforce.

A CHOICE EMPLOYER

RANKED
No.4
OF THE 100 MOST ATTRACTIVE EMPLOYERS FOR ENGINEERING/ NATURAL SCIENCES STUDENTS (UNIVERSUM)

IN 2023, WE ONBOARDED
900 Interns

Singapore-Industry Scholarship
2023 marks our 12th year partnering with Singapore-Industry Scholarship (SgIS), a multi-industry scholarship programme in partnership with the Singapore Government, to grow and nurture future industry leaders, particularly in the technology, defence and engineering domains. We have awarded a total of 128 scholarships, deploying our scholars globally and developing their careers with us.

Internships
We stepped up on our outreach efforts via regular engagement sessions, fireside chat events and site tours to engage interns and pique their interest to build their careers with us. At Mobile Aerospace Engineering in Alabama, U.S., we launched the Aircraft Maintenance Training Traineeship program which seeks to identify and hire exceptional talent among local secondary and post-secondary students into their career field on a part-time basis while they complete their schooling. In all, we onboarded 900 interns globally.

OUR PEOPLE DATA[7]

We continued to expand on the utilisation of People Analytics to gain deeper insights into our people data, initiatives and processes. This helps us make better decisions to enhance our people practices and achieve critical business outcomes.

EMPLOYEE PROFILE (%)

by Gender

22 **78**
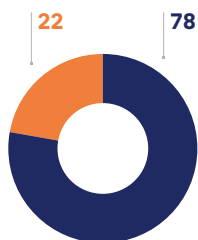
- Male Employees
- Female Employees

19 **81**

- Male Supervised Workers[9]
- Female Supervised Workers[9]

by Region

10 **3** **60**

27
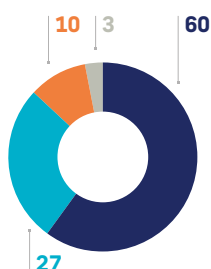
- Singapore
- Europe
- North America
- Others

by Age Group

21 **9** **20**

25 **25**
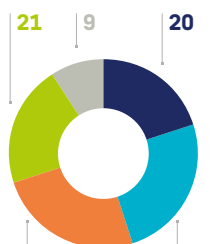
- 30 and below
- 30 to 40
- 40 to 50
- 50 to 60
- Above 60

MANAGEMENT PROFILE[8] (%)

by Managers

19 **81**
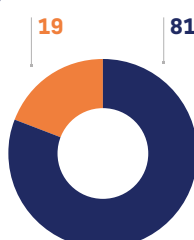
- Male
- Female

15%
of male employees
are people managers

14%
of female employees
are people managers

EMPLOYEE RETENTION[10] (%)

Rate of Employee Turnover

by Gender	
Male	11%
Female	12%

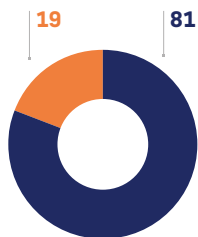| by Age Group	
30 and below	17%
30+ to 40	14%
40+ to 50	9%
50+ to 60	7%
Above 60	9%

Rate of New Hires

by Gender	
Male	23%
Female	23%

by Age Group	
30 and below	52%
30+ to 40	24%
40+ to 50	15%
50+ to 60	11%
Above 60	8%

Proportion of New Hires

by Gender			
Male	77%	Female	23%

TRAINING AND DEVELOPMENT

Total Training hours

30 hours

Average Training Per Employee[11]

Male	32 hours	Non-Executive	36 hours
Female	21 hours	Executive	27 hours
		Manager	21 hours

Notes

[7] Based on the Group's 2023 staff strength of 26,779 (including our subsidiaries) at the end of the reporting period

[8] Based on the population of each management category

[9] Supervised workers refer to short-term contract workers hired through local contractors who work in the Group's facilities and are supervised by ST Engineering

[10] Based on the total employee population of each gender and age group

[11] Based on the total employee population of each gender and employee category

Social

TOTAL WORKPLACE SAFETY & HEALTH

Safety and health are paramount to our everyday work. Prioritising safety and health leads to a cycle of increased employee health and wellness, high productivity and longer life expectancy.

We continuously work towards a safer and healthier working environment for our employees, stakeholders and partners globally.

OUR GOVERNANCE AND FRAMEWORK

Our Workplace Safety and Health (WSH) efforts are coordinated by the OEST – WSH which comprises representatives from our various business areas. OEST – WSH is led by the OESC Chairman who reports to the OESC Executive Sponsor. The OESC Executive Sponsor is currently our President, Commercial Aerospace who is a member of the Group EXCO.

Read more on our Sustainability Website

OUR COMMITMENT

We are committed to "Safety Before Profits" and strive to create a safe and healthy workplace. We target to have zero fatalities in our operations and work towards lowering our major injuries and ill health cases year-on-year.

OUR APPROACH

Our Management is Committed
ST Engineering's management is committed to the total WSH of our employees. Our OEST – WSH team meets regularly to discuss, coordinate and strategise on total WSH implementation and share best practices. The OEST – WSH team is also guided by our Workplace Safety and Health (WSH) policy and Safety Pledge.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Improve our Recordable Frequency Rate (RFR) and Recordable Severity Rate (RSR) by 5%	• Positive downward trend from 2021 to 2023 meeting our target of 5% • We plan to continue efforts in areas such as education and awareness, risk assessment review, increased supervision during silent hours and increase self-check efforts	• Improve our Recordable Frequency Rate (RFR) and Recordable Severity Rate (RSR) by 5%
• Digitalise key work processes to better manage WSH	• Safety hazard reporting processes were digitalised using e-applications • Adoption of technology to enhance forklift safety	• Organise Safety audits across all local business areas once a year for benchmarking and improvement

Senior Management Safety Walkabouts
The Group P&CEO, Group EXCO members and Business Areas' Presidents conducts regular safety walkabouts at various sites across our Business Areas. Through the walkabouts, the Group's leadership regularly emphasises and communicates the importance of workplace safety.

Social
• Total Workplace Safety & Health

We Adopt Global Health and Safety Standards

All our global operations abide by their relevant workplace safety regulations and requirements. For example, in Singapore, our material business units are certified ISO 45001 Occupational Health and Safety Management Systems. They also comply with the approved code of practices specified by the Singapore Ministry of Manpower, Singapore Civil Defence Force, National Environment Agency, and all applicable industry-specific legal requirements.

Internal and external verifications are regularly performed to evaluate our health and safety system performance, effectiveness of control procedures and compliance to global standards.

Global health and safety requirements extend beyond our employees to our workers[12]. We do this by incorporating WSH as a component of our Supplier Code of Conduct. This includes the requirement for our suppliers to have an internationally recognised occupational health, safety management system and comply with our WSH policy when working on our premises. Those who fail to adhere to our WSH policy may be administered disciplinary actions by our on-site supervisory teams. These conditions have also been included into our procurement terms and conditions.

We Focus on a Collective Total Workplace Safety and Health

We adopt a holistic approach to better manage staff safety and health. A holistic approach protects our employees from both short and long-term injury, stress and illness. This boosts business productivity as it reduces staff absenteeism and turnover, increases productivity and quality, and raises employee morale. Our collective approach means that our care extends beyond our employees and workers, to the people around them including family, friends, and colleagues.

We conduct regular checks of our operational areas to test for hazardous materials, noise, and general air quality. Additionally, we send our employees for annual occupational health check-ups on areas such as audiometry. These measures help us to identify health and safety risks early on and implement appropriate mitigation measures.

We also take care of our employees' wellbeing by providing general health screening, mental health support and return to work (from injuries) programmes.

Read about how we take care of our employees' wellbeing

Health and Safety is Embedded in Our Culture

We adopt a "Zero Accident" mentality and believe that safety starts with individuals. We make conscientious efforts to embed a culture of WSH vigilance among our employees through a combination of:

• Health and safety competency trainings

• Awareness campaigns

• Regular equipment and tool inspection and maintenance

• Safe work procedures and regulations

• Daily safety toolbox meetings

• Incident reporting, investigation, analysis and sharing of lessons learnt

New employees and workers undergo a WSH induction programme as part of the onboarding process. We also provide specialist safety training on specific work-related hazards such as lifting, welding and confined space.

ST Engineering

Safety Pledge

"**We** at ST Engineering are committed to **Safety Before Profits.**

We believe that **Safety Starts with Me** and pledge to abide by all safety rules, stop all unsafe practices and watch for the health, wellness and safety of everyone within our premises.

We shall, through our diligence and continuous improvement efforts, achieve our goal of **Zero Accident.** "

www.stengg.com

---

[12] Workers refer to people who are not employees but whose work and/or workplace is controlled the Group

We Tap on Technology to Improve Workplace Safety and Health

Adopting technology can bring about significant breakthroughs in WSH performance and in turn boost business productivity. In 2023, we employed the use of technologies such as improving our forklift operations and digitalising our current internal safety reporting system.

Upgrading our Forklifts for Safety

Our Land Systems team rolled out a suite of technology-enabled safety improvements for forklifts used in our operations. This includes retrofitting with an e-forklift pre-use checklist, seat belt sensor with interlock, red zone and blind spot warning lights and a laser guide system with camera. These improvements help keep our employees safe and enable forklift operations to be conducted in a safe and efficient manner.

We embed WSH into the Group's risk appetite statement. Our Environment, Health and Safety cardinal rules include:

FIRE SAFETY
Do not smoke outside designated areas. Keep clear of fire protection system and equipment.

WORK AT HEIGHTS
Use fall prevention and protection devices when working at heights.

CONFINED SPACE ENTRY
Enter confined space only if trained and authorised. Comply with confined space entry and emergency procedures.

WASTE DISPOSAL
Dispose and discard waste materials in accordance with requirements.

VEHICULAR SAFETY
Operate vehicles only if trained and authorised. Comply with safe operating requirements.

MACHINE / EQUIPMENT SAFETY
Operate equipment only if trained and authorised. Comply with safe operating requirements. "Lockout Tagout" before performing any maintenance task.

LIFTING OPERATIONS
Carry out lifting operations only if trained and authorised. Comply with safe lifting plan.

ELECTRICAL SAFETY
Use approved appliances and equipment with safety mark. Do not overload electrical circuits.

Social
• Total Workplace Safety & Health

We Are Recognised for Our Workplace Safety and Health Efforts
In 2023, our teams from ST Engineering were recognised for their efforts by the WSH Council in Singapore and were awarded a total of 10 national awards and two industry level awards.

Workplace Safety and Health Awards
In 2023, multiple teams from our Urban Solutions, Land Systems and Marine businesses were awarded for multiple projects. The projects range from the implementation of new systems to process improvements that assist in reducing workplace injuries. The wide range of projects and multiple recognition highlights the efforts and unwavering commitment of the Group towards WSH.

Industrial Awards
In 2023, we were also recognised by various industries for our efforts towards Workplace Safety and Health Innovation. Our Land Systems business took home the Gold and Silver awards at Singapore Manufacturing Federation for their improvement efforts in their production lines. Our Hull Benoi team from Marine was also recognised for their efforts in reducing WSH-related hazards and process improvement in AGV Chassis Fabrication.

OUR SAFETY DATA#

WE HAD
ZERO
FATALITIES IN 2023

Recordable Frequency Rate (RFR) — No. of injuries / 200,000 manhours worked
Recordable Severity Rate (RSR) — No. of medical leaves / 200,000 manhours worked

- 4.72^ (2021, RSR)
- 23.89* (2022, RSR)
- 2.93 (2023, RSR)
- 0.37^ (2021, RFR)
- 0.39 (2022, RFR)
- 0.33 (2023, RFR)

Legend:
- Recordable Frequency Rate
- Recordable Severity Rate
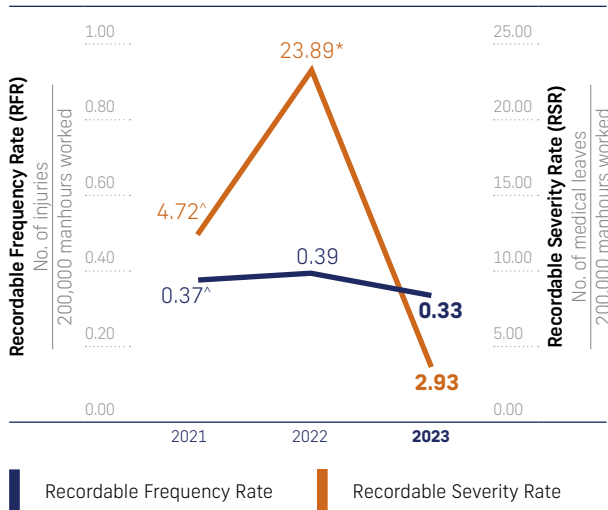
Notes:

Data from TransCore Partners LLC, have not been reflected but will be included in subsequent years.

^ RFR and RSR data for 2021 is based on the previous WSH indicators used – Accident Frequency Rate and Accident Severity Rate (indicators consists of injuries with medical leave of more than three days). RFR and RSR data for 2022 and 2023 captures frequency and severity based on medical leave one day and above.

* High Severity Rate is due to a fatality in 2022

	High Consequence Injuries	Recordable Work-Related Injuries	Recordable Work-Related Ill Health Cases
Number of Cases	–	118	1

MAIN TYPES OF WORK-RELATED INJURIES
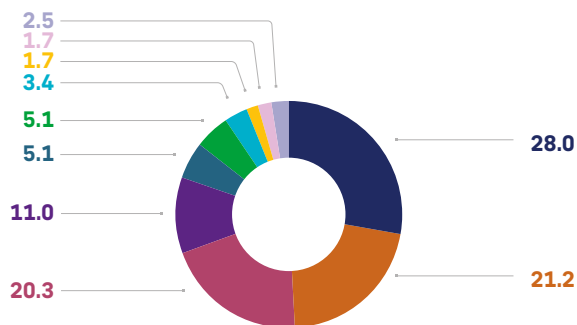
	Cases	Breakdown (%)
Cuts/Stabbed by Object	33	28.0
Slip, Trip, Fall	25	21.2
Struck by Object	24	20.3
Caught in Between	13	11.0
Fall from Height	6	5.1
Fracture/Sprain/Back Pain	6	5.1
Contact with Chemical	4	3.4
Burn	2	1.7
Machinery in Motion	2	1.7
Others	3	2.5

MAIN TYPES OF WORK-RELATED ILL HEALTH CASES

Type of Injury	Cases	Breakdown (%)
Noise induced deafness	1	100
Others	–	–

Social

CORPORATE COMMUNITY CONTRIBUTIONS

We recognise that our lives and business are deeply intertwined with the communities we operate in. We strive to do good as we do well, so that we flourish and grow together.

We uplift lives through employee volunteerism, philanthropy, technology and innovation.

Our activities and initiatives contribute to charities and support various shared causes, including healthcare and eldercare, education and environment, that are locally relevant and impactful. To encourage and facilitate employee participation, we actively promote a purpose-driven giving culture through corporate initiatives and engagements.

OUR GOVERNANCE AND FRAMEWORK

In 2023, we refreshed our three focus pillars to better reflect our corporate purpose. Guiding our outreach efforts, our pillars include:

- • Improving Lives through Charitable Gifts
- • Empowering Lives through Education
- • Transforming Lives through Technology and Innovation

These pillars support the UN SDGs and enable us to contribute to the sustainable growth of the communities we operate in. We measure, report, and communicate our corporate community investments and philanthropy efforts. These are coordinated by our Group Corporate Social Responsibility (CSR) Steering Committee which comprises employee volunteers from various business areas globally.

OUR COMMITMENT

We are committed to being a responsible corporate citizen and enabling a more secure and sustainable world for the communities we serve.

OUR APPROACH

We serve our communities through a combination of volunteer work, skills-based contributions as well as in-kind and monetary support to build an inclusive, resilient and vibrant society. Our efforts leverage our Group's expertise and purpose and are aligned with our focus pillars as well as supported causes.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Target higher employee participation for Group-wide fundraising through the ST Engineering MOVEment	• Raised $600,000 globally and achieved more than 10% increase in employee participation	• Support STEM education initiatives that empower students to achieve their fullest potential
• Facilitate community service programmes and partnerships to drive employee volunteerism	• Established the Group CSR Steering Committee to streamline the CSR approach and organise Group-wide volunteering activities such as Green Day 2023 and Science Fun Day! 2023, which saw an increase in employee volunteerism	• Develop and adapt technology and innovation solutions through partnerships with external stakeholders to address identified community issues or societal challenges

CONTRIBUTED A TOTAL OF

$2.3m*

IN COMMUNITY CONTRIBUTIONS

$1,307,000
of donations and sponsorships

$525,000
to President's Challenge 2023

Over
$511,000
to Community Chest's SHARE Programme

* Baselined according to 2023's refreshed focus pillars. Including contributions from the Group, employees and other stakeholders.

Awarded the Charity Platinum Award for the fifth consecutive year

Social
• Corporate Community Contributions

WE IMPROVE LIVES THROUGH CHARITABLE GIFTS

We aim to inspire social change and uplift lives, by collaborating and forging meaningful partnerships with the community, our employees, charities and other organisations. To foster a strong culture of giving, we create opportunities for our employees to serve actively in community outreach programmes to make a difference.

Doing Good through ST Engineering MOVEment
ST Engineering MOVEment – a global month-long initiative organised to encourage employees to stay healthy, keep fit and do good. Over 6,300 employees across 22 markets participated actively, putting their best foot forward to walk, run and cycle for charity. With everyone's effort and commitment to MOVE for good, we managed to raise $600,000 to support the underserved groups, including beneficiaries of the President's Challenge 2023.

Food For Neighbors
Our U.S. colleagues from ST Engineering iDirect, accompanied by their families, rallied at sorting locations in Herndon, Centreville, and Falls Church to dedicate their time and efforts to Food For Neighbors, in support for ending child hunger in Northern Virginia. Being the Red Bag Sponsor for this event, they managed to gather and process a commendable 9,400 kilogrammes of donations, providing for over 5,000 students in 41 secondary schools.

Donation of COVID-19 Self-Test Kits
Our colleagues from Elbe Flugzeugwerke GmbH (EFW) donated 3,000 COVID-19 self-test kits to Alexa Senioren Residenz (Alexa Senior Residence) and Hansahaus Seniorenpflegeheim (Hansahaus Senior Nursing Home), which cater to the living and care needs of the elderly. The donation enhanced the safety and well-being of the residents of these facilities.

Helping to Weather the Storm
Our colleagues in ST Engineering Aerospace (Guangzhou), donated disaster preventative goods, comprising sleeping bags, sleeping mats, and hygiene kits, to Shiqian Village in Guangzhou, China. These essential items were intended for use in emergency shelters during the typhoon season, and to ensure that 97 villagers had the necessary resources to weather the storm safely.

Cooking with Willing Hearts
For the second consecutive year, we engaged in a meaningful endeavour to support Willing Hearts, a non-profit organisation that provides 7,000 daily meals and other support services to those in need. Beneficiaries include the elderly, the disabled, low-income families, children from single parent families or otherwise poverty-stricken families.

Community Upgrading
60 of our employees volunteered at MWS Bethany Nursing Home and Xin Yuan Community Care on two separate occasions. Both teams assisted in painting and facility-upkeeping works, which freshened the look of the facilities and brightened the place for the beneficiaries.

Social
• Corporate Community Contributions

WE EMPOWER LIVES THROUGH EDUCATION

We firmly believe in the transformative power of Science, Technology, Engineering, and Mathematics (STEM) education. By providing resources and supporting diverse learning pathways across various industries and demographics, we aim to empower communities, by imparting them knowledge that enables them to build a brighter and better future.

SG Cares Giving Week – Empowering Young Minds through STEM Education
As part of Singapore's SG Cares Giving Week 2023, we organised fundraising and volunteering activities to empower children through STEM education.

Fundraising:
We raised over $32,000 for Child at Street 11, an Institution of Public Character (IPC) registered non-profit preschool and student care service provider. We view STEM education as an important means of preparing children to excel in a world increasingly shaped by technology. Our collaboration with Child at Street 11 aimed to provide the children under their care with additional resources to strengthen their STEM education.

Volunteering:
Our 140 volunteers took 100 children from Child at Street 11 and Life Community Services Society out on a fun day to Science Centre Singapore. To spark their interest in STEM, we spent the afternoon engaging with the children and introduced simple science topics through fun and interesting quizzes. We were honoured to have Singapore's President Tharman Shanmugaratnam grace our event, engaging and interacting with both the children and our employee volunteers.

Engaging the Next Generation with Aerospace Insights
Dedicated to fostering young talent and bridging academic learning with industry insights, we opened the doors to our engine shop factory to students from Loyang View Secondary School as part of their "Future Forward Programme". This hands-on visit familiarised students with the intricate challenges of the aerospace sector and underscored the indispensable skills and mindsets required in daily operations. Through such endeavours, we aim to prepare students with the robust life skills needed for upcoming professional challenges.

Experiencing the Working World
Our Land Systems Business Area in Singapore hosts students, twice a year, from Assumption Pathway School as part of an Industry Experiential Programme (IEP). These students are attached to our staff to perform simple facility inspection and maintenance work and warehousing activities. IEP provides students the opportunity to gain practical experiences and skills, build professional networks and cultivate soft skills such as teamwork and communication in a real working environment.

WE TRANSFORM LIVES THROUGH TECHNOLOGY AND INNOVATION

We aspire to lead community betterment by leveraging our knowledge and expertise in technology and innovation to solve real-world problems and improve lives.

Connectivity for World Champions
Our Satcom business, ST Engineering iDirect, partnered with Innoptus Team for the annual World Solar Challenge. We provided game-changing satcom-on-the-move capable equipment to enable constant satellite connectivity for the team to monitor key weather parameters and adapt their race-winning strategy. As a result of this contribution, participants gained insight to the development of solar-powered cars and battery efficiency, leading to the betterment of STEM.

Governance

ETHICAL BUSINESS & REGULATORY COMPLIANCE

Good governance refers to having the appropriate people, policies and processes to manage the business and affairs of the company to enhance long-term stakeholder value whilst upholding high standards of compliance and ethical business practices.

As a company listed in Singapore, we are bound by SGX listing rules and practice guides, and we are also bound by all applicable requirements stipulated in Singapore's Code of Corporate Governance (2018) and the Companies Act 1967.

OUR GOVERNANCE AND FRAMEWORK

We have a single-tier Board system consisting of an appropriate level of independence, diversity of thought and background to enable it to make decisions in the best interests of the Group and all stakeholders. The Board is supported by Company Secretary (CoSec) who ensures that board processes and regulatory requirements are followed.

Read more about our Board on Page 79 of our Annual Report

Since 1998, the Board formed the Risk and Sustainability Committee (RSC). The RSC assists the Board in its risk governance responsibility, overseeing the responsibilities of the senior management. This ensures that there is a sound system of controls in place for identifying and managing risks to safeguard stakeholder interests and the Group's assets. Additionally, it oversees sustainability matters, including those related to climate change. Annually, the RSC updates the Board on its achievements according to the workplan. In addition, significant risk and control issues are communicated promptly to the Board, and remedial actions are taken to minimise lapses. The RSC is supported on risk related matters by the R&A function which in turn liaises with Risk Champions appointed by the respective Business Areas.

Read more about our Risk and Sustainability Committee on Page 96 of our Annual Report

The R&A function is integral to ensuring that ST Engineering manages its key risks well, complies with applicable and regulatory requirements where it operates, and has the appropriate governance and controls in place. Our policies include but are not limited to:

- Code of Business Conduct and Ethics
- Gifts and Hospitality Policy
- Export Control Policy
- Whistle-Blowing Policy
- Governance Policy for Non-subsidiary Companies

The Group Head, R&A reports to the Group Chief Financial Officer. The R&A function provides leadership in the implementation of a Group-wide ERM framework and ensures the continued effectiveness of relevant policies and procedures at all our Business Areas and functions.

The Control Self Assessment (CSA) framework is designed to reinforce control ownership and awareness of key risks across the Group. The primary objective of CSA is to identify weaknesses in internal controls and facilitate the formulation of action plans to address any control lapses in a timely manner. Independent controls testing is also conducted by the CSA Champions to assess the adequacy and operating effectiveness of key controls. Action plans are implemented to address any exceptions identified and commensurate with the risk exposure. The Board receives, at regular intervals, updates from the Board Committees on the key business risks, and IA reports on the operational effectiveness of internal controls.

The Group IA function is headed by the Group Head, IA who reports directly to the AC. The IA function examines and evaluates the adequacy and effectiveness of the Group's governance, risk management and internal controls. The Group Head, IA operates independently and has the right to audit the Risk Management Framework.

Read more about our Risk and Assurance on Page 96 of our Annual Report

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Enhance Group ERM Framework for proactive monitoring of emerging risks on a longer-term horizon, such as climate change and geopolitical trends	• Formalised the Emerging Risk Management Framework to be progressively rolled out to all business areas. Also conducted workshops for selected business areas to identify their key emerging risks and corresponding opportunities, action plans and watchpoints	• Enhance regulatory compliance governance structure, processes and systems in response to evolving laws and regulations
• Strengthen risk culture and awareness through training, communication, and campaigns	• We continuously review our risk training programme to identify areas of improvement to strengthen the Group's risk culture.	• Leverage AI technologies to develop e-learning courses for relevant risk and compliance topics to achieve the following: – Enhance audience engagement and retention – Expand our global outreach through localisation of training content

OUR COMMITMENT

We are committed to conducting our business in a responsible manner and comply with all applicable laws and regulations including export control, data privacy, trade sanctions and embargoes.

We do not tolerate fraud, bribery, corruption and misconduct in all our business areas globally and throughout our supply chain. We are determined to foster and maintain an environment where anyone can report any wrongdoing, in good faith, without the fear of retaliation.
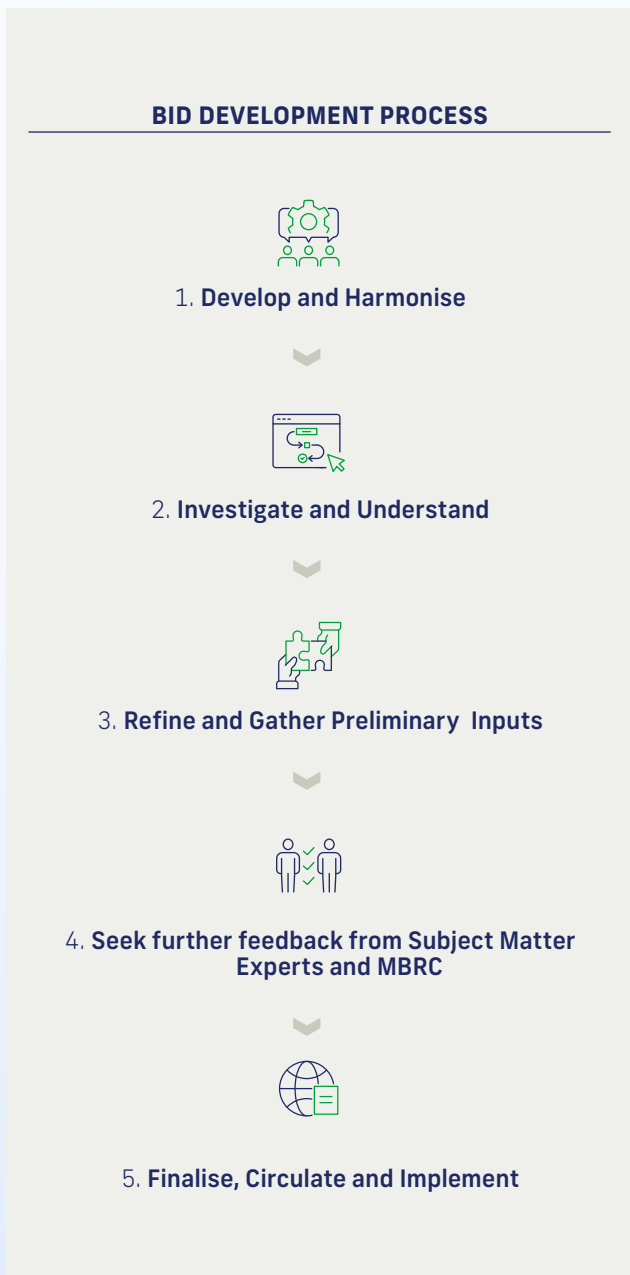
IN 2023, WE HAD

ZERO

• substantiated cases of bribery and corruption
• significant fines or non-monetary sanctions for non-compliance with environmental, health and safety regulations

Governance
• Ethical Business & Regulatory Compliance

Major Bid Review Committee

In 2023, under the sponsorship of the Group EXCO, the Major Bid Review Committee (MBRC) was formalised to review the Group's bid management process with the aim of achieving robust margins and delivering on business plans. Key objectives of the MBRC include evaluating strategic fit, unlocking synergies across business areas, reviewing of bids and associated risks, and building a knowledge depository of lessons learnt to improve project outcomes, capture new opportunities and ensure continuous improvement.

BID DEVELOPMENT PROCESS

1. **Develop and Harmonise**

2. **Investigate and Understand**

3. **Refine and Gather Preliminary Inputs**

4. **Seek further feedback from Subject Matter Experts and MBRC**

5. **Finalise, Circulate and Implement**

Global Trade Compliance (GTC) Programme and Strengthening Internal Controls

In the complex world of international trade, responsible operations are not just an obligation but a vital aspect of our business integrity. We recognise the importance of a GTC framework covering areas like Import/Export Management, Supply Chain Visibility, Risk and Quality Management to maintain trust with stakeholders. This framework helps identify, assess and mitigate trade-related risks, ensures required business licenses and permits are obtained and the implementation of proper protocols for reporting compliance issues.

We are cognisant that an effective trade compliance programme is not just about following the law but about setting a standard for how our business should be conducted globally—transparently, ethically, and responsibly. Hence, we maintain high standards of operational discipline through:

- **Recordkeeping**
  Provides the backbone for accountability, enabling detailed tracking and tracing of all transactions and interactions.

- **Policies and Procedures**
  Serves as the operational manual for executing each of the key elements, ensuring consistency across the Group.

- **Training and Education**
  Equips staff with the knowledge and skills required to implement and adhere to the policies and procedures effectively.

GLOBAL TRADE COMPLIANCE

OUR APPROACH

Our Leaders Keep Abreast of Best Practices and Critical Risks

The Board goes through regular training to enhance their collective knowledge and skills on topics such as corporate governance, anti-corruption and sustainability. Additionally, the CoSec arranges briefings by external consultants and industry experts to keep the Board abreast of developments in these areas. More details on the Directors' training can be found in the "Director Induction, Training/Development" section of the Corporate Governance Report in our Annual Report.

R&A also monitors key risks pertaining to the macro-environment such as geopolitical tensions and provides updates to the RSC accordingly. Every quarter, Presidents of the Business Areas and relevant Group HQ Functions will review their respective dashboards of key risks with the RSC by rotation. These key risks are aggregated to identify the top risk themes which represent the most significant impact on the Group's ability to achieve its strategic objectives. During these engagements, emerging trends, critical uncertainties, areas for improvement and action plans are thoroughly discussed and addressed. In 2023, there were no significant regulatory non-compliances.

We Are Guided by Our Code of Business Conduct and Ethics

Our Code of Business Conduct and Ethics forms the foundation of the Group's commitment to ethical business conduct and regulatory compliance. It was developed based on key principles guided by the Group's Core Values namely, Integrity, Value Creation, Courage, Commitment and Compassion. These principles guide our employees on areas such as:

1. **Workplace conduct** – such as non-discrimination and workplace safety and health

2. **Security over information and assets** – such as the safeguarding of confidential information entrusted to the company and ethical and judicious application of AI tools and technologies.

3. **Business conduct** – such as zero tolerance for corruption and bribery, avoidance of conflicts of interest, as well as awareness of anti-trust and anti-competitive behaviour

4. **Social responsibility** – such as caring for the environment and engaging our communities

5. **Reporting concerns** – such as our policy on whistleblowing

View our Code of Business Conduct and Ethics

All reporting lines, responsibilities and accountabilities are clearly defined in our businesses. Employees are advised to reach out to their direct line manager or R&A business partners for clarifications, and guidance on our Code of Business Conduct and Ethics.

Employees are informed about the consequences of violating the standards in our Code of Business Conduct and Ethics. Employee misconduct may result in disciplinary action which may be reflected in their performance appraisal and can impact their renumeration. Employee misconduct of a serious nature may also result in termination.

We Have Zero Tolerance for Fraud and Corrupt Practices

The Group has zero tolerance towards fraud and corruption, reinforced by our detailed policies and compliance procedures.

Anti-Bribery and Corruption Risks

The Group's operations are assessed for risks related to bribery and corruption as part of the ERM framework. The significant corruption-related risks relate primarily to using third-party suppliers and intermediaries, corruption by employees, gifts and hospitality donations and sponsorships to business partners and public officials. Our anti-bribery and corruption policy is included in our Code of Business Conduct and Ethics and is available for our employees.

Conflict of Interest

Our Conflict of Interest policy provides guidance on the different types of conflicts, ranging from financial interest to stakeholder relationships. All employees are required to submit an annual declaration of conflict of interest. All declarations are subject to review by management, and employees are to comply with the recommended actions to address any conflict.

Gifts and Hospitality

The Group has a Gifts and Hospitality policy, setting out clear guidelines and principles on the giving and receipt of gifts and hospitality. This includes charitable donations and sponsorships, where recipients are reviewed and subject to appropriate due diligence and approval by senior management.

Intermediaries

The appointment and re-engagement of intermediaries are governed by a formal policy and procedures that entail a risk-based and thorough due diligence review process supported by independent, established service providers. The due diligence process includes (a) onboarding and ongoing screening against sanctions lists and negative media publicity, (b) mandatory anti-bribery and corruption training,

Governance
• Ethical Business & Regulatory Compliance

and (c) compliance with our anti-bribery and corruption policy and clauses as part of the terms and conditions of the agreement. In addition, intermediaries are subject to due diligence checks by established, independent third-party service providers prior to and post appointment.

Lobbying and Political Contributions
Political contributions, donations or sponsorships must be approved by management in accordance with the Group's approval limits policy and be made with the highest ethical standards and in compliance with all applicable laws of the jurisdictions where the Group operates in. These must not confer a personal benefit and must not be given to gain a business advantage or to influence a business outcome or an official action.

We Comply with All Applicable Export Control Regimes
The Group complies with all applicable laws, regulations, trade sanctions and embargoes (collectively referred to as ECRs) governing the import and export of goods, services, software, technology, dual-use goods and information (collectively referred to as Controlled Items) of all of the jurisdictions that the Group operates in. International sales may also require compliance with extraterritorial laws like international sanctions lists issued by the U.S.

The Group also strives to ensure that transactions undertaken by any party operating on behalf of the Group, including vendors, suppliers, agents, distributors, and resellers, comply with applicable ECRs. Strict adherence to this policy is required.

Export Control
The Group Export Control Policy is applicable to all our businesses. It aims to ensure that all our exports are not used for unauthorised purposes and comply with the applicable ECRs. Our businesses have put in place trade control procedures to embed compliance into the day-to-day business processes, namely commodities classification and screening of customers.

Compliance with ECRs and the maintenance of an effective trade control system are supported by Export Control Officers who are appointed at the Group, regional, country and line of business levels.

In the event of any violations, immediate reporting and corrective measures are to be carried out under the supervision of the Group EXCO and senior management. All violations are to be promptly recorded in a central database for management review and monitoring of corrective actions. Significant violations are reported to the RSC, where lessons learnt are distilled and shared.

Business units comply with all record keeping regulatory and internal policy requirements that are applicable to their trade activities. Records maintained shall be made available for inspection by government officials, upon reasonable notice.

Export Review Process
The Group adopts a risk-based approach to monitor transactions. This includes procedures such as the review of sales transactions against sanctions, as well as due diligence screening of customers. To ensure that the transaction is eligible for export, the relevant team carries out:

i. **Pre-export reviews**
   We review the classification of the export item including technical data, technology, software, and hardware prior to sharing, transferring, releasing to a third party. An assessment will also be conducted to ascertain that the classification of export and re-export items, transactions and activities are correct. Additionally, an assessment will be made on whether additional due diligence is required if any "red flags" or diversion risks are detected.

ii. **ECRs, Licenses and Authorisation reviews**
   We review the status of the transaction under the applicable ECRs and determine if all the necessary licenses or authorisations have been obtained.

iii. **Destination, party and end-use review**
   We review all transactions against all applicable destination, party and end use restrictions.

We Empower our Employees to Uphold Business Ethics and Integrity
The Group has detailed policies for our employees, as well as training and compliance procedures that are accessible to employees.

Our Code of Business Conduct and Ethics is disseminated to employees globally in the form of digital handbooks and video messages from the Group EXCO. To reinforce awareness and compliance of our Code of Business Conduct and Ethics, the Group mandates that all employees complete the e-learning module and self-attestation on a yearly basis. Our employees also receive annual training to reinforce awareness on the Group's anti-corruption policies and procedures, and trade compliance. Targeted training is provided for employees whose job functions entail greater involvement with Controlled Items.

Whistleblowing channels have been established for our employees and other stakeholders to report any potential violations of our Code of Business Conduct and Ethics, irregularities and regulatory non-compliances. Our whistleblowing channels provide our employees and other stakeholders a platform to raise concerns, in confidence, about possible improprieties in business conduct, financial reports or other matters, without the fear of reprisal. No form of retaliation to the informant (internal or external) is tolerated for any report made in good faith.

Appropriate disciplinary actions will be taken in the event of any breach or non-compliance.

Read more about our Whistleblowing Policy and Procedures

Governance

CYBERSECURITY & DATA PROTECTION

ST Engineering understands the need for strong cybersecurity and data protection as digital technology and highly connected economies and businesses bring new vulnerabilities from a proliferation of cyber threats.

Cybersecurity threats evolve quickly and may include computer viruses, attempts to access information, denial of service and other breaches. It is commonly recognised that attempts to disrupt or improperly access Information Technology (IT) systems through cyber-attacks or otherwise may cause financial loss, reputational loss, business disruption, and/or data and proprietary information loss.

OUR GOVERNANCE AND FRAMEWORKS

The Board has oversight on the Group's cybersecurity strategy and cybersecurity topics are regularly reported to the RSC, AC and the Board.

Cybersecurity in the Group is overseen by the Group Cybersecurity Committee which is chaired by the Group Chief Information Security Officer and supported by the Group Information Security Office (GISO). The Group Chief Information Security Officer reports directly to the Group President & CEO.

We conduct reviews of our cybersecurity measures to ensure that they are in line with industry standards and put in place a Group Cybersecurity Management Procedure to guide our businesses. Our IT infrastructure and Information Security Security Management System takes reference from ISO 27001 – Information Security Management, National Institute of Standards and Technology, and other relevant industry standards.

Our focus on data governance and protection in the Group is overseen by the Group Data Governance Committee which is chaired by the Group Chief Information Officer and comprises representatives from business areas and Group HQ functions. The committee provides oversight, and escalates key risks and violations on data governance and protection to the management in a timely manner. The committee also monitors changes in the regulations and recommends the adoption of relevant best practices.

Our policies and procedures on data handling and cross border data transfer are updated to ensure compliance with all applicable data protection laws and regulations.

ST Engineering's Personal Data Policy can be accessed here.

OUR GOALS

Our 2023 Goals	Our Achievements	Our 2024 Goals
• Continue mandatory training for cybersecurity and data protection policies	• We have annual mandatory e-learning courses on cybersecurity and data protection policies for our employees	• Continue mandatory training for cybersecurity and data protection policies
• Link cybersecurity key performance indicators to executive performance	• We have linked cybersecurity key performance indicators to executive performance	• Continue linking cybersecurity to executive performance through our internal key performance indicators scorecard

OUR COMMITMENT

We are committed to protecting our data and systems including those entrusted to us by adopting best practices in cybersecurity. We are also committed to complying with all applicable data protection laws and regulations in the various countries we operate in.

OUR APPROACH

We focus on "People, Process and Technology"
We continue to strengthen our cyber and data resilience with a system of capabilities that comprises People, Process and Technology. This holistic approach manages cybersecurity risks and the associated data breaches by seeking to keep abreast of the threat landscape and environment. We also implement a multi-layered security framework to ensure that there are relevant preventive, detective and recovery measures.

We safeguard internal assets from emerging threats by extending our layered cybersecurity controls, conducting periodic reviews of our digital footprints and cybersecurity exercises.

Our employees are made aware that cybersecurity and data protection is everyone's responsibility. We regularly train our employees on cybersecurity threats, data privacy and handling, relevant regulations, and best practices.

Violations of cybersecurity and data protection policies by our employees will trigger mandatory remedial training, impact their performance evaluation and may result in disciplinary actions against offenders.

We Prepare for Contingencies
In the event of a cyber and/or data security breach, employees are required to follow the Group's escalation process that is readily available on our corporate intranet. Additionally, we have a disaster recovery system in place across our core business operations that is designed to enable the recovery of data and the continuation of vital IT and business operations following disruptions caused by natural disasters, human error, technical failures or malicious cyber-attacks.

We continuously review and enhance measures designed to prevent, detect and respond to any unauthorised activities in our systems against a constantly evolving cyber landscape and increasing sophistication of cyber-criminals.

Global Reporting Initative (GRI)

GRI CONTENT INDEX

ST Engineering has reported in accordance with the GRI Standards for the period 1 January 2023 to 31 December 2023.

GRI STANDARDS	DISCLOSURE	PAGE / RESPONSE
The Organisation and its Reporting Practices		
GRI 2-1	Organisational details	Annual Report 2023, pages 2, 3 and 142
GRI 2-2	Entities included in the organisation's sustainability reporting	Annual Report 2023, page 239 Some data from TransCore Partners LLC were not included in this report.
GRI 2-3	Reporting period, frequency and contact point	Sustainability Report 2023, page 01
GRI 2-4	Restatements of information	Our 2021 and 2022 GHG were restated due to divestment of our U.S. subsidiaries, VT Halter Marine, Inc (Halter Marine) and ST Engineering Halter Marine and Offshore, Inc., and the off cycle third party verification of Singapore emissions. GHG emissions are 1% and 5% lower for 2021 and 2022 respectively than previously reported.
GRI 2-5	External assurance	Sustainability Report 2023, page 02
Activities and Workers		
GRI 2-6	Activities, value chain and other business relationships	Annual Report 2023, pages 26 - 63
GRI 2-7	Employees	Sustainability Report 2023, page 53
GRI 2-8	Workers who are not employees	Sustainability Report 2023, page 53
Governance		
GRI 2-9	Governance structure and composition	Sustainability Report 2023, pages 5, 8 and 9 Annual Report 2023, pages 79 - 108
GRI 2-10	Nomination and selection of the highest governance body	Annual Report 2023, pages 87 - 89
GRI 2-11	Chair of the highest governance body	Annual Report 2023, page 12
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Report 2023, pages 8 - 9
GRI 2-13	Delegation of responsibility for managing impacts	Sustainability Report 2023, pages 8 - 9
GRI 2-14	Role of the highest governance body in sustainability reporting	Sustainability Report 2023, page 05
GRI 2-15	Conflicts of interest	Annual Report 2023, pages 20 - 21 and 84 - 89
GRI 2-16	Communication of critical concerns	Sustainability Report 2023, pages 66 - 71 Annual Report 2023, pages 96 - 107
GRI 2-17	Collective knowledge of the highest governance body	Sustainability Report 2023, pages 5, 8 and 9 Annual Report 2023, page 80
GRI 2-18	Evaluation of the performance of the highest governance body	Annual Report 2023, pages 88 - 89
GRI 2-19	Remuneration policies	Sustainability Report 2023, page 10 Annual Report 2023, pages 90 - 96
GRI 2-20	Process to determine remuneration	Annual Report 2023, pages 90 - 96
GRI 2-21	Annual total compensation ratio	Annual Report 2023, pages 94 - 95 and 217
Strategy, Policies and Practices		
GRI 2-22	Statement on sustainable development strategy	Sustainability Report 2023, page 5
GRI 2-23	Policy commitments	Sustainability Report 2023, page 9
GRI 2-24	Embedding policy commitments	Sustainability Report 2023, pages 16 - 73
GRI 2-25	Processes to remediate negative impacts	Sustainability Report 2023, page 51
GRI 2-26	Mechanisms for seeking advice and raising concerns	Sustainability Report 2023, page 71 Annual Report 2023, pages 103 - 104
GRI 2-27	Compliance with laws and regulations	Sustainability Report 2023, pages 66 – 71
GRI 2-28	Membership associations	ST Engineering and/or its key subsidiaries are members of the following organisations: a) Aerospace & Defense Secure Enterprise Platform (Exostar) b) Advanced Remanufacturing and Technology Centre (ARTC) c) Association of Company Emergency Response Teams (Singapore) d) Association of the Metal and Electrical Industry of Saxony (VSME)

GRI STANDARDS	DISCLOSURE	PAGE / RESPONSE
Strategy, Policies and Practices		
		e) Association of Singapore Marine Industries (ASMI)
		f) Civil Air Navigation Services Organisation (CANSO)
		g) German Aerospace Industries Association (BDLI)
		h) German Chamber of Commerce and Industry (IHK)
		i) Institute of Engineers, Singapore (IES)
		j) International Motor Vehicle Inspection Committee (CITA)
		k) National Aerospace and Defense Contractors
		l) National Advanced Mobility Consortium
		m) National Training and Simulation Association
		n) Non Destructive Testing Society (Singapore)/ Singapore National Aerospace NDT Board (NANDTB)
		o) Singapore Business Federation (SBF)
		p) Singapore Chinese Chamber of Commerce and Industry
		q) Singapore Cybersecurity Consortium
		r) Singapore Institute of Directors (SID)
		s) Singapore Institution of Safety Officers
		t) Singapore Manufacturing Federation
		u) Singapore National Employers Federation (SNEF)
		v) Singapore Shipping Association
		x) United Nations Global Compact (UNGC) / UN Global Compact Network Singapore (GCNS) Compact Network Singapore (GCNS)
Stakeholder Engagement		
GRI 2-29	Approach to stakeholder engagement	Sustainability Report 2023, page 11
GRI 2-30	Collective bargaining agreements	Sustainability Report 2023, page 45
Material Topics 2021		
GRI 3-1	Process to determine material topics	Sustainability Report 2023, pages 12 - 13
GRI 3-2	List of material topics	Sustainability Report 2023, pages 14 - 15
Economic Performance and Productivity		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 22 - 25
GRI 201-1	Direct economic value generated and distributed	Sustainability Report 2023, page 23
GRI 201-2	Financial implications and other risks and opportunities due to climate change	Sustainability Report 2023, pages 19 - 21
GRI 201-3	Defined benefit plan obligations and other retirement plans	Annual Report 2023, pages 217 - 223
GRI 201-4	Financial assistance received from government	Annual Report 2023, pages 150, 186, and 217
Technology and Innovation		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 26 - 29
Responsible and Resilient Supply Chain		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 30 - 33
GRI 204-1	Proportion of spending on local suppliers	Sustainability Report 2023, page 32
GRI 308-1	New suppliers that were screened using environmental criteria	Sustainability Report 2023, pages 30 - 31
GRI 308-2	Negative environmental impacts in the supply chain and actions taken	Sustainability Report 2023, page 31
GRI 414-1	New suppliers that were screened using social criteria	Sustainability Report 2023, pages 30 - 31
GRI 414-2	Negative social impacts in the supply chain and actions taken	Sustainability Report 2023, page 31
Environmental Protection		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 34 - 39
GRI 302-1	Energy consumption within the organisation	Sustainability Report 2023, page 36
GRI 302-2	Energy consumption outside of the organisation	ST Engineering is in the midst of consolidating this data globally.
GRI 302-3	Energy intensity	Sustainability Report 2023, page 37

Global Reporting Initative (GRI)

GRI STANDARDS	DISCLOSURE	PAGE / RESPONSE
Environmental Protection		
GRI 302-4	Reduction of energy consumption	ST Engineering is in the midst of consolidating this data globally.
GRI 302-5	Reductions in energy requirements of products and services	ST Engineering is in the midst of consolidating this data globally.
GRI 303-1	Interactions with water as a shared resource	Sustainability Report 2023, page 39
GRI 303-2	Management of water discharge-related impacts	Sustainability Report 2023, page 39
GRI 303-3	Water withdrawal	Sustainability Report 2023, page 39
GRI 303-4	Water discharge	Sustainability Report 2023, page 39
GRI 303-5	Water consumption	Sustainability Report 2023, page 39
GRI 305-1	Direct (Scope 1) GHG emissions	Sustainability Report 2023, pages 36 - 37
GRI 305-2	Energy indirect (Scope 2) GHG emissions	Sustainability Report 2023, pages 36 - 37
GRI 305-3	Other indirect (Scope 3) GHG emissions	Sustainability Report 2023, pages 36 - 37
GRI 305-4	GHG emissions intensity	Sustainability Report 2023, pages 36 - 37
GRI 305-5	Reduction of GHG emissions	Sustainability Report 2023, pages 36 - 37
GRI 305-6	Emissions of ozone-depleting substances (ODS)	ST Engineering does not consider this material to our operations.
GRI 305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	ST Engineering does not consider this material to our operations.
Sustainable Quality Products and Solutions		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 40 - 43
GRI 416-1	Assessment of the health and safety impacts of product and service categories	Sustainability Report 2023, pages 40 - 43
GRI 416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	ST Engineering considers this information to be confidential. Refer to Sustainability Report 2023, pages 40 - 43 for how we manage the health and safety impacts of our products and services.
People Excellence		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 44 - 53
GRI 401-1	New employee hires and employee turnover	Sustainability Report 2023, page 53
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Sustainability Report 2023, pages 51 - 52
GRI 401-3	Parental leave	ST Engineering is in the midst of consolidating this data globally.
GRI 402-1	Minimum notice periods regarding operational changes	Sustainability Report 2023, page 45
GRI 404-1	Average hours of training per year per employee	Sustainability Report 2023, page 53
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	Sustainability Report 2023, pages 47 - 48
GRI 404-3	Percentage of employees receiving regular performance and career development reviews	Sustainability Report 2023, page 51
GRI 406-1	Incidents of discrimination and corrective actions taken	Sustainability Report 2023, page 51
GRI 407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Sustainability Report 2023, page 45
Total Workplace Safety and Health		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 54 - 59
GRI 403-1	Occupational health and safety management system	Sustainability Report 2023, pages 54 - 56
GRI 403-2	Hazard identification, risk assessment, and incident investigation	Sustainability Report 2023, pages 56 - 57
GRI 403-3	Occupational health services	Sustainability Report 2023, pages 56 - 59
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	Sustainability Report 2023, pages 55 - 57
GRI 403-5	Worker training on occupational health and safety	Sustainability Report 2023, page 56
GRI 403-6	Promotion of worker health	Sustainability Report 2023, pages 45 - 46

GRI STANDARDS	DISCLOSURE	PAGE / RESPONSE
Total Workplace Safety and Health		
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Sustainability Report 2023, pages 54 - 59
GRI 403-8	Workers covered by an occupational health and safety management system	Sustainability Report 2023, page 56
GRI 403-9	Work-related injuries	Sustainability Report 2023, page 59
GRI 403-10	Work-related ill health	Sustainability Report 2023, page 59
Corporate Community Contributions		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 60 - 65
GRI 413-1	Operations with local community engagement, impact assessments, and development programs	Sustainability Report 2023, pages 60 - 65
GRI 413-2	Operations with significant actual and potential negative impacts on local communities	Sustainability Report 2023, pages 60 - 65
Ethical Business and Regulatory Compliance		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 66 – 71
GRI 205-1	Operations assessed for risks related to corruption	Sustainability Report 2023, page 69
GRI 205-2	Communication and training about anti-corruption policies and procedures	Sustainability Report 2023, pages 69 – 71
GRI 205-3	Confirmed incidents of corruption and actions taken	Sustainability Report 2023, page 67
Cybersecurity and Data Protection		
GRI 3-3	Management of material topics	Sustainability Report 2023, pages 72 – 73
GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	ST Engineering considers this information to be confidential. Refer to Sustainability Report 2023, pages 72 – 73 for how we manage our customers' privacy and prevent loss of customer data.

United Nations Global Compact (UNGC)

TEN PRINCIPLES – INDEX

PRINCIPLES		PAGE / RESPONSE
Human Rights		
1	Businesses should support and respect the protection of internationally proclaimed human rights; and	Sustainability Report 2023, page 09
2	make sure that they are not complicit in human rights abuses.	Sustainability Report 2023, page 09
Labour		
3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Sustainability Report 2023, pages 09 and 45
4	the elimination of all forms of forced and compulsory labour;	Sustainability Report 2023, page 09
5	the effective abolition of child labour; and	Sustainability Report 2023, page 09
6	the elimination of discrimination in respect of employment and occupation.	Sustainability Report 2023, pages 09, 50 and 51
Environment		
7	Businesses should support a precautionary approach to environmental challenges;	Sustainability Report 2023, pages 14, 16 - 21, 34 - 39
8	undertake initiatives to promote greater environmental responsibility; and	Sustainability Report 2023, pages 34 - 39
9	encourage the development and diffusion of environmentally friendly technologies.	Sustainability Report 2023, pages 16 - 21 and 43
Anti-Corruption		
10	Businesses should work against corruption in all its forms, including extortion and bribery.	Sustainability Report 2023, Pages 66 - 71 Annual Report 2023, pages 80, 81, 98-99, 101 and 108

Sustainability Accounting Standards Board (SASB)

AEROSPACE & DEFENSE | VERSION 2018-10

CODE	TOPIC / ACCOUNTING METRIC	PAGE / RESPONSE
Energy Management		
RT-AE-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Sustainability Report 2023, pages 4, 36 and 38
Hazardous Waste Management		
RT-AE-150a.1	Amount of hazardous waste generated, percentage recycled	ST Engineering is in the midst of consolidating this data globally. Refer to Sustainability Report 2023, page 39 on how we mange hazardous waste in our operations.
RT-AE-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	ST Engineering is in the midst of consolidating this data globally. Refer to Sustainability Report 2023, page 39 on how we mange effluents and spills in our operations.
Data Security		
RT-AE-230a.1	(1) Number of data breaches, (2) percentage involving confidential information	ST Engineering views this to be confidential.
RT-AE-230a.2	Description of approach to identifying and addressing data security risks in (1) company operations and (2) products	Refer to Sustainability Report 2023, pages 72 and 73 for ST Engineering's approach to identifying and addressing data security risks in company operations. ST Engineering views (2) to be confidential. Our products comply to the neecssary industry standards and project requirements required by our customers.
Product Safety		
RT-AE-250a.1	Number of recalls issued, total units recalled	ST Engineering considers this information to be confidential. Refer to Sustainability Report 2023, pages 40 - 42 for more information on how we manage product safety and quality within our operations.
RT-AE-250a.2	Number of counterfeit parts detected, percentage avoided	ST Engineering considers this information to be confidential. Refer to Sustainability Report 2023, pages 40 - 42 for more information on how we manage product safety and quality within our operations.
RT-AE-250a.3	Number of Airworthiness Directives received, total units affected	All Airworthiness Directives are publicly available. The most recent information concerning those directives can be found on the appropriate regulatory sites. Refer to Sustainability Report 2023, pages 40 - 42 for more information on how we manage product safety and quality within our operations.
RT-AE-250a.4	Total amount of monetary losses as a result of legal proceedings associated with product safety	ST Engineering considers this information to be confidential. Refer to Sustainability Report 2023, pages 40 - 42 for more information on how we manage product safety and quality within our operations.
Fuel Economy & Emissions in Use-phase		
RT-AE-410a.1	Revenue from alternative energy-related products	ST Engineering does not generate revenue from alternative energy-related products.
RT-AE-410a.2	Description of approach and discussion of strategy to address fuel economy and greenhouse gas (GHG) emissions of products	Sustainability Report 2023, pages 18, 21 and 40 - 43
Materials Sourcing		
RT-AE-440a.1	Description of the management of risks associated with the use of critical materials	Sustainability Report 2023, pages 30 - 33
Business Ethics		
RT-AE-510a.1	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	Sustainability Report 2023, pages 66 - 71
RT-AE-510a.2	Revenue from countries ranked in the "E" or "F" Band of Transparency International's Government Defence Anti-Corruption Index	ST Engineering does not report revenue breakdown by individual countries.
RT-AE-510a.3	Discussion of processes to manage business ethics risks throughout the value chain	Sustainability Report 2023, pages 66 - 71
Activity Metrics		
RT-AE-000.A	Production by reportable segment	Annual Report 2023, pages 144 - 147
RT-AE-000.B	Number of employees	Sustainability Report 2023, page 53

Task Force on Climate-related Financial Disclosures (TCFD)

For more information, please refer to the Group's sustainability webpage: https://www.stengg.com/en/sustainability/

TCFD RECOMMENDATIONS		PAGE / RESPONSE
Governance		
a	Describe the board's oversight of climate-related risks and opportunities	Sustainability Report 2023, page 17
b	Describe management's role in assessing and managing climate-related risks and opportunities	Sustainability Report 2023, page 17
Strategy		
a	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	**Opportunities** The Group identified short, medium and long-term opportunities in system solutions, innovative materials and products, which would contribute to key areas of reducing GHG emissions, solving urban and city challenges and promoting the circular economy. **Physical Risks** • In the short and medium term, the physical risk to our productive assets and our people is low. We have put in place a process to regularly review facilities against extreme climate and weather events. **Transition Risks** • We expect minimal impact on our business in the transition to a low carbon economy in the short and medium term. Refer to Sustainability Report 2023, pages 18-19 for more information.
b	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	Sustainability Report 2023, pages 18-19
c	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	To assess the resilience of the Group's strategy, we accounted for different climate-related scenarios relevant to our business, including a 2°C or lower scenario. Refer to Sustainability Report 2023, page 19 for more information.
Risk Management		
a	Describe the organisation's processes for identifying and assessing climate-related risks	Sustainability Report 2023, page 20
b	Describe the organisation's processes for managing climate-related risks	Sustainability Report 2023, page 20
c	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management	Sustainability Report 2023, page 20
Metrics and Targets		
a	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	**Climate-Related Opportunities** Metric: The Group set a monetary value target for our sustainability-linked revenue to drive our businesses to pursue products and solutions that would enable our customers' sustainability journeys, including reducing the impact of their operations to climate change. Target: We aim to increase our sustainability-linked revenue to more than $3b by 2026. This target was announced at the Group's 2021 Investor Day. Performance: The Group will share our performance against this target progressively in our upcoming sustainability and annual reports.
b	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	
c	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	**Carbon Emission Scopes 1, 2 and 3 and Related Risks** Metric: In the identification, evaluation and management of the Group's exposure to both physical and transition risks, we monitor global GHG emissions in $MtCO_2e$/year and how we as an international community are faring against a 1.5°C compatible pathway. To identify, evaluate and manage the Group's contribution to these risks, we measure and analyse both our GHG emissions intensity and absolute emissions in $MtCO_2e$/year. Targets & Performance: The Group has been making steady strides in our decarbonisation journey, since we started disclosing our GHG emissions since 2014. In 2021, we committed to halve our carbon emissions by 50% by 2030, with 2010 as a baseline. This is aligned with the aspiration of our major shareholder for the decarbonisation pathway of their portfolio. In 2023, we reduced our absolute GHG emissions by 29% compared to our 2010 baseline. **Other Climate-Related Risks** Refer to Sustainability Report 2023, page 21 for more information.

ST Engineering