

Integrating operational and tactical decision-making in spare part inventory management

UNIVERSITY
OF TWENTE.

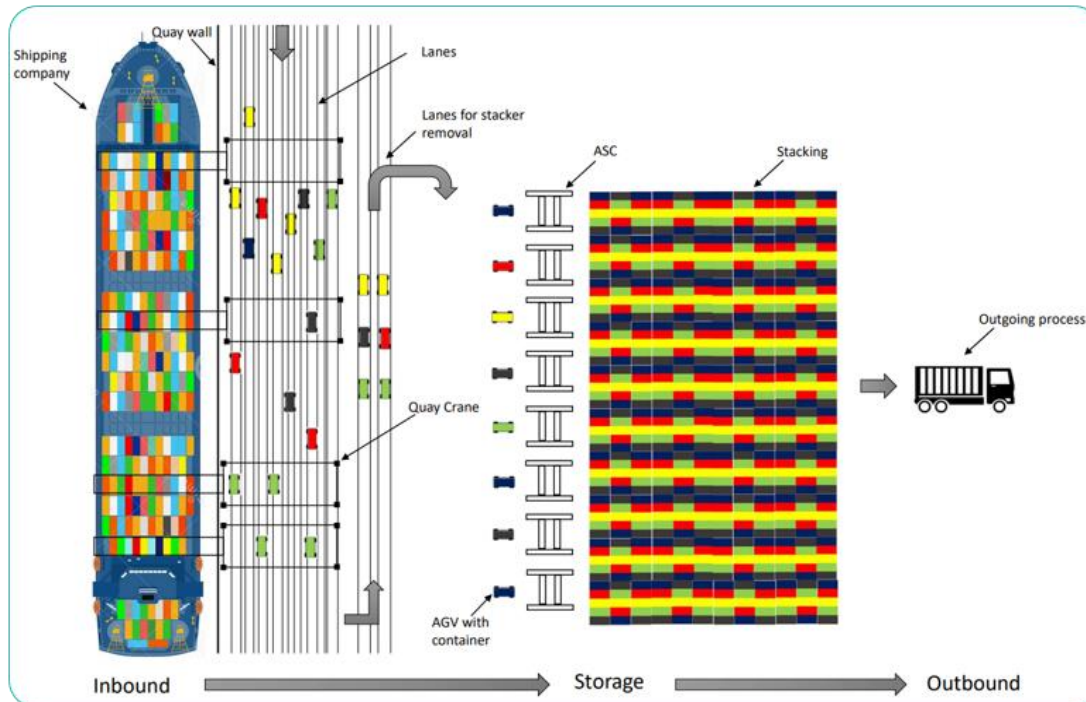
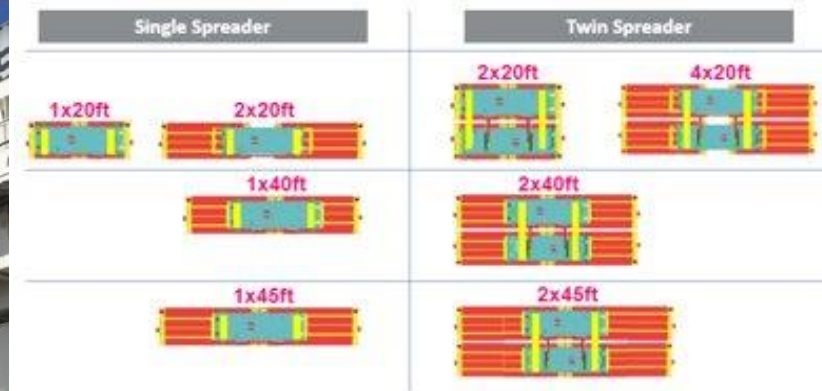


Using Deep Reinforcement Learning to determine (tactical) base stock levels for repairable spare parts while considering day-to-day (operational) flexibility enabled by interventions.

Daan Peters

- Jean-Paul van Oosterhoud
- Roy Willemse
- Damian Schouten

Research Assignment - RMISLAM



Advantages of the Split-Headblock:

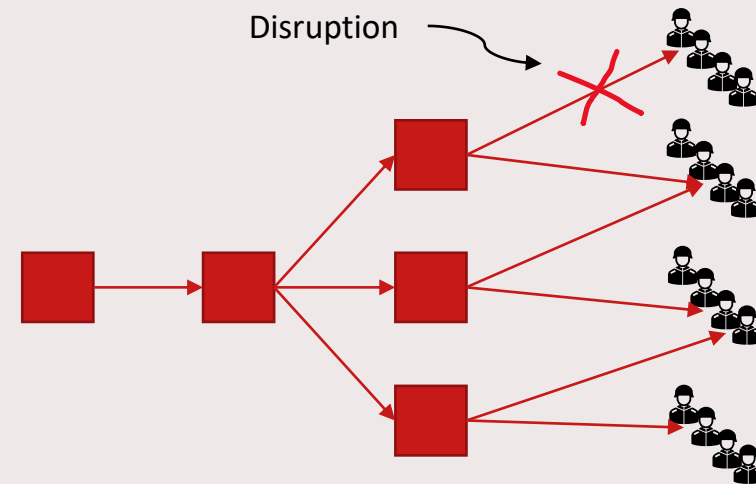
- 80% more efficient
- Less labor costs
- Reliable system
- High Uptime
- Less cranes needed
- R.O.I. after 4 years
- Can lift different sizes containers at the same time
- Easy to control
- Trusted manufacturer
- Flexibel system (Margins)
- 4 Quay Cranes per Deepsea needed instead of 6.

Disadvantages of the Split-Headblock:

- Higher Equipment tear



Military Supply Chain Network Resilience against Targeted Disruptions in Urban Warfare



Stefan van den Berg

Thimo Rottier

Optimal Planning

Changing information flows and inspection work to:

- *Optimize sustainability by reducing CO² emission.*
 - *Reducing fuel costs.*
 - *Lowering workload.*



**Port of
Rotterdam**



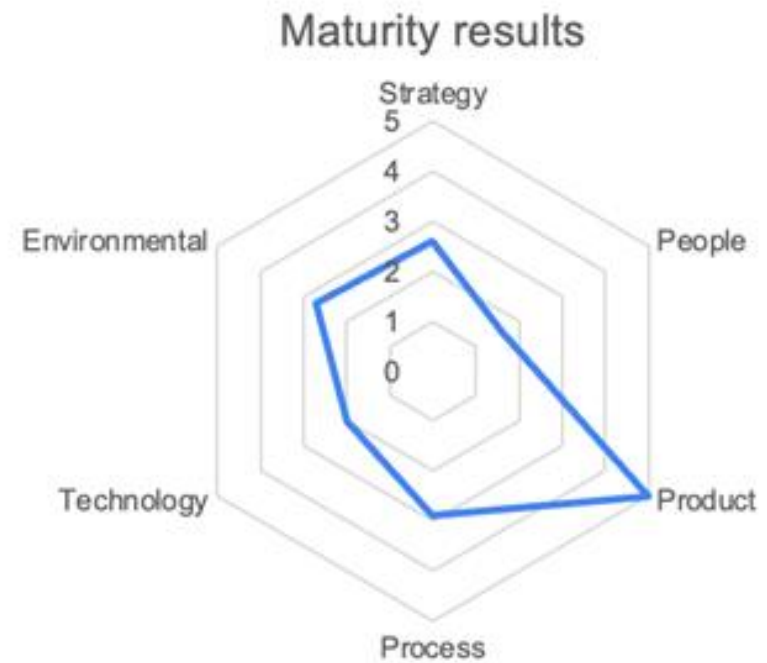
Circular maturity model

ASTRID VAN DEN BERG

BRENT RIETVELD

JOP DE WINTER

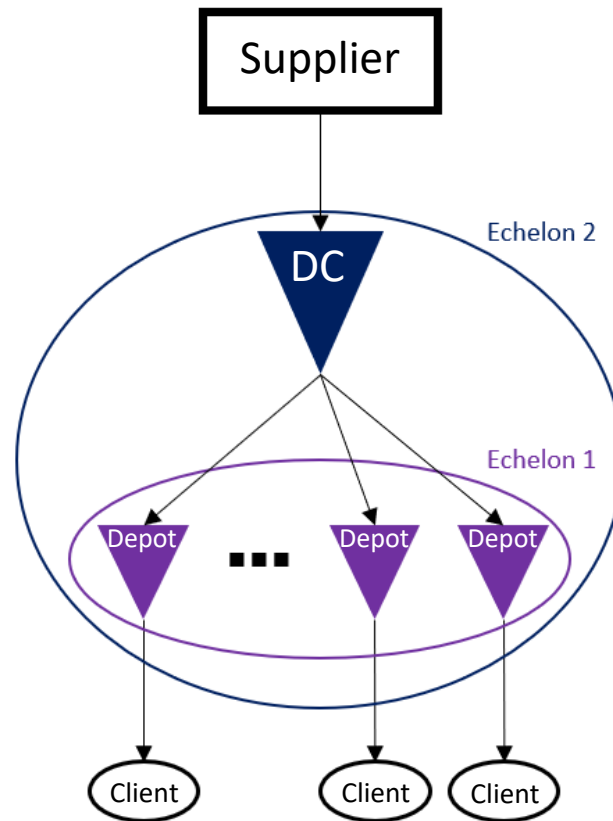
“How can the circular performances of Dutch businesses in the trade and industrial sector be made transparent in a holistic, representative, and attractive way?”



Multi-echelon models with Various-service levels

By Xander Maaskant

How to stock at depots for slow moving items?

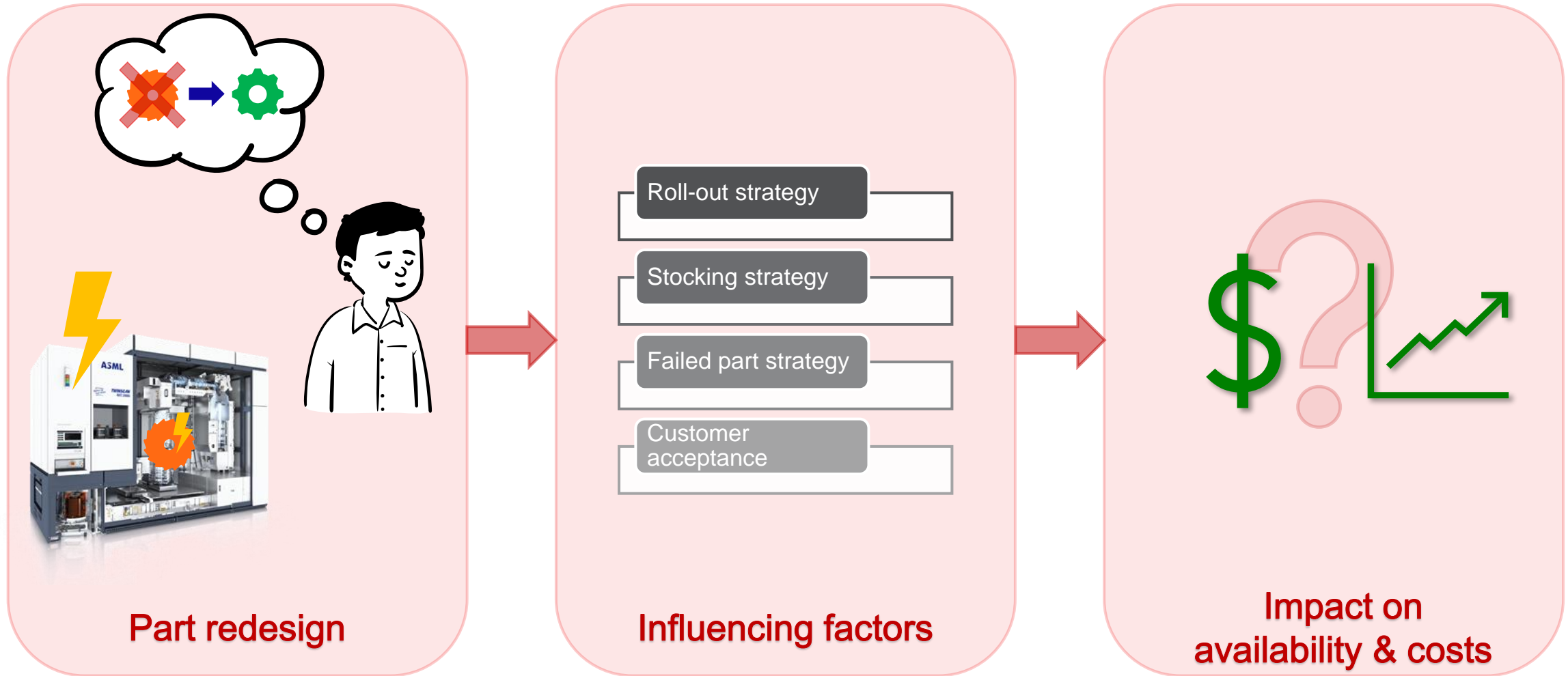


Availability vs. Cost



Component redesigns and the impact of their implementation policy

TU/e Master thesis at ASML by Steffi Neefs





Problem

No control system,
resulting in
disappearing
of materials and
unnecessary orders



Objective

Optimize the inventory
management system



Design

Implementation RFID
tags, expansion SAP,
and warehouse
control system



Result

Real time overview in
inventory and more
control in material
management