



Institute of Transport Economics
Norwegian Centre for Transport Research

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INTERNATIONAL CONFERENCE

01 & 02, MARCH, 2019

New Directions for Research on Ageing: Work, Care and Mobility

Organized by

Transdisciplinary Centre for Qualitative Methods (TCQM)

&

Public Health Evidence South Asia (PHESA)

Prasanna School of Public Health,

Manipal Academy of Higher Education, Manipal, Karnataka, India

in collaboration with

Center for Innovative Ageing,

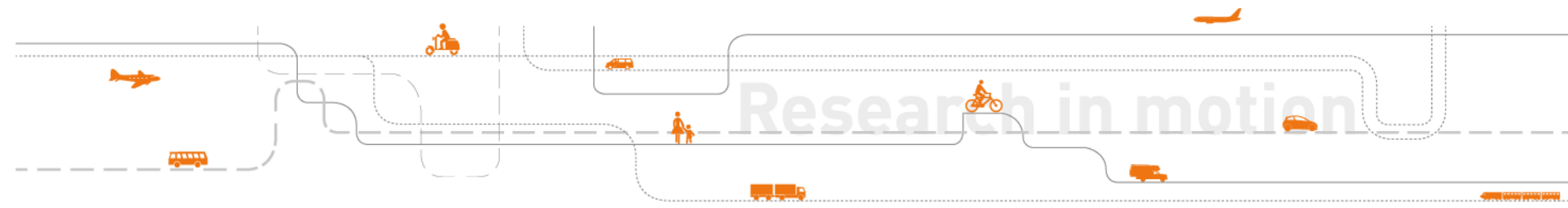
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Utrecht University, The Netherlands



Planning for Elderly Mobilities:

How can car sharing aid the transition towards sustainable travel behavior? Case of Oslo, Norway

Tanu Priya Uteng, PhD

Terripest



Shift

Sustainable Horizons in Future Transport

Research in motion



CAR SHARING (?????)

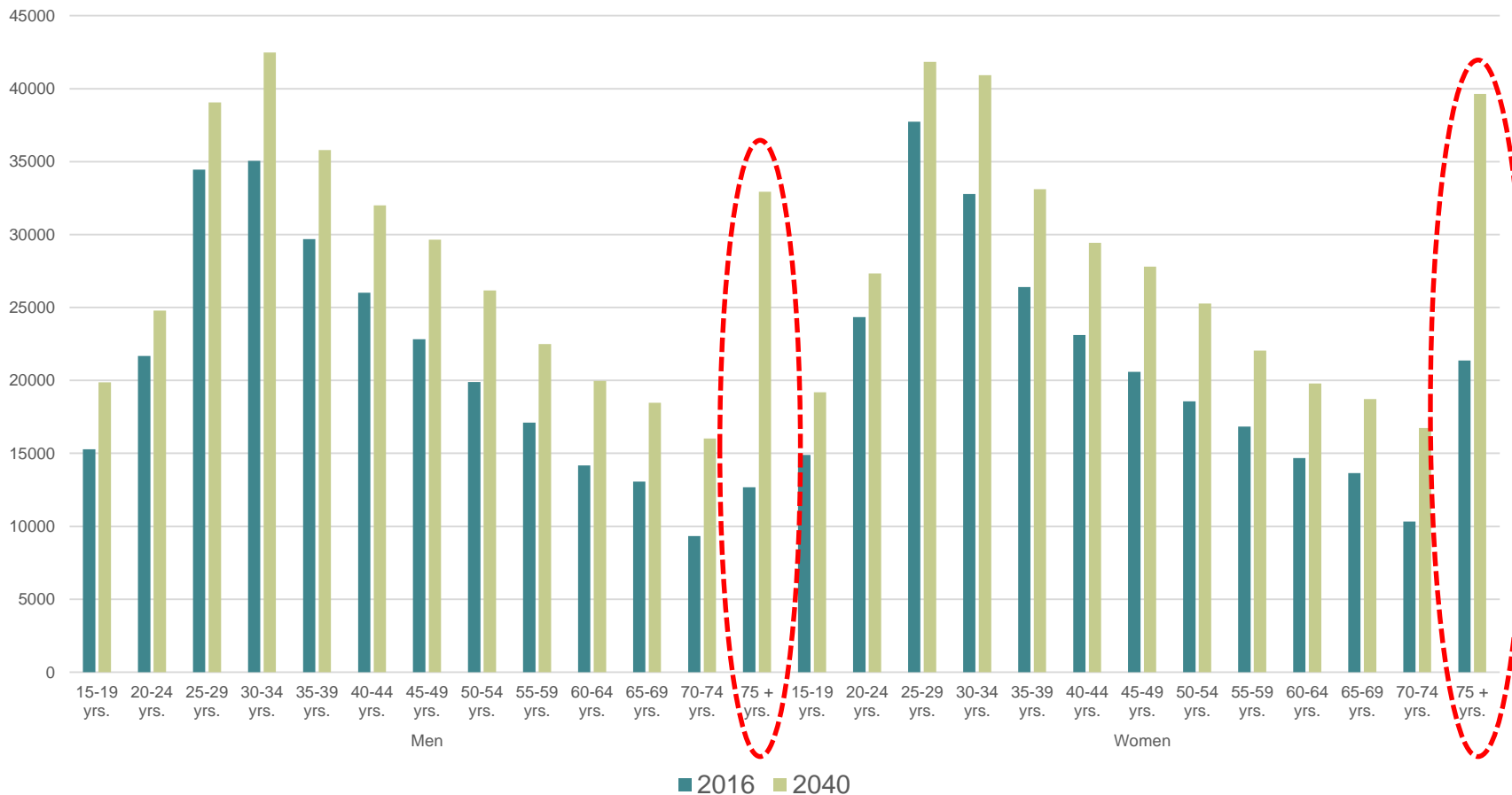
Peer-to-Peer

Business-to-Consumer

Cooperative

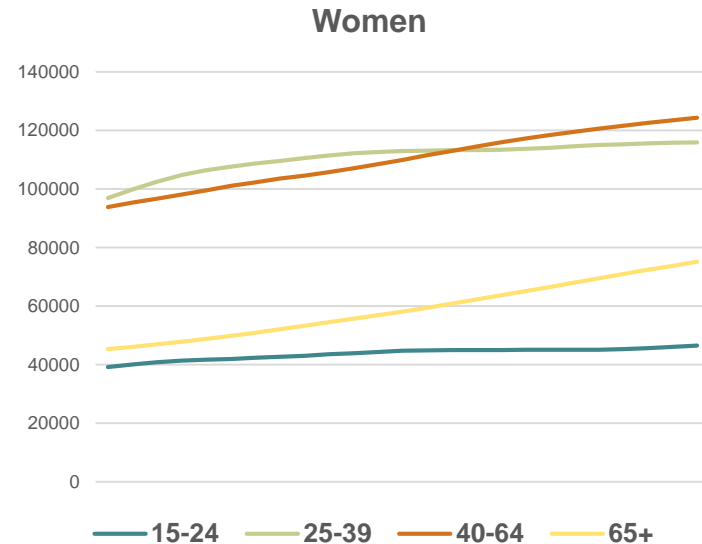
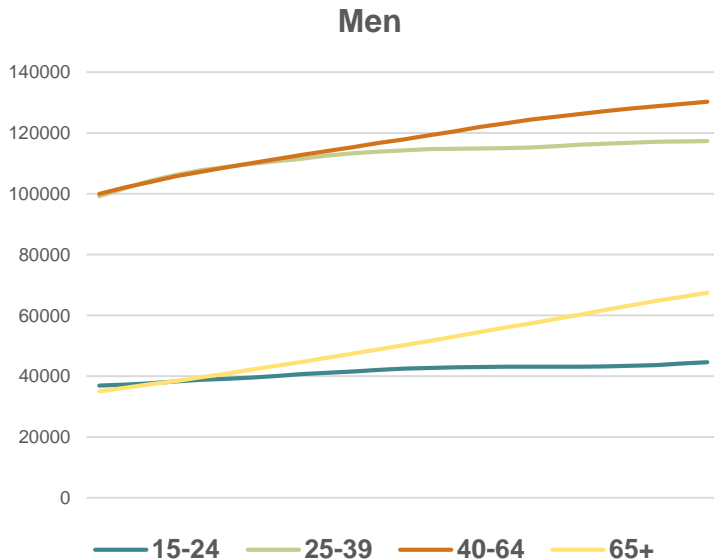
The Norwegian **AGEING** patterns

DEMOGRAPHY_Oslo



- 75+-year-olds will account for 10% of population by 2040 compared to 6% in 2016.
- Share of Oslo’s “retired” population (65 +) will grow from 14.7% to 19.8% by 2040.

Gendered variations



- **Established workers** group will overtake the young workers in population size **much earlier** in **men** than in women.
- By 2040, **disparity** between **youth and elders** is **larger** in **women** than in men.
- **Women** are projected to have a **larger share of elders** than men by 2040, while **men** are projected to have a **larger share** of **established workers** than women.

Demography vis-à-vis future mobility

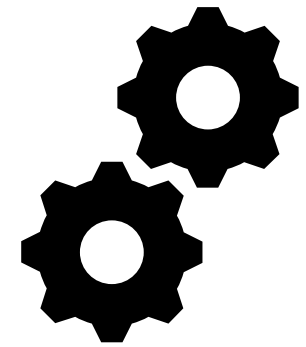
Established workers and **elderlies** will make up a larger share of the overall population

Higher **influence** on future mobility

Disaggregated analyses needed

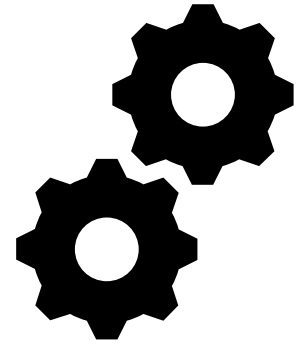
The Norwegian **AGEING** **agenda** and a few implications

ACTIVE AGEING



1. National level policy on Active Ageing
2. *ECONOMICS-SOCIAL* interlocking
3. Focus on *health and pension reforms*
4. *In-situ Ageing* or ageing in own homes

ACTIVE AGEING, DENSE RESIDENTIAL AREAS & DAILY MOBILITY

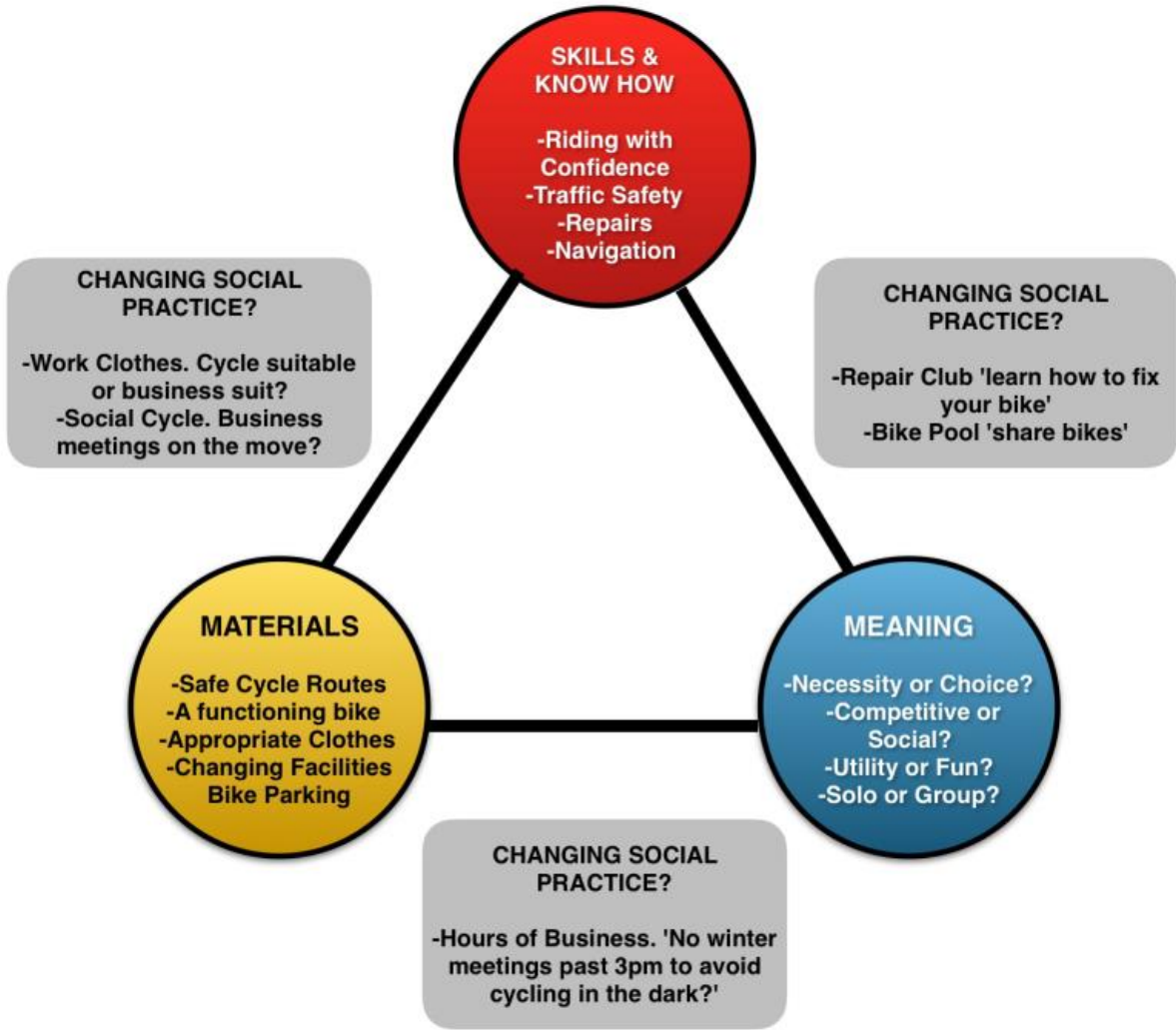


1. Parallel development – the 're-densification' project
2. Increase in *high rise apartments* near *transit nodes*, urban centers etc.
3. A vast majority of the elderly population, **65+ RELOCATING**

The Theoretical background

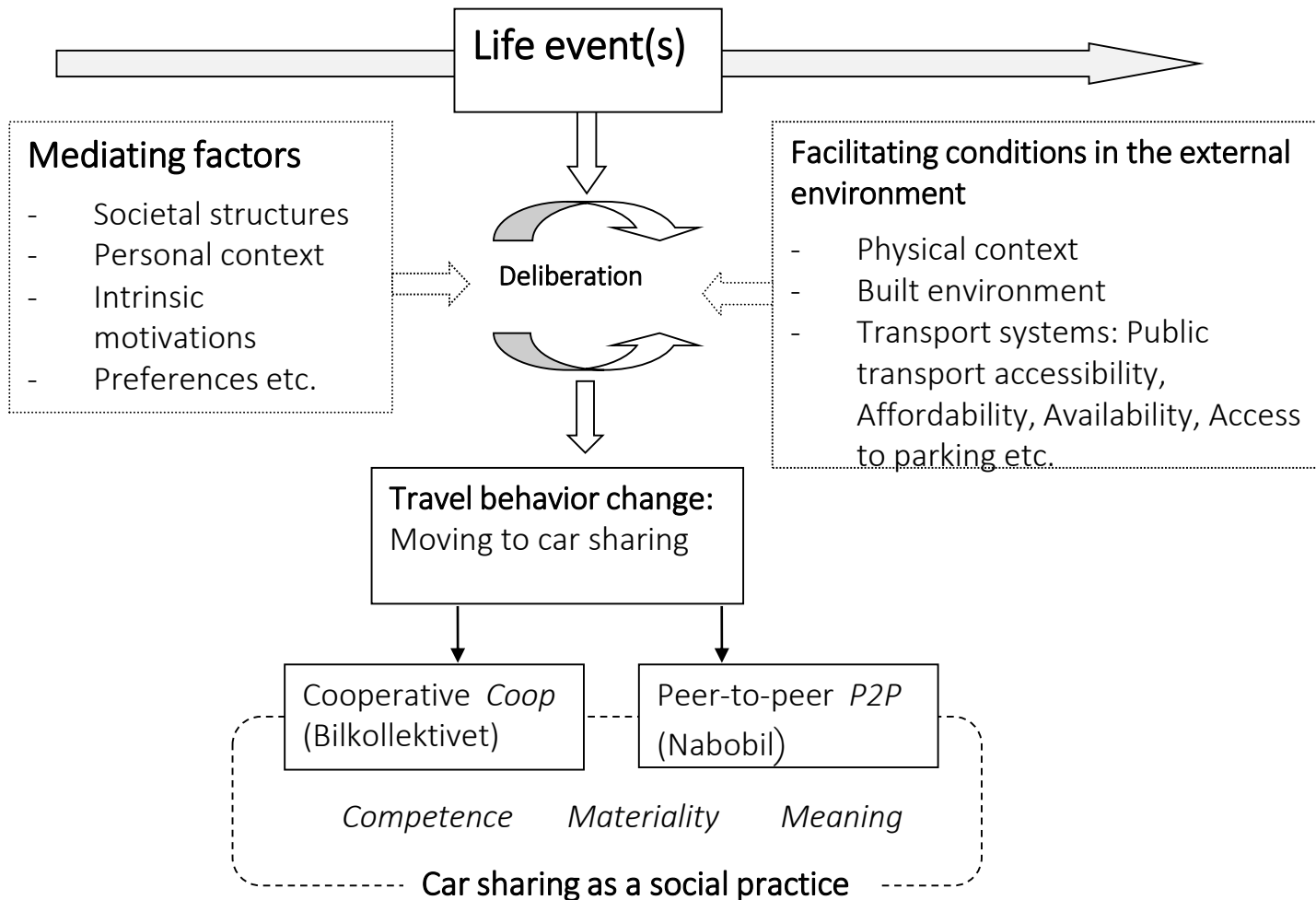
Social Practice Theory (SPT)

- 1. MATERIALITY
- 2. MEANING
- 3. SKILLS



Source: <https://whatsthepont.com/2016/10/23/cycling-to-work-its-just-what-we-do-could-social-practice-theory-help/>

Car sharing and Social Practice Theory

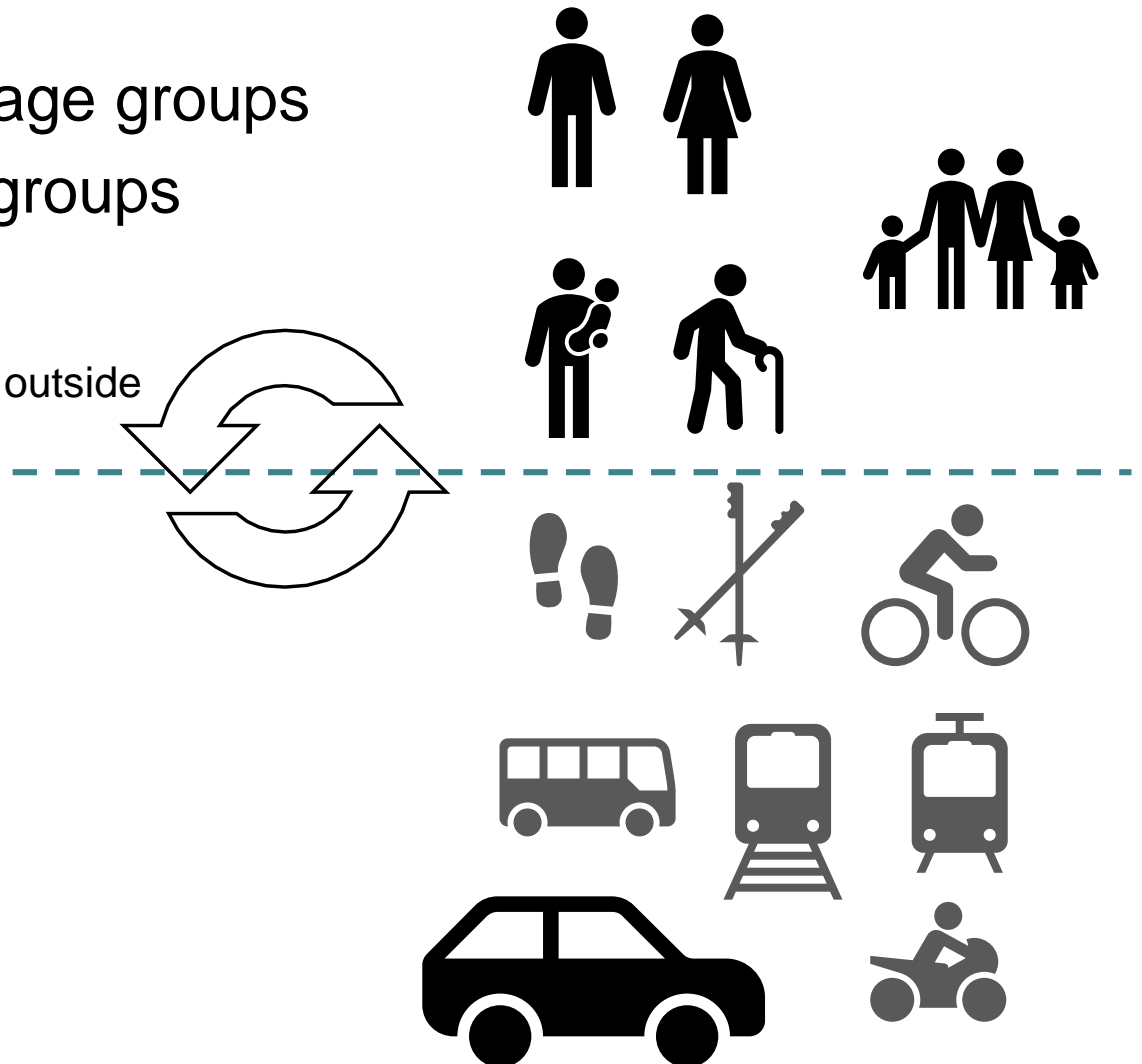


Different travel-bytes

TRAVEL BEHAVIOUR..DIFFERENCES

PERSIST ON:

- Av number of trips per age groups
- Trip purposes per age groups
- Trip length
- Trip timings - Rush hour vs. outside
- Trip durations
- Modal split
- Preferences
- Attitudes
- Acceptability etc. etc.



Why are trip variations important?

- Travel behaviour variations – age, gender
- For example, in Oslo (and around) :
 - i. Males aged 35–45 - most eager drivers BUT, average number of daily car trips has been falling
 - ii. Middle-aged (45–65-year-olds) increase in average number of daily car trips
 - iii. Even stronger trend for 65+ years - accelerating increase in the number of daily car trips

source: (Priya Uteng, 2011; TØI 2012 faktaark; TØI report 1477/2016)

■ Old age \neq car-dependency.

= HABIT FORMATION

The **ELDERLY** and their **PRACTICES**

65+ : The ignored customer base for car sharing?

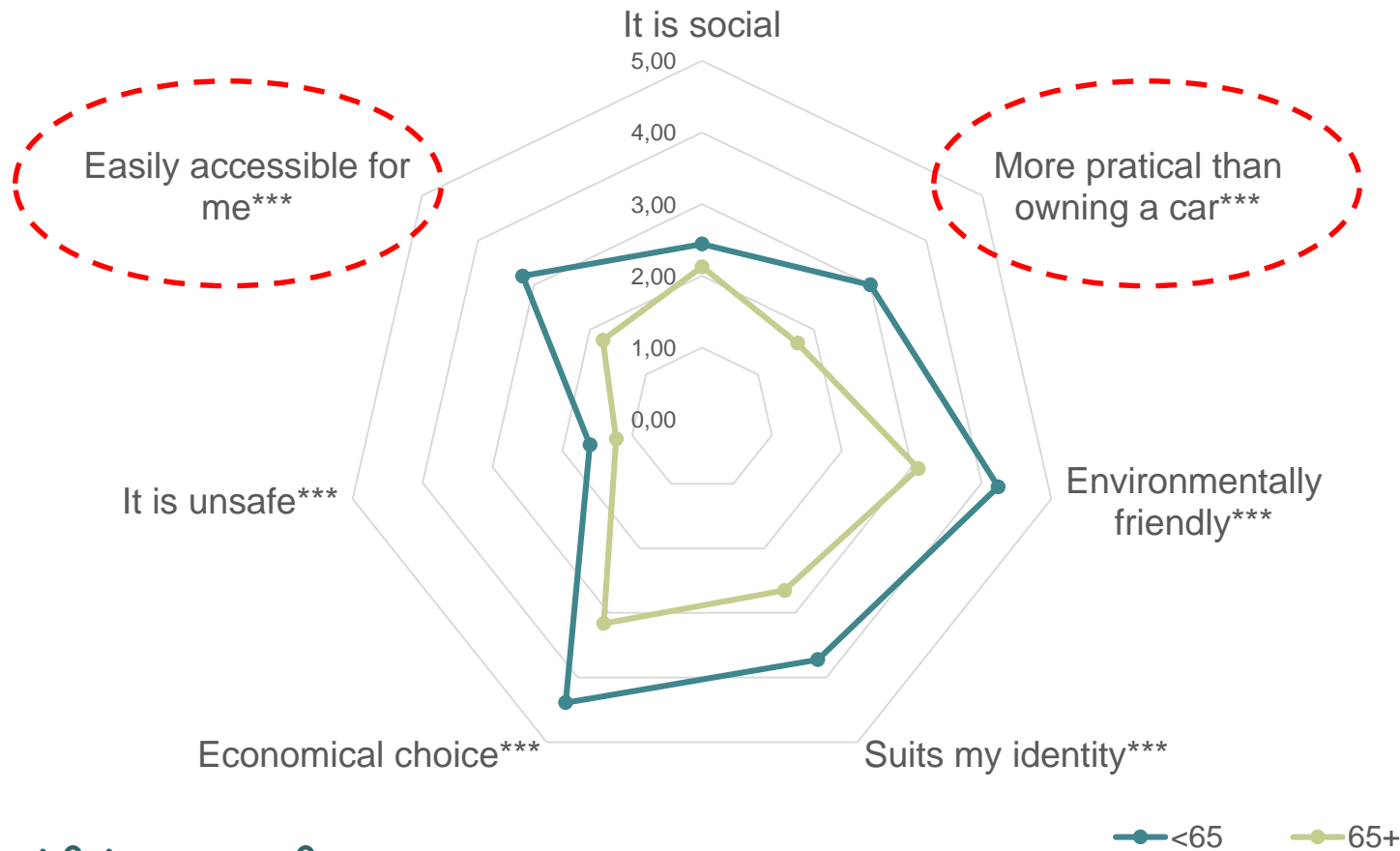
	Walking	Car	PT
Daily shopping			
Heavy shopping			
Leisure activities			
Visit friends			
Weekend trips			

Logistic regression for use of car sharing scheme

	B	Wald	Sig	Exp (B)
Life events (importance)				
LE 1-Children	0,352	16,719	0,000	1,423
LE2- Relocate	-0,297	17,429	0,000	0,743
LE3- Leisure	-0,067	1,025	0,311	0,935
Motives				
Inclusive	0,338	51,907	0,000	1,402
Practicality	0,132	10,443	0,001	1,142
Environmental	0,097	5,827	0,016	1,102
Cost saving	-0,168	12,004	0,001	0,846
Car sharing Identity	0,087	4,203	0,040	1,091
Car identity	-0,119	8,851	0,003	0,888
Context				
PT distance (neg)	0,056	0,207	0,649	1,058
Parking access	-0,148	20,017	0,000	0,863
Car owner history				
Dont have, but previously owner	-0,176	1,041	0,308	0,838
Have car now and previous owner	-1,055	24,378	0,000	0,348
Demography				
Gender	0,026	0,032	0,857	1,026
Age	0,019	6,582	0,010	1,019
Education	0,417	17,503	0,000	1,517
Income (household)	0,234	17,732	0,000	1,264
Constant	-2,419	11,626	0,001	0,089
Model summary				
n	2856,000			
-2LL	1422,456			
Nagelkerke R square	0,361			

- Preference for COOPERATIVE increases with age
- Difficult to comment on Gender as there are more men in both types of car sharing schemes.
- Share being even higher for Nabobil.

65+ : Meanings attached to car sharing

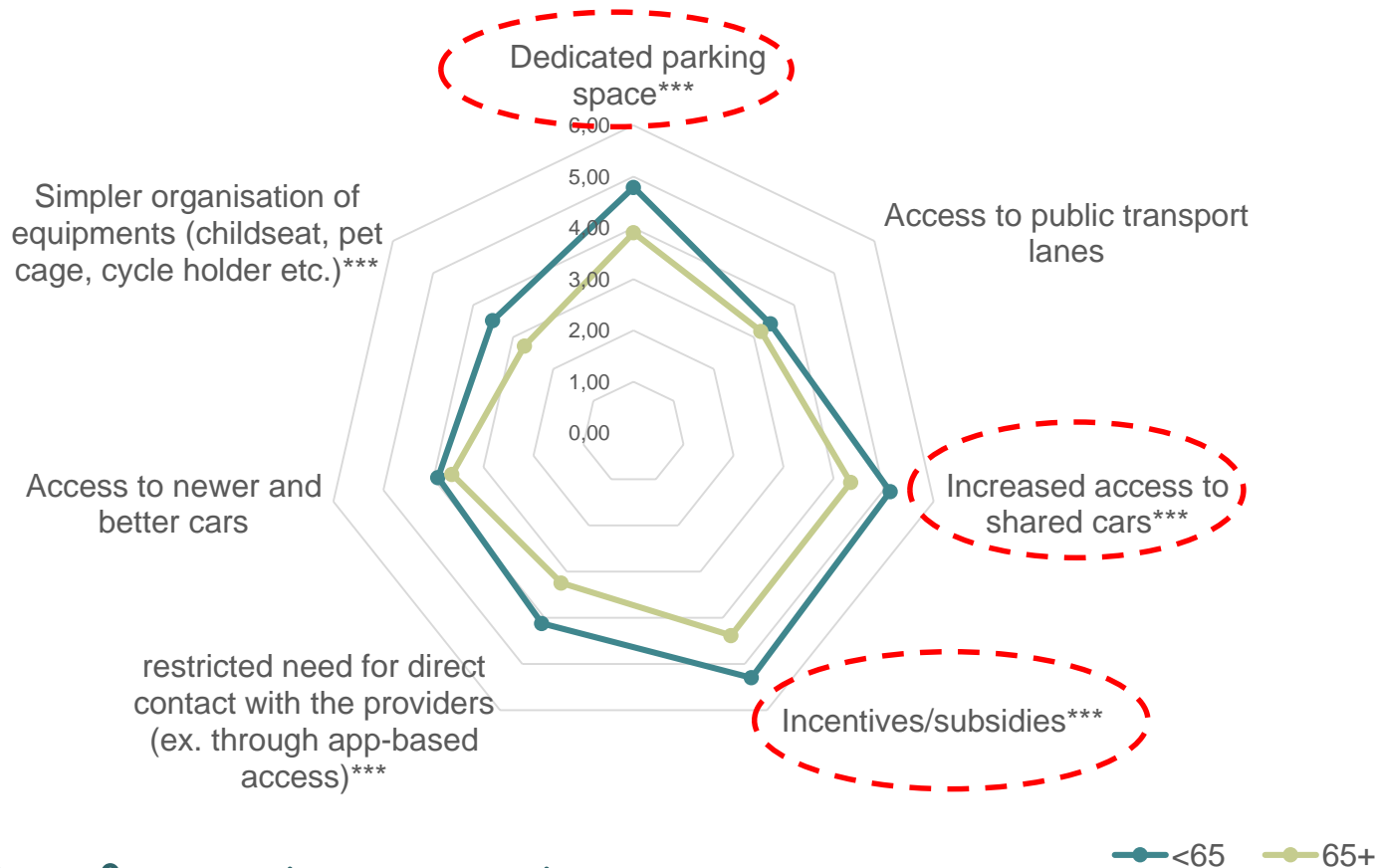


■ Identifying performance gaps

scored on a scale of 1-7, 1=completely disagree, 7= completely agree.

***mean scores are significantly different for the two groups, $p < .001$.

65+ : Factors which might lead to an increased use of car sharing schemes



- Designing future interventions.
- Plotting differences over a period of time

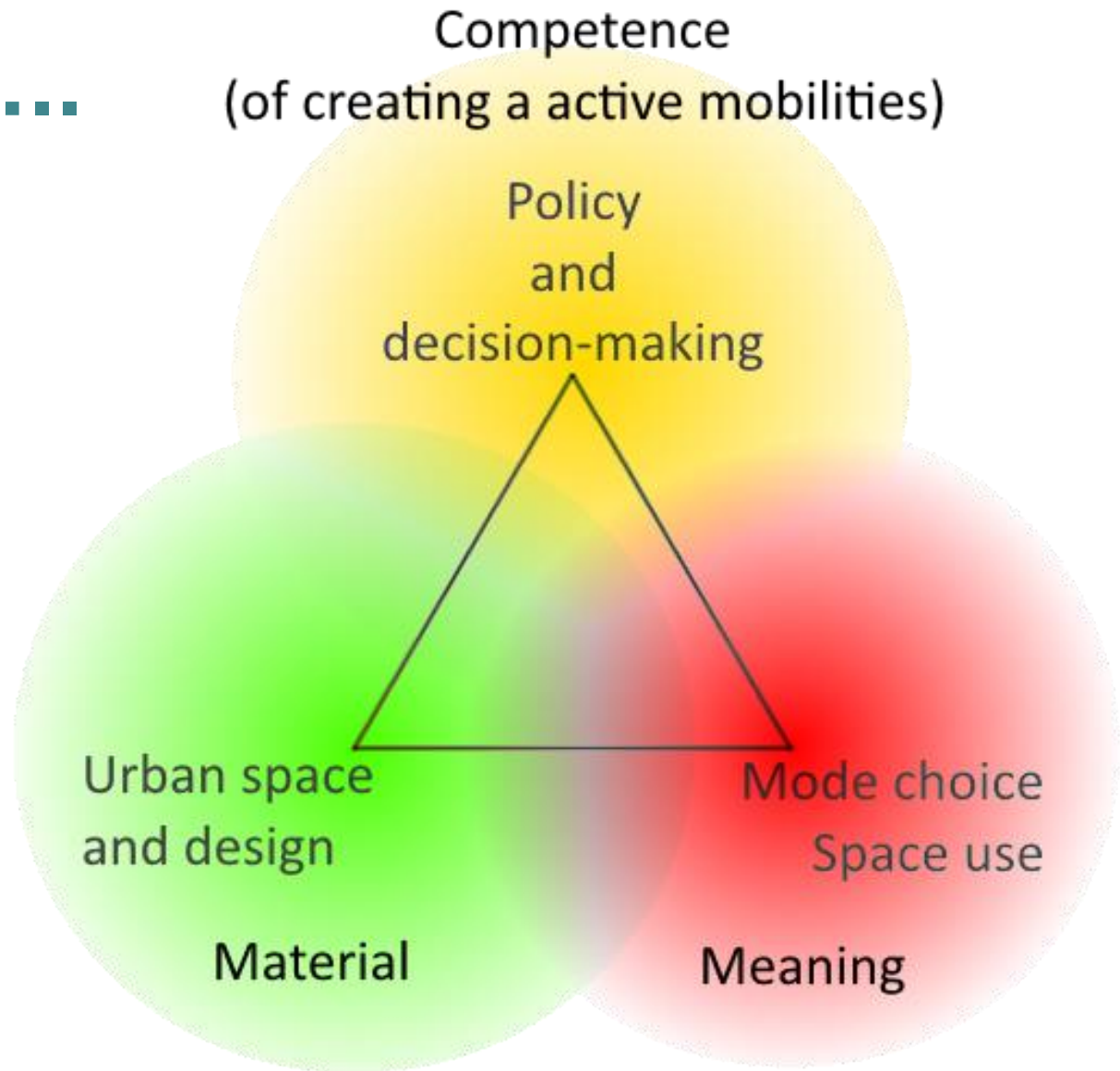
scored on a scale of 1-7, 1=to a lower extent, 7= to a greater extent.

***mean scores are significantly different for the two groups, $p < .001$.

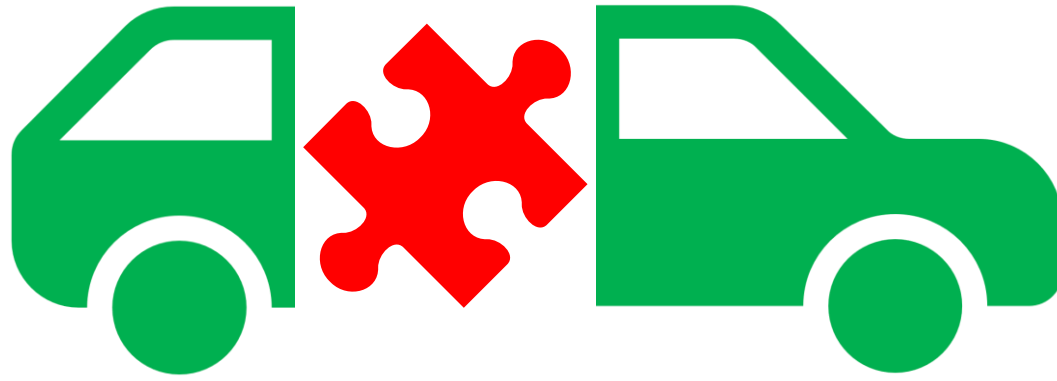
TARGETS

- Sewing offers to the mobility needs of different age-groups and life-stages – *for ex. Integrated solution with the housing blocks, neighborhood parking.*
- Differential pricing – *time, age, employment status, tax benefits etc.*
- Marketing – *University crowd <25; 'Young-kids' stage 25-40; Independent / 'low family-responsibility' stage 40-65; Elderly 65+*
- Location – *center vs. periphery*
- Reaching the clients – *app vs. Non-app, training, linking to elderly activity centers etc.*

Next steps.....



Source: <https://katsdekker.wordpress.com/2015/10/17/wrestling-mental-elephants/>



Thank you!!

Teripest



Shift

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