

INNOVATION IN MATERIALS

Shortlisted: Cecence

Developing lightweight, sustainable material options for aircraft cabins of the future.

In 2021 Cecence invested in driving forward development of their most sustainable aero seat back to date as part of an Innovate UK funded competition

The development programme enabled Cecence to develop a number of lightweight sustainable material options for the aircraft cabin of the future including a recycled carbon and bio-resin solution.

Cecence’s seat back is designed to meet structural requirements and for ease of process. The materials are rapid cure low temperature enabling a low embodied carbon product and a GWP reduction of 84% on more traditional composite materials.

Phenomenally low heat release results on the materials allow for unprecedented design freedom with FST compliance built into the structure removing the need for additional fire-proof dressings.

After 35,000 flights 321 tonnes CO2 can be saved by a 5kg reduction in mass. The seat back offers a 10% weight reduction on Cecence’s previous designs.

The backing film selected for the prepreg is recyclable and dry unused carbon waste conserved through cutting templates prior to pre-pregging allows for unused dry fibre to be recycled once again into carbon felt.

An LCA carried out during development has provided a template from which to calculate the potential carbon footprint of future products.



Website: [www.cecence.com](http://www.cecence.com)

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