

AAL-4 COM'ON
Common Ground Report
Deliverable WP1
May, 2012

Content

- Intro
- Desk research from each knowledge partner (CLL, Laurea, i2Cat, EA/YW)
- National user-workshops:
Recapitulations
- Scope and focus for ethnographic based research

Intro: Com'On, workpackage 1 and the common ground report

COM'ON address the perceived orientation/navigation challenges and special needs that older persons (having mild to moderate problems with moving around) experience throughout the whole chain of travel, using public transportation. Weak or missing parts in the chain may significantly reduce the value of otherwise good services. Travelling by public transport entails a lot of uncertainties for older people, who struggle with outdoor activities. Major barriers are functional limitations as well as fear and lack of self-efficacy, making them feel insecure and avoid situations they believe exceed their coping skills.

The idea and starting point for COM'ON

In larger European cities travel information is already accessible. However, no dedicated service exists for older people, who need additional **information and assistance** in order to feel confident on the move. COM'ON will take on a holistic approach to this challenge and create a digital confident motion platform that allows for multiple mobile services supporting older persons needs for coping with outdoor mobility issues – the COM'ON service platform.

COM'ON will create specific planning, sharing and on-journey services helping older persons maintain their *outdoor mobility* for as long as possible.

WorkPackage 1: Insights and opportunities

In WP1 we collect user-insights from the participating countries into a shared understanding of older persons' explicit and implicit needs, wishes and barriers in relation to coping with their outdoor mobility issues.

AAL-4 COM'ON

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Initial desk research is focused on synthesising insights from the participating countries on mobility and elderly people. Areas for further investigation will be identified by national 'opportunity workshops' and ethnographic research methods will be applied to collect deep insights on and inputs from end-users around the point of coping with outdoor mobility issues.

The objective of WorkPackage 1 is to analyse and describe end-user needs for the information and assistance support to ensure highest possible relevance of the COM'ON solutions. WP1 shall create a foundation that guides the further development process.

This common ground document is the first report on insights collected via:

- Desk research on national existing insights from each knowledge partner in the Com'On consortium (and presented at the Kick-Off meeting, Copenhagen, March 2012). That means different types of knowledge from studies already conducted within the field of outdoor mobility and public transportation in relation to older people.
- National user-workshops – applying the method of LegoRealPlay – outlining situations and different contexts in which the COM'ON applications shall be functional and feasible.

Thereby the common ground report result in defining scope and focus (research design) for the following ethnographic based pre-studies conducted qualitatively in five partner-countries (DK, FI, BE, LU, ES)

Desk Research

Desk research content

Supplementary to the massive knowledge base inherent to the AAL Joint Programme, specifically within the CALL 4 text (*AAL Joint Programme Call for proposals AAL-2011-4*) the knowledge partners in the Com'On consortium have conducted desk research on the topic of outdoor mobility based on local/national research institutions and projects.

In general

- being able to move about outdoors is the basis of carrying out a lot of activities, important to the individual person.

1. Older persons physical and cognitive condition
2. Daily transport: facts and figures
 - Modes of transport
 - Information
 - Way finding
3. Purposes and motivational factors
4. Problems and barriers
5. IT
6. Conceptual definitions on mobility and motility
7. References

1. Older persons physical and cognitive conditions

Mild to moderate difficulties/immobility

Risk factors for Mobility Limitation

(Yeom et al. 2008, Yong 2011)

Individual risk factors:

- Age (70+), Sex (women)
- Marital status (single)
- Socioeconomic status (low annual income, less than a high school education)
- Motivational factors (personality, self-efficacy)
- Lifestyle (smoking, drinking alcohol, poor nutritional status, obesity, physical inactivity)
- Diseases and conditions (heart diseases, stroke, high blood pressure, diabetes, dyspnea, knee pain, foot problems, tiredness with daily activities, fatigue, having metabolic syndrome)

Social risk factors:

- Weak social networks
- Low levels of social participation
- High dependency on caregivers (“overprotection”!)

Environmental factors:

- Poor housing and outdoor accessibility (steps, no ramps, handrails, lifts)
- Geographical location
- Physical conditions (traffic safety, air pollution, season of the year, neighbourhood characteristics)

Organizational factors:

- Urban planning
- Transportation regulations

Disability in older people

(Guralnik et al. 2001)

- The onset of disability may be sudden and catastrophic (such as a hip fracture or a stroke) for some and slowly progressive (such as arthritis) for others.
- Stroke, hip fracture and cancer were associated with very high risk of severe mobility disability (n= 5,355).

<http://www.mendeley.com/research/progressive-versus-catastrophic-loss-ability-walk-implications-prevention-mobility-loss/#page-1>

Fear of moving outdoors

“A emotional condition that can lead to avoidance of outdoor activities that are well within a person’s functional health capacity”.

(Rantakokko 2011, 31)

“In total, 65 % of women and 29 % of men were categorized as having fear of moving outdoors.”

(Rantakokko 2011, 46)

“Fear predicted mobility decline over the 3.5-year follow-up.”

(Rantakokko 2011, 57)

Fear of moving outdoors (Rantakokko 2011)

- Most commonly reported fears among older people are **fear of falling** and **fear of crime** (Murphy et al. 2002, Delbaere et al. 2004, Martin et al. 2005, Stafford et al. 2007, Zijlstra et al. 2007, Foster & Giles-Corti 2008, Roman & Chalfin 2008).
- -> **Poor socioeconomic status, musculoskeletal diseases, slow walking speed and the presence of poor street conditions, hills in the nearby environment, and noisy traffic were associated with fear of moving outdoors at baseline.** (Rantakokko 2011, 66).

Fear – result of poor self-efficacy?

“According to the self-efficacy theory, people fear and avoid situations they believe exceed their coping skills

and

self-efficacy has been found to be a very important factor in outdoor mobility.”

(Rantakokko 2011, 59)

Fear of moving outdoors in Europe

European Social Survey Cumulative File, ESS 1-4 (2011); data file edition 1.0; Norwegian Social Science Data Services, Norway - data archive and distributor of ESS data in **European Commission 2012. Active ageing and solidarity between generations – A statistical portrait of the European Union 2012**

How safe do you feel walking alone after dark?

Persons aged 65 or more

- 63.5 % of those aged 65 or more who were surveyed in the EU said they felt safe walking alone in 2008.
- This ratio fell to less than half of those aged 65 or over in Bulgaria, Greece and Latvia,
- in contrast to the situation in Denmark, Belgium, Sweden, Finland and Slovenia, where three quarters or more of this sub-population felt safe.

Visual impairments & mobility

- According to a recent study the prevalence of low vision in older European population is 3 % or less (Seland et al. 2009).
- The prevalence of visual impairment (defined according to WHO) rises with increasing age and more so in women, and it shows a definite increasing trend from north to south. It has been estimated that the total number of European people suffering from low vision is 12.790 million (Resnikoff et al. 2004).

Visual impairments & mobility

(Laitinen, 2009, n= 8,028)

- Functioning in a wider social context demands sufficient visual ability to cope with an unfamiliar environment.
- “Visual function is also known to play an important role in balance, orientation, and gait, but some of the decreased mobility may be due to fear of falling (Marron and Bailey 1982, Stones and Kozma 1987, Klein et al. 2003, Lee and Scudds 2003, Deshpande et al. 2008).”
- “Decreased visual function may lead to multiple undesirable consequences, such as social isolation and poorer quality of life. In addition, lack of physical activity is known to be a major risk factor for further disability (Mor et al.1989).”

Balance & concentration

(Karinkanta 2002) (n=363)



- The cognitive resources demanding task decreased postural stability in older females.
- The relationship between decreased self-rated functional ability and decreased postural stability due to a cognitive task may be important for risk of falls in older adults

Lower extremity functional ability and perceived barriers to physical activity among older people (Kivinummi 2007) (n=645 in Jyväskylä Finland)

- The decrease in functional capacity can be seen first as **difficulties on lower extremity function, for example balance and walking speed**. The most significant barriers to exercising are health, fear of falling and injury, weather conditions and a loss of a partner.
- The poorer the lower extremity functional ability was the more people perceived barriers to exercise related to fears and poor health. The fear of falling and lack of safe environment prevented people from doing exercise. **Pain and diseases were most perceived barriers in a poor health category**. Lower extremity functional ability did not have statistically significant association to barriers caused by environment and negative attitudes.
- Decreased lower extremity ability increases perceived barriers to exercise, especially if they are connected to health and fears like fears of falling and injuries.

Difficulty with "moving around" in last 30 days, %

	None	Mild	Moderate	Severe
Denmark				
60-69	68.6	13.1	11.4	5.1
70-79	58.2	20.0	17.3	4.5
80+	37.8	22.2	24.4	13.3
Finland				
60-69	61.3	19.6	14.2	4.4
70-79	40.7	20.7	24.2	12.3
80+	38.9	17.2	29.0	12.8
Netherlands				
60-69	57.6	17.4	19.8	5.2
70-79	57.5	16.3	21.3	5.0
80+	40.0	50.0	0.0	10.0

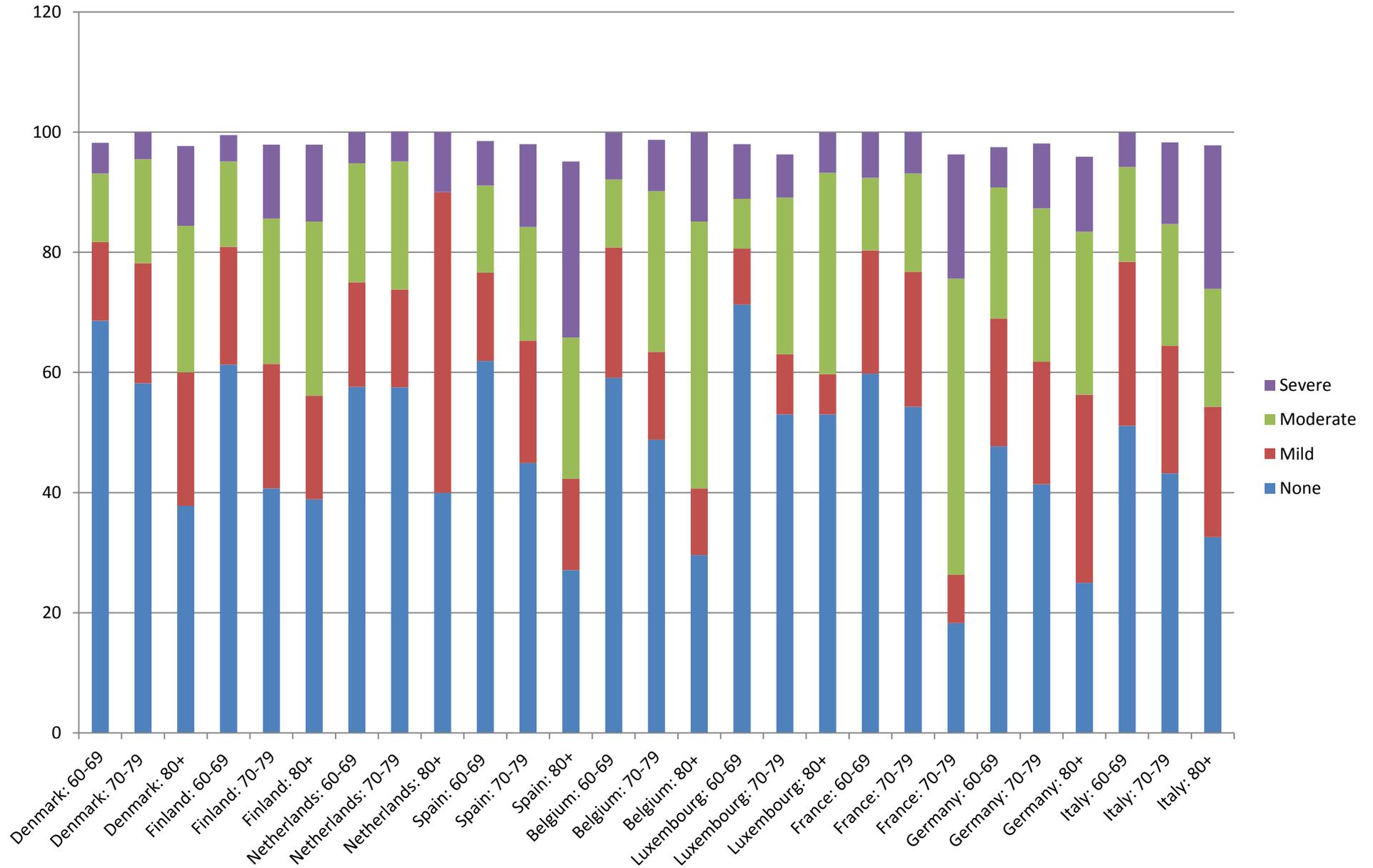
Difficulty with "moving around" in last 30 days, %

	None	Mild	Moderate	Severe
Spain				
60-69	61.9	14.7	14.5	7.4
70-79	44.9	20.4	18.9	13.8
80+	27.1	15.2	23.5	29.3
Belgium				
60-69	59.1	21.7	11.3	7.8
70-79	48.8	14.6	26.8	8.5
80+	29.6	11.1	44.4	14.8
Luxembourg				
60-69	71.3	9.3	8.3	9.1
70-79	53.0	10.0	26.1	7.2
80+	53.0	6.7	33.5	6.7

Difficulty with "moving around" in last 30 days, %

	None	Mild	Moderate	Severe
France				
60-69	59.8	20.5	12.1	7.6
70-79	54.3	22.4	16.4	6.9
80+	18.3	8.0	49.3	20.7
Germany				
60-69	47.7	21.3	21.8	6.7
70-79	41.4	20.4	25.5	10.8
80+	25.0	31.3	27.1	12.5
Italy				
60-69	51.1	27.3	15.8	5.8
70-79	43.2	21.2	20.3	13.6
80+	32.6	21.7	19.6	23.9

Difficulty with "moving around" in last 30 days, %



Insights on immobility rate

- Immobility rate grows with age
- Drastic decline once age of 80 years or above
 - The number of non movers increases strongly
 - The number of trips per day decreases
- Male seniors make more trips than female
- Seniors with a driving license make more trips than those without

Elderly population in Belgium

- In 2000 : 1/6 is older than 65
- In 2050 : 1/3 is older than 65
- Life expectancy increases, healthy life expectancy increases less

Insights on physical restriction

- 60,1 % of the elderly population is physically restricted
 - Group 60-69: only 47,2%
 - Group 70-79: 67,1%
 - Group +80: 83,9%
- 26,4% have fallen at least once a year in the past
(from 19,4 for youngest group to 41,8% oldest group)

2. Daily transport: facts and figures

Insights on average number of trips

- Trip motives: shopping, visiting someone, leisure/sports/culture
- Duration of trips: +/- 65 minutes
 - Duration decreases when age increases
 - Men travel more frequently than women and spend more time
 - Time of leave: between 9.00 and 10.00 or after 14.00
- Trip distance: distance diminish when age increases
 - Group 60-69: 11,7 km Group +80: 7,8 km

Insights on transport mode

- Elderly with a lower income less often use the car or bike
- Women are more likely to use public transportation, the call bus, a taxi for less mobile persons than men
- Men more often dispose of a driving license and drive their car more frequent on a daily basis than women
- The older people get, the less often they 'walk' as transport mode
- When age increases, car use decreases

Insights on transport mode

- Physical restriction impacts strongly on trips by bike and on foot.
- Physical restriction impacts less on transport modes as car and public transportation.
- Group 80+: mobility in classic transport modes is compensated through a more individualised transport mode (taxi, call bus etc).
- Collective organized but individualized transport modes are helping physically restricted elderly to move outdoor.

Insights on transport mode

- In urban areas
 - Cars are banned more often (cities)
 - Moving outdoor on foot is popular (cities and coast communities)
 - More trips by public transportation
- In rural communities
 - Cars have pole position
 - Elderly rather cycle than walk
 - Less trips by public transportation

Driving license

- 70,7 % of the elderly respondents dispose of a driving license with a big difference between men and women
 - 90,8 % of men
 - 50,4 % of women

Possession of driving license drops down with age from 77,5% (group 60-69) to 39,8% (group 80+)

Danish Travel Survey (TU)

3.1.4 Analysis of age differences

Figure 7 shows the percentage of people with a specific age choosing the different transportation modes. People younger than 18 years old have a very different pattern from the rest, since they have not yet had the chance to obtain a driving license. The young population often travels as car passengers or by bike. The bike use is increasing up to 12 years (40 %) and then decreasing to a rather constant share of 15 %. The share of public modes is increasing up to 18 years of age, and then dropping after the possible achievement of driving license. This share increases again with age and the elderly population's share of public transportation is almost as high as the young one. The car as driver is the most often chosen mode from the age of 18 to 77 years, with a peak at 40 years of age.

Walk is increasing from the age of 40 and a very high share of the trips conducted by the elderly in the survey is by walking. The people in the middle age group are often employed and therefore have a high demand for transportation. They often can afford one or more cars and, because of the convenience of using the car, this choice is superior to the rest (Lorenc et al 2008). The older people have more time when travelling and often feel safer when being a passenger (both public and private) than when driving (Rosenbloom 2004). The curve is clearly turning around the point of retirement (60-67 years of age) where the demand for transportation is changing and perhaps decreasing.

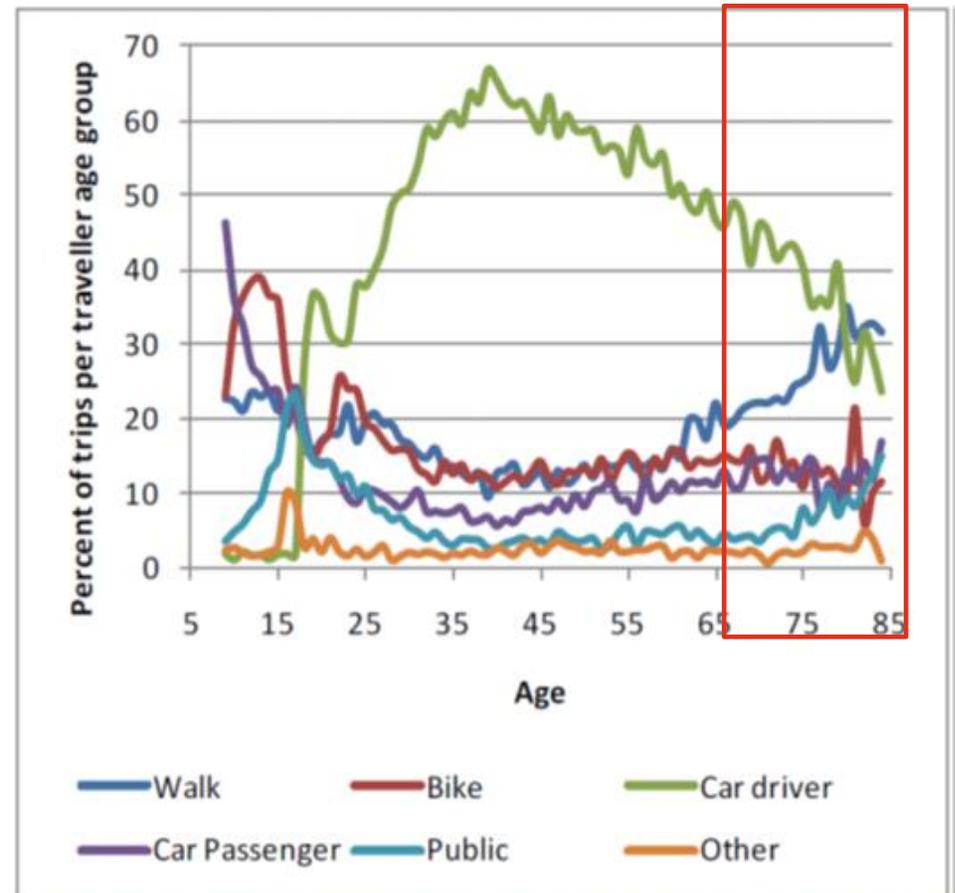


Figure 7: Choice of transport modes in relation to the age of the respondent

Table 6 shows the average OD distances for the trips in each age group. The two age groups which are very different from the others are the youngest (9-17) and the oldest (70-85). The two groups have an average of less than 6.0-6.8 km compared to the third lowest of 9.3 km. The reason for the short trips for both groups is the decreased possibility to use the same transportation modes as the other age groups. The youngest have not yet had the chance to obtain driver's licenses and among the elderly more people have lost their license, not renewed it, etc.

The oldest respondents probably feel safer when walking because they can choose their own pace and have more time to assess the surroundings when walking. The average distance for the travellers in the age groups 18-29, 30-39 and 60-69 are not significantly different from each other at the 0.01 confidence interval, which is also the case for the groups of 40-49 and 50-59 years.

Table 6: Average distance and standard deviation between origin and destination for age groups

Age Group	Avg. Distance [km]	St. Dev. Distance	No. Observations
9-17	5.97	16.85	20,581
18-29	9.34	20.29	21,328
30-39	10.02	21.40	27,010
40-49	10.82	22.47	29,671
50-59	11.10	22.36	24,902
60-69	9.34	21.76	19,507
70-85	6.79	17.79	10,887

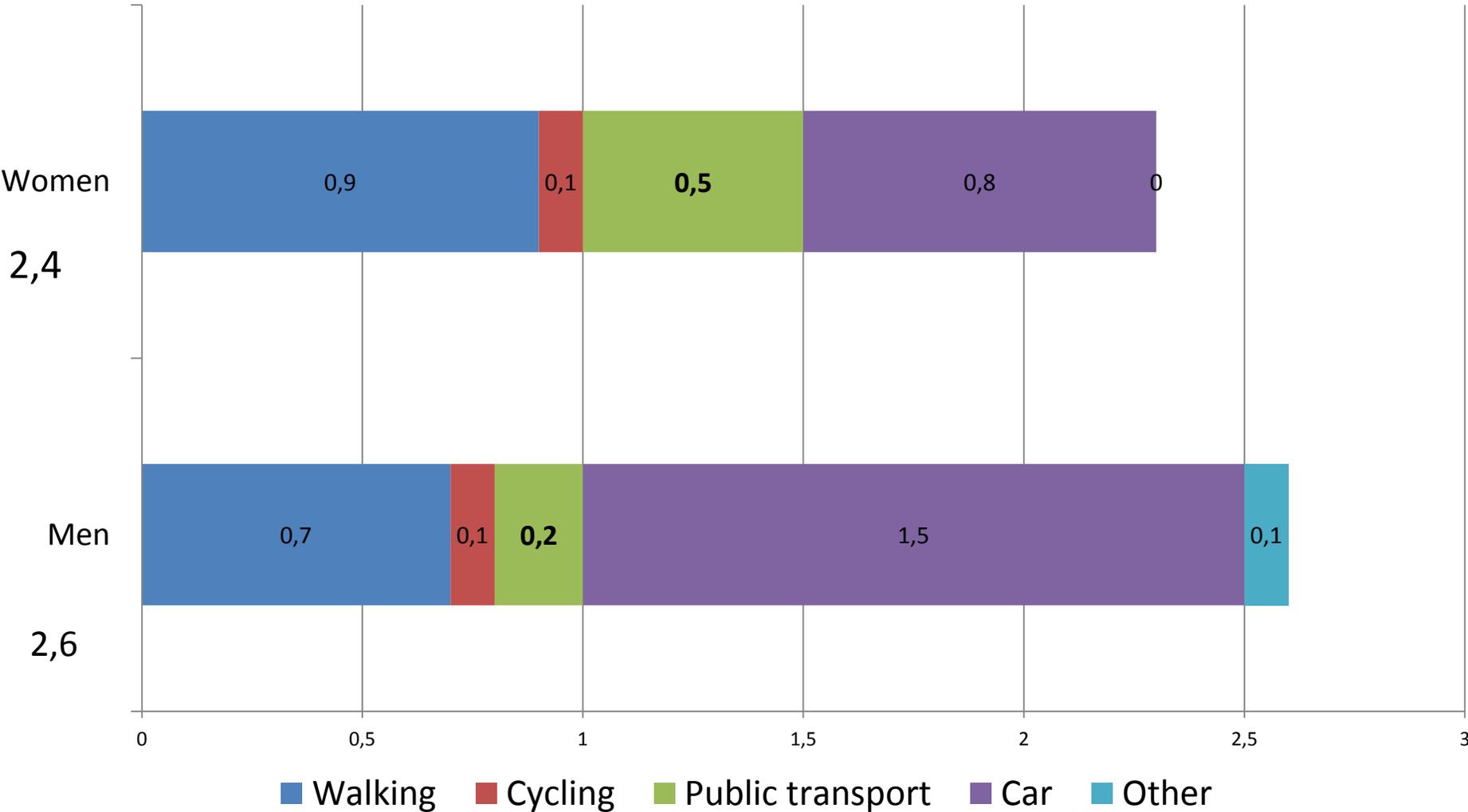
Mode of transportation

The most frequent mode of transportation is to move about by **foot**, nine out of ten people have been out by foot. **The car** is the mean of transportation which is used second frequently. Four out of ten have been out **bicycling**, and half of them have gone by **bus**. Less than four per cent have used the special **transportation arrangements** for older people and people with disability.

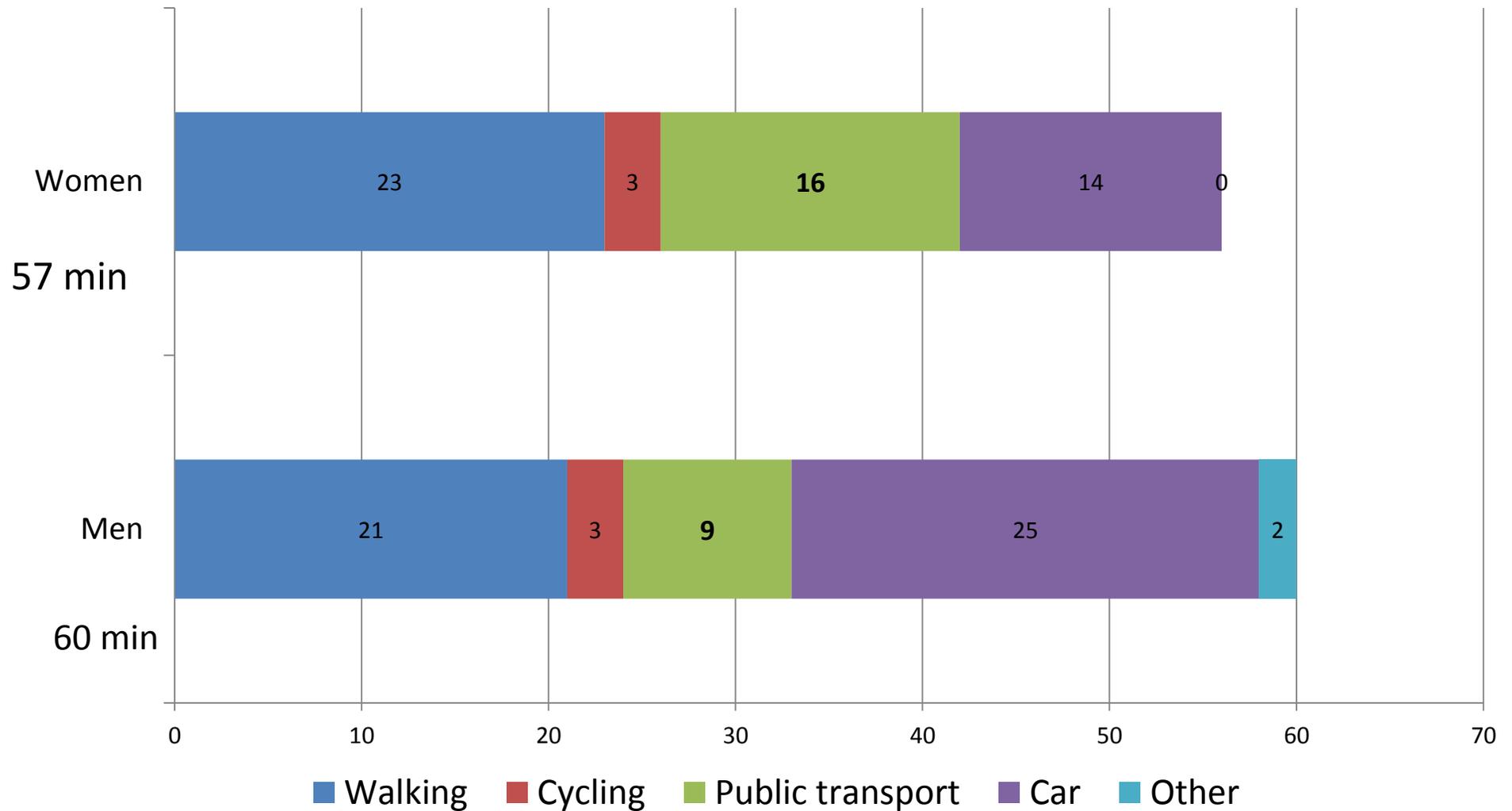
Seniors & daily journeys in Finland (Helsinki greater metropolitan area)

*Helsinki region commuting area travel
behaviour survey. 2008. HSL publications
32/2010. Helsinki Region Transport. (In Finnish)*
(20.172 respondents in total; 3.103 aged 65+ years)

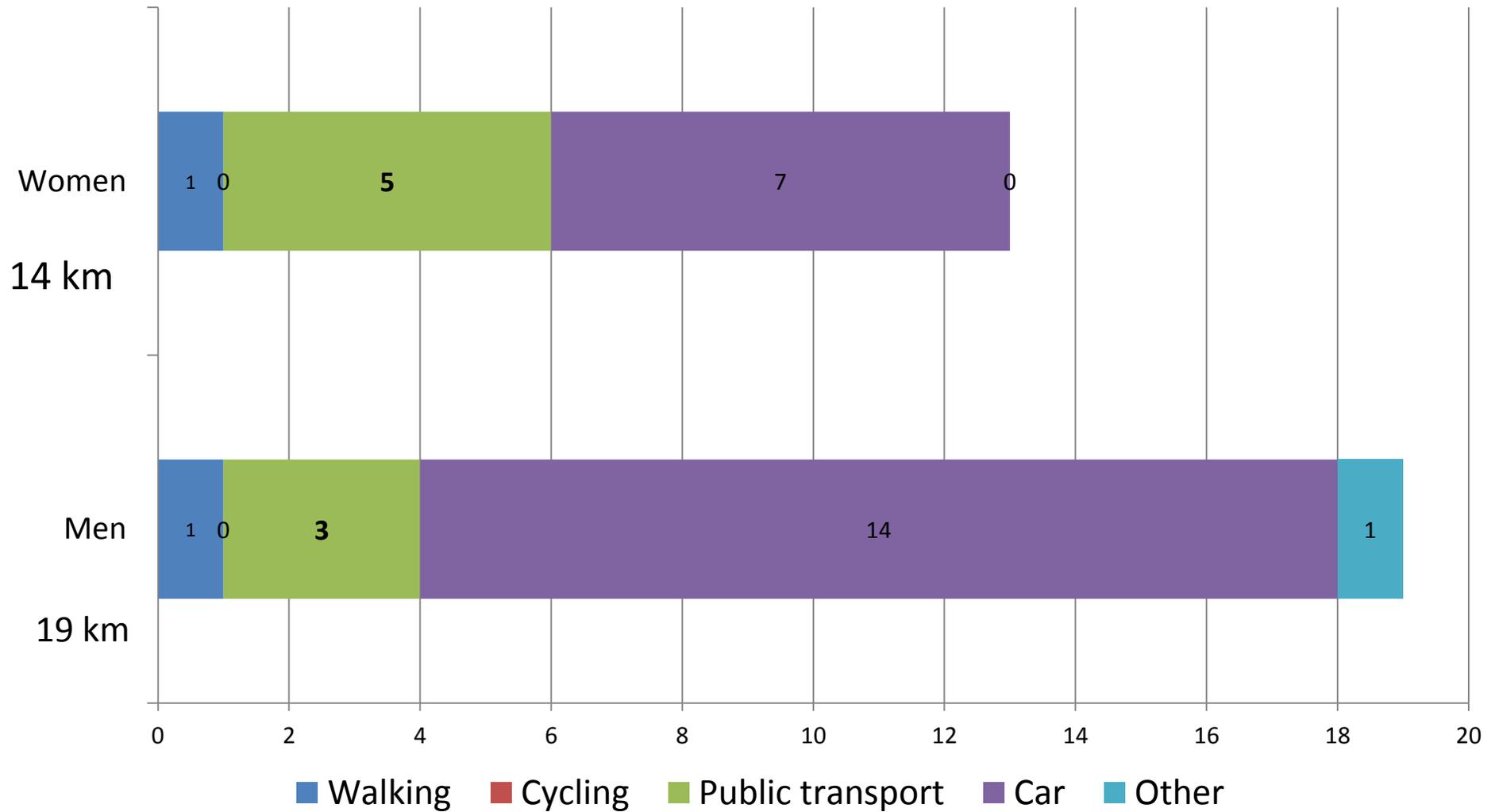
Number of daily journeys, 65+ yrs (2008)



Time spent on daily journeys, 65+ yrs (2008)

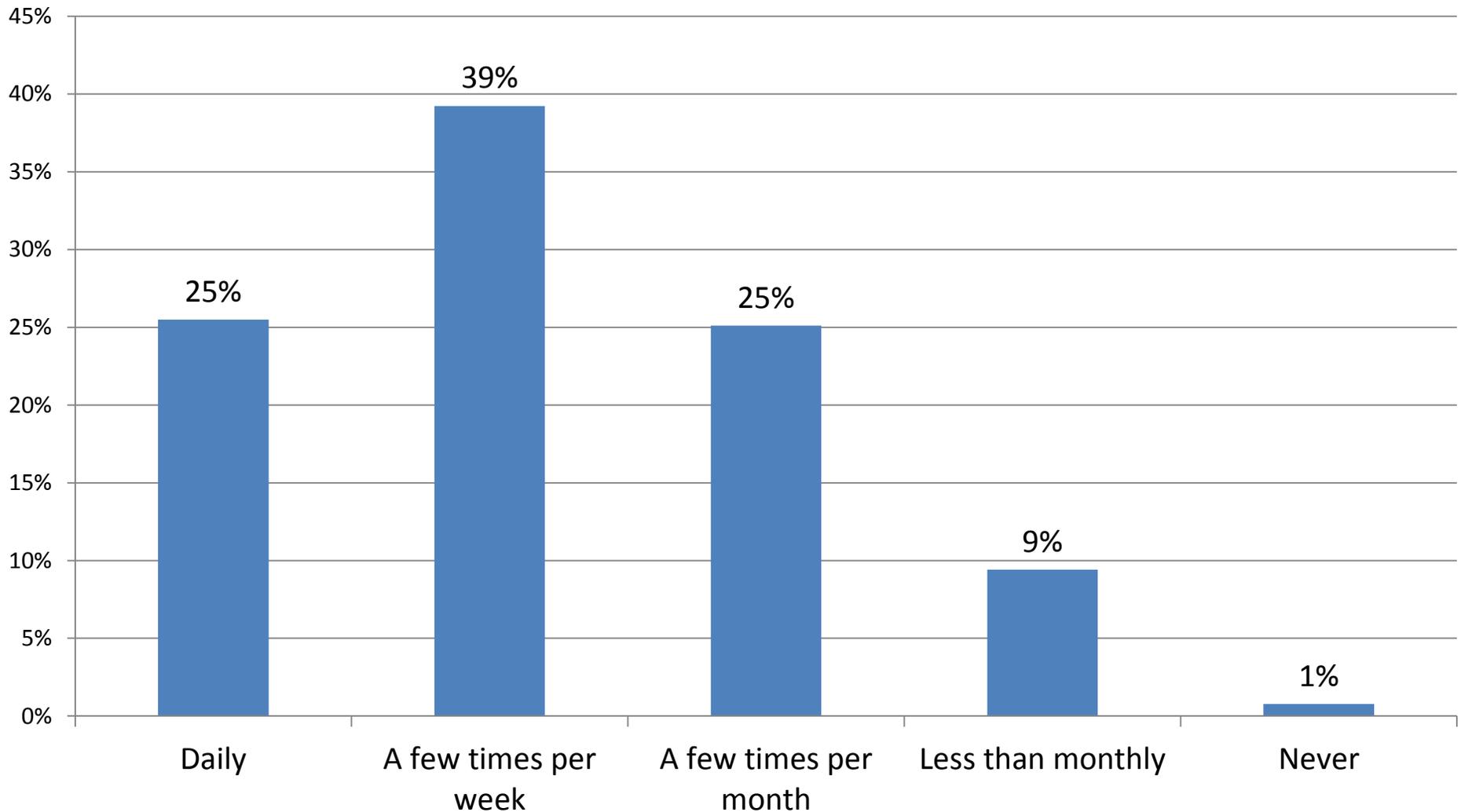


Length of daily journeys, 65+ yrs (2008)



“How often do you typically travel with public transport, all types of trips?”

65+ yrs, Helsinki, 255 respondents (HSL, 2011)

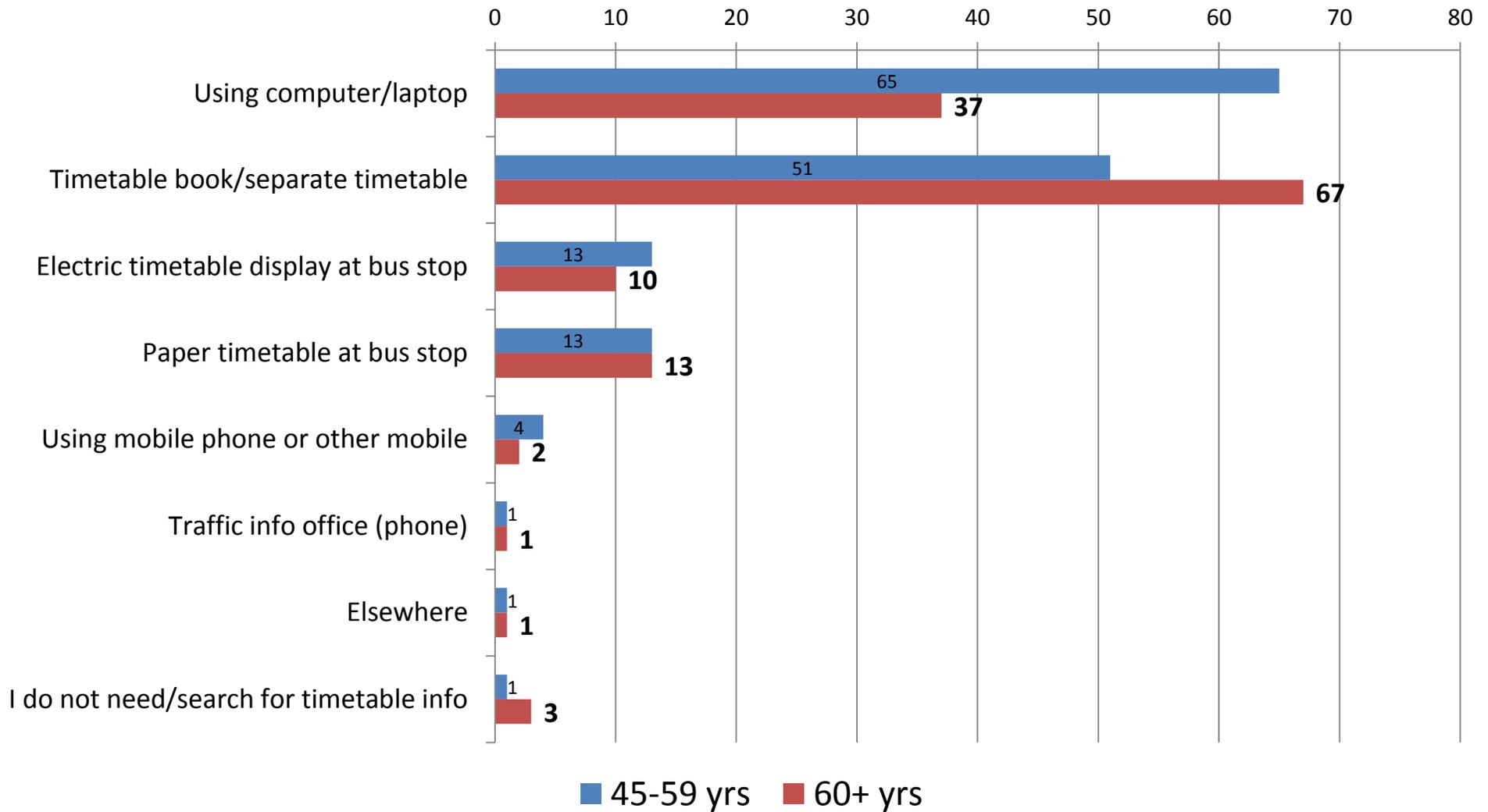


Information search on timetables in Finland

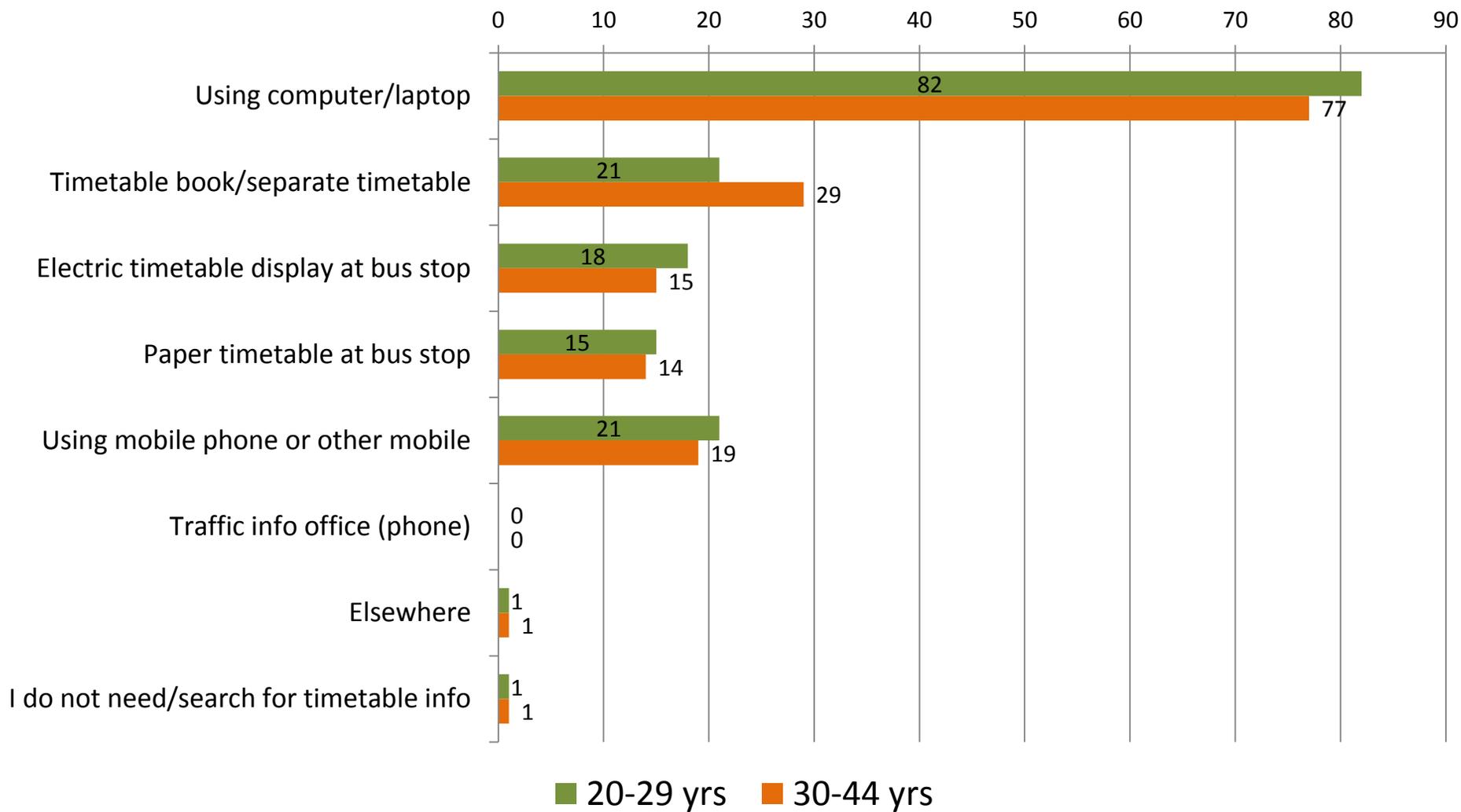
(Helsinki greater metropolitan area)

HSL's public transportation customer satisfaction survey, spring 2011. 2011. HSL publications 24/2011. Helsinki Region Transport. (In Finnish) (23.195 respondents in total; 2.783 aged 65+ years)

Where/how do you mostly search information about public transport timetables?



Where/how do you mostly search information about public transport timetables?



Older people & Transport

(European Commission 2011 & European Commission 2012)

- Main mode of transport used for daily activities, EU-27, October 2010, n= 25,570.
- Older people – aged 55 and above – had a different pattern of reliance on a broader range of transport modes.
- **47.0 % of older people cited the car as their main mode of transport.** In contrast, a higher than average proportion used **public transport (21.5 %)** or **walking (17.2 %)** as their main mode of transport; note that 4.0 % of older respondents replied that they had no regular mobility.



Elderly people and navigation

(Head & Isom 2010)

- Age associated decrements in spatial navigation skills
- -> restrictions in daily activities, resistance to new environments

Age effects on wayfinding and route learning skills

(Head & Isom 2010)

- Successful navigation: identification and knowledge of salient environmental features, critical route events, course-maintaining actions and the temporal and spatial sequence of such events and actions.
- **Response learning** (learning route through the environment) or **place learning** (forming a "cognitive map" of the spatial relationships amongst landmarks in the environment).

Age effects on wayfinding and route learning skills

(Head & Isom 2010)

- Older adults suffer decline in place learning (Moffat et al. 2002, 2006 & 2007, Driscoll 2003 & 2005, Iaria et al. 2009).
- It takes longer for older adults to form a cognitive map and once formed to the same level as younger adults, they are also less accurate in the use of it.
- How can we best use landmarks to support older people in navigation? (See Goodman et al. 2005)

3. Purposes and motivational factors

Purpose

The most frequent purpose of moving about by **foot** and **on bicycle** is to **take a walk or a ride**. **Shopping** is the main purpose of going by car or bus. **Visits** are generally the third frequent purpose of getting outdoors.

(Older people's outdoor mobility, The Danish Centre for Assistive Technology, 2000)

Motivational factors (Yeom et al. 2008)

In addition to self-efficacy (defined as a person's belief about his or her ability to engage in a health behavior)

- belief in the benefits of exercise,
- goals,
- personality,
- motivational appraisal and
- readiness for change

are associated with physical activity in older adults.

Motivational factors and moving outdoors

(Rantakokko 2011)

- “Green exercise, that is exercise in natural outdoor environments, may improve self-esteem and mood (Barton & Pretty 2010).”
- “Spending time in outdoor areas and in natural settings also promotes restorative experiences such as relaxation and calmness, according to a study of a Finnish population aged 15-75-years (Korpela et al. 2010).”

Motivational factors and moving outdoors

- Close relationships with friends and relatives motivate older people to move outdoors (Mollenkopf et al. 1997 in Rantakokko 2011)
- Social support mediates the effect of physical activity on functional disability (Taylor & Lynch 2004, Travis et al. 2004 in Rantakokko 2011)
 - > Applications encouraging for social activities while moving outdoors are needed, such as:
 - Mobile phone application for encouraging activity by sharing step count with friends (Consolvo et al. 2009)

Example: Four key design requirements for technologies that encourage physical activity

(Consolvo et al. 2009)

1. Give users proper credit for activities.
2. Provide personal awareness of activity level.
3. Support social influence.
4. Consider the practical constraints of users' lifestyles.

<http://www.katherineeveritt.com/papers/p457-consolvo.pdf>

More on motivational factors

(ILC-UK. 2011. Good Neighbours. Measuring Quality of Life in Older Age)



- Development of **positive thinking**, and making **downward social comparisons** rather than aspiring to unachievable ideals; people need to learn to **be, and to feel, more in control** of their everyday lives.

”The good transport arrangement – from the perspective of older, disabled people” (Dansk vejtidsskrift februar 2006 /Lykke Magelund, TetraPlan A/S, Ålborg trafikdage 2005)

Contact

- Personal and caring service from drivers
- Personal service when ordering (call-bus)

Service principles and operation

- Service close by
- Accuracy
- Possible door-to-door service (call-bus)
- Professional routeplanning (call-bus)
- Service daytime and Saturday morning/noon

Physical layout/design

- No level difference and roomy
- Good accessibility and good waiting facilities (service-bus)

Other

- Fair price
- Connected to ordinary public transport (service-bus)
- focus on information

CITY FOR ALL

Programme run by the City of Copenhagen, Technical and Environment Administration, working with making the city more accessible. The programme is committed to the international charter for walking, by Walk21.



MAKE COPENHAGEN A "METROPOLIS FOR PEOPLE" AND AN EVEN BETTER CITY TO WALK IN.

MORE PEOPLE TO WALK MORE
Join the debate...



Will you help us to...

- make Copenhagen the world's most liveable city: a sustainable city inviting all to a diverse and unique urban life.
- promote a walking culture where you choose to walk because it is the best and most healthy option.
- create a network of routes for people on foot, where it is safe and pleasant to walk: routes which make it easy and comfortable to walk to those places you need to get to.
- create small meeting places with experiences along the way: a place where you can have a short break on your trip, where you can meet other people, have a rest or just enjoy life.
- improve the district's traffic nodes - S-trains and Metro stations - so that they are easier to get to and encourage you to use public transport more.
- elevate the district's main roads - shopping arteries - to the status of first-class streets for people on foot.

CONSULTANTS **GEHL ARCHITECTS APS**
LAYOUT **GEHL ARCHITECTS APS AND TMF DESIGN**
PHOTO **GEHL ARCHITECTS APS AND TROELS HEIEN**

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Traffic nodes.



Shopping arteries.

“Future of transport”

European Commission (2011) Future of transport (No 312) & European Commission (2012) Active ageing and solidarity between generations – A statistical portrait of the European Union 2012

Ideas to encourage car users to combine different modes of transport:

- **65%** of car users thought they would be more liable to combine different modes of transport if they could **transfer easily from one transport mode to another**; more attractive terminals would be an encouragement for 47% of car users.
- **52%** of car users said that **better (online) information about schedules** would encourage them to combine different modes of transport instead of using their car, and **38%** would be more likely to do this if it would be possible to **buy tickets online**.
- Greece, Malta, Cyprus, Spain and Ireland tended to be the countries where the largest proportions of respondents said they would be encouraged to combine different modes of transport and reduce their use of a car if various suggestions were implemented (easy transfers, online information etc.).

4. Problems and barriers

Insights on problems with transportation in general

- 29,1% of the elderly population never experienced problems
- 12,4% of the elderly population frequently experienced problems
- Once 80+: 25% frequently experience problems

In general: feelings of insecurity increase with ageing, more pronounced for 80+ than in other age categories.

Insights on problems with transportation in general

- 31 % of the elderly: sometimes or quite often feel insecure in traffic
differences between age groups are small
but number doubles for the oldest group

Accessibility to the physical environment and buses

Many older people have problems of accessibility to the physical environment and buses, and rather many are **afraid of assaults and bag snatching**. However, these barriers **do not stop older people from getting out**, but they are very **inconvenient** for those who actually get out.

However, one exception is if older people think that **the nearest bus stop is too far away**. Then it is very likely that they do **not go by bus** and that they do **not get out at all**. It is also likely that they do not go out by bus if they live **more than 500 meters from the bus stop**.

Distance

In other cases distance **does not seem** to be of great **importance**, but if older people live **close by** the place where they usually do their **shopping** it is more likely that they go there by **bicycle**.

“Future of transport”

European Commission (2011) Future of transport (No 312) & European Commission (2012) Active ageing and solidarity between generations – A statistical portrait of the European Union 2012

Reasons why car users don't use public transport

- 71% of car users felt that public transport was *not as convenient* as a car
 - 72% said that *a lack of connections* was a problem
 - 64% mentioned *a low frequency of services*
 - 54% said they did not use public transport because it was *not reliable*
 - 49% of car users said public transport was *too expensive*
 - 49% stressed *a lack of information about schedules*
 - *Security concerns* were considered as an important reason not to use public transport by 40% of car users.
- In a majority of countries (19 out of 27), about three-quarters – or more – of car users felt that public transport was *not as convenient* as a car. In all Member States, at least half of car users said that they did not use public transport because of *a lack of connections*.
 - Cyprus, Malta, Poland, Bulgaria and the UK were the countries most frequently featuring at the top end of the distributions, i.e. car users describing multiple numbers of reasons why they did not use public transport.

5. IT

Barriers in using computers and the Internet

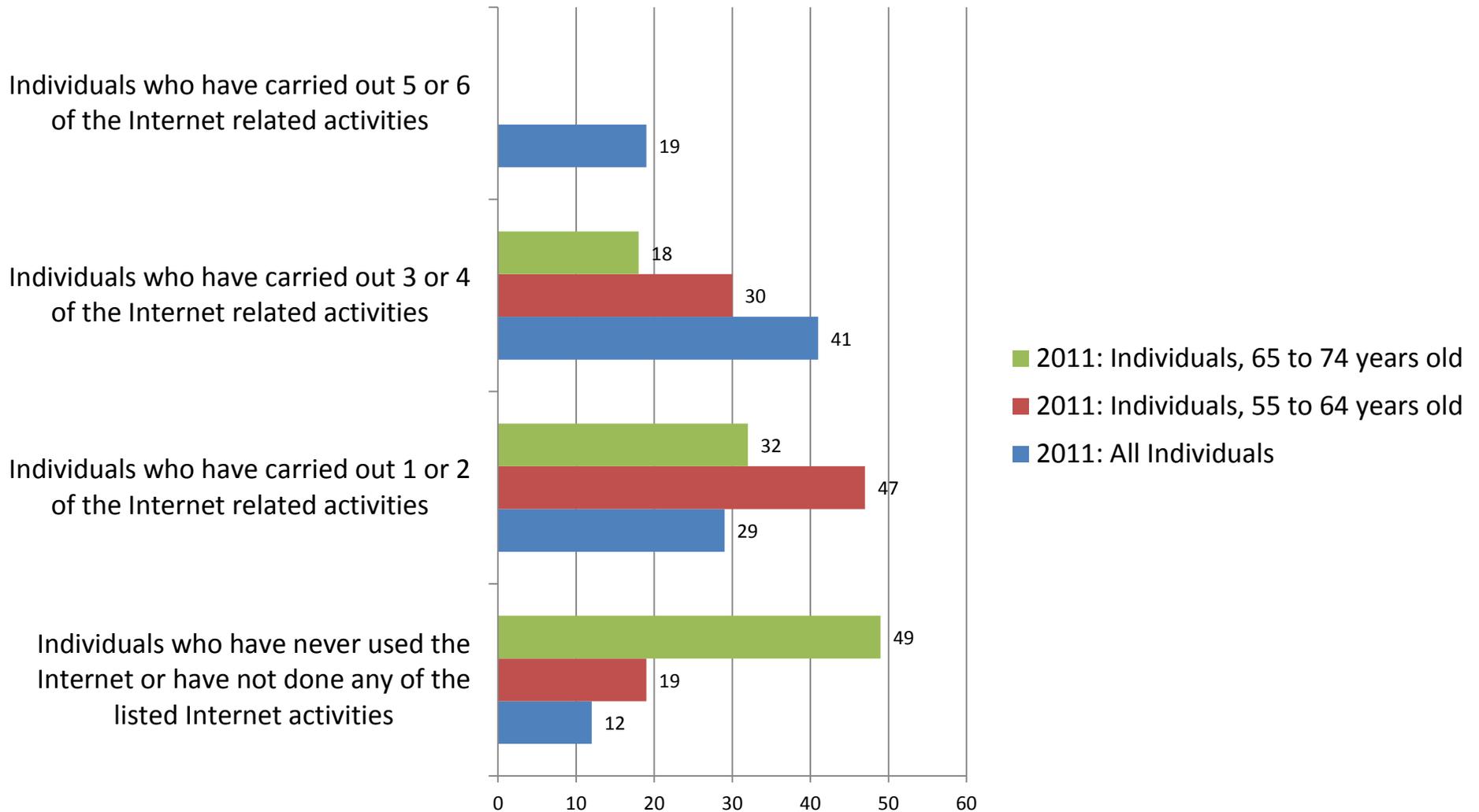
- **Psychological factors** (experiencing personal anxiety or stress, having limited self-confidence; lack of trust, doubtful, fear of having their personal information at risk for identity theft)
- **Obstacles from social environments** (lack of support, need of assistance, lack of a training program)
- **Inaccessibility to the technology** (illnesses or disabilities: arthritis, visual deficits, ergonomic factors; costs)

(Lee et al. 2011)

Prevalence of Internet usage and certain purposes of use in 2011 in Finland, %
(N = 4300, all age groups)

	Used the Internet in the past 3 months	Uses the Internet usually several times a day	Bought over the Internet in the past 3 months	Followed some social network service in the past 3 months	Uses the Internet with a laptop outside home and workplace	Uses the Internet with a mobile phone in 3G network	Has a smartphone in own use
Aged 55-64	81	41	26	15	18	13	28
Aged 65-74	53	23	10	6	11	5	11
Total, all age groups	89	59	45	45	26	29	42

Finland: Individuals' level of Internet skills, % (Eurostat 2011)

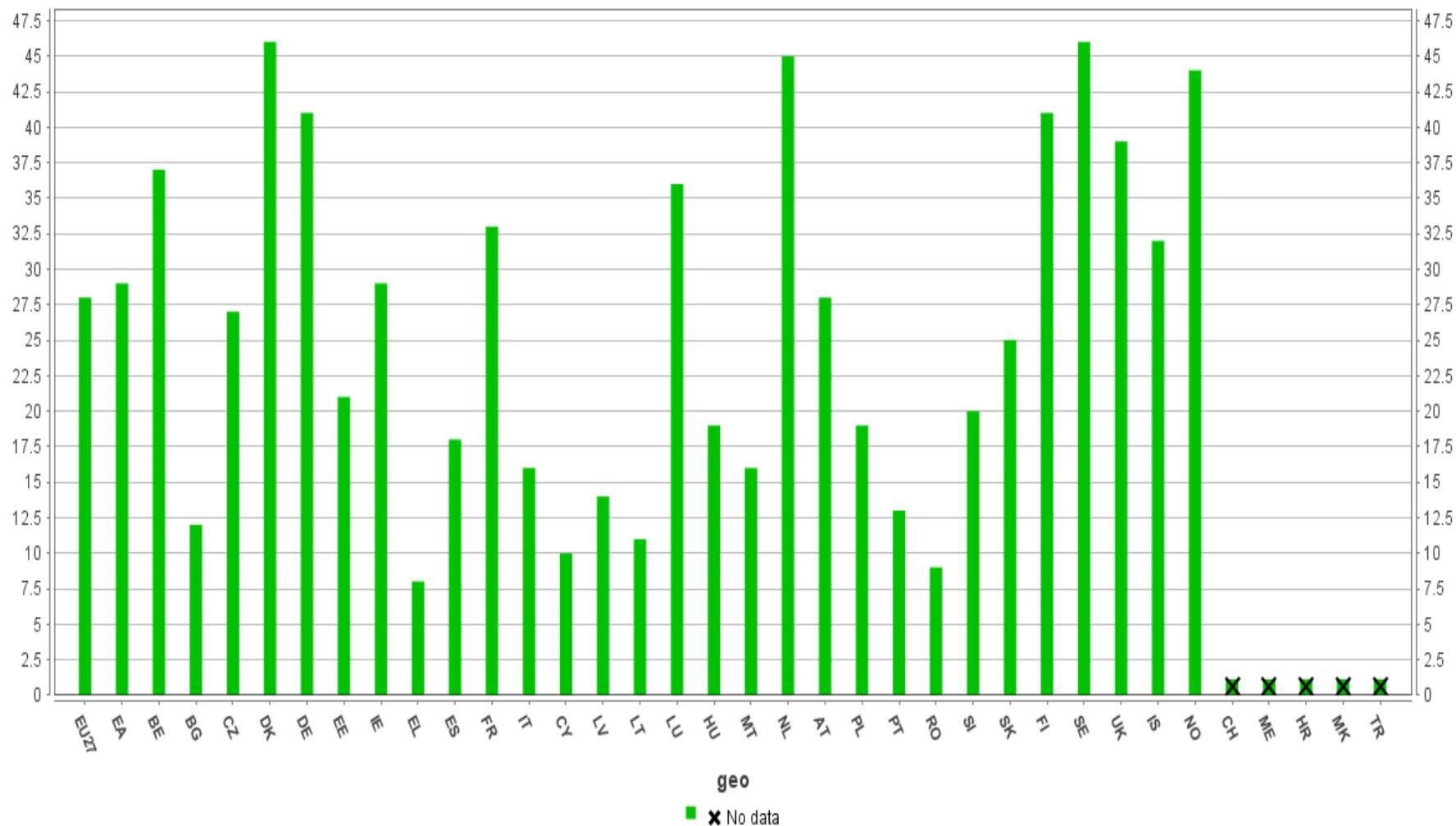


Individuals, 55-74 who have carried out 1 or 2 of the Internet related activities (Eurostat 2011)

Individuals who have carried out 1 or 2 of the Internet related activities

Percentage of individuals aged 16 to 74

Individuals, 55 to 74 years old

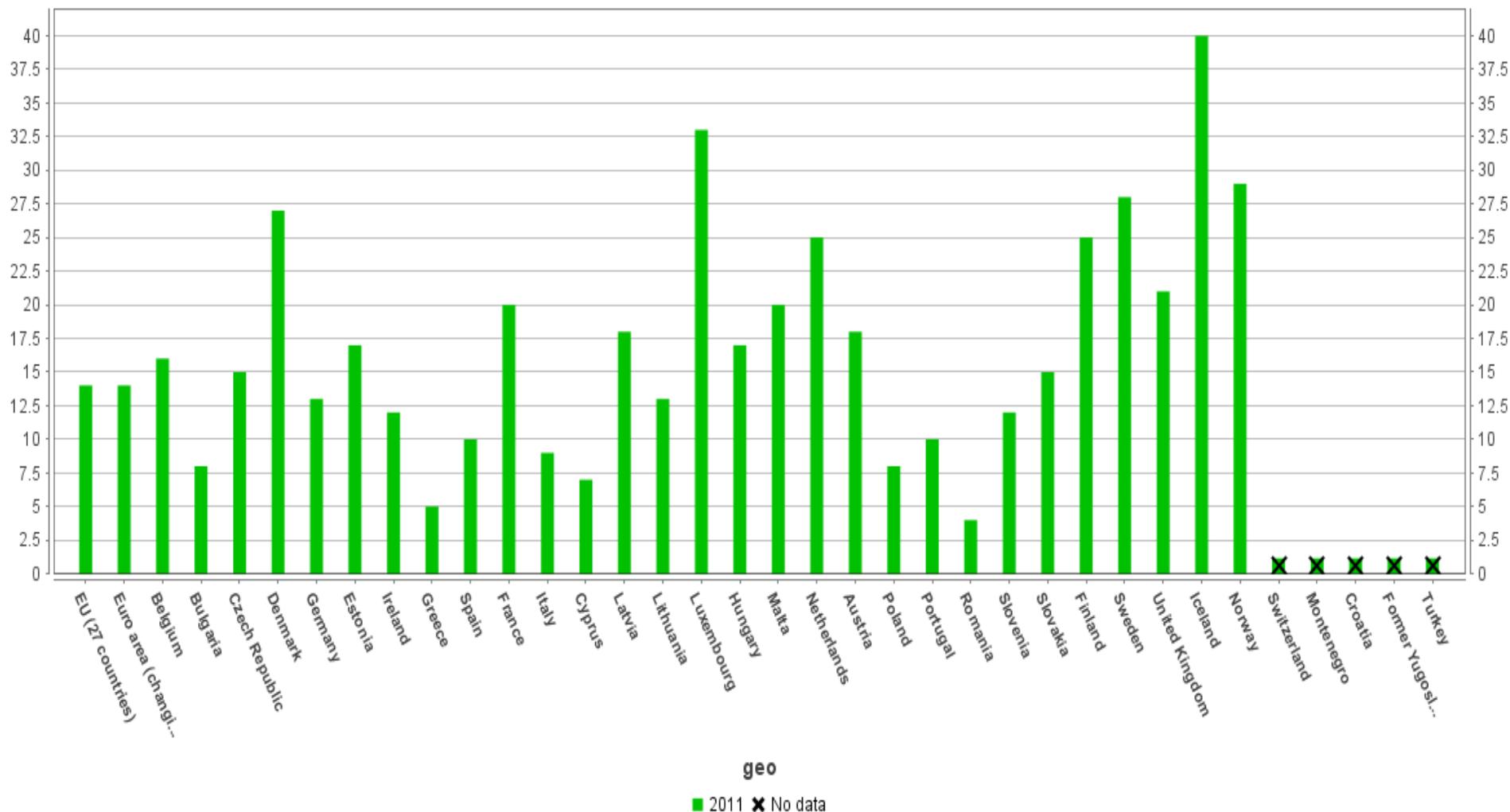


Individuals, 55-74 who have carried out 3 or 4 of the Internet related activities (Eurostat 2011)

Individuals who have carried out 3 or 4 of the related Internet activities

Percentage of individuals aged 16 to 74

Individuals, 55 to 74 years old

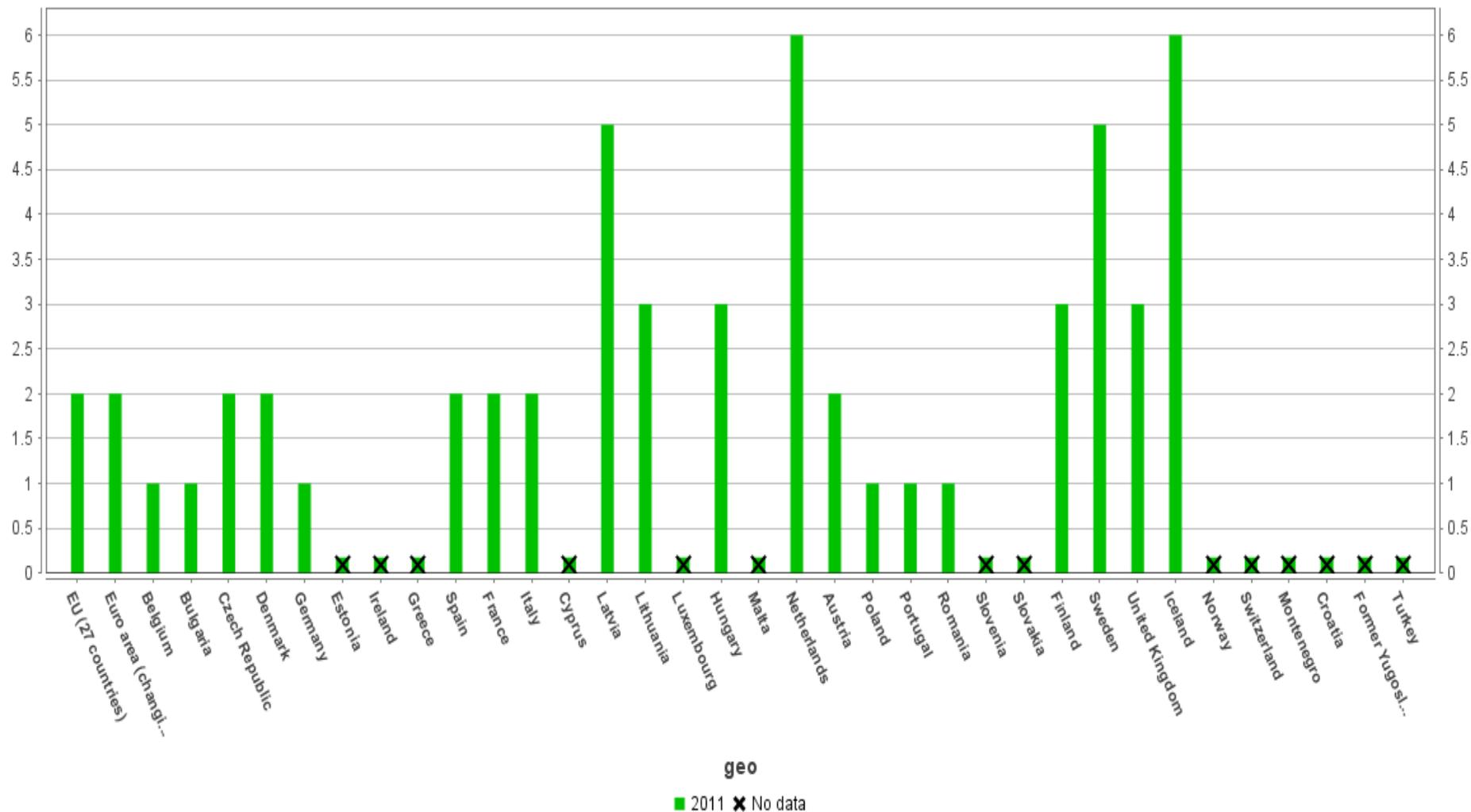


Individuals, 55-74 who have carried out 5 or 6 of the Internet related activities (Eurostat 2011)

Individuals who have carried out 5 or 6 of the related Internet activities

Percentage of individuals aged 16 to 74

Individuals, 55 to 74 years old



Constraints in the use of computer-mediated technology

(Lee et al. 2011)

Intrapersonal

- Too old to learn
- It is useless
- Computer is too complex
- Do not like it
- Cannot control it
- Fear to break it
- Never use it before.

Structural

- Cost too much to learn
- Cost too much to own
- Nowhere to go to use it
- Cost too much to purchase Internet access

Functional

- Logic reasoning decline
- Memory function decline
- Spatial orientation decline

Interpersonal

- Nobody for me to send email to
- No one teaches me how
- Have nobody to ask a question

Need to design a senior-friendly operating system while promoting uses of computer-mediated information technology to senior citizens (Lee et al. 2011)

- "Growing into older ages does not necessarily mean an inability to access the computer-mediated information technology; instead it could be a poor level of education, a lower annual income, or a lonely living arrangement" (Lee et al. 2011)
-> Increasing education or training opportunities and providing some forms of financial support
- "Apparently, intrapersonal factors will not be a problem until they grow into the older-old age range (75 year old and beyond), while interpersonal and functional constraints can become immediate effects on those stepping into retirement age (65 year old)" (Lee et al. 2011)
-> Differentiation of needs based on various age stages

Need to design a senior-friendly operating system

- "Intellectual abilities including logical reasoning and spatial orientation would not decline until the age after 60" (Shaie & Willis 2002, p. 366 in Lee et al. 2011)
- "Seniors were not technologically adverse; they wanted technology to support activities that they were familiar with. They were willing to accept new technology as long as it had usability and it was not frustrating "(Seals et al. 2008 in Lee et al 2011)



Example: Key Tips for Making Your Website Senior Friendly

- Break information into short sections.
- Give instructions clearly and number each step.
- Minimize the use of jargon and technical terms.
- Use single mouse clicks.
- Allow additional space around clickable targets.
- Use 12- or 14-point type size, and make it easy for users to enlarge text.
- Use high-contrast color combinations, such as black type against a white background.
- Provide a speech function to hear text read aloud.
- Provide text-only versions of multimedia content.
- Minimize scrolling.
- Choose a search engine that uses keywords and doesn't require special characters or knowledge of Boolean terms.
- Visit www.NIHSeniorHealth.gov for an example of a website that incorporates these senior-friendly guidelines.
- http://www.nia.nih.gov/sites/default/files/Sr_Web_tips_forweb_final_032509_0.pdf

6. Conceptual definition on mobility and motility

Concept of Mobility (Metz 2000)

1. *Travel to achieve access to desired people and places.*
2. *Psychological benefit of movement – of “getting out and about”.*
Such benefits may, however, be offset by feelings of vulnerability, for instance because of anxieties about personal security in public space.
3. *Exercise benefits.*
4. *Involvement in the local community – yielding benefits from informal local support networks.*
5. *Potential travel – knowing that a trip could be made even if not actually taken.*

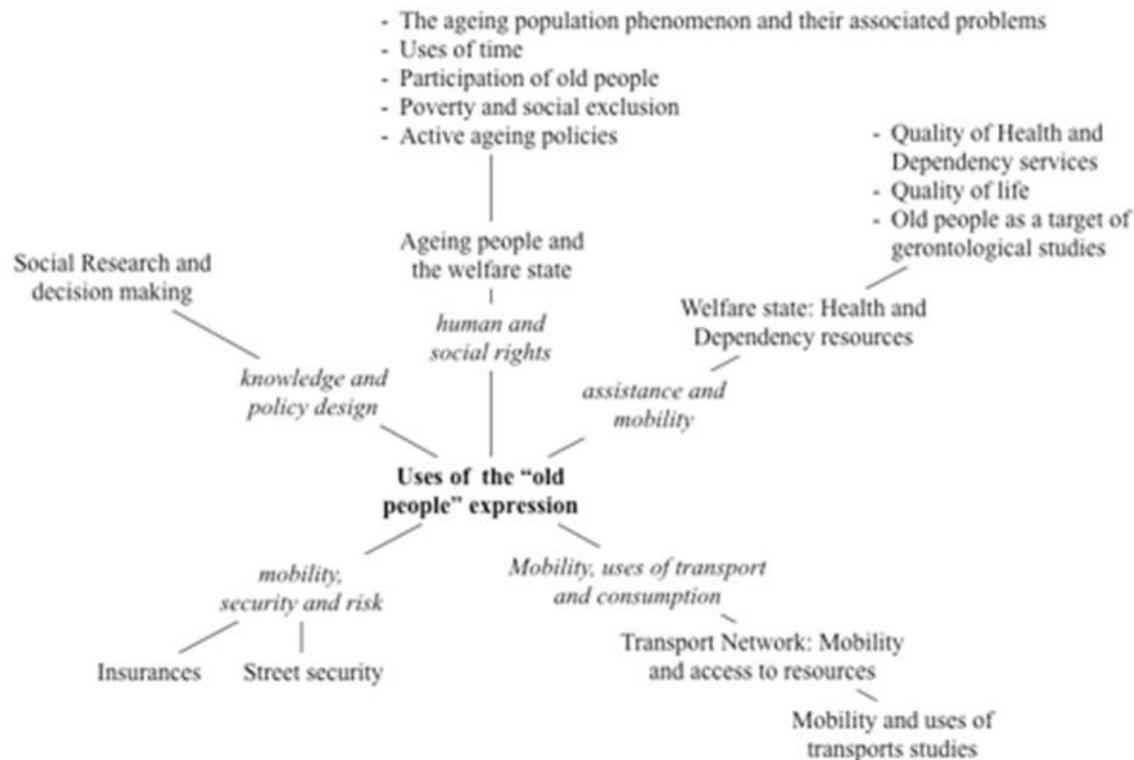
*** Measuring the components of mobility -> the impact on QOL of older people when facing mobility limitations

Concept of mobility defined by older adults living in the cities (Mollenkopf et al. 2006)

- Physical movement [a basic human need]
- A basic emotional experience
- Movement in natural surroundings and observation of nature
- A social need
- An expression of personal autonomy and freedom
- A source of stimulation and diversion
- A reflective expression of one's personal life force

When relating “old people”, mobility and assistance we observe different approximations. We identified the following narratives and documentation:

- Ageing people and the welfare state (human and social rights)
- Welfare state: Health and Dependency resources (assistance and mobility)
- Transport Network: Mobility and access to resources (mobility)
- Mobility and consumption (what the old people do with their free time)
- Insurances (mobility, security and risk)
- Social Research and decision making (knowledge and policy design)



Framework to identify segments of “old people” with different needs

We distinguish three relative degrees of dependency (Dependency, semi dependency/autonomy, autonomy) and three domains (Physical, social and cultural)

Each pattern identifies a different segment and requires a different adaptation of the future product and service

	Dependency	Semi dependency/ autonomy	Autonomy
Physical			
Social			
Cultural			

7. Wrap-ups

Conclusion

- Distinctions between age categories < distinctions between income groups
- Gender is a key dimension
 - because of difference re public transport experience / driving license
 - because gender differences grow with age
- As people grow older, the radius of action decreases, main elements:
 - Quality of the environment (accessibility)
 - Health

Conclusion

- Moment of abandoning 'car travel' is critical point: COM'ON could offer solutions to ease the transition to public transportation
- Multi-mode travel is even more important for this target group
- We need to take into account the features of motility
 - > COM'ON will offer solutions to enhance motility

What we don't know

- Facts and figures on stopping to use the car, and transition to use of public transportation
- Same applies to qualitative info (barriers, role of children, caretakers, ...)
- Analysis of multi-mode travel based on various levels and types of impairment

Some typologies (to be contrasted and completed)

Why old people moves?	Motivations	<ul style="list-style-type: none"> To get up To body caring To dress To eat To home caring To in house family caring To out of house family caring To visit & meet with friends & people To shopping To banking To access the health & care services To leisure To travel 	<p><u>Causes</u></p> <ul style="list-style-type: none"> Obligation / Prescription Solidarity / Commitment SelfCare Family bounds Political & social bounds Active ageing
When?	Dates and times	<ul style="list-style-type: none"> Annual public & social events (New year, Lovers day, Sant Antoni's day, Sant Jordi's day, Easter cycle, 1 of May, St. Joan's day...) Local public & social events Family & friends life cycle events (births, pass rituals, death...) Daily personal habits 	
Where? Remainig and connecting	Places, scenarios, destinations	<ul style="list-style-type: none"> People's home Residences Hotel Streets Shops Community facilities & parks Education facilities Health related facilities (primary services, hospitals, rehabilitation centres) Sport related facilities Administration facilities Leisure facilities Restoration Transportations facilities Social services facilities Cultural facilities Other facilities (Pompas Funebres, cemeteries) 	
How?	Means of transport	<ul style="list-style-type: none"> Walking Own car Taxi Bus & Tram Metro Train Boat Plane Horse, chariot 	

Some typologies (to be contrasted and completed)			
With who?	Profiles	Alone Own couple Sons & daughters Grandchild's, granddaughters, grandnieces Friends, colleagues & groups Accompanist, volunteer Eventual people on the street and places	
What means "old people"?	Segments	63-70 70-77 78-85 86-92 93-100 + 100	Different degree of mobility & needs

About displacements & assistance		
Why to use them?	Faster More comfortable More economic More secure More controllable*	
About information	Meta-information About companies About the service About the timetables About community* (Internet 2.0) Cross-service integration* Customer attention, on line interaction*	
Implicit questions about transportation	Where I can find the really usefully information to me among such a mess of information? Where is my "one button solution"? How I know if this is what I need? How I'm sure of this destination	Integration of transportation services and assistance services. The insurance cue* (This integrated service could be useful for insurance assistance)
Implicit questions about assistance	Who will help me in case of need?	Integration of transportation services and assistance services. The insurance cue* (This integrated service could be useful for insurance assistance)

8. References

Insights from qualitative and quantitative research

- Main source: Mobility and the elderly: successful ageing in a sustainable transport system 'Message' (2007 – 2009)
- OVG (Mobility in Flanders) – information on mobility patterns
- MOBEL (Mobility in Belgium) – National household survey on mobility
- BAS (Belgian Ageing studies) - information on perceptions and needs about 'quality of life' factors of elderly

Knowledge actors:

- “Trafikforskningsgruppen”, AAU
 - Annual conference since 1994: *“Trafikdage på Aalborg Universitet”* qualifying Danish Traffic- and Transportation research.
- Danish Travel Survey (Transportvaneundersøgelsen: TU), Technical University of Denmark
- Danish Traffic Journal (Trafik og Veje, dansk vejtidsskrift)
- Centre for Assistive Technology (part of The National Board of Social Services)
- Dane Age Association (focus on older peoples’ rights)
- The Accessibility Label Scheme (Accessibility for All Association, godadgang.dk)
- Architects/consultants
 - Gehl
 - TetraPlan
 - Danish Architecture Centre
 - School of Architecture, Academy of Fine Arts in Copenhagen
 - Centre for Sports and Architecture works within the field of sports, bodyculture, architecture and planning.

Accessibility projects (locally based)

- In cities
 - City of Copenhagen
 - City of Århus
- In country side
 - Municipality of Rebild – local Traffic Planning

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<http://www.katherineeveritt.com/papers/p457-consolvo.pdf>
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- Lee, B., Chen, Y., and Hewitt, L. (2011). Age differences in constraints encountered by seniors in their use of computers and the internet. *Computers in Human Behavior*, 27: 1231–1237.
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- Mollenkopf et al. (2006) Outdoor mobility in late life: persons, environments and society in Hans Werner (ed.) *The many faces of health, competence and well-being in old age*: 33-46. Springer: Dordrecht, The Netherlands.
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Further reading

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<http://dissertations.jyu.fi/studsport/9789513944506.pdf>

Worlds, UE, National, regional and local statistics and studies of ageing population supporting UN and OMS global recommendations as well OCDE health indicators and risk factor (health at glance, 2009) (for the case of Spain see: http://www.elpais.com/elpaismedia/ultimahora/media/200912/08/sociedad/20091208elpepusoc_1_Pes_PDF.pdf). The "Portal Mayores" compiles Spanish statistics: <http://www.imsersomayores.csic.es/estadisticas/index.htm>

VI Congress of Old People (2010 -every 4 years-):

<http://www20.gencat.cat/portal/site/bsf/menuitem.7fca6ecb84d307b43f6c8910b0c0e1a0/?vgnextoid=3f06df414ed26210VgnVCM1000008d0c1e0aRCRD&vgnextchannel=3f06df414ed26210VgnVCM1000008d0c1e0aRCRD>

Active aging documents:

<http://www20.gencat.cat/docs/dasc/03Ambits%20tematics/04Gentgran/>

[Seccions_orfes/Congres_Nacional_Gent_Gran/documents/ponencia_c_ponencies_envelliment_actiu.pdf](http://www20.gencat.cat/docs/dasc/03Ambits%20tematics/04Gentgran/Seccions_orfes/Congres_Nacional_Gent_Gran/documents/ponencia_c_ponencies_envelliment_actiu.pdf)

Studies of uses of time promoted by the council of Barcelona. Portal:

<http://w110.bcn.cat/portal/site/>

UsosDelTemps

(2002, Generalitat of Catalonia) The white book of active ageing (<http://www20.gencat.cat/docs/dasc/01Departament/08Publicacions/Ambits%20tematics/Gent%20gran/08llibreblancgentgranactiva02/2002Llibreblancgentgranpaper.pdf>)

(2009, Council of Barcelona) Bases for an active and healthy ageing (<http://www.aspb.es/quefem/docs/Envelliment%20a%20BCN.pdf>)

Welfare state: Health and Dependency resources (assistance and mobility) topics and references

- Quality of Health and Dependency services

- Quality of life

- Old people as a target of gerontological studies

Dependency law:

<http://www20.gencat.cat/portal/site/bsf/menuitem.6e02226e86d88424e42a63a7b0c0e1a0/?vgnextchannel=03ea4b1dc16a4210VgnVCM1000008d0c1e0aRCRD&vgnextfmt=default&vgnextoid=03ea4b1dc16a4210VgnVCM1000008d0c1e0aRCRD>

Dependency studies: <http://www.elmasnou.net/ARXIU/gentgran/>

[ESTUDI_DEPENDENCIA_GENT_GRAN_EL_MASNOU_2008.pdf](http://www.elmasnou.net/ARXIU/gentgran/ESTUDI_DEPENDENCIA_GENT_GRAN_EL_MASNOU_2008.pdf)

Catalan and Spanish survey of disability, personal autonomy and dependence situations (2008) <http://www.idescat.cat/pub/?id=edad>

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft15%2Fp418&file=inebase>

Resources to identify the degree of dependence (Clinical approach):

<http://www.hipocampo.org> // <http://www.gerontologo.es/>

Test of Barthel about the daily basic activities

<http://www.hipocampo.org/Barthel.asp>

Federation of associations of old people (Social approach): <http://gentgran.org/>

A selection of primary targets have been done. The following are the places to begin contacting people who works with old people.

<http://www.gentgran.nouhoritzo.cat/>

<http://www.acra.es/cat/index.asp>

<http://www.amicsdelagentgran.org/>

http://www.deltagentactiva.org/Home/_H4QS29qxa71vL_bjr56XgPCzIESJkW7mB1WBJSPOoHjRKHD6TmtfA

http://www.avismon.org/Home/_H4QS29qxa71KNNJarYfQfKboRzkzzSalt9NRYnrqquLdMKySZr-cvg

Transport Network: Mobility and access to resources topics and references

Mobility and uses of transports studies

Questionnaire of Daily Mobility (2006):

http://www20.gencat.cat/docs/ptop/Home/Departament/Estadistica/Estadistiques%20de%20mobilitat/Enquesta%20de%20mobilitat%20quotidiana%20de%20Catalunya%202006/pdf/Principals_resultats_EMQ_2006_juny_tcm32-39950.pdf

In detail by inner regions:

<http://www20.gencat.cat/portal/site/territori/menuitem.2a0ef7c1d39370645f13ae92b0c0e1a0/?vgnextoid=ee9f3abec0a38210VgnVCM1000008d0c1e0aRCRD&vgnnextchannel=ee9f3abec0a38210VgnVCM1000008d0c1e0aRCRD>

Mobility and consumption (what the old people do with their free time) topics and references

Access to destinations

Access to transport

Access to inside the transport

Access to meta-information

Insurances (mobility, security and risk) topics and references

The most part of pedestrian accidents are old people

The age of drivers is increasing

Street security

Street mobility

“Secure mobility”

http://www20.gencat.cat/docs/transit/Documents/Arxius/doss_tec_18.pdf

RACC Corporate Social Responsibility program activities:

[//">http://saladeprensa.racc.cat/wp-content/uploads/2011/09/ndp-estudi-racc-mobilitat-majors-65-anys.pdf //](http://saladeprensa.racc.cat/wp-content/uploads/2011/09/ndp-estudi-racc-mobilitat-majors-65-anys.pdf)

http://imágenes.w3.racc.es/uploads/file/22514_DP_Gente_Mayor_CAT.pdf

Social Research

Database of Catalan social research groups

<http://www20.gencat.cat/portal/site/bsf/menuitem.7fca6ecb84d307b43f6c8910b0c0e1a0/?vgnextoid=e26855ed7bc37210VgnVCM1000008d0c1e0aRCRD&vgnnextchannel=e26855ed7bc37210VgnVCM1000008d0c1e0aRCRD&vgnnextfmt=default>

National User-workshops Lego Real Play

Workshop objective and participants

The objective of the workshop is to identify and begin the understanding of

- specific user-groups and their particular situations and contexts
- needs and wishes and barriers related to the specific user-groups.
- Coping strategies that are carried out in everyday life

By bringing personal experiences, insights and perspectives into play.

The workshops result in defining the scope and focus for following ethnographic based pre-studies.

10-12 participants in the workshop should cover variation of the following criteria:

- Experiencing mild to moderate difficulties (visual, hearing, balance, orientation) with moving around outdoors
- Living in the city vs. Living in the countryside
- Recently stopped driving car (within 1 year) vs. haven't been driving car for a longer period (more than 1 year)
- New living environment (new routes)
- Men and women - retired

Overall project questions for the workshops to address

1. How – and in which situations – does fear and lack of self-efficacy occur?
2. To whom does it occur?
3. What do people do to cope with it?
4. And what are the barriers to overcome the fear and lack of self-efficacy, when it is in place?

Aim: Bringing personal experiences, insights and perspectives into play.

Context: fear and lack of self-efficacy – can be complicated matters on a personal level and uncomfortable/unpleasant to share.

How to handle this:

We can talk about concerns, barriers and motivations for getting round and about as one wishes to.

Workshop set-up

REALplay workshop

1. The facilitator ask a question with relation to the project
2. The participants answers this question by building a symbolic and metaphoric models, which they afterwards presents to the group



Workshop set-up: *Why Lego bricks?*

The hand-mind connection

The extraordinary connection between our hands and our mind. By using the hands we get connected to our unknown knowledge. Some researchers refers to it as: 'thinking with our hands'.

The process

As well as the important element that the process of building allows for individual reflections as alternative to more reaction-based discussions.

The shared language

Different people have different references, preferences and 'languages'. Some people like to draw, others like matrixes and some like to write.

By building in bricks, we create a space and structure for a shared language.



Screenplay

Before the workshop:

- Arrange the main table, so that there is enough room for the participants
- Arrange the bricks, so they are easy to approach
- If there is coffee and other refreshments, please position them on an extra table
- Find 28 Lego-bricks with eyes on them
- Find out who documents the models – in terms of pictures and notes

REALplay – workshop screenplay

Three page screenplay with guidelines and ‘direct quotes’ on how to facilitate the workshop

*What spoils or Challenge social relations in seniors' lives?
What seniors' do to maintain and create social relations?
What barriers there are to escape loneliness, when it is there?*

– We would like you to share with us some of your personal experiences and perspectives on these questions.

To do this, we have brought along some LEGO bricks to support the process.

Why bricks?

The hand-mind connection
The extraordinary connection between our hands and our mind. By using the hands we get connected to our unknown knowledge. Some researchers refers to it as: 'thinking with our hands'

The shared language
Different people have different references and 'languages'. Some people like to draw, others like make tables and some like to write. By building in bricks, we create a shared language

The workshop process

We start with some skills building exercises, so that you get to know the bricks

The process goes like this:

1. I ask a question with relation to the project
2. You answer this question by building a model, and
3. Then you present these models to each other

After some skill-building exercises, we will go into the main questions of the workshop

– I ask some questions, and you build the answers – and in the end I might ask you to build some of the models together.

However do not worry about the process – that is my job

So let's begin!

participants)

back to the table.

icks – you have 5 min to do it.

are is 2 min. left.

or a manager

get their chance to explain)

to show you, that you do not need to build literal
del.As you can see, you can build icons, meanings
of the model a specific meaning.

the table

**is to make this bridge as tall and as wide as
again you have 5 min!**

re is 2 min. left.

obile-phone test!

dges (hard enough to make sure that they crash)

is an explanation behind. When I did it – you probably
n – and that is quite natural – because you have been
was to show you this ownership. – and it is pretty
it also means that you should respect each other's
hange them.

from now on however there will be not more tricky
many bricks as you want.

hing about what spoils or challenges the social

RECAPITULATIONS

All workshops took place from April 23rd till April 30th 2012

COM'ON REALplay workshop

24.4.2012, Finland

11 participants
7 females
4 males

(The first letter of the participant code:
F=female, M=male)





- **Average age of participants: 68,6 years**
(range 62 – 80 years)
- **Females: 69,7 years**
(range 65 – 80 years)
- **Males: 66,8 years**
(range 62 – 75 years)

8 persons live in Vantaa,
2 persons in Espoo,
1 person in Helsinki

(More detailed information on
the dwelling area in the Word file.
In the participant code V=Vantaa,
E=Espoo and H=Helsinki)



1 person has lived in the same place less than a year
2 persons have lived in the same place for 1-2 years
8 persons have lived in the same place more than two years

2 participants drive a car or travels by car as a passenger
(1 female, 1 male)

9 participants don't drive a car or travel by car as a
passenger
(6 females, 3 males)

2 persons used car earlier but gave up using it
less than a year ago (1 female, 1 male)

5 persons used car earlier but gave up using it a
longer time ago (4 female, 1 male)

2 persons have never used private car as mean of
transport (1 female, 1 male)

Difficulties in moving outdoors or using public transport:

2 feel that they hardly ever encounter any difficulties (2 females)

4 feel they have mild difficulties (1 female, 3 males)

5 feel they have moderate difficulties (4 females, 1 male)

(A survey question; the questionnaire was filled in before the workshop was started.)



Have these difficulties prevented you from going outdoors, even if you would have wanted to go?

Very seldom or never: 3
(2 females, 1 male)

Quite seldom 7
(4 females, 3 males)

Quite often or often 1
(female)

(A survey question; the questionnaire was filled in before the workshop was started.)

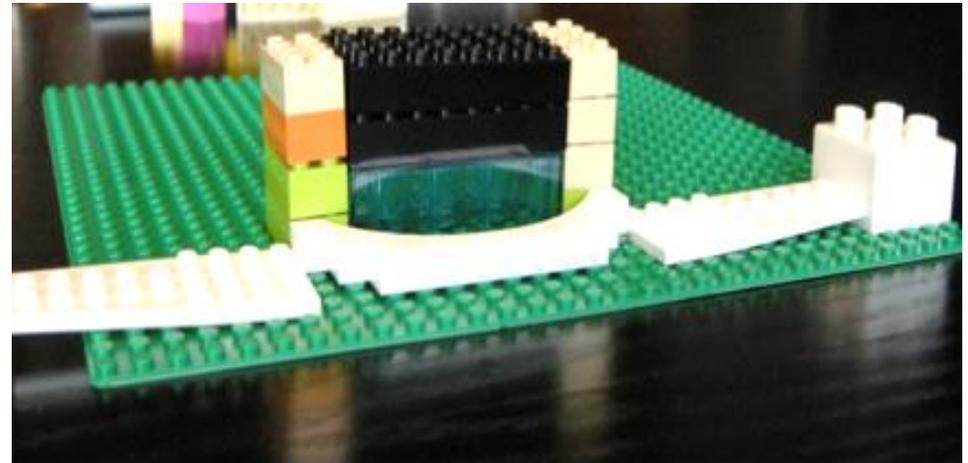


What spoils or challenges the ease of getting around outdoors – using public transport?

Slides 9 - 21

Snowy and icy streets and bus stops make it difficult to get out; buses leave too quickly, difficult to keep your balance in a moving bus

- *The streets are covered with snow. The buses stop further away on the street, not exactly by the pavement. You have to jump down. Especially this, getting out of the bus in the winter . Somehow you can manage to get yourself on the bus, but this jumping out, because with this body weight and these knees it is really challenging. The bus stops are very icy and slippery – why they don't start delivering sand first on the bus stops?*
- *There are lot of differences in the bus drivers: some wait until you get on the bus and sit, but others start driving immediately. You need to constantly hold on, you cannot trust in keeping your balance.*

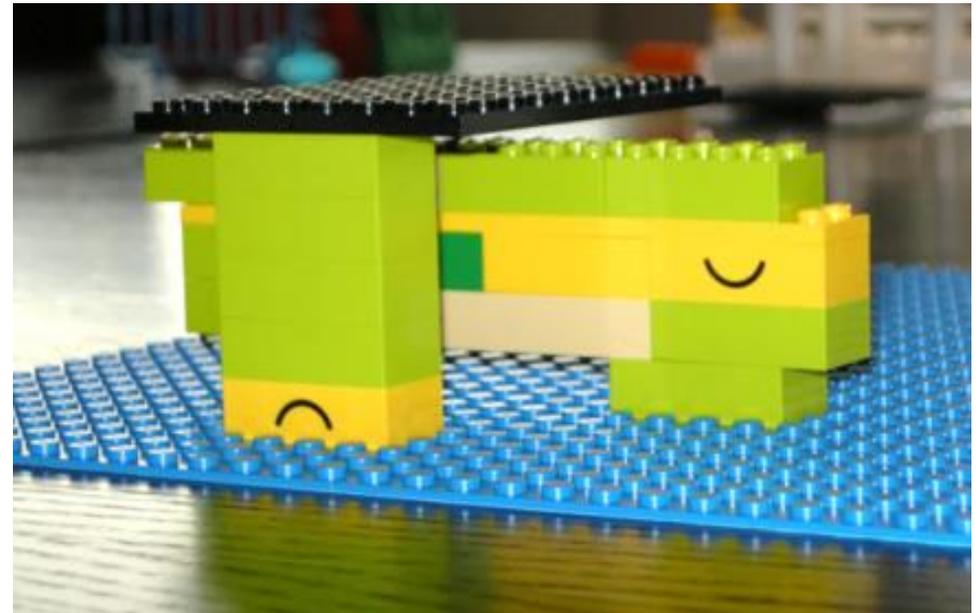


F67V-FI

Waiting time at the bus stop in winter; not used to waiting for the transfer, used to drive own car

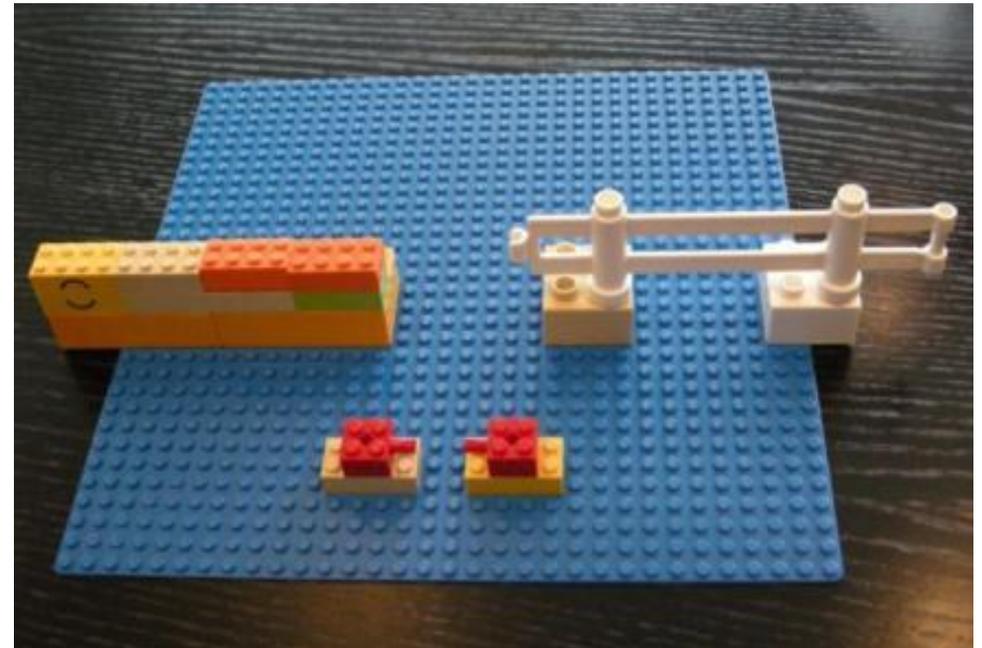
- *Yes, this is a bus here, at the bus stop, it has just arrived.*
- *So it is awkward - long time to wait for the bus there. I'm used to drive my own car.*
- *Even one minute is too long time for that, when it is frost. For forty years I haven't had to use much of these, buses or any means of public transportation.*

M66E-FI



Winter conditions of the streets and the bus stop & too few departures & expensive taxi service

- *Here you can see the big pile of snow, there is the parking place of the house I live in, and there is the fence. When they come and clean the main street out of snow, they just drive with the snow plough once, and leave the piles of snow there, by the main lane. Last winter there was two meters of snow and no pavement. I had to first climb to the driveway, and then get myself to the bus stop.*
- *Bus service ends at 10 p.m. Stay at home unless you have money for taxi.*
- *In our neighbourhood the buses go very rarely, that is a problem too. Especially during the weekends. Someone seems to think that nobody moves anywhere from our place.*

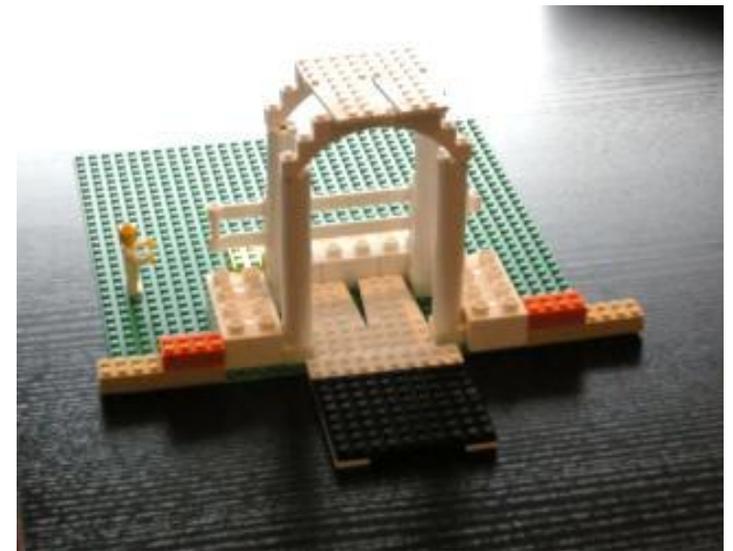


M62V-FI

Snowy and icy pavements and bus stops & fear of falling when trying to access the bus

- *The first brick I chose was the tiny, tiny figure of a person. And I built as long pillars as possible to reflect the feelings of a small human being with bad knees trying to get to the bus stop. And these white bricks, they represent the piles of frozen snow, one meter high, and the tiny human being is ought to be able to climb over them to get to the driveway where the bus goes. One feels rather helpless. Even if there is bus service, but if you can't access the bus.*
- *I personally, I am afraid to climb over these icy snow piles, because if I fall down there and break my already broken knees again, I will be invalid for the rest of my life.*
- *Human being is also small next to the bureaucracy, one does not understand the logic of maintenance. Different sectors, like public transportation services and road maintenance, do not discuss with each other, and probably their ICT systems are incompatible.*

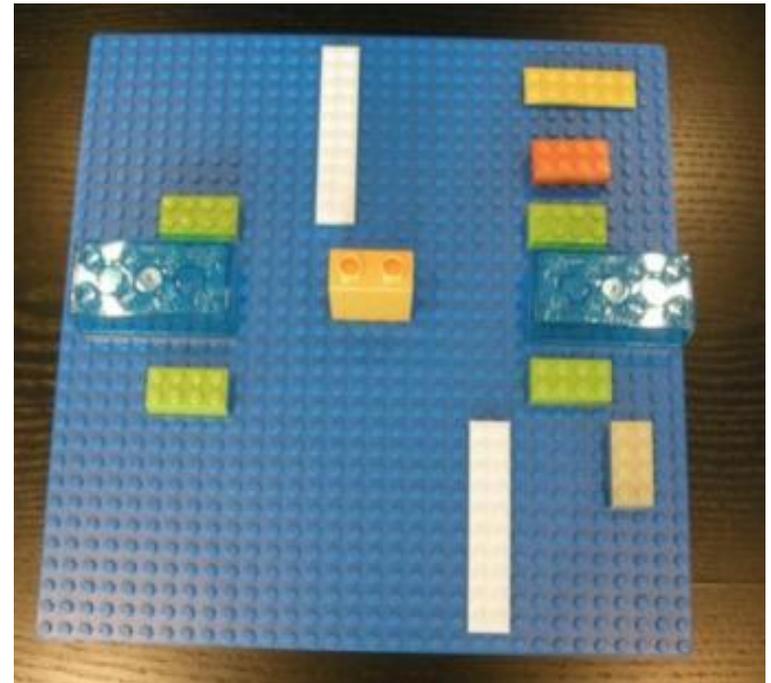
F70V-Fi



Crossroads & buses start moving too quickly, fear of falling & bus drivers and passengers speaking on mobile phones

- *The biggest problems are the crossroads. When I come to this crossroad like this, there is no signal, except very rarely. I cannot see whether the light is green or red. The situation is terrible. I'll try to figure out that the light is green as the car has stopped here. And I pass the road and get to the other side of the street, but then from the other side comes a car, and almost touches my skirt. There is no traffic discipline. It is very difficult for us visually impaired because you can't see the colours.*
- *I think it is wrong that disabled people or elderly or someone other in need of help is not allowed to sit on the front seat. Or you can sit there but you are not allowed to step out from the front door.*
- *Nowadays, especially immigrant bus drivers start driving immediately, so that the situation is chaos-like before you get further on the bus. I have fallen down on the floor*
- *It is unpleasant when drivers or passengers speak on the phone on bus. When drivers speak on mobile phone, it makes me nervous and it makes me angry as they endanger our safety.*

F80E-FI (with visual impairment)



Getting on the bus in wintertime & fear of falling in the bus due to fast driving

- *Getting on the bus is difficult as the bus stops so far away from the bus stop - that is under the winter conditions.*
- *Some of the bus drivers just sit there, in their holy solitude, with no eye on what's going on in the bus, they don't react in any way. I'm not a racist person but I must say that some of the immigrant bus drivers drive very fast. Once the bus suddenly stopped, and I fell over, and my hip was broken. The bus driver was totally helpless, he didn't do anything. There are very good bus drivers, too, and I'll give this one to the good ones...*
- *The bus drivers should keep an eye on what's going on in the bus. I feel unsafe.*
- *So, I am afraid to get on the bus, because I never know how the driver will act, or what will happen. Will I get a seat in time or whether I have to try to walk along the corridor, or what should I hold on to. It is difficult. Especially if you have something to carry.*

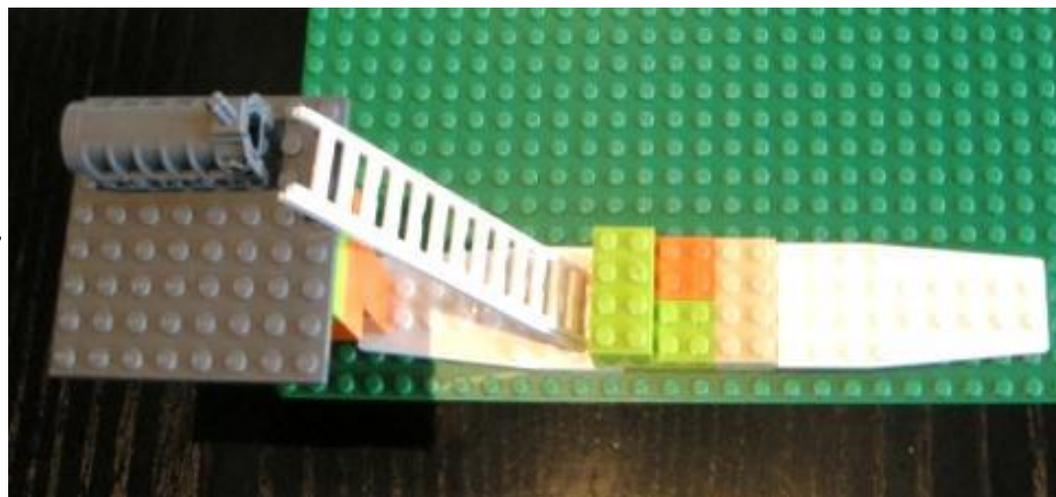
F65V-FI



Lack of escalators and elevators, climbing and descending the stairs is difficult

- *At the railway stations, there are stairs. It is difficult to climb up, because I have arthrosis. They do not have elevators and escalators everywhere.*
 - *Descending the stairs, it is even more difficult than climbing up.*
 - *This is a train, and it depicts the railway, and the ladders represent all the different kinds of barriers that we need to get over.*
- *They don't have ladders in the stations, but it feels a bit like you have to climb the ladders to get on the train*

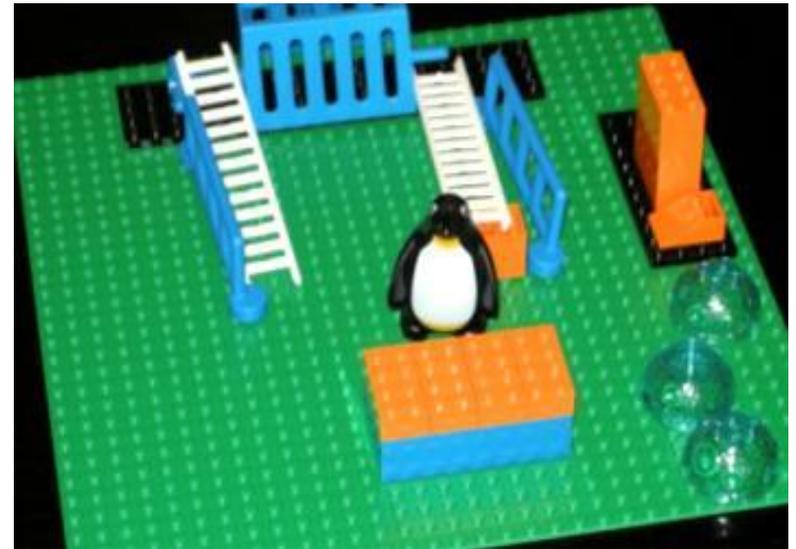
M75V-FI



Inconvenient transfer connections & slippery roads

- *This the Tikkurila railway station with all the stairs. I travelled by train from Korso (I was feeding the cat there), and I checked that I 'll have two minutes to transfer to bus. This is related to the traffic planning and scheduling – why are they planned in such a way that the transfer time is so short, that a person with difficulties cannot make it. I'm the penguin, walking slowly, leaning on the railing. I have to descend the stairs, walk to the other end of the tunnel , and climb the stairs. The bus is about to leave. Almost breathless I wave to the driver, I'm coming.. But no, the bus goes without me...*
- *It is so frustrating, then I stand there for twenty minutes or half an hour in the wintertime and summertime before the next one comes. Of course I could take another bus, but then I should walk uphill for one kilometre or so, and the maintenance in the wintertime is ever so lousy. Last winter I didn't have the courage to walk there, it was so slippery.*

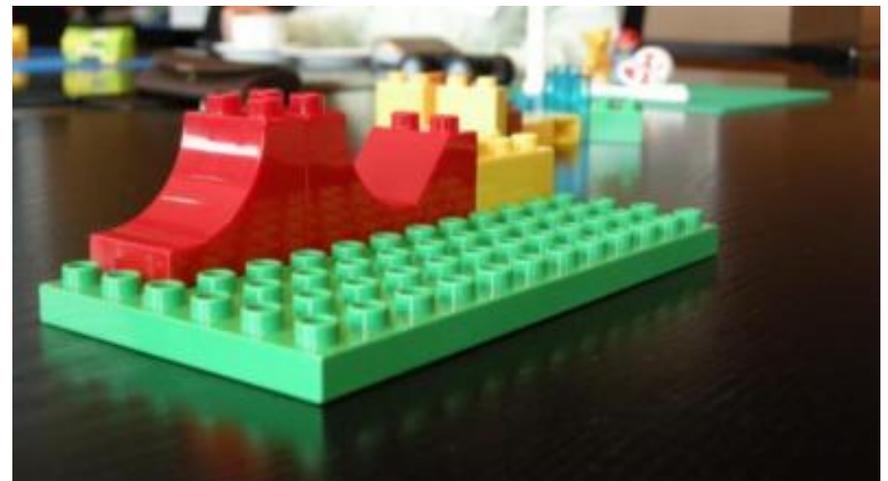
F66V-FI



Frozen streets, rutted & slippery roads, thus hard to walk & one falls very easily

- The streets are snow-ploughed on the second or third day after snowing, and car wheels make deep ruts on the roads, and then, if the temperature rises and then drops again below zero, the streets will be frozen. Pretty hard to walk, which is why it would be better to use private car, if you don't want to fall down. And often it snows again, and the icy surface is covered with snow, and then it will extremely slippery. The maintenance folk of Vantaa city should clean the streets on the very same day it has snowed. Once the surface has frozen it is more expensive to clean the road.*

M64V-FI



Crossing the road & getting on the bus & stamping your ticket and finding a seat to sit on while the bus starts very fast

- *There is a bus on the bus stop, and me and my husband with his walking chair trying to cross the road as quickly as possible. There are traffic lights and zebra crossings.*
- *And because, in the end, you do not know when the lights will change, you have to walk pretty fast, depending on the weather. But when you are in a hurry, and the dog likes to watch the traffic. And then getting on the bus. Those low-floor-buses are very good, but if there are steps, it is very difficult to step on the bus, and if you are carrying things with both hands, or have a dog or a cat. And the bus starts moving very fast. You have to stamp your ticket quickly and get a seat quickly. These are everyday challenges.*

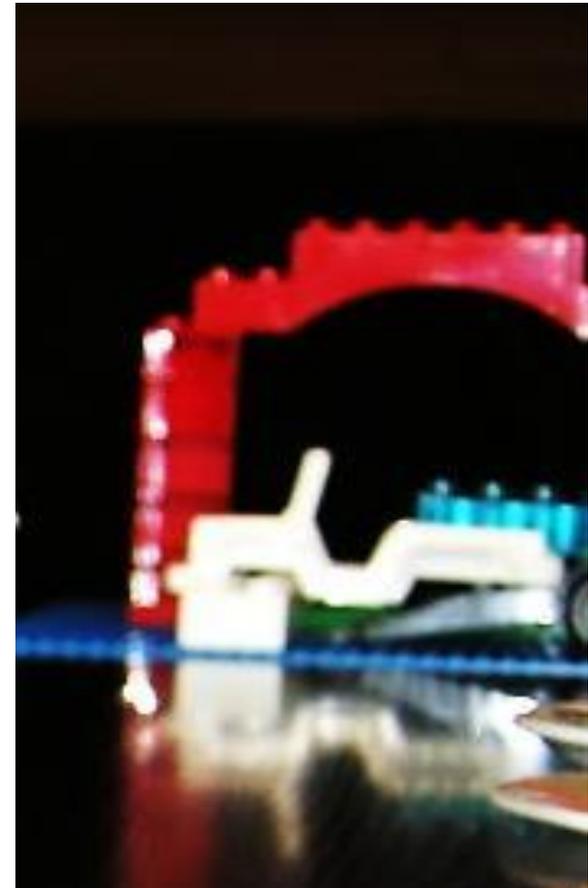
F66H-FI



Getting on the bus in wintertime, huge gap between the bus stop and the bus

- *I have this massive bus stop here. And this is the bus, and this gap here (between me and the bus) is awfully big. And when it is frozen, and over here there is a huge pile of snow, it takes a long time for me to get on the bus. And the bus driver has to wait for me.*
- *And then, because I have a cane, using the card reader is very difficult. I have to press one or two and at the same time try to keep the card in front of the reader, and then I have the cane, which I try to put somewhere. I must say that bus drivers have been behaving surprisingly well, they have never got nervous or anything. They seem to think, take your time with stamping... And they wait surprisingly nicely until I have found a seat to sit on, I think it is thanks to my cane.*

F74V-FI



Challenges and difficulties - all the key words from slides 8-19

- Snowy and icy streets and bus stops make it difficult to get out; buses leave too quickly, difficult to keep your balance in a moving bus
 - Waiting time at the bus stop in winter; not used to waiting for the transfer, used to drive own car
 - Winter conditions of the streets and the bus stop & too few departures & expensive taxi service
 - Snowy and icy pavements and bus stops & fear of falling when trying to access the bus
 - Crossroads & buses start moving too quickly, fear of falling & bus drivers and passengers speaking on mobile phones
 - Getting on the bus in wintertime & fear of falling in the bus due to fast driving
 - Lack of escalators and elevators, climbing and descending the stairs is difficult
 - Inconvenient transfer connections & slippery roads
 - Frozen streets, ruddy & slippery roads, thus hard to walk & one falls very easily
 - Crossing the road & getting on the bus & stamping your ticket and finding a seat to sit on while the bus starts very fast
 - Getting on the bus in wintertime, huge gap between the bus stop and the bus
- In the summertime, moving outdoors is a lot easier. You can walk or bicycle, too.
 - The challenges or difficulties mentioned in the workshop are mainly related to weather conditions, and poor road maintenance, and the way drivers behave when the bus leaves the bus stop.
 - The challenges seem to be "out there", own illnesses and disabilities are quite seldom referred to when explaining the models.
 - The models presented concrete challenges; most of them were like "photos" of reality; representations of the environment

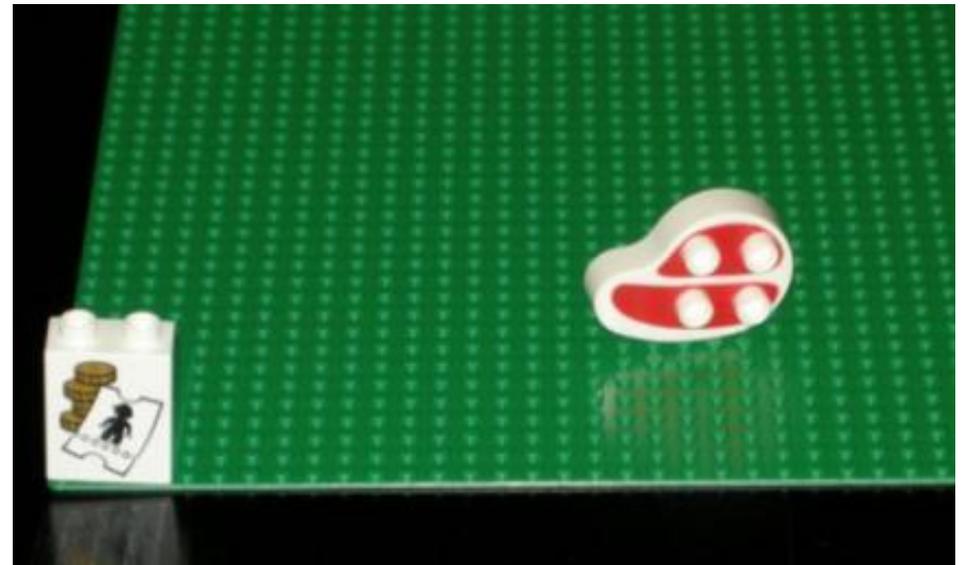
The actions you as a senior take to cope with mobility difficulties?

Slides 22 – 33

Private car, taxi (if you win in the lottery), service line bus

- *Well, if you drive your own car, it usually is quite difficult to find a parking place, where-ever you go in southern Finland. And well, you have the certain freedom, you are not dependent on the timetables, and you can go to places where the public transport could not take you.*
- *Using taxi or service line bus is quite expensive. You should win a lottery to use taxi or service line bus. And to get taxi vouchers from the municipality is complicated, you have to have all kinds of papers, and show them everywhere, and you have to have passwords and so on...*

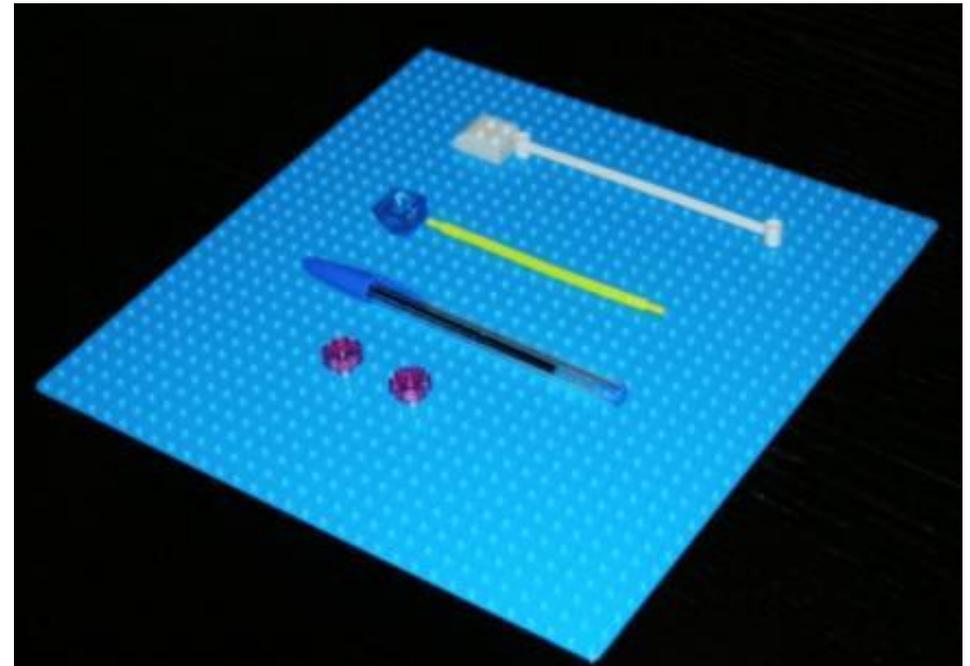
F66H-FI



Coping tools for the winter conditions

- *There is a hard shovel, iron bar, and then these represent the bottoms of the shoes, removable spikes. These tools help you to cope with winter conditions on the yard. Others don't help.*
- *Bicycle in summertime.*

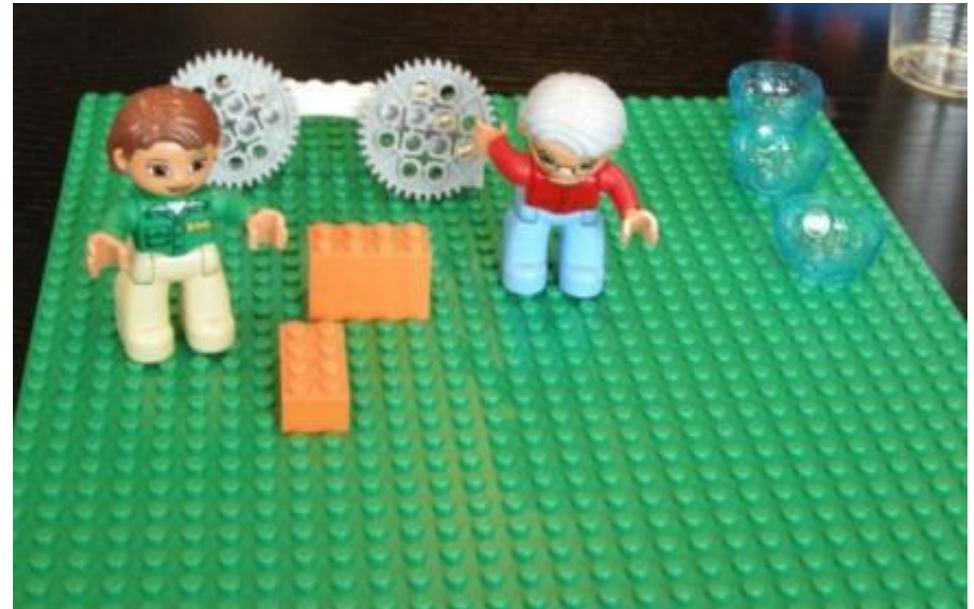
M62V-FI



Bicycle, walking & ask other people to help with your carrier bags

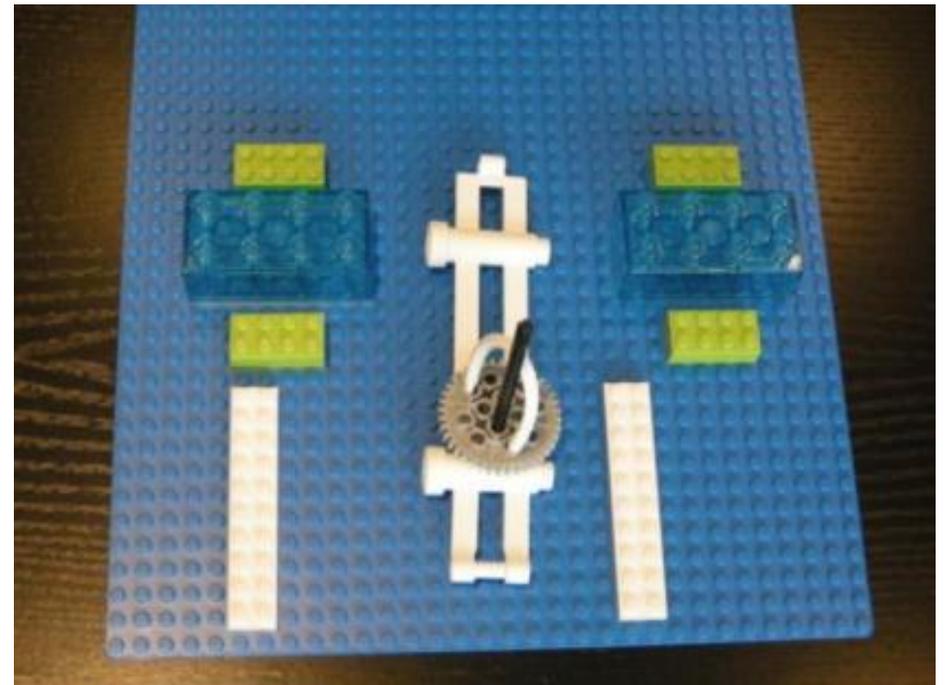
- *Well, in the summertime, when there are fewer departures, I have quite often had to take my bicycle to get somewhere faster.*
- *Or walking, depending on the condition of one's feet.*
- *And then, if you are carrying something heavy, I have asked other people to help. For example when getting on the train if there are stairs you have to climb to get in. But of course you have to carefully select the person whom to ask for help, there are all kinds of conmen offering help to carry your luggage.*

F66V-FI



Start using the white cane

- *My next project as a visually impaired person is to swallow my pride and start using the white cane which has been lying on the shelf for two years. I have decided, that I will go out with a white cane that is folded. I will use it here, so that the driver will see that I am visually impaired. So this is my next project, and how I am planning to hold it up. First with that folded cane, but then later with a real cane for the blind. But this is a very big step – it is like an exclamation mark in the traffic. And it requires a tremendous effort from myself.*

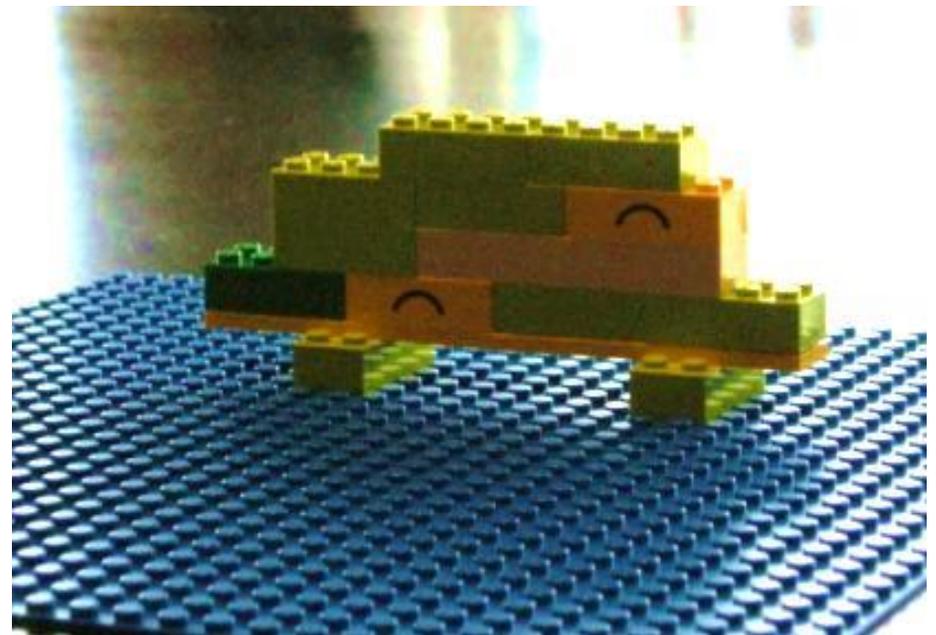


F80E-FI (with visual impairment)

Service line bus, taxi & taxi vouchers

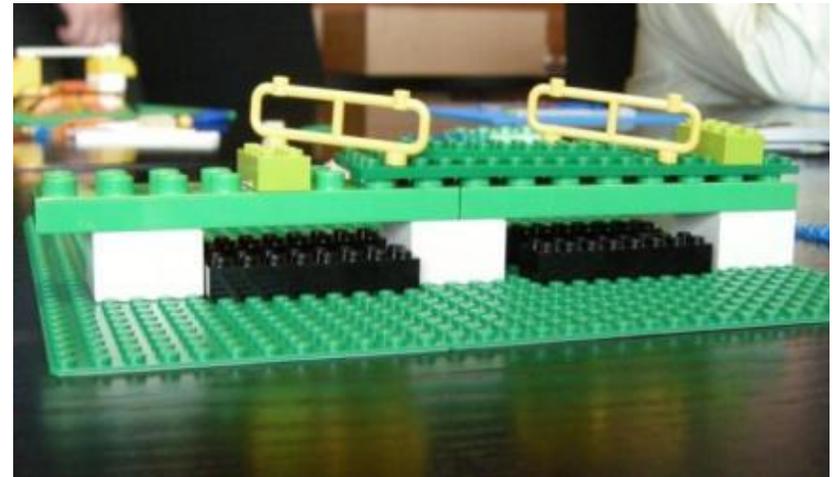
- *It was very difficult to come up with any ideas. To use a service line bus would be one idea, or taxi, taxi vouchers. That would make it a lot easier.*

M66E-FI



Low-floor trams & using routes without any stairs

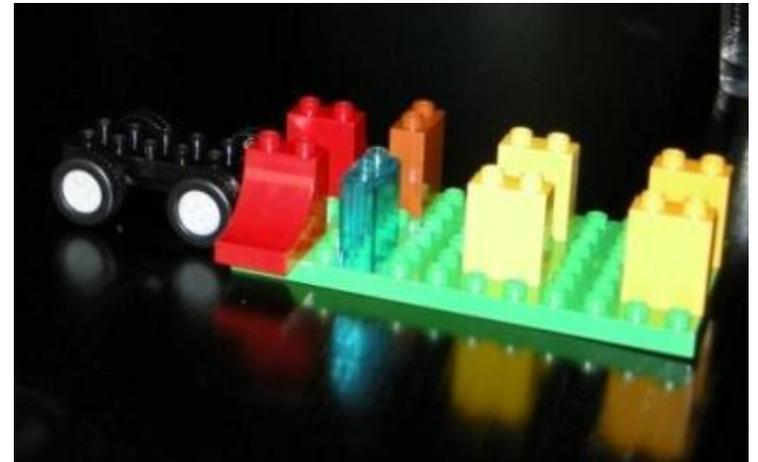
- *My solution would be, especially in Helsinki, to use these green trams (which are low-floor trams). I often visit Stockholm and Tallinn, and the 4T tram going to the harbour is never a green one. I don't have the strength to lift my luggage.*
- *If I am not in awful hurry, I will wait for these green trams, because they have a low floor, you don't need to take the step.*
- *And when I get around in Helsinki, I have learned all the places where there are no stairs, I use routes with ramps for prams, I have learnt those, found them by myself, I'll use them.*



F67V-FI

Driving your own car & checking the map, and memorizing the route

- *Well, if I'm going to Helsinki, public transportation is convenient, I'll either take the direct line or I transfer to another bus at Tikkurila. When I travel to the countryside, I use my own car.*
- *About coping methods, I use a simple method: I check the map in the phone directory, and I spot the destination. I memorize the route I have to take; pass three crossings, and then turn to the left. (The model presents Helsinki city centre.) And then I just go. I'm used to doing so, abroad, too. It works surprisingly well for me.*
- *I don't have a navigator or any of these GPS things in my mobile phone. I think that you'll easily become a slave of the GPS device, you can't go anywhere without it.*



M64V-FI

Modern bus or tram without any stairs

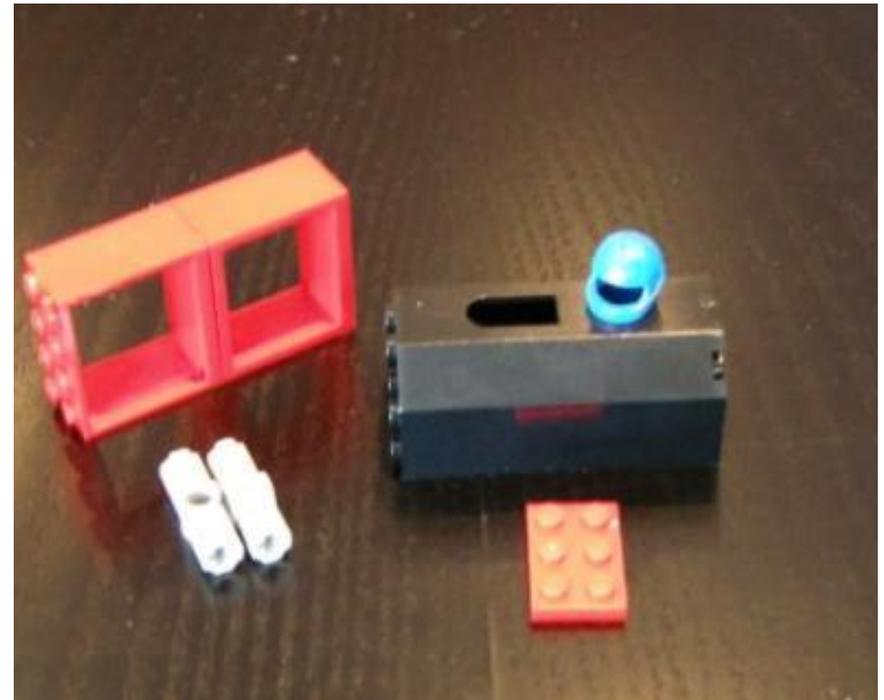
- *Yes, this is a modern bus or tram. It is a lot more easier to travel by bus or tram. Even though there still are some difficulties left. Anyway, you do not have to climb up or down. At railway stations there are stairs which make moving difficult for me. By bus or tram you will get closer to your destination, if you have something to carry or fetch.*



M75V-FI

Glasses, Journey Planner, maps in the phone directory, alarm, spikes for the shoes

- *Proper specs, so that I will be able to see, because with these computers and maps, it is hopeless, it is impossible to see well.*
- *This means that I have the Journey Planner option, that I will go typing and checking where I am really going to.*
- *Well, this is a bit silly, but this how I nowadays cope...I have an alarm clock, and I'll set the alarm to tell me when it's time to leave.*
- *This is the map of the phone book. This one I absolutely have to have with me, or then some notes to which I have marked how many stops it will take before I am there. (Someone asked whether she has a printer at home – she doesn't have.)*
- *And then these two small, grey ones, these are for the winter weather – spikes for the shoes.*



F65V-FI

Longer route with spike-shoes

- *I have Italian shoes with real spikes*
- *Because here is a slippery hill, it is icy. The pavements are covered with snow and ice. I wonder do I dare to walk there. I walk a short distance, and decide that I don't dare to take the short way to the bus stop.*
- *Okay, I have solved it so that I will walk on the road because the car wheels have melted the snow on the lanes. It is the only place without snow and ice.*
- *In short: Longer route with spike-shoes*



F70V-FI

Laurea

COM'ON Laurea UAS Finland

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Slide or ramp & pole vaulter's trick & longer routes

- *This is kind of a slide, for example for someone with disability, or someone sitting in a wheelchair, so it would be nice that the bus driver would turn it out. But you have to shut from the middle door: come and turn the slide out. Luckily I don't need the ramp yet but quite often I have thought it would be an easier way to get out of the bus.*
- *And then there is the pole vaulter's trick, meaning that you try to use your cane and jump out.*
- *And you can take a longer route to be able to walk on the gravelled road.*



F74V-FI

Actions taken to cope: all the key words from slides 21 – 33

- Private car, taxi (if you win in the lottery), service line bus
 - Coping tools for the winter conditions
 - Bicycle, walking & ask other people to help with your carrier bags
 - Start using the white cane
 - Service line bus, taxi & taxi vouchers
 - Low-floor trams & using routes without any stairs
 - Driving your own car & checking the map, and memorizing the route
 - Modern bus or tram without any stairs
 - Glasses, Journey Planner, maps in the phone directory, alarm, spikes for the shoes
 - Longer route with spike-shoes
 - Slide or ramp & pole vaulter's trick & longer routes
- The coping actions are related to choosing another means of travelling or choosing another route. Spikes for the shoes are the popular method of fall prevention in the winter.
 - In the discussion the facilitator asked if the coping actions or knowledge on the routes with ramps and lifts are discussed among friends. The answer was unanimously: No.
 - In most of the models there are no people.
 - Interpretation: the strong ethos of coping by myself, coping alone, at least most of the time?

A model that tells something about the motivations to overcome the barriers for outdoor mobility

Got to get out and see interesting and new things & kids are nice

- *You got to be able to get out and see everything new preferably, but also what is interesting - I like walking to the beach, to Helsinki. I go to the Korkeasaari Zoo, or some other place, where you have all kinds of things to see. And kids are also nice.*

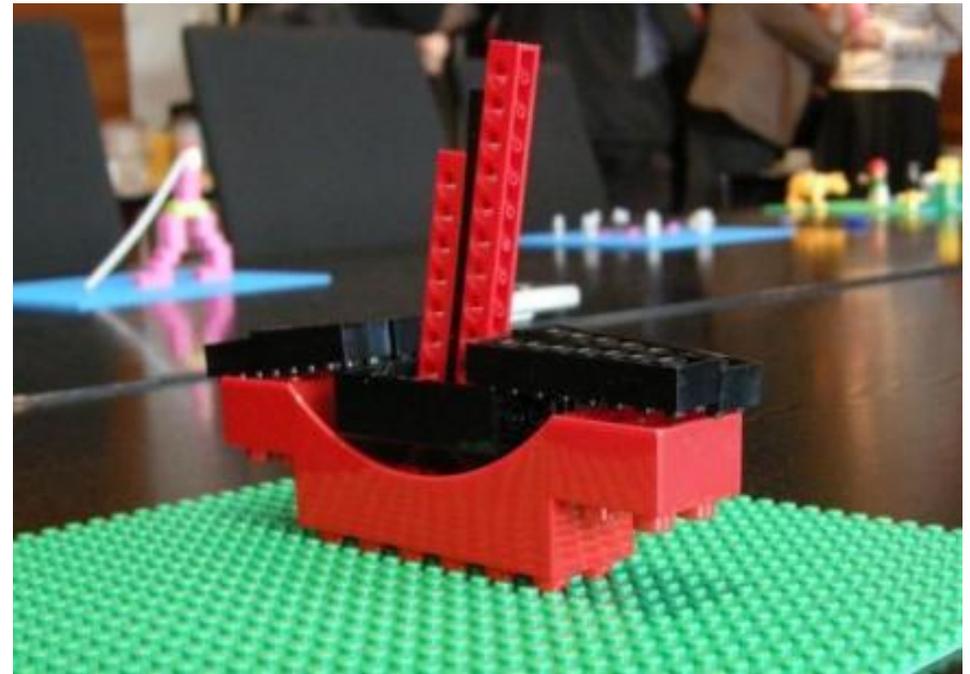
F74V-FI



Leisure travel & responsibility to get grandchildren from day care

- *I have here this Viking Line boat which takes me to Tallinn and Stockholm. I always have some company. For example in Stockholm there are 81 museums. I go to both cities, I rather go to Stockholm though.*
- *Well in Finland I have to get moving because I have to get my grandchildren from the day care.*
- *Sometimes no matter how it rains or whatever, you just have to get yourself outdoors – it is good if you have some pressing need - you have to get outdoors.*

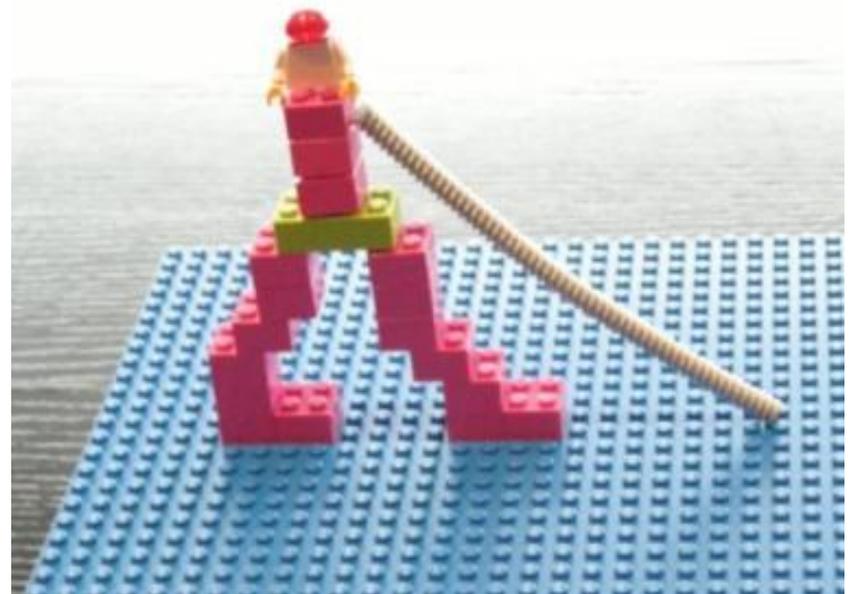
F67V-FI



Oxygen & exercise

- *The old man outdoors to get some oxygen. Exercise, walking, cycling, and that tube brings in the oxygen. I have to get outdoors to get this one smaller (tapping on his belly). That it the motivator. Seriously. If you only stay inside four walls, it's no good.*

M62V-FI



Fresh air, nature, friends, kids, exercise

- *Well, one needs to get some oxygen and fresh air, and ion, especially in the forest you can get some ion, which is good for your health, and vitamins from the sun.*
- *And we have these four seasons, I love to admire the nature during different seasons, it is wonderful, it has its own special appeal. I've been an nature person all my life, I love to admire plants and flowers.*
- *And specially, if you have a dog, you need to take it out couple of times a day, and a good friend who goes out with you is a good motivator. And children, you need to look after them playing in the yard and baking sand cakes.*
- *And well, exercise, exercise, exercise. Everywhere they say for everything exercise, exercise, exercise.*



F66H-FI

Meeting people; friends, relatives or strangers

- *So first in the morning I need to take the dog out, and other times as well. As I take the dog out, I 'll take some food for the bird feeder as the squirrels like to eat there, too.*
- *But what is most important is that, when I go out I hope to meet someone I know. Or maybe you have already arranged it, and you go together, so that I have a hand to hold on to, and on the other hand I got the dog. Friends are treasurers, in the long run, too. My late son used to say: Mother, you are far too social, you talk to anybody.*
- *So the main point is to meet people. No matter whether you know from past or you just met, whether they are relatives or strangers.*

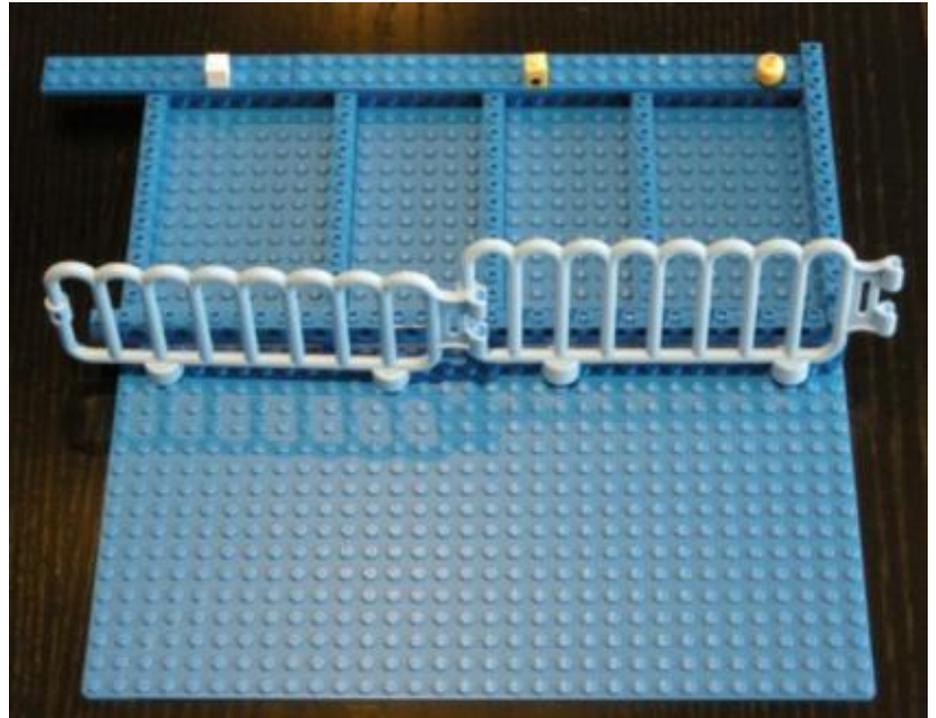


F80E-FI

Swimming

- *This is a public swimming pool, and there are the pools. On this side there might be some game, play some water game, a bit different. Because I go swimming twice or three times a week, in the morning at six o'clock, when it opens.*
- *It is nice and calm. And especially for patients with arthrosis, it is the best exercise – swimming and water exercise.*

M75V-FI



Physical exercise

- *Here the bear walks to get some honey from somewhere. And for people too, it is good to search and maybe find something as well. Every person has his or her own “honey” he or she searches for.*
- *And physical exercise is a right thing for that, it is offered almost everywhere. Solution to almost every problem.*

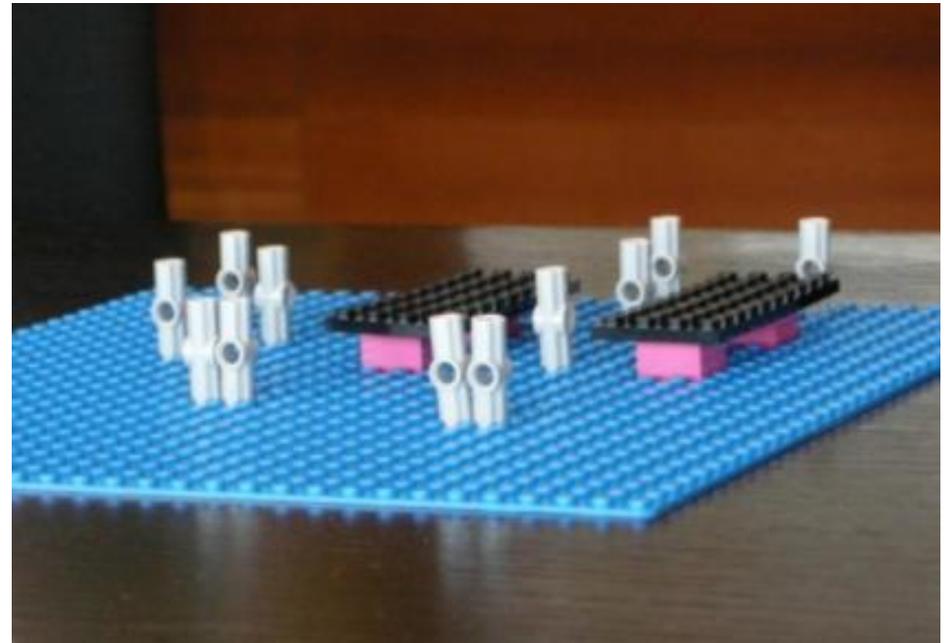
M64V-FI



Dancing and meeting friends

- *Yes, this depicts kind of a market place, market tables and vendors. These are dancers here – a dance at the market.*
- *I have been there, in Spain. There is a big market place, we danced, musicians and all there.*
- *Before I got sick I went to dance sometimes three times a week.*
- *You meet acquaintances.*

M66E-FI



Everyday needs and other activities

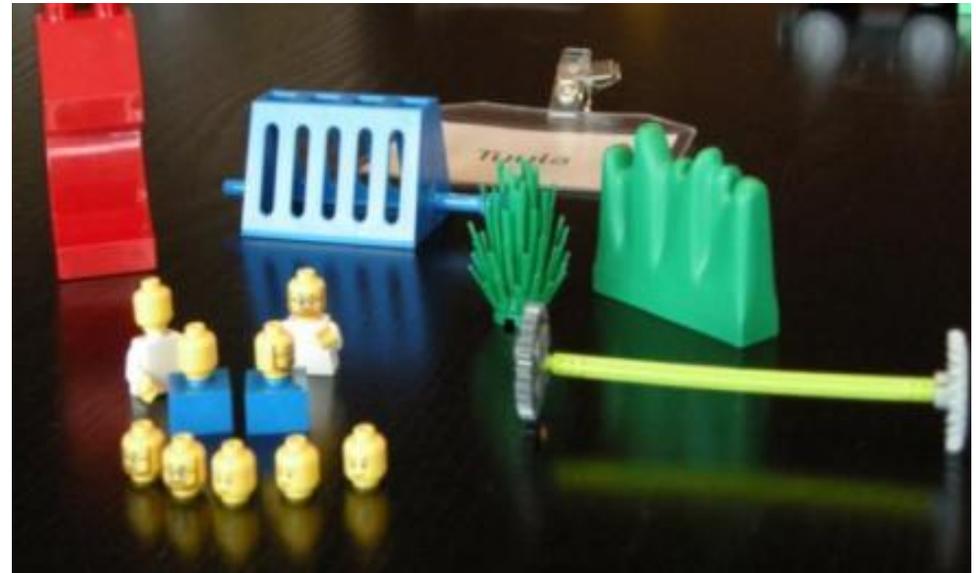
- Go to grocery shop, health care centre, take care of a cat
- Cultural needs, such as theatre
- Voluntary activities
- *The Zoo represents everything Helsinki has to offer – there are many colleagues and other things – like the old saying goes: a rolling stone gathers no moss. You just need to stay moving as long as you can, even if by using public transport when your feet are too tired for walking.*



F66V-FI

Nature, work, culture & close relatives

- *First of all nature is extremely important to me.*
- *And this represents work, not weight training, but work.*
- *And then these portray different kinds of cultural events – art, and all that kind of offerings are very important to me. They take me out to the world even from the sickbed.*
- *And then, here is the centre of my life: my son and his wife, my daughter and her husband, and my five lovely, little grandchildren.*



F65V-FI

Social life in the city

- *I'll go to the park, or just somewhere to watch people, to see people – going to see friends somewhere further, to cultural events, and then just somewhere further away to the nature. What is the most significant reason to go out, is to get some air, get oxygen, and to get moving – is my dog – it takes me out. But mainly the whole milieu, social life, city life all in all.*

F70V-FI



Motivations: all the key words from slides 35 – 45

- To see interesting and new things & kids are nice
 - Leisure travel & responsibility to get grandchildren from day care
 - Oxygen & exercise
 - Fresh air, nature, friends, kids, exercise
 - Meeting people; friends, relatives or strangers
 - Swimming
 - Physical exercise
 - Dancing and meeting friends
 - Everyday needs and other activities
 - Nature, work, culture & close relatives
 - Social life in the city
- To be among other people, enjoying your own "honey", be it any kind of an activity, or nature.
 - In the models there are people, animals, and green grass – the vehicles, roads, and buildings are missing. These last models are more personal.

Facilitators: Satu Luojus and Anne Äyväri

Assistant & photographer: Meri Raunola

Reporting: Meri R. and Anne Ä.

The workshop was voice-recorded and partly video-recorded (2 x 30 minutes).
If interested in the more detailed description of the participants, please, contact Anne or Mie.

Contact person: anne.ayvari@laurea.fi

Research design
Ethnographic based userstudies
Scope and focus

Preliminary listing of points of interest

- Focus on unwanted immobility - People experiencing mild to moderate difficulties by moving about outdoors
- Known versus unknown routes – and implications for demanded assistance/info
- Transition from car to public transport
- The role of relatives/friends/neighbours
- City versus countryside living
- Climate impact (‘environmentalism’) – Icy, Finnish streets causing death among elderly each year.
- Trustworthiness of info/data – what does it take to provide the necessary trustworthiness of the COM’ON system?
- ‘Motility’
- Risk and motivational factors

Motility

The name of this construct shall be motility'.

Motility can be defined as the capacity of entities (e.g. goods, information or persons) to be mobile in social and geographic space, or as the way in which entities access and appropriate the capacity for socio-spatial mobility according to their circumstances. (The term motility is used in biology and medicine to refer to the capacity of an organism to move (such as the motility of a fish). In sociology, it has been used sporadically by Bauman in *Liquid Modernity* (2000) to describe the capacity to be mobile. It is also found in sociological analyses of the body (Mol and Law, 1999) to describe the body in motion.)

Motility incorporates structural and cultural dimensions of movement and action in that the actual or potential capacity for spatio-social mobility may be realized differently or have different consequences across varying socio-cultural contexts.

Empirical investigations will focus fundamentally on the temporal changes in the extent, reasons and manner of motility. Generally, motility encompasses interdependent elements relating to access to different forms and degrees of mobility, competence to recognize and make use of access, and appropriation of a particular choice, including the option of non-action. More specifically,

- *Access* refers to the range of possible mobilities according to place, time and other contextual constraints, and may be influenced by networks and dynamics within territories. Access is constrained by options and conditions. The options refer to the entire range of means of transportation and communication available, and the entire range of services and equipment accessible at a given time.

The conditions refer to the accessibility of the options in terms of location-specific cost, logistics and other constraints. Obviously, access depends on the spatial distribution of the population and infrastructure (e.g. towns and cities provide a different range of choices of goods and services), sedimentation of spatial policies (e.g. transportation and accessibility), and socio-economic position (e.g. purchasing power, position in a hierarchy or social network).

- *Competence* includes skills and abilities that may directly or indirectly relate to access and appropriation. Three aspects are central to the competence component of motility: physical ability, e.g. the ability to transfer an entity from one place to another within given constraints; acquired skills relating to rules and regulations of movement, e.g. licenses, permits, specific knowledge of the terrain or codes; and organizational skills, e.g. planning and synchronizing activities including the acquisition of information, abilities and skills. Competence is multifaceted and interdependent with access and appropriation.

- *Appropriation* refers to how agents (including individuals, groups, networks, or institutions) interpret and act upon perceived or real access and skills. Appropriation is shaped by needs, plans, aspirations and understandings of agents, and it relates to strategies, motives, values and habits. Appropriation describes how agents consider, deem appropriate, and select specific options. It is also the means by which skills and decisions are evaluated.

All three elements of motility are fundamentally linked to social, cultural, economic and political

(Motility: Mobility as Capital VINCENT KAUFMANN, MANFRED MAX BERGMAN and DOMINIQUE JOYE, Volume 28.4 December 2012 2004 745±56 International Journal of Urban and Regional Research) 146

Analytical parameters and scope...

- Access
 - Competence (skills)
 - Appropriation

 - Planning (IT)
 - Sharing (Relations)
 - On-journey (Navigation...)

 - Jobs
 - Barriers
 - Outcomes

 - Information
 - Assistance

 - Fear & lack of self-efficacy
- Mild to moderate difficulties
 - Cognitive and physical impairments

 - Multi-mode transport (transfer/switch/waiting)

 - Men – women

 - From car to public transport



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