



**CiViTAS**  
Cleaner and better transport in cities



# Have CIVITAS measures change the mobility mindsets of car drivers; the case of carrots and sticks in Perugia

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# Perugia in a nutshell



- 168.000 inhabitants
- Height above sea level:  
450 m (up to 493 m)
- Municipality territory extent:  
449.9 Km<sup>2</sup>
- Modal shift:
  - cars 71,9%
  - PT 13,8%
  - walking 10,0%
  - cars/1000 inhab.: 687,3





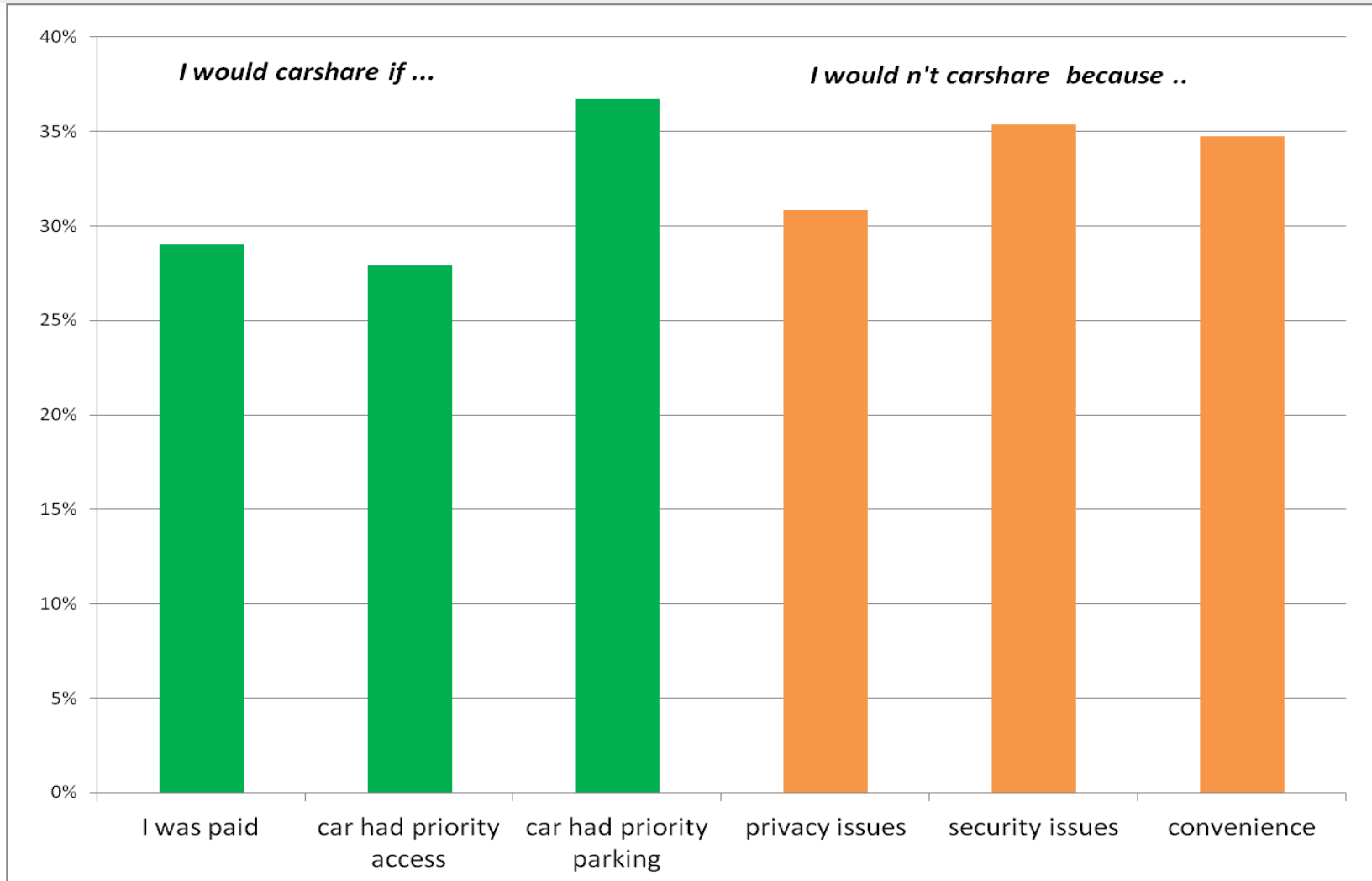
MiniMetro





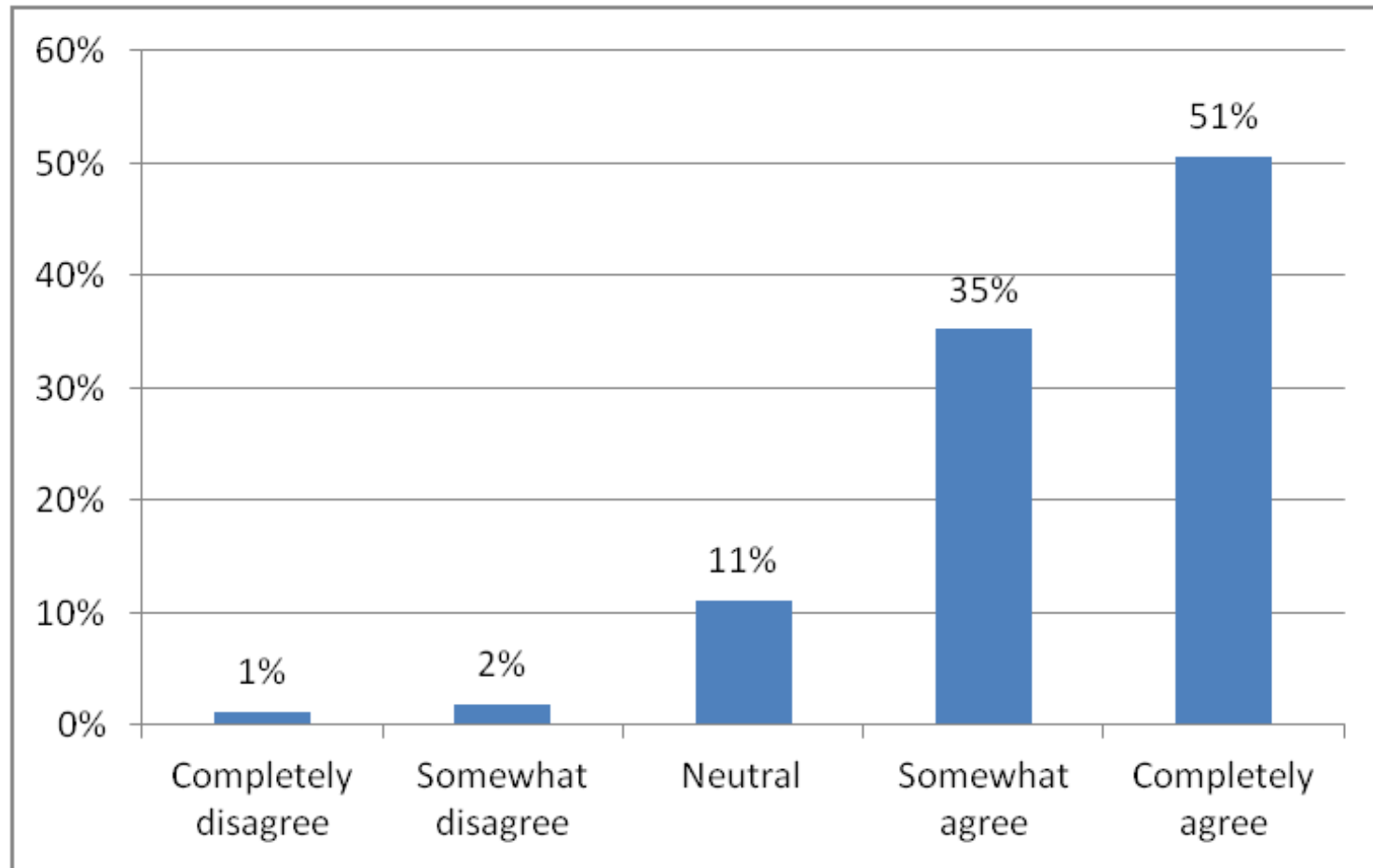
- **Before survey N = 1899 car drivers**
- **After survey N = 2000 car drivers**
- **20 attitude questions that were repeated in the before/ after surveys**
- **Many additional attitudinal questions**
- **Statistical tests of significance – are any observed changes more than could occur by chance?**
- **Cluster analysis to identify likeminded groups of individuals ('Mobility Mindsets')**

# Before: Car pooling

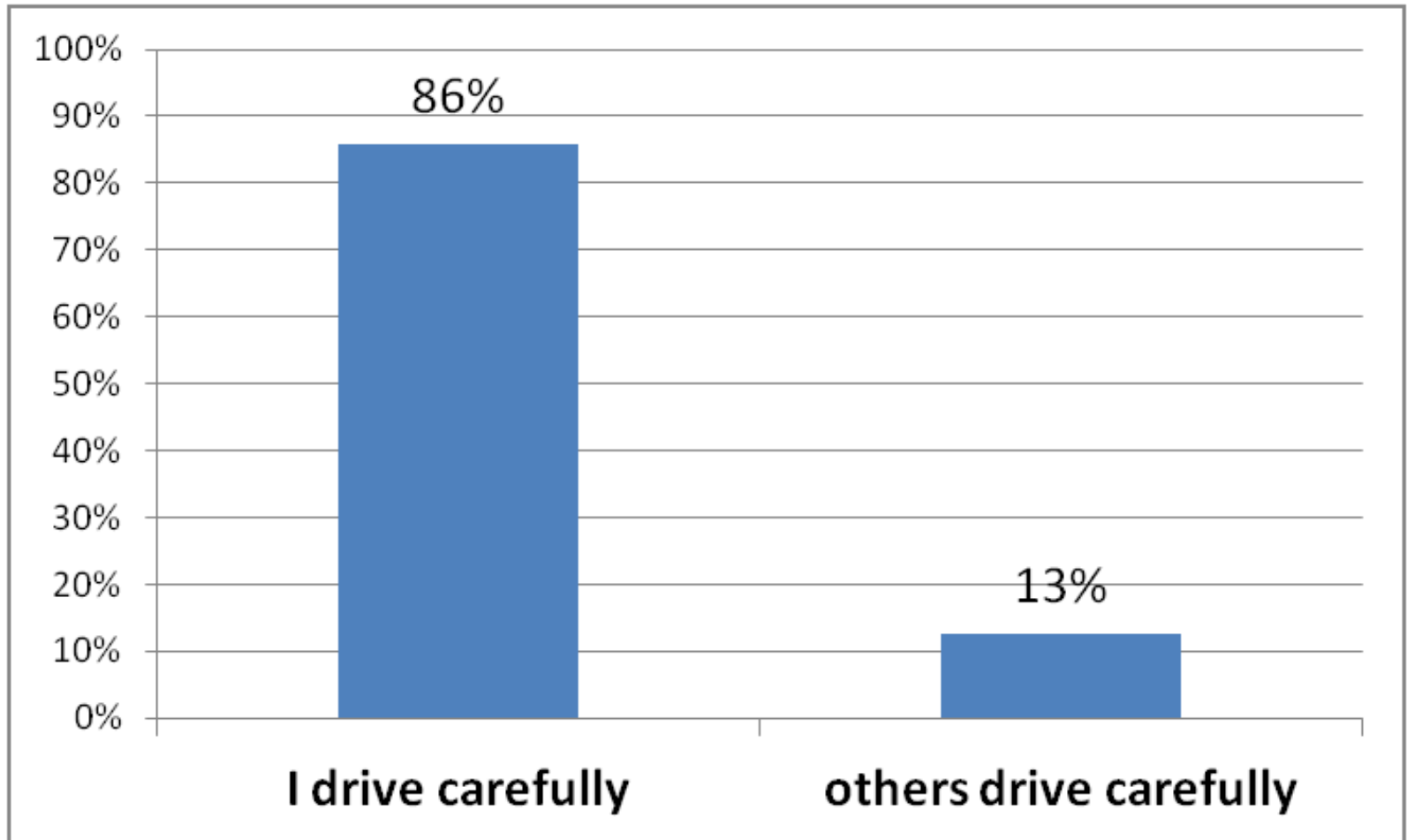




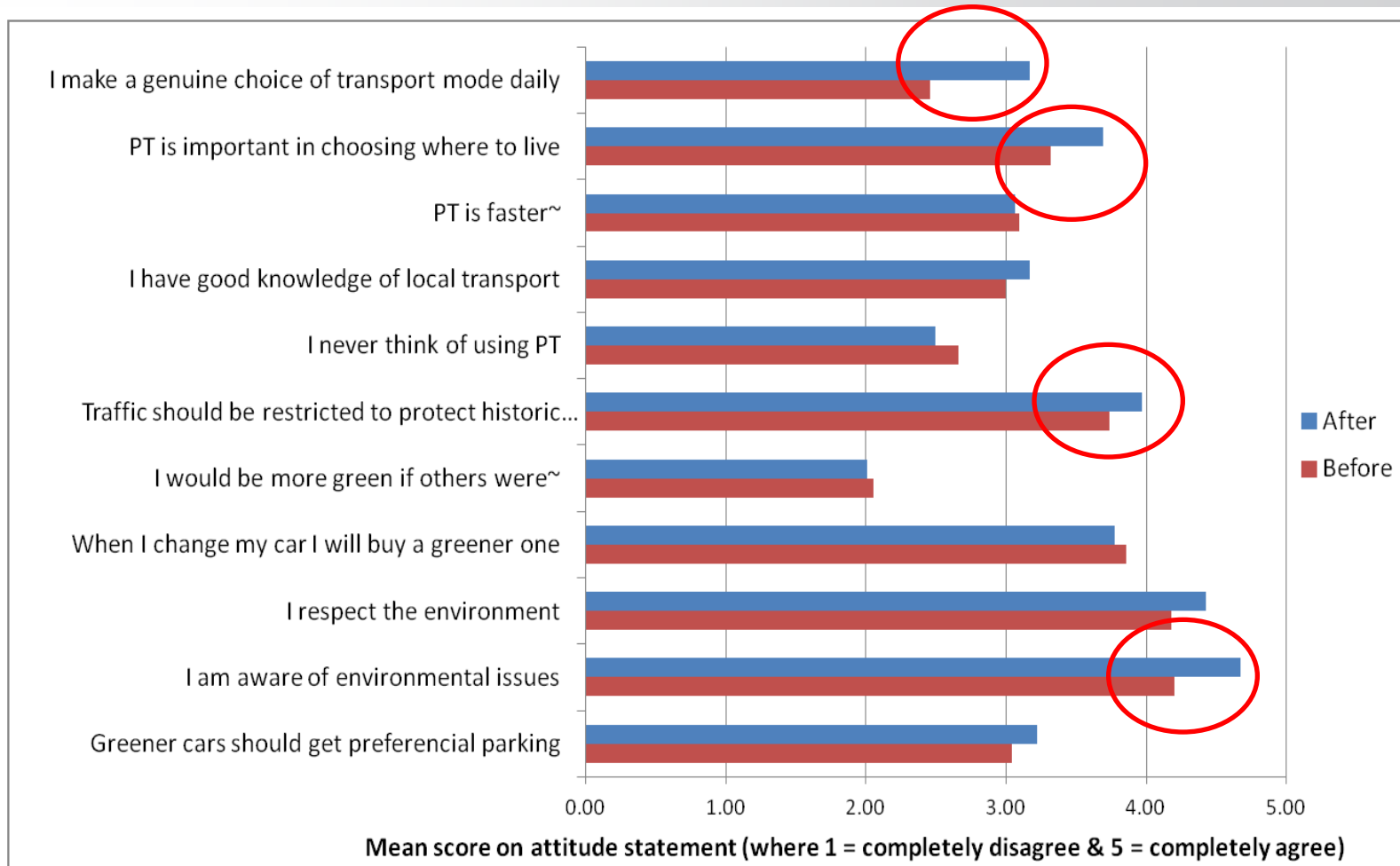
# Before: “I would like the opportunity to travel greener”



# Before: beliefs about safe driving

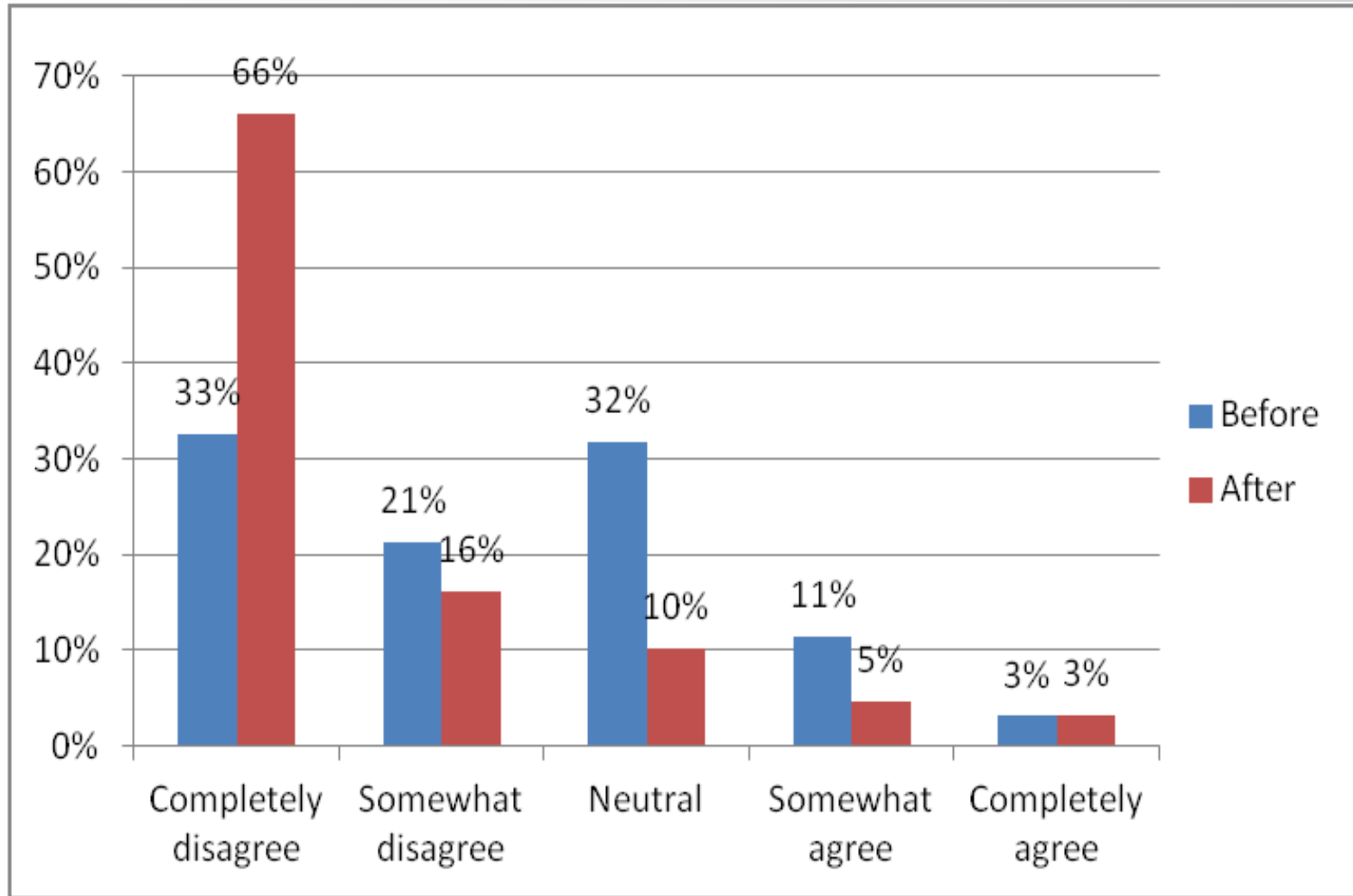


# Some key attitudes before/after (mean difference)

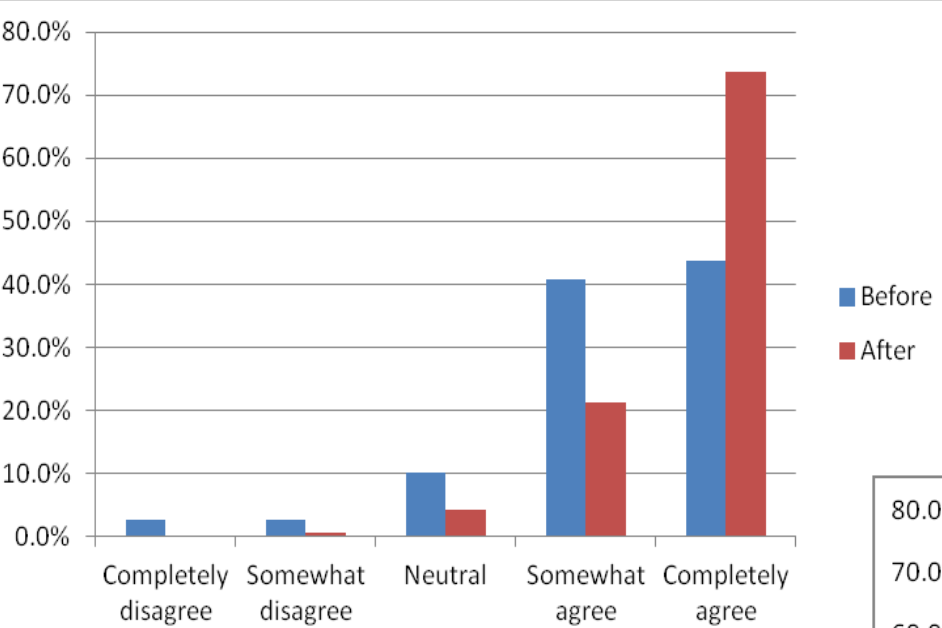


~ difference between before/ after is non statistically significant at  $P < 0.05$

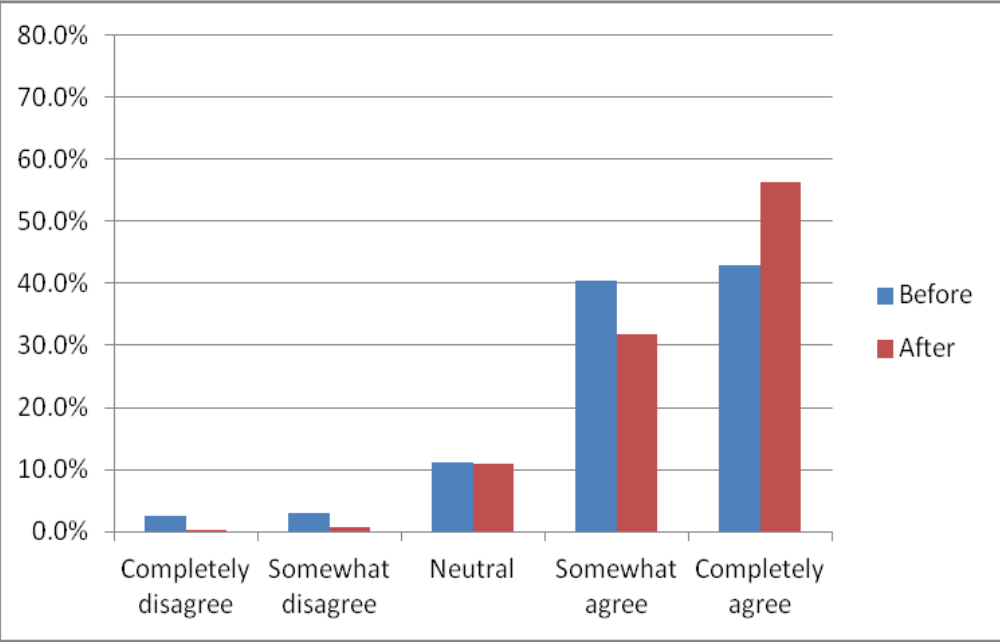
# “Parking charges are reasonable”



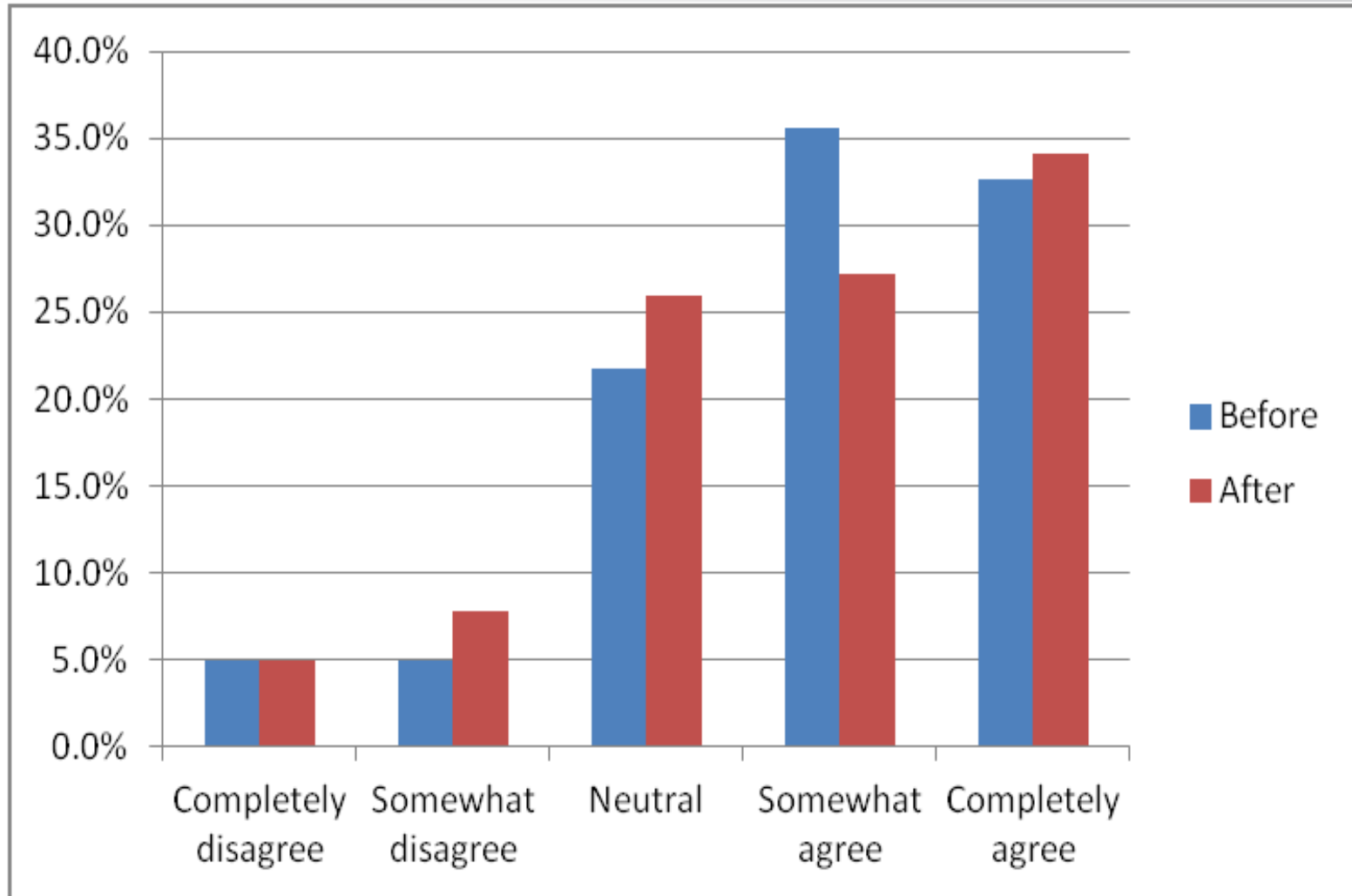
# “Generally, I am aware of the importance of environmental issues”



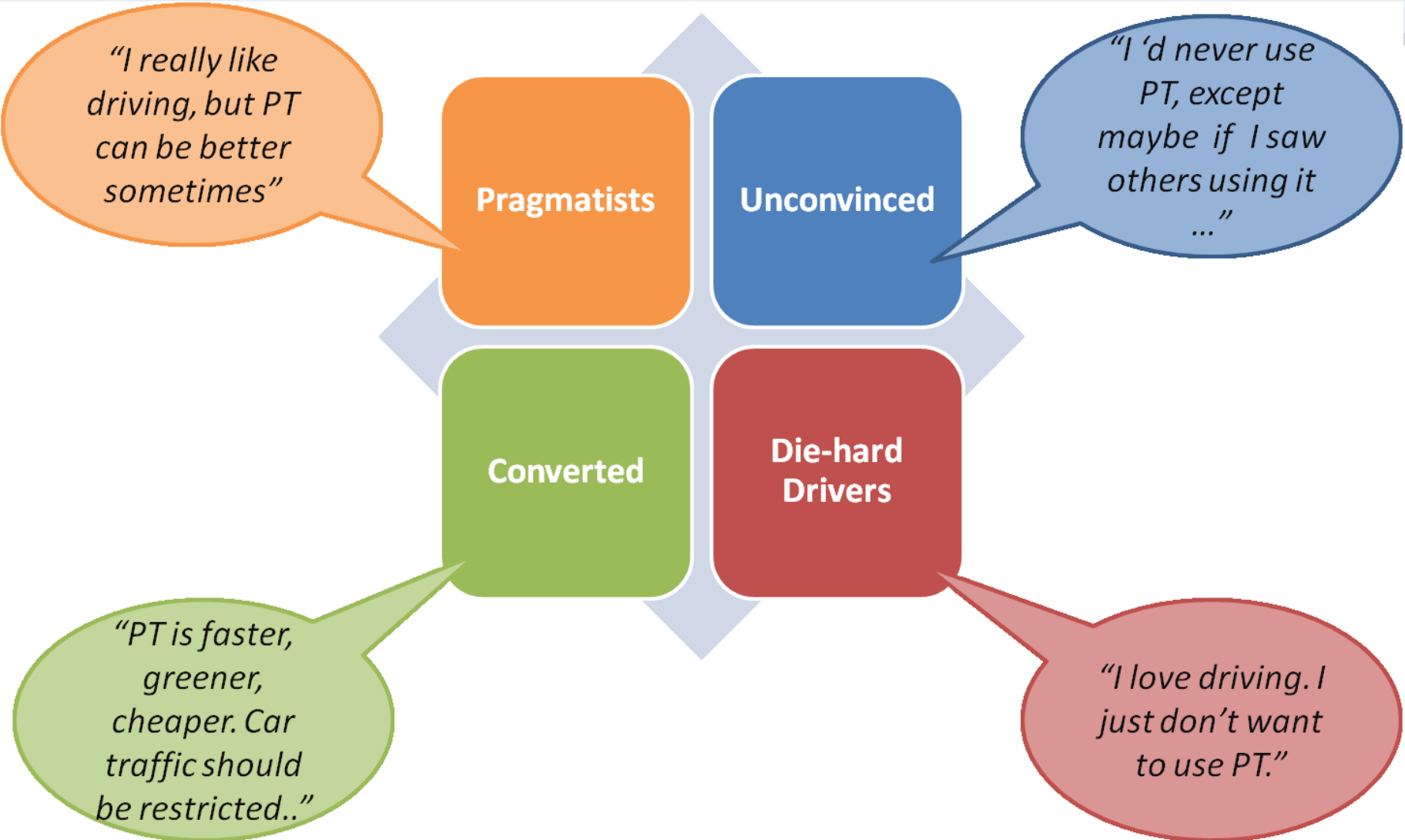
# “I generally behave in an environmentally friendly way”

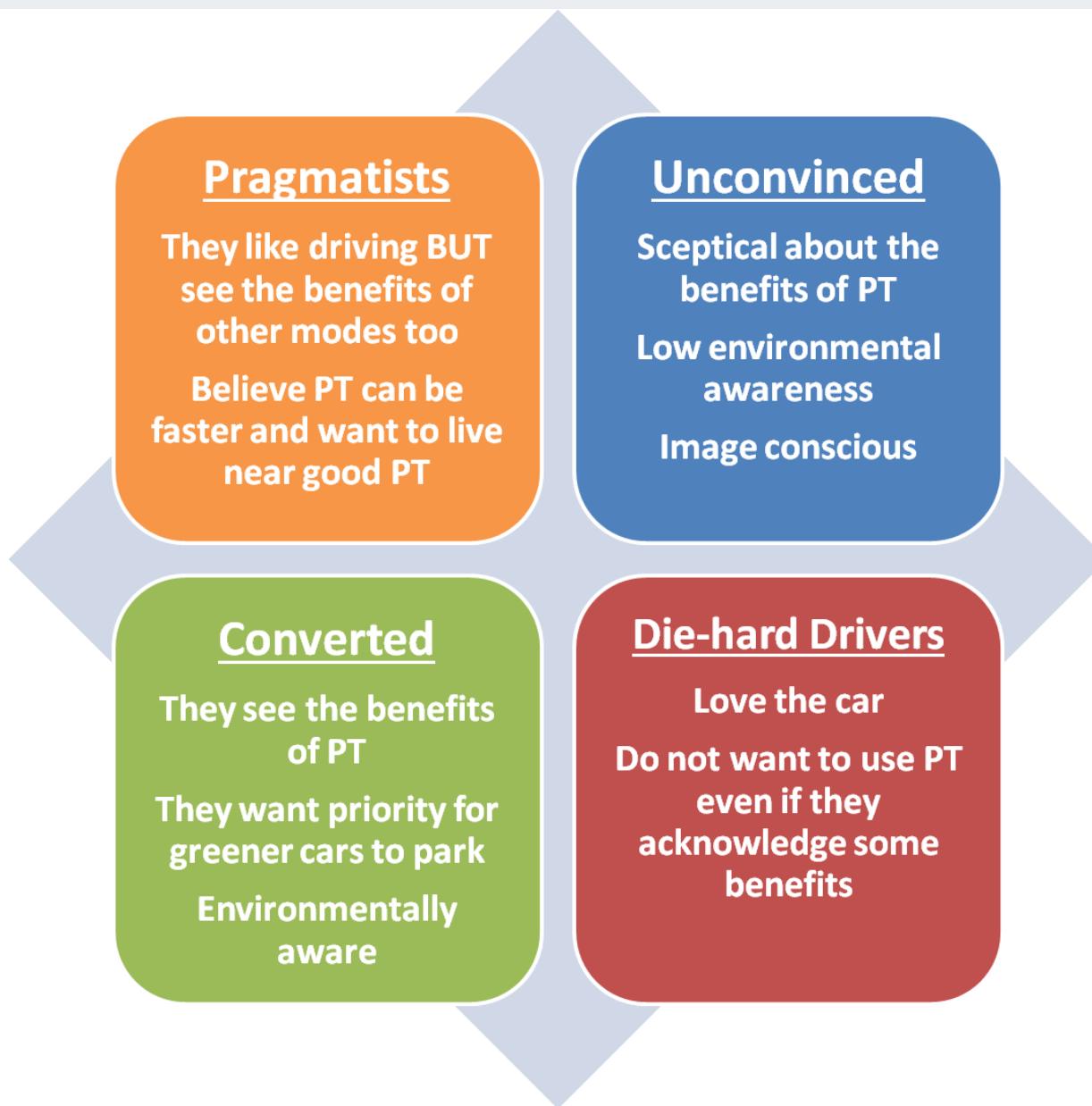


# “When I change my car I will buy a greener one ”



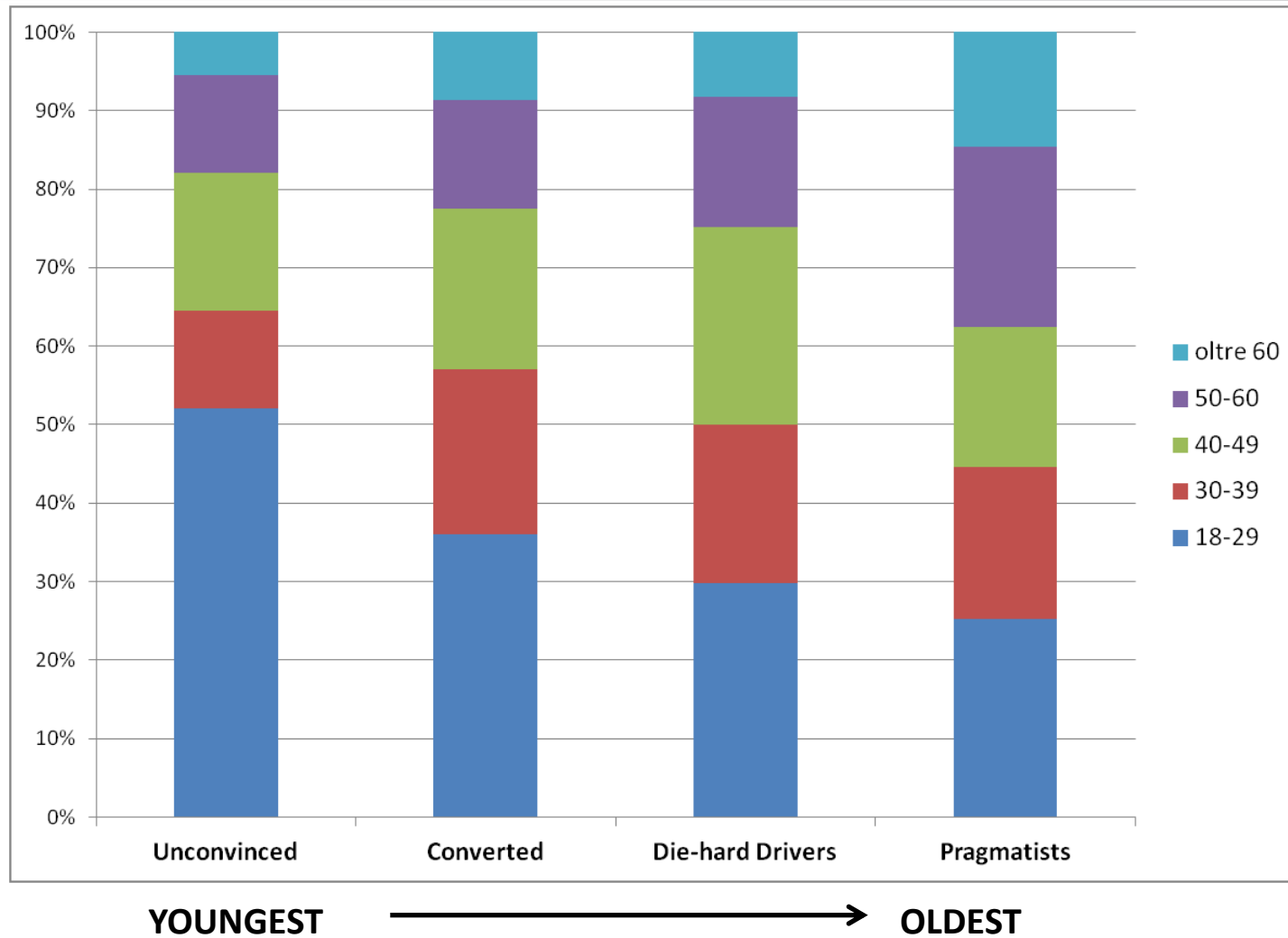
# 4 x 'Mobility Mindsets'



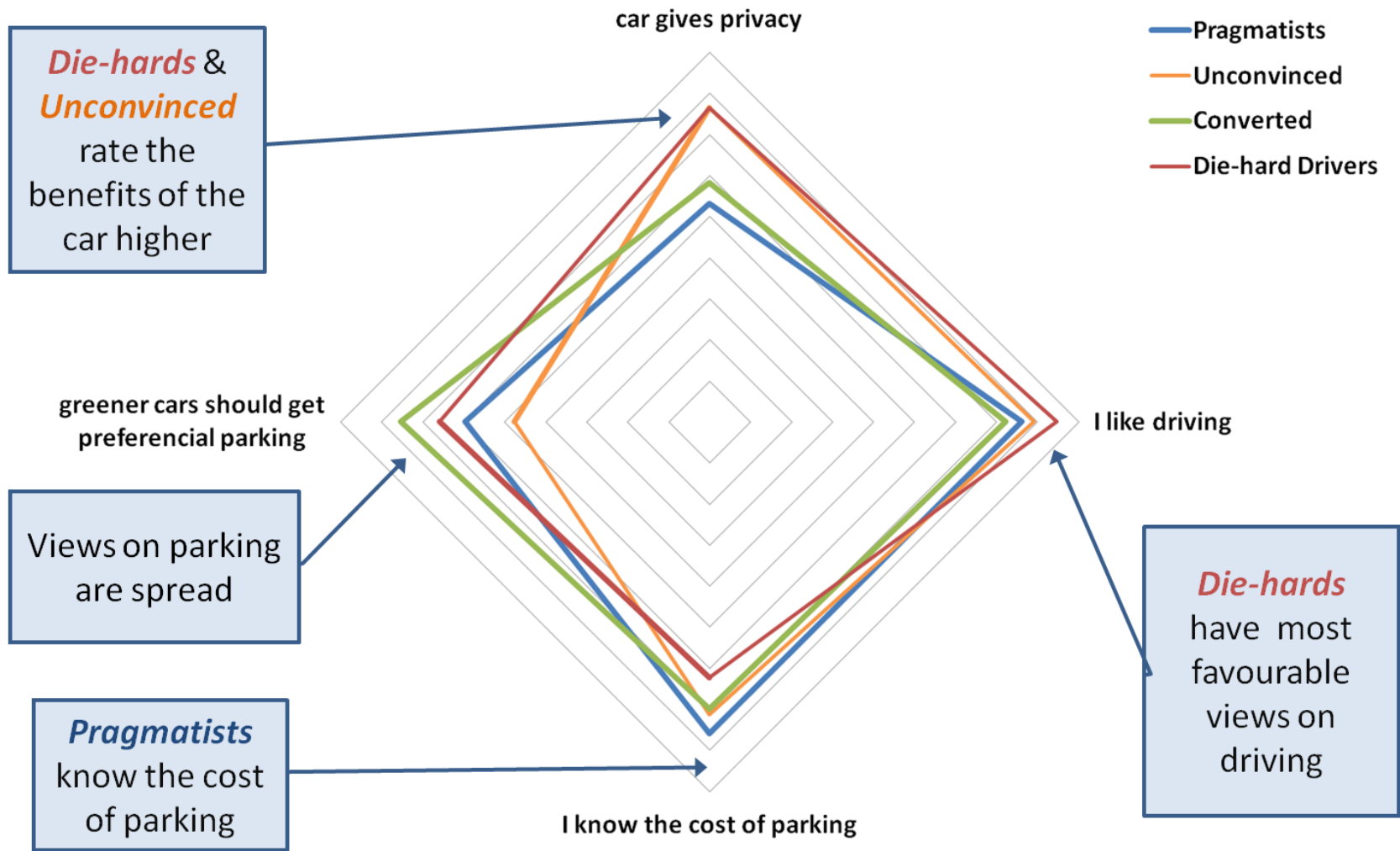




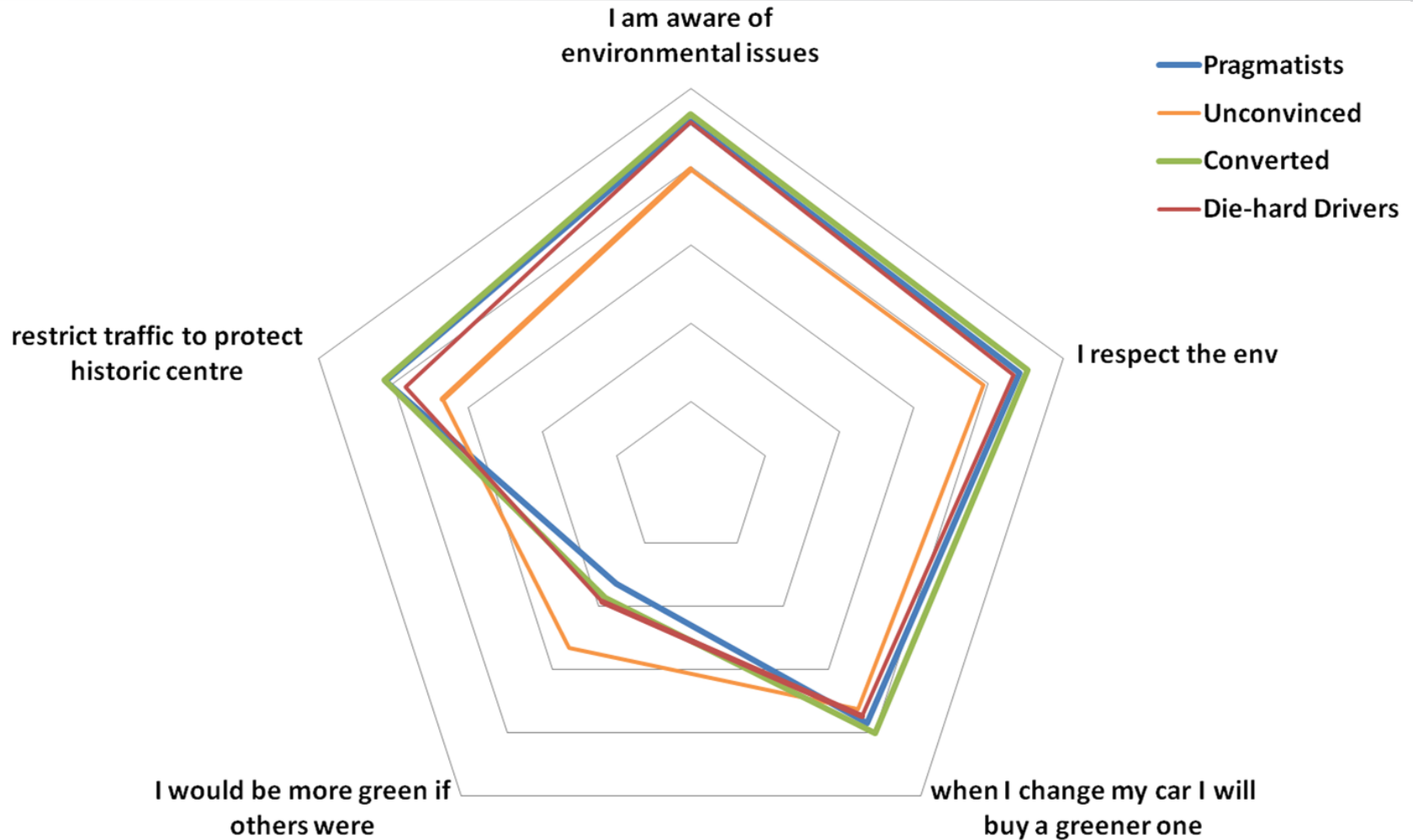
# Age profile of segments



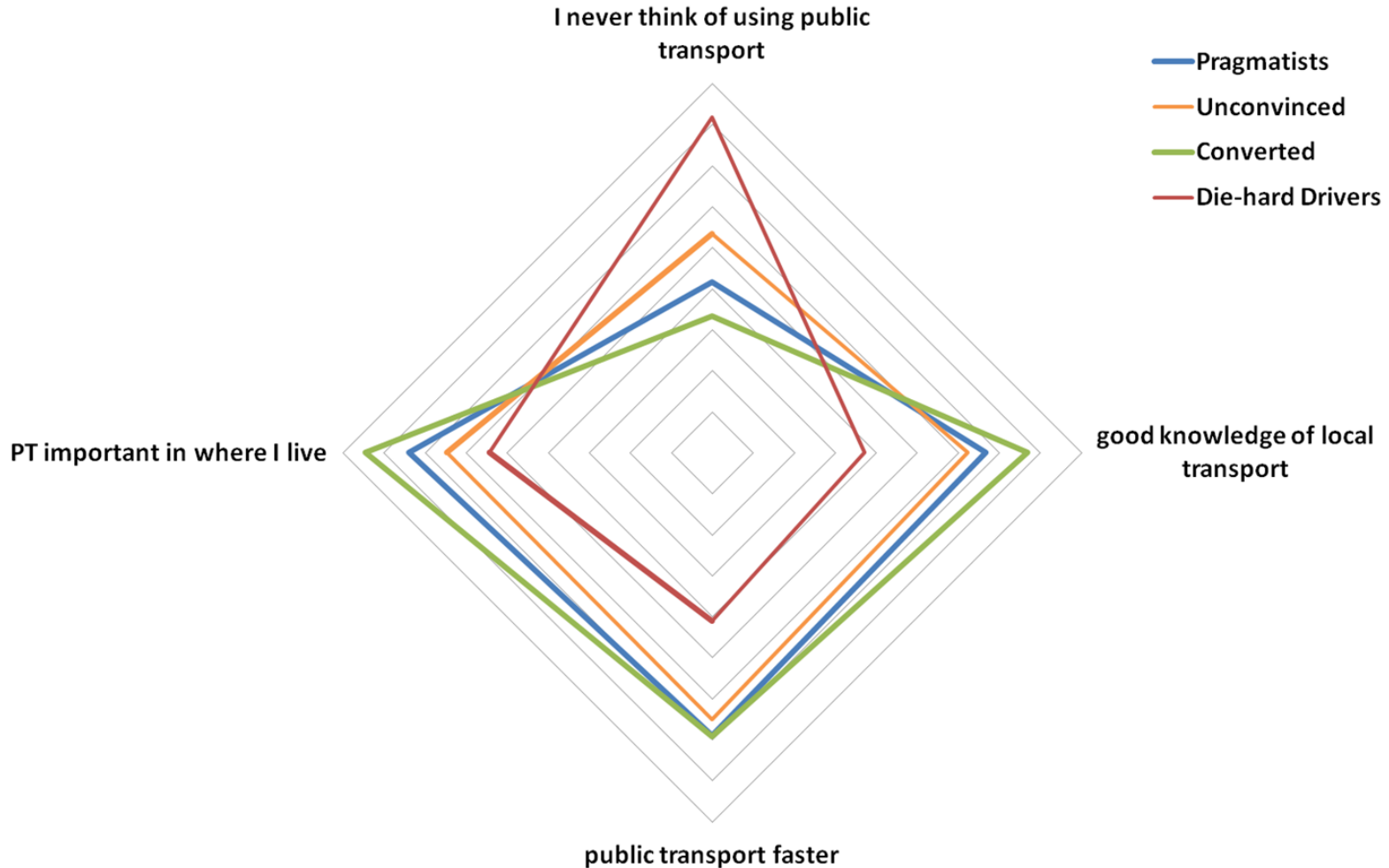
# Segment attitudes – driving/parking



# Segment attitudes – environment

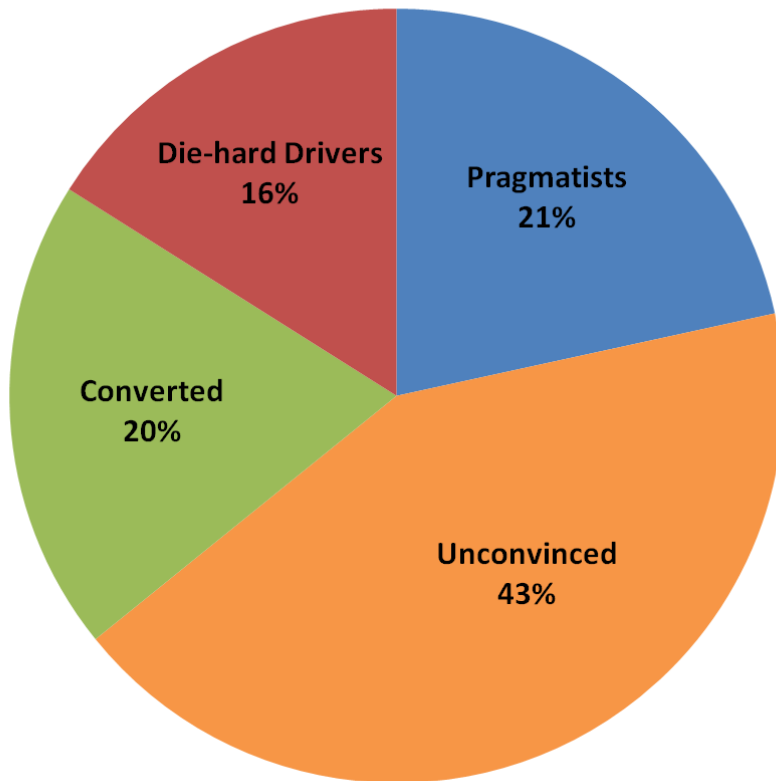


# Segment attitudes – Public Transport

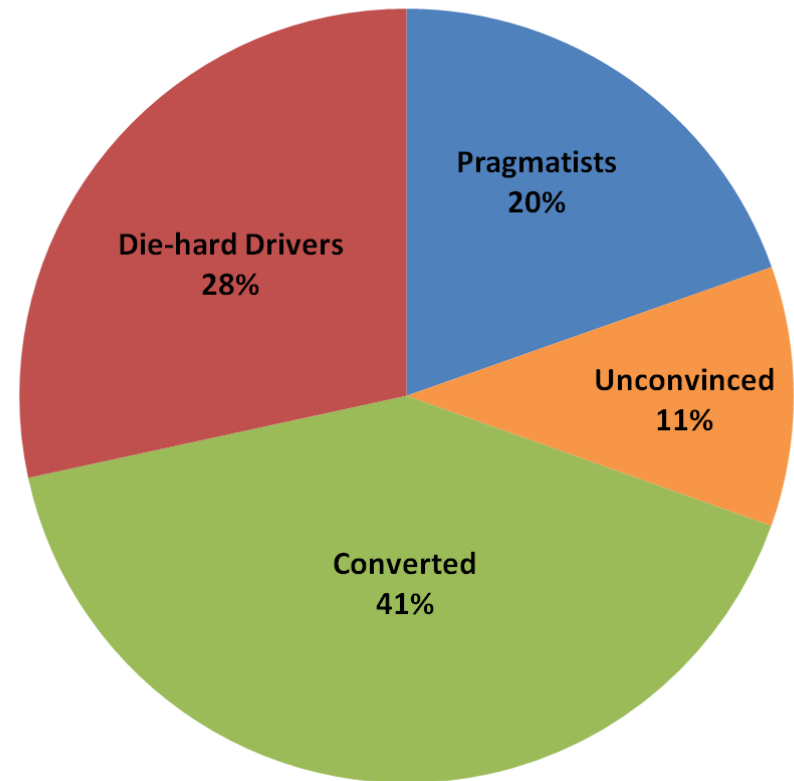


# Mobility Mindsets – before & after

Before



After



# Key observations (1)

**Converted** up 100% (21%-points)  
**Unconvinced** down 75% (32%-points)

- This is significant because the Unconvinced were the ones most likely to say:
  - *“I am not aware of environmental issues”*
  - *“I would be more green if others were”*
- So – it seems that making them more aware and changing the social norms around public transport had an **impact**.

### *Die-hard Drivers* up 75% (12%-points)

- Some people will not be convinced by the new investment and views may become more polarised.

### *Pragmatists* stayed the same

- This group are open to all kinds of transport. They are likely to have increased their use of PT after the investment.

- ***Mobility Mindset* segments are a useful way of grouping the population according to propensity to use (and switch) to PT**
- **They can be used to monitor impact of investment in PT and Mobility Management investment**
- **The Unconvinced can be convinced!**



# Thank you!

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