

How will people use eHUBS?

Results from a survey in Amsterdam

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What do we want to know?

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- Which shared mobility service attributes influence mode choice?
- Which individual-related variables have an impact on mode choice?
- Does eHUB have added value compared to unimodal shared mobility services?

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Stated choice experiment: choice question

For a 1-mile leisure trip:

	Public transport (Bus/tram/train)	eHUBS	
Access (walk to vehicle) and egress (walk to destination) time in total	3 minutes	10 minutes	
Parking search time	0 minutes	None	
		Electric Vehicle	E-bike
Travel time	4 minutes	3 minutes	8 minutes
Congestion		20% chance of a 2-minute delay	
Travel cost	£ 1.5	£ 0.8	£ 1.5

Which option do you prefer for a 1-mile leisure trip?

Your choice:

Public transport (Bus/tram/train)
 Shared electric vehicle
 Shared E-bike

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I may want to use multiple modes...

- People can use different modes on different days
- People who prefer private cars may still be willing to use eHUBS for some of their trips
- “Frequency question”:

How many times would you use each option **if you need to conduct this trip 10 times?**
Assume that the shared cars and (cargo)bikes in the eHUB are always available when you need them.

	Public transport (Bus/tram/train)	Shared electric vehicle	Shared E-bike	Total
For every 10 times:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

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Is there added value for providing multiple modes in a hub?

- How would people change their choice if only one mode is provided?

If only **one** type of vehicle (instead of two) will be available in the eHUB, how many times would you use each mode **if you need to conduct this trip 10 times**? Please indicate your choice given the following conditions.

Only **Electric vehicle** is available

	Public transport (Bus/tram/train)	Shared electric vehicle	Total
For every 10 times:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Only **E-bike** is available

	Public transport (Bus/tram/train)	Shared E-bike	Total
For every 10 times:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

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Experiment contexts

- Commute trips
 - Only those who commute >2 days per week and commute distance < 10km: otherwise shared mobility is not really an option
- Non-commute trips
 - All respondents
 - Trip purpose: shopping, leisure
 - Trip time and cost based on three different distance range: 2km, 5km, 10km
- Assumption:
 - One-way system
 - No parking search time
 - Shared vehicles are always available

Data collection

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- Population: adults with driver's license living in Amsterdam
- Valid sample size: 880 respondents
- Representativeness: slightly more women (55% vs 45%), representative age distribution, ~82% car owners

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Result: the impact of attributes

- Access time of eHUB highly significant
- Travel time not significant
- Travel cost: only significant for shared e-bike
- Public transport users are more likely to switch to eHUBS compared to car users
- Parking search time and cost highly significant
- Congestion-related variables (both frequency and duration) are non-significant

Results: the impact of individual variables

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	Commute			
	Total	Class 1 Current mode	Class 2 Interest in shared EV	Class 3 eHUB
Age				
• 18-24	20.3%	18.8%	21.0%	25.5%
• 25-34	31.4%	29.5%	33.8%	32.6%
• 35-44	21.6%	23.5%	20.0%	17.2%
• 45 or older	26.7%	28.1%	25.2%	24.7%

	Non-commute			
	Total	Class 1 Current mode	Class 2 eHUB	Class 3 Interest in shared e-bike
Age				
• 18-24	16.0%	14.1%	20.2%	17.7%
• 25-34	27.4%	21.4%	43.7%	28.8%
• 35-44	19.3%	17.4%	23.2%	21.3%
• 45 or older	37.3%	47.1%	12.9%	32.2%

Result: added value of eHUBS

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Providing two modes slightly increases people's usage of shared mobility (usage of current mode reduces)

	Commute	Non-commute
Current mode	71.8%	70.1%
Shared EV	15.3%	14.7%
Shared e-bike	12.9%	15.2%
Only Shared EV		
Current mode	75.6%	76.2%
Shared EV	24.4%	23.8%
Only Shared e-bike		
Current mode	73.6%	74.0%
Shared e-bike	26.4%	26.0%

Further work

- In-depth analysis regarding the added value of eHUBS
- Compare with other cities: already have sample from Manchester, probably distribute in more cities

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Thanks!