

The impact assessments consider the impacts of the measures included in the Bus Services Bill. Measures covered in the Bill include: Open data & registration, ticketing co-operation, franchising and partnership improvements.

Impact Assessments

Bus Services Bill

Department for Transport

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Title: Making bus service registration digital by default and mandating the provision of fares and punctuality data. IA No: DfT00338 Lead department or agency: Department for Transport Other departments or agencies: DVSA Traffic Commissioners	Impact Assessment (IA)		
	Date: 30/10/2015		
	Stage: Final		
	Source of intervention: Domestic		
	Type of measure: Primary legislation		
Contact for enquiries: Busworkshops2015@dft.gsi.gov.uk			
Summary: Intervention and Options		RPC Opinion: GREEN	

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2014 prices)	In scope of One-In, Three-Out? Measure qualifies as
£478.0m	-£2.1m	£0.24m	Yes IN

What is the problem under consideration? Why is government intervention necessary?

Registration is a statutory process whereby details of bus services being introduced, varied or withdrawn are lodged with the Traffic Commissioners. These details are used in enforcement of bus service punctuality, one of the most important issues for passengers. The information provided through the existing registration process is very limited and not rich enough for modern journey planning and information systems. To generate journey planning information, some registration information needs to be input twice, risking errors and increasing work. Only 25% of bus registrations are currently submitted electronically. Government intervention is necessary to ensure that route, timetable, punctuality, fares data is made available and provided on an open access basis regardless of what operating model is in place (i.e. deregulated, franchising, enhanced partnership).

What are the policy objectives and the intended effects?

The intention is to make it easier for passengers to access information about their journey, including routes, fares and times. We want to facilitate the exchange of data needed to achieve this. We want to modernise the bus registration process to reflect modern needs and enable access by third parties for use in the development of apps. The Government's digital strategy aims to improve processes through the use of digital tools and makes interactions between business, the public and Government 'digital by default'. We want operators to make punctuality data available to local authorities to encourage them to improve punctuality or maintain an existing good standard, and to journey planners to provide real-time information.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0: Do nothing
 Option 1: Mandating the release of data - within this, there are different approaches to how data would be held (by DVSA - the Driver and Vehicle Services Agency - or in a central data repository populated by data released through local authorities and operators.)
 Option 2: Using financial incentives to encourage operators to provide data

Our preferred option is Option 1. The intention is to ensure that the primary legislation enables the future release of data. A mandatory scheme is necessary to ensure 100% release of data and that operators will provide it in a timely and accurate fashion. Voluntary take-up of existing data sharing and electronic registration schemes has been limited.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 05/2022					
Does implementation go beyond minimum EU requirements?				N/A	
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.		Micro Yes	< 20 Yes	Small Yes	Medium Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)				Traded: 0.00	Non-traded: 0.01

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: Andrew Jones Date: 8.2.16

Summary: Analysis & Evidence

Policy Option 1

Description: Mandating the release of data

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: 226.0	High: 1,418.8	Best Estimate: 478.0

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	14.09	0.89	19.4
High	14.12	1.54	24.3
Best Estimate	14.10	1.03	20.4

Description and scale of key monetised costs by 'main affected groups'

Bus operators: Familiarisation costs of adapting to new regulation (£0.02m), costs of fitting all buses with automatic vehicle location (£3.5m), staff costs of reporting fare and punctuality data (£4.9m) costs of increased fuel duty paid (£2.0m). **Government:** Costs of processing fares and punctuality data (£0.9m), costs of improving the IT system (£9.1m).

Other key non-monetised costs by 'main affected groups'

Government: No transitional costs for government have been monetised but these are expected to be low. **Bus operators:** It is possible that this policy would lead to passengers having better information about and therefore choosing lower fares but this has not been monetised as it is highly uncertain. The back office costs of providing data have not been calculated as it is assumed that bus operators will already have the systems in place to record data for internal purposes.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	32.42	245.4
High	0	191.13	1,443.1
Best Estimate	0	66.01	498.4

Description and scale of key monetised benefits by 'main affected groups'

Consumers: Benefits from increased convenience of travelling on buses due to better information (£487m). **Bus operators:** Benefits due to increased demand (£8.4m). **Society:** Net external benefits from increased bus use and reduced car use (including reduced congestion and air pollution) (£4.0m). **Government:** Dis-benefit due to loss of indirect tax revenue as a result of mode shift from cars to buses (-£0.7m).

Other key non-monetised benefits by 'main affected groups'

Government: Local authorities who use bus registrations to populate Traveline will no longer have to manually input the data to generate electronic format as bus operators will now do this. These benefits are expected to be small.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5%

- Assumed that in franchised areas local transport authorities would secure the required data through franchise agreements and so operators in those areas would not be in scope of this policy. Also assumed that Passenger Transport Executive areas would undertake franchising. Franchised areas will need to make data open access to third parties for use in journey planning tools
- Assumed that bus operators will already record punctuality data for internal use.
- The reduction in generalised journey time as a result of this scheme is quite uncertain so a conservative estimate has been used in the central scenario.
- Assumed that government will improve the existing IT system.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: 1.21	Benefits: 0.97	Net: -0.24	Yes	IN

Summary: Analysis & Evidence

Policy Option 2

Description: Using a financial incentive to encourage bus operators to provide data

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: 47.5	High: 1,010.8	Best Estimate: 223.9

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	10.21	0.44	12.5
High	10.24	1.78	22.6
Best Estimate	10.22	0.94	16.3

Description and scale of key monetised costs by 'main affected groups'

Bus operators: Additional registration costs due to different registration fees (£1.9m), familiarisation costs of adapting to new scheme (£0.02m), staff costs of reporting fare and punctuality data (£2.3m), costs of increased fuel duty paid (1.0m). **Government:** Costs of processing fare and punctuality data to local authorities (£0.4m) and the cost of providing and administrating the financial incentive (£1.6m), costs of improving the IT system (£9.1m).

Other key non-monetised costs by 'main affected groups'

Government: No transitional costs for government have been monetised but these are expected to be low. **Bus operators:** It is possible that this policy would lead to passengers having better information about and therefore choosing lower fares (which would be a net cost to operators but a net benefit to consumers) but this has not been monetised as it is highly uncertain and would therefore be misleading to be included. The back office costs of providing data have not been calculated as it is assumed that bus operators will already have the systems in place to record data for internal purposes.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	7.93	60.0
High	0	136.86	1,033.4
Best Estimate	0	31.81	240.21

Description and scale of key monetised benefits by 'main affected groups'

Consumers: Benefits from increased convenience of travelling on buses due to better information (£231m). **Bus operators:** Benefits due to increased demand (£4.0m), benefits of financial incentive (£3.5m). **Society:** Reduced congestion, emissions etc. from increased bus use and reduced car use (£1.9m). **Government:** Dis-benefit due to loss of indirect tax revenue as a result of mode shift from car to bus (-£0.3m).

Other key non-monetised benefits by 'main affected groups'

Government: Local authorities who use bus registrations to populate Traveline (a public transport information website) will no longer have to manually input the data to generate electronic format as bus operators will already do this. These benefits are expected to be small.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5%
<ul style="list-style-type: none"> - Assumed that in franchised areas, local transport authorities would secure the required data through franchise agreements and so operators in those areas would not be eligible for financial incentives. Also assumed that Passenger Transport Executive areas would undertake franchising. - Assumed that bus operators will already record punctuality data for internal use. - The reduction in generalised journey time as a result of this scheme is quite uncertain so a conservative estimate has been used in the central scenario. - Assumed that government will improve the existing bus registration IT system. - The take up of the financial incentive is uncertain so this has been varied in the high and low scenarios. 		

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:	In scope of OI30?	Measure qualifies as
Costs: 0.6	No	NA
Benefits: 0.9		
Net: 0.3		

Evidence Base (for summary sheets)

1. Problem under consideration

The current system of bus service registration was established at deregulation in 1986. A registration is a notice of the bus service an operator wishes to run. New, changed or withdrawn bus services must be registered with the Traffic Commissioners (TCs) 56 days in advance (28 days for community bus services), although shorter notice periods can be accepted at the TC's discretion. Registrations are processed on behalf of the TC under delegated authority by staff in the Office of the Traffic Commissioner, employed by the Driver and Vehicle Standards Agency (DVSA). Although registrations can be submitted using the Electronic Bus Service Registration (EBSR) system, market forces have not resulted in significant uptake and 75% are still paper based. Given that EBSR has been available since 2008, we believe the number of operators willing to sign up voluntarily is almost exhausted and an alternative approach is needed.

Research by Transport Focus on Bus Passenger Views on Value for Money¹ (October 2013) indicates that passengers are looking for more centralised sources of information about tickets. However, the current regulatory framework does not provide effective provisions on the collection of fares data, creating a barrier to the development of a centralised information system. This prevents passengers making informed pricing decisions as they lack an easy way of comparing bus services. In some areas, there can also be an extensive range of competing ticketing products available leading to confusion for the passenger. A voluntary scheme is unlikely to achieve full participation in fare data release given operators' long term reluctance to release this information.

According to Transport Focus' research, punctuality and reliability are among passengers' main priorities. However, there is no statutory requirement for operators to release data about how their services are running and share it with local authorities and the TCs. There is however a positive duty on operators to co-operate with the TCs, enabling the TCs to obtain information when necessary. DfT has looked to incentivise operators to share real-time punctuality data with local authorities through an additional subsidy per litre of fuel used by the bus operator, paid as an uplift to the Bus Service Operators Grant (BSOG)².

The current data provided through the registration process is basic and reflects the information requirements of 30 years ago, before the internet, Traveline (a public transport information website) and apps. The existing registration process does not provide rich enough data for journey planner systems and provides no information about fares. A separate process has to be gone through to populate Traveline and other systems with data, increasing work, introducing duplication and risking inconsistency in the quality of information available to passengers.

2. Rationale for intervention

2.1 Registration

Bus operators are required to register their services with the TCs by the Transport Act 1985. The information that operators must provide and the timescales to which they must adhere are set out in regulations made under the Act (see annex B).

The registration system primarily ensures that operators commit to providing reliable services to the public. It allows the TCs as the enforcement body to hold operators to account and ensure that services are being operated punctually in accordance with their timetable. The registration requirements were also intended to enable local authorities to determine what socially necessary services they need to provide. The system also provides local authorities with the service information needed for publicity such as maps and local travel guides. If the registration system were being set up now, although some of the aims would be the same, it is likely that there would be much greater focus on the open exchange of data and populating journey planners.

Despite attempts to digitise the bus registration process, through the introduction of the EBSR system in 2008, market forces have not resulted in significant uptake. The existing bus registration process

¹ 'Bus Passengers' Views on Value for Money', Transport Focus, October 2013
<http://www.transportfocus.org.uk/media/98bab9f0aaa9dd91846e09930950112ea888fe9a/Giving%20passengers%20a%20voice%20in%20bus%20services%20-%20October%202013%20-%20FINAL.pdf>

² BSOG is a subsidy paid per litre of fuel used by a bus operator subject to eligibility criteria. BSOG helps reduce fares and extend the national bus network by making it cheaper for bus operators to provide routes.

remains primarily paper based. EBSR brings benefits to operators, local authorities and passengers in terms of reduced administrative costs, ease of updating local travel information and improvement in the completeness and timeliness of bus route / timetable information.

The Government's digital strategy aims to improve processes through the use of digital tools and make interactions between business, the public and Government 'digital by default'³. This means services that are so straightforward and convenient that all those who can use them digitally will choose to do so whilst those who cannot are not excluded.

Without mandating that all bus services should be registered electronically, a voluntary approach will lead to some bus service information being published electronically, while other information is not. This means that different local areas will have different levels of information provision with an inconsistent quality of offer for bus users.

Following its investigation into competition in the local bus market, the Competition Commission (CC), now the Competition and Markets Authority, recommended that local transport authorities (LTAs) should have extra powers to request and make available information from operators about the revenue and patronage of commercial services that are deregistered. This will help LTAs to decide whether they need to tender for a replacement bus service because it is socially necessary and encourage greater competition in the tendered bus market.

Currently, emergency rail replacement services procured by train operating companies (TOCs) should technically be registered with the TC. This requirement does not extend to rail replacement services procured by the national authority (i.e. National Rail). The Transport Act 1985 originally specified that all emergency rail replacement services should be exempt from registration, as they cannot be registered in advance and there is no need for the TCs to enforce punctuality as they are a railways matter. However, later legislation created an unintended inconsistency between the treatment of services procured by TOCs and those by the national authority. In practice, the technical requirement for TOCs to register these services is not observed. The Government intends to use the opportunity presented by the Bus Services Bill to remove this anomaly.

2.2 Punctuality

Transport Focus' research 'How Late is Late – what passengers think about punctuality and timetables'⁴ explored passengers' needs for punctuality data. While it indicated that some passengers would be interested in seeing headline punctuality and reliability figures, it also found that they thought the information would be most relevant to regulatory bodies.

Reasons for poor punctuality can lie with the bus operator, the local traffic authority or other organisations such as the police, highways agency or utility companies. DfT determined, with support from these sectors, that partnership working was essential to bring about punctuality improvements. The focus has therefore been on a partnership-led approach rather than a simple enforcement of punctuality standards, with operators and local authorities encouraged to work together to improve punctuality and identify punctuality 'hotspots'.

One of the major barriers to creating constructive punctuality partnerships has been data sharing. Sharing punctuality data allows local authorities to obtain information on bus performance for the purposes of providing real time information to passengers, inform passengers about how their services are performing, support planning and development of bus services and priority schemes and assist with the operation of traffic management systems.

Operators have been concerned that data provided in good faith will be taken out of context and used against them for enforcement purposes. By providing this on a voluntary basis, they are concerned that they are putting themselves at a disadvantage against those who do not release their data. They are also concerned about how delays are attributed: a poor headline figure may not take account of delays that are out of their control such as roadworks. The Association of Transport Coordinating Officers (ATCO), the Confederation of Passenger Transport and PTEG produced a model data sharing agreement taking account of the obstacles experienced by operators and local authorities and offering a path around them. Although it was agreed that data sharing should initially be voluntary and anecdotal

³ Government digital strategy, December 2012, <https://www.gov.uk/government/publications/government-digital-strategy>

⁴ 'How Late Is Late - what passengers think about punctuality and timetables', Transport Focus, January 2014 <http://www.transportfocus.org.uk/media/85fa2b98e4c72250dbd8cc65daa45bdf133adc77/How%20late%20is%20late%20-%20What%20bus%20passengers%20think%20about%20punctuality%20and%20timetables%20-%20Full%20report%20-%20FINAL%20-%20January%202014.pdf>

evidence suggests that a small number of agreements are in place, it is not clear that sufficient progress has been made, thus justifying a regulatory approach.

While the 90% of operators in English non-metropolitan areas who have automatic vehicle location (AVL) systems possess considerable information on punctuality, there is no statutory obligation to share it with local authorities. The Department uses a financial incentive to encourage operators to release punctuality data. Operators who equip their vehicles with AVL systems have received a 2% BSOG uplift since 2010. This provides an ongoing small incentive to bus operators for installing the equipment. A condition is that the operator must provide data gained through the AVL system on request to local authorities for use in real-time information systems and punctuality partnerships where they exist. However, there have been concerns that the data is not provided in a form that can easily be interrogated by others, and the number of operators taking up the BSOG incentive has now plateaued. Data must also be provided to central Government but the current data requirements are limited.

The current TC approach to punctuality enforcement places an emphasis on operators to provide them with sufficient punctuality data. Although there is no statutory duty on operators to share punctuality data with the TCs, as established by existing case law (set out in Senior Traffic Commissioner Statutory Document 14 on local bus services⁵), operators have a positive duty to co-operate with the relevant enforcement agency and the TC. Therefore, using regulations to require punctuality information to be provided to the TCs is not being considered in this IA as they can already obtain necessary information.

2.3 Fares

While there is no requirement in the registration process to provide information about fares, there is a requirement under regulation 13(1)(a)(i) of the Public Service Vehicles (Registration of Local Services) Regulations 1986 for every vehicle, when it is being used in service, to display or have available on request a fare table containing sufficient information to enable any passenger to ascertain the fare for their journey, or the way in which it is calculated. Operators have traditionally been reluctant to release data voluntarily about fares, citing issues of commercial confidentiality.

Transport Focus' report on bus passenger views on value for money (October 2013) found a strong desire for more centralised sources of fares information and that passengers identified the lack of fares information at the bus stop as a key expectation not being met. Readily available fares data would improve the passenger experience, helping passengers to plan journeys and find the best price by allowing fares to be included in websites and apps such as Traveline and Citymapper and delivered direct to passengers' mobile devices. Improving the passenger experience and, in particular, making journey planning easier could also help encourage the take up of bus travel.

3. Policy objective

The objective is to provide a system for the open exchange of data about bus services so that it is sufficient for the needs of operators, local authorities, journey planners and regulators. The process should meet the need to register services for enforcement purposes and support the development of journey planner apps. It should eliminate the need to input some data twice to populate journey planners.

DfT is committed to making the provision of comprehensive digital data easy for all operators regardless of size. We recognise that special attention will need to be paid to the needs of smaller operators, particularly in rural areas, who may not be able to participate easily in digital registration and who do not use digital scheduling systems. Therefore, our objective is to ensure that the adopted approach includes an option that will assist small operators and minimise their costs.

Stakeholder engagement

DfT consulted in March 2014 on pursuing the further roll out of digital bus registration⁶. The majority of respondents supported the extension of digital bus registration but highlighted the shortcomings of the existing EBSR system. Some operators highlighted the potential additional costs and complexity of registering services electronically, and the risk of those who register services infrequently being unable to maintain knowledge of using the system. Having considered the responses, the previous

⁵ 'Local Bus Services in England (outside London) and Wales', Senior Traffic Commissioner, March 2015
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417682/statutory-document-14.pdf

⁶ <https://www.gov.uk/government/consultations/bus-registration-competition-commission-recommendations>

administration announced in February 2015 that DfT would progress full implementation of digital bus registration.

As part of its work on the Bus Services Bill, the Department held a series of Bus Reform Workshops⁷ in Birmingham, Bristol, Leeds, London and Manchester in September and October 2015. The workshops were attended by representatives of the bus industry, local authorities and passengers. Discussions were held on aspects of bus reform, including more open data. There was general support for the principle of open data and its benefits were acknowledged. Operator and local authority representatives were keen that any move to more open data sets should build on what Traveline has already developed. There was support for a web based system that was more accessible to smaller operators. It was acknowledged that electronic data submission reduced the scope for errors through double-keying.

4. Description of options considered

4.1 Option 0 - Do nothing: persuade operators to release data voluntarily

One option would be to continue the Department's existing approach in pursuing a digitised registration process and encouraging the industry to increase the volume of data they release on a voluntary basis. Given that EBSR has been available since 2008, we believe the number of operators willing to sign up voluntarily is almost exhausted and an alternative approach is needed, particularly to help smaller and rural operators who would face disproportionate costs and practical issues in this scenario. Similarly, the Department has encouraged operators to release punctuality data to local authorities voluntarily through punctuality partnerships.

A voluntary scheme is also unlikely to achieve the 100% take up of fare data release, and of patronage data on deregistered services, especially given operators' long term reluctance to release data. There would be no means of requiring operators to take part. This would mean that information provided to passengers through journey planning tools would not be comprehensive and so undermine the benefits to passengers.

4.2 Option 1 - Mandating the release of data

Operators could be required to release information about their services, including fares, times and routes in an open data format. This information would be used to populate journey planners, provide information about punctuality and meet the requirements to register services.

Regulations could be made under the Transport Act 1985 requiring operators to release data to local authorities and other interested parties about punctuality in relation to services registered with the TCs. It is likely that new powers would be needed to require operators to release real-time information for use in journey planners and apps so that passengers can see the exact location of the bus they intend to catch, and about fares. Not all operators are currently equipped to capture information about punctuality (around 10% of buses in English non-metropolitan areas do not have AVL devices installed according to DfT bus statistics). If operators were required to capture such data, it would place a burden on these operators. The intention is to ensure that the Bill enables the release of open data through secondary legislation over the course of this Parliament. There is already an existing process in relation to bus registration data set out in secondary legislation and requirements for the wider policy objective of open fares and punctuality data will build on this. Data in franchised areas will also need to be captured and released as open data and we anticipate this will be achieved through the various agreements and contracts.

There are specific issues with the existing EBSR system that make it an unattractive option to some operators, such as the need to buy mapping software to produce the map that is an essential part of a registration. DVSA, as the body handling registrations on behalf of the TCs, could conduct a project to find ways of improving EBSR to capture better data more easily and a way to support smaller operators wishing to use it. This would be based on the existing EBSR and would maintain the existing processes based on the TransXchange format. This would effectively be a new front end to make the existing system simpler to use. A separate process for obtaining fare and punctuality data would be required since this information does not form part of the registration process. DVSA has no ongoing interest in passenger information since its purpose is testing and enforcement.

Alternatively, operators could be required to provide open data to local authorities about routes, fares, times and punctuality. This data would then be released through the local authority's website or placed

⁷ Bus Reform Workshops – background document, September 2015:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/462225/buses-reform-workshops-background.pdf

on data.gov.uk. Traveline currently holds route and timetable data which is provided to it via local authorities and operators. We envisage that the market, through the existing Traveline process or similar, would draw the data together into a central repository used to meet the requirements of registration and journey planning and store a broad array of information and data relating to bus services.

This data might potentially include:

- timetables at bus stop level;
- route data to allow accurate mapping;
- real-time punctuality data for use in services either at bus stops, online or through apps; and
- information on the range of available fares.

Access to this data would be available to anyone who needs it, including those registering services, the TCs, providers of travel information, and DfT when administering BSOG claims and as a data source for bus statistics. Although this option is based on data flowing to local authorities, there is potential for data to flow in the first instance to the repository, in which case we expect the costs to be the same or less as data would be submitted to one body rather than 82 local transport authorities (LTAs). The precise nature of data flow will be designed in conjunction with industry, LTAs and DVSA before introduction to ensure that the right information is received at the right time (for example, that it is received by TCs in a timely fashion).

Discussions following the 2014 consultation on digital bus registration suggested that many operators use scheduling systems which produce partial data. Releasing this data would remove the need to input it twice for journey planning purposes, making the process more efficient and improving the quality of passenger information as re-keying errors would be eliminated.

4.3 Option 2 - Using financial incentives to encourage operators to release data

Operators could be offered financial incentives to encourage them to move to digital bus registration. This could take the form of a graduated fee for registrations based on the method of registration and the size of the operator. The lowest fee would apply to a small or micro-business registering their service electronically. The next level would apply to small or micro-businesses registering by paper and also larger operators registering electronically. The highest fee would apply to larger operators who continued to register by paper. This approach would be likely to leave a handful of operators who would still register in paper form, and would therefore retain some of the inefficiencies in the current system. It would be unlikely to capture small operators as, based on existing fee levels, any reduction in fee would be unlikely to be significant enough to offset the required cost of investing in a scheduling system.

Similarly, the release of punctuality and fares data could be linked to the receipt of funding. The existing smart ticketing and AVL BSOG incentives require the operator to provide certain information to the local authority and DfT as a condition of receiving the incentive. Fares and punctuality data could be specified as part of this information and could then be made available by the local authority or DfT. There has been concern however that data gained through the AVL system is not provided in a form that can easily be interrogated by others. DfT may therefore need to consider imposing a standard data format, although this could lead to suboptimal information being shared given the complexity of existing fare structures. The number of operators taking up the BSOG incentive has also plateaued. In addition, BSOG, including incentives, is subject to a wider review. If the review concluded that the incentives were no longer appropriate, or BSOG changed fundamentally, a new funding stream may need to be identified.

5. Analysis of policy options

This analysis looks at the effects of a scheme to increase the number of bus services registered electronically and compel bus operators to report fares and punctuality data. At present, bus operators can choose to register their services either electronically or by paper (with around 75% opting to do so by paper⁸) but this policy would seek to reduce the number of paper service registrations. It would also seek to encourage or compel bus operators to report their fares and punctuality data as this has been identified as a key passenger expectation which is not currently being met. Two options to do this have been analysed:

⁸ Transport commissioner registration data.

- A mandatory scheme to register bus services electronically and report fares and punctuality data.
- A scheme of financial incentives to encourage bus operators to register bus services electronically and report fares and punctuality data.

The analysis for these options is summarised below but, for a complete methodology of the analysis, see annex A.

5.1 Option 1: A mandatory scheme to register bus services electronically and report fares and punctuality data

This option would

- mandate that bus operators register bus services electronically rather than by paper.
- mandate that bus operators report fares and punctuality data to LTAs.
- give LTAs powers to request information on fares and patronage from bus operators when they cancel a bus service.
- remove unintended inconsistency in legislation about registering rail replacement bus services

Table 1 summarises the analysis for this option. It shows the costs from mandating registering bus services electronically and reporting fare and punctuality data and the overall benefits of the scheme. Due to the uncertainty surrounding many of the assumptions used in the analysis, three potential scenarios have been modelled to give a likely range of monetised impacts. As can be seen, the biggest costs are those to bus operators of recording and reporting fares and punctuality data. The biggest benefits are those of improved journey quality for bus customers.

Table 1: Monetised costs and benefits of mandating registering bus services electronically and reporting fares and punctuality data (2017-2026)

	Low	Central	High
Costs, £m, PV, 2014 prices			
Familiarisation costs for bus operators to switch the new scheme	£0.04	£0.02	£0.01
Costs to government for improving the IT system	£9.09	£9.09	£9.09
Total costs of mandating electronic registration of bus services	£9.13	£9.11	£9.10
Costs to bus operators of fitting all buses with AVL	£3.50	£3.50	£3.50
Staff costs to bus operators for reporting fare and punctuality data	£4.86	£4.86	£4.86
Costs to LTAs for processing data	£0.92	£0.92	£0.92
Costs to bus operators from increased bus fuel duty paid (minus increased BSOG payments)	£1.03	£2.06	£5.91
Total costs of recording and reporting fare and punctuality data	£10.31	£11.34	£15.19
Total costs	£19.44	£20.45	£24.29
Benefits, £m, PV, 2014 prices			
Benefits to consumers from reduced generalised journey time	£243.05	£486.81	£1,409.62
Benefits to operators due to increased demand	£4.18	£8.36	£24.09
Net external benefits from mandating reporting bus fares and punctuality data	-£2.15	£3.96	£11.49
Benefits to HMRC from indirect tax revenue	£0.36	-£0.72	-£2.09
Total benefits	£245.44	£498.41	£1,443.10
NPV, £m, 2014 prices	£226.00	£477.96	£1,418.81

5.1.1 Direct costs

Transition costs

Familiarisation costs

It is estimated that it will cost bus operators a combined total of £10,000 to £40,000 to familiarise themselves with the new scheme in the first year after it is implemented. This is the cost of bus operator staff familiarising themselves with the electronic registration system.

Costs of fitting all buses with automatic vehicle location (AVL) devices

In order to comply with the regulation, bus operators will have to ensure that all buses are fitted with AVL devices. As 90% of buses in English non-metropolitan areas already have AVL devices⁹, the remaining 10% will have to do so in order to comply with this regulation. However, by extrapolating the historic trend for the take-up of AVL, it is estimated that a further 4% of buses will have AVL installed regardless of this policy. It is therefore estimated that installing AVL for the purposes of this policy will cost bus operators a combined total of £3.5m over three years. Bus operators will be assisted in paying these costs to some extent by the BSOG subsidy for AVL but as this is not thought to be a significant amount and also because BSOG is subject to a wider review, this has not been calculated.

Costs of improving the IT system

A major reason why most bus operators do not currently register using EBSR is because it is regarded as more difficult to use and as such, more time consuming. We therefore plan to improve the IT system as part of the process of mandating electronic bus service registration. Internal DfT analysis estimated the cost of improving the bus registration IT system to be £3.0m over six years, with up-front costs of £2.0m in the first two years and costs of £1.0m for the next four years as the system is improved over time in reaction to new needs and demands. To account for optimism bias, this estimate has been scaled up by 200% for this analysis (in line with WebTAG guidance for a stage 1 IT project). The total cost of improving the IT system in this analysis is therefore estimated to be £9.1m over 6 years although we believe that the true cost is unlikely to be this high. It is assumed that there will be no additional staff cost to bus operators for switching to electronic registrations because the new IT system is expected to be as easy to use as the paper system. If a new IT system were not to be developed, bus operators would need to use the existing software and would face substantial costs.

Ongoing costs

Staff costs to bus operators from reporting fares and punctuality data

It is estimated that it would cost bus operators a combined total of £900,000 per year in staff costs to report fares and punctuality data to LTAs. This estimate is based on a series of assumptions due to a lack of evidence (see annex A for details). It is assumed that there would be no additional back office costs to bus operators in order for them to collect the punctuality data as it is assumed that they would already do this for their own internal purposes. While this is likely to be true for large bus operators, it may not be the case for small operators. However this cost is likely to be small and so has not been monetised.

Costs of processing data for LTAs

LTAs will have to process the data which they receive from bus operators. It is estimated that this would cost £170,000 per year for all LTAs (see annex A for details). The current assumption is that information would be provided to LTAs but this may change to a central body as the policy progresses, in which case it is assumed costs would be decreased as there would only be one central body rather than 82 LTAs.

5.1.2 Indirect costs

Costs to bus operators from increased bus fuel duty paid (minus increased BSOG payments)

This policy is assumed to lead to an increase in the number of bus trips. This means that there will be an increased number of bus services and this will increase the overall amount that bus operators will have to pay in fuel duty. This increase will be offset to some extent by increased BSOG payments to bus

⁹ Department for Transport bus statistics 2014 (table 0606)

operators. It is estimated that the net impact would be a cost to bus operators of £0.1m to £0.8m per year.

5.1.3 Benefits

Benefits to consumers from improved journey quality

The better information available to consumers as a result of this scheme is estimated to lead to benefits of around £35m-£201m per year. This is equivalent to around 2-3p per bus journey. This is the main benefit of the scheme and is based on improvements in generalised journey times (GJT). GJT is a measure of the total cost associated with travel, i.e. fares, journey time and other factors such as comfort and convenience expressed in the unit of journey time minutes.

Benefits to bus operators from increased demand

The better information is assumed to lead to higher demand. This will lead to greater profits for bus operators in the region of £0.8m-£5m per year. This estimate is based on the propensity for bus passengers to take more trips given lower costs of travel which comes from an academic study by Balcombe et al. (2004).¹⁰

Net external impact from increased bus journeys and fewer car journeys

Travelling by bus or car has external impacts on society through increased air pollution, greenhouse gas emissions, congestion and road accidents. This policy is expected to increase the number of bus journeys but reduce the number of car journeys as some of the new bus journeys would otherwise be made by car. The net external benefit of the reduced number of car journeys and increased number of bus journeys is estimated to be -£0.3m to £1.6m per year. In the low scenario, there is a negative impact because it is assumed that very few new bus journeys are diverted from car journeys so there is less external benefit from reduced car journeys to balance the external cost of increased bus journeys.

Benefit to consumers from reduced car fuel duty paid

Some of the additional bus trips which occur as a result of this policy would otherwise have been car trips. Those who take buses instead of cars will not have to pay fuel duty and so there will be a benefit to consumers from paying less fuel duty overall. It is estimated that consumers will pay between £0.1m and £1.1m less in car fuel duty each year because of this policy. However these benefits have already been captured in the improved journey quality benefits and so have not been included in the results table to avoid double counting.

Impact on indirect tax revenue to government

As travellers switch from car to bus travel, the government will lose tax income from fuel duty on car fuel but will gain tax income from fuel duty on buses. The government will also have to pay a higher subsidy to bus operators through BSOG which is paid based on total bus operator fuel consumption as the ridership on buses increases. The annual benefit to the exchequer of this change in indirect tax revenue is estimated to be -£0.3m to £0.05m. This impact is negative in the high and central scenarios as the reduced fuel duty from cars is not outweighed by the increased fuel duty from buses. However the impact is positive in the low scenario because less of the new bus journeys are assumed to be diverted from car journeys so the increased fuel duty from buses is greater than the reduced fuel duty from cars. This benefit is cancelled out by the net benefit to consumers from reduced car fuel duty paid and the net cost to bus operators from increased fuel duty paid in the NPV. This is because it is a transfer of tax revenue between bus operators, the government and consumers and so has no overall effect on society as a whole.

5.1.4 Non-monetised costs and benefits

Back office costs to bus operators for recording fares and punctuality data have not been monetised. This is because it is assumed that bus operators will already record this data for their own internal purposes. In reality, some smaller operators may not do this. However, these costs have not been monetised as they are expected to be very small and there is no robust data to underpin this analysis.

¹⁰ Balcombe, R., Mackett, R., Paulley, N., Preston, J., Shires, J., Titheridge, H., Wardman, M., White, P., (2004) 'The demand for public transport: a practical guide,' TRL Report TRL 593, Crowthorne, UK

No transitional costs to the government have been monetised but they are expected to be very low. This is because most of the burdens of this regulation fall upon bus operators and the government merely has to process the new data which it should already be equipped to do.

This policy could potentially lead to a reduction in fare revenue as passengers will have better information about the fares available to them and they could 'shop around' for the best fare. This would be a net cost to operators but a net benefit to consumers. However this has not been monetised as it is very uncertain and there is no evidence to support this.

Local authorities who use bus registrations to populate Traveline will no longer have to do this manually and so will experience a small benefit from less staff time spent and a reduction in the potential for making errors. This has not been monetised because the effects are likely to be quite small. However, they would to some extent offset the staff costs to bus operators of registering the data electronically.

The effects of the changes to primary legislation to give LTAs powers to request information on fares and patronage from bus operators who cancel a service have also not been monetised. It is unlikely that these powers would lead to any significant cost to bus operators as they would have this information available for their own internal purposes. There would be some benefits to LTAs from these powers although it is not possible to monetise these given a lack of evidence.

5.2 Option 2: A scheme of financial incentives to encourage operators to register bus services electronically and report fares and punctuality data

This option would:

- provide a financial incentive through bus registration fees for operators to register electronically by making it cheaper to do so than by paper.
- provide a financial incentive for operators to report their fares and punctuality data through a subsidy to them worth more than their costs of reporting this data.

Given that few bus operators are currently willing to share data on a voluntary basis, it is likely that a substantial financial incentive would need to be offered in order to encourage them to do so. Table 2 summarises the analysis for this option. It shows the costs from registering bus services electronically and reporting fare and punctuality data, and the overall benefits of the scheme.

Due to the uncertainty surrounding many of the assumptions used in the analysis, three potential scenarios have been modelled to give a likely range of monetised impacts. In the central scenario, it is assumed that 50% of large and medium operators and 25% of small operators would apply for the scheme. In the low scenario, it is assumed that 25% of large and medium operators and 13% of small operators would apply for the scheme. In the high scenario, it is assumed that 75% of large and medium operators and 38% of small operators would apply for the scheme. As a simplifying assumption, it is assumed that all bus operators who apply for the financial incentive will do so as soon as possible (i.e. in the first years of the scheme). As can be seen, the biggest costs are increased registration costs to bus operators and the costs to them of reporting fares and punctuality data. As with the regulatory option, the biggest benefits are those of improved journey quality for passengers.

Table 2: Monetised costs and benefits of providing a financial incentive for bus operators to register bus services electronically and report fares and punctuality data (2017-2026)

	Low	Central	High
Costs, £m, PV, 2014 prices			
Additional registration costs for bus operators	£2.83	£1.85	£0.87
Familiarisation costs for bus operators to switch the new scheme	£0.04	£0.02	£0.01
Costs to government for improving the IT system	£9.09	£9.09	£9.09
Total costs of registering bus services electronically	£11.97	£10.96	£9.98
Staff costs to bus operators for reporting fare and punctuality data	£1.15	£2.31	£3.46
Costs to LTAs for processing data	£0.22	£0.44	£0.66
Costs to bus operators from increased bus fuel duty paid (minus increased BSOG payments)	£0.24	£0.99	£4.21

Total costs of recording and reporting fare and punctuality data	£1.62	£3.72	£8.33
Costs to government of providing financial incentive	-£1.10	£1.61	£4.32
Administrative costs to government of providing the financial incentive	£0.00	£0.00	£0.00
Costs of providing financial incentive	-£1.10	£1.61	£4.32
Total costs	£12.48	£16.30	£22.63
Benefits, £m, PV, 2014 prices			
Benefits to consumers from reduced generalised journey time	£57.72	£231.23	£1,004.35
Benefits to operators due to increased demand	£0.99	£3.97	£17.16
Net external benefits from mandating reporting bus fares and punctuality data	-£0.51	£1.88	£8.19
Benefits to HMRC from indirect tax revenue	£0.08	-£0.34	-£1.49
Benefits to bus operators from financial incentives	£1.73	£3.46	£5.19
Total benefits	£60.02	£240.21	£1,033.40
NPV, £m, 2014 prices	£47.54	£223.91	£1,010.77

The incentives offered to bus operators are:

- fees for registering bus services electronically rather than by paper have been profiled so that it is cheaper for bus operators to register electronically and more expensive to register by paper. They have also been altered so that electronic registration is cheaper for SMEs (see table 6). This should incentivise electronic registration and penalise paper registration.
- a lump sum financial incentive which is equivalent to 150% of bus operators' costs of reporting fares and punctuality data is offered for operators if they report their fares and punctuality data to the government. This should incentivise reporting fare and punctuality data. It is unlikely that bus operators whose vehicles are not currently fitted with AVL will be interested in this incentive as they would face greater costs to comply. An incentive for implementing AVL is offered as part of BSOG but this has not incentivised all bus operators to install AVL devices.

The types of costs and benefits for this option are broadly the same as for the lead option except for the changes below:

- there are no costs to operators for fitting their buses with AVL technology. This is because it is assumed that only bus operators who already have AVL installed on their buses will apply for the financial incentives because they are the ones who will face the least costs to comply.
- bus operators will face increased costs should they continue to register services by paper but reduced costs if they register their service electronically due to the changed registration fees. The annual cost of this is estimated to be £87,000 to £283,000.
- the government will gain revenue from the new registration fees but they will face costs from providing the financial incentive. The net cost to government is estimated to be between -£110,000 and £432,000 per year. In the low scenario, there is a negative net cost because the revenue to government from the new registration fees is greater than the costs of the financial incentive.
- bus operators will gain benefits due to the financial incentive. These benefits are estimated to be £247,000-£742,000 per year.
- there would be some costs to the government in administering the financial incentive. These are estimated to be minimal and are based on the administrative costs of BSOG.

5.3 Risks and uncertainties

This analysis is taking place in parallel to the analysis for other measures which would significantly change the bus landscape, such as granting bus franchising powers to local authorities. Where possible, this analysis has attempted to take into account the overlaps with these but there is a high degree of uncertainty with impacts given the big changes which may be implemented in local bus markets over the next few years.

It is possible that publishing fares data might lead to a reduction in fares which would result in lower benefits to bus operators. This has not been factored into the analysis as the effects are uncertain.

The analysis assumes that it takes longer for bus operators to complete an electronic registration compared to paper registration due to the complicated computer software. If the electronic registration software were to be improved, the time that companies would spend on electronic registrations versus paper registrations could be equalised, in line with the aim of 'digital by default'. This would come at a greater cost to the government as the software would have to be developed, although it is not anticipated that this would be significant.

Travellers' propensity to increase bus use with improvements in bus services is based on that from Balcombe et al. (2004)¹¹ which is the best available data. It is debateable whether a small change in bus service quality will really result in a substantial change in demand. However, this will not make a big difference to the overall benefits as most of the benefits are experienced by consumers who already use bus services and experience bus service improvement. Therefore, even if demand does not increase at all as a result of this policy, the overall NPV of the policy will still be £467m in the central scenario (as opposed to £478m if demand changes as expected).

The administrative costs for both bus operators and local authorities as a result of this policy are quite uncertain. Due to a lack of evidence, they have been estimated based on assumptions for the amount of full time equivalent (FTE) time spent on registering bus services and reporting fares and punctuality data. Although there is a high degree of uncertainty for these costs, it is very likely that they would be low in comparison to the overall scheme costs and so the risk associated with these estimates is not too high.

The number of buses is assumed to remain constant over time as a simplifying assumption. This is felt to be a reasonable assumption given that bus statistics suggest that the number of buses has been relatively constant over the past few years.

These calculations use 2014 WebTAG data book figures for the value of time. These figures have been provisionally updated as of November 2015 but are still subject to consultation and so they may change. Therefore they have not been used in this analysis. If the new provisional values were to be used, it would result in a 7% decrease in the scheme NPV for the low, central and high scenarios for both options.

There is no information as to how many operators would apply for the financial incentives so some illustrative values have been included for each of the three scenarios to demonstrate the effects that different levels of take-up would have.

The assumptions around the reduction in GJT as a result of the policy, the diversion factor for car journeys as a result of increased bus journeys, and the familiarisation costs of the scheme are all subject to a high degree of uncertainty. As such they have been varied between the low, central and high scenarios to illustrate the combined effects that these assumptions have on the impacts of the policy. The values used for different scenarios are shown in table 3.

¹¹ Balcombe, R., Mackett, R., Paulley, N., Preston, J., Shires, J., Titheridge, H., Wardman, M., White, P., (2004) 'The demand for public transport: a practical guide,' TRL Report TRL 593, Crowthorne, UK

Table 3: Input values which vary between different scenarios

	Scenario			Rationale
	Low	Central	High	
Familiarisation costs (percentage of additional staff costs in the first year of the scheme)	100%	50%	25%	It is assumed that it will take bus operators time to familiarise themselves with the new scheme. This assumption is not based on evidence.
Reduction in the temporal cost of a journey (including fare and journey time) as a result of the scheme, minutes	0.25	0.5	1.44	The high value comes from the softer values report ¹² estimate for the impact of having web-based information. However, there is already some web-based information so this value is likely to be very optimistic and so has been scaled down in the central and low scenarios
Percentage of new bus journeys which would otherwise have been car journeys	0.15	0.31	0.31	The central value comes from the 2015 WebTAG data book. This has been lowered in the low scenario to reflect the uncertainty behind this figure but has not been changed substantially in the high scenario as it is thought to be unlikely for this value to be higher.

6. Summary and preferred option with description of implementation plan

Table 4: Comparison table for lead and alternative option

	Option	
	Mandatory scheme	Financial incentives
NPV to society (2017-2026)	£478m (Very high)	£224m (High)
Impact on business (PV 2017-2016)	-£2.1m (Small cost to business)	£2.3m (Small benefit to business)
Impact on government (PV 2017-2016)	-£10.7m (Small cost to government)	-£11.5m (Small cost to government)
Impact on consumers (PV 2017-2016)	£487m (Very large benefit to consumers)	£231m (Large benefit to consumers)
Impact on wider society (PV 2017-2016)	£4.0m (Small benefit to wider society)	£1.9m (Small benefit to wider society)

¹² DfT (2009) The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England

Percentage of bus operators who report fare and punctuality data	100% (All operators will be compelled to report their fares and punctuality data)	Uncertain but less than 100%. In the central scenario we have assumed 50% take-up but this is varied between the three scenarios. The financial incentive would have to be very high in order to incentivise bus operators who do not have AVL installed on their buses to take up the scheme. It is highly unlikely that this policy would be able to achieve 100% of operators reporting their fares and punctuality data which is a major issue because this is one of the key objectives for a policy in this area.
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Our preferred option is option 1, which would build on the existing registration process with a requirement to release open data on routes, timetables, punctuality and fares. The exact way in which this will be achieved will be subject to further development work, taking into account the existing registration process and the existence of a central repository in the form of Traveline. This option will ensure that the legislation enables the release of data in future and is the only option that will ensure full take-up. We anticipate that this process would be phased in with registration data being released in the first instance (by 2017), then adding punctuality data and finally fares data (by 2020). This transitional approach should make the process of releasing data easier for operators to manage.

One-In, Three-Out / Business Impact Target (BIT)

As defined in the [Better Regulation Framework Manual](#) section 1.9.5, One-In, Three-Out (OI3O) applies to all changes in, or introduction/removal/expiry of, measures that require RRC clearance. This policy imposes a small regulatory cost on businesses so it is in scope of OI3O and is a small 'IN' because the direct incremental economic cost to business of the measure slightly exceeds the direct incremental economic benefit to business. It does not qualify as an exclusion under section 1.9.9 of the Better Regulation Framework Manual. The EANCB for this scheme is £0.2m and the Present Value of Net Costs to Business from 2017 to 2026 is £2.1m. The EANCB has been calculated in line with the guidance in section 1.9.32 of the [Better Regulation Framework Manual](#) (p46). This policy is a qualifying regulatory provision (QRP) and therefore the EANCB of £0.2m will count towards the Business Impact Target.

7. Wider impacts

7.1 Economic / financial impacts

Competition Assessment

The greater transparency around fares and punctuality data created by this policy should make it easier for new firms to enter the bus market and thus increase competition. Such a trend would be beneficial to smaller firms who face significant barriers to entry in the current bus market. This policy would also allow consumers to shop around and make more informed choices which will increase competitive forces on bus operators. This is one of the points which was raised by the Competition Commission (now the Competition and Markets Authority) in their review of the bus market.

Small and Micro Business Assessment

This regulation will affect all bus operators including small and micro businesses. DfT analysis suggests that approximately 10% of bus services are currently run by small and medium sized enterprises¹³ (although many of these services will be run by medium enterprises) and that there are approximately 400 small and micro businesses in English non-metropolitan areas. It is thought that the requirements to register data electronically are likely to be more difficult for small businesses to comply with due to the fact that special software may be required to do so. However the impact on individual operators is likely to be relatively small (approximately £15 per service registered) and should be mainly compensated for by the increase in demand which is expected to result from this scheme due to the fact that potential

¹³ Annual bus statistics 2013/14, page 15, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/387397/annual-bus-statistics-year-to-march-2014.pdf

passengers will be more readily able to access information about services. In addition, the Department intends to make electronic registration accessible to all operators and not dependent on having specialist scheduling software: one option under consideration is providing a supported service to small and micro businesses which would aid them in submitting the necessary information. Another option would be for an operator to continue to provide the information in paper format for input by a third party which the operator would then sign off as correct.

A significant cost of the scheme would be the cost of fitting buses with AVL technology and back office support in order to generate the data needed to report real-time punctuality data. DfT statistics show that 10% of non-metropolitan buses do not currently have AVL devices installed¹⁴ however, by the time this regulation comes in, this is proportion expected to be around 6% due to the natural growth of this technology. Whilst the cost of fitting AVL equipment will be proportional to the number of buses owned, we assume that it is more likely to be small and micro businesses that do not already have this equipment fitted or the back office support. DfT's 2014/15 Public Service Vehicle survey indicates that 48% of vehicles without AVL equipment in English non-metropolitan areas are owned by small or micro businesses. Operators can already claim the BSOG AVL incentive to offset the installation costs to some extent. As mentioned earlier, BSOG and its associated incentives are subject to a wider review. While the details are still being worked up, prior to further engagement with stakeholders, we are considering how the AVL incentive can be changed to better support smaller operators, as it is recognised that the current incentive alone is not sufficient to incentivise small and micro operators to install AVL. DfT is not proposing to mandate the provision of real-time punctuality data until 2020. Any changes to BSOG are expected to be put in place during 2018, so it will be clear prior to the introduction of a requirement to supply real-time punctuality data whether further support is needed for small and micro businesses to help minimise the burden of fitting AVL equipment.

The policy does not disproportionately affect small and micro bus operators in that it applies equally to all operators regardless of size. However larger operators will be more able to absorb the costs. There is insufficient data to calculate the exact burden on small and micro operators but the net costs to business associated with this policy are not very large and will be split among a number of operators.

Consideration has been given to removing small and micro businesses from the scope of the policy. However, this would not achieve 100% coverage and so the policy objective of ensuring that passengers can easily find information about their local bus services would not be met. Passengers have a reasonable expectation that information should be available for all services, regardless of the size of the operator providing the service. It is also important to note that the greater transparency created by this policy should make it easier for smaller firms to enter local bus markets than before although we are unable to quantify this impact due to a lack of data.

Justice impact test

These proposals may create a new offence of failure to provide information. It is likely to be enforced against operators through the existing TC enforcement system. Details are still being finalised and will go through the Justice impact test.

7.2 Environmental impacts

Greenhouse gas assessment

We consider that these proposals are likely to lead to an increase in carbon emissions as a result of increased bus use. However this should be largely offset by a decrease in carbon emissions from reduced car use. It is estimated that this measure will lead to a net increase of 0.01MtCO₂e of non-traded carbon emissions with a negligible effect on traded carbon emissions.

Wider environmental issues

We do not consider that there would be any wider environmental issues.

Sustainable development

We do not consider these proposals to impact on sustainable development.

¹⁴ DfT bus statistics 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/463861/bus0606.xls

7.3 Social impacts

Equalities impact

We can confirm that these proposals have been screened for the likely impacts (positive or negative) on the equality groups. No impacts have been found of the policy to make route, timetable, punctuality and fares data open and so we have not gone further in this instance. Disability representative groups may feel that data on the accessibility of vehicles should be provided but we consider this to be unnecessary given that buses will need to comply with the Public Service Vehicle Accessibility Regulations by 2017. The proposals are not considered to have a negative effect on any particular group but are considered to have a positive impact for all passengers. A high proportion of bus users come from the higher age groups and young people as well as those without access to a car. These groups are expected to benefit from the proposals through better journey planning tools and more accurate route and timetable information. Disabled people may particularly benefit from increased scope to develop apps that are specifically aimed at improving the accessibility of services.

Health and well-being

Having reviewed the screening questions for the Health Impact Assessment we have concluded that there is no need for a full assessment to be carried out.

Family life

We do not consider that these proposals will have any impact on family life.

Human rights

We do not consider that these proposals would impact on human rights legislation.

Rural proofing

Use of digital services can be more difficult in rural areas owing to less well developed broadband provision than in urban areas. Small and micro operators are more likely to operate tendered bus services in rural areas. As part of its work on digital bus registration, the Department has undertaken to develop a method of providing information which meets the needs of small and micro operators. We do not envisage that there would be any impact on rural services. Increased information provision should make it easier for people in rural areas to find out about transport options.

7.4 Post Implementation Review (PIR) Plan

The policy will be reviewed after five years, alongside other measures from the Bus Services Bill, as part of the usual PIR process. The PIR plan is expanded upon in Annex C.

Annex A: Methodology for analysis of options

Analysis for lead option: A mandatory scheme to register bus services electronically and report fares and punctuality data

The estimated costs and benefits of option 2 have been monetised and socially discounted using the social discount rate recommended in the Green Book (3.5%). The results are shown in table 1. These impacts are additional to a do nothing counterfactual.

Given the significant uncertainties around some of the key assumptions, three different scenarios have been produced in order to give a realistic range for the results of this analysis. The assumptions used in the central scenario are relatively conservative in order to account for optimism bias. An explanation of the assumptions which change between the scenarios is shown in table 3.

Costs of mandating registering bus services electronically

As all services would be registered digitally by default, it is assumed that there would be no differential in the fee for registering a service, other than a reduced fee for community bus services as now.

It is assumed that all bus operators would spend approximately 30 minutes of FTE on each paper-based registration. This is the same assumption as used in the 'Changes to bus service registration requirements to improve competition in the bus market' impact assessment, which was produced to evaluate remedies proposed by the Competition Commission (CC). Although registration using EBSR is currently more burdensome than paper registration, the Department intends to bring forward a streamlined digital system as part of the government's 'digital by default' initiative. It is therefore assumed that the time taken to complete an electronic registration will be the same as a paper registration. If these IT improvements are not progressed, there are likely to be additional time burdens imposed on bus operators by requiring them to register bus services electronically rather than by paper.

It is estimated that the costs of improving the IT system will be £9.1m over six years. This is based on high level DfT analysis and includes upfront costs of £6.1m for the first two years and a further £3.0m in costs for the next four years while the system is improved over time in reaction to new needs and demands. These costs have been scaled up by 200% in the analysis to account for optimism bias (in line with WebTAG guidance for a stage 1 IT project). If the IT system is not improved, bus operators will have to use the existing EBSR software which is expensive. This will result in a far greater burden on businesses.

It is assumed that, in the first year of the scheme, operators would face costs to familiarise themselves with the new scheme. This has been estimated by increasing the staff costs in the first year of the scheme by 100% in the low scenario, 50% in the central scenario and 25% in the high scenario. These estimates are likely to be quite pessimistic but, due to a lack of evidence, we have used conservative assumptions. This assumption is not based on any evidence which is why it has been varied between the scenarios. Familiarisation costs are likely to be quite small and so would not have a substantial impact on the overall costs of the scheme.

Costs of reporting and recording fares and punctuality data

In order for bus operators to record punctuality data, all of their buses need to be fitted with AVL devices which cost around £3,000-4,000 according to local government contacts. DfT statistics show that 90% of buses in English non metropolitan areas are already fitted with this technology so the remaining 10% would need to implement the technology before the deadline in 2020 for submitting punctuality data. However, the historical trend for AVL has been one of increased implementation over time meaning that more buses are likely to be fitted with AVL in the absence of this policy. By extrapolating the historic trend, it is estimated that 94% of buses in English non-metropolitan areas would have AVL fitted by 2020 regardless of this policy. It is therefore estimated that it would cost approximately £3.5m over three years to install AVL devices in the remaining buses. It is assumed that all new buses would already be fitted with AVL devices and so this would not be an additional cost to bus operators.

Bus operators would also need back office systems to process the data but it is assumed that those with AVL equipment would have these anyway for their own internal purposes. In English non-metropolitan areas, 19% of operators have no AVL fitted buses. Of these, 84% are small or micro operators. These operators might face some additional back office costs but these are likely to be small and so they have not been monetised. Bus operators can claim a 2% BSOG uplift for buses fitted with working AVL equipment and on condition that certain data is shared with local authorities and central Government.

This is likely to offset the costs of fitting an AVL device to some extent although the benefit of this subsidy to bus operators has not been calculated.

As it is assumed that fares and punctuality data will already be collected by bus operators for internal use, the main cost to them will be the cost of providing the data to LTAs. It is assumed that it will take the bus operators approximately 1 FTE hour per week to report the data to each LTA. All FTE estimates are monetised using the average UK hourly wage for administrative and secretarial occupations according to ONS data. These estimates are not based on evidence but are sensible assumptions which do not have a significant effect on the overall costs.

For the LTAs, it is assumed that they would each spend 4 FTE hours per week managing and maintaining the fares and punctuality data. This time assumption is not based on any evidence but is not a significant part of the overall costs. All FTE estimates are monetised using the average UK hourly wage for administrative and secretarial occupations according to ONS data. The current assumption is that information would be provided to LTAs but this may change to a central body as the policy progresses, in which case it is assumed costs would be decreased as there would only be one central body rather than 82 LTAs.

Benefits of mandating registering bus services electronically

There will be a benefit to passengers from improved accuracy of bus timetables and route information but this has not been monetised as there is insufficient evidence to do so. There would be a reduced administrative burden to local government.

Benefits of recording and reporting data

Research commissioned by DfT¹⁵ suggests that having web-based information is valued by bus passengers. Providing this information improves the travel experience of passengers and reduces the overall “costs” of travel. By way of measuring this, web-based information has the effect of reducing the GJT¹⁶ of bus journeys of 1.44 minutes per bus journey. However this is likely to be optimistic as there is already some degree of web-based bus information available. This value is therefore only used in the high scenario and is substantially scaled down in the central and low scenarios (to 0.5 minutes and 0.25 minutes) to give a more conservative assumption. The percentage reduction in GJT is multiplied by passengers’ likely responsiveness to changes in GJT (Balcombe et al. 2004)¹⁷ to give the increase in the number of journeys as a result of shorter average journey times.

The benefits of the reduction in GJT is calculated using the ‘rule of a half’ which multiplies the reduction in GJT by the sum of the number of journeys under a do nothing scenario plus the number of journeys under the policy, multiplied by a half. The ‘rule of a half’ measures the increased wellbeing to consumers as a result of increased journey quality. This gives the increase in consumer surplus in minutes which is then monetised using the value of time data tables from the 2015 WebTAG data book.

The benefits to operators from increased demand as a result of reduced GJT have been calculated by multiplying the number of additional journeys by the average fare to get the gross revenue gains to operators from increased demand. This gross revenue is then multiplied by an estimate for the average operating margin for bus operators (which is based on data from the CC report¹⁸) to calculate the additional income to operators as a result of the greater demand.

The external impact of this policy is also calculated. The external impact captures the positive and negative effects to society as a whole as a result of greater bus travel and lower car travel (such as changes in carbon emissions, air pollution and congestion). First, the increase in bus distance travelled is calculated using the Mohring factor¹⁹ and the growth in the number of journeys. Then, the decrease in the distance travelled by cars is calculated using a diversion factor which varies depending on the scenario but with a central value based on the 2015 WebTAG data book. The diversion factor estimates the number of new bus journeys which would otherwise have been car journeys in a do nothing scenario.

¹⁵ DfT (2009) ‘The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England’

¹⁶ GJT - Generalised Journey Time - is a way of expressing all the costs of travel in a single metric – minutes. It involves converting the time spent in a vehicle, at a station/stop and the price of a fare through the principles that people put a monetary value on their time.

¹⁷ Balcombe, R., Mackett, R., Poulley, N., Preston, J., Shires, J., Titheridge, H., Wardman, M., White, P., (2004) ‘The demand for public transport: a practical guide,’ TRL Report TRL 593, Crowthorne, UK

¹⁸ Competition Commission (2011) ‘Local bus services market investigation’

¹⁹ The Mohring factor is a standard DfT conversion factor which accounts for the fact that the distance travelled by buses is not proportional to the number of journeys as multiple journeys can be made by different passengers on the same bus.

The external benefit to society from lower carbon emissions as a result of the reduced distance travelled by cars is calculated using car fuel efficiency data from the 2015 WebTAG data book. Other external benefits from reduced car travel are calculated using car and bus MEC (marginal external cost) values from the 2015 WebTAG MECs workbook. The external costs to society from increased bus travel are monetised in the same way and taken off the benefits of reduced car travel to give the overall external impact on society.

Net impact on indirect taxation (effects on the government, bus operators and consumers)

The lost revenue to the exchequer from reduced car fuel tax payments is calculated by multiplying the reduction in distance travelled by cars by the average car fuel efficiency data from the 2014 WebTAG to get the reduced fuel use by cars. This is multiplied by the car fuel duty for diesel and petrol cars (taken from the 2014 WebTAG data book) to get the reduction in car fuel duty paid as a result of the scheme.

The increased revenue to the exchequer from increased bus fuel duty payments is calculated in the same way as for car fuel duty. The increased BSOG payments are calculated using the increased distance travelled by buses and the rate for BSOG payments²⁰. The reduced revenue from car duty and the increased BSOG payments are then taken away from the increased fuel duty payments to give the net impact on the public account. The results of this analysis are shown in table 5. All of these effects are transfers of money from one group to another and so have no overall effect on the NPV of the scheme.

Table 5: Net impact on indirect taxation (2017-2026), £000s

£000s	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Reduction in car fuel duty	£0	£0	£0	£550	£539	£527	£518	£510	£503	£497	£3,644
Increase in bus fuel duty (minus increased BSOG payments)	£0	£0	£0	£374	£379	£382	£383	£390	£397	£403	£2,708
Total	£0	£0	£0	£177	£160	£145	£135	£120	£106	£93	£936
Total, PV	£0	£0	£0	£149	£130	£114	£102	£88	£75	£64	£723

Key modelling assumptions

A separate part of the Bus Services Bill will seek to give franchising powers to local authorities. The analysis for this policy assumes that, in franchised areas, LTAs would secure the required data through franchise agreements and so operators in those areas would not be in scope of this policy. For consistency with the franchising analysis, it is therefore assumed that metropolitan areas will undertake franchising and so will not be in scope of this policy. However, while operators in metropolitan areas will not need to register services, the data on franchised services will need to be open access data available to third parties for use in journey planning tools.

Bus operators will be mandated to register services electronically from 2017 and they will have to provide fares and punctuality data from 2020. This is in order to give operators who do not currently have AVL installed on their buses time to comply with the regulation.

All of the current electronic bus service registrations are from large and medium operators. This is due to registration data which shows that only large and medium operators are currently registering by EBSR.

All bus operators would spend approximately 30 minutes of FTE (full time equivalent) per service registration by paper. This is the same assumption as used in the 'Changes to bus service registration requirements to improve competition in the bus market' impact assessment, which was produced to evaluate remedies proposed by the Competition Commission.²¹

Large bus operators would spend approximately 1 hour of FTE per service registration electronically because it is thought that it would be more burdensome for operators to register electronically than by paper due to the complicated software required to do so. It is assumed that it would take small and micro bus operators 50% more time than larger bus operators to register services electronically (1½ hours for an electronic registration) because they would have to do it less often and so would not have as much expertise at using the electronic registration software. While this reflects the existing EBSR system, the Department recognises the need to make it accessible to all operators and is proposing to address this. However, as this is only a proposal, the analysis still assumes that bus operators will have to register electronically using the EBSR system.

The average bus journey time in a do nothing scenario does not change over time as there is no data to suggest that it would.

²⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/326156/bsog-rates-april2014.pdf [accessed 14/10/2015]

²¹ 'Changes to bus service registration requirements to improve competition in the bus market' 18/12/2014 (IA No: DfT00308)

Bus operators will already record the punctuality data for internal purposes therefore their additional costs as a result of this policy would only be the costs of reporting their data to local authorities. In reality, smaller operators may not do this but this has not been monetised due to a lack of evidence.

The operating margin for bus operators is assumed to be 10%. This is based on data from the Competition Commission report on the bus market which suggested that large operators had operating margins of 11% but this has been slightly scaled down to reflect the fact that smaller operators are likely to have lower operating margins. This assumption is also consistent with other analysis for the Bus Services Bill.

As all services would be registered digitally by default, it is assumed that there would be no differential in the fee for registering a service, other than a reduced fee for community bus services as now.

It will take bus operators an average of 1 FTE hour per week to report fares and punctuality data. It is assumed that each LTA will also spend 4 FTE hour per week monitoring and managing the data.

The current bus registration IT system will be improved in order to make it easier to use and thus more attractive to bus operators. If this was not done, there would be a substantially greater time and monetary burden on businesses as they would need to use the existing EBSR system.

Analysis for alternative option: A scheme of financial incentives to encourage bus operators to register bus services electronically and report fares and punctuality data

The estimated costs and benefits of option 1 have been monetised and socially discounted using the social discount rate recommended in the Green Book (3.5%). The results are shown in table 1. These impacts are additional to a do nothing counterfactual.

The analysis for the alternative option uses the same methodology as for the lead option with the following differences:

The financial incentive offered to operators is twofold. Firstly, the registration costs are changed in order to incentivise the take-up of electronic registration as set out in table 6. Secondly, the government will give a lump sum to operators which will be 150% of their costs of reporting fares and punctuality data. Given that bus operators are not currently willing to share data on a voluntary basis, it is likely that a substantial financial incentive would need to be offered to encourage them to do so. This gives operators an incentive to register their bus services electronically and to report their fares and punctuality data.

Table 6: Registration costs per bus service registered in the do nothing and financial incentives scenarios²²

	Costs under do nothing scenario (£)	Costs under financial incentives scheme (£)
Cost of registration (SME electronic)	£60	£30
Cost of registration (SME paper)	£60	£60
Cost of registration (Large electronic)	£60	£60
Cost of registration (Large paper)	£60	£120

There is no information as to how many operators would apply for the financial incentives so some illustrative values have been included for each of the three scenarios to demonstrate the effects that different levels of take-up would have. In the central scenario, it is assumed that 50% of large and medium operators and 25% of small operators would apply for the scheme. In the low scenario, it is assumed that 25% of large and medium operators and 13% of small operators would apply for the scheme. In the central scenario, it is assumed that 75% of large and medium operators and 38% of small operators would apply for the scheme. As a simplifying assumption, it is assumed that all bus operators who apply for the financial incentive will do so as soon as possible (i.e. in the first years of the scheme).

It is assumed that there would be some costs to government to administer the financial incentives. The costs of administering a financial incentive are scaled down from the BSOG costs to reflect the fact that the administrative burden is likely to be far smaller for this scheme.

It is also assumed that only bus operators who already have buses with AVL will apply for the financial incentives because they will be the ones who face the least costs to comply. It we wanted to incentivise

²² The fee for registering community bus services is assumed to remain at £13

all operators to report their fares and punctuality data, the financial incentive offered would have to be substantially higher and, even then, it is highly unlikely that all operators would be willing to take it up. Therefore this cost is not included in the NPV analysis for this option.

Annex B: Public Service Vehicles (Registration of Local Services) Regulations 1986

The requirements for registering a bus service are set out in the Public Service Vehicles (Registration of Local Services) Regulations 1986 (SI 1986/1671 – as amended) as made under the Transport Act 1985. When registering, operators must set out:

- the name of the operator of the service
- the number of their PSV licence or community bus permit
- the date on which the service is to start
- the times during the year the service will be provided
- the principal starting and finishing points of the service
- a description of the route which is sufficient to identify the roads to be traversed together with a map not smaller than 1:50,000 showing the roads
- a timetable for the service indicating the proposed times of individual services at principal points on the route, except where the service interval is 10 minutes or less when a statement of fact may be given
- details of stopping arrangements

The application must be accompanied by the appropriate fee (currently £60: £13 for community bus services).

According to the Traffic Commissioners' Annual Report 2014-15, 13,819 registrations were made in England in the 12 months to 31 March 2015. Of these, 3,066 were new registrations, 7,912 were variations and 2,841 were cancellations.

Annex C PIR planning

Post Implementation Review (PIR) Plan

1. **Review status:** Please classify with an 'x' and provide any explanations below.

<input type="checkbox"/>	Sunset clause	<input checked="" type="checkbox"/>	Other review clause	<input type="checkbox"/>	Political commitment	<input type="checkbox"/>	Other reason	<input type="checkbox"/>	No plan to review
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2. **Expected review date** (month and year, xx/xx):

01	04	/	20	22
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Rationale for PIR approach:

Describe the rationale for the evidence that will be sought and the level of resources that will be used to collect it.

- Will the level of evidence and resourcing be low, medium or high? (See Guidance for Conducting PIRs)

Low-medium

- What forms of monitoring data will be collected?

Data relating to the availability of apps and journey planners will be needed, and data on their usage where this can be shared. Information about the impact on the internal processes of operators and whether this has led to any costs or efficiencies. Information about any failures to meet the open data requirements in the legislation, which would be picked up by the Traffic Commissioners and in the first instance, providers of journey planners.

- What evaluation approaches will be used? (e.g. impact, process, economic)

A mixed approach to evaluation is proposed, but with an emphasis on assessing the uptake of information by journey planner providers and passengers and any improvement to existing processes for operators and LTAs. Transport Focus' ongoing passenger research will give a more qualitative view.

- How will stakeholder views be collected? (e.g. feedback mechanisms, consultations, research)

A variety of collection methods will be used, including feedback from LTAs, bus operators and information providers. Passengers' views on information provision will be picked up through Transport Focus' ongoing work, including their annual Bus Passenger Survey.

Title: Bus Services Bill - Ticketing Co-Operation IA No: DfT00336 Lead department or agency: Department for Transport Buses & Taxis Other departments or agencies: Smart & Integrated Ticketing	Impact Assessment (IA)		
	Date: 24/09/2015		
	Stage: Final		
	Source of intervention: Domestic		
	Type of measure: Primary legislation		
Contact for enquiries: Busworkshops2015@dft.gsi.gov.uk			
Summary: Intervention and Options			RPC Opinion: GREEN

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2014 prices)	In scope of One-In, Three-Out? Measure qualifies as
-£0.025m	0	0	YES ZNC

What is the problem under consideration? Why is government intervention necessary?
 Smart joint and through ticketing schemes²³ introduced by Local Transport Authorities (LTAs) using existing joint ticketing powers (section 135 Transport Act 2000) are usually isolated – it is typically not possible for bus users to cross LTA boundaries using the same smart ticket (typically a smartcard, but could be a contactless bankcard or a smartphone). This is due to the technical and commercial complexities involved in introducing a scheme, the costs involved, and the geographical limits of LTA boundaries. This is hindering the development of interoperable schemes, limiting the positive externalities of growth in patronage and mobility between neighbouring LTAs. Government intervention is required to enhance existing legislation, providing LTAs with further guidance on how to co-operate, and thus improve network accessibility for passengers across LTA boundaries.

What are the policy objectives and the intended effects?
 The policy objective is to encourage LTAs to co-operate when introducing or amending joint and through ticketing schemes. The intended effect is an increase in the number of smart ticketing schemes which allow bus passengers to travel between neighbouring LTAs using the same compatible smart ticket. Should LTAs decide to co-operate over their joint and through ticketing schemes, bus users will benefit from seamless travel in and between LTA boundaries, which in turn will lead to bus passenger growth.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
 Option 1: Do nothing – no legislation change. New and existing schemes would continue to operate in silos, with little thought for co-operation between neighbouring LTAs or sub-regional bodies. As a consequence opportunities to travel using the same smart ticket between adjoining LTA areas would remain limited.
 Option 2: Amend legislation and introduce a requirement to “have regard to” guidance issued by the Secretary of State. Preferred option. This option would strengthen existing legislation by further enhancing the requirement for LTAs to have regard to neighbouring LTAs when making or amending a joint and through ticketing scheme. It would be further strengthened by adding a duty to “have regard to” guidance issued by the Secretary of State.
 Financial incentives or penalties to LTAs were considered. However, these were not appraised as the incentive option is not financially feasible given central government budgetary constraints. The penalty option is not feasible due to equity, financial and legal concerns.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 11/2020

Does implementation go beyond minimum EU requirements?	N/A				
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: N/A		Non-traded: N/A		

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: Andrew Jones Date: 8.2.16

²³ Joint and through ticketing schemes offer tickets accepted by multiple bus operators, potentially including other modes with services crossing LTA boundaries.

Summary: Analysis & Evidence

Policy Option 2

Description: Change regulation - strengthen existing legislation

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -0.005	High: -0.095	Best Estimate: -0.025

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.0095	0.0112	0.0935
High	0.0015	0.0005	0.0050
Best Estimate	0.0045	0.0025	0.0245

Description and scale of key monetised costs by 'main affected groups'

Local Transport Authorities: Familiarisation costs for managers (£0.004m); Administrative costs for LTAs when exploring or proposing a potential interoperable scheme (£0.02m)

Other key non-monetised costs by 'main affected groups'

Local Transport Authorities: Consolidated back office costs for co-operative schemes; Marketing costs to promote new schemes; Training costs for back office staff implementing schemes
 Bus operators: Equipping buses with smart-capable technology; Staff familiarisation and training costs for bus drivers and administrators; Increased fuel duty costs

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	N/A	N/A	N/A
High	N/A	N/A	N/A
Best Estimate	N/A	N/A	N/A

Description and scale of key monetised benefits by 'main affected groups'

None.

Other key non-monetised benefits by 'main affected groups'

Bus users: Increased convenience due to seamless travel
 Bus operators: Increased net revenue due to higher bus patronage
 Society: Environmental and decongestion benefits due to modal shift from cars to buses
 Central government: Change in fuel duty revenues due to modal shift from cars to buses
 Local Transport Authorities: Reduced back office costs due to consolidated back office operations

Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

Assumptions: The intervention leads to an increase in the number of joint and through ticketing schemes; LTAs will consolidate their back office operations
 Risk: The intervention will be ineffective in encouraging co-operation and therefore there will be no increase in the number of joint and through ticketing schemes.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: 0	Benefits: 0	Net: 0	NO	ZNC

Evidence Base

The evidence base section is structured in the following way:

- *Main body*
 1. Problem under consideration
 2. Rationale for intervention
 3. Consultation
 4. Policy objective
 5. Description of options considered (including do nothing)
 6. Non-legislative option
 7. Costs and benefits of Option 2 (preferred option)
 8. Risks and assumptions
 9. Wider impacts
 10. Summary of preferred option with description of implementation plan
- *Analysis and evidence annex*
- *Post Implementation Review (PIR) Plan*

1. Problem under consideration

Bus ticketing is often complex and confusing even to a frequent traveller. In comparison with many other areas of retail, limited progress has been made in simplifying ticketing options and introducing modern forms of payment such as contactless bankcards.

Recent attempts to modernise bus ticketing have largely centred on the introduction of local and group branded ITSO¹ smartcard schemes (e.g. the Key, Stagecoach Smart, Touch card), or barcode based mobile applications. ITSO schemes are often limited to the major urban conurbations, whilst barcode based mobile applications typically cover whole operating groups or regions. Many of the ticketing schemes across the country have been implemented by bus operators with others being taken forward by local authorities to cover their area.

Schemes typically fall under a single brand (e.g. West Yorkshire's Metro brand) and are made up of a series of elements, including but not limited to the following:

- Commercial agreement
 - Products (single / multi-modal / pay as you go)
 - Zones or geographical boundaries
 - Pricing / revenue allocation
 - Governance
 - System owner / controller
- Infrastructure
 - Back-office systems
 - Operator infrastructure (e.g. ticket machines)

As ticketing technologically advances there are significant challenges to standardising existing schemes. These challenges are from both a commercial and ticket rationalisation perspective, but also a technological perspective. Technology systems need to be suitably standardised to enable passengers to travel in and between adjoining LTA areas using compatible smart tickets on any one or more operators' services.

The focus on local delivery has led to a series of ring-fenced schemes being introduced. As a consequence, the tickets, back-office systems, pricing structures, smart ticket options and retail mechanism vary greatly between schemes and even between operators within the same scheme. Single operator led schemes typically restrict travel to one operator², or in the case of schemes established by a

¹ ITSO is the national Specification, or Standard, for smart ticketing. The copyright for this is owned by The Crown in Great Britain.

² Stagecoach Smart - <http://www.stagecoachsmart.com/>

LTA³ they are often constrained geographically to their own local administrative boundary. For people looking to travel across LTA boundaries this presents a cognitive cost – they have to research, understand and make sure they have the right provisions for the different ticketing scheme(s). As a result, this can deter bus use.

This represents a significant problem as the positive externalities of cooperating and integrated smart ticketing schemes (increased bus usage and mobility between neighbouring LTAs) are not being realised.

As the number of local areas being provided with devolution powers increases, the Department needs to consider how best to use the Bus Services Bill to ensure local areas have the necessary legislative powers, both existing (S135 Transport Act 2000) and new (Franchising & Enhanced Partnership) to deliver a coherent and improved ticketing offer for bus passengers.

2. Rationale for intervention

LTAs have an existing power under Section 135 of the Transport Act 2000 which allows them to make a ticketing scheme which operators of local bus services are required to participate in. Section 135 already requires LTAs to consider cooperating with neighbouring LTAs when making or amending a ticketing scheme. However this requirement has not encouraged cooperation – there are no documented cases of LTAs using this requirement to co-operate when introducing a joint and through ticketing scheme. There is therefore a need to enhance the existing co-operation powers to clarify the existing requirement on LTAs to give due and proportionate consideration to cooperation when seeking to make or amend an existing scheme.

LTAs may make a scheme under S135 if they consider that the proposed scheme –

- a) Would be in the interests of the public; and
- b) Would to any extent implement the policies set out in their bus strategy.

When making a ticketing scheme, an LTA sets out the requirements of the scheme. Operators of local services are then required to make and implement arrangements to cover tickets which apply to that scheme. Manchester's System One⁴ is an example of such a scheme introduced using these powers.

Historically, travel between adjoining LTA areas has been less of an issue with schemes based on paper tickets which are shown to the driver and visually verified. Since the introduction of S135 in the Transport Act 2000⁵ ticketing technology has continued to progress at a rapid rate, with the introduction of smartcards and other forms of electronic smart ticketing such as contactless bankcards and smart phones.

For the full benefits of running a smart scheme to be realised by LTAs there is a need to standardise the technical development. This cannot be achieved without more specific levels of co-operation between LTAs when making or amending their joint and through ticketing schemes.

3. Consultation

A "background document" on Bus Reform policies was published on 21st September⁶, followed by a series of workshops across the country which allowed us to engage with around 400 people from across local authorities and the bus industry.

Feedback demonstrated that from a passenger perspective the barriers to travel across LTA boundaries need to be removed by facilitating greater levels of joint and through ticketing. In rural areas there needs to be consideration for changes to joint and through ticketing schemes to ensure they meet passenger expectations, particularly around cross-boundary issues. Finally, simplicity was identified as a key driver in terms of tickets, pricing, geography and available modes (e.g. bus, rail, tram).

³ Pop card - <http://www.nexus.org.uk/pop>

⁴ Manchester System One - <http://www.systemonetravelcards.co.uk/>

⁵ Transport Act 2000 - <http://www.legislation.gov.uk/ukpga/2000/38/part/II/crossheading/bus-services-ticketing-schemes>

⁶ Bus Reform - <https://www.gov.uk/government/publications/bus-reform-workshops-background-information>

4. Policy objective

The overarching policy objective is to encourage LTAs who wish to make or amend a joint and through ticketing scheme using the existing powers set out at section 135 of the Transport Act 2000 to have regard to neighbouring LTAs. The intended effect is an increase in the number of joint and through ticketing schemes which allow bus users to travel between neighbouring LTAs using the same (compatible) smart ticket.

By reducing barriers to travel between LTA boundaries, passengers will benefit from seamless travel across a wider geographical area. Improved interoperable travel could lead to greater passenger growth, with bus operators also expected to benefit from increased revenue as a result of more passengers travelling.

Having introduced integrated schemes across an area, it also offers an LTA the opportunity to expand schemes to be cover other modes, for instance rail, tram and ferry. This brings further benefits to passengers and transport operators by enabling payment across all modes of transport to be increasingly standardised.

Finally, there is also a need to ensure that where franchising and enhanced partnership powers are being made available to LTAs that existing legislation such as S135 of the Transport Act 2000 is consistent with these.

5. Description of options considered (including do nothing):

1. Do nothing – no legislation change. New and existing schemes taken forward by LTAs using the powers available in section 135 of the Transport Act 2000 would continue to operate in silos, with little thought for co-operation between neighbouring LTAs. As a consequence opportunities to travel using the same smart ticket between adjoining LTA areas would remain limited.
2. Amend legislation and introduce statutory guidance. **Preferred option.** This option would strengthen existing legislation by further enhancing the requirement for LTAs to have regard to neighbouring LTAs when making or amending a joint and through ticketing scheme. It would be further strengthened by adding a duty to “have regard to” guidance issued by the Secretary of State. Any changes to legislation and guidance will not make cooperation mandatory when establishing a joint and through ticketing scheme, however it will require LTAs to give due and proportionate consideration to co-operation.

6. Non-legislative options

S135 of the Transport Act 2000, as currently formulated, is vague and has no real “teeth” so if left unreformed it is unlikely to improve co-operation between LTAs for the benefit of passengers. This is evidenced by the fact there has been no documented cases of LTAs using S135 powers to support the need to co-operate when making a joint and through ticketing scheme. This issue will be amplified as additional smart schemes are introduced that rely upon a structured specification to support interoperability.

Financial incentives and penalties

No non-regulatory options aside from the “Do nothing” option have been appraised as part of this impact assessment. One non-regulatory option that could have been considered is financial incentives for cooperation. In this option, central government would compensate all costs to LTAs who decided to cooperate with one another, plus an additional percentage of total costs to incentivise cooperation (e.g. a 10% uplift). This option has not been appraised as the costs to central government is likely to be high, and given the budgetary constraints of central government this option is not financially feasible.

Another option could be to impose financial penalties on LTAs if they decide not to cooperate with one another when implementing a joint and through ticketing schemes. This has not been appraised for a number of reasons. Firstly, there may be legitimate reasons why LTAs cannot cooperate, and therefore a penalty would not be an equitable response. Secondly, LTAs are under considerable budgetary constraints and a penalty would exacerbate this situation. Thirdly, this option could contravene the New

Burdens Doctrine⁷ which requires all new burdens on Local Authorities (and thus LTAs) are fully funded by central government.

7. Costs and benefits for Option 2 (preferred option)

This section considers the net costs and benefits of Option 2 (the preferred option). **These figures are net of the do-minimum scenario (which is the same outcome as Option 1).**

Detailed analysis of costs and benefits, including assumptions and data sources, is included in the analysis and evidence annex at the end of this impact assessment.

The analysis excludes concessionary travellers where applicable. This is because concessionary travellers do not pay fares (and so do not enjoy any money-saving benefits) and already enjoy seamless travel nationally through the English National Concessionary Travel Scheme (ENCTS).

The intervention affects cross-boundary bus trips (cross-boundary trips refers to trips that go across existing scheme boundaries or LTA boundaries where future schemes could be delineated). Consequently, the analysis depends on the number of cross-boundary bus trips and the level of cross-boundary bus service mileage. Analysis⁸ using National Transport Survey data indicates that around 10% of bus journeys in England start and finish in different local transport authorities. This represents a substantial proportion of the bus journeys that could benefit from interoperable ticketing schemes.

In the Option 2 scenario it is assumed that the joint and through ticketing proposals are introduced in 2018 and, unless otherwise stated, the effects of the intervention take place from 2019 onwards, after stakeholders adjust to the new changes. All costs and benefits represent impacts at the national level of England, including London.

Direct impacts (monetised)

There are two direct impacts resulting from the intervention. Both impacts are costs – there are no direct benefits as a result of the intervention. These are displayed in the table below and have been monetised. Further explanations of these impacts and their calculation, as well as the assumptions used in the sensitivity analysis, can be found in the Analysis and evidence annex.

Costs	Explanation	Scenario costs (£, 2014 prices, discounted to 2015)		
		Low	Central	High
Familiarisation costs for LTA delivery and policy managers	LTA managerial staff will have to familiarise themselves with any changes to their policy and delivery framework as a result of the intervention. This is a one-off transition cost that will be incurred when the provisions are introduced in 2018	£9,500	£4,000	£1,000
Administrative costs for LTAs	Administrative costs may be incurred by LTAs when proposing or exploring a potential interoperable scheme. This could include time spent by LTA managerial staff on meetings and communications with other LTAs, and their own internal meetings and independent work. These costs are incurred from 2019 onwards	£84,000	£20,000	£3,500
Total costs		£93,500	£24,500	£5,000

⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/5960/1926282.pdf

⁸ Unpublished analysis by Department for Transport statisticians using National Transport Survey data

Indirect impacts (non-monetised)

All other impacts incurred as a result of the intervention apart from the two listed above are indirect impacts. This is because the intervention does not mandate either the introduction of smart ticketing itself, or joint and through ticketing cooperation – only the LTAs in question have the authority to decide if they want to cooperate. Therefore the impacts are a second-order effect and are not a direct consequence of the intervention.

The table below outlines the non-monetised indirect costs and benefits of Option 2 under the three scenarios.

The indirect impacts of the intervention have not been monetised for two reasons. Firstly, this intervention is relatively light in terms of its expected impacts and therefore a full quantitative analysis would be disproportionate. Secondly, there is a lack of relevant and robust data that can be used to inform some assumptions, including the effectiveness of the intervention in encouraging interoperable schemes.

Further detailed analysis, including the relevant assumptions used, of each of these benefit and cost items is outlined in the analysis and evidence annex.

Benefits	Explanation
Benefits to bus passengers (increased consumer welfare)	Passengers can travel seamlessly between co-operating areas. This, combined with likely fare and ticket-type harmonisation will reduce the cognitive cost of cross-boundary travel, resulting in a reduction of Generalised Journey Time ⁹ (GJT) for cross-boundary trips. This will increase consumer welfare for existing users and entice new consumers to use buses.
Benefits to bus operators (increased net revenue)	The reduction in GJT leads to an increase in cross-boundary bus trips as new passengers are enticed into the market. This will lead to an increase in net revenue for bus operators.
Environmental and decongestion benefits	The increase in cross-boundary bus trips are made by new bus users, some of whom in the absence of the intervention may have used a car for their trip. This means there are environmental and decongestion benefits ¹⁰ in some cases, due to a reduction in car trips and an increase in bus trips.
Public accounts impact (change in fuel duty)	The decrease in car trips and increase in bus trips will lead to a change in the amount of fuel duty paid to central government.
Reduced cost burden to Local Transport Authorities (LTAs)	If two or more LTAs decide to cooperate and consolidate their back office operations, they are likely to enjoy back office cost savings due to economies of scale benefits.
Costs	Explanation
Installing and maintaining smart technology in buses	There may be a need to install smart technology in buses that do not already have it, in order for LTAs to successfully co-operate with their smart ticketing schemes.
Consolidated back office costs	Back office costs for LTAs who decide to cooperate and consolidate their back office operations.
Marketing costs	It is likely that LTAs will market their cooperative schemes in order to notify passengers of changes and encourage higher bus patronage.
Staff familiarisation and training costs for bus operators	Bus drivers and operator administrators will need to be trained in order to familiarise them with any changes to bus services and operations that result from new cooperative schemes.
Increased fuel duty costs for operators	In response to higher passenger numbers, bus operators will increase their bus mileage and thus incur higher fuel duty costs due to higher fuel consumption
Staff training costs for LTAs	When implementing a cooperative scheme. LTA back office staff may need to be trained on any changes to back office operations.

⁹ Generalised Journey Time (GJT) is a measure of the overall cost of a journey. It includes factors such as in-vehicle journey time, access/waiting/egress times and fares

¹⁰ Decongestion benefits include air quality and safety improvements

C02 equivalent change in greenhouse gas emissions

This is the difference between the fall in greenhouse gas emissions from car trips that otherwise would have been taken in the absence of the intervention and the rise in greenhouse gas emission from increased bus mileage as a result of the intervention. This has not been calculated.

One-In, Three-Out (OI3O) and Business Impact Target (BIT) status

As defined in the [Better Regulation Framework Manual](#) (BRFM) section 1.9.5, One-In, Three-Out (OI3O) applies to all changes in, or introduction/removal/expiry of, measures that require RRC clearance. **This measure is in-scope of OI3O**, however, as explained above, the intervention does not mandate cooperation – all impacts on business are a consequence of LTAs deciding to cooperate voluntarily. This intervention has no direct impacts on business and therefore the EANDCB has not been calculated **and the measure classified as zero-net-cost**.

This measure is a qualifying regulatory provision (QRP) for the Business Impact Target (BIT) but with an EANDCB of zero.

8. Risks & assumptions

There are two main assumptions that the analysis is based on. Firstly, the intervention will lead to an increase in interoperable schemes. Secondly, LTAs that partner on interoperable schemes will consolidate their back office operations. Impact-specific assumptions, including those for the direct monetised impacts, are outlined in more detail in the evidence and analysis annex.

There is a risk that following amendments to S135 of the Transport Act 2000 LTAs will choose not to utilise the available powers to act constructively with one another. This could, where a scheme is being made or amended, result in a lack of co-operation between LTAs and reduce the likelihood of the creation of a joint and through ticketing scheme.

Another risk is the requirement to have regard to neighbouring LTAs, which might impact the cost of making a ticketing scheme, making it unviable financially. As the requirement to have regards to does not mandate integration past seeking to investigate co-operation this is unlikely to occur, but would still impact upon the passenger being able to travel between adjoining LTA areas using the same smart ticket.

9. Wider impacts

Competition assessment

Cooperative schemes and the resulting higher bus patronage could induce new firms to enter the bus market and increase competition. For existing and new small bus operators, cooperative schemes will be beneficial as their services will be more accessible to a proportionately larger set of customers (compared to larger operators). This could increase competitive pressure on larger bus operators and therefore incentivise improvements in bus services for bus passengers.

Small & micro business assessment

LTAs can already choose to utilise the powers they have available in S135 of the Transport Act 2000 to mandate operator participation in a ticketing scheme. There is no requirement for LTAs to use this pre-existing power, and our proposals will not alter that.

The proposed changes place further “have regard to” requirements on LTAs, but do not change the requirements placed on bus operators once an LTA has chosen to establish a ticketing scheme. Therefore no further requirements are placed upon small and micro businesses as a consequence of the intervention, and the costs of compliance remain unchanged from the existing policy regime.

Where a scheme is being made or amended to utilise smart ticketing equipment, there will be a need for all participating operators to have the necessary equipment installed to enable the acceptance and retailing of ticketing products. The initial capital cost for installing smart ticketing equipment on one bus is in the region of

£2,700 and the ongoing maintenance and support cost is around £250 per bus per year¹¹. For a small operator with a fleet of 20 non-smart-enabled buses, this entails an initial installation cost of £54,000 and recurring costs of £5,000 per year. These potential costs to business would exist even in the do-nothing scenario due to the fact that LTAs could already implement a ticketing scheme using the pre-existing S135 powers from the Transport Act 2000.

Secretary of State Guidance will be used to detail possible options a LTA might wish to consider when making a scheme, in order to lessen the financial burden on smaller business. This could include providing equipment free of charge or at a subsidised rate, or establishing special circumstance where an operator is given dispensation to participate without the necessary equipment.

In some instances, where an LTA is proposing a scheme, the necessary ticketing equipment is loaned or granted to smaller businesses by the LTA to aid with the compliance costs. This has mostly recently occurred in South Hampshire and Manchester to ensure smaller operators can participate and SMEs are not unfairly excluded as a consequence of an LTA(s) introducing a mandatory scheme. The costs to LTAs from supporting small and micro businesses will depend on the level and type of support offered, the size of the local small and micro bus operator market, and the proportion of small and micro operated-buses which are not smart-enabled¹².

Further financial support for small and micro businesses can accrue from the Bus Service Operators Grant (BSOG) incentive payment for smart-technology-enabled buses¹³. Operators can claim an 8% uplift on their core BSOG payment. Based on Departmental BSOG data, a small operator with a fleet of 20 smart-enabled buses receives on average £280 per bus per year. This represents just over 10% of the installation cost and 112% of the yearly maintenance cost of smart ticketing technology per bus. The BSOG smart incentive payment is currently undergoing reform; suggested changes include a central Government-funded managed service for small operators. If this reform is implemented during the scope of this intervention, small and micro bus operators could enjoy a proportion of their initial equipment and/or maintenance/support costs being funded by this managed service.

Small & micro businesses also have an opportunity to capitalise on the increased revenue opportunities generated as a result of any increased interoperability between schemes. This could allow them to gain a greater foothold in a market dominated by larger bus operators.

Rural proofing assessment

In rural areas there is often less of an identifiable need for co-operation on smart ticketing issues given the lower-levels of operator competition on individual routes. We do not envisage that as a result of these proposals that there would be any impact on rural services. By increasing the requirement for co-operation it could lead to improved rural connectivity, potentially opening up new cross-border routes between LTAs.

Other wider impacts

Other equalities issues have been considered and no undue impact is anticipated on any particular group.

10. Summary and preferred option with description of implementation plan

- Amend section 135(7) of the 2000 Transport Act to make more specific the requirement for LTAs to “have regard to” when making or amending an existing scheme, particularly in regards to arrangements for passenger to be able to travel in and between adjoining LTA areas using compatible smart tickets on any one or more operators’ services.
- Introduce guidance to support joint and through ticketing schemes between LTAs.

Our preferred option is to amend legislation to make more specific the requirement on LTAs to have regard to other LTAs with which they share a geographical boundary when making or amending an existing scheme.

¹¹ Cost data from a commercial source

¹² Due to a lack of robust data and information on these variables, the Department is unable to offer indicative cost estimates

¹³ <http://webarchive.nationalarchives.gov.uk/20110504135837/http://www.dft.gov.uk/pgr/regional/buses/busgrants/bsog/avl-incentives.pdf>

It is proposed that the legal provisions are included in the Bus Services Bill and, if Parliamentary approval is secured, would be enacted in late 2017, or early 2018.

Guidance would need to be developed with input from local authorities and bus operators. Much of this information will be available from work already undertaken by the Department's Smart Cities Partnership which has been looking at how to achieve greater levels of co-operation and joint and through ticketing between LTAs. There will be sufficient time to do this and to consult with stakeholders before completion of the statutory process.

Analysis and evidence annex

This section explains the costs and benefits in more detail, outlining relevant assumptions and data sources.

Data sources

The majority of data come from the WebTAG databook¹⁴, DfT Bus Statistics¹⁵ and National Travel Survey statistics¹⁶. Other sources and the above sources are mentioned in the following analysis where appropriate.

Indirect Benefits (non-monetised)

Benefits to bus passengers (increased consumer welfare)

If a new smart joint and through ticketing scheme becomes interoperable with a neighbouring scheme, this brings benefits to bus users. Bus passengers in both affected areas can now travel seamlessly between areas using the same smart payment mechanism. As part of the co-ordination in smart ticketing schemes, it is likely that some form of fare and ticket-type harmonisation will occur across the areas. Both of these processes reduce the cognitive cost of travelling on bus services across and within both areas: passengers no longer have to use different smart payment mechanisms and can spend less time researching the money cost implications of their journey.

These benefits can be considered to be a reduction in the Generalised Journey Time (GJT) of bus travel for bus trips that cross neighbouring schemes and/or LTAs. A reduction in GJT will lead to an increase in cross-boundary bus journeys as new bus users are enticed into the market. Overall this will lead to an increase in consumer welfare – the difference between the price (in terms of GJT) consumers pay for a good/service and what they are willing to pay (in terms of GJT) for the good/service.

The magnitude of this benefit depends on the number of current cross-boundary trips in the relevant LTA(s), the extent to which existing and potential bus passengers value the new smart and interoperable scheme, and the extent to which new bus trips are generated as a result of the new scheme.

Assumption	Source	Source evidence used
An interoperable smart ticketing scheme will reduce the GJT for cross-border bus journeys	DfT (2009) "The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England"	A simplified ticketing scheme reduces the GJT for bus journeys by 1.43 minutes for commuters. Simplified ticketing is as an appropriate proxy as the scheme provides similar benefits in the form of reduced cognitive costs. The effect for this intervention is likely to be smaller than 1.43 minutes as some LTA's already have smart ticketing schemes and leisure users have a lower value of time
A reduction in GJT will lead to an increase in bus journeys	Balcombe et al (2004) "The demand for public transport: a practical guide" ¹⁷	The GJT elasticity of demand for bus journeys is negative (-0.58). I.e. A 10% reduction in GJT will lead to a 5.8% increase in bus journeys, all other things being equal

¹⁴ <https://www.gov.uk/government/publications/webtag-tag-data-book-november-2014>

¹⁵ <https://www.gov.uk/government/collections/bus-statistics>

¹⁶ <https://www.gov.uk/government/collections/national-travel-survey-statistics>

¹⁷ <http://www.demandforpublictransport.co.uk/TRL593.pdf>

Benefits to bus operators (increased net revenue)

The reduction in GJT leads to an increase in cross-boundary bus trips (as shown above). This will lead to an increase in net revenue for bus operators. The magnitude of this benefit depends on the extent of the increase in bus trips and the operating margins for the relevant operators.

Assumption	Source	Source evidence used
Bus operators will gain positive net revenues from an increase in cross-boundary bus trips	Competition Commission (2011) "Local bus services market investigation" ¹⁸	Operating margins for four of the largest bus operators in England range from 11.0% to 17.1% in 2011. The average operating margin for all operators, which includes smaller operators, is likely to be 11.0% or lower, but positive nonetheless.

Environmental and decongestion benefits

The reduction in GJT leads to an increase in cross-boundary bus trips and in response to the increase in demand for bus travel, operators will increase their bus service mileage. The generated trips are made by new bus users, some of whom in the absence of the intervention may have used a car for their particular trip instead. This means that, in some cases, there are environmental and decongestion benefits. This will occur when the monetised costs of green-house gas emissions and congestion as a result of increased bus trips are lower than the equivalent monetised costs if the intervention did not occur.

Assumption	Source	Source evidence used
Of the newly generated cross-boundary bus trips, a proportion will come from trips that would otherwise have been taken by car	DfT (2014) "WebTAG data book" ¹⁹	The car diversion factor for buses is 0.31. This means that for every additional 100km of bus travel, 31km of this additional travel would have been taken by car in the counterfactual.
An increase in cross-boundary bus trips will lead to an increase in bus service mileage	DfT (2014) "WebTAG" ²⁰	The Mohring Factor ²¹ of 0.6 indicates that bus service mileage will increase in response to an increase in demand

Public accounts impact (change in fuel duty)

The increase in cross-boundary bus trips and subsequent reduction in car trips will lead to a public accounts impact (i.e. a change in the total amount of fuel duty paid to central government). Petrol and diesel are subject to fuel duty and the change in fuel duty paid will vary according to the ratio between the change in bus and car trips (there will be a rise in fuel duty paid by bus operators and a fall in fuel duty paid by car owners).

The change in fuel duty is a transfer: users who switch from car to bus travel benefit from not having to pay this fuel duty. This benefit will be reflected as an increase in consumer welfare. Bus operators have an increased fuel duty cost burden – as bus trips increase they respond by increasing their bus service levels in terms of bus mileage. Therefore they use more fuel and incur higher fuel duty costs.

Assumption	Source	Source evidence used
Of the newly generated cross-boundary bus trips, a proportion will come from trips that would otherwise have been taken by car	DfT (2014) "WebTAG data book" ²²	The car diversion factor for buses is 0.31. This means that for every additional 100km of bus travel, 31km of this additional travel would have

¹⁸ <https://www.gov.uk/cma-cases/local-bus-services-market-investigation-cc>

¹⁹ <https://www.gov.uk/government/publications/webtag-tag-data-book-november-2014>

²⁰ <https://www.gov.uk/guidance/transport-analysis-guidance-webtag>

²¹ The Mohring factor is a standard DfT conversion factor which accounts for the fact that the distance travelled by buses is not proportional to the number of journeys as multiple journeys can be made by different passengers on the same bus.

²² <https://www.gov.uk/government/publications/webtag-tag-data-book-november-2014>

		been taken by car in the counterfactual.
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Reduced cost burden to Local Transport Authorities

If two or more LTAs decide to cooperate with one another and consolidate their back office operations they are likely to enjoy back office cost savings due to economies of scale benefits²³. The magnitude of this benefit will depend on the extent of the economies of scale benefits that can be realised.

Assumption	Source	Source evidence used
If two or more LTAs decide to co-operate over their smart ticketing scheme, they will consolidate their back office operations and enjoy cost savings	Departmental expert opinion and commercially sensitive information	Cost savings of around 35% observed from back office cost forecasts of an existing interoperable scheme

Indirect Costs (monetised)

Installing and maintaining smart technology in buses

If an LTA implements a joint and through ticketing scheme and wants to cooperate with another LTA(s), there may be a need to install smart card technology in buses that do not already have it. As mentioned in the “Small and micro business assessment” section, the initial capital cost for installing smart ticketing equipment on one bus is in the region of £2,700 and the ongoing maintenance and support cost is around £250 per bus per year. There may also be a need to change the technology in certain buses to make them interoperable with the wider smart ticketing scheme if the adopted technology specification is different.

The magnitude of smart technology costs will depend on the number of buses in the relevant LTA(s) which aren't smart capable. 89% of buses in England outside of London are already equipped with smart card technology²⁴ (all buses in London are smart card capable), so the magnitude of smart technology costs is unlikely to be large for the average LTA, assuming the number of non-smart buses is distributed equally across England.

Consolidated back office costs

LTAs will incur costs from the operation of their consolidated back office. These costs include payments for relevant software and digital management systems, technical support and any related administrative and personnel costs.

The magnitude of consolidated back office costs will vary according to the sizes of the relevant LTA(s)' bus markets.

Assumption	Source	Source evidence used
If two or more LTAs decide to co-operate over their smart ticketing scheme, they will consolidate their back office operations	Departmental expert opinion and commercially sensitive information	Observation of existing interoperable schemes having consolidated back office operations

Marketing costs

It is likely that LTAs will market their cooperative schemes to bus passengers in order to notify them of any changes to local bus services and encourage higher bus patronage. Marketing strategies (and their subsequent costs) could vary according to the type of media used and the level and breadth of exposure.

²³ Economies of scale refers to unit cost reductions that occur due to expanding the scale of production. In the context of this analysis, economies of scale benefits could arise from removing duplication of back office operations, reduced software contract costs per unit due to greater bulk discounts and bargaining power, and so on.

²⁴ Bus Statistics BUS0607

Staff familiarisation and training costs

Bus drivers and bus operator administrators will need to be trained in order to familiarise themselves with any changes to bus services and operations if any new cooperating schemes are implemented as a result of the intervention. It is assumed these costs are met by private bus operators.

It is likely that staff training costs will only be incurred in the first year of the scheme's creation in the form of familiarisation costs, and in the following years the staff training hours will be incorporated into the existing training schedule (thereby doing the relevant training in the same amount of hours as in the counterfactual). This is because in the counterfactual scenario (i.e. Option 1), the LTA(s) and bus operators are either already part of an existing scheme and have the option to cooperate with a neighbouring scheme, or are about to implement a new scheme themselves. Therefore there will already be a training schedule undertaken by operators which factors in all the relevant training.

The magnitude of staff familiarisation and training costs will depend on the size of the relevant LTA(s)' bus market in terms of operator staff numbers.

Increased fuel duty costs for operators

As the number of bus passengers increases, bus operators may respond by increasing their bus service levels in terms of bus mileage. Therefore they use more fuel and incur higher fuel duty costs. The assumptions used for this cost item are the same as those used for the "Public accounts impact" item – this can be found in the benefits section. The magnitude of increased fuel duty costs for operators will depend on the extent of the increase in bus service mileage.

Assumption	Source	Source evidence used
An increase in cross-boundary bus trips will lead to an increase in bus service mileage	DfT (2014) "WebTAG" ²⁵	The Mohring Factor of 0.6 indicates that bus service mileage will increase in response to an increase in demand

Staff training costs for LTAs

When implementing a cooperative scheme LTA back office staff may need to be trained regarding any changes to back office operations. For example, staff may need to be trained on the operation of a new software system. This is likely to be a one-off cost in the first year of the scheme's creation, for the same reasons as explained in the "Staff familiarisation and training costs" item. The magnitude of this cost item will depend on the number of relevant staff who need training and the length of time they will need to complete the training.

Direct benefits (monetised)

There are no direct benefits associated with this intervention.

Direct costs (monetised)

Familiarisation costs for LTA delivery and policy managers

LTA managerial staff will have to familiarise themselves with any changes to their policy and delivery framework as a result of the intervention. This is a one-off transition cost that is incurred by all LTAs when the provisions are introduced in 2018 (as opposed to all other impacts which begin to be realised from 2019 onwards once stakeholders adjust to the changes).

This cost item is calculated by multiplying the number of LTAs in England (88) by the number of relevant managerial staff per LTA, the average hourly wage for managerial staff and the number of hours required for familiarisation per staff member. Assumptions and scenario costs are displayed in the table below.

²⁵ <https://www.gov.uk/guidance/transport-analysis-guidance-webtag>

Assumption	Source	Scenario		
		Low	Central	High
Number of relevant managerial staff	Departmental expert opinion	4	3	2
Average hourly wage for managerial staff	ONS (2014) "Annual Survey of Hours and Earnings" ²⁶	£20.00	£18.00	£16.00
Number of hours required by staff member	Departmental expert opinion	1.5	1	0.5
Total costs (£, 2014 prices, discounted to 2015)		£9,500	£4,000	£1,000

Administrative costs for LTAs

Administrative costs may be incurred by LTAs when proposing or exploring a potential interoperable scheme. This could include time spent by LTA managerial staff on meetings and communications with other LTAs, and their own internal meetings and independent work. This is likely to be a one-off cost in the year that an LTA(s) considers ticketing co-operation, and may be repeated across multiples years if an LTA reconsiders co-operation after previous attempts.

This cost item is found by multiplying the average number of LTAs which actively consider cooperation per year by the number of relevant managerial staff involved, the average hourly wage for managerial staff and the number of hours dedicated to these administrative activities. Assumptions and scenario costs are displayed in the table below.

Assumption	Source	Scenario		
		Low	Central	High
Average number of LTAs which actively consider cooperation each year	Departmental expert opinion	7	5	3
Number of relevant managerial staff	Departmental expert opinion	4	3	2
Average hourly wage for managerial staff	ONS (2014) "Annual Survey of Hours and Earnings" ²⁷	£20.00	£18.00	£16.00
Number of hours required by staff member	Departmental expert opinion	20	10	5
Total costs (£, 2014 prices, discounted to 2015)		£84,000	£20,000	£3,500

²⁶ <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-337425>

²⁷ <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-337425>

Post Implementation Review (PIR) Plan

3. **Review status:** Please classify with an 'x' and provide any explanations below.

<input type="checkbox"/>	Sunset clause	<input type="checkbox"/>	Other review clause	<input type="checkbox"/>	Political commitment	<input checked="" type="checkbox"/>	Other reason	<input type="checkbox"/>	No plan to review
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PIR will be held to assess effectiveness of intervention in encouraging LTA joint and through ticketing cooperation

4. **Expected review date** (month and year, xx/xx):

0	1	/	20	21
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Rationale for PIR approach:

Will the level of evidence and resourcing be low, medium or high? (See Guidance for Conducting PIRs)

Low-medium

What forms of monitoring data will be collected?

Data relating to the number of schemes made or amended using the legislation will need to be collected. In addition, a record of the technology deployed and the levels of co-operation should be logged. If an LTA has escalated co-operation concerns there should be an identifiable record obtainable through the Traffic Commissioner.

What evaluation approaches will be used? (e.g. impact, process, economic)

A mixed approach to evaluation is proposed, but with an emphasis on assessing the economic benefits to operators, LTAs, bus passengers and the wider local economy of an area as a result of the improved interconnectivity and cooperation between schemes.

How will stakeholder views be collected? (e.g. feedback mechanisms, consultations, research)

A variety of collection methods will be used, however feedback from LTAs using the power will be the most valuable asset when looking to assess the impacts.

Title: Changes to bus market legislation - bus franchising and partnership improvements for inclusion in the Bus Services Bill IA No: DfT00337 Lead department or agency: Department for Transport Other departments or agencies:	Impact Assessment (IA)			
	Date: 01/12/2015			
	Stage: Final			
	Source of intervention: Domestic			
	Type of measure: Primary legislation			
Contact for enquiries: Busworkshops2015@dft.gsi.gov.uk				
Summary: Intervention and Options			RPC Opinion: GREEN	

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2014 prices)	In scope of One-In, Three-Out?	Measure qualifies as
£546m	-£306m	-£1m (QRP) £37m (NQRP – Pro competition)	No	OUT

What is the problem under consideration? Why is government intervention necessary?

Local bus markets in England outside London have been deregulated since 1986. However, the long term decline in bus patronage from its peak in the 1950s has continued under the deregulated environment. Local bus markets outside of London display, to varying degrees, market failures such as lack of competition, wider social and environmental benefits that buses can bring not being fully realised, and incentives between private operators and local transport authorities (LTAs) who provide bus infrastructure being misaligned. Government intervention is necessary to provide enhanced tools that enable LTAs to deal with market inefficiencies that occur in their local bus markets and deliver more effective bus services.

What are the policy objectives and the intended effects?

The policy objective is to provide LTAs with an effective set of tools to allow them to reduce the inefficiencies that exist in their local bus markets. The tools required to address inefficiencies will vary and depend on local circumstances. Some authorities may choose to take up powers that allow them to franchise their local bus networks while others may choose to use tools that facilitate improved partnership working between operators and LTAs. The intended effect is not to direct LTA decisions but rather to increase the tools available to LTAs when it comes to bus services, with the goal of improving services for passengers, be that through achieving increased patronage or wider benefits such as environmental improvements.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

- Option 1 - Do nothing, LTAs must deal with inefficiencies in their market under existing legislation and consider best practice guidance on partnership working;
- Option 2 - Amend legislation relating to partnership working;
- Option 3 - Develop an enhanced partnership option to provide more scope for LTAs to achieve better outcomes under partnership without the risks of franchising;
- Option 4: Develop new 'franchising' legislation to allow LTAs to replace the deregulated market with a system of contracting;
- Option 5: combination of options 2-4

Option 5 preferred - A new legislative framework enabling improved partnership working and franchising are required to provide local transport authorities with more effective ways to improve their local bus services.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 04 2022					
Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent) NOT CALCULATED			Traded: N/A		Non-traded: N/A

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: Andrew Jones Date: 8.2.16

Summary: Analysis & Evidence

Policy Option 3

Description: Develop an enhanced partnership option to provide more scope for LTAs to achieve better outcomes under partnership working

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £332	High: £422	Best Estimate: £513

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£0.4	£1	£10
High	£1.0	-£9	-£86
Best Estimate	£0.7	-£4	-£38

Description and scale of key monetised costs by 'main affected groups'

Operators: (-£87m to £9m): Reduced operating costs due to a reduction in total distance travelled as a result of a rationalised network. There are also expected to be some capital costs (AVL costs and staff costs) which outweigh the reduced operating costs in the low scenario.

Government: (£0.3m-£0.6m): increased payments for supported services due to greater patronage, increased implementation costs to LTAs

Other key non-monetised costs by 'main affected groups'

The capital costs to LTAs for improved interchange facilities between modes have not been monetised. While these costs could have a small impact on the total costs, they would be very context specific to local needs so creating a general estimate is spurious in the absence of knowledge of who will implement enhanced partnerships. Due to a lack of cost evidence, the benefits to passengers from some potential service and vehicle quality improvements which may result from enhanced partnerships have also not been monetised.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	£34	£341
High	0	£43	£426
Best Estimate	0	£38	£384

Description and scale of key monetised benefits by 'main affected groups'

Users: (£280m-£329m): benefits to bus users from service changes

Non-users: (£8m-£50m): benefits to wider society such as reduced congestion and pollution

Bus operators:(£48m to £50m): benefits to operators from higher revenues

Government:(-£15m to -£5m): dis-benefits of reduced fuel duty, reduced revenue to the public account.

Other key non-monetised benefits by 'main affected groups'

The benefits from improved quality and maintenance standards and increased network stability as a result of enhanced partnerships have not been monetised as the impacts of these are very uncertain and there is limited evidence to support them. Due to a lack of cost evidence, the benefits to passengers from potential service and vehicle quality improvements which may result from enhanced partnerships have also not been monetised.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5%

This policy enables LTAs to implement an enhanced partnership operating model. It is very uncertain how many and which LTAs will choose to change their operating model from the status quo. These local decisions will have a significant impact on the final national outcomes in terms of costs and benefits associated with this legislation. This analysis should therefore be treated as being illustrative only due to these significant uncertainties.

BUSINESS ASSESSMENT (Option 4)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: -4.5	Benefits: 5.7	Net: 10.2	No	NA

Summary: Analysis & Evidence

Policy Option 4

Description: Develop new 'franchising' legislation to allow LTAs to replace the deregulated market with a system of contracting

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £216	High: £805	Best Estimate: £511

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£11	£40	£409
High	£22	£41	£436
Best Estimate	£16	£41	£423

Description and scale of key monetised costs by 'main affected groups'

Operators: (-£1m to £119m): Reduced operating costs due to responsibilities being passed to LTAs, increased tendering costs, and implementation staff costs.

Government: (£290m-£438m): increased capital costs to LTAs (AVL costs, staff costs and fleet renewal costs), increased implementation costs to LTAs

Other key non-monetised costs by 'main affected groups'

The capital costs to LTAs for improved interchange facilities between modes have not been monetised. While these costs could have a significant impact on the total costs, they would be very context specific to local needs so creating a general estimate is spurious in the absence of knowledge of who will implement franchising. Due to a lack of cost evidence, the benefits to passengers from some potential service and vehicle quality improvements which may result from franchising have also not been monetised.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	£63	£626
High	0	£124	£1,241
Best Estimate	0	£93	£934

Description and scale of key monetised benefits by 'main affected groups'

Users: (£595m-£1,071m): benefits to bus users from fare and service changes

Non-users: (£21m-£94m): benefits to wider society such as reduced congestion and pollution

Bus operators:(-£72m to -£439m): dis-benefits to operators from lower revenues

Government:(£55m-£470m): dis-benefits of reduced fuel duty, increased revenue to the public account.

Other key non-monetised benefits by 'main affected groups'

The benefits from improved quality and maintenance standards and increased network stability as a result of franchising have not been monetised as the impacts of these are very uncertain and there is limited evidence to support them. Due to a lack of cost evidence, the benefits to passengers from potential service and vehicle quality improvements which may result from franchising have also not been monetised. These benefits could be substantial but will be dependent on whether and to what extent the LTA thinks they would be worth implementing.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5%

This policy enables LTAs to implement a franchising operating model. It is very uncertain how many and which LTAs will choose to change their operating model from the status quo. These local decisions will have a significant impact on the final national outcomes in terms of costs and benefits associated with this legislation. This analysis should therefore be treated as being illustrative only due to these significant uncertainties.

BUSINESS ASSESSMENT (Option 4)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: 6.9	Benefits: -29.7	Net: -36.6	No	NA (pro-competition)

Summary: Analysis & Evidence

Policy Option 5

Description: Combination of options 2 – 4: Amend legislation relating to partnership and develop an enhanced partnership option to ensure partnership working between operators and LTAs is easier, and develop a new franchising option to make this a more realistic option for LTAs to use

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2015	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £245	High: £847	Best Estimate: £546

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£11	£40	£410
High	£22	£41	£431
Best Estimate	£17	£40	£421

Description and scale of key monetised costs by 'main affected groups'

Operators (-£7m to £120m): Reduced operating costs due to responsibilities being passed to LTAs (franchising only), increased tendering costs (franchising only), implementation staff costs, and increased capital costs (under the partnership model).

Government (£290m-£438m): increased implementation costs to LTAs

Other key non-monetised costs by 'main affected groups'

The capital costs to local governments for improved interchange facilities between modes have not been monetised. While these costs could have a significant impact on the total costs, they would be very different depending on area type and local needs so creating a general estimate is not possible given the lack of certainty as to who will implement franchising. Due to a lack of cost evidence, the impacts of some potential service and vehicle quality improvements which may result from franchising have not been monetised.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	£66	£656
High	0	£128	£1,278
Best Estimate	0	£97	£967

Description and scale of key monetised benefits by 'main affected groups'

Users (£620m-£1,100m): benefits to users from fare and service changes

Non-users (£21m-£97m): benefits to society such as reduced congestion and pollution

Bus operators(-£430m to -£68m): dis-benefits to operators from changing fares and services

Government (£55m-£463m): dis-benefits of reduced fuel duty, increased revenue to the public account.

Other key non-monetised benefits by 'main affected groups'

The benefits from improved quality and maintenance standards and increased network stability as a result of franchising have not been monetised as these are very uncertain and there is not much evidence to support them. Due to a lack of cost evidence, the impacts of potential some service and vehicle quality improvements which may result from franchising have not been monetised either. It is likely that these benefits could be substantial but each LTA would have to determine whether they would be worth implementing.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5%

This policy provides LTAs with the powers to implement either a franchising operating model or an enhanced partnership model, or to use the improved Quality Partnership Scheme powers. It is very uncertain how many and which LTAs will choose to change their operating model from the status quo. These local decisions will have a significant impact on the final national outcomes in terms of costs and benefits associated with this legislation. This analysis should therefore be treated as being illustrative only due to these uncertainties.

BUSINESS ASSESSMENT (Option 5)

Direct impact on business (Equivalent Annual) £m:			In scope of OI30?	Measure qualifies as
Costs: -0.3 (in scope), 6.9 (out of scope)	Benefits: 0.8 (in scope), -29.7 (out of scope)	Net: -1.0 (in scope), -36.6 (out of scope)	No	NA (pro-competition)

1. Problem under consideration

1.1 Current status and performance of the bus market

1. Deregulation of the bus market outside London was effected through the Transport Act 1985¹ (“the 1985 Act”). Bus services in England, outside London, are currently planned, specified and provided by private bus operating companies, with Local Transport Authorities (LTAs) tendering for supported services where they think that the commercial offering does not meet the needs of local communities. Within the Greater London Area, bus services are planned and specified by Transport for London (TfL) through a contracting or franchising model. TfL specify the services they want to be provided and the particular standards that those services are required to meet, and private bus companies then bid to provide those services.
2. Bus travel has been in long term decline since the 1950s, with the number of passenger journeys on local bus services declining by 59% between 1950 and 2013/14². Deregulation of the bus industry was intended to increase competition in the market and lead to lower costs, lower fares and appropriate frequency of services. Declining patronage has not been reversed as a result of deregulation, and since it was introduced in 1985/86, local bus passenger journeys in England have decreased by further 2%.
3. In contrast in London under franchising the use of local buses has more than doubled since 1985/86 and in 2013/14 accounted for 51% of bus journeys made within England (the equivalent figure was 24% in 1985/86). There are a number of other social, economic and political factors which may also have an influence on bus usage in London including levels of car ownership, population density and growth and also policy choices such as implementation of the congestion charge. TfL also have control over fares and service levels of alternative modes of transport in the city, such as the London Underground. In England outside of London, both non-metropolitan and metropolitan areas have seen declines in bus use. In metropolitan areas bus use has declined by 51% and in non-metropolitan areas by 18% since 1985/86.
4. Although overall patronage outside of London is falling, trends in bus use vary greatly across the country. Patronage is falling in our biggest conurbations but there are some other places where authorities and operators have worked effectively to improve services, or bus companies have been particularly progressive in the way in which they have provided services. For example a growth in patronage can be seen in places like Oxfordshire and Brighton and Hove. In many other areas bus patronage has fallen significantly with the number and frequency of services also falling at the same time. This decline is likely to be due to a large extent to the expansion in private car ownership, but the deregulation of the industry introduced in 1985/86 is also considered by some LTAs to be part of the problem.
5. Across all areas of England, local bus fares have increased in real terms since March 1995. Metropolitan areas have seen the largest real-terms increase with local bus fares increasing by 59%. In London, fares have increased by 36%, while non-metropolitan areas have seen the smallest increase of 33%³. Fares have also risen beyond the rate of inflation, at a time when the real cost of motoring has fallen.
6. Competition in the bus market currently takes place ‘on the road’, with different bus operators competing with each other to provide services along particular roads and at bus stops. The Competition Commission found that local bus markets were not working in the most efficient way, concluding that it is not perfectly competitive, with little in the way of head-to-head competition, and that barriers exist that allow local bus markets to sustain an environment that lacks competitive pressure. This was found to be largely in the form of operators pursuing predatory behaviour or

¹ Transport Act 1985 c.67.

² DfT statistics, Table BUS0101

³ DfT statistics, Table BUS0405

exclusionary tactics that limit competition; fares being higher than they would be in a perfectly competitive market; and/or service levels being lower than they would otherwise be.

7. In addition, the Competition Commission's 2011 report found that there were some aspects of competitive conduct which delivered no benefit to customers⁴, for example the obstruction of a rival's services by deliberately blocking or delaying their services on the road or by preventing them from using bus stops or stands.

1.2 Government support and subsidy provided to the bus market

8. Government currently supports the bus market in England outside London by providing a subsidy in the form of the Bus Service Operators Grant (BSOG). BSOG is paid to operators in support of all commercially-run services (those planned and provided by bus companies), to LTAs for their supported services (those planned and put out to tender by LTAs) and for community transport services, and is calculated on the basis of fuel consumption. BSOG helps to keep fares 4% lower, allows operators to run a network 7% larger, and allows passenger numbers to be 4% ⁵higher than they would otherwise have been if BSOG was not provided.
9. In addition to the services provided commercially, LTAs also have a duty to provide services which they deem as socially necessary which are not being provided commercially. LTAs can use the block grant they receive from the Department for Communities and Local Government to support these services and the BSOG that is devolved to them.
10. LTAs also have a number of policy and legislative tools available to them to help improve their local bus services, with changes to the deregulated regime contained in the Transport Act 2000, as amended by the Local Transport Act 2008. These legislative changes included provisions to allow LTAs to enter into statutory partnerships with operators to deliver particular outcomes and improve services, introduce multi-operator ticketing regimes to provide a better, more co-ordinated offering to the customer, or to suspend the deregulated market and deliver a Quality Contract scheme. These existing options are set out in more detail below:
 - Quality Contracts – this is the current legislative route to franchising whereby the LTA, subject to being satisfied that a five-part public interest test is satisfied together with consulting and responding to the recommendations of an independent Quality Contract Board, can suspend the deregulated market, determine a network of services to be delivered and invite competitive bids from bus companies to provide those services in the area;
 - Quality Partnerships – legislation to bring about statutory partnership arrangements between LTAs and bus operators to improve services. The LTA invests in bus-related infrastructure, such as bus lanes, in the scheme area, and in return for the right to use the improved infrastructure, local bus operators agree to provide higher quality standards of services, such as for example newer buses;
 - Voluntary partnerships or agreements – voluntary agreements between LTAs and bus operators to improve services, whereby the operators and LTAs agree to provide certain things on a voluntary basis to satisfy mutual objectives; and
 - Multi-operator ticketing schemes – LTAs have the power to impose a ticketing scheme in their area which operators must comply with in line with competition law. LTAs can specify the ticket types and products to be made available by operators but they do not have control over the fares to be charged.

1.3 Issues with existing legislative options

11. The Quality Contract legislation was introduced in the Transport Act 2000 and amended by the Local Transport Act 2008, but since then only one LTA (Nexus on behalf of the North East Combined Authority) has attempted to introduce a Quality Contract Scheme (QCS) and the QCS board published their report in early November 2015 which concluded that the Nexus proposal did not satisfy all five of the public interest test criteria set out in the QCS legislation. Experience from that process suggests that practical implementation of the current legislation has been very time-

⁴ Competition Commission Local Bus Services market investigation, page 7, accessed online at http://webarchive.nationalarchives.gov.uk/+/http://www.competition-commission.org.uk/inquiries/ref2010/localbus/pdf/00_sections_1_15.pdf

⁵ Based on Department's National Bus Model outputs, 2014

consuming, resource-intensive and costly. The post legislative assessment of the Local Transport Act 2008 reflects that various LTA groups such as the Association of Transport Coordinating Officers (ATCO) and the Urban Transport Group (UTG) view the QCS process as an expensive, complex and time consuming undertaking, likely to be potentially viable only within larger urban areas overseen by the Passenger Transport Executives (PTEs)⁶.

12. Before a LTA can make a QCS it must comply with the procedural requirements set out in the Transport Act 2000, undertake a consultation exercise and satisfy itself that a five-part public interest test is met. A QCS Board is then established by the senior traffic commissioner for the area, whose role is to form an opinion as to whether the authority has met the necessary consultation requirements and whether the public interest conditions have been met. The public interest test includes consideration of whether:
 - the proposed scheme will result in an increase in the use of bus services in the area to which the proposed scheme relates,
 - the proposed scheme will bring benefits to persons using local services in the area to which the proposed scheme relates, by improving the quality of those services,
 - the proposed scheme will contribute to the implementation of the local transport policies of the authority or authorities,
 - the proposed scheme will contribute to the implementation of those policies in a way which is economic, efficient and effective, and
 - any adverse effects of the proposed scheme on operators will be proportionate to the improvement in the well-being of persons living or working in the area to which the proposed scheme relates and, in particular, to the achievement of the objectives mentioned in paragraphs (a) to (d).”.
13. In particular, criticism has been directed at the five-part public interest test. An LTA has to satisfy itself that the test conditions have been met and the QCS Board must also consider whether the conditions are met. The five-part test itself is seen as too narrow and prescriptive by many LTAs, and not reflective of wider considerations outside pure transport policy, such as consideration of how bus services can contribute to wider development or planning policies.
14. The QCS Board process has, as discussed, taken a significant length of time and substantial resources to administer. The time-limited nature of the legislation has also been criticised, as a Quality Contract Scheme is limited to 10 years, and many LTAs see any move to a franchising as a much longer commitment which would require more than 10 years to fully mature and become established. Since the legislation has not resulted in a QCS being introduced yet, it is difficult to comment further on the practicalities and impacts following implementation.
15. The Quality Partnership legislation has also not been used as fully or widely as anticipated, and LTAs have previously suggested that there are a number of barriers inhibiting them from introducing such schemes. These include the link in the Quality Partnership legislation to the provision of infrastructure as a prerequisite to establishing a Quality Partnership. Infrastructure projects can be difficult to fund and may not be the appropriate local solution to issues with bus services, which could be better addressed through other means such as changing city centre parking charges or availability. The Post Legislative Assessment of the Local Transport Act 2008 identifies that the use of Quality Partnerships to set fares and impose registration restrictions has been limited. Feedback from some LTAs and from ATCO suggests that this may be due in part to perceived issues with the policing and enforcement of Quality Partnership Schemes⁷.
16. In addition to the issues highlighted above, the Competition and Markets Authority (CMA) can investigate and take legal action where they think a partnership is acting in breach of competition legislation. The CMA has the ability to level a fine on operators of up to 10% of group turnover. This CMA oversight is perceived to as a continual threat to partnerships by operators (despite no record of

⁶ Post legislative assessment of the Local Transport Act 2008, Page 13, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259164/pla-lta2008.pdf

⁷ Post legislative assessment of the Local Transport Act 2008, Page 11, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259164/pla-lta2008.pdf

the CMA exercising these powers), and introduces a barrier to the use of Quality Partnership Schemes (QPS) powers. Many in the industry perceive the CMA powers as a threat, and it was raised by both LTAs and bus operators at the Bus Reform Workshops carried out in September and October 2015 as one of the key issues holding them back from pursuing partnerships further.

1.4 Recent Government commitments

17. In addition to trying to address the problems highlighted above, as part of Government's commitment to devolution, several authorities have asked to be given greater control of the bus services in their local area but have requested that a new approach is developed that is more effective than the existing legislative provisions.
18. The Government has signed devolution deals with a number of areas, including Greater Manchester, Cornwall, the Sheffield City Region, the North East Combined Authority, Tees Valley, the West Midlands and the Liverpool City Region in which it committed to providing the powers to enable those local authorities to franchise their local bus services. A 'Buses Bill' was then announced as part of the Queen's Speech in May 2015.
19. [Devolving powers over transport is a Conservative manifesto commitment, and Government is currently in discussion with many other places on their devolution deals](#) with areas ranging from Combined Authorities to County Councils requesting franchising powers as part of their deal.

1.5 Summary

20. Many LTAs are keen to take action to improve their local bus services, particularly looking to:
 - reduce over-bussing on key routes (because on-the-road competition causes congestion and bunching of vehicles at bus stops, creating long gaps between services);
 - improve integration between bus services and the wider public transport system;
 - improve congestion in town centres;
 - improve air quality standards in town centres; and
 - improve the ticketing offer to passengers.
21. Through our engagement with LTAs and the Government's devolution deal process, it has become clear that LTAs do not believe that the existing range of tools provides them with the necessary freedoms and flexibilities to achieve the objectives appropriate to their local areas.

2. Rationale for intervention

22. As discussed above, the combination of falling bus patronage, reductions in the levels of Government subsidy provided to the bus industry and a legislative framework that has not been utilised as expected has led us to conclude that action is needed to ensure effective bus services continue to be provided to the public and that LTAs have access to the range of tools needed to bring about change.
23. Government intervention is necessary to enable LTAs to deal with market inefficiencies that exist in their local bus markets. This could be achieved by changing the funding and subsidy mechanisms that are currently used to support bus services, or by making changes to the tools that LTAs have available to control and influence bus services in their local area.
24. The Competition Commission (CC) reviewed the local bus market in England outside of London in 2011. They found that the local bus market was not working in the most efficient way, concluding that it is not perfectly competitive and that barriers exist that allow the local bus market to sustain an environment that lacks competitive pressure. This was found to be largely in the form of operators pursuing predatory behaviour or exclusionary tactics that limit competition; fares being higher than they would be in a perfectly competitive market; and/or service levels being lower than they would otherwise be.
25. The CC also found that head-to-head competition is limited and that many local markets exhibit persistently high levels of concentration, with the five largest bus operators running 69 per cent of all

local bus services⁸. The majority of services in most local areas were found to be served by just one or two providers, with the largest operator providing on average, 69 per cent of bus services in urban areas⁹.

26. The local bus market was also found to generate periods of intense short-lived rivalry, leading to the exit of one operator. This ultimately reduces the extent of head-to-head competition, and the anticipation of this type of behaviour creates a barrier to entry and expansion; thus reducing the competitive constraint from potential competition and new entry.
27. Further to the CC findings, an independent review of the bus market commissioned by the Department for Transport (DfT) and completed by KPMG in 2015, found that passenger numbers using bus services in England outside of London fell almost continuously from the time of deregulation to the mid-2000s, but have remained relatively stable since then. It also found that bus fares for services in England outside of London have risen at a higher rate than general inflation since 2005 and have risen at a significantly faster rate in metropolitan areas than in non-metropolitan areas, increasing by 24% and 4% in real terms respectively.
28. In addition to the lack of competition, the 'Local bus market study' by KPMG in 2015 found that local bus markets can also display the following market failures to varying degrees:
 - Network economies relating to service coordination, ticket integration and joint marketing;
 - Misaligned incentives between operators and the infrastructure provider/manager;
 - A lack of contestability of markets and ability for new entrants to enter the market; and
 - Economic, social and environmental benefits that occur to society as a by-product of bus travel but are not captured fully by private bus operators.
29. Each type of market imperfection is discussed in further detail below.

2.1 Network economies

30. Effective bus services connect people to the places where they want to go and in many situations this requires a co-ordinated and integrated network of services and routes. Where services are provided by competing operators, the coordination of timetables, fares and ticketing arrangements is complex and unless it is carefully managed it could potentially be in breach of competition law.
31. Where there is a need, government intervention can help to coordinate services and align fares and ticketing to help passengers transfer seamlessly between services provided by different operators.

2.2 Misaligned incentives

32. The delivery of a high quality bus network generally requires partnership working between those who are responsible for providing and maintaining transport infrastructure and managing road network performance, and those who are responsible for operating the bus services themselves. The separation of these inter-related activities and lack of formal or informal arrangements on how to manage the interface between them can lead to a misalignment of incentives.
33. Operators have limited incentives to unilaterally invest in bus infrastructure where this investment can be used by their competitors. Similarly, in the absence of partnership arrangements, LTAs may have limited incentives to invest in bus infrastructure where they cannot be sure that the level of service provided by operators using the facility will be maintained or that the benefits of the investment will ultimately flow to passengers and the wider community. There may also be conflicts or misaligned incentives associated with investment in other transport schemes (such as light rail) for which competition from bus services could impede the realisation of scheme benefits.

⁸ Competition Commission Local Bus Services Market Investigation, Page 3, accessed online at http://webarchive.nationalarchives.gov.uk/+http://www.competition-commission.org.uk/inquiries/ref2010/localbus/pdf/00_sections_1_15.pdf

⁹ Competition Commission Local Bus Services Market Investigation, Page 4-5, accessed online at http://webarchive.nationalarchives.gov.uk/+http://www.competition-commission.org.uk/inquiries/ref2010/localbus/pdf/00_sections_1_15.pdf

34. Where there is a need, LTA intervention can reduce the misalignment of incentives to invest in infrastructure by establishing formal or informal agreements between the LTA and operators.

2.3 Lack of contestability of markets or ability for new entrants to enter the market

35. A lack of effective, sustainable competition between bus operators could lead to higher fares for passengers, fewer services, reduced service quality, reduced innovation and higher operator profits relative to those delivered by a more competitive market. A lack of effective competition could also lead to inefficiencies in the market for supported services.

36. In theory, competition in the bus market takes place 'on the road', but in reality head-to-head competition is relatively scarce, the market is sometimes regarded as being 'contestable' with the threat of market entry providing an incentive to operators and the market to work efficiently. Competition from other modes of transport and cars in particular could also provide an incentive for the market to work efficiently. Whilst the CC could not find evidence to support this view there is a strong relationship between household car ownership levels and bus use.

37. Where there is a need, LTA intervention can protect passenger interests by providing favourable conditions for competition to arise or by regulating market power where competition is not sustainable.

2.4 Wider economic, social and environmental benefits

38. Bus services can generate wider economic, social and environmental benefits which can mean that it is economically efficient to increase supply above the levels determined by the commercial market. Buses connect people to jobs and customers to businesses, they provide access to essential services, promote social inclusion and provide environmental improvements by encouraging a switch from private to public transport.

39. Where these wider benefits or 'positive externalities' exist, LTAs can improve market efficiency by expanding supply and/or keeping fares lower than they would otherwise be.

40. The prevalence of the market imperfections identified above and their impacts on local markets will vary from place to place, depending on:

- Travel patterns and behaviours, the complexity of the network and the need to make multi-stage, multi-operator trips.
- The level of integration between infrastructure and operations, including the quality of the road network, levels of congestion, and availability of bus lanes and priority measures.
- The level of market power held by operators which in turn will be influenced by the number of operators, competition from other modes of transport, and the extent to which the market is contestable.
- The relative importance of generating wider economic, social and environmental benefits, and the level of investment in complementary transport and spatial planning.

41. An assessment of each of these factors might reveal that there are particular issues with the performance of a local market which in turn might be indicative of a market imperfection. In practice the assessment of market imperfections is complicated by the fact that the imperfections are not mutually exclusive and at times may work in opposite directions, for example a lack of competition could lead to better coordination and integration of services and ticketing due to the ability of a small number of operators to co-ordinate products.

42. Each LTA will be best placed to carry out an assessment of the market imperfections that exist in its area, whether a change in operating model is required and if so what the most suitable action to take may be.

2.5 Funding and subsidy

43. With the current fiscal climate, there is no guarantee that BSOG will be retained at its current rate in the future. In addition, it is extremely unlikely that funding for bus services will be increased over the coming years. In parallel, LTA funding to support bus services is also decreasing due to the restrictions on wider LTA budgets.

2.6 Summary

44. In order to enable LTAs to address the market failures that exist in their local bus market we need to legislate to either introduce new tools or to amend and improve the existing tools. As part of the devolution deal process, local areas have asked that Government make a new 'franchising' process available to them, to allow them to suspend the deregulated bus market and implement a franchised network of services or partnership working if this would help drive improvements in services.

45. We therefore need to intervene to ensure that a viable franchising option is available to all LTAs, together with improving and expanding the existing toolkit of options. This will provide LTAs with a wide range of tools which can be used to improve the efficiency of their bus markets, and the LTA will then be able to determine which of the tools available is best suited to addressing their local needs.

3. Policy objective

46. To provide a more effective set of tools for LTAs to use to address inefficiencies, including imperfect competition, in their local bus markets and provide better local bus services for passengers. This will include a more effective route to franchising for LTAs than is currently offered through the QCS legislation and a new partnership option to enable more effective joint working between LTAs and bus operators.

47. The aim of this legislation is to provide LTAs with enabling powers, it does not mandate changes to operating models by central government. LTAs will be required to determine how best to use these powers to address the inefficiencies in their local bus market.

4. Description of options considered (including do nothing)

48. The options that have been considered are set out in more detail below. All options are all OUT of scope of One-In-Three-Out (OI3O) due to being a manifesto commitment

49. Illustrative analysis has been carried out for option 3, option 4 (as through devolution deals we have already committed to changing legislation to enable some LTAs to franchise their bus services should they wish to do so) and the preferred option (option 5) to demonstrate a possible set of costs, benefits and an illustrative range of their magnitude in the subsequent chapter.

4.1 Option 1 - Do nothing, LTAs must deal with inefficiencies in their market under existing legislation and consider best practice guidance on partnership working

50. This option represents the 'do nothing', reflecting that currently LTAs can attempt to address inefficiencies in their local bus markets by establishing partnership arrangements in their local area to work with operators towards joint goals or use the QCS legislation to suspend the deregulated market for a period of 10 years and contract to provide local bus services.

4.1.1 Voluntary partnerships

51. Voluntary partnerships are simple to create and have substantial flexibility. They work best where an authority already has a positive relationship with the local operator(s), and can deliver good results in terms of service improvements and increased passenger numbers. There are many examples of voluntary partnership arrangements, such as in Birmingham, Norfolk and Cheshire. However, the voluntary nature of the agreement makes withdrawal a relatively easy matter and enforcement of stated commitments difficult, relying on reputational damage and any contractual commitments.

52. For example South Yorkshire PTE have recently consulted on proposals to introduce a network of planned routes in Sheffield, to regulate the gaps between individual buses, control of the number of vehicles operating along certain corridors to ease general congestion (and thereby improve bus reliability) and improve air quality. The proposals also include a standard ticketing framework that allows travel on all buses in the partnership area. All is being delivered voluntarily by the local bus operators, and can be delivered because of the good relationship between the authority and the operators, and their commitment to making partnership work.
53. There are many examples of where voluntary partnerships may not be particularly effective and where a statutory approach may be required. This could be due to a combination of:
- The market being very lucrative in terms of financial return, which means there is strong competition between individual operators who are therefore less likely to compromise because of the potential financial effect;
 - A lack of trust between the key players – particularly between the LTA and the bus operators – neither trusts the other to deliver on their part of the bargain, often due to personality clashes;
 - Wavering or lacklustre political commitment within the LTA to improving bus services;
 - The objectives of the LTAs and the bus operators not aligning, which fosters conflict rather than consensus; and
 - A lack of confidence on the part of either (or both) the LTA and the bus operators that they can plan and implement partnership arrangements that meet the competition tests to the satisfaction of the Competition and Markets Authority – and therefore avoid the legal action and heavy financial penalties that can follow.
54. These effects have resulted in partnership working either stalling or being restricted to relatively simple models.

4.1.2 Quality Partnerships

55. Statutory Quality Partnership Schemes (QPS), which are enforceable by law, are generally seen as more useful where a LTA is considering investment in major infrastructure improvements, and areas that have utilised this tool include Birmingham and Nottingham. In these cases a voluntary partnership might be considered to provide inadequate safeguards against the consequences of one or more partners failing to fulfil their obligations.
56. A QPS is a legal arrangement between a LTA and one (or more) bus companies. The schemes are developed through negotiations between LTAs and local bus operators, though ultimately the LTA can impose a QPS on a given area and take steps to ensure that operators who will not agree to abide by the scheme cannot make use of the facilities provided by the LTA under the scheme. Under a QPS an authority can specify frequencies, timings and maximum fares to be included where there were no admissible objections from relevant bus operators. It also provides scope for the Traffic Commissioner to disallow the registration of additional services in the partnership area if it risks undermining the successful operation of the QPS. Any LTA may make a QPS, though in doing so it is required to meet a self-completed competition test, ensuring that, among other things, any adverse impact on competition is proportionate to the benefits of the scheme. To take forward a QPS, a LTA (or two or more LTAs jointly) must agree to invest in improved facilities at specific locations along bus routes (for example bus stops/bus lanes) and operators who wish to use those facilities undertake to provide services of a particular standard (for example new buses or driver training standards). Only those operators prepared to provide services to the standards specified in the scheme are permitted to use the facilities.
57. For example, there has been a successful QPS in place in Birmingham City Centre for a number of years. The [“Birmingham Statutory Quality Partnership Scheme”](#), which was introduced in July 2012, is considered by Centro to be the biggest of its kind in the UK, and involved a multi-million pound investment in bus infrastructure for the city centre by the LTA and requires all bus operators who enter the city centre to improve their quality standards.
58. Nottingham City Council introduced a QPS in 2010, with the following aims:

- To facilitate an increase in the modal share of bus as part of the Greater Nottingham Growth Strategy and sustainability objectives;
 - To provide additional City Centre bus infrastructure in order to accommodate more bus services/higher frequencies in-line with modal share targets;
 - To provide information and reassurance to customers already on a journey or to help customers plan a journey in the future, key information will be provided at all bus stops and bus shelters, from timetable information to mapping and journey planning information;
 - To improve the range of City Centre destinations served by bus routes and in particular to better serve major new developments;
 - To reduce pressure on congested bus priority streets and bus stops to help improve journey reliability and reduce delays;
 - To achieve better environmental conditions and improve pedestrian and cycling amenities on bus priority streets;
 - To manage bus stop use so as to maximize capacity within a quality framework, whilst maintaining high environmental standards; and
 - Provide management of on street stops on a similar basis to bus station management, with the introduction of a Slot Booking System.
59. Similarly to the Centro scheme, Nottingham's QPS aims to enhance the quality of the vehicles in the city centre to improve environmental standards, and to reduce congestion.

60. The post legislative assessment of the Local Transport Act 2008 found that full use of the Quality Partnership powers, such as setting maximum fares, has been limited, and that this may be due in part to perceived issues with the policing and enforcement of QPSs¹⁰. It also found that there is a general sense that potentially complex statutory schemes, requiring additional resource to manage and long-term financial commitment, do not necessarily represent the best available option for all LTAs¹¹, and that the limited number of QPSs suggests that many LTAs believe their objectives can be met through less bureaucratic, non-statutory arrangements. Recent engagement with stakeholders through a series of "Bus Reform Workshops" highlighted that the 'Competition test' aspect of the legislation also acted as a deterrent to use of the powers due to the potential for the Competition and Markets Authority to impose penalties.

4.1.3 Multi-operator ticketing powers

61. Authorities are currently unable to ensure multi-operator ticketing is competitively priced, effectively marketed, and clearly understood by the public. Availability of multi-operator ticketing was identified in 2010 by Passenger Focus as one of passengers' top priorities, and whilst powers exist in the Transport Act 2000 allowing authorities to mandate participation in such schemes, the powers have been little used and are thus ineffective.

62. Section 135 of the Transport Act 2000 provides LTAs with the powers to introduce a ticketing scheme in their area and mandate participation from operators. It does not, however, provide authorities with the powers to set fares for those tickets or to restrict operators from offering competing products to these tickets. This can mean that the passenger is provided with a plethora of ticketing options at different prices which can be confusing. For example, an authority can require two operators that compete on the same route to sell inter-available tickets, but they can't require them to sell them at the same price as each other, or at the same price as tickets that are valid only on their own buses. Passengers are likely to find this confusing and/or poor value for money.

63. Authorities such as MerseyTravel, Centro and Nottingham City have introduced multi-operator ticketing schemes, with products such as the Walrus, Swiftcard and Kangaroo available to passengers in those areas. However, these products tend not to be well used due to the availability of alternative operator

¹⁰ Post legislative assessment of the Local Transport Act 2008, page 11, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259164/pla-lta2008.pdf

¹¹ Post legislative assessment of the Local Transport Act 2008, page 11, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259164/pla-lta2008.pdf

products and tickets which tend to provide a better price to passengers due to the premium which is usually attached to multi-operator tickets.

4.1.4 Summary

64. Approaches currently adopted through both voluntary and statutory partnerships demonstrate that where partnerships are operated effectively, congestion can be reduced, environmental and service standards improved and multi-operator tickets provided to passengers. The permanency of a voluntary partnership arrangement will however depend on the ongoing strength of the relationships in the area, and if new entrants enter the market then the partnership would be disrupted. Statutory partnerships are being used in a few areas across the country, and where they have been put in place the authority can address congestion and air quality problems, but there are difficulties in enforcing the requirements in the partnership agreements and with providing the infrastructure necessary to establish a partnership in the first place.
65. Partnerships allow LTAs to have greater influence over local bus services to varying degrees, and can enable them to have greater control over the frequency of services and the quality of vehicles enabling them to improve congestion and air quality in town centres. However, partnerships do not provide authorities with certainty, even where QPSs are utilised, because of the need for partnerships to accommodate competition and new entrants. This means that authorities are not able to fully integrate bus services with wider transport networks, or to promote a common brand, so there will continue to be a range of differently branded bus services on offer. The perceived risk of the competition test means that LTAs also tend to be less ambitious than they may otherwise have been in utilising all the powers available because of the perceived threat of sanctions.
66. The powers to introduce a multi-operator ticketing scheme enable LTAs to specify and promote a joint product, but they do not provide the LTA with any powers over the fares or with the ability to exclude competition in the form of single operator products. This means that multi-operator products tend to have a price premium and the existence of a wide range of products due to competition means that passengers are often faced with so much choice that it can be confusing.

4.3 Option 2 - Amend legislation relating to partnership working

67. As explained under Option 1, existing legislation allows a LTA to introduce a statutory Quality Partnership Scheme (QPS) by agreeing to invest in improved facilities at specific locations along bus routes (e.g. bus stops and bus lanes) and operators wishing to use those facilities then undertake to provide services of a particular standard (e.g. new buses, or driver training standards). The LTA can specify requirements as to frequencies, timings or maximum fares as part of the standard of service to be provided under a scheme, in addition to quality standards – with safeguards to ensure unrealistic conditions are not imposed.
68. The Quality Partnership legislation has not been utilised by LTAs as fully as expected. The [post-legislative assessment of the Local Transport Act 2008](#) found that LTAs were generally not making use of the additional powers to set fares and impose registrations standards due to the perceived issues with policing and enforcement. Complex statutory schemes that required long-term financial commitment may not necessarily be seen as the best option for all LTAs. The issues with the existing legislation include:
- The link between quality partnerships and infrastructure provision which can be difficult to fund and may not necessarily represent the optimal local response to bus related issues; and
 - The perceived risk of challenge from the Competition and Markets Authority (CMA) in establishing a QPS.
69. We are proposing amendments to the existing QPS legislation to try to address some of these issues. Our proposals include removing the requirement for a partnership to be built around the provision of infrastructure. Instead, a partnership could be established around a commitment to a set of pro-bus policies, for example reducing the provision of free parking spaces in town centres, where these measures are considered to provide more benefit to passengers. Existing QPS schemes will also benefit from an exemption from CMA penalties against operators if they are acting in good faith.

70. In addition, the existing QPS approach could be amended to allow ticketing promotion and marketing standards to be mandated as part of the QPS. Currently, a LTA can establish a multi-operator ticketing scheme, but these products are not always clearly or widely marketed by all participating operators. As part of the existing QPS, we are proposing to provide the LTA with the ability to ensure that joint ticketing products were being consistently advertised and marketed by participating operators to ensure that the passenger is aware of the availability of such products.
71. Effective partnership working requires comprehensive data on how passengers use the services. We are also proposing to amend the existing QPS provisions to provide the local transport authority with powers to request certain information from participating operators to help develop the QPS proposals further and deliver a better range of services to passengers - with appropriate safeguards to ensure commercial confidentiality – so that the partnership can ensure that the plans and proposals it implements remain up to date.
72. These proposals would address some of the issues highlighted in the post legislative assessment of the Local Transport Act 2008 and the feedback received at the “Bus Reform Workshops” conducted in September/October 2015 which both pointed to the need to provide infrastructure as limiting the use of the QPS powers, and that this could be broadened to reflect wider priorities.
73. Making the QPS approach easier to implement is likely to make these powers more appealing for LTAs. Even with these additional features, LTAs have told us that the Quality Partnership legislation cannot deliver all LTA objectives. This is because the LTA still has limited influence over network planning, meaning that they cannot ensure that the bus network is integrated with other modes and the wider public transport system. The lack of change to the enforcement mechanism also means that partnership may be perceived by the authority as unenforceable, making it a less attractive proposition. The use of an amended partnership approach will help some LTAs to achieve their objectives, but a wider range of tools is required to enable more LTAs to address the range of issues they may experience in their local areas.

4.4 Option 3- Develop an enhanced partnership option to provide more scope for LTAs to achieve better outcomes under partnership

74. As discussed under option 2, the QPS legislation, even when amended and utilised fully, is unlikely to allow all LTAs to achieve their objectives. This option builds on option 2 by providing an additional tool for LTAs to use – an enhanced partnership. This new partnership option bridges the gap between franchising and Quality Partnerships, bringing some of the benefits of franchising, such as the ability for the authority to plan an integrated network in partnership with the operators, but with less of the risk.
75. Under the new model, the LTA and the operators in the area would come together to form a statutory enhanced partnership. The partnership would then collectively develop a bus strategy setting out exactly what was to be achieved over a defined period of time, with the option of developing a network plan setting out the collective understanding of the services that would be needed to achieve those outcomes. The network plan would consider the services required and/or the standards of those services, for example the gaps between individual buses on a particular route or the emission standards of the buses.
76. The partnership would then request that the operators in the partnership voluntarily agree on how to meet any route-level restrictions. If operators could not sort this out voluntarily then the LTA can impose the route restrictions as service registration standards. If it were to do so, the LTA may, in order to comply with EU regulations 1370/2007, be obliged to award any resulting exclusive right in a competitively tendered Public Service Contract.
77. One of the criticisms of the existing QPS is that it is seen as unenforceable. In addition to the processes set out above, the LTA, acting on behalf of the board, may be granted the registration powers that currently sit with the Traffic Commissioner. The LTA would then have the power to add conditions to any registration that are consistent with the network plan as agreed by the partnership and would be responsible for ensuring that individual operators are running services in accordance with the registration. The LTA would also have the power to revoke or refuse registrations if there is evidence of non-compliance. This would ensure that the enhanced partnership model could be locally managed and

enforced. As part of that, the enhanced partnership would also be able to charge as fee, as the Traffic Commissioner currently does when processing registration applications, to cover the costs of administering the partnership.

78. One of the key issues raised at the “Bus Reform Workshops” held in September/October 2015 was the perceived threat of action by the Competition and Markets Authority (CMA), and the barrier that creates to the use of QPSs. To address this we are proposing three new measures as part of this statutory, enhanced partnership option, including:
- Exempting the delivery of the bus strategy from CMA powers to levy fines on operators provided that the operators have acted in good faith; and
 - Including the CMA as a statutory consultee on all bus strategies developed by a statutory enhanced partnership, and placing a duty on the partnership to have regard to the CMA response.
 - Allowing the LTA to certify that partnership arrangements meet the requirements of competition legislation.
79. On ticketing, whilst there are current powers to impose a ticketing regime in a particular area, there can sometimes be an issue regarding the price premium that multi-operator tickets currently attract. The enhanced partnership model would provide the partnership with the powers to exert downward pressure on that premium, to make this type of ticket more attractive to passengers. The detail methodology of how the price premium could be restricted under an enhanced partnership is still to be worked through, but the principle would need to be agreed by the partnership.
80. Under an enhanced partnership, a joint set of information provisions and marketing standards could also be agreed and applied across the area. For example, one condition of an enhanced partnership could be that all operators provide plans of the whole area-wide network of services and the area-wide ticketing products on their websites and on their buses to help improve the passenger understanding of the wider network or routes and services.
81. In addition to a joint set of standards that could be applied, an enhanced partnership would require comprehensive data on how passengers use the services. As such, the LTA will have powers to request certain information from incumbent operators, such as patronage and revenue data, to help develop the enhanced partnership proposals - with appropriate safeguards to ensure commercial confidentiality – so that the partnership can ensure that the plans and proposals it implements remain up to date.
82. These measures would provide some reassurance to parties entering an enhanced partnership that they would be able to seek the advice and views of the CMA upfront, and would be exempt from the threat of financial penalties if they acted in good faith. This may make this option a more attractive tool for authorities to use to address the market inefficiencies that may exist.
83. The new enhanced partnership model could go a significant way to delivering the outcomes that LTAs are looking for. It builds on the previous option, and also provides the ability for the LTA to provide input into the network planning process to ensure the bus network takes account of the wider public transport system and can be integrated more effectively with other local transport offerings. This new model will also allow the LTA to locally enforce the partnership, addressing some of the issues highlighted in the post-legislative assessment of the Local Transport Act 2008.
84. This model does however have some drawbacks from an LTA perspective, meaning it is unlikely to meet all LTA objectives. The LTA will need to gain the agreement of the majority of operators before proceeding with the partnership, meaning that they would not have overall control, and the new provisions would also need to account for the need for competition, meaning that the LTA could not restrict operators from providing their own ticketing products. Ultimately, this option is built on partnership and relies on the members of the partnership reaching a consensus – if this is not possible then the authority will not be able to achieve their objectives.
85. It should be noted that community transport services will be exempted from enhanced partnership schemes, and will be allowed to continue to operate as they do currently. Community transport providers tend to operate flexible and bespoke services to their local communities, and it is not our intention to disrupt these services.

86. This option provides another tool for LTAs to use to address inefficiencies in their local bus markets, but it will not meet the objectives of all LTAs due to the desire of some to have complete control over the planning and commissioning of services.

4.5 Option 4: Develop new 'franchising' legislation to allow LTAs to replace the deregulated market with a system of contracting

87. The Quality Contract legislation allows LTAs to suspend the deregulated bus market for a 10 year period and specify and contract for all the local bus services in their area. The QCS process was brought into effect through the Transport Act 2000, and amended in 2008 to make it easier to use, but has only been pursued by one LTA since that time, and the process has not yet reached a conclusion, taking much longer and proving much more costly to administer than anticipated.

88. Through Government's devolution deal process, some local areas have told us that the only way they can effectively address all the market inefficiencies in their area is to suspend the deregulated market and open competition, and for the LTA to specify the services required, the standards of those services and a common brand to align with their wider objectives. LTAs argue that this is the only way to fully integrate the bus network with the wider public transport network, and for the LTA to provide a common, uniform brand and series of ticketing products without the existence of 'on-road' competition.

89. Through our discussions with LTAs as part of devolution deals, local areas have told us that the current QCS process is not a useful mechanism for moving to franchising and that there are several shortcomings, including:

- the time-limited nature of the legislation, leading to the suspension of the deregulated market for 10 years;
- the 5-part test public interest test which the LTA must pass before introducing a QCS, because this is seen as lacking the wider strategic, environmental and social considerations of the LTA; and
- the independent board process which has proved time and resource intensive to administer.

90. A new process is required which is distinct from the QCS process and which addresses the shortcomings identified and fits with the wider devolution agenda. The new franchising proposal will allow Combined Authorities with directly-elected Mayors, and other LTAs following the Secretary of State's consent, to locally decide whether or not to implement franchising depending on the strength of the business case. The new franchising process will address the shortcomings with the QCS process by:

- creating a permanent change to a model of contracting for services, rather than limiting the authority to a 'scheme' lasting 10 years;
- replacing the prescriptive 5-part public interest test with a wider requirement to develop a business case using Government best practice guidance such as the HMT Green Book and business case model guidance, allowing the LTA to align their objectives in relation to buses to their wider aims and strategies; and
- removing the independent board process by providing the LTA with the power to take the decision independently, with some safeguards built in to ensure the key analytical and financial data is robust.

91. As part of the franchising proposals, LTAs would be able to request information from incumbent operators, such as revenue and patronage data, to help plan the network and develop their business case. In addition to letting a number of franchises, the LTA would also be responsible for administering a permit system. The main aims of this would be to 'permit' cross-border services that operate both outside and inside the franchising area to continue to run, and to allow bus operators who have identified a gap in the franchising authority's provision to also run services. This 'open access' provision would require that franchising authorities issue permits to bus operators who wish to run services which serve the needs of passengers in the area while not adversely affecting the franchised network. As part of the permit process, the cross-border operators may be required to

provide their services to higher standards, or to participate in joint ticketing schemes. The LTA will also be able to charge a fee to recover the costs of administering the permit system.

- 92. Franchising would allow some LTAs to achieve their objectives in relation to buses, as they would have control over which services were provided and could fully integrate the bus network with wider transport modes and planning proposals. Depending on the contracting method used, the authority will potentially have control of the fare levels and ticketing products, and will also be able to develop a common brand to be provided, creating a unified and simple offering to passengers, much as exists in London. However, some LTAs will not want to move to a franchising model because of the potential risks and the resources needed to deliver and manage franchising. As such, introducing a new franchising option on its own will not sufficiently broaden the scope of tools available and will not allow all LTAs to take positive steps to address inefficiencies in their local bus markets.
- 93. As with enhanced partnerships, community transport services will be exempted from franchising schemes and will be allowed to continue to operate as they currently do.
- 94. The current assumption is that LTAs that move to a franchising model will have the BSOG that is currently paid for commercial services devolved to them to support their franchised services. The quantum of this funding will however be dependent on future Spending Reviews.

4.6 Option 5: combination of options 2-4

- 95. The performance of local bus markets vary significantly, and as such the issues that are faced will be different in different places. For example some markets may have one dominant operator with little competition to encourage innovation, while others may have several competing operators on key routes leading to over-bussing and congestion issues. Other LTAs may be perfectly content with the services provided by the bus companies, but may want to address certain issues, such as an air quality issue in a town centre, or the introduction of a multi-operator ticketing scheme.
- 96. Through the devolution deal process, some areas have expressed their desire to have powers to move to a franchising model to ensure they can deliver a single, integrated network of services to passengers with a common brand and simple ticketing. But other areas have expressed their desire to continue to work with operators under voluntary partnerships to achieve their goals, or to use a QPS or an enhanced partnership to deliver better outcomes for passengers. Franchising is likely to bring risks and costs to LTAs and requires some specialist expertise, so it is unlikely to be something that all LTAs will want to implement. It is therefore important to provide a range of ways in which different LTAs can address their differing objectives.
- 97. It is clear to us that central Government’s role lies in making the necessary suite of powers and options available to LTAs, to enable them to use the approach they deem as likely to be most effective and proportionate in response to their issues they are facing in their local bus market.
- 98. Delivering options 2, 3 and 4 will enhance the range of tools that LTAs have available to improve their local bus services, and provide them with the choice as to which options best addresses their individual circumstances and needs.
- 99. Going forward, we would like to ensure that local authorities cannot both commission bus services and provide them. As such, we intend to restrict LTAs from establishing a company for the purposes of operating bus services. Existing LTA links to bus companies, such as the existence of municipal bus operators, will not be affected.
- 100. The table below summarises how the different options could address LTA objectives. A key is provided below:

	Unlikely to be used consistently to achieve the objective
	May be able to achieve the objective in some circumstances
	Likely to effectively achieve the objective in all circumstances

	Option 1 – do nothing	Option 2 – Amend existing partnership legislation	Option 3 – Develop an enhanced partnership option	Option 4 – Develop new franchising legislation	Option 5 – combination of options 2-4
Over-bussing	Where relationships are effective, voluntary partnerships and QPSs can be used to a limited extent, but variable and unreliable	QPSs can address this issue to some extent, but maximum frequencies cannot be specified. Reducing the barriers to the use of the powers would help more LTAs address this issue	An enhanced partnership would allow a network plan to be developed and agreed to address this issue – but majority agreement required	Under a franchising regime, the authority would have full control over the number and frequency of services	Would provide authorities with a range of tools to address this problem
Integration between services and modes	Where relationships are effective, voluntary partnerships and QPSs can be used to a limited extent, but variable and unreliable	An easier to use QPS could help to address this issue, but unlikely to be effective at integration between different modes due to the fact that the LTA does not have a role in network planning	An enhanced partnership would allow a network plan to be developed and agreed to address this issue to a certain extent, but integration with other modes would remain difficult due to the need for majority agreement	Under a franchising regime, the authority would have full control over the services, and could integrate them with other local-authority run transport systems	Would provide authorities with a range of tools to address this problem
Congestion	Where relationships are effective, voluntary partnerships and QPSs can be used to address, but variable and unreliable	An easier to use QPS could help address this issue, but cannot specify maximum frequencies so may not be particularly effective	An enhanced partnership would allow a network plan to be developed and agreed to address this issue but majority agreement would still be required	Under a franchising regime, the authority would have full control over the number and frequency of services	Would provide authorities with a range of tools to address this problem
Air quality	Where relationships are effective, voluntary partnerships and QPSs can be used to address, but variable and unreliable	Air quality issues can be dealt with as part of a QPS, but as few have been implemented it has not proved a useful tool for dealing with this	An enhanced partnership could help address this issue	Under a franchising regime, the authority would have full control over the standards of vehicles	Would provide authorities with a range of tools to address this problem

		issue. An easier to use QPS that is implemented by more authorities could go further towards addressing these issues			
Integrated ticketing	Where relationships are effective, voluntary and QPSs can be used to address, but variable and unreliable	Multi-operator ticketing can be implemented without the need for a QPS. Improvements to the QPS to allow the authority to mandate ticketing marketing standards could help with the effectiveness of multi-operator ticketing	An enhanced partnership would allow a network plan to be developed and an integrated ticketing strategy could form part of that plan, but majority agreement would still be required	Under a franchising regime, the authority would have full control over the ticketing offer	Would provide authorities with a range of tools to address this problem
Deliver on Government's devolution commitments	Would not deliver on Government's devolution commitments	Would not deliver on Government's devolution commitments	Would not deliver on Government's devolution commitments	Yes	Yes
Provide flexibility and a wider range of tools	Tools would remain as they are currently and existing issues would remain	Tool could be applied in more circumstances, as the link to infrastructure would not be required	Would add a new tool	Would add a new tool but not provide all LTAs with the means to improve their bus network	Would provide a fuller range of tools enabling LTAs to choose which tool best suits their needs

4.7 Summary of discussions at a series of “Bus Reform Workshops”

101. In September and October 2015, the Department for Transport hosted a series of “Bus Reform Workshops” across the country. Ahead of the workshops the Department published a [background document](#) which set out some initial ideas on a number of bus policies including franchising, partnership and data provision. Seven workshops were held in total with over 400 participants, including a range of bus operators, LTAs and passenger groups.
102. On franchising, the feedback was based around the detail of how franchising would work in practice, including the different models of franchising that could be implemented. There were also queries about the impact of franchising on operators, particularly SMEs, and on bus services in surrounding areas. Concerns in particular were raised regarding the process that a LTA would need to go through to make the case for moving to a franchising model and the level of independent scrutiny that should be included in the process. Discussions also centred on cross-border services, and how they could be accommodated in a franchising system.
103. We have considered the feedback from the workshops as we have developed the policy further, and have developed a clear process that LTAs would have to follow before moving to a franchising system, including a level of independent scrutiny. We are also carefully considering how cross-border services can be accommodated, including the permit system that might be necessary to facilitate them.
104. On partnerships, some of the feedback was about the need to have more effective enforcement mechanisms and that the link to infrastructure could be amended or built upon. There was also discussion about the risk levels associated with partnership, given the ability of the CMA to levy fines and take legal action.
105. We have considered the feedback from the workshops as we have developed our partnership policies, and are proposing to address the issue of enforcement by providing LTAs with the powers to refuse and revoke registrations where they are not in accordance with the enhanced partnership model. We have also attempted to address the issues associated with the CMA’s role in the new enhanced partnership model, to provide more certainty and clarity for LTAs and operators.

5. Costs and Benefits for options 3, 4 and 5

106. Under the preferred option (option 5), LTAs will have the powers to implement partnerships without being tied to making infrastructure improvements, adopt an enhanced partnership model or choose to franchise their bus network.
107. As the aim of this legislation is to provide enabling powers to LTAs rather than to mandate changes in operating models in various markets by central government, the analysis below is of the costs and benefits that will occur under an illustrative scenario. This impact assessment therefore includes a number of assumptions, both about the numbers and types of LTAs that might implement particular approaches and about how those LTAs would implement the approaches in practice and what the impacts of their approaches might be.
108. Should any LTA wish to implement bus franchising or an enhanced partnership, the types and scale of measures, and the costs associated with these will be very context specific. Our modelling is purely illustrative and makes several generic assumptions as we are limited by lack of area specific data or knowledge of their intentions for a move to a different operating model. Thus there are large uncertainties associated with our modelled estimates and we would expect individual LTA business cases for a move to a different operating model to be significantly more accurate in identifying the costs and benefits related to those specific areas.
109. A spreadsheet model that is compliant with the department’s transport appraisal guidance (WebTAG) has been used to assess the likely costs and benefits to the places that choose to change their market models to either franchising or partnership working in our illustrative scenario.
110. Under these different operating models, LTAs will have varying powers to influence attributes of the bus market. The model allows the user to input assumptions on the changes that authorities make under the do something scenario for the following attributes:

- Fare level
 - Fare structure: this includes fare simplification such as zonal fares
 - Vehicle quality: This includes improving vehicle age, low floor buses, CCTV on buses, general maintenance and cleanliness and real time information for passengers
 - Service quality: This includes provision of journey planning information and general information provision for services
 - Network integration: This includes providing improved interchange facilities between bus services and or to other modes in the area
 - Ticket integration: This includes increasing smart ticketing coverage and or introducing multi operator and multi modal ticketing
111. For attributes other than fares, the assumptions on improvements made have to be measured as changes to the generalised journey time associated with passengers' bus journeys. Generalised journey time is a measure of the total cost associated with travel, i.e. journey time and other factors such as comfort and convenience expressed in the unit of journey time minutes.
112. The model also requires as inputs, some estimates of the likely costs associated with changes made to the different attributes in the new operating model, and who will bear the associated costs (i.e. LTA, bus operators or both).
113. The impacts of changes to attributes on demand are estimated by using generalised journey time and fare elasticities for passengers. In line with DfT national bus model, a long run fare elasticity of -0.4 is used for metropolitan areas and a fare elasticity of -0.5 for non-metropolitan areas. A national estimate of generalised journey time elasticity of -0.58 has also been used in the calculations. The fare elasticity measures the proportionate change in demand as a result of a proportionate change in fares while the generalised journey time elasticity measures the proportionate change in demand that occurs as a result of a proportionate change in the total generalised journey time of an average bus trip.
114. We have used generalised journey time improvement estimates associated with improvements to various attributes such as smart ticketing and vehicle quality from the 'The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England' study commissioned by the Department in 2009. The generalised journey time improvement estimates in the study are now included in the Department's transport appraisal guidance and used by LTA scheme promoters in appraising schemes such as bus priority measures and regional smart ticketing schemes.
115. Using the inputs for changes in fare structure, fare level and other attributes, the model estimates impacts as follows:

5.1 User impacts

116. These are the impacts on bus users as a result of any fare changes and or quality attributes. User impacts are estimated using the rule of a half method¹ and the change in consumer surplus (the additional amount that consumers would be willing to pay for a good/service above what they actually have to pay) that occurs as a result of the change in fare or quality attributes.

5.2 Non user impacts

117. Using inputs provided on fare changes, quality factors and fare elasticities, the model estimates the change in passenger demand that occurs as a result of the changes made to various attributes. It is assumed that a proportion of this change in demand will be as a result of car users now shifting their travel to buses. The diversion factor, or the proportion of additional trips generated that are assumed to have been shifted from cars is 31% in line with 'TRL 593, The Demand for Public Transport: a Practical Guide' from 2004. Applying the diversion factor to additional demand generated under the new operating model, the model calculates the following non user impacts:
- Decongestion: where reduced crowding on roads as a result of fewer cars outweighs additional congestion as a result of more buses on the road, there will be positive decongestion benefits

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427089/TAG_Unit_A1.3_-_User_and_provider_impacts_November2014.pdf

- Infrastructure costs: where the lower infrastructure damage costs from fewer cars on the road outweighs any additional damage to infrastructure from more buses on the road, there will be positive infrastructure cost benefits
 - Local air quality: measuring net impact on NOx and PM10 emission
 - Greenhouse gases: measuring net impact on CO2 emissions
 - Accidents: measuring net impact on road safety
 - Indirect taxes: measuring the net impact on HMT of the reduction in fuel duty received from car usage vs increased fuel duty from buses and BSOG as per paragraph 116 below
118. All the impacts above minus indirect taxation are referred to as marginal external costs or MECs of transport. The department publishes guidance on the monetary values to be used in estimating net total marginal external costs for cars and buses (classified as Public Service Vehicles) in its appraisal guidance.² The prescribed values here have been used appropriately in the model.

5.3 Central Government Impacts

119. The lost revenue to the exchequer from reduced car fuel tax payments is calculated by multiplying the reduction in distance travelled by cars by the average car fuel efficiency data from WebTAG to get the reduced fuel use by cars. This is multiplied by the car fuel duty for diesel and petrol cars (taken from the WebTAG data book) to get the reduction in car fuel duty paid as a result of the scheme.
120. The increased revenue to the exchequer from increased bus fuel duty payments is calculated in the same way as for car fuel duty. For enhanced partnerships, the increased BSOG payments are calculated using the increased distance travelled by buses and the rate for BSOG payments. The reduced revenue from car duty and the increased BSOG payments are then taken away from the increased bus fuel duty payments to give the net reduction in indirect taxes. For franchising, BSOG will no longer be paid to bus operators so this is not factored into the tax revenue.

5.4 Operator impacts

121. This provides a measure of the change in revenue and the change in costs for bus operators in the industry in comparison to the do nothing scenario. The changes in revenue and costs are dictated by:
- changes in demand as a result of changes in fares and other quality attributes;
 - whether operators face additional operating costs as a result of the new operating model; and/or
 - whether they have control over their own revenues and costs in the new operating model.

The net impact here will mask any individual winners or losers who enter or leave the market as a result of the change in operating model.

5.5 LTA impacts

122. This provides a measure of the change in revenue and the change in costs for LTAs in the industry in comparison to the do nothing scenario. The changes in revenue and costs are dictated by:
- changes in demand as a result of changes in fares and other quality attributes;
 - whether LTAs face additional operating costs as a result of the new operating model; and/or
 - whether they have control over their own revenues and costs in the new operating model.
123. The model calculates total additional costs associated with the move to a new operating model over the appraisal period as follows:
- **Administrative and implementation costs** - The model requires inputs on any additional administrative costs and implementation costs (both one off and ongoing) associated with a move to a different operating model for LTAs and operators. For example: under bus franchising we

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427105/webtag-tag-unit-a5-4-marginal-external-congestion-costs.pdf

would expect the LTA to face additional administrative costs associated with network planning, fare setting and franchise procurement.

- **Capital costs** - The model requires inputs on any additional capital costs incurred by LTAs and operators as a result of a move to new operating model. For example, under the enhanced partnership model, if LTAs were to set vehicle quality standards requiring operators to buy new Euro 6 buses in order to operate in the area, there would be some additional capital costs for them.
124. For a more detailed methodology explaining how the costs and benefits are calculated in the model, please see Annex B.

5.6 Modelling the monetised costs and benefits for options 3, 4 and 5

125. The costs and benefits of options 3, 4 and 5 have been modelled using illustrative scenarios due to the substantial uncertainties underpinning the data. Through the devolution deal process, Government has already committed to provide LTAs with a wider range of tools to address inefficiencies in their local bus markets. Other options have not been modelled as they would not deliver on Government's devolution commitments.
126. As the policy is to give LTAs a choice of options to manage local bus services, there is a high degree of uncertainty as to which option each LTA will choose to implement. Currently, a number of LTAs have requested access to the franchising powers through the devolution deal process, with others keen to explore enhanced partnership options. We have therefore produced illustrative scenarios for options 3, 4 and 5.
127. For the illustrative scenario for option 3, we have assumed that six metropolitan areas and two non-metropolitan areas will take up enhanced partnership, and for option 4, we have assumed that the six metropolitan areas will undertake franchising. For the illustrative scenario for option 5, we have assumed that the six metropolitan areas will implement bus franchising, and two non-metropolitan areas will undertake enhanced partnerships.
128. Currently a number of metropolitan areas have been promised access to franchising powers through their devolution deals, together with Cornwall Council which is a non-metropolitan area. Some of the areas granted access to franchising powers may not choose to use those powers and may prefer to pursue partnership instead. These illustrative scenarios should therefore not be taken as firm indicators of the places that are likely to implement franchising or enhanced partnerships. It is expected that LTAs will undertake further analysis of options prior to taking final decisions. As a result this scenario is not intended to be robust and there is significant uncertainty with regards to the number of areas pursue franchising or enhanced partnership models.
129. Furthermore, in order to estimate likely costs and benefits under these scenarios, we have had to make several assumptions (as are set out below). The actual costs and benefits will depend on how franchising and enhanced partnerships are implemented at the local level.
130. Bus franchising currently exists in London, but a wholesale move from the deregulated to a completely regulated market is largely untested in the UK. The effects of an enhanced partnership are similarly difficult to quantify given a lack of historical precedent. Therefore, to reflect the large uncertainties in several of the estimates used, a high scenario (with optimistic passenger growth, greater competition for the market driving down operator margins, and service quality improvements introduced by the LTA) and a low scenario (which assumes more modest passenger growth and service quality improvements and no impact on operator margins as a result of the move to franchising) have been modelled for options 4 and 5. The central estimate of costs and benefits are at the midpoint of the high and low scenarios.
131. Table 2 in Annex A presents the assumptions made for the areas which are assumed to undertake bus franchising in the illustrative scenarios. Table 3 in Annex A presents the assumptions made for the areas which are assumed to undertake enhanced partnerships in the illustrative scenarios.

5.7 Appraisal period, price and value base

132. For option 3, it is assumed that 2 PTE areas and 1 non-PTE area will implement enhanced partnerships in 2017 and 2018 and that 2 PTE areas will implement enhanced partnerships in 2019. For options 4 and 5, it is assumed that there will be staggered take up of bus franchising amongst the PTEs once the new legislation is introduced with two PTEs implementing franchising in 2017, two more in 2018 and the remainder in 2019. For the analysis of option 5, it is also assumed that one non-PTE area will implement an enhanced partnership in 2017 and one will implement an enhanced partnership in 2018. The costs and benefits have been appraised from 2017 to 2026. All costs and benefits are discounted to 2015 and all monetary values are in 2014 prices.

5.8 Analysis outputs for illustrative scenarios

133. The analyses for options 3, 4 and 5 follow the same methodology. The analysis for option 5 includes all of the impacts from the six PTE areas implementing franchising in option 4, but also includes the impacts of two non-PTE areas implementing enhanced partnerships. For option 3, it is assumed that 6 PTE areas and 2 non-PTE areas will implement enhanced partnerships. The summary of monetised impacts for options 3-5 are shown in tables 1-3. Due to the uncertainties behind many of the key assumptions, in particular around the types of vehicle or service improvement measures which might be taken under an enhanced partnership or franchising, sensitivities have been run around the key assumptions with the more optimistic assumptions being shown in the high scenario and the more pessimistic assumptions being shown in the low scenario. This demonstrates how variable the impacts of the each option may be.

Table 1: Summary of the monetised impacts of option 3 for an illustrative level of take up

Discounted appraisal outputs	Present Value (2017-2026), £m, 2014 prices		
	Low	Central	High
BENEFITS			
User benefits			
From fare changes	£0.0	£0.0	£0.0
From service changes	£279.8	£304.5	£329.3
Non user benefits			
Benefits to other road users (decongestion)	£8.7	£22.0	£35.3
Infrastructure	-£0.9	£2.1	£5.1
Local Air Quality	£0.0	£0.0	£0.1
Noise	-£0.1	£0.3	£0.7
Greenhouse Gases	-£0.1	£1.3	£2.7
Accident reductions	-£0.1	£3.2	£6.5
Operator benefits			
Bus revenue impacts	£48.2	£48.9	£49.5
Wider social benefits			
Health and well being	£10.5	£11.4	£12.4
Government benefits			
Indirect tax revenues from modal transfer (fuel duty)	-£0.4	-£6.0	-£11.6
Change in public account revenue	-£4.3	-£4.0	-£3.7
Total benefits	£341.3	£383.8	£426.3

COSTS			
Operator costs			
Bus cost impacts	£8.4	-£40.0	-£88.4
Capital costs - operators	£0.9	£0.9	£0.9
Implementation costs - operators	£0.2	£0.3	£0.5
Government costs			
Change in public account costs	£0.1	£0.1	£0.1
Capital costs - local authority	£0.0	£0.0	£0.0
Implementation costs - local authority	£0.2	£0.3	£0.5
Total costs	£9.8	-£38.3	-£86.4
NPV	£331.5	£422.1	£512.7

134. This analysis for our illustrative scenario and assumptions suggests that option 3 is likely to have a large positive effect on society with an NPV of £331m-£513m. The greatest benefits are those to consumers from service improvements (£280m-£329m). There is not much variability between the high and low scenarios.

Table 2: Summary of the monetised impacts of option 4 for an illustrative level of take up

Discounted appraisal outputs	Present Value (2017-2026), £m, 2014 prices		
	Low	Central	High
BENEFITS			
User benefits			
From fare changes	£148.1	£148.5	£149.0
From service changes	£446.8	£684.5	£922.2
Non user benefits			
Benefits to other road users (decongestion)	£23.2	£48.9	£74.5
Infrastructure	-£2.2	£1.4	£5.0
Local Air Quality	£0.0	£0.1	£0.1
Noise	-£0.1	£0.4	£0.9
Greenhouse Gases	-£0.1	£1.8	£3.8
Accident reductions	-£0.1	£4.6	£9.3
Operator benefits			
Bus revenue impacts	-£72.1	-£255.7	-£439.4
Wider social benefits			
Health and well being	£27.3	£36.6	£45.9
Government benefits			
Indirect tax revenues from modal transfer (fuel duty)	-£1.3	-£9.6	-£18.0
Change in public account revenue	£56.2	£272.1	£488.0
Total benefits	£625.7	£933.6	£1,241.4

COSTS			
Operator costs			
Bus cost impacts	£113.9	£51.0	-£11.9
Capital costs – operators	£0.0	£0.0	£0.0
Implementation costs - operators	£5.3	£8.0	£10.7
Government costs			
Change in public account costs	£117.2	£115.8	£114.3
Capital costs - local authority	£167.3	£239.6	£312.0
Implementation costs - local authority	£5.6	£8.4	£11.2
Total costs	£409.4	£422.8	£436.3
NPV	£216.4	£510.7	£805.1

135. This analysis for our illustrative scenario and assumptions suggests that option 4 is likely to have a large positive effect on society with an NPV of £216m-£805m. This may be greater than for option 3 although the variability between the high and low scenarios is higher reflecting the greater risks associated with franchising compared to enhanced partnerships. The analysis also suggests that bus operators are likely to lose out as a result of this policy with a net loss of £191m-£438m compared to a business as usual counterfactual. The greatest benefits are those to consumers from service and fare improvements (£595m-£1,071m) and the greatest costs are the capital costs to LTAs (£167m-£312m). It is worth noting that the analysis for this option assumes that only 6 PTE areas will implement franchising compared to the assumption that 6 PTE areas and 2 non-PTE areas will implement enhanced partnerships in option 3. This is because it is assumed that any LTAs who would choose to implement franchising in option 4, would choose to implement enhanced partnerships instead if the option to implement franchising were not available. However it is thought that some LTAs who would implement enhanced partnerships if they were able to, would not choose to implement franchising as this is an operating model which would require a far more significant level of LTA involvement in the bus market.

Table 3: Summary of the monetised impacts of option 5 for an illustrative level of take up

Discounted appraisal outputs	Present Value (2017-2026), £m, 2014 prices		
	Low	Central	High
BENEFITS			
User benefits			
From fare changes	£148.1	£148.5	£149.0
From service changes	£471.5	£711.3	£951.1
Non user benefits			
Benefits to other road users (decongestion)	£24.0	£50.6	£77.1
Infrastructure	-£2.3	£1.5	£5.4
Local Air Quality	£0.0	£0.1	£0.1
Noise	-£0.1	£0.4	£0.9
Greenhouse Gases	-£0.1	£1.9	£4.0
Accident reductions	-£0.1	£4.8	£9.7
Operator benefits			

Bus revenue impacts	-£68.4	-£249.0	-£429.7
Wider social benefits			
Health and well being	£28.2	£37.6	£47.0
Government benefits			
Indirect tax revenues from modal transfer (fuel duty)	-£1.3	-£10.1	-£18.8
Change in public account revenue	£56.0	£269.0	£482.0
Total benefits	£655.5	£966.8	£1,278.0
COSTS			
Operator costs			
Bus cost impacts	£114.6	£48.4	-£17.7
Capital costs - operators	£0.2	£0.2	£0.2
Implementation costs - operators	£5.4	£8.1	£10.8
Government costs			
Change in public account costs	£117.2	£115.8	£114.3
Capital costs - local authority	£167.3	£239.6	£312.0
Implementation costs - local authority	£5.7	£8.5	£11.3
Total costs	£410.4	£420.7	£430.9
NPV	£245.1	£546.1	£847.1

136. The analysis for option 5 suggests that providing LTAs with a range of operating models would be more beneficial than only providing enhanced partnerships (as in option 3), or franchising powers (as in option 4). It is estimated that the NPV for option 5 would be £86m lower to £516m higher than for option 3, and £29m-£42m higher than for option 4. There is expected to be a net cost to bus operators (£189m-£423m) but a large benefit to bus users (£620m-£1,100m). The text below describes the costs and benefits for option 5 in more detail but the methodology is equivalent to the methodology for options 3 and 4. For a more detailed methodology, see Annex B

Direct costs

Costs to operators

137. The major costs to bus operators are tendering costs under franchising and administration costs such as implementation meeting costs under enhanced partnerships. These may be offset by a reduction in operating costs because there is expected to be a reduction in vehicle mileage as a result of less on-road competition and because many of the costs currently borne by bus operators (such as marketing costs) would be taken over by LTAs under a franchising model. Therefore there is estimated to be a net reduction in costs for operators of £1m per annum in the high scenario and a net increase in costs for operators of £12m per annum in the low scenario. Additionally, we expect that there will be a dis-benefit to operators from reduced revenue as a result of simplified fares which will be offset to some extent by an increase in bus journeys. This is explained further in the benefits to operators section.

Costs to government

138. The biggest costs to government under option 5 are estimated to be the capital costs of renewing the bus fleet (£3m-£12m per LTA per annum). From a theoretical point of view, welfare maximising local transport authorities will be less likely to display certain behaviours that profit maximising

operators exhibit in the deregulated environment, such as price discrimination and the removal of non-profitable routes. To proxy for this effect, we have assumed that there will be greater operating costs per vehicle mile over time as a result of greater inefficiencies from public control of the bus market compared to private control under business as usual. This is modelled by increasing costs per vehicle mile by 1% each year compared to a do nothing scenario.

139. The costs of implementing franchising are also expected to be substantial. The staff costs and marketing costs of implementation are based on the [analysis by Bristol City Council³](#) which suggested that implementing franchising would cost £1m-£2m. This has been doubled for PTE areas as it is assumed that implementing a franchising in model in these areas will be significantly more complicated. The costs of implementing enhanced partnerships are estimated to be between £50,000 and £120,000 per area in the first year of the scheme based on expert advice. This includes the costs of meetings to set up the scheme (£2,000-£20,000) and the costs of running a consultation (£50,000-£100,000). It is estimated that the total costs to government for option 5 will be between £29m and £44m per year.

Indirect costs

140. No indirect costs have been modelled.

Benefits

User benefits

141. For both enhanced partnerships and franchising, it is thought that there would be significant user benefits as a result of improvements in the service quality. These are estimated to be £1m-£8m per LTA per annum for enhanced partnerships and £5m-£24m per LTA per annum for franchising. For the franchising analysis, based on assumptions made in the Nexus QCS business case it has also been assumed that the new operating model will lead to a simpler fare structure for bus users which will give annual benefits of £1m-£2m per LTA.

Non-user benefits

142. For non-bus users and society as a whole, there will also be benefits resulting from greater numbers of bus journeys and fewer car journeys such as reduced carbon emissions, noise, congestion and accidents. These benefits will be offset to some extent by a reduction in fuel duty paid to the Treasury as a result of fewer car journeys. The net external impact is estimated to be £0.2m-£2.2m per LTA per year for franchising and £0.01m-£0.20m per LTA per year for enhanced partnerships.

Operator benefits

143. There is likely to be a significant reduction in operating revenue for bus operators overall as a result of franchising. This is due to a simplification of fares which will be offset to some extent by an increase in bus journeys. In the high scenario for franchising, there is also assumed to be reduced profit margins for bus operators which will further reduce their operating revenue. The net reduction in revenue for operators is estimated to be £2m-£15m per LTA per annum. This reduced revenue also captures the impact on the incumbent bus operators who stand to lose out by more than bus operators as a whole because it is likely that they will lose some business to new competitors and face reduced operating margins as a result of the increased competition generated by franchising. For enhanced partnerships, fares are assumed to remain as they would be in a business as usual scenario. Therefore, we estimate an increase in operator revenue as a result of journey quality improvements implemented under enhanced partnerships of £0.1m-£0.3m per LTA per year.

Wider social benefits

144. As both of these schemes are anticipated to lead to a greater number of bus journeys, there will be some health and wellbeing impacts as a result of greater walking (to and from bus stops). These impacts are estimated to be up to £0.1m per LTA per annum for areas engaging in enhanced partnerships and up to £1m per year for areas which chose to implement franchising. The

³https://www2.bristol.gov.uk/committee/2013/sc/sc024/1219_11.pdf

calculations for wider social benefits are not calculated using WebTAG but the methodology is included in Annex B.

Government benefits

145. There are expected to be increased revenues to LTAs as a result of their taking over control of bus fare revenue from bus operators. This benefit is estimated to be in the region of £2m to £16m per LTA per year for areas which implement franchising but this will not happen in areas which implement enhanced partnerships as revenues from fares will remain with bus operators under this operating model. It is estimated that central government will lose revenue from reduced fuel duty as a result of a model switch from cars to buses. This impact is estimated to be up to £0.4m per year from franchising and up to £0.04m per year from enhanced partnerships.

5.9 Non monetised costs and benefits

146. Given the limited information available on generalised journey time improvements that can be associated with changes to several attributes and the lack of information available on potential costs we have not estimated the following:

- Costs and any positive benefits from any quality standards set by the LTA on cleaning and maintenance.
- In addition to the positive impact on air quality that results from passengers shifting mode from car to buses, the fact that in our illustrative scenario LTAs will require that bus fleets are renewed to Euro 6 standards means that there will be some additional and potentially significant air quality improvement benefits. The model used to assess impacts currently does not have the capability to model this impact.
- The capital cost or benefits associated with improved interchange facilities between modes and individual stages of trips. While we have evidence on the costs associated with such infrastructure from large major schemes associated with public transport interchange, we concluded that the nature of infrastructure required would vary by area type and local need, meaning any generalisation of costs will be spurious. However, we expect the costs associated with this could have a significant impact on total costs associated with franchising for a LTA.
- Increased network stability: LTAs may wish to increase network stability by minimising route changes as part of their franchise. This is likely to have a small positive impact on generalised journey time and hence demand, but could result in a loss of some cost efficiencies.
- Fare simplification under enhanced partnerships: There is also likely to be some fare simplification under enhanced partnerships but this has not been valued as there is insufficient evidence to support this.
- Increased CCTV coverage: It is possible that LTAs may choose to install CCTV in buses which do not currently have it. This will increase the overall journey quality and will lead to increased user benefits. While there is reasonable data for the costs and benefits of implementing this measure, the likelihood of it being implemented is far less certain and so it has not been monetised.
- Audio announcements and real time passenger information: Some LTAs may choose to implement these measures under a franchising model. They would lead to improved journey quality and thus higher user benefits. While these measures could lead to substantial benefits, we do not currently have good cost data for these so we have chosen not to monetise them in this analysis.
- It is possible that wages for bus drivers will be higher under franchising than under the current unregulated market. However this has not been modelled because there is no data with which to quantify this.
- The costs for either operators LTAs of staff transfers and pension requirements. Further policy work is ongoing to consider these impacts and as such we have chosen not to monetise or attempt to substantiate further on these in this assessment.
- No costs or benefits from exempting community services from franchising and enhanced partnership schemes have been monetised. Community transport providers tend to operate

flexible and bespoke services to their local communities, and it is not our intention to disrupt these services. Exempting these services will allow them to continue to operate which is likely to have a positive effect for passengers, but they could also potentially compete with franchise operators. However we would expect the costs of this measure to be negligible due to the bespoke nature of community transport services.

- The impacts of the 'permit' system for cross border and open access operators have not been monetised. These would be very area-specific and so it is not possible to generalise about what the effects might be. It is unlikely that these permits would impose a substantial additional cost to bus operators beyond what has already been included in the analysis. It is also not obvious that these costs would be direct.
- The effects of preventing local authorities from setting up new municipal bus operators have not been monetised because this policy will not have an impact on existing municipal operators and we do not expect any local authorities to set up new municipal operators. The impacts of this policy are therefore likely to be minimal.
- There is likely to be a small impact on the CMA in terms of an increased workload due to its scrutiny role in the enhanced partnership model. The CMA already have oversight of the bus market, but they will now be required to engage with any enhanced partnerships that are formed. This impact has not been monetised as it is likely to be small and there is little evidence to base any analysis on.

5.10 Risks and assumptions

147. The franchising and enhanced partnership options provide the ability for LTAs to require improvements in the quality of services if this will improve the outcomes for passengers. Improving the partnership options available and introducing an 'easier to use' franchising option may create environments whereby smaller operators are not able to provide services in accordance with those requirements or are unlikely to win bids for franchising due to the competition from larger operators. This could result in a reduction in the number of smaller operators in the market, potentially reducing competition depending on how procurement and contracts are designed.
148. This policy would grant LTAs with the power to implement enhanced partnerships or franchising but it is extremely uncertain as to which LTAs would implement each option. The effects of this policy are therefore highly uncertain.
149. This uncertainty is exacerbated by the differences between various regions. A solution which works for one LTA might not make sense for another. The effects of this policy will vary substantially not only based on how many LTAs implement franchising and enhanced partnerships but also based on which LTAs implement franchising and enhanced partnerships.
150. These calculations use 2014 WebTAG data book figures for the value of time. These figures have been provisionally updated as of November 2015 but are still subject to consultation and so they may change. Therefore they have not been used in this analysis. If the new provisional values were to be used, it would result in a 7-8% decrease in the scheme NPV for the low, central and high scenarios.
151. Local authorities considering implementing franchising will need to think carefully about how they procure their bus services to ensure that the routes or packages of routes that are put out to the market are attractive and achieve value for money. In some instances, this may be achieved by packaging up routes, whereas other areas may prefer a route-by-route approach. There is a risk that unprofitable routes could reduce the overall value of a package of routes and dissuade operators from bidding, and there is also the risk that franchising becomes commercially unsustainable for operators due to the design of the tender packages. We expect any authority looking to implement franchising to think carefully about the commercial viability of their proposition as part of the business case development process.

5.11 One-In Three-Out and Business Impact Target

152. As defined in the [Better Regulation Framework Manual](#) section 1.9.5, One-In, Three-Out (OI3O) applies to all changes in, or introduction/removal/expiry of, measures that require RRC clearance. These policy options contribute to the delivery of a manifesto commitment and are out of scope of OI3O.

Enhanced partnerships

153. Enhanced partnerships are a qualifying regulatory provision (QRP) and therefore in scope of the Business Impact Target. These provide a net benefit to business with an EANCB of -£1.0m and a present Value of Net Costs to Business from 2017 to 2026 of -£9m.

Franchising

154. Franchising is a regulatory provision that promotes competition and has the potential to lead to significant costs to businesses (with an EANCB of £36.6m and a present value of net costs to Business of £315m). It is therefore considered to be a non-qualifying regulatory provision that is not scored towards the Business Impact Target. An assessment of the four pro-competition criteria is set out below:

- a. *The measure is expected to directly or indirectly increase the number or range of sustainable suppliers; to strengthen the ability of suppliers to compete; or to increase suppliers' incentives to compete vigorously.*

In its investigation into the bus market, the Competition Commission found that many local markets exhibit persistently high levels of concentration, with little head-to-head competition which can create a barrier to entry. Currently, new operators have to compete 'on-road' with well-established operators. Providing that tender contracts are well designed, there should be lower barriers to entry to the bus market under franchising, and a new range of suppliers, both large and small, should be able to compete for contracts to operate in the area.

Franchising therefore has the potential to increase the range of suppliers in the market and to also increase the incentive for incumbent operators to compete as they will both need to actively compete to continue to operate their services, and will also be able to compete with other operators to secure new services more easily. While there are hundreds of bus operators around the country, there are typically many areas in which there is no effective competition with big operators choosing to operate in different areas. Franchising should strengthen the ability of suppliers to compete and increase their incentives to compete vigorously by setting up tendering rounds in which the incumbent is given no innate advantage over other bus operators. The open access provision (which allows operators who have identified a gap in the services offered by the franchised network to exploit the opportunity and offer additional services), should increase the opportunities for bus operators to run services while not undermining the franchised services.

- b. *The net impact of the measure is expected to be an increase in effective competition (i.e. if a policy fulfils one of the criteria but results in a weakened position against another)*

While unproductive on-road competition is expected to fall as a result of this measure, off-road competition for tendered contracts should lead to an increase in the overall level of competition in the bus market as incumbents will no longer be able to keep the same established bus routes and will be able to compete for other operators' routes. The Competition Commission's 2011 investigation into the bus market found that the majority of bus services face no effective competition. This policy will allow operators to more easily compete for contracts on all services which will result in an increase in the overall level of competition within local bus markets.

- c. *Promoting competition is the primary expected impact of the measure*

The primary intended impact of this measure is to deliver better outcomes for bus users by improving competition in the bus market. The expected costs to business from this measure

will be brought about by an increase in competitive market pressures rather than by an increase in regulatory burdens. If this measure does not lead to increased competition, bus operators will be able to bid for tenders unchallenged and so should be able to run services as they currently do so without any additional costs.

- d. *It is reasonable to expect a net social benefit from the measure (i.e. benefits to outweigh costs), even where all the impacts may not be monetised*

Our illustrative analysis demonstrates that franchising has a strong positive NPV ranging from £216m to £805m with a central value of £511m. The impacts which have not been monetised as part of this NPV are not expected to cause any substantial change to the overall scale of the positive impact expected to result from bus franchising. It is therefore very likely that this scheme will result in a net social benefit.

6. Wider Impacts

6.1 Economic/financial impacts

6.1.1 Competition assessment

Franchising

155. In the deregulated market, competition takes place ‘on road’ whereby bus operators actively compete with each other on the road and at bus stops to pick up passengers.
156. ‘On-road’ competition can lead to better outcomes for passengers where it encourages lower fares and higher service quality, but it can also have some negative effects such as predatory practices, or over-bussing on a particular route adding to congestion.
157. In its investigation into the bus market⁴, the Competition Commission found that, ‘in the vast majority of Urban Areas a substantial proportion of services do not face effective head-to-head competition.’ They also found that many local markets exhibit persistently high levels of concentration, with the five largest bus operators operating 69% of all local bus services. The majority of services in most local areas are served by just one or two providers, with the largest operator providing, on average, 69% of bus services in urban areas.
158. The Competition Commission’s report also found that the local bus market can generate periods of intense short-lived rivalry, leading to the exit of one operator. This ultimately reduces the extent of head-to-head competition, and the anticipation of this type of behaviour can create a barrier to entry and expansion.
159. One other issue that the Competition Commission found was that competition in local bus markets had been diminished by operator conduct leading to geographic market segregation. This reduces the constraint to incumbent operators from potential competition and new entrants, and can lead to stagnation of local bus markets.
160. The introduction of franchising will lead to competition ‘for the market’ whereby operators will compete with each other through a tendering exercise. Franchising is likely to reduce the barriers to entry to new operators as they will not have to compete ‘on-road’ with well-established operators, but could compete on cost and quality grounds through a tendering process. If the franchising contracts are designed well, then a new range of suppliers, both large and small, should be able to compete for contracts and to operate in the area. Franchising therefore has the potential to increase the range of suppliers in the market and to also increase the incentive for incumbent operators to compete vigorously.
161. One of the issues that could drive a LTA to pursue franchising is the lack of progress made through partnerships, potentially due to the fact that the incumbent operators do not feel that the constraints from potential competition are strong enough to encourage them to act. Franchising could

⁴ Competition Commission (2011) ‘Local bus services market investigation’

potentially promote competition in these areas by opening up the market to new entrants and therefore creating an incentive for incumbent operators to compete.

162. However, enabling LTAs to take forward franchising is likely to bring uncertainty for incumbent bus operators, as the impacts on their businesses will be dependent on the choices of various LTAs. This uncertainty also has the potential to filter through and have an impact on other businesses, such as manufacturers.
163. The permit system, which will allow cross border and open access operators to run services, should increase the opportunities for bus operators to run services provided that these services do not interfere with the existing franchising network. This is likely to have a small net positive impact on bus operators although this has not been quantified as the effects are likely to be fairly small and the interest that bus operators will have in applying for these permits is uncertain.
164. The exemption from franchising schemes for community transport should not have an adverse effect on competition due to the bespoke nature of community transport services and the limited competition with commercial providers. The impacts of this have not been quantified as the effects are likely to be fairly small.
165. Local authorities will be restricted from establishing new bus companies. Currently there are only 8 existing municipal bus companies operating services in England, and we are not aware of any current plans to establish new municipal bus companies. This policy will not affect existing LTA links to bus companies, so existing municipal operators will be unaffected. We therefore expect this policy to have a negligible impact on competition. This has not been quantified as the effects are likely to be fairly small.
166. While it is likely that this policy will lead to some net losses to businesses, it has a strongly positive impact for society as a whole. It will bring significant benefits to passengers and society and promote competition by remedying some of the market failures identified in the bus market by the competition commission.

Enhanced Partnership

167. Partnerships can result in increased concentration of the bus market and have the potential to benefit incumbent operators who have good relationships with the LTA. The enhanced partnership proposals will mitigate the risk of market segregation and barriers to entry by ensuring that new entrants can join the partnership at any time, and putting in the appropriate mechanisms to ensure that operators are given an equal and fair opportunity to register their interest to run routes. As with franchising, the exemption for community transport schemes should have negligible effects on competition.

6.1.2 Small and micro business assessment

168. Currently, bus operators determine which routes they want to operate and local authorities fill in the gaps by subsidising the provision of other services that are not commercially viable. The desire to move away from this piecemeal approach to bus service delivery to a more joined-up and centrally-planned system of delivery may be one of the key factors that drives an authority to pursue franchising or an enhanced partnership approach. If an authority thinks that franchising is the best method to use to achieve their desired outcomes then they will take responsibility for specifying the services to be delivered. Under an enhanced partnership approach the authority will work with the operators to determine the outcomes they want to jointly achieve, and the services needed to achieve those outcomes.
169. Some of the key aims of authorities are likely to be to push up standards and improve the coverage and integration of services. To achieve these aims it will be important to provide the authority with the freedom and flexibility it needs to determine the optimum mix of services, and not be constrained by the services that are currently provided by the operators. The market share of small and micro bus companies is approximately 11% for England outside London, with approximately 5% of the market share in PTE areas being held by small and micro businesses⁵. Allowing services operated by small or micro businesses to continue to run in a deregulated environment rather than have to participate in a franchising or enhanced partnership scheme would mean that 5-11% of services in the area would be operating to a potentially different standard, and

⁵ Approximated using DfT statistics table BUS0701

the authority would be unlikely to achieve their aims and could reintroduce inefficiencies and duplication in the provision of bus services.

170. We recognise that it may be more difficult for some smaller businesses to compete under a franchising model as they may not have the resources and information to be able to deliver competitive bids. If smaller operators are unsuccessful in their bids to operate franchises in their incumbent market they are also less likely to be able to bid for contracts in other areas as it will be more difficult for them to move their resources and businesses. The end of a contract may also create a barrier for smaller businesses as they may not be able to absorb the loss of a service as easily as a larger operator might. However, franchising may give innovative and agile smaller bus operators a better chance to grow their businesses than under the status quo where they find it difficult to compete or enter the market due to the barriers posed by 'on road' competition.
171. We have attempted to mitigate the impacts on SMEs in a franchising scenario by requiring any authority that is looking to pursue franchising to clearly state in their consultation materials how, in conducting the franchising procurement processes, the authority proposes to facilitate the involvement of small and medium-sized enterprises. The authority will then be required to consult all incumbent operators to get their views on the proposed approach to involving small and medium-sized enterprises in the procurement process. We anticipate that most local authorities looking to franchise will want to work constructively with the incumbent operators to ensure a smooth transition from the status quo to franchising, and as such are likely to take the views of incumbents into account and think carefully about small and medium-sized enterprises when designing their procurement processes. They will however need to design processes which align with procurement law, and therefore cannot ensure that small and medium-sized operators can continue to operate the same services in the future.
172. In the enhanced partnership model it is possible that any higher standards required by particular partnership areas may be difficult for smaller operators to meet. SMEs would, however, have the same ability join the partnership and run routes as larger operators and our partnership proposals will also require the majority of bus operators to agree to the proposals, meaning that small and medium-sized operators will be able to voice their concerns regarding changes to services. The enhanced partnership legislation will also ensure that any voting system gives SMEs a fair say in determining the objectives of the partnership.

6.1.3 Justice impact test

173. A move to franchising in a local area could be controversial and there is a risk that a decision by a local area to move to franchising is judicially reviewed. We do not anticipate wide-scale take-up of franchising powers however, so would expect this impact to be minimal. Under both franchising and enhanced partnership proposals, the powers that the Traffic Commissioner has to impose sanctions on operators will be extended and amended which could create additional burdens for the justice system. We are in the process of considering how best to resource the Traffic Commissioners to cover these additional requirements, and a more detailed justice impact test is being developed.

6.2 Environmental impacts

6.2.1 Greenhouse gas assessment

174. The impact of these policies on greenhouse gases will be dependent on how they are implemented by the LTAs involved. We would expect LTAs to specify similar or higher standards of vehicles in an enhanced partnership or a franchise, and to try to reduce congestion and over-bussing where it is occurring as part of either franchises or partnerships, so would not expect a negative impact. However we do anticipate that these policies would lead to an increase in bus use which might increase carbon emissions. This is likely to be offset to a certain extent by a reduction in car use.

6.2.2 Wider environmental issues

175. The impact of these policies on pollution and air quality will be dependent on how they are implemented by the LTAs involved. We would expect LTAs to specify similar or higher standards of

vehicles, and to try to reduce congestion and over-bussing where it is occurring as part of either franchises or partnerships, so would not expect a negative impact.

6.2.3 Sustainable development

176. Once franchising powers are used in an area it will be difficult to move back to a deregulated system should franchising not deliver the required benefits anticipated. We are providing enabling powers to allow LTAs to move to a franchising model, but we would expect local areas to consider the sustainability of the model, particularly in relation to finances.
177. The enhanced partnership model will be easier to adapt and change than the franchising model and will not result in a permanent change in the regulatory model. We would however expect authorities to consider the sustainability of an enhanced partnership model, particularly if the LTA is taking on responsibility for managing the registration system.

6.3 Social Impacts

6.3.1 Equalities impact

178. People in the 17-20 and 70+ age groups make the most trips using the bus⁶ meaning that groups such as pensioners and university students tend to use bus services more frequently than other groups. Women also tend to use bus services more frequently than men across all age groups⁷.
179. People in the lowest income groups make three times as many trips on buses than those in the highest income groups⁸, with 36% of bus users below pension age from the lowest income group and 40% of these using the bus for work or education purposes. The impacts of either franchising or enhanced partnerships will impact most on these demographics.
180. The impact of these policies on equalities will be dependent on how they are implemented by the LTAs involved. We would expect LTAs to specify similar or higher levels of service than are currently being provided, so would expect a neutral or positive impact on these groups.

6.3.2 Health and wellbeing

181. Buses are used by many as their principle mode of transport, so changes to bus services in an area have the potential to impact both positively and negatively on the health and wellbeing of local residents. The impact of these policies on health and wellbeing will therefore be dependent on how they are implemented by the LTAs involved. We would expect LTAs to specify similar or greater networks of services, so would not expect a negative impact.

6.3.3 Family life

182. We do not anticipate that these policies would have any impact on family life.

6.3.4 Human rights

183. We do not anticipate that these policies would have any impact on human rights.

6.3.5 Rural proofing

184. The impact of these policies on rural areas will be dependent on how they are implemented by the LTAs involved. The extent of the bus network in any area will depend on the funding available to support that network, which may or may not be greater under a franchising or enhanced partnership scenario. As part of the franchising policy we will also ensure that LTAs are required to consider the impact of their franchising proposals on neighbouring authorities, which should help to address any unintended consequences.

⁶ DfT statistics, NTS0601

⁷ DfT statistics, NTS0601

⁸ DfT statistics, NTS0705

6.3.6 Post Implementation Review (PIR) Plan

Post Implementation Review (PIR) Plan

5. **Review status:** Please classify with an 'x' and provide any explanations below.

<input type="checkbox"/>	Sunset clause
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<input checked="" type="checkbox"/>	Other review clause
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<input type="checkbox"/>	Political commitment
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<input type="checkbox"/>	Other reason
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<input type="checkbox"/>	No plan to review
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6. **Expected review date** (month and year, xx/xx):

01	04	/	20	22
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Rationale for PIR approach:

Describe the rationale for the evidence that will be sought and the level of resources that will be used to collect it.

- Will the level of evidence and resourcing be low, medium or high? (See Guidance for Conducting PIRs)

High

- What forms of monitoring data will be collected?

As a minimum, we expect to collect data on how local authorities respond to the new legislation, i.e., how many places take up franchising, enhanced partnerships etc. Data relating to fares before implementation of a new model and after will also be collected. We will be able to use this information in conjunction with the data that department routinely collects on service levels and patronage, together with passenger satisfaction data collected by Transport Focus, to determine the impact of the legislation on the market and whether it has demonstrated benefits to passengers. We also expect to collect information on the costs to local authorities and operators where the market is reformed after this legislation is introduced. In addition we expect to collect information on features of market reform that are implemented, for example: vehicle standards set under franchising or quality partnerships. This information will help validate the assumptions we have made in the illustrative scenarios presented in this IA. Qualitative information from operators and LTAs in relation to some of the 'softer' policy outcomes that the different models have facilitated will also be useful. This will aid our understanding of whether the policy changes implemented have helped to address the market inefficiencies identified, such as whether the LTA has found it easier to integrate services, or link up services with new developments.

- What evaluation approaches will be used? (e.g. impact, process, economic)

A mixed approach to evaluation is proposed, but with an emphasis on assessing the impacts of uptake of either franchising, enhanced partnership or quality partnerships on the services provided, and the associated costs to both operators and LTAs. The evaluation approach is likely to include engagement through surveys and interviews with LTAs, operators & end users to understand how well the new options are working and the reasons why. This will be complemented by analysis of Departmental statistics to observe whether there is any change in data relating to bus services that can be observed in those areas which have implemented a new operating model. Transport Focus' ongoing passenger research into passenger satisfaction and passenger priorities for improvement will give a more qualitative view.

- How will stakeholder views be collected? (e.g. feedback mechanisms, consultations, research)

A variety of collection methods will be used, including feedback from LTAs and bus operators. Passengers' views on information provision will be picked up through Transport Focus' ongoing work, including their annual Bus Passenger Survey.

7. Summary and preferred option with description of implementation plan.

185. The preferred option is option 5 – amendments to the existing Quality Partnership tool to make it more effective, providing a new statutory enhanced partnership tool which bridges the gap to franchising but without the associated risks, and developing a new legislative process whereby

franchising powers can be provided to a LTA as part of a wider devolution of powers and responsibilities.

186. This option will improve the range of tools that LTAs have available to improve their local bus services, and provide them with the choice as to which options best addresses their individual circumstances and needs. Use of the legislative tools will be at the discretion of the LTAs, and no particular option will be mandated in specific places by central Government.
187. The powers have already been promised to a number of LTAs, with Manchester requesting that the powers are in place by early 2017 in time for their Mayoral elections. The aim is to have the necessary powers in place, including any necessary secondary legislation, before the Mayoral elections in Greater Manchester.

Annex A: Modelling assumptions

Table 2: Assumptions used for the areas which undertake franchising

Variable	Calculation methodology	Assumptions and sources of evidence	Inputs under high ¹ scenario	Inputs under low scenario	Duration over which impact occurs
Fare level + Fare structure	<p>The fare level is assumed to be unchanged, however as a result of fare simplification we expect that the average fare will be lower overall</p> <p>Assuming total revenue will fall by 5%, calculating the fall in fares required by using the relationship between total revenue and fare elasticity</p>	<p>Expert opinion: rail yield management software typically assumes that maximising price discrimination will increase yield by 5%. We have assumed that fare simplification will result in a 5% reduction in total revenue in the high scenario</p>	Fare reduction of roughly 5%	N/A	Gradual reduction in average fare over 10 years
Vehicle age	<p>With no evidence available on the likely additional improvement that can be gained in the PTEs in terms of vehicle quality, a range of likely improvements are assumed</p>	<p>Generalised journey time (GJT) improvement for a new bus of 1.52 minutes, softer factors (2009) (scaled down by 20% for non-commuting journeys). Based on data from the national Transport Survey, the average GJT is 40mins and for commercial journeys and 50 minutes for supported journeys.</p> <p>The average lifetime of a bus assumed to be 15 years</p>	50% of bus fleet renewed, implying 0.76 minutes GJT improvement	25% of bus fleet renewed, implying 0.38 minutes GJT improvement	Gradual renewal of fleet over 10 years in the high scenario and 12 years in the low scenario

¹ We have defined the high scenario as bringing the high generalised journey time improvements and revenue for the authority. The low scenario has lower unit costs because of more pessimistic assumptions about generalised journey time improvements that are brought about in the Do Something.

Improved passenger information	No evidence is available on the likely improvement on this under a franchised scenario, so a 100% increase in provision is assumed in the high scenario and 50% improvement is assumed in the low scenario	Generalised journey time improvement of 1.43 minutes, softer factors (2009) (scaled down by 20% for non-commuting journeys). Based on data from the national Transport Survey, the average GJT is 40mins and for commercial journeys and 50 minutes for supported journeys.	50% improvement implying 0.72 minutes GJT improvement	25% improvement implying 0.36 minutes GJT improvement	Improvement occurs gradually over 10 years
Smart and integrated ticketing	No evidence is available on the likely improvement of this attribute under franchising. A 40% increase is assumed in the high scenario A 20% increase is assumed in the low scenario	Generalised journey time improvement of 1.43 minutes, softer factors (2009) (scaled down by 20% for non-commuting journeys). Based on data from the national Transport Survey, the average GJT is 40mins and for commercial journeys and 50 minutes for supported journeys. Web search of smart and integrated ticketing available in the metropolitan areas.	40% improvement implying a GJT improvement of 0.57 minutes	20% improvement implying a GJT improvement of 0.29 minutes	Improvement occurs gradually over 10 years
Costs associated with renewing bus fleet	Use available evidence on total bus fleets in the metropolitan areas and weighting by the patronage in each area to estimate vehicle fleet	Bus statistics on total fleet in metropolitan areas and bus patronage by LTA LowCVP ² advice on average cost of a Euro 6 bus of £130,000	10% of fleet renewed per year	8% of fleet renewed per year	Costs incurred by LTA annually over 15 years

² Low Carbon Vehicle Partnership

	Multiply bus fleet by proportion of fleet renewed by an estimate of the average cost of a new bus				
Costs associated with installing AVL	Use available evidence on the level of AVL coverage on buses, expert advice on the costs associated with AVL device installation and inputted bus fleet estimates for each area	Bus statistics on AVL coverage, expert LTA advice on AVL costs (£4,000 per bus).	50% of buses without AVL fitted with AVL devices	25% of buses without AVL fitted with AVL devices	Costs incurred by LTA over first 3 years
Cost of reporting data for bus operators	This has been estimated using the same methodology as in the 'Making bus service registration digital by default and mandating the provision of fares and punctuality data' IA which is also part of the Bus Services Bill.	DfT bus statistics on the number of operators per LTA. The average UK hourly wage for administrative jobs from the ONS's Annual Survey of Hours and Earnings. An assumption that each operator will spend approximately one FTE hour per week reporting to each LTA.	£6,000 per area per year	£3,000 per area per year.	Costs incurred by LTAs in each year of the scheme
Profit margins	Use published evidence on operator margins and bus operator market share to calculate weighted average profit margins in the deregulated market	Competition Commission investigation into the bus market (2011), DfT bus statistics on operator market share of weekly bus trips	Profit margins assumed to reduce under franchising to margins estimated by the CC to occur under perfectly competitive conditions of roughly 8-9%	No change in profit margins	N/A
Franchise model type	Assumed to be gross cost contracts assuming that LTAs retain revenue risk	TfL currently uses gross cost contracts	Gross Cost	Gross Cost	N/A

LTA staff costs	Based on the staff costs in the Nexus Quality Contract proposal but scaled up by 15% to account for optimism bias	Nexus Quality Contract proposal	£0.6m per LTA per year	£0.6m per LTA per year	Costs incurred by LTA in each year of the scheme.
LTA marketing costs	Based on the marketing costs in the Nexus Quality Contract proposal but scaled up by 15% to account for optimism bias	Nexus Quality Contract proposal	£1.3m per LTA per year	£1.3m per LTA per year	Costs incurred in by LTA in each year of the scheme.
Consultation costs	There is no evidence underpinning these costs and so they are varied between the scenarios in order to account for this.	Assumption	£100,000 per LTA	£50,000 per LTA	Costs incurred by LTA in the first year of the scheme.
Reduction in vehicle miles/hours	A reduction in total bus mileage is assumed as there will be no competition over the same route under franchising	Assumption based on expert opinion.	3% reduction in bus mileage, vehicle hours and PVR	0% reduction in bus mileage and vehicle hours. No change in PVR	Change occurs over 10 years

Table 3: Assumptions used for the areas which undertake enhanced partnerships

Variable	Calculation methodology	Assumptions and sources of evidence	Input under high scenario	Input under low scenario	Duration over which impact occurs
Fare level + Fare structure	N/A	The fare level and structure are assumed to be unchanged from the do nothing case	N/A	N/A	N/A
Improved passenger information	No evidence is available on the likely improvement on this under a franchised scenario, so a 33% increase in provision is assumed in both scenarios which is in	Generalised journey time improvement of 1.43 minutes, softer factors (2009) (scaled down by 20% for non-commuting journeys). Based on data from the national Transport	25% increase in improved passenger information implying 0.36 minutes GJT improvement	25% increase in improved passenger information implying 0.36 minutes GJT improvement	Improvement occurs gradually over 10 years

	line with the central assumption used in the 'Making bus service registration digital by default and mandating the provision of fares and punctuality data' IA which is also part of the Bus Services Bill	Survey, the average GJT is 40mins and for commercial journeys and 50 minutes for supported journeys.			
Smart and integrated ticketing	No evidence is available on the likely improvement on this attribute under an enhanced partnership. A 20% increase is assumed in the high scenario A 10% increase is assumed in the low scenario	Generalised journey time improvement of 1.43 minutes, softer factors (2009) (scaled down by 20% for non-commuting journeys). Based on data from the national Transport Survey, the average GJT is 40mins and for commercial journeys and 50 minutes for supported journeys. Web search of smart and integrated ticketing available in the Mets	20% improvement implying GJT improvement of 0.29 minutes	10% improvement implying GJT improvement of 0.14 minutes	Improvement occurs gradually over 10 years
Costs associated with installing AVL	Use available evidence on the level of AVL coverage on buses, expert advice on the costs associated with AVL device installation and inputted bus fleet estimates for each area	Bus statistics on AVL coverage, expert LTA advice on AVL costs (£4,000 per bus).	25% of buses without AVL fitted with AVL devices	25% of buses without AVL fitted with AVL devices	Costs incurred by bus operators in each year of the scheme
Cost of reporting data for bus operators	This has been estimated using the same methodology as in the 'Making bus	DfT bus statistics on the number of operators per LTA. The average UK hourly wage for	£4,000 per area per year	£4,000 per area per year	Costs incurred by bus operators in each year of the scheme

	service registration digital by default and mandating the provision of fares and punctuality data' IA which is also part of the Bus Services ill.	administrative jobs from the ONS's Annual Survey of Hours and Earnings. An assumption that each operator will spend approximately one FTE hour per week reporting to each LTA.			
Consultation costs	There is no evidence underpinning these costs and so they are varied between the scenarios in order to account for this.	Assumption	£100,000 per area	£50,000 per area	Costs incurred by LTAs and bus operators in the first year of the scheme.
Profit margins	N/A	Profit margins are assumed to stay the same under enhanced partnerships as in the do nothing case.	N/A	N/A	N/A
Implementation meeting costs	These costs are illustrative estimates due to a lack of evidence	Estimated based on expert advice	£20,000 meeting costs per area	£2,000 meeting costs per area	Costs incurred by LTAs and bus operators in the first year of the scheme
Reduction in vehicle miles/hours	A reduction in total bus mileage is assumed as there will be no competition over the same route under franchising	Assumption based on expert opinion.	2% reduction in bus mileage, vehicle hours and PVR	0% reduction in bus mileage and vehicle hours. No change in PVR	Change occurs over 10 years

Annex B – description of the calculations for the costs and benefits presented in the franchising and enhanced partnerships analysis summary tables.

Overarching notes

- All of the analysis is compliant with the Department of Transport's standardised transport appraisal guidance (WebTAG) unless otherwise stated.
- Do minimum scenario (DM) refers to a scenario in which no action is taken (i.e. franchising or an enhanced partnership are not implemented) and do something scenario (DS) refers to a scenario in which either franchising or an enhanced partnership are implemented.
- The change in demand for buses as a result in changes in fares and service quality have been estimated using bus fare elasticities from Wheat and Toner (2010)¹ and generalised journey time elasticities from [Balcombe et al. \(2004\)](#).
- All values have been rebased to 2014 prices and discounted to 2015 using a social discount rate of 3.5%.
- For basic values such as the number of bus trips per area and the distance travelled by buses in each area, [DfT bus statistics](#) are used.

User benefits

From fare changes

The change in consumer surplus as a result of fare changes for fare paying passengers is calculated using the rule of a half methodology as outlined in WebTAG ([Unit A1.3](#)) using the following equation.

$$\text{Benefits from fare changes} = -\frac{1}{2} \times (\Delta \text{Fares} \times (\text{No. of trips DM} + \text{No. of trips DS}))$$

Where DM is do minimum scenario and DS is do something scenario. The change in fares is calculated so as to reduce revenues by 5% as it is assumed that fare simplification will lead to an initial fall in revenue of 5%.

From service changes

The change in consumer surplus as a result of service changes for fare paying and concessionary passengers is calculated using the rule of a half methodology as outlined in WebTAG ([Unit A1.3](#)) using the following equation.

$$\text{Benefits from service changes} = -\frac{1}{2} \times (\Delta \text{Service quality} \times (\text{No. of trips DM} + \text{No. of trips DS}))$$

Where DM is do minimum scenario and DS is do something scenario. The change in service quality is calculated by multiplying the change in the generalised journey time as a result of service improvements (given by [DfT 2009](#)) by the appropriate values of time as given in the WebTAG data book ([A1.3.2](#)).

Non user benefits

Benefits to other road users (decongestion)

It is estimated that while franchising and enhanced partnerships will lead to an increase in the demand for buses, there will be an overall reduction in the distance travelled by buses due to less on-road competition. The increase in demand for buses as a result of franchising and enhanced partnerships will lead to a modal switch from cars to buses which will result in less distance travelled by cars. This will lead to less congestion which will benefit non bus users. This benefit is calculated using the following equation:

¹ Wheat, P. and Toner, J. (2010), Concessionary Fares Project, Research Report 8, Whole market demand elasticity variation, Report to the Department for Transport

Benefits to other road users

$$\begin{aligned} &= -((\Delta \text{ Distance travelled by buses}) \\ &\times \text{Average external impact of congestion per distance travelled by buses}) \\ &+ (\Delta \text{ Distance travelled by car}) \\ &\times \text{Average external impact of congestion per distance travelled by cars}) \end{aligned}$$

Where the average external impact of congestion per distance travelled by buses comes from a DfT national transport model estimate and the average external impact of congestion per distance travelled by cars comes from the WebTAG data book ([table 5.4.2](#)). The change in the distance travelled by car is estimated using the following equation:

$$\begin{aligned} \Delta \text{ Distance travelled by car} \\ = \frac{-\Delta \text{ No. bus trips} \times \text{Average bus journey length} \times \text{Diversion factor from cars to buses}}{\text{Average car occupancy}} \end{aligned}$$

Where the average bus journey length comes from the 2013 national transport survey; the diversion factor from cars to buses comes from [Balcombe et al. \(2004\)](#); and the average car occupancy comes from the WebTAG data book ([table 1.3.3](#)).

Infrastructure

As franchising and enhanced partnerships are expected to result in less distance being travelled by buses and cars, there will be less stress on the transport infrastructure. This benefit is estimated in the same way as for the benefits to other road users above but WebTAG values for the external impact of car travel on infrastructure ([table 5.4.2](#)) rather than congestion are used. The benefit from less distance being travelled by buses is not calculated due to a lack of evidence.

Local Air Quality

As franchising and enhanced partnerships are expected to result in less distance being travelled by buses and cars, there will be less air pollution resulting in better local air quality. This benefit is estimated in the same way as for the benefits to other road users above but WebTAG values for the external impact of car travel on local air quality ([table 5.4.2](#)) rather than congestion are used. The benefit from buses is calculated using a DfT national transport model estimate for the external impact of bus travel on local air quality.

Noise

As franchising and enhanced partnerships are expected to result in less distance being travelled by buses and cars, there will be less noise pollution. This benefit is estimated in the same way as for the benefits to other road users above but WebTAG values for the external impact of car travel on noise pollution ([table 5.4.2](#)) rather than congestion are used. The benefit from less distance being travelled by buses is not calculated due to a lack of evidence.

Greenhouse Gases

As franchising and enhanced partnerships are expected to result in less distance being travelled by buses and cars, there will be lower greenhouse gas emissions. This benefit is estimated in the same way as for the benefits to other road users above but WebTAG values for the external impact of car travel on greenhouse gas emissions ([table 5.4.2](#)) rather than congestion are used. The benefit from buses is calculated using a DfT national transport model estimate for the external impact of bus travel on local air quality.

Accident reductions

As franchising and enhanced partnerships are expected to result in less distance being travelled by buses and cars, there are likely to be fewer accidents. This benefit is estimated in the same way as for the benefits to other road users above but WebTAG values for the external impact of car travel on road accidents ([table 5.4.2](#)) rather than congestion are used. The benefit from buses is not calculated due to a lack of evidence.

Operator benefits

Bus revenue impacts

The impacts on bus operator revenues as a result of franchising or enhanced partnerships are calculated by subtracting the bus operator revenues in the do minimum scenario from bus operator revenues in the do something scenario. Bus operator revenues are calculated using the following equations:

Bus operator revenue

$$= (\text{Fare revenue}) + (\text{Concessionary reimbursement}) + (\text{BSOG receipts}) \\ + (\text{Income from tendered services})$$

$$\text{Fare revenue} = \text{Average fares} \times \text{No. of fare paying journeys}$$

Concessionary reimbursement

$$= \text{Average concessionary reimbursement per trip} \times \text{No. concessionary trips}$$

$$\text{BSOG receipts} = \text{BSOG rate per litre of fuel} \times \text{Average fuel efficiency for buses} \\ \times \text{Distance travelled by buses}$$

Income from tendered services

$$= \text{Operating costs for tendered services} \\ \times \text{Tender price as a percentage of operating costs}$$

Where average fares come from DfT estimates; the average concessionary reimbursement per trip from analysis of DfT bus statistics ([BUS0105](#) and [BUS0811](#)); the BSOG rate comes from [gov.uk](#); average fuel efficiency for buses comes from DfT's national bus model; and the tender price as a percentage of operating costs is an assumption. The do minimum scenario tender price is based on an estimate for operating margins for which is calculated based on the operating margins of bus operators in each area and will vary by region. The do something scenario tender price is the same as in the do minimum scenario except in the high franchising scenario where it is assumed to be at the average level found in London.

Wider social benefits

Health and well being

There are expected to be some health and wellbeing benefits from implementing franchising and enhanced partnerships due to the increased walking to and from buses (which will be offset to some extent by a reduction in walking to and from cars). These benefits are calculated by the following formula:

Wider social benefits

$$= \text{Average health benefit per km walked} \\ \times (\Delta \text{Distance walked by bus users} + \Delta \text{Distance walked by car users})$$

$$\Delta \text{Distance walked by bus users} = \text{Average distance walked in a bus journey} \times \text{No. of bus journeys}$$

Δ Distance walked by car users

$$= \text{Average distance walked in a car journey} \times \text{No. of bus journeys} \\ \times \text{Diversion factor from car journeys to bus journeys}$$

Where the average health benefit per km walked comes from the New Zealand Transport Agency's Economic Evaluation Manual, ([Table A20.3](#)); the average distance walked in a bus and equivalent car journey is taken from the 2011 [Mindlab International study](#) commissioned by Greener Journeys; and the diversion factor for new bus journeys which would otherwise have been car journeys is taken from [Balcombe et al \(2004\)](#). This methodology is not compliant with the Department for Transport's transport appraisal guidance which does not include wider economic impacts.

Government benefits

Indirect tax revenues from modal transfer (fuel duty)

The government will receive less income from fuel duty as a result of a reduction in transport mileage. The reduction in fuel duty revenue is calculated by multiplying the reduction in vehicle mileage for both buses and cars by the values for the external impact of bus and car travel on fuel duty. The value for cars is found in the WebTAG data book ([table 5.4.2](#)) and the value for buses comes from DfT analysis. The government may gain indirect taxes from consumers choosing to spend the money that they save from paying less fuel duty on other taxed items but this has not been monetised as the effect is likely to be small.

Change in public account revenue

The impacts on public account revenues as a result of franchising or enhanced partnerships are calculated by subtracting the public account revenues in the do minimum scenario from public account revenues in the do something scenario. Public account revenues are the sum of revenues from fares, concessionary reimbursement, BSOG and income from tendered services.

The public account will gain revenue from fares for supported services in all scenarios. However it will also gain revenue from commercial services under franchising. The revenue from fares is calculated by taking the average fare (based on DfT estimates) and multiplying it by the number of journeys. The government will have to pay the concessionary travel reimbursement to bus operators so it will have a net cost equal to the net benefit for bus operators from concessionary travel reimbursement payments. The BSOG revenue for commercial services will be paid to the local authorities under franchising in addition to the BSOG already paid to authorities for supported services. This is calculated in the same way as for the bus operator revenues. The tendered services revenue paid to bus operators will be paid from the public account so there will be a cost equal to the benefit to the bus operators.

Operator costs

Bus cost impacts

The bus operator cost impacts are calculated by taking away the operating costs under the do minimum scenario from the operating costs under the do something scenario. The operating costs are the sum of the variable operating costs, fixed operating costs, tender administration costs, network planning costs, marketing costs and revenue protection costs. The variable operating costs are calculated using the following formulas:

Variable operating costs

$$= \text{Passenger costs} + \text{Peak Vehicle Requirement (PVR) costs} + \text{Vehicle hour costs} \\ + \text{Vehicle mile costs}$$

$$\text{Passenger costs} = \text{Marginal cost per passenger trip} \times \text{No. of trips}$$

$$\text{PVR costs} = \text{Marginal cost per PVR} \times \text{Total bus fleet} \times \text{Ratio of total bus fleet to PVR}$$

$$\text{Vehicle hour costs} = \text{Vehicle cost per hour} \times \frac{\text{Total distance travelled by buses}}{\text{Average speed}}$$

$$\text{Vehicle mile costs} = \text{Vehicle costs per mile} \times \text{Total distance travelled by buses}$$

Where the marginal cost per passenger trip, the marginal cost per PVR, the vehicle cost per hour and the vehicle costs per mile all come from [DfT guidance](#) for concessionary fare reimbursement to operators. The total bus fleet comes from DfT bus statistics. The ratio of total bus fleet to PVR is assumed to be 90% based on expert opinion. The average speed is assumed to be 12mph on commercial routes and 15mph on supported routes based on data from TfL.

The fixed operating costs are set manually in order to achieve the do minimum operating profit calculated for each area. The tender administration costs are estimated by multiplying the tender administration costs per km (based on expert opinion) by the distance travelled by buses each year. The network planning costs, marketing costs and revenue protection costs are taken from the [Nexus quality contract scheme proposal](#) but are scaled up by 15% to account for optimism bias (WebTAG

recommended adjustment for a stage 2 bus scheme, [Unit A1.2](#)) and are scaled to the size of each area based on the different totals for distance travelled by buses.

Under franchising, the tender administration costs apply to both commercial and supported services but under enhanced partnerships they only apply to supported journeys as commercial journeys will not be tendered. Network planning costs, marketing costs and revenue protection costs are incurred by local authorities under franchising so they are not included in the bus operator cost impacts.

Capital costs – operators

There are no capital costs to operators under franchising as these are incurred by local authorities instead. For enhanced partnerships, bus operators will have to pay capital costs to install AVL (automatic vehicle location) devices on all buses and staff costs for improved passenger information. The AVL costs are estimated to be £4,000 per bus based on expert opinion and this figure is multiplied by the number of buses and by the percentage of buses which do not currently have AVL devices installed according to DfT bus statistics ([BUS0606](#)). The staff costs for improved passenger information are estimated using the following formula:

$$\begin{aligned} & \text{Staff costs for improved passenger information} \\ &= \text{FTE hours spent per bus operator reporting information to LTAs} \\ & \times \text{average no. of bus operators per LTA} \\ & \times \text{average wage for administrative occupations} \end{aligned}$$

Where the FTE hours to be spent per bus operator reporting information to LTAs is an assumption; the average number of bus operators per LTA comes from DfT bus statistics; and the average wage for administrative occupations comes from the [ONS' Annual Survey of Hours and Earnings](#).

Implementation costs - operators

The implementation costs for enhanced partnerships are based on expert opinion about the costs for existing quality partnership schemes. The implementation costs for franchising are based on a [business case](#) developed by Bristol City Council for implementing a Quality Contract Scheme² and these are doubled for metropolitan areas as it is likely to be substantially more expensive for them to implement franchising due to their size.

Government costs

Change in public account costs

The public account cost impacts are calculated by taking away the operating costs under the do minimum scenario from the operating costs under the do something scenario. The operating costs are the sum of the tender administration costs, network planning costs, marketing costs and revenue protection costs. Under partnerships, government will only incur network planning, marketing and revenue protection costs for supported services but for franchising, it will take over these operating costs from bus operators for commercial services. These costs are calculated using the same methodology as for bus operators' operating costs. The tender administration costs will only be incurred for services which are tendered (supported services under enhanced partnerships, and supported and commercial services under franchising). The tender administration costs are estimated by multiplying the tender administration costs per km (based on expert opinion) by the distance travelled by buses each year.

Capital costs - local authority

There are no capital costs for local authorities under enhanced partnerships. Under franchising, local authorities are assumed to pay to renew the bus fleet at a quicker rate than under business as usual, install AVL devices and for staff costs to provide passenger information. The latter two are calculated in

² https://www2.bristol.gov.uk/committee/2013/sc/sc024/1219_11.pdf

the same way as for bus operators. The capital costs to renew the bus fleet are calculated using the following formula:

Capital costs for renewing the bus fleet

$$= \text{number of buses} \times (\text{renewal rate DS} - \text{renewal rate DM}) \\ \times (\text{cost of a new bus} - \text{resale value of an old bus})$$

Where the number of buses and the renewal rate in the do minimum scenario come from DfT's bus statistics ([BUS0602](#) and [BUS0605](#)); the renewal rate in the do something scenario is an assumption, the cost of a new bus and the resale value of an old bus are based on expert opinion.

Implementation costs - local authority

The implementation costs for local authorities come from the same sources as for bus operators. In addition, for partnerships it is assumed that local authorities will also have to pay some consultation costs which have been estimated based on expert opinion.