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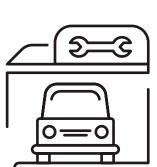
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# III. ABBREVIATIONS & ACRONYMS

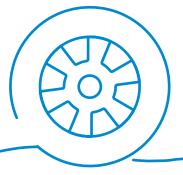


AC Air-conditioning AR6 Sixth Assessment Report BY Base Year CDP Carbon Disclosure Project **CFP** Carbon Footprint CH4 Methane CO, Carbon Dioxide CO,e Carbon Dioxide equivalent Department for Environment, Food & Rural Affairs **DEFRA EBITDA** Earnings Before Interest, Taxes, Depreciation, and Amortization EF **Emission Factor ERA Electricity Regulatory Authority** Environmental, Social and Governance **ESG GB** Auto **Ghabbour Auto GHG** Greenhouse Gases **GWP** Global Warming Potential **HCWW** Holding Company for Water and Wastewater **HVAC** Heating, ventilating, and air conditioning; **IPCC** Intergovernmental Panel on Climate Change International Standard Organization ISO **KPI** Key Performance Indicator kWh Kilowatt hour Litre L Line of Business LoB  $m^2$ Square meter  $m^3$ Cubic meter **MENA** Middle East and North Africa mt Metric tons mtCO,e Metric tons Carbon Dioxide equivalent Passenger-kilometre p.km Scp Scope **SDG** Sustainable Development Goals SDS Sustainable Development Strategy **TCFD** Task Force on Climate Related Disclosure t.km Ton kilometer **WBCSD** World Business Council for Sustainable Development WF Water Footprint

World Resources Institute

Well-to-Tank

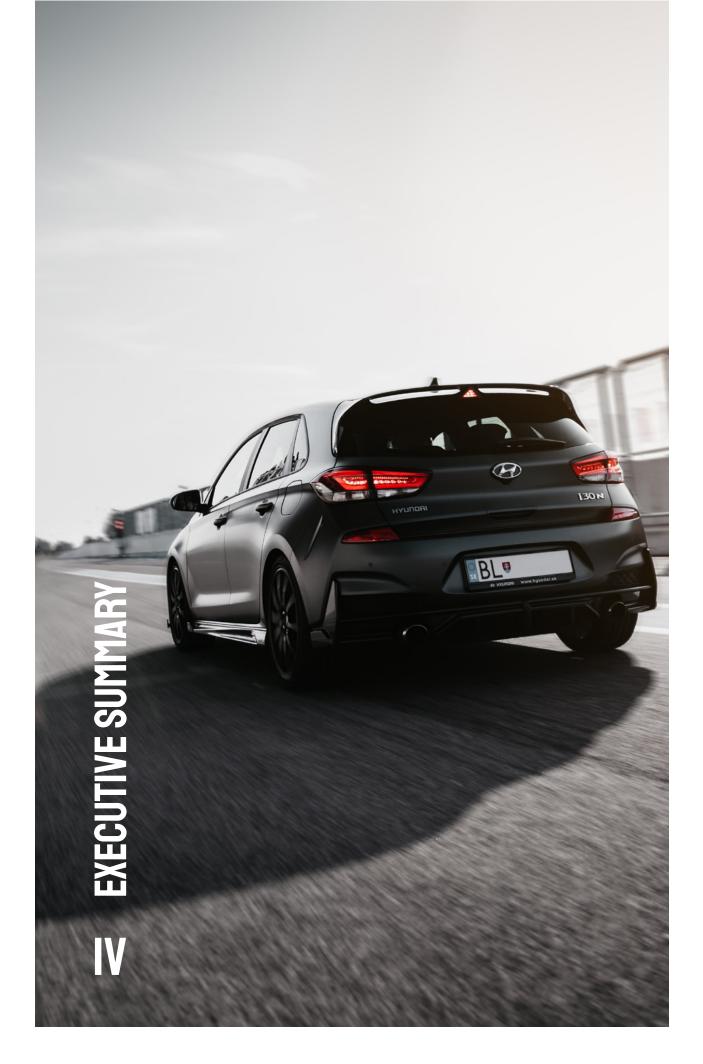
Year-on-Year



**WRI** 

**WTT** 

YoY



# **EXECUTVE SUMMARY**

Founded in 1960, Ghabbour (GB) Auto has become a leading automotive company in the Middle East and North Africa (MENA). As GB Auto enters a new era of sustainable development and corporate citizenship, we have felt the need to fully utilize all available frameworks and solutions to achieve a clean and fast transition towards Environmental. Social and Governance (ESG) advancement. Allowing for a solid and methodological assessment, the Carbon Footprint Analysis provides a reference to our overall sustainability by addressing the overall emissions related to our operation leading to the assessment of and highlights our performance over time. We aim to align with Egypt Vision 2030 and the Sustainable Development Goals through converting to a greener operation and environmentally conscious operation.

GB Auto is hereby presenting their first carbon footprint assessment, with the reporting period from the 1st of January 2020 to 31st of December 2020, and from the  $1^{st}$  of January 2021 to the  $31^{st}$ of December 2021. The year 2020 serving as the

base year (BY) against which all upcoming years will be compared.

The operational boundaries included emissions of our main activities, embracing direct emissions from controlled equipment and assets, emissions from purchased electricity, and selected indirect emissions resulting from our operations within Egypt and Iraq. The analysis and calculations were based on the Greenhouse Gas Protocol, the Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories, and the ISO 14064-1:2018 standards with the baseline being 2020.

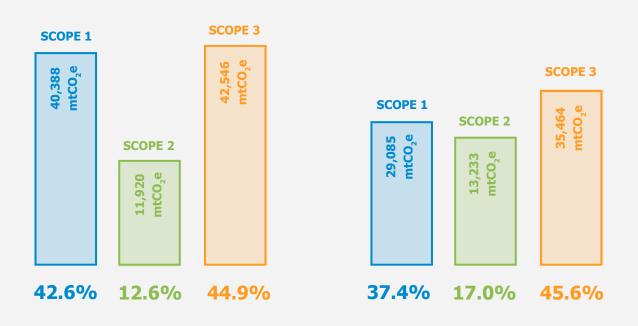
Ghabbour Auto has witnessed a total carbon footprint of 94,853 mtCO,e for the Base Year (BY) 2020 and 77,783 mtCO,e for 2021. This constitutes to an absolute decrease of 18% in its total carbon footprint emissions with the addition of the increased revenues, the total intensity has witnessed a drop of 41%

# **CARBON FOOTPRINT 202**I **2020 BASE YEAR** 94,853 77,783 **Absolute Emissions** mtCO<sub>2</sub>e mtCO<sub>2</sub>e **Intensity per Revenue** 2.9 **1.7** (Scp 1+2)mtCO<sub>2</sub>e/Mln EGP mtCO<sub>2</sub>e/MIn EGP **GB AUTO CARBON**

TARGETS

### **2020 EMISSIONS**

### **202I EMISSIONS**





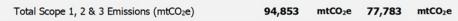
# **EMISSIONS SUMMARY (2020 AND 2021)**

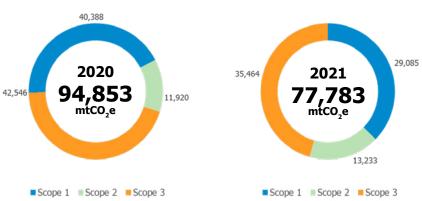
_						
	SCOPE 1 - DIRECT EMISSIONS (mtCO2e)			2020 (BY)		
	Stationary Combustion	Fuel burning – Diesel	6,578		2,444	
	<b>^</b>	Fuel burning – Natural Gas	170		1,654	
	Mobile Combustion	Fuel burning – Owned vehicles (including employees commuting and business travel)	9,553	43%	4,566	37%
		Fuel burning - Upstream and downstream transportation	12,390		10,607	
	<b>Fugitive Emissions</b>	Refrigerant leakage	11,697		9,814	
	Total Sco	ope 1 (mtCO <sub>2</sub> e)	40,388		29,085	
	SCOPE 2 - INDIR	FCT FMISSIONS (mtCO.e)	2020		2021	

SCOPE 2 – INDIREC	2020 (BY)		2021		
Electricity	Purchased electricity	11,920	13%	13,233	17%
Total Scope 2 (mtCO₂e)		11,920		13,233	

Total Scope 1 & 2 Emissions (mtCO <sub>2</sub> e)	52,307	mtCO <sub>2</sub> e	42,318	mtCO₂e
Scope 1 & 2 Carbon intensity (mtCO <sub>2</sub> e/ Mln EGP)	2.9	mtCO <sub>2</sub> e/ Min EGP	1.7	mtCO₂e/ Min EGP

SCOPE 3 – INDIREC	T EMISSIONS (mtCO <sub>2</sub> e)	2020 (BY)		2021	
Purchased goods and services	Office supplies	41		33	
	Fuel burning – Diesel (WTT)	1,576		568	
Fuel and energy-related actives (not included in scope	Fuel burning – Natural Gas (WTT)	22		283	
1 and 2)	Fuel burning – Owned vehicles (WTT)	2,487		1,088	
	Fuel burning - Upstream and downstream transportation (WTT)	2,969	440/-	2,465	460/
	Water usage & wastewater treatment	835	44%	762	46%
Upstream transportation and distribution	Imports	34,321		29,929	
Waste generated in operations	Solid waste disposal	172		190	
Business travel	Hotel stay	122		42	
	Air Travel + (WTT)	1		103	1
Total Scope 3 (mtCO₂e)		42,546		35,464	





Scope 1 direct emissions had a share of 43% in the base year of 2020. While in the following year, scope 1 emissions were reduced, and the total share was equal to 37%.



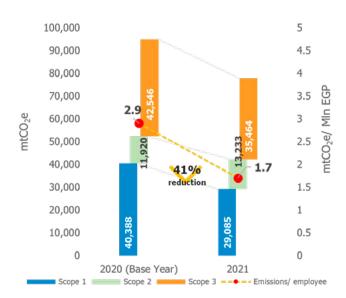
GB AUTO CARBON FOOTPRINT REPORT — 2020.21

INVENTORY

BOUNDARIES

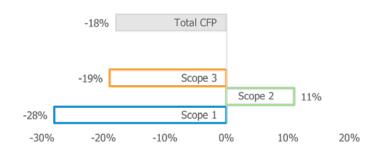
# **BASEYEAR & CARBON INTENSITY**

# **GHG EMISSIONS PER SCOPE (mtCO,e)**



The above graph represents scope 1, 2, and 3 emissions for both reporting periods, as well as scope 1 and 2 emissions per revenue. To keep track of yearly emissions, absolute emissions are used. While the intensity emissions are used to evaluate the business's performance over time. With a reduction of more than 40%, GB Auto demonstrated an improvement in emissions intensity per revenue.

# **CHANGE IN GB AUTO'S ABSOLUTE EMISSIONS** 2020 - 2021 (%)



2021 Carbon **Intensity** Scope 1 and 2



Even though our purchased electricity and natural gas consumption has increased in the year 2021, the overall drop in the carbon footprint emissions can be attributed to the decrease of our scope 1 and 3 emissions and this is mainly because of replacing the diesel fuel with natural gas.



GB AUTO CARBON FOOTPRINT REPORT — 2020.21

INVENTORY BOUNDARIES

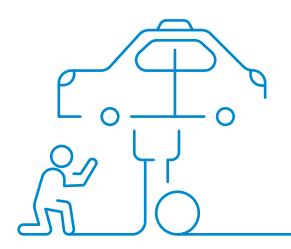
TARGETS

# GB AUTO CARBON FOOTPRINT EPORT — 2020.21

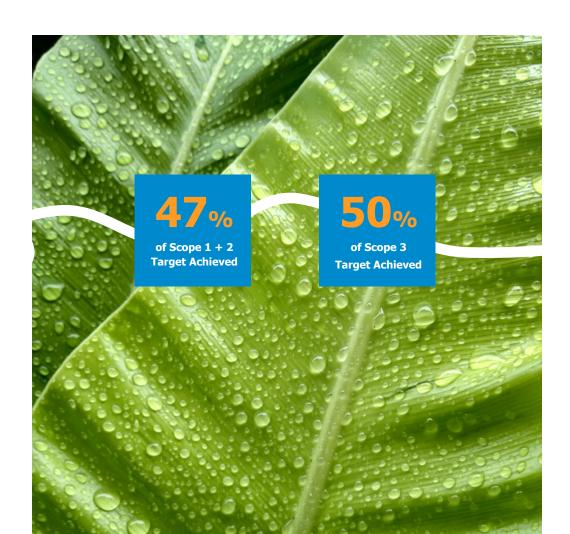
# **EMISSIONS REDUCTION TARGETS**

Accordingly, we have committed to calculating the carbon footprint for the years 2020 and 2021 to determine the environmental impacts and set clear and attainable targets aimed at achieving the 1.5°C scenario. This scenario in short, is a global goal to hold global warming at 1.5°C and was set during the 2015 Paris Agreement.

GB Auto is committed to achieving the following absolute reduction targets by 2028. As such, the following depicts our targets for each scope:



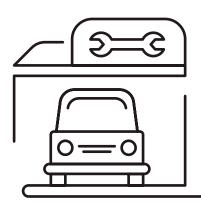
SCOPE	Base year emissions – mtCO₂e (2020)	Most Recent Year (2021)	Target year emissions (2028)	% Reduction target	Status
SCOPE 1 SCOPE 2	40,388 11,920	29,085 13,233	23,039 7,951	43% 34%	65% Achieved 0% Achieved
SCOPE 1+2	52,308	42,318	30,954	41%	47% Achieved
SCOPE 3	42,546	35,464	28,251	34%	50% Achieved





# **DECARBONIZATION PLAN**

As such, we are able to determine and condude that enhancing the sustainability of our operation is a natural possibility. Moving forward we have set a framework and targets to allow for the improvement of our performance and ensure our constant and advancing efforts to reduce our negative impact on the planet.



### **WAY FORWARD**













Integrating sustainability considerations at strategic and operational level

program and training

Disclosing sustainability performance

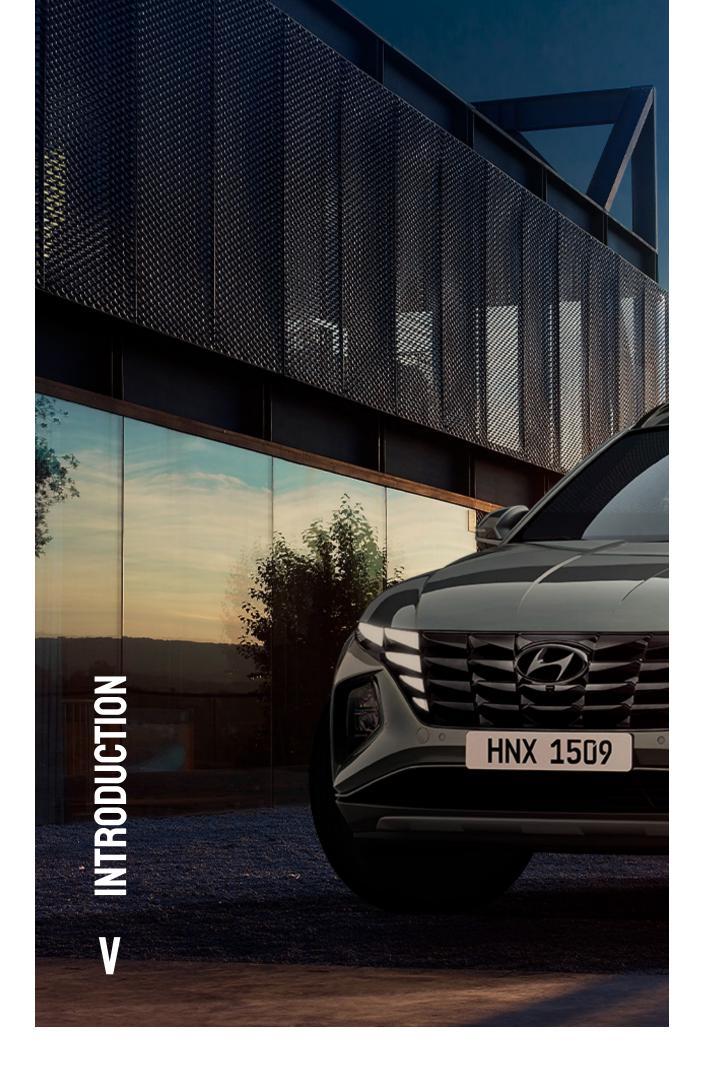
Investing in sustainable technologies and innovations

Improvement of energy efficiency in manufacturing and operations

Integrating renewable energy into energy supply

Low-carbon fleet, electrical vehides and other sustainable mobility solutions







# INTRODUCTION

With a solid reputation in the automotive industry in Egypt and Iraq, Ghabbour Auto acknowledges its economic, social and environmental impacts within the MENA region. Building on its strong awareness and belief in investing in green solutions, GB Auto has started expanding its sustainable operations frameworks and policies. This year, GB Auto has undergone a carbon footprint analysis to estimate and mitigate all negative impacts related to its operations. At GB Auto we understand the significant impact related to our scope of work and accordingly have decided to quantify it in a clean and clear way to ensure our past and future efforts are within the right track.

As GB Auto remains committed to reducing its energy consumption, it continues to uphold its sustainability policy, which places controls on energy consumption, guides the company's waste treatment efforts, and mitigates pollution risks. The regular introduction of upgrades and improvements across the company's operations has also helped GB Auto reaffirm its willingness to adapt to changing circumstances, especially with the increasing growth of sustainable industrial practices among

companies within the local and global communities. Our new ESG policy builds upon our core beliefs and sets a multitude of further KPIs to ensure our strategic and fast paced advancement. We hope the quantification of our emissions becomes our first step towards setting targets for climate action and building a resilient and competitive business of the future.

Today, the term "carbon footprint" is often used as shorthand for the amount of carbon being emitted by an activity or organization. This idea behind it being that organizations, entities and people can calculate and tabulate their annual emissions and its effect on the atmosphere and global warming. As such, carbon footprint reports have gained a momentum over the years to become a fundamental part of any organization's sustainability reporting practice. Carbon footprint reports generally encompass any entity's directly related emissions and well as indirect ones. At GB Auto, we are proud to be one of the first within our industry in Egypt to report on our emissions and aim at being at being part of the exemplary sustainable organizations within the MENA Region.



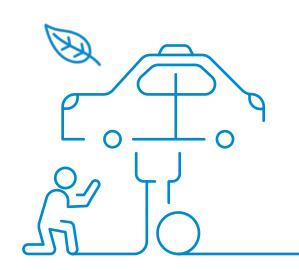


INVENTORY

BOUNDARIES

### **ORGANIZATIONAL BOUNDARIES**

Organizational boundaries define the scope of business and operation that is taken into consideration when calculating a company's Green House Gas Emissions. At Ghabbour Auto, we chose to disclose all operations related to our owned facilities. This covers the manufacturing, assembly, sales, after-sales and trading of passenger cars, motorcycles & three wheelers and construction equipment and tires over Egypt and all operations occurring in our Iraq facilities. Admin buildings, showrooms, service centers, factories, warehouses, and outlets are taken into consideration.



### **BOUNDARIES** \*

### **EGYPT**

FACILITY TYPE	NUMBER OF FACILITIES		
Service Centers	25		
Factories	5		
Admin	5		

### **IRAQ**

FACILITY TYPE	NUMBER OF FACILITIES
Admin	1
Service Centers	5
Showrooms	8
Showrooms and	16 (two of which were
Service Centers	introduced in 2021)
Warehouse	5
Outlet	4

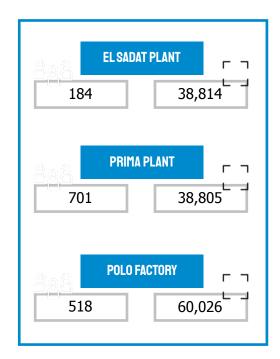
<sup>\*</sup> More details can be found within the Annexes

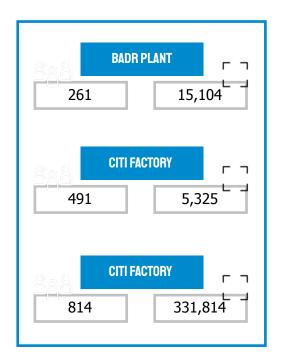
To ensure a clear organizational boundary is properly taken into consideration during GB Auto's carbon foot printing, all dynamic factors - elements that change Year-on-Year (YoY) - as well as static factors must be taken into consideration. Dynamic factors include, but are not limited to: Employees' headcount, production quantity and revenue and number of owned/rented locations. Static boundaries include slowly changing factors or more stable factors which is mainly a branch or location's area.

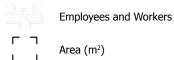
For consistency and analysis' purposes, this information is collected over the years to obtain a better understanding of how the operations of GB Auto are affected during these trying times and how that correlate to GB Auto's emissions. Spatial and employee boundaries assist in our target-setting as well.

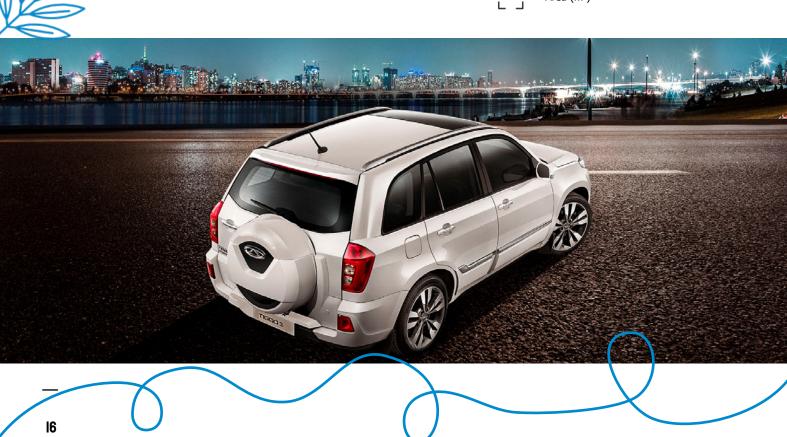


### **SPATIAL AND EMPLOYEE BOUNDARIES**









# **OPERATIONAL BOUNDARIES**

INVENTORY

BOUNDARIES

Operational boundaries determine the business activities of the reporting company that generate emissions, and which of these activities that should be included in the calculations, and how these activities should be classified (i.e. Direct, or indirect emissions). The emissions fall under different scopes; scope 1, resulting from GB Auto's owned or controlled equipment and assets, scope 2 covering emissions from purchased electricity; and Scope 3

embracing significant indirect emissions resulting from the operations.

In conformance with the GHG Protocol Corporate Standard, the reporting of Scope 1 and Scope 2 emissions, direct emissions and indirect emissions resulting from purchased electricity, are mandatory to report. The operational boundaries for GB Auto's carbon footprint assessment included the following:



### **SCOPE I - DIRECT EMISSIONS**

Emissions from sources that are owned or controlled by GB Auto (i.e. any owned or controlled activities that release emissions straight into the atmosphere).

The list of scope 1 activities includes the following:

- Stationary combustion
  - Diesel fuel burning on site (This mainly includes diesel generators)
  - Natural gas fuel burning
- Mobile combustion
  - Owned vehicles (including employees commuting and business travel)
  - Upstream and downstream transportation
- Fugitive emissions:
  - Refrigerant leakage

### SCOPE 2 - INDIRECT EMISSIONS

associated with Emissions the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by **GB Auto**.

The list of scope 2 activities includes the following:

Purchased electricity



### **SCOPE 3- INDIRECT EMISSIONS**

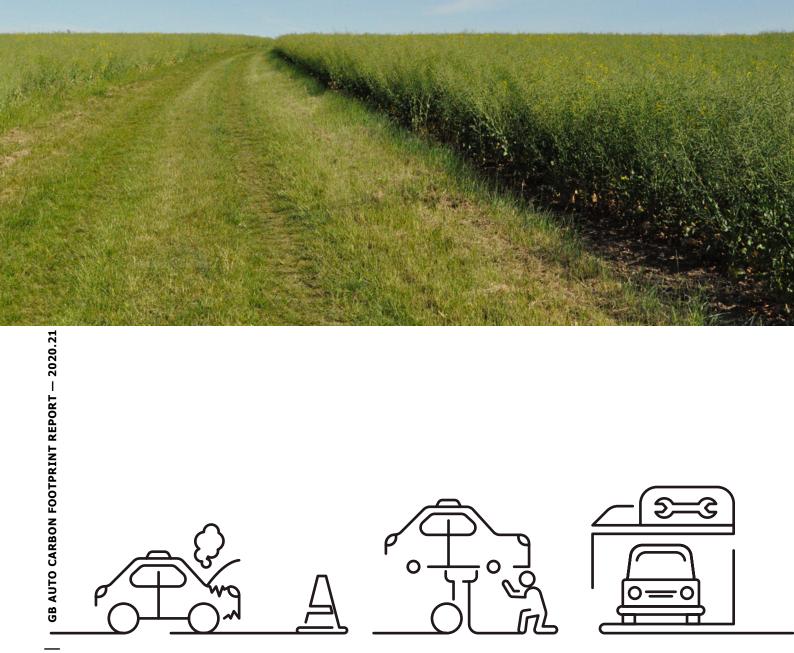
Emissions resulting from other activities that are not covered in scope 1 and 2. This includes transport fuel used by air business travel, imports, emissions from waste disposal; ... etc. The list of scope 3 activities includes the following:

- Purchased goods and services
  - Office supplies
- "Fuel and energy-related activities (not included in scope 1 and 2)"
  - Fuel burning: diesel Well-to-Tank (WTT)
  - Fuel burning: natural gas (WTT)
  - Fuel burning: owned vehicles (WTT)
  - Fuel burning: Upstream and downstream transportation (WTT)
  - Water usage & wastewater treatment
- Upstream transportation and distribution
- Waste generated in operations
  - Office solid waste disposal
- **Business travel** 
  - Air travel + (WTT)
  - Hotel stay

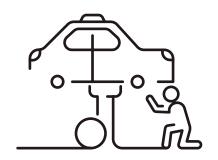


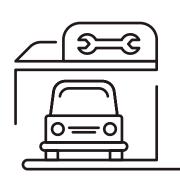
# **REPORTING PERIOD**

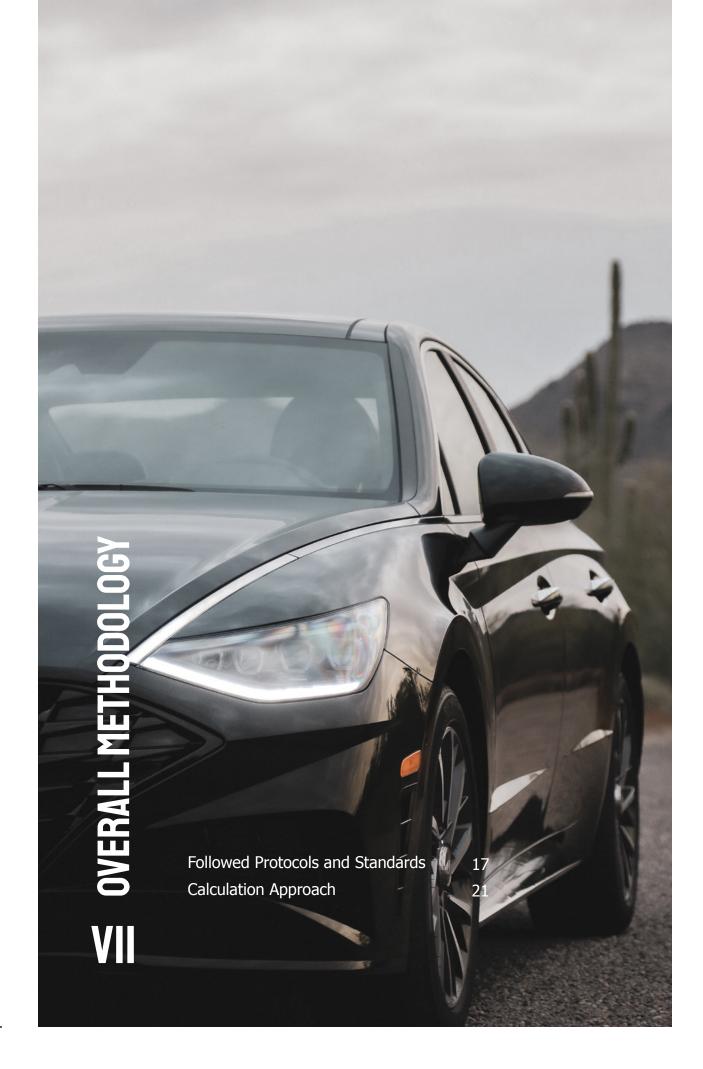
The reporting period covers from the  $1^{\mbox{\tiny st}}$  of January 2020 to the 31st of December 2021. This is the first report for the GB Auto; therefore, 2020 will be considered the base year to which all future years will be referenced.



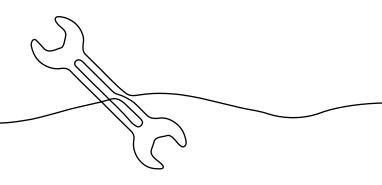








TARGETS



# **FOLLOWED PROTOCOLS & STANDARDS**

This carbon footprint report is based on a number of international and commonly used carbon footprint accounting and reporting standards, protocols, and guidelines, including the following:

# **The Greenhouse Gas Protocol Guidelines which** include, but not limited to:

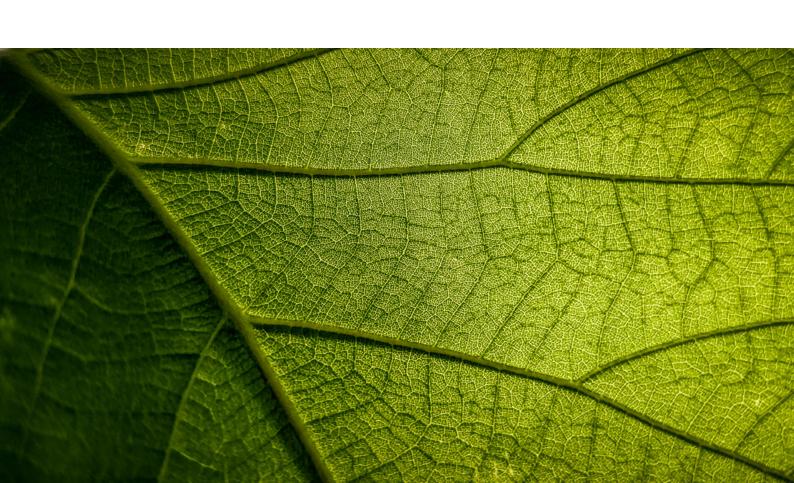
- A Corporate Accounting and Reporting Standard
- Corporate Value Chain (Scope 3) Accounting and Reporting Standard

### ISO 14064-1:2019

Specification with guidance at the organization level for quantification and reporting of greenhouse emissions gas and removals

# 2006 **Intergovernmental Panel on Climate Change (IPCC)**

Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).



INVENTORY

BOUNDARIES

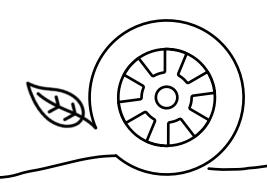
# CALCULATION APPROACH

As required by best practice in organizational GHG accounting and the chosen WBCSD/ WRI GHG Protocol, all seven Kyoto Protocol greenhouse gases have been included where applicable and material. This includes biogenic carbon dioxide, which is created from the combustion, harvesting, decomposition or processing of biological sources rather than fossil sources.

Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g. methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions totals to a single standardized unit useful for comparison, carbon dioxide equivalent, or CO2e.

The carbon footprint applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions in metric tons carbon dioxide equivalent (mtCO<sub>2</sub>e). Global warming potential values were sourced from the Intergovernmental Panel on Climate Change's (IPCC) sixth Assessment Report (AR6 2021), the most recent IPCC report available at the time of assessment. The Kyoto Protocol GHGs (or categories of GHGs) and their respective GWPs are listed in the table below.

GREENHOUSE GAS	CHEMICAL FORMULA	100-YEAR GWP	
Carbon dioxide	CO <sub>2</sub>	1	
Methane	CH <sub>4</sub>	27	
Nitrous oxide	$N_2O$	273	
ydrofluorocarbons (HFCs)	Various	Various	
Perfluorocarbons (PFCs)	Various	Various	
Nitrogen trifluoride	NF <sub>3</sub>	17,400	
Sulphur hexafluoride	SF <sub>6</sub>	25,200	
	CARBON	METHANE	NITROUS OXIDE
	Th	27x e GWP of CO,	273x The GWP of C







Each activity falls under a certain scope according to the GHG Protocol Guidelines; Scope 1 (Direct emissions), Scope 2 (Indirect emissions associated with the consumption of purchased electricity) and Scope 3 (Indirect emissions) that are a consequence of the operations of the organization but are not directly owned or controlled by the reporting company.

When calculating the CFP of Ghabbour Auto, the emissions of each activity have been considered. Each activity falls under a certain scope, which is described more in depth under each activity. The general calculation approach for the emissions, counted in mtCO2e, is multiplying the activity with its corresponding emission factor. When doing this, a unit analysis is performed in order to make sure the results of the emissions are obtained in the desired unit mtCO<sub>2</sub>e. The general formula for calculating the emissions for each activity is according to the below equation.

The unit of the GHG Emissions is metric tons carbon dioxide equivalent (mtCO<sub>2</sub>e). The unit CO<sub>2</sub>e refers to an amount of a GHG, whose atmospheric impact has been standardized to that one-unit mass of carbon dioxide (CO<sub>2</sub>), based on the global warming potential (GWP) of the gas.

# GHG Emissions, E [mtCO<sub>2</sub>e] = Activity, A [unit] x Emission Factor, EF [mtCO<sub>2</sub>e/unit]

The general formula could be applied for each activity to obtain its emissions. All activities were calculated for the fiscal year, 2020 and 2021. Thus, the emissions accounted for, were those of the total value for each activity in a single fiscal year.









### **EMISSION FACTORS**

INVENTORY BOUNDARIES

Emission factors (EF) are representing the quantity of pollutants released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO<sub>2</sub>e) emissions generated by a unit weight, volume, distance, or duration of the activity, e.g., CO2e /liter fuel consumed, CO2e /km driven or CO2e / kWh of purchased electricity etc. The emission factors were identified based on:



### **DEFRA**

Department for Environment, Food & Rural Affairs UK 2020 and 2021

### **IPCC**

Intergovernmental Panel on Climate Change

### **Country Specific Emission Factors**

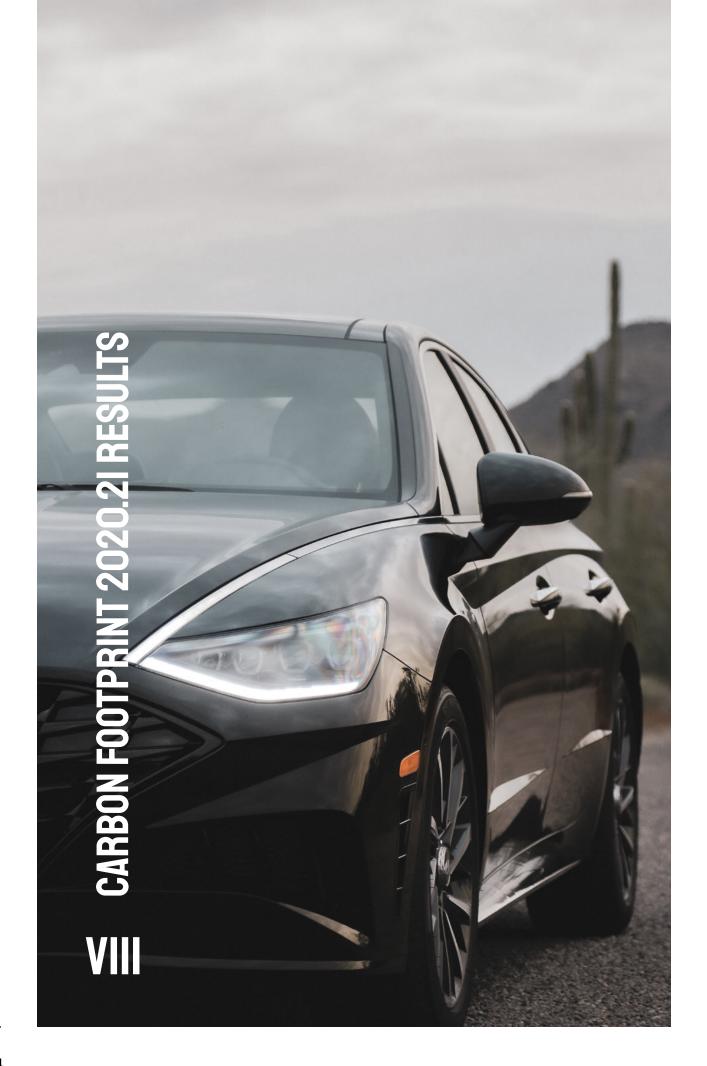
Emission factor calculated specifically for Egypt

As regards to the country specific emission factor, the emission factor is reported monthly by Egypt Electricity Regulatory authority (ERA). An average value is calculated for each year. The emission factor is based on Egypt's actual fuel consumption.

The emission factor for water supply and wastewater treatment is calculated using a conversion formula, provided by the Holding Company for Water and Wastewater (HCWW). Based on the amount of energy consumed in each process, the corresponding emission factor could be obtained.







INTRODUCTION

INVENTORY Boundaries

OVERALL METHODOLOGY

CARBON FOOTPRINT BASEYEAR & CARBON RESULTS INTENSITY

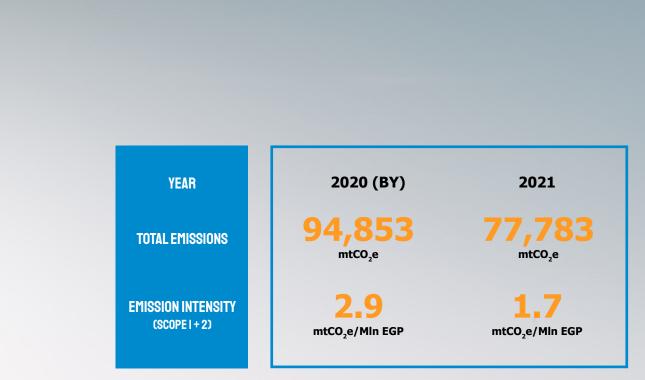
TARGETS

DECARBONIZATION PLAN

TOWARDS A GREEN ENVIRONMENT

ANNEX

QUALITY ASSURANCE STATEMENT





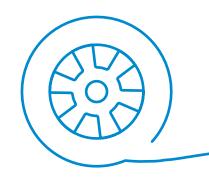
# **SCOPE I – DIRECT EMISSIONS**

### STATIONARY COMBUSTION



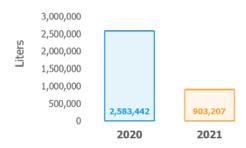
### **FUEL BURNING - DIESEL**

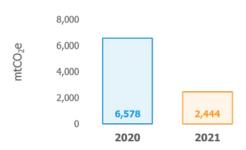
Emissions resulting from diesel fuel burning on site fall under scope 1 (direct emissions). Diesel burned is used in different activities including the use of diesel to generate electricity in factories, service centers and showrooms. In 2020 GB auto facilities consumed 2,583,442 liters of diesel and resulted in 6,578 mtCO,e. As for the year 2021, GB auto consumed 903,207 liters of diesel which resulted in 2,444 mtCO,e.



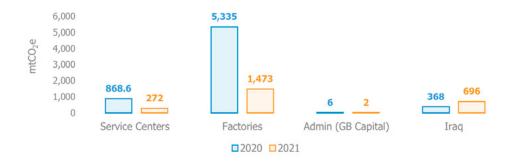
### **Total Diesel Consumption (Liters/year)**

### Total Diesel Fuel Burning Emissions (mtCO<sub>2</sub>e/year)

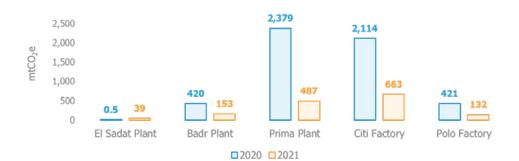




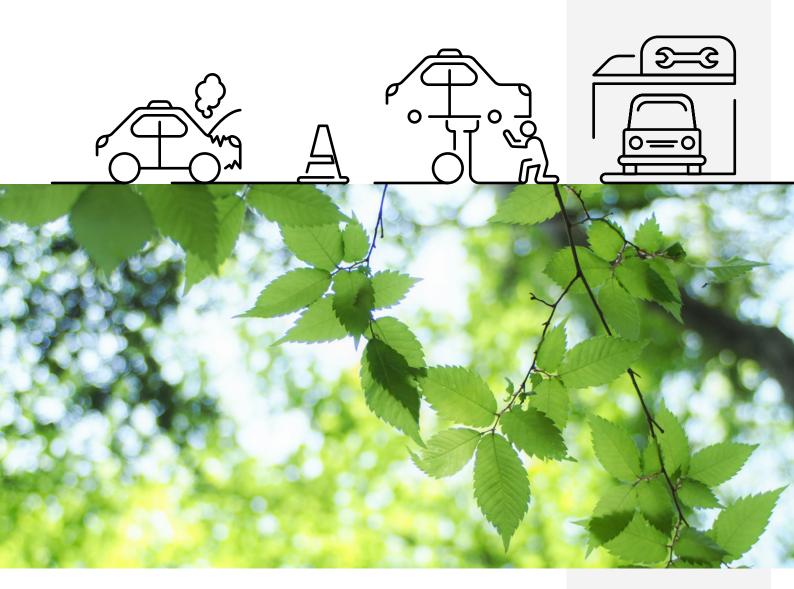
### Diesel Fuel Burning Emissions per type of facility (mtCO<sub>2</sub>e/ year)



# Diesel Fuel Burning Emissions per Factory (mtCO<sub>2</sub>e/Factory)



The highest emissions resulted from Prima and Citi factories in the base year 2020 resulting in 2,379 and 2,114 mtCO<sub>2</sub>e respectively. After switching to natural gas, these factories were able to drastically reduce their diesel emissions the following year with emissions of 487 and 663 mtCO<sub>2</sub>e. This was around 80% reduction in Prima plant and 68% reduction in Citi factory.





### **FUEL BURNING - NATURAL GAS**

Since it is directly used by GB Auto, the emissions resulting from the consumption of natural gas were accounted for under scope 1. Natural gas burned is used in different activities in factories, service centers and showrooms. In the base year 2020, GB auto facilities consumed 84,055 m³ of natural gas and resulted in 170 mtCO2e and in 2021 the increase in consumption reached 818,351 m³ this resulted in 1,654 mtCO,e.

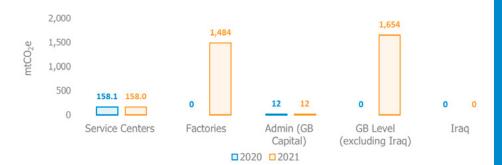
### Total Natural gas Consumption (m³/year)



### Total Natural Gas Fuel Burning Emissions (mtCO,e/year)

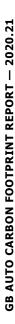


### Natural gas Fuel Burning Emissions per type of facility (mtCO,e/ year)



For the year 2021 the overall natural gas consumption increased by 870% as shown in the graph above which resulted in an increase in emissions from 170 mtCO<sub>2</sub>e to 1,654 mtCO<sub>2</sub>e

factories the reduced those that had their diesel emissions and switched to natural gas. The dramatic increase can be seen from the baseline year of 2020, which was zero, to the year 2021, which resulted in 1,484 mtCO<sub>2</sub>e, or 90% of total natural gas emissions in 2021.





### **MOBILE COMBUSTION**



### FUEL BURNING - Owned Vehicles (incluing employees commuting and business travel)

Mobile combustion includes emissions from our company's owned vehicles, which are accounted for under scope 1 (direct emissions). In 2020, our company's owned vehicles and employees commuting to and from the workplace consumed 1,758,977 liters of gasoline, resulting in 9,553 mtCO,e. In 2021, GB Auto consumed 1,749,135 liters of gasoline, resulting in 4,566 mtCO2e.



### FUEL BURNING - Upstream and downstream transportation

Scope 1 accounts for the transportation of imported products from ports to factories, as well as the transfer of products from factories to service centers and showrooms. In 2020, our company's upstream and downstream transportation activities consumption was 4,866,254 liters of diesel, resulting in emissions of 12,390 mtCO<sub>2</sub>e. As for the year 2021, our consumption was equal to 3,920,579 liters of diesel in upstream and downstream transportation activities which resulted in 10,607 mtCO,e.



### Mobile Combustion Emissions (mtCO<sub>2</sub>e/year)

14,000 12,000 10,000 8,000 6,000 4,000 2,000 0

9,553.0

4,566

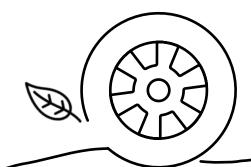
Owned Vehicles including Employees Commuting

12,390

10,607

Up/Downstream transportation

□2020 □2021



TARGETS

# **FUGITIVE EMISSIONS**



### **REFRIGERANT LEAKAGE**

Refrigerants are fluids used in refrigeration for cooling. The emissions resulted from this activity fall under scope 1 (direct emissions). GB Auto have consumed 6,789 kg of R-22, and R 134A and other mix of refrigerants in 2020 and resulted in 11,697 mtCO,e. As for the year 2021 GB Auto consumed 5,415 kg of refrigerants and resulted in 9,831 mtCO,e. Refrigerant leakage was the second most significant emitting activity in scope 1 direct

### Refrigerants Emissions (mtCO<sub>2</sub>e/year)

12,000 11,500 11,000 10,500 10,000 9,500 9,000 8,500

11,697

9,831

Refrigerants Leakage

□2020 □2021



# SCOPE2 - INDIRECT EMISSIONS

### **PURCHASED ELECTRICITY**

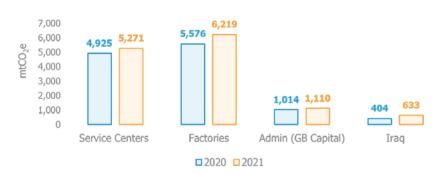
INVENTORY

BOUNDARIES



The electricity consumption for GB auto for the year 2020 was 26,963,328 kWh and resulted in emissions of 11,920 mtCO,e, and for the year 2021 was 30,518,957 kWh and resulted in 13,233 mtCO<sub>2</sub>e. This activity accounts for the second largest share of the carbon footprint emissions, accounting for about 13% and 17% of total scope 1, 2 and 3 emissions in 2020 and 2021.

### Purchased Electricity Emissions per line of Business (mtCO,e/year)



### Electricity Emissions per Factory (mtCO<sub>2</sub>e/year)



Prima Plant, with a share of 73 percent of the factory's overall emission in 2021, can be seen as the source most GB auto's electricity emissions.

### Electricity Emissions per Admin building (mtCO,e/year)



TARGETS

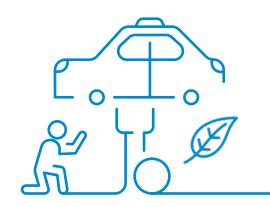
# **SCOPE 3 - INDIRECT EMISSIONS**

### **PURCHASED GOODS AND SERVICES**

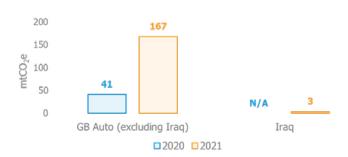


### **OFFICE SUPPLIES**

Which includes paper, ink cartridges, flyers, face masks, etc., falls under scope 3 (indirect emission). Our office supplies consumption for the year 2020 was 44 tons and it resulted in emissions of 41 mtCO2e, as for the year 2021 our consumption was 186 tons and resulted in **171 mtCO<sub>2</sub>e.** 



### Purchased Goods Emissions (mtCO<sub>2</sub>e/year)





GB AUTO CARBON FOOTPRINT REPORT — 2020.21

INVENTORY

BOUNDARIES

## **FUEL AND ENERGY-RELATED ACTIVITIES**

(NOT INCLUDED IN SCOPE 18-2)



### **WELL-TO-TANK (WTT) EMISSIONS**

GB Auto accounted for WTT emissions in order to capture the maximum climate impacts from fuel burning activities. Emissions related to fuel burning WTT fall under scope 3 are as follows:

Fuel burning - Diesel WTT: For the years 2020 and 2021, WTT emissions resulting from diesel usage were 1,576 mtCO<sub>2</sub>e and 568 mtCO<sub>2</sub>e respectively.



mtCO,e

2020 (BY)

mtCO,e

2021

Fuel burning - Natural gas WTT The WTT emissions related to the consumption of natural gas were 22.11 mtCO,e in 2020 and 283 mtCO,e in 2021.



mtCO,e mtCO,e

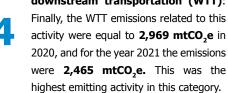
Fuel burning - Owned vehicles (including employees commuting and business travel) WTT: GB Auto's WTT emissions in 2020 were equal to 2,487 mtCO<sub>3</sub>e and for the year 2021 the emissions were 1,088 mtCO2e.



mtCO,e

mtCO,e

Fuel burning - Upstream and downstream transportation (WTT):



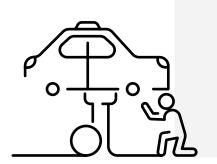


mtCO,e

mtCO<sub>2</sub>e







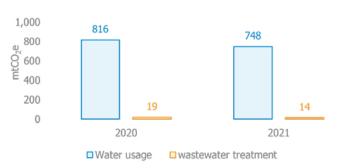


GB AUTO CARBON FOOTPRINT REPORT — 2020.21

### **WATER USAGE & WASTEWATER TREATMENT**

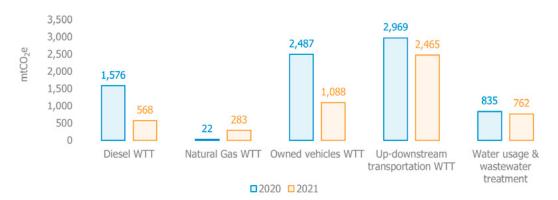
Scope 3 includes water consumption and wastewater treatment emissions. In the reporting period of 2020, GB Auto's facilities consumed 634,166 m³ of water resulting in 816 mtCO<sub>2</sub>e for water consumption and 19  $\mathbf{mtCO_2}\mathbf{e}$  for wastewater treatment. The overall water consumption in the year 2021 was equal to 493,402 m<sup>3</sup> which resulted in  ${\bf 748~mtCO_{2}e}$  for water consumption and  $\mathbf{14} \ \mathbf{mtCO_2} \mathbf{e}$  for wastewater treatment.

### Water usage & wastewater treatment Emissions (mtCO,e/year)





### Fuel and energy-related activities (not included in scope 1&2) emissions summary per activity (mtCO<sub>2</sub>e/year)





### **UPSTREAM TRANSPORTATION AND DISTRIBUTION**



### **IMPORTS**

Imports of complete build ups (CBU's), spare parts and vehicle body parts are accounted for under scope 3 (indirect emissions). In the base year of 2020, the total imports have reached 170,684 ton.km and resulted in emissions of  $\bf 34,321$   $\bf mtCO_2e$ . As for the year 2021, the imports were 157,096 ton.km and resulted in emissions of 29,929 mtCO<sub>2</sub>e.



### Imports Emissions (mtCO<sub>2</sub>e/year)





### **WASTE GENERATED IN OPERATIONS**

### **SOLID WASTE DISPOSAL**

The solid waste generated in operations was accounted for under scope 3 (indirect emissions). The emissions associated with transportation of waste form the facility to disposal or treatment was accounted for in this category. The waste generated from our facilities for the year 2020 was 8,076 tons and resulted in 172 mtCO2e, as for the following year, the quantities have reached 8,928 tons which resulted in 190 mtCO<sub>2</sub>e.



### Solid Waste Disposal Emissions (mtCO<sub>2</sub>e/year)





# **BUSINESS TRAVEL**



INVENTORY BOUNDARIES

# **HOTEL STAY**

Hotel stay emissions from business-related visits are accounted for under scope 3 (indirect emissions). In 2020, 2,006 nights were stayed, resulting in 122 mtCO2e, while in 2021, 746 nights were stayed, resulting in 42  $mtCO_2e$ .



# AIR TRAVEL + (WTT)

Because of COVID-19, GB Auto only had domestic flights in 2020. The total kilometers travelled by all passengers were 6,271 p.km, resulting in 1.1 mtCO,e. International as well as domestic flights took place in the year 2021. In this year, total passenger kilometers for domestic and international flights totaled 605,203 p.km, resulting in 103 mtCO2e. WTT emissions were taken into account in order to capture the maximum impacts of air travel.

# **Business Travel Emissions (mtCO,e/year)**





TARGETS

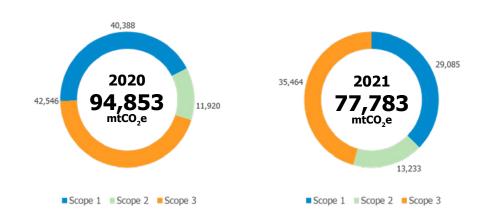
# **EMISSIONS SUMMARY (2020 AND 2021)**

SCOPE 1 - DIRECT EMISSIONS (mtCO2e)			o.	2021	5	
Stationary Combustion	Fuel burning – Diesel	6,578		2,444		
	Fuel burning – Natural Gas 170			1,654		
Mobile Combustion	Fuel burning – Owned vehicles (including employees commuting and business travel)	9,553	43%	4,566	37%	
	Fuel burning - Upstream and downstream transportation	12,390		10,607		
Fugitive Emissions	Refrigerant leakage	11,697		9,814		
Total Scope 1 (mtCO₂e)				29,085		

SCOPE 2 – INDIREC	2020 (BY)		2021	y Mangarana	
Electricity	Purchased electricity	11,920	13%	13,233	17%
Total Scope 2 (mtCO₂e)		11,920		13,233	

Total Scope 1 & 2 Emissions (mtCO₂e)	52,307	mtCO <sub>2</sub> e	42,318	mtCO <sub>2</sub> e
Scope 1 & 2 Carbon intensity (mtCO₂e/ Mln EGP)	2.9	mtCO₂e/ Min EGP	1.7	mtCO <sub>2</sub> e/ Min EGP

SCOPE 3 - INDIRECT EMISSIONS (mtCO <sub>2</sub> e)				2021	
Purchased goods and services	Office supplies	41		33	
5 days a second to d	Fuel burning - Diesel (WTT)	1,576		568	
Fuel and energy-related actives (not included in scope	Fuel burning – Natural Gas (WTT)	22		283	
1 and 2)	Fuel burning – Owned vehicles (WTT)	2,487		1,088	
	Fuel burning - Upstream and downstream transportation (WTT)		440/	2,465	460/
	Water usage & wastewater treatment	835	44%	762	46%
Upstream transportation and distribution	Imports	34,321		29,929	
Waste generated in operations	Solid waste disposal	172		190	
Business travel	Hotel stay	122		42	
	Air Travel + (WTT)	1		103	
Total Scope 3 (mtCO₂e)		42,546		35,464	



94,853

mtCO<sub>2</sub>e

77,783

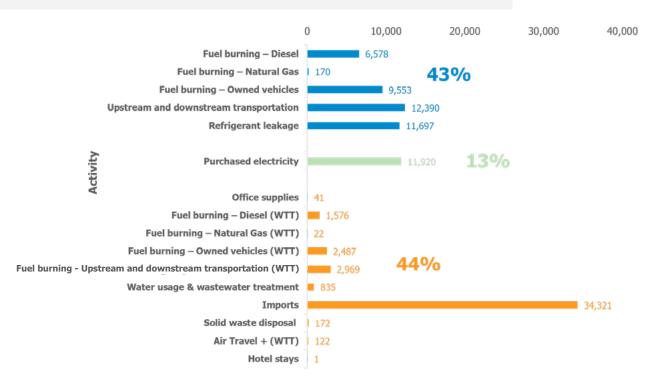
mtCO<sub>2</sub>e

Total Scope 1, 2 & 3 Emissions (mtCO<sub>2</sub>e)

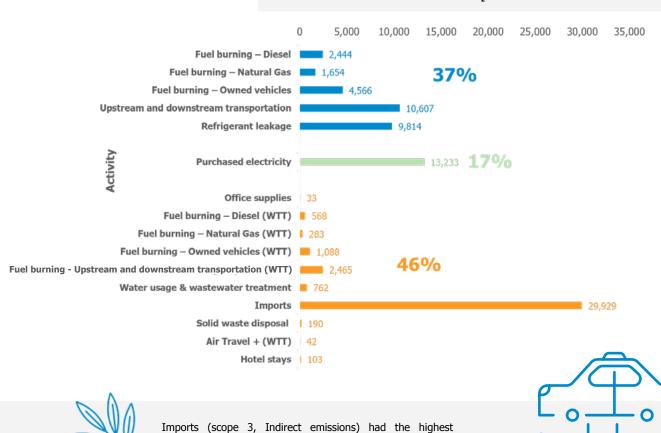
GB AUTO CARBON FOOTPRINT REPORT — 2020.21

EXECUTIVE INTRODUCTION INVENTORY OVERALL CARBON FOOTPRINT BASEYEAR & CARBON TARGETS DECARBONIZATION TOWARDS A GREEN ANNEX QUALITY ASSURANCE STATEMENT STATEMENT

# 2020 Emissions per activity (mtCO<sub>2</sub>e)



# 2021 Emissions per activity (mtCO<sub>2</sub>e)



contribution in both reporting periods, with percentages of 36 percent and 38 percent of the total emissions, respectively.

CARBON FOOTPRINT REPORT — 2020.21



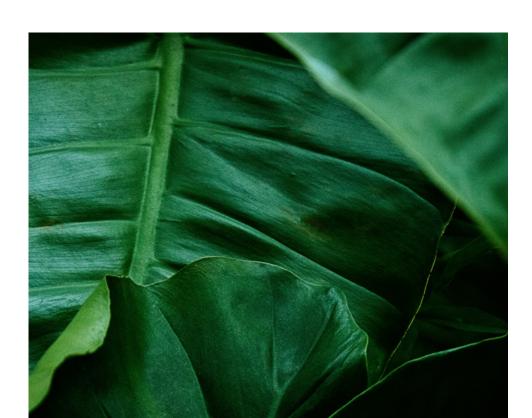
# **BASE YEAR & CARBON INTENSITY**

The Base Year represents a reference point in the past against which current emissions can be compared. The base year for GB Auto's carbon emissions is 2020, as this is the first year when GB Auto first started calculating the emissions for all its operations. In the following table, GHG emissions for the years 2020 and 2021 are compared:



		ABSOLUTE EMISS	IONS (mtCO₂e)	
SCOPE		SCOPE  BASE YEAR EMISSIONS 2021 EMISSIONS –  - mtCO <sub>2</sub> e (2020) mtCO <sub>2</sub> e		DIFFERENCE
SCOPI	E 1	40,388	29,085	- 11,303
SCOPE 2		11.920 13,233		+1,313
SCOPE	SCOPE 1+2		42,318	- 9,989
SCOPI	E 3	42,546	35,464	-7,082
Emissions Intensity	Revenue	2.9	1.7	-1.2
Scope 1 & 2	EBITDA*	41.6	21.8	-19.8
Emissions Intensity	Revenue	3.8	4.3	+0.5
Scope 1, 2 & 3	EBITDA	49.8	62.2	+12.4

<sup>\*</sup> Earnings Before Interest, Taxes, Depreciation, and Amortization

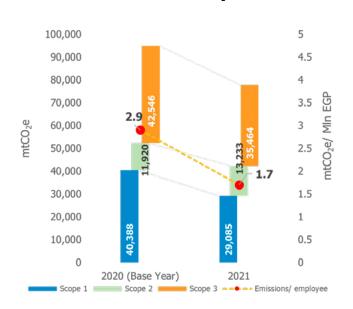


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A carbon intensity is the emission rate of a given pollutant relative to the intensity of a specific activity, or an industrial production process. An example of emission intensity is the ratio of GHG emissions produced to the total revenues of GB and GB related entities. This would help in understanding and analyzing

the performance of each factory when compared to the base-year intensity. GB Capital was excluded from the calculations because the data provided did not represent GB Capital as well as the emissions. The following charts show the difference in emissions/ revenue for the years 2020, and 2021:

# GHG Emissions per Scope (mtCO<sub>2</sub>e)



2021 Carbon Intensity Scope 1 and 2





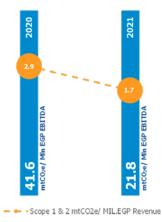




As observed below (as well as within the above table), the carbon intensity decreased for the calculated scope 1 & 2, this was due to the drastic decrease in diesel fuel and its replacement with natural gas in 2021. As for scope 1, 2 & 3 there is an increase in the calculated carbon intensity due to the additional data in scope 3 that was not available in the year 2020 but was completed in the year 2021.



# **Carbon Emissions Intensity**







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# **TARGETS**

In Paris in 2015, we witnessed a historic and unprecedented moment of global unanimity. 200 countries Nearly committed to keeping warming far below 2 degrees Celsius above pre-industrial levels, with a target of 1.5 degrees Celsius.

Targets set a clear roadmap for businesses to reduce greenhouse gas (GHG) emissions, allowing them to avoid the worst effects of climate change while also assuring future corporate success.

All targets are based on the Absolute Contraction method, which calls for a 1.5 degree Celsius scenario by 2028.



40.8%

**Reduction to 2028** 





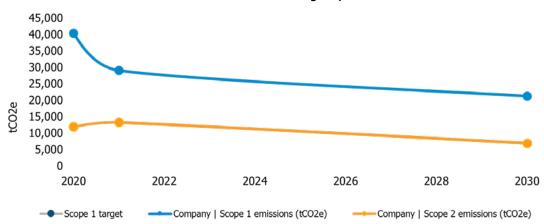
# **TEMPERATURE GOAL**

We can set emission reduction targets and direct investments toward a low-carbon economy by accounting for carbon emissions and ensuring that our activities and related emissions contribute to a global temperature increase of no more than 1.5 degrees Celsius. The Intergovernmental Panel on Climate Change, or IPCC, has set this as the safe limit for temperature increases from pre-industrial levels.



SCOPE	Base year emissions — mtCO2e (2020)	Most Recent Year (2021)	Target year emissions (2028)	% Reduction target	Status
SCOPE 1	40,388	29,085	23,039	43%	65% Achieved
SCOPE 2	11,920	13,233	7,951	34%	0% Achieved
SCOPE 1+2	52,308	42,318	30,954	41%	47% Achieved
SCOPE 3	42,546	35,464	28,251	34%	50% Achieved





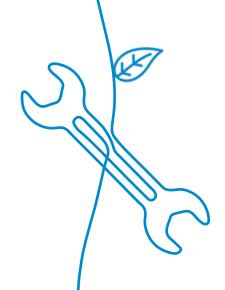


BOUNDARIES

# GB AUTO CARBON FOOTPRINT REPORT — 2020.21

# **DECARBONIZATION PLAN**

Ghabbour Auto has made a commitment to decarbonization as climate change and global warming have become a global issue affecting not only humanity but also the environment. As GHG emissions from industrial and other humaninduced activities rise, it is more important than ever to restore the ecological balance, which is why GB Auto has developed a strategy and GHG emission reduction plan that includes various sustainability solutions and carbon emissions offsetting schemes in order to achieve Carbon Neutrality by 2050.



#### **ACTION AREA**

#### **TARGET**

#### Energy



- Implementing green electricity and renewable energy and investing in renewable energy projects
- Energy monitoring systems.
- Using energy efficient lighting system.
- 100% facilities certified according to ISO 50001.
- Conduct annual climate risk assessment.

# Wastewater and water consumption



- Reduce water consumption in office buildings and factories by installing sensor operated sinks with low flow fittings.
- Implementing of grey water treatment in facilities and reaching zero wastewater

# Transportation and distribution



Sustainable and low-carbon fleet, encouraging employees traveling to work vis their private cars to reduce using their cars.

# Waste disposal and recycling



- Conducting corporate waste management system
- Setting up separate waste bins for different types of waste in all GB auto facilities, and ensuring collection and recycling
- Adapting the concept of reducing the use of raw materials,
- Out-sourced materials renewable recycled or recyclable.
- zero waste from operations

# Refrigerant consumption



- Establish a full-scale system to purchased refrigerants tracking their quantities, types and locations
- Using more ecofriendly refrigerants such as R-1234yf, R-152a or R-744 if applicable

#### Corporate sustainability



- Publish internal guidelines for integrating sustainability into decision-making by 2023
- Conduct a review of corporate policies, standards, instructions, plans and procedures for capacity to effectively manage material ESG topics
- 100% of managers trained on ESG topics by 2025





BOUNDARIES



# **CONTRIBUTION TOWARDS A GREEN ENVIRONMENT**

TARGETS

In global alignment to the Sustainable Development Goals (SDGs), Egypt has developed its own Sustainable Development Strategy (SDS) - the Egypt Vision 2030. The SDS addresses the country's unique requirements and challenges and is broken down into eight goals addressing social, economic and environmental dimensions. All eight goals correspond to the 17 SDGs.

Ghabbour Auto's current goals and targets contribute to the SDGs & Egypt Vision 2030 on both the economic as well as the environmental dimensions of the sustainable development of Egypt and its infrastructure.



In an ambitious yet dedicated goal to ensure our sustainability momentum and transparency, Ghabbour Auto will be disclosing in accordance to the Carbon Disclosure Project (CDP) for the second time in 2021. The CDP is a questionnaire aimed at assessing a company's water, environment or forests (deforestation) impact and provides a scoring accordingly.

#### **SDG**









# **EGYPT VISION 2030**









The Task Force on Climate-related Financial Disclosure (TCFD) is a globally recognized climate related disclosure platform focusing on the adoption and consideration of financial risks and opportunities related to climate change. The TCFD reporting is in alignment with the CDP Questionnaire. For further information kindly reference our 2021 Sustainability Report.

# **SDG**









# **EGYPT VISION 2030**





BOUNDARIES

Ghabbour Auto is currenlty in the process of changing its factories' consumption to greener and more sustainable solutions. Along with shifting towards natural gas where applicable instead of Diesel, we aim at having our solar energy plants up and running by 2023.

# **SDG**



# **EGYPT VISION 2030**



# **WATER MANAGEMENT**

With the aim of achiving net-zero liquid discharge - a closed loop water usage and treatment system, GB Auto is in the process of implementing a wastewater treatment system at El Sadat Plant to resue treated water within our manufacturing process. Excess water is to be used in the irrigation of our green areas surrounding the factory.

#### **SDG**





# **EGYPT VISION 2030**







# **CLEAN ENERGY VEHICLES**

In efforts to transform the mobile sector in Egypt and to allow for a streamless conversion to green vehicles, we are planning on introducing a new variety of natural gas vehicles.

#### **SDG**











# **EGYPT VISION 2030**







# **GB AUTO ESG POLICY**

In 2021, GB Group has published its first ESG Strategy 2022-2030 covering four main pillars: Good Governance, Vibrant Business, Livable Planet and Thriving Humanity. This strategy aims at ensuring the sustainable and transparent operation of GB Group. Throughout the policy, different risks are being addressed and mitigated with focus on the green recovery, circularity, sustainable mobility and climate and energy. The fourth pillar (Livable Planet) goes hand-in-hand with GB Auto's carbon footprint assessment

# **SDG**













# **EGYPT VISION 2030**









BOUNDARIES

# **DEFINITIONS & TERMINOLOGY**

Base year

A base year is a reference year in the past with which current emissions can be compared. In order to maintain the consistency and comparability with future carbon footprints, base year emissions need to be recalculated when structural changes occur in the company that change the inventory boundary (such as acquisitions or divestments). If no changes to the boundaries of the inventory happen, the base year is not adjusted.

TARGETS

**Carbon Footprint** 

The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.

CO<sub>2</sub> Sequestration

The capture and secure storage of carbon that would otherwise be emitted to or remain in the atmosphere.

CO<sub>2</sub>e

Carbon dioxide equivalent or CO<sub>2</sub> equivalent, abbreviated as CO<sub>2</sub>e, is a metric used to compare the emissions from various GHGs on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

**Direct Emissions** 

Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g., generators, blowers, vehicle fleets.

**Emission Factors** 

Specific value used to convert activity data into greenhouse gas emission values.

**Fugitive Emissions** 

Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.

Well-to-Tank **Emissions** 

Well-to-Tank emissions, also known as upstream or indirect emissions, is an average of all the GHG emissions released into the atmosphere from the production, processing and delivery of a fuel

Stationary **Combustion**  Stationary fuel combustion sources are devices that combust solid, liquid, or gaseous fuel, generally for the purposes of producing electricity, generating steam, or providing useful heat or energy for industrial, commercial, or institutional use

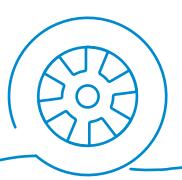
Mobile **Combustion**  Mobile combustion are emissions from the transportation of materials, products, waste, and employees resulting from the combustion of fuels in company owned or controlled mobile combustion sources (e.g., cars, trucks, buses, trains, airplanes, ships, etc.).

**GHG Protocol** 

Greenhouse Gas Protocol - uniform methodology used to calculate the carbon footprint of an organization.

**GWP** 

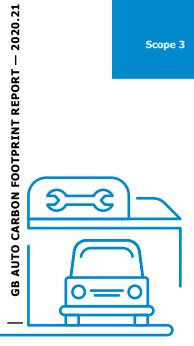
Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.

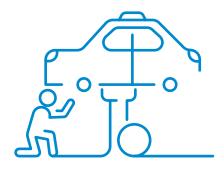




# **DEFINITIONS & TERMINOLOGY**

HVAC	HVAC (heating, ventilating, and air conditioning; also heating, ventilation, and air conditioning) is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
Indirect Emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g. purchasing of electricity.
Kyoto protocol	It operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.
Operational boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organizational boundary	Determination of which business units of an organization will be included in a carbon footprint calculation
Refrigerant	A refrigerant is a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle
Renewable Energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scope 1	Emissions from sources that are owned or controlled by the reporting entity (i.e. any owned or controlled activities that release emissions straight into the atmosphere).
Scope 2	Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
Scope 3	Emissions resulting from other activities. This includes transport fuel used by air business travel, and employee-owned vehicles for commuting to and from work; emissions resulting from courier shipment; emissions from waste disposal; etc.









# LIST OF INCLUDED AND EXCLUDED ORGANIZATIONAL BOUNDARIES

	2021 Facilities	2020	Rationale	2021	Rationale
SC-01	Abu Rawash - ITAMCO	~		~	
SC-02	01 Ismailia				
SC-02	Katamia - Ring Road	Š		<i>-</i>	
SC-04	Qaliub k7	<i>-</i>		<u> </u>	
SC-05	Merghem - Hyundai	· V		, in the second	
SC-06	Bosch Building -				
	Qalyoub K3	Υ.		~	
SC-07	Factory - Qaliub k16	<b>×</b> .		<b>×</b> .	
SC-08	Itamco 2	<b>×</b> .		×.	
SC-09	Itamco 3	<b>~</b>		<b>~</b>	
SC-10	Al Ameria	<b>Y</b>		<b>~</b>	
SC-11	Raml Station	<b>×</b> ,		<b>×</b> ,	
SC-12	Assiut	<b>Y</b> ,		<b>Y</b> ,	
SC-13	Hurghada - Hyundai	<b>×</b> ,		<b>×</b> ,	^
SC-14	Hurghada - Volvo	<b>Y</b> ,		×,	
SC-15	Mazda Plaza - K32	×,		~	
SC-16	Suez Sharm El Sheikh -	~		~	
SC-17	Hyundai	<b>~</b>		~	
SC-18	Sohag	<b>~</b>		~	
SC-19	Menyia - Hyundai	<b>~</b>		~	
SC-20	Portsaid	<b>~</b>		~	
SC-21	Zagazig	<b>~</b>		~	
SC-22	Tanta	<b>~</b>		~	
SC-23	Obour	<b>~</b>		~	
SC-24	Luxour	<b>~</b>		~	
SC-25	Gesr El Suez	<b>~</b>		~	
SC	Iraq Service center	<b>~</b>		~	
FC-01	El Sadat Plant	<b>~</b>		~	
FC-02	Badr Plant	<b>~</b>		~	
FC-03	Prima Plant	<b>~</b>		~	
FC-04	CITI factory - toktok	<b>~</b>		~	
FC-05	Polo Factory - Buses	~		~	
Admin	GB Lease	<b>~</b>		~	
Admin	GB Haram + Drive	<b>~</b>		~	
Admin	GB Raseedy	<b>~</b>		~	
Admin	GB Tasaheel + Mashroey	<b>~</b>		~	
Admin	GB Capital	<b>~</b>		~	
Admin	Iraq Office building	<b>~</b>		<b>~</b>	
GK - WH	Baghdad Awareeg WH	<b>Y</b>		<b>~</b>	
GK - WH	El Dora WH	<b>~</b>		<b>~</b>	
GK - SR	Baghdad 62 SR	<b>×</b> .		<b>~</b> .	
GK - SC	Baghdad -Orisat SC	<b>~</b>		<b>~</b> .	
GK - SC	Basra SC	<b>Y</b>		<b>&gt;&gt;&gt;&gt;&gt;</b>	
GK - SR	Baghdad Mall	<b>Y</b> ,		<b>Y</b>	
GK - SC	Erbil SC	<b>Y</b> ,		<b>V</b>	
GK - SR	Douhok SC	<b>Y</b> ,		<b>Y</b>	
GK - SC	Douhok SR	<b>Y</b>		<b>Y</b>	
GK - SR	Kwer WH	V.		Y,	
GK - WH	Solimania SC	<b>V</b>		<b>V</b>	

# LIST OF INCLUDED AND EXCLUDED ORGANIZATIONAL BOUNDARIES

	2021 Facilities	2020	Rationale	2021	Rationale
GK - SC	Douhok SR	<b>~</b>		~	
GK - SR	Kwer WH	~		~	
GK - WH	Solimania SC	<b>~</b>		~	
GK - SC	Solimania SR	<b>~</b>		~	
GK - SR	GK AL Mansour SE	<b>~</b>		~	
GK - SR	Basra SR	~		~	
GK - SR	Baghdad - Bayaa S.R	<b>~</b>		<b>~</b>	
GK - SR GK -	Baghdad -Mehion Outlet	~		~	
Outlet	Baghdad -Souq Outlet	~		~	
GK - Outlet	Baghdad -El Mansour Outlet	~		<b>~</b>	
GK - Outlet	Erbil Outlet	~		~	
GK - Outlet	Baghdad Awareeg	~		~	
GQ - WH	Al Najaf	~		~	
GQ - WH	Al Basraa - Al Ashar	<b>~</b>		~	
GQ - Land	Bajaj Building	<b>~</b>		~	
GQ - SC,SR	Al Hela	~		~	
GQ - SC,SR	Al Amarah	~		~	
GQ - SC,SR	Al Najaf	~		~	
GQ - SC,SR	Karblaa	~		~	
GQ - SC,SR	Al Hayania	~		~	
GQ - SC,SR	Abu Dsheer	~		~	
GQ - SC,SR	Al Basraa - Al Ashar	~		<b>~</b>	
GQ - SC,SR	Al Samawah	~		~	
GQ - SC,SR	Al Mahmoudya	~		~	
GQ - SC,SR	Al Najaf	~		~	
GQ - SC,SR	Al Basraa - Um Qaser	~		~	
GQ - SC,SR	Al Dewanya	<b>~</b>		~	
GQ - SC,SR	Al Najaf	~		~	
GQ - SC,SR	Al Bayaa	~		~	
GQ - SC,SR	New SR - Al Mahmoudya	×	Facility was not established in 2020	~	
GQ - SC,SR	New SR - Karbla	×	Facility was not established in 2020	×	No consumption data was available regarding the facility.
GQ - SC,SR	Spare Part Outlet Baghdad	×	Facility was not established in 2020	~	



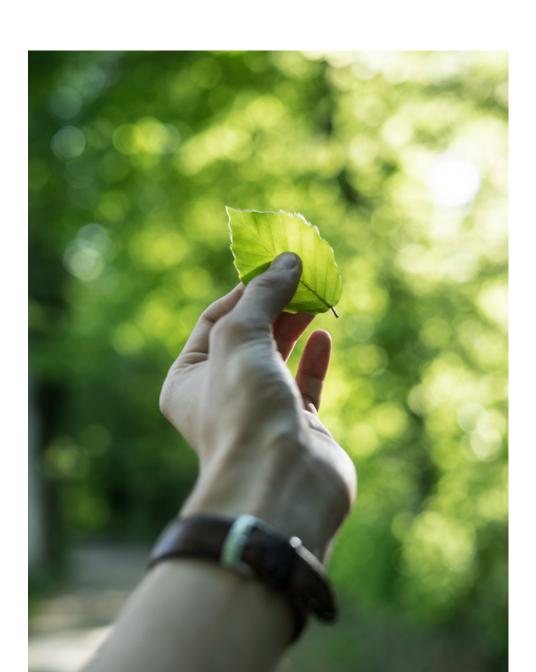
TARGETS

# **DATA SOURCES AND QUALITY**

All of the information used to compute the various footprints comes from our database. The data quality has been evaluated and presented below, with data from each business sector evaluated independently to enable for better analysis and display of resolution and further explanations. The most used types of data are:

- **Primary data:** data taken from documents that are directly linked to the assessment, such as electricity invoices, to calculate emissions caused due to electricity.
- Secondary data: such as databases, studies, and reports.
- Assumptions: assumptions made based on internationally recognized standards and studies.

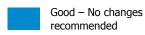


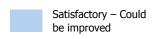


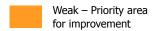
INVENTORY Boundaries

# **CFP Data quality from 1/1/2020 to 31/12/2020 (Base year)**

SCP	ACTIVITY	DATA	RESOLUTION	NOTES
1	Fuel burning — Diesel	2,583,442.37 L	Yearly diesel consumption per facility – Liters/year	-
1	Fuel burning — Natural Gas	84,055.04 m <sup>3</sup>	Monthly consumption in m³	<
1	Fuel burning – Owned vehicles (including employees commuting) - business travel	247,865.35 L 1,511,111 km (Employees commuting)	Yearly diesel consumption per facility – Liters/year Average distance traveled per month for employees commuting	Owned vehicles: The data is correct and accurate, but it should be provided for each facility separately.  Employees commuting: 1. Emissions were calculated based on total consumed fuel for transportation per liter and not per p.km due to lack of data (e.g. no. of employees transported per vehicle, no. of trips per month per vehicle type etc.) 2. Emissions from outsourced buses were excluded due to lack of data 3. Average of the of Km available for allowance was used to calculate the average total distance travelled per year
	Fuel burning - Upstream and downstream transportation	4,866,254 L	Yearly fuel consumption and distance travelled per vehicle – liters and distance travelled/vehicle and year	The data is correct and accurate, but it should be provided for each facility separately.
1	Refrigerant leakage	6,788.40 kg	Total yearly consumption per type of refrigerant in kg	The data is correct and accurate, but it should be provided for each facility separately.
2	Purchased Electricity	26,963,327.01 kWh	Consumption per month – kWh/month	Iraq's electricity EF was based on a 2011 value (latest value available)     Average tariff value was used to calculate the consumption in kWh for the entire year (normally, tariff values increase every 6 months)
	Purchased goods	44.21 ton	Yearly quantities of purchased goods – kg/year	The data is correct and accurate, but it should be provided for each facility separately.
	Water consumption	634,166.43 m <sup>3</sup>	Monthly consumption	Assumed the electrical energy needed to supply and treat the water in Iraq is the same as that in Egypt     For facilities with no data, an average of the facilities of the same type was used, in proportion to the area of that facility     Assumed same water tariff in Iraq as Egypt, to calculate the emissions from Iraq SC and Iraq office building
3	Imports	2,161,270,839.45 t.km	Weight of imports and distance of shipment from port to port was provided	All the containers (20" and 40") were assumed to be loaded with the maximum capacity
3	Solid Waste disposal	8,076.48 tons	Total waste quantity in tons per type	The data did not include the waste resulted from employees and workers during the operation of each facility.
3	Hotel stay	2,006 nights	Number of nights per trip	-
3	Air travel	6,271 km	Total distance traveled per flight (short-long haul)	-



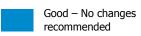




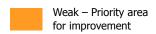
# CFP Data quality from 1/1/2021 to 31/12/2021

SCP	ACTIVITY	DATA	RESOLUTION	NOTES
1	Fuel burning – Diesel	903,207.17 L	Yearly diesel consumption per facility – Liters/year	Values provided as average "Diesel oil consumption/month in liter" for prima, sadat and badr (no indication whether this is used for transportation or no)/ average data provided was not used instead monthly data provided was used for Iraq (GQ) information is not satisfactory as not all months were covered for the reported information
1	Fuel burning – Natural Gas	818,351 m <sup>3</sup>	Monthly consumption in m <sup>3</sup>	Data was provided for Prima Plant only; 2020 data was taken for the rest of the facilities.
	Fuel burning – Owned vehicles (including employees commuting) - business travel	1,749,134.74 L	Yearly diesel consumption per facility – Liters/year Average distance traveled per month for employees commuting	The data is accurate, but it should be provided for each facility separately. Employees commuting was calculated as part of this category.
	Fuel burning - Upstream and downstream transportation	3,920,579 L	Total yearly consumption per type of transportation	. 0
	Refrigerant leakage	5,401 kg	Total yearly consumption per type of refrigerant in kg	Data was only provided for Iraq and type of refrigerant was not mentioned
2	Purchased Electricity	30,518,958.33 kWh	Consumption per month – kWh/month	Not all facilities provided data. Karabla and Mahmoudeya closed for GQ Iraq
	Purchased goods	35.98 ton	Yearly quantities of purchased goods – kg/year	<ul> <li>Data for GQ was provided without unit; therefore, it was not accounted for in this category.</li> <li>GK data was provided as an average in KG and the average was assumed as avg yearly not monthly.</li> <li>Egypt values were provided like last year and therefore the CFP 2020 values were taken.</li> </ul>
3	Water consumption	493,401.85 m <sup>3</sup>	Monthly consumption	Values provided in LE for Egypt and assumed $m^3$ for Iraq like what was assumed last year/ like the values provided in $m^3$ for last year
3	Imports	157,096 t.km	Weight of imports and distance of shipment from port to port was provided	-
3	Solid Waste disposal	113,758 ton	Total waste quantity in tons per type	<ul> <li>The data did not include the waste resulted from employees and workers during the operation of each facility.</li> <li>Data provided only for factories as sold products.</li> <li>Hazardous waste was not accounted for in this category.</li> </ul>
3	Hotel stay	746 nights	Number of nights per trip	International hotel stay was not provided within the data therefore excluded from calculation.
3	Air travel	605,230.34 km	Total distance traveled per flight (short-long haul)	









# **RELEVANCY AND EXCLUSIONS**

# **EXCLUDED OPERATIONS AND ACTIVITIES**

The following section describes the GHG emission sources and sinks that were excluded from GB Auto's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond GB Auto's operation and control. The exclusion rationale per category has also been specified.





TARGETS

# **SCOPE 3**

#	ACTIVITY	DESCRIPTION	2020 - BY (mtCO <sub>2</sub> e)	<b>2021</b> (mtCO₂e)	STATUS
1	Purchased goods and services	Includes office supplies, paper consumption, face masks etc.	41	33	Relevant, calculated
2	Capital goods	Includes the emissions from embodied carbon in GB Auto's owned assets, buildings, etc.			Relevant, not yet calculated
3	"Fuel and energy- related actives (not included in scope 1 and 2)"	Emissions from energy consumed for municipal water supply and wastewater treatment, as well as WTT from fuel burning and transportation.	7,889	5,166	Relevant, calculated
4	Upstream transportation and distribution	Only emissions from imports are included in this category, transportation of raw material and goods to the factories takes place using GB Auto's owned fleet.	34,321	29,929	Relevant, calculated
5	Waste generated in operations	Includes emissions from the transportation of Solid waste to recycling facilities	172	190	Relevant, calculated
6	Business travel	Emissions from air travel and hotel stays are included under this category, other forms of business travel take place using GB Auto's owned cars; hence, under scope 1 (fuel burning - owned cars)	123	145	Relevant, calculated
7	Employee commuting	Calculated under scope 1, as commuting takes place using GB Auto's owned fleet/ buses			Not relevant, explanation provided
8	Upstream leased assets	We do not have any upstream leased assets.			Not relevant, explanation provided
9	Downstream transportation	Calculated under scope 1, as the transportation of the final products from the factories to the warehouses, and/or show rooms takes place using GB Auto's owned fleet			Not relevant, explanation provided
10	Processing of sold products	This category is not relevant to GB Auto's business and has therefore been excluded.			Not relevant, explanation provided
11	Use of sold products	This category is not yet embraced in GB Auto's boundaries but could include the fuel burning emissions of the sold vehicles.			Relevant, not yet calculated
12	End of life treatment of sold products	This category is not yes embraced in the calculations but could include end of life treatment of sold spare parts.			Relevant, not yet calculated
13	Downstream leased assets	This category is not relevant to GB Auto's business and has therefore been excluded.			Not relevant, explanation provided
14	Franchises	This category is not relevant to GB Auto's business and has therefore been excluded.	-		Not relevant, explanation provided
15	Investments	It is expect to identify and evaluate the investments- related emissions within the upcoming years.	-	-	Relevant, not yet calculated

# **CALCULATION METHODOLOGY**

# **CARBON FOOTPRINT EQUATIONS**

The following section describes the GHG emission sources and sinks that were excluded from GB Auto's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond GB Auto's operation and control. The exclusion rationale per category has also been specified.

# **SCOPE I: DIRECT EMISSIONS**

# STATIONARY COMBUSTION



Diesel and natural gas are consumed by our buildings', factories, service centers and showrooms. The total consumption of diesel for each facility was recorded monthly in both liters and amount of money purchased. On the other hand, natural gas is used by most of the service centers and few factories.

Since it is directly used by the company, the emissions resulting from the stationary consumption were accounted for under scope 1.



Fuel burning – Diesel Emissions (mtCO<sub>2</sub>e) = Fuel consumption (L) x EF (mtCO<sub>2</sub>e/L)

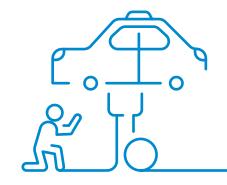
Fuel burning – Natural gas Emissions (mtCO<sub>2</sub>e) = Fuel consumption (m<sup>3</sup>) x EF

DECARBONIZATION PLAN

# **MOBILE COMBUSTION**



Owned vehicles fuel burning falls under scope 1 direct emissions. This included all the owned vehicles used to transport the managers, employees, upstreamdownstream transportation, etc. The fuel type and annual consumption in liters for each vehicle type was retrieved from our database. Since the data of fuel type and fuel consumption were available, these were utilized to estimate the emissions occurring from owned vehicles.



Owned Vehicles Emissions (mtCO<sub>2</sub>e) = Fuel consumption (L) x EF (mtCO<sub>2</sub>e/L)

# **FUGITIVE EMISSIONS**



Refrigeration fluids are fluids which are used to cool a space in refrigeration cycles. Each year, an amount of refrigerants is used to re-charge the cooling systems used in each building in order to compensate for the leakage that happened during the operating year. The refrigerant type used in each building is different and all its related data was found in our database.

**Refrigerants Leakage Emissions (mtCO<sub>2</sub>e) =** Refrigerant leakage (Kg) x EF (mtCO<sub>2</sub>e/Kg)



# **SCOPE 2: INDIRECT EMISSIONS**

# **PURCHASED ELECTRICITY**



Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption of each facility.

Purchased Electricity falls under Scope 2 (Indirect emissions). The electricity consumption includes all the operating buildings. The monthly electricity consumed at the facilities, was retrieved from the electricity bills in both kWh and amount of money purchased (EGP). Therefore, the total electricity consumption of the fiscal year was calculated using the formula below:

**Purchased Electricity Emissions (mtCO<sub>2</sub>e) =** Electricity Consumption (kWh) x EF (mtCO<sub>2</sub>e/kWh)

# **SCOPE 3: INDIRECT EMISSIONS**

# **PURCHASED GOODS AND SERVICES**



#### SUPPLIES, MASKS, **MARKETING** MATERIALS, ETC.

Purchased goods are the commodities used by the different sectors. For GB Auto's facilities, office supplies including ink, copy paper, envelopes, files, cardboard archive boxes etc. as well as hygiene and disposal items such as face masks, paper cups and plastic bags were included in the purchased goods. Items that did not have clear specifications were estimated where applicable using common market characteristics and specifications, and otherwise excluded.

The yearly amounts of purchased goods per type have been retrieved from the internal data recordings, as units of items. The emissions were obtained by multiplying the emission factor per unit by the number of items.

**Purchased Goods Emissions (mtCO<sub>2</sub>e) = \Sigma** quantity of item (units) x EF of each item (mtCO<sub>2</sub>e/unit)

GB AUTO CARBON FOOTPRINT REPORT — 2020.21

# **FUEL AND ENERGY-RELATED ACTIVES** (NOT INCLUDED IN SCOPE I AND 2)



# **WELL-TO-TANK (WTT) EMISSIONS**

WTT emissions are those that result from the production of a fuel, including resource extraction, initial processing, transportation, fuel production, distribution and marketing, and delivery into a consumer vehicle's fuel tank. WTT emissions were taken into consideration to reflect the full range of climatic impacts from fuelburning activities.

All fuel burning activities, such as diesel & natural gas consumed by our buildings, distribution fleet and owned vehicles, internal and external courier shipment were included in WTT emissions.

For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

WTT Emissions (mtCO<sub>2</sub>e) = Fuel consumption (unit) x WTT EF (mtCO<sub>2</sub>e/unit)



# **WATER USAGE & WASTEWATER TREATMENT**

The emission factor for water supply and wastewater treatment is calculated by using a conversion formula, provided by Holding Company for Water and Wastewater (HCWW). The emissions are based on the amount of energy consumed in each process. The emission factors for water supply and wastewater treatment are accordingly calculated by multiplying the conversion factor by the electricity emission factor. At the same time, a unit analysis is performed to make sure the units are conforming.

Energy Consumption (Wh) = Water supply/ wastewater (m³) x Conversion formula (Wh/m³)

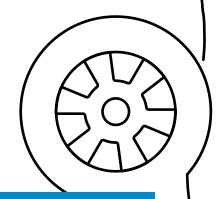
Water Supply and Treatment (mtCO<sub>2</sub>e) = Energy Consumption (kWh) x EF (mtCO<sub>2</sub>e/kWh)

# **UPSTREAM TRANSPORTATION AND DISTRIBUTION**



# **IMPORTS**

Imports are accounted for under scope 3 indirect emissions, the weight of each shipment and the distance from port to port were both recorded in our database, and the ton kilometers (t.km) were calculated by multiplying the distance travelled (km) by the entire weight of the shipment, and then multiplying by the emission factor.



Fuel burning Emissions (mtCO<sub>2</sub>e) = Distance (t.km) x EF (mtCO<sub>2</sub>e/t.km)

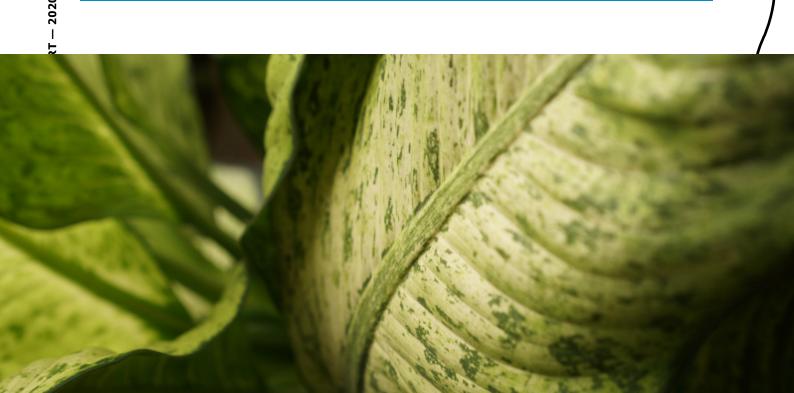
# **WASTE GENERATED IN OPERATIONS**



# **SOLID WASTE DISPOSAL**

Solid waste disposal falls under scope 3 (indirect emission). Waste Generated was calculated as the sum (in tons) of waste diverted plus waste disposed. The quantities for the waste were retrieved from our data recording for the amounts of waste generated annually. The emissions were calculated by multiplying the quantity in tons by the corresponding emission factor.

**Solid waste disposal Emissions (mtCO<sub>2</sub>e) =** Quantity (ton) x EF (mtCO<sub>2</sub>e/ton)



# **BUSINESS TRAVEL**



#### **HOTEL STAYS**

For each of the hotel stays, dates, location, no. of hotel rooms and nights were obtained from our data records. All hotel stays are during 2021, with minimal hotel stays during 2020. DEFRA is providing the emission factors per hotel night for each country as UK and non-UK countries. In those cases where the country of the hotel stay is not available in DEFRA, an average value of all non-UK values has been used to approximate the emissions.



Hotel stay emissions (mtCO<sub>2</sub>e) = Number of nights x EF (KgCO<sub>2</sub>e/night)/1000



#### AIR TRAVEL + WELL TO TANK EMISSIONS

In 2020, no international flights occurred, only domestic flights. As for 2021, both international and domestic flights took place. GB Auto's data records provided data of flight routes, dates, and no. of tickets. The flight distances have been obtained from airport distances calculator. The emissions factors were obtained from DEFRA as average passenger, flights to/from non-UK countries.

**Air travel emissions (KgCO**,e) = Distance travelled per passenger (p.km) x EF (mtCO,e/ p.km)

Air travel (WTT) emissions (KgCO<sub>2</sub>e) = Distance travelled per passenger (p.km) x EF (mtCO<sub>2</sub>e/ p.km)





# **QUALITY ASSURANCE STATEMENT**

#### To Ghabbour Auto Board of Directors',

We have been appointed by GB Auto to conduct GHG calculations pertaining to GB Auto's operational activities in Egypt and Iraq for the period from 1st of January 2020 to the 31st of December 2021. The Scope covered GB Auto's operations in their owned facilities across Egypt and Iraq; this included service centers, showrooms, factories, admin buildings, warehouses, and outlets.

#### **AUDITOR'S INDEPENDENCE QUALITY CONTROL**

We adhere to integrity, objectivity, competence, due diligence, confidentiality, and professional behavior. We maintain a quality control system that includes policies and procedures regarding compliance with ethical requirements, professional standards, and applicable laws and regulations.

#### **AUDITOR'S RESPONSIBILITY**

In conducting the carbon footprint calculations, we have adopted the Greenhouse Gas Protocol Guidelines, IPCC Guidelines for Greenhouse Gas Inventories, and ISO 14064-1:2019 specification with guidance at the organization level for quantification and reporting of GHG emissions and removals

It is our responsibility to express a conclusion about the quality and completeness of the primary data collected/ provided by GB Auto. We have performed the following quality assurance/ quality control tasks:

- Several rounds of data requests were performed whenever the received information was not clear;
- All data presented in this report were provided by the reporting entity and revised and completed by our technical teams;
- For data outliers, meetings were held to investigate the accuracy of the data and new data was provided when requested;
- Any gaps, exclusions and/or assumptions have been clearly stated in the report.

#### **CONCLUSION**

Based on the aforementioned procedures, nothing has come to our attention that would cause us to believe that GB Auto's raw data used in the GHG calculations have not been thoroughly collected, verified and truly represent GB Auto's resource consumption in 2020 and 2021 related to all categories/aspects identified in this report. We do not assume and will not accept responsibility to anyone other than GB Auto for the provided assurance and conclusion.



Dr. Abdelhamid Beshara, Founder and Chief Executive Officer MASADER, ENVIRONMENTAL & ENERGY SERVICES S.A.E CAIRO, October 2022









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**ABOUT MASADER** 

Masader is an innovative interdisciplinary consulting, design, and engineering sustainability firm based in Cairo, aiming at leveraging positive impact across the MENA region and globally. It specializes in Resource

Efficiency, Sustainable Management of Natural Resources, and Integrated Sustainability Solutions. Since 2015, Masader has led 100+ projects across the areas of energy, environment, climate change & carbon footprint, circular economy, green building (LEED), as well as corporate sustainability strategies, reporting,

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