



Research School for Operations
Management and Logistics

Routing problems with location selection and inventory restrictions

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This project focuses on pickup and delivery problems, a subset of routing problems in which routes are created for transporting items between individual pickup and delivery locations. It will investigate (1) how decisions on routing and (pickup) location selection can be integrated, while accounting for limited inventory levels, and (2) the benefit of such integrated decision-making under various problem conditions. To this end, first, innovative heuristic solution techniques are developed to solve a generic version of the problem. Second, these techniques are tailored and extended to address several problem variants arising in practice. Finally, new managerial insights are obtained on the impact of integrated decision-making and the effect of problem conditions thereon.