



Séminaire du CIRRELT Seminar

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THE FOOD BANK SUPPLY CHAIN MODEL: OPTIMIZING RESOURCE ALLOCATION AND INVESTMENTS

Abstract: In this paper we describe a optimization model for the food bank setting that detects and solves bottlenecks in storage, transport and donations. This mixed integer linear program can be applied by food banks worldwide and deals with real-world circumstances, such as sparse data, heterogeneous vehicles and strong diversity in food bank operations. This study is inspired by a challenge faced by the food banks in the Netherlands, who experienced an increase in supply chain uncertainties in 2020 with the onset of the COVID-19 pandemic. Their assessment of demand uncertainty created alarming scenarios, where demand could potentially grow as much as 50% that would inevitably cause problems in the supply chain. In this uncertain period, the optimization model presented in this paper was used to help decision making on the strategic level, suggesting opportunities for investment to protect the supply chain against exposure to COVID-19 in a way that best serves their beneficiaries.

Joint work with: Frans Cruijssen and Hein Fleuren

Bio: Meike Reusken (26) is a PhD candidate at the Zero Hunger Lab of Tilburg University, supervised by Frans Cruijssen, Dick den Hertog and Hein Fleuren. She is working together with the United Nation's World Food Programme and the Dutch Food Bank to find innovative and sustainable solutions to tackle hunger in the Netherlands and worldwide. Meike believes that the UN 2030 agenda is crucial to all members of society and believes that the call to action should be that everyone must incorporate it into their daily lives, but she is particularly passionate about hunger, poverty and sustainability. Meike is Dutch and lives in Rotterdam. Her academic background is diverse as she studied multiple disciplines over the past years. She received her Bachelor in International Business Administration at the Erasmus University for which she attended a semester abroad at the Chinese University of Hong Kong. Additionally, Meike holds two master titles, in Economics (Erasmus University) and in Econometrics (Tilburg University). Before Meike started at the Tilburg University, she worked for various companies (ORTEC, Willis Towers Watson, Nationale-Nederlanden) and spend her time helping voluntary organisations (Unie van Vrijwilligers, Raleigh International).

Mardi / Tuesday
25 octobre 2022, 14h30
October 25th, 2022, 14:30

Salle / Room 5441
Pavillon André-Aisenstadt
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Responsable / Organizer
Margarida Carvalho

