

Airspace Modernisation & Carbon Strategies in Aviation

Aena's Climate Action Plan (CAP) & Carbon Emissions

Dirección: Planificación Aeroportuaria y Control Regulatorio
División Gestión Ambiental



General overview of Aena SME

We manage sustainable airports so you can be close to what's most important to you.



AENA AT A GLANCE

46
airports
2
heliports

Aena is a state-owned trading company that manages airports and heliports of general interest in Spain.

Through its subsidiary Aena International, Aena is also involved in the management of

34
airports in different countries



* In August 2022, Aena has been awarded the management of 11 airports in Brazil. The takeover of these infrastructures is expected to take place by end-2023.



Aena is the world's largest operator by number of passengers.



439.7m

passengers in 2024

309.3m

Spain

16.7m

UK

43.4m

Brazil

8.1m *

Colombia

55.3m

Mexico

6.8m

Jamaica

In Spain



2,590,861

operations
in 2024



1,280,167

tonnes of cargo
in 2024



87

connected
countries



MAD and BCN

among the top ten
airports in the EU by
passenger traffic.



159

commercial
airlines



368

destinations



168

long-haul
routes



* Aena ceased managing Cali Airport in Colombia on 1 September 2025.

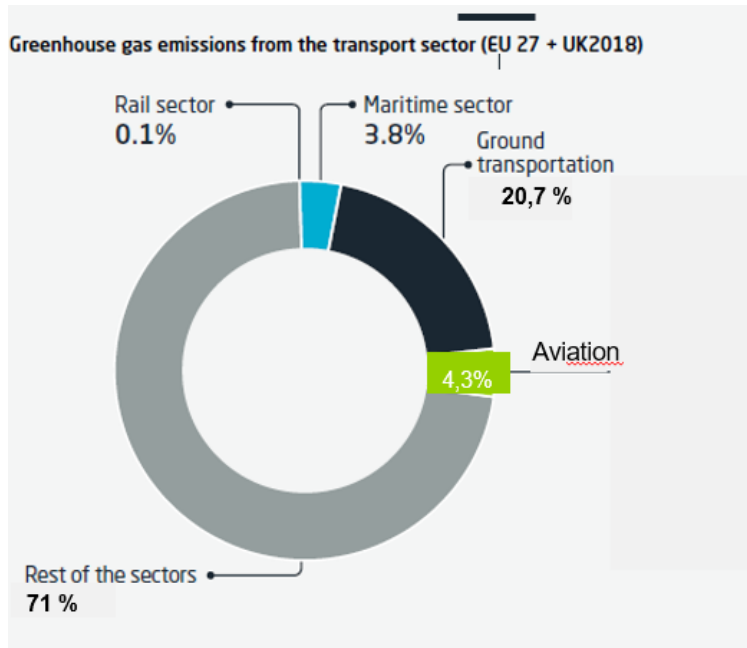
Aena's Climate Action Plan (CAP) & Carbon Emissions

We are at a crucial moment for successfully meeting the greatest environmental challenge of our time: the fight against climate change



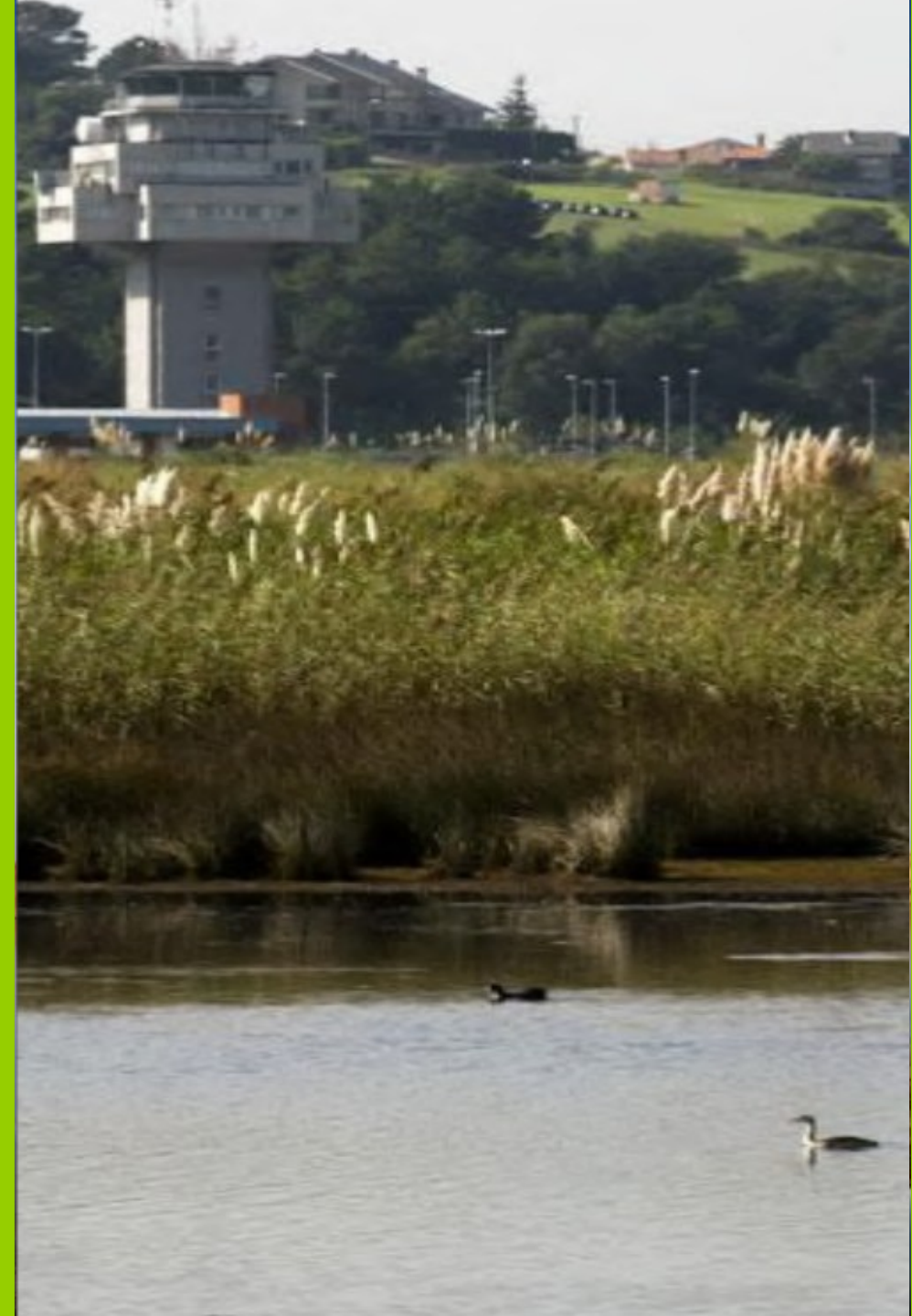
CLIMATE CHANGE: GLOBAL CONTEXT

- **GLOBAL:** The aviation sector contributes between **2-3% of CO₂ emissions**
- **EUROPE:** The aviation sector contributes about of **4% of EU CO₂**



Source: European Environment Agency (Greenhouse Gas Inventory 2019)

**What is the role of
Aena/ Airport Operator?**



WICH EMISSIONS CAN OCCUR AT AN AIRPORT?

Emissions from the purchase of electricity and heating/cooling

SCOPE 2

Emissions from fuels/process: boilers, generators, vehicles, firefighting excercises, refrigerant losses...

SCOPE 1

Emissions from 3^{tr} parties (not under Aena's control): Aircraft, Handling, Auxiliary Power Units passengers travel to airport, staff bussiness travel, etc .

SCOPE 3

Alcance 3

Scope 1

Emissions from airport controlled sources

- 01 Vehicles/ground support equipment belonging to the airport
- 02 On-site waste management
- 03 On-site waste water management
- 04 On-site power generation
- 05 Firefighting exercises
- 06 Boilers, furnaces
- 07 De-icing substances
- 08 Refrigerant losses

Scope 2

Emissions from purchased electricity

- 09 Off-site electricity generation
- A Heating
- B Cooling
- C Lighting

Scope 3

Emissions from other sources related to the activities of an airport

- 10 Flights
- 11 Aircraft ground movements
- 12 Auxiliary Power Unit
- 13 3rd party vehicles/ground support equipment
- 14 Passenger travel to the airport
- 15 Staff commute
- 16 Off-site waste management
- 17 Off-site water management
- 18 Staff business travel
- 19 Non-road construction vehicles and equipment
- 20 De-icing substances
- 21 Refrigerant losses

Typical distribution at Aena

SCOPE 1 + SCOPE 2

**DIRECT AND INDIRECT EMISSIONS
UNDER AENA CONTROL**

<5% of the emissions are produced directly or indirectly by Aena/ airport operator

SCOPE 3

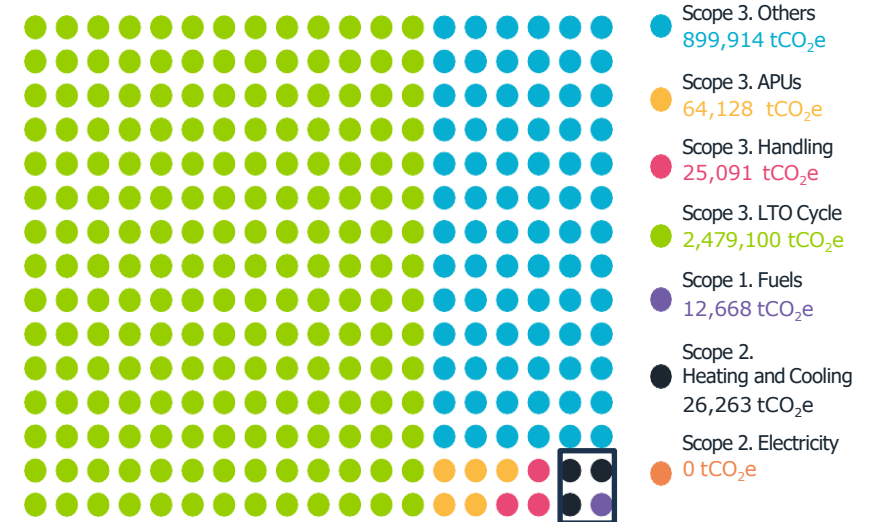
INDIRECT / THIRD PARTY EMISSIONS

>95% of emissions are produced by aircrafts, APUs, Ground Handling and other sources that are not under Aena's control

Emissions



Contribution of emissions in 2024 (tCO₂e)



**EMISSIONS UNDER
AENA CONTROL**

Our Strategy

Aena is committed to the sustainable recovery of the sector based on efficiency, innovative solutions and collaboration with third parties

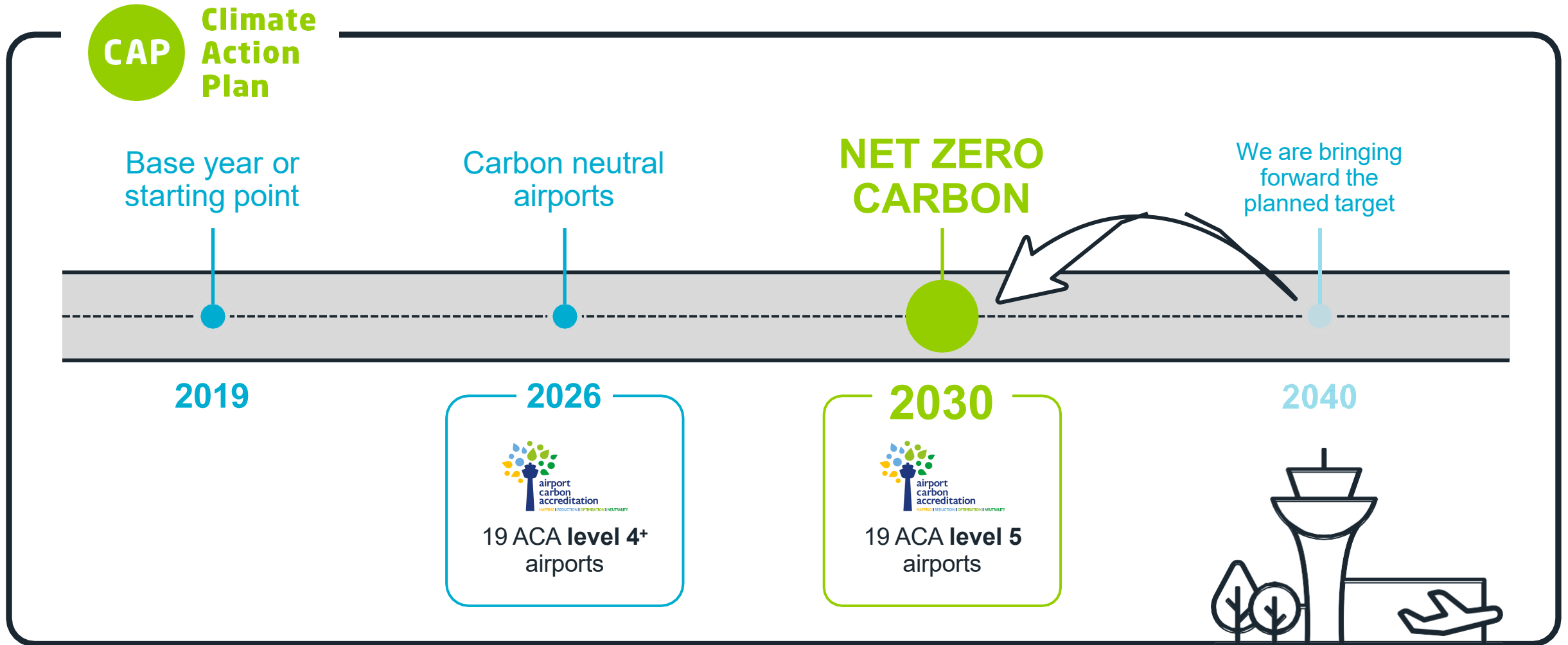


Structure of Aena's sustainability strategy



PROGRAMS	LINES OF ACTION				
Carbon neutrality	 Renewable energy 	 Energy efficiency 	 Sustainable own fleet 	 Offsetting emissions 	
Sustainable aviation	 Clean aircraft propulsion 	 Efficiency in aeronautical operations 	 Sustainable groundhandling fleet 		
Responsible use of resources	 Efficient water footprint	 Circular economy			
Sustainable community and value chain	 Sustainable mobility 	 Co-operation and awareness 	 Air quality 	 Noise management 	 Preservation of biodiversity 
Social commitment	 Relationship with the community	 People Management			

The Net Zero target has been brought forward to 2030, and the number and level of the ACA airports certifications increases



KEY FACTS OF THE CLIMATE ACTION PLAN



The Climate Action Plan will enable in **2026 to achieve carbon neutrality** and, laying the foundations to achieve Net Zero Carbon by 2030, will enable **a 94% reduction in emissions per passenger associated with Aena's own operations by 2030**



Aena will act as a driving force in the sector, promoting the introduction of **sustainable ground handling vehicles and equipment by 2030** and will drive additional reductions associated with airlines

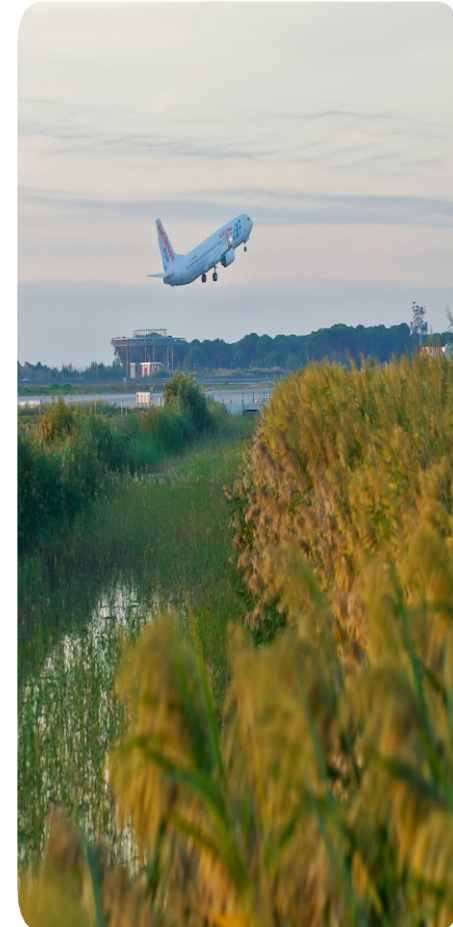


The plan involves investments of close to € 550M in the 2021-2030 period and includes internal **mechanisms for monitoring to ensure the development of the initiatives** (e.g. Specific Commission, Operational Working Group)



The Plan complies with the requirements of the **Task Force on Climate-related Financial Disclosures (TCFD)** and the **Sustainability Accounting Standards Board (SASB)**, including information related to corporate governance, strategy, risk and opportunity management, metrics and their evolution.

Emissions



CLIMATE ACTION PLAN (CAP): MAIN INITIATIVES

- ✓ **Energy efficiency** actions at airport facilities
- ✓ Use of **biofuels**
- ✓ Construction of renewable **energy facilities for self-consumption**.
- ✓ **Purchase of 100% renewable energy**, with guarantee of origin in all airports
- ✓ **Electric charging points** for vehicles.
- ✓ Implementation of **collaborative measures**.
- ✓ **Airport Carbon Accreditation Program**
- ✓ **Efficiency in aeronautical operations**
- ✓ **Ground Handling Fleet** emissions reduction plan.
- ✓ Intermodality and **sustainable mobility**: Employee Mobility Plans, Airport Mobility Comissions,etc

Emissions



CARBON EMISSIONS - ENVIROSUITE

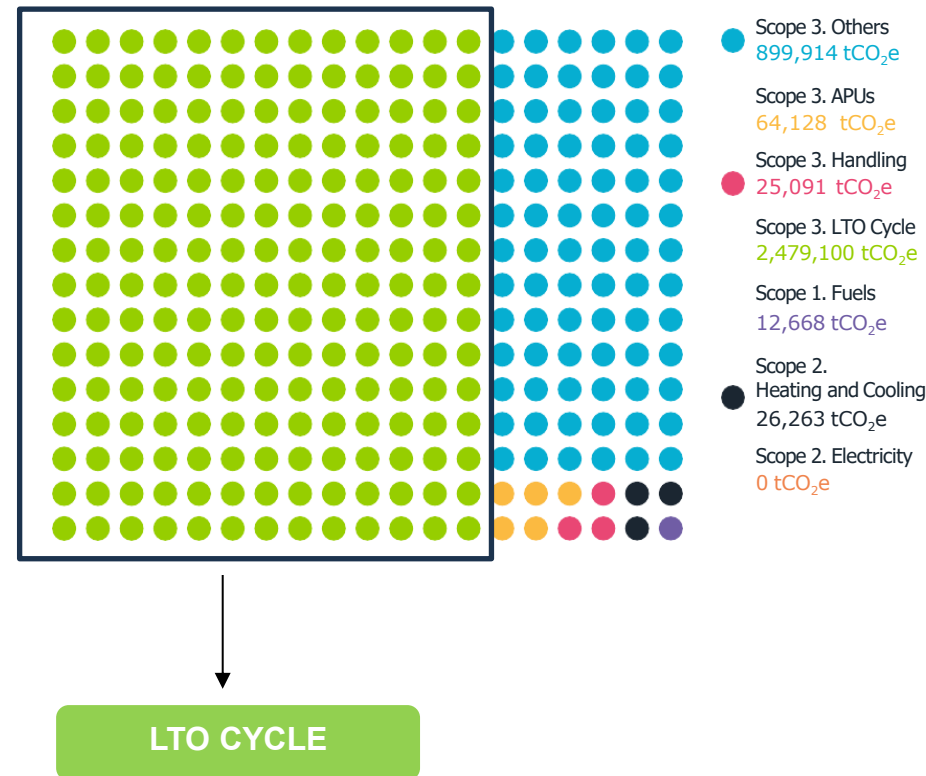
WHY?

- ✓ Know the environmental impact of the airport and carry out a detailed Greenhouse Gas Inventory
- ✓ Possibility of obtaining detailed emissions data from the LTO cycle:
 - More accurate reports using real radar data for LTO
 - Increasing the knowledge of the main contributors
 - Simulating improvements
- ✓ Airport Carbon Accreditation Program/ improve our carbon footprint accreditation
- ✓ Provide information to our stakeholders
- ✓ Possibility to evaluate future emissions and improvement actions
- ✓ Be able to simulate different scenarios and evaluate the effectiveness of emission reduction measures: e.g. use of biofuel, reduction of taxi time...

Emissions



Our carbon footprint in 2024



CARBON EMISSIONS - ENVIROSUITE

WHERE?

First phase 2024

Three main Aena airports:

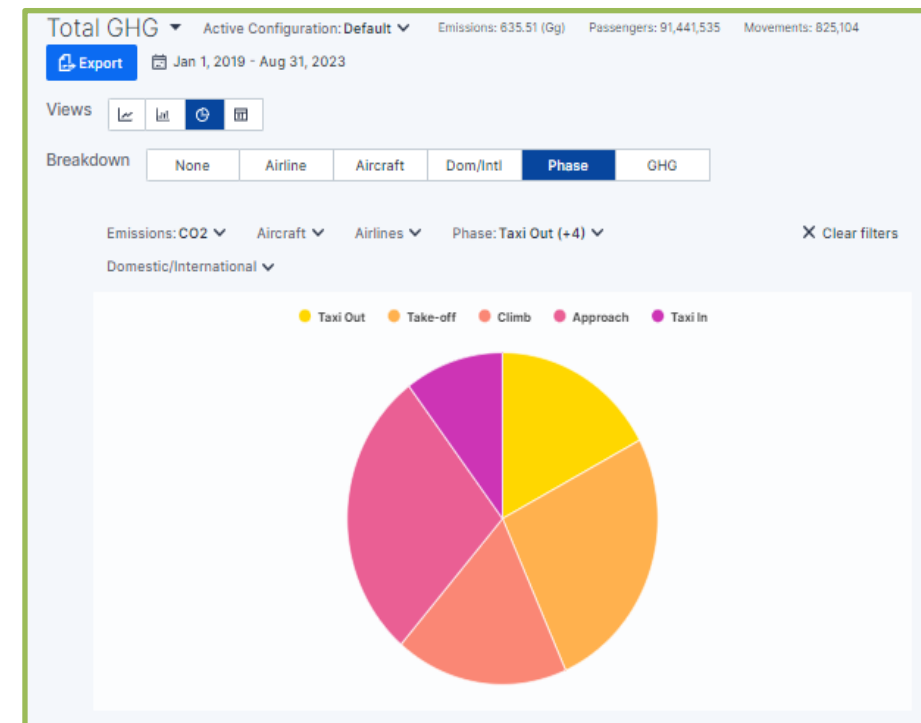
- Madrid,
- Barcelona
- Palma

Second phase 2025-2026

- Valencia
- Málaga
- Alicante
- Bilbao
- Sevilla
- Ibiza
- Gran Canaria
- Tenerife Norte
- Tenerife Sur
- Lanzarote
- Fuerteventura

>94% Aena Spain emissions

Emissions



Thank you

