



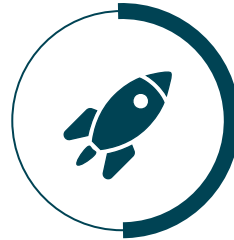
Greenbaggage

NAG Air-Rail

January 17th, 2023

What is GreenBaggage®?

A devoted group committed to decarbonize the baggage journey



1

Mission

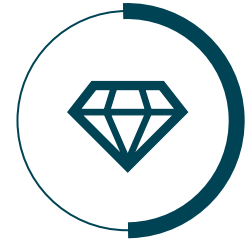
Promoting a greener journey by reducing the impact of travelling with a bag



2

Vision

A worldwide network of industry professionals who actively contribute reducing the footprint



3

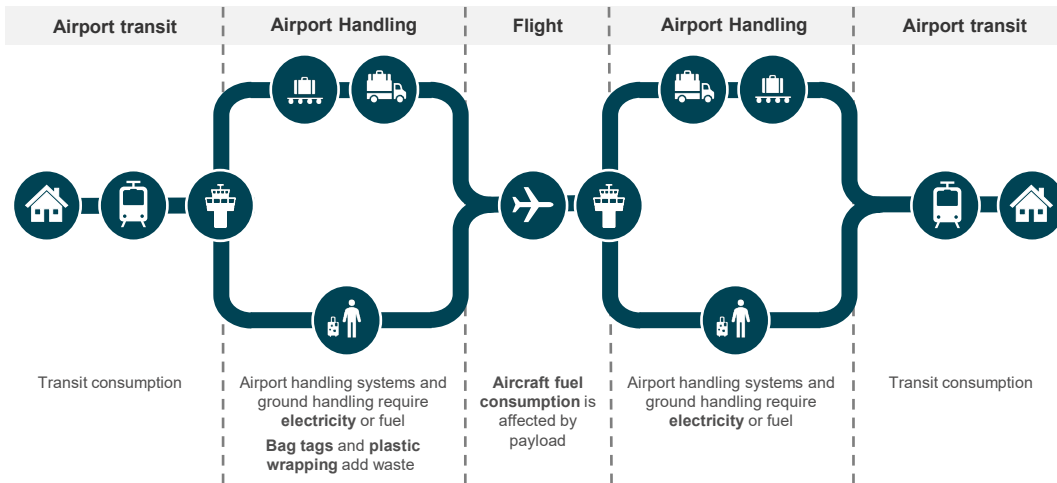
Values

Our work is based on responsibility and the SDG's. This guides whatever we do and how we do it.



What problem are we tackling?

Baggage has a large CO₂ impact along the entire travel journey



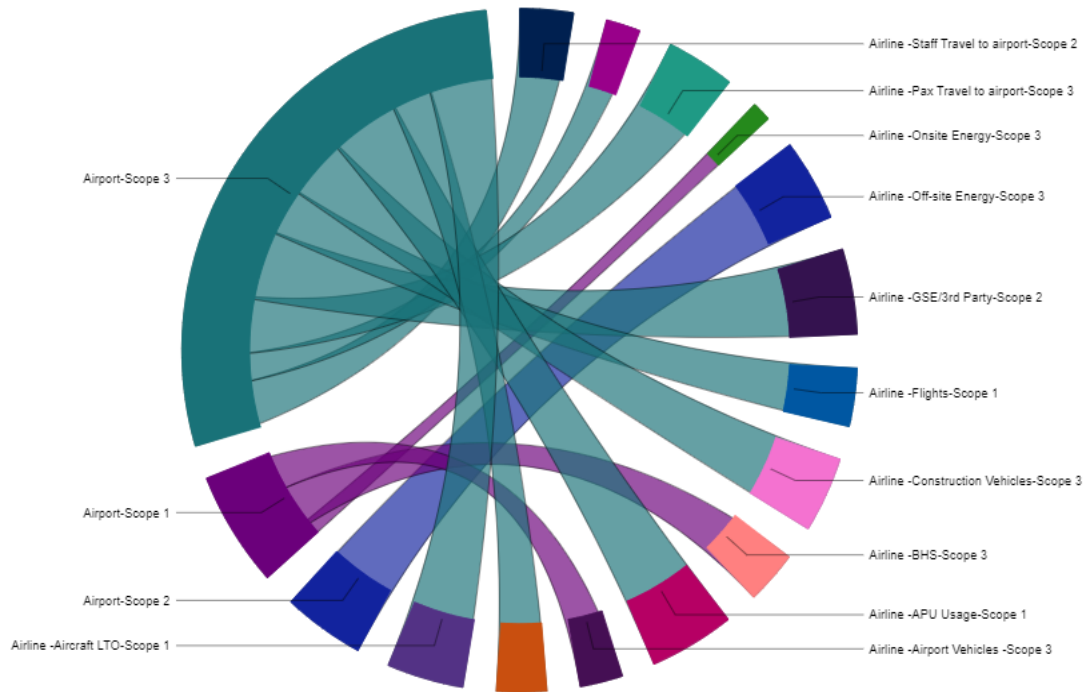
Grams of CO₂ per kilometer travelled¹





A very complex emissions problem

Stakeholder emission relation in bag journey is very complex



How is the problem currently being tackled?

GreenBaggage® is the first to address this issue internationally

Baggage is an overlooked part of the travel industry's environmental impact, and we aim to change that.



SAF



Carbon Offsetting



Electrification



Baggage Journey



The facts behind baggage



Up to 10%
of an average airport total energy
consumption can be attributed to the BHS



3%
of each flight CO₂ emissions can be saved if
passengers fly with carry-on baggage only
(global saving equivalent to NOT driving 327
billion km's by car, every year)

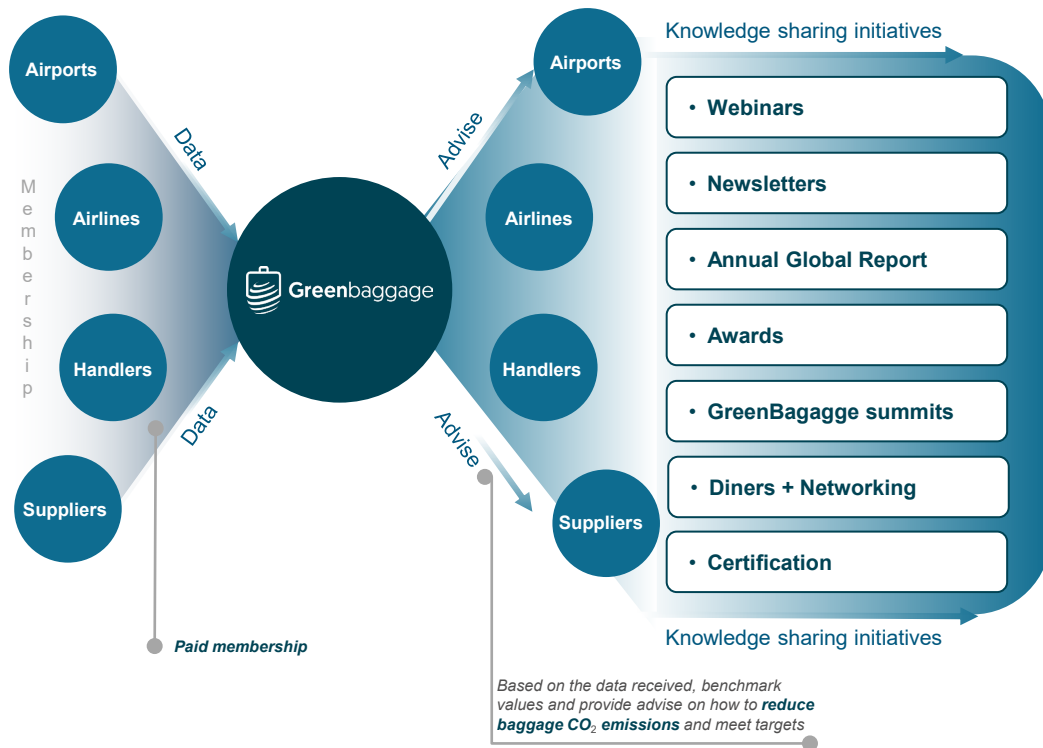
For who is Greenbaggage?

All involved in the bag journey ecosystem

- Airports
- Airlines
- Ground-handlers
- Technology providers / suppliers
- Governments, authorities and regulatory bodies
- Rail companies
- Energy companies
- Others in the travel eco-system

What solution does GreenBaggage® offer?

An alliance to share knowledge and provide advisory services



What value is added to each stakeholder?

GreenBaggage® offers aspiring opportunities



Members

- Receive privileged **access to unique data**, research and knowledge
- Achieve **financial advantages** (e.g., less energy consumption)
- Receive white label **CO₂ calculation tools** for the **whole baggage journey**
- Receive **solutions / advice** on how to reduce their CO₂ emissions
- Increase their reputation by receiving the **GreenBaggage® international certification**
- Access a **networking community** of like-minded peers
- Industry perspective & global trends
- Firsthand insight into latest developments and pilot results
- Greenbaggage® conferences and events



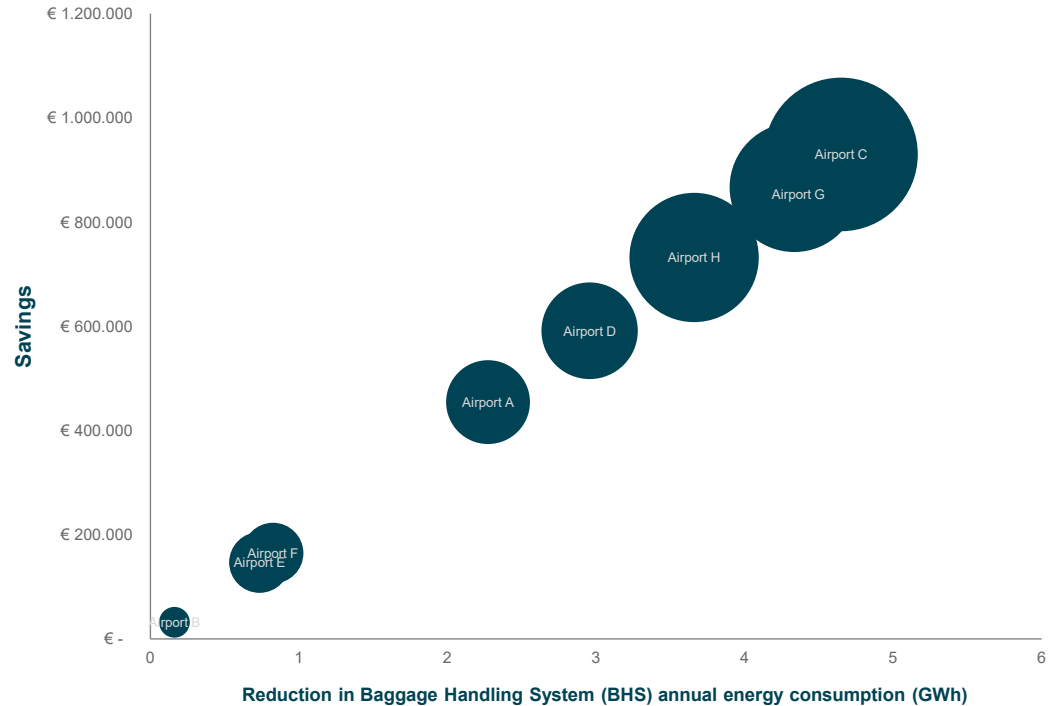
Environment

- Achieve significant **CO₂ savings**
- Increase collective **industry awareness**, knowledge
- Increase **public understanding** on how to reduce the environmental impact of travelling
- Increase the **transparency** in CO₂ emissions in the aviation industry
- Increase the **transparency** in non-CO₂ emissions in the aviation industry
- **Certification** for the (non) CO₂ emissions



What value is added to each stakeholder?

GreenBaggage® airport members can achieve financial advantages



Airline
SN

Date
1/7/2018

Route

[*AGA*, 'BRU']
[*AGP*, 'BRU']
[*BRU*, 'ACC']
[*BRU*, 'FCO']
[*BRU*, 'FRA']
[*BRU*, 'IAD']

Flight

SN15321
SN8849
SN8551
SN8552
SN8815
SN8818

Schedule Emissions (ton)



Upstream

CO2 emission

52.7

Non CO2 emission

10.6



On-flight

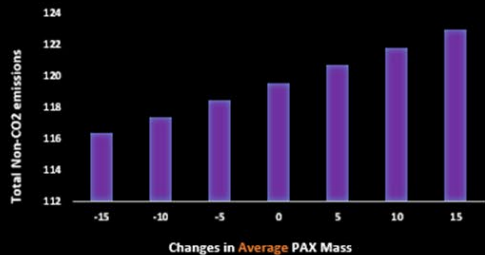
CO2 emission

324

Non CO2 emission

108.9

Route Emissions Analysis (ton)



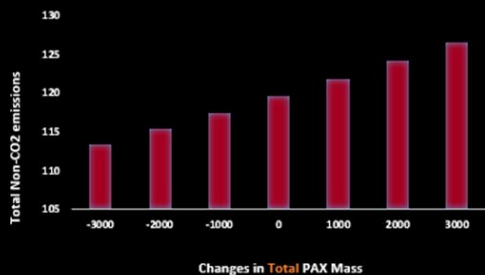
Emission changes compared to benchmark scenario



Requires -87 tree(s) to absorb per year



Equivalent a car drives -21970 kilometers



Emission changes compared to benchmark scenario



Requires -171 tree(s) to absorb per year



Equivalent a car drives -43253 kilometers



Greenbaggage

Airline Emission Dashboard

Refresh



Schedule Fuel Consumptions (ton)

Phase	Fuel Consumption (ton)
Taxi	2.37
Take-off	0.86
Climb	16.44
Cruise	75.58
Descent	7.32



SDG's tackled by Greenbaggage

- #SDG 4, Quality Education
- #SDG 9, Industry, Innovation and Infrastructure
- #SDG 12, Responsible consumption by all
- #SDG 13, Stop climate change
- #SDG 17, Mechanisms and partnerships to reach the goals

