

Design of a lightweight & sustainable economy seat for short haul flights

Short-haul flights are one of the most carbon-intensive modes of travel. Weight and fuel economy are closely linked. Therefore, weight reduction in the aviation industry is one of the critical factors in making commercial aviation more sustainable.

This project focuses on aircraft efficiency by developing a lightweight aircraft seat for the economy segment during short-haul flights.

The result of this project is a concept proposal for a 3-seater bench with a per-seat weight of approximately 6.5 kg.

The low weight is achieved, on one side, by addressing the structure of the seat, where the core element of the concept is a single-piece compression-moulded shell made of CFRTP that consolidates conventional multi-component assemblies. On the other hand, comfort is provided by replacing traditional and heavy PU foams with a lightweight fabric suspension system.

3x6,5 kg



Orelia De Jonghe
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20 July 2021
Master Integrated Product Design

Committee Chair: Prof. dr. Vink, P.
Mentor: Dr. Song, Y. (Wolf)

 **TU Delft**