



Review of underground logistic systems in the Netherlands: an ex-post evaluation of barriers, enablers and spin-offs

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Abstract

Now, 10 years after the first plans, we analyse in this paper what has happened with Underground Logistic Systems (ULS). The major question in this paper is: Which barriers and enablers led to the failure of ULS and what ULS spin-offs can be found nowadays? Several factors can be classified as barriers or enablers. The main conclusions that can be drawn are that the opportunities for try-out were too limited; political support could have been gained on higher levels; the costs were too high, the catchment area was too limited; ULS in itself is a very promising system, but there was no one clear goal. In particular, the lack of a thorough and positive business model in combination with a lack of sufficient freight volumes almost immediately guaranteed the failure of the initiative. The spin-offs seem to have taken place in different directions: ranging from rather soft impacts (e.g. scientific knowledge) to more hard developments (adopting and developing transport and tunnelling technologies), and, although difficult to quantify, they are of great value.

Keywords: Innovation management; Underground freight transport.

1. Introduction

In the 1990s, a research project was carried out in the Netherlands that focussed on underground freight transport for Schiphol airport. The title of the project was 'Ondergronds Logistiek Systeem' (Underground Logistic System or ULS). Several aspects of the innovative concept were researched in detail, and it was planned to have a system operational by 2005. Now, approximately 10 years after the first plans, it is

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