



Research School for Operations
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Integrated field service engineers and spare parts planning in maintenance logistics

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Maintenance logistics is an important discipline that has received considerable attention both in practice and in the scientific literature. This importance is often due to the high investments associated with capital-intensive assets which in turn require a high operational availability. The unplanned downtime of advanced capital equipment can be extremely expensive. Consequently, these unplanned downtimes should be avoided as much as possible and if they occur, it should be kept as short as possible (by using optimal corrective maintenance policies). The latter implies that malfunctioning parts or components causing the system breakdown are immediately replaced by ready-for-use ones, since repair of the complete system on site requires too much time. This in turn requires an optimal availability of resources (spare parts, tools and service engineers). So far the planning of resources such as spare parts, service engineers and repair tools has been fragmented and separated. However, any integrated solution encompasses all three types of resources simultaneously. In this research, I will focus on the challenging multi-resource planning problem, namely for spare parts and service engineers, for advanced equipment maintenance.