



InnovaSUMP
Interreg Europe



European Union
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The Exeter Engaged Smart Transport Project



Laura Dawkins

Postdoctoral research associate, University of Exeter

L.C.Dawkins@exeter.ac.uk

UNIVERSITY OF
EXETER

Devon
County Council 

7 June, 2017 | Travel Behaviour workshop, Prague

The Engaged Smart Transport Project

www.commute-Exeter.com

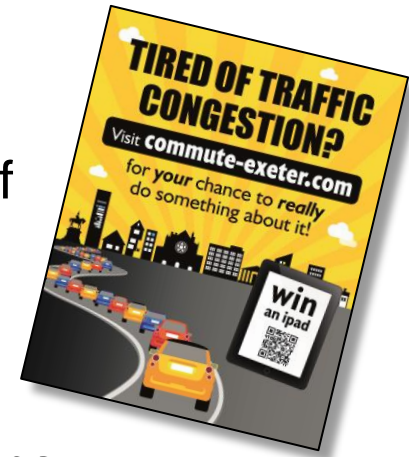


- Aim: understand **where and why** commuter congestion happens and identify solutions to address these problems
- Traffic management systems
- **Behavioural change**



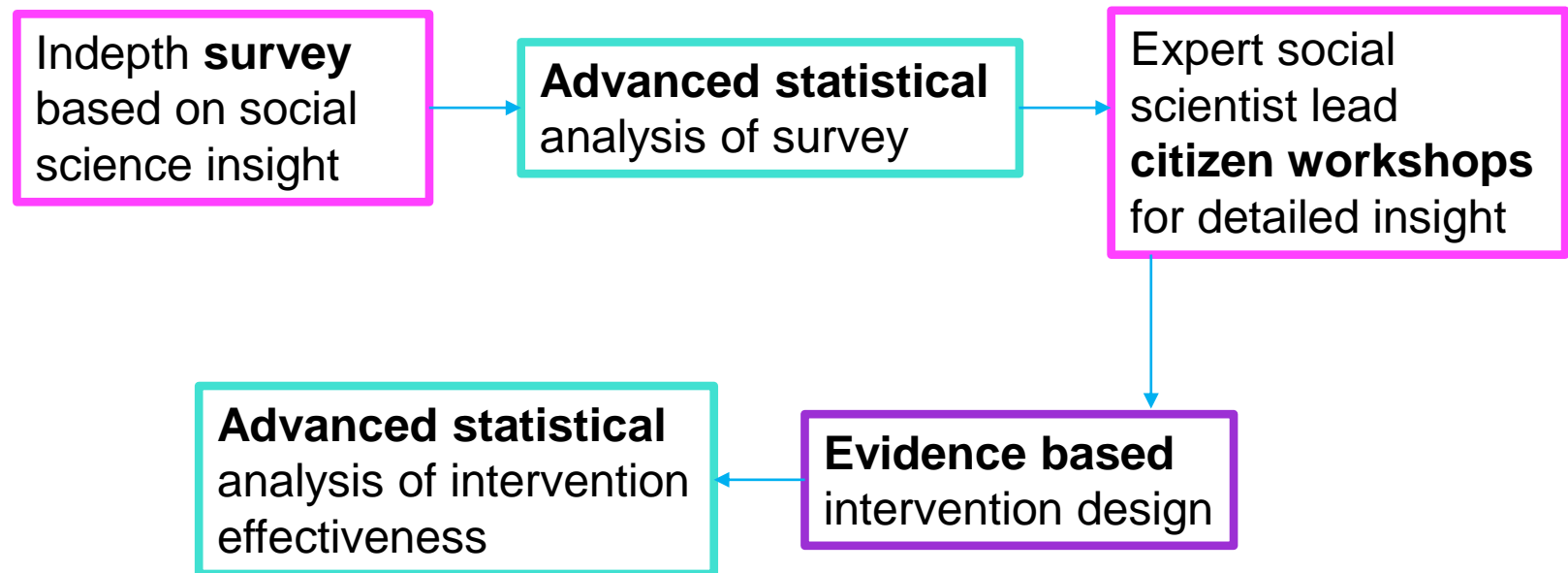
Travel Behaviour Research

Aim to reduce congestion through **encouraging behavioural change** towards more sustainable modes of transport



A unique approach

- **Collaboration** between social scientists and statisticians



The Survey

A unique approach

- Recognise that people **don't use just one type of transport mode**

6. How many DAYS on average, in a typical FOUR WEEK period (Mondays to Fridays), do you commute to and from your place of work/study using some or all of the following travel mode options?



Number of days using a motorised vehicle
(e.g. car, motorbike, van)

16

Number of days using public transport
(e.g. train, bus)

Number of days using a bicycle

4

Number of days walking/running

Number of days using a combination of modes within a single day's commute
(e.g. bicycle and public transport)



Prev

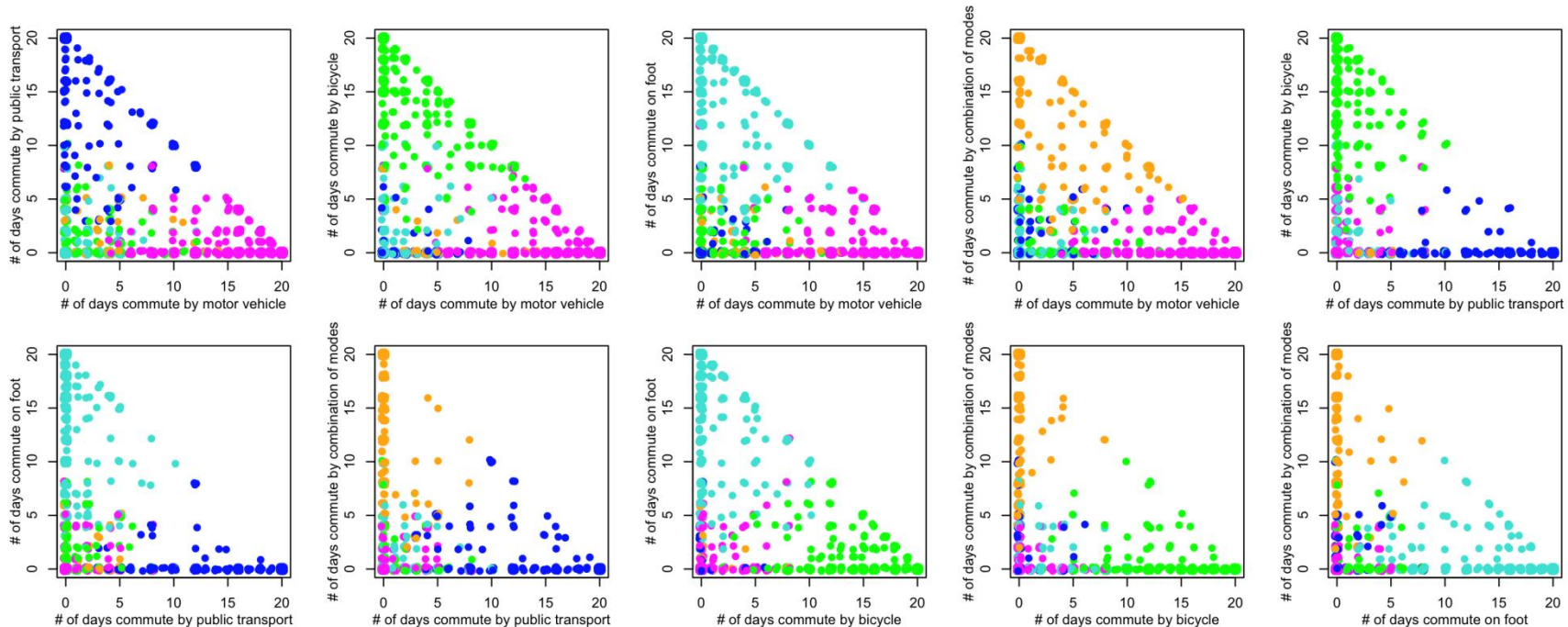
Next



The Survey Analysis

A unique approach

- **Grouped** survey respondents based on their predominant mode



- **Group 1** – Mostly commute by motor vehicle
- **Group 2** – Mostly commute by public transport
- **Group 3** – Mostly commute by bicycle
- **Group 4** – Mostly commute on foot
- **Group 5** – Mostly commute using a combination of modes

The Survey Analysis

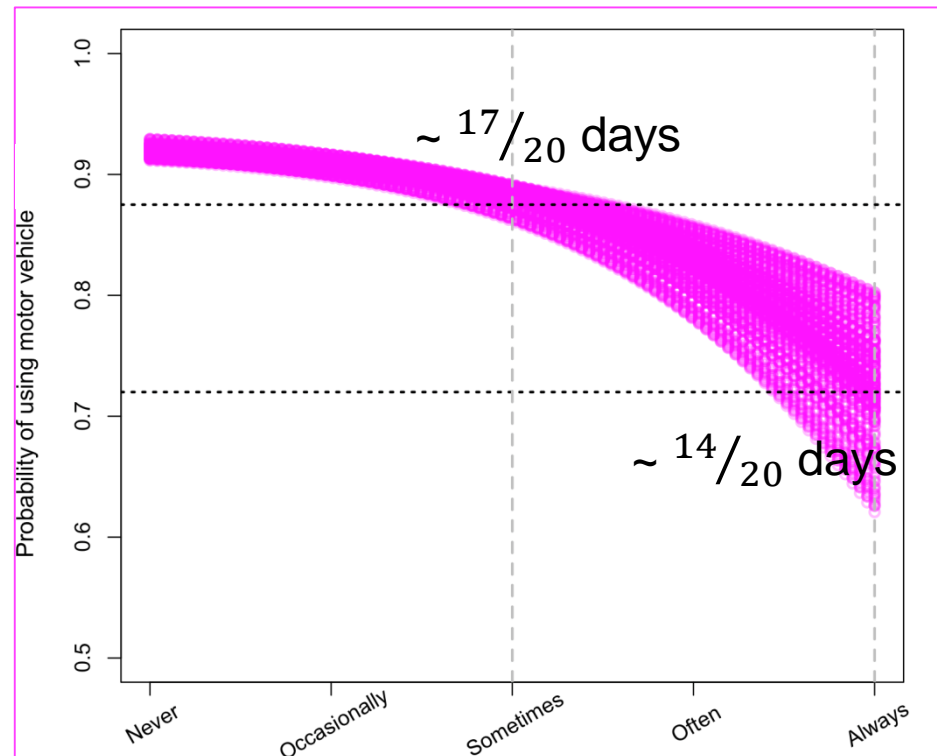
A unique approach

- **Advanced statistical model** to **quantify** how much different factors influence day-to-day transport mode choice within each group

10. How much does receiving information about traffic congestion and transport delays influence your choice of travel mode to your place of work/study?

- ☐ Always influences
- ☐ Often influences
- ☐ Sometimes influences
- ☐ Occasionally influences
- ☐ Never influences

- **Group 1**, probability of using motor vehicle is lower if more influenced by traffic information
- **~ 428 less people commuting by motor vehicle per day!**



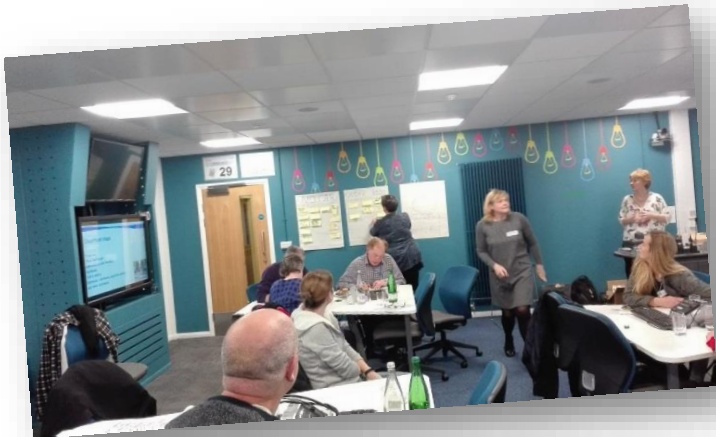
The Citizen Workshops

A unique approach

- Working **with the public** for a **more in depth understanding** of how to influence travel behaviour

"If you do check the information you probably get things that aren't necessarily relevant to you"

"Any information has to give viable alternatives"



"Honiton Road roundabout is a nightmare - and traffic backs up so quickly it can take ages to get through. Now I can at least go via the Science Park, avoid that roundabout and not arrive at work in a rage"

The Intervention Phase

A unique approach

- **Evidence-based** intervention design



- **Send a daily messages** to ~20 people per group for 20 weekdays beginning 19th June
- Designed to promote alternatives transport modes with **content based on evidence** from survey and citizen workshop
- Record each individual's transport mode usage each day
- Developing an advanced **statistical model** to **quantify the effect** of the intervention on reducing motor vehicle usage

The Engaged Smart Transport Project

A unique approach

- **Collaboration** between social scientists and statisticians
- Recognise that people **don't use just one type of transport mode**
- Work and engage **with the public**
- **Evidence-based** intervention design
- **Advanced statistical models**

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Thank you!

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Questions welcome



- 41 people - **sometimes influenced** by receiving traffic information ($x=3$)
- These 41 people commute by motor vehicle a total of **539 days in a 4 week period**
- If, through an intervention, these people became **always influenced** by traffic information – **could go from using motor vehicle 88% to 72% of the time**

- **539 days becomes 443 days** – 96 less days ~ **5 less people commuting by motor vehicle per day**

- If we do the same for all individuals ($x = x + 2$), **2954 days becomes 2665 days** – 289 less days ~ **15 less people commuting by motor vehicle per day**

- Scale up to the whole population ~ **428 less people commuting by motor vehicle per day**

