Ministry of Infrastructure and Water Management

KiM Netherlands Institute for Transport Policy Analysis

Promising Groups and Trips for MaaS in the Netherlands

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1. Definition and research goal

What is MaaS?


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Early adopters of Mobility-as-a-Service in the Netherlands

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ABSTRACT

The concept of Mobility-as-a-Service (MaaS) is rapidly gaining momentum. Parties involved are eager to learn more about its potential uptake, effects on travel behaviour, and users. We focus on the latter, as we attempt to reveal the profile of groups within the Dutch population that have a relatively high likelihood of adopting MaaS in the near future, apart from the actual supply side.

MaaS is a transport concept integrating existing and new mobility services on a digital platform, providing customised door-to-door transportation options. Based on common denominators of MaaS as found in the literature, we have established five indicators to identify early adopters: innovativeness, being tech-savvy, needing travel information, having a multimodal mindset, and wanting freedom of choice. These five indicators are the building blocks of our Latent Demand for MaaS Index (LDMI), and were constructed using 26 statements and questions from a special survey conducted in 2018 among participants of the Netherlands Mobility Panel (MPN). The features derived from the MPN serve as independent variables in a regression analysis of the indicators used to ascertain the profile of early adopters.

The results of our model indicate that early adopters are likely to be highly mobile, have a high socio-economic status, high levels of education and high personal incomes. Young people are more eager to adopt MaaS than older adults. Early adopters are healthy, active and frequent users of trains and planes. The characteristics of MaaS's early adopters overlap in numerous ways with those of innovative mobility services users and with the general characteristics of early adopters as found in innovation studies.

1. Introduction

The idea of Mobility-as-a-Service (MaaS) is gaining momentum internationally. Transport researchers, policy makers, transport service providers, developers and others are all eager to get involved. The word 'hype' is appropriate, as already noted by Giesecke et al. (2016), Matyas and Kamargianni (2017a), and Lyons et al. (2019).

In this paper, MaaS is defined as a transport concept integrating existing and new mobility services into one single digital online platform, providing customised door-to-door transport options. Instead of owning individual modes of transport, or to complement them, customers would purchase mobility service packages tailored to their individual needs, or simply pay per trip. Although public transport (PT) is frequently dubbed 'the backbone of MaaS' (Karlsson et al., 2017; Matyas and Kamargianni, 2018; UITP, 2016), shared mobility modes are seen as having an important role as well (Utriainen and Pöllänen, 2018), with nearly all existing MaaS schemes integrating them (Jittrapirom et al., 2017). Following the terminology of Shaheen et al. (2015), shared mobility services include, but are not restricted to, car sharing, bike sharing and ride sourcing.[2] Ultimately, the strength of MaaS would lie in the combination of these various modes (Karlsson et al., 2017) and in their integration (Kamargianni et al., 2016).

Commentators describe how MaaS could support a decrease in the negative externalities caused by transport, and, more generally, could be an efficient travel demand management tool with environmentally and socially desirable outcomes (Arbib and Seba, 2017; CIVITAS, 2016;

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[1] At the time of submitting, these authors are no longer working at 1.
[2] See Soares Machado et al. (2018) and Shaheen and Cohen (2018) for recent overviews of shared mobility modes.

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Forthcoming

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Promising Trips for Mobility-as-a-Service

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Research goals

Promising Groups for MaaS study

› Identify groups that are likely to accept and use MaaS first

and

› Analyse their current travel patterns

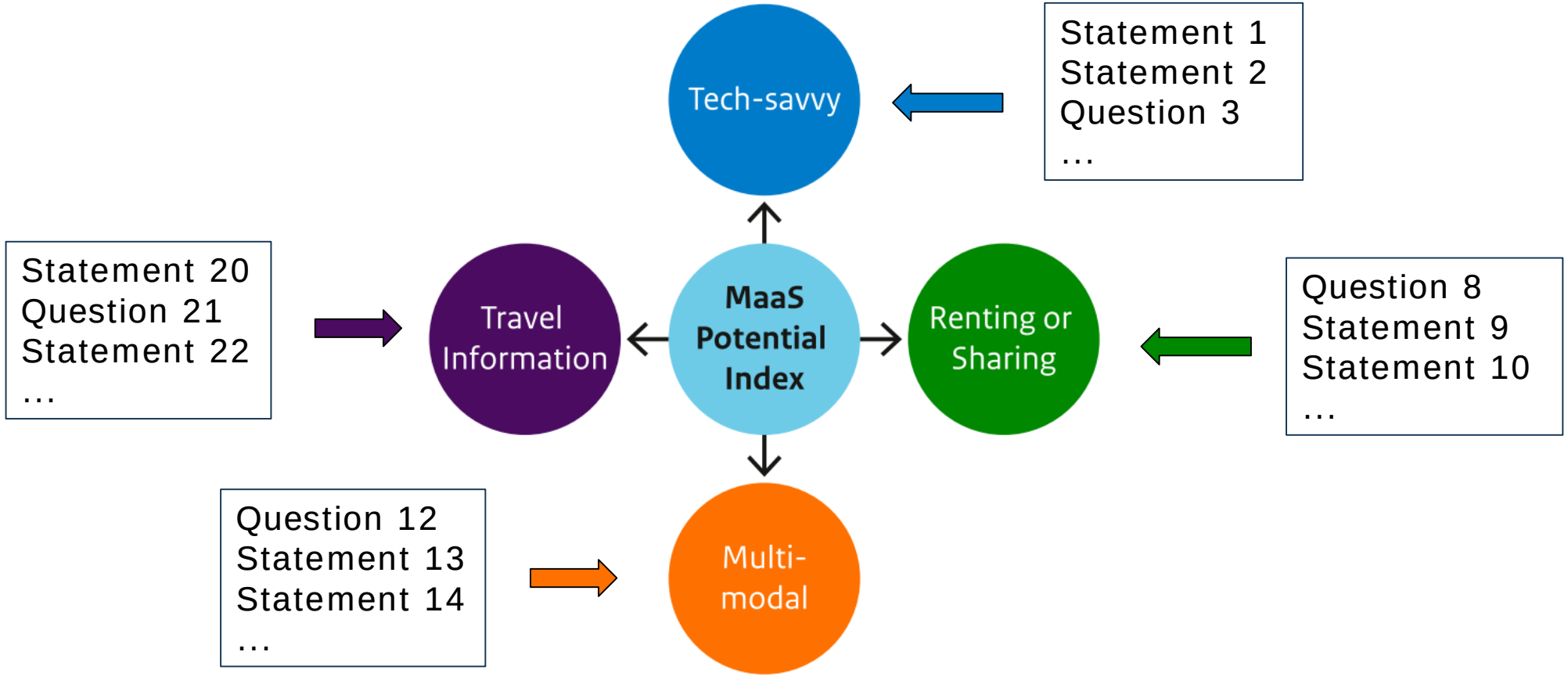
Promising Trips for MaaS study

2. Promising Groups for MaaS

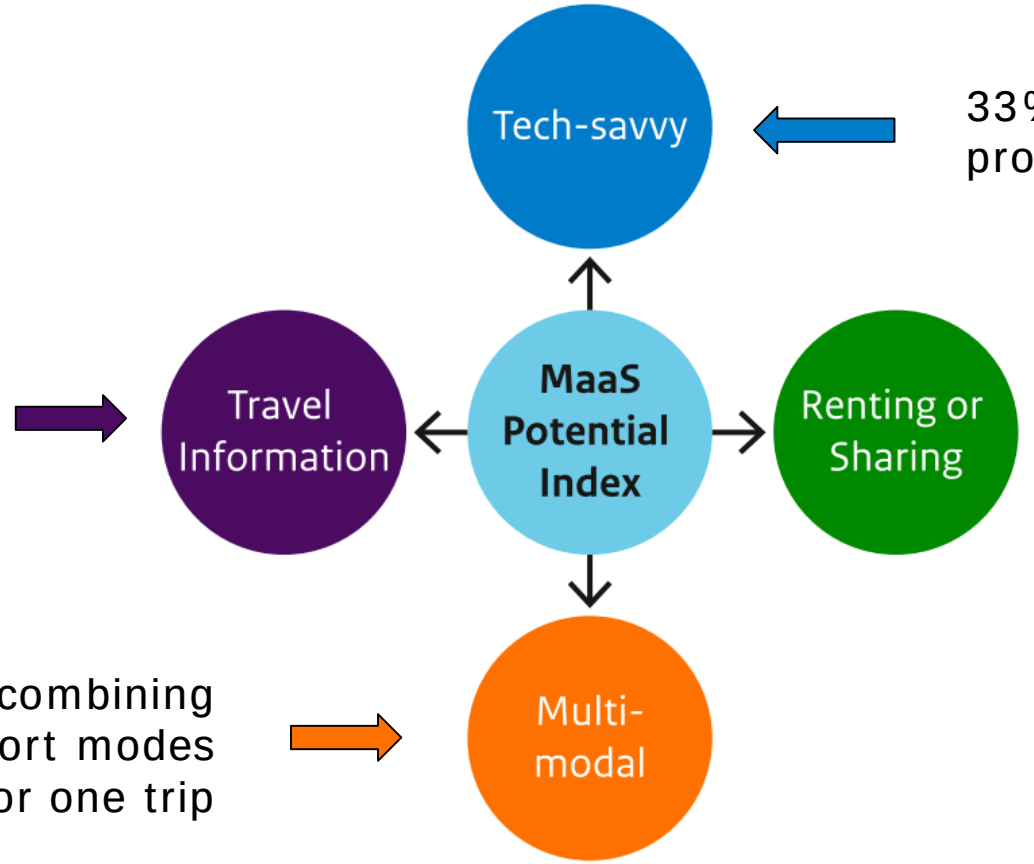
Research approach and data collection

- Questionnaire designed to determine *MaaS Potential Index®*
- Conducted among selection of respondents from the **Netherlands Mobility Panel (MPN)**
- 1.547 cases remain after data cleaning (RR: 75,4%)
- Sample representative for Dutch population (18+), after mild application of weighting factors

MaaS Potential Index (MPI)



Some results from statements/questions



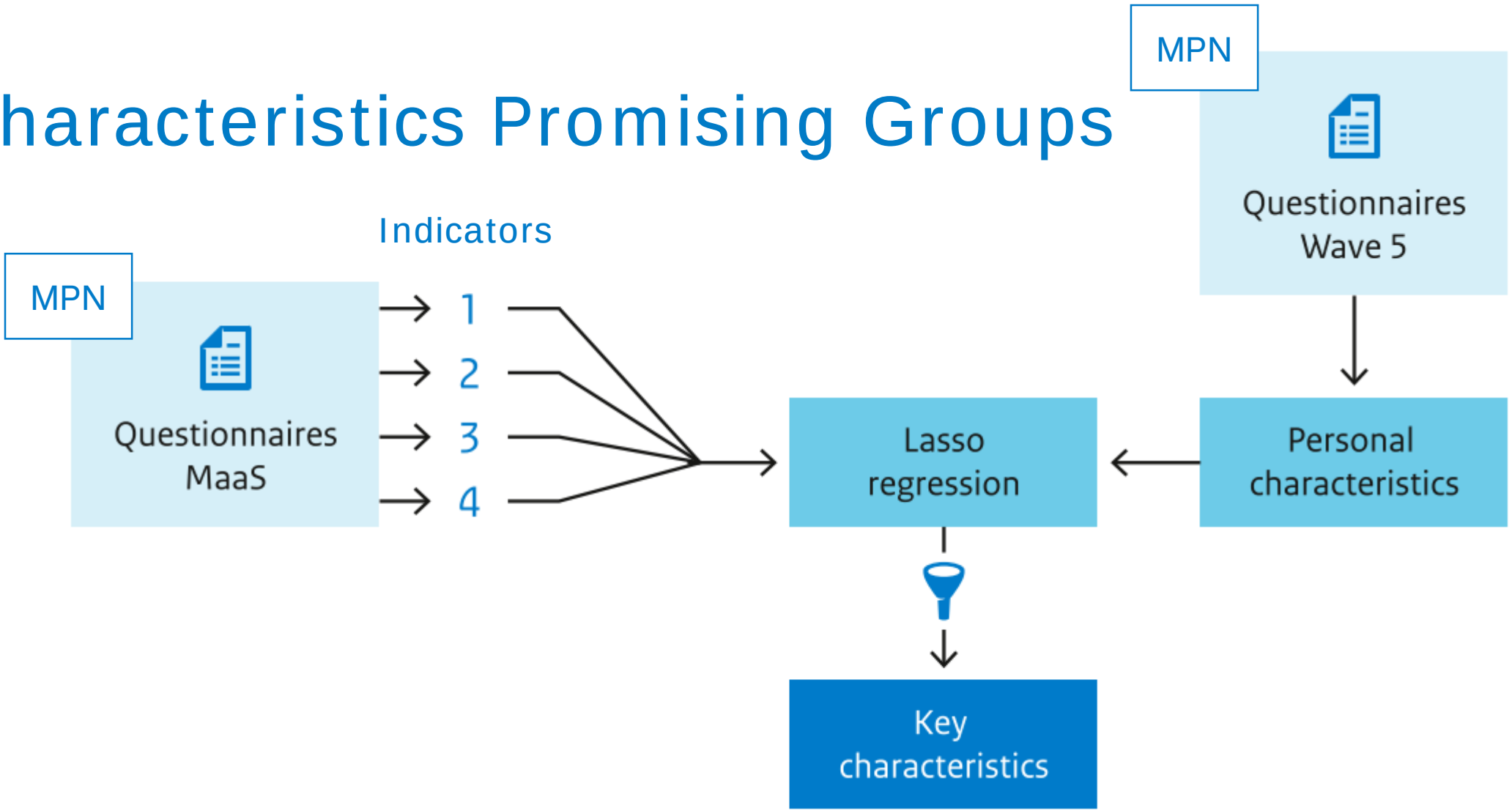
33% use a smartphone as a proof of payment

30% look for travel information on their smartphone multiple times a week

For 60%, a life without one's own car is unimaginable

46% don't mind combining different transport modes for one trip

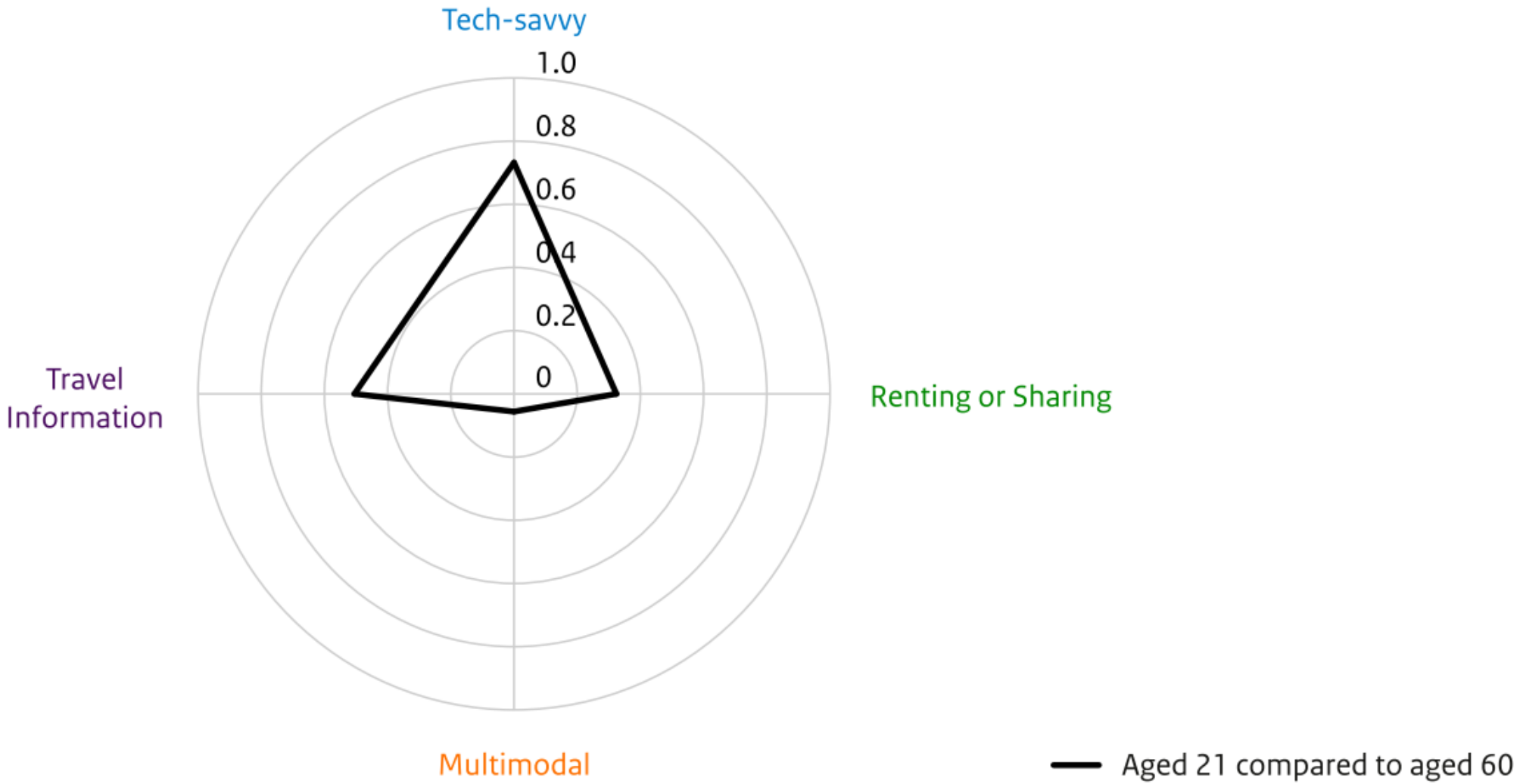
Characteristics Promising Groups



Top 10 characteristics

1. Young, rather than old

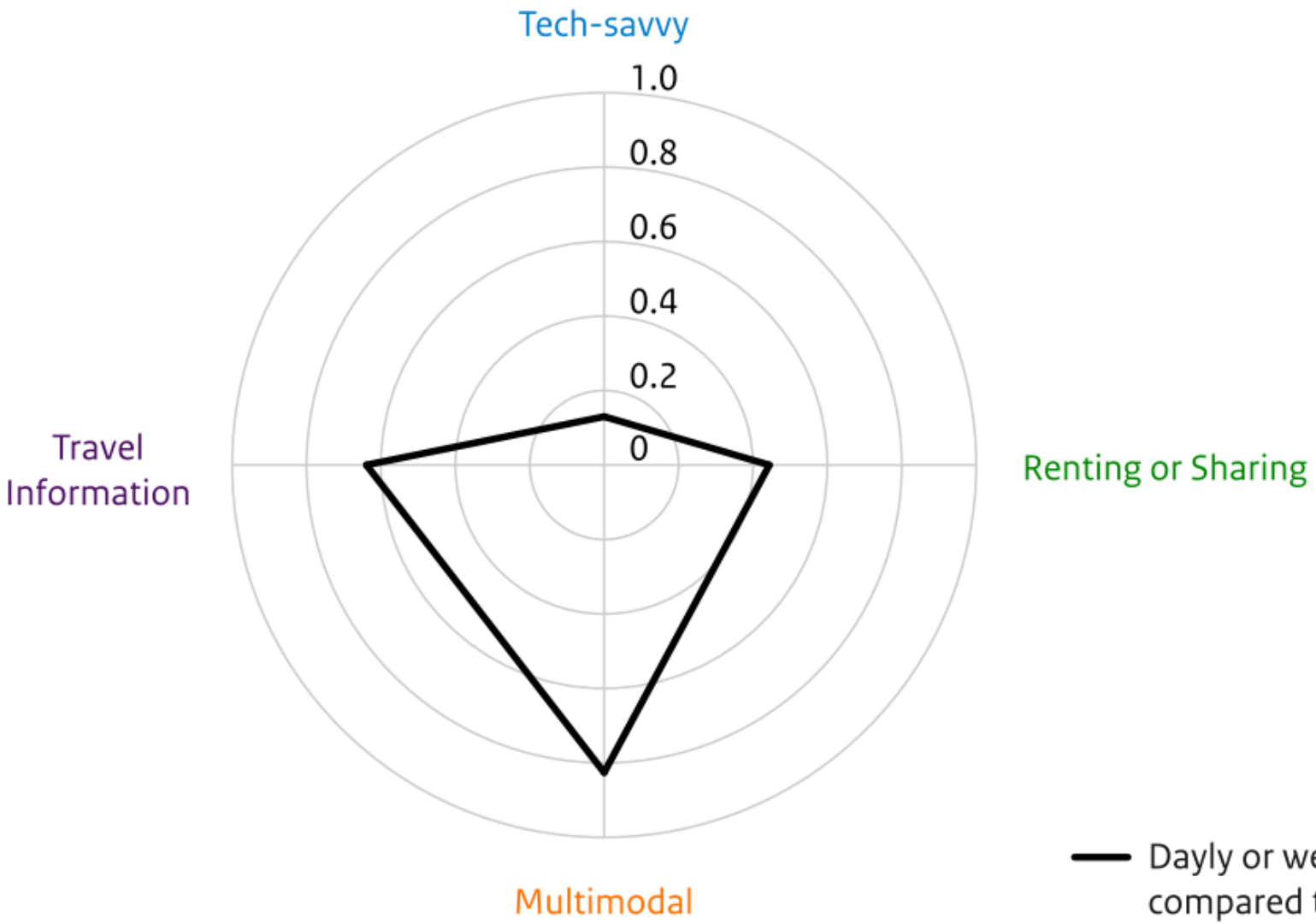
The importance of age for the MPI, illustrated by comparing a person aged 21 to a person aged 60.



Top 10 characteristics

1. Young, rather than old
2. Use public transport more often

The importance of public transport use for the MPI



Top 10 characteristics

1. Young, rather than old
2. Use public transport more often
3. Fly more often for personal reasons (like to travel)
4. Higher education level
5. Higher environmental awareness
6. Go out a lot (day trips, visiting bars, …)
7. Live in densely populated areas
8. Own a speed pedelec
9. Own a folding bike
10. Have a higher income

3. Travel behaviour of Promising Groups for MaaS

Not included because not yet published

4. Conclusion

Conclusion

- Early adopters of MaaS are likely to be young, have a high socio-economic status, high levels of education and personal incomes.
- Travel patterns reflecting a very mobile lifestyle
- Public transport users

- The profile of MaaS early adopters and the trips they undertake deviate from the general population

Thanks!

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