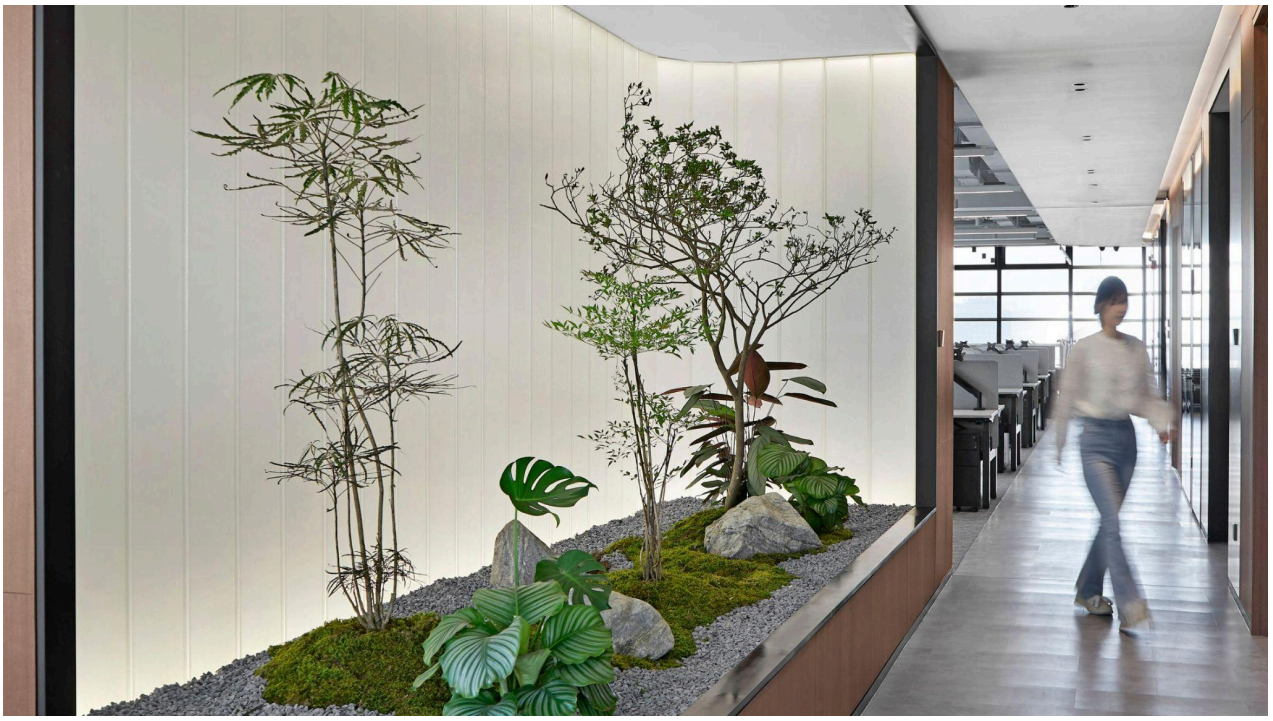
GHG **Emission**

Annual Report FY 2024



> **Reporting period** : April 2023 - March 2024
> **Prepared by** : Sustainable Solutions, Space Matrix

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>TERMINOLOGY

Terms	Definitions
Greenhouse gas (GHG)	A gas that contributes to the greenhouse effect by absorbing infrared radiation, which contributes to Global Warming and climate change.
Global Warming Potential (GWP)	An index that integrates the overall climate impacts of different pollutant emissions in terms of carbon dioxide equivalents.
Scope 1 (GHG Emissions the company has direct control over):	These occur from sources owned or controlled by the company. e.g. emissions from combustion in owned or controlled Generators, Boilers, and Vehicles.
Scope 2 (Indirect GHG emissions related to energy demand):	It accounts for GHG emissions from purchased Electricity (grid system or sha Diesel Generator set)
Scope 3 (Indirect GHG emissions cover everything which makes business possible):	Scope 3 emissions are a consequence of the activities of the company but occur from sources not owned or controlled by the company. Some examples of scope 3 activities are the extraction and production of purchased materials.
Hotspot	A process that accounts for a significant proportion of the GHG inventory. Potential sources for the reduction of emissions.

>ACRONYMS

CO2	Carbon Dioxide
CO	Carbon Monoxide
CH4	Methane
N20	Nitrous Oxide
GHG	Greenhouse gas
GWP	Global Warming Potential
IEA	International Energy Agency
US-EPA	United States Environmental Protection Agency
IPCC	Intergovernmental Panel on Climate Change
ADEME	Agence de la transition écologique
UNFCCC	United Nations Framework Convention on Climate Change
IRS	Internal Revenue Service
OECD	Organisation for Economic Co-operation and Development
IFI Default Grid Factors	International Financial Institutions Default Grid Factors
CEA	The Central Electricity Authority
NGEF	National Grid Emission Factor
HFC	Hydrofluorocarbons
DG	Diesel Generator
SBTi	Science-Based Target Initiative
Kg	Kilogram
kWh	Kilowatt Hour

>EXECUTIVE SUMMARY

Space Matrix International Pte Ltd is a workplace design consultancy with expertise in workplace design and built projects. We have extensive project experience in over 80 cities and an office presence in fifteen (15) locations, including Australia, China, India, Hong Kong, the Philippines, Thailand, Singapore (HQ), and the United States.

Founded in 2001, our design practice has evolved into a dynamic, agile, 21st century digital enterprise; a design consultancy that specialises in Workplace Strategy, Workplace Design Consultancy, Cost Consultancy, Change Management, Project Management, Sustainability, Technology, Procurement, and AV/MEP Design. We have developed a unique client focus that creates and delivers profitable, sustainable, and future-ready workplace solutions. Our continuing mission aims to continue revolutionising the delivery of design and build services in both Asia and globally. Teamwork, Integrity, and Excellence guide the selection of our clients, the relationships with our business partners, the recruitment of our team members, and the delivery of our services. Our firm has approximately 500+ professionals globally and continues to push the boundaries in workplace transformation & Sustainability.

Sustainability is the key area of focus where Space Matrix is committed to lowering its environmental footprint across its Global operations and analysing the supply chain to reduce its overall emissions to align its existing operational energy efficiency and resource efficiency initiatives. Following our ambition, our short-term and long-term climate targets have been validated by the SBTi in April 2023. As an early adopter of the SBTi climate ambition in the region's workplace design industry, we would like to disclose our GHG emissions and the progress made in our climate journey by publishing this report on our website. Additionally, we intend to participate in the disclosure process of CDP and bring more credibility to our commitment and efforts to the overall objectives of our goals.

This is our 2nd year's annual emission report that includes a comprehensive list of GHG inventory for global operations, including Scope 1, 2, and relevant Scope 3 categories. This showcases our commitments and ambitious target to take responsibility for our actions and reduce our overall emissions for all the locations in the upcoming years.

The current reporting period is April 2023 to March 2024; however, a detailed GHG assessment was done for the reporting period April 2019 - March 2020 to establish the baseline for the organisation. The Calculation of GHG Accounting Scope 1, 2 & 3 emissions is performed concerning Greenhouse Gas Corporate Value Chain Accounting and reporting standard guidelines provided by the Greenhouse Gas Protocol.

As a committed organisation, we understand the impact that we can create through our design & build services and try to excel in whatever we undertake. One such example is our Sustainability initiative 'RE-SOURCE' through which we aim to handle the majority of C & D waste generated in our India projects in a sustainable way. The program is a collaborative approach to streamlining the on-site segregation of different streams of waste and diverting them to different facilities to process and prepare them for repurposing or recycling. This avoids massive amounts of waste going to landfills, thus leading to resource conservation. Additionally, the GHG emissions associated with sourcing new raw materials, transportation, manufacturing of products etc, will be further avoided.

1. Methodology

Considering the presence of Space Matrix at all 15 locations globally, the GHG emission accounting process has been performed considering the operational control approach. We have considered all relevant Scope 1,2,3 emissions and have covered 100% of GHG operations we have control over.

The scope has been defined according to the "GHG protocol standards", a widely used international methodology that is compliant with ISO 14064-1. The best available data has been captured to calculate the emission data concerning the latest emission factors available in the industry, sourced from credible sources like IPCC GHG inventory, EPA, IEA, and Central Electricity Authority India V-19. All the greenhouse gases (CO2, CH4, CO, HFC) are quantified as CO2e (carbon dioxide equivalents).

We understand the value of data accuracy in our climate journey, hence this has been an important area for us to work on -understanding the existing data management systems and then identifying different accounting processes involved, which are crucial to the GHG inventory. This helped us define appropriate metrics and methodology which best suit our organisation's operations. We have created a responsibility matrix for all the stakeholders according to their roles and responsibilities to collect and manage the data. Simple and Standard Excel-based data collection templates have been designed to collect, measure and process the data for each location. The in-house Sustainability team has consolidated the data collected from admin, finance, and IT departments, and other supply chain partners and calculated the emissions for each location. All the stakeholders were briefed & trained to perform the data collection process systematically, verify the sources to maintain the accuracy of the data, and to avoid double-counting and misinterpretation of the emission data.

GHG inventory is an iterative process. Emission factors and methodologies are updated periodically to reflect best practices and the most current available data. An important step in the process is verifying that one is using the most current emission factors and that the selected methodologies are still the best fit for the organisation.

2. GHG Emission Calculation

2.1 Scope of Activities

Following the Comprehensive GHG accounting framework, ***Table 2*** provides an overview of the covered scopes for **Space Matrix International Pte Limited**.

Table 1: Overview of Scope 1, 2, & 3

Scope 1 - The GHG Emissions company has direct control over	• DG Fuel Consumption • Office Private Vehicle Fuel Consumption • Refrigerant Gas • CO2 Fire Extinguisher
Scope 2 - Indirect GHG emissions related to energy demand	• Electricity Consumption from the grid • Electricity Purchased from an off-grid system
Scope 3 - Indirect GHG emissions cover everything that makes business possible	• Business Travel (Category 6: Business travel) • Paper Consumption, Purchased Drinking Water (Category 1: Purchased goods & services) • Waste Generation (Category 5: Waste generated in operations) • Employee Commute (Category 7: Employee Commuting)

Note: *We plan to consider Scope 3 emissions pertaining to Co-working & Teleworking activities in the coming years after establishing clear processes around data collection from these activities.*

2.2. GHG emissions inventory

The report consists of emission data from Scope 1, 2 & 3 for all 15 site activities and consumed resources. We have reported all the relevant Scope 3 categories with the available information transparently. ***Table 1*** represents emission data for FY 2020 (base year) and FY 2024, considering Scope 1,2 & 3 emissions. The base year has been considered pre-COVID to give a realistic approach for data comparison.

Table 2 GHG inventory FY 2020 - FY 2023

No of Employees Globally Emissions identified		500 (approx)			
		FY 2020 (Base Year)		FY 2023	
Scope	**Emission Sources**	**tonne-CO2**	**%**	**tonne-CO2**	**%**
Scope 1	Diesel for DG set	1.6	0.10%	1.4	0.09%
	Fuels for company-owned vehicles	7	0.20%	9.7	0.65%
	HVAC Refrigerant gasses	0.1	0.00%	0.1	0.01%
	Scope 1 Total	8.7	0.30%	11.18	0.76%
Scope 2	Purchased Grid Electricity	449.4	14.70%	379	25.62%
	Purchased Off-grid Electricity	1.7	0.10%	6.1	0.41%
	Scope 2 Total	451.1	14.70%	385	26.03%
Scope 3	Employee Commuting	1245.00	40.60%	344	23.25%
	Business Travel	1,328.10	43.30%	728	49.20%
	Waste generated	8.2	0.30%	7.51	0.51%
	Purchased goods (paper)	3	0.10%	2.25	0.15%
	Purchased goods (packaged water)	23.3	0.80%	1.54	0.10%
	Scope 2 Total	2,607.50	85.00%	1,083.30	73.22%
	Total (Scope- 1, 2, 3)	**3,067.30**	**100%**	**1478**	**100%**

2.3 Location-specific Emissions

Following the comparison of **FY 2020 & FY 2024, *Table 3*** highlights the breakdown of **FY 2024** GHG emissions contribution of Scope 1 & 2 for 15 locations operated by Space Matrix.

Location-specific emission data represents the breakdown for each global location where some of our offices contribute less than 1% to the global emissions for Space Matrix. In upcoming years, we are looking at optimising resource consumption and reducing our scope 3 emissions, which have a larger share **(up to 70%)** in our overall emissions. Scope 1 & 2 are the major areas of focus where Space Matrix has direct control over its activities.

Table 3 Location-Specific GHG Emissions breakdown for FY 2023 (in tCO2e)

Location	Scope 1 tC02e	% of total Scope 2	Scope2 tC02e	% of total Scope 2	Total emissions of Scope 1 and 2 in tC02e	% of total emissions

1	Bangalore	4.017	35.98%	140	36.50%	144	36.48%
2	Chennai	0.21	1.91%	34	8.95%	35	8.76%
3	Gurugram	0	0.00%	50	12.95%	50	12.58%
4	Hyderabad	0.0345	0.31%	18	4.56%	18	4.44%
5	Mumbai	0.022	0.20%	37	9.70%	37	9.43%
6	Pune	0.00	0.00%	17	4.43%	17	4.31%
7	Shanghai	6.87	61.52%	47	12.18%	54	13.57%
8	Singapore	0.01	0.09%	41	10.74%	41	10.44%
	TOTAL	**11.18**	**100.00%**	**385**	**100.00%**	**396**	**100.00%**

Note: Other locations which are not listed in the above table are either co-working or teleworking locations for which we do not have Scope 1 & Scope 2 emissions. Hence, only Scope 3 emissions pertaining to those locations have been accounted for, in the reporting year.

3. SBTi Target

3.1 Target Description

The Science Based Targets Initiative (SBTi) is a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science. It is focused on accelerating companies across the world to halve emissions before 2030 and achieve net-zero emissions before 2050.

The commitment is focused on reducing Scope 1 and Scope 2 GHG emissions by 46% by 2030 from a 2019 base year and measuring and reducing its Scope 3 emissions. **Space Matrix International Pte Ltd** commits to reducing scope 1+2+3 emissions by 90% by 2050 from a 2019 base year.

The SBTi has validated Space Matrix's near-term science-based emissions reduction target. Space Matrix has also committed to set long-term emissions reduction targets with the SBTi in line with reaching Net Zero by 2050. This is published on the SBTi webpage, and the readers of the report can refer to our climate targets by clicking on the link below https://sciencebasedtargets.org/companies-taking-action; look for 'Space Matrix International Pte Ltd' to know more about our climate targets.

3.2 Substantial emission variations and changes in the Target

There are no variations or changes in the target. We intend to relook at the target in the coming 2-3 years when we observe some changes made to the GHG accounting standards, and adoption of regulatory frameworks in the Target setting methodologies by the SBTi [if any]. Compared to the base year data, the data collection process has improved with a general understanding of the units of each inventory item, the importance of data management, our focus on resource consumption, etc., among the stakeholders. By understanding the stakeholder requirements and organisation structure, consistency of the data collection process and emission calculation are the major areas of improvement.

Scope 1 and scope 2 are the key areas of improvement where Space Matrix focuses on reduction targets instead of offset schemes. Our higher ambition to achieve this goal is to build confidence for external and internal stakeholders, in addition to inviting young talent towards the growth of the organisation.

Currently, the company is not dealing with large amounts of goods within its operational boundary, considering the end of life of those products. The range of Scope 3 is limited to relevant categories for our organisational activities as listed under section 2.1. We have worked with the latest version of secondary inventory location-specific data to avoid uncertainty during the emission calculation process.

From the FY24 emission analysis, we realised the impact of an accurate and granular data collection process on the Scope 3 emission categories, specifically the Business Air travel and Employee commuting, which have

been the hotspots for us. We collaborated with our service providers to get the activity data and relevant emission factors that resulted in a considerable reduction in the emissions.

The industry is maturing with collaboration from other industries concerning the Emission factors (Secondary data) and also experiencing technological advancements in the features of the available tools and solutions. In the upcoming year, Space Matrix will aspire to automate and streamline the data collection process to refine the GHG accounting process for all the scopes.

4. Actions towards meeting SBTs

Considering the past years of experience in analysing the Space Matrix's emission sources and their complexity, we have documented all the takeaways and challenges to improve the process. Our stakeholders are very keen on contributing their efforts during the process of GHG emission calculation. We are utilising the expertise of our in-house team to reduce our operational energy demand.

All the responsible stakeholders have contributed to this journey. The sustainability team is responsible for focusing on the data collection process and identifying challenges with stakeholders to maintain the consistency and quality of the data. Frequent monitoring of the data to evaluate the emission results and discussing the areas concerning the reduction strategies with stakeholders have been the key areas of focus for the sustainability team to have more precise and actionable data.

We have worked towards collecting the data on Facilities performance to identify possible areas of improvement - maintenance reports, physical inspections, feedback from the users, etc. This helps to devise the best possible strategies to reduce Scope 1 & Scope 2 emissions. We also looked at sourcing renewable sources of energy for our premises - on-site and off-site sources. Additionally, we are exploring options to purchase Green Power from the electricity supply companies wherever it's available. As a result, some of our offices are being considered for retrofits, focusing on improving the energy efficiency through

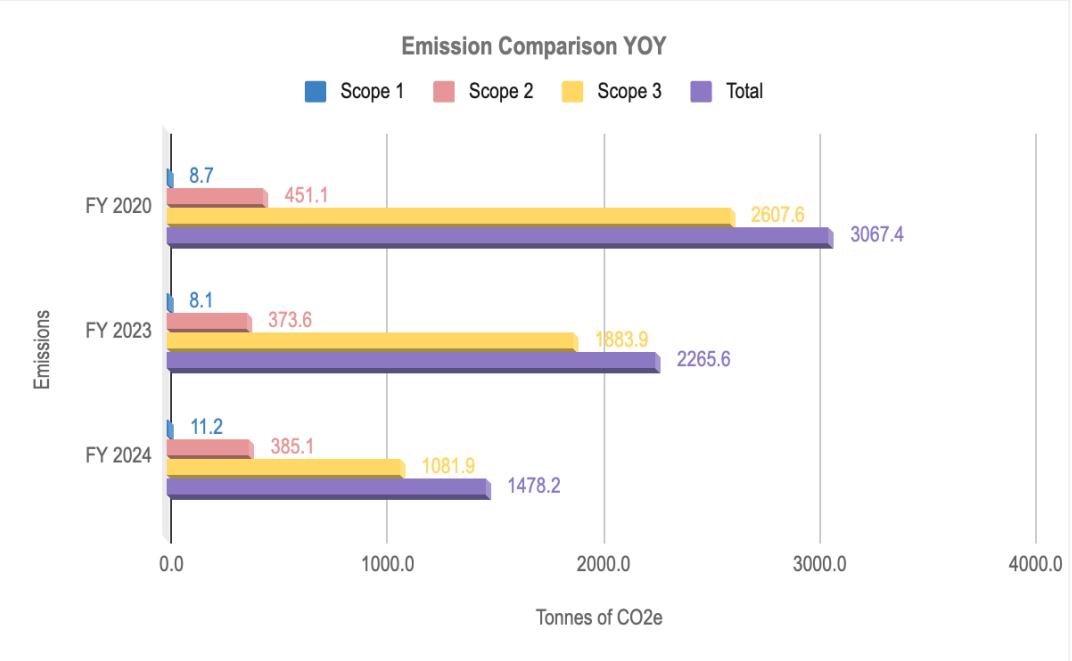
4.1 Decreased Lighting Power Density [LPD W/SF]

A. integration of occupancy/daylight sensors wherever feasible,
B. HVAC Systems
C. On-site Renewable Energy Systems

Also, we are committed to enhancing the employee experiences and well-being by working on comfort parameters such as Lighting Quality, Acoustics, Daylight utility, Thermal comfort, Ergonomics, Indoor Air Quality, etc. Implementing such strategies will help us to make considerable progress in our Climate journey, which is our primary motto, and all efforts will be taken to reach the goals year on year.

Further to the streamlining of the data collection process, the sustainability team has been vigilant about all of our actions and impacts. This helps in building a stronger pathway towards our Climate goals.

The graph below represents our emissions' details, Year on Year:



5. Way Forward

We have started our climate journey by calculating base year data (FY 2020) to achieve our climate commitment of short-term goal by 2030 and long-term goal by 2050 or earlier. With the GHG accounting process, we have analysed the potential sources to improve and reduce our different sources of emissions compared to the FY 2023 data.

So far, we have identified the trend, where we noticed energy consumption, business travel, and employee commute-related emissions are the major areas to implement reduction strategies. Our approach for targets is to be appropriately tailored to each category, creating an emissions-reduction strategy that is more effective and comprehensive overall.

The in-house sustainability team is devising a robust sustainability program that would encompass all the potential solutions that would accelerate our climate actions to reach our short-term and long-term goals in a more advanced manner. Being a Small-Medium Enterprise, the challenges we face are numerous in our journey, to integrate most of the available solutions that large corporations can easily adopt. However, the dedicated sustainability team is exploring solutions to reduce our emissions and switch to alternate energy sources by creating awareness among the stakeholders and making small changes to eliminate major environmental impacts, etc.

We understand the importance of disclosure, hence we are also exploring the use of a disclosure portal such as CDP, which underscores our commitment to being more transparent and adhering to the global goals. We also carefully intend to engage with different internal and external stakeholders to push the boundaries

We continue to firm up the strategies to be implemented and towards solutionizing our ideas with a more accurate and impact-driven approach. In this process, we try to be more adaptive, inclusive, and transparent to champion the cause. We believe that we will be able to strive better when, as a whole organisatio,n we take part in this sustainability agenda and aspire to lead the market transformation resulting in significant impacts in our supply chain as well.

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