

3.2 OPENING UP THE FULL RANGE OF POLICY OPTIONS

Headlines

- A good option generation process is crucial to ensure that the transport interventions that offer the highest returns can be found.
- This means starting with a good understanding of the strategic priorities and the challenges that need to be addressed, before considering potential solutions.
- At present some propositions start by suggesting a ‘single solution’ rather than defining the problem.
- Unless a wide range of appropriate options is considered, there is a risk that the best options are overlooked and money could be wasted.
- The full range of options should look across all modes and include: making better use of the existing transport system, including better pricing; investing in assets that increase capacity without the need for additional fixed infrastructure; investment in long-life fixed infrastructure; and combinations of these options.

INTRODUCTION

2.1 The impacts of transport interventions can vary significantly. Their location-specific nature means that it is not possible to identify a policy option that is effective in one area and assume that, if implemented elsewhere, it would have the same impacts and cost the same to deliver.

2.2 The choice of intervention to implement is, therefore, very complex and requires consideration of a wide range of factors if particular problems are to be tackled effectively and the highest levels of welfare return are to be achieved.

2.3 In order to build an understanding of the interventions that are able to contribute effectively to welfare, it is first necessary to identify the range of possible policy options that could deliver on the strategic priorities identified in Volume 2. This chapter first sets out some overarching issues for consideration before going on to identify a menu of policy options.

THE RANGE OF POLICY OPTIONS

2.4 Volumes 1 and 2 have shown that in the long term, the characteristics of the transport system that business, freight and commuters value are speed and reliability of journey times, cost, connectivity and comfort. These transport outcomes directly support economic activity, so options that deliver on these counts are likely to deliver GDP benefits.

2.5 It may not be possible, or necessary, for a policy option to deliver all these transport outcomes at once. Some transport policy options may not deliver any of these outcomes, but may be considered good value for money because they contribute to other government objectives such as safety, accessibility or environmental protection – all of which are assessed as part of transport appraisal. In designing policies targeted at a particular objective, such as GDP, policy makers should recognise that there are likely to be implications for other objectives, such as social inclusion or environmental protection. More fundamentally, policy makers need to be aware that some options help to meet multiple goals.

2.6 In undertaking this study, it has become clear that some schemes are promoted as solutions without having defined the problem, and without having considered a range of options. Often, interventions are promoted as catch-all schemes without being closely targeted to deliver specific outcomes as identified above. So, the first step towards transport policy that supports sustainable growth better is to understand which links are under-performing and on what counts. Only then can options be generated that will best tackle those problems and deliver the best returns for the economy and to society more widely.

Prioritise investment on the basis of the best overall returns

2.7 There will be more than one way to meet most transport challenges, and not all will be equally cost-effective. In a resource-constrained world, with many competing demands on government funds, it will never be possible for government to fund all good schemes. Prioritisation must be carried out, and carried out well. Government can do most for GDP, and for social and environmental objectives, by backing those policies and schemes that offer the highest returns across these objectives.

2.8 To be confident of finding the best returns, the option generation process is crucial: the right problems need to be tackled, and a sufficient range of alternatives considered from the option menu (though the extent of an appraisal needs to be proportionate to the size and scale of the problem).

The full policy range is important

2.9 Interventions across modes, across the country, and from the very large to the very small have been examined in this volume. A spectrum of different types of intervention has emerged, which can be broadly described as:

- better use: interventions that lead to more efficient use of the existing transport system;
- variable capacity: investment in shorter- and medium-life assets that increase the capacity of the transport system without the need for additional fixed infrastructure, for example additional bus services or longer trains and platforms; and
- fixed infrastructure: investment in additional very long-life capital assets on the ground, such as roads, rail lines, ports etc.

2.10 In very general terms, scale, cost, delivery time and complexity will tend to increase going down the list. There are exceptions to this rule: while many better use schemes are small, cheap and relatively quick to implement, some are not. For example, depending on the technology chosen, implementing widespread road pricing could be very complicated. Likewise, some options that increase variable capacity could be very expensive. In addition, infrastructure options may still present challenges in terms of the cost and complexity of taking them through the planning process and mitigating potential social and environmental impacts.

2.11 This spectrum of options is explored more fully below. All of the options on the menu improve effective performance of the network by focusing on the key characteristics of speed and variability of journey times, cost, connectivity and comfort.

BETTER USE

2.12 The UK transport network is a vast asset that, as Volume 2 demonstrated, has the right connections in place and is able to support a high volume of movements. However, as was also shown, the performance of the network in some places and at certain times of day is relatively poor with significant scope for taking action to make better use of the assets.

2.13 Better use can be divided into four types of measures:

- supply-side measures that make the movement of users already on the network more efficient, including maintenance;
- demand-side measures that make the network more efficient by changing traveller behaviour; and
- regulation.

2.14 These better use options are further explored in Figure 2.1.

Figure 2.1: Better use measures

	Measure	Impact on the network
Supply-side measures	Traffic management	Throughput of traffic is actively managed to increase flow. Examples include ramp metering, hard-shoulder running or speed control.
	Incident management	Throughput of traffic is improved by making the network more resilient to disruptions. For example, the Highways Agency Traffic Officer service aims to get traffic moving again as quickly as possible following an incident.
	Reallocation of capacity	Available infrastructure capacity is reallocated for particular users or purposes. For example, reallocating road space (e.g. to bus lanes or cycle ways); allocating rail paths or landing slots at airports to priority users. Or, capacity could be removed, as with workplace or city centre parking.
	Maintenance	Regular maintenance regimes prevent future disruption and extend asset life.
Demand-side measures	Pricing	Better pricing of transport to spread demand can, if well-targeted, allow the system to be used more effectively.
	Soft measures	Behavioural change is brought about by increasing public awareness of travel options and taking small practical steps to make travel 'easier'. Examples include workplace travel plans or car-sharing schemes that often rely on improved information provision.
	Regulation	Improvements in transport performance are the objective of regulation that specifies minimum service levels. Examples include rail franchises that penalise train operating companies for late running, and bus franchising in London. Regulation is also one way to manage the impact of transport's externalities, e.g. noise impacts on other people. Delivery restrictions help to mitigate such impacts, while also impacting on how fully available capacity can be used.

2.15 Better use measures can have very significant environmental benefits through reducing or eliminating the need for additional capacity, that can often have significant adverse environmental implications (for example, the landscape impacts of road widening or airport expansion).

2.16 The policy options discussed later in this volume suggest that there is significant scope to implement better use policies in a wide range of circumstances. The relative lack of evidence available on these interventions suggests that they may not be adequately considered as part of the option generation process. Chapter 3.3 sets out the evidence on better use, and takes an in-depth look at the potential offered by better pricing.

VARIABLE CAPACITY

2.17 Better use options are concerned with taking the transport system as it is and using it more effectively to improve its performance. But in some cases, there may be an economic case for adding capacity to the transport system. Additional variable capacity involves investing in those assets that deliver an increase in effective capacity of the transport network without the need for significant additional fixed infrastructure. Examples of additional variable capacity are set out below:

- **Bus services:** this captures a range of options including new routes, higher service frequency, investment in new vehicles to increase onboard capacity, or better signage.
- **Train capacity:** this could involve investment in new rolling stock to increase onboard capacity, and longer trains to increase the capacity available on each train service. In some cases the distinction between variable and fixed infrastructure as discussed next, may be somewhat blurred e.g. when longer trains mean longer platforms.
- **Signalling:** upgrading rail signalling can allow a reduction in the gap between trains that increases the effective capacity of a given rail line. This may require significant investment but would have the potential to improve journey times and reliability.

2.18 Chapter 5 sets out the evidence on variable capacity options.

FIXED INFRASTRUCTURE

2.19 Investment in fixed infrastructure refers to investment in long-life capital assets that increase the geographical scope of the transport network and create a larger 'footprint' on the ground. It is costly and generally non-reversible, so is only likely to be an option where a sufficiently high level of demand can be guaranteed over the long term. Additional fixed infrastructure can, if delivered well, improve journey time and reliability, and new links may improve connectivity. Examples of fixed infrastructure options are set out below:

- **walking and cycling infrastructure:** providing dedicated walkways and cycleways to improve journeys by these modes;
- **additional rail capacity:** new or longer platforms, new or enhanced stations, line extensions, dual tracking, rail gauge enhancement, bridges and tunnels can all be implemented to significantly increase capacity;
- **additional road capacity:** new roads, upgrades to trunk road or motorway standard, on-line or off-line widening, bridges and tunnels;
- **junction improvements:** junctions that are the cause of many congestion problems can be upgraded to improve traffic flows thereby improving journey time and reliability;
- **additional port and airport capacity:** additional runways, quayside capacity, and airport facilities; and
- **public transport interchange facilities:** where travellers need to change from one mode to another such as from bus to rail or rail to the underground network, interchanges impact on the overall journey time and reliability.

2.20 The majority of these fixed infrastructure options are likely to have long lead delivery times and require significant investment so it is even more important to make sure the right option is pursued. Such options are also most likely to have negative environmental or social consequences so, as always, a full value for money assessment needs to be carried out to establish the case for investment.

2.21 Alongside the evidence on variable capacity, Chapter 5 also sets out the evidence on fixed infrastructure options for each of the strategic priorities identified in Volume 2, namely congested and growing cities, key inter-urban links and key international gateways.

WHICH OPTIONS TO PURSUE, AND WHEN

2.22 Choosing the highest return combination of better use, additional variable capacity or new fixed infrastructure solutions first requires a full understanding and definition of the problem to be addressed. The options from the policy menu that are most likely to be cost effective will, of course, vary according to the particular circumstances in which they are implemented. Good quality appraisal is, therefore, needed so that options can be compared and the most effective options identified.

Packages of interventions can in some cases be worthwhile considering

2.23 In many cases packages of better use and variable or fixed infrastructure options could be most effective. The potential for synergies and complementarities between policy options should be considered as they may be able to deliver benefits that exceed the returns offered if implemented separately. In some circumstances, it may make sense to implement better use options while, at the same time, work on delivering a major fixed infrastructure enhancement. It is of course possible that some policy options would not work well together. One of the most important interactions in this regard is the impact of better pricing in reducing the need for more road infrastructure, which is explored in Chapter 5.

2.24 In looking at the policy options, the Study's starting points have been as follows:

- where congestion and overcrowding problems are significant, there is a strong presumption that better use and better pricing options, and their impact on investment needs, should be considered;
- enhancing variable infrastructure can in some cases be more flexible than providing fixed infrastructure;
- better use and variable capacity options have a smaller 'footprint' so may have lower landscape and biodiversity costs than fixed infrastructure projects; and
- packages of options offer important choices in their own right.

2.25 The next chapters set out the evidence available to this study on the returns from a wide range of interventions across the policy options, and identify the conditions under which a high contribution to welfare and GDP is likely.

