Sustainability & ESG Planning for Built Environment

A Presentation By



Sustainability from Investors' Perspective

FINANCIAL CAPITAL: 30% Disclosed in Financial Report

INTANGIBLE CAPITAL: 70% Sustainability Strategy and Management, Expected Disclosures in Sustainability Reports

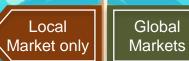
Sustainability Governance Strategy | Capability | Adaptability

Environment Capital Environmental Risk & Management | Efficiency | Strategic Profit Opportunities

Human Capital Talent Management | Employee Motivation | Labour Relations | Innovation Capacity | Health & Safety

Stakeholder Capital Regulators | Investors | Communities | NGOs | Suppliers | Customers | Social Benefits of Products

Commercial Significance of ESG



Global

Sustainable Business

No changes

GROUF

The Green Future Index 2022 *Malaysia ranked* 65th out of 76 nations

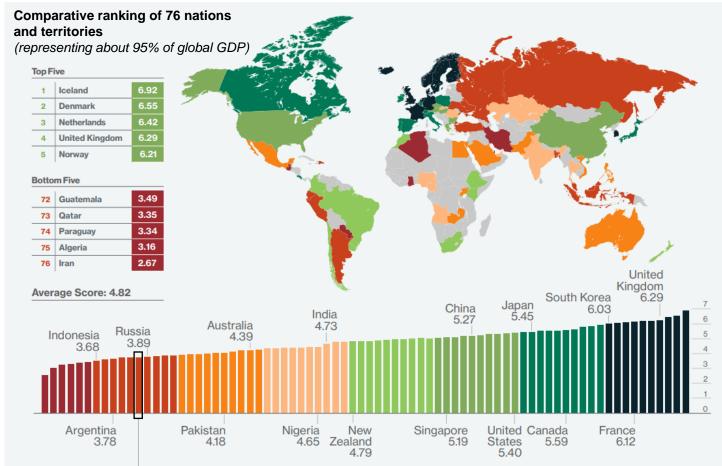
The Green Future Index 2022

The Green Future Index 2022 is the second edition of the comparative ranking of 76 nations and territories (representing about 95% of global GDP) on their ability to develop a sustainable, lowcarbon future for their economies and societies.

It measures the degree to which their economies are pivoting towards **clean energy, industry**, agriculture, and society through investment in renewables, innovation, and green policy.

All **22 indicators** were used and structured into **5 separate pillars**:

- 1. Carbon emissions
- 2. Energy transition
- 3. Green society
- 4. Clean innovation
- 5. Climate policy



Malaysia Score 3.87 Rank 65th (2022); Rank 56th (2021)

9

Overview for Malaysia

In its 2040 energy transition plan, Malaysia plans to increase **renewable energy to 31% in 2025 and 40% in 2035**, by which time carbon emissions are projected to decline 60%.

Source: MIT Technology Review Insights, 2022

Sustainable Development Goal (SDG) 2021

Malaysia ranked 65th out of 165 countries

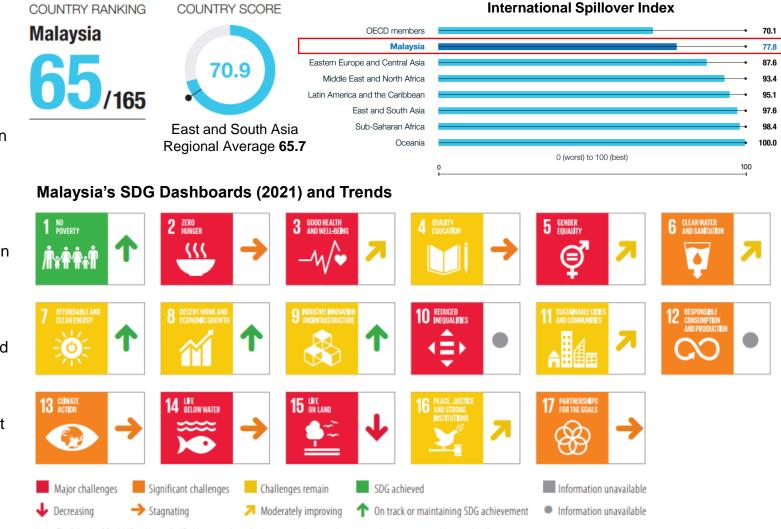


The Sustainable Development Report 2021 (SDR2021) presents data on countries' performance against the SDGs.

The SDG dashboards highlight each country's strengths and weaknesses in relation to the 17 goals, presenting performance in terms of levels and trends.

The score can be interpreted as a percentage of SDG achievement.

A score of 100 indicates that all SDGs have been achieved.



Notes: The full title of Goal 2 "Zero Hunger" is "End hunger, achieve food security and improved nutrition and promote sustainable agriculture". The full title of each SDG is available here: https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals

Source: Sustainable Development Report, Ranki

Global Sustainability Competitiveness Index (The GSCI) 2021

Malaysia ranked 67th out of 180 nations



The GSCI is considered to be a more balanced and more inclusive index than the WEF Competitiveness ranking.

The GSCI measures competitiveness of countries based on 131 indicators derived from the World Bank, the IMF, and various UN agencies.

The **131 indicators** are grouped into 5 sub-indexes:

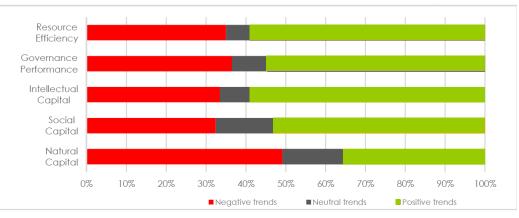
- 1. Natural Capital
- 2. Resource Efficiency & Intensity
- 3. Intellectual Capital
- 4. Governance Efficiency
- 5. Social Cohesion

The **average global score** in the Global Sustainable Competitiveness Index 2021 (GSCI) is **45**, out of a possible 100. The state of the World is **not particularly good**.

2021 Average Global GSCI Score = 45

To reach a perfect sustainable competitive World, it needs additional **55** score – the world are still far away from a **green**, **inclusive**, **circular society**.

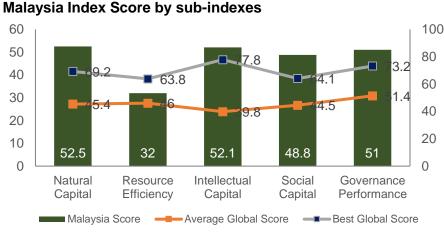
Global Trend: % of Positive or Negative Developing Indicators in GSCI

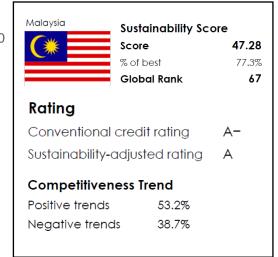


Intellectual Capital has the highest % of **positive** drivers (59%), mostly driven by Asian Nations.

Natural Capital trends are 50% negative.

Unfortunately, we have to expect further decline of the natural environment in the future.





Source: The Global Sustainable Competitiveness Index 10th edition by SolAbility – State of the World Report 2021

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Sustainable Cities Index (SCI) 2022

Malaysia ranked 71st out of 100 cities

ARCADIS Design & Consultancy for natural and built assets

The Sustainable Cities Index ranks **100 global** cities on their sustainability, encompassing measures of the social, environmental and economic health of cities

The SCI measures three (3) pillars of sustainability:

- People (Social). Reflects social mobility and quality of opportunity and life
- Planet (Environmental). Describes management of energy use, pollution and emissions
- Profit (Economic). Assesses business environment and economic performance

The three pillars are closely aligned to the UN Sustainable Development Goals (SDGs) and track progress against UN SDG commitments

Summary of Selected **Countries Ranking (2022)**

- Oslo, Norway 1st
- Stockholm, Sweden **2**nd
- Tokyo, Japan 3rd
- Copenhagen, Denmark **4**th
- 5th Berlin, Germany
- 6th London, England
- Seattle, United States **7**th
- Paris, France 8th
- San Francisco, United **G**th States

Kuala Lumpur, Malaysia

Amsterdam, 10th Netherlands

71*st*

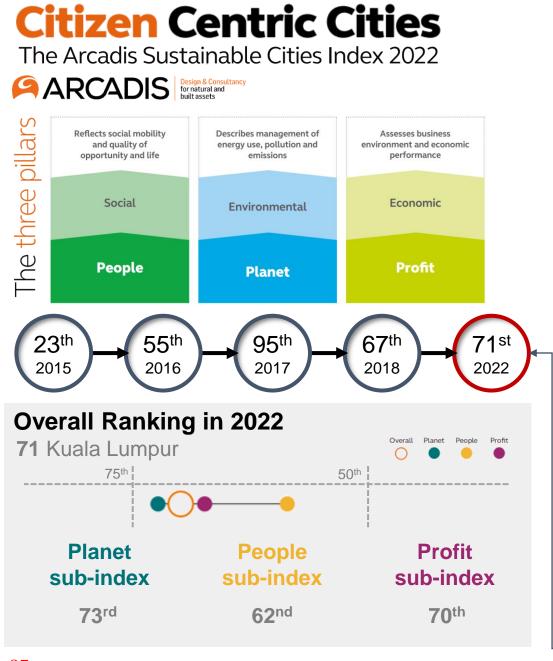
8 Archetypes that highlight how cities are experienced by citizens

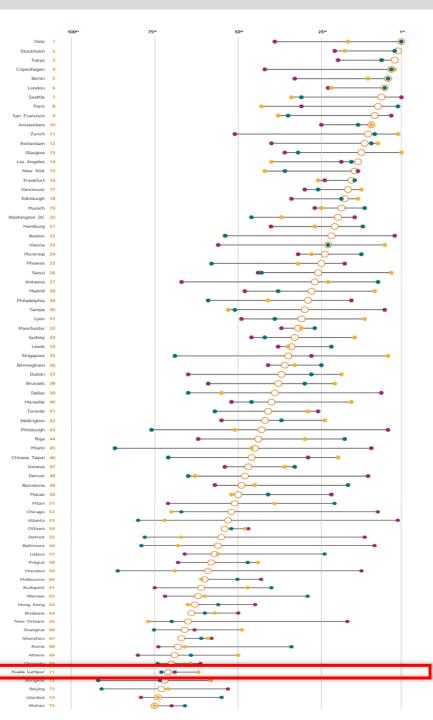


The physical attributes of a city will affect the city's sustainability in the longterm. Some sample are: investment in health, education & transport infrastructure.

The city planning will need to consider how these drivers relate to citizen needs, both now & in the future.

Source: Arcadis Sustainable Cities Index 2022





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State of Global Climate Change

The increase in GHG emissions has led to the global warming of the atmosphere, attributable to human actions that create and emits CO2. The extreme conditions further exacerbate or causes a wide range of economic and social repercussion.

Premature Mortality

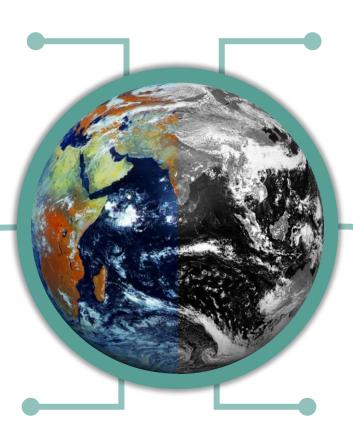
Emission from fossil fuel are responsible for **1 out of 5 premature death** in 2018, amounting to **8.7 million death**

Malnutrition, Malaria, Diarrhoea & Heat Stress

Climate change would cause an additional death of **250,000 per year** between 2030 – 2050

Developing Countries are most at Risk

Countries with weak health infrastructure may not be able to cope without aid



Air Pollution

7 million of death from all sources of air pollution including the indoor and ambient pollution

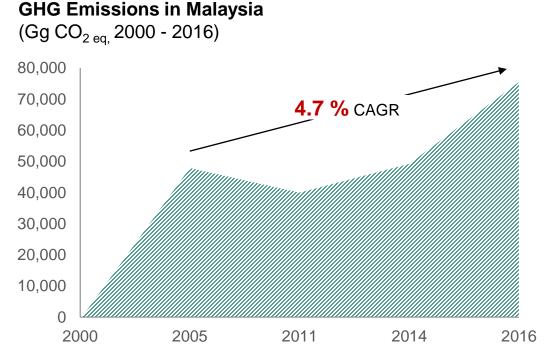
Death of Wildlife

1 billion sea creatures have died due to heat with 600,000 dead mussels in a 164 feet of beach

Biodiversity Loss

A loss of **23% of natural habitat** would be lost in the next 80 years

Malaysia is committed to be a Carbon Neutral country by 2050



- Increasing trend of GHG emissions in Malaysia since 2000. It hit about 75,488 Gg CO_{2eq} in 2016, from -848.98 Gg CO_{2eq} in 2000
- Based on the National Low Carbon Cities Masterplan (NLCCM), there are 15 cities in Group 1* are projected to achieve carbon neutrality by 2050
- To solve the issue & target above, Malaysia has been putting effort to promote low carbon cities while reducing energy consumption and GHG emissions

"We are committed to be a carbonneutral country at the earliest in 2050."

Datuk Seri Ismail Sabri Yaakob Malaysia Prime Minister

More efforts will be needed in the environmental & circular economy aspects



Stable level of waste generated per capita implies that the consumption patterns of the population are generally maintained at the same level

Increases in industrial production did not improve or deteriorated the recycling of waste, this suggests the increased in products are of similar level of circularity potentials

More wastes were generated to the environment as the economy growing

Source: Department of Statistics Malaysia, 27Advisory Analysis

Index (IPI)

30.7

9.8

2020

28.1

14.6

2019

13.5

Understanding Environment, Social and Governance (ESG)

ESG addresses many topics and stakeholders.

ESG represents the company's efforts to systematically assess, manage, and monitor risks of material potential impact to the strategic and financial decisions of the company.

The term ESG is often used as a synonym for sustainability, CSR, public relations, social investment, or environmental compliance.

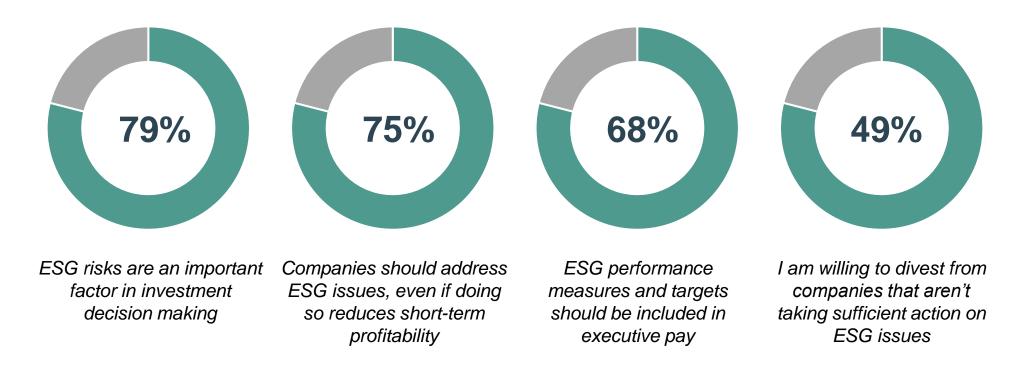
While some of these elements may factor into an ESG program, at the center of ESG is the management of risk and the preservation of shareholder value.



Investors are catching up on ESG, and they're ready to act

Attitude Toward ESG Risks and Opportunities

(% of respondents who agree)

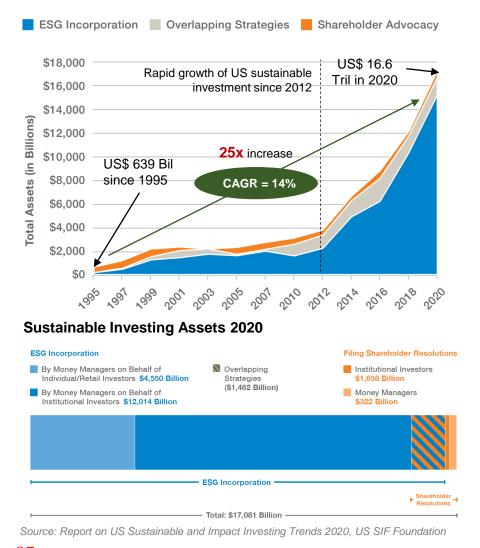


Respondent Profile: **325** investment professionals across **43** territories globally

Source: 2021 Global Investor Survey

Sustainable Investing in the US has been growing at CAGR 14%, and Climate Change has been one of the ESG Criteria Focus

Sustainable Investing in the United States 1995–2020



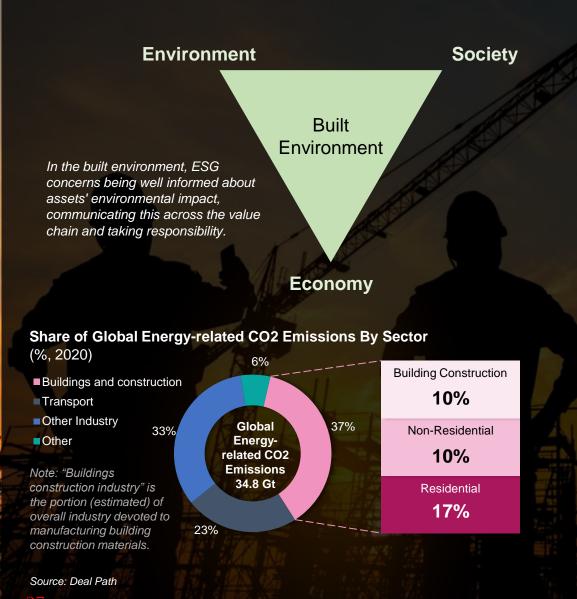
What is sustainable investing?

 Sustainable investing refers to assets under management using sustainable investing strategies which practice "ESG incorporation" in their investment analysis and portfolio selection.



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ESG in real estate has become a critical consideration to fight climate change



ESG is a framework that allows investors to measure the impact of their real estate investments across ESG-related factors. Achieving data-driven ESG certifications can prove valuable to investors in the form of more funding, exclusive lending opportunities, and more.

ESG considerations in built environment have become a top priority for investors at every stage in the asset lifecycle– from screening prospective acquisitions, to building development, and of course, while optimizing building energy usage in servicing tenants.

The built environment sector generates **37** percent global energy-related CO2 emissions; construction uses 32 percent of the world's natural resources.

The World Bank estimates, the built environment sector has to **reduce CO2 emissions by 36% by 2030** to support staying within the 2°C threshold. If the world's nations do not reduce global warming quickly, temperatures may increase dramatically in the coming decades.

A company's ESG index would affect the investors' perception and thus impact it's ability to attract investments and share price movements

"

No MNC (multinational corporation) or buyer of Malaysian goods and services would want their products or brand to be associated with human rights deficiencies

And a perceived weak track record of such in Malaysia risks the country's competitiveness in terms of trade and FDI (foreign direct investment)

Anand Pathmakanthan Regional Head of Equities Research Maybank Kim Eng

> Maybank Kim Eng

Investors may prioritise ESG-related companies to ensure that their capital will not be stuck in some companies that are ignorant of ESG, which will eventually be avoided by investors in the future

> Syhiful Zamri Abdul Azid Chief Investment Officer Maybank Asset Management Sdn Bhd

> > Maybank Asset Management

We opine that one of the main advantages of being on an ESG index such as F4GBM is that it opens the company to a wider pool of investors. Therefore, companies not part of the F4GBM may face lower visibility

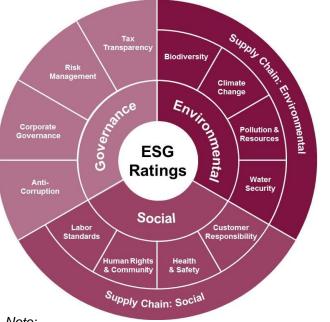
> Imran Yassin Yusof Head of Research MIDF Research

midf F RESEARCH

There are still many Malaysia's property companies having low ESG scores



In July 2021, Bursa Malaysia and FTSE Russell launched the FTSE4Good Bursa Malaysia Shariah (F4GBMS) Index to cater to investor demand for ESG and Shariah-compliant index solutions. The F4GBMS index is designed to track constituents in the F4GBM Index that are Shariah-compliant. The list has evaluated **249** public listed companies in Malaysia



Note:

Definition of Band by ESG Rating by FTSE Russell Band 4: Top 25%; Band 3: Top 26% - 50%; Band 2: Top 51% - 75%; Band 1: Bottom 25%

Sectors	Band 1	Band 2	Band 3	Band 4
Financial Services	6%	0%	25%	69%
Transportation & Logistics	0%	13%	38%	50%
Telecommunications & Media	0%	18%	36%	45%
Utilities	14%	0%	43%	43%
Plantation	8%	33%	17%	42%
Health Care	11%	22%	33%	33%
Energy	24%	29%	18%	29%
Consumer Products & Services	28%	30%	20%	22%
Technology	41%	18%	23%	18%
Real Estate Investment Trusts	0%	33%	50%	17%
Property	25%	20%	45%	10%
Industrial Products & Services	54%	15%	25%	6%
Construction	53%	26%	16%	5%

Only 10% of companies in Property sector achieve the Band 4 ...

Stock Code	Company Name	Band
7105	HCK CAPITAL GROUP BERHAD	1
6181	MALTON BHD	1
6114	MKH BERHAD	1
7765	RAPID SYNERGY BHD	1
5239	TITIJAYA LAND BERHAD	1
1589	ISKANDAR WATERFRONT CITY BERHAD	2
5789	LBS BINA GROUP BHD	2
5073	NAIM HOLDINGS BHD	2
5401	TROPICANA CORPORATION BERHAD	2
3417	EASTERN & ORIENTAL BHD	3
8206	ECO WORLD DEVELOPMENT GROUP BERHAD	3
5283	ECO WORLD INTERNATIONAL BERHAD	3
3174	LAND & GENERAL BHD	3
1651	MALAYSIAN RESOURCES CORPORATION BERHAD	3
5236	MATRIX CONCEPTS HOLDINGS BHD	3
1724	PARAMOUNT CORPORATION BHD	3
5288	SIME DARBY PROPERTY BERHAD	3
8664	SP SETIA BHD	3
8583	MAH SING GROUP BHD	4
5148	UEM SUNRISE BERHAD	4

... **20** out of the 249 companies are under Property sector, and **90%** are still at **Band 3 or below**.

Property Companies need to have more comprehensive overview on its operations especially on labour management, product design and raw material followed by structured ESG reporting & disclosure in order to improve their ESG scoring

Case Study on Band 4 Company – Mah Sing Group Bhd

SUSTAINABILITY FRAMEWORK

MahSing Reinvent Spaces. Enhance Life.

Mah Sing's approach to sustainability is driven by the Group's sustainability framework with the Group's vision and mission at the apex of this framework.



Linkage of Adopted UN SDGs to Material Topics

MISSION PILLARS	MATERIAL TOPICS	UN SDG LINKAGES
EMPOWERING our people towards personal and professional growth through continuous learning	Employment Training and Education Economic Performance Innovation Anti-corruption	4 martine 5 martine ©
Anticipate future MARKET TRENDS and providing the right solutions	Economic Performance Innovation Customer Satisfaction Product and Services Responsibility (Environmental) Product and Services Responsibility (Social) Employment	8 EEEE EEEEE 8 EEEEE EEEEE 9 Meterometer 8 EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE
Delivering our QUALITY PROMISE	Economic Performance Materials Occupational Health and Safety Customer Satisfaction Innovation Procurement Practices and Supply Chain Product and Services Responsibility (Social) Compliance Anti-corruption	9 Antiper Normalia 9 Antiper Normalia 12 Antiper Normalia Antiper Normalia Antip
CARING for the people, community and environment	Indirect Economic Impact Community Development Occupational Health and Safety Product and Services Responsibility (Environmental) Compliance Waste Energy Emissions Water and Effluents Materials Biodiversity	4 metrin bili 8 metrin en una en una

STAKEHOLDERS
Shareholders and Investors Employees Customers Government and Regulatory Authority
Media Suppliers and Contractors Communities Business Partners

Social Media MY Mah Sing app Email Newsletters
 Annual General Meeting Corporate Website Events

Commitments and Pledges



Reduce / avoid the impact or improve efficiency of greenhouse gases ("GHG") emissions towards addressing climate change.

Source: Mah Sing Group Bhd Sustainability Report 2020

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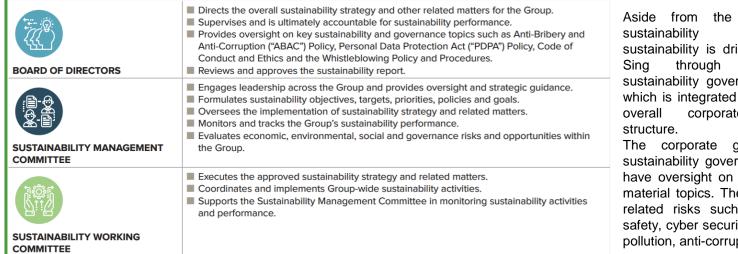
Increase efficiency of raw materials and resources, notably plastics to reduce / avoid impacts associated with resource consumption.



Committed to improving health and safety for workers, employees and other stakeholders across our business operations and value chain.

Case Study on Band 4 - Mah Sing Group Bhd

SUSTAINABILITY GOVERNANCE



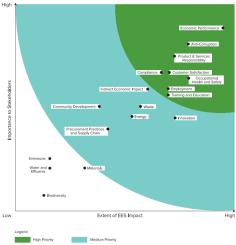
aforementioned framework, sustainability is driven across Mah the Group's sustainability governance structure, which is integrated into the Group's corporate governance

The corporate governance and sustainability governance structures have oversight on a wide range of material topics. These include ESG related risks such as health and safety, cyber security, labour issues, pollution, anti-corruption and more.



Mah Sing defines its list of material topics based on its four sustainability mission goals, its business model and the views and opinions of stakeholders. In FY2020, Mah Sing has retained its 18 material topics and subsequently, its materiality matrix as per the previous year. The table below provides the respective boundaries for each material topic, as well as its alignment with the Group's selected UN SDGs. Specific details on each material topic are provided in subsequent pages of this report.

Mah Sing FY2020 Materiality Matrix



Relevance of Materiality Matters to Stakeholders

	Employees	Customers	Shareholders and Investors	Government and Regulators	Communities	Media	Business Partners	Suppliers and Contractors
Economic Performance	1		1	1		1	1	1
Anti-corruption	1		1	1	1	1	1	1
Compliance		1		1	1		1	1
Customer Satisfaction		1		1			1	1
Indirect Economic Impact	1				1		1	1
Innovation	1		1			1		
Procurement Practices and Supply Chain	1			1			1	1
Waste			1	1	1			1
Energy			1		1			1
Emissions			1	1	1			1
Water and Effluents			1	1				1
Materials		1	1					
Biodiversity				1	1	1		
Product and Services Responsibility (Environmental)			1	1	1			1
Occupational Health and Safety	1			1			1	1
Employment	1				1			
Training and Education	1				1		1	1
Community Development			1		1	1		
Product and Services Responsibility (Social)		1	1		1	1		1

Source: Mah Sing Group Bhd Sustainability Report 2020

Case Study on Band 4 - UEM Sunrise Berhad

SUSTAINABILITY STRATEGY

Embracing the integration of Environmental, Social and Governance (ESG) factors into all aspect of the business ensures our support for our people, the planet and the communities in which we live and work is impactful.

The sustainability strategy boosts innovation, encouraging employees to incorporate sustainability into everyday actions and working symbiotically to build communities of the future. Our goal is to minimise the risks associated with climate change, support the communities in which we operate and protect people and the planet while creating stakeholder value. We monitor environmental, social and governance metrics as best as we can so that our performance can be tracked over time.

ECONOMIC

We seek to create economic value for our suppliers and vendors through our business dealings; the government through taxes paid; and the nation through the development of infrastructure that attracts investments and economic activity.



ENVIRONMENT

We manage our energy and water consumption to avoid waste and manage waste to minimise our impact on the environment. We incorporate innovative designs and features in our developments to reduce material use and find avenues to conserve biodiversity.

SOCIAL

We commit to providing the best possible living environment for our customers while nurturing a conducive workplace for our employees. We establish partnerships in the communities in which we operate and empower employees to volunteer. We also invest in the communities where we operate, to bridge socio-economic gaps.

GOVERNANCE

Our Board of Directors ensures the highest level of integrity and transparency in all actions to build and maintain our corporate reputation and the trust that stakeholders have in us.

Source: UEM Sunrise Berhad Sustainability Report 2020

Providing	Being an
a healthy,	environme
safe,	responsib
conducive	leader and
and	partner in
empowering workplace;	communit

	*	
	Conserving	Er
entall	y natural	ef
ole	resources by	re
d	optimising	us
our	re-use and	an
ities;	recycling	
	wherever	
	possible	

nsuring the Utilising fficient and operational sponsible processes se of water that do not nd energy; adversely affect the



Conducting Working Taking steps rigorous audits, with our to continually evaluations, stakeholders develop and selfto enhance and provide assessments awareness. environmentally supportive and environment; implementation incorporating, performance of this policy; practicing and advances and promoting including sound embedding environmental sustainability into our decision practices, making, using our

guidance, and to create

necessary; and shareholders.

planning and

investment

processes

sustainable

value for our



A member of **UEM Group**

SUSTAINABILITY	
FOCUS AREAS	

on the

PLACES

We transform places in which we invest to create value and enhance the lives of local communities

resources

to provide

leadership,

motivation where

PEOPLE

Our employees are our most valuable assets and their contributions are critical to our success

SOCIAL-ENVIRONMENTAL PERFORMANCE

We develop high-guality societies while improving our social and environmental performance

ECONOMIC PERFORMANCE

We deliver sustainable economic performance that is underpinned by good corporate citizenship

Case Study on Band 4 - UEM Sunrise Berhad

SUSTAINABILITY GOVERNANCE

The corporate sustainability team oversees the implementation of the sustainability strategy set by the organisation, driving change within operational and functional groups. The team ensures that there is support for an ethical and sustainable supply chain through environmental and social efforts while mitigating risks as they occur.



SUSTAINABILITY GOVERNANCE STRUCTURE



our agenda. Sustainability matters are overseen by the Board Governance and Risk Committee (BGRC). The Board of Directors appoints some of its members to serve on the BGRC. The BGRC is responsible for overseeing sustainability efforts to ensure alignment with UEM Sunrise's business strategy through the effective management of significant and material economic, environmental and social matters impacting our principal businesses. In parallel, the Board of Directors formalises and reviews the performance of key sustainability initiatives and recommends improvements which include environmental, ethical, social and governance aspects of the business.

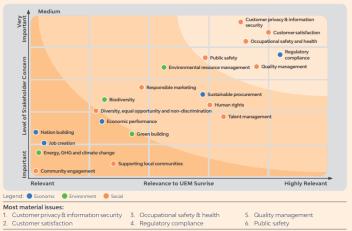
Sustainability is an important part of the business oversight of our Board of Directors. It is integrated into the

business strategy as it is central to

UEM Sunrise's Materiality Process

Step 1:	Step 2:	Step 3:
Identification	Prioritisation	Validation
Identified key issues and defined stakeholders for this consultation	Conducted online survey across 7 stakeholder groups over a duration of 2 weeks and collected 499 complete responses	Obtained Board of Di on the relevance of id material issues

Prioritisation Of Material Issues



Most Important Issues To Selected Stakeholders

	EMPLOYEES	INVESTMENT- RELATED STAKEHOLDERS'	CONTRACTORS & SUPPLIERS	STRATEGIC PARTNERS	GOVERNMENT REGULATORY AUTHORITIES
	Occupational safety and heaith	Sustainable procurement	Customer satisfaction	Environmental Resource management	Customer satisfaction
Customer privacy & information security	Quality management	Economic performance	Customer privacy & information security	Occupational safety and health	Job creation
Customer satisfaction	Regulatory compliance	Environmental resource management	Regulatory compliance	Public safety	Sustainable procurement

and overseeing their execution. Sustainability principles are widely practised throughout UEM Sunrise including business conduct, product design and project developments, talent management, and engagements with the community and wider society.

Source: UEM Sunrise Berhad Sustainability Report 2020



A member of **UEM Group**

irectors input dentified

Environmental regulations will only grow more prominent for ESG real estate

The Building Research Establishment Environmental Assessment Method (BREEAM)



The global standard for measuring and planning sustainability across the asset lifecycle Global Real Estate Sustainability Benchmark (GRESB)



A real estate ESG benchmark through which investors can measure their portfolios against industry standards based on standardised data. LEED (Leadership in Energy and Environmental Design)



A rating system from the US Green Building Council that measures environmental performance, which, in real estate ESG, is considered a high standard. The Carbon Disclosure Project (CDP)



An internationally recognised, non-profit organisation through which investors can disclose, and subsequently reduce, carbon emissions.

ENERGY STAR



An EPA tool that allows businesses to measure and track energy consumption and waste disposal, as well as their environmental impact, at the building level

ESG Indicators for Real Estate industry



ESG real estate considerations have become a top priority for investors at every stage in the asset lifecycle from screening prospective acquisitions, to building development, and of course, while optimizing building energy usage in servicing tenants.

Environmental

Emissions – Scope 1, 2, and 3

- By project/development
- Administrative/office buildings

Water discharge

• By quality and destination

Waste produced

- By type and disposal methods
- · Recycling rate

Significant impacts of activities, products, and services on biodiversity

Habitats protected or restored



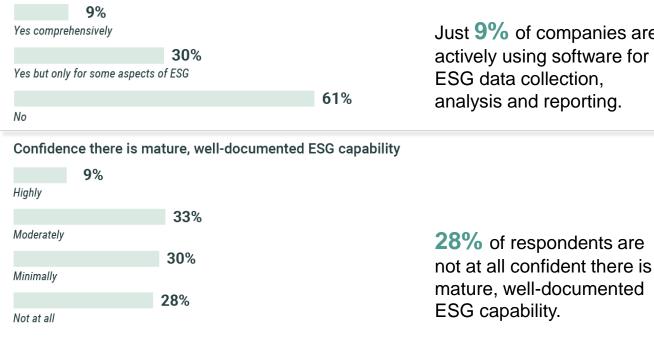
The No. 1 ESG challenge organisations face: DATA

Reporting on ESG and adhering to disclosure requirements is a key sign – to regulators, to investors, to your peers and competitors – that your business takes its ESG commitments seriously.

And the foundations of a strong ESG program are built on data.

However, a recent survey suggest that many organizations can't get over the data hurdle when it comes to ESG.

Currently using software for esg data collection, analysis and reporting



Just 9% of companies are actively using software for analysis and reporting.

ESG Planning and Performance Survey

OCEG 2021

Snapshot of Survey Respondents

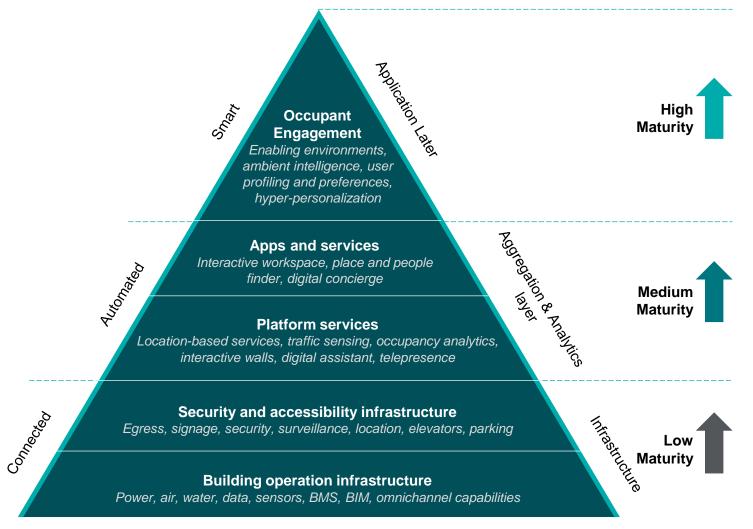
- 500+ Participants
- 66% have a role in managing or reporting on ESG, policies for ESG, and/or selecting technology
- 53% hold board. C-suite or other senior executive titles
- They come from organizations of all sizes from fewer than 500 employees to 25,000 employees
- 46% have more than 1000 employees
- Wide range of industries with finance topping the list at 21%

Note: Open Compliance & Ethics Group (OCEG) is a global, nonprofit think tank and community. OCEG inform, empower, and help advance 120,000+ members on governance, risk management, and compliance (GRC).

Source: World Economic Forum - The No. 1 ESG challenge organizations face: data; Diligent - ESG Planning and Performance Survey (OCEG 2021)

Digital technologies help companies improve ESG reporting & track their progress

Connected, Automated & Smart Real Estate Asset Architecture



"Data has been at the heart of many conversations about how we move forward and drive progress in implementing sustainability.

Developments in fintech and green technology have led to greater sophistication in analysing ESG related data."

> Helena Fung FTSE Russell

Source: Deloitte - Digital Real Estate in 2022

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If you are interested, that's good.

If you are not interested, GET INTERESTED!

Treat ESG as a risk that you cannot ignore.

statement and party life and

Carbon Footprint Assessment

- Conducting carbon inventory check on Scope 1 and 2
- Determining company & business carbon footprint level

4 Materiality Assessment

- Ascertain the target
 audiences for the common
 disclosures
- Engaging internal & external stakeholders to ascertain Financial Materiality & Impact Materiality for the business

07 Low Carbon Design

- Reviewing architectural & engineering design to assess carbon footprint
- Proposing low carbon design alterations at city, project & building level

Gap Analysis

- Company-wide diagnostics to ascertain gaps to achieve ESG objectives
- Identifying areas for improvement

05 Sustainability Indicators

- Evaluating & selecting ESG indicators for financial & sustainability reporting
- Developing the data capture & reporting framework

Benchmarking

- Reviewing industry peers' performance to ascertain overall company standing
- Identifying industry bestpractices & possible adaptation

Sustainability Strategies & Reporting

- Ascertain ESG goals & devise corresponding Corporate-level ESG strategies for Sustainability Reporting
- Proposing governance for effective implementation

Sustainability Actions Plan

- Formulating time-phased implementation action plans for ESG strategies
- Setting progressive milestones & develop mechanism for performance tracking

VERITAS 27Advisory

Sustainability Training

- ESG training for Board members & senior management
- Coaching sessions for strategy execution & internal reporting

Socio-Economic Transformation

O1 Carbon FootprintAssessment

- Conducting carbon inventory check on Scope 1 and 2
- Determining company & business carbon footprint level



02 Gap Analysis

- Company-wide diagnostics to ascertain gaps to achieve ESG objectives
- Identifying areas for improvement \bullet



03 Benchmarking

- Reviewing industry peers' performance to ascertain overall company standing
- Identifying industry best-practices & possible adaptation



Socio-Economic Transformation

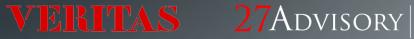
04 Materiality Assessment

- Ascertain the target audiences for the common disclosures
- Engaging internal & external stakeholders to ascertain Financial Materiality & Impact Materiality for the business

VERTIAS 27ADVISORY Socio-Economic Transformation

05 Sustainability Indicators

- Evaluating & selecting ESG indicators for financial & sustainability reporting
- Developing the data capture & reporting framework



Socio-Economic Fransformation

16 Sustainability Strategies & Reporting

- Ascertain ESG goals & devise corresponding Corporate-level ESG strategies for Sustainability Reporting
- Proposing governance for effective implementation

VERITAS 27ADVISORY Socio-Economic Transformation

07 Low Carbon Design

- **Reviewing architectural & engineering** ulletdesign to assess carbon footprint
- Proposing low carbon design alterations at city, project & building level



08 Sustainability Actions Plan

- Formulating time-phased implementation action plans for ESG strategies
- Setting progressive milestones & develop mechanism for performance tracking



Our ESG Services

09 Sustainability Training

- ESG training for Board members & senior management
- Coaching sessions for strategy execution & internal reporting



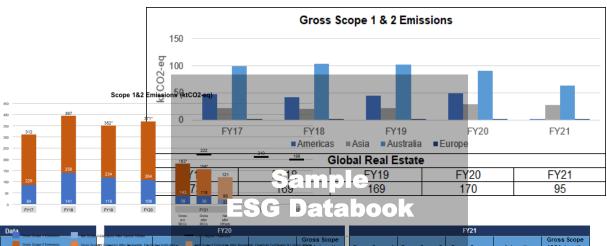
Socio-Economic Transformation

Sample Materiality Assessment for ESG Dashboard

		Extractives & Minerals Processing								Financials	Food & Beverage	Health Care	Infrastructure	
Dimension	General Issue Category ⁽¹⁾	Click to expand	Coal Operations	Construction Materials	Iron & Steel Producers	Metals & Mining	Oil & Gas – Exploration & Production	Oil & Gas – Midstream	Oil & Gas – Refining & Marketing	Oil & Gas – Services	Click to expand	Click to expand	Click to expand	Click to expand
Environment	GHG Emissions													
	Air Quality													
	Energy Management													
	Water & Wastewater Management													
	Waste & Hazardous Materials Management													
	Ecological Impacts													
	Human Rights & Community Relations													
	Customer Privacy													
	Data Security													
Social Capital	Access & Affordability													
	Product Quality & Safety													
	Customer Welfare													
	Selling Practices & Product Labeling													
	Labor Practices													
Human Capital	Employee Health & Safety													
	Employee Engagement, Diversity & Inclusion													
	Product Design & Lifecycle Management													
Business Model & Innovation	Business Model Resilience													
	Supply Chain Management													
	Materials Sourcing & Efficiency													
	Physical Impacts of Climate Change													
Leadership & Governance	Business Ethics													
	Competitive Behavior													
	Management of the Legal & Regulatory Environment													
	Critical Incident Risk Management													
	Systemic Risk Management													

Sample ESG Dashboard

"An international real estate developer ranked top spots in GRESB sustainability ranking and announced to becoming a 1.5°C aligned company."



Data	anna 1 En	and the second second second		FT20			F121				
Gross Scope 2 Emissions Gross • Comp.Gross S. Emissions		Gross Scope f (tCO2-eq)	Gross Scope 2 (tCO2-eq)	Gross Scope 1&2 (tCO2-eq)	Normaliser	Gross Scope ^{on 9} 182 Intensity (kg CO2-eq/ Normaliser)	Gross Scope 1 (tCO2-eq)	Gross Scope 2 (tCO2-eq)	Gross Scope 1&2 (tCO2-eq)	Intensity Normaliser	Gross Scope 1&2 Intensity (kg CO2-eq/ Normaliser)
Global Real Estate		11,198	158,770	169,968			11,801	83,468	95,269		
Americas		4,595	44,071	48,666			1,349	1,202	2,551		
Investment Management		673	748	1,421	38,980	36	268	598	866	37,947	23
Defence	۲	3,922	43,323	47,245	828,868	57	1,081	604	1,685	838,137	2
Development											
Asia		5	29,707	29,712			4	28,319	28,323		
Investment Management		5	29,707	29,712	447,908	66	4	28,319	28,323	514,610	55
Australia		6,457	84,703	91,160			10,362	53,947	64,309		
Investment Management		3,664	71,833	75,497	2,276,082	33	7,955	41,301	49,256	2,018,800	24
Retirement Living		2,701	11,019	13,720	12,786	1,073	2,076	8,617	10,693	6,810	1,570
Development		92	1,851	1,943			331	4,029	4,360		
Europe		141	289	430			86	0	86		

The ESG Databook provides an aggregated view of climate-related impacts and environmental performance of each business line.

Disclosures are prepared in accordance with the Task Force for Climate-Related Financial Disclosures (TCFD) recommendations.

Sample ESG Insights from Databook:

- Core and Non-Core Businesses
- Greenhouse Gas Emissions
- Water Use
- Electricity Use
- Energy Use
- Waste Production
- TCFD Index
- Climate-related Risks

Source: Lendlease ESG Databook

Case Study

*****=***** 000000 5 ENVIRONMENTAL, SOCIA COVERNANCE

Case Study: Menara JLand Green Building Elements

Efficiency

Energy

Efficiency

Water



GROUP

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PASSIVE MEASURES

- High Performance glazing.
- Air Tight Building Envelope.

ACTIVES MEASURES

- Energy Efficient HVAC System.
- Efficient Lighting System -T5, Lux and Motion Sensor.
- Lift with ACVVVF motor drive and sleeping mode
 - Rainwater Harvesting for landscape irrigation.
 - Efficient Water Fittings and Fixtures.
 - Use of Condensate Water to top up cooling tower make up water.
 - Water Recycling from Ablution Area for Toilet flushing.

Environmental Quality Indoor

Environmenta

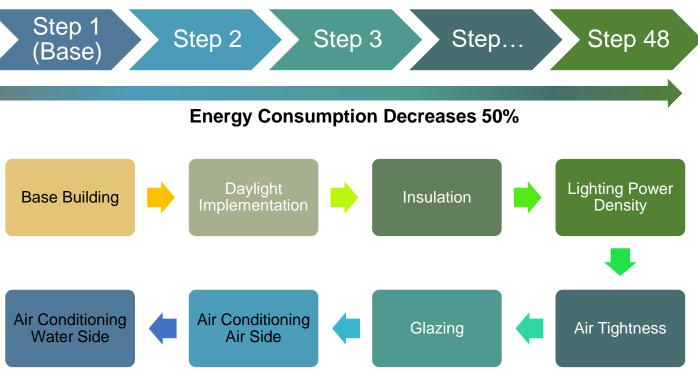
Protection

- Reduce waste during construction and during occupancy.
- Use of refrigerants with zero ODP.
- Selection of sustainable materials.

- Optimize Daylight Harvesting.
- Use low VOC, non toxic materials for paints and adhesive.
- Maintain odour free indoor environment.
- UV Light in the AHU to kill bacteria/viruses and protect occupants during haze season.



- Targeted Building Energy Index (BEI) of 82 kWh/m² per year.
- 60% less energy consumed compare to a conventional building. Implement 48 incremental steps to reduce energy demand.



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Good Indoor Air Quality designed for building occupants. UV light (AHU) to kill bacteria/viruses and protect occupants during haze season. Low VOC paints and adhesive.



Main building façade are orientated north-south to minimise solar heat gain. Sky gardens located at east-west to utilize solar heat gain for landscape.

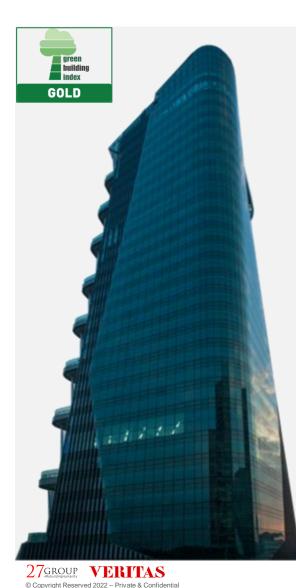




Collect and re-use rainwater on site for landscape irrigation. Recycle waste water from ablution area and using it for toilet flushing. Recycle condensate water from all AHU and re-use for aircond make tower to serve cooling towers.



Reduce the reliance to artificial lighting and utilize natural daylight thus reducing carbon emission.

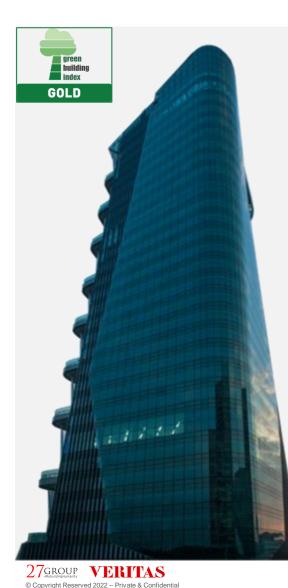




This includes both passive & active design. Good performance glazing (reject heat and allow light). Heat recovery system bring in fresh air at energy low cost. Lighting system i.e motion sensor& lux sensor. Air tight building.



Good practice of construction waste management. Divert 75% construction waste to recycle centre from landfill.





Recognised sustainable products i.e ceiling, door selection – MTCC certified.



GREEN TRAVEL PLAN

Electric car charging station, carpool preferred parking.

LOW CARBON SOCIETY BLUEPRINT FOR ISKANDAR MALAYSIA

Scope of Services

- Assessment towards achieving the carbon reduction target for year 2025 including gap analysis
- Precedent and benchmarking on international and local best practices on sustainable and low carbon development
- Conduct Greenhouse Gas (GHG) Modelling and Climate Risk Vulnerability Assessment (CRVA)

Solutions/Outcomes Delivered

- Developed detailed implementation action and roadmap including mapping with 17 Sustainable Development Goals (SDG) and New Urban Agenda (NUA)
- Developed framework for future monitoring and reporting plan to track the performance in achieving climate mitigation target and adaptation goal

Socio-Economic Transformation

This project was delivered by the core team of 27Advisory during their tenure in their previous engagement

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NATIONAL SOLID WASTE BLUEPRINT FOR A MINISTRY

Scope of Services

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- Benchmark on circular economy, conduct comparative analysis and document best practices
- Value chain mapping & analysis for Solid Waste, from an end-to-end perspective covering the process of product production to disposal or postconsumer
- Propose Solid Waste Management Transformation initiatives towards a Circular Economy
- Implement Regulatory Impact Assessment

Solutions/Outcomes Delivered

- Overview on solid waste ecosystem & regulatory environment of the country
- Strategic initiatives to
- Transformation Roadmap for Solid Waste Management Towards A Circular Economy

COMPREHENSIVE DEVELOPMENT PLAN 2020 – 2030 (CDPIII) FOR ISKANDAR MALAYSIA

Scope of Services

 Assessment of current State, National, Regional and International economic development policies and directions and their impact to Iskandar Malaysia

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- Benchmarking assessment of development strategies for developed countries
- Conduct assessment of Digital Economy and Industrial Revolution 4.0 and recommendations
- Provide key directions and strategic initiatives for sustainable development in the study area

Solutions/Outcomes Delivered

- Developed implementation plan and programmes including governance tools for effective implementation with effective and measurable timeline from economic perspective
- Developed comprehensive development framework for economic arrangement

Socio-Economic Transformation

7Advisory

LIVABILITY CITY INDEX FOR THINKCITY

Scope of Services

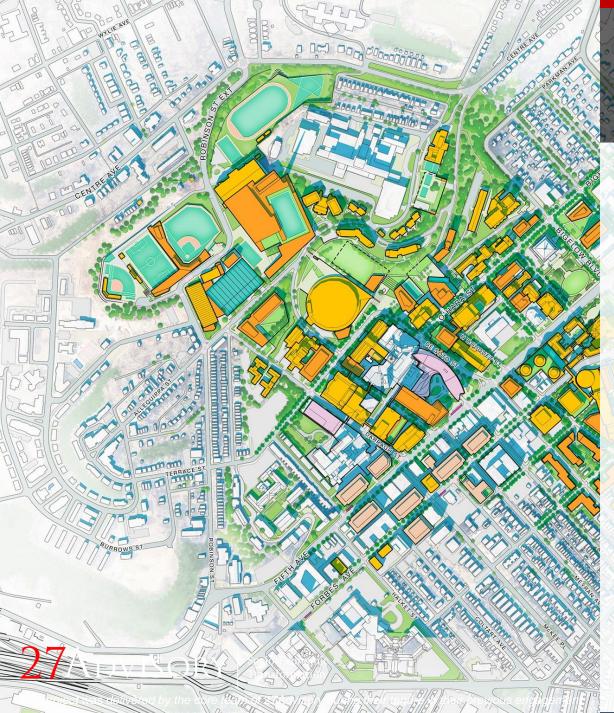


- Develop a Livability Index for the client that provides an independent assessment on the living experiences of general public Malaysia.
- The phase 1 of this project was carried out at Penang, Malaysia

Solutions/Outcomes Delivered

27ADVISORY Socio-Economic Transformation

- Leveraging on our internal database & international benchmark, we have developed an evaluation framework for the Index which look at the indicators from 5 main areas of Livability, i.e. Live, Work, Play, the Environment & Governance
- Adopted both quantitative analysis and qualitative analysis whereby a weightage was given to the qualitative indicators



COMPETITIVE CITY MASTER PLAN FOR A MINISTRY

Scope of Services

- Working with a diverse group of consultant comprises of town planner, architect and business strategist, we were tasked to draw up a Competitive City Masterplan that will uplift the competitiveness level of the capital city and guide its future development.
- The master plan is to include recommendations in the forms of policy, physical project, and programs.

Solutions/Outcomes Delivered

- Developed a comparison matrix that look at various city's indicators.
- Curated several baskets of strategies by leveraging on international benchmark.
- The outcome is a rich pool of strategy database which cover key areas of a city such as economic density, transit-oriented development, livability, green-based development, knowledge-based cluster, inclusivity & digital infrastructure.

AGRICULTURE LANDSCAPE & 4IR DEVELOPMENT FOR THE AGRICULTURE SECTOR IN M'SIA

Scope of Services

- Thorough assessment on the Agriculture industry in Malaysia, including the industry outlook, issues which impeding the technology adoption, key industry development plan and progress to-date
- International benchmark on government policy strategy relating to the development Agriculture sector towards higher technology adoption
- Make recommendations that will resolve the challenges for the Agriculture sector in adopting 4IR technologies

Solutions/Outcomes Delivered

- Recommendations on sectoral policies and programmes with main objectives to resolve the challenges that are impeding technologies adoption & facilitate nation-wide 4IR adoptions
- Syndication with Agriculture-related ministries, agencies & associations such as MOA, MPIC, MPOB, MEOA to ensure buy-in on the recommendations

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Socio-Economic Transformation

This project was delivered by the core team of 27Advisory during their tenure in their previous engagement

CONCEPT BUSINESS STRATEGY FOR 4IR APPLICATION CENTERS

Scope of Services

- Conduct macro-economic analysis on the manufacturing industries which required the service of the center
- Conceptualise the strategic components & highlevel operating model of the 4IR Application Center

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Develop an implementation roadmap to guide the business plan execution

Solutions/Outcomes Delivered

- Organised and facilitate a design thinking workshop with the top management to map out the operating flow of the 4IR Application Center.
- Developed several collaboration models between the client and its technology partners in delivering the technology supports for the SMEs. This include options for revenue model to provide technology consultancy & customisation services for different manufacturing industry.

Socio-Economic Transformation

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CONCEPT BUSINESS STRATEGY & INVESTMENT MEMORANDUM FOR DIGITAL COMPANY

Scope of Services



- Conduct global and regional market research on Agri-tech industry
- Develop a 5 years business plan with product rollout plan, strategic partnership and marketing strategies
- Assessment on the potential market size and perform value leakages analysis to ascertain potential value creation from the products
- Build financial model to estimate the business's performance, profitability and ascertain equity investment needed
- Assist in the negotiation process with potential investors for funding

Solutions/Outcomes Delivered



• Produced an Investment Memorandum and assist in the presentation & negotiation with a 5 years business plan with products focus, R&D schedule, funding requirement, corporate & shareholding structure etc.

SMART CITIES FRAMEWORK FOR A MINISTRY

Scope of Services



This framework outlined the development policy, implementation & monitoring mechanism to ensure successful smart city developments that will uplift the cities' competitiveness & quality of life for the citizens.

Solutions/Outcomes Delivered

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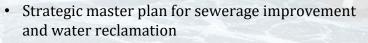
- Gathered urban challenges and industry insights on policy recommendations
- Build upon the insights collected, the team had developed a detailed list of policies recommendations, each equipped with a dedicated set of indicators to measure the performance level of a city in addressing the key urban challenges and to attain smart city level.

27ADVISORY Source Transformer

This project was delivered by the ours team of 27Advisory during their tenure in their previous engager

SEWERAGE IMPROVEMENT & WATER RECLAMATION STUDY **AND PLANNING** FOR JOHOR DARUL TA'ZIM

Scope of Services



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- Concept value engineering on preliminary design and technology used
- Financial modelling to evaluate the project feasibility, including CAPEX & OPEX estimates and lifecycle costing analysis

Solutions/Outcomes Delivered

- Developed a business plan for supplying industrial water from wastewater reclamation
- Evaluate the technologies available and proposed a . viable option in advanced treatment of sewage effluent for industrial consumption



This project was delivered by the core team of 27 Advisory during their tenure in their previous engagement

WATER FOR GROWTH -SUSTAINABLE WATER MANAGEMENT FOR NEGERI SEMBILAN

Scope of Services

- Situational analysis on the current state of water supply in Negeri Sembilan
- Water security assessment along the value chain from upstream to downstream
- Value leakage analysis on water supply and the assessment on the potential saving in water efficiency
- True Cost of Water (TCoW) analysis

Solutions/Outcomes Delivered

- Ascertained the "True North" of sustainable water management in Negeri Sembilan
- Demand profile and usage of water
- Land utlisation by upstream and downstream
- Analysed the true cost of water to derive the direct and indirect costs, risk impacts as well as missed opportunities
- Identified value leakage in terms of physical losses and non-revenue water

This project was delivered by the core team of 27Advisory during their tenure in their previous engagement

Socio-Economic

Transformation

27Advisory

BUSINESS FEASIBILITY STUDY & MASTER PLANNING FOR AN AGRICULTURAL PARK

Scope of Services

- Conduct feasibility study on Agrotourism, including technical, financial, market, economy, implementation, risk, environment and social
- Develop detailed Master Plan which includes Physical Development Masterplan, Rehabilitation Development Masterplan, Infrastructure Masterplan and Sustainable Environmental Plan for the overall proposed development study area
- Produce detailed implementation plan for identified new proposed agrotourism development components

Solutions/Outcomes Delivered

- Improve the park's existing and future tourism products and physical development to achieve a robust, holistic, sustainable and resilient agricultural park
- Produce detailed Business Model which includes development, rehabilitation, operational and maintenance for the overall proposed development study area

Socio-Economic Transformation

27ADVISOR

This project was delivered by the core team of 27Advisory during their tenure in their previous engagement

SOCIO-ECONOMIC ASESSMENT & CONCEPT MASTER PLAN FOR AN ECONOMIC REGION IN VIETNAM

Scope of Services



 Jointly deliver a study that covered master planning, architecture design, environment impact assessment, floor mitigation strategy, and socioeconomic impact assessment with global Top 5 Architecture and Design firm and a Netherlandbased engineering consulting firm.

Solutions/Outcomes Delivered

- Identified a basket of high impact and catalytic projects that could spur the economic growth at project site.
- Stabilized the riverbanks while creating several floodable developments within the flooding zone that can are usable during flooding seasons. With this innovative design, the masterplan can then maximize the socio-economic benefits & construction value of the whole development.

This project was delivered by the core team of 27Advisory during their tenure in their previous engagement

Thank You For Your Time

Sustainability & ESG Planning for Built Environment

Prepared by





GIRISH RAMACHANDRAN Executive Director | 27Group girish@27advisory.com.my

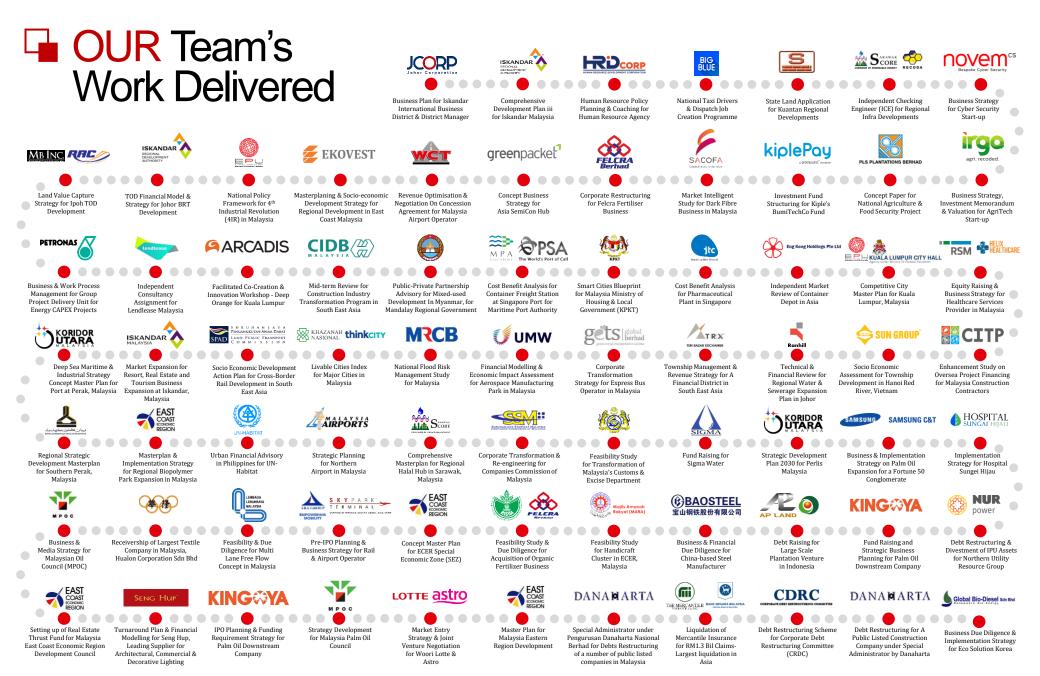


27GROUP INTRODUCTION

Comprising of 27Digital, 27Advisory, 27Capital & 27Projects

The 27Group was founded on the base of the journey of our founders, having spent more than 33 years in audit, corporate recovery then corporate finance moving onto to management consultancy and focusing on natural and built assets over the last decade. With this expertise in understanding design and engineering of large projects, we are now focusing on rebuilding with a cause and care, doing it the right way.





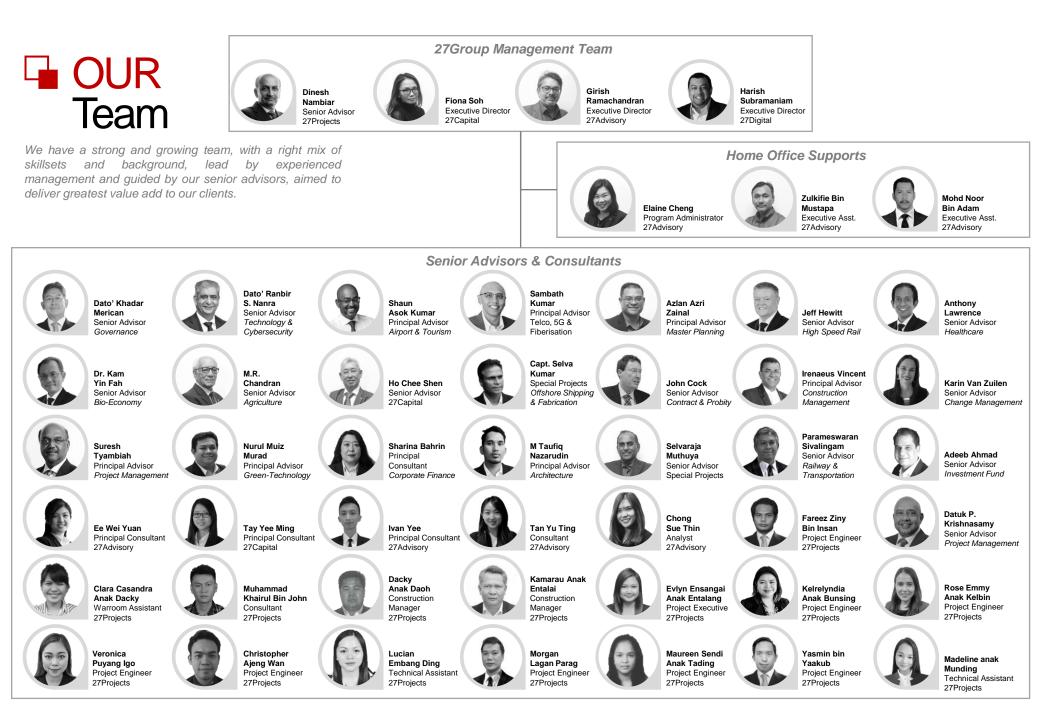
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Our Service Offerings

We provide a wide range of services to complement each stage of a business life cycle

4 Companies9 Offerings27 Services





OUR Award

SME100 Awards: Malaysia's Fast Moving Companies

The Business Media International, one of Asia's leading business-to-business publishers, announced that 27 Advisory Sdn Bhd was named as 100 companies shortlisted amongst thousands of SMEs nationwide for its **SME100 Awards 2019: Malaysia's Fast Moving Companies**, and we are honoured to have been selected and recognised.



Business Media International

Business Intelligence Made Simple

2 December 2019

Mr. Girish Ramachandran Executive Director 27 Advisory Sdn Bhd

Dear Mr. Girish Ramachandran:

SME100 AWARDS: MALAYSIA'S FAST MOVING COMPANIES

Congratulations!

We are pleased to inform that 27 Advisory Sdn Bhd has been selected as a recipient of the SME100 Awards: Malaysia's Fast Moving Companies.



Yours sincerely,

DATO' WILLIAM NG Group Publisher / Editor-in-Chief Business Media International

MALAYSIA · Unit 706A, 6th Floor Kelana

Parkview Towet Jalan 556/2 Kellana Jaya, 47301 Petating Jaya T + 603 7600 1558 F + 603 7603 1152 THAILAND -331, 331/1-3, The Plot Building, 9th Floot Silom Road, Bangrak, Banglock 10500 T + 66.2235.05/30 / 1 F + 06.2439.75/19 SINGAPORE -

1 Rattes Place Tower One #44-02 Bingapore 048616 T + 65 3158 9809



Special Business Leaders Awards: Corporate Leadership Excellence Icon Award

The KSI Strategic Institue for Asia Pacific, an independent notfor-profit think tank dedicated to improving socio-economic well being through the development of public policy ideas, recently announced that **27 Advisory Sdn Bhd** had been selected for the **Corporate Leadership Excellence Icon Award** at its Special Business Leaders Awards, and we are honoured to have been selected and recognised for the work we have done.







Definition of Rebuilding Humanity

#RebuildingHumanity is 27Group's vision to collectively rebuild our nation through assets we build (eq. real infrastructure. estate. hospitals) and natural capital (gas resources, plantations, human talent) using innovative and sustainable methodologies. Rebuild with us if you need fresh ideas or more efficient financing or project implementation to improve your KPIs.



#RebuildingHumanity

Projects needs infusion of human values into strategy, credible money and innovative funding and new ways to integrate development and implementation to arrive at balanced impact.

At 27Group our ethos is to rebuild humanity with our focus on Socio Economic Transformation, Transaction Funding and Development Integrators as service modules.

