

Truck platooning in rural freight routes

Maren Eitrheim, Markus Log,
Trude Tørset, Tomas Levin, Kelly Pitera









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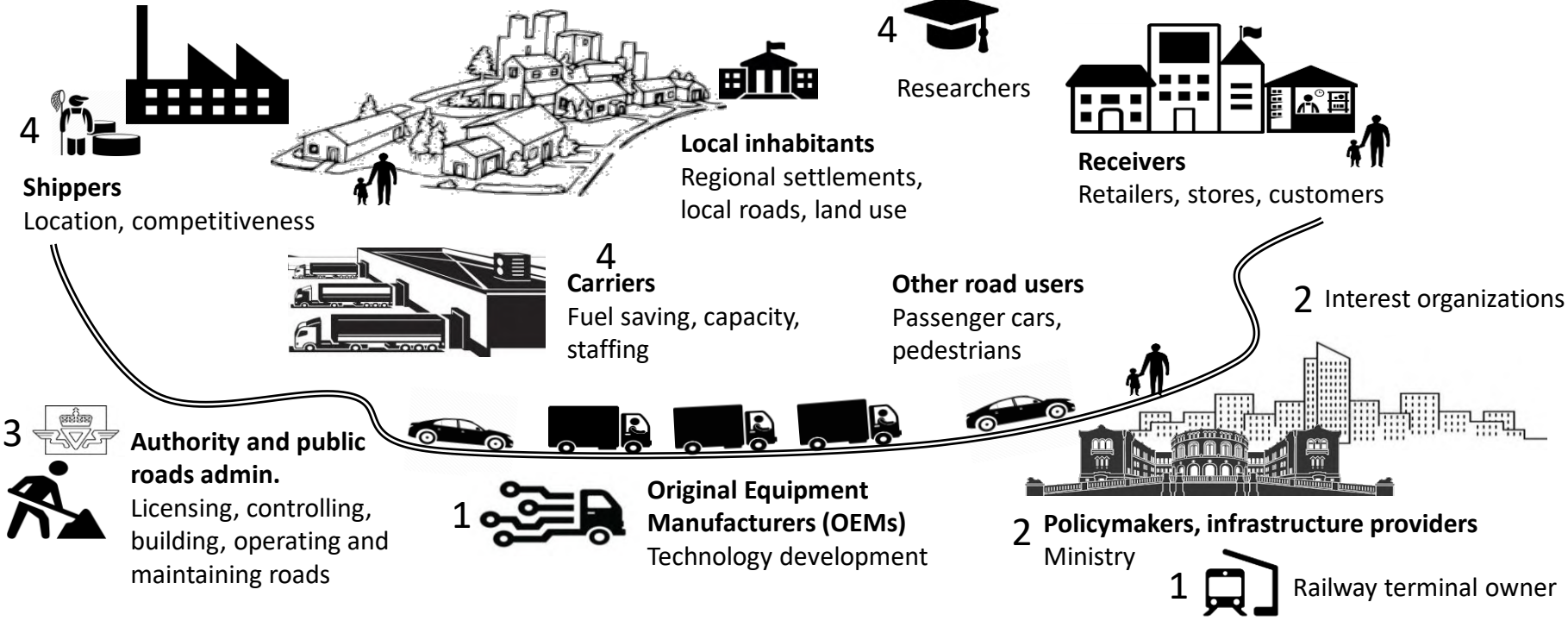
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101st Annual Meeting

What are the opportunities and barriers for platooning in Norwegian rural freight routes?



Stakeholder interview study

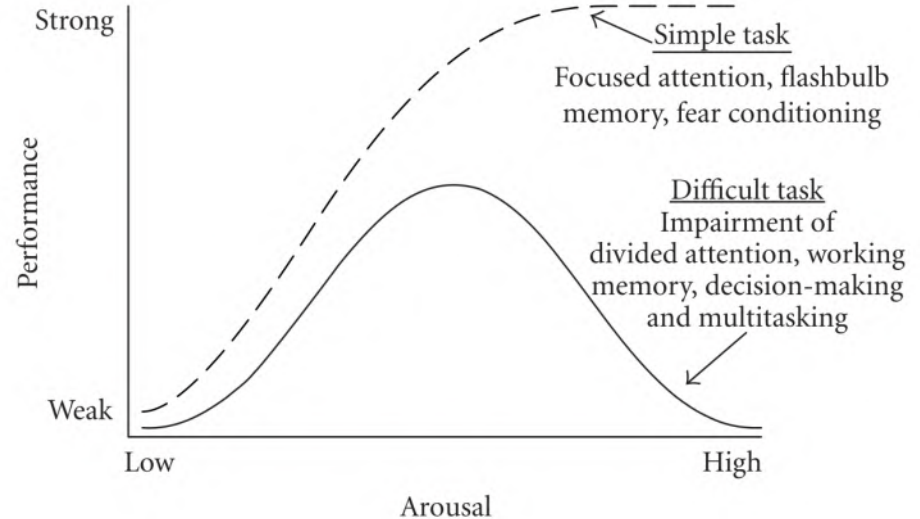


What is truck platooning?



Truck drivers

- Needed in all trucks?
- Too high or too low workload
- New tasks and competences
- Rotate position, and rest while moving

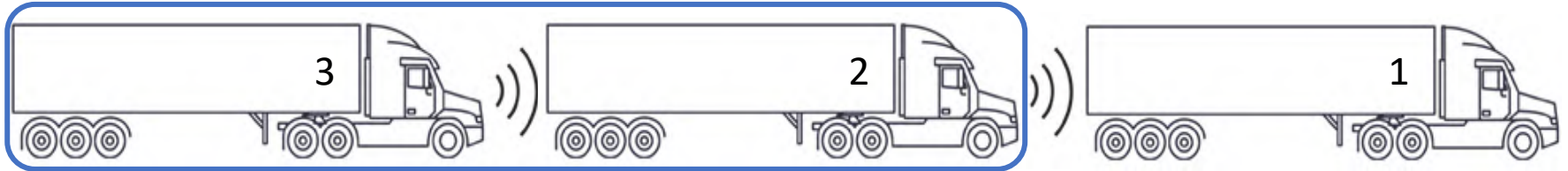


Yerkes–Dodson law (1908)

https://en.wikipedia.org/wiki/Yerkes%E2%80%93Dodson_law

Speed selection, mental workload and trust

- Task difficulty
- Trust in co-drivers and technology
- Motion sickness and safety



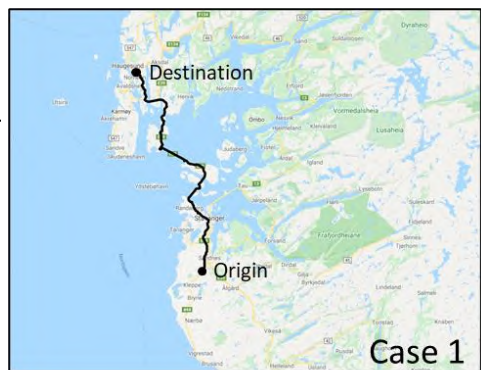
How other road users experience platooning

- Overtaking
- Reduce risky driving
- Speed regulation





Percentages are based on distance
 * For simplicity, ferry for Case 3 is included in driving time



Organization

- Matchmaking system needed to organize platoons across carriers
- Data sharing and cyber security

It's a Match!

You and SCS 857 have liked each other.



Send a Message



No, thanks

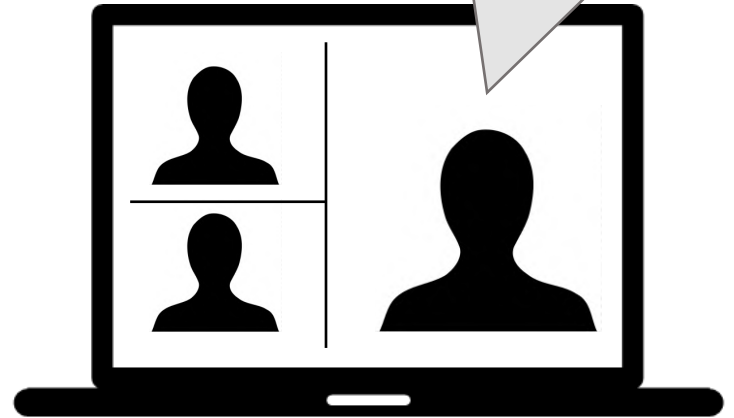


Tell your friends

Economy

- Fuel savings not enough.
- Reduced transit times and driver costs are economic opportunities.
- Matchmaking system expands the potential.
- Fear competition and share
- Waiting costs

“The same company may not want to drive first all the time. At least not the business owner, because doing so is more costly. While the driver may want to drive first.”



Infrastructure readiness

- High-quality, uniform infrastructure standard
- Road maintenance and operation contracts
- Winter operation
- Rest areas
- Road tunnels
- Digital infrastructure



Conclusions

- Timely and coordinated action is needed on multiple areas
- Platooning across carriers – matchmaking
- Fuel savings not enough
- Re-evaluation of road parameters and infrastructure management
 - Requirements for sight distances, climbing lanes, traffic separation...
- Will overtaking be an issue?
- Acceptance – platooning needs to be favorable, safe and easy to use or cooperate with.
- Real-world testing!