Appraisal of Sustainability

Social Indicators

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1. Introduction

This report describes the methodology for and outcomes of a study to identifying and validate a set of social indicators of sustainable development for transport. The work has been undertaken in parallel with a similar process for the environmental and economic pillars of sustainable development, as identified in the Brundtland definition. The research represents the first stage of a two-part project seeking to develop an improved methodology for capturing and assessing the sustainability of decisions about, or that impact on, the transport system.

The selected indicators have been identified through an evidence-based review of the direct interactions between transport and the three broad social principles for sustainable development, as identified throughout the literature, namely:

- Social progress,
- Equity (or equality of opportunity) and
- Justice (in terms of policy outcomes).

These three core social principles for sustainable development can be traced back to the Brundtland definition:

> *"… sustainable development requires that societies meet human needs both by increasing productive potential and by ensuring equitable opportunities for all…* (Equity of) *access to resources and in the distribution of costs and benefits… a concern for social equity between generations, a concern that must logically be extended to equity within each generation"*
>
> (WCED, 1987: 43)

They can also be found in the UK Government framework for sustainable development as representing the core values steering future sustainability policy (e.g. HM Treasury, 2005)

2. Methodology for indicator selection

2.1 Key areas of social progress

Much of the contemporary academic and policy literature on social progress is loosely derived from Beveridge's five 'great evils' of want, squalor, idleness, ignorance and disease (Commission on Social Justice, 1994):

- Want = poverty (and in particular childhood poverty),
- Squalor = housing and crime,
- Idleness = (un)employment,
- Ignorance = (literacy) education and
- Disease = health

This list was used to form the conceptual basis for developing the social progress indicators. Initially, a review of key Government policy documents and other relevant literature pertaining to indicators was undertaken across the relevant policy sectors, i.e. transport, land use, housing, health, education, sustainable development, etc. From this, it was possible to identify the key social policy issues and concerns against these five themes and examine the indicators that are currently being used by various government departments to monitor and evaluate the social effects of policy interventions in each instance (see Table 1).

The key direct transport interactions with these five areas of social progress were also identified at this stage, in order that the sensitivity of the different indicators to transport changes could be assessed. For example, in respect of the Poverty indicators, the main interaction was deemed to be household travel expenditure as a proportion of household income to denote both affordability and over-expenditure. For employment, health and education the key transport interaction was deemed to be both the physical ability to access these activities, i.e. entry-level jobs, healthcare and educational facilities and the affordability of that trip.

Additional considerations for the 'health indicators' were transport-related accidents (currently included under the economic pillar), exposure to noise and air pollution (currently included under the environment pillar), access to healthy affordable food and the health benefits of walking and cycling.

In terms of housing, the influence of transport spending on housing, affordability vs. mobility trade offs, spatial mismatches between housing location, employment opportunities and local services and amenities, and the problem of severance are all key interactions. The impact of fear of crime on walking trips and when using public transport were also identified as key areas that the indicators must address.

2.2 Identifying equality of opportunity

Having identified these interactions the next step was to consider potential points of disaggregation, in order to gain a measure of the distribution and thus equity of any registered progress. Household income, levels of car ownership and geographical locations based on indices of deprivation were all identified as potentially powerful ways of expressing (in)equities in the distribution of outcomes. Travel choice, i.e. the various travel options that are available to an individual or area, is another potential area for disaggregation.

It was recognised that similar disaggregation would also need to be applied to some of the environmental (e.g. noise or air pollution) and economic (e.g. journey-time savings) indicators before a complete picture of the 'social sustainability' of an outcome could be fully assessed.

2.3 Determining the justice of policy outcomes

Arguably, justice is often more of a moral assessment of a policy or project outcome than something that can be captured by a set of indicators. Nevertheless, the social policy literature does offer indications of how the justice or the fairness of an outcome might be assessed.

Table 1: Initial indicator set

Area of Progress	Indicator	Measure of Social Progress and Explanation	Availability and Source
Poverty	Number of people below 60% of contemporary median household income	The poverty line.	
	Number of children in households with less than half average income		
	Level of expenditure on travel (Exceedence of 15% household income, for households with below 60% median household income)	Household expenditure on travel is a regressive figure, hence the focus on households below the poverty line. Average motoring costs as a proportion of income are significantly lower for the richest 20% than the poorest, despite the disparity in income.	Adapted from Litman 2003, JRF 2001, JRF 2004
Employment	Proportion of people of working age who are in work		
	Number of working age adults on minimum wage	This is a more coherent indicator than simply 'low wages', though there might be an issue as regards regional disparities in wages.	
	Number of recipients claiming Job Seekers Allowance or Income Support for two years or more	Gives a focus on long-term poverty	
	Proportion of households in social housing where the head of household is not in work		
(Access to Employment)	Journey time by car/public transport comparator to key centres of employment		Adapted from The Egan Review 2004, JRF 2002
	Level of transportation choice to reach key centres of employment	Allowing for more choice will help socially excluded groups unable to afford or use a car. The same applies with this indicator in the education, health and quality of life categories.	
	Percentage of residents within 500m or a 15 minute walk within a safe route of key centres of employment		
Health Inequalities	Premature deaths from Heart Disease	Standard health indicator	DfH 2004
	Number of primary care professionals per 100,000 population		The Egan Review 2004
	Number of people classified as being at high risk of developing mental illness.		JRF 2002
	Proportion of working-age women who are obese (differs substantially by class)	Might seem outside our remit, but is actually a good indicator of health inequalities.	JRF 2002
	Percentage of low birth-weight babies by	Closely correlated with poor health in the first weeks of	JRF 2002

	social class	life, with death before the age of two and with ill health in later years.	
	Total killed and seriously injured casualties. Child killed and seriously injured casualties		DfT Mandatory Indicators for LA
	Number of child pedestrian casualties per 1,000 children in population		
(Access to Healthcare)	Journey time by car/public transport comparator to primary health provider		
	Level of transportation choice to reach primary health provider		
	Percentage of residents within 500m or a 15 minute walk within a safe route of primary health provider		Adapted from The Egan Review 2004
Educational Attainability	Numbers failing to obtain 5 GCSE's at grades A to C	Standard education indicator	
	Chance of receiving job related training by level of qualifications	People with higher qualifications are more likely to have a job with greater emphasis on work-related training and skills improvement.	
	Literacy levels		
	Levels of school truancy	Link to accessibility and social exclusion	
(Access to Education)	Journey time by car/public transport comparator to educational facility		
	Level of transportation choice to reach educational facility		
	Percentage of residents within 500m or a 15 minute walk within a safe route of educational facility		Adapted from the Social Exclusion Unit, 2003
	Numbers of people in receipt of free school travel	Discouraging car use	
Crime	Recorded crime (violent, non-violent and burglaries)		
	Proportion of people feeling unsafe after dark		
	Recorded instances of anti-social behaviour		
	Crime on/waiting for public transport		
Housing	Predictive analysis of land and property value	Imperative to know, but don't know how to assess its pertinence as regards sustainable development, up/down etc?	National Cooperative Highway Research Programme

	Average density of new housing		DEFRA, 2005
	House Price / Income Ratio		London First 2003
	Proportion of households that are overcrowded	Indication of displacement that complements numbers living in temporary accommodation.	
	Number of people living in temp accommodation provided by a local authority		
Community Liveability and Cohesion	Proportion of individuals who are not involved in any civic organisation (political parties, trade unions, tenants groups, social groups)		
	Level of displacement of persons		
	Number of disrupted bus links, footpaths and cycle lanes		
	Level of community and community stakeholder participation in planning process	Ensuring equitable input as well as outcome, emphasises notions of 'social learning' (Reich,1988) and participative planning.	Connelly and Richardson 2005
Quality of life	Perception of value of historical and cultural resources and places of scientific interest		
	Rank score on Index of Local Deprivation (+ housing score)		
	Access to the Internet		
	Percentage of time spent in/out of house		
	Journey time by car/public transport comparator to key food shops		Adapted from the Social Exclusion Unit, 2003
	Level of transportation choice to reach key food shops		
	Percentage of residents within 500m or a 15 minute walk within a safe route of key food shops		Adapted from The Egan Review 2004
	Access to historical and cultural resources and places of scientific interest		
	CO2 emissions and car-km and household final consumption expenditure		DEFRA 2005
	Greenhouse gases from UK-based international aviation		DEFRA 2005

However, unlike the environmental and economic indicators, the direction of progress for each indicator in the social pillar will vary, with for example the percentage of people living within a safe walk of an educational facility going up and the proportion of household expenditure on travel going down. Questions of levelling up or levelling down or encouraging parallel progress across all groups are still pertinent, however, and will still inform further development of the indicators. Discussions about the use and setting of baselines and maximum figures are also important to this debate.

2.4 Refining the list

The importance of establishing a functional and easy to apply ex-ante appraisal method had already been recognised by the team at the early stages of the literature review. In order to achieve this, it was clear that the forty plus indicators that had been identified through the initial review needed to be refined to a more manageable set, whilst continuing to provide a comprehensive assessment of the social value of a given intervention.

It was felt that the most effective way to achieve this would be to:

i) Identify whether the indicator could be directly affected by changes in the transport system;
ii) Reject indicators where it is not possible to identify a meaningful relationship between interventions and outcomes.

For example, although literacy levels could be minimally affected over time as a result of the availability or lack of transport and thus a child's ability to access a decent education, this interaction would be difficult to accurately capture, and even harder to predict with ex-ante appraisal of a new transport intervention. The measure is also vulnerable to change from a variety of other factors such as diet, class sizes or teaching standards, etc.

Similarly, although it has been well established by the medical profession that obesity can be greatly reduced through regular exercise, such as cycling or walking, it is virtually impossible to capture the levels of increased walking that may have been induced within a given population as the result of the introduction of a new cycleway or footpath. Even is this was possible, to then relate the changes in walking behaviour to corresponding reductions in the level of obesity in that population would be even harder to reliably correlate. On this basis, a number of the indicators in Table 1 were rejected as follows:

Poverty

Level of transportation choice to reach key centres of employment	
Number of working age adults on low rates of pay (minimum wage?)	Too far removed from a transport intervention
Number of children in HH with less than half average income	Too far removed from a transport intervention
Number of recipients claiming JSA or IS for two years or more	Too far removed from a transport intervention
Proportion of households in social housing where the head of household is not in work	Too far removed from a transport intervention
Proportion of people of working age who are in work	Too far removed from a transport intervention
Proportion of HH's that have neither a bank nor building society account	Too far removed from a transport intervention

Health

Premature deaths from Heart Disease	Too far removed from a transport intervention
Death rate for under 65's, 10% or more above the British average	Too far removed from a transport intervention
Number of primary care professionals per 100,000 population	Too far removed from a transport intervention
Number of people classified as being at high risk of developing mental illness.	Too far removed from a transport intervention

Proportion of working-age women who are obese	Difficult to separate influence of travel from other social factors
Health Inequalities	Difficult to establish ex-ante

Education

Travel time to education facility	Covered in accessibility indicator
Level of transportation choice to reach education facilities	Weighted journey times more useful in the absence of policy targets and standards
Numbers failing to obtain a qualification above a Grade D at GCSE	Too far removed from a transport intervention
Chance of receiving job related training by level of qualifications	Too far removed from a transport intervention
Literacy levels	Too far removed from a transport intervention
Number of children permanently excluded from school	Too far removed from a transport intervention

Crime

Recorded crime (violent, non-violent and burglaries)	Too far removed from a transport intervention, particularly with ex-ante appraisal
Recorded instances of anti-social behaviour	Too far removed from a transport intervention, particularly with ex-ante
Proportion of people feeling unsafe after dark	Too far removed from a transport intervention. Would require repeat surveys to monitor change.

Community Livability and Cohesion

Proportion of individuals who are not involved in any civic organisation (political parties, trade unions, tenants groups, social groups, sports clubs…)	Too far removed from a transport intervention
Number of severed transport links	Captured within accessibility indicators
Levels of voter registration and turn-out	Too far removed from a transport intervention
Level of displacement of persons	Difficult to measure
Level of community and community stakeholder participation in planning process	Part of a general planning principle but not suitable for a measure of change

Housing

Predictive analysis of land and property value (disruption, increase, decrease)	Difficulty of establishing a coherent approach to the indicator, an increase in house value is good for an owner-occupier, particularly given the shift towards asset-based welfare in society, but bad for people trying to get onto the property ladder, often vulnerable groups, key workers and the lower income brackets.
Average density of new housing	Transport and land use interactions unclear
House Price / Income Ratio	Too far removed from a transport intervention
Proportion of HH's that are overcrowded	Too far removed from a transport intervention
Number of people living in temp accommodation provided by a local authority	Too far removed from a transport intervention

Quality of life

Levels of car ownership	Only indicates social progress for car owners and may actually reduce it for non-car owners
Rank score on Index of Local Deprivation (+ housing score)	Use as a disaggregator
Access to the Internet	Too far removed from a transport intervention
Percentage of time spent in/out of house	To difficult to capture without surveys
Participation in sports and cultural activities	Too far removed from a transport intervention, covered in an accessibility

	indicator
CO2 emissions and car-km and household final consumption expenditure	Captured under environmental pillar
Greenhouse gases from UK-based international aviation	Captured under environmental pillar

2.6 Developing new indicators

In many instances, it was not possible to identify existing indicators that would be capable of capturing the direct interactions between transport decision-making and social progress. It was recognised that this is a relatively new area of research enquiry and, as a result, academic and policy thinking is even less certain developed in this respect than is the case for either with the economy or environment.

Poverty
In respect of poverty, the main interaction with transport was deemed to be household travel expenditure as a proportion of household income to denote both affordability and over-expenditure. Household expenditure on transport would of course go down if bus and rail fares, for example, were too high and people chose to stay at home.

Accessibility
For employment, health and education the key transport interaction was deemed to be both the physical ability to access these activities, i.e. entry-level jobs, healthcare and educational facilities and the affordability of that trip.

Cost could also be factored in to these indicators to include consideration of suppressed demand, the affordability of a given journey and highlight disparities in cost between car and public transport travel. This would also provide a supply-side indicator to balance the demand-side indicator of household expenditure on transport.

Having both these indicators will prevent this potential misrepresentation. This could also be disaggregated by other factors closely related to the journey's destination, for instance a poverty disaggregation for journeys to key centres of employment. In rural areas, where levels of car dependence are likely to be higher than urban areas, housing tenure might be a more telling indicator, as well as accessibility from the lowest quartile of house prices. Accessibility from these tenure types should at the very least not go down over time.

There are of course problems with using a ratio. Previously a downward direction of indicator was used, though journey times cannot continue to decrease. This then moved to a maximum standard that could, for example, be based on typical journey times. A comparator was also another option. Using a ratio, however, places the emphasis on encouraging interventions that promote a more sustainable balance between car use and public transport use.

Safety
Additional considerations for the 'health indicators' were transport-related accidents (currently included under the economic pillar), exposure to noise and air pollution (currently included under the environment pillar), access to healthy affordable food and the health benefits of walking and cycling. In terms of housing, the influence of transport spending on housing, affordability vs. mobility trade offs, spatial mismatches between housing location, employment opportunities and local services and amenities, and the problem of severance are all key interactions. The impact of fear of crime on walking trips and when using public transport were also both identified as issues that the indicators should address.

Quality of Life
It was clear from the literature that the issue of improved quality of life is of prime importance to the social progress aspects of sustainable development. Numerous documents have recorded that residents' ability to walk safely and easily within their local area is seen as immensely important in this respect. It is also an aspect of policy that falls firmly within the realms of transport policy-makers to affect. Many local authorities already operate 'safe routes' programmes to encourage walking and improve the safety of the pedestrian environment, so this was seen as a useful indicator to capture

both walking opportunity and travel choice. An increase in safe cycle routes could also be measured, if this was deemed appropriate.

Housing

There is a clear interaction between transport and property market and land values, but equally huge uncertainties about the impact of this on social progress (e.g. an increase in house prices could be positive for the overall economy but negative for low-income families aspiring to become home owners) or how to capture this effect through the indicator framework. Equally, in some areas where entry-level house prices are high (e.g. London) there appears to be a trade-off occurring between the increased journey distances and house ownership (i.e. people are choosing to travel further to benefit from lower house prices and/or improved lifestyles). This suggests there may be a conflict between social progress and sustainability in this instance. For this reason no indicator for housing was include in the set, although it was suggested that this decision should be discussed with stakeholders.

4. Discussion of selected indicators

On the basis of these considerations, a five core social indicators were recommended for presentation to the stakeholders alongside the environment and economy indicators at the consultation phase of the research (see Table 2).

Table 2: Indicators presented to key stakeholders

Area of Progress	Indicator of Progress	Disaggregation	Direction of change
Poverty	Total household expenditure on travel	Households below 60% of contemporary median household income vs. all households	Not increasing overall and not exceeding 15% for households below 60% of contemporary median household income
Accessibility	Weighted journey times[1] to: • key centres of employment; • primary, secondary & further educational facilities; • primary health care provider[2] & general hospital[3]; • key food shops	By car and public transport[4]	Reduced ratio between car-based and public transport options
Safety	Number of child pedestrian casualties per 1,000 children in population	Social Class I - V	Reduce number injured by 50% by 2010 compared with the average for 1994-98 plus reduced disparity between social groups
	Recorded incidences of crime on public transport	None	Down overall and improved perceptions of safety
Quality of Life	Percentage of residents living within 1000m or 15-minute 'safe walk'[5] to key destinations (e.g. health, educational, leisure and cultural facilities, food shops, post office, etc.)	Can be disaggregated by particular relevant groups (e.g. primary school by % of children under 11 years).	Up

[1] It was suggested to stakeholders that it may be advisable to also include an indicator for the cost of journey to these destinations

[2] Doctor's surgery, health centre, NHS walk-in centre

[3] Hospital offering A&E and other key services

[4] Can also be disaggregated by particular relevant groups (e.g. health care facility by % of people suffering Chronic Heart Disease; primary school by % of children under 11 years; etc.) and also by housing tenure (the latter may be particularly in rural areas where low-income households are more likely to have higher levels of car ownership).

[5] Determined by an official safe route. A safe cycle route to these destinations could also be included

3.1 Poverty

Strength of indicator

There is a direct relationship between household income and expenditure, travel affordability and the distances people are able to travel by both car and public transport. Generally, the less that is spent on travel is also a proxy indicator of the extent of their car use. Reduced car use is desirable for both the social equity and environmental sustainability of the transport system.

Disaggregation

The indicator is disaggregated by households below 60% of contemporary median household income vs. all households. Household expenditure on travel is a regressive figure, hence the focus on households below the poverty line. Average motoring costs are significantly lower for the richest 20% as a proportion of income than the poorest and also for public transport and taxis, although the difference is less significant (Lucas et al, 2001; SEU, 2003).

Direction of change

15% was the average household across all income groups' expenditure on transport in 2005 (Family Expenditure Survey, 2005), which it is recommended should act as the base-line figure. In order to achieve greater equity, interventions should aim to bring the level of spending in relation to income down for the lowest income group and levelled out as a minimum for all households.

Data source

Family Expenditure Survey (Office of National Statistics).

Problems of measurability

Existing sample is inadequate for analysis below the regional level.

Expenditure will not record suppressed demand for travel within households due to lack of affordability.

It is suggested that both these issues could be addressed by including an indicator of the average cost of journeys to different destinations under Accessibility.

3.2 Accessibility

Strength of the indicator

Accessibility was chosen as Bruntland (WCED, 1987) recommends that,

> *"… sustainable development requires that societies meet human needs both by increasing productive potential and by ensuring equitable opportunities for all."*

There is a growing body of evidence (SEU, 2003) to suggest that people on low-incomes and in particular those living in households without a car are unable to meet their human needs and thus have a reduced opportunity to secure a reasonable quality of life. It is increasingly being recognised by recruitment agencies that transport is a key factor in securing a reliable labour force. Health workers are also beginning to make the links between transport and negative impacts on health outcomes, both through an inability to attend health appointments and access to healthy affordable food and less directly through the feelings of social isolation, which can have significant mental health impacts.

The evidence for linking poor accessibility to low educational achievement is perhaps less compelling. The SEU study, however, presents a convincing argument to suggest that children in low-income

households are more likely to attend the nearest school because of a lack of transport or the expense of travel cost. This can give rise to inequalities in educational outcomes where the nearest school is considered to be poorly performing. It also reduces parental choice amongst households who are least likely to be able to move in order to secure better educational opportunities. The evidence-base is stronger for linking poor transport and high travel costs with the low take-up of further education and college dropout rates.

Weighted journey times (as a continuous measure) have been used as the proxy measure of accessibility as this will also record a level of trade-off between walking, cycling, waiting and in-transit elements of the journey. This has been preferred over generalised travel costs as these require use of a standardised value of time and cost which will tend to over-value the cost of travel for low-income groups and under-value time spent travelling by highly mobile groups. Using a continuous measure of accessibility avoids the use of thresholds, which are problematic in the absence of research or policy to determine desirable and/or acceptable levels of travel.

Disaggregation

The key services are: employment, primary health care, education and food shops and the indicator is proposed to be disaggregated by non-car owning and car owning households (can also be disaggregated by key relevant population sectors e.g. for disabled people, children, etc.)

Disaggregation by relevant social groups is also highly recommended (e.g. for people with disabilities across all destinations, and, e.g. health care facility by % of people suffering Chronic Heart Disease; primary school by % of children under 11 years; etc.) and also potentially by housing tenure. The latter may be particularly in rural areas where low-income households are more likely to have higher levels of car ownership.

Direction of Change

Lack of a car remains the single greatest barrier to accessibility, with people who are dependent on other modes taking, on average, twice as long to travel the same distances as drivers. The aim would be to reduce the disparities between car and public transport journeys to these destinations. Ideally this would be achieved by either locating these facilities closer to where they live or by introducing more direct public transport routes to them. However, it should be noted that there could be perverse incentives to encourage high-speed rapid transit links and traffic calming schemes in order to reduce this ratio, rather than target public transport improvements on areas with high concentrations of non-car owners.

Data source

Modelled data using DfT national indicators.

Problems of measurability

Accessibility models such as the DfT's Accession model do not currently allocate weightings to different modes and these would have to be calculated on the basis of the available evidence and/or stated and revealed preference surveys and manually calculated.

Ratios, particularly concerning car use, are easily politicized and inconsistent with the approach adopted by other pillars, but do place an emphasis on accessibility and in turn social inclusion for the lowest income groups.

It would be possible to consider alternative use of opportunity contours, which would offer an indication of travel choice. However, this method demands thresholds to be set and there is an absence of both policy targets (e.g. no person should travel more than x minutes to a given activity) and data on willingness to travel to different destinations (research suggests that this is highly variegated for different parts of the country).

3.3 Safety

Selected Indicators

Number of child pedestrian accidents by social class

Recorded incidences and fear of crime on and waiting for public transport

Disaggregation

The 2004 White Paper on Transport sets out clearly the Government's long-term policies on safety with an overall aim to improve safety and security on all modes of transport. Road traffic accidents are the biggest single accidental cause of lost years of life and are an issue still requiring much attention. The majority of accidents occur on roads and the Government has already set targets to reduce these overall and specifically amongst the child population. Total accidents are included in the economy pillar so this section concentrates on the impacts on children of different social class. The SEU report (2003) has identified that children in Social Class V are five times more likely to be knocked down in a traffic accident than their counterparts in Social Classes I and II. Most of these children also live in households that do not have access to a car. There is, therefore, both strong equity and justice arguments for targeting pedestrian safety measures and campaigns towards the areas where there is a high concentration of low-income households with children.

In addition to accident risk, levels of crime and fear of attack on the street are also important. Ideally, transport measures should aim to address both street crime and crime on public transport services, however, the Civilising Cities study (TSG, 2004) demonstrated that it is difficult to gain access to crime figures at a small enough spatial scale to make them meaningful. Crime on public transport is reported separately by the police and can be easily obtained by local authorities. The measure is not ideal, however, as it may lead decision-makers towards a perverse incentive to remove transport services in high crime areas. No Disaggregation is recommended.

Direction of Change

Reduce number injured by 50% by 2010 compared with the average for 1994-98 plus reduced disparity between social groups.

Data source

DfT accident data

National crime statistics

Problems of measurability

None for accidents

The street level crime data is difficult to access due to issues of confidentiality.

3.4 Quality of Life

Selected Indicator

Percentage of residents living within 1000m or 15-minute 'safe walk'[6] to key destinations

Disaggregation

Whilst the accessibility indicators above provide a measure of wider opportunities, the local focus of this indicator is representative of the 'livability' of a community and the need to travel external to that

[6] Determined by an official safe route. A safe cycle route to these destinations could also be included

community to conduct basic functions. It is recommended by the Egan review of Sustainable Communities. The key destinations are perhaps best linked to local needs but include health, educational, leisure and cultural facilities, food shops and a post office.

Direction of Change

Up, though the development of a minimum percentage, as with accessibility, would be a considerable step forward.

Data source

Local Authority

Problems of measurability

This could be too far removed from a transport intervention. Public transport can carry people to a key location, but it is out-with their powers of influence to relocate activities.

4. Stakeholder feedback

Generally stakeholders were supportive of the social indicator set. It was recognised that indicators of social contribution to transport are the least developed in many respects and that there is still a large degree of uncertainty about what constitutes a sustainable way forward in this respect. Some general comments included:

- Include all accidents under the social pillar
- Consider the addition of a physical fitness indicator
- Consider the addition of a severance indicator
- If the social pillar is about reducing the ratio between car and public transport then is social progress/equity implied by car conditions worsening?
- Street scene and livability sits within 'squalor'
- We should focus on time and not distance as a walking indicator
- Have we reflected frequency as a part of choice/opportunity?
- Need to consider including journey cost as well as time in access indicators
- Is the 15% indicator for poverty the right level – to what extent is this affected by other constraints at the moment?
- Structural problems with the framework, such as the absence of an indicator of Value for Money (VfM).

More specifically, both Transport 2000 and the CPRE were keen to see the positive effects of walking and cycling on health and obesity to be included as an additional indicator. The SDC felt the need for an indicator to demonstrate transport and land-use interactions and one to record incidences of litter and petty crime.

Both the SDC and the LGA noted that the absence of any real targets relating to the social aspects of transport is problematic for indicator development. The LGA also noted issues around choice, compulsion and people's reasons for mobility.

The Treasury noted the importance for transport to be achieving social objectives, especially as we move away from subsidised transport schemes. The ODPM was concerned that the indicators suite integrates with land use planning, and in particular the location decisions of schools and hospitals.

4.1 Poverty

Specific comments from stakeholders in relation to the Poverty indicators were:

- Total percentage on travel should be measured by household income quintiles for motorist and non-motorist
- Shift debate to how much companies are charging rather than how much people are paying (Sustainable Development Commission).
- Housing issues: property values, displacement effect, trade-off between housing and transport cost – this is very important in assessing social impacts and could also be applied to the quality of life indicators. (DEFRA)
- Non-decreasing standard of living, how to factor in life expectancy, the pension time bomb. (Though this is in the economic pillar, is also an issue for the social pillar and could be balanced out in the social pillar) (HM Treasury).
- Family expenditure and how to factor in children (HM Treasury).

4.2 Accessibility

Specific comments from stakeholders in relation to the Accessibility indicators were:

- This might not take into consideration the stark difference between rural and urban areas and rural issues in general, (DEFRA)
- Need for walking and cycling in access area (CPRE)

- Is it more important to clearly differentiate between modal choice or choice to leave the house? (SEU)

4.3 Safety

The Sustainable Development Commission (SDC) and DfT recommended that given safety is an important issue with transport appraisal, it might be better to have all safety indicator together, rather than having an indicator in the economic pillar and another in the social pillar. Placing a safety indicator in the economic pillar does not sufficiently take into account loss and bereavement.

SDC noted that often fear of crime in and around public transport and more generally is often more of a deterrent to traveling on public transport than actual crime, but it was accepted that this data would be impossible to capture without local surveys and difficult to forecast, although possible for transport spending to influence.

4.4 Quality of Life

DEFRA noted the difficulty of capturing well-being. DFT also noted that often this qualitative aspect of research is over-dependent on surveying, which in turn can be corrupted.

4.5 Housing

Although none of the stakeholders were able to recommend a suitable indicator, it was generally agreed that it would be useful for policy decision-making to include some indicator to represent the interaction between transport and property prices.

5. Recommended revisions

5.1 Poverty

This is seen as a powerful indicator but ONS recommends that at the present time there is an insufficient sample to disaggregate this indicator below the national level on an annual basis, with the potential to use three years of data to measure it at a regional level. On this basis, it is recommended that an indicator of the average cost of journeys to key destinations replace this indicator. A comparator of car km cost to public transport fare costs is also included.

5.2 Accessibility

Whilst there were some issues of concern raised by stakeholders regarding the urban focus of this indicator, it is considered to be the best opportunity for capturing the social benefits of transport at the present time. Using a continuous measure weighted journey times recommended over opportunity contours in the absence of data and policies relating to thresholds and highly differentiated willingness to travel for each activity in different parts of the country.

5.3 Safety

Include all accidents under the social pillar and disaggregate by index of deprivation, teenage deaths by driving and child pedestrian deaths.

5.4 Quality of life

The 'walkability' of a local area was widely supported as an indicator of 'liveability' in the stakeholder consultations and it is recommend that this indicator be retained. It should be noted that this indicator would also capture where severance was occurring from a new transport intervention. It was suggested, however, that the title of this theme is inappropriate and that it be changed to either 'liveability' or 'walking'. The latter is recommended as consistent with NATA.

Numerous alternative QOL measures have been recommended by the various policy documents relating to this subject and consulted stakeholders also referred to some of these. In most instances, however, it is unlikely that these alternatives would demonstrate change as the result of transport policy or spending overtime, as previously discussed. This is either because they are could not directly be influenced by a transport intervention or because there are too many other factors influencing them of which transport is only one and so its direct effect is lost (e.g. level of litter in an area).

There was some concern from stakeholders that walking is only one aspect of improved quality of life. However, it should be noted that the 'environment' pillar is designed to capture the pollution aspects of quality of life (E.g. CO_2 emissions, noise, etc) and that real GDP is also a measure of this when considered in combination with the indicators of social progress.

5.5 Housing

In light of both the teams own concerns and the comments from stakeholders, it would seem sensible to include at least some proxy measure of the transport and property price interactions, even if this is an uncertain and proxy measure for the time being. Following further exploration of this issue the suggest indicator for inclusion in the framework is as follows:

Lowest 10% value of house prices within x minutes (based on average local journey times to employment) *of:*

a) *The town centre and*
b) *Key centres of employment*

Disaggregated by public transport and car

There are issues that will need to be discussed with modellers about forecasting this indicator into the future but it is understood is that Land-use Transport models do include at least some housing price response so this should be in part possible to address even in the short-term.

6. References

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