

# AIRBUS

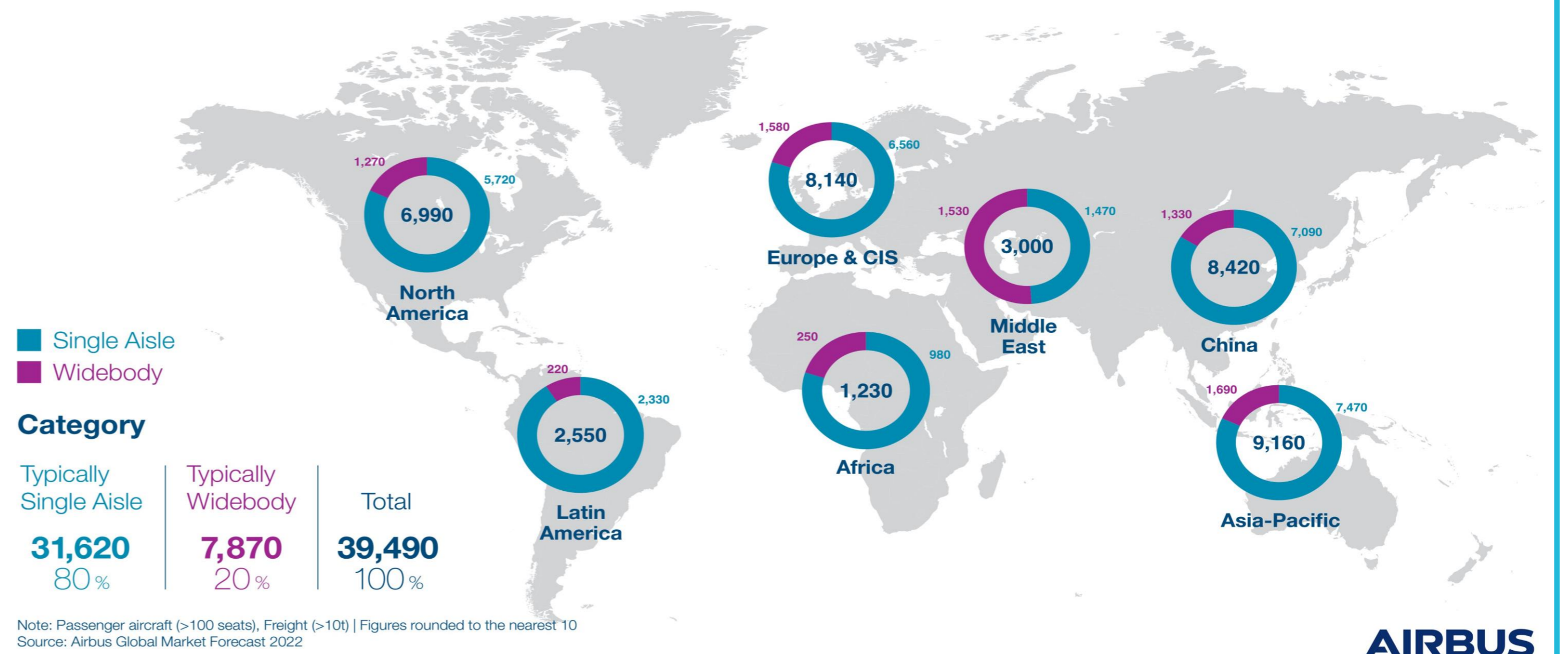
**Aim:** The purpose of this project is to implement the concept of Circular Logistics in the existing supply chain network of AIRBUS cabin parts and components for End-of-Life Management and reduce the overall carbon footprint.

## What is Circularity logistics?

- Circularity logistics is a sustainable approach to supply chain and logistics management that focuses on creating closed-loop systems where products and materials are recycled, reused, or repurposed rather than discarded, in order to minimize waste and promote the efficient use of resources.
- A circular logistics focuses on reducing wastage and pollution with repair, reuse, and reduction.
- It aims to minimize the use of raw materials and minimize discarded waste materials.

## Commercial Aircraft demand 2022-2041

Asia-Pacific, China, Europe and US continue to be major drivers for growth & replacement

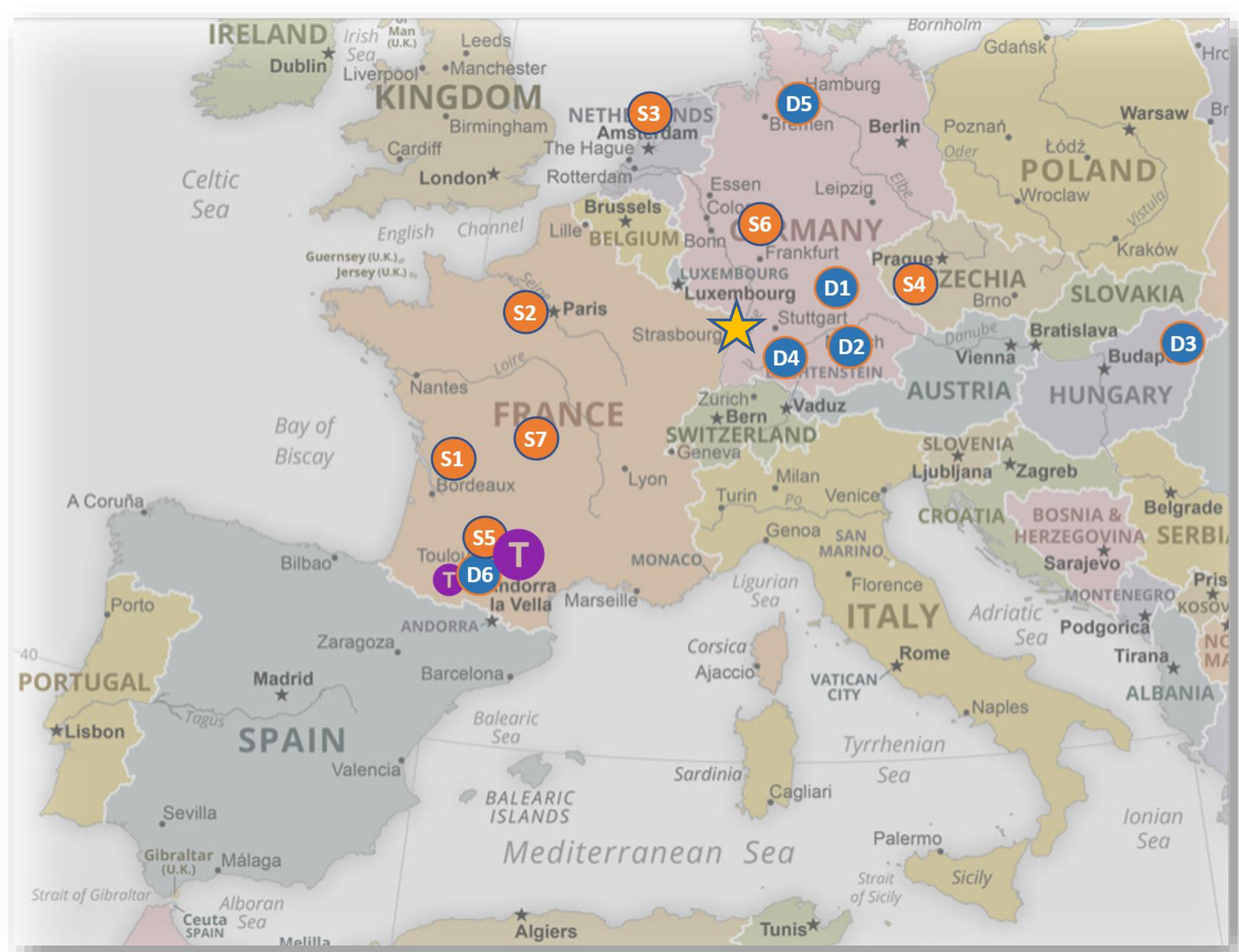


## AIRBUS Global Market Growth

- For the next 20 years, AIRBUS predicts that passenger traffic will expand by 3.6% per year (2019-2041 CAGR - Compound Annual Growth Rate).
- TARMAC anticipates demand for 39,490 new passenger and freighter aircraft, with 31,620 being single-aisle and 7,870 being wide-body.
- The demand for freighters is estimated to reach 2,440 aircraft, with approximately 900 of these being produced new.
- Only 20% of the existing fleet is comprised of the most recent generation of fuel-efficient aircraft.
- One of the easiest ways to decarbonize the sector is to replace older-generation airplanes.
- TARMAC Aerosave is the largest aircraft maintenance and recycling facility in Europe.
- Handling Cabin Parts End-of-Life Services within Europe( France and Germany) and mapping to Local Cabin Suppliers.
- DIEHL Aviation Laupheim GmbH - Supplier of Aircraft Ceilings and Sidewalls.
- SAFRAN Cabin France – Supplier of Overhead Stowage Compartments.

Source - Airbus Global Market Forecast 2022-2041 Report

## Mapping of the supply-chain network of AIRBUS cabin suppliers & TARMAC facilities in Europe



- T** TARMAC Facilities
- S** Safran Aerospace Locations
- ★** Proposed Location
- D** Diehl Aviation Locations

## Conclusions

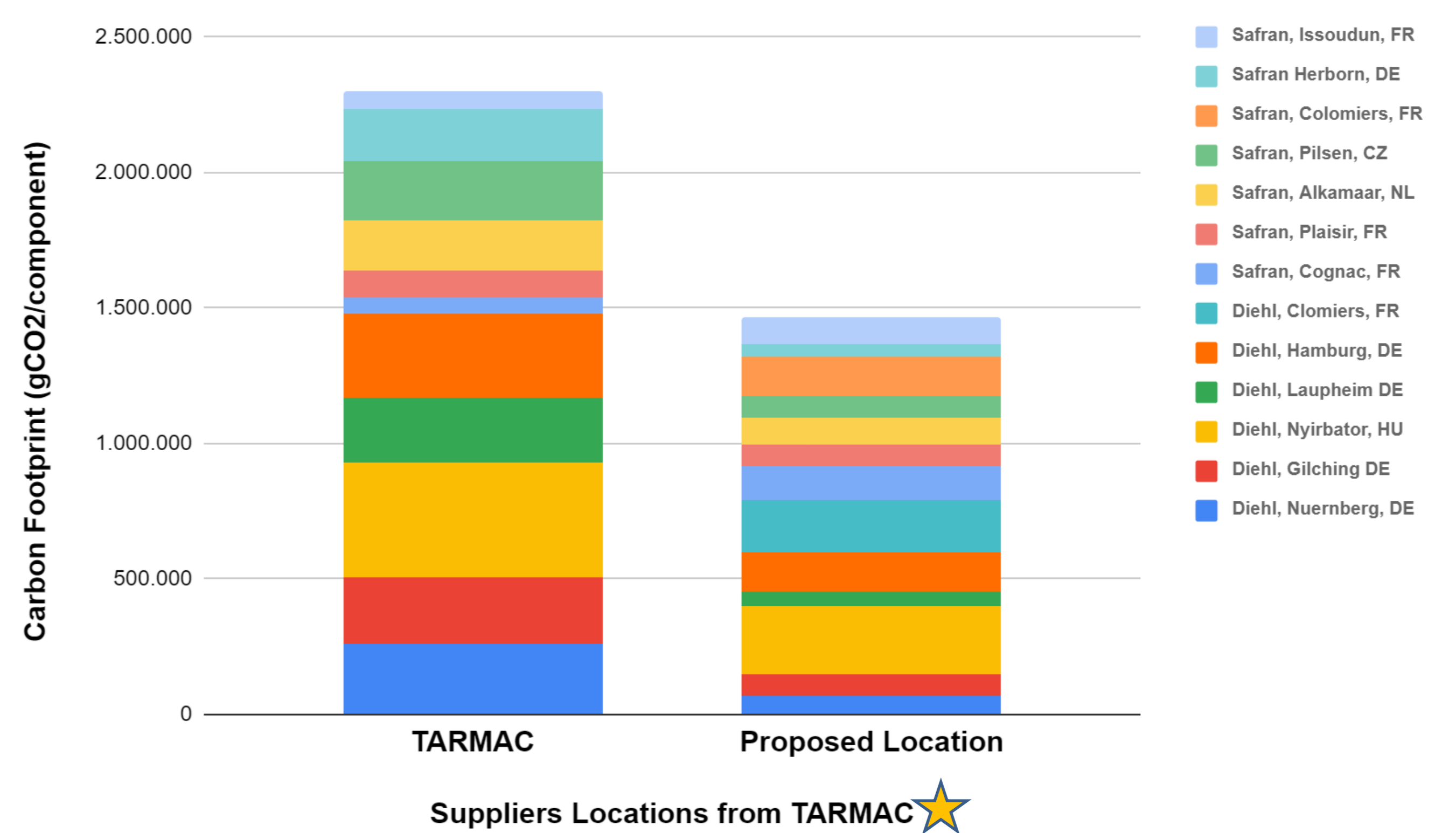
- The total carbon footprint for transporting the components from the current TARMAC facility back to the suppliers was determined to be **2.299,20 kgCO<sub>2</sub>/component**.
- A new location for the End-of-Life facility is proposed at Strasbourg in France, with good proximity to suppliers in France and Germany.
- The total carbon footprint for the proposed location at Strasbourg was calculated as **1.467,81 kgCO<sub>2</sub>/component**. This is **36% lesser** than the existing TARMAC location.

## Assumptions and considerations for calculation

1. The average carbon footprint produced by a long-haul tractor-trailer is 57 gCO<sub>2</sub>/tonne-km. [theicct.org]
2. Calculations were done per component.
3. Components considered:
  - a) Overhead Storage Cabin – 378 kg (Safran)
  - b) Sidewall Panel – 211 kg } (Diehl)
  - c) Ceiling Panel – 75 kg }

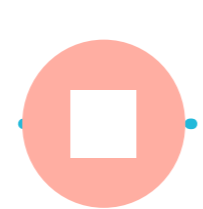
Source - CO2 EMISSIONS FROM TRUCKS IN THE EU: An Analysis Of The Heavy-duty Co2 Standards Baseline Data - theicct.org

## Carbon footprint with current TARMAC Facility and proposed new location at Strasbourg



## Regulations needed at the new EoL facility

ISO 14001 and EN 9110 certification.



### Team members

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