



# Design2Occupancy Services LLP

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A Partner in your Journey Towards Sustainability





**D2O TEAM**



# About D2O



Founded in  
**2013**



Head Office  
**Jaipur**



Team Members  
**150+**



Projects in  
**14** COUNTRIES



Projects Delivered  
**4,000+**

# Key People



Ashu Gupta  
Managing Partner



Kushagra Juneja  
Managing Partner



# Our Services

**Simulation Services**  
*Energy Modelling,  
Daylighting Modelling,  
Artificial Lighting Modelling*



**Building Analysis**  
*Thermal Comfort  
Analysis, CFD and  
FDS Analysis*



**Building Star Rating  
Services**  
*BEE Star Rating,  
Energy Star*



**Sustainability  
Reporting**  
*ESG & Sustainability  
Analysis*



**Capacity Building  
Training & Workshop**  
*BEE S&L Training  
ECBC, MuDSM etc.*



**Solar PV**  
*Analysis, Designing &  
Implementation*



**Green Building  
Facilitation**  
*LEED, EDGE, WELL,  
IGBC, GRIHA,  
ASSOCHAM-GEM*



**Building Design  
Services / BIM**  
*Mechanical, Electrical,  
Plumbing & Fire  
Fighting*



**Local Code  
Compliance**  
*ECBC Compliance*



**Auditing &  
Commissioning**  
*TAB, Energy Audit,  
Water Audit, PAT &  
Fire Audit*



**Air Quality  
Consulting**  
*Testing, Reporting  
& Recommendation*



# Why is Carbon Neutrality and ESG Reporting necessary ?

## Carbon Neutrality or Net Zero CO<sub>2</sub> Emissions

Referring only to carbon emissions. Achieving carbon neutrality means reducing as many carbon dioxide (CO<sub>2</sub>) emissions as possible and then balancing those that cannot be eliminated through removals.

## Net Zero Emissions

Getting to zero GHG through reduction in one's own emissions-related activities while removing additional GHGs from the atmosphere to make up any shortfalls, all in alignment with the targets outlined in the Paris Agreement.

## Climate Neutrality

Reduction of all GHGs to the point of zero while eliminating all other negative environmental impacts that an organization may cause.

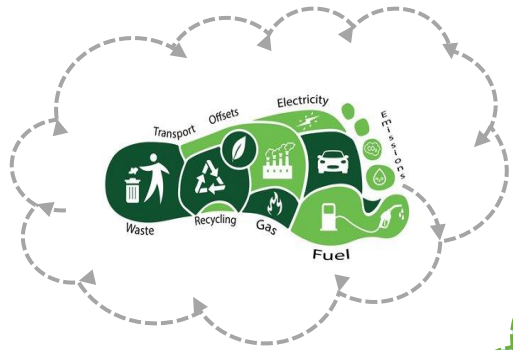
## ESG



**ESG reporting** refers to the **disclosure** of data covering the company's operations in three areas: environmental, social and corporate governance.

**ESG reporting** helps investors avoid companies that might pose a greater financial risk due to their environmental performance or other social or governmental practices.

# How can we help ?

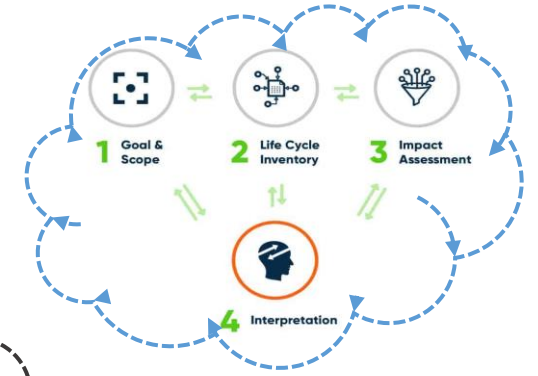


Carbon Foot Printing and Reporting



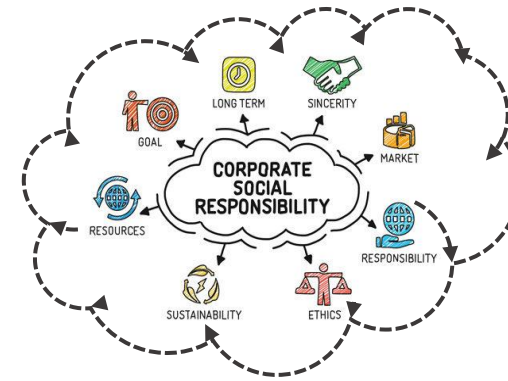
Open Access and Alternative Sources of Energy

Life Cycle Assessment



Corporate Sustainability Reporting

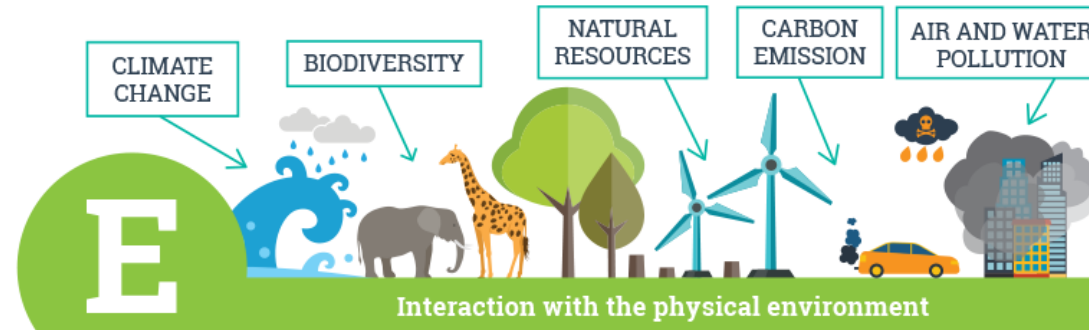
Support in developing Afforestation Strategy



FOR BETTER BUSINESS PERFORMANCE



Internal Carbon Pricing



ENVIRONMENTAL



Energy Audit and Water Audit



# Process of achieving Carbon Neutrality

**Reduction**  
Document  
emission reduction  
strategy **4**

**Inventory**  
Collation of activity  
data, calculation of  
carbon footprint **3**

**Boundary**  
Determine emission  
sources for Climate  
Active inventory **2**

**Kick-off**  
Discuss project  
requirements **1**



**5 Documentation**  
Excel sheet and  
Word report

**6 Validation**  
Liaise with validation  
providers and address  
change requests

**7 Offsets**  
Facilitate purchase of  
suitable carbon offsets

**8 Finalise**  
Finalise deliverables,  
publish public statement



# Organizations supporting disclosure and sustainability reporting:



Carbon  
Neutral  
PAS 2060



SUSTAINABLE  
DEVELOPMENT  
GOALS



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



Dow Jones  
Sustainability Indexes



FTSE4Good







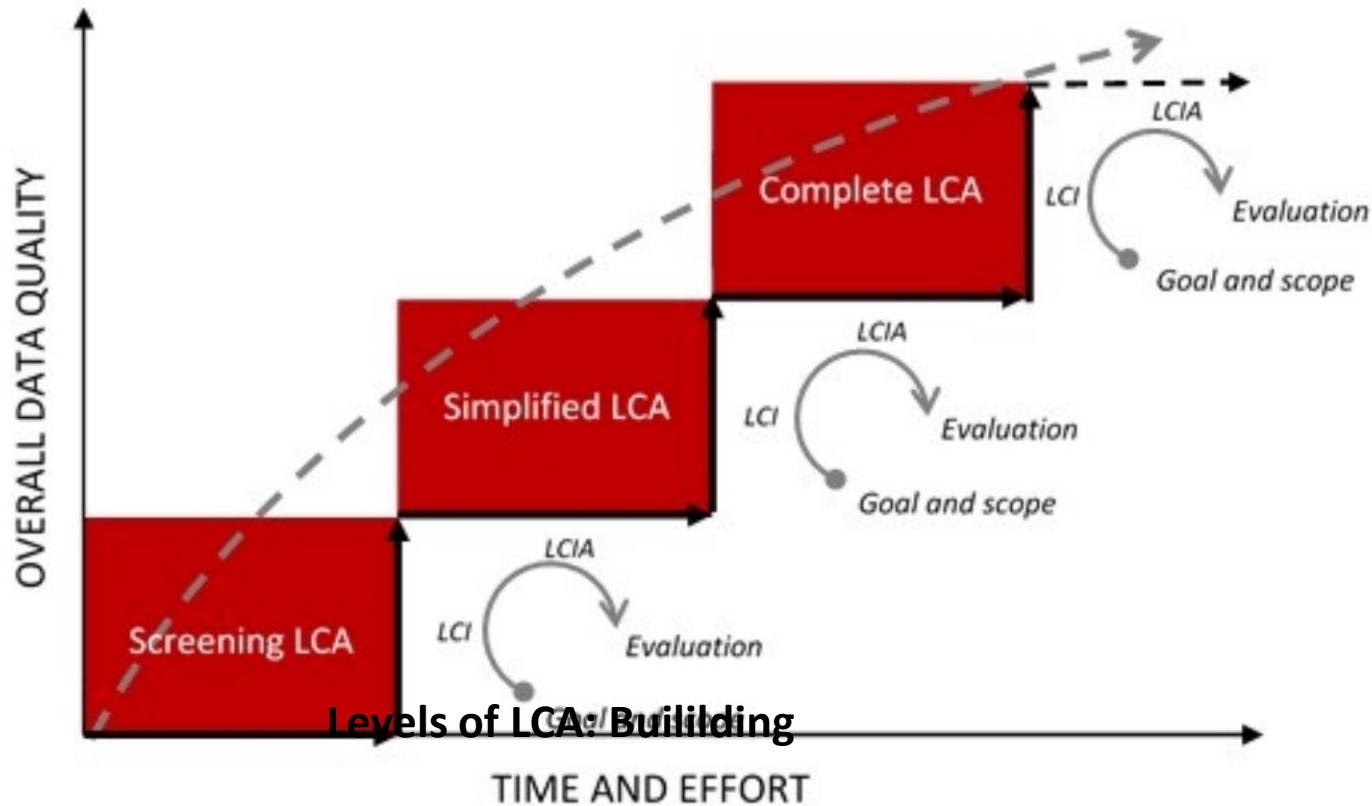
# LIFE CYCLE ASSESSMENT (LCA)

# What is an Environmental Life Cycle Assessment?

**Life Cycle Assessment (LCA)** involves evaluating the environmental impact of a product, process, or organization throughout its entire life cycle. There are three distinct types of LCA, each offering a varying level of depth and detail:

ASPECT	SCREENING/CONCEPTUAL LCA	SIMPLIFIED LCA	COMPLETE/DETAILED LCA
<b>Data Quality</b>	Low-quality, generic data	Specific quantitative data from the company	High-quality, comprehensive data
<b>Focus</b>	Quick overview of impacts	Main contributors to the system under assessment	Whole life cycle assessment
<b>Data Collection</b>	Minimal data and assumptions	Specific quantitative environmental information on building elements, products, materials, components, and services	Extensive inventories and high-quality data
<b>Environmental Considerations</b>	Input materials, energy, water, and transportation	Building elements, products, materials, components	Cradle-to-grave analysis
<b>Standards</b>	-	-	Compliant with Standards such as ISO 14040, ISO 14044 etc.

# The iterative nature of life cycle assessment (LCA)



**LCI (Life Cycle Inventory)** compiles extensive data on inputs and outputs during a life cycle.

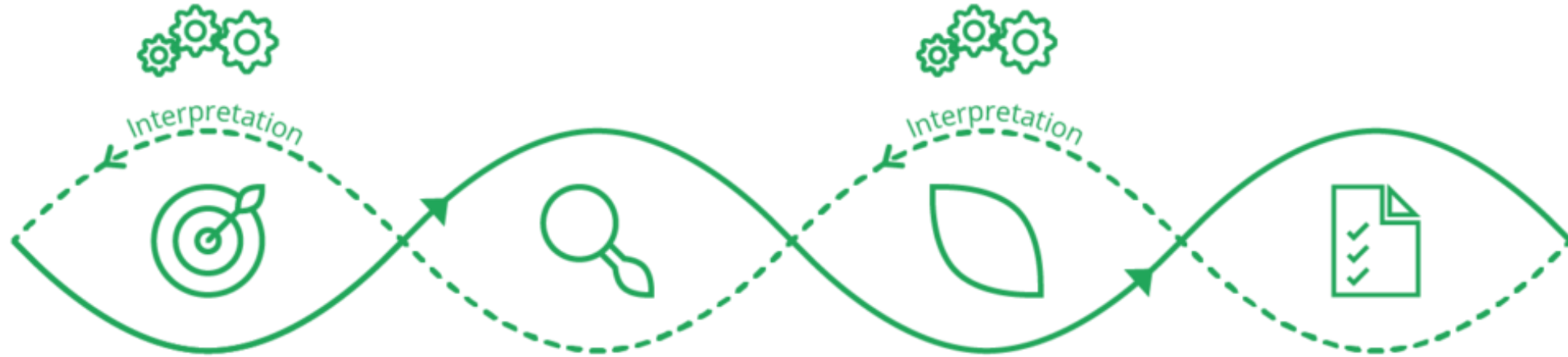
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**LCIA (Life Cycle Impact Assessment)** evaluates environmental impacts using data from LCI.

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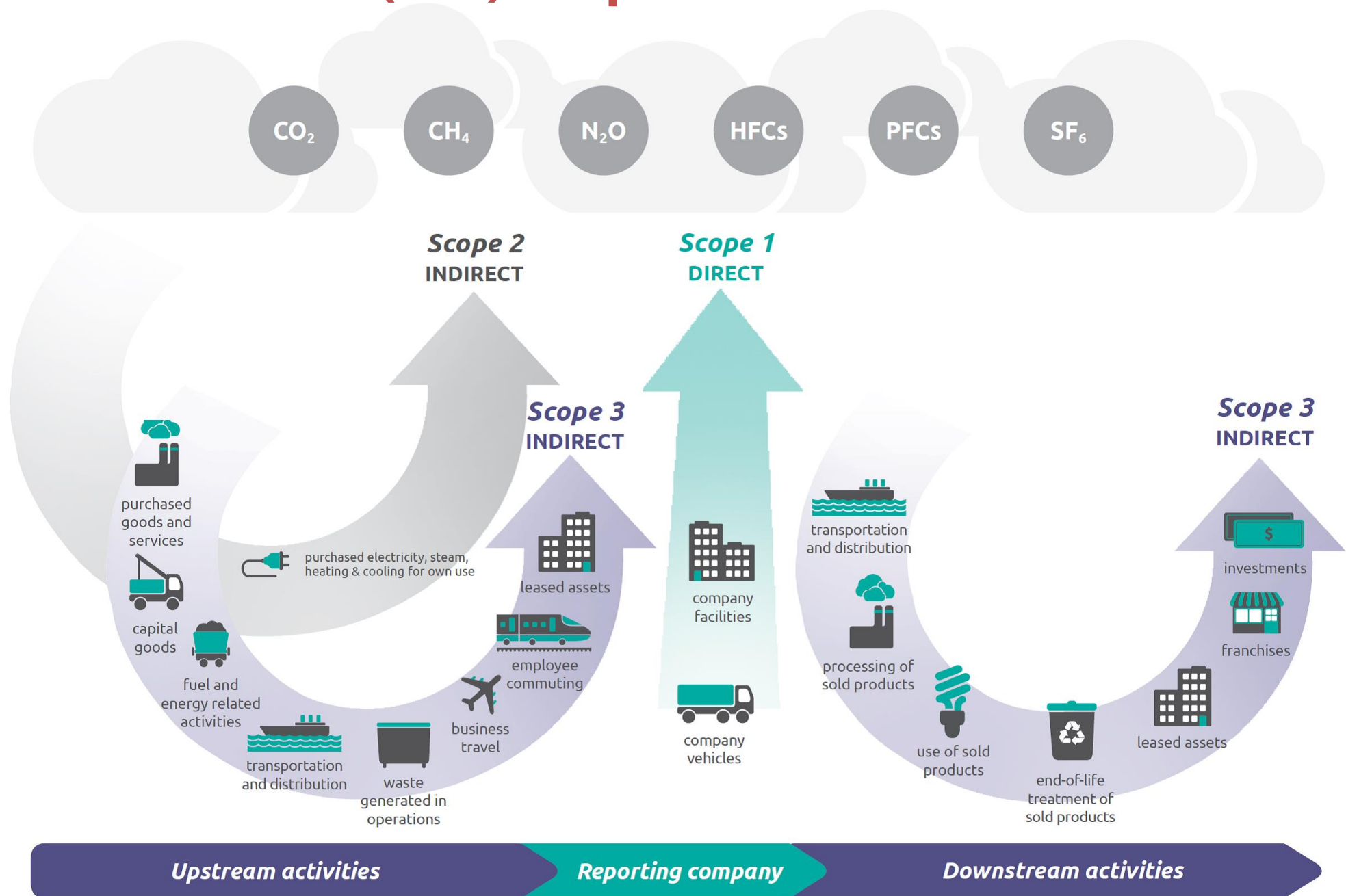
**LCA (Life Cycle Assessment)** provides a holistic view of environmental consequences, aiding informed decisions.

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- Product development and improvement
- Strategic planning
- Portfolio assessment
- Organizational footprint
- Capacity building
- Other

# Life-cycle assessment (LCA) Scopes



# Impact Categories

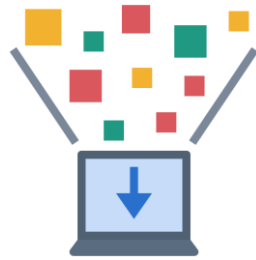
LEED BD+C offers the option to earn three points through a whole-building life-cycle assessment for new construction, demonstrating a minimum 10% reduction in at least three of six impact categories, including global warming potential, compared to a baseline building. No impact category should increase by more than 5%, with comparable size, function, and a 60-year service life.

Indicator	Abbreviation	Unit
Global warming potential, fossil	GWP	kg CO <sub>2e</sub>
Depletion potential of the stratospheric ozone layer	ODP	kg CFC11 <sub>e</sub>
Acidification potential of soil and water sources	AP	kg SO <sub>2e</sub>
Eutrophication potential	EP	kg PO <sub>4e</sub>
Formation potential of tropospheric ozone	SFP	kg O <sub>3e</sub>
Abiotic depletion potential (ADP fossil) for fossil resources	ADP <sub>f</sub>	MJ, NCV
Abiotic depletion potential (ADP element) for fossil resources	ADP <sub>e</sub>	kg, Sb <sub>e</sub>
Fossil fuel depletion	FFD	MJ Surplus
Renewable primary energy carrier used as energy	RPRE	MJ, NCV
Non-renewable primary energy carrier used as energy	NRPRE	MJ, NCV
Consumption of freshwater resources	FW	m <sup>3</sup>
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg

# How can we help?



**Expertise**



**Data Collection**



**Resource Optimization**



**Recommendation &  
Certification**



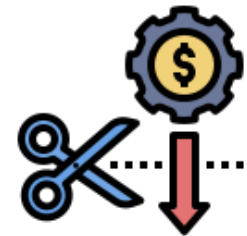
**Stakeholder  
Communication**



**Modeling**



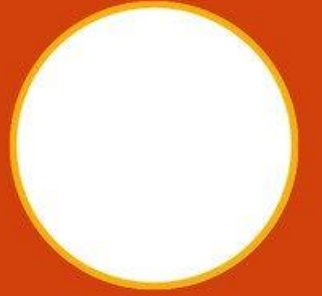
**Policy Alignment**



**Cost Savings**



# OUR PROJECTS







# Cold Storage Kiambu, Kenya

**Project Area:** 15000 sqm

**Project Type:** Warehouse Distribution and Centre

**Platform for LCA:** GaBi was used with impact assessment method CML version 2015.

Cold storage Kiambu, Tatu city is a leading temperature-controlled warehouse and logistics service provider, announced that it will invest USD 70 million to construct state-of-the-art, temperature-controlled cold storage warehouses in Kenya. Cold Solution's 15,000 sqm flagship facility in Tatu City Special Economic Zone in Nairobi will be the largest, most advanced, and efficient in the region. The facility is flexibly designed to cater for numerous temperature ranges from +26 to -40 C and multiple product ranges, from fresh fruit and vegetables to pharmaceuticals and vaccines, meats and poultry, and frozen foods. Cold Solutions Kenya is a portfolio company of ARCH Cold Chain Solutions East Africa Fund, a private equity fund advised by ARCH Emerging Markets Partners Limited (ARCH).



# Kigali financial Business Square

Ongoing Project

**Project Area:** 60,009 sqm.

**Project Type:** Core and Shell

**Platform for LCA:** One Click 

President Paul Kagame has launched the construction of the state-of-the-art Kigali International Finance and Business Square (KIFBS) in the heart of Kigali's central business district. The building has a 2-tower running vertically till 20 and 24 floors respectively. One of the towers is a hotel with multiple types of the room options available for the consumer and other tower is an office building which is going to be leased to a eligible customer.

# CP4 -213 D2O Head office

Ongoing Project

**Project Area:** 2,043 sqm.

**Project Type:** New Construction

**Platform for LCA:** One Click LCA

Our forthcoming D2O head office, "CP213," located in Jaipur and currently under construction, is a pioneering project where sustainability takes center stage. We have conducted a thorough Whole-Building Life Cycle Assessment using cutting-edge One Click LCA software, ensuring that every aspect of the building's life cycle is assessed for environmental impact. With a firm commitment to eco-conscious design, "CP213" is poised to become the first Net-Zero building in Rajasthan, exemplifying our dedication to green innovation and responsible construction.





Amazon India

# Our Client

## **Project Title: Study of Embodied Energy and Operational Carbon Emission**

Evaluation of the total embodied energy from cradle to gate stage, as well as the total carbon emission during construction and operational stages for Delivery Station (DS), Ultra Fast Fresh (UFF), Fulfilment Centre (FC), Sort Centre (SC), and Last Mile Delivery Centre. located pan-India.

## **Project Title: Study of Utilization of Low Embodied Energy and EPD based Materials**

Assessment of the available construction materials having valid EPDs within the geographical scope of India and to check their impact in terms of embodied energy from cradle to gate stage in addition to alternate construction materials.

## **Project Title: Capital Goods Emission Study**

D2O conducted a Capital Goods Emission Study focusing on Amazon's Warehouse Supply Chain to evaluate and reduce the environmental impact associated with their supply chain operations

## **Project Title: Embodied Carbon Study**

Evaluation of the total carbon emission during construction stage for Amazon's NCTG and DED1 Warehouse (ongoing).

# Our Client



Vaibhav Global Limited



## About the Facility

Vaibhav Global Limited is an environmentally responsible business entity based out of Jaipur, Rajasthan and took its initial step to embark on a journey of Sustainability.

**Facility type** – Manufacturing Unit

**Scope** – ESG Reporting



Amazon India

## Our Client



### About the Facility

D2O has conducted a comprehensive Embodied Energy Analysis for Amazon's Last Mile Delivery Station, quantifying the energy consumption and environmental impact throughout the facility's lifecycle, facilitating data-driven sustainability decisions for Amazon.

**Facility type** – Warehouse

**Scope** – Embodied Energy Analysis and Suggestions with reduction strategies



# Our Client



N V Group Pvt. Ltd.

## About the Facility

NV Group is one of India's largest distillers of grain alcohol. They have over 25 years of experience in manufacturing and bottling premium quality spirits and feature a portfolio of alcohol brands that are loved and enjoyed across the world.

**Facility type** – Brewery

**Scope** – Reporting of Carbon Footprint and achieving Carbon Neutrality

**Emissions Scope Covered** – Scope 1,2 and 3

Targeted Neutrality for 2020-21 Carbon Emissions

# Our Client

## About the Facility

We've had the privilege of working with MKU Limited on a significant project aimed at "Carbon Footprint Reporting and Attaining Carbon Neutrality." This initiative reflects MKU's impressive evolution from a regional player to a global leader in lightweight composite armor inserts, setting an international benchmark for excellence in armor technology.

**Facility type** – Manufacturing Unit

**Scope** – Reporting of Carbon Footprint and achieving Carbon Neutrality

**Emissions Scope Covered** – Scope 1,2 and 3

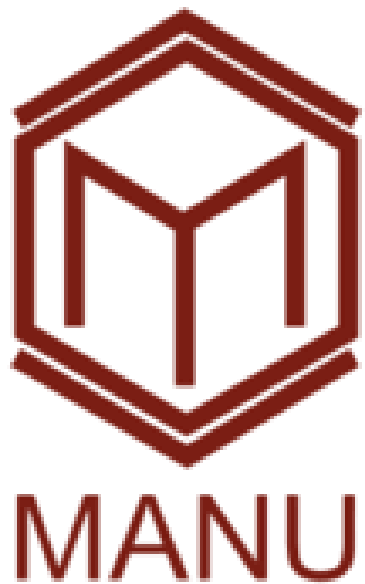
Targeted Neutrality for 2020-21 Carbon Emissions



MKU Limited



# Our Client



Manu Yantralaya Pvt. Ltd.,  
Jaipur, SEZ Facility

## About the Facility

It is a manufacturing firm which manufactures ball bearing cages & dust shields for bearing and auto industry.

**Built Up Area** – 1,00,000 sq. ft.

**Facility type** – Manufacturing Unit

**Scope** – Reporting of Carbon Footprint and achieving Carbon Neutrality

**Emissions Scope Covered** – Scope 1,2 and 3

Targeted Neutrality for 2020-21 Carbon Emissions

# Brands Impacted





### Chandigarh, Punjab

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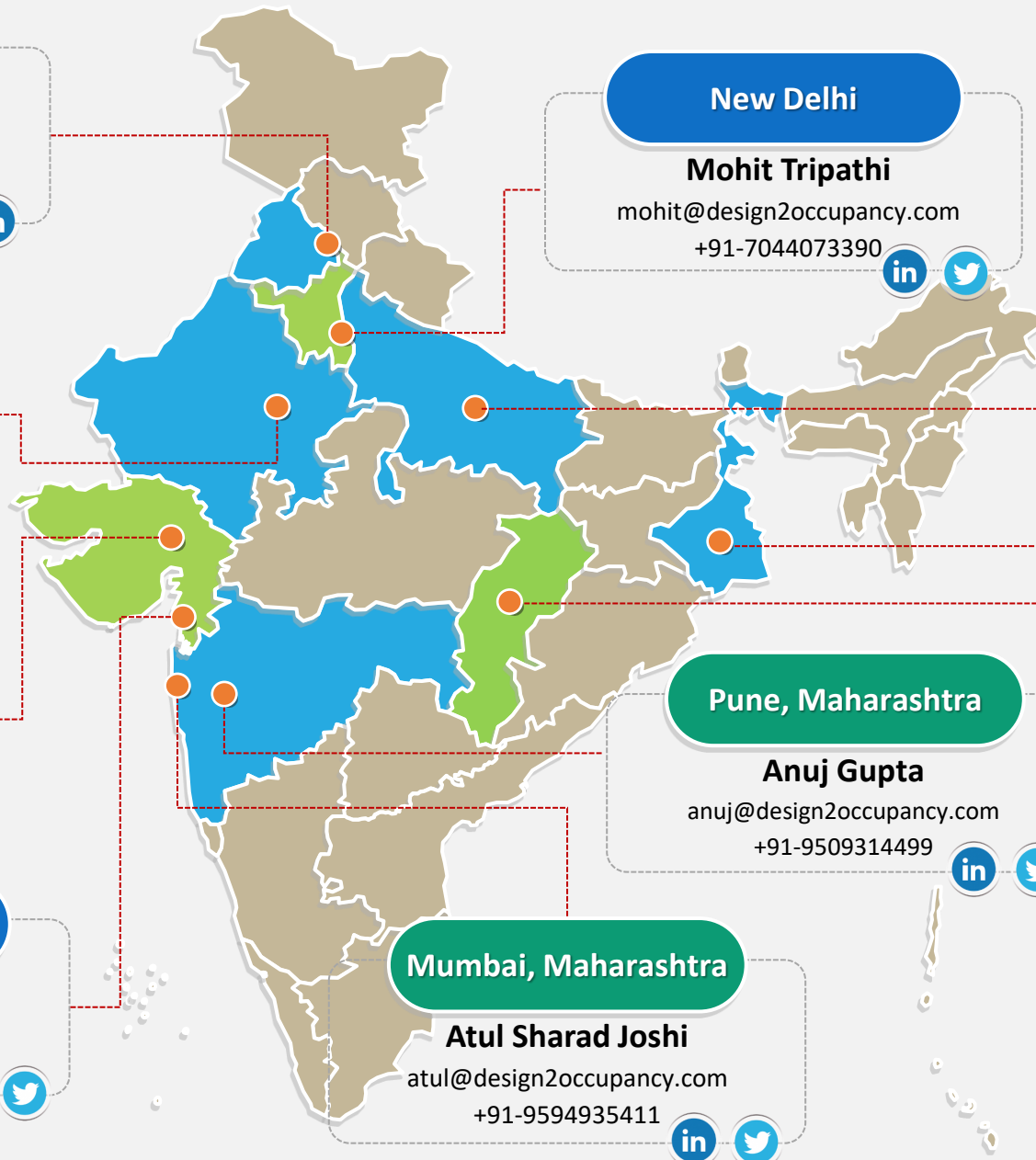
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# Our Presence in India





*Get in touch, Today!*

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