

# DESIGN, MATERIALS AND MANUFACTURING OF THE INTERIORS OF THE SUPERBUS

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## ABSTRACT

The *Superbus* (Figure 1) is a new public transport vehicle designed for fast, safe, comfortable, sustainable and flexible transportation. The vehicle travels at 250 km/h cruising speed on its dedicated infrastructures and at conventional speed on existing roads, and transports passengers and goods from point to point, without the need to change transport during the journey. It is 15 meters long and provides seating for 23 passengers and to improve comfort and to allow for individuality, it has 8 doors per side.

One of the primary aims with regard to the interior design of this new concept is to create a comfortable, interesting and inviting environment, and fully equipped with a number of devices through a number of personal space layouts. However, due to the challenging vehicle operational requirements, the interior design had to be optimized with regard to the overall weight constrains, accessibility and manufacturability aspects.

In this paper the philosophy of the vehicle will be highlighted in terms vehicle fundamental concepts. Then, the analysis of the interior design will be discussed in correlation to the operational requirements. Finally, the resulting overall interior layout of the vehicle, the relative material used and manufacturing processes will be described.

KEY WORDS: Design, Applications - Automotive, Carbon Fiber Composites, Vacuum Infusion.



Figure 1: the Superbus