

A decorative geometric pattern covers the left side of the slide. It features a repeating grid of hexagons. Each hexagon is divided into two halves by a vertical line. The left half of each hexagon is a light blue color, and the right half is a light green color. The background of the entire slide is a dark blue color.

WP2 Regulatory frameworks and MaaS developments in Finland and Norway

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Research questions

1. What types of smart mobility services have emerged in Finland and Norway?
2. What role have the regulatory frameworks played in the MaaS developments in Finland and Norway?
3. What can local and national governments learn from these experiences when planning regulation for smart mobility?

Typology of smart mobility services

Category	Type	Description	Examples
Aggregator service	Trip planners (journey planners)	Search engines for planning, booking and paying with multi-service and multi-modal outreach (but no packaging)	Rome2Rio, Entur, HSL app, Ruter app
	Mobility as a Service	As above, and in addition packaging services by different operators, both public and private, under one account (e.g. monthly subscription)	Kolumbus, Whim, Ruter, UbiGo
Ride service	Ride-sourcing (ride-hailing)	Taxi-like peer-to-peer services, where the driver chauffeurs the passenger	Uber, Lyft
	Ride-sharing	As above, but the driver and passenger share the destination	GoMore, Skjutsgruppen
	On-demand public transport	Demand-responsive service combining taxi-like features to public transport (e.g. a bus with a flexible route based on customer requests)	Flextur, HentMeg (Kolumbus)
Vehicle service	Vehicle rental	Vehicle rental for daily mobility; vehicles are owned by a public or private organisation (e.g. car clubs)	Bilkollektivet, Voi, Tier, Circ, HSL city bikes
	Vehicle sharing	As above, but as a peer-to-peer service; vehicles are owned by individuals	Blox Car, Nabobil

Cases: Whim (Fin) and Kolumbus (Nor)



- **Whim:** Privately owned aggregator service. Subscription and ticket based access to public transport, city bikes, e-scooters, ferry tickets, taxis and rental cars in one app. Operates in five countries.



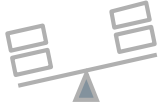
- **Kolumbus:** PTA in Rogaland, provides access to public transport (rail, bus, boat), the electric city bikes (Bysykkelen), a number of trials, on-demand bus service. Electrification frontrunner.

Different regulatory settings



- **Finland:** The Act on Transport Services 2018/2019
 - Harmonised regulation across modes & focus on data sharing and interoperability of different systems
 - Promotes free competition and aims lowering the threshold for transport market entry.
- **Norway:** The Railway Act, the Vocational Transport Act, supplementary regulations
 - Traditional, sectoral approach
 - Rail and scheduled bus services have data sharing obligations to the national travel information agency.

Challenges of Smart Mobility



- The tension between supporting the uptake of innovations, which offer **benefits in the short-run**, but which may create bigger governance **challenges as they scale**.
- Management of the **taxation** of the transport system to reduce e.g. negative externalities like congestion and local pollution as the **actors' roles change**.
- **Data as a critical asset** to control and have power over the mobility marketplace - open data offers many opportunities to different actors, but **shifts in the control of data** will make governing mobility difficult.
- **Equity and inclusion** and the fact that a smart mobility transition will not occur at the same pace or degree **across different areas**.

Docherty, I., Marsden, G. & Anable, J., 2018. The governance of smart mobility. Transportation Research Part A: Policy and Practice, 115, 114-125. <https://doi.org/10.1016/j.tra.2017.09.012>

What did we learn ?



- **The short versus the long game**
 - The tension between the short-run benefit of supporting new services versus the longer run sustainability targets is recognizable, but relation to MaaS is not straight forward
 - In both approaches it is still unclear how MaaS as such influence the provision of physical transport services.



What did we learn ?

- **Data as a critical asset to control and have power over the mobility marketplace**
 - Standards and interoperability (data, interfaces, systems)
 - Flexibility with regards to implementation of different operators' services; organisations to work together to deliver new services
 - Public authorities as bodies overseeing transition
 - Communication and supervision of the requirements and market situations.



What did we learn ?

- **Business models, equity and inclusion**
 - Market entrants (MaaS): predominantly private companies in Finland, publicly owned PTAs in Norway
 - The PTA approach reduces the scope for private initiatives
 - Both approaches share challenges related to the increasing need for digital competence in the population and equity in terms of regional and socio-economic accessibility.



Conclusions

- **Regulatory frames have an impact on the dynamics of smart mobility markets**
- **Both privately owned and publicly owned MaaS operators may provide successful MaaS**
 - PTAs may have a competitive advantage locally when they are allowed to enter the MaaS market due to public funding and an established customer base
 - Privately owned MaaS may benefit from easier access to private high-tech resources, may have an easier job in integrating new services, and less of a challenge related to existing service provision.

Publications

- Ydersbond, I. M., Auvinen, H., Tuominen, A., Fearnley, N., Aarhaug, J. 2020. Nordic Experiences with Smart Mobility: Emerging Services and Regulatory Frameworks. *Transportation Research Procedia* 49 (2020) 130–144.
<https://doi.org/10.1016/j.trpro.2020.09.012>
- Inga Margrete Ydersbond 2019. Smart, delt og elektrisk mobilitet: Fremtiden er her! *Samferdsel* 21.10.2019.
<https://samferdsel.toi.no/forskning/smart-delt-og-elektrisk-mobilitet-fremtiden-er-her-article34349-2205.html>

Thank you!
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