

iConnect - an integrated approach to measuring and evaluating the physical activity, travel and carbon impacts of interventions to improve the connectivity of infrastructure for walking and cycling in the UK

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THE PROJECT IN A NUTSHELL

The iConnect (Impact of Constructing Non-motorised Networks and Evaluating Changes in Travel) study aims to measure and evaluate the changes in travel, physical activity and carbon emissions related to Sustrans' Connect2 programme, which is an ambitious UK-wide project that will transform local travel in 79 communities by creating new crossings and bridges to overcome barriers such as busy roads, rivers and railways, giving people easier and healthier access to their schools, shops, parks and countryside. Having started in May 2008, the five-year iConnect study involves a broad evaluation of the whole programme coupled with detailed investigations at five specific sites. We hope to determine if the new routes have got more people switching from using their cars to walking or cycling, helping them to get more physically active and reducing their carbon footprint. This poster provides an introduction to the project.

BACKGROUND TO ICONNECT

- Unrealised aspirations to increase walking and cycling in Britain
- Cross-sectoral benefits of an increase in walking and cycling
- Limitations of existing research evidence
- Unique research opportunity offered by the Connect2 programme
- Wide ranging, inter-disciplinary and policy relevant approach

PROVISIONAL CASE STUDY SITES

- Bridge to Nowhere (Glasgow)
- Whitlingham Country Park (Norwich)
- Banbury (Oxfordshire)
- Itchen Walkway (Southampton)
- Ottery St Mary (Devon)

RESEARCH OBJECTIVES

- Develop and refine measurement instruments and evaluation frameworks for assessing the effects of physical walking and cycling interventions on travel activity, physical activity and carbon emissions
- Apply these methods in longitudinal population-based studies at a sample of Connect2 case study sites
- Determine the likely benefits of additional promotional interventions using a randomised controlled trial (RCT)
- Enhance and collate data at all Connect2 sites to develop broad strategic evaluation measures



Norwich, Whitlingham Country Park



Glasgow, 'Bridge to Nowhere'
Photo Credit: Martin Lunden, Glasgow City Council

APPROACH

The methodological approach is informed by the realist approach to evaluation (Pawson and Tilley, 1997) which advocates determining not simply whether an intervention has worked but also understanding why it is effective (or not), in what ways, for whom and in what circumstances. We are therefore collecting data on context, mechanisms and outcomes using a longer self complete household questionnaire, to which we anticipate a total of approximately 10,000 useable responses from the main case studies; a shorter user intercept questionnaire, developed in conjunction with Sustrans; and more detailed objective measures from subsets of our study cohorts. This builds on gold standard methods and tools, e.g. the Saelens socio-ecological model and the HEAT for Cycling tool. Animations similar to the 'virtual reality town' with walkers and cyclists will be included in promotional material for the 'Bridge to Nowhere' work and RCT.



An example socio-ecological model underlying the iConnect evaluation framework
Source: Saelens et al, 2003

The Health Economic Assessment Tool for Cycling
Source: Rutter et al (2007)



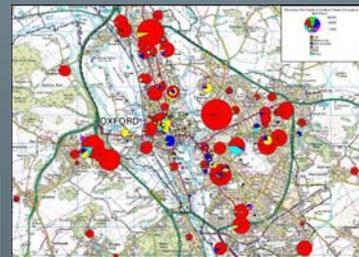
A Virtual Reality town with walkers and cyclists
Credit: David Drinkwater, UEA

EXPECTED RESULTS

The main outputs will be an improved set of measurement and evaluation tools at the strategic and more detailed, local levels, validated using a heterogeneous set of Connect2 case studies; evidence on the impacts of infrastructural and promotional interventions, which will inform policy and practice; and strategic benefit and cost measures which will inform and influence government policy and appraisal of infrastructural interventions. Given the longitudinal nature of the main body of work, these results are expected towards the end of the project (2012/13).

REFERENCES

Brand (2008) Personal Travel and Climate Change. Saarbruecken: VDM Publishing.
Pawson, R. and Tilley, N. (1997). Realistic evaluation. London: Sage.
Rutter et al (2007) Health Economic Assessment Tool for Cycling v1.0, WHO Regional Office for Europe, Copenhagen.
Saelens et al (2003) Environmental correlates of walking and cycling, Ann Behav Med, 25: 80-91



Map of Oxford residents and their annual carbon emissions from personal travel (Brand, 2008)