A design for the hydrofoil Seabubble to stimulate interaction during shared autonomous travelling

To anticipate on the growing amount of cars (with as a result, global gridlock and pollution) Alain Thebault and Anders Bringdal invented the Seabubble: a boat flying on water. The Seabubble provides autonomous transport on inland waterways.

The electric propelled hydrofoil-system, that sets the Seabubble into motion, provides a smooth and silent journey. Therefore opportunities arise within the field of interaction during travelling.

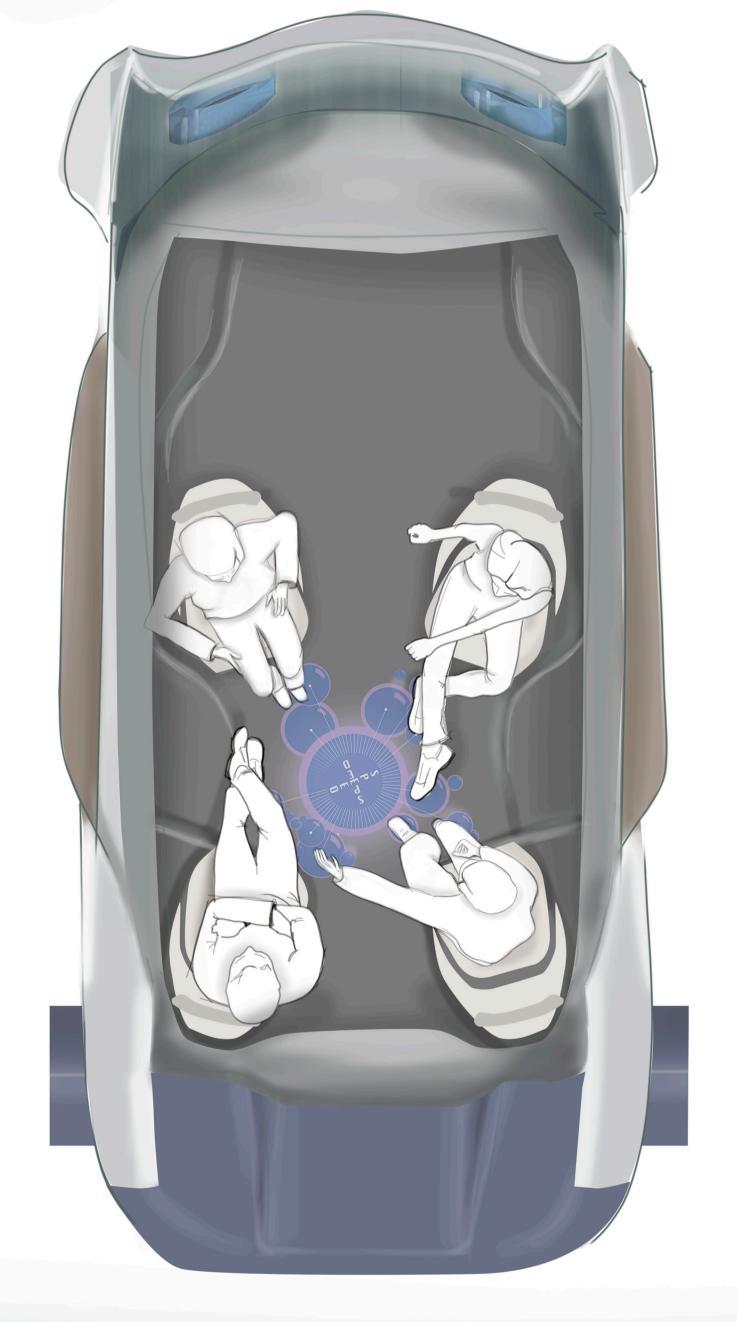
A list of tools for interaction is compiled by repeatedly testing interactions with low fidelity prototypes. The tools are used to design the SpeedBubble.

The SpeedBubble

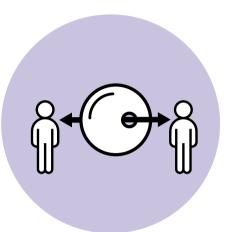
Passengers are stimulated to interact by means of a control-system: The SpeedBubble. It facilitates indirect interaction by projecting a speed indicator on the floor of the Seabubble. The Seabubble will fly autonomously on 25% of its speed capability. The passengers can speed up the Seabubble (up to 50%) by collecting projected bubbles with their hands and feet.

Community sharing

A case-study is used to design for the interaction amongst neighbours of a water-rich area. A journey within this area would take between 3 to 15 minutes, therefore the design is self-explanatory and easily accessible. The SpeedBubble requires neighbours to collaborate since the only way to have full control is when everyone is actively involved.

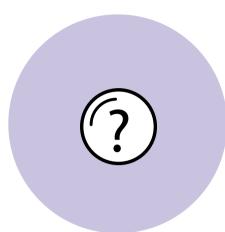


Tools for interaction



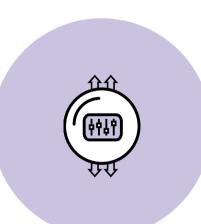
A facilitator for interaction

A joint focus point facilitates indirect contact. Lowering the threshold for direct interaction.



Uncertainty

The passengers depend on each other's actions, the mystery of what might happen triggers to interact.



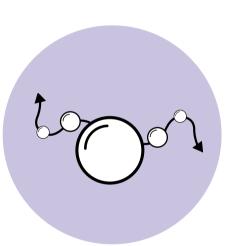
A sense of control

Having influence over the speed of the Seabubble provides a common goal.



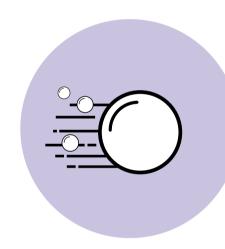
A need for simultaneous

The passengers need to work together to enable the highest level of control.



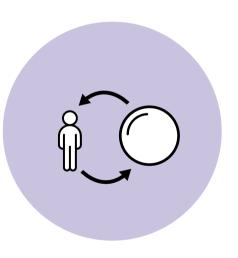
Successive stimuli

A self-learning adaptive system adjusts the stimuli to the activity of the passengers and the level of experience.



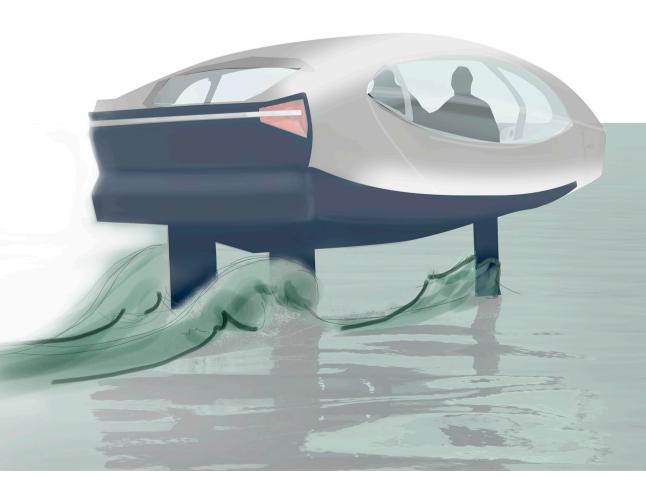
A non-static character

The speed-level changes synchronously to the level of activity of the passengers; triggering an active posture.



Balanced Feedback

Feedback is given by projecting the result of the passengers' (non) active posture.



Ilse van Zeumeren Tools for stimulating interaction amongst passengers of autonomous vehicles 23rd April 2020 Msc Design for Interaction

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