

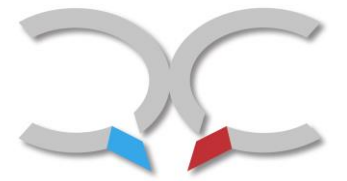


University of Applied Sciences



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Windsheim



KennisDC Logistiek



BRINGING OUR SYNCHROMODALITY RESEARCH TO THE NEXT LEVEL!



Ron van Duin
Lector Haven & Stadslogistiek

Today you are committed



- Scientific member of the Joint Corridors OffRoad & Greening Corridors
- Outcomes and results really matter and contribute to our knowledge database

Based on the results and outcomes :

- Assist companies with their struggle to reach higher lever of synchomodality
- Bring more knowlegde to the (applied) research of synchomodality



General developments at container terminals

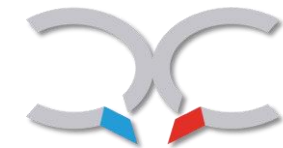
Developments

- Higher terminal productivity
- Large container vessels (>20K TEU)
- More automation
- More simultaneous operations

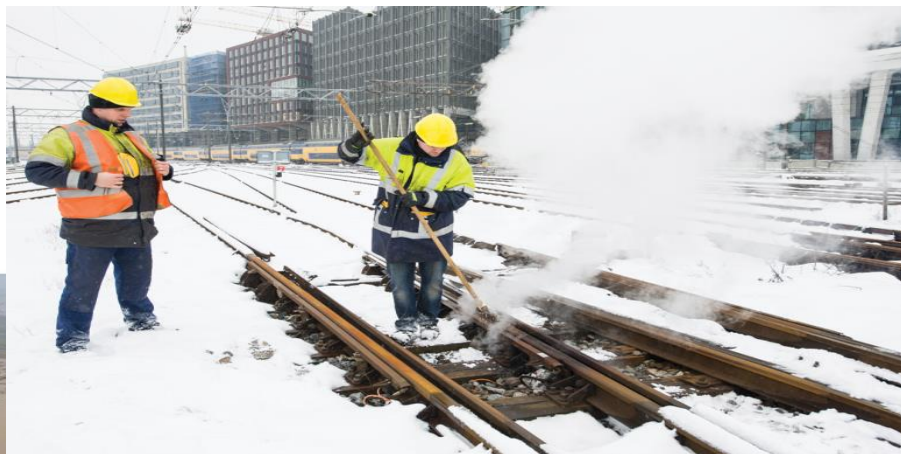
Leading to

- Higher peak productivity
- High peak volumes to hinterland connections





Real-time conditions



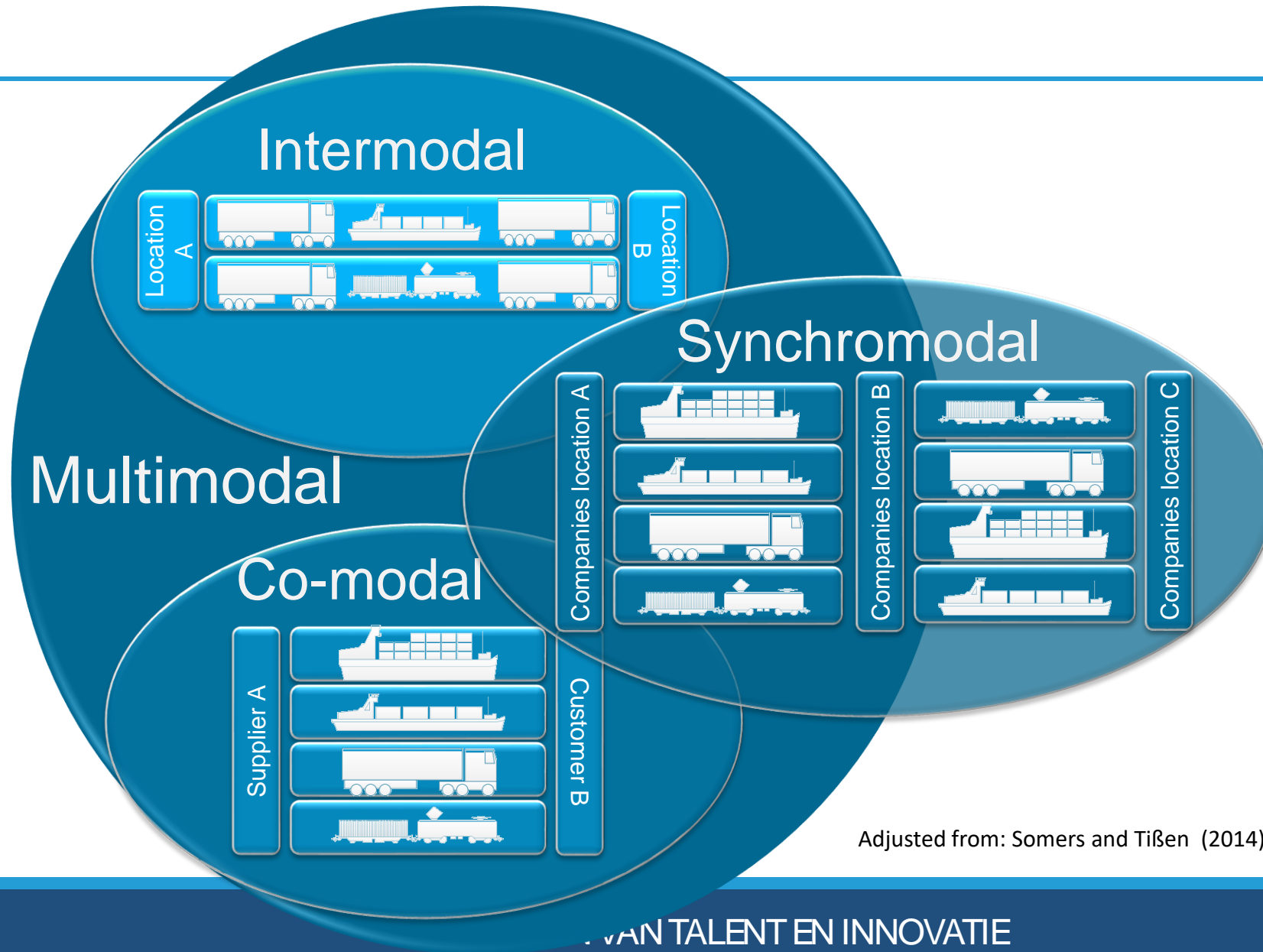
10 januari 14,64 NAP



18 oktober 6,66 NAP



Synchromodal transport



Adjusted from: Somers and Tißen (2014), & Singh, van Sinderen, and Wieringa (2016).

Synchromodality

- Strong points
 - Flexibility to urgency, traffic, transport availability, etc.
 - Focus on time and costs: modality irrelevant
 - Loading degree in transport should increase



Sit and Wait attitude among SMEs¹

- Small volumes
 - Many shippers (Sustainable Social Responsibility) < volume to fill a train or vessel
 - Absence of return flows
- Uncertainty about confidence, priority rules & privacy
- Flexibility could lead to waiting times for vessels
- Fear/ scepticism/ threat for negative consequences among forwarding agents/Cargadoors



¹ Small & Medium-sized Enterprises

Literature review says

- Synchromodal transport is an emerging topic, i.e. almost 50 publications over the last 10 years
- Just a few papers on the evaluation of implementing synchromodal transport
- Lucassen & Dogger (2012) described the first experiences on a synchromodal transport pilot study.
- Most important factors are
 - design of the network,
 - necessary changes in collaboration and business models,
 - central coordination of the overall transport system

Application

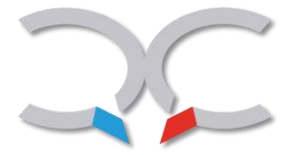
- Structured questionnaire developed based on maturity model
- +/- 100 students
- More than 100 companies approached
- 41 interviews at 41 companies conducted in Netherlands and Belgium
- 12 teachers, 3 researchers, 1 applied research professor, 4 universities
- Raise awareness about possibilities synchromodal transport
- Contribute to more intermodal transport
- Help companies with an individual advice and benchmark based on maturity model

Published articles

- Alons, K. , Somers, G. , & van Duin, R. , (2019). In vier stappen van intermodaal naar synchromodaal transport. Web publication/site, Vakmedianet
- Alons-Hoen, K., Somers, G., & van Duin, R. (2019). Moving from intermodal to synchromodal transport: A maturity model applied to a case study in North Western Europe. In *Proceedings of 2019 TRB Annual Meeting* (pp. 1-10). Transportation Research Board (TRB).
- van Duin, R., Warffemius, P., Verschoor, P., de Leeuw, A., & Alons-Hoen, K. (2019). Synchromodal transport: From theory to practice: Case study port of Rotterdam: Identifying the success/fail factors. In *Proceedings of 2019 TRB Annual Meeting* (pp. 1-11). Transportation Research Board (TRB).
- Alons-Hoen, K., van Duin, R. & Somers, G., (2019). The current state of Synchromodality: an application of a synchromodal maturity model on case studies. *LOGISTIEK + Tijdschrift voor Toegepaste Logistiek* (8), 116-131
- Alons-Hoen, K., Somers, G., & van Duin, R. (2021). The current state of synchromodality: An application of a synchromodal maturity model on case studies in the Netherlands and Belgium . In *Proceedings of the 100th Annual Meeting Transportation Research Board* (pp. 1-11). Transportation Research Board (TRB)

Prices

- TRB Washington, (2019)
Annual Private Sector Applicability paper award



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A photograph of a port at sunset. A large gantry crane is the central focus, with its structure reflected in the calm water in the foreground. The sky is filled with dramatic, colorful clouds in shades of orange, yellow, and blue. In the background, there are stacks of shipping containers and a building with 'BELL' branding. The overall scene is peaceful and industrial.

Wish you a good race!