

Defining ERSO

The Electric Road System Operator

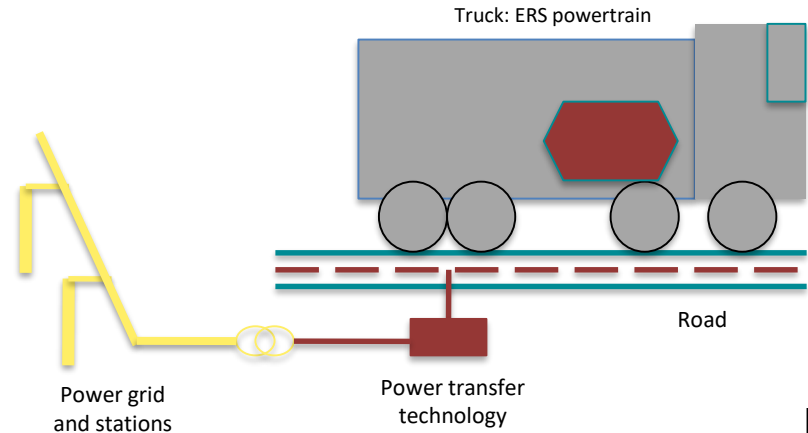
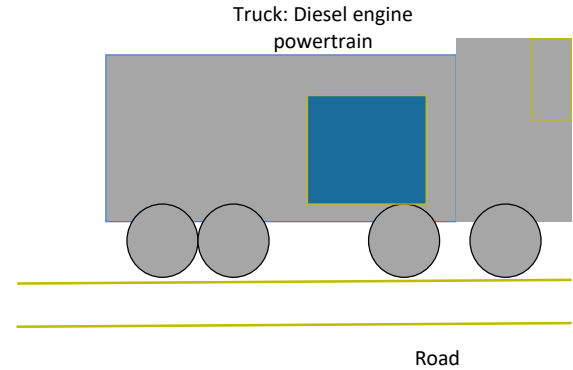
Stefan Tongur, RISE
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ERS Conference 2019 in Frankfurt

Background

- A transition to ERS challenges established
 - System interfaces
 - Actors
 - Funding and business models

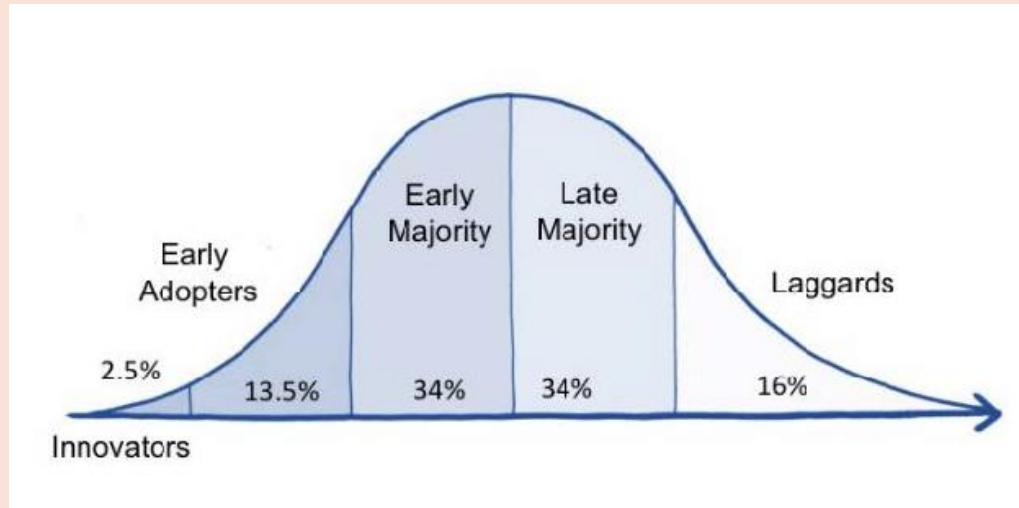


Petrol station



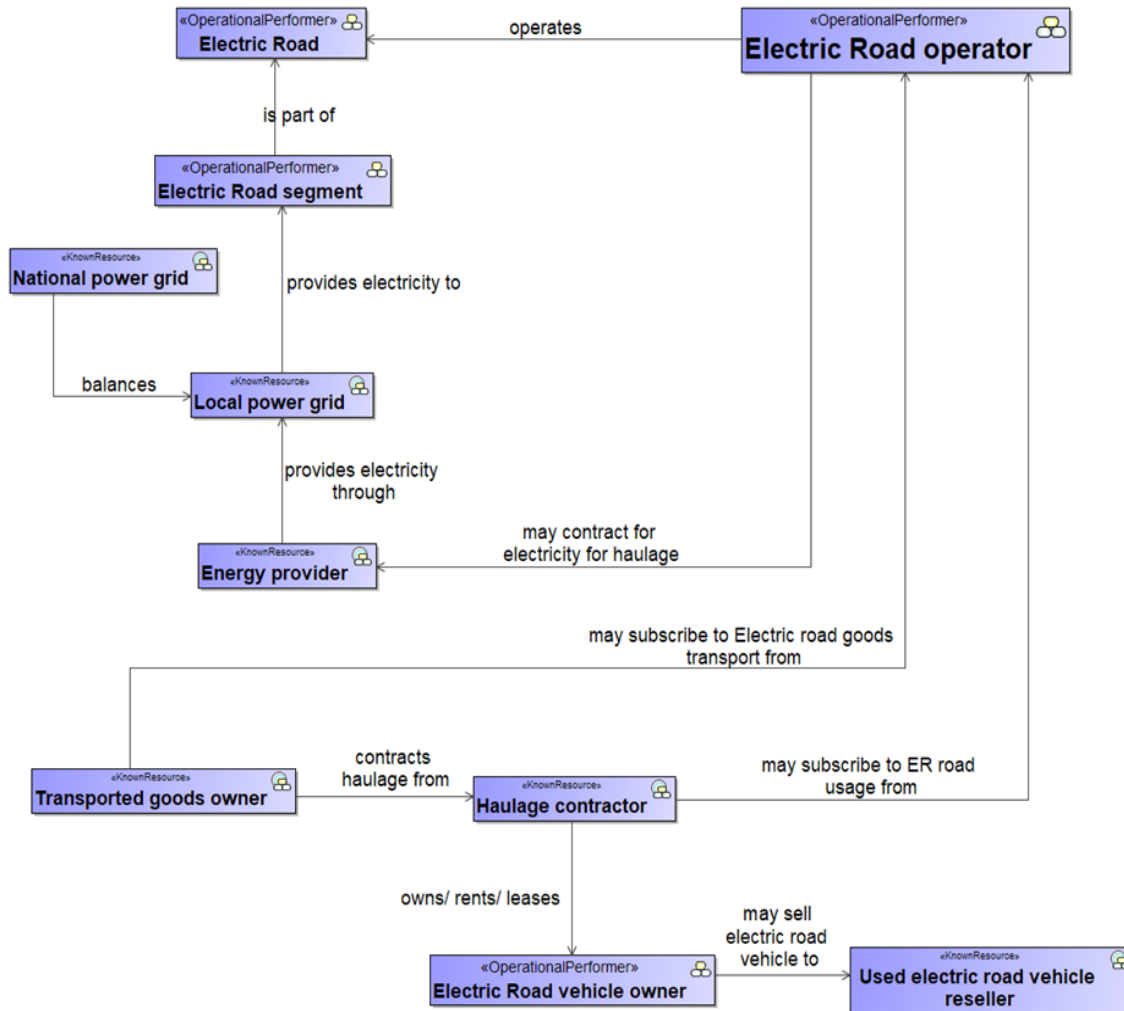
Research questions

1. How can the architecture and interfaces of ERSO be described?
2. How could ERSOs role be analysed in a small-scale ERS deployment?
3. How could ERSOs role be analysed in a large-scale ERS deployment?



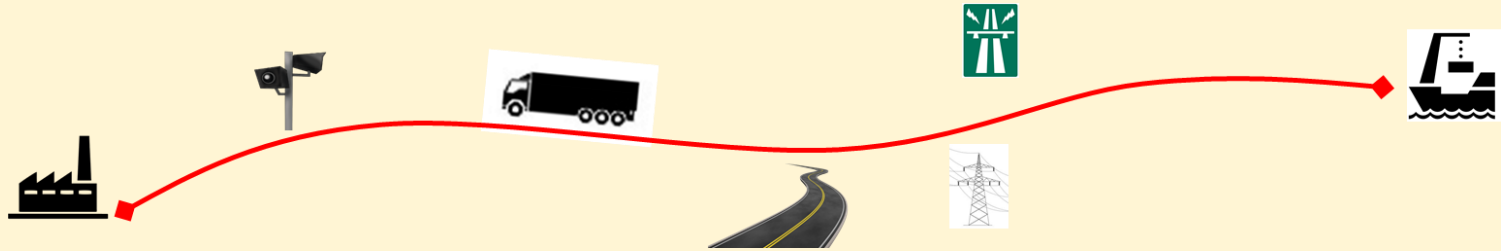
Metodology		
Interviews, 2018-2019	Users	Sveriges åkerier (2)
		Transportföretagen
		Ernst Express
		DB Schenker Concluting
		Elektroskandia
	Policy actors	Närkefrakt
		Näringsdepartementet (2)
		Trafikverket (3)
		Energimyndigheten
		Trafikanalys
Suppliers	EON	
	Ellevio	
	Vattenfall	
Workshops	Trafikverket (6)	
		Pilot discussion
Documentation	Trafikverket	





ERSO (ERS Operator) –
the role that connects ERS
users with energy supply of
the electric road

ERSOs role in small-scale ERS deployment

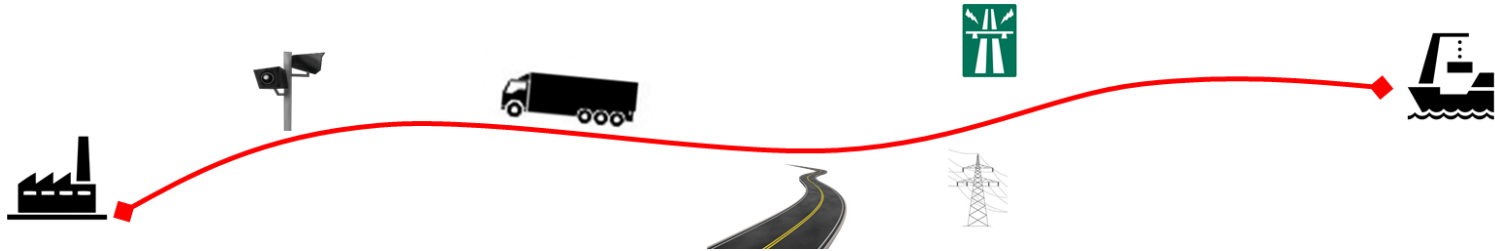


Who is ERSO?

- suppliers of power transfer technology
- vehicle OEMs offering vehicle as a service (VaaS)
- energy suppliers that offer subscriptions to users and possibly also pick-ups

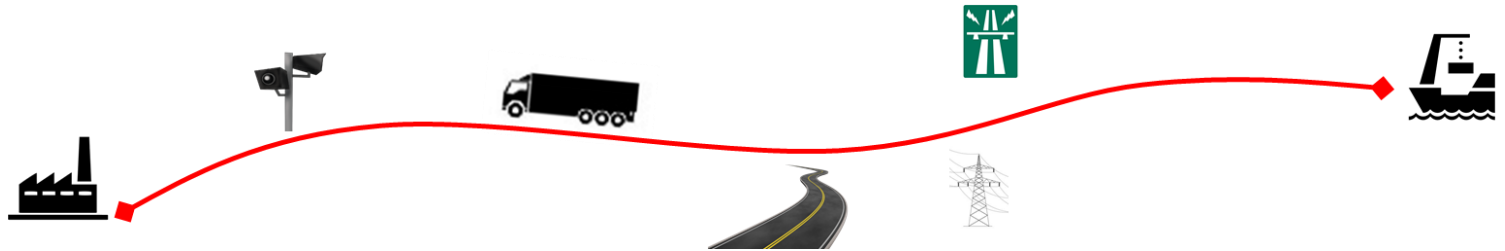
ERSOs relationship with suppliers?

- Strong relationship with one ER provider and one/two energy providers
- Payment for ERS usage
- Simplified access control and metering

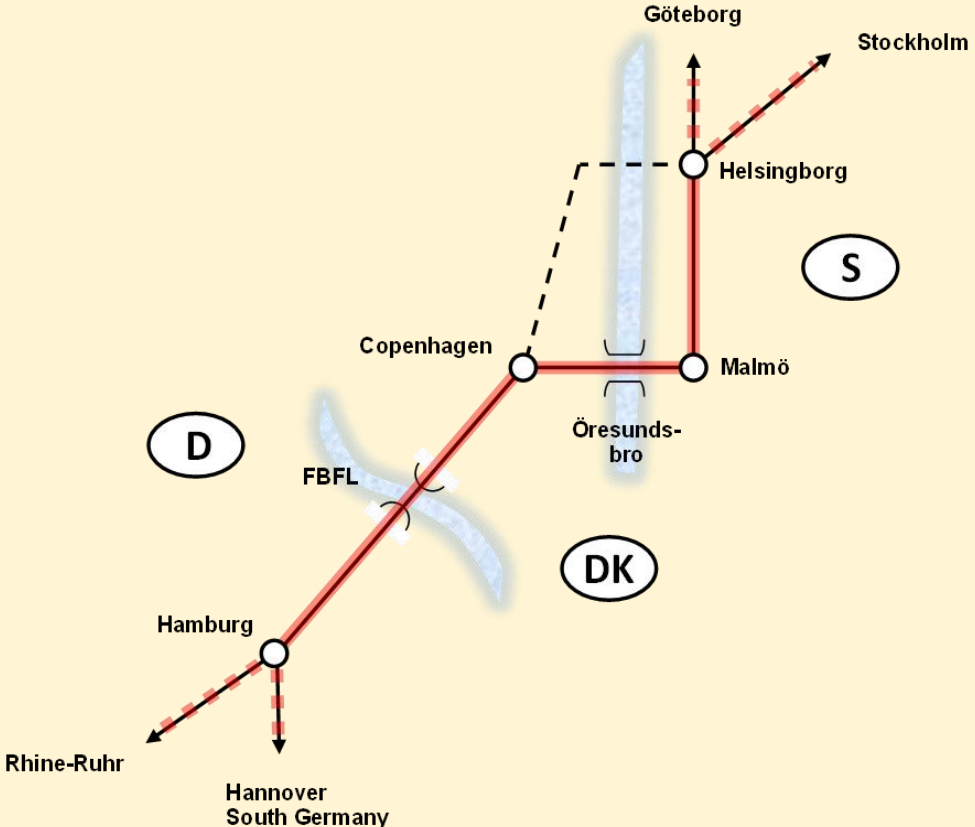


ERSOs relationship with users?

- Important developing relationships with local goods owners
- Collaboration between haulage companies and goods owners
- Ensuring availability of electric supply and attractive services



ERSOs role in large-scale ERS deployment

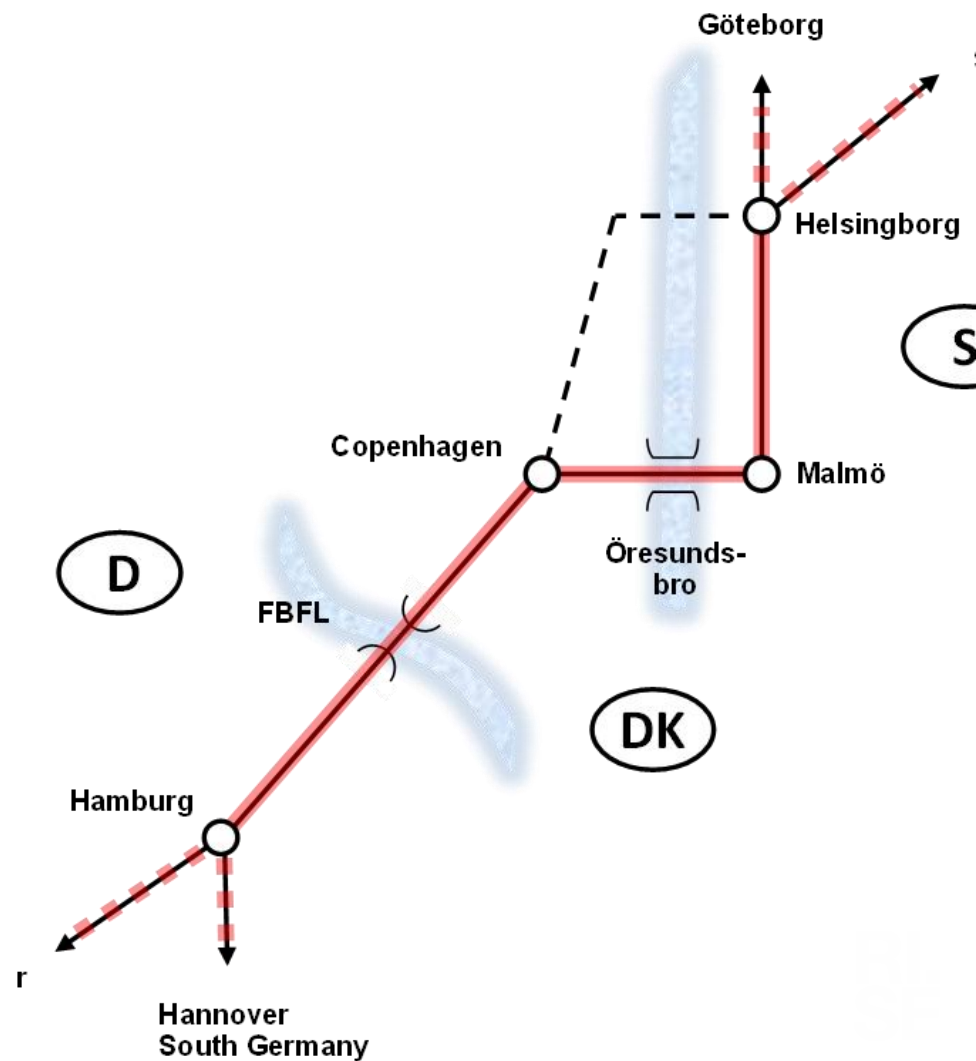


Who is ERSO?

- ERSOs from different sectors
- Competition on a mature and standardized ERS market
- Differentiation through unique business models

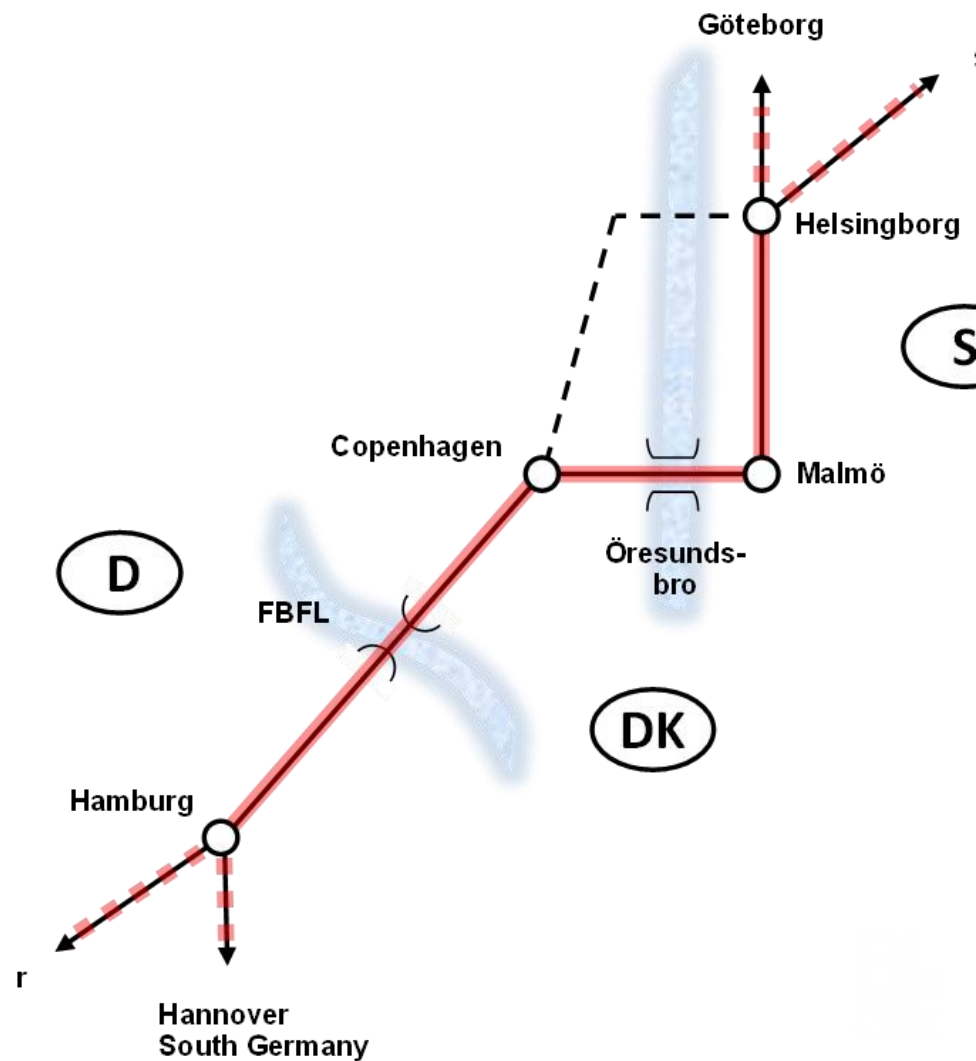
ERSOs relationship with suppliers?

- Relationship with multiple ERS suppliers and owners over different regions
- Standardized contracts and metering systems to allow for roaming
- Facilitating interoperability between different ERS alternatives



ERSOs relationship with users?

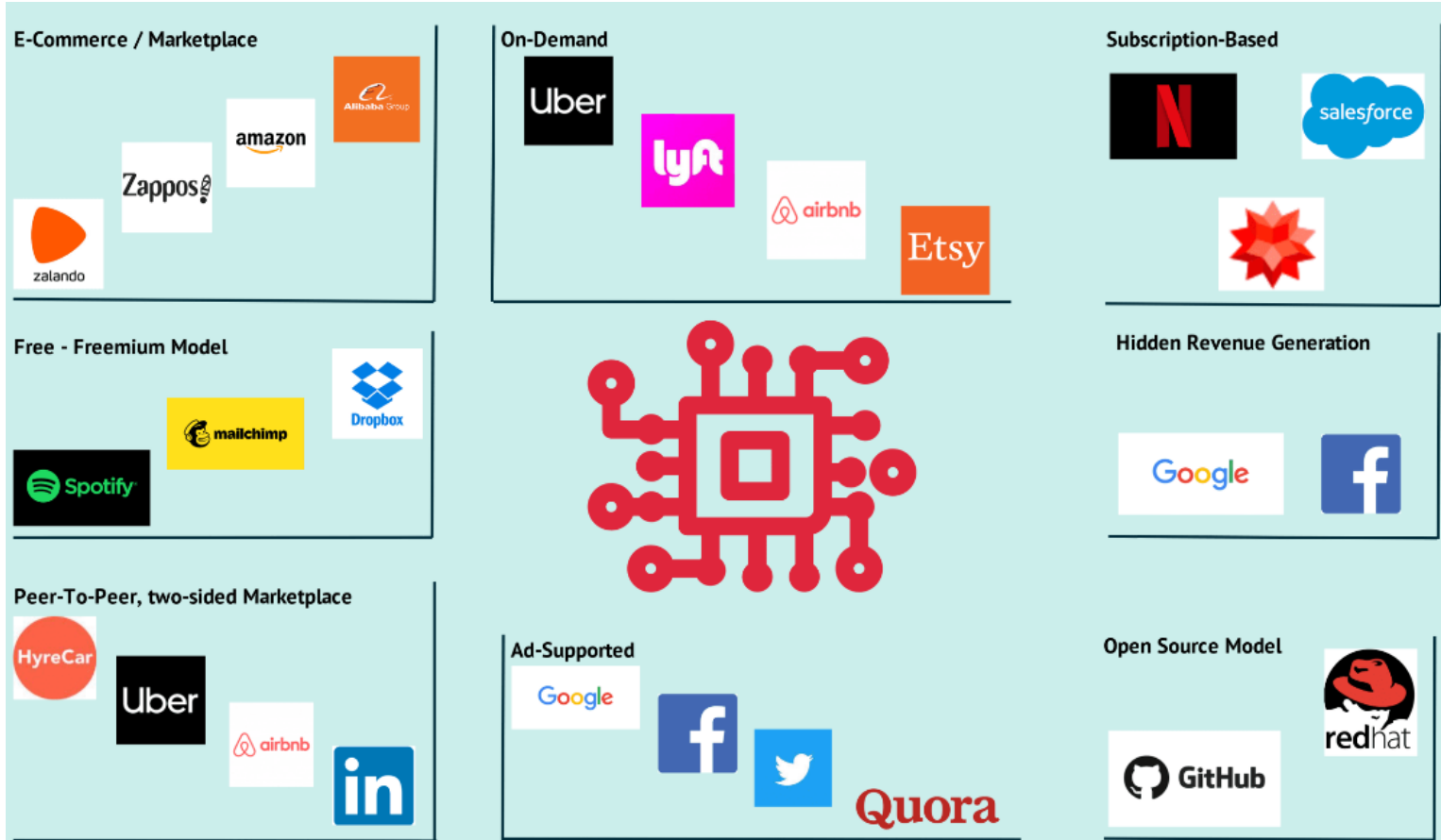
- ERSOs compete on a market to attract users, mainly forwarding market
- Focused on multimodal transportation
- Integration with other disruptive technologies such as autonomous transportation



Implications

- The role of ERSO will evolve with different 1G, 2G, 3G etc.
- Policy makers need to create conditions for investments in infrastructure and in ERS adapted vehicles
- Standardized interfaces and fees could enable ERSO competition and freedom for users to choose

Innovative business model could facilitate ERS market





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COLLERS – German and Swedish
collaboration on ERS



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