

A New Approach to Rural Public Transport





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November 2008

Commission for Integrated Transport
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Web site: www.cfit.gov.uk

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ISBN: 978 1 906581 49 7



Printed in Great Britain on paper containing at least 75% recycled fibre.

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Acknowledgements

We would like to thank all the members of CfIT's Working Group for many insightful comments regarding the evidence we presented to them over the course of this project. In addition, we would like to thank the numerous stakeholders who informed the evidence review carried out for this work.

Disclaimer

Although the technical advice provided by Mott MacDonald and Dr Corrine Mulley was commissioned by the Commission for Integrated Transport (CfIT), the findings and recommendations within these reports are those of the authors and do not necessarily represent the views of CfIT. CfIT does not guarantee the accuracy, completeness, or usefulness of that information; and it cannot accept liability for any loss or damages of any kind resulting from reliance on the information or guidance those documents contain.

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Foreword

Public transport has enjoyed a renaissance in many urban areas in recent years, but outside large towns and cities its quality remains patchy. Many rural communities have public transport services that are infrequent, finish early in the evening and do not run at all at weekends. Connections between buses and trains are erratic, and examples of integrated ticketing are the exception rather than the rule.

This problem affects large numbers of people – a fifth of the English population (9.5 million people) live in rural areas. It causes significant hardship, with the evidence suggesting that low-income rural households are often forced into buying and running a car when they cannot really afford to do so. Rising fuel prices make it even more important to offer a better alternative to car use for these rural households.

But the problems caused by poor rural public transport are wider than this. Lack of a decent transport service undermines the economies of rural areas, since it is more difficult for people to access jobs and services. It also has environmental consequences, resulting in high levels of car use compared to urban areas, and greater per capita carbon emissions from transport.

In its recent paper *Towards a Sustainable Transport System* (DfT, 2007b) the Government highlighted the need for new thinking on rural accessibility, to help meet its goals of quality of life and accessibility for all, and to tackle the challenge of finding carbon-friendly ways of meeting rural transport needs.

In our role as an advisory body to Government, therefore, the Commission for Integrated Transport (CfIT) has examined how innovative transport schemes, using shared taxis, might be developed on a large scale to meet rural accessibility needs. In doing this, we have looked at examples from the UK and abroad. We have found that there are examples in mainland Europe of schemes operating on a large scale, which we believe could be adopted here. The evidence from these schemes suggests that it should be possible to achieve significant economies of scale, so that it would be possible to develop a rural transport network that is more cost-efficient and environmentally-efficient than the current system, and better meets rural people's needs.

It is noteworthy that the European schemes generally require *less* subsidy, as a proportion of total costs, than the UK schemes – an unusual situation, since it is more common for European public transport to receive higher subsidies than public transport in the UK. This suggests that there are clear opportunities to make current expenditure on rural public transport 'work harder', so as to deliver a better service.

We have coined the term 'TaxiPlus' to describe the type of service we envisage as necessary to meet the challenges laid down by the Government in *Towards a Sustainable Transport System*, and we have recommended a large-scale demonstration TaxiPlus scheme as the next step. We see this as a way of demonstrating what is possible, and evaluating the costs and benefits. If good value for money can be demonstrated, we believe this would provide a justification for expansion to other areas.

We do not believe that there are any insurmountable regulatory or legislative problems that would prevent our developing these schemes, though there are some specific issues in relation to taxi licensing and the funding system for rural transport that will need to be resolved.

We would like to thank the members of our working group for their help in producing this Report, and we would also like to thank everyone who provided information to assist in our research.



Lynn Sloman
Chair, Working Group



Peter Hendy
Chair, CfIT

Executive summary

Our analysis examines the role that taxis and other demand-responsive transport services could have, alongside more conventional public transport, in meeting the transport needs of rural dwellers. The origin of this work was a study commissioned by CfIT in 2002 (LEK Consultancy, 2002) which suggested taxi services could be a more cost-effective alternative to bus services in deep rural areas.

Patterns of movement in rural communities are often too dispersed to be handled efficiently by conventional public transport and, as a result, these kinds of transport tend to require high subsidies to remain in operation.

We believe the UK would benefit from demand-responsive transport schemes similar to those that have developed in the Netherlands and Switzerland. Our research has shown that these regional and national operations have lower subsidy costs per trip than the more locally-organised schemes currently operating in the UK. We believe that the economies of scale benefits achieved in these countries could also be achieved in the UK.

The types of schemes operating in the Netherlands and Switzerland typically use a fleet of small vehicles to provide shared transport to passengers who pre-book. In some cases, the service operates on a fixed route and at a fixed time but in a location or at a time of day when conventional bus services would not be viable. In other cases, the service is door-to-door. Pre-booking can generally be made up to an hour before travel. Hours of operation are commonly from early in the morning until late in the evening, seven days a week. Ticketing is integrated with conventional public transport, and services are designed to connect with buses and trains.

While they operate within a national framework, the Dutch and Swiss schemes are generally *managed* at a regional or sub-regional level. For example, the licensing system for providers of what is known as ‘small-scale collective transport’ in the Netherlands is national, so that providers need only register once in order to be able to operate anywhere in the country. A single provider operates a small number of call centres that take bookings from passengers anywhere in the country. Contracts for small-scale collective transport services are then let by the various provincial administrations.

Within the UK, the Government’s Local Transport Bill sets out a framework for sub-regional co-ordination of transport planning that may in future make it easier to manage demand-responsive transport services on a regional or sub-regional scale – for example across several counties. This would help achieve the economies of scale shown by the mainland European schemes.

However, there are some barriers to the expansion of demand-responsive services that need to be resolved. First, there is reluctance on the part of local authorities and the taxi trade to take full advantage of the opportunities that are available under current legislation.

Second, taxi and private hire vehicle (PHV) licensing outside London is the responsibility of district and unitary councils. This is seen as working against the development of large firms with the capacity to run sizable operations of the type seen in mainland Europe. The law on out-of-area operation by taxis and PHVs is both complex and controversial. Case law has established, for example, that a PHV can accept a booking entirely outside the area in which it is licensed provided that the driver, vehicle and operator's licence have all been issued by the same authority. However, the basis of the licensing system – and the way that the industry in general sees itself – is one of locally based regulation and operation within a defined local area. There is also the argument that district level licensing divorces this function from the wider considerations that are the responsibility of local transport authorities.

Third, certain streams of public subsidy (eg Bus Service Operators' Grant, (BSOG)) have a distorting effect on the economics of certain types of demand-responsive transport schemes provided by commercial taxi firms (who are ineligible for BSOG). If demand-responsive transport schemes as seen in the Netherlands example are to become a bigger part of the picture in this country in future, it will be necessary to have a consistent approach to subsidy for all forms of public transport.

We support the Government's efforts in tackling accessibility and quality of life outlined within the recent Department for Transport policy statement *Towards a Sustainable Transport System* (TaSTS) (DfT, 2007b). However, we believe the aspirational goals set within TaSTS will not be realised unless the planning and decision-making for public transport services is shifted to an administrative level that can benefit from the economies of scale achieved in mainland Europe. We believe this research to be a valuable contribution to the further development of the Government's transport strategy.

We have coined the phrase 'TaxiPlus' to refer to the form of taxi-based public transport service we envisage: a fleet of small vehicles that provide shared transport to passengers who pre-book.

Our recommendations are summarised below and include both immediate and long-term ways of generating greater take-up of TaxiPlus schemes within the current legal framework.

- Our **first recommendation** is that central Government should consider the funding of a large-scale demonstration pilot. The scheme should be at the level of an entire county.
- Our **second recommendation** is that central and local Government should consider the licensing of taxi operators at a higher geographical level, either at county or regional level, than currently undertaken.
- Our **third recommendation** is that central and local Government must work more closely with taxi operators to develop new relationships and exploit existing opportunities.
- Our **fourth recommendation** is that central Government review how public subsidy going into rural public transport provision can be best applied to ensure a level playing field among potential operators.

Chapter 1: Introduction

CfIT's interest in rural transport

- 1.1 In 2002, CfIT examined the use of public subsidy in the bus industry. That research considered the cost-effectiveness of traditional bus services in rural areas and concluded that in deep rural areas, standard and experimental bus services have higher subsidy costs per passenger than taxis (LEK Consulting, 2002).
- 1.2 Further examination was recommended to determine the funding, regulatory and management issues associated with operating a taxi-based scheme, and the implementation barriers that would need to be overcome.
- 1.3 In 2007, CfIT began a programme of work examining how the travel needs of rural communities were being met by public transport services in both the UK and mainland Europe. Our focus widened from taxis to include any service that either complemented or replaced conventional bus services. We were keen to understand the quality and cost-effectiveness of a range of schemes and the scope for transferring those schemes across rural areas.

Our aim

- 1.4 We set out to understand whether it might be possible to provide better public transport services in rural areas than is generally the case today. We were particularly interested in how taxis and other non-conventional services might be used to provide a step-change in the availability and quality of public transport services for the general public in rural areas, whilst still achieving value for money.
- 1.5 Our interest in opportunities to improve rural public transport chimes with a recent series of reports from the Commission for Rural Communities, which highlighted the urgent need to find new solutions to the transport problems faced by rural communities (Commission for Rural Communities, 2008b).¹

Scope of the CfIT study

- 1.6 Our study included examples from the UK and mainland Europe, and examined the economics of the schemes, the costs to passengers, levels of public subsidy, and the wider social and environmental benefits.

¹ Five thinkpieces in collaboration with TRL, MVA, ITP, University of West of England, Universities of Plymouth and Aberdeen.

1.7 The scope of the work included:

- taxis (hackney carriages and private hire vehicles) in their roles as adjuncts to or replacements for conventional public transport,² registered local bus services, both commercial, and subsidised by local authorities, Community Transport (CT) and special needs transport, and brokerage schemes;
- the combination of services best suited to meeting needs in different types of rural areas;
- issues of social inclusion, the needs of disabled people, and people on low incomes; and
- the combination of public transport services that might have the greatest potential to achieve sustainability, including lower emissions by better matching vehicle size to demand, and influencing the travel choices of rural car drivers.

Working methodology

1.8 This project is based upon a number of sources, including desktop research of publicly available data and primary research involving case studies and stakeholder consultation. The following pieces of evidence are available from the CfIT website (www.cfit.gov.uk).

- *Think piece on the role of taxis and private hire vehicles in rural areas* (Mulley, 2007). This report, based on existing literature, includes an analysis of the current licensing rules and practices for local bus services, CT, and special bus and taxi licences and various shared vehicle schemes. The report proposes a framework in which the rural bus market could function more efficiently and be in a better position to meet the needs of transport-disadvantaged groups in rural areas.
- *The Role of Taxis in Rural Public Transport* (Mott MacDonald, 2008). CfIT commissioned new research to examine taxi-based services in operation in rural areas. This analysis included a literature review on taxi services, case studies of taxi-based schemes from the UK and mainland Europe, and consultation with operators, funders and stakeholders. The complete Mott MacDonald evidence base is available from the CfIT website.
- *Think piece on the role played by alternative forms of transport in rural areas to 'meet the gap' between taxis and conventional buses in rural areas* (Mulley, 2008). This report, based on existing literature, supplemented by interviews with representatives from the not-for-profit sector, includes an analysis of the current licensing rules and practices for flexible transport services. The report specifically considers the role of the not-for-profit sector in providing wider access in rural areas, and considers different brokerage options.

1.9 This report represents the views of the Commission for Integrated Transport (CfIT), which in 2007 established for this task a Working Group of CfIT Commissioners as well as other relevant individuals (see Annex 3 for a list of the Working Group members).

² These roles could include door-to-door bookable shared taxis; taxis running on bus routes as a supplement to bus services; the taxi element of train-taxi schemes; taxis that are booked to meet passengers at bus stops; and "conventional" taxi operation where the taxi is booked on an individual basis, with the cost met by the passenger or through a taxicard scheme.

Glossary

1.10 The following list provides a brief definition of terms frequently referred to within the body of this report.

- **Car sharing:** An arrangement whereby two or more people share a car journey – either as part of an organised scheme that matches drivers and passengers, or an informal arrangement of family, friends or colleagues who agree amongst themselves to share car journeys on an ad hoc basis.
- **Community transport (CT):** Transport services provided to groups who have difficulty using conventional services because those services may be infrequent, unavailable, or physically inaccessible. CT services offer door-to-door transport or opportunities for onward travel through connections with conventional bus and rail. These transport services tend to be operated by not-for-profit community groups, though local authorities, health authorities and schools/colleges can all provide community transport services.
- **Demand-responsive transport (DRT):** Any form of transport where day-to-day service provision is influenced by the demands of *users*. In the UK these tend to be small-scale, for a defined region or specific community of people, and be door-to-door. This can include services offered by taxis, private hire vehicles (mini-cabs), buses, or community transport schemes.
- **Hackney carriage:** A public transport vehicle with no more than eight passenger seats, which is licensed to ply for hire. This means that it may stand at ranks or be hailed in the street by members of the public.
- **Private hire vehicle (PHV):** A vehicle that must have no more than eight passenger seats and requires advance booking by customers through an operator (may not ply for hire in the street).
- **TaxiPlus:** Large-scale shared taxi-based operations, involving a fleet of small vehicles, which, in addition to core operation, operate a bookable, shared, demand-responsive public transport service. The service utilises a centrally operated call centre to take passenger bookings, integrating with local bus, rail, and other transport networks to ensure connectivity and seamless travel.

Evidence

1.11 Our evidence is drawn from a range of sources and, despite our best efforts to put data and figures on as common a basis as possible, there will inevitably be some inconsistencies. While we may not be able to claim robustness for all estimates, particularly the financial data between schemes within the UK and mainland Europe, we think, nevertheless, that it is possible to make comparisons and draw broad conclusions from the evidence available.

- 1.12 In undertaking this analysis, our review of published literature highlighted some gaps in existing data and understanding:
- Better information collection is necessary on the financial costs and benefits of schemes. This needs to be collected on a consistent basis so that funding bodies and operators can consider the business case more effectively.
 - Long-term research is crucial to our understanding of the cost-effectiveness of schemes.
 - Research needs to examine the attitudes and behaviours of transport users in order to get the best value.
 - Research needs to have an international component.

Structure of this report

- 1.13 Notwithstanding the limitations highlighted above, we believe there are some key insights into the role that transport which is responsive to demand can play in meeting the transport needs of rural communities. These insights and recommendations are set out in this report as follows:

Chapter 2: Government policy

Chapter 3: The challenges for rural public transport

Chapter 4: What we found in the study

Chapter 5: The economics of TaxiPlus schemes

Chapter 6: Why don't we have more TaxiPlus services here?

Chapter 7: Why do we think more TaxiPlus services are a good idea?

Chapter 8: Conclusion and recommendations

Chapter 2: Government policy

Towards a Sustainable Transport System

- 2.1 In the last fifty years, an exponential growth in people's mobility has played a significant role in economic and social advances. It has also stimulated a growth in personal mobility expectations.
- 2.2 There is recognition that this growth in mobility is eroding some of the advantages it has brought. For instance, the transport sector's contribution to CO₂ emissions is significant and unlikely to be resolved through technological advances alone (OECD, 1996). In rural areas, increasing levels of car ownership have gone hand in hand with centralisation of services and loss of local shops, and with reduced viability of public transport. This has resulted in the paradox of vastly increased overall mobility accompanied by poorer access to facilities for those rural residents who do not have access to a car. At the same time, it has resulted in greater car mileage, and therefore greater individual carbon emissions from transport among rural dwellers as compared to urban dwellers.
- 2.3 We therefore need to look for ways to mitigate the negative impacts of the growth in mobility. In recent years, much attention has been focused on solutions for urban areas, but comparatively little attention has been paid to possible solutions for the 19%³ of people who live in smaller settlements and rural areas.
- 2.4 Most recently, reflecting on the analysis of the *Eddington Transport Study* (Eddington, 2006) and the *Stern Review* (Stern, 2007), the Government has published a discussion document, *Towards a Sustainable Transport System* (TaSTS) (DfT, 2007b) looking at the ways in which these earlier studies' recommendations can be translated into policy over the short, medium and long term. TaSTS offers a clear rationale and context for our study. Noting the low load factors and high carbon footprints of many rural services, it suggests (in paragraph 3.20) that there is a need for new thinking on rural accessibility and welcomes CfIT's intention to study the options.
- 2.5 TaSTS recognises that journeys do not exist in isolation but that there are linkages not only between different journeys but also between the available modes. Transport links are thus part of a system that provides end-to-end journeys in response to mobility demand.
- 2.6 TaSTS states in a simple framework a series of goals and challenges that need to be met to create a sustainable transport system. Two of the five goals in particular are relevant to rural dwellers and thus provide a rationale for this study.
- 2.7 Goal 4 relates to quality of life and the way in which accessing transport services (both public and private) gives rise to significant benefits (eg the ability to visit friends and relatives, the ability to access employment, jobs and other services that are necessary for an inclusive society). These activities are highly valued by individuals but come at the cost of negative impacts such as noise and pollution where they involve motorised transport.

³ 19% of the population (9.5 million) live in rural areas. Of these, 6% live in rural areas where the surrounding region is particularly sparsely populated. Among those in less sparse rural areas, 47% (4.2 million) live in small towns, 37% (3.3 million) in villages and 16% (1.4 million) in hamlets or isolated dwellings (www.defra.gov.uk/rural/strategy/annex_b.htm).

- 2.8 Goal 5 relates to the accessibility of transport for all and the desire to provide equality of opportunity in terms of access to facilities and services, across different geographical areas, ages and income levels.
- 2.9 These goals are reflected in the Challenges set out in TaSTS. Challenge 14 identifies rural accessibility as a problem, especially for households without access to a private car. It notes that public transport provision can both require high subsidy and be inefficient in terms of carbon emissions, when there are low passenger loadings on services. In particular, it highlights the need for innovative thinking (learning from best practice around Britain and abroad) on carbon-friendly ways of meeting rural transport needs.
- 2.10 We believe, therefore, this analysis provides a valuable contribution to the Government's current deliberations on TaSTS investment options.

The legislative framework for rural public transport

- 2.11 In rural areas (as in urban areas), current legislation allows for a wide range of types of public transport service. These range from conventional local bus services to a range of options for demand-responsive transport provided by taxi firms (either hackney carriages or private hire vehicles) or not-for-profit operators.
- 2.12 Table 2.1 compares the legislative framework for the different types of public transport service that may operate in rural areas, starting with a local bus service⁴ or registered service under the Transport Act 1985 and comparing other regulations for collective transport with this.
- 2.13 This table makes clear that the regulatory framework now offers the opportunity for a variety of vehicle sizes to provide public passenger services: all vehicle sizes (registered services), small or large vehicles (services operated under permit), small vehicles (restricted bus licences), a taxi used as a bus (taxibus) and taxi/PHV sharing (from designated places or by advance booking).
- 2.14 There are different cost implications of the different types of registration. As Table 2.1 shows, services registered under most of the regulatory options are eligible for the BSOG, but this is not the case for services registered as shared taxis under Sections 10 or 11 of the Transport Act 1985. Concessionary fares are a further difficulty as, with the exception of a local bus registration (and the Section 12 taxibus that is effectively a local bus service registration), there is no legal requirement to accept travellers on a concessionary fares basis.
- 2.15 Table 2.1 demonstrates a complex institutional environment that imposes different costs and benefits on different types of operator (eligibility for BSOG, requirements to hold an operator's licence and whether or not drivers must be paid or be volunteers). However, to the travelling public, the output of these services would not necessarily be distinguishable and would be viewed simply as public transport.

⁴ A 'local service' is defined as a public service vehicle (PSV) carrying passengers at separate fares where the overall route or distance between stopping places is less than 15 miles (measured in a straight line).

Table 2.1

Comparison of the regulatory framework for different local public transport operation

Legislation (Transport Act 1985 unless otherwise specified)	PSV operator licence required (1)	Vehicle size	Type of route	PCV licence for driver	Eligible for BSOG (2)	Required to accept concessionary free travel passes (3)	Other restrictions/comments
Local service registered by a commercial bus operator (including LA supported services)	Yes	Any complying with construction and use regulations and with a Certificate of Initial Fitness or equivalent (if >9 passengers)	Fixed and flexible (4)	Yes	Yes	Yes	
Community Transport Section 19 Permit	No, but only non-profit-making organisations are eligible	Vehicles carrying > 9 passengers. Small: 9-16 passengers Large: > 17 passengers	Carriage of classes of passenger specified on permit (not general public) so generally group transport, pre-arranged (though may pick up and set down at different places).	No for small buses if unpaid; (5) Yes for large buses	Yes, in a wide range of specified categories (6)	No	In general, drivers must be volunteers, though may be paid if driver licence permits (see footnote 76). Local Transport Bill would also allow <9 passenger vehicles if passengers carried at separate fares.
Restricted bus licence (Section 13 (3) of the Public Passenger Vehicles Act 1981)	Special PSV operator licence: a CPC is not required	Up to 2 vehicles < 8 seats	Route registered with Traffic Commissioners, and separate fares can be charged to general public. Fixed or flexible registration.	Yes	Yes	Yes	Can also be granted for operation of occasional registered bus services using up to two larger vehicles (up to 16 seats), provided the main business of the operator is not carrying passengers (eg a hotel) or if the main business is carrying passengers using vehicles carrying fewer than eight passengers (eg a taxi or private hire vehicle).
Local service registered by holder of Section 22	No, but only non-profit-making organisations are eligible	Currently 9–16 passengers. Local Transport Bill will also allow use of 17 passenger vehicles	Route registered with Traffic Commissioners, and separate fares can be charged to general public. Fixed or flexible registration.	No	Yes	Yes	Currently, driver must be volunteer, unpaid but with reasonable expenses. Local Transport Bill would remove payment restriction where driving licence permits (see footnote 7).
Local service registered by Taxibus licence holder: Section 12	Special PSV Operator licence	Taxi (hackney carriage) Max 8 passenger seats	Route registered with Traffic Commissioners, and include one fixed stopping point within the taxi's local authority area. Fixed or flexible registration.	Taxi driver licence	Yes	Could be eligible, but might not be required to accept (8)	A presumption that the Traffic Commissioners will grant licence. Allows taxi owner to choose when to provide conventional taxi service or bus services.
Shared Taxi Section 10	No	Taxi (hackney carriage) (7) Max 8 passenger seats	Allows passengers travelling to the same or similar destination to share a taxi carrying 8 or fewer passengers and pay separate fares.	Taxi driver licence	No	No	Passengers must board at a designated place (usually a taxi rank). Discretionary for the taxi licensing authority, unless 10% or more of taxi licence holders request this.
Shared taxi Section 11	No	Taxi (hackney carriage and private hire vehicles) Max 8 passenger seats	Allows pre-booked passengers to have discounted fares for sharing taxi and pay separate fares.	Taxi or PHV driver licence	No	No	Can be for one-off or for regular journeys Passengers must have agreed to share.

- 1 The operator needs to fulfil a financial requirement (showing the ability to have liquid funds proportional to the number of vehicles held), hold a Certificate of Professional Competence (CPC) (or nominate a suitably qualified traffic manager), be of good repute and demonstrate adequate maintenance facilities (or have a contract for maintenance).
- 2 BSOG (Bus Service Operators' Grant) is equivalent to about 80% of the duty paid on the fuel used in providing the service; the service has to be available to, and regularly used by, the general public.
- 3 Local services are eligible for concessionary travel if they carry the general public along fixed routes with specified stopping points. Demand-responsive services are not eligible.
- 4 Regulations (The Public Service Vehicles (Registration of Local Services) (Amendment) (England and Wales) Regulations 2004), brought into force in February 2004, allow the registration of flexible services run on demand, as well as the typical local services with fixed routes and fixed start and finish points
- 5 Holders of driving licences with a full Category B (car) entitlement pre-dating 1.1.1997 may drive s19 or s22 permit minibuses – 9–16 passengers – irrespective of payment. Where the entitlement dates from 1.1.1997 or later, this concession is only available to driving in a voluntary capacity (ie not receiving payment beyond expenses).
- 6 Regulations that came into force in April 2002 extended BSOG to Section 19 journeys, which carry passengers who are wholly or mainly people over 60, disabled, in receipt of income support or jobseeker's allowance, people 'suffering a degree of social exclusion', people who 'believe that it would be unsafe for them to use any public passenger transport services' and carers or persons under 16 accompanying any of the categories listed (Community Transport Association (2003)).
- 7 This is being extended to private hire vehicles under the current Local Transport Bill.
- 8 Where a service is eligible for concessionary travel, the operator has to accept a valid pass presented on the vehicle (s145 (1) TA2000), but s99(1) of TA 1985 provides for an authority to release the operator from his obligation, or he can appeal to the Secretary of State to be released under s99(2) of the TA 1985 and/or s150(3) TA 2000.

Chapter 3: The challenges of public transport in rural areas

Rural residents have a right to a fair level of access

- 3.1 Securing fairness in the level of access to transport services is enshrined in disability legislation to ensure disabled people's inclusion in society and good quality of life. However, outside of this identifiable group, other groups are also at risk of exclusion and disadvantage because of their lack of access to key services (eg work, education, healthcare and social activities).
- 3.2 Social exclusion and poverty exist in both urban and rural areas but, in rural areas, the risk of becoming 'transport disadvantaged' is much greater. Rural areas pose particular problems for public transport as a result of low densities of population and because many key services are time sensitive in their access (eg jobs, education and healthcare, for example), which makes conventional public transport expensive to provide. Recognising that rural communities are entitled to a reasonable level of transport access is therefore fundamental to providing a good quality of life and mitigating poverty and social exclusion (Social Exclusion Unit, 2003).

There are specific problems for public transport in rural areas

- 3.3 In England, outside London, some 80% of bus services are provided on a commercial basis. Operators have the commercial flexibility to decide on the extent and frequency of these services. Local authorities can support services that are not commercially viable to meet specific local needs, and the remaining 20% of services are provided in this way, with support from public subsidy.
- 3.4 Public transport in rural areas has a range of demand and supply side characteristics that set it apart from urban-based operations. On the supply side, it can be difficult to operate a profitable commercial service, due to the dispersed and low population and strong competition from the car. Where this has led to the withdrawal of commercial services, a combination of rising operating costs within the bus industry and constraints on public sector funding has limited the ability of many local authorities to subsidise replacement services to the same level of frequency and coverage.
- 3.5 On the demand side, the requirements of rural dwellers to access key services are time sensitive (access to jobs, access to healthcare, for example) but require different time windows for access (journeys to work at each end of the day, healthcare visits during the day, for example). Older people, young people, families, working people and disabled people all have different needs. In rural areas where the total demand can only support a low service frequency, it may be difficult for a conventional public transport service to meet these different accessibility needs.

- 3.6 As a result, bus services in rural areas have contracted over the last 20 years, with operators taking the commercial decision to concentrate on more lucrative urban markets. Decisions on supported services are left to local authorities but, as budgets are squeezed, local authorities have had to prioritise subsidy to services meeting criteria related to social need (with access to employment usually having highest priority).
- 3.7 There are also wide disparities in public transport service levels among different rural areas. These are partly due to different levels of rurality, but also a result of different commitments from local authorities to subsidise services. This may result in rural mobility being something of a 'post code lottery'.
- 3.8 However, there are some statistics that buck the trend of service decline. In 2002–05, children in rural areas travelled twice as far as children in urban areas, and were more likely to travel by private coach or school bus than children in urban areas (DfT, 2007a). In addition, there appears to have been some improvement in the availability of bus services in rural areas in recent years. For instance, between 1998–2000 and 2006, the proportion of households in rural areas within 13 minutes' walk of an hourly or more frequent bus service⁵ increased from 45% to 54%.
- 3.9 One reason for this improvement is the availability over this period of new funding streams for rural transport (Table 3.1). In particular, the Rural Bus Subsidy Grant (RBSG) was introduced in 1998 with initial funding per annum of £32.5m per annum. Current RBSG funding is £56m (2007/08).

Table 3.1
Sources of bus service support (2007/08)

Bus Service Operators Grant	413m
Rural Bus Subsidy Grant	56m
Local Authority Secured Services (estimated)	330m
Concessionary fares	725m
London Funding	650m
Challenge and Kickstart	11m
Total (revenue)	2,185m
Capital spending via local authorities	300m
Total Spending	2,485m

Source:
DfT (2008).
*Local Bus
Service Support
– Options for
Reform:
Consultation
Paper.*

⁵ The minimum criterion for the government's bus availability indicator for England.

- 3.10 A further positive trend in recent years is the variety of innovative rural transport services, including demand-responsive services, which have been trialled through Rural Bus Challenge and Kickstart funding. To date, most of these have been limited in scope, and not all have survived beyond the initial grant funding, but some schemes (such as Northumberland's Phone and Go) have provided valuable experience, which the local authorities concerned have built on in developing other demand-responsive services.

Our aspiration: a more flexible approach

- 3.11 While acknowledging these positive developments, we feel that it remains the case that rural public transport services in many areas fall far below the standard for what rural transport in Britain *should* be like.
- 3.12 Low population density in rural areas and the variety of different requirements of individuals for travel mean that a more flexible approach is required. This might entail conventional timetabled bus services on main corridors where there are high passenger numbers, supplemented by smaller vehicles operating only on demand in quieter areas or at off-peak times. This would be more environmentally friendly than using conventional buses on routes or at times with few (or no) passengers.
- 3.13 These demand-responsive or flexible transport services would be part of a co-ordinated approach to rural transport. By a co-ordinated approach, we mean that road-based public transport services would be designed to connect with each other and with train services. Ideally, passengers would be able to purchase one ticket (or use a smartcard) for their entire journey, even where the journey involved changing modes. This co-ordinated public transport network would be supplemented by initiatives such as car-sharing schemes (to match people for regular car trips, such as the trip to work, enabling a saving in driving costs), and car clubs (which would provide access to a car for short-term hire of a few hours).⁶

⁶ Car clubs are generally more developed in the UK in urban areas. However, European experience – especially in Switzerland – suggests that car clubs can also work well in certain rural areas, such as market towns and larger villages.



Photo by Paul Salvesson showing a co-ordinated approach to rural public transport: buses connect with trains in rural Germany.

- 3.14 The demand-responsive transport services that we envisage will require new ways of enabling passengers to make their needs known (the booking system) and a way of matching passenger demands to appropriately sized vehicles.
- 3.15 Door-to-door services may be the most effective solution in areas of dispersed population, where a passenger would otherwise have to travel a considerable distance to access the service. However, for many rural dwellers (for example, those living in small market towns or villages on main road corridors) an on demand service operating along a core route could provide a cost-effective improvement over conventional services – for example, through an extension of operating hours.
- 3.16 Matching vehicles to passengers is an important step in increasing the efficiency of public transport. Where passengers request journeys at the same time of day, it should be possible to combine trips, increasing the loading of a vehicle and bringing significant cost efficiency. This suggests that differently-sized vehicles might be better at different times of day. A system that matches the available vehicle stock to the request for journeys via a system of vehicle brokerage would minimise costs and maximise efficiency.
- 3.17 Managing requests from passengers and matching passenger demand to vehicle size implies that a new approach to the overall planning of rural services may be needed so that the provision of a service to a passenger is co-ordinated with the decision to choose a vehicle of appropriate size.

- 3.18 Although the focus for CfIT's research was rural areas, the more flexible approach described here also has potential to deliver better transport services in suburban and inter-urban areas where conventional services cannot provide for different accessibility needs viably (whether commercially or with subsidy).

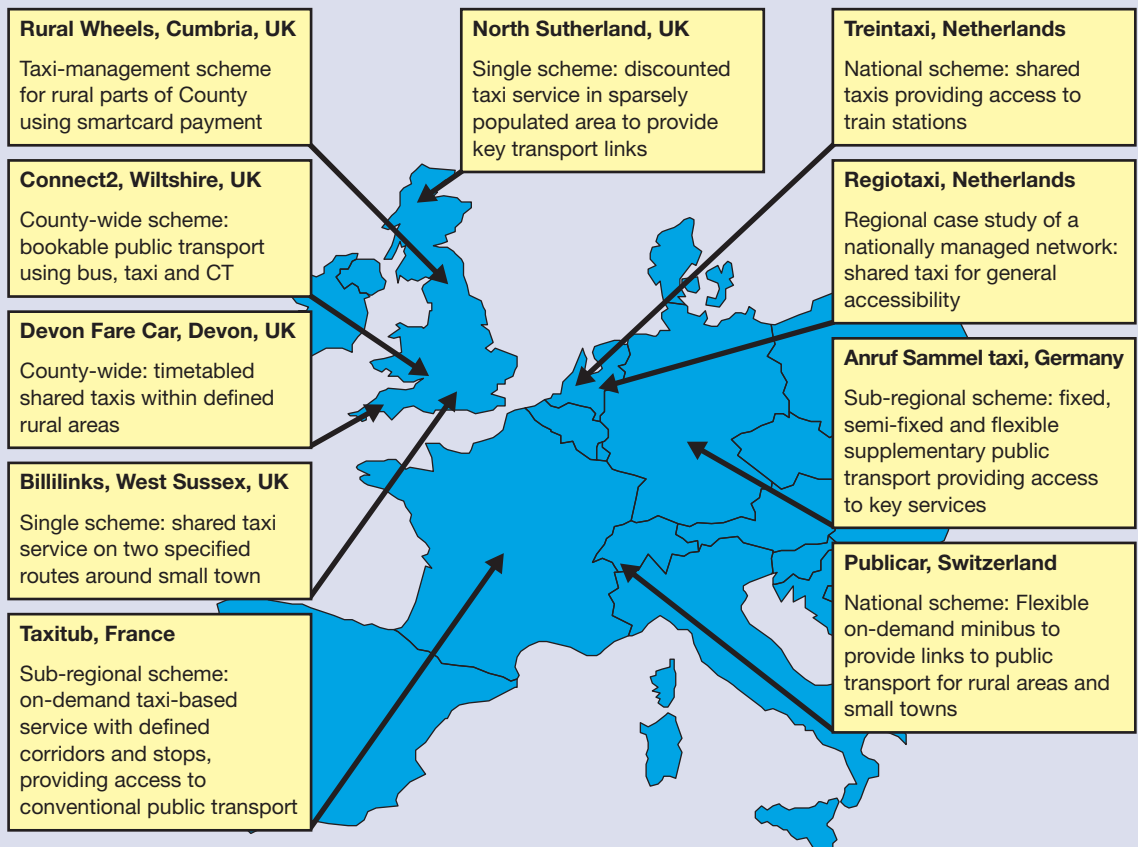
Services could come from a range of operator types

- 3.19 The more flexible services that we envisage could potentially be provided by a range of operators, including bus operators, taxi firms, community transport operators, and other not-for-profit social enterprises. There will be no 'one size fits all' model that will be suitable for every rural area.
- 3.20 In areas where the best solution involved several operators, it would be necessary to establish a co-ordinating agency to run a call centre, take bookings from passengers, and match these with the appropriate operator and vehicle. (These different functions do not all necessarily have to be carried out by the same body, but this is probably the simplest approach.) The co-ordinating agency could sit within the local authority (many already operate call centres for other purposes) or could be another agency, which might be specially created.
- 3.21 Where a co-ordinating agency was responsible for both passenger bookings and vehicle allocation, it would be logical for this agency's role to include a brokerage/co-ordination scheme to improve vehicle utilisation. Such an agency could increase co-ordination across special needs transport, transport to healthcare and school transport services. At present, these transport services commonly operate in separate 'silos', with different agencies independently managing their own passenger bookings and vehicle fleets. A brokerage/co-ordination scheme could enable services for specific groups and specific journeys (eg older people and children, travel to hospitals, day centres and schools) to be provided within the context of an integrated public transport service, providing better utilisation and cost efficiencies.
- 3.22 Although the main focus of CfIT's current work has been on the possible role of taxi firms in providing an expanded network of flexible transport services, we were also interested in whether CT groups might play a role, either as vehicle operators or as co-ordinating agencies.
- 3.23 Our discussions with CT operators and the Community Transport Association suggest that CT groups are very diverse, reflecting the way in which they have emerged over time, with rural CT groups typically interacting more with the commercial operators in their area. Some CT groups have already made a strategic decision to generate more income through social enterprises, and these groups might be interested in having a broader role in public transport provision. However, other CT groups may be more reluctant to expand, perceiving this as a diversion from their core purpose of providing transport for older and disabled people. The Disabled Persons Transport Advisory Committee (DPTAC) has also expressed to us the view that it would be undesirable for CT services to expand too far beyond their core role, if this was to the detriment of services for disabled people.

Chapter 4: What we found in the study

- 4.1 Our analysis is based upon a comprehensive review of relevant literature and in-depth case study analysis of taxi-based schemes within mainland Europe and the UK. Figure 4.1 provides a summary of the characteristics of each scheme analysed, and further detail on each scheme can be found in Annex 2.

Figure 4.1
Case study sites (UK/mainland Europe)



Taxi-based schemes

- 4.2 Considerable differences emerged between mainland European and UK schemes that could not be accounted for simply by differences in the regulatory aspects of the institutional frameworks.
- 4.3 Mainland European schemes benefited from a commitment to funding at a national level and a robust planning framework at a regional level. They have been implemented within the context of an integrated network of public transport, and with an understanding that rural accessibility needs should be met by that public transport network.
- 4.4 The larger scale of the mainland European schemes appeared to provide attractive commercial opportunities for their operators, suggesting that scale is important to ‘unlock’ the investment decisions of operators and increase their willingness to participate.
- 4.5 In contrast, each of the UK schemes was under the jurisdiction of a single local authority, and funding for schemes was considered as part of the decision to subsidise services falling outside the commercial network. Local authorities in particularly rural areas, such as Cumbria, are aware that the subsidy of services that run for part of the journey over route sections that are commercially registered could lead to the commercial service becoming unviable. This is likely to make planning and delivery of flexible schemes considerably more difficult.



Photo courtesy of Apex/Theo Moye. Margaret Prouse helps a passenger into a fare car, a public transport service for rural areas in Ashwater, Devon.

- 4.6 UK schemes are normally targeted at satisfying a restricted set of needs, often in priority to an agreed set of criteria, because constraints in funding mean that not all needs can be satisfied.
- 4.7 These policy differences are reflected in service design and in the quality of service offered to passengers. UK schemes typically offer only limited hours of operation and are not generally integrated with onward journeys. They have significantly longer advance booking requirements than their mainland European counterparts (eg 24 hours or longer, as compared to about 1 hour for the mainland Europe schemes).
- 4.8 Mainland European schemes are regarded as permanent from the outset, whereas many UK schemes were implemented using Challenge funding streams with a finite end-date. Upon the cessation of these funds, local authorities have to decide whether continued funding still presents good value for money in relation to other spend in subsidising public transport. UK schemes are therefore often seen as transitory experiments, with consequent poorer passenger perceptions.
- 4.9 Many UK taxi-based schemes are unable to use consistent branding, because they operate in the territory of more than one taxi licensing authority. This reduces visibility and hence limits public awareness of the availability of the service. Public awareness is also associated with the length of time that a taxi-based scheme has been in operation: this may provide part of the explanation for the higher passenger figures in mainland Europe where the chosen case studies for our research were more mature.

Revised Service

fare F11 car

All Saints, Alston, Chardstock, Churchill, Dalwood, Furley, Hawkchurch, Holy City, Membury, and Smallridge areas to and from Axminster and Chard

Only £2.00 per journey

All you need to do is to reserve your journey a day in advance

All people may use the service

To confirm your journey call **01460 53400**

between 09.00 and 17.00 Monday to Friday
09.00 and 12.00 Saturday

From 5th March 2007

Devon County Council

Revised Timetable

fare F5 car

From Monkton, Luppitt, Rawridge, Uptontery, Marsh, Yarcombe, Stockland, Cotleigh, Farway, Northleigh & Combe Raleigh to and from Honiton

Anyone may use the service

All you need to do is to reserve your journey a day in advance

To book your journey call **TRIP CTA 01404 46529**

between 09.00 and 16.00 Monday to Friday

From 5th March 2007

Devon County Council

Pictures by Apex and David Ovenden: Devon Fare Car service leaflets

- 4.10 In the selection of case studies for our research, it was not difficult to find nationally or regionally co-ordinated examples of successful schemes in mainland Europe. In the UK, only one county-wide scheme was found (Wiltshire), although a second scheme, Rural Wheels in Cumbria, became county-wide in its coverage in 2008. The larger scale of operation in mainland Europe means that taxi operators are willing to dedicate vehicles to the flexible transport service, whereas in the UK rural taxi operators see flexible transport schemes as an infill to their core work, which is usually the transport of schoolchildren. The way taxi operators in the UK view flexible transport schemes as an add-on to their core business causes two problems: the vehicles used tend to be whatever is available, which may or may not be suited to the flexible transport scheme, and hours of operation are commonly limited to an off-peak period.

An introduction to TaxiPlus schemes

- 4.11 TaxiPlus schemes are characterised by being large-scale, involving a fleet of small taxi vehicles which, in addition to their normal core service, operate a bookable, shared, demand-responsive public transport service. The service utilises a centrally operated call centre to take passenger bookings, integrating with local bus, rail, and other transport networks to ensure connectivity and seamless travel.
- 4.12 Experience in mainland Europe demonstrates that TaxiPlus schemes do work. The differences between the mainland European and UK schemes appear to relate to a difference in the geographical level at which service delivery is planned, leading to different scales of operation. The planning of services at regional or sub-regional level in mainland Europe allows the provision of permanent taxi-based flexible transport schemes that operate over a larger area than in the UK and for longer hours. The implementation of TaxiPlus services as one part of an interconnecting web of train services, conventional buses and pre-bookable services enables people to make public transport journeys in rural areas efficiently and at reasonable cost. In the next chapter, we look at the economics of the taxi-based schemes.



Photo by Cumbria County Council. Mrs Dunn pays for Airbus service using a smartcard.

How a TaxiPlus scheme might work: a passenger perspective

Mr and Mrs Jones live in a small village on a main road ten miles from the nearest market town. Before the introduction of TaxiPlus in their county, they did have a bus service, but it was infrequent and the timing was inconvenient, so that they either had just 40 minutes to do their shopping, or had to wait 4 hours for a bus home. There were no buses in the evenings or on Sundays, and none of the buses connected with the trains on the rural branch line. Not surprisingly, most people in the village had given up on the bus service and either drove or took lifts. The old double-deck buses often only carried one or two people, or even ran empty.

There was only one taxi firm in the area, based in the market town, and at the times Mr and Mrs Jones wanted to use it they often found it was unavailable because all the drivers were busy with the school run.

The new TaxiPlus service brought a huge improvement. The service runs along the main road every hour, but it only operates if someone in Mr and Mrs Jones's village – or one of the other villages along the main road – has contacted the booking centre. It is timed to connect with trains at the rail station.

The booking centre takes reservations over the phone or the internet from passengers using TaxiPlus services throughout the region. This particular booking centre is run by a social enterprise that grew out of a community transport initiative, but the pattern varies and in some regions the booking centre is run by a large commercial bus operator.

Mr and Mrs Jones have to phone at least an hour before they wish to travel. As soon as they get through, the operator knows from their phone number that they are regular users, and can check that they would like to be picked up from their usual pick-up point. This particular service runs on a fixed route, although it can divert a short distance from the route to pick up or drop off people with walking difficulties. Some other services run by TaxiPlus have completely flexible routes, covering a zone or area.

When the TaxiPlus service arrives, Mr and Mrs Jones pay the driver a fare, which is about the same as normal bus fare. The service picks up three other people who have also pre-booked. A couple of miles along the road it picks up two people waiting at a bus stop. They are visitors to the area, but the phone number and times of the TaxiPlus service are displayed at every bus stop and they had called by mobile phone a few minutes earlier. Because the TaxiPlus was running anyway, the operator was able to tell them that it would be able to pick them up.

Since the taxi licensing system was changed, there are more taxi firms operating in the area. Most of them have contracts with the TaxiPlus booking centre. This means there is quite a wide choice of vehicles, so it is possible to book an appropriate type of vehicle for each trip. For example, if only a few passengers wish to travel, the operator will book a four-seater taxi, but if more people are travelling a larger ten-seat taxibus will be used. The system can also cater for passengers' special needs – for example, some older people prefer a 'saloon'-type car because it is easier to get in and out.

These preferences are all recorded on the booking centre's database. The booking centre has taken over several local authority and NHS contracts for schools transport and special needs transport. It is also liaising with a number of local charities and other organisations to encourage them to use its transport services rather than buying and running their own vehicles. It is finding that, by co-ordinating a range of different transport needs, it can provide a more attractive and flexible service for passengers.

TaxiPlus has proved very popular. Mr and Mrs Jones's service now runs from 7am until 10pm every day, with the hours extended to midnight on Friday and Saturday nights. Passenger numbers have risen fourfold compared to the old bus service. The service has made it easier for young people in the village to reach college and get jobs, and it means that Mr and Mrs Jones's son, who is on a low income, has decided he doesn't need to run a car any more.

Chapter 5: The economics of TaxiPlus schemes

Costs of operation and subsidy of TaxiPlus schemes

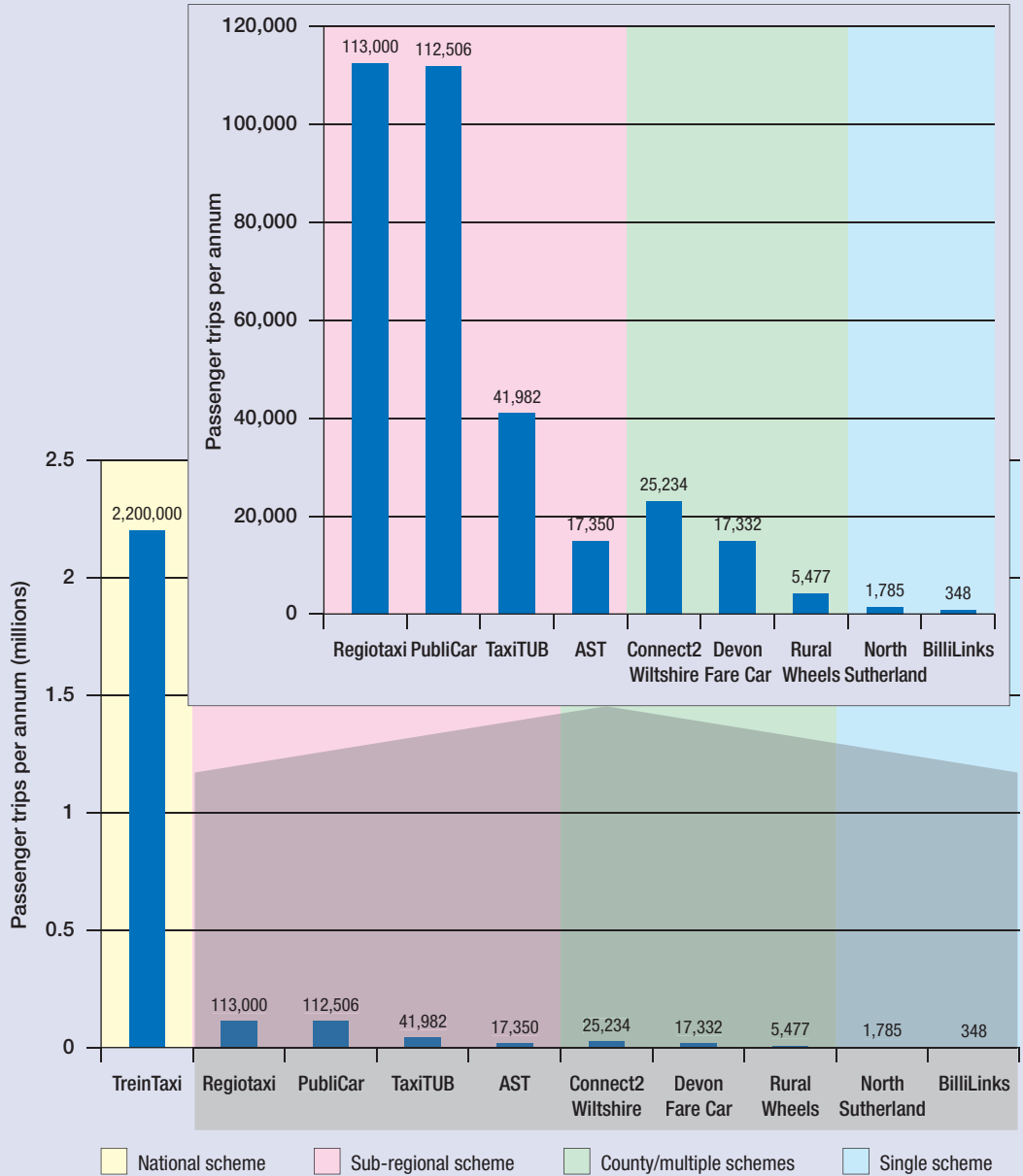
- 5.1 An understanding of the costs of operation is crucial to the discussion of why rural transport in mainland Europe is better served by flexible taxi-based schemes than the UK.
- 5.2 Our research (Mott MacDonald, 2008, Ch 4) provided information from the operation of a number of different schemes. Whilst significant care was taken to present data in a consistent form, it should be noted that schemes provided data for different time periods (so comparisons between absolute values must be indicative) and the breakdown between categories of data may not be consistent.
- 5.3 For the mainland European schemes, our research found TrainTaxi data covering the whole of the national scheme. For PubliCar, another national scheme, our research collected limited data at the national and for the sub-regional level in the area of Vaud, but this combination allowed the sub-regional costs to be estimated. The data for AST were taken from a sub-regional scheme in the Miesbach area. Similarly, data for RegioTaxi were taken from two sub-regional schemes, although we also had limited information collected at the national level. TaxiTUB is a sub-regional scheme, and the data encompassed the whole operation.
- 5.4 For the UK schemes, our research investigated three case studies where taxi-based services were managed at the county level (Devon Fare Car, Rural Wheels (Cumbria) and Connect2 (Wiltshire). Devon Fare Car operated services in 11 areas, and Rural Wheels operated services in two areas, but with plans, now implemented (September 2008) to extend to county-wide operation. The data we collected for Devon and Cumbria covered all their services. In Wiltshire, our research provided data for four of the 12 services in operation across the County.
- 5.5 A common difficulty for our research was the inability of scheme managers of the mainland European schemes to provide us with financial and other information. We understand that the regionally co-ordinated and national schemes often share overheads with other public transport activities, so the breakdown of costs is difficult. We also found it difficult to secure reliable patronage data for some of the mainland European schemes. The UK schemes appeared to have a better overview of their costs and revenues and, in many cases, how their performance fed into the local authority's decisions for subsidy. This was helpful for our research. However, the level of reporting required for UK taxi-based schemes was identified as onerous by many operators.

- 5.6 Three key themes emerged from our analysis of the economics of the case study schemes. First, the case study schemes in mainland Europe are generally bigger, in terms of passenger trips per annum, than those examined in the UK. Second, the mainland Europe schemes typically meet a higher proportion of their costs through the farebox and require lower subsidy per passenger than the UK schemes. And, finally, the economics of the European schemes and the larger UK schemes is such that they require a subsidy per passenger trip that is quite moderate, given the difficulties of providing any form of public transport service in areas of low and dispersed population. We elaborate on each of these points below.

European schemes are generally larger than UK schemes

- 5.7 Figure 5.1 shows the number of passenger trips per annum in each of the case study schemes. TreinTaxi, which serves the areas around 38 rail stations across the Netherlands, provides 2.2 million passenger trips per annum. This makes it by far the largest single scheme. For the other mainland Europe case studies, we obtained data at the sub-regional level (even where, as in the case of Publicar and Regiotaxi, they are part of a larger national initiative). PubliCar Vaud provides 112,500 passenger trips per annum. RegioTaxi KAN is of a very similar scale, with 113,000 passengers per annum. TaxiTub has 42,000 passengers per annum, and AST Miesbach is rather smaller at 17,000 passengers per annum.
- 5.8 Amongst the UK case studies, the largest is Connect2 Wiltshire, with 25,000 passengers per annum, then Devon Fare Car (about the same size as AST Miesbach, at 17,000 passengers per annum). Rural Wheels is smaller (5,000 passengers per annum). The remaining UK schemes, North Sutherland Taxis and Billilinks, are much smaller, at 1,800 and 350 passengers per annum respectively.
- 5.9 Thus, the largest county schemes in the UK are at, or approaching, the size of the smaller sub-regional schemes in mainland Europe.
- 5.10 In our search for case studies, we aimed to include the largest UK schemes that we were able to identify, and we were satisfied that there were no other UK schemes of comparable scale to Connect 2 Wiltshire and Devon Fare Car. Thus, this difference in scale between UK and mainland European schemes appears to be genuine, and not an artefact of our case study selection. It may in part be explained by the fact that the European schemes are older, having been established between 1990 and 1997, and have therefore had longer to grow than the UK schemes, which began in 2002 or later. However, it also seems likely that the planning framework within which the European schemes have been delivered is more favourable – a theme to which we will return.

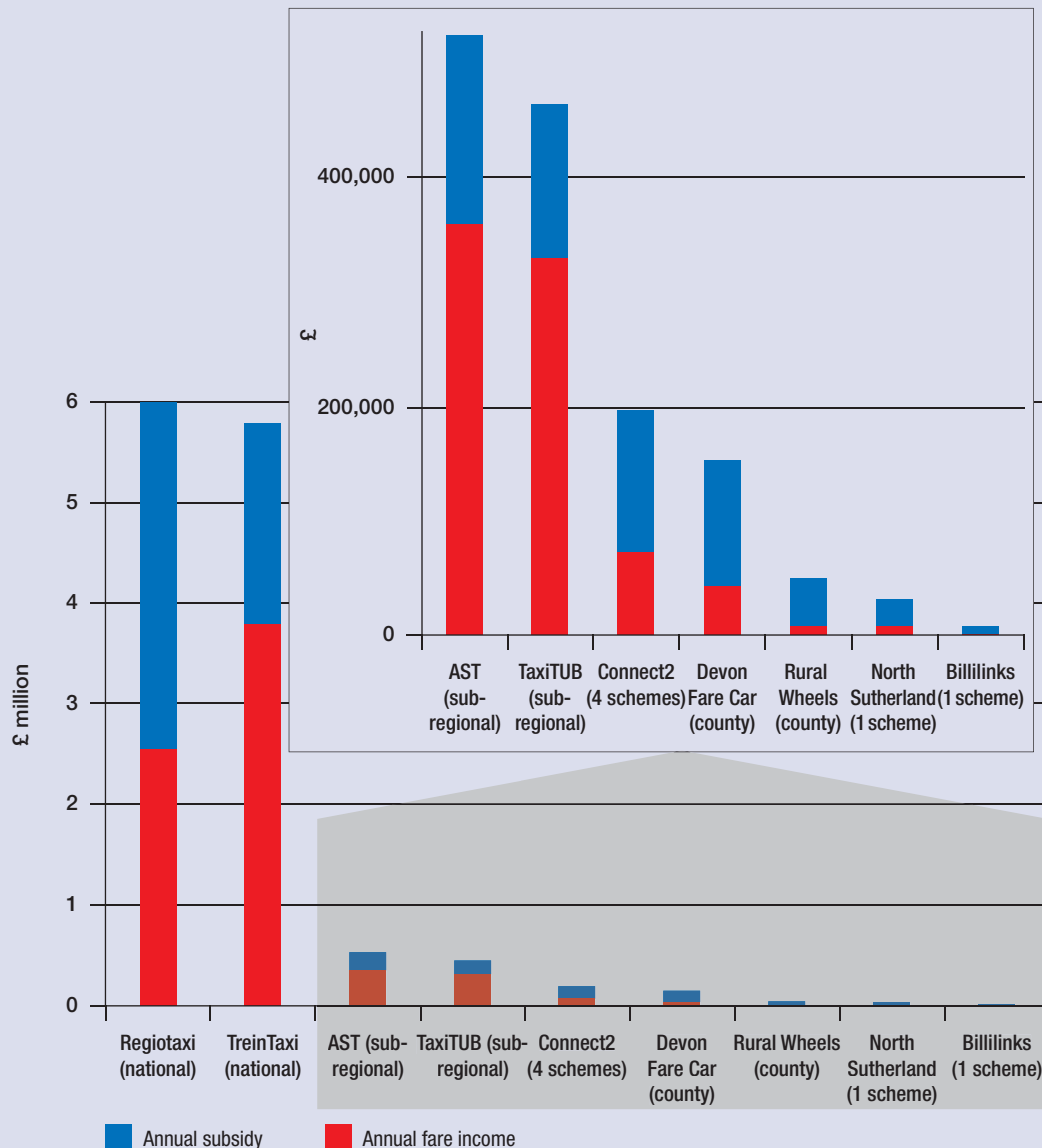
Figure 5.1
Scale of operation: number of passenger trips per annum, by geographical scale of operation



European schemes typically require a lower subsidy per passenger

5.11 In general, the bigger scale of operation of the mainland European schemes tends to be associated with lower subsidy requirement, as shown in Figures 5.2 and 5.3. Subsidies are typically under 40% of gross scheme costs in the European case studies, except for RegioTaxi, where subsidy is just under 60%. By contrast, the larger UK schemes have subsidy levels running at 60–80% of gross scheme costs, and the smaller UK schemes have almost all of their gross cost met through subsidy.

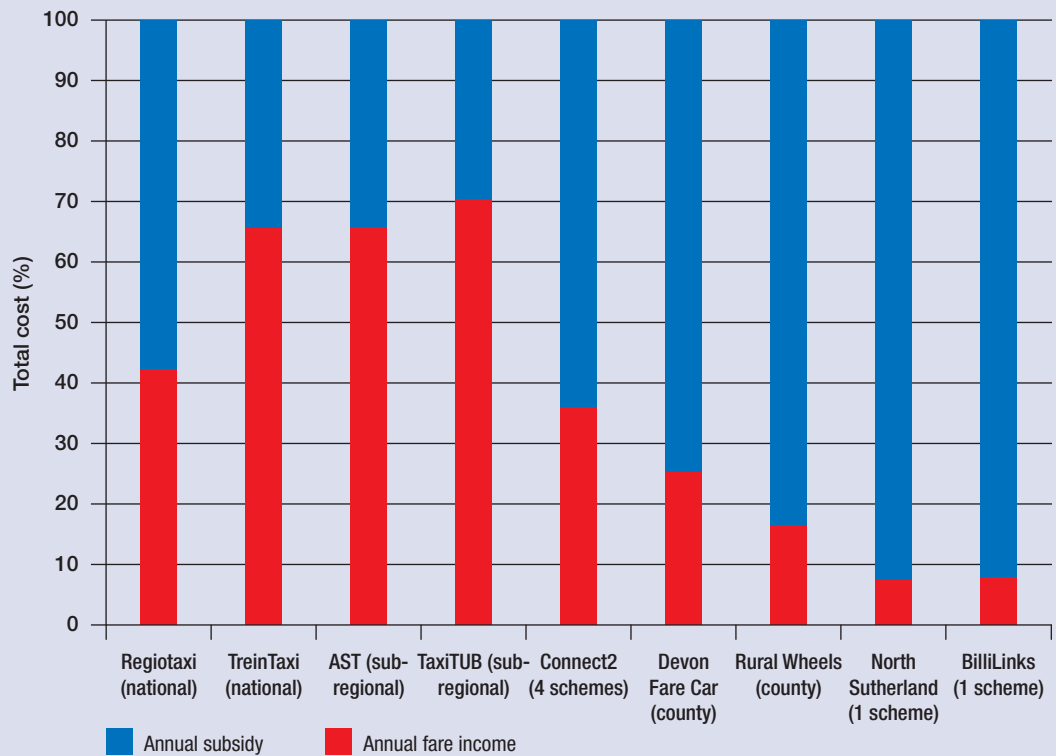
Figure 5.2
Contribution of fare income and subsidy to total cost:
schemes ranked by gross cost^{1,2}



1 Regiotaxi plotted at mid-point of range of annual fare and subsidy figures.

2 Insufficient data for PubliCar.

Figure 5.3

Proportion of total cost met by subsidy (schemes ranked by gross cost)^{1,2,3}

1 Regiotaxi plotted at mid-point of range of annual fare and subsidy figures.

2 Total cost is the sum of fare revenue plus subsidy.

3 Insufficient data for PubliCar.

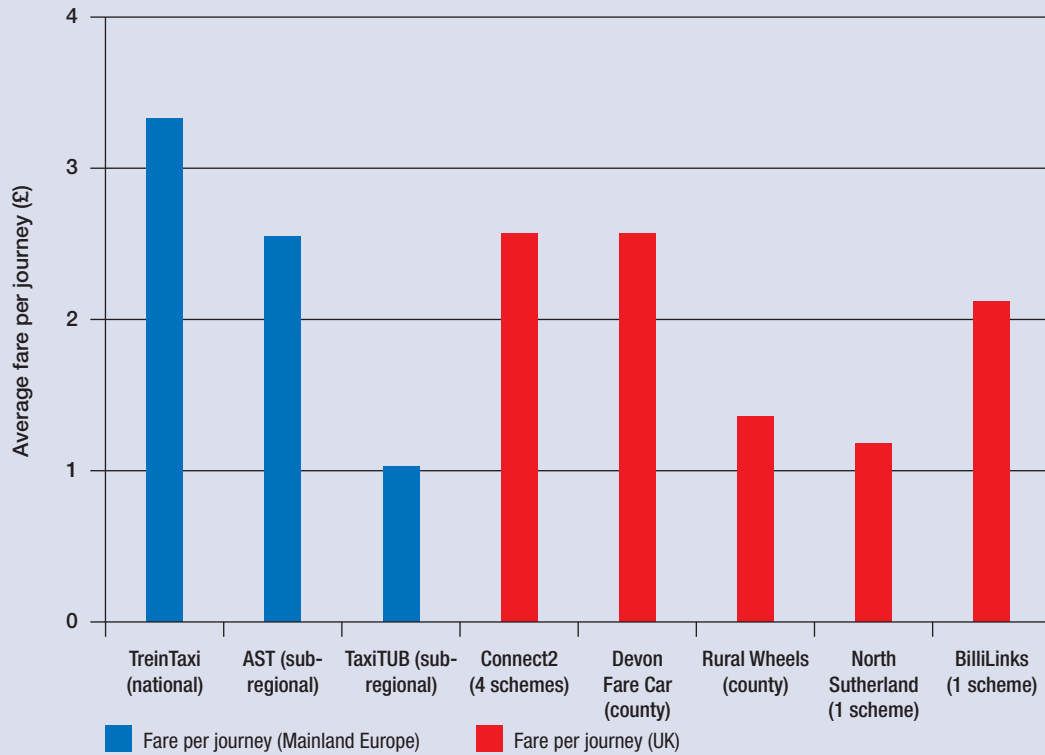
5.12 Several explanations for this difference were considered. One possible explanation might be that the European schemes charged significantly higher fares than the UK schemes. However, examination of case study data on fares shows that this is not the case. Figure 5.4 displays the average fare (at 2007 prices),⁷ ranked by gross costs, and shows that, whilst the largest scheme (TreinTaxi) does have the highest fare, the fares levels in the mainland Europe and UK schemes are broadly comparable.

5.13 Another possible explanation is that the financial data from the European schemes might not include the full range of overheads (eg costs associated with centralised call centres used for booking trips). However, we have no evidence that this is the case and, in any event, the magnitude of the difference seems too large for this to be a complete explanation.

⁷ Fares have been adjusted by European harmonised consumer index (HCIP) for transport costs to 2007 prices (Eurostat), with the exception of TreinTaxi, where the reported fares are for 2008.

Figure 5.4

Average fare per journey (schemes ranked by gross cost)



5.14 A third possibility – and the most likely, in our view – is that the European schemes have been established for longer than the UK schemes, have had more time to develop their patronage base (and therefore fare income) and have been able to find ways of exploiting economies of scale. There does seem to be some evidence to support this: in particular, it is interesting that, among the mainland European schemes, RegioTaxi, which is the most recent, also has the highest subsidy requirement. The UK schemes are all younger than their mainland Europe counterparts, having started in 2002 or later. It is possible that, as they grow, they will gain patronage and become more cost-efficient.

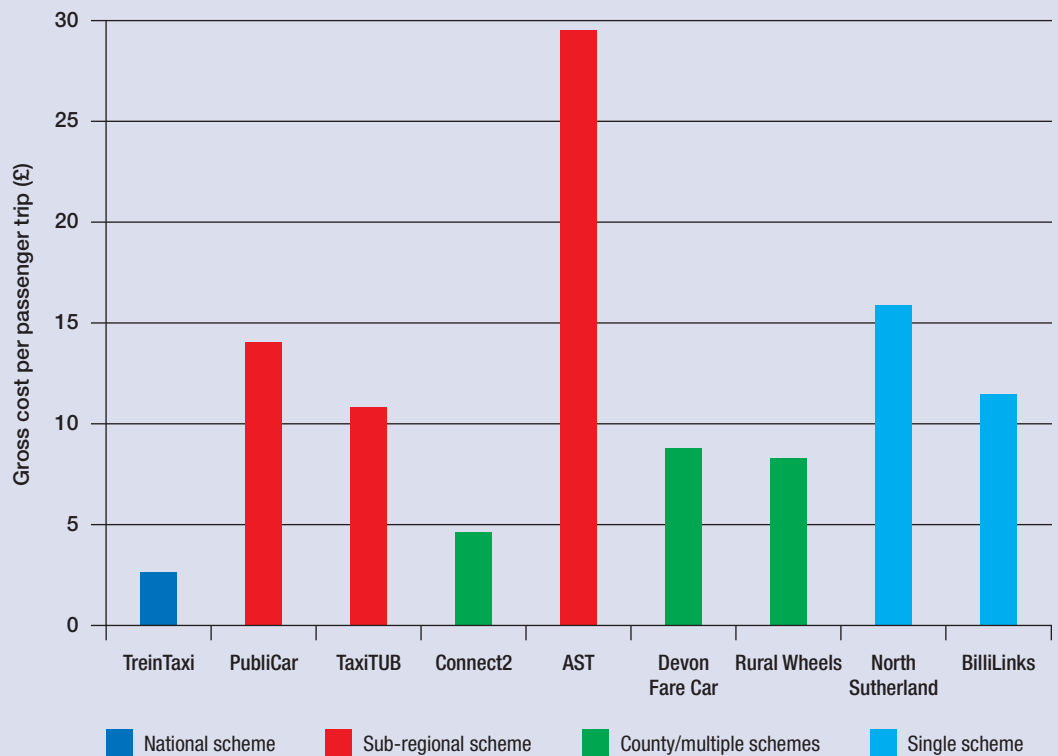
5.15 The mainland European schemes are likely to be achieving economies of scale in a variety of ways. In the Netherlands, we know that centralised call centres take bookings from many schemes in different areas of the country, and this is likely to deliver substantial savings. There are likely to be savings in other administrative overheads where one large operator runs flexible taxi-based services in several areas. There may also be savings in some costs associated with purchase and servicing of vehicles.

Costs and subsidies of European and larger UK taxi-based schemes are moderate

5.16 Figure 5.5 shows the gross cost per passenger trip for the case study schemes. Broadly, we can say that the gross cost per passenger trip is between £2 and £10 for the European and larger UK schemes, and somewhat over £10 for the small UK schemes. There is an exception to this, which is the AST scheme in Miesbach. The reason for the high costs in this scheme are not entirely clear, although one possibility is that trip lengths in this highly rural area are much longer.

Figure 5.5

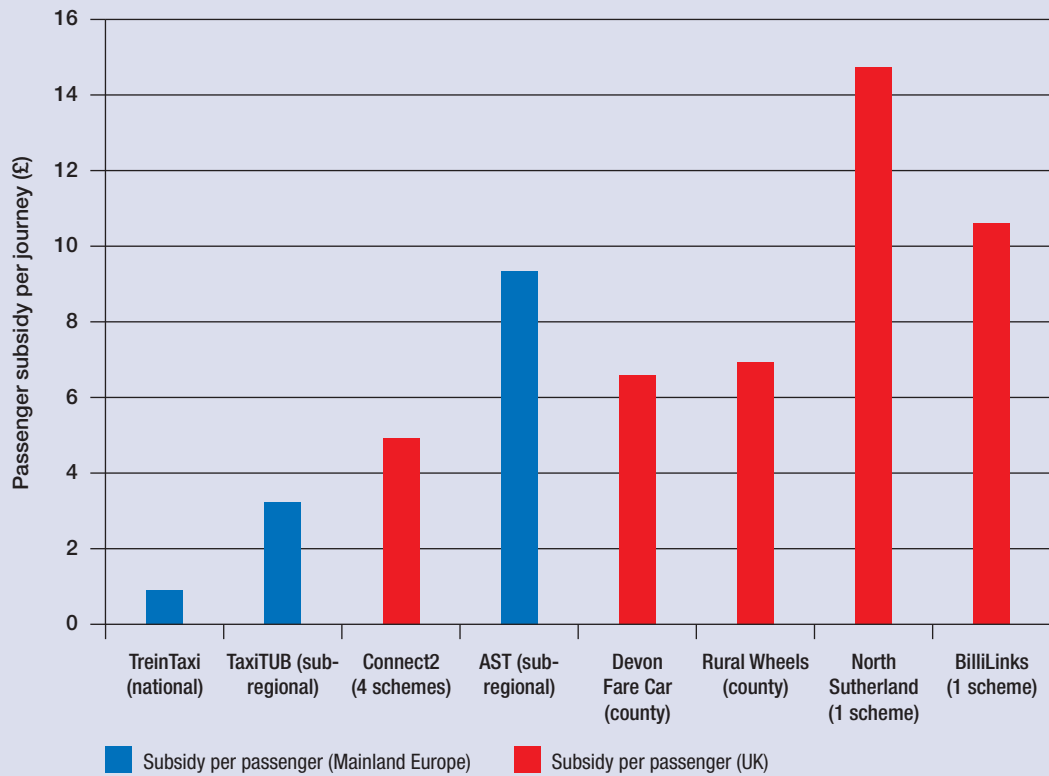
Cost per passenger trip (ranked by annual passenger trips)



Annual cost defined as the sum of the annual fare income and annual subsidy. Gross cost for PubliCar Vaud an estimate, using national level data for Publicar.

5.17 Figure 5.6 shows the subsidy per passenger journey. The broad picture is that subsidy ranges from roughly £1 to £7 per passenger journey for the European and larger UK schemes, again with anomalous data for AST Miesbach. The smaller UK schemes have higher subsidies, of over £10 per passenger journey.

Figure 5.6
Subsidy per passenger journey by scheme
(ranked by annual passenger trips)



Insufficient data for Regiotaxi and PubliCar.

- 5.18 TreinTaxi, the largest scheme for which we have data, has the lowest subsidy by a significant margin. This may be due in part to the nature of its market: rail passengers tend to arrive at and depart from train stations at similar times, which means that TreinTaxi load factors are likely to be better than load factors for the other case study schemes. The low subsidies per passenger for TreinTaxi may also be a function of its relatively high fare and the restrictions on journey length that can be undertaken.
- 5.19 In summary, the evidence points to scale, both in the number of passenger trips per annum and also spatial coverage, as being an important determinant of the cost-effectiveness of flexible taxi-based schemes. The larger UK schemes, managed at a county level, are beginning to reach a size where their costs and subsidy requirement per passenger are broadly comparable to our mainland Europe examples. By comparison, the small UK schemes are expensive. Encouragingly, the level of subsidy per passenger trip for the larger UK schemes is quite moderate, especially given the difficult territory they serve, with dispersed populations.

The wider economic benefits of taxi based services in rural areas

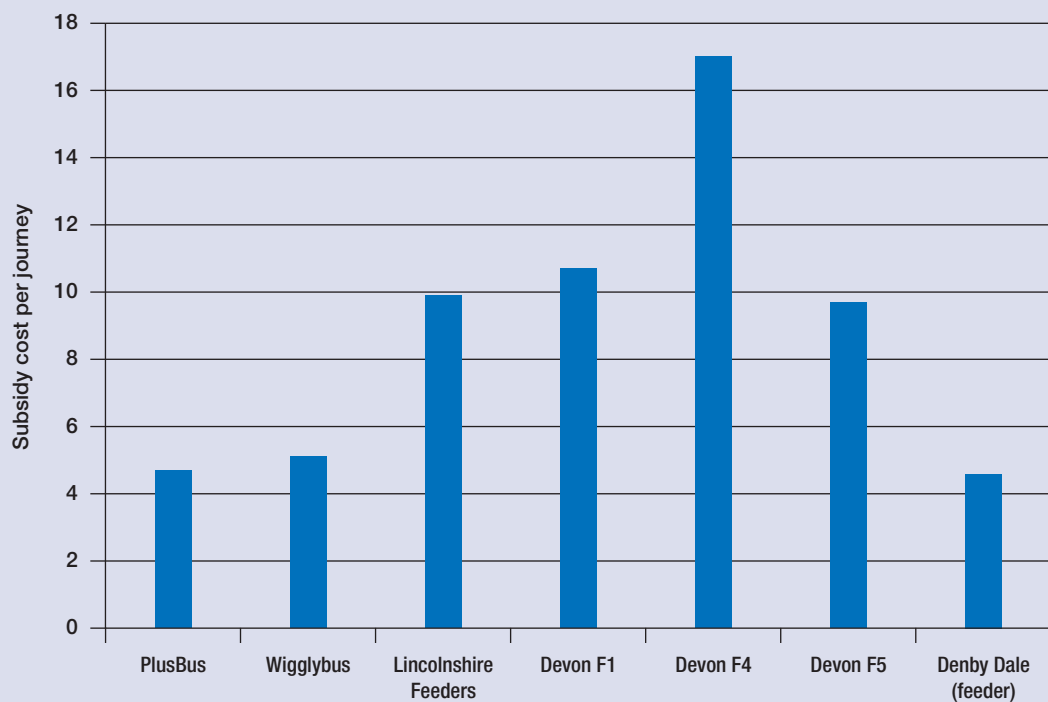
- 5.20 The implementation of TaxiPlus services as part of the public transport mix in rural areas can provide a range of user benefits. These include better access to employment, shops and leisure facilities and a reduction in social exclusion.
- 5.21 There are also a range of non-user benefits. These include the option value of having a service available if it were needed in the future (for example, if a person became unable to drive), and the benefit of knowing that a service is available for other family members or certain groups in society (Institute for Transport Studies, 2006).
- 5.22 Additional benefits of the greater access which would be afforded to rural residents through a better public transport service include the environmental benefits (eg less noise, lower carbon emissions) if some trips transfer from the private car.
- 5.23 It has not been possible to quantify these wider economic benefits in this study, and existing appraisal processes do not provide guidance on how such benefits can be calculated. We believe that further work to assess the wider benefits of schemes of this type is needed. We note the current revision of the Government's appraisal frameworks for transport schemes (NATA) does not include consideration of these benefits, and suggest that further work to remedy this omission would be worthwhile.
- 5.24 The use of taxi-based services can provide environmental benefits compared to conventional bus services, both as a result of using smaller vehicles and because a journey will only be made if a passenger requests it, reducing empty running. In larger schemes, passengers have been attracted to use services for which they had previously used a private car: to the extent that the taxi-based service may have higher passenger loadings than the equivalent car journey, this gives rise to environmental benefits. In low-income households, a mode switch that lessens or removes the need to own a private car can allow income to be better utilised.
- 5.25 In the UK in particular, the provision of taxi-based services as part of the public transport mix benefits rural taxi operators, who have access to additional income between what is regarded as their core operation of transporting children to and from school. In the larger mainland European schemes, it is usually the case that the operation of the scheme itself provides the taxi operator with a viable business that is not restricted to slack periods.

Cost comparisons: flexible taxi services and conventional bus services

5.26 This study was prompted by the finding from our 2002 research (LEK Consulting, 2002). LEK's work suggested that, in deep rural areas, standard and experimental bus services required subsidies that were higher than the equivalent cost of providing taxis. LEK looked at seven deep-rural bus schemes, most of which had some element of demand-responsiveness, and found a range in subsidy per passenger trip of £4.60 – £17.00. It then compared the cost per passenger for two of the bus services, Wigglybus and Plusbus, with the cost of providing an equivalent service by taxi, and suggested that it would be possible to achieve savings of the order of 27% in each case.⁸

Figure 5.7

Subsidy cost/total per journey for deep rural schemes



5.27 It is interesting to note that the range of subsidies per passenger of the seven deep-rural bus schemes examined by LEK (£4.60 – £17) is somewhat higher than the range of typical subsidies of larger taxi-based schemes in the current study. Whilst not definitive, as both the current research and the LEK study involved limited samples, this does seem to bear out LEK's conclusion that flexible taxi-based schemes might be more cost-effective than bus services in deep rural areas.

⁸ For Wigglybus, the annual cost was £297k and the cost of providing a taxi for current Wigglybus passengers was calculated as £213k. For Plusbus, the annual cost was £59k and the cost of providing a taxi for current passengers was calculated as £43.1k. In each case, taxi load factors were assumed to be 1.4 and annual administrative costs for a taxi-based scheme were put at £5,000. Taxi fares were based on average figures in the relevant geographical areas, which were £1.30 per mile for Wigglybus and £1.80 per mile for Plusbus.

- 5.28 Within the current study, we asked case study interviewees for three of the UK case studies whether they could estimate what would be the equivalent cost of providing a conventional bus service giving an equivalent level of accessibility (although not on-demand) as the existing flexible taxi-based scheme. Table 5.1 indicates that, for the Devon and West Sussex schemes, the cost of providing a comparable conventional bus service would be considerably higher than the flexible taxi scheme. In North Sutherland, the cost of providing a taxi-based service is greater than the estimated cost of a conventional bus service, but only marginally so.

Table 5.1

Cost of providing taxi service schemes compared to cost of providing conventional bus services

Scheme	Overall cost of providing the case study taxi service per annum	Overall cost of providing a 'conventional' bus service in the same/comparable area
Devon Fare Car	Between £672 and £30,450 ¹	£80,000
BilliLinks – West Sussex	£4,000	£143,000
North Sutherland	£28,405	£24,662

¹ Indicates the range of costs for providing individual Fare Car services. This provides a more appropriate comparison than comparing the overall Fare Care network against conventional bus services, as the scale of operation of the overall network is very different from that of an individual bus service.

- 5.29 While it seems intuitively plausible that flexible taxi-based services in deep rural areas with dispersed populations will be more cost-effective than conventional buses serving the same areas, this may not be a sufficient basis for a local authority to take the decision to fund them. Rural local authorities will commonly use some form of benchmark of what constitutes an acceptable bus subsidy per passenger when making decisions about which public transport services to support. In areas with dispersed populations and long distances between settlements, it is possible that support for a flexible taxi-based service would look like poor value compared to support for a conventional bus serving more people in a somewhat more populous part of the county.
- 5.30 With this in mind, we were interested in the 'benchmarks' used by the local authorities in six rural areas (two of which were included in our case studies).
- In Cumbria, the County Council is introducing Rural Wheels services in areas with small settlements where the provision of 'conventional' services would require a prohibitively high level of financial support. Officers at Cumbria County Council regard anything over £10 per head as a high level of subsidy for 'conventional' bus-based public transport services.

- In Devon, the County Council is currently reviewing the acceptable bus subsidy per passenger, and the proposed levels are £3.40 per passenger journey for a standard bus; £4.40 for a once a week service; and £5.40 for the last remaining link to a rural area.
- In East Sussex, the average level of subsidy per passenger journey for supported services is about £3.50.
- In Durham, the average level of subsidy for supported bus services is £1.50 per passenger, although a few services have support levels going into 'middle single figures'.
- In Midlothian, subsidies range from around 40 pence per passenger trip (for a service that is close to commercial viability) to just under £3 per passenger trip.
- In Lancashire, although subsidy per passenger is not currently used as an acceptable indicator of whether a service should be funded, a figure of £2 per passenger trip was used in this way in the past.

5.31 The figures quoted above are not treated as absolute determinants of whether a service should be supported by the local authorities concerned, and other factors, such as social need, also figure prominently in local decision-making. However, they do provide a helpful indication that the upper limit of subsidy per passenger for conventional bus services is quite commonly in the range of about £1.50–£10.

5.32 Against these figures, the typical subsidies per passenger of £1–£7 for the mainland European and larger UK flexible taxi schemes appear to offer comparable value, such that large-scale TaxiPlus services in rural areas with dispersed populations might seem a sensible use of public money alongside conventional bus services in more populous areas.

Chapter 6: Why don't we have more TaxiPlus services here?

Perceived barriers

- 6.1 In terms of regulatory structure, there is real opportunity to provide for a greater take-up of TaxiPlus schemes within rural areas. However, while the legislative framework does offer flexibility, a key obstacle is the perception and attitude of local authorities and the taxi trade.
- 6.2 There are many reasons for this, including:
- lack of awareness or understanding of the opportunities provided by current legislation;
 - unwillingness of local authorities to take wide-scale advantage of the not-for-profit sector operating under s19 or s22 permits for bus-based services;
 - the compliance costs of tendering for schemes and registering a service for taxi operators in particular;
 - taxi operators function in a cash-based environment that may not lend itself to integrating with public transport provision;
 - the reporting requirements for reimbursement of subsidies;
 - the perceived limited level of trade that may dissuade operators from becoming involved;
 - a perception by operators that shared taxi services might be less profitable than the current system; and
 - concern about engaging in anti-competitive activities.

Taxi licensing

- 6.3 Evidence gathered throughout the course of our analysis would suggest that licensing at district level militates against development of large firms/enterprises with the capacity to run sizable operations of the type seen elsewhere in mainland Europe:
- the law on 'out of area' operation by taxis and PHVs is complex and controversial;
 - district licensing may prohibit growth of large-scale taxi operations, as a large company would need to meet the varying requirements of every district it wished to cover;
 - vesting regulatory authority at district level may cause a lack of connectivity to transport policy at the county/regional level; and
 - lack of expertise in transport matters relating to the licensing of taxis at the district level.

- 6.4 It should be noted that the Netherlands taxi operator licensing system was both centralised and deregulated (thus removing barriers to entry in the industry) in 2000, and this appears to have paved the way for the introduction of the RegioTaxi network. Once licensed, taxi firms can now operate anywhere within the Netherlands.

Funding

- 6.5 Our analysis found that current Government funding arrangements for public transport create an uneven playing field. Bus operators are eligible for the BSOG and also receive substantial public money through the concessionary fares entitlement, local authority secured services and other forms of public subsidy. Taxi operators on the other hand generally operate as purely commercial endeavours and therefore do not receive any government subsidy. Although difficult, it is important to ensure that the legislative framework does not distort the economics between the different forms of provision in the market. If, as CfIT has recommended elsewhere, BSOG is reformed to an ‘incentive per passenger’ payment,⁹ the Government might wish to consider extending it to cover all passenger trips on services registered with the Traffic Commissioner as a public transport service, whether operated by a bus or taxi.
- 6.6 Another possible distortion to the market could be the national concessionary fares entitlement that was introduced in April 2008. This scheme provides free off-peak local bus travel for older and eligible disabled people anywhere in England. The full effects of this on local authority finances, operator economics and overall patronage may not be fully known for several financial cycles, though it is possible that the design of the national entitlement acts as a barrier to more efficient local transport provision in rural areas by maintaining the status quo, rather than looking at more innovative solutions. In particular, our evidence suggests:
- having concessionary travel linked to a particular mode, rather than travel, means that bus pass-holders often prefer an infrequent bus service that is free to a more flexible and frequent alternative that they may have to contribute to;
 - a presumption by local authorities that substituting conventional bus services with alternative options might reduce their funding for concessionary fares in the future;
 - inclusion in the statutory entitlement has potentially profound implications for the economics and level of administration of these services and may actually discourage their rollout because of reimbursement implications both for operators and for the local authorities.
- 6.7 CfIT therefore believes the effects of the concessionary fare national entitlement to the economics of public transport operation need to be investigated further, as this may distort efficient local decision-making and discourage change. As TaxiPlus schemes generate a critical mass, concessionary fares will become more of an issue. We believe more evidence will be necessary to resolve this position.

⁹ Incentive per passenger (IPP) is a payment to bus operators based upon passengers carried. This differs from BSOG, which is a grant paid on the basis of fuel consumed.

- 6.8 We finally note the status of VAT as a potential issue. The VAT rating is currently zero for vehicles designed to carry ten passengers or more, although there are specific exceptions in relation to vehicles for disabled people and Post Office vehicles.
- Smaller vehicles (eg taxi, PHVs, and taxibuses) need to charge VAT. However, this may affect fare levels, and this needs to be allowed for in any comparisons with conventional bus operation.
 - There may be small taxi and PHV operators who are not registered for VAT at all because their turnover is below the mandatory threshold. This will also affect operating costs, as, unlike VAT registered operations, they will be unable to reclaim the VAT they pay out on the vehicle, fuel and other non-labour costs, but would need to charge VAT on their fares.
- 6.9 More evidence is needed on the impact of VAT on the operating costs of TaxiPlus schemes. We are particularly concerned that the obligation to charge VAT on fares discriminates against TaxiPlus services using small vehicles.

Chapter 7: Why do we think more TaxiPlus services are a good idea?

- 7.1 Mainland European schemes have a different ethos from those in operation in the UK. In a policy environment that promotes public transport use, taxi-based schemes for rural areas are provided as part of the overall public transport mix within an integrated network. This allows all passengers, including rural travellers, to plan and book door-to-door journeys, with flexible shared taxis providing direct access to local facilities and connections to the wider public transport network. The long hours of operation and same-day advance booking arrangements make it easy for passengers to use the services.
- 7.2 In the UK, taxi-based services have historically focused on providing access to local shops and health care for rural residents who do not have a car. There is an unspoken assumption that such services will act as a 'safety net' for residents who lack any other choice. The way in which the services are conceived by using the periods of low demand for existing taxi operators means that hours of operation are limited, often ruling out trips to work or evening leisure trips. The schemes require longer lead times for booking than in mainland Europe, often more than a day. UK customers are predominantly older people accessing local facilities, and these passengers do receive considerable benefit from the services. Since integration with the wider public transport network is limited or absent, relatively few taxi trips are the first leg of a longer public transport journey.
- 7.3 We think that the mainland Europe model for TaxiPlus services offers greater social and environmental benefits than the current UK model. These include:
- increased mobility, and greater social inclusion, for all people who currently lack access to a car;
 - less 'enforced' car ownership amongst low-income rural dwellers who are obliged to run a car but cannot really afford to do so¹⁰ (eg as car ownership consumes more of their disposable income);¹¹
 - the opportunity for existing car users to switch to public transport for some trips, reducing environmental impacts of car use; and
 - reduced carbon emissions from the use of better utilised small vehicles rather than conventional buses on some routes and at some times.

10 The Commission for Rural Communities points out in their *State of the Countryside 2007* (CRC, 2007) report that 'in the lowest income group [quintile] between 72% and 88% of households in hamlets and villages own a car, compared to between 46% and 53% in towns and urban areas. This strongly suggests that a lack of accessibility is making low income households in rural communities run a car when they might not if they lived in areas with better transport services.'

11 Rural households in the lower income bands spend more than their urban counterparts on transport (10.0% compared to 8.9%) (CRC,2008b).

- 7.4 The potential social and environmental benefits that could be achieved would be increased if taxi-based services could be integrated into a national journey planning system, such as Transport Direct. This would enhance the current door-to-door mixed mode journey planning options available. However, there are technical issues involved in fixing the interchange points that would be used. It would also require setting the rules regarding when taxi services are shown (eg rather than/in addition to local bus services), and how available taxi services are identified, validated and regulated.¹²
- 7.5 Significant economies of scale would appear to be available in the provision of taxi-based services in rural areas. Thus, bigger schemes with greater spatial coverage seem able to meet a bigger proportion of their total costs via fare income, and to require lower subsidies per passenger trip. A large-scale rural taxi-based scheme therefore offers the opportunity to:
- provide more for the same outlay, thus increasing value for money and improving the quality of life for rural inhabitants;
 - send a strong message about the Government's commitment to an integrated transport system that works well, as a pre-requisite to encourage modal shift; and
 - ensure a reasonable level of mobility for all, meeting TaSTS Goal 5.
- 7.6 The following chapter sets out our recommendations for improving the role that TaxiPlus could have, alongside conventional public transport, in meeting the transport needs of rural dwellers.

¹² Taxi services, such as Traintaxi, which provides information about taxi and private hire firms serving all the train, tram, metro and underground stations in Britain, are already shown on travel planners, although this is as a reference set from railway and coach/bus stations and from airports, rather than being fully integrated in the journey plan.

Chapter 8: Conclusions and recommendations

- 8.1 In this report, we have sought to examine the ability and availability of taxi services to meet the transport demands of rural dwellers. Our analysis has included in-depth examination of a range of taxi-based services both within the UK and within mainland Europe.
- 8.2 We have coined the phrase TaxiPlus to describe a large-scale taxi-based operation, involving a fleet of small vehicles, which operates a bookable, shared, demand-responsive public transport service.
- 8.3 In earlier chapters, we have identified that in mainland Europe there is a different ethos for operating taxi-based schemes. For instance, taxi-based schemes in rural areas are part of the public transport mix and provide opportunities to plan door-to-door journeys.
- 8.4 We have found that the larger scale of rural taxi-based services in mainland Europe and their integration into the public transport network offer several benefits, including more varied vehicle fleets, simple call-out and booking services, and door-to-door journey provision. Equally, the larger scale provides cost efficiencies, enabling the provision of better services for any given level of public investment.
- 8.5 While our analysis has found there are no insurmountable regulatory or legislative obstacles to the development of TaxiPlus schemes in the UK, the legislative framework is complicated (see Table 2.1).
- 8.6 Our research highlights that differences in subsidy eligibility distort the economics of TaxiPlus schemes relative to bus (including flexible bus) operation. This is a particular issue in the case of BSOG payments. Also, the requirement to offer concessionary fares on some but not all services produces confusion for passengers and uncertainty for local authorities and public transport operators.
- 8.7 We note that significant amounts of public subsidy are provided to stimulate innovation and maintain public transport services in rural areas, though this has not generally been applied to the role of taxis. In the case of conventional bus services, successful services have been pump-primed through Rural Bus Challenge funding and the Kickstart programme. This suggests innovation can be stimulated by targeted central Government funding.
- 8.8 We note and support the Government's thinking within TaSTS and the Local Transport Bill. We believe they provide a platform upon which taxi-based services, such as TaxiPlus, can be developed.
- 8.9 The Government will shortly consider investment options as part of the TaSTS implementation process. We believe there is a strong case for Government now to consider the role of TaxiPlus and other non-conventional public transport schemes in realising the Government goal of accessibility.

Recommendation 1: Implement a large-scale demonstration pilot

- 8.10 Our **first recommendation** is that central government should consider the funding of a large-scale TaxiPlus demonstration pilot. The scheme should be at the level of an entire county. We consider that the demonstration pilot would be easier to implement in either one of the planned unitary counties (Cornwall, Durham, Northumberland, Wiltshire and Shropshire), or in a county where district councils imposed no quantity restrictions on taxi licensing.
- 8.11 The TaxiPlus demonstration pilot should adopt a partnership approach between the local authority and all public transport and taxi operators; be across at least a seven-year cycle to allow patronage growth to occur; and utilise a centrally operated call centre to take passenger bookings. It should aim to develop shared taxi services to a scale comparable to that now seen in sub-regional schemes in the Netherlands and Switzerland – eg about 100,000 passenger trips per year.
- 8.12 The demonstration pilot should be used to evaluate:
- the circumstances in which taxi-based provision in rural areas is likely to prove a cost-effective approach to service provision in the UK, particularly in relation to different rural areas;
 - the potential to integrate TaxiPlus services into the wider public transport network;
 - the gross cost of delivering a service of comparable quality to those in mainland Europe, in terms of hours of operation and pre-booking requirements;
 - the subsidy costs against network benefits, social inclusion benefits, mode shift benefits, service improvements (frequency/quality) resulting from the change and greater use of the wider public transport network;
 - the cost efficiencies provided by implementing brokerage of vehicles to bring together related transport funding streams (from social services, health and education, for example); and
 - the likely costs and benefits of extending a demonstration nationally.

We believe, over the longer term, consideration should be given to extending TaxiPlus schemes nationally, to all rural areas, following the experience of the demonstration pilot and with an eye to developments in mainland Europe. There may also be the potential to extend such schemes to some urban areas that are difficult to serve by conventional public transport.

- 8.13 Further information on the demonstration pilot proposal is included in Annex 2.

Recommendation 2: License taxi operators at a higher geographical level than currently

- 8.14 Our **second recommendation** is that central and local Government should consider the licensing of taxi operators at a higher geographical level (at least county or regional) than at present. We believe this will enable the development of large firms or enterprises with the capacity to run sizable operations of the type seen in mainland Europe. We also believe this will provide a strong signal to taxi operators of the opportunities for involvement in providing public transport services.

Recommendation 3: Encourage greater take-up of existing opportunities

- 8.15 Our **third recommendation** is that central and local Government should work more closely with taxi operators to develop new relationships and exploit existing opportunities.
- 8.16 Our research shows the existing regulatory regime does provide the flexibility for rural shared taxi services to be operated, but barriers to take-up could be reduced by more education of the key stakeholders. We note the Department for Transport's best practice guide (Brake et al., 2006) and the more recent *Taxi Toolkit* (North West Centre of Excellence and Merseytravel, 2007) and feel these publications are a step in the right direction. We believe greater awareness of what is currently possible may encourage wider consideration of the potential role that flexible taxi services could offer to the public transport mix.

Recommendation 4: Promote a level playing field

- 8.17 Our **fourth recommendation** is that central Government should review how public subsidy going into rural public transport provision could be best applied to ensure a level playing field among potential public transport operators, including shared taxis.
- 8.18 Our research has shown that differences in eligibility for BSOG distort the economics of TaxiPlus schemes relative to bus (including flexible bus) operation. We note DfT is currently consulting on options for change to the bus subsidy arrangements in England and in particular on reform options for BSOG. We have previously recommended that subsidy should focus upon passengers carried rather than mileage travelled. An 'incentive per passenger' payment might be made to individual operators, or (more simply) might be made to agencies co-ordinating the provision of shared taxi services.

Areas for further analysis

8.19 Our research also notes the following issues that require further examination:

- The effect of the national concessionary fare entitlement to the economics of public transport operation. The concessionary fare entitlement may distort efficient local decision-making and discourage change.
- A better understanding of the wider economic benefits of TaxiPlus services in rural areas is needed. The current lack of quantification hampers the development of a robust business case for investing in these services.
- The impact of VAT on the operating costs of TaxiPlus schemes. We are particularly concerned that the obligation to charge VAT on fares discriminates against flexible services in rural areas. Although larger vehicles (+10 people) are exempt, they may not offer the benefits of a flexible door-to-door bookable service.

Annex 1: Summary of case study scheme information

The schemes examined within the Mott MacDonald study (Mott MacDonald, 2008) included five UK-based and five mainland Europe shared taxi schemes. Further detail on each scheme is provided below, and the individual reports on each scheme can be located on the CfIT website. Table A1.1 provides a summary of the economic information gathered on each case study site.

Mainland European schemes

- **TreinTaxi, Netherlands** – a shared taxi scheme provided by Dutch State Railways that provides travel to or from 38 stations across the Netherlands. Treintaxis serve an area of approximately 8 km around each station. This includes both the town centre and surrounding areas that range from urban to rural.
- **PubliCar, Switzerland** – a fully flexible pre-booked demand-responsive minibus service, which also provides links with traditional transport services. PubliCar services are available in 32 regions of Switzerland. The schemes serve rural areas and small towns with between 5,000 and 10,000 inhabitants. The PubliCar scheme in Vaud was the focus of this case study.
- **RegioTaxi, Netherlands** – a shared taxi service that operates in rural areas throughout the Netherlands. Contracts for provision of the service are let by provincial government and delivered by commercial operators. The Regiotaxi scheme in Vechtdal was the focus of this case study.
- **TaxiTub, France** – an on-demand taxi-based public transport scheme serving defined corridors and stops, operating in the Nord-Pas-de-Calais region of north-east France. Its main purpose is to feed into mainstream bus service stops.
- **Anruf Sammel Taxis (AST)** – a scheme operating across a number of areas of Germany, providing a range of fixed, semi-fixed, and flexible supplementary public transport services for urban fringe and rural communities. The regionally co-ordinated scheme for Miesbach was the focus of this case study.

UK schemes

- **North Sutherland Taxis** – an open-access, heavily discounted taxi service providing key transport links in a sparsely populated area of the Scottish Highlands with limited public transport provision.
- **Rural Wheels, Cumbria** – a taxi management network providing door-to-door demand-responsive transport within selected parts of rural Cumbria, using smartcard (as opposed to cash) payment technology.

- Devon Fare Car – a network of timetabled shared taxi services for communities in 11 areas of Devon. Each service is provided by a local taxi operator under contract to Devon County Council.
- Connect2 Wiltshire – the new name for all bookable public transport covering bus, taxi and community transport in the county, co-ordinated and marketed by Wiltshire County Council.
- BilliLinks, West Sussex – a local shared taxi service providing demand-responsive transport through two routed services for communities around the town of Billingham. The service is provided by West Sussex County Council and Horsham District Council through the Billingham Community Partnership.

In addition, a less detailed examination was made of:

- Kielder TaxiBus (Northumberland) – a community based shared minibus service that operates part of its service as a taxi.
- Dengie Village Link (Essex) – a shared minibus and taxi network in Essex. The service has now been withdrawn and replaced by a conventional bus service.
- Stagecoach Yellow TaxiBus (Fife, Scotland) – a commercially operated shared taxibus service that provided express services to Edinburgh. The service has now been withdrawn and replaced with revised conventional bus services.
- Neath and Port Talbot and Ceredigion Taxi Voucher scheme (Wales) – this scheme is part of the Welsh Assembly Government's Transport Demonstration Pilots, and provides vouchers for use on local taxis for eligible members of the public.

Table A1.1 summarises the economic information collected on each of the case study sites.

Table A1.1

Summary of economic information for case study schemes

Scheme ¹	Number of trips per annum	Annual fare income (£)	Annual subsidy (£) ²	Annual costs (£) ³	Net cost ratio ⁴	Costs per passenger journey (net) (£) ⁵	Cost per passenger journey (gross) (£) ⁶	Percentage of cost to manager ⁷
Rural Wheels	5,477	7,455	37,970	45,606	6.12	6.93	8.32	83
Devon Fare Car	17,332	38,337	114,061	152,398	3.97	6.58	8.79	76
Connect2 Wiltshire ⁸	25,234	69,912	124,508	194,420	2.79	4.93	7.70	65
Billilinks ⁹	348	311	3,689	4,000	12.86		66.65	92
North Sutherland	1,785	2,112	26,293	28,405	13.45	14.72	15.91	93
Publicar ¹⁰	112,506	Not known	Not known	Not known	Not known		9.36–18.72	Not known
TaxiTub	41,982	319,000	135,000	454,000	1.42	3.00	10.81	30
Treintaxi ¹¹	2.2m	3.8m	2m	5.5m	1.44	0.90	2.50	40
Regiotaxi ¹²	Not known	2.7–2.4m	3.3–3.6m	6.04m	n/a	Not known	Not known	55–60 ¹³
AST ¹⁴	17,350	350,000	162,102	532,621	1.52	9.34	30.69	30

1 It is important to note that financial information for each service is provided at different scales of operation. For example, financial information for the TreinTaxi service was only available at the national level, whilst information for Billilinks is provided for a scheme serving a small number of villages close to a market town. In examining the presented information, it is important to acknowledge the impact that the level at which data is presented has on one's ability to compare the financial performance of two or more services.

2 It has not been possible to gather comparative data for each scheme; scheme managers record information in different ways and may or may not include all forms of subsidy, recompense for concessionary fare use and sponsorship, for example. The figure given is the most appropriate information available, within the constraints posed by the data provided.

3 'Costs' refer to all forms of expenditure made by a scheme. Each of the case study schemes was asked to provide information on their cost of operation. For some schemes they were able to disaggregate the cost of operating vehicles from other associated costs such as call centres; other schemes were unable to do this. Therefore, the term 'costs' as used in this table refers to all costs associated with a scheme, including the cost of supporting administrative elements.

4 Ratio of cost to fare income.

5 Annual subsidy divided by number of trips.

- 6 Total scheme cost divided by number of trips.
- 7 The percentage of the overall cost of the scheme met by the scheme manager.
- 8 Connect2 is the brand name applied to all demand-responsive services in Wiltshire. For the purposes of this research, four schemes within the Connect2 network were examined and these costs cover these four schemes as a whole. Further information is provided in the case study report for Connect2.
- 9 The information gathered for BilliLinks is of varying quality, reflecting the concerns highlighted in the case study report regarding the scheme's administrative processes. Information for this service should be treated with caution. Of note is the figure for cost per passenger journey; the scheme allows passengers to make their first trip free. However, there is no record as to the number of 'first' trips made, and therefore the actual relationship between overall operating costs and passenger income.
- 10 PubliCar were unable to provide any financial information for their service during the case study research process, although patronage figures for PubliCar Vaud were collected. However, follow-up discussions with the scheme operator allowed the study team to elicit the above broad figures for the likely cost per passenger journey on a national basis. No indication was given as to whether these figures are for gross or net costs.
- 11 The information provided for TrainTaxi comes from a number of different sources, and data are drawn from discussions and correspondence with a number of organisations and individuals.
- 12 It has not been possible to gather data on scheme use and scheme finance at a comparable level for RegioTaxi. Finance information has been provided by the national scheme co-ordinator, whereas patronage information on scheme use is only available for the individual scheme RegioTaxi KAN. It is not therefore possible to generate cost per passenger journey figures.
- 13 This figure for RegioTaxi is based on anecdotal views expressed by the scheme operator, rather than through examination of actual data, and in examining the results of the intermode research, which proposed a comparable figure for research conducted in 2003.
- 14 Selected information for the AST service has been estimated by the scheme operator in Miesbach, and these figures are only for that service. This accounts for the apparent shortfall in the scheme's ability to meet its costs and the discrepancy in the percentage of the cost of the scheme met by the scheme manager.

Annex 2: The Demonstration pilot proposition

As we have found, the legislative framework is flexible enough to accommodate a county-wide demonstration. However, current institutional arrangements (eg licensing, branding, and competition between markets) are complicated and discourage an innovative approach. We would encourage the demonstration pilot to promote an integrated system of governance, controlled by a single authority.

Based upon the evidence we have gathered, and to maximise the potential success of the pilot, the demonstration would require the following characteristics.

- New schemes take a significant period to generate patronage. The demonstration will require national funding that should be in place for a limited period, but at least seven years to enable patronage growth.
- We envisage that individual local authorities (or consortia) might be invited to come forward with proposals and business cases, and that the most promising and ambitious business case would be selected. This would be similar to the competitive approach adopted with initiatives such as Sustainable Travel Towns or Cycling Towns, and the Challenge fund. Funding might be front-end loaded, for example to meet the cost of establishing a booking centre.
- The demonstration would need to work under current legislation, as amended by the Local Transport Bill currently before Parliament. The local authority (county council) will need to take the lead in the education of bus, taxi and CT operators, with district councils and others, to ensure the regulatory framework does not become a barrier and to promote workable governance structures for the partnership.
- We envisage that the pilot should provide bookable shared taxi services to the general public *and* special services such as schools transport, transport to healthcare and special needs transport under the auspices of a single co-ordinating agency. This would enable the evaluation of possible cost efficiencies through integration of services that currently operate in separate 'silos'. In the short term, the pilot would facilitate vehicle brokerage to address capacity issues. In the longer term, it would create flexibility in vehicle provision and promote higher vehicle utilisation.
- Operation of the booking/brokerage centre might be by a social enterprise or a commercial operator, but in either case it would have clear contractual responsibilities to the commissioning local authority. The contract would be such as to encourage the booking centre to build patronage and deliver a high-quality, passenger-focused service in the demonstration area while maximising value for money. It should be such that the booking centre is encouraged to secure additional contracts to deliver services elsewhere, so as to ensure its long-term viability beyond the end of the demonstration pilot.

- The pilot will need to consider how the concessionary fares entitlement should be applied when passengers use a shared taxi as opposed to a conventional bus. One option would be that passengers who are eligible for concessionary fares would be offered a discounted fare (as opposed to free travel) when using a shared taxi. This would reflect fairly the fact that shared taxis provide a higher quality, door-to-door service as compared to the conventional bus.
- The pilot should aim to offer the high service quality seen in the best mainland Europe schemes, including: providing connections to the wider public transport network to enable onward travel; offering the ability to make bookings on the day of travel; and offering operating hours from early morning until late in the evening, seven days a week.
- The pilot must consider the special needs of disabled people (including issues of accessibility and concessionary fares entitlement). It will also be crucial that disabled people, along with other important passenger groups (eg elderly, youth, and people on low incomes), are consulted in the development of the concept to ensure appropriate matching of passenger need to service provision.
- The booking system must enable passengers to speak to a booking agent, as many potential passengers are elderly and may not be familiar with, or have access to, internet facilities.
- Passengers should be guaranteed a minimum level of service within which they would be expected to adjust their plans, perhaps by up to an hour earlier than desired, if this allows higher vehicle occupancy;
- There is strong emphasis in the mainland European schemes on links that enable journeys beyond the boundary of the scheme. The pilot will need to explore the ways in which services can be integrated into a journey planning service, such as Transport Direct, to facilitate longer journeys.
- Attention should be given to marketing the scheme to create a high level of public awareness, for example through brand development; display of the booking number on the 'flag' at all bus stops in the area; and development of strong publicity materials aimed at both residents and visitors.

Annex 3: About the Commission for Integrated Transport

The Commission for Integrated Transport (CfIT) is an independent advisory body, set up by Ministers in 1998. CfIT provides advice to Government on a wide range of transport policy issues and their interface with economics, the environment, social inclusion and best practice.

The Commission's remit is as follows:

- A) **Providing policy advice via evidence based reports** on:
- future policy options, so-called 'blue-sky thinking' on strategic issues;
 - policy issues spanning departmental boundaries (ie environments, social etc.);
 - domestic and international best practice in transport;
 - the impact of new technology on policy options;
 - specific issues as requested by the Department for Transport.
- B) **Refreshing the transport debate**, based on published reports and with a view to raising the overall level of the 'Transport Debate' and, where possible, to build consensus among stakeholders.

Report Working Group

Thanks go to the members of the Working Group for their time and expertise in guiding this analysis.

Lynn Sloman, (Chair), Transport for Quality of Life and CfIT Vice Chair
Helen Holland, Bristol City Council, and CfIT Commissioner
Paul Godier, CfIT Commissioner
Neil Scales, Merseytravel, and CfIT Commissioner
Harry Bush, Civil Aviation Authority, and CfIT Commissioner
Peter Blake, South Gloucester County Council
Nigel Dotchin, Department for Transport
Steven Salmon, Confederation of Passenger Transport
David Farmer, Department for Transport
Kylie Lovell, Department for Transport

CfIT would also like to thank the **Strategic Advisor** to the Working Group

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This report highlights the transport difficulties faced by rural dwellers and assesses the role that shared-taxi schemes – or what CfIT has called ‘TaxiPlus’ services – could have in meeting their needs. TaxiPlus schemes, which already operate in some rural areas of the UK and on a much larger scale in many parts of mainland Europe, are discussed in this report. Particularly successful schemes operate in the Netherlands and Switzerland, where sophisticated journey matching software is used to match people’s trips, and where significant economies of scale have been achieved. CfIT has concluded that we now need to trial a large-scale scheme in the UK to assess how TaxiPlus schemes could transform rural transport in the UK and address a worrying trend in rural social exclusion.

