PLANNING AND MONITORING TRAFFIC REDUCTION STRATEGIES

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Tim Pharoah

The Traffic Reduction Act requires local authorities to set traffic reduction targets for their areas, and to devise plans for achieving them. This raises important questions of which traffic should be reduced.

The answer is likely to vary between different areas, but should follow the adoption of a set of specific objectives. Traffic reduction has no intrinsic merit, but is a useful proxy for a range of environmental and social improvements.

This paper aims to clarify some of the issues, and to suggest a framework for setting and monitoring traffic reduction objectives.

Local and global objectives

There is a dilemma in planning for traffic reduction. Urban concentration can reduce the need for travel, and offers greater opportunities for travel by public transport and non-motorised modes. This helps to reduce CO_2 pollution, a global concern, but concentrated living can lead to severe local environmental problems of poise, pollution and severance of communities.

Urban sprawl, on the other hand, can reduce local environmental impacts of travel but lead to higher levels of private motorised travel, and hence greater CO_2 pollution.

Getting the framework right

Although the policy objective of reducing motorised traffic is not yet fully accepted, let alone integrated into the full range of policy and practice, some ground rules need to be established.

- What is traffic in this context? Traffic refers only to motorised traffic (non-motorised traffic being accepted here as having minimal adverse impacts), and to motor vehicle kilometres driven. Because of the paucity of data relating to distance travelled, **trips** may have to be accepted as a proxy for traffic.

- "Traffic reduction" can refer to an absolute reduction, or stabilisation of traffic or lower growth rates compared to a general trend of traffic growth.

- What traffic should be reduced? The big growth rates are out of town, but the big opportunities to provide alternatives to the car are in town. Different measures tackle different parts of the problem. For example road pricing tackles the congestion problem, but not necessarily overall traffic growth or

C02.

- Who should benefit? Conventional wisdom targets car commuting for reduction, for example by converting long stay to short stay parking in town centres. Greater intensity of parking use will mean increased traffic, however, and traffic reduction targets may involve different priorities.

Monitoring traffic reduction

Monitoring the achievement of traffic reduction requires something more than anecdotal evidence, or vague expectations. It will be necessary to collect "before and after" data to reveal the reality or extent of reductions.

Four categories of evidence are possible:

Evidence from traffic measurement:

1. A road, or group of roads, or area, where traffic has been reduced, due to **schemes directly affecting their use** (e.g. pedestrianisation, road closure, traffic calming, traffic management, capacity reduction, tolls).

   It must be clear whether traffic diverts to other routes or times.

2. A road, group of roads, or area where traffic has been reduced due to **schemes or circumstances affecting traffic generation or origins and destinations of traffic**. Examples might be parking controls or charges, reduced parking supply, lower public transport fares, new infrastructure for cycling, walking or public transport, higher taxes. Economic activity can also be responsible for traffic reductions.

   Such evidence is likely to come from
   - cordon or screen-line traffic surveys
   - monitoring of automatic traffic counters
   - origin and destination roadside interviews
   - other manual traffic surveys

Evidence relating to population or activities (this may not reveal any overall traffic reduction on the road network, due to counter trends from other population or activities):

3. A **sample population where vehicle trips or vehicle kilometres per head have been reduced**. For example, resulting from transport changes as in categories 1 and 2, or from a home-based mobility management scheme. This category is important in a town or area with a growing population, where reductions of traffic per capita may be more realistic than net reductions of traffic overall.

   Evidence may come from household interview or travel diary surveys or records from a particular group. (e.g. city car club monitoring, vehicle odometer records from vehicle fleets). This category should include any

second-order effects of mode switch.

4. A **sectoral reduction in traffic** due to changes in land use, activities, or demographic change. Examples might be: an office relocation, factory closure, the introduction of home delivery services, a green commuter plan, new facilities located closer to customer population, population decline or ageing.

   Evidence may be from a variety of sources, including private sector sources. This category will not pick up any second order changes, since there may be compensating changes in other sectors not included in the data.

There may be overlap between the categories, especially between 1-2, and 3-4. With regard to 3-4, an important distinction can be made between data which reveals travel by all people within a sample of households or community (category 3) and data relating to a selected group of people (category 4) which will not reveal "mode migration" effects within households. For example, commuter plan data may show a reduction in car commuting, but not show that the cars formerly used for commuting are now used for (perhaps greater) travel by other members of the household.

Delivering the benefits

Since traffic reduction involves changing people's behaviour, it is reasonable to expect compensating benefits. If these benefits are thinly spread (such as a one percent reduction of delay throughout the town), or are invisible (such as CO_2 reductions) it may be difficult to maintain public support for traffic reduction. It is therefore important to develop plans that include direct and visible improvements as well as traffic reduction. Good examples of this are pedestrianisation and reallocation of roadspace for non-car modes, or for public use and enjoyment.

Conclusion

Traffic reduction plans must be specific about the type of traffic to be reduced, and why. They must include improvement schemes to exploit the benefits of less traffic, as well as measures to achieve the desired traffic reduction.

The methods to reduce traffic and the methods of monitoring success both need to be tied to specific objectives. These should distinguish between the reduction of local impacts, and contributions to reduced global impacts.

TIM PHAROAH
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