

## ***Lightweight Electronics by Injection Moulding in Seamless Architecture***

The LEIMSA (Lightweight Electronics by Injection Molding in Seamless Architecture) project aims to develop disruptive components for the interior of the car of the future, with the purpose of following the market evolutive trends in the automotive industry and anticipate materialization.

Decorative elements and distinctive features will be integrated into the products with as few operations as possible, through the use of emerging technologies in the mold (in-mould operations) and lightweight, such as In-Mould Decoration (IMD), and In-Mould Labeling (IML), High Pressure Forming (HPF) and In-Mould Electronics (IME), for the development of intelligent and haptic surfaces, with an attractive seamless 3D design and an immersive and intuitive Human-Machine Interface (HMI), centered on the user experience.

## ***Specific Project Objectives***

The LEIMSA project has a set of SPECIFIC OBJECTIVES focused on the development of applied R&D and the transfer of knowledge around the following areas:

- Flexible electronics, printed and embedded in the product.
- Design and concept of lightweight product.
- Haptic feedback systems, lighting and sensing.
- Human-machine interfaces (HMI, UX, UI).
- Optimization of manufacturing processes and integration of technologies to produce components for the auto interior of the future.
- Methods for evaluating product quality and functionality at the various stages of the process.

**Project:** POCI-01-0247-FEDER-048378

Main objective: Strengthening research, technological development, and innovation.

Timeline: august 2020-june 2023

Elegible costs: 4.802.431,13€

Financed FEDER: 3.036.914,62€

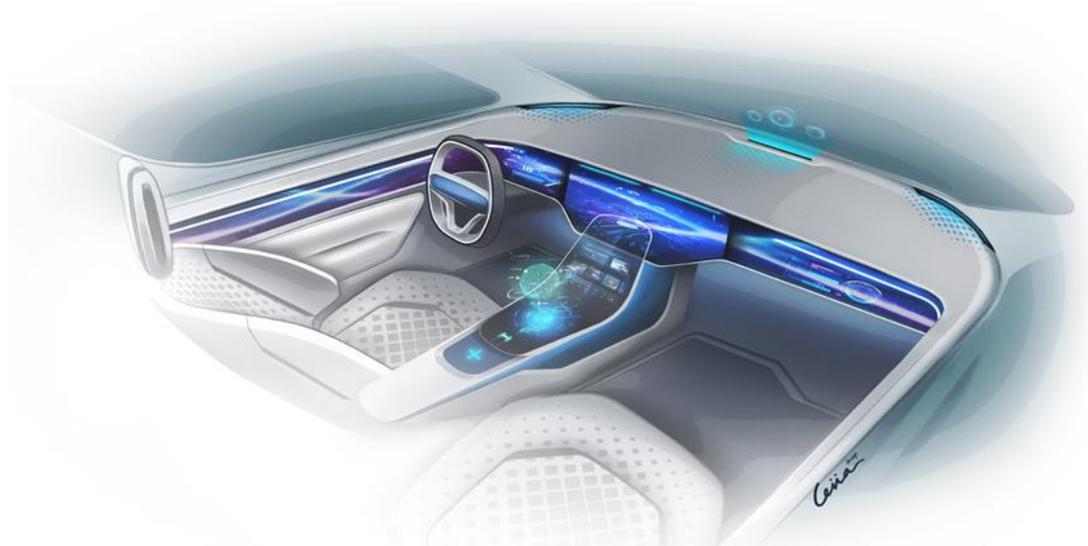
I&DT Empresarial – Copromoção , Clube de fornecedores

Region: North

Approval date:10/11/2020

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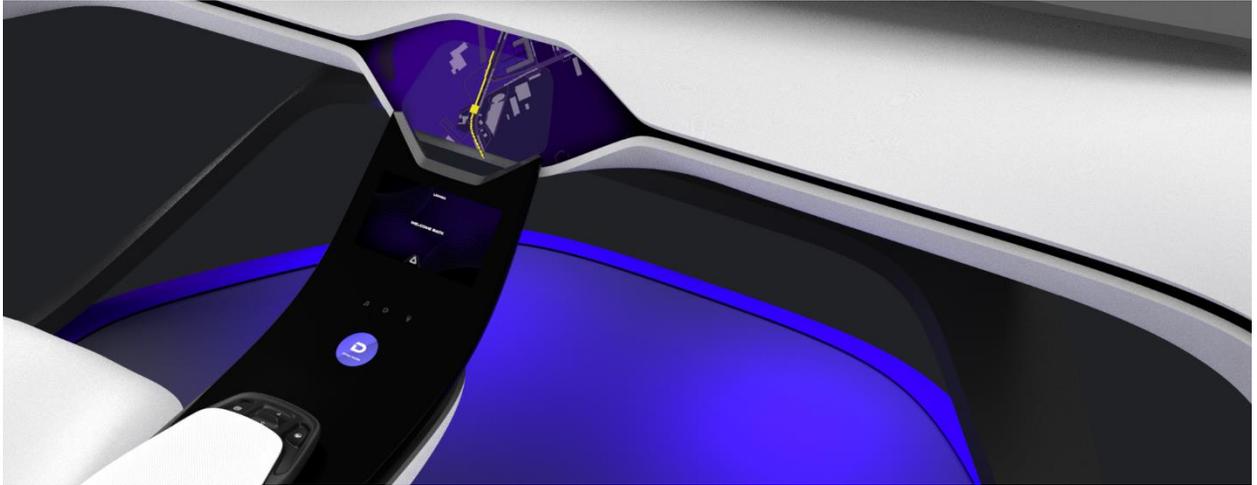
## *Project Results*



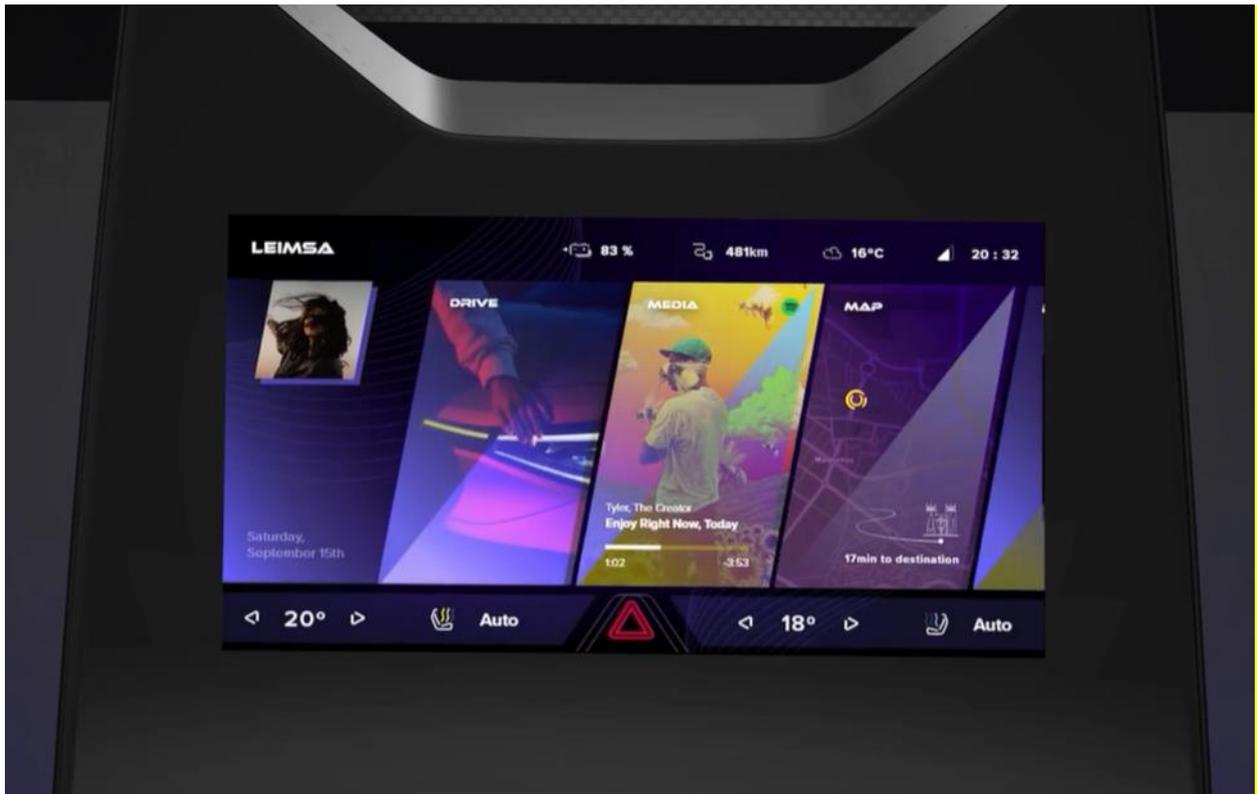
It is intended to

- Develop a self-disruptive Interior, with flexible design.
  - Create user-centered HMI concepts, integrating gesture performance, touch displays and haptic feedback into a 3D shape demonstrator.
  - Seamless and lightweight integration of printed and hybrid electronics into the product by IME.
  - Development of a control panel/central console that integrates decoration and functionalization with as few operations as possible (Minimization of the number of operations in the production/assembly process).
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# Concept Developed



## ***UI/UX CONCEPT DESIGN VIDEO***



***UI/UX VIDEO @Website:***

[www.leimsa.pt](http://www.leimsa.pt)

## ***LEIMSA PROTOTYPES AND DEMONSTRATORS***







## Consortium

