

Table 4. Overview of studies included in scoping review (n=129) *From Michie et al's Behaviour Change Wheel¹

Study/ Report Author	Year	Location	Population age group	Setting	Summary	Relevant intervention function(s)*	Findings
Mayer ²	1982	USA	Adults	University	A community-based intervention for encouraging cycling. Individuals offered cash or vouchers for modal shift to cycling or for increasing cycling. Intervention lasting 3 weeks involving all individuals using a bike path.	Incentivisation	Evaluation data collected from 464 individuals. During incentive period, biking frequency at the experimental bike path was significantly greater than during pre-incentive condition. However, these effects were transient.
Alcott ³	1991	USA	Adults	Workplace	Effects of the Clean Air Force campaign "Don't drive 1 in 5" (1989-1990) on attitudes and commuter behaviour change. Almost 100,000 workers from 81 different employers took part in multi-component intervention.	Environmental restructuring (social) Persuasion Education	Evaluation data collected from n=701. Pre 1988-1990 campaign measurement showed 5% of participants cycled to work. Post measurement showed 7% cycled to work.
Shoup ⁴	1997	USA	Adults	Workplace	Eight case studies evaluating the effects of a parking cash out program. Employees from 8 workplaces who complied with California's cash out requirement took part.	Incentivisation	Evaluation data collected from n=1694. Evaluation showed walking and cycling increased by 33%.
Macarthur ⁵	1998	Canada	Children	School	Evaluation of a bicycle skills training program for young children: 'Kids CAN-BIKE' festival. Grade 4 children recruited from 6 elementary schools in one district borough received a 90 minute cycle training session.	Training	Evaluation data collected from n=117. This brief skills training program was not effective in improving safe cycling behaviour, knowledge, or attitudes among grade 4 children.
Cooper ⁶	1999	Canada	Children	School	Evaluation of the Kids CAN-BIKE training program for young children. Grade 4 children from six elementary schools in East York took part in this one off festival event (90 minutes)	Training	Evaluation data collected from n=141. No significant difference in skills change between intervention and control groups. This brief skills training festival was not

							effective in improving safe cycling behaviour in grade 4 children.
Pucher ⁷	1999	USA and Canada	Various	Various	This study describes recent trends and multiple policies aiming to promote cycling in North America.	Environmental restructuring (physical and social) Education	Specific evaluation for each policy not reported. Concluded that there has been a bicycling renaissance underway over the past two decades, with growing cycling levels and widespread interest in cycling in both the USA and Canada.
Cleary ⁸	2000	UK	Adults	Workplace	A case study evaluation of the Cycle Challenge project; 'Nottingham Cycle-Friendly Employers'. Employees from 8 large employers in Greater Nottingham area were focus of this project from 1996-98.	Environmental restructuring (social and physical) Incentivisation Education	42% of cycling respondents (n not reported) indicated that their level of cycle commuting had increased during the life of the project.
Mutrie ⁹	2002	UK	Adults	Workplace	A randomised controlled trial of the self-help intervention 'Walk in to Work Out' aiming to improve active commuting. Employees from 3 workplaces in the city of Glasgow, Scotland took part in intervention.	Education Enablement	Evaluation data received from n=295. Intervention was not successful at increasing cycling to work.
TravelSmart ¹⁰	2002	Australia	All	Home	Final report of the TravelSmart Suburbs Brisbane project. Residents in over 450 households in inner northern suburbs of Brisbane were focus of this project (May to Nov 2001)	Persuasion Environmental restructuring (social)	Before and after surveys showed cycling increased by 6% (n= not reported).

						Education	
Staunton ¹¹	2003	USA	Children	School	Evaluation of the Safe Routes to School program in Marin County. Children from public and private schools in Marin County (middle- and upper- class community on the California coast). Ongoing at the time.	Education Environmental restructuring (social) Incentivisation Training Persuasion	Evaluation data collected from n=1611 in Spring 2002. Participating public schools reported an increase in school trips made by walking (64%), biking (114%), and carpooling (91%) and a decrease in trips by private vehicles carrying only one student (39%).
Merom ¹²	2003	Australia	Adults	Community	Evaluation of an environmental intervention promoting walking and cycling; the newly constructed Rail Trail in Western Sydney. Participants were potential cyclists and pedestrians living within 5km of a new cycleway. 3 month intervention.	Persuasion Environmental restructuring (social)	Evaluation data collected from n=450. The campaign reached and influenced cyclists in the inner evaluation area with increases in awareness, use and cycling time and mean bike counts found
Rowland ¹³	2003	UK	Children	School	A randomised controlled trial of site specific advice on school travel patterns. Children recruited from 21 primary schools in London boroughs. Duration: 1 school year.	Environmental restructuring (social)	1386 provided evaluation data. No evidence that this assistance changes children's travel patterns.

TravelSmart ¹⁴	2003	Germany	Adults	Home	Evaluation of TravelSmart Viernheim Household Transport project. Inhabitants within households within 3 target areas of Viernhem (Jan – March 2001).	Incentivisation Persuasion Education Environmental restructuring (social)	With Individualised Marketing, the share of environmentally-friendly modes increased by the following percentage: Walking: 7 %, Bicycle: 10 % (n=900 for evaluation data).
TravelSmart ¹⁵	2004	Australia	All	Home	Evaluation of the TravelSmart Household Program in parts of the Perth Metropolitan Area (2001-2005). Residents in households in Melville 3940 households received information.	Persuasion Education Incentivisation Enablement	Cycling as a main travel mode increased from 1 to 2%. Relative changes to mode choice: cycling went from 12% to 21% so this is a 75% relative increase in mode choice for number of trips per person per year (n=2763 in before survey from target and control groups, n=1300 from target group in after survey)
Wen ¹⁶	2005	Australia	Adults	Workplace	Evaluation of a pilot study in Australia promoting active transport in a workplace setting. Randomly selected health service employees (n= 68) working at healthcare facility in inner-city Sydney received intervention (12 months)	Persuasion	Reduction in the proportion of participants who drove to work 5 days per week and a decrease in trips travelled by car on weekends. In addition, there was high awareness of the intervention amongst participants and their understanding of the concept of active transport improved from 17.6% at baseline to 94.1% at the follow-up survey (p 0.01). There was also a significant shift in attitudes, which suggested

							increased positive regard for active transport. Evaluation n=45.
Bowles ¹⁷	2006	Australia	Adults	Other (sporting event)	An investigation into who participates in mass cycle events. Subsample of online registrants in a mass cycling event in Sydney attended this 1 day event (n=1,135).	Environmental restructuring (social)	Participants of mass cycle event more likely to be middle aged, male, have high baseline self-rated cycling ability, regular cyclists. In first time participants in this cycling event, there was a significant increase in mean number of times cycled in months post-event in comparisons to pre-event. Evaluation n=918.
Telfer ¹⁸	2006	Australia	Adults	Online	Pilot intervention of a cycling proficiency training program in central Sydney. General public (n=113) were recruited through promotional flyers, posters and adverts in local newspapers for this intervention (6 hours of cycle training).	Training	At 2-month follow-up, the course had significantly increased participants' self-reported skills and confidence for cycling. More than half of the participants (56%) said they cycled more 2 months after the course. There was a 40% increase in participants having cycled in the previous week at follow-up among baseline non-cyclists, although this was not statistically significant. Evaluation n=105.
TravelSmart ¹⁹	2006	UK	All	Home	Report on TravelSmart individualised travel marketing campaign in Bessacarr. A total of 1134 households in Doncaster received intervention.	Education Incentivisation Persuasion	After survey received 1871 responses. There was a 1% point increase in cycling as main mode from 2 to 3%. In terms of trips per person per year, a 14% relative increase in cycling was seen (22% to 25%).
Martens ²⁰	2007	Netherlands	Various	Various	Study describing cycling promotion efforts in the Netherlands	Environmental restructuring (physical)	Evaluation of specific projects not reported. Overall conclusion: Small changes to infrastructure have been beneficial for

							cycling levels in the Netherlands
Groesz ²¹	2007	USA	Children	School	A conceptual evaluation of a school-based utilitarian exercise model: BikeTexa Safe. 4th and 5th grade school children from 7 schools in Texas received intervention. Duration not reported.	Training Incentivisation Environmental restructuring (social)	Experimental students displayed greater knowledge, a trend toward greater motivation, and greater recreational cycling at follow-up compared to waitlist students. Evaluation data from children n=118 and parents n=186.
Rose ²²	2007	Australia	Adults	Community	Evaluation of a major ride to work day event. Workplace employees who had expressed a desire to participate in the ride to work day event were involved in this study (n=5577).	Environmental restructuring (social) Education	More than one in four (27%) of those who rode to work for the first time as part of the event were still riding to work five months after the event (evaluation n=1952)
TravelSmart ²³	2007	Sweden	Adults	Home	TravelSmart International Review: IndiMark program. 17,000 people received initial information,	Environmental restructuring (social)	In total project resulted in increase by 11% relative figures in market share of green modes (53% to 59%), largest increase was noted for cycling with a 45% increase in relative figures. Evaluation n not reported.
		Sweden	All	Home	TravelSmart International Review: SMART road user program. 5 towns outside Lund where large groups of people commuted to Lund. In total the	Education	Evaluation not conducted.

					SMART road user campaign was in contact with about 10,500 residents and 7,000 employees		
		UK	Adults	Home	<p>TravelSmart International Review: Intelligent travel in city of York program. Covered three wards in the City of York within these wards four different areas were selected as the study area. Recruited via telephone or post.</p> <p>Random sample of 5,701 households were contacted</p>	<p>Persuasion</p> <p>Incentivisation</p>	In intervention group, 1% increase (or 33.333% relative increase) in cycling before/after intervention. However 1% point increase also seen in non-intervention group. Evaluation n=339.
Darling ²⁴	2008	New Zealand	Children	Community	Description of a community intervention to encourage cycling in children: Kids on Bikes. 101 children aged 4-12 received intervention. Training was one night a week, number of weeks not reported.	<p>Training</p> <p>Enablement</p>	Evaluation not reported.
Fesperman ²⁵	2008	USA	Children	School	A comparison case study on active transport to and from school. Children from two North Carolina Schools received intervention.	<p>Persuasion</p> <p>Education</p>	<p>16 key stakeholders interviewed.</p> <p>Challenges to active transport identified were funding, school location, available infrastructure, community involvement, school support, parental buy-in, ad sufficient program promotion.</p>
Wen ²⁶	2008	Australia	Children	School	A cluster randomised controlled trial aiming to increase active travel in school. Pupils from 24 primary public schools in inner city west Sydney received intervention (ongoing at time).	Education	<p>Evaluation data provided from 1966 students and 1606 parents.</p> <p>No cycling outcomes reported.</p>

TravelSmart ²⁷	2008	UK	All	Home	Report on the TravelSmart individualised travel marketing campaigns in Preston, South Ribble and Lancaster (2006-2007). Households in Lancaster were contacted to register interest to take part. In total, deliveries containing 99,758 items of information and rewards were made to a total of 9,867 households.	Education Incentivisation	Evaluation data provided from 1743 in Preston & South Ribble, 1863 in Lancaster City and Morecambe. Preston: changes in trips by main mode (trips per person/year) - cycling went from 17% to 23% (so a relative increase of 35% or 5%points). Total travel time did not change significantly, just mode share. Cycling relative growth (trips per person per year) was +69% (+20%points).
Chatterjee ²⁸	2009	UK	Adults and Children	Various	A comparative evaluation of large-scale personal travel planning projects in England. 7 pilots targeted households in residential areas in England, and 6 targeted employees in workplaces, and 2 pupils in schools (various projects lasting 1-4 months)	Persuasion Incentivisation	Cycling share increased by 1 percentage point in 8 of the 14 pilot studies. In the other 6 it remained constant, did not decrease.
Hamamoto ²⁹	2009	USA	All	Community	Description of two active living projects aiming to inspire community participation in cycling. A low-income community in Hawaii was target group of this intervention. Bicycle repair and recycle programme.	Enablement Environmental restructuring (social)	Evaluation not reported.
Hemmingsson ³⁰	2009	Sweden	Adults	Community	A randomised controlled trial of an intervention aiming to increase PA in abdominally obese women through support for changing commuting habits. 60 healthy female volunteers in Stockholm recruited from a single newspaper advertisement	Persuasion Enablement	38.7 of intervention group achieved cut off for cycling treatment success (greater than 2km/day) compared with 8.9% in active control group (evaluation n=54).

					received intervention (14 month intervention)	Incentivisation	
Hendricks ³¹	2009	USA	Adults	Various (Workplace, School and Community)	Description of a project to encourage PA in a small midwestern city. Adults from a city (Jackson, Michigan) were target population (N not reported).	Environmental restructuring (social and physical) Persuasion Education	Evaluation not reported.
TenBrink ³²	2009	USA	All	Community	Evaluation of Project U-Turn. Participants were inhabitants of the City of Jackson; a blue-collar city of 36,000 people in south-central Michigan, located at the crossing of two major highways.	Education Training	The 2005 study documented a citywide count of 1028 people using active transportation; a year later, this study showed an increase in active transportation of 63%.
VanStralen ³³	2009	Netherlands	Older Adults	Home	A randomised controlled trial of an environmentally tailored PA intervention for older adults. n=1971 older adults in the Netherlands received intervention (duration: 2 months). 654 received basic intervention, 737 received intervention plus.	Education Modelling	Mediation analyses showed that changes in cycling, sports and total physical activity behaviour induced by the environmentally tailored intervention were mediated by changes in environmental perceptions. Changes in environmental perceptions did not mediate the effect of the basic tailored intervention on behaviour. Compared with the basic tailored intervention, the environmentally tailored intervention significantly improved cycling behaviour ($\tau = 30.2$). Additionally, the tailored letters of the environmentally tailored intervention

							were better appreciated and used, although these differences did not mediate the intervention effect. Evaluation n=1977.
Cavill ³⁴	2009	UK	Adults	Various	Evaluation of the Cycling Demonstration Towns project. General public adults target of this intervention.	Environmental restructuring (physical and social) Training Enablement	25,383 new adult cyclists in 2009 who were not cycling at all in 2006 (from n=714,907 survey respondents)
Geraghty ³⁵	2009	USA	Children	School	Evaluation of the Partnership for Active Communities program aiming to increase PA in school children. School children at schools in Sacramento. N not provided.	Education	Only walking outcomes provided.
McCreeedy ³⁶	2009	USA	All	Community	Description of the Get Active Orlando program: changing the built environment to increase PA. Residents within a community redevelopment area target population. N not provided.	Environmental restructuring (physical and social) Persuasion	Evaluation not reported

						Enablement	
Slovan ³⁷	2009	UK	All	Community	Overall report of effects of the Cycling Demonstration Towns project on six cycling demonstration towns.	Environmental restructuring (physical and social) Education Training Enablement Persuasion	Using data from automatic cycle counts, the interim result for the mean increase in cycling levels across all six towns was 27% relative to a 2005 baseline and including data up until March 2009.
Thomas ³⁸	2009	USA	All	Community	Evaluation of the Bike Walk and Wheel A way of Life program in Columbia, Missouri. Residents in a US city (Columbia) (n not provided). Intervention is one week each year.	Education Persuasion Incentivisation Enablement	According to a survey of adult graduates conducted 6 weeks after the classes, 75% rode their bicycles more often, 97% felt safer when riding, and 73% reported improved physical fitness since taking the course. In addition, 35% of automobile trips were replaced with bicycle trips among graduates of the classes.

O'Fallon ³⁹	2010	New Zealand	Adults	Workplace	Development and preliminary evaluation of Bike Now project: aiming to create sustained participation in cycle commuting. Employees from 27 workplaces across New Zealand. N not provided. 12-month intervention.	Training Enablement Modelling Environmental restructuring (social and physical)	Consistent increase in cycling to work in all categories (evaluation n=1567).
O'Fallon ⁴⁰	2010	New Zealand	Adults	Workplace	Evaluation of Bike Now project. Employees from 40 workplaces in Auckland, Wellington, Nelson and Blenheim (~9500) received intervention	Modelling Environmental restructuring (social and physical) Training Enablement	The number of employees reporting they'd cycled on most days increase from 13% pre intervention to 17% post. The number of people who responded not at all in past 3 months decreased from 66% to 55% (evaluation n=1623)
Rissel ⁴¹	2010	Australia	Adults	Community	Study described effectiveness of a community-based cycling project: Cycling Connecting Communities. Residents in Fairfield and Liverpool (n=520) were recruited for the intervention, and socio-demographically similar comparison area (Bankstown) residents recruited as control.	Environmental restructuring (social) Education	The telephone survey results showed significantly greater awareness of the Cycling Connecting Communities project (13.5% vs 8.0%, p < 0.05) in the intervention area, with significantly higher rates of cycling in the intervention area (32.9%) compared with the comparison area (9.7%) amongst those aware of the project. There

						Training	was a significant increase in use of bicycle paths in the intervention area (28.3% versus 16.2%, $p < 0.05$). These findings were confirmed by the bike count data. Evaluation $n=909$.
Cope ⁴²	2010	UK	Adults	Various	Economic evaluation of cycling demonstration towns project. Various towns included.	Environmental restructuring (physical and social) Training Education Enablement	Data from automatic cycle counters showed increase in cycling levels across all six towns of 27% measured from a 2005 baseline up to March 2009.
Mathews ⁴³	2010	Australia	Children	School	The process evaluation of It's Your Move!, an Australian adolescent community-based obesity prevention project. Children from secondary schools in region of Victoria. 3 year project duration.	Environmental restructuring (social and physical)	Evaluation not reported.
Wen ⁴⁴	2010	Australia	Adults	Workplace	Findings from a cross-sectional survey investigating the role of workplaces in reducing employees' driving to work. Parents of children taking part in a Central Sydney Walk to School Programme took part in this survey.	Environmental restructuring (physical and social)	Workplace encouraging active travel were less likely to drive. Facilities and flexible working hours not significant. Evaluation $n=888$.
Ben-Elia ⁴⁵	2011	Netherlands	Adults	Home	A study of commuters' travel behaviour. Rush-hour car commuters with 3 trips a week or more were identified by license plate and approached	Persuasion	Participants with a positive attitude to cycling were more likely to change behaviour by not driving (the coefficient for

					by mail. 120 received intervention. 13-week field study.	Incentivisation	not driving is positive, $p < 0.001$)
Brockman ⁴⁶	2011	UK	Adults	Workplace	Study reports results of University of Bristol Staff Travel Survey (n=2829) to investigate the potential health benefits of a workplace transport plan.	Environmental restructuring (social and physical) Incentivisation Coercion	The percentage of respondents who reported that they usually cycle to work increased from 7% to 12%, but year comparisons with 2007 data failed to reach significance. Over the same period, the percentage of respondents who usually commuted by car decreased from 50% to 33% ($P < 0.001$).
Buliung ⁴⁷	2011	Canada	Children	School	A pilot study of a school travel intervention. 12 schools in 4 Canadian provinces involved (n=1489).	Environmental restructuring (social and physical) Education	Active transportation increased from 43.8% to 45.9%. Figures on cycling only not reported.
Burke ⁴⁸	2011	Australia	Adults	Other (Cycle centre)	Individuals who cycle to work in Brisbane, Australia and have purchased a membership with the cycle centre.	Environmental restructuring (physical)	Prior to existence of Cycle Centre, only 8% reported cycling as their primary mode of transport to work. Now 100% using it as primary source (all participants are members of the cycle centre). 6% of surveyed members shifted mode from the car to bicycle commuting. 73% shifted from public transport to bicycle commuting. These shifts appear to be directly due to the Cycle Centre. Evaluation data from n=44.

Hinckson ⁴⁹	2011	New Zealand	Children	School	Responses from Children from schools involved in a central and local government funded School Travel Planning programme in Auckland (n=22,762)	Education Coercion Environmental restructuring (physical and social) Restriction	Active transport increased by 5.9% from 2004 - 2006 (cycling not reported specifically). Evaluation data from n=13,631.
Urbanczyk ⁵⁰	2011	Various European Cities	Various	Various	Reports from various European cities on cycling promotion efforts.	Environmental restructuring (social) Incentivisation Education	Evaluation not reported
Børrestad ⁵¹	2012	Norway	Children	School	Study reports findings of a 12-week intervention to increase cycling in public school pupils. N=26 received intervention.	Persuasion	Those who started cycling in intervention had significantly different VO2 max at follow up (51.7mlO2/min/kg vs 47.9 in non-cycling pupils).
Chatterjee ⁵²	2012	UK	Adults	Various (School, Community)	Qualitative study sought to obtain explanations for changes in cycling behaviour. Participants were residents of cycling demonstration towns. N	Persuasion	Theory and preliminary analysis of the interview data were used to develop a conceptual model which hypothesises that

				& Online)	not reported. Study reports findings from 144 face to face interviews.	Training	turning points in travel behaviour are triggered by contextual change.
Christensen ⁵³	2012	UK	Adults	Various (School, Community & Online)	Evaluation of the Cycling Cities and Towns (CTT) program. Residents in CCT locations took part. Interview sample was purposive designed to focus on people that had recently changed their cycling behaviour (started, stopped, increased or decreased cycling).	Persuasion Training	Only 15% of cyclists in 'after' survey considered conditions for cycling had deteriorated in program period whereas 85% disagreed. 42% of respondents indicated their level of cycle commuting had increased during the life of the project. It was found in analysing the interviews that three categories of mediating factors played a role in the outcome on cycling behaviour of contextual change. These were intrinsic motivations (for example, increasing physical fitness), facilitating conditions (for example, facilities to store a bicycle at the destination) and personal history (for example, past experience of cycling).
Claus ⁵⁴	2012	USA	All	Community	Paper describes various approaches to promote cycling by 25 Active Living Design Partnerships.	Enablement Training	Evaluation not reported
		USA	Children	School		Environmental restructuring (social) Education	Evaluation not reported
		USA	Adults	Workplace		Persuasion	Evaluation not reported

						Education	
		USA	Various	Various		Persuasion	Evaluation not reported
		USA	Various	Various		Education	Evaluation not reported
						Environmental restructuring (social)	
Jariyasunant ⁵⁵	2012	USA	Adults	University	Intervention involving personalised travel data feedback. Students and staff at UC Berkeley took part in this 3-week intervention (n=135)	Persuasion	Significant change in participants' awareness of statistics related to their travel behaviour, and an intention to drive less amongst the "mainly driving" baseline group. No significant change in levels of cycling. Evaluation data n=121.
Crawford ⁵⁶	2013	Australia	Children	School	A combined impact-process evaluation of a program promoting active transport to school: Ride2School. n=761 children received intervention.	Environmental restructuring (social)	Mode of travel as self-reported by parents was 13.9% at baseline and 15.9% at follow-up, p<0.05 (data from n=358 parents).
						Education	
						Incentivisation	
Dubuy ⁵⁷	2013	Belgium	Adults	Various (Workplace and Online)	Evaluation of a workplace intervention to promote commuter cycling: a RE-AIM analysis. Participants were employees from twelve small and middle-sized companies in Flanders given an internet-based program. Consideration given to	Environmental restructuring (social)	Difference in general attitude towards cycling between employees aware (3.8 ±0.52) and unaware (3.6 ±0.56) of the program (F= 19.8, p<0.001). Difference in frequency of commuter cycling per week

					companies with staff living 5-10km away from work.	Education Incentivisation	between employees aware (1.27 ±2.01) and unaware (0.63 ±1.56) of the program (F= 20.57, p<0.001). Evaluation data from n=1116.
Goodman ⁵⁸	2013	UK	Adults	Community	A longitudinal, controlled natural experiment investigating effectiveness and equity impacts of town-wide cycling initiatives in England. 1.3 million commuters in 18 intervention towns.	Environmental restructuring (physical and social) Education Training Enablement	Found that the prevalence of cycling to work rose from 5.8% in 2001 to 6.8% in 2011. Driving to work decreased. Effects were observed across all fifths of area deprivation, with larger relative changes in deprived areas.
Johnson ⁵⁹	2013	UK	Adults	Community	A review of the effectiveness of adult cycle training in Tower Hamlets, London. 471 individuals who live, work or study in a densely populated area in London received intervention. 4 individual training sessions of 1 hour each.	Training	Both the frequency (no. days cycling for 30mins) and overall duration of cycling increased by 3 month follow-up. Evaluation data n=130.
Bamberg ⁶⁰	2013	Germany	Adults	Home	An intervention applying the stage model of self-regulated behavioural change to reduce car use. Participants were recruited from a random sample of 12,000 addresses of Berlin citizens of German nationality obtained from city	Persuasion Education	Compared with controls, the standardized effect size of the dialog intervention on motor-car use was 0.51, and on PT use 0.39. The standardized information package did not have a significant effect on either

					administration. Two week intervention. 208 received information intervention, 148 received stage-tailored intervention		motor-car or PT use. Neither the dialog marketing intervention nor the information package had a significant effect on postintervention cycling and walking. Evaluation data n=291.
Buckley ⁶¹	2013	USA	Children	School	Evaluation safe routes to school events that designate days for walking and bicycling. Students at two elementary schools in Moscow, Idaho that participate in two designated days for walking and bicycling; "international walk to school day" and "fill the racks". Count data collected for 8 days, also 45 students and 17 parents were surveyed.	Environmental restructuring (social)	Count data revealed substantial increase in active travel on the designated safe routes to schools days (101% increase during the fall event). Data suggests that increased active travel was sustained for at least two weeks after event.
Henderson ⁶²	2013	USA	Children	School	Description of the Safe Routes to School program in Atlanta (2008-2010). 658 Students at Oak Grove Elementary School (Metropolitan Atlanta) received Safe Routes to School programme.	Environmental restructuring (social) Education Incentivisation	Evaluation not reported
Lachapelle ⁶³	2013	Canada	Adults	Home	Study reports on an early vehicle retirement program in Quebec between 2009 and 2011.	Incentivisation	42316 program participants provided data during the scrappage scheme Only 3.08% of participants chose bicycle or e-scooter rebates.

McDonald ⁶⁴	2013	USA	Children	School	Study reports on the Safe Routes to School Program in Eugene, Oregon.	Incentivisation Education Environmental restructuring (physical)	Eugene's SRTS program was associated with increased walking and biking for school travel. Receiving only education and encouragement programs was associated with a nonsignificant increase in walking and a five percentage point increase in biking. SRTS interventions appeared to have a cumulative impact; schools with more types of interventions had larger proportions of students walking and biking to school.
Panter ⁶⁵	2013	UK	Children	School	Longitudinal results from the SPEEDY study. 912 10-year old children recruited from 92 primary schools	Environmental restructuring (social and physical)	Neither travel plan or high cycling provision were associated with a change to an active commuting mode (evaluation n=912)
Bungum ⁶⁶	2014	USA	Children	School	The effect of an active transport to school intervention at a suburban elementary school. Elementary schools in the state of Nevada. N=698 in control school and N=638 in intervention school. Age not reported.	Environmental restructuring (social) Persuasion	The sole significant difference between the two schools over the 3 data collections, in overall cycling rates, was on NMD, when rates (5% vs.1.9%) were statistically higher at the intervention school. One-week post-event ATS rates returned to baseline levels at both schools. Evaluation n=638.
Caulfield ⁶⁷	2014	Republic of Ireland	All (Children 15+, adults and older)	Other (city-wide)	Investigation into the growth of cycling in Dublin. Consensus data from Dublin (compared to Cork and Galway)	Incentivisation Environmental	In Dublin, cycling made up 5% of modal share in 2011 compared with only 4% in 2006, whereas there was no change in Cork or Galway (control cities). Evaluation data

			adults)		Dublin N=511,760, Cork n=197,772, Galway N=93,380.	restructuring (social)	n=511,760.
Christiansen ⁶⁸	2014	Denmark	Children	School	Effects of a Danish multicomponent physical activity intervention on active school transport (Sport Active transport Club fitness and Environment – SPACE - study). Adolescents from 14 schools in Region of Southern Denmark N=1014 total. Mean age 12.6 years. 2-year intervention.	Environmental restructuring (social and physical) Training	No significant effects on outcomes. Evaluation data n=1060.
Ducheyne ⁶⁹	2014	Belgium	Children	School	Effects of a cycle training course on children's cycling skills and levels of cycling to school. Random sample from five primary schools in Flanders, Belgium n=135, mean age 9.3 years, 4-week intervention.	Training	Children's total cycling skill score increased significantly more from pre to post and from pre to 5-months follow-up in the intervention group than in the control group. No significant intervention effects were found on children's cycling to school levels and parental attitudes towards cycling.
Gutierrez ⁷⁰	2014	USA	Children (behavior) Adults (parent perception)	School	Investigation into the effects of crossing guard presence on active transport and injury prevention. Participants recruited via elementary schools in Miami	Environmental restructuring (social) Education	No significant change in child AT trends from pre to post-controlling for other variables. No improvements in parent concerns or attitudes towards active travel. Evaluation n=702.

Hamre ⁷¹	2014	USA	Adults	Workplace	Investigation into commuter mode choices in Washington DC. 2007/2008 DC Household Travel Survey conducted by the Metropolitan Washington Council of Governments' (MWCOC) Transportation Planning Board.	Environmental restructuring (physical)	Commuters offered either public transportation benefits, showers/lockers, or bike parking, but no free car parking, are more likely to either ride public transportation, walk, or cycle to work (n=4630)
Chapman ⁷²	2014	New Zealand	All	Community	Results of a quasi-experimental study of an intervention to encourage walking and cycling. All household members of 10 years of age in different cities - respondents to ACTIVE survey and NZ travel survey.	Education Persuasion Environmental restructuring (physical)	Findings from this study reported in Keall [86].
Lanzendorf ⁷³	2014	Germany	Various	Various	Empirical evidence for successful cycling campaigns in Germany. (Berlin, Hamburg, Frankfurt and Munich).	Education	Conclusion: Both cycling infrastructure improvements and communication campaigns initiated, supported and executed by the local government are key factors for increasing bicycle use in cities.
Norwood ⁷⁴	2014	UK	Adults	Various	Evaluation of an active travel intervention: Smarter Choices, Smarter Places. Implementation of SCSP was restricted to seven local areas with populations ranging between 8 and 39 thousand (Barrhead, Dumfries, Dundee, Glasgow East End, Kirkintilloch/Lenzie, Kirkwall and	Education Persuasion	The results suggest that the initiative impacted positively on the likelihood of physical activity participation and meeting the recommended physical activity guidelines. Individuals in the intervention areas were on average 6% more likely to

					Larbert/Stenhousemuir). 7226 received intervention.	Training	meet the physical activity guidelines compared to individuals in the non intervention areas. However, the absolute prevalence of physical activity participation declined in both intervention and control areas over time. Evaluation n=9542.
Rissel ⁷⁵	2014	Australia	Adults	Community	Evaluation of the impact of a national cycling skills program (AustCycle). Registered participants of AustCycle N=2250 provided demographic and cycling behavior data, majority 45-59 years bracket Overall 1216 AustCycle programs were conducted between July 2010 and June 2013, with approximately 6700 participants.	Training	Over 91% of participants highly rating their AustCycle experience. Statistically significant improvements in cycling skills and confidence at three months, and small but statistically significant reductions in weight and body mass index (BMI) at three and 12 months. There was a statistically significant association between lower BMI and total minutes cycled in the past week at the three month follow-up, after adjustment for age, sex other physical activity. Evaluation n=423 at 3 month and n=125 at 12month follow-up.
Bothos ⁷⁶	2014	Austria	Adults	Home	Intervention using persuasive strategies and choice architecture to encourage sustainable transport. Adults from metropolitan area of Vienna, Austria, in summer of 2013. All participants had Android phones with software to allow the app to be installed. N=24. 8 weeks	Education Persuasion	Cyclists and public transport users searched significantly more often for specific routes than did car users. Behaviour change was small and limited to short-term effects. This can partly be attributed to the application used being work-in-progress.
DelDuca ⁷⁷	2014	Brazil	Teens and Adults	School	Effectiveness of physical activity indicators of an intervention delivered to high school students. High school students in Recife and Florianopolis baseline n=2155, 10 month intervention.	Education Environmental restructuring	In comparison to the control group, the intervention group significantly increased the practice of active commuting to school on >1 day a week (80.5% vs 86.8%, P<0.001) and >5 days per week (64.3% vs 71.9%,

						(physical)	p<0.001). Evaluation n=989.
Engelberg ⁷⁸	2014	USA	All	Community	<p>Ciclovia Participation and Impacts in San Diego, CA: The First CiclosDias. Residents and visitors of San Diego, CA.</p> <p>N=8,311 attended the event. One day event.</p> <p>Comprehensive evaluation consisted of city-wide survey 1 week before and after event (n=805), counts of event attendees, surveys of event attendees (n=713), and businesses (n=26)</p>	<p>Environmental restructuring (social and physical)</p> <p>Enablement</p> <p>Education</p> <p>Incentivisation</p>	<p>Direct observations indicated 85% of attendees were cycling, 15% were walking. 97% of attendees met the 30 min/day guideline, and 39% met the 150 min/week guideline during the event alone. 27% of attendees reported they would have been inactive without the event.</p>
Hoffman ⁷⁹	2014	USA	Children	Community	<p>Experiences and perceptions of urban youths of a community cycling initiative Earn-A-Bike. Youths who took part in the first four Neighbourhood Bike Works Earn-A-Bike classes offered at the Bike Salon in Philadelphia, PA</p> <p>n=32, 7-14 children (mean age 10.21)</p> <p>Qualitative focus groups with participants of the programme</p>	<p>Enablement</p> <p>Environmental restructuring (social)</p>	<p>The programme was well accepted by urban youth who reported positive perceptions and intentions to continue cycling after the conclusion of the programme.</p>
Kinton ⁸⁰	2014	USA	All	Community	<p>Description of the Walk or Ride, Get Moving San Antonio "Ride to Own" program. Residents of San Antonio</p>	<p>Education</p> <p>Environmental</p>	<p>Evaluation not reported</p>

					300 received new bikes	restructuring (social) Incentivisation	
Nordback ⁸¹	2014	USA	Adults	Workplace	Investigation into traffic reduction as a result of a cycling event. Workers taking part in a bike to work day in community in city.	Environmental restructuring (social)	Bike volume on the days of these events is typically double than comparable workdays and a reduction in motor vehicle traffic is also evidence.
Stewart ⁸²	2014	USA	Children	School	Multistate Evaluation of Safe Routes to School Programs. Pupils from schools affected by a completed SRTS programme	Environmental restructuring (physical and social) Persuasion Incentivisation Training Enablement	Bicycling increased by 24% (from 2.5-3%) at 50 schools
Chandler ⁸³	2015	USA	Children	School	Evaluation of a community based after school program promoting bicycling skills and knowledge: 'Kids Can Bike!'. 3rd to 5th graders already enrolled in afterschool programme in Knoxville, Tennessee.	Enablement Education	Significant increase in bicycling safety and skill knowledge $p < 0.001$ (n=69)

					7 week intervention.	Environmental restructuring (social) Training	
Diniz ⁸⁴	2015	Brazil	Adults and Older Adults	Workplace	Results of an educational intervention to improve active commuting. Workers from a metallurgical industry drawn through a random systematic sampling n=464 intervention group, n=468 control group. 6 month intervention.	Education Incentivisation	The proportion of participants that used bicycles to commute to work (IG) increased significantly from baseline (45.3%) to the final interventional period (47.5%). No difference was found between the CG and the IG group after the interventional period (evaluation n=932)
Fyhri ⁸⁵	2015	Norway	Adults	Community	Effects of e-bikes on bicycle use and mode share. Members of the Norwegian Automobile Federation (NAF)	Enablement	E-bike cycling trips increased from 0.9 to 1.4 per day, distance from 4.8 km to 10.3 km and, as a share of all transport, from 28% to 48%, whereas with the control group there was no increase in cycling. (evaluation n=593)
Gamble ⁸⁶	2015	UK	Adults	Online	Bicycling campaigns promoting health versus campaigns promoting safety: A randomized controlled online study of 'dangerization'. Respondents were recruited opportunistically through social media (Facebook and Twitter), and on the University of Bath homepage and electronic Noticeboard	Education Environmental restructuring (physical and social)	The study suggests that safety-focused campaigns are unlikely to have any immediate effect on people's perceptions and intentions to cycle, whether positive or negative; health-focused campaigns, on the other hand, make bicycling appear more beneficial to those who do not currently do it. Evaluation n=228.

						Training	
Keall ⁸⁷	2015	New Zealand	All	Community	Increasing active travel: results of a quasi-experimental study of an intervention to encourage walking and cycling. All household members of 10 years of age in different cities - respondents to ACTIVE survey and NZ travel survey	Education Persuasion Environmental restructuring (physical)	37% increased odds of active travel versus other modes in intervention cities compared to control (no cycling specific models) (evaluation n=283).
Ostergaard ⁸⁸	2015	Denmark	Children	School	Effectiveness and implementation of interventions to increase commuter cycling to school: a quasi-experimental study. Students from public schools in 3 different regions in Denmark (Copenhagen, Fredericia, and Funen) n=2415	Training Incentivisation	No significant differences in commuter cycling were detected in the adjusted analyses comparing the intervention with the control group neither when assessed as changes in short term, nor when assessed as changes in long term school cycling. No differences were observed neither in the incidence of traffic injuries nor in the characteristics of injuries when comparing the control group and the intervention group. Evaluation n=2401.
Petrunoff ⁸⁹	2015	Australia	Adults	Workplace	Comparison of approaches to workplace travel plans using disincentives for driving and incentives for active travel Staff from two	Restriction	It was found that there was a 42% reduction in driving alone amongst QEII Medical Centre staff or a 5% reduction in driving alone amongst Hollywood Private

					adjoining hospitals in Perth, Western Australia n=1041 at site 1 and 445 at site 2. Ongoing, but evaluation compared 2009 data with 2012 data.	Coercion Training Enablement	Hospital staff. The 37% difference in the reduction of staff driving to work alone at the two sites was significant.
Villa-Gonzalez ⁹⁰	2015	Spain	Children	School	Effectiveness of an active commuting school-based intervention at 6-month follow-up. 8-11 year olds from 5 primary schools were invited. n=206 children ages 8–11. Duration: 6 months.	Persuasion Education Incentivisation	There was a significant difference in the change of number of walk and bike travels per week between groups at 6-month follow-up. Regarding the frequency of mode of commuting, only a change in walking to school was significantly different between the groups at 6-month follow-up. Evaluation n=206.
Poslad ⁹¹	2015	Europe	Adults	Other - app	Intervention using Smart City Internet of Things (IoT) software to incentivise shifts in mobility behaviour. Volunteers recruited via adverts and social media in 3 European cities	Incentivisation Persuasion	It is feasible to induce public transport users to change to cycling.
Bike League ⁹²	2015	USA	Various	Various	Descriptions of small cycling promotion projects from communities New York City.	Environmental restructuring (physical) Incentivisation	Evaluation not reported

Behrendt ⁹³	2016	UK	Adults	Workplace	Investigation into potential impacts of e-bikes on travel behaviour. Commuters in Brighton - 80 employees were loaned e-bikes 6-8 weeks	Enablement Training	Evaluation not reported
Coombes ⁹⁴	2016	UK	Children	School	A pilot evaluation of the Beat the Street physical activity intervention. Children from schools in Norwich n=51 received intervention, 8-10 year olds. Intervention school was 62.7% female, control school 41.4% female. 9 weeks	Incentivisation	Significantly higher increase in MVPA between baseline and post-intervention in intervention school compared to control school (evaluation n=80).
Goodman ⁹⁵	2016	UK	Children	School	Impact of offering cycle training in schools upon cycling behaviour. Children participating in the nationally-representative Millennium Cohort Study N=2563 Intervention group, N=773 control group.	Training	Children whose school had offered Bikeability were much more likely to have completed cycle training than the control group (68 % vs. 28 %, p < 0.001). There was, however, no evidence that delivering Bikeability in school was associated with cycling more often. There was likewise no evidence of an association with cycling independently. Evaluation n=3336.
Millonig ⁹⁶	2016	USA	Adults	Workplace	Evaluation of a corporate cycling campaign: Biking Tourney. Employees recruited from 14 different companies in Boston, MA. N=239, 81% male, age not reported. 6 weeks	Incentivisation	Quantitative results based on an ex-post survey (n=129) show that during the tourney 15% of participants biked more often than usual. More than 19% of the tourney participants planned to bike more often even after the tourney ended
Petrunoff ⁹⁷	2016	Australia	Adults	Workplace	Effects of a workplace travel plan intervention encouraging active travel to work: outcomes from a three-year time-series study. Hospital staff from	Environmental restructuring (social and	The proportion of staff travelling actively to work increased by 4%--6% across intervention years compared to the

					a large outer-suburban worksite. Ongoing, comparison of data from 2011, 2012, 2013 and 2014	physical) Training Education	baseline, and this increase was significant in 2012 and 2013. Compared to baseline, after adjusting for distances staff lived from work staff had 33% greater odds of travelling to work via active modes in 2012, and 50% greater odds in 2013. Evaluation data from n=804 in 2011, n=904 in 2012, n=872 in 2013, n=682 in 2014.
Teyhan ⁹⁸	2016	UK	Children	School	Impact of a cycle proficiency training program (National Cycle Proficiency Scheme – now known as Bikeability) on cycle-related behaviours and accidents in adolescents. Participants in the Avon Longitudinal Study of Parents and Children who reported whether or not they had received NCPS training. 5415 received intervention.	Training	Trained children were more likely to cycle to school and to own a cycle helmet at both 14 and 16 years, to have worn a helmet on their last cycle at age 14, and to have worn high-visibility clothing at age 16, than those who had not attended a course. NCPS training was not associated with self-reported involvement in a cycle accident.
Uttley ⁹⁹	2016	UK	Adults	Various (Workplace and University)	A case study from the university of Sheffield investigating long-term behavioural change as a result of cycling promotion schemes (the Cycle Challenge). Students and staff at the University of Sheffield (n=488) participants who took part in either 2009 or 2010 challenge	Incentivisation	Cycling behavior was recorded before the Cycle Challenge and two years after the scheme's completion. It was found that seventy five percent of participants who were not already regular cyclists reported increased cycling, yet the overall impact of this shift was limited because the majority of participants already cycled regularly. This failure to attract new cyclists suggests recruiting non-cyclists should be a priority in future schemes.

Ang-Olson ¹⁰⁰	2016	USA	Adults and Children	Community	Evaluation of the Metropolitan transportation Commission's Climate Initiatives Program. Residents of the San Francisco Bay area N not reported. Actions took place over 4 years.	Enablement Education	Evaluation not reported.
Castellanos ¹⁰¹	2016	Colombia	Adults	Online	Field study example of delivering modal-shift incentives using gamification and smartphones. Commuters in the city of Bogota (Colombia) received 2 week intervention. N=40.	Education Incentivisation	30 cycling trips recorded in week 2 compared to 9 in week 1. However, Mean distance cycled was not significantly different between weeks 1 and 2. Suggests cycling didn't actually increase, but that participants were just more likely to log their trips with the incentive.
Chaston ¹⁰²	2016	UK	Young adults	University	Evaluation of the Higher Education recreational pilot 'Ride Social'. Higher education students from universities who had applied for Sport England's University Sport Activation fund (USAF). 10 months. Only two universities (Leeds and Plymouth) carried out group rides through Ride Social in this pilot, n=224	Environmental restructuring (social) Persuasion	Reasons for not participating in group rides included that they were too busy or did not have enough support. Most successful rides were those linked with other initiatives, for example Kent University did a 'ride to the coast to get fish & chips' that had 20 participants.
CyclingScotland ¹⁰³	2016	UK	Multiple	Multiple	Case studies to help demonstrate where positive progress is being made to get more people cycling more often in more places in Scotland.	Training	Cycling levels are significantly increased but statistical data and stakeholder views indicate that the 10% vision is unlikely to be achieved by 2020.
Harms ¹⁰⁴	2016	Netherlands	All	Online	Investigation into performance of Municipal Cycling Policies in medium sized cities in the Netherlands since 2000. Residents from medium sized cities in the Netherlands - respondents to	Environmental restructuring (physical)	Providing adequate cycling infrastructure and reducing attractiveness of car use seem to be key drivers

					the Dutch National Travel Survey (online)		
Hidalgo ¹⁰⁵	2016	Colombia	Children	School	Description of a bike to school program: Al Colegio en Bici. Children from 74 schools in 6 districts in Bogota, Colombia n=3194 pupils, 19% girls 81 boys, age info not provided. Participating schools mainly located in low-income and peripheral areas.	Education Environmental restructuring (social and physical) Enablement Training	Launch of programme can be considered successful as it's providing a fun, safe and sustainable way to access school for more than 3,000 public school students.
Semanjski ¹⁰⁶	2016	Belgium	Adults	Other - app	Intervention involving mobile sensing and incentivised targeted shifts in mobility behaviour. Volunteers who registered on a dedicated web portal and downloaded an app 6 months N=3400 received intervention	Incentivisation Persuasion	The majority of participants kept old behaviours and typically less than 10% took a new suggestion
Swift ¹⁰⁷	2016	UK	Adults	Workplace	Impact of the Cycle to Work Scheme. Cycle to work scheme users who chose to respond to the survey. N not reported.	Incentivisation Enablement	66% respondents reported that they cycled more since joining the scheme - greater proportion of new and occasional cyclists reported cycling more (i.e., new journeys) than enthusiastic cyclists (maintenance of journeys)

VanLierop ¹⁰⁸	2016	Canada	Children	School	Evaluation of a bicycle education program for children in Quebec. Pupils from schools taking part in the CCA Education programme N=153	Education Training Environmental restructuring (social)	Children's knowledge of bicycle safety increased. Children became more confident. Cycling abilities increased. Evaluation n =51.
Aittasalo ¹⁰⁹	2017	Finland	Adults	Workplace	Large workplaces in Tampere Area 1: n=910, mean age 44.5 (32.3). Area 2: n=230, mean age 44.1(11.4). 1642 received accelerometers.	Environmental restructuring (social)	Evaluation not reported
Bernstein ¹¹⁰	2017	USA	Adults and Older Adults	Community	Results of a pilot randomised controlled trial examining the impact of a bicycling intervention on lower-income adults. Participants included members from 1 largely Latino community and a second primarily African American neighbourhood in Milwaukee, Wisconsin. Recruited using flyers at community events. 12 weeks	Education Environmental restructuring (social) Training Enablement Incentivisation	Bicycling for leisure or non-work transportation increased significantly more in the intervention than control group from baseline to 12 weeks but this difference attenuated by 20 weeks. Both groups increased their fitness between baseline and 12 weeks, with a trend towards greater gains in the bicycling intervention group

Blake ¹¹¹	2017	UK	Adults and Older Adults	Workplace	Evaluation of a technology based intervention to promote PA in hospital employees (Active8!). Hospital employees recruited via email, posters and notice boards. N=296, mean age 38.78 years. Duration: 12 weeks.	Persuasion	Increase in duration and frequency of active travel from baseline to 16 weeks. Does not distinguish between walking and cycling.
Cairns ¹¹²	2017	UK	Adults	Workplace	Potential impact of ebikes on travel behaviour. Commuters in Brighton n=80, 6-8 week intervention.	Enablement Training	Average miles driven in car decreased from 54 to 43. Mean time spent cycling increased from 47 minutes to 132 minutes. Qualitative participant interviews revealed that bikes were perceived as faster and more enjoyable than car.
Fyhri ¹¹³	2017	Norway	Adults	Community	Investigation into the role of ebikes in overcoming barriers to bicycle use. Randomly selected respondents from a convenience sample among car owners - cross-sectional data collection via internet questionnaire asking about perceptions of cycling N=66 in intervention group, N=214 in control group. 2-4 week intervention.	Enablement	Following intervention, those who had been loaned eBike were significantly more likely to report being willing to pay extra for an eBike compared to control group (41% increase compared to 15% increase). Evaluation data n=280.
Hatfield ¹¹⁴	2017	Australia	Children	School	Evaluation of a cycling education program: Safe Cycle. Recruited from 4 schools in Canberra, Australia n=12; duration: 8 weeks.	Education Training	No evidence that Safe Cycle changed riding behaviour
Ho ¹¹⁵	2017	Australia	Adults	Community	A case study of Rouse Hill Town Centre evaluating area-wide travel plans. Residents from a new subregional development (1800 new dwellings)	Enablement	Awareness was almost zero for all actions. Likelihood to take part in next 12 months was around 30%.

					N=378.	Environmental restructuring (social) Education	
Lambe ¹¹⁶	2017	Ireland	Children	School	Evaluation of a natural experiment to improve active travel to primary school in Ireland. 5th and 6th grade primary school students from 21 primary schools N=743 intervention town 1, n=295 intervention town 2, n=419 control town.	Persuasion Training Environmental restructuring (social) Incentivisation	There was no evidence from this study that the community-wide interventions were effective in increasing active travel in the overall sample of students. Evaluation n=1457.
Mendoza ¹¹⁷	2017	USA	Children	School	A pilot cluster randomised controlled trial of a Bicycle Trains program. Fourth and fifth graders from four different public schools serving low income families in Seattle n=54, mean age intervention group was 9.8, mean age control group 10. intervention group 54% female, control group 73.3% female. 6 weeks	Environmental restructuring (social) Training Enablement	For two separate adjusted repeated measures linear mixed effects models in which students were nested within schools, intervention participants had: (1) an absolute increase in mean percentage of daily commutes by cycling of 44.9%, and (2) an increase in mean MVPA of 21.6 minutes/day, from Time 1 to Time 2 compared with controls. Evaluation n=54.

Sloman ¹¹⁸	2017	UK	Adults	Various	Details of the Barnsley, Doncaster, Rotherham and Sheffield (BDRS) (sustainable journey to work) programme	Environmental restructuring (physical) Training Enablement	7 of the 12 projects were to do with cycling. Evidence from national road traffic estimates shows that for the group of 10 large projects for which data were variable, there was a fall in car traffic between 2009-2011. General picture was of a significant amount of activity to encourage cycling, but rather limited evidence to assess the effect of this activity on overall cycling levels. Nevertheless, accepting limitations of the data, all seven large projects that had implemented many cycling interventions showed some indications of increases in cycling since the start of the programme.
		UK	Adults and Children	Various	Details of CENTRO (Smart Network, Smarter Choices) programme	Environmental restructuring (physical) Training	
		UK	Adults	Various	Nottingham Area Local Sustainable Transport Fund (LSTF) Programme details	Enablement	
		UK	Adults	Various	Solent (A Better Connected South Hampshire) project	Incentivisation	
		UK	Adults	Various	Details on Telford Future – Local Action for Sustainable Growth	Training	
		UK	Adults	Various	TfGM (Sustainable Travel in Greater Manchester) project	Environmental restructuring (physical) Training Enablement	

					Incentivisation	
	UK	Adults	Various	Details on the Bournemouth "Three Towns" project	Environmental restructuring (physical) Incentivisation	
	UK	Adults	Various	Details on cycling promotion efforts in Hertfordshire	Incentivisation Environmental restructuring (social)	
	UK	Adults	Various	Details on cycling promotion efforts in Merseyside	Enablement Training Education	
	UK	Adults and Children	Various	Details on cycling promotion efforts in Reading	Environmental restructuring (physical) Persuasion Incentivisation	

						Enablement	
		UK	Adults and children	Various	Details on cycling promotion efforts in Surrey	Environmental restructuring (physical and social)	
						Enablement	
						Training	
		UK	Adults and Children	Various	Details on the WEST project (West of England Sustainable Travel)	Education	
						Environmental restructuring (social)	
Wall ¹¹⁹	2017	UK	Adults	Workplace	Evaluation of the Portsmouth Big Green Commuter Challenge. Employees in Portsmouth n=928.	Incentivisation	No difference in % of commutes made by bike
Cope ¹²⁰	2017	UK	Adults	Various	Monitoring project report of the cycling demonstration towns programme	Environmental restructuring (physical and social)	Evaluation not reported
						Training	

						Education Enablement	
CyclingScotland ¹²¹	2017	UK	All	Various	Cycling Scotland 2016-2017 Annual Report and Accounts	Training	Evaluation not reported
Pronello ¹²²	2017	France	Adults	Online	The effects of the multimodal real time information systems on the travel behaviour (n=50).	Education	The introduction of Optimod'Lyon did not produce any change in the use of car, motorcycles, bicycles and Velov'v (bike-sharing) in autumn/winter, spring/summer or weekend (evaluation data n=46)
Vairo ¹²³	2017	USA	Adults	Workplace	Qualitative investigation of best practices for businesses promoting cycling. Employees in workplaces enrolled in the Bike-friendly Business programme. N=16.	Incentivisation Environmental restructuring (social and physical) Education	Businesses reported the creation of a culture for cycling, providing adequate bike parking/infrastructure and maintenance facilities, investing in education, offering either financial or group-based incentives and including competitions for promoting biking. Interviewees also noted the importance of engaging with the community to support biking
Villa-Gonzalez ¹²⁴	2017	Spain	Children	School	Effects of a school-based intervention on active commuting to school. Pupils from 5 schools taking part in an intervention to increase W+C to school. n=469 participated in study. Duration: 8	Persuasion	The intervention group had higher rates of cycling to school than control group for boys only (p = 0.04)

					months.		
Bopp ¹²⁵	2018	USA	Children/Adults	University	Development, implementation and evaluation of Active Lions: a campaign to promote active travel to university campus. University students and employees at large University in North Eastern USA N=563 students and n=999 employees.	Education Persuasion	Intervention did not increase cycling in staff or students.
Chapman ¹²⁶	2018	New Zealand	All	Community	Results of a quasi-experimental study of an intervention to encourage walking and cycling. All household members of 10 years of age in different cities - respondents to ACTIVE survey and NZ travel survey	Education Persuasion Environmental restructuring (physical)	Findings from this study reported in Keall [86].
Stark ¹²⁷	2018	Germany and Austria	Children	School	The effectiveness of an intervention to promote active travel modes in early adolescence. Adolescents from four secondary schools in Austria and Germany. N=169 took part in both waves and all surveys. 12 x school lessons at 50 min per lesson.	Education Persuasion Incentivisation	Findings suggest that the intervention was effective in changing attitudes, perceived behavioral control (PBC) and intentions to use non-motorized travel modes more, and car less.

Secker ¹²⁸	2018	UK	Children and Adults	School	Evaluation of Go-Ride program. Children and their families using the Go-Ride-Go website 47% of young participants female, 19% from BAME backgrounds, 15% with additional support needs.	Education Environmental restructuring (social) Incentivisation	Evaluation data were drawn from survey responses from 85 practitioners (56 of whom are currently engaged with the programme), counterfactual interviews with senior representatives of partaking organisations, telephone interviews with 20 lead practitioners in schools, and site visits to 3 schools in which Go-Ride Go is being delivered. Over 80% of survey respondents believe that Go-Ride GO has increased young participants' readiness (81%) and confidence (83%), to cycle, cycling skills (85%), and enjoyment of cycling (81%). 63% thought that programme increased frequency of participants' cycling.
British Cycling ¹²⁹	2018	UK	All	Other (national trust sites)	Report on British Cycling's National Trust Update. Description of cycling promotion approaches.	Enablement Incentivisation Environmental restructuring (social) Persuasion	Evaluation not reported
Hopkinson ¹³⁰	2018	UK	Various	Various	Report: Addendum to Rapid Evidence Assessment. Cycling and walking investment strategy - production of a model to aid policy planning	Enablement Training	Evaluation not reported

						Environmental restructuring (social)	
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