

Embedding ESG into Project Workflows: From Local Blueprint to Global Best Practices

Presented By: **Amanda Yeo**

Lead Consultant – ESG
and Sustainability at
JFourth Solutions



My profile

- **Spent the past five years in public policy**
 - Worked at the Sabah state government and a think tank in Kuala Lumpur, Malaysia
- **Venture into the ESG space since April 2023**
 - Worked at an industry association advocating for sustainable packaging and a Big 4 consultancy firm
- **Education Qualification:**
 - MSc International Relations, Nanyang Technological University, Singapore
 - BSc Economics and Finance, University of London



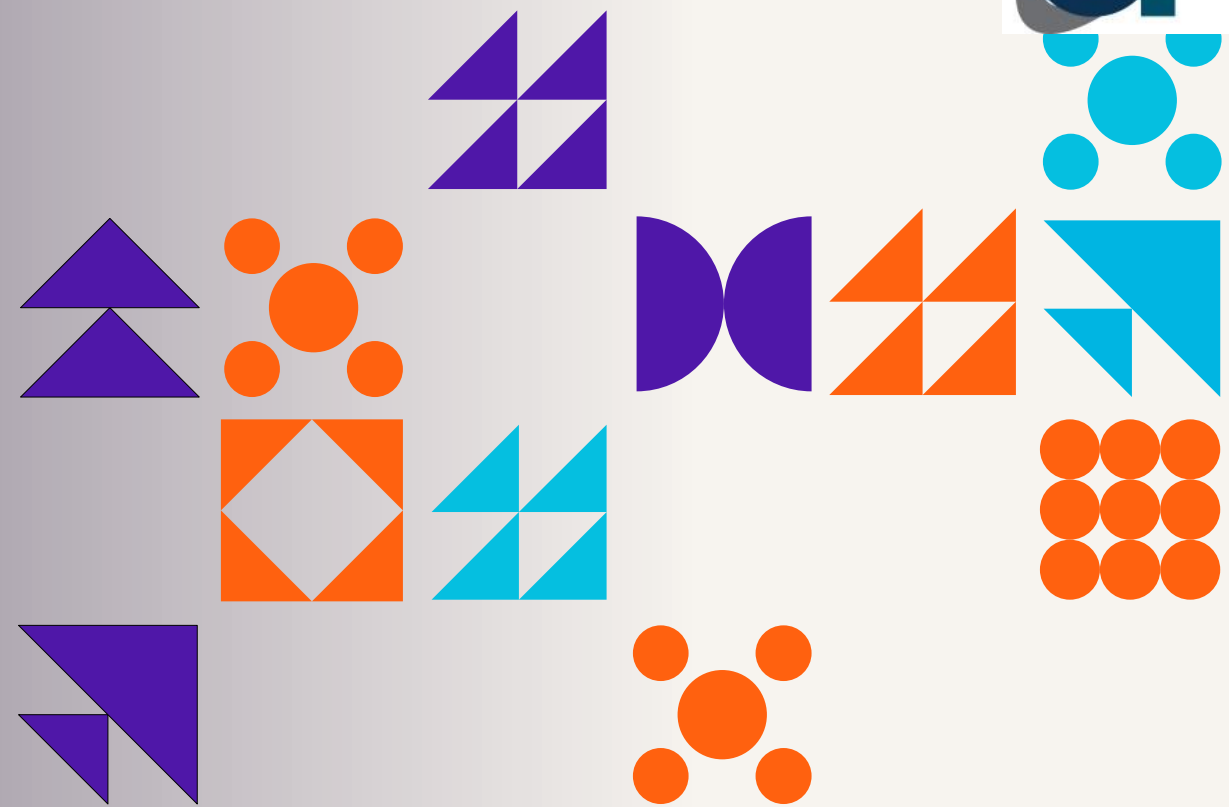
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Session Agenda

- 1 Context & Challenges among SMEs
- 2 Context & Challenges among PLCs
- 3 SME Case Study - Emerging EPC Sdn. Bhd.
- 4 PLC Case Study – Sunway Berhad
- 5 Global Best Practices
- 6 Concluding Remarks





Context & Challenges among SMEs

Why SMEs struggle to embed ESG into fast-paced projects





Environmental

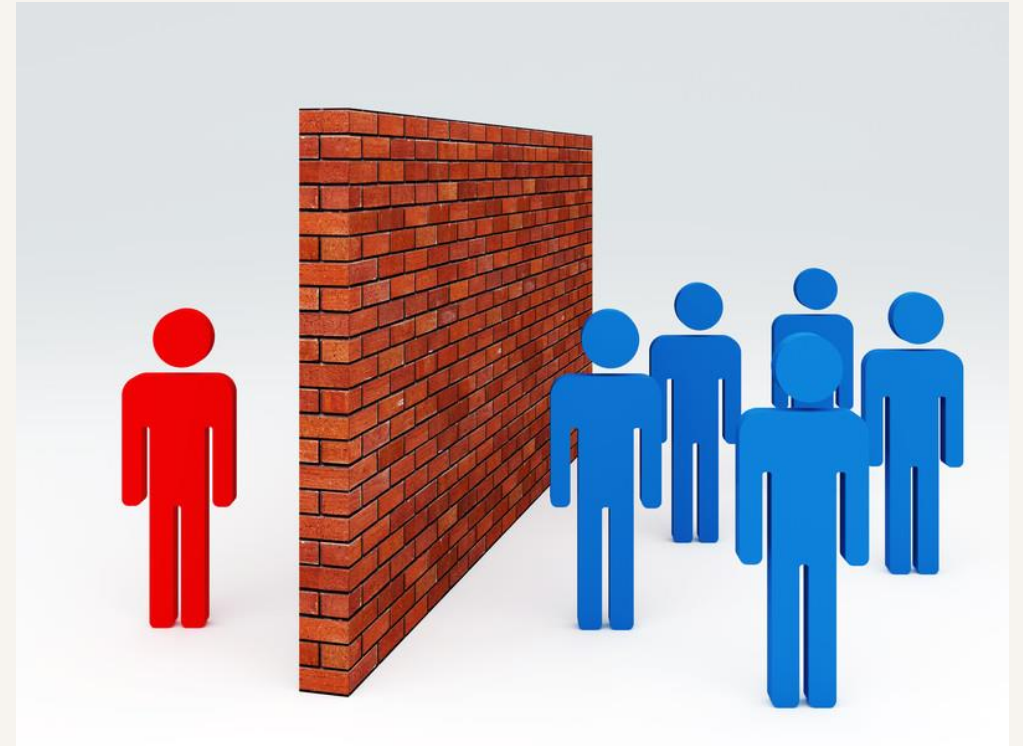
Social

Governance



SMEs: High Awareness Gap & Resource Constraints

- **Resource Constraints:** Financial, human, and technical limitations
- **Knowledge & Awareness Gaps**
- **Framework Overload & Regulatory Complexity**
- **Data Collection & Reporting Challenges**
- **Limited Governance & Stakeholder Pressure**





Context & Challenges among PLCs

Why PLCs struggle to embrace ESG beyond compliance



PLCs: Broader Reach, Yet Persistent Disclosure Gaps



- **ESG Rating Coverage is Limited:** Only large-cap PLCs are rated (e.g. FTSE Russell, MSCI, Bloomberg); coverage is limited to ~18–25% of all PLCs
- **Methodology Inconsistency:** ESG ratings use varying methodologies, making it difficult to benchmark and set meaningful targets
- **Poor Transparency & Limited Depth:** While ~90% of PLCs report completing materiality analysis, only ~20% disclose how it was conducted; stakeholder mapping and supply chain transparency <40%
- **People, Process & Technology Shortfalls:**
 - ESG data often resides in spreadsheets, lack centralised systems or governance SOPs





SME Case Study – Emerging EPC Sdn. Bhd.

Key Learning from their 2023 report on HR,
HSE and energy efficiency



COMPANY INFORMATION

- Register in 2006
- Petronas (License No. L-733145-A); 2011
- Ministry of Finance (MOF); 2011

ENGINEERED EQUIPMENT & SERVICE PROVIDER

- Zone 2 Diesel & Gas Driven Generator
- Chemical Injection Pump
- Onshore/Offshore Elevators
- Dehydration Systems

PROCESS FILTRATION & SEPARATION

- Onshore/Offshore Filtration & Separation Skid
- Process Filtration Systems
- Asset Reliability Analysis

COMPRESSED AIR & GAS EQUIPMENT PACKAGING AND SERVICES

- Customized Air & Gas Compressor Packager
- Maintenance, Retrofitting & Overhaul
- Offshore/Onshore Manpower Supply
- Re-engineering & Fabrication





A Strong Track Record of Growth



Over 15 years of OGSE expertise.



Petronas-registered vendor since 2011.



Recognised as MPRC Regional Champion.



Revenue growth from MYR 27M (2018) to MYR 81M (2024 projected).



Consistent EBITDA margin with IIoT and ESG enhancing value.

ESG and Sustainability Milestones

- 2023: Sustainability Report launched Integrated GRI, Bursa 3.0 & UNGC principles
- 2024: 2nd year disclosure
- 2024: PSSP Jump Start (*Advance Level*)
- Awards: *UNGCMYB, MSMA, AKI Finalist, MPRC Regional OGSE Champion*
- 35% staff trained in ESG (3 GRI, 1 GHG auditor); target 100% by 2026
- Green Fabrication Yard (Q4 2025): Solar, Water Harvest, Waste Management, HSE, Cooling systems.
- Real-time data capture via EARS: Energy, Maintenance, Run-Hour Tracking
- 2025: ISO 14064-1 GHG emissions audit



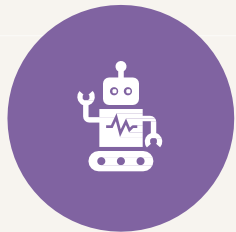
Strategy – Operations and Culture



ESG integrated into business operations



Involvement from HR, Finance, Procurement, Engineering



Digital tools: Odoo ERP, Auk IoT, EARS real-time platform



Staff KPIs linked to ESG outcomes



The Value



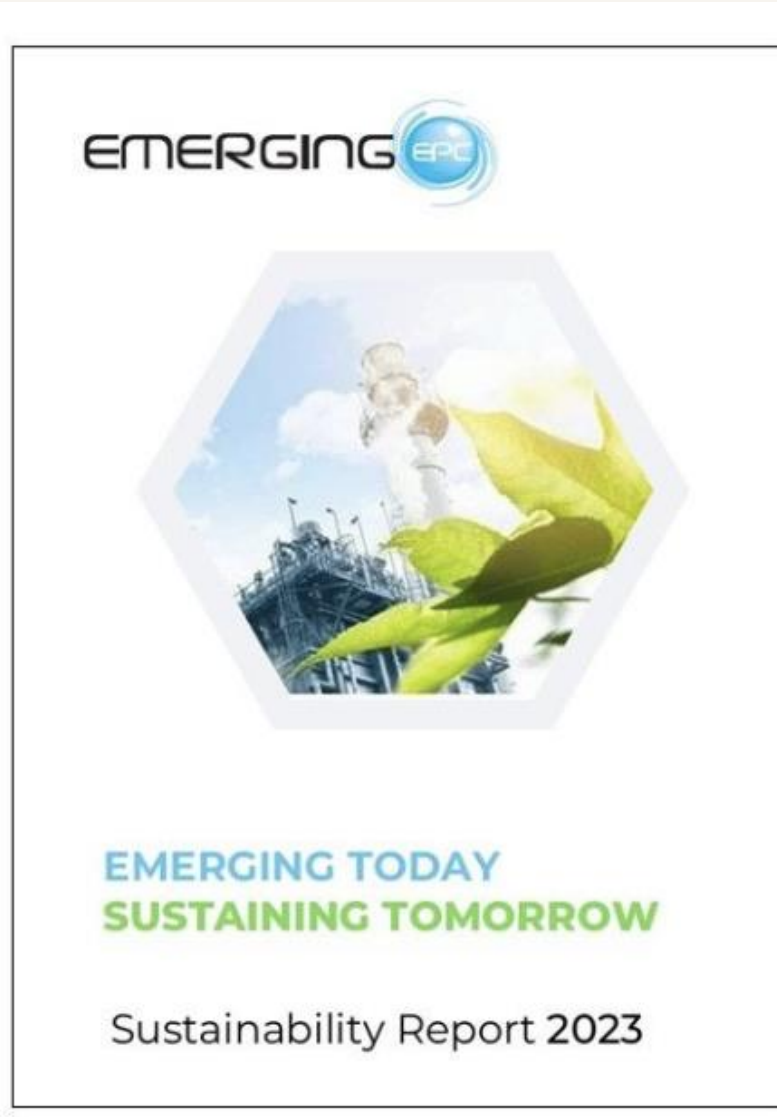
Gained

Access to new ESG-conscious markets and tenders

Eligible for green finance & ESG-linked grants (DIAF, GITA)

Improved staff morale, retention

Higher supply chain performance and evaluation scores



Scan the QR Code below to download the full report and explore our sustainability journey!



5.5 Upskill and Training

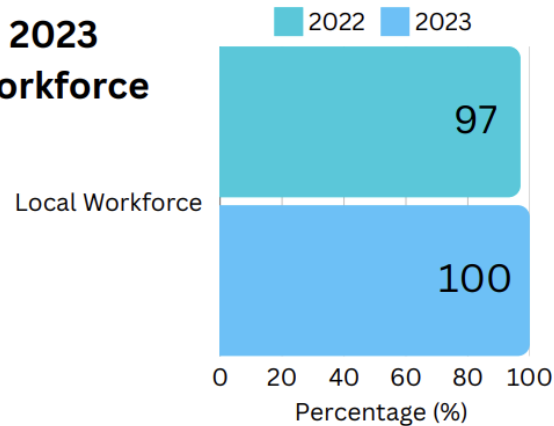
In 2023, Emerging EPC invested RM99,788 in employee upskilling and training initiatives, covering offshore safety, ISO 45001:2018 compliance, fire drills, first aid CPR, and SQL accounting. These programs totaled 568.85 training hours, directly benefiting 52 employees by enhancing their technical expertise and professional capabilities.



5.7 Diversity and Inclusivity

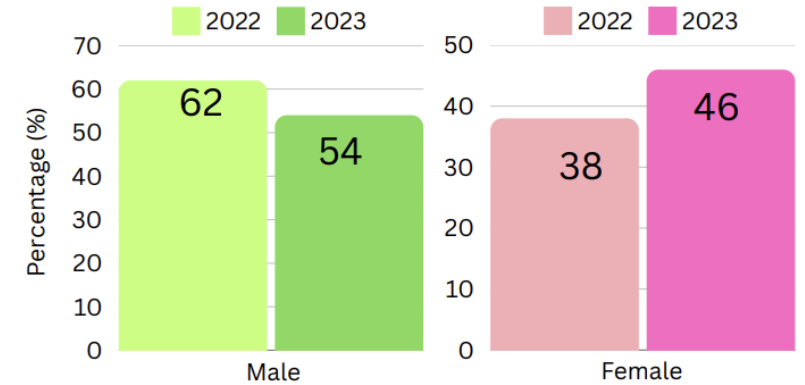
At Emerging EPC, we uphold diversity and inclusivity as fundamental values, reflected in the progression of our local workforce from 97% to 100%, encompassing individuals from diverse racial backgrounds. We are dedicated to fostering an inclusive workplace where all employees feel respected, valued, and empowered.

2022 vs. 2023 Local Workforce Trends



Our commitment to gender diversity is evidenced by an 8% increase in female representation, now at 46%, as we continue to provide equal opportunities for professional growth and development.

2022 vs. 2023 Workforce Trends (by gender)



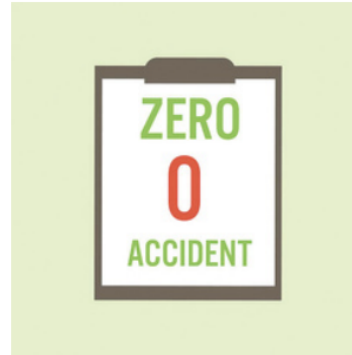
We also recognize the importance of addressing employee retention, with a significant reduction in turnover from 26% to 4.48%. This improvement underscores the success of our efforts to identify root causes and implement targeted initiatives to enhance employee satisfaction and engagement. By cultivating a supportive and inclusive environment, we have strengthened team cohesion, reduced turnover, and ensured that all employees feel motivated and empowered to contribute to Emerging EPC's success.

5.8 Employee Health & Safety

At Emerging EPC, employee safety and well-being are at the core of our operations. Our ISO 45001 certification reflects our strong occupational health and safety management system, ensuring that workplace risks are systematically identified and managed to create a secure and hazard-free environment.



We take immense pride in achieving zero work-related injuries in 2023, a testament to our proactive approach to safety. This success is driven by comprehensive safety training for all on-site employees, equipping them with the knowledge and skills to perform their duties safely.



Our commitment to health, safety, and environmental (HSE) practices is deeply ingrained in our operations. We conduct regular activities such as ISO audits, fire evacuation drills, PPE training, worker briefings for critical lifting operations, and daily toolbox talks led by our dedicated HSE supervisor. These measures ensure that each employee is well-versed in HSE procedures, enabling them to carry out their tasks responsibly and securely.



In our industry, Health, Safety, and Environment (HSE) are paramount concerns, and in 2023, we enhanced our safety-conscious culture by integrating advanced technologies and best practices into daily routines and annual safety initiatives. Through continuous HSE training and digital monitoring, employees are not just protected—they are also active champions of workplace safety.



Renewable Energy & Energy Efficiency

- **Solar Energy:** Explore renewable energy solutions following the installation of solar panels at our office and fabrication yard.
- **Energy Optimization:** Implemented high-efficiency lighting, smart energy monitoring systems, and optimized air conditioning operations to enhance energy efficiency and further reduce Scope 2 emissions.





PLC Case Study – Sunway Berhad

Key Learning from their 2024 report



ESG BENCHMARK

In our commitment to sustainability, Sunway is dedicated to generating value for future generations by protecting the well-being of both humanity and the planet.

This commitment entails actively embracing sustainability principles, building resilience to environmental challenges, promoting social equality and driving economic growth. To attain our 2030 Sustainability Goals and Targets, Sunway's business practices, objectives, plans and targets are closely aligned with global goals, international and national reporting frameworks and ESG rating tools.

GLOBAL GOALS



Doughnut Economics



REPORTING FRAMEWORKS

LOCAL



GLOBAL



Taskforce on Nature-related Financial Disclosures

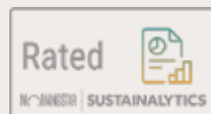
RATING TOOLS

2024 KEY HIGHLIGHTS

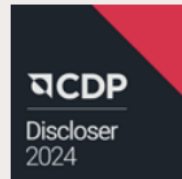


FTSE4Good

Score: **3.8** out of 5.0
Top **11%** of ICB supersector (Real estate)



Rating:
Low ESG Risk



- Climate Change
- Water Security

SUSTAINABLE FINANCING FRAMEWORK ASSESSMENT



- Sunway Healthcare Treasury **Gold**
- Sunway South Quay **Gold**
- Sunway Velocity Three **Silver**

2024 HIGHLIGHTS



Gold
for Best Sustainability
Reporting category in the
National Annual Corporate
Report Awards (NACRA) 2024



3-Diamond rating for
Sunway City Kuala Lumpur
at the Malaysian Low Carbon
City Awards 2024

Top 11%
of the Industry Classification
Benchmark
(Real Estate) Supersector
assessed by FTSE Russell



Top 25%
by ESG Ratings among
PLCs in FBM Emas

Initiated reporting on emissions per revenue
and on track for **45%** reduction in carbon
emissions

Inaugural disbursement of incentives
amounting to **>RM322,000**
under the Internal Carbon Pricing
framework for **Renewable
Energy and Waste
Diversion**

12,933 MWh
of renewable energy
generated across our
properties

Diverted **9%** of
waste from landfills

Zero fatality rate

>60,000 beneficiaries impacted
through various community projects



Achieved MSCI
ESG Rating of AA



Established

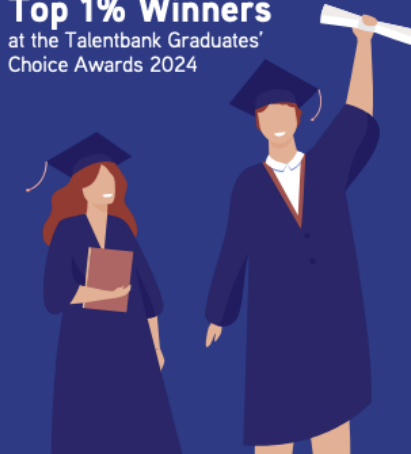
- Climate Change Policy
- Pollution Policy
- Resource Use Policy
- Volunteerism Guidelines
- Waste Policy

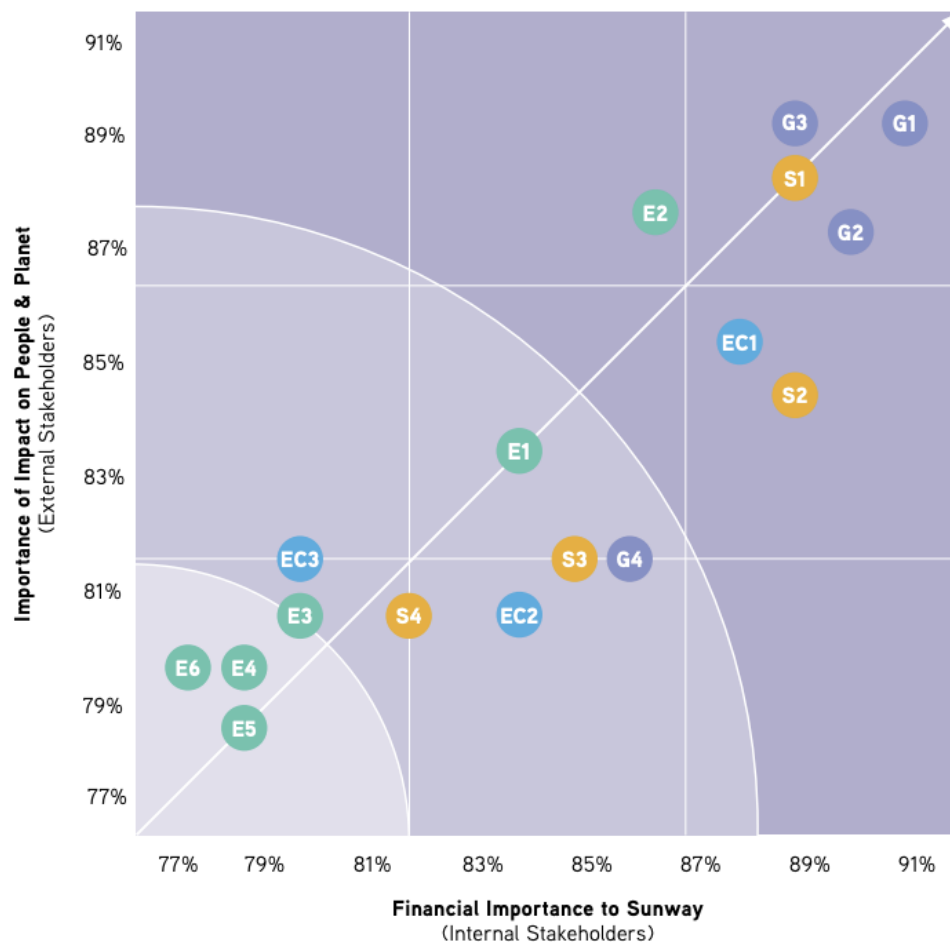
Initiated efforts to evaluate and align with
International Financial Reporting Standards
IFRS S1 & S2

- Gap analysis reveals that the sustainability report has improved from covering 75% of IFRS S2 disclosures in 2023 to nearly full compliance in 2024



Top 1% Winners
at the Talentbank Graduates'
Choice Awards 2024





- Alignment of material issues along the diagonal signifies the degree of shared priorities between internal and external stakeholders.
- Shade gradations of a circular radius indicate the level of importance of a material issue. The darker the shade, the more important the issue.

● Governance (G) ● Environment (E) ● Social (S) ● Economic (EC)

HIGHER IMPORTANCE		CHANGES FROM 2022 TO 2024	Key issues to prioritise and improve visibility among stakeholders
● G1	Ethical Business Conduct	New	
● G2	Risk Management & Regulatory Compliance	New	
● G3	Data Privacy & Cybersecurity	New	
● S1	Occupational Safety & Health	Previously known as Group standards and operating procedures, retained in same tier	
● S2	Labour Practices & Standards	New	
● EC1	Business Performance	Previously known as Company's financial performance, retained in same tier	
● E2	Energy Management	New	
MEDIUM IMPORTANCE		CHANGES FROM 2022 TO 2024	Key issues to keep track and improve performance
● G4	Brand Awareness & Reputation	Down one tier	
● S3	Diversity, Equity & Inclusion	New	
● E1	Waste & Pollution Management	Previously known as Pollution management, retained in same tier	
● EC2	Economic Performance	Previously known as Macroeconomic issues, retained in same tier	
● S4	Community Engagement & Social Impacts	Previously known as Community investment, retained in same tier	
● EC3	Supply/Value Chain Management	New	
● E3	Emissions Management	Previously known as Pollution (emissions), up one tier	
LOWER IMPORTANCE		CHANGES FROM 2022 TO 2024	Key issues to keep track and carry on momentum
● E4	Materials Management	Previously known as Resource management (materials), retained in same tier	
● E5	Protection of Biodiversity & Ecology	New	
● E6	Physical Impacts of Climate Change	New	



Goal 5

- Ethical Business Conduct
- Risk Management & Regulatory Compliance
- Data Privacy & Cybersecurity
- Business Performance
- Brand Awareness & Reputation
- Economic Performance



Goal 4

- Community Engagement & Social Impacts



Legend:

- Financial Capital
- Human Capital
- Manufactured Capital
- Social and Relationship Capital
- Natural Capital
- Intellectual Capital

SUNWAY
2030
SUSTAINABILITY
GOALS

UPHOLDING TRANSPARENCY
AND DELIVERING
EXCELLENCE

DRIVING CARBON REDUCTION
ACROSS OUR PORTFOLIOS
AND CITIES

ADVOCATING A
RESPONSIBLE
VALUE CHAIN

DEVELOPING A
SAFE, EQUAL
AND DIGNIFIED
WORKFORCE

Goal 3

- Occupational Safety & Health
- Labour Practices & Standards
- Diversity, Equity & Inclusivity



Goal 1

- Materials Management
- Protection of Biodiversity & Ecology
- Physical Impacts of Climate Change
- Waste & Pollution Management
- Energy Management
- Emissions Management



Goal 2

- Supply/ Value Chain Management





STRATEGY

SUNWAY'S NET ZERO CARBON EMISSIONS BY 2050 ROADMAP

ON TRACK TOWARDS ACHIEVING 2030 TARGETS

We have set future value goals and 2030 targets to drive carbon reduction across our portfolios and cities.

Strategic Framework:

- Decarbonisation
- Resource management
- Pollution management

ACCELERATING DECARBONISATION

Implementation:

- Internal Carbon Pricing**
 - Emissions avoidance (Energy efficiency improvement, waste diversion)
 - Energy substitution (Renewable energy)
- Engaging with stakeholders to reduce Scope 3 emissions**
 - Upstream - Suppliers (Sustainable procurement and supply chain practices)
 - Downstream - Tenants (Green leases)

- Supported the recommendations of the **Task Force on Climate-related Financial Disclosures (TCFD)**
 - Committed to setting near-term science-based emissions reduction targets in line with the **Science Based Targets initiative (SBTi)**
 - Introduced the **nation's first Internal Carbon Pricing** framework
- Introduced the **Green Lease** Partnership Programme
 - Submitted reports on climate change and water security to the **Carbon Disclosure Project (CDP)**
 - Embarked on **sustainable financing** to accelerate ESG transformation
- Introduced **incentives** under the Internal Carbon Pricing framework for renewable energy and waste diversion
 - Established an **embodied carbon emissions roadmap** for Building Materials and Quarry products
 - Launched a **black soldier fly composting site** to tackle food waste
- Initiated efforts to evaluate and align with **International Financial Reporting Standards (IFRS) S1 and S2**
 - Installed more than 11 MWp of **rooftop solar PV cells** as of 2024

GETTING TO NET ZERO

- To achieve net zero carbon emissions by 2050, we plan to focus on carbon offset technology and have invested in a research centre for carbon dioxide capture and utilisation.
- Carbon offset is the last resort after we have maximised our resources.

Implementation:

- Carbon capture and storage
- Investment in large-scale renewable energy

By 2030, we will reduce our residual emissions by **45%**.

Global temperature is estimated to rise between 4.0°C and 5.0°C above pre-industrial levels without any mitigation efforts.

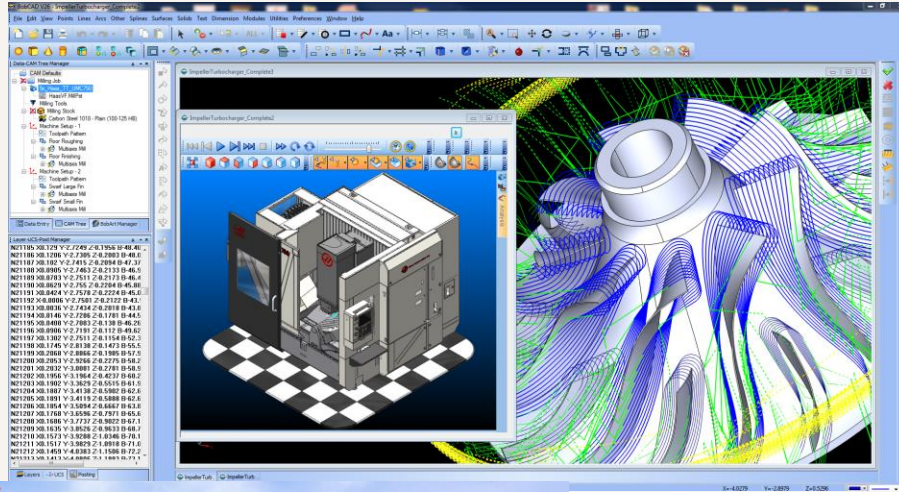
Global warming is limited to 1.5°C with mitigation efforts, in line with the Paris Agreement goal.

— Net zero pathway
 ... Business as usual

Global Best Practices



Examples of Digital Tools



- **CAD & CNC machines** enable precision production and sustainable design flexibility.

- **Supply-chain traceability systems** provide full end-to-end visibility—from supplier sourcing to delivery—enhancing accountability and ESG compliance.



- **Gamified training applications**, adapted from educational IoT interventions, engage staff effectively on sustainability behaviours

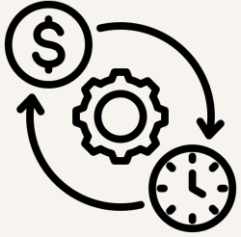
Inter-Organisational Cooperation



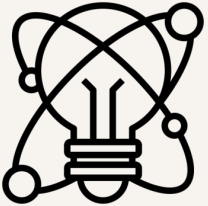
- Co-invest in shared infrastructure (e.g., energy meters, software platforms, sustainability labs) to reduce individual costs and gain access to advanced tools.
- Webinars, workshops, peer exchange sessions and online forums enable rapid capability building in ESG practices.



Benefits of Inter-Organisational Cooperation



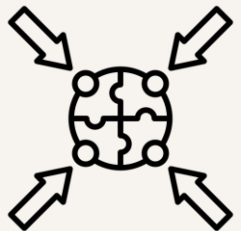
Cost Efficiency: Shared access cuts capital expenditures and reduces per-firm cost.



Innovation Leverage: Joint R&D enables rapid testing and scaling of sustainable solutions.



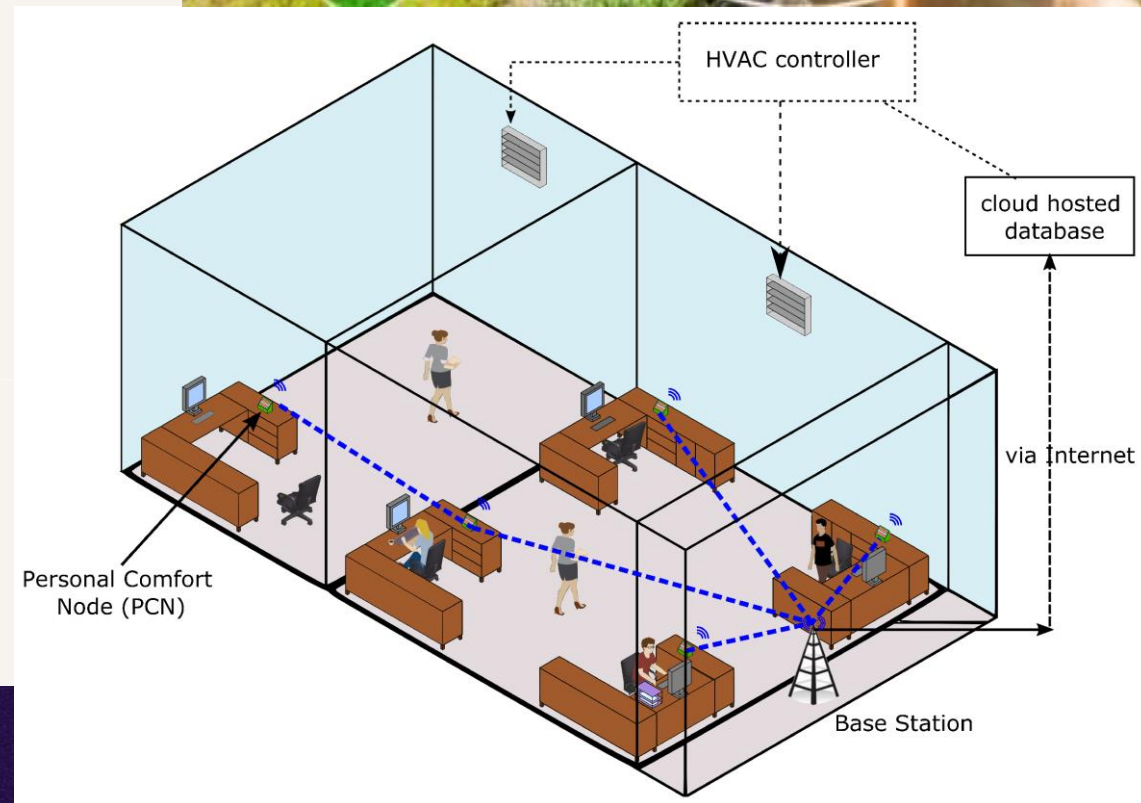
Circularity: Symbiosis projects reduce waste and material procurement costs.



Collective Impact: Companies gain scale for credibility in green certifications, procurement and compliance.

Examples of Technology-Driven Integration

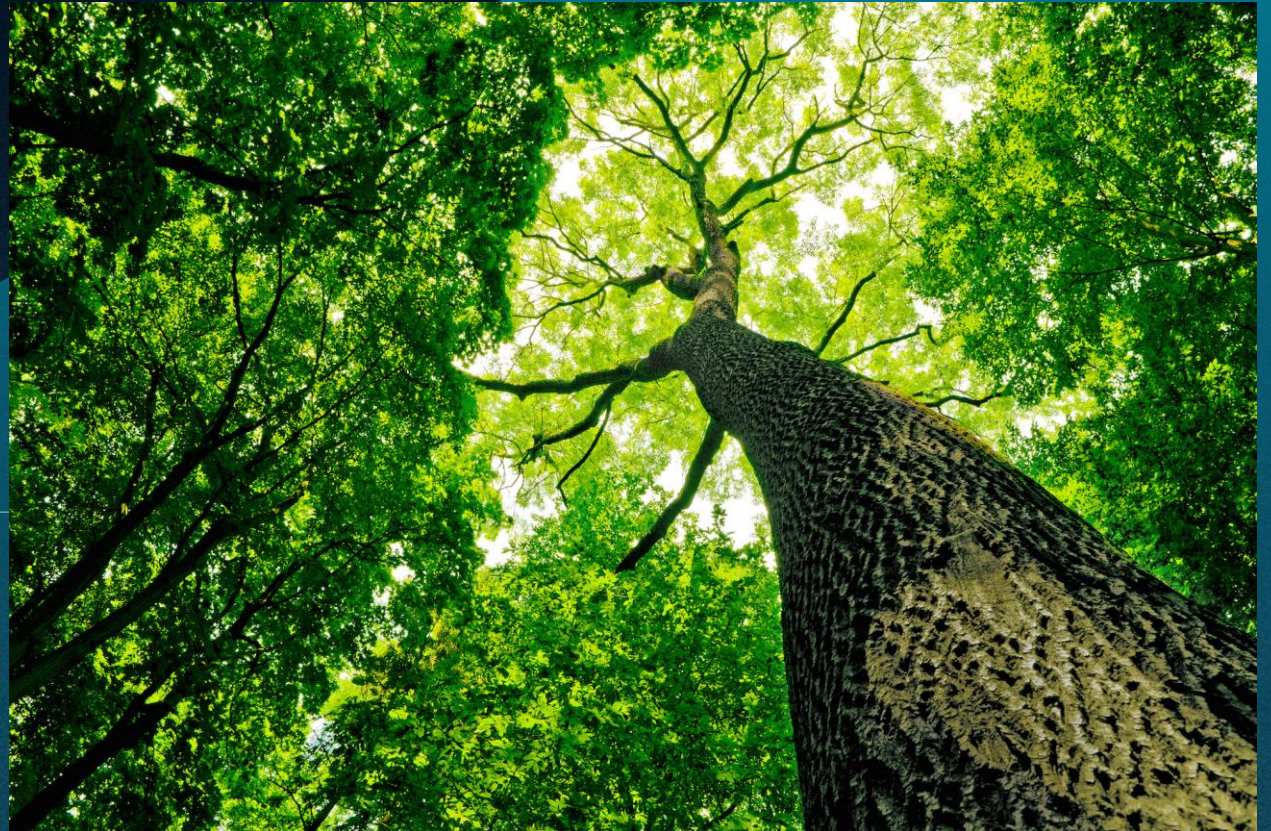
- **IoT sensors (energy, water, air quality)** connected to dashboards and edge-AI platforms enable real-time tracking and proactive operational decisions
- Example: **Indoor environmental sensing systems** built with Raspberry Pi or Pico W cost under USD 100 per zone



- **Automated ESG Reporting & AI Tools** analyse sensor signals to forecast peak demand, propose optimisations and auto-generate ESG reports.
- Systems reduce manual reporting time by up to 70%, speed up compliance and support agile decision-making.



Concluding Remarks

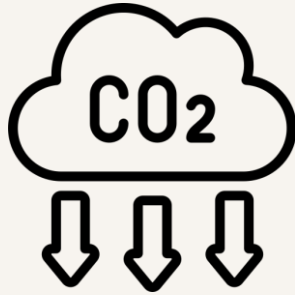


How to start?

- Develop action plan with ESG related KPIs
- Define short-term (1-2 years) and long-term (3-5 years) milestones



Environmental KPIs



Carbon Footprint Reduction

- **KPI:** Ton CO₂ e per ton of product (Scope 1, 2, and 3)
- **Target Example:** Reduce from 0.50 t CO₂ e/t to 0.40 t CO₂ e/t within 12 months.



Energy Savings

- **KPI:** Energy Savings (kWh) and % reduction vs. baseline year
- **Target Example:** Achieve a 10% reduction (e.g., from 100,000 kWh to 90,000 kWh) by next financial year.



Waste Reduction

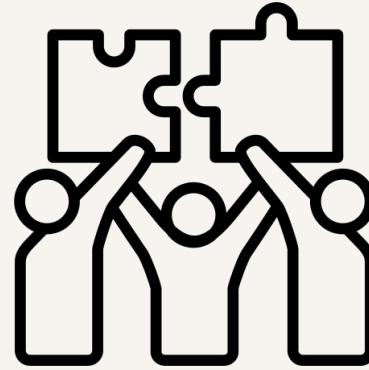
- **KPI:** Waste generated per unit (kg/unit) or % reduction in total waste
- **Target Example:** Decrease waste per unit from 0.20 kg to 0.16 kg (20% reduction) over three years.

Social KPIs



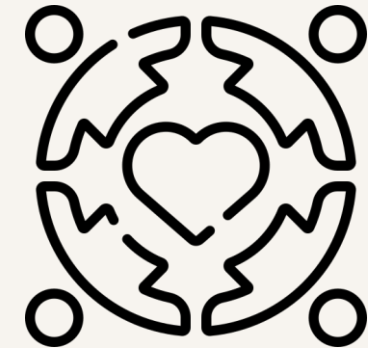
Employee Retention Rate

- **KPI:** Annual employee turnover rate (%)
- **Target Example:** Lower turnover from 15% to 10% within one year.



Diversity & Inclusion

- **KPI:** Percentage of under-represented groups in leadership roles
- **Target Example:** Increase female representation in management from 20% to 30% by year-end.



Community Engagement

- **KPI:** Volunteer hours per employee per year
- **Target Example:** Achieve at least 20 hours per employee annually.

Governance KPIs



Regulatory Compliance Rate

- **KPI:** Compliance with applicable laws (% of requirements met)
- **Target Example:** Maintain a 100% compliance rate, with zero regulatory breaches.



Transparency (Timeliness of Reporting)

- **KPI:** Days between financial-year end and ESG report publication
- **Target Example:** Publish the annual sustainability report within 90 days of year-end.



ESG Reporting Accuracy

- **KPI:** % of ESG data points validated by third-party assurance
- **Target Example:** Achieve 100% assurance coverage across key environmental and social metrics within two years.

Short-term Milestones (1-2 years)

- **Data & Materiality Foundation:** Gather baseline ESG data (e.g., energy, water, waste) and conduct a materiality assessment to identify priority areas
- **Launch Targeted ESG Initiatives:** Implement quick wins like recycling programs, energy-efficient upgrades, diversity targets or updated governance policies
- **First Sustainability Report:** Publish an initial ESG disclosure/report based on standards (GRI, local NSRF), demonstrating transparency



Long-term Milestones (3-5 years)

- **Achieve Ambitious ESG Targets:** Set SMART goals like reducing Scope 1 & 2 emissions by 45% by 2030, attaining carbon neutrality by 2050
- **Obtain External Certifications or Ratings:** Seek third-party validation (LEED, SBTi, ESG ratings from MSCI or FTSE Russell) to build credibility
- **Continuous ESG Improvement Loop:** Regularly update roadmaps based on monitoring and stakeholder feedback, setting new milestones after each cycle





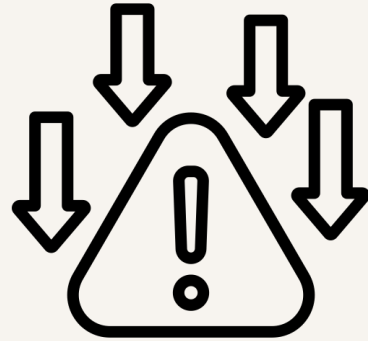
Why ESG matters in Project Workflows?



1) Enhances Long-Term Profitability by reducing resource usage, energy costs, and operational inefficiencies



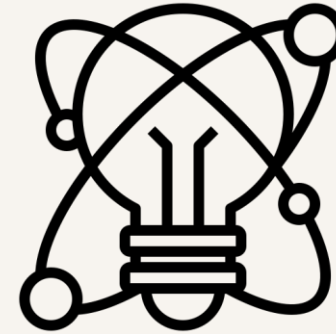
2) Attracts impact investors and ESG funds, increasing access to capital



3) Improves Risk Management related to climate change, regulatory compliance, and social issues, ensuring business continuity



4) Strengthen brand reputation, enhance customer loyalty, and differentiate themselves from competitors



5) Drives Innovation and Market Opportunities



6) Fosters Employee Engagement & Retention, leading to a more motivated and productive workforce



ESG isn't an add-on—it's the evolution of good business practice.

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