



Project Title: Dual Channel Logistics Strategy with the Integration of Crowdsourced Vehicles for Ad Hoc Demand
研究項目: 通過整合眾包車輛以滿足特殊需求的雙渠道物流策略
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Abstract

Managing the dual channel of logistics resources has become more critical than ever, not only to achieve cost savings via enhanced process efficiency in operations, but also to utilise idle resources within and outside operations for social sustainability. With the success of crowdsourcing logistics platforms in recent years, many companies have sought to outsource some of their logistics orders to crowd networks. However, when compared with internal logistics resources, resources in the crowd network involve higher uncertainty, which creates many challenges for companies in determining the allocation of logistics orders to the crowdsourced platform for the fulfilment of ad-hoc demand. There is a lack of a holistic approach for integrating internal logistics resources among various storage facilities with crowdsourced vehicles via decision intelligence systems.

In this research project, we aim to design an integrated decision framework for managing the dual channel of logistics resources through the adoption of decision intelligence systems. With the support of decision intelligence systems, including systems simulation, data-driven models, and geospatial data analytics, the integration of internal and crowd logistics resources is expected to lead logistics operations to the next stage of operations management. The main contributions of this study are therefore focused on the management theory of dual channel logistics resource management. Apart from the management theory, we will collaborate with a company in this project. The collaborated case study would also serve as a guideline for practitioners.