



# 4.1 Carbon Footprint

2021

Report prepared by: **ISOTECH LTD, Environmental Research and Consultancy**

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# Introduction

This report is part of the Elysée's Strategy / Pillar 4 / Green Elysée, subdivided into the following categories:

- **4.1 Carbon Footprint**
- 4.2 Green Energy
- 4.3 Zero Waste
- 4.4 Circular Economy
- 4.5 Green Circular products and Technologies for Circularity
- 4.6 Green Policy

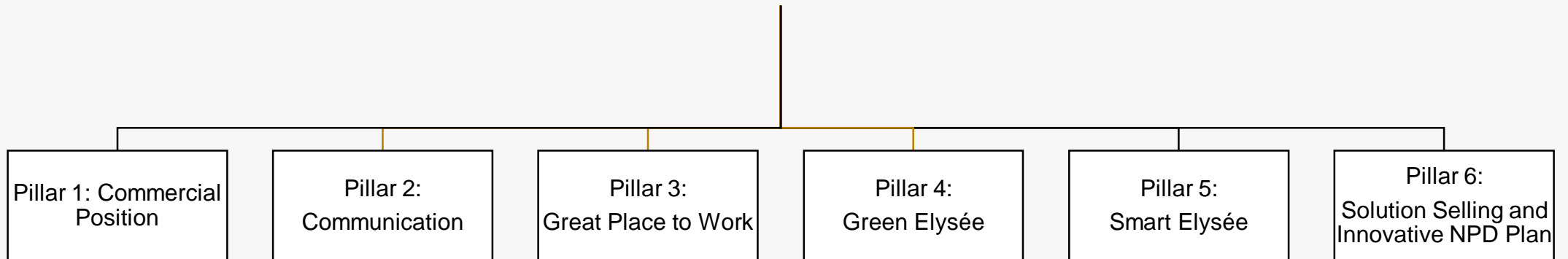
The scope of this report is to provide the latest assessment on current Greenhouse Gas (GHG) emissions in comparison with past emission levels. As this is the **second report** published by the company Elysée, the focus relies on the assessment of the greenhouses gases emissions for 2021 and the comparison of the results with those of 2020. The report layout and emissions categorization has been developed according to CYS EN ISO 14064-1:2019 standard, in alignment with the potential to be certified by the standard in the future.

This report was prepared by Isotech Ltd, Environmental Research and Consultancy. It has been assigned by the Management of Elysée, with the aim of investigating the GHG emissions related to the operations of the company and a plan for future actions.

Elysée has developed and implements the following strategy



# Strategy



# GOALS<sub>2021</sub>

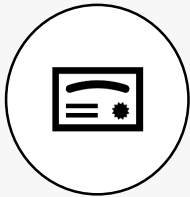
## Carbon Footprint



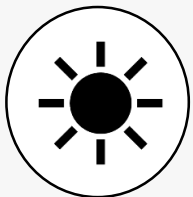
Implement GHG Emissions reduction initiatives



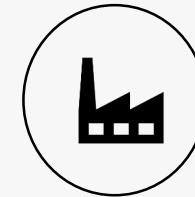
Invest in Carbon removal schemes



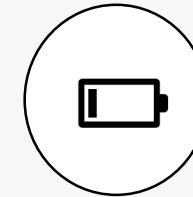
Certified Company's and products' environmental footprint



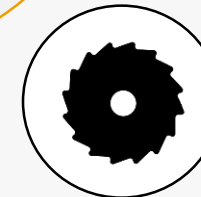
Investing in Renewable Energy



Quantify our GHG Emissions



Implement Energy Efficiency projects across our operations



Improve our material utilization



Zero waste-to-landfill

# Boundaries

## Organizational Boundaries

Elysée accounts for the GHG emissions and removals from all facilities over which it has operational control. These facilities include the factory, building facilities and sales stores (Table 2-1).

Table 1: A breakdown of Elysée’s facilities, including the factory, building facilities and sales stores.

## Reporting Boundaries

### Direct GHG Emissions and Removals

The term direct GHG emissions stands for Greenhouse Gases released into the atmosphere from a process owned or controlled by the company. The direct GHG emissions are calculated separately, where possible, for CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, NF<sub>3</sub>, SF<sub>6</sub>, HFCs and PFCs emissions in tonnes of CO<sub>2eq</sub>.

The same applies for direct GHG removals.

### Indirect GHG Emissions and Removals

The term indirect GHG emissions stands for the GHG emission that is a consequence of the company’s operations and activities but occurs from GHG sources that are not owned or controlled by the organization.

The same applies for indirect GHG removals.

Table 1: Factory and on-site office building

Departments	
Injection	Maintenance
PVC	Accounting
PE	Human Resources
Assembly	Health & Safety
Logistics & Warehouse	Sales
Workshop	Management
Quality Control	Research & Development
Stores	
Strovolos	Larnaca
Frenaros	Ergates
Paphos	Limassol



## Results Overview

21%

increased production

19,684tn CO<sub>2eq</sub>

total emissions for 2021

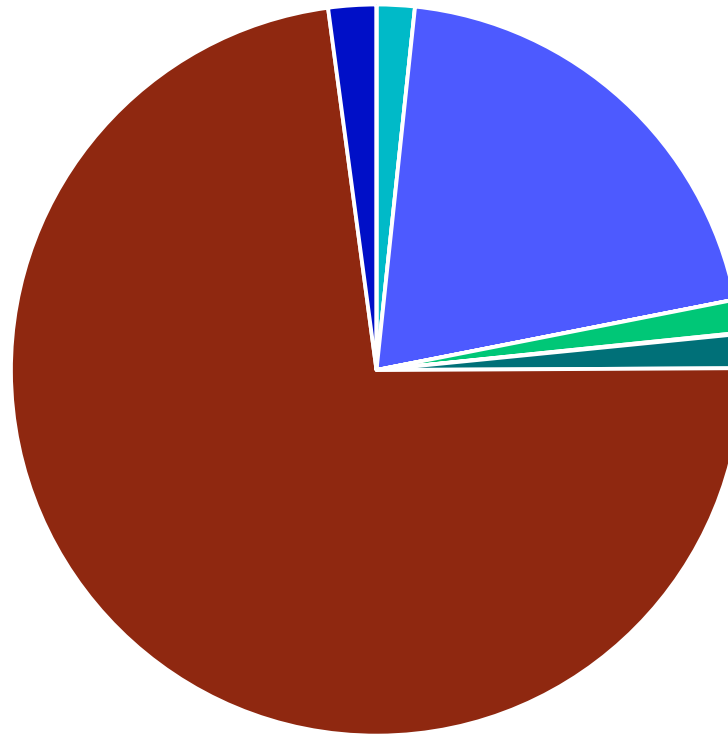
0.0025 tnCO<sub>2eq</sub>/kg

specific CO<sub>2eq</sub> emissions per kg of material used



# Results overview

GHG Emissions Summary, 2021



- Stationary Combustion
- Mobile Combustion
- Fugitive Emissions
- Imported Energy
- Water Usage
- Transportation (Employee Commute)
- Transportation (Air Travel, Personnel)
- Products Shipping
- Products Used (Goods & Services)

## Quantify our GHG Emissions



**+78%**

GHG Emissions “**Saved**”  
from PV Panels

**-1%**

Imported Energy

**+2%**

Products Used

**-37%**

Waste Treatment

**-10%**

Transportation of Products  
Used

**-4%**

Mobile Combustion

**-17%**

Transportation (Employee  
Commute)



**-16%**

Specific Energy in fuel consumption

**0.0025 tnCO<sub>2</sub><sub>eq</sub>**

emissions per kg of raw material used  
[Report 4.1 Carbon Footprint]

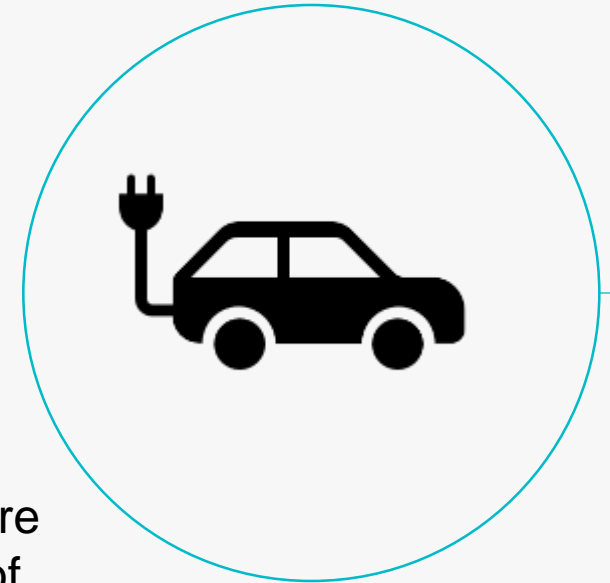


Improved quantification of GHG Emissions.

Initiation and funding of the procedure through CYS, for the quantification of CO<sub>2</sub> sequestration from trees.

Upkeep of 82 trees planted in 2020.

## Implement GHG Emissions reduction initiatives



# Invest in Carbon removal schemes



Proposal towards the Ministry of Agriculture for the cooperation in the development of the methodology of CO<sub>2</sub> sequestration from trees.

Request for the proposal has been approved by the Cyprus Standards Organization.  
Drafting of the guideline expected to commence in 2023.

The sum of sequestered carbon from the plantations in 2020 and 2021 was **0.098 ton CO<sub>2eq</sub>** and **0.110 ton CO<sub>2eq</sub>** respectively

## **Certified Company's and products' environmental footprint**



ISO 14064 preliminary work has been prepared.

Application for certification has been submitted.

**20%**

of the factory electricity  
needs covered by PV

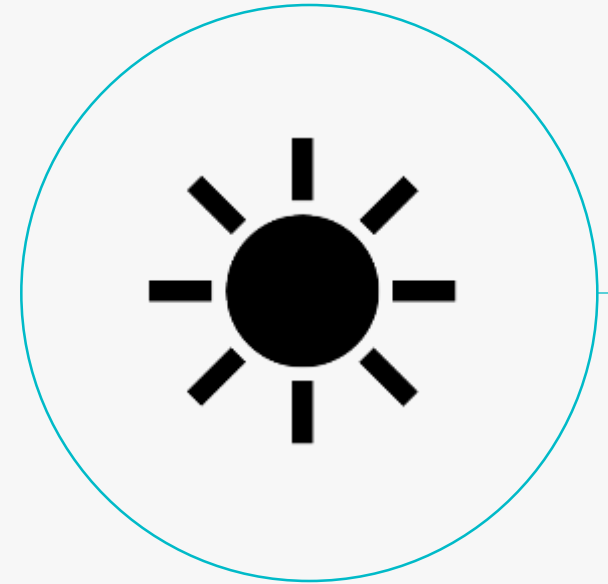
**78%**

increased emissions  
“savings”

**4.04%**

of the total emitted  
GHGs

## Investing in Renewable Energy



Third phase of solar panel installation completed in September 2021

## Implement Energy Efficiency projects across our operations



Development of PV washing piping system

3% increase in PV efficiency

4

Development of 4 circular products out of recycled plastic

Development and operation of the plastics recycling unit

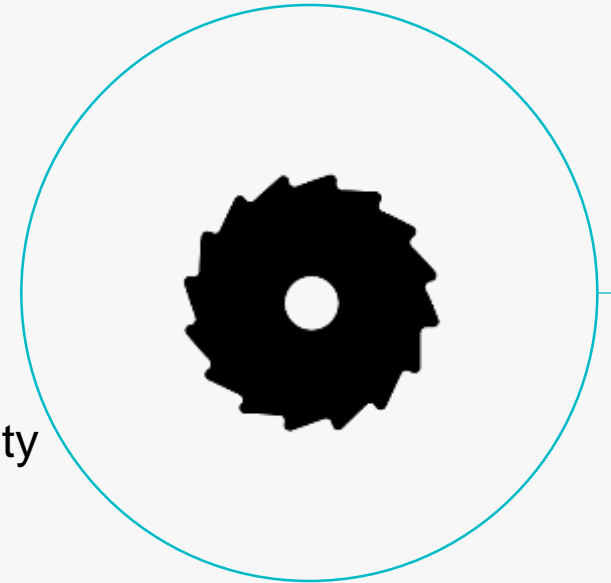


Quantifying waste generation intensity

R&D for new circular products

Design of an on-site recycling unit

## Improve our material utilization



4

Circular Products out of  
recycled plastic

-1.4%  
mixed waste  
disposed to landfill

- Development and operation of the plastics recycling unit.
  - Development of 4 circular products out of recycled plastic.
- [Report 4.5 Green Circular Product]
- Specific waste streams, delivered to the responsible waste treatment facilities.

[Report 4.3 Zero Waste]

## Zero waste-to-landfill



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# Needs and Challenges

- Transportation of employees from their homes to their workplaces has been incorporated in the indirect emissions partially. There is still a need for more information.
- Transportation of visitors to the company's facilities must be incorporated in the indirect emissions.
- Emissions from energy needed, to produce the raw materials used by the company. This data should be available by the company's suppliers and set an important criterion on the selection of suppliers.
- Emissions from end-of-life stage of the product sold by the reporting company, covering the disposal of solid and liquid waste.



# Targets

## CYS national guideline for the calculation of CO<sub>2</sub> sequestration per tree

Work with Ministry of Agriculture officials for the development of the CO<sub>2</sub> sequestration per tree methodology.

## Waste generation rate

Training employees to minimize waste & improve recovery rates.

Reduce the amount of waste generation by 5%.

## Certification of production GHG Emissions

Aquire ISO14064 Certificate

## Plant 1000 trees

Absorption of CO<sub>2</sub> from trees planted and maintained

## Quantities of waste streams treated by designated facility

Treat each waste stream in the most sustainable way possible.

Reduce the amount of waste landfilled by 10%



# Targets

## Recycling Rate

Pilot program for material recovery to produce circular products.

Use 50 tons of recycled plastic for the production of new products

## Recycling permit by the Department of Environment

Apply for recycling Permit

## Amount of waste to end up in landfill

Partnership with local recycling plants to manage waste

Reduce the amount of waste ending up in landfill by 10%

## Waste Transportation permit by the Department of Environment

Acquire waste transportation permit for the collection and transportation of plastic waste

## Quantities of untreated/ stored waste streams

Investigation of new materials or solutions for waste streams that are hard to treat (eg printing label, sicker labels, strapping)

All "Hard to treat" Waste to be diverted away from landfill



*Streaming Water. Streaming Life!*



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