

# MARA case studies of car sharing

Viktor Skrickij

# Car sharing in remote areas: case study in Lithuania and Poland

1. The most widespread transport mode in Lithuania and Poland is a privately owned car. In Lithuania, this number is higher than 50% in Poland, almost 50%<sup>1</sup>
  2. Commonly in remote areas there is no local public transport or its frequency is shallow
  3. Railway connections in remote areas are usually missing
- To improve the rural mobility landscape, three possible solutions may be used:
- a) flexible transport services; an example would be a bus on demand;
  - b) ride-sharing services;
  - c) asset sharing, including car-sharing and micro-mobility sharing solutions.

<sup>1</sup> Davide Fiorello et al. Transportation Research Procedia, 14 ( 2016 ): 1104 - 1113.

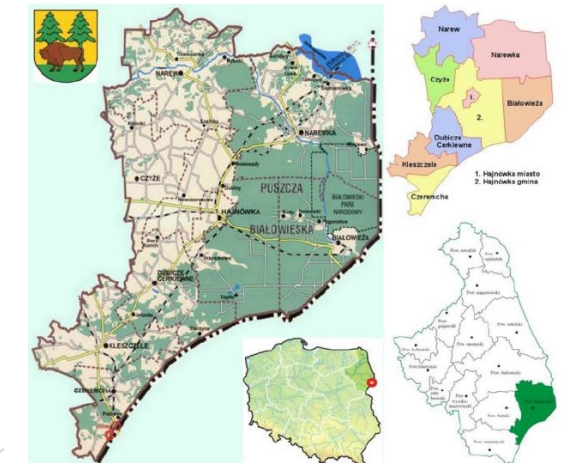
# Case study in Lithuania

- A small spa town Birštonas is located in the central part of Lithuania. The distance from the capital Vilnius is about 100 km and from the second biggest city Kaunas - 46 km.
- The territory of Birštonas municipality is located in the eastern part of the regional park Nemunas Loops. Birštonas is strongly oriented toward rehabilitation and tourism services and is the regional significance centre. The development of Birštonas regional park of river Nemunas Loops and Birštonas Resort City is closely interlinked.
- More than 100,000 guests visit Birštonas every year, while the population of Birštonas is about 2,350 inhabitants. Tourism amount directly depends on seasonality, with the peaks on Easter, Christmas, New Year and other holiday celebrations.



# Case study in Poland

- Hajnowka Region is characterized by a low percentage of the density of county and municipal roads. The length of roads per 1 km<sup>2</sup> is almost 2,5 times less compared to Poland average value.
- The low density of roads in the Hajnowka Region results mainly from the large area of forest complexes (50.6%) and low population density, 27 people per 1 km<sup>2</sup> compared to 124 people per 1 km<sup>2</sup> in Poland<sup>2</sup>.
- Under these conditions, the public transport organisation is quite challenging, primarily since the county is inhabited by approx. 150,000 inhabitants in 244 localities, 21,000 of which live in Hajnowka



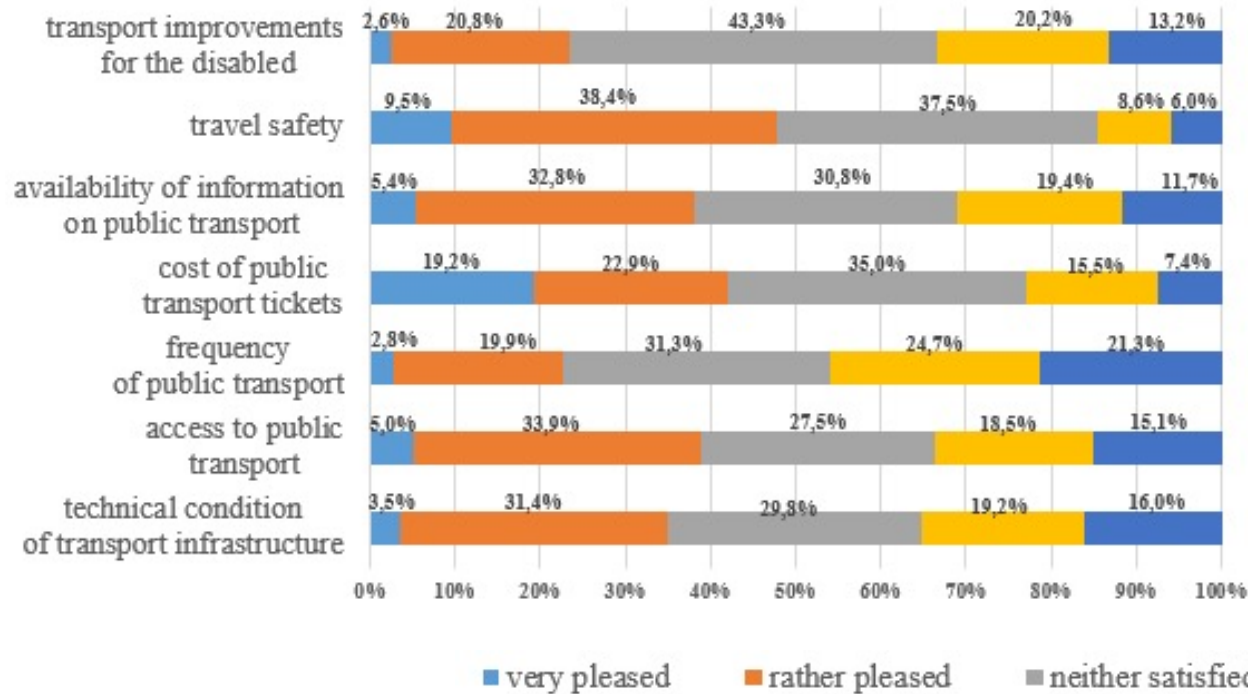
<sup>2</sup>Central Statistical Office of Poland, 2019



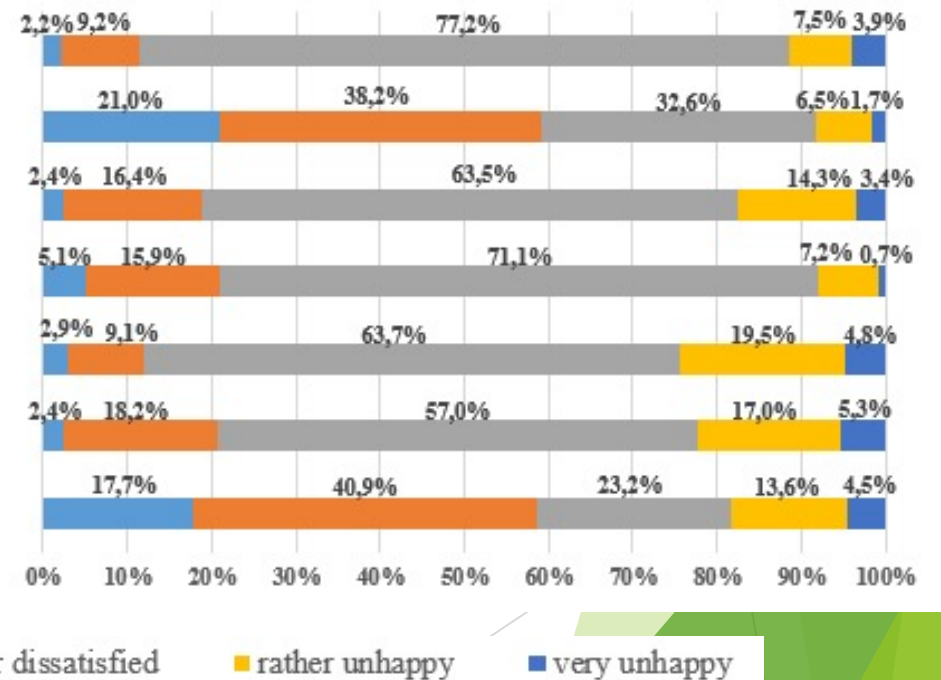
# People needs in Hajnówka County

The degree of satisfaction/needs in Hajnówka County with the concentration of transport services in the county

Residents



Tourists

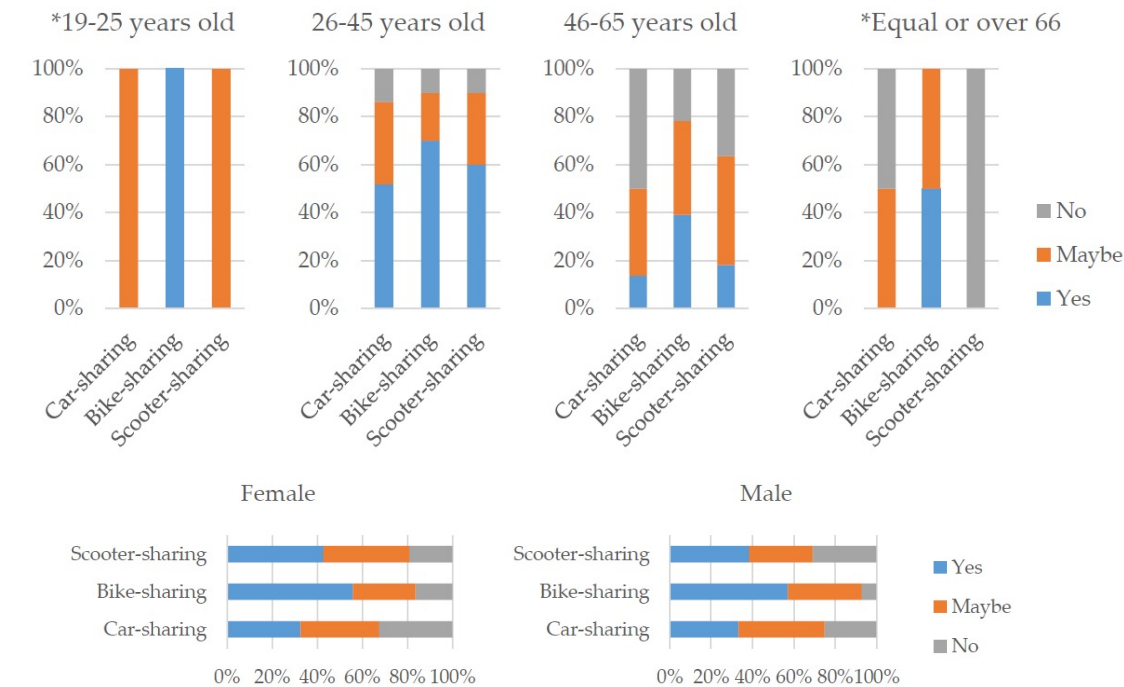


# People Acceptance in Poland

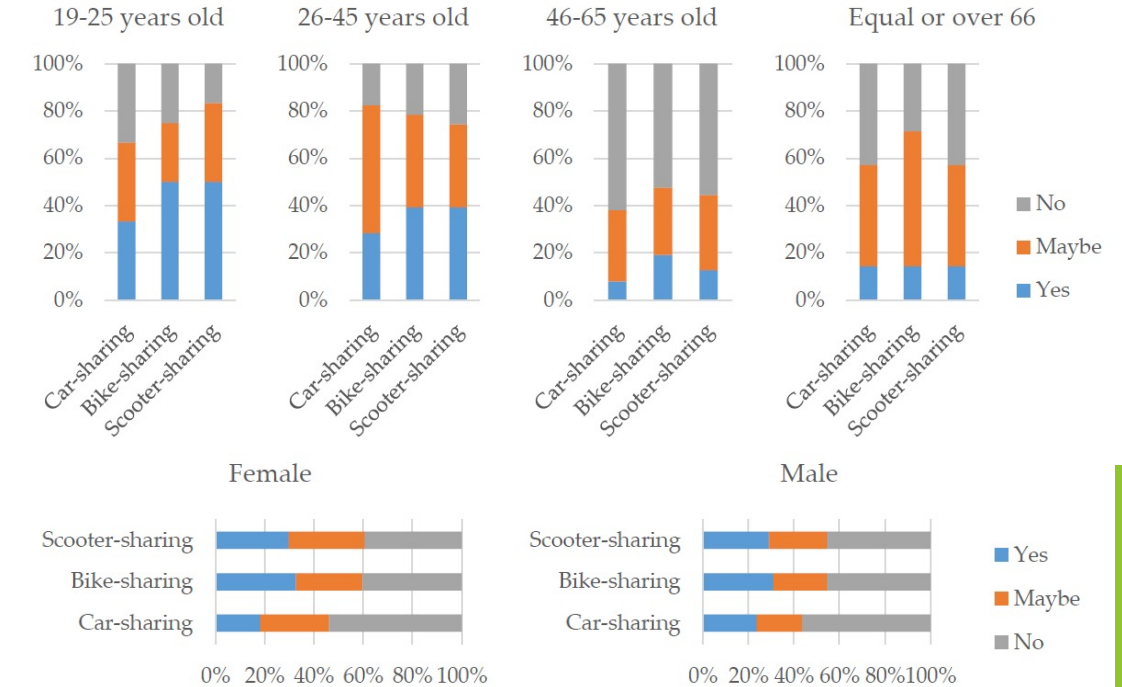
Which of the following innovative solutions would increase the frequency of your movement around the region?	Results (in %)					
	respondents	no impact	Little impact	Significant impact	affects to a very high degree	hard to say
e-car system with mobile application and infrastructure (basestations, charging modules)	tourists	29.2	19.3	22	15.9	13.5
	residents	36	24.1	15	8.8	16.1
e-bike / scooter system with mobile application and infrastructure (basestations, bicycle paths)	tourists	15.2	10.6	26.7	36.6	10.8
	residents	31.1	18.5	24.8	12.5	13.1
a mobile application that allows you to search for transport in the ridesharing system	tourists	9.6	13	36.1	30.8	10.6
	residents	21.3	15.6	36	15.6	11.5
bus on demand service	tourists	19.8	19	23.4	21.7	16.1
	residents	22.8	21.5	24.8	7.9	23.1

# People Acceptance in Lithuania

Distribution of **tourists** answers whether they would use asset sharing system at the resort

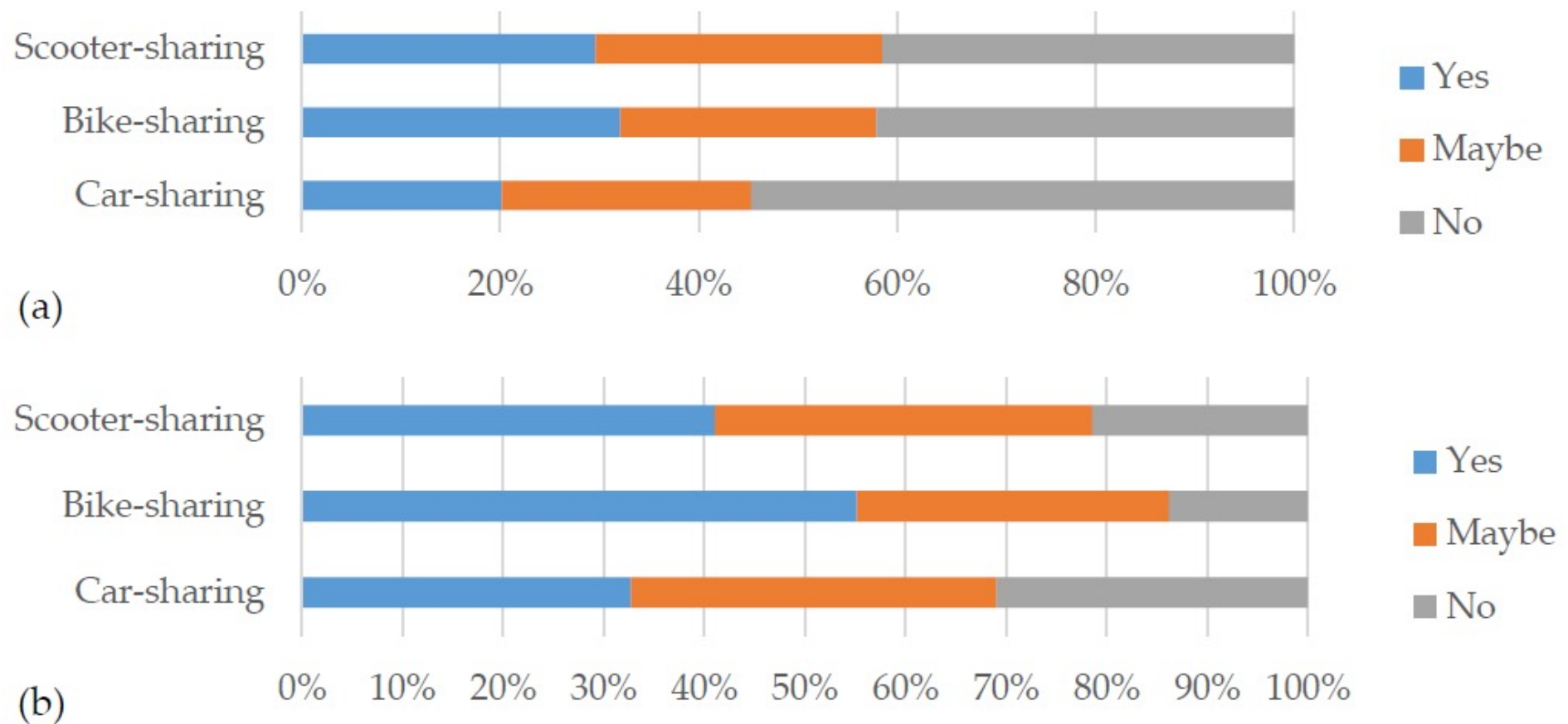


Distribution of **residents** answers whether they would use asset sharing system at the resort



# People Acceptance in Lithuania

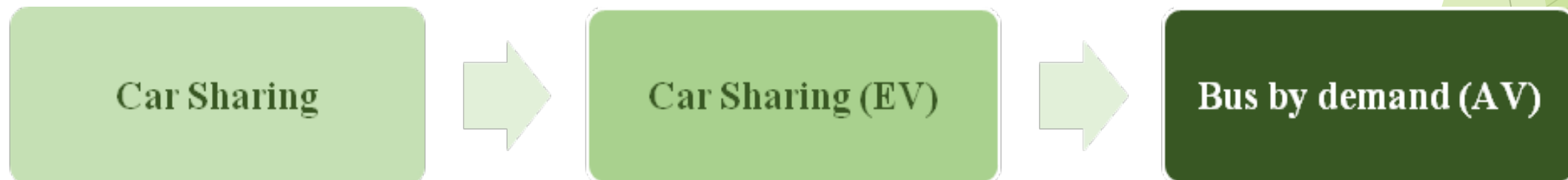
Distribution of respondents' answers to whether they would use the assets sharing system at the resort: a) *Residents of Birštonas*, b) *Tourists of Birštonas*.





# Concept for Car/E-car/ Automated Car Sharing in Rural Areas

1. The environmental benefits of car sharing:
2. Fewer cars on the road.
3. Reduction in vehicle miles travelled.
4. Increased usage of smaller and newer cars.
5. Sharing companies increase electric vehicle usage.



# Conclusions (I)

- ▶ Sharing mobility providers working in urban areas do not expand to rural areas as the existing business model is not profitable.
- ▶ Car sharing service in Poland is available in cities with over 40,000 inhabitants, while in other countries this number is about 100,000. In Lithuania, services are available in towns with a population of over 150,000.
- ▶ According to the surveys, priority should go to micro mobility sharing. In small towns in remote areas, it is more convenient to travel short distances on foot or take advantage of micro mobility solutions.
- ▶ At the same time, the car becomes essential when it comes to reaching places outside the town. A car-sharing system could improve the accessibility to guests while also serving locals.

# Conclusions (II)

## Proposals for remote areas

- Focus on the development of infrastructure required for electric cars.
- Proposals for development of asset sharing systems:
  - a) companies provide access to their platform for peer-to-peer (P2P) service when people or small renting companies can share their vehicles using the well-known platform;
  - b) ii. subsidise this transport mode, as it is done for public transport and railway transport;
  - c) iii. to define an additional fee for the service user who travels to a remote area.
- During the development of automated driving technologies, ensure that solutions are appropriate for rural areas.

# Remotely Controlled Vehicles in Lithuanian Car Sharing Company



For more information about the project  
MARA – Mobility and Accessibility in  
Rural Areas please visit:

<https://journeys.mara-mobility.eu/>

# THANK YOU FOR YOUR ATTENTION

Viktor Skrickij [viktor.skrickij@vilniustech.lt](mailto:viktor.skrickij@vilniustech.lt)  
Gintautas Bureika, Elżbieta Szymańska



**MARA**

Mobility and Accessibility  
in Rural Areas



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