A DURABLE IN–CAR INTERFACE DESIGN FOR FUTURE LIGHTYEAR MODELS

A USER–CENTERED APPROACH IN AVOIDING OBSOLESCENCE OF THE IN–CAR EXPERIENCE

A significant problem within the automotive industry and for in-car interfaces in general, is the fact that the in-car user experience becomes obsolete at a much faster pace over time compared to the potential lifespan of the car itself.

Moreover, there is also a societal future need for long lasting products in order to have a positive impact on sustainability and to achieve the goals as decribed in the EU Road Map to a Resource Efficient Europe by 2050.

PROBLEM STATEMENT

Users experience a sense of obsolescence, which causes them no longer regarding the interfaces as useful and/or meaningful, which results in people perceiving the product as if its no longer relevant although it still has a substantial life to come. For an in-car interface many resources were acquired for development and production purposes. Subsequently, a user-centered design approach of extending product lifetime, is not (yet) focussed on within the automotive industry, and especially not within the design fields of in-car interfaces.

THE CHALLENGE

The main challenge is to create a durable in-car interface by doing research, user tests, and apply design principles within in-car interfaces to manage obsolescence of the in-car user experience.

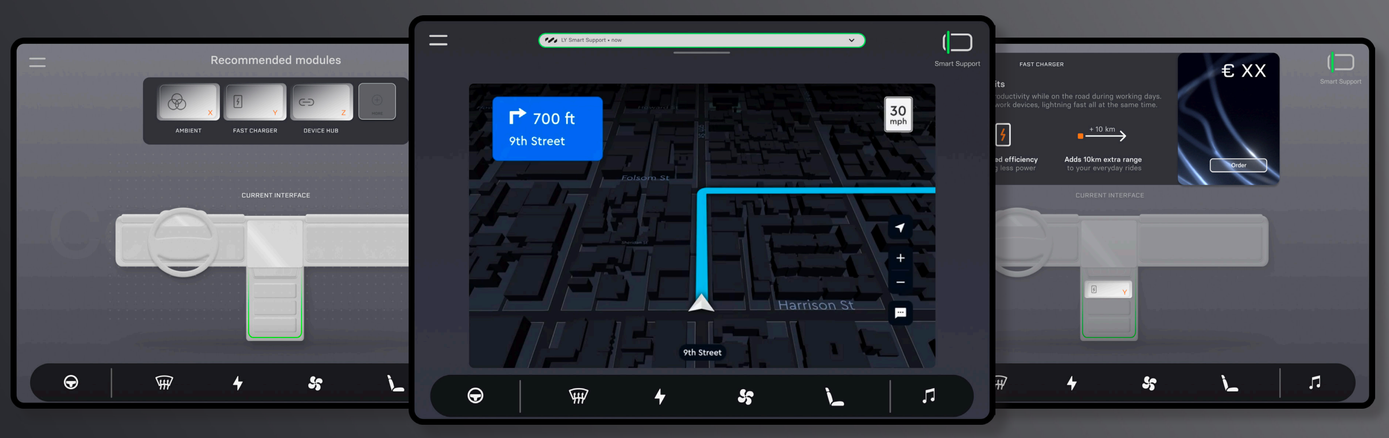
RESEARCH AND EVALUATION

The user evaluation sessions and user tests provide insights in use and to validate interaction design principles. The objective of the user tests was to gain knowledge about to what extent these principles facilitate the user's behaviour, needs, wants, expectations, and preferences.

DESIGN PROPOSAL

The design of the in-car interface should have a supporting system that analyzes the use and gives feedback and recommendations based on the performed user's rides and interface use. Secondly the design should have a modular principle aiming at updating physical functional modules. Lightyear should provide installation support for updating physical modules and/or panels. In terms of payment, most users prefer paying by one time purchase for (physical) updates over time, to make a well considered decision on what and when to update.

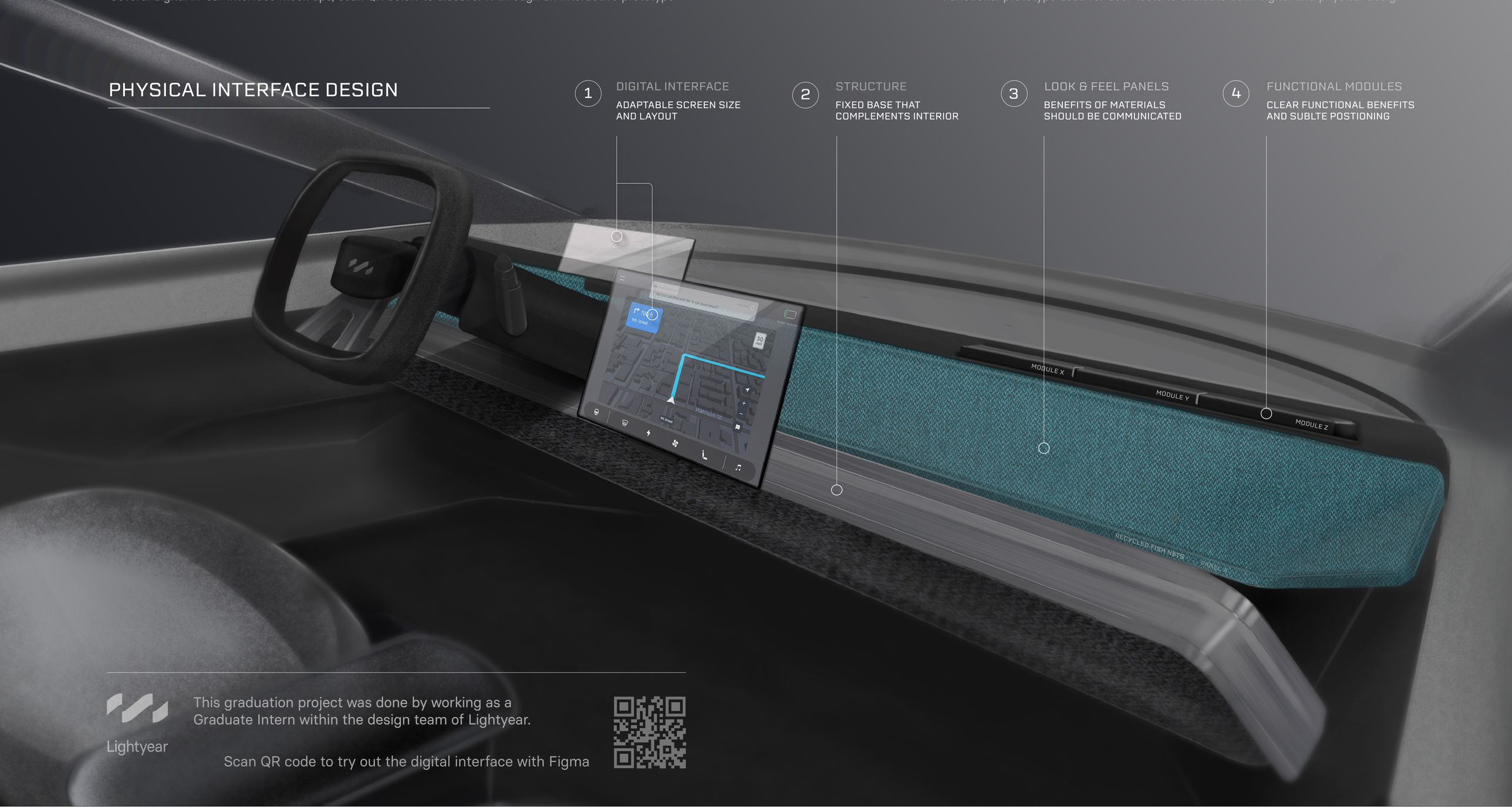
FINAL DIGITAL INTERFACE DESIGN



Several digital in-car interface mock ups, scan QR below to discover it through an interactive prototype

Functional prototype used for user tests to evaluate both digital and physical design

PHYSICAL INTERFACE DESIGN



Lightyear

This graduation project was done by working as a Graduate Intern within the design team of Lightyear.

Scan QR code to try out the digital interface with Figma

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