

Abstract HICL

Requirements for the implementation of delivery robots in combined passenger and freight transport

Marko Thiel^{1*}, Sandra Tjaden¹, Manuel Schrick¹, Kerstin Rosenberger¹, Matthias Grote¹,

1. Hamburg University of Technology, Germany, *marko.thiel@tuhh.de

Purpose

Delivery robots promise to provide gains in many ways especially on short distances. However, there is a lack of orderly overview of requirements for successful implementation. The aim of this paper is to generate a better understanding of how to implement delivery robots in public infrastructure.

Methodology

This paper follows an explorative, applied and interdisciplinary research approach based on the pilot project "TaBuLa-LOG". The results of a literature review were used as the foundation for thematically targeted expert workshops, interviews and desktop research. The individual approaches and outlined requirements are then combined and structured on the basis of a dependency model.

Findings

We discuss not only the independent solo autonomous use of delivery robots, but also the combined use, where the main run takes place in an automated passenger shuttle. The result of this paper is a comprehensive overview of the identified requirements structured along the developed dependency model.

Originality

When it comes to delivery robots there is limited uniform information about the implementation in the real environment so far. This paper closes the gap by identifying requirements for implementing a delivery robot into a combined passenger and freight transport.