



Research School for Operations
Management and Logistics

Theoretical vs. real-life Vehicle Route Planning

Marieh Kadivar – Eindhoven University of Technology

The world is moving forward in taking advantage of Information and communication Technologies (ICT) in different sectors of industry. However, one pivotal issue that needs to be considered is that in many real-life cases, decisions made by planners tend to deviate from decision support systems' (DSS) solutions and recommendations supported by ICT. These deviations stem from both behavioral factors and flaws in mathematical models and algorithms. Although scientists have put a lot of effort in making valid models and algorithms underlying DSS solutions and recommendations to better fit real life problems, there is still a gap between these two. To close this gap, specifically in decision making and planning platforms leveraging optimization-based DSS, engaging human's experience is necessary to obtain the highest decision-making performance. This PhD project aims to identify reasons for deviations between the theoretical and real-world use of optimization-based DDS and seeks ways to get the most advantage out of DSS in vehicle route planning. This is achieved by understanding and adding planners' experience, knowledge, and decision approaches for solving vehicle routing problems to the theoretical models underlying the DSS.