

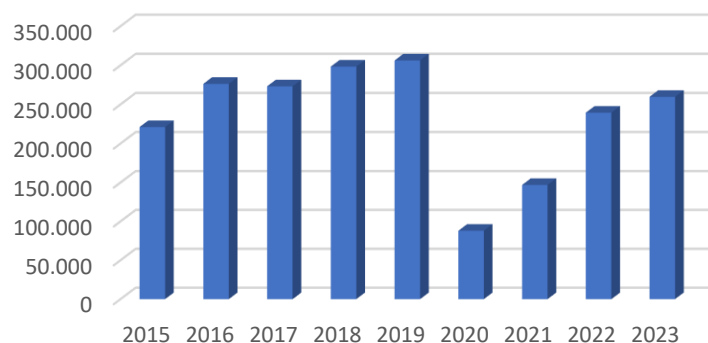
# ACI Net zero Roadmap

Scope 1+2

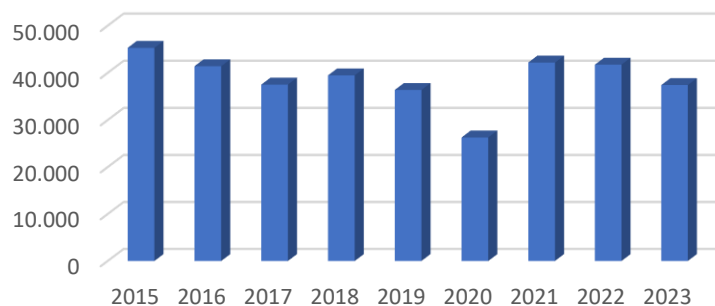
June 2024



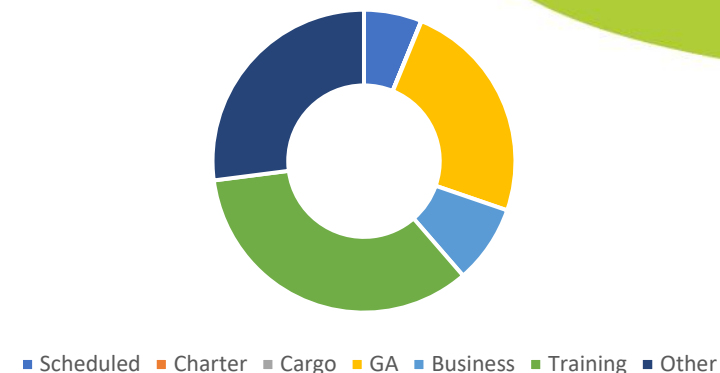
Evolution passengers: 2015 - 2023



Evolution movements: 2015 - 2023



Detail movements



## Antwerp Airport

- ✈ Regional airport with 1.510 m runway
- ✈ Part of the international group EGIS
- ✈ Focus areas: scheduled services & business aviation



## MILESTONES

- ✕ ACI Net Zero 2050 commitment 2019
- ✕ ANR environmental policy 2020
- ✕ ACA level 1 certification 2021
- ✕ Carbon management plan 2023 (update 2024)
- ✕ ACA level 2 certification 2024
- ✕ Carbon Net Zero Roadmap (scope 1+2) 2024
- ✕ Stakeholder Engagement Plan 2024
- ✕ ACA level 3 certification 2025



# CERTIFICATE of ACCREDITATION

Valid until the 26th April 2023

This is to certify that **Airport Carbon Accreditation**, under the administration of WSP, confirms that the carbon management processes at


## ANTWERP INTERNATIONAL AIRPORT

implemented by Egis Group

have earned the accreditation level of **MAPPING**, in recognition of the airport's actions to address its CO<sub>2</sub> emissions, as part of the Global airport industry's response to the challenge of Climate Change.

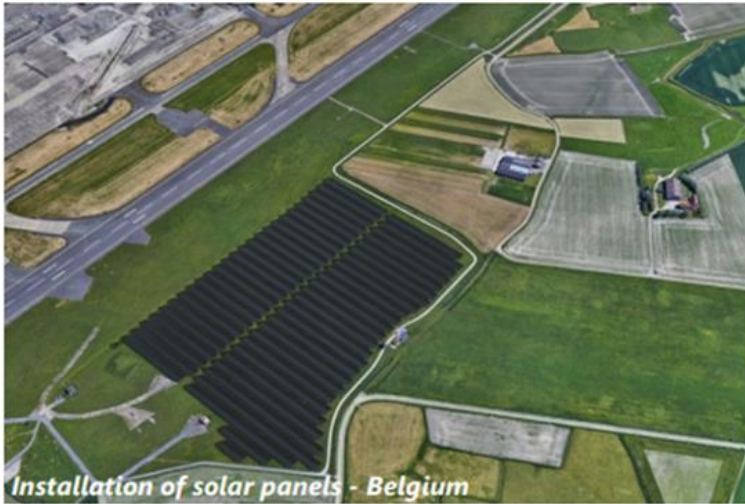


  
Olivier Jankovec  
Director General  
ACI EUROPE

  
Simon Clouston  
Director  
WSP

# 1

## CLIMATE CHANGE



### ADAPTATION

- Make a climate risk assessment to identify the effect of climate change on the airport
- **Establish a Climate Adaptation Plan**

### MITIGATION

- **Measure yearly scope 1-2-3 GHG emissions** to obtain the ACA certification level 3+ in 2028 at the latest
- **Implement actions to reduce these emissions**, to participate in the overall goal of reducing by 5% each year EGIS' carbon emissions up to 2030 (base year 2023):
  - Be certified ISO 14 001 and ISO 50 001
  - Perform an energy audit
  - Always replace equipment by the most energy efficient solutions available (such as LED)
  - Switch to e-vehicles and install EV charging stations on both airside and landside area
  - Offer alternative options to the use of APUs
  - Perform a feasibility study for the installation of solar panels

### Associated Indicators

- tCO<sub>2</sub>e
- kWh consumed/purchased
- Number of E-vehicles
- %LED lights
- kWp of PV installed
- % of stand equipped with 400Hz systems
- % of actions from Climate Adaptation Plan implemented

# Carbon Management Plan: initiatives, actions, projects

- ✘ Environmental calendar – targets (ACA certification + reduction targets EGIS, ACI)
- ✘ Monitoring efficiency HVAC
- ✘ Green mobility – E-vehicles – bike friendly airport
- ✘ Awareness - Zero idling – energy-reporting
- ✘ Green procurement
- ✘ Waste and water management
- ✘ Fuel efficiency
- ✘ Airside infrastructure
- ✘ Renewable energy – solar panels
- ✘ Building - isolation (roof, wall, windows) - lighting



# Long term- short term CO<sub>2</sub> targets

|   | baseyear |                | amount CO2 baseyear | goal              | GOAL ton CO2 | timing |
|---|----------|----------------|---------------------|-------------------|--------------|--------|
| EGIS                                    | 2019     | location based | 647                 | min 30%           | 452,9        | 2030   |
| EGIS                                    | 2019     | market based   | 698                 | min 30%           | 488,6        | 2030   |
| EGIS Strategy map                       | 2023     | location based | 522                 | min 5% every year |              | 2030   |
| EGIS Strategy map                       | 2023     | market based   | 572                 | min 5% every year |              | 2030   |
| Net zero 2050                           |          |                |                     | min 100%          |              | 2050   |
| Environmental permit (under assessment) | 2019     | location based | 647                 | min 90%           | 64,7         | 2034   |
| Environmental permit (under assessment) | 2019     | market based   | 698                 | min 90%           | 69,8         | 2034   |



Carbon  
emissions:  
baseyr 2019-  
ACA application  
yr 2023

**Location based**

| Year -3   | Year -2 | Year -1 | Average of historic data | Year of application (Year 0) | Less than average? |
|---|---------|---------|--------------------------|------------------------------|--------------------|
| <i>Absolute footprint (tCO<sub>2</sub>) for emissions under the airport's Scope 1 and 2 emissions only.</i> |         |         |                          |                              |                    |
| 647   | 553     | 505     | 568                      | 522                          | Yes                |

**Market based**

Note: If you are using a location based benchmark to demonstrate a reduction you do not need to calculate historic market based emissions.

| Year -3   | Year -2 | Year -1 | Average of historic data | Year of application (Year 0) | Less than average? |
|---|---------|---------|--------------------------|------------------------------|--------------------|
| <i>Absolute footprint (tCO<sub>2</sub>) for emissions under the airport's Scope 1 and 2 emissions only.</i> |         |         |                          |                              |                    |
| 698   | 597     | 550     | 615                      | 572                          | Yes                |



# CERTIFICATE of ACCREDITATION

Valid 24th April 2023 - 23rd April 2024

This is to certify that **Airport Carbon Accreditation**, under the administration of WSP, confirms that the carbon management processes at

## ANTWERP INTERNATIONAL AIRPORT

implemented by Egis Group

have earned the accreditation level of **REDUCTION**, in recognition of the airport's actions to map and reduce its CO<sub>2</sub> emissions, as part of the Global airport industry's response to the challenge of Climate Change.



  
Olivier Jankovec  
Director General  
ACI EUROPE

  
Giulio Corte  
Programme Director  
WSP

# Realisations

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Renovation runway (september-oktober 2022): LED (+5 weeks closed) – pax building: LED + sensor



Fuel limitation heat generation Fire & Rescue Building (2021-2023)



Energy consumption awareness 2023



Runway renovation 2022

INPUT 1

**ADB SAFEGATE**

STOPBAR straight section  
Part No. DTSA2RN0BM00000  
ID No. 20008140262022/26

|                    |                      |
|--------------------|----------------------|
| <b>Color</b>       | Unidirectional Red   |
| <b>Orientation</b> | No toe in            |
| <b>Input power</b> | 2.8A - 6.6A, 50/60Hz |
| <b>Lamp Type</b>   | LED, 4072.42.390     |
| <b>System</b>      | With monitoring      |
| <b>IP Degree</b>   | IP68                 |
| <b>Rated power</b> | 11 VA                |
| <b>Options</b>     | no options           |



Runway lights 425 LED  
Efficient power regulators



## EV-charging

Antwerp airport: 2 charging points airside

Parking personnel: 2 charging points

Parking visitors + pax: 6 charging points

# Energy feasibility study

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- 3D-scan pax building (2023)
- architectural heritage study pax building (2023)
- Energy study (2024-2025)



## WASTE HIERARCHY - **Step Up & Go Green**

**A Reduce**

**B Re-use**

**C Recycling**

**D Energy**

**E Incineration**

**F Landfill**



Waste management: recycling

# Waste & water management: recycling → prevention



## WASTE HIERARCHY - Step Up & Go Green

A Reduce

B Re-use

C Recycling

D Energy

E Incineration

F Landfill







## ROAD TO LEVEL3

- ✘ Carbon management plan: actions, initiatives, projects concerning:
  - ✘ Renewal heating building fire & rescue department (2024-2025)
  - ✘ Renewal no-break pax building (2024-2025)
  - ✘ Replacement ice water chiller pax (2025)
  - ✘ Building automation and monitoring system (HVAC) (2025)
  - ✘ Electricity contract : 100% green energy (renewable) (2026)
  - ✘ Renewal heating pax building (2027)
- ✘ Carbon Net Zero Roadmap
- ✘ Stakeholder Engagement Plan December 2024
- ✘ ACA level 3 certification april 2025



## ROAD CARBON NET ZERO (1)

- ✘ Carbon management plan: actions, initiatives, projects concerning:
  - ✘ Renewal heating building fire & rescue department (2024-2025):  
120 ton CO<sub>2</sub> (diesel 2023) → 60 ton CO<sub>2</sub> (gas) or 80 ton CO<sub>2</sub> (propane) or  
(electrical heatpump 190kW +260 kW (< 20 ton CO<sub>2</sub>))
  - ✘ Renewal no-break pax building (2024-2025)
  - ✘ Replacement ice water chiller pax (2025)
  - ✘ Building automation and monitoring system (HVAC) (2025)
  - ✘ Renewal heating pax building (2027)



## ROAD CARBON NET ZERO (2)

- ✘ Carbon management plan: actions, initiatives, projects concerning:
  - ✘ Electricity contract : 100% green energy (renewable) (2026):
    - ✘ EF residual mix: 149,8 g CO<sub>2</sub>/kWh → 100% renewable electricity: EF 15 g CO<sub>2</sub> /kWh → from 232 ton CO<sub>2</sub> to 23 ton CO<sub>2</sub> (90% reduction)
  - ✘ Fuel vehicles:
    - ✘ Gasoline/diesel → electricity (100% green)
    - ✘ Heavy vehicles (diesel) → 100% HVO100 (90% reduction CO<sub>2</sub>)



# Contacts

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