Making the economic case for active travel

Active travel and economic performance: A ‘What Works’ review of evidence from cycling and walking schemes

Active Travel Toolkit Slide Pack

Active travel and economic performance: A ‘What Works’ review of evidence from cycling and walking schemes. Part of the Active Travel Toolbox, written by Sustrans with support from Dr Adrian Davis, Living Streets and The TAS Partnership.

July 2017

sustrans

What is this slide pack for?

This slide pack provides a summary of the toolkit: Active travel and economic performance.

The Active Travel Toolbox slide packs are designed to demonstrate the benefits of sustainable transport and help LEPs and local delivery partners strategically invest in walking and cycling schemes.

This slide pack provides:

- Key messages
- Statistics and evidence

sustrans

Contents

This slide pack covers:

- The contribution of walking and cycling to economic performance.
- What works? Walking and cycling intervention typologies.
- Where to target interventions.
- Applying a holistic approach.

Key messages

- There is increasing, and increasingly strong, evidence that walking and cycling can play a very significant role in optimising the contribution of transport to economic performance
- There are a range of intervention types that can be effective in increasing walking and cycling
- The nature of economic benefits gained varies between rural and urban settings
- An optimum balance between capital and revenue investment in cycling and walking is 20-40% revenue

sustrans

Active travel and economic performance

There are five key areas where walking and cycling contribute to economic performance:

- Keeping people and business moving (reducing congestion)
- Supporting local businesses and high streets (quality of life and retail vitality)
- Improving business efficiency (reduced absenteeism as a result of a healthier and happier workforce)
- Direct job creation
- Leisure and tourism and support for cycling industry

sustrans

Keeping people and business moving (reducing congestion)

- Congestion is getting worse in cities across the UK and current projections have suggested a cost to the economy of £11 billion a year
- Reduced congestion is a key benefit of active travel, which can be measured using the WebTAG economic appraisal framework

sustrans

Supporting local businesses and high streets

- Almost 11% of all employment is in the retail sector
- A survey of shoppers on independent shopping streets, conducted in Bristol and Newcastle by Sustrans, found that less than a third of shoppers arrived by car
- Similarly, it was found that 50% of shoppers surveyed on one of the main city centre shopping streets in Swansea had arrived by car
- The contribution of sustainable transport to town and city centre shopping areas is much greater than many retailers anticipate

sustrans

Supporting local businesses and high streets

- What would an ideal shopping street look like
- The Newcastle survey showed that the three most pressing issues for shoppers were
  - improved access for disabled people,
  - better conditions for pedestrians and
  - the reduction of traffic on the road
- This supports programmes that improve walking and cycling links and accessibility within towns and city centres
- This also supports previous evidence that an attractive townscape will attract shoppers. By altering the streetscape to become more pedestrian-friendly, a “sense of place” can be created making pedestrians feel more comfortable to spend at ease
- This approach has fed into projects such as Sustrans DIY Streets

sustrans

Supporting local businesses and high streets

- The importance of non car-drivers to spend on the high street:

  - On an individual trip, car drivers tend to spend more that shoppers who have arrived by sustainable transport, but cyclists, pedestrians and people arriving by public transport tend to visit more frequently and spend more over the course of a month
  - These findings are echoed in work by Transport for London and the Cycling Embassy of Denmark

sustrans

Improving business efficiency

- Absenteeism: A habitual pattern of absence from work
- Users of the cycle network take approximately half the days off compared to the average worker resulting in a £13.7 billion annual boost to the British economy
- Actively promoting healthier travel options in the workplace has been shown to reduce absenteeism by up to 20%
- Presenteeism: Activity impairment, low efficiency and poor performance at work, usually due to stress or problems associated with poor health
- Physical activity has been suggested to benefit levels of presenteeism in the work place, and has been estimated to cost businesses up to 7.5 times as much as absenteeism

sustrans

Direct job creation

- Every time Sustrans funds a project or scheme that spends money in the local and wider economy, jobs are created
- Sustrans has investigated the number of direct and indirect jobs supported by the construction of walking and cycling routes, using monitoring data (which included scheme costs, length and staff hours work) collected for 127 infrastructure schemes
- The key findings were:

- 12.7 jobs are supported or sustained for every £1 million of investment in sustainable transport infrastructure
- 1.6 jobs are supported of sustained for every km of route constructed
- The average cost per km of construction was £103,891

sustrans

Direct job creation

- Cycling Infrastructure presents very good value for money compared to road construction
- Transport Scotland have published details of several road building schemes for comparison:

	jobs	Cost (million)	cost per job	jobs per £1m investment	km	cost/km (thousand)
Forth bridge replacement	1,500	£1,600	£1,066,667	0.9	2.7	£592,593
M47	350	£445	£1,271,429	0.8	8	£55,625
M8/M73/M74	900	£415	£461,111	2.2	18	£23,056
HS2 Phase 1	9,000	£17,160	£1,900,000	0.5	224	£76,600

- This shows that smaller scale projects and investment in sustainable transport create more jobs per pound invested

sustrans

Direct job creation

- How many jobs does cycling provide nationally?
- There is evidence to show that continued reduction of car use through improving sustainable transport infrastructure provides more jobs than it destroys
- A 1997 study found that an increase in the demand for public transport, cycling and walking would create 130,000 jobs by 2010, which more than offsets the 43,000 jobs that would be lost in the motor industry. Although this work wasn't verified, there is a growing body of work that supports this assertion
- Cycling as an industry employs an estimated 23,415 people in the U.K, paying annually £514m to its employees and over £106m in tax and N.I. contributions. The majority of these jobs are in the retail sector, though cycling infrastructure and maintenance account for 2,500 jobs and are estimated to pay almost £80 million per annum in salaries

sustrans

Leisure and tourism

- Tourism is a crucial sector of the UK economy. It is the UK's fifth largest industry, employs 2.72 million people (2011) and is worth £115 billion a year
- Economic benefits of cycle tourism

- Cycle tourism represents a growing and valuable tourist market, and can provide new incentives for people to visit an area and help support local trade and businesses
- Long distance cycle routes, which are predominantly rural, can generate as much as £30 million per year to the local economy; enough to sustain over 600 full time equivalent jobs
- Research by Sustrans indicates that, on average, home-based leisure cyclists each spend £9.20 per day and overnight tourists spend significantly more at £22.90 per day

sustrans

What works? evidence of the impact of different walking and cycling typologies

- There is evidence that improved economic performance results from a variety of types of cycling and walking interventions:
- New infrastructure to overcome barriers and link communities
- Rail station accessibility improvements
- Smarter choice measures
- Town-wide programmes of mixed infrastructure and smarter choice interventions

New infrastructure to overcome barriers and link communities

- Local travel can be transformed by overcoming natural or man-made barriers, enabling everyday cycling for more people
- There are a wide range of benefits which boost economic performance, examples include:

- Improved health: Following the completion of the Pony y Werin Bridge in Cardiff, as part of the Connect2 programme, 85% of route users said that the scheme had helped them increase their levels of physical activity
- Reduced congestion: As part of the DfTs Linking communities 2012-13 programmes a shared use path from Winchester city centre to South Winchester was implemented, consequently removing 17,000 car trips from the road per annum

sustrans

Rail station accessibility improvements

- Interventions that seek to increase travel by bicycle through the improvement of facilities for cyclists at train stations (or at other transport interchanges), such as in the Bike ‘n’ Ride programme
- A six percentage point increase in mode share for passengers travelling to and from the station by cycle was evidenced. In addition, 78% of passengers cycling to the station, referred to aspects of the intervention as the main reason for cycling

Smarter choice measures

- Smarter choice programmes encourage sustainable and active travel decisions through engagement with individuals and communities
- Measures include promotion of routes and events and behaviour change programmes that work through challenge, facilitation, encouragement or provision of information. The benefits include:
  - A healthier, more active, workforce: Survey results from those involved in the My Journey South Hampshire online Challenge showed increased active travel, contributing to a healthier workforce
  - Reduced congestion: TravelSmart Watford, an Individualised Travel Marketing campaign, led to a noticeable shift away from motorised transport

Town-wide programmes of mixed smarter choice and infrastructure interventions

- Evidence from town-wide interventions demonstrates the benefits of smarter-choices programmes, and how combining these with infrastructure improvements can increase the impact further
- The Cycling Demonstration Towns:
- Programme of mixed infrastructure and smarter choices initiatives to promote active travel and provide travel planning in six towns
- Across the six towns, the benefit cost ratio was 3.5 to 1 (this included absenteeism and decongestion benefits)
- The Sustainable Travel Towns:
- Town-wide smarter choice programmes were implemented in three towns
- Across the towns Car trips decreased by 9%, with a benefit cost ratio of 4.5 to 1 calculated based only on the reductions in congestion

sustrans

Benefit cost ratios for different intervention types

Project type	Calculated BCR
New infrastructure to overcome barriers and link communities	Projects such as Connect2 and Linking Communities that deliver new infrastructure see overall average BCRs of 6.3:1 (8:1 when children are included) and 10.9:1 (13.8:1 when children are included) respectively. The BCRs of individual schemes range greatly from 3:1 to 32.8:1.
Rail station accessibility improvements	To date WebTAG has not been used to assess BCRs for rail station accessibility improvements.
Smarter choice measures	Smarter choices projects would not typically use WebTAG to calculate BCRs, given the framework is designed primarily for infrastructure projects. However, the 'Get Britain Cycling' APPCG Inquiry states that "there is substantial evidence that cycling initiatives, like other smarter choices give very good value for money indeed – better than most infrastructure projects – in line with a decade of discovery that small, local, cheap improvements to the quality and ease of transport…. typically give benefit cost ratios (BCRs) in double figures, with benefits that may be 10 or 20 times as large as costs, or more"
Town-wide programmes of mixed infrastructure and smarter choice interventions	The Cycling Demonstration Towns have seen BCRs of 2.6:1 to 3.5:1 over 10 years, rising to 7.8:1 over 30 years[41]. The Sustainable Travel Towns see an overall average BCR of 4.5:1 (considered a conservative estimate as based only on the reductions in congestion)[5]

Using the Department for Transport's (DfT) transport appraisal framework, WebTAG, the benefit-cost ratio (BCR) of interventions can be calculated, indicating their economic benefits

sustrans

Where to target interventions

- Evidence indicates that different types of intervention can successfully add to the UK economy across both urban and rural settings, although the type of intervention should be targeted to the area
- PTEG chair David Brown indicates that urban locations should be targeted to stimulate economic growth through business
- Given that 68% of all journeys made in the UK are under 5 miles and can be reasonably made by walking and cycling and that 80% of the population live within densely populated cities and towns it is recommended that interventions target urban locations to maximise economic impact in relation to improved business efficiency
- Leisure and tourism routes provide a very different solution, demonstrating a viable boost to the economy through the development of longer leisure and tourism routes through rural settings

sustrans

Benefits of a holistic approach

- There is limited evidence to support the widely held belief that a programme of mixed interventions will have a greater impact than a scattering of uncoordinated projects
- Sloman et al. (2014) explored the optimum balance of capital (broadly speaking infrastructure) and revenue (behaviour change) investment in sustainable transport projects, concluding that a proportion of revenue funding in the range of 20-40% seemed capable of delivering higher BCRs

Summary of economic benefits associated setting and project types

Economic benefits	Indicators	Setting	Types of project	
			Infrastructure	Revenue
Reduced congestion	Reduced car use	Primarily Urban	○ New routes (on and off road) ○ Links ○ Improved access	○ Personalised Travel Planning ○ Workplace Travel Planning
Support to local businesses and high streets	Quality of Life & Retail vitality	Urban, Rural	○ Links ○ Improved access	○ Community Street Design ○ Personalised Travel Planning
Improved business efficiency (reduced absenteeism, presenteeism and costs of recruitment)	Increased physical activity, as a result of increased active travel	Urban	○ New routes (on and off road) ○ Links ○ Improved access	○ Personalised Travel Planning ○ Workplace Travel Planning
Direct job creation	Jobs created per £ investment and/or jobs created per km of new route	Urban and rural	○ New routes	
Leisure and tourism	Increased usage on routes Retail vitality surveys	Long-routes (urban and rural)	○ New routes	○ Promotion of new and existing routes