

VGI PLC

TCFD Report

2022/2023

CONTENTS

Executive Summary	<u>3</u>
Introduction	<u>5</u>
1 Governance	<u>9</u>
2 Strategy	<u>13</u>
3 Risk management	<u>31</u>
4 Metrics and targets	<u>39</u>
References	<u>46</u>

EXECUTIVE SUMMARY

VGI focuses on managing risks and opportunities resulting from climate change, such as the dramatic changes in extreme weather conditions and natural disasters that may affect VGI's business activities. This year VGI first Taskforce on Climate-related Financial Disclosures (TCFD) report assessed business risks and opportunities caused by climate change. The TCFD report has been prepared according to recommendations from TCFD and builds upon globally recognized guidelines such as The Dow Jones Sustainability Indices (DJSI) and CDP climate change disclosures to disclose climate-related financial information to manage risks within the company. This also serves as information for investor decision-making in the future

Our Approach to Assess and Manage Climate-related Risks and Opportunities

Engage on climate risk and opportunity on the business where, in our view, climate risk and opportunity are relevant and pose the material impact in our value chain (suppliers, operations, and customers).

EXECUTIVE SUMMARY

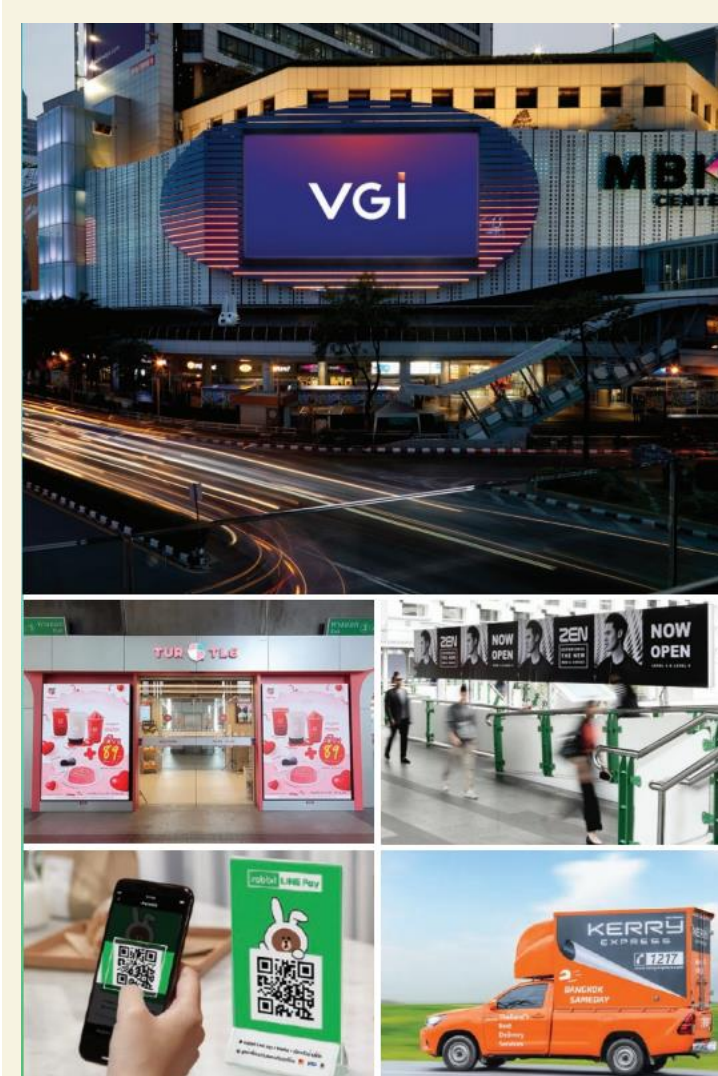
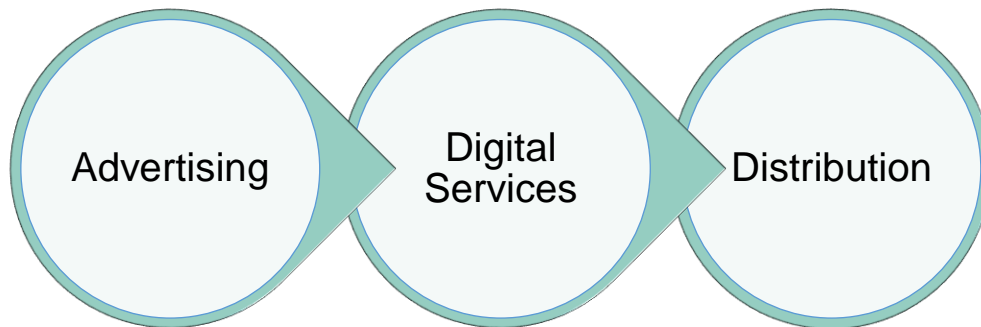
Structure of This Report

This report is structured in line with TCFD recommendations, in four sections.

1. “Governance” section explains how climate-related risks and opportunities are incorporated into our governance and management frameworks
2. “Strategy” section focuses on our core climate-related components: Climate & Energy Strategy
3. “Risk Management” section explains how we identify and manage climate risks and opportunities through our Risk Management Process and plan to integrate ESG into company’s enterprise risk management system.
4. “Metrics and Targets” section shows the metrics that we currently use and report to monitor our performance

INTRODUCTION

VGI was established in 1998 and started its business as a media rental company focused on traditional Out-of-Home ("OOH") advertising in the Bangkok area. However, the company's vision for sustainable growth prompted it to expand its media network across Thailand through strategic partnerships with leading companies. With the rapid progress in technology, VGI recognized immense opportunities and decided to strategically integrate Digital Services and Distribution. This move enabled the company to offer a comprehensive range of Offline-to-Online ("O2O") Marketing Solutions. Presently, VGI concentrates on three main businesses:



INTRODUCTION

Climate change is undeniably a global problem, therefore, as an Offline-to-Online ("O2O") solution service provider, VGI is committed to addressing challenges and opportunities arising from climate change and energy conservation. VGI not only intends to address the greenhouse gas emissions generated by its business activities but also aims to raise social awareness about the importance of climate change through the Company's various media channels and platforms.

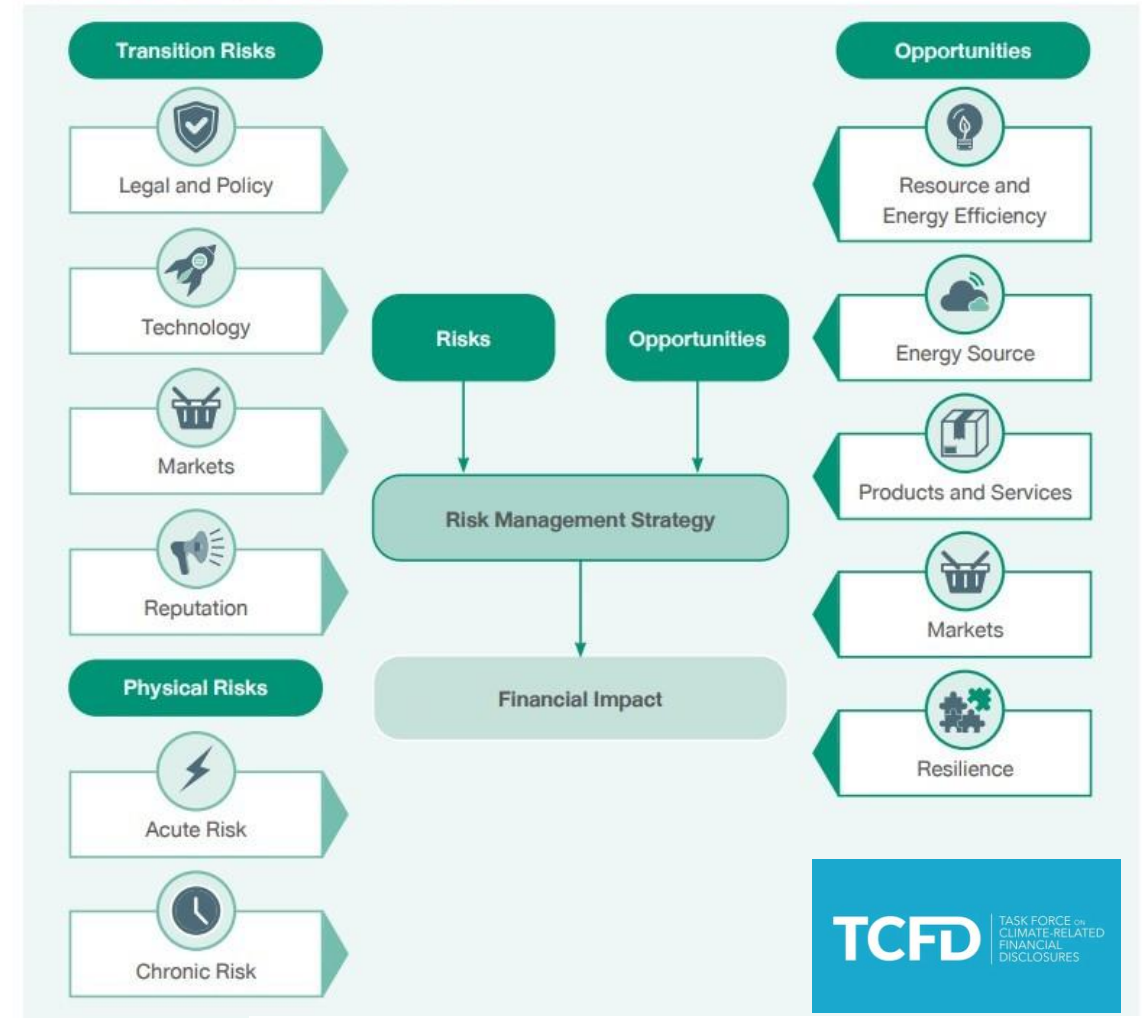
VGI is committed to addressing challenges and opportunities arising from climate change and energy conservation. Not only does VGI intend to tackle the GHG emissions generated by its business activities, but it also aims to raise social awareness about the importance of climate change through the Company's advertising platform. The company's environmental policy serves as a commitment to improve operations by focusing on energy efficiency, investing in modern technology, and using clean energy sources. VGI actively raises awareness about the impact of climate change through various media channels and platforms. Moreover, VGI has implemented a corporate risk management process to review and address emerging risks related to the impact of climate change on business operations, including a disaster recovery plan to deal with adverse weather events.



INTRODUCTION

VGI also focuses on managing risks and opportunities resulting from climate change, such as the dramatic changes in extreme weather conditions and natural disasters that may affect VGI's business activities. Therefore, to address these climate change risks, VGI has implemented a corporate risk management process to review existing and emerging risk factors related to the impact of climate on business operations, including a disaster recovery plan to deal with adverse weather events. Climate Risk Assessment, including preparing the TCFD report according to the recommendations of the Task Force on Climate-related Financial Disclosures, have been put in place to disclose climate-related financial information to manage risks within the Company and to serve as information for investors to make decisions in the future.

Climate Risk and Opportunities



TCFD SUMMARY

Section	Recommendation	Page
Governance	a) Describe the Board's oversight of climate-related risks and opportunities	<u>10</u>
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	<u>11</u>
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	<u>14-16, 22-23, 29-30</u>
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	<u>17-21, 24-28, 29-30</u>
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	<u>17-21, 24-28, 29-30</u>
Risk management	a) Describe the organization's processes for identifying and assessing climate-related risks	<u>32-34</u>
	b) Describe the organization's processes for managing climate-related risks	<u>34-36</u>
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	<u>36-38</u>
Metrics and targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<u>40-43</u>
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	<u>44</u>
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	<u>45</u>

GOVERNANCE

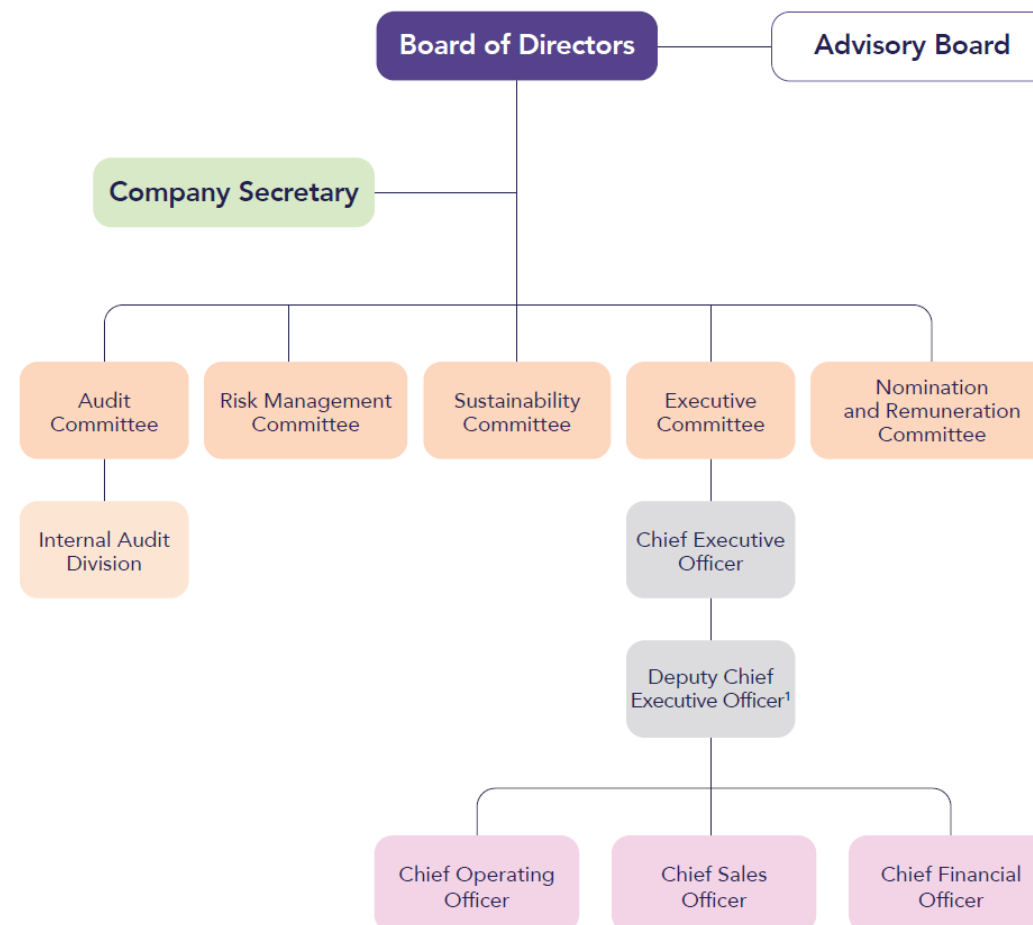
1

GOVERNANCE STRUCTURE

The Board of Directors and management structure, along with individually designed roles and responsibilities, play a crucial role in ensuring transparency and public disclosure regarding investments at VGI. The Board of Directors oversees the climate related issues. The Sustainability Committee and the Risk Management Committee are entrusted with the responsibility of formulating the company's climate strategy, assessing climate-related risks and opportunities, and presenting their recommendations to the Board of Directors for consideration and approval. The Sustainability Working Team actively monitors climate reporting to ensure that the current disclosure practices align with industry-leading standards.

Remarks: Corporate Governance Committee changed to Sustainability Committee since 13 February 2023

ORGANISATION CHART



BOARD COMMITTEE RESPONSIBILITIES

VGI's board-level committees take responsibility of addressing climate-related risks at various levels. This includes establishing protocols for handling climate-related issues, determining the frequency of reporting on such matters, and defining metrics and targets for assessing climate-related concerns.

Board committee	Climate consideration	Frequency	Evaluation metrics
Sustainability Committee	Consider, determine, review, and update the Company's climate strategy, as well as climate-related risks and opportunities, to be in line with international developments and standards and to propose to the Board of Directors for consideration and approval, and to oversee and monitor the implementation of the Company's climate strategy	Quarterly	Link with KPIs
Risk Management Committee	Consider risks, including climate-related risk, that could have an impact on the business	Quarterly	Link with KPIs

MANAGEMENT COMMITTEE RESPONSIBILITIES

The management of climate change impacts is an integral component of VGI's broader sustainability approach and the overseen sustainability working team.

Management committee	Reporting line	Climate considerations	Frequency
Sustainability Working Team which is overseen by Sustainability Committee	Sustainability Committee and Board of Directors	Monitoring climate reporting and ensuring current reporting reflects leading practices	Quarterly

STRATEGY

2

TIME HORIZONS

When considering climate-related physical and transition risks, VGI assesses them through the following short-, medium-and long-term time horizons

Time horizon	Start year	End year	Explanation for the choice of time frame
Short-term (0-7 years)	2023	2030	Developed to align with climatic model data and physical and transition scenario analysis (RCP 2.6, 8.5; IEA: NZE , STEPS)
Medium-term (7-17 years)	2030	2040	Developed to align with climatic model data and physical and transition scenario analysis (RCP 2.6, 8.5; IEA: NZE , STEPS)
Long-term (17-27 years)	2040	2050	Developed to align with climatic model data and physical and transition scenario analysis (RCP 2.6, 8.5; IEA: NZE, STEPS)

PHYSICAL RISK IDENTIFICATION (1/2)

PHYSICAL RISKS

Climate risk identification is a common element found in TCFD reports; however, the categorization of these risks often lacks consistency. In our assessment, we have classified risks and opportunities into three timeframes: short, medium, and long term. Short-term impacts encompass the next 7 years, while medium-term impacts span a seven-to-seventeen-year timeframe, aligning with VGI's typical business planning cycle. Long-term impacts extend beyond seventeen years. Moreover, we also assessed our risk and opportunities along value chain both upstream, downstream and own operations. As a company in media and entertainment sector, VGI operates predominantly in Bangkok, with 98 advertisement locations on BTS trains and one in-station. Additionally, VGI has three building advertisement locations in Khon Kaen and one in Songkhla. VGI's asset portfolio consists of out-of-home media advertisements located in Bangkok, Khon Kaen, and Songkhla provinces.

Acute

- Coastal flood
- Extreme heat
- River flood
- Heavy precipitation and pluvial flood
- Drought
- Severe windstorm
- Tropical cyclone
- Sand and dust storm

Chronic

- Relative sea level

PHYSICAL RISK IDENTIFICATION (2/2)

Physical risks applicability to VGI

Risk type	Sub-type	Climate-related risks	Climate-related risk description	Short-term (2023-2030)	Medium-term (2030-2040)	Long-term (2040-2050)
Physical risk	Acute	Increased severity of extreme weather events such as tropical cyclone – severe windstorm (Direct impact)	Increased frequency and severity of climate-driven events with varying impacts based on location, weather conditions, and season. In Bangkok, metropolitan areas with fewer tall buildings may face higher wind speeds than built-up urban areas during such events.	Yes	Yes	Yes
		Heavy precipitation (rain, hail, snow/ice), floods	There is low potential direct and indirect impact due to short occurrence nature of the event	No	No	No
		River flood (Indirect impact)	There is potential direct impact from floodwaters which may damage outdoor advertising infrastructures and potential cost to replace them. And potential indirect which may affect number of impressions in VGI advertisement.	Yes	Yes	Yes
		Landslide and subsidence	There is low potential impact from landslide and subsidence	No	No	No
		Aridity	There is low potential impact from aridity	No	No	No
		Air pollution	There is low potential impact air pollution	No	No	No
	Chronic	Changing temperature (air, freshwater, marine water)	High temperatures may cause electronic components to overheat, which may result in malfunctions or failures. However, according to Digikey (2022), all of the LED backlights are specifically designed to operate from -40°C to +85°C. Therefore, low potential impact.	No	No	No
		Coastal flood (Indirect impact)	Coastal flooding may cause damage to outdoor advertising structures such as billboards, posters, and banners, making them ineffective and potentially costly to replace in longer timescales. It may indirectly affect number of impressions and reduce revenue per impression.	No	No	Yes

Yes, relevance or contribute high financial impact to VGI

No, no impact/ low relevance or contribute low financial impact to VGI

SCENARIO ANALYSIS (PHYSICAL RISK) (1/3)

Scenario Analysis Component	Scenario information					
Name of Component	Scenario provider	Scenario	Risks evaluated	Time Horizons and Intervals	Tools	Modelling assumptions
IPCC RCP 2.6	IPCC	RCP 2.6	Physical	Short term: 2023-2030 Medium term: 2030 - 2040 Long term: 2040 – 2050	Aqueduct, Climate analytic: impact explorer, Climate central	Relative change from baseline
IPCC RCP 8.5	IPCC	RCP 8.5	Physical	Short term: 2023-2030 Medium term: 2030 - 2040 Long term: 2040 – 2050	Aqueduct, Climate analytic: impact explorer, Climate central	Relative change from baseline

SCENARIO ANALYSIS (PHYSICAL RISK) (2/3)

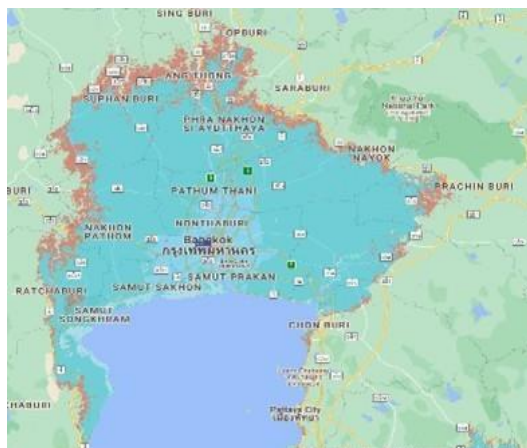
Tropical cyclone

Scenario Analysis Component		Output		Business and Financial Impacts	
Name of Component	Output Metric	Output Value		Business impacts	Financial impacts
RCP 2.6	Annual expected damage from TC in %	Short-term (2023-2030): 4.48 % Medium-term (2030-2040): 6.94 % Long-term (2040-2050): 6.94 %		The increase in likelihood and impact of tropical cyclones triggers the integration or shifting of offline to online (O to O) media	- Cost of maintenance from infrastructure damage - Total cost of insurance premium
RCP 8.5	Annual expected damage from TC in %	Short-term (2023-2030): 5.92 % Medium-term (2030-2040): 10.85 % Long-term (2040-2050): 13.88 %		The increase in likelihood and impact of tropical cyclones triggers the integration or shifting of offline to online (O to O) media	- Cost of maintenance from infrastructure damage - Total cost of insurance premium

SCENARIO ANALYSIS (PHYSICAL RISK) (3/3)

River Flood and Coastal Flood

Scenario Analysis Component	Output		Business and Financial Impacts	
Name of Component	Output Metric	Output Value	Business impacts	Financial impacts
RCP 2.6	Change in number of impression	Advertising cost	Indirect impact from flood may affect the number of impression	Increasing Revenue per impression (CPM)
RCP 8.5	Change in number of impression	Advertising cost	Indirect impact from flood may affect the number of impression	Increasing Revenue per impression (CPM)



Bathtub approach

Map areas are identified as vulnerable based on land elevation relative to the selected shoreline water level alone. This means that low-lying but isolated areas that may potentially be protected by higher ground will be marked as inundated.

*This picture use elevation data to project the impact; the level of impact can be change due to the capability of climate adaptation plan and flood management system

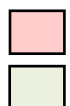
$$\text{Cost per impression (THB)} = \frac{\text{Advertising cost (THB)}}{\text{Number of impression (\#)}}$$

In this context, advertising cost is revenue lost.
Dependent variable is number of impression.

SUMMARY OF PHYSICAL RISK ASSESSMENT (1/2)

Physical risks applicability to VGI

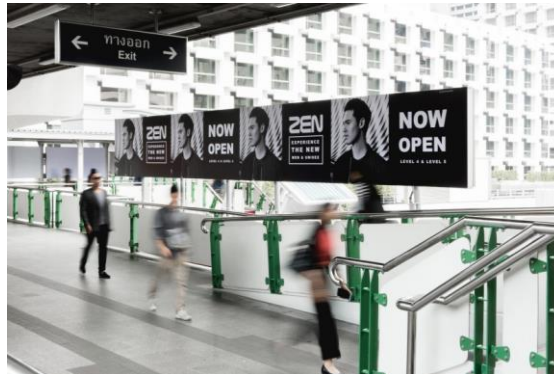
Risk type	Sub-type	Climate-related risks	Climate-related risk description	Changes from Baseline
Physical risk	Acute	Increased severity of extreme weather events such as tropical cyclone – severe windstorm (Direct impact)	Increased frequency and severity of climate-driven events with varying impacts based on location, weather conditions, and season. In Bangkok, metropolitan areas with fewer tall buildings may face higher wind speeds than built-up urban areas during such events.	RCP 2.6 2023-2050: 4.48 - 6.94 % RCP 8.5 2023-2050: 5.92 - 13.88 %
		Heavy precipitation (rain, hail, snow/ice), floods	There is low potential direct and indirect impact due to short occurrence nature of the event	No significant change
		River flood (Indirect impact)	There is a low potential direct impact from floodwaters which may damage outdoor advertising infrastructures and potential cost to replace them. While potential indirect impact may be higher which may affect number of impressions in VGI advertisement.	RCP 2.6 2023-2050: 11.86 - 42.31% RCP 8.5 2023-2050: 24.32 - 102.56%
		Landslide and subsidence	There is low potential impact from landslide and subsidence	No significant change
		Aridity	There is low potential impact from aridity	No significant change
		Air pollution	There is low potential impact air pollution	No significant change
	Chronic	Changing temperature (air, freshwater, marine water)	High temperatures may cause electronic components to overheat, which may result in malfunctions or failures. However, according to Digikey (2022), all of the LED backlights are specifically designed to operate from -40°C to +85°C. Therefore, low potential impact.	No significant change
		Coastal flood (Indirect impact)	Coastal flooding may cause damage to outdoor advertising structures such as billboards, posters, and banners, making them ineffective and potentially costly to replace in longer timescales. It may indirectly affect number of impressions and reduce revenue per impression. However, this risk is considered insignificant as there is no asset on ground level. Thus, the impact was assessed on qualification basis only.	Located in vulnerable area, but most assets are on building above ground level



SUMMARY OF PHYSICAL RISK ASSESSMENT (2/2)

TROPICAL CYCLONE

The increased frequency and severity of climate-driven events have varying impacts based on location, weather conditions, and season. In Bangkok, metropolitan areas with fewer tall buildings may experience higher wind speeds than built-up urban areas during such events. Therefore, the tropical cyclone was considered under RCP 2.6 and RCP 8.5. The financial impact is assessed based on the cost of maintenance from infrastructure damage and the total cost of insurance premiums in three timeframes: short-term 2023-2030 (0-7 years), medium-term 2030-2040 (7-17 years), and long-term 2040-2050 (17-27 years).



SUMMARY OF PHYSICAL RISK ASSESSMENT

We conduct an initial screening of physical impacts based on the IPCC AR6 report. Our assessment indicates that heavy precipitation (rain, hail, snow/ice), floods, landslides and subsidence, aridity, air pollution, and changing temperature (air, freshwater, marine water) have either no impact or low relevance in terms of contributing to a low financial impact on VGI.

There are potentially **indirect** acute physical impacts on VGI's business from river floods, and less likely **indirect** chronic impact from coastal floods. These events can cause damage to outdoor advertising structures, resulting in financial losses from replacement costs and reduced revenue per impression.

TRANSITION RISK IDENTIFICATION (1/2)

TRANSITION RISKS

VGI has placed its focus on sustainability, directing efforts towards areas where we can make the most significant contribute to the environment. This includes consideration of our risks due to these transitions.

The transition towards lower-carbon practices presents both potential risks and opportunities. Some of these are shared by many businesses, such as changes in carbon costs, the expenses associated with adopting lower-carbon technologies, and advertising related to supporting activities with negative climate impacts (such as greenhouse gas emissions, coal, deforestation, and water stress). Another significant impact that specifically affects VGI is the uncertainty surrounding market signals. Additionally, the volatility of future I-REC prices, driven by demand-supply dynamics, is further compounded by uncertainties in electricity prices.

Policy and legal

- Carbon pricing mechanism
- Current and Emerging regulation

Technology

- Cost to transition to lower technology

Market

- Uncertainty in market signal

Reputation


- Advertising related to supporting of activities with negative impacts on climate

TRANSITION RISK IDENTIFICATION (2/2)

Transition risks applicability to VGI

Risk type	Sub-type	Climate-related risks	Climate-related risk description	Short-term (2023-2030)	Medium-term (2030-2040)	Long-term (2040-2050)
Transition risk	Policy and legal	Carbon pricing mechanism Current and Emerging regulation	Low potential direct impact due to low carbon intensity by nature of VGI's business and low GHG emissions scope 1. Low impact from current and emerging regulations	No	No	No
	Technology	Costs to transition to lower emissions technology	Low potential impact in increasing of the expenses associated with upgrading or replacing existing technology or equipment in order to reduce the amount of GHG emissions produced in the operation due to low energy consumption in most devices.	No	No	No
	Market	Uncertainty in market signals (Direct impact)	The uncertainty of electricity and I-REC prices in the future, which could be volatile due to demand-supply dynamics, is further compounded by the uncertainties of the electricity prices.	Yes	Yes	Yes
	Reputation	Advertising related to supporting of projects or activities with negative impacts on climate (e.g., GHG emissions, coal, deforestation, water stress)	No potential impact from failure to deliver sustainability performance could result in reputational damage, or eventually leading to a revenue decrease.	No	No	No

 Yes, relevance or contribute financial impact




 No, no impact/ low relevance or contribute low financial impact

SCENARIO ANALYSIS (TRANSITION RISK) (1/3)

Scenario Analysis Component	Scenario information					
Name of Component	Scenario provider	Scenario	Risks evaluated	Time Horizons and Intervals	Tools	Modelling assumptions
IEA	The Net Zero Emissions by 2050 Scenario (NZE)	Transition	Short term: 2023-2030 Medium term: 2030 - 2040 Long term: 2040 – 2050	Dataset from IEA	Carbon price dataset 2030, 2040, 2050 Electricity generation cost 2030, 2040, 2050	Dynamic absolute value
IEA	Stated Policies Scenario (STEPS)	Transition	Short term: 2023-2030 Medium term: 2030 - 2040 Long term: 2040 – 2050	Dataset from IEA	Carbon price dataset 2030, 2040, 2050 Electricity generation cost 2030, 2040, 2050	Dynamic absolute value

SCENARIO ANALYSIS (TRANSITION RISK) (2/3)

- The scenario analysis is increasingly included in disclosures, the information provided in the analysis focuses on a particular business segment (media, movie and entertainment sector).
- Electricity price and I-REC price are identified as transition risks for media, movie and entertainment sector in VGI business.

Risk driver	Description	Tool/Data source
Electricity price	The electricity price change was estimated using data from 'International Energy Agency (2022), Global Energy and Climate Model Documentation 2022, IEA, Paris' and 'IEA's World Energy Outlook 2022'. While the base electricity price and emission factored are from 'GlobalPetrolPrice.com' (June 2022 data). The electricity consumption was given by VGI.	 
I-REC price	<p>An International Renewable Energy Certificate (I-REC) price forecasting methodology is based on the estimated Levelized Cost of Electricity (LCOE). The LCOE method assumes that an economically sensible renewable investor will engage in the I-REC market. The data based on 'International Energy Agency (2022), Global Energy and Climate Model Documentation 2022, IEA, Paris' and 'IEA's World Energy Outlook 2022'.</p> <p>Remark: Overall, the price of I-REC is expected to be relatively stable in the future. However, important to note that the actual price of I-REC will depend on a number of factors, and it is impossible to predict with certainty what the price will be in the future.</p>	

SCENARIO ANALYSIS (TRANSITION RISK) (3/3)

Electricity price

Scenario Analysis Component	Output		Business and Financial Impacts		Transition
Name of Component	Output Metric	Output Value	Business impacts	Financial impacts	Factors relevant for consideration within transition plans
Net Zero Emissions by 2050 Scenario (NZE)	Relative change from 2022	Short-term (2023-2030): -0.69% Medium-term (2030-2040): -1.65% Long-term (2040-2050): -2.62%	Promote renewable energy consumption	Cost saving due to the decreasing in electricity price	Electricity consumption
Stated Policies Scenario scenario (STEPS)	Relative change from 2022	Short-term (2023-2030): -0.54% Medium-term (2030-2040): -1.13% Long-term (2040-2050): -1.72%	Promote renewable energy consumption	Cost saving due to the decreasing in electricity price	Electricity consumption

SUMMARY OF TRANSITION RISK ASSESSMENT (1/2)

Transition risks applicability to VGI

Risk type	Sub-type	Climate-related risks	Climate-related risk description	Change from baseline (2022)
Transition risk	Policy and legal	Carbon pricing mechanism Current and Emerging regulation	Low potential direct impact due to low carbon intensity by nature of business and low GHG emissions scope 1. Low impact from current and emerging regulations	No significant change
	Technology	Costs to transition to lower emissions technology	Low potential impact in increasing of the expenses associated with upgrading or replacing existing technology or equipment in order to reduce the amount of GHG emissions produced in the operation due to low energy consumption in most devices.	No significant change
	Market	Uncertainty in market signals (Direct impact)	The uncertainty of electricity and I-REC prices in the future, which could be volatile due to demand-supply dynamics, is further compounded by the uncertainties of the electricity prices.	NZE 2023-2050: -2.62% to -0.69% STEPS 2023-2050: -1.72% to -0.54%
	Reputation	Advertising related to supporting of projects or activities with negative impacts on climate (e.g., GHG emissions, coal, deforestation, water stress)	No potential impact from failure to deliver sustainability performance could result in reputational damage, or eventually leading to a revenue decrease.	No significant change

Yes, relevance or contribute high financial impact to VGI

No, no impact/ low relevance or contribute low financial impact to VGI

SUMMARY OF TRANSITION RISK ASSESSMENT (2/2)

ELECTRICITY PRICE

The uncertainty of electricity in the future can be considered in two different scenarios: the Net Zero Emissions by 2050 Scenario (NZE) and the Stated Policies Scenario (STEPS). The financial impact is assessed based on cost savings resulting from the decrease in electricity prices in three different timeframes: short-term 2023-2030 (0-7 years), medium-term 2030-2040 (7-17 years), and long-term 2040-2050 (17-27 years). The financial impact from electricity prices in the NZE and STEPS scenarios creates an opportunity for VGI business.



SUMMARY OF TRANSITION RISK ASSESSMENT

Our assessment indicates that transition risks have no/low significant impact on VGI due to the low carbon intensity nature of our business, low GHG emissions scope 1, and minimal costs associated with transitioning to lower emissions technologies. Our reputation also carries a low risk, as we refrain from advertising or supporting projects and activities with negative climate impacts such as GHG emissions, coal, deforestation, and water stress.

However, our transition risk assessment reveals that the uncertainty of future electricity poses a high relevance and high financial impact on VGI. This stems from the uncertainty surrounding market signals in the electricity sector.

OPPORTUNITY IDENTIFICATION (1/2)

OPPORTUNITIES

The way in which the world responds to climate change and transitions to a low-carbon economy has the potential to create business opportunities for VGI.

Climate-related impacts are typically divided into two categories: risks and opportunities. In our analysis, we also present positive impacts as opportunities for VGI. These opportunities have been classified into short-term, medium-term, and long-term timeframes, following the recommended framework outlined by the Task Force on Climate-related Financial Disclosures (TCFD). Our current assessment has identified several relevant opportunities for VGI, including recycling initiatives, the utilization of lower-emission energy sources, and considerations of electricity prices. On the following page, we delve into the positive impacts associated with each opportunity in each time horizons.

Resource Efficiency

- Use of recycling
- Use of more efficient production and distribution processes

Energy Source

- Use of lower-emission sources of energy

Products/Services

- Development and/or expansion of low emission goods and services

Markets

- Access to new markets
- Electricity price

Resilience

- New products and services related to ensuring resiliency

OPPORTUNITY IDENTIFICATION (2/2)

Opportunities

Opportunity type	Climate-related opportunities	Climate-related opportunities description	Short-term (2023-2030)	Medium-term (2030-2040)	Long-term (2040-2050)
Resource efficiency	Use of recycling	Using recycled materials (e.g., recycle plastics instead of paper) to reduce the amount of waste generated during manufacturing and the environmental impact.	No	No	No
	Use of more efficient production and distribution processes	Implement energy efficiency programs for data center (e.g., airflow management in control room)	No	No	No
Energy Systems	Use of lower-emission sources of energy	Implement energy efficiency programs through switching to low carbon technology e.g., installation of the renewable energy such as solar panel system for monitoring outdoor LED digital display screen and installation of the energy storage for renewable technology during peak production period. Energy from the storage can be used to power LED screen during low production period.	Yes	Yes	Yes
Products and Service	Development and/or expansion of low emission goods and services	Implement a branding and marketing policy that promotes environmentally sustainable business practices to effectively engage customers who value environmental responsibility and promote sustainability.	No	No	No
Markets	Access to new markets	Implement a recycling program to collect and recycle the waste generated by vinyl poster, paper poster, etc.	No	No	No
	Electricity price	Implementing renewable energy consumption in the electricity system aligns with STEPS and NZE scenarios, resulting in cost savings due to the decreasing electricity prices.	Yes	Yes	Yes
Resilience	New products and services related to ensuring resiliency	Digital disruption involves shifting from offline advertising to online advertising, which reduces the business risk in the event of natural disasters such as cyclone or floods. These events can affect the impressions, but using online advertising helps to ensure that customers can still access advertisements.	Yes	Yes	Yes



Yes, high relevance or contribute high financial impact to VGI

No, No impact/ low relevance or contribute low financial impact to VGI

**RISK
MANAGEMENT**

3

RISK MANAGEMENT : RISK IDENTIFICATION PROCESS

VGI places importance on risk management within the organization, which the Company realizes is crucial in driving the Company to achieve its goals according to its business plans, strategies and visions under the rapidly changing business situation, highly competitive market, and unexpected crisis including emerging risk situations and uncertainties of various businesses that may occur in the future.

VGI analyzes and divides risks into four aspects, consisting of (1) Strategic Risks, (2) Operational Risks, (3) Financial Risks and (4) Compliance Risks. This impact covers the impact on corporate governance and the safety of those involved in the organization, Human Resources, and the environment.



RISK MANAGEMENT : RISK IDENTIFICATION PROCESS

VGI determines to address both of the challenges and the opportunities presented by climate change and energy conservation in its materiality assessment. The processes of identifying, assessing, and managing climate-related risks are being planned to get endorsement from the 2023–2024 reporting year and to be incorporated into VGI's comprehensive risk management process. The Sustainability Committee increased its roles and duties to cover sustainability governance including environmental management, climate change, as well as revised its charter to reflect such changes.

Climate-related scenario analysis

Scenario analysis is now commonly included in disclosures. In case of VGI's business, physical risks are analyzed under the IPCC: RCP2.6 and RCP8.5 scenarios. Whilst, transition risks are analyzed under the IEA: NZE and STEPS scenarios.

By undertaking this work, the company aims to gain a comprehensive understanding of climate change impacts and quantify them. We intend to report these risks in this report, aligning with the structure recommended by the Task Force on Climate-related Financial Disclosures (TCFD).

Risk management process and governance

- The VGI Board holds the responsibility for assessing risks and overseeing the implementation of mitigating activities and controls to manage those risks.
- Risks are identified by each operating division within our organization and subsequently presented to the Sustainability Committee.

RISK MANAGEMENT: RISK IDENTIFICATION PROCESS

The processes for risk identification, which vary both across and within VGI's business. Risk identification process aims at standardizing information through the use of general risk identification indicators.

Organizational level	Risk consideration	Exposure	Risk indicators	Environmental indicators	Business metrics	Performance metrics
Risk taxonomy	Emerging Risk	Media	Number of out-of-home media advertisements located in vulnerable area	Flood risk map	Annual revenue loss, Annual damage to infrastructure, Annual maintenance cost	-
Risk taxonomy	Emerging risk	Media	Costs or savings due to the increasing or decreasing electricity prices	-	Electricity price	Scope 2 (Electricity consumption)
Risk taxonomy	Emerging risk	Media	The uncertainty of I-REC prices is due to the demand and supply	-	I-REC price	Scope 2 (Electricity consumption)
Risk taxonomy	Operational risk	Office building	Costs or savings due to the increasing or decreasing electricity prices	The amount of GHG emission reduction	Electricity saving	Scope 2 (Electricity consumption)

RISK MANAGEMENT: RISK ASSESSMENT PROCESS

VGI discloses the process by which they assess risks in the table below.

Organizational level	Activities considered	Climate risks assessed		Segmentation of assessment	Risk prioritization
Enterprise	All	Significant transition risks	Significant physical risks	Sector-specific and Location specific (Thailand, Bangkok)	Prioritized by negative financial impact

PROCESS FOR MANAGING RISKS

Risk management processes can be disclosed through the lens of enterprise risk management framework components

Organizational level	Risk considered	Risk appetite statement	Roles and responsibilities	Governance and escalation	Internal control framework
Enterprise level	Enterprise Risk Management Framework (ERMF)	<ul style="list-style-type: none"> - Risk appetite framework determines the risk levels to assume to achieve targets - Sets out the general principles of the risk strategy and the target risk profile - Appetite quantification through metrics and thresholds that provide clear and concise guidance on the defined maximum risk profile 	<ul style="list-style-type: none"> - Executive team integrates sustainability into risk management - Risk and Compliance Committee monitors the executive team activities 	<ul style="list-style-type: none"> - Risk appetite framework is approved by corporate governance bodies 	<ul style="list-style-type: none"> - Climate risk is incorporated into the industry frameworks, a basic tool in the definition of our risk appetite

INTEGRATION INTO OVERALL RISK MANAGEMENT

Aligned with the risk management process, this table shows risk integration by incorporating essential components of the enterprise risk management framework.

Organizational level	Risk consideration	Strategic plan	Talent and incentive management	Resources and infrastructure
Enterprise risk	Emerging risk	<ul style="list-style-type: none"> - Manage the extreme weather changes by Business Continuity Plan (BCP) and crisis revitalization plans - Implement the Task Force on Climate-related Financial Disclosures (TCFD) and extreme weather strategic planning 	<ul style="list-style-type: none"> - Business and Climate Change Training Course, an environmental training course, for employees to gain knowledge and comprehension of the greenhouse gas effects on humanity, the economy, society, and the environment. 	<ul style="list-style-type: none"> - Investing in modern technologies to improve energy conservation

INTEGRATION INTO OVERALL RISK MANAGEMENT

Risk type	Sub-type	Climate-related risks	Climate-related risk description	Maturity of integration	Market risk			Operational risk		
					ST	MT	LT	ST	MT	LT
Transition risk	Market	I-REC price	The uncertainty of I-REC prices in the future, which tend to be low/high due to demand-supply dynamics, is further compounded by the extra cost from electricity prices.	Integration in process	X	X	X			
	Policy and legal	Carbon pricing mechanism	There is no potential impact due to the low GHG Emission in Scope 1	Integration in process		X	X			
Physical risk	Acute	Increased severity of extreme weather events such as tropical cyclone – severe windstorm	Increased frequency and severity of climate-driven events with varying impacts based on location, weather conditions, and season. In Bangkok, areas without tall buildings may face higher wind speeds than built-up urban areas during such events.	Integration in process				X	X	X
		River flood	Indirect impact from flood may affect the number of impression	Integration in process						X
	Chronic	Coastal flood								X

ST : Short-term (0-7 years) **MT** : Medium-term (7-17 years) **LT** : Long-term (17-27 years)

METRICS AND TARGETS

4

METRICS AND TARGETS

VGI has established a set of targets/measures concerning climate change impacts, as well as broader sustainability progress to adapt to climate related risks for all operations (existing and new). We report the relevant data and our performance in these areas, providing details on third-party assurance, in the company's Annual Report, Sustainability Report, and through information accessible on the VGI website. VGI's environmental performance is focused on the continual improvement of energy efficiency and the reduction of GHG emissions throughout our business. We are also the world's first and only media and publishing company to be Carbon Neutral. And this year, VGI increased its use of clean energy from renewable sources by 10% of business operations through the procurement of RECs. This demonstrated our contribution to Thailand's commitment to achieving carbon neutrality by 2050 and net zero by 2065 under the Paris Agreement. Moreover, we are in process of committing Science-based targets (SBTs) and Net Zero.

Sustainability target by maintain

10% reduction

The electricity consumption over the baseline 2019

2022 performance

10% reduction

The non-renewable electricity consumption from 2019/20

Sustainability target by adjust

30% recycling rate

Of the total waste disposal methods from landfill and incineration from 2020/2021

2022 performance

54% recycling rate

Of the total waste disposal methods from landfill and incineration

Sustainability target by at least

10% reduction

Of the waste generation by converting into environmentally friendly products from 2020/2021

2022 performance

3% reduction

Of waste disposed by landfill or incineration methods compared to 2019/20

RISK EXPOSURE

The result of risk assessment has only one significant risk exposure which is tropical cyclone. The table below shows the sum of potential financial impact from tropical cyclone under RCP 2.6 and 8.5 scenarios

Exposure	Financial Impact		
Business unit	Relative exposure by Maximum Financial impact(THB)/Revenue (%) *100	Relative exposure (%) by Maximum Financial impact(THB)/Asset value (%) *100	Relative exposure (%) by Maximum Financial impact (THB)/Insurance (%) *100
All (Media & Office)	<u>RCP 2.6</u> Short: 0.19 % Medium: 0.20 % Long: 0.20% <u>RCP 8.5</u> Short: 0.20% Medium: 0.21% Long: 0.21%	<u>RCP 2.6</u> Short: 0.12% Medium: 0.12% Long: 0.12% <u>RCP 8.5</u> Short: 0.13% Medium: 0.13% Long: 0.13%	<u>RCP 2.6</u> Short: 190% Medium: 194% Long: 194% <u>RCP 8.5</u> Short: 192% Medium: 201% Long: 207%

OPPORTUNITY EXPOSURE

The way in which the world moves to lower-carbon practices creates potential risks and also opportunities. Some are common to many businesses, such as developments in electricity price and I-REC price. Other impacts are particularly relevant to VGI and include potential impact

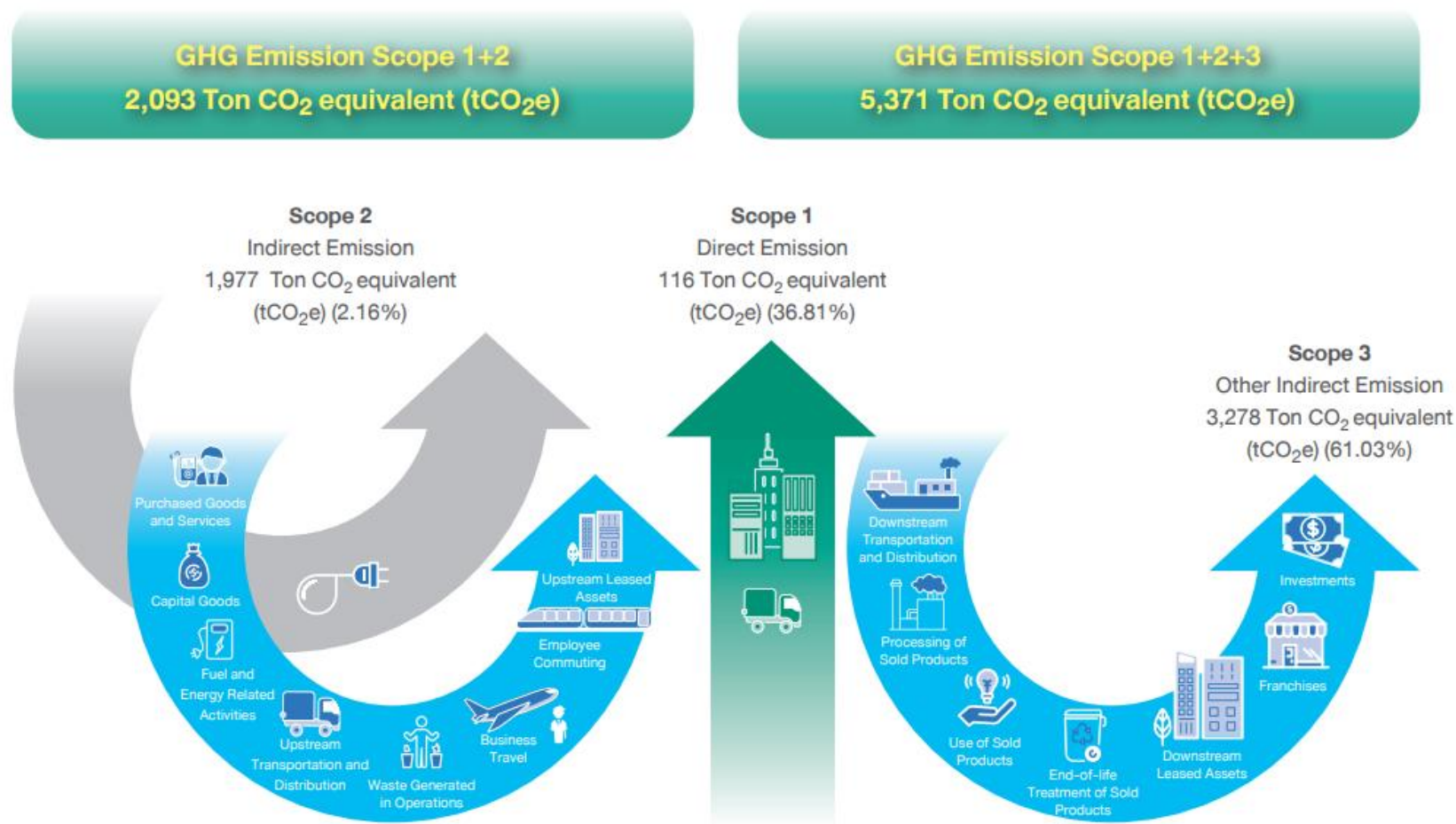
Exposure	Cost saving	
Business unit	Relative exposure by cost saving (THB)/Revenue (%) *100	Relative exposure (%) by cost saving (THB)/Asset value (%) *100
Media advertising and office	<u>NZE</u> Short-term: 0.09% Medium-term: 0.23% Long-term: 0.40% <u>STEPS</u> Short-term: 0.07% Medium-term: 0.15% Long-term: 0.26%	<u>NZE</u> Short-term: 0.05% Medium-term: 0.14% Long-term: 0.24% <u>STEPS</u> Short-term: 0.04% Medium-term: 0.10% Long-term: 0.16%

FORWARD-LOOKING METRICS

Business unit	Cross-industry climate related metric category	Metric	Output value	Methodology	Coverage
Media advertising	Transition risks	Market	Changes in I-REC price	IEA: NZE, STEPS	100% of media advertising
	Climate-Related Opportunities	Energy sourcing	Changes in electricity price	IEA: NZE, STEPS	100% of media advertising
	Physical risks	Tropical cyclone	Changes in Tropical cyclone frequency and intensity	IPCC: RCP 2.6, RCP 8.5	100% of media advertising
	Physical risks	Flood	Changes in Flood frequency and intensity	IPCC: RCP 2.6, RCP 8.5	100% of media advertising

GHG EMISSIONS INVENTORIES

Carbon Emission of Organisation in 2022/23



INTERNAL OPERATIONS GOALS

Internal operations goals table

Goal type	Goal description	Baseline value	Baseline year	Goal target	Target year	Goals status
Electricity consumption	Maintain the level of electricity consumption	3,769.29 MWh	2022	10 %	2023	100%
Waste	Increasing recycling rate	5.54 Metric tonnes	2020	30%	2023	85%
Waste	Reduction in waste disposed	2.85 Metric tonnes	2019	10%	2023	3%

Internal Climate-Related Management Incentives to achieve operational goals “Spirit Program – NuDuan Chuan Kayan Project”

Objective	Employees can be rewarded points for achieving for good corporate behavior which covers ESG targets including energy reduction, resource efficiency. Employees can exchange accumulated points for monetary value. In addition, employees with longer years of service are entitled for multipliers depending on number of years of service, therefore can achieve more points for good corporate behavior and exchange for higher monetary value.
Eligibility	All employee levels including <ul style="list-style-type: none"> - CEO and Executive Level - Manager Level - Employees

References

5

References

Intergovernmental Panel on Climate Change (2023), *IPCC AR6 Synthesis report Climate Change 2023* , Retrieved from [AR6 Synthesis Report: Climate Change 2023 \(ipcc.ch\)](https://www.ipcc.ch/AR6/Synthesis/AR6_Synthesis_Report_Climate_Change_2023)

UNEP FI (2023), *Sectoral Risk Briefings: Insight for Financials Institutions, Climate Change Risks in the Agriculture Sector* , Retrieved from [Climate Risks in the Agriculture Sector – United Nations Environment – Finance Initiative \(unepfi.org\)](https://www.unepfi.org/publications/sectoral-risk-briefings)

Intergovernmental Panel on Climate Change (2014), *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Retrieved from [AR5 Synthesis Report - Climate Change 2014 \(ipcc.ch\)](https://www.ipcc.ch/AR5/Synthesis/AR5_Synthesis_Report_-_Climate_Change_2014)

Climate Analytics (2023), *Climate impact explorer*, Retrieved from <https://climate-impact-explorer.climateanalytics.org/>

Strauss et al. 2015, *CoastalDEM®: New v2.1 release provides even better elevation data for flood risk assessment*, Retrieved from <https://go.climatecentral.org/coastaldem/>

IEA (2022), *World Energy Outlook 2022*, IEA, Paris , Retrieved from <https://www.iea.org/reports/world-energy-outlook-2022>

HugeDomains(2023), *Global price petrol* (June 2022 data), Retrieved from [lobalPetrolPrice.com](https://www.globalpetrolprice.com)

VGI Public Company Limited, *One report 2022/23 (FORM 56-1 One Report)*, Retrieved from [annual-report-2022-23-56-1-one-report \(vgi.co.th\)](https://www.vgi.co.th/annual-report-2022-23-56-1-one-report)

VGI Public Company Limited, *Sustainability report 2022/2023*, Retrieved from [sd-report-2022-th.pdf \(vgi.co.th\)](https://www.vgi.co.th/sd-report-2022-th.pdf)



VGI PUBLIC COMPANY LIMITED

**21 TST TOWER, 9TH FLOOR, VIPHAVADI-RANGRIT ROAD
CHOMPHON, CHATUCHAK, BANGKOK 10900 THAILAND**

TEL: +66(0) 2273 8884

FAX: +66(0) 2273 8883