

# Putting your foot down

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Older People on the Move Workshop  
Reading, 19th Sept 2007



Faculty of the  
Built Environment



# Overview

- Background
- Methodology
- Findings
- Conclusions

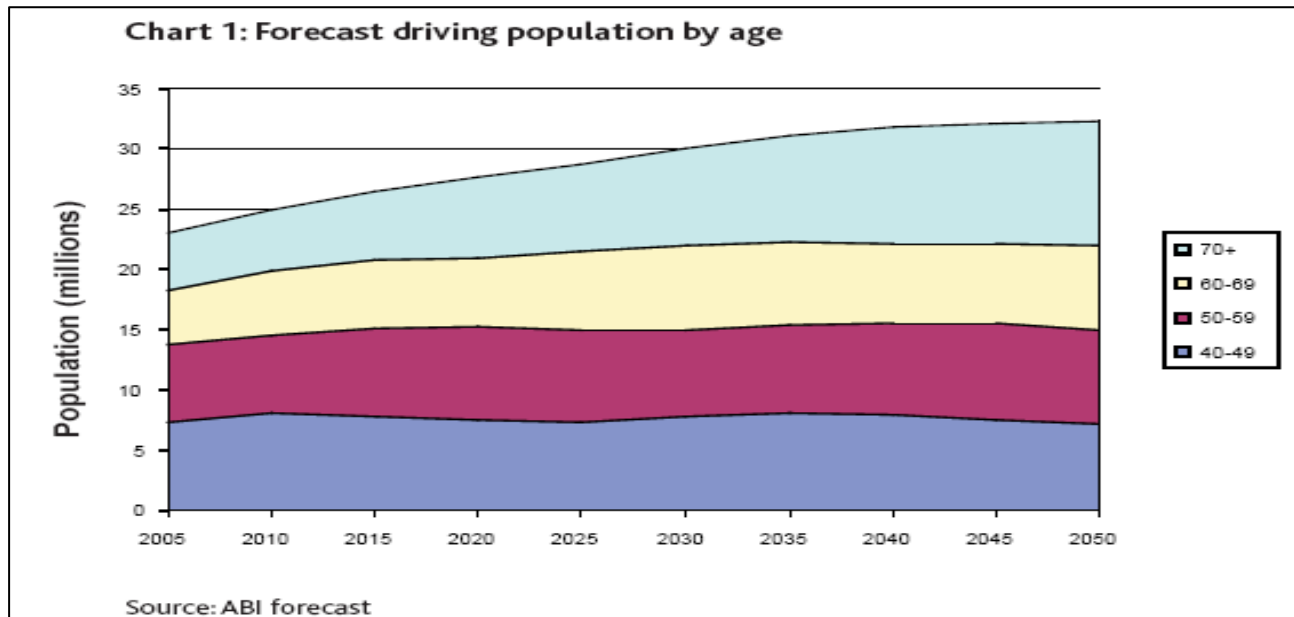
# Background: Older driver statistics (2)

## ■ Current

- 4 million drivers over 70 in the UK
- 47% of population over 70 hold driving licence
- Compared to 15% in 1975

## ■ Predicted growth

- 10 million drivers over 70 in the UK by 2050



# Background: Why prolong driving?

- Mobility important
- Services moving out of town centres and residential zones
- Life satisfaction and quality of life
- Sense of control over environment
- Driving increases self-confidence
- Giving up driving linked to depressive symptoms

# Is technology the answer?

## ■ New technologies

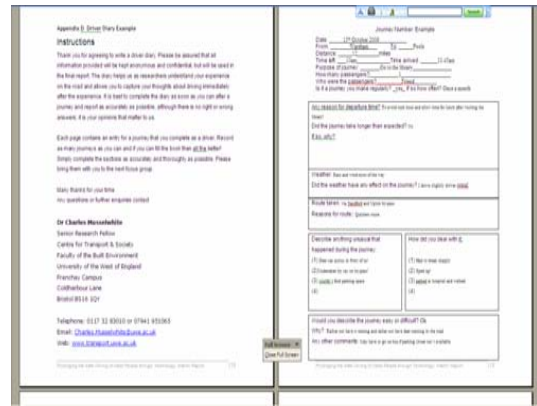
- Advanced Control and Safety System (AVCSS)
- E.g. Adaptive Cruise Control (ACC)
- New technologies can make a significant contribution to improving the safety (OECD, 2001)

## ■ Attitudes towards technologies

- Attention needs to be given to evaluating new technologies to ensure that older people can use it comfortably (OECD, 2001)
- Previous research treats drivers the same
- Older driver needs and attitudes ignored



# Methodology



**PHASE ONE -  
25 driving (3 groups)**

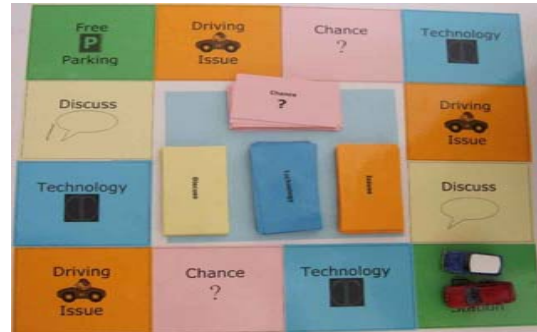
**Wave 1 focus group**  
Understanding older people's driving needs

**Driver Diary**  
Reflecting on driving needs in practice

**Telephone Interviews**  
Re-visiting driving needs and assessing attitudes to technology



**Wave 2 focus group**  
Understanding how driving needs might be met with modern technology



**PHASE TWO -  
31 no longer driving**

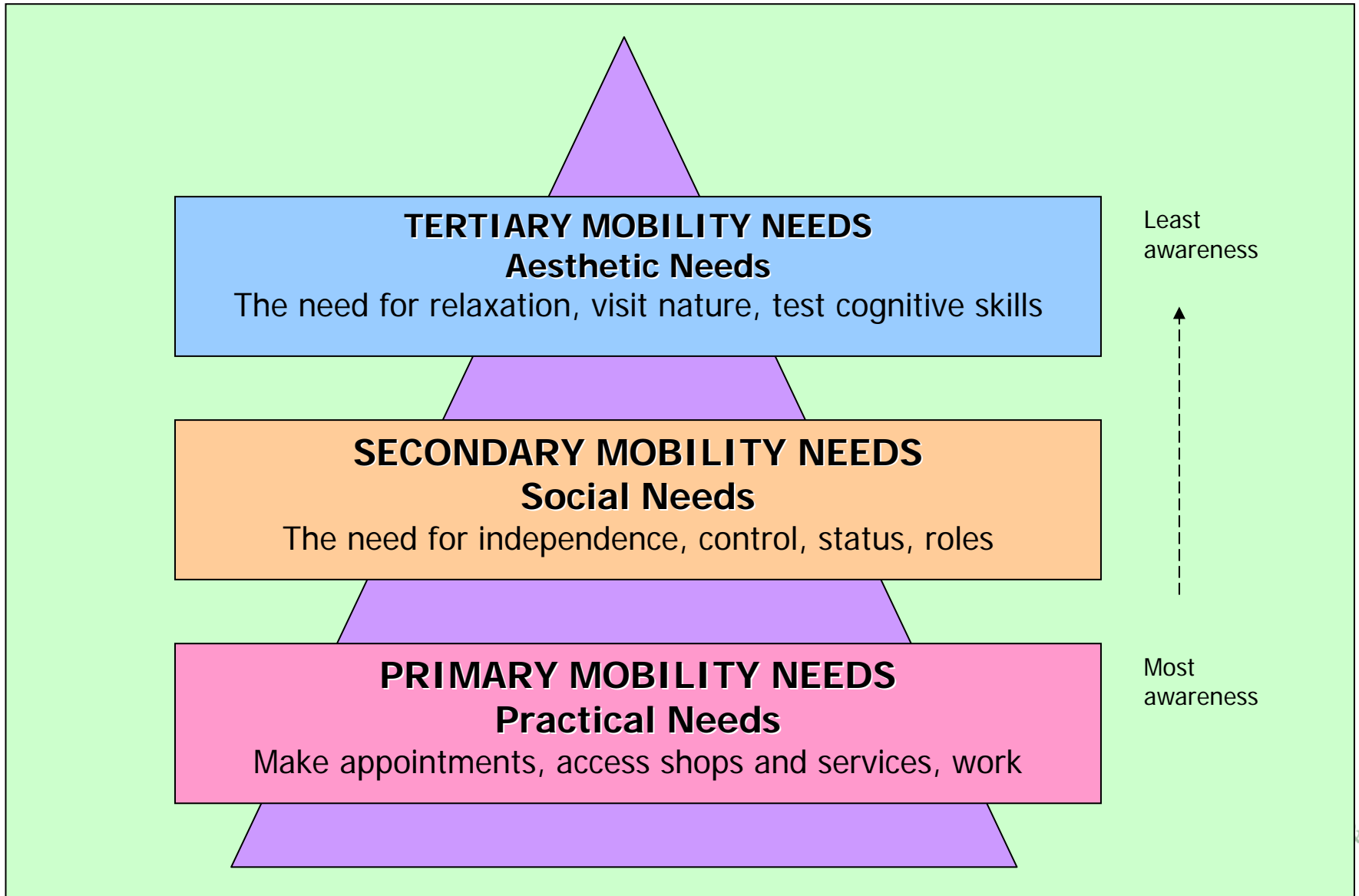
**Interviews**  
Why people gave up driving and assessing the feasibility of technologies

**PHASE THREE -  
18 users/experts**

**E-Discussion**  
To examine the generalisability and feasibility of developing the new technologies



# Travel Needs



## Travel needs

### PRIMARY NEEDS Practical Needs

Make appointments, access shops and services, work

Need to get from A-to-B in a safe, reliable, cheap, easy to understand, comfortable manner



On giving-up driving – this level of need usually met –

- friends
- accessible transport
- public transport
- teleshopping?





## Travel needs

### SECONDARY NEEDS

#### Social Needs

The need for independence, control, status, roles

- Linked to feelings of self-worth, self-esteem
- Normalness of travel
- Potential for travel

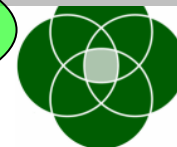


"It is the one thing that allows me to compete with youngsters. It is something I can probably still do as well as when I was a young man"

On giving-up driving this level of needs is adversely affected

Virtual mobility?

"I feel able to be part of society"



## TERTIARY NEEDS

### Aesthetic Needs

The need for relaxation, visit nature, test cognitive skills

## Travel needs

- Biophilia
- Escapism
- Relaxation



"Until I moved into my (retirement) flat, I loved looking at my garden, how it changes throughout the seasons. With my car, at least, I can still visit parks and the forest regularly to watch them change"



On giving up driving this level of need is adversely affected

Car clubs/ public transport route info

# Driver Needs

**TIREDFNESS**

**REACTION**

**Compensatory  
Behaviour**

**EXTERNAL DISTRACTIONS**

**MAINTAINING A CONSTANT SPEED**

**GLARE** **MINANCE**

**Technology  
Wanted**

# EXTERNAL DISTRACTIONS

## Dashboard sign display

- Most preferred amongst older people

## Head-up sign display

- Most preferred option amongst car designers, technologists and academics

- Mixed dashboard & head-up has some support
- User-prioritisation increases popularity
- Older people also advocate clearer signs and a change in legislation about amount of signs



# MAINTAINING A CONSTANT SPEED

Driver needs

## Head-up display of current vehicle speed

- preferred by older people

## Audible speed cue

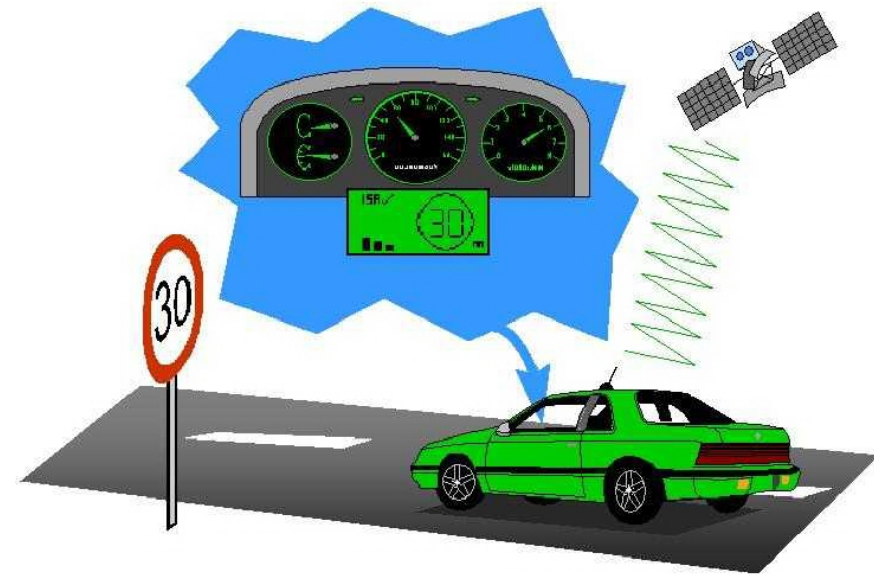
- preferred by older people

## Audible warning when reach actual speed limit

- Preferred by academics and technology experts

## Intelligent Speed Adaptation

- Preferred by academics and car manufacturers and by older people if everyone has it fitted



# GLARE AND LUMINANCE

## Night vision enhancement

- Head-up display
- Dashboard display
- Either system is preferred by academics, technologists and car designers
- Older people remain more sceptical about use of such system



# Conclusions (1)

- Older drivers view car as important to their lives
  - Functional: Day-to-day activities, services, A to B
  - Psychological: personality, prestige, self-esteem, mastery, identity
  - Aesthetic: need to see nature, relax, and test cognitive skills
- Keep technology simple to use and aesthetically pleasing
  - In line with expectations and norms
  - Older people don't want adaptations that make their car look like an old person's car
- Key driving issues for older drivers are
  - Distraction
  - Keeping to the speed limit
  - Fatigue/tiredness
  - Reactions
  - Glare and luminance



# Conclusions (2)

- Older drivers feel they have good awareness of tiredness and are able to compensate for having slower reactions
- Technologies to take forwards and be developed along with older people
  - Sign display and prioritisation
  - Additional speed warning and cues
  - Intelligent Speed Adaptation
  - Night vision?
- Lobby for better placement, content and amount of signs
- Maintain needs-led and bottom-up approach



Thanks for listening

Many thanks to all the participants for their valuable time and help and to the SPARC team for their help, guidance and funding – Verity, Peter, Nicky and Richard.

## Further information

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