



LION ROCK GROUP LIMITED

獅子山集團有限公司*

(Incorporated in Bermuda with limited liability)

(Stock code: 1127)

**ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022**

** for identification purpose only*

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I. ABOUT THIS REPORT

Lion Rock Group Limited (referred to as the “Company”) and its subsidiaries (collectively referred to as the “Group” or we) is engaged in the provision of printing services and book publishing. The Group’s customers in the printing services segment include international book publishers, trade, professional and educational conglomerates, print media companies and government departments, whilst the Group’s printed products comprise mainly of illustrated leisure and lifestyle books, educational textbooks, learning materials and children’s books. Our principal printing facilities are located in the People’s Republic of China (the “PRC”), Australia, Malaysia and Singapore. In the publishing division, our customers are comprised of co-edition publishing partners, retailers and bookstores.

Scope of the Report

This report summarises the Company’s management approach to Environmental, Social and Governance (“ESG”) and the Group’s corresponding performance within our operational boundaries for the period from 1 January 2022 to 31 December 2022 (the “year” or “2022”). Save for the inclusion of Griffin Press in Australia and Quarto Group with operations in the UK and US, there were no material changes to the reporting scope compared to the previous year. For information regarding corporate governance, please refer to the section “Corporate Governance Report” in the Group’s annual report for the year ended 31 December 2022.

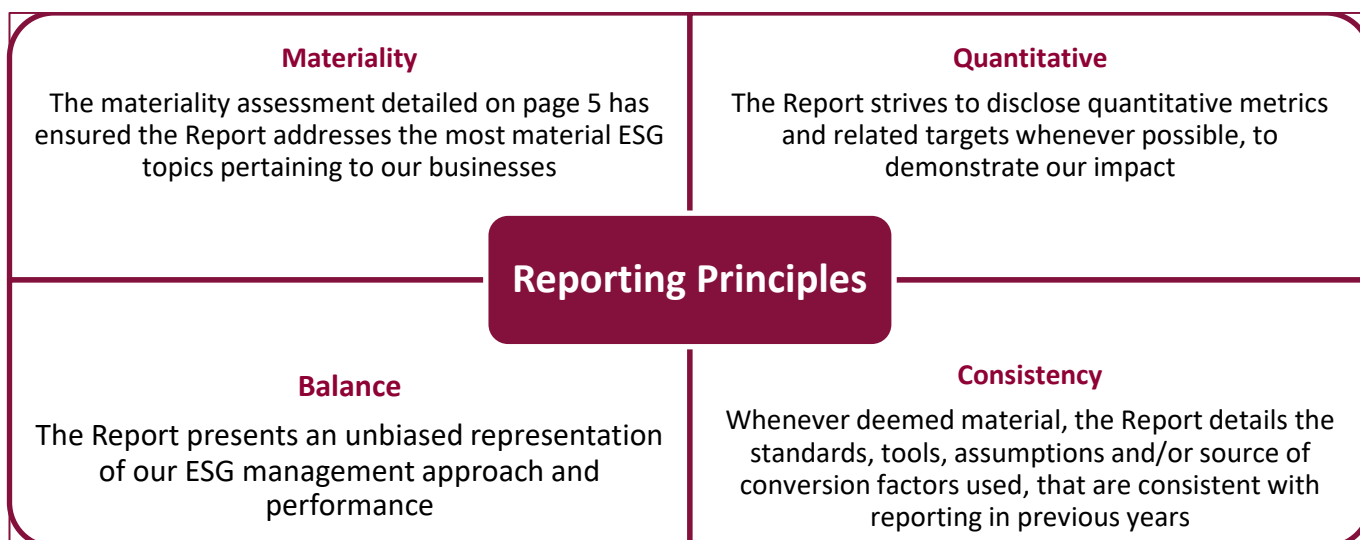
This report has been prepared in accordance with the provisions of the ESG Reporting Guidance under Appendix 27 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (“HKEx ESG Reporting Guide”). The Report has been reviewed and approved by the board of Directors of the Company (the “Board”).

Sources of Data

The information and data cited in this Report are all derived from internal documents, statistical and financial reports, as well as other ESG practices collected and summarised by the functional departments of the Group.

Reporting Principles

During the preparation process, the Group adheres to the fundamental reporting principles, namely, Materiality, Quantitative, Balance and Consistency, as outlined in the HKEx ESG Reporting Guide and detailed as follows:



Comments and Feedback

The Group values feedback from our stakeholders. If you have any queries, comments or suggestions regarding the Report or our ESG performance, please feel free to contact us through the following email: investor@lionrockgrouphk.com.

Board Management Approach

The Board acknowledges its overall responsibility for overseeing the Group’s ESG objectives, strategies and management approach and sets the process to evaluate, prioritise and manage material ESG issues. The Board regularly assesses and reviews the Group’s ESG risks and opportunities, formulates its strategies and ensures the establishment and maintenance of effective control systems on the environmental, social and governance aspects of our business and operations. The Board discusses, reviews and evaluates all relevant ESG issues and the progress towards the targets at least once a year. The Group has established an ESG Working Group which consists of members from senior and middle management to assist and advise the Board on the development and implementation of ESG related strategies, policies, practices, performance and targets. The ESG Working Group strives to guide and monitor various business functions to effectively implement the measures to achieve our ESG strategies and targets.

II. MESSAGE FROM THE MANAGEMENT

Dear valued stakeholders,

In compliance with the ESG Reporting Guide and the Corporate Governance Code (the “CG Code”), the Board has taken up overall responsibility for formulating the Group’s ESG strategy and ensuring that appropriate and effective ESG-related risk management and internal control systems are in place. Key management personnel are responsible for executing the policies and evaluating the performance in different aspects such as environmental, occupational health and safety, labour standards and product responsibilities in the ESG aspects. We encourage all our staff in every department of our Group to consider their role and job through an ESG lens so that we can operate mindfully in a more sustainable manner. Our staff of 1,790 employees are to be congratulated for all their efforts in supporting our policies and measures in the daily operation to help realise the Group’s policies and strategies on environmental, social and governance issues.

The Group strives to create value for our shareholders and seeks to continuously communicate with our stakeholders to understand their concerns and fulfil their expectations. We have communicated closely with our stakeholders to collect their views on a broad range of matters including our business, working relationships and the sustainability issues of the Group. Their opinions provide management with valuable insight on our own performance, areas of improvement and focus and give us a better understanding not only of our stakeholders’ own objectives and requirements but also how we as a Group can build a better relationship with them. Moreover such interactions help us to understand how we perform from an ESG perspective and enable us to assess the importance of different ESG issues so that we can prioritise them. With reference to stakeholders’ opinions, the Board regularly reviews the Group’s sustainability strategies and makes adjustments to try to match stakeholders’ expectations with our business model.

During the year, we have continued on the long and challenging journey as a responsible corporate citizen to operate in a sustainable and environmentally aware manner. The Board proactively monitors our progress through its analysis of the Group’s ESG data and performance. Going forward, the Group will continue to evaluate any potential for improvement and enhance our sustainability strategy accordingly. We believe that our efforts to raise employee’s awareness of ESG, drive behavioural change and facilitate the incorporation of ESG initiatives into the Group’s operations is a financially and environmentally winning strategy.

On behalf of the Board of Directors, I would like to express my gratitude to my fellow Directors, the management team, all employees and stakeholders for their contributions to the Group's sustainable development.

Yours faithfully,
Yeung Ka Sing
Chairman

III. APPROACH TO SUSTAINABILITY

Our Commitments

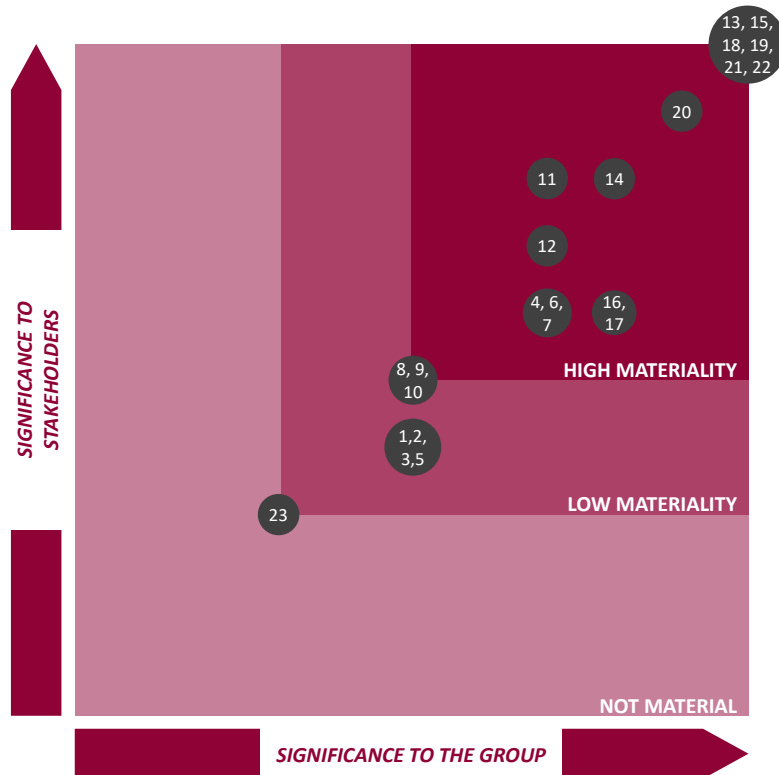
The Group is committed to delivering the best possible products and services in the global print and publishing industry. We believe that we can achieve this by understanding our customers and suppliers and through continued innovation and focus on delivering high quality printed products which are manufactured safely and with respect for our employees and finite natural resources. While committed also to our shareholders, the Group strives to reduce any negative impacts on the environment, our workforce, business partners and the community at large.

Materiality Assessment

As a Group, we are committed to conducting our business, in particular the production and supply of printed products, in a responsible and sustainable manner. In order to ensure that we are able to meet our commitments, and to provide direction and framework for the Group as a whole, we have sought to identify the environmental, social and governance issues which are most material to our business. Acknowledging that sustainability management and identification of material issues is a dynamic process that needs to keep pace with the ever-changing business environment, the Group regularly reviews the list of sustainability issues that are relevant to our business and stakeholders.

The Group adopts a three-step process of identification, prioritisation and validation to ensure sustainability issues are being managed and reported in accordance with their materiality. First, we conduct an analysis of the ESG issues to identify the realm of risks and issues which not only impact our Group but also how our Group impacts such issues. Senior management then considers and analyses such risks to prioritise the issues which are material to us and are scored by metrics including among others, likelihood and magnitude of impact. Finally, the Board conducts its own review and analysis of the materiality of ESG risks and concerns and the findings are validated through the presentation of this Report.

The results of the Group's assessment of the materiality assessment are presented as follows:



ENVIRONMENTAL

- | | |
|---|---|
| <p>Emissions</p> <ol style="list-style-type: none"> 1. Air emissions 2. Effluent discharges 3. Greenhouse gas emissions 4. Hazardous waste management 5. Non-hazardous waste management | <p>Use of Resources</p> <ol style="list-style-type: none"> 6. Energy consumption 7. Water consumption 8. Packaging material consumption |
| | <p>The Environment & Natural Resources</p> <ol style="list-style-type: none"> 9. Environmental risk management |
| | <p>Climate Change</p> <ol style="list-style-type: none"> 10. Climate Change |

SOCIAL

- | | |
|--|--|
| <p>Employment</p> <ol style="list-style-type: none"> 11. Employment and remuneration policies 12. Equal opportunity and diversity | <p>Product & Service Responsibility</p> <ol style="list-style-type: none"> 18. Quality and safety of the products/services 19. Customer satisfaction 20. Personal data privacy protection 21. Protection of intellectual property rights, ethical marketing communication and product labelling |
| <p>Health & Safety</p> <ol style="list-style-type: none"> 13. Occupational health and safety | |
| <p>Development & Training</p> <ol style="list-style-type: none"> 14. Employment development | <p>Anti-corruption</p> <ol style="list-style-type: none"> 22. Anti-corruption and anti-competitive practices |
| <p>Labour Standards</p> <ol style="list-style-type: none"> 15. Anti-child and anti-forced labour | <p>Community Investment</p> <ol style="list-style-type: none"> 23. Community Investment |
| <p>Supply Chain Management</p> <ol style="list-style-type: none"> 16. Supply chain management 17. Sustainable procurement | |

Stakeholder Engagement

Our stakeholders are key to the success of our business and provide valuable insights into how we should and need to operate as an ambitious but responsible corporate citizen. The Group seeks to better understand the perspectives and expectations of our stakeholders on ESG issues so that we can refine our management policies and approaches to ESG matters. The Group communicates regularly with and gathers feedback from stakeholders through various channels to understand their expectations, build and maintain a good relationship, and identify the key aspects of our operations which are relevant to stakeholders.

The table below outlines the Group’s various communication channels for our network of stakeholders:

Stakeholders	Key communications	Expectations and concerns
Shareholders and investors	<ul style="list-style-type: none"> • General meetings • Regular corporate publications including financial ESG reports • Circulars & announcements • Direct enquiries 	<ul style="list-style-type: none"> • Business strategies & sustainability • Financial performance • Corporate governance
Employees	<ul style="list-style-type: none"> • Performance appraisals • Training sessions • Social media • Staff handbook 	<ul style="list-style-type: none"> • Training and development • Employee remuneration & welfare • Occupational health & safety • Equal opportunities
Customers	<ul style="list-style-type: none"> • Business meetings • Complaints and feedback channels • Social media • Corporate website • Emails 	<ul style="list-style-type: none"> • Service quality & reliability • Client data security • Business ethics
Suppliers	<ul style="list-style-type: none"> • Business meetings • Supplier assessment • Continuous direct communications • Emails 	<ul style="list-style-type: none"> • Fair competition • Business ethics
Government & regulatory	<ul style="list-style-type: none"> • Statutory filings & notifications • Regulatory or voluntary disclosures 	<ul style="list-style-type: none"> • Compliance with laws & regulations • Business strategies & sustainability • Environmental protection
Community	<ul style="list-style-type: none"> • Community activities • Corporate donations • Corporate website • Social media 	<ul style="list-style-type: none"> • Fair employment opportunities • Environmental protection

IV. ENVIRONMENTAL

The Group considers itself to be a good corporate citizen and recognises its responsibility to operate its print and publishing business whilst limiting its impact on the environment. We have adopted environmentally responsible manufacturing policies across our production facilities in the PRC, Singapore, Malaysia and Australia, which seek to ensure that printed products are manufactured in a manner which minimises our environmental footprint.

The Group adopts the Environmental Management Systems (EMS) at its facilities to reduce environmental impacts and increase operating efficiencies. The EMS ensures strict environmental compliance of our policies and continual improvement towards cleaner and more resource-efficient practices. Periodic reviews of the system are conducted to ensure its effectiveness. The facilities in the PRC and main site in Australia are certified to the EMS requirements of the ISO14001:2015 standards – incorporated into the ISO Integrated Management Systems (IMS). The clean production management working group established in 1010 Printing takes a proactive lead towards industry best practices through the exploration of clean production technology, as well as the formulation and improvement of the production processes.

Aspect A1: Emissions and Wastes Generated

The Group seeks to ensure that all products manufactured at the Group's production facilities conform to environmental safety standards whilst meeting customers' requirements. We conduct regular reviews of the regulatory requirements and our production processes to ensure that our operations are fully compliant with every material environmental requirement as well as to achieve optimal waste reduction and energy conservation. During the year, the Group was not aware of any non-compliance with the relevant laws and regulations that has a significant impact on the Group relating to air and GHG emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.

Air emissions

The Group's main sources of air emissions are (i) gas emissions from consumption of fuels from motor vehicles for the transportation of products and personnel, forklifts for intra-plant transportation and other fuel uses; (ii) emissions related to electricity generation; and (iii) limited amounts of gases from our production processes. In respect of the latter, the production processes at our PRC facility generate limited emissions such as VOCs, benzene, toluene, xylene, and non-methane hydrocarbons, which are treated by our waste gas treatment equipment.

The following table sets out the Group’s principal air pollutant emissions during the year:

Air emissions	Unit	2022	2021	YOY change
Nitrogen Oxides (NOx)	kg	1,744.6	1,426.8	22%
Sulphur Oxides (SOx)	kg	0.6	0.6	(2%)
Particulate Matter (PM)	kg	15.3	17.7	(14%)

The major applicable laws and regulations related to the control of air emissions include, but are not limited to, the PRC Law on Air Pollution Control, Environmental Protection Acts of Australia, Air Pollution Regulations of Singapore, and Environmental Quality Act in Malaysia. Emission licenses are acquired and renewed with periodic exhaust gas monitoring. Qualified third-party testings are also carried out at least once a year, which ensures major problems with processes are rectified.

In addition to ensuring that air emission levels meet the statutory requirements, the Group has also committed to reducing air pollutants through the improved management of the Group’s fleet of vehicles, which are the primary source of such emissions. For example, in the PRC and Australia, company fleets have been replaced with cleaner and more efficient models; warehouse forklifts endeavour to use cleaner energy and we conduct regular maintenance on all our vehicles to ensure they are operating at optimal performance for fuel consumption and emissions reduction.

Greenhouse gas (GHG) emissions

The carbon footprint of the Group is primarily generated through its usage of electricity and is largely measured under our Scope II emissions. During the year, the Group generated a total of 20,525 tonnes of carbon dioxide equivalent (tCO₂e) of greenhouse gases (Scope I and II), resulting in a carbon intensity of 8.2 tCO₂e per HKD million revenue generated.

The following table sets out the Group's greenhouse gas emissions during the year:

Greenhouse gas emissions ⁽¹⁾	Unit	2022	2021	YOY change	
Scope I (Direct Emissions)	tCO ₂ e	581.8	763.7 ⁽³⁾	(24%)	
Stationary combustion	tCO ₂ e	382.0	585.1	(35%)	
Mobile combustion	tCO ₂ e	202.2	181.0 ⁽³⁾	12%	
GHG removal from trees on premises	tCO ₂ e	(2.4)	(2.4)	0%	
Scope II (Indirect Emissions)	tCO ₂ e	19,943.2	20,295.3	(2%)	
Electricity purchased	tCO ₂ e	19,943.2	20,295.3	(2%)	
Scope III (Other Indirect Emissions)⁽²⁾	tCO ₂ e	207.0	17.0	1,118%	
Business air travels	tCO ₂ e	203.8	13.6	1,399%	
Paper waste disposed at landfills	tCO ₂ e	3.2	3.4	(6%)	
Total	(Scope I and II)	tCO ₂ e	20,525.3	21,059.0 ⁽³⁾	(3%)
	(Scope I, II and III)	tCO ₂ e	20,732.0	21,076.0 ⁽³⁾	(2%)
Carbon intensity	(Scope I and II)	tCO ₂ e per HKD	8.2	12.1	(32%)
	(Scope I, II and III)	million revenue	8.3	12.1	(31%)

Note (1): Boundary has been set using GHG Protocol's financial control approach and GHG emission data is based on, but not limited to, "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standards" issued by the World Resources Institute and the World Business Council for Sustainable Development, "How to prepare an ESG Report – Appendix 2: Reporting Guidance on Environmental KPIs" issued by the HKEX, Hong Kong Electric Sustainability Report 2021 and CLP Sustainability Report 2021.

Note (2): Scope III emissions from production materials are excluded, as there are limitations in obtaining an accurate representation. Scope III emissions from fresh water and sewage processing are also excluded, as they are considered immaterial.

Note (3): Restated from 2021 to include an additional 76 tCO₂e of Scope I emissions from mobile consumption

The major sources of the Group's greenhouse gas (GHG) emissions are associated with energy consumption, which in our case is mainly purchased electricity used in our daily operations. While we were successful during the year in reducing our carbon intensity and Scope I and II emissions, we continue to seek progress and will further consider different measures to minimise GHG emissions including the following:

- Scope I efforts/initiatives: We make every effort to implement the principles of a circular economy, by reducing waste; reusing materials; and maximise recycling opportunities. In particular, we seek to recycle as much material as possible so as to reduce GHG release from landfill decomposition. Moreover, we make conscious efforts to conduct regular inspection of all machinery and equipment to ensure that they are operating at optimal levels which prevents wastage and inefficiency which may lead to higher GHG emissions. Where applicable, we endeavour to upgrade our facilities and equipment utilising the most sustainable or energy efficient practices, machinery and equipment.

- Scope II effort/initiatives: Given that we operate large offset printing presses which consume considerable amounts of electricity, the ability to reduce electricity consumption can be challenging. However, we seek to reduce our Scope II impact by increasing efficiency where we can. We encourage the reduction of our GHG emissions through the monitoring of electricity consumption and where possible, lowering of our energy usage from major areas including air conditioning and lighting systems.
- Scope III efforts/initiatives: The Group's largest calculable Scope III emissions are generated from business travel. With business travel restricted in 2020 and 2021 due to COVID, the lifting of travel restrictions and COVID measures in 2022 led to the resumption of near normal levels of business travel. Whilst we have been successful in conducting business through alternative means (i.e. video conference), given the global reach of our business, with customers and suppliers located around the world, the resumption of business travel was to be expected. However, to reduce emissions, to the best extent possible we seek to limit travel and when we do, we centralise our booking and select direct flights to minimise carbon impacts.

Effluent discharges

As part of our production, we utilise wash water in the plate-production process which generates effluent discharges requiring treatment and/or disposal. At each facility, we carefully monitor the concentration of water pollutants to ensure that such discharges are handled properly and in accordance with all regulatory requirements. Where possible, wastewater is treated in-house to meet the local effluent discharge quality standards before being released into municipal sewage pipes. Water monitoring systems are established in designated discharge points to monitor the key effluent quality parameters and ensure the requirements are met. Where in-house treatment is not possible, the Group typically engages third party professionals to dispose of such wastewater. In addition to such handling of effluent discharges, the Group seeks to adopt measures to improve production equipment, enhance the recycling efficiency of resources, and reduce the generation and discharge of wastewater. The major applicable laws and regulations related to the control of effluent discharges include, but are not limited to, the PRC Law on Water Pollution Control, Environmental Protection Acts of Australia, Environmental Protection and Management (Trade Effluent) Regulations of Singapore, and Environmental Quality Act in Malaysia.

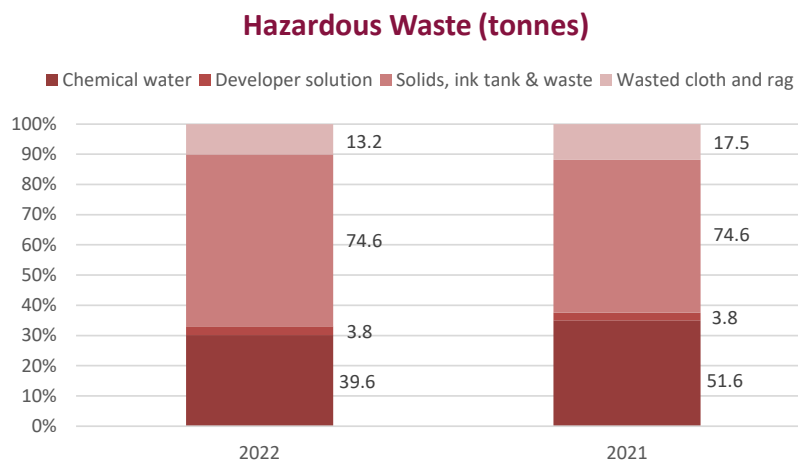
Noise emissions

Noise emissions are mainly generated from the operation of machineries during our production processes. To the extent possible, we remove or attenuate hazardous noise at source by careful selection of production machinery and effective implementation of good maintenance schedules. At the same time, barriers and sound-absorbing materials, such as engine enclosures, sealing gaps and windshields, are implemented to interrupt transmission of noise, whilst employees use personal protective equipment to protect against possible hearing damage when necessary. To further manage noise pollution, we adhere to relevant regulations stipulating operational hours together with regular monitoring of noise emission levels, which enables us to operate safely and in compliance with regulatory levels.

The major applicable laws and regulations related to the control of noise emissions include, but are not limited to, the PRC Law on Prevention and Control of Environmental Noise Pollution, Environmental Protection Acts of Australia, Workplace Safety and Health (Noise) Regulations 2011 of Singapore, and Guidelines for Environmental Noise Limit and Control in Malaysia.

Hazardous waste management

During the year, the Group generated a total of 131.2 tonnes of hazardous waste, resulting in a hazardous waste intensity of 0.05 tonnes per HKD million revenue generated.



The following table sets out the Group's hazardous waste emissions during the year:

Hazardous waste	Unit	2022	2021	YOY Change
Chemical water	tonne	39.6	51.6	(23%)
Developer solution	tonne	3.8	3.8	0%
Solids, ink tank and waste	tonne	74.6	74.6	0%
Waste cloth and rag	tonne	13.3	17.5	(24%)
Total hazardous waste generated	tonne	131.2	147.5	(11%)
Hazardous waste intensity	tonne per HKD million revenue	0.05	0.09	(42%)

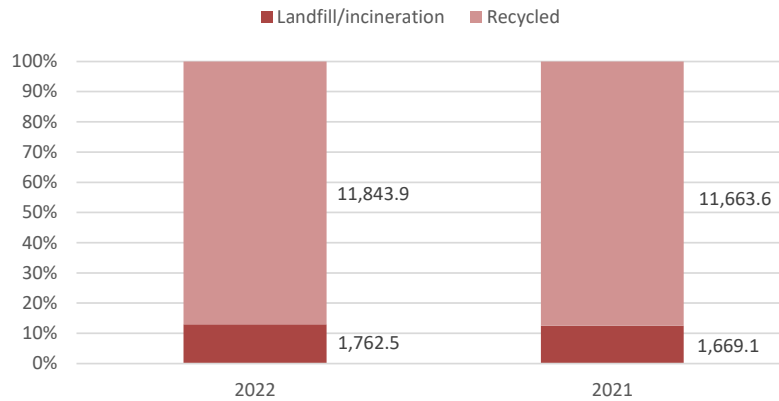
Through our production process, we generate certain hazardous waste materials, which includes, developer solutions, ink tanks, waste cloth, chemical water and solids, etc. All collected hazardous waste, being mainly production chemicals, is transported and treated by authorised waste disposal contractors. The Group has established clear protocols at each relevant stage to ensure that all hazardous materials are handled and stored in a safe and secure manner until collection; to prevent contaminations; and to ensure prompt action in the event of emergencies or suspected contamination.

The major applicable laws and regulations related to the control of hazardous waste include, but are not limited to, the PRC Law on Prevention and Control of Environmental Pollution from Solid Wastes, Environmental Protection Acts of Australia, Environmental Protection and Management (Hazardous Substances) Regulations of Singapore, and Environmental Quality (Scheduled Wastes) Regulations in Malaysia. Although the Group has been successful in largely reducing its hazardous waste emissions for the year, we shall continue to conduct regular reviews of how we can further reduce our emissions. We will continue to review the effectiveness of the existing initiatives whilst considering alternative materials, equipment and production techniques in an effort to reduce the production of hazardous by products and maintain the pathway of hazardous waste reduction with a long-term perspective as a directional target.

Non-hazardous waste management

During the year, the Group generated a total of 13,606.4 tonnes of non-hazardous waste, resulting in a non-hazardous waste intensity of 5.5 tonnes per HKD million revenue generated. Of the 11,843.9 tonnes of material for recycling which we collected, 11,677.7 tonnes (99%) was paper. Metal waste from production processes included zinc, aluminium and iron of which 294.6 tonnes of aluminium was recycled.

Non-hazardous Waste (tonnes)



The following table sets out the Group's non-hazardous waste emissions during the year:

Non-hazardous waste	Unit	2022	2021	YOY Change
Landfill/incineration	tonne	1,762.5	1,669.1	6%
Recycled	tonne	11,843.9	11,663.6	2%
Total non-hazardous waste generated	tonne	13,606.4	13,332.6	2%
Non-hazardous waste intensity	tonne per HKD million revenue	5.45	7.76	(29%)

Non-hazardous waste typically generated by the Group's facilities includes paper, aluminium, cardboard and domestic waste. The Group's primary objective is to reduce waste generated as reduction, more often than not, has a lower environmental impact than reusing or recycling. Where reduction is not possible, we seek to recycle and where recycling is unavailable, non-hazardous waste is disposed of at landfills and carried out by qualified waste disposal contractors. The control and management of non-hazardous waste is subject to various laws and regulations including, but not limited to, the PRC Law on Prevention and Control of Environmental Pollution from Solid Wastes, Environmental Protection Acts of Australia, and Solid Waste and Public Cleansing Management (Licensing) Regulation of Malaysia.

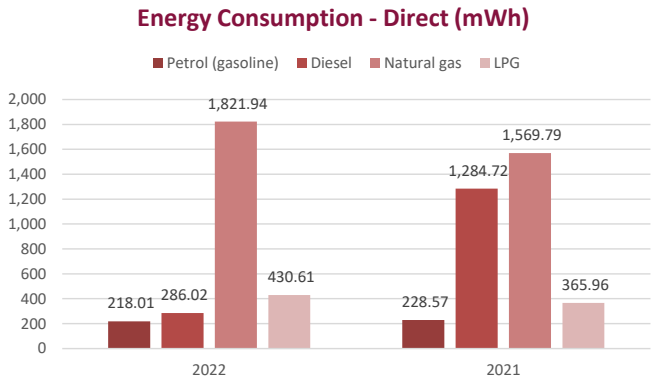
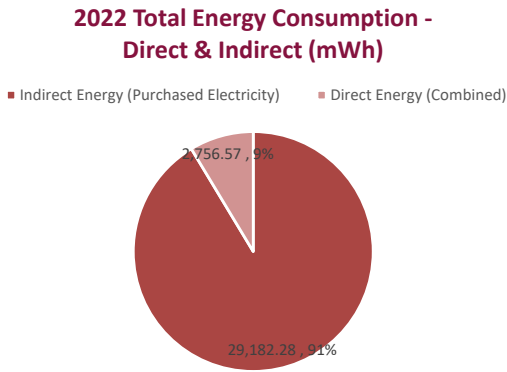
While we found success during the year in increasing our recycling of waste materials slightly and reducing our non-hazardous waste intensity, we continue to push for improvements in the reduction of our non-hazardous waste through effective management of our supply chains. By monitoring inventory levels and engaging with our customers on production pipelines, not only can we avoid overstocking but we can also offer sustainable solutions for our customers including recycled paper end products; paperless billing; web-printing and digital printing services which reduces paper wastage.

Aspect A2: Use of Resources

The Group strives to improve the efficiency in its use of resources. In particular, the Group seeks to consume energy as efficiently and effectively as possible without compromising its production goals and standards. Through careful management of its energy consumption, the Group aims to strike a balance between continued growth and responsible and environmentally friendly utilisation of resources, including energy, water and packaging materials. During the year, the Group was not aware of any non-compliance with the relevant laws and regulations that has a significant impact on the Group relating to the consumption of energy, water or packaging material.

Energy

While the Group consumes electricity for its daily business operations, we are committed to reducing energy consumption. Although we rely to some extent on fossil fuels to power vehicles and certain equipment, we mostly depend on purchased electricity for our operations, accounting for 91% of total energy consumption in 2022. During the year, the Group consumed 2,756.6 mWh and 29,182.3 mWh of direct and indirect energy respectively, resulting in a total energy intensity of 12.8 mWh per HKD million revenue generated.



The following table sets out the Group's energy consumption during the year:

Energy Consumption	Unit	2022	2021	YOY Change
Direct	mWh	2,756.6	3,449.0	(20%)
Natural gas	mWh	1,821.9	1,569.8	16%
Petrol (gasoline)	mWh	218.0	228.5	(5%)
Diesel	mWh	286.0	1,284.7	(78%)
LPG	mWh	430.6	366.0	18%
Indirect	mWh	29,182.3	28,726.5	2%
Electricity purchased	mWh	29,182.3	28,726.5 ⁽¹⁾	2%
Total (Direct and Indirect)	mWh	31,938.9	35,345.5	(10%)
Energy intensity	mWh per HKD million revenue	12.8	20.3	(37%)

Note (1): restated from 31,896.5 mWh in FY2021

The major applicable laws and regulations related to energy use include, but are not limited to, the PRC Law on Energy Conservation. As noted earlier, given that our business relies on the operation of large offset printing presses which consume considerable amounts of electricity, the ability to reduce energy consumption can be challenging. Although we purchased slightly more electricity during the year than in 2021, we were successful in reducing our overall direct energy consumption and able to reduce our energy intensity. We continue to seek to reduce our fuel and electricity consumption through the following initiatives.

- *Improved energy consumption planning:* Our production facility in China typically formulates a consumption quota which enables the team to better plan and develop energy savings initiatives for its operations.
- *Equipment upgrades / energy saving installations:* We continue to identify areas where we can reduce electricity consumption across our business lines. For example, in the PRC we were able to reduce our electricity consumption by approximately 5.1 mWh, as well as reduce maintenance costs by replacing old vacuum pumps with a single centralised vacuum air supply system. We also seek to install energy-efficient LED lighting and cooling systems in production areas and replace computer equipment, servers, and monitors with energy-efficient models.
- *Energy conservation:* we strive to lower our energy consumption from the major areas which include air conditioning, lift and lighting systems and utilising as much natural light at our facilities as possible.

Water resources

During the year, the Group consumed a total of 158,313.4 cubic metres of water, resulting in a water intensity of 63.4 cubic metres per HKD million revenue generated.

Water consumption	Unit	2022	2021	YOY change
Total water consumption	cubic metre	158,313.4	161,434.1	(2%)
Water consumption intensity	cubic metre per HKD million in revenue	63.4	92.9	(32%)

The Group utilises water in its production for processes such as plate-washing and general amenities. The Group typically draws water from municipal water supplies, while in Australia we also rely on surface water and groundwater. We have not encountered any issues in sourcing water that is fit for purpose. However, we consider water to be a resource which should not be taken for granted and are committed to conserving water resources in order to ensure a sustainable future. The Group proactively implements water-saving measures. Among other actions, we try to recycle at all opportunities through the use of plate developer filtration systems which generates reusable output water as well as fountain solution filter system that extends the lifespan of the process solutions. All water facilities and equipment are well-maintained and regular inspections are also conducted to prevent water leakage. The Group records and monitors its water consumption data on an annual basis and analysed for abnormal consumption levels.

The major applicable laws and regulations related to water use include, but are not limited to, the Water Law of PRC and Environmental Protection Acts of Australia.

Packaging material

During the year, a total of 3,468.1 tonnes of packaging materials were consumed for finished products, resulting in an intensity of 1.4 tonnes per HKD million revenues generated.

Packaging consumption	Unit	2022	2021	YOY change
Total packaging consumption	tonne	3,468.1	3,642.6	(5%)
Packaging consumption intensity	Tonne per HKD million revenue	1.4	2.1	(33%)

The Group generally packages finished products for shipment using standard packaging materials such as carton boxes and wrapping film. The Group is in the early design phase of considering more sustainable approaches to product packaging, while adhering to the needs of the customers. In the PRC facility, we aim to further reduce consumption by establishing monthly target quotas for major types of packaging materials.

Aspect A3: The Environment and Natural Resources

The Group is committed to environmental protection. As responsible members of the print production and publishing communities, we are focused on ensuring that we balance our commitment to our customers as well as to the environment and in particular our use of paper. For our 1010 Printing, C.O.S and Papercraft subsidiaries, we have obtained FSC-COC certification by the Forest Stewardship Council (FSC), which ensures that our products come from responsibly managed forests and that the supply chain from forests to end-user is chain of custody certified. To promote broader environmental awareness, in Australia, new staff induction trainings at some of our locations include an eco-awareness component. By increasing education among our staff, we hope to encourage greater awareness of the “double materiality” of the relationship between our business and operations and the natural environment. Management believes that every effort contributes on the journey to a low carbon sustainable economy and we are committed to considering all viable opportunities which enable us to reduce our footprint and impact on the environment.

Aspect A4: Climate Change

Management recognises that climate change is one of our most urgent and pressing global challenges. Acute physical risk can arise from extreme weather conditions such as flooding and storms and chronic while physical risks can arise from a failure to restrain temperature rise and transition risks can impact business and operations due to changes in environmental regulations or customer preferences. As part of the Group’s assessment of its climate change risks, the Group has considered the following climate-related physical and transition risks which are most relevant to the Group:

Physical Risks	Policy/Legal Risks
<p>The Group's business plans and cost for insurance are sensitive to extreme weather or any environmental changes. Extreme weather events may result in direct damage to constructions and company's assets, as well as affecting the health of outdoor employees. The Group may also experience disruptions to its operations, as well as indirect impacts from the supply chain disruptions if our suppliers also suffer from extreme weather conditions. In any of these scenarios, we would expect there to be considerable financial impacts.</p> <p>The Group is seeking to increase climate resilience so that the influences to operations can be significantly reduced. After our assessment, the risk of exposure to the extreme weather that cause the operational and supply chain disruptions is relatively low.</p>	<p>The transition into a low-carbon economy may cause extra legal responsibilities, investment for operation and trainings for the Group. This may increase our operating costs by imposing additional expenditures such as increased investment more energy efficient business models. Failure to make such investments may have a negative impact on our business due to the possible regulatory penalties for such failings and/or reduced demand for our products and services from customers who are sensitive to climate issues or are themselves obligated to adopt such policies in their transitions.</p>

To minimise the possible threats and risks of climate change to the Group's business and operations, management integrates climate change risks and opportunities within our business strategies. The ESG Working Group continues to conduct assessments into climate-related risks and opportunities that may have impacts to our businesses. Our Group will conduct enterprise risk assessment at least once a year to cover the current and potential risks faced by our Group insist business, including, but not limited to the risks arising from the ESG aspects strategic risk around disruptive forces such as climate change. The Group has formulated emergency plans to deal with extreme weather events, which aims to reduce the disruption and loss due to suspension of operations.

The Group will continue to review the impact of climate change on its operation on a regular basis and will formulate measures in response to the different risks to the Group. We will also continue to explore innovative options and solutions that will help us to adapt and contribute to the mitigation of climate change and achieve sustainable operations in the future.

V. SOCIAL

The Group's strong sense of social responsibility places human resources, customers and community engagement at its core. We aim to be a virtuous employer, trusted business partner and valuable member of our community. Through positive communication and focus on developing mutual trust with our employees and stakeholders, we are confident that we can fulfil our ethical duties and corporate social responsibilities. To enhance this, we have prioritised the health and safety of our team and have sought to maintain the highest standards of business ethics, operational practices, supply chain responsibility and engagement with the community.

Aspect B1: Employment

As at 31 December 2022, the Group had a total global workforce of 1,790 employees. The following tables set out detail information in respect of the breakdown by gender, employment type, employment category, age and location.

	2022		2021	
	Number	Percentage	Number	Percentage
Gender Distribution				
Male	963	54%	825	61%
Female	827	46%	535	39%
By Age Group Distribution				
<30	319	18%	234	17%
30-39	475	27%	418	31%
40-49	521	29%	386	28%
50-59	367	21%	252	19%
>=60	108	6%	70	5%
By Employment Type				
Full time	1,683	94%	1,303	96%
Part time	36	2%	11	1%
Casual	71	4%	46	3%
By Employment Category				
Executive	60	3%	54	4%
Operational	1,288	72%	1,045	77%
Administrative	442	25%	261	19%

	2022		2021	
	Number	Percentage	Number	Percentage
By Geographical Region				
Australia	391	22%	319	23%
Hong Kong	103	6%	109	8%
Italy	1	0%	0	0%
Malaysia	133	7%	106	8%
PRC	795	44%	729	54%
Singapore	39	2%	84	6%
United Kingdom	192	11%	2	0%
United States	136	8%	11	1%

During the year, the Group's employee turnover rate was approximately 47%. The table below presents the turnover rate by gender, age and geographical region.

Turnover rate	Unit	2022	2021
Group	%	47.2	44.3
By Gender			
Male	%	56.8	42.1
Female	%	35.9	47.9
By Geographical Region			
Australia	%	21.0	18.5
Hong Kong	%	26.2	19.3
Italy	%	0	0
Malaysia	%	36.1	30.2
PRC	%	72.8	61.0
Singapore	%	123.1	53.6
United Kingdom	%	12.5	0
United States	%	26.5	9.1
By Age Group			
<30	%	114.4	109.0
30-39	%	42.9	38.5
40-49	%	26.1	31.9
50-59	%	28.9	21.0
>=60	%	30.6	15.7

The Group considers human resources to be one of its most valuable assets. We believe that the enhancement of employee value is a key contributor to the overall enhancement of the Group's long-term development, performance and value. As such, the Group seeks to provide all our employees with a highly transparent recruitment process, safe working environment, competitive remuneration packages, fair promotion opportunities and appropriate training and development opportunities. The Group's human resources policies strictly comply with all major applicable laws and regulations including, but are not limited to, the Labour Law of the PRC, National Employment Standards and Fair Work Acts of Australia, Employment Act of Singapore, Employment Act in Malaysia as well as Hong Kong Employment Ordinance. During the year, the Group has not encountered any incidents of non-compliance with all major applicable laws and regulations related to employment at all operating regions.

Remuneration and benefits

The Group adopts a remuneration policy with reference to market rates and the qualifications and experience of employees. Employees are entitled to basic salaries, statutory holidays, various types of paid leave (annual, compensation, marriage, maternity, paternity, sick, etc.), medical allowance, education subsidies, transportation allowance, and staff discount. The Group may also offer discretionary bonuses and other incentivised rewards, based on the performance of individual employee in appreciation for their efforts or to align their motives with the development of the Group. We have also adopted a share option scheme which enables us to further reward and incentivise our staff for their contributions to the Group. During the year we granted 1,716,000 award shares under the share award scheme. We conduct regular reviews of our compensation policies and systems to ensure that employees' remuneration is in line with the commensurate market levels and are fairly and equally paid.

Recruitment, promotion and dismissal

The Group adopts a fair recruitment policy to offer open and equal opportunities, free of gender, sexual orientation, race, religious, political, family status and age discrimination, with a view to recruiting the best possible talents. Once employed, we offer employees opportunities to advance within the organisation and the promotion and remuneration of the Group's employees are subject to periodic review according to staff performance. In respect of dismissals, the Group has formal procedures and arrangements to ensure a smooth and fair process and opportunity for resigning employees to express opinions on the Group. Termination of employment contract are made in writing by either party. Employees may be summarily dismissed without advance notice or payment in lieu of notice for serious misconduct in accordance with relevant laws.

Anti-discrimination and equal opportunity

The Group endeavours to promote an equal opportunities and non-discriminatory environment across our entire business. We encourage and promote tolerance and a harmonious and respectful workplace where the rights, views and welfare of all our employees are respected. The values of equal opportunities and equality are consistently maintained when considering candidates and employees for recruitment and promotion, regardless of gender, nationality, marital status, disability, religious belief, etc. The Group does not tolerate any workplace harassment and discrimination and has established policies for staff to report such incidents. Cases will be investigated and confidentially by the relevant human resources department and in accordance with the guidelines for handling complaints.

Employee communications

The Group seeks to provide its employees with open and effective communication channels. Depending upon the region, local managements endeavour to better understand the opinions and concerns of our staff. The Group adopts an open attitude and encourages employees to voice out their opinions, advice and suggestions with a view to offering a better working environment for the employees.

Aspect B2: Workplace Health and Safety

During the year, the Group again recorded no cases of work-related fatalities and 28 cases of injuries. The total lost days due to work injury amounted to 912 days. The Group also held internal safety-related trainings which alerted staff to the latest regulatory updates as well as safe operational procedures.

Workplace safety	Unit	2022	2021	YOY change
Number of work-related fatalities	Cases	0	0	0%
Lost days due to work injuries	Days	912	1,288	(29%)
Number of work-related injuries	Cases	28	41	(32%)

We are committed to providing a safe and secure working environment free from health and safety hazards for our employees. To eliminate occupational risks for our employees, safety management systems for various facilities have been established which covers procedures and emergency response plans for identified risks to eliminate potential safety hazards in time. The safety committees at relevant facilities which oversee such systems, meet periodically to ensure that the latest regulations, legislation and industry practices are identified and incorporated into the safety management systems. In addition, we regularly review the operations of our safety management systems to assess the effectiveness of the preventive measures and whether corrective measures are being properly executed. The Group strictly complies with all applicable laws and regulations in relation to occupational health and safety, including but not limited to the PRC Law on Work Safety, Work Health and Safety Acts of Australia, Workplace Safety and Health Act of Singapore and the Occupational Safety and Machinery Act in Malaysia. During the year, the Group has not encountered any incidents of non-compliance with all applicable laws and regulations related to occupational health and safety at all operating regions.

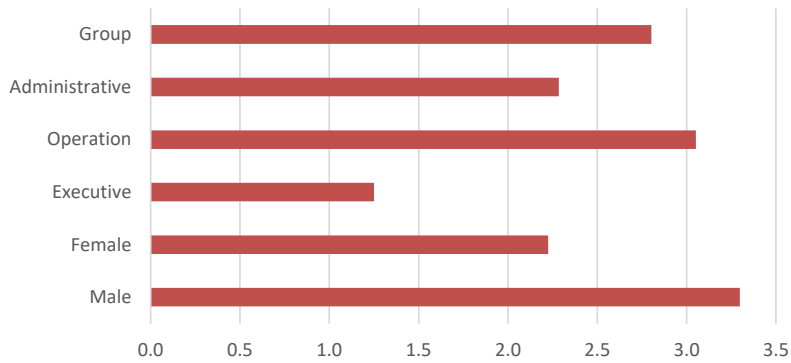
As a key stakeholder, we place a high value on the health and safety of our employees. From time to time during the outbreak of COVID-19, particularly throughout peak outbreaks, we adopted special work managements such as work-from-home policies and flexible working hours, to support our staff whilst maintaining operations during the pandemic. Where necessary, we restricted employees' travel plans to reduce the chances of transmission. The Group also supplied protective and sanitising products such as face masks, face shields, etc. and adopted best practices such as body temperature checks and safe distancing.

Aspect B3: Development and Training

During the year, a total number of 1,177 staff participants have received training, of which 16 were executive, 979 were operational and 182 were administrative staff, representing 1%, 83% and 16% of total trained numbers by employee category. In respect of training hours, our executive, operational and administrative staff received an average of 1.3, 3.1 and 2.3 training hours per staff, respectively. Overall, the Group has provided a total of approximately 5,016 training hours representing an average of 2.8 hours per staff.

Of the 1,177 staff participants who received training, 723 (i.e. 61%) were male and 454 (i.e. 39%) were female, respectively, while the average training hours received by male and female staff amounted to 3.3 and 2.2 hours, respectively.

Average Training Hours per Person by Employee Category and Gender



The Group attaches great importance to the improvement and development of employees. The Group encourages employees to undertake challenges at work, and in turn provides feedback and training classes for them. The Group believes that well trained staff enhances our overall growth and development, and formulates training plans that can both satisfy the development needs of the Group and employees. To further promote continuous development, staff are entitled to educational leave for attending external programmes, such as external public trainings, lectures and seminars. The Group provides tuition reimbursements to eligible staff for engaging in programmes that enrich job knowledge. During the year, the Group has not encountered any incidents of non-compliance with statutory requirements related to staff training and development at all operating regions.

Training session at the PRC factory



Aspect B4: Labour Standards

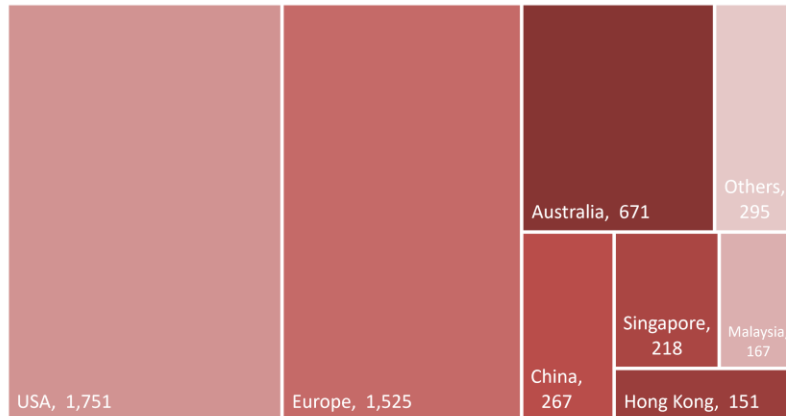
The Group strictly prohibits child and forced labour and has established and implemented anti-child and anti-forced labour policies that meet the highest legal and ethical standards. In order to avoid potential for child labour breaches, we conduct strict age verification of all new applicants and we regularly monitor our recruitment processes to ensure that these labour standards are maintained. To protect the rights and freedoms of every individual and to avoid potential for forced labour, no worker is required to surrender any identification documents nor lodge fees or deposits as a condition of employment. Staff handbooks contain clear policies relating to relevant labour laws, regulations and industry practices, covering areas such as compensation, dismissal, promotion, working hours, recruitment, rest periods, diversity and other benefits and welfares. Employees that are suspected to be in breach of such policies should submit reports through grievance mechanisms of respective subsidiaries and all protocol implementation is reinforced through periodic audits. At our C.O.S. facility, we have adopted additional statements which align with international conventions relating to human rights, labour standards and issues such as the freedoms of association and protection of trade unions against discrimination.

Major laws and regulations applicable include, but are not limited to, the Labour Law of the PRC, as well as employment and modern slavery legislation of Australia and Singapore, and Malaysia Act 350-Children and Young Person (Employment) Act 1966. During the year, the Group has not encountered any incidents of non-compliance with applicable laws and regulations related to anti-child and anti-forced labour practices at all operating regions.

Aspect B5: Supply Chain Management

The Group understands the importance of supply chain management for sustainability and is committed to establishing continuous and long-term relationships with our suppliers to procure high quality materials and content efficiently. During the year, we have partnered with a total of 5,045 suppliers and subcontractors which are mainly from Australia, Malaysia, Hong Kong, Mainland China, Europe, USA and Singapore. The increase in number of suppliers by approximately 259% was primarily due to treatment of Quarto's authors as suppliers and contractors following the increase in the Group's shareholding of Quarto Group, where the number of suppliers and contractors in Europe and the USA rose significantly.

Number of Suppliers by Geographical Location



The Group has developed long-term and good relationships with a number of suppliers to maintain stable supply of high-quality raw materials. We carefully select our suppliers for all kinds of raw materials, auxiliary ingredients and packaging materials, and require them to satisfy certain criteria including track record, experience, reputation, ability to produce high-quality products and effectiveness of quality control in order to ensure that our suppliers possess our commitments to quality and ethics. We require suppliers to confirm that they are compliant with relevant local and national laws including any environmental and social policies which are laid out in the supplier code of conduct. Raw materials suppliers and subcontractors are required to submit statements declaring conformity to the respective code of conduct whilst supply chains are assessed from time to time by the self-assessment questionnaires and/or internal audits.

In order to enhance resilience in our supply chain, we continually assess supplier risks and conduct supply chain mapping whilst searching for the most suitable sources of supply. Moreover, we see environmentally friendly supply chain management as an opportunity to reduce carbon footprint and costs. The Group has been considering opportunities to conduct purchasing from a more sustainable perspective. As paper is a primary raw material in our business, we seek to utilise this valuable resource in the most responsible manner possible. For example, products printed at our 1010 Printing, C.O.S. and Papercraft facilities are able to bear the Forest Stewardship Council (FSC) label, as we have obtained the FSC-COC certification, which verifies that paper products have been produced from responsibly sourced wood fiber.

Aspect B6: Product and Service Responsibility

Product quality and safety, and customer satisfaction

The Group places a high priority and awareness on product quality and safety and customer satisfaction. We produce a diverse range of products including, illustrated leisure and lifestyle books, textbooks, learning materials and children's books for a broad customer base comprised of international book publishers, trade, professional and educational conglomerates, print media companies and government departments. As such, our products and services are expected to meet the highest quality and safety standards.

The Group sets standards for raw materials, plant, equipment, hygiene and personnel training, and continually seeks to improve the efficiency and quality of the production process and products to meet the requirements relating to safety and quality standards. Quality assurance is performed against required parameters at each stage of the production process. The Group has also formulated product inspection and certification management procedures to ensure that the products meet quality standards in respect of manufacturing and sales. Final products are inspected to ensure that they pass the relevant safety and quality standards expected by our customers and are fit for use by end users. In order to reduce the probability of product defects, the Group has established relevant standards on product defects and takes corrective and preventive measures to prevent any recurring problem. In addition, we conduct periodic customer satisfaction analysis, in the form of surveys and/or monthly monitoring at the majority of our subsidiary operations which help us to determine the areas in which we can strengthen in the following year. In the PRC we disseminated over 100 customer surveys and received a response rate of around 52%. All product and service complaints are managed through our customer services team and during the year all material complaints were handled to the satisfaction of our customers without any record of any outstanding issues.

Ethical operating practices

We strive to execute all business activities in a trustworthy, ethical, and transparent manner. This includes interactions with our employees, as well as with our business partners, customers, and suppliers. From the protection of data privacy and intellectual property to ethical marketing communication, robust management approaches have been adopted to ensure even the most trivial aspects will not be overlooked. Compliance audits are planned and conducted at least once a year. During the year, the Group has not encountered any incidents of non-compliance with all applicable laws and regulations related to the protection of data privacy and intellectual property and to the ethical marketing communication at all operating regions. Major applicable laws and regulations include, but are not limited to, the Criminal and Civil Law of PRC, the Privacy Acts, Trade Marks Acts, Competition and Consumer Acts of Australia and Singapore, and Personal Data Protection Act 2010 in Malaysia.

Data protection

The Group is committed to protecting the privacy and confidentiality of any and all collected personal data. Data privacy of customers and suppliers is strictly protected by the Group. The Group has policies and written guidelines in place for all staff of collection, processing, use of and access to employees' and customers' personal data and information. When collecting any personal data and information, the Group strictly complies with all the relevant regulations to ensure that the information collected is solely for specific purposes, e.g., personnel, advertising and promotional. Sound security protection of the personal data is in place, stored for the relevant periods required by law and accessible only by authorised staff. The Group never sells, transfers or discloses any personal data to third parties unless with the consent from data owners.

Intellectual property rights protection

As the Group evolves from a pure printing services company to one which also incorporates publishing, we are fully aware of the value of intellectual property rights and the importance of compliance with all relevant laws and regulations concerning book publishing and production. We have the highest regard for intellectual property rights and endeavour to protect the Group from reputational damages arising from the infringement of any intellectual property. In managing intellectual property rights, we strictly comply with all relevant laws and regulations and have in place policies to monitor and avoid infringement. We also have high expectations of our suppliers and have included confidentiality clauses and other specifications in supplier contracts to ensure that relevant intellectual property rights are respected. We support the protection of intellectual property rights, and strictly abides by all applicable laws.

Aspect B7: Anti-corruption

The Group has a zero-tolerance policy for all forms of corruption, bribery, extortion, fraud and money laundering, and handles conflicts of interest in the Group seriously. We strictly abide by all major applicable laws and regulations including but not limited to, the Prevention of Bribery Ordinance (Chapter 201 of the Laws of Hong Kong) and Anti-money Laundering and Counter-Terrorist Financing Ordinance (Chapter 615 of the Laws of Hong Kong) in Hong Kong, the anti-corruption laws of the PRC, the Anti-Unfair Competition Law of the PRC and Interim Provisions on Prohibiting Commercial Bribery (《關於禁止商業賄賂行為的暫行規定》), Criminal Law of the PRC, Anti-Corruption Acts of Australia and Singapore, and the Malaysian Anti-Corruption Commission (Amendment) Act. During the year, the Group has not encountered any incidents of non-compliance with all applicable laws and regulations at all operating regions nor have we been engaged in any legal action relating to any corrupt practices.

The Group has included anti-corruption guidelines in the staff handbook and the materials within the staff handbook will be updated on a regular basis. Employees are strictly prohibited from offering or accepting any forms of advantages such as gifts, entertainment, rewards or commission that could be considered of material value from customers, suppliers or any other business partners as stipulated in the employee handbook. Employees must declare if such offers have been made or received. Furthermore, the Group strives to avoid any potential conflict of interest or appearance of conflict. The anti-corruption guidelines also set out the professional and ethical standards for our employees to observe in all business dealings to prevent any conflicts of interest. In addition, all suppliers are required to comply with our supplier code of conduct to ensure that they are fully aware of the Group's requirements.

The Group also enacts zero tolerance to any anti-competitive practices such as cartels and market power abuse in its business dealings.

In the event of any violations of our policies in respect of anti-corruption, conflicts of interest, anti-competitive practices or any other unethical business dealings, we have implemented internal whistle-blowing procedures and a whistle-blowing channel for the reporting of any violations.

Aspect B8: Community Investment

As a part of our continuous effort to engage with our community and as a proud member of the print and publishing industry, the Group seeks opportunities to direct charitable efforts towards various community events and programs. During the year, the Group has made donations and sponsorships to a range of activities, valued at approximately HKD68,000, including among others,:

- Support for the ASX Refinitiv Charity Foundation in the form of in-kind print sponsorships for events held by local charities and initiatives, which has been valued at approximately HKD15,000.
- Support for the Australian Book Designers Association in the form of in-kind print sponsorships for printing an awards catalogue to support local designers, which has been valued at approximately HKD20,000.

Furthermore, as part of the Group's overall ESG efforts, management has begun to consider how the Group can extend its position and role as a responsible corporate citizen beyond the printing industry and local communities it operates in. Having considered a number of green finance products, during the year we have placed funds with a bank in Hong Kong which offers a fixed interest rate on sustainable deposits. Unlike traditional fixed rate deposits, the sustainable deposit is aligned to the UN Sustainable Development Goals (SDG) and helps to fund finance activities in emerging markets across Asia, Africa and the Middle East. The Group will continue to explore such opportunities which support sustainability and UN SDG goals.