Planning the caregivers at Landelijke Thuiszorg

P. A. Maya, M. Castro, K. Sörensen, and P. Goos

University of Antwerp,

Operations Research Group ANT/OR

{pablo.maya, marco.castro, kenneth.sorensen, peter.goos}@ua.ac.be

In this talk, the core optimisation component of a decision support system for the regional service planning at Landelijke Thuiszorg is described.

Landelijke Thuiszorg is a "social profit" organisation that provides home care services in several Belgian regions. Underlying this decision support system is an optimisation problem that aims to maximise the service level and to minimise the distance travelled by the group of caregivers.

This problem is tackled as a bi-objective mathematical problem. A flexible two-phase solution strategy is designed to efficiently solve this problem. Computational tests, as well as extensive pilot runs performed by the organisation's personnel, show that this approach achieves an excellent performance, both in terms of the service level and the total travelled distance. Moreover, computing times are small, allowing for the weekly planning to be automated to a large extent.

The organisation is currently in the process of implementing our solution approach.