

Changing the change

Design Visions, Proposals and Tools

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CHAIN MOBILITY- ROLE OF PRODUCT SERVICE COMBINATIONS

A research by design approach

Abstract

Chain mobility, which is combinations of forms of transport, is one of the future options for urban congestion problems. This research attempts to combine the aspects of chain mobility, short distance travel, portability and use of emerging battery technologies. The challenge is to create the door-to-door solution which is one of the functionalities of urban travel; usually it concerns niche circumstances where a quick, clean and individual transfer over a limited number of kms is required. The focus of thinking and orientation in this project has been from the need point of view, the functionalities of the personal travel and the role of niche circumstances in portable vehicle design.

The research by design background is set to demonstrate the combination of expertise in the field and sustainable mobility knowledge, which could be used to come up with a market ready unique mobility solution. The general product design is seen as combination of disciplines of form-giving, engineering, ergonomics and innovation management. In order to demonstrate the optimal combination of these disciplines for intended purpose and market a unique product is developed.

The premise is also that there is pressing need for advanced concepts which could be using advanced technologies and materials to overcome the issues with traditional technologies. Available knowledge on sustainable mobility at Faculty of Industrial Design Engineering in the form of experts and previous projects could be a head start in coming forward with more practical solutions. The system perspective is also to fulfil a particular function (e.g., door to door) but not just being another product on the market. The combination of sustainable perspective and system thinking should result in a more complete solution.

This paper is an attempt to give reasons and optimized solutions why chain mobility options and better alternatives for car travel could bring more consumer satisfaction as well improve the quality and opportunities for public transport. The research is carried out for city Leeuwarden in order to reduce

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urban carbon emissions by reducing car usage and providing door-to-door transportation options. The results of the research are presented in a form of feasible product-market combinations and potential tie-ups among public-private transport providers.

Results:

1. a unique concept vehicle prototype
2. Illustrations of concept vehicle
3. Visualisations of Product service combinations for separate niches

Keywords:

Chain mobility, product service combinations, alternatives for car and sustainability