



Freight data feasibility study: Final report

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1 Summary

1.1 One of the key outcomes from the Haulage Industry Task Group, set up in December 2005, was the decision by Government to undertake a freight data feasibility study. DfT commissioned a consortium to take forward the study. The purpose of the study was to identify and assess options for delivering a database linking non-UK Heavy Goods Vehicles (HGVs) with their operators as a means of improving enforcement of road safety. This report sets out the conclusions of the consortium study team's work and their final report.

1.2 In the Progress Report published in October 2007, the study presented a review of a number of options and concluded that four options should be analysed further.

1.3 The four options analysed were a voluntary registration scheme, a scheme linking data from Government Departments, a similar scheme taking data from industry and a vignette (a time-based charge for the use of UK roads designed to ensure foreign hauliers help pay for the wear and tear inflicted by their vehicles). The progress report highlighted that none of the options offered high value for money (a benefit to cost ratio of more than 2:1) under the terms of Department for Transport guidance. The economic benefit of

each of the options, including that from improved road safety as a result of enforcement using the data (but excluding any revenue raised) was low.

1.4 The study has investigated further the options and carried out more detailed analysis. In particular the vignette scheme, the only option found to have a potentially positive business case, was investigated in more detail. The costs of running a scheme were analysed and compared against the marginal financial and economic benefits that might accrue. The study found that a vignette scheme offered a benefit to cost ratio of between just 1.06 and 1.25 when the necessary HM Treasury ‘optimism bias’ calculation was applied to the baseline assessments that are detailed in this report; this finding supported the earlier higher level analysis.

1.5 The study team also looked at the risks associated with the introduction of such a scheme. There remain some areas of significant risk associated with the interpretation of the Eurovignette Directive, particularly in the areas of dual charging on the Trans-European Network (specifically as to the application of the Directive to the M6 Toll) and the principles of state aid. The study concluded that were any scheme to proceed, that further legal investigation would be required, and that even after carrying out such investigation it might not be possible to arrive at a definitive answer. The risk remains that were any scheme to be introduced, its legality could be challenged, which could lead to the scheme being abandoned.

1.6 The 2008 Budget announced that the vignette scheme should not be progressed at the current time. Other, more economically advantageous, ways of addressing the safety objective such as increased enforcement funding should be progressed where these options are likely to offer better value for money and less risk

2 Introduction

2.1 In the December 2005 Pre-Budget Report, the Government announced the setting up of the Haulage Industry Task Group. The purpose of the Task Group was to build a better understanding of the issues raised in the *Burns Inquiry* into fuel prices, freight taxes and foreign competition published by the Road Haulage Association (RHA), and Freight Transport Association (FTA) in December 2005, and to extend the work begun by Burns into other areas affecting the haulage sector.

2.2 The Haulage Industry Task Group reported in December 2006 alongside the 2006 Pre-Budget Report, in which the Government undertook to carry out a detailed *Freight data feasibility study*, the purpose of which was to conduct a wide-ranging feasibility study to identify and assess options for delivering a database to link non-UK HGVs to their operators with the aim of using the resulting database to target enforcement activity against operators with a poor compliance record. The work included evaluating, to an outline business case level, a preferred option.

2.3 A progress report¹ from the study was published by the Department for Transport (DfT) in October 2007, in which a number of options were considered. That report concluded that a ‘vignette’ scheme showed the greatest likelihood of providing an

¹ The Freight Data Feasibility Progress Report was published on 9 October 2007 alongside the Pre-Budget Report. It is available on the DfT website at <http://www.dft.gov.uk/pgr/freight/road/freightdatarep>

acceptable benefit to cost ratio (BCR). Further analysis was performed on this option and on data sharing and voluntary schemes.

2.4 The final report examined how a vignette scheme might operate, the costs of setting up and operating it, and the benefits that might accrue.

2.5 In conducting the study, the study team noted that a number of other Government and European initiatives would intersect with the purpose and outcomes of any vignette scheme, and considered whether in light of these initiatives a vignette scheme would provide sufficient benefit to be worth pursuing.

3 Operating model

3.1 In order to assess costs and benefits the study team defined a model vignette scheme as described below. In doing so the team sought to balance benefits and drawbacks and to detail only those aspects of the scheme which had a bearing on its costs, benefits and feasibility.

3.2 Under European legislation any vignette scheme must apply to all applicable vehicles regardless of national origin. Therefore the team based the model scheme on a design where every HGV, whether domestically or foreign-operated, would be required to have a vignette in force to operate on the UK's roads. The vignette would not be a physical object (like a tax disc, for example), but would be represented as a record in one or more computer databases.

Purchase of vignettes

3.3 For UK hauliers the purchase of a vignette would be undertaken at the same time as payment of Vehicle Excise Duty (VED). The scheme would be designed to minimise the cost and operational impact on UK hauliers, with the aim that there would be no overall cost increase to the UK haulage industry. Purchase of the vignette at the same time as payment of VED would be the most efficient way for UK hauliers to operate and would allow the easiest processing of the information by UK Government.

3.4 Foreign hauliers wishing to use the UK's roads would have to register their details with the scheme authority. Registration would be a free service and would be offered via the internet or by telephoning a multi-lingual call centre. Postal registration would not be offered. An operator would only be required to register once, prior to purchasing vignettes for one or many vehicles for one or many periods of time. Upon successful registration a unique operator ID would be issued to the operator that could be used for purchasing vignettes and correspondence.

3.5 The operator would not be obliged to give details of their vehicles at the time of registration. The ability to do this might be offered if operators wanted it, but as the data would become stale and the operator/vehicle relationship would have to be confirmed at the time of vignette purchase it was not clear that this would be of much benefit to the scheme or the operator.

3.6 A registered operator would then purchase a vignette to cover each journey to the UK made by a vehicle in his fleet. This would be possible using the internet, by phone, or for cash at agents such as ferry or train operators.

3.7 The purchase record would identify the operator, the vehicle to which the vignette applied and the dates for which the vignette would be valid. It would be possible to purchase a vignette to start at the moment of purchase or on future days, but backdating would not be possible.

3.8 Vignettes for non-UK hauliers would be offered for a range of durations. For the purposes of modelling the revenues the study assumed daily, weekly, monthly and annual vignettes would be available.

Enforcement

3.9 By the time a vehicle arrived on UK roads with a vignette in force, the scheme database would hold data allowing the vehicle to be identified and its operator determined. The unique identifier of a vehicle would be its vehicle registration mark (VRM) and country of registration.

3.10 For detection of vehicles that did not have a valid vignette, a variety of measures would be used, as follows.

3.11 VOSA currently stop HGVs at locations in Great Britain for the primary purpose of enforcing road traffic legislation. When foreign vehicles were stopped, the examiner would also check that a vignette was in force, and a vehicle (or operator, if known) with a record of operating without a vignette could be recorded as worthy of future scrutiny.

3.12 The probability, however, of any vehicle being stopped for these reasons on any one trip would be quite small and further checks would be required, at least initially. The study proposed that a workforce would be deployed to patrol areas where HGVs habitually stop, such as port departure lanes or motorway service areas. These patrols would carry handheld devices which would allow rapid entry of a vehicle's registration mark (VRM) to determine whether a valid vignette was held. Port checks could also be made between Northern Ireland and Great Britain.

3.13 Mobile patrols would be used on a campaign basis. The mobile units would provide a key enforcement capability in Northern Ireland where the many crossings over the land border meant that the exit port checks option described above would not be relevant. With careful monitoring, the study team believed that mobile units would be able to be deployed so as to deliver an equivalent level of enforcement in NI to that on the mainland. Mobile patrols would also be useful in targeting areas where displacement activity occurred – that would be operators deciding to travel by alternative routes where they believed they were less likely to be detected.

3.14 If a vehicle were found without a vignette the driver would be required to deposit a sum of money equal to the relevant penalty, using the provisions of the planned Graduated Fixed Penalty and Deposit (GFPD) Scheme.

3.15 If these checks were done at ports the port authorities would not welcome vehicles being delayed and disruption to their operations, but it would be possible to mitigate this as the transaction with a single driver would take less than 15 minutes and patrols would be able to stop operating 15 minutes before loading were due to commence.

3.16 The study considered the use of automatic number plate recognition (ANPR) for more widespread enforcement, but concluded that it would be of limited value and

substantial cost. Other adequate means existed for enforcing the payment of VED for UK-registered vehicles, and hence of the vignette payment, and number plate data alone would not assist in enforcement of the vignette payment on non-compliant foreign operators.

3.17 Experience from other schemes suggests that a penalty of six times the evaded fee is effective in encouraging compliance, and this ratio was assumed for the model.

Technology

3.18 The operating model assumed IT infrastructure comprising three main elements: a database, vignette registration and purchase interfaces and enforcement interfaces.

3.19 The amount of data to be held and communicated was relatively modest by the standards of modern computer technology, and commercial off-the-shelf equipment could be used. Appropriate arrangements would need to be made to secure the data, to provide high availability and to allow for recovery in case of disastrous loss (for example by fire) of the critical components.

3.20 The registration and purchase interfaces would include a multilingual website and call centre. To avoid delay at incoming port facilities the model assumed a facility for drivers to purchase vignettes on cross-channel ferries and trains, and appropriate radio links would be needed to transfer this data to the scheme database. Interfaces would be needed to financial institutions to process payments.

3.21 Enforcement interfaces would include delivery of data to enforcement agencies such as VOSA, to handheld devices used by the port and mobile operators, to print and mail facilities and to courts and appeal bodies.

Financial aspects

3.22 The price of a vignette is constrained by European legislation and by the requirement to keep the scheme broadly cost-neutral to the UK haulage industry. With these restrictions in mind, for modelling purposes an annual fee of £377 was assumed for vehicles under 38 tonnes and of £727 for heavier vehicles. The average charge for any foreign vehicle would be £7 per day, as restricted by the European legislation. A reduction in VED rates for UK hauliers would mean that the cost burden on UK hauliers would not be increased. Pro-rata rates, but allowing for the increased cost of processing, were assumed for shorter periods which would be available to foreign operators visiting the UK for limited periods.

3.23 The penalty charge for a vehicle over 38t was assumed to be £140 based on the weekly vignette charge.

Legal considerations

3.24 The study concluded that the principle of such a charge is supported by specific EU legislation, and such schemes had been successfully implemented in other countries. It would be necessary to ensure that the detailed design of any scheme was compliant with EU law in particular. Additionally it was noted that the case or otherwise for a vignette or other lorry charging scheme in the UK would be different from that in some other EU Member States in that the UK has lower levels of transit traffic.

3.25 Some of the data collected under the scheme would be subject to data protection legislation. The study considered that this area would also require further careful consideration.

4 Benefits

4.1 The original premise behind the study was that linking operators and vehicles via a database would lead to a greater ability to target vehicles, drivers and operators likely to be operating in an unsafe manner. The benefits of targeted enforcement against those vehicles, drivers and operators would be fewer accidents leading to a reduction in injuries and deaths on UK roads, a reduction in congestion, a reduction in road damage, a reduction in damage to property and vehicles, and an improvement in public health due to traffic emissions.

4.2 Furthermore any scheme requiring payment for registration would also have the potential to secure net revenues to the Government and be used to offset the costs of administering the scheme. In the case of any vignette scheme, tangible additional cash revenues would flow to HM Treasury as a result of a charge being applied to non-UK registered HGVs using the UK's public roads where currently no charge is applied.

4.3 The other, intangible, benefits which were identified, quantified and monetised were calculated, where possible, using standard valuation metrics.

4.4 The benefits of all options were presented as marginal revenue generated or a reduction of marginal costs (compared to taking no action). The following paragraphs set out the study conclusions on potential benefits, all of which were tested with the study steering group, that a vignette scheme might bring if operated as per the model set out in section 3.

Reduction in persons killed and seriously injured

4.5 The study team obtained data for accidents involving foreign registered heavy goods vehicles where the non-UK registered HGV was considered to be "... the only vehicle with a contributory factor". These values were monetised by taking the standard and generally accepted costs of an accident and applying these values to the number of each type of accident to give a total value for the economic impact of these accidents insofar as persons killed or seriously injured (KSI) was concerned. The existence of a database would not eliminate these accidents, so the team estimated, using empirical or statistical evidence where possible, the improvement that could be expected if the information held in a database were used to enforce non-UK HGVs' compliance with haulage regulations. The total economic cost was then multiplied by the average of the percentage of expected improvement.

Reduced congestion and journey time

4.6 Using the same data source as for KSIs above, the study team modelled the time delay caused to traffic by accidents and used Highway Agency estimates of the economic impact of delays to monetise the benefit of a reduction in the number of incidents.

4.7 Once again the percentage improvement (reduction) in this figure was estimated assuming the DfT and its agencies were able to link foreign-registered HGVs to their

operators using a database and were able to increase the effectiveness of compliance enforcement as a result of using and maintaining this database.

Reduced highway and street damage

4.8 The study team estimated road damage in the UK caused by non-UK HGVs from the Burns Report. This figure was adjusted by the marginal spend estimated due to overloading of foreign registered HGVs (estimated at nine percent, based on data from the Highways Agency). This gave a total cost of road damage resulting from overloaded foreign registered HGVs.

Reduced damage to private property and vehicles

4.9 The study team used the number of KSIs from the same source as above to estimate the average value of damage to private property resulting from such accidents. This gave an annual value of the costs of damage to private property.

Reduced respiratory problems

4.10 By using data from the Department of Health, the study team estimated the costs of breathing difficulties caused by road traffic pollution from HGVs, and this figure was adjusted to give an amount attributable to non-UK HGVs. The percentage improvement that could be expected as a result of the database was tested and multiplied by the attributable costs to give a net benefit of the schemes.

Additional revenue generation

4.11 The approach taken by the study team to determine the additional revenues generated by charging for vignettes involved taking DfT statistics on foreign freight traffic in the UK (including frequency of visits and duration of stay), determining the likelihood that an operator would choose to buy a daily, weekly, monthly or annual vignette, the frequency of these purchases in a given year and multiplying the result by the relative charge of each vignette.

Results

4.12 The table below summarises the potential economic benefits that could be realised each year as a result of a vignette scheme and a populated database allowing non-UK registered vehicles to be linked back to their operators using the vehicle registration mark. These benefits were calculated by a model that used a series of normal operating parameters for the scheme including assumptions regarding traffic growth, compliance rates and defect rates in non-UK HGVs.

Benefit	Current annual cost (£k)	Benefit annual value (£k)	Derivation of benefit
Reduced killed and seriously injured (KSI)	23 205	754	0.1 life saved, 1.4 people avoid serious injury and 21 avoid slight injury each year
Reduced congestion	15 505	643	Over 6 man-years of congestion avoided each year

Benefit	Current annual cost (£k)	Benefit annual value (£k)	Derivation of benefit
Reduced highway/street damage	16 800	336	
Reduced damage to private property	1 876	56	Equivalent of 10 small cars saved each year
Fewer respiratory problems	207	6	
Total	57 593	1 796	

4.13 The current annual cost column in the table above shows the estimated cost of the current damage (or burden) resulting from foreign HGVs driving on UK roads. If all of this burden could be eliminated, the annual value would be £57.6m. The study team estimated that the realisable improvements (or reduction in this burden) amounted to just £1.8m per annum. This is very small when compared to the costs of any vignette scheme. It was also very small compared to the additional marginal revenues which could reasonably be expected as a result of charging non-UK operators for the vignettes allowing them to drive their vehicles in the UK. These amounted to an average of £33m per annum of which £25m would be through direct vignette payments and £8m would come from fixed penalty charges issued for not having a valid vignette.

4.14 The net result of the benefits analysis was that only a vignette scheme, that is, a scheme involving a charge, would be likely to achieve benefits exceeding its costs. The economic benefits on their own would not offset even quite modest vignette scheme costs, and when the necessary HM Treasury ‘optimism bias’ is factored in, the benefit to cost ratio reduces further.

5 Costs

5.1 The study team estimated the total costs of a vignette scheme.

5.2 The costs for the model scheme amounted to £194m over a 10 year (+2 year set-up) period. These would fall to £104m if the scheme only ran for only 5 years (+2 year set-up period) before being replaced.

5.3 The costs presented in the table below exclude VAT. The study team understood that the degree to which any VAT charged on the construction and ongoing operation of any vignette scheme would be recoverable would depend on which services were directly operated or contracted out by Government. Ultimately, the VAT that was not recoverable would accrue to the UK Government, but this could have an impact on the DfT if it did not budget for VAT payments which it then found it could not recover.

5.4 The costs associated with a vignette scheme operated as per the model set out in Section 3 were divided into the areas shown in the table below. However, these figures do not incorporate the necessary HMT ‘optimism bias’ calculation - which would inevitably increase the cost assumptions. The ‘optimism bias’ is explained more fully in Section 6.

Cost area	10yr costs £k	Percentage of total	5yr costs £k	Percentage of total
Enforcement	73,427	40	35,987	37
Payments to third parties	19,388	11	9,155	9
VED offsetting costs	31,136	17	16,983	17
Contact centre	19,390	11	11,017	11
Roadside equipment	11,365	6	5,745	6
Database and website	10,862	6	8,176	8
Marketing costs	10,867	6	7,242	7
Other costs	2,000	1	2,000	2
Scheme management costs	1,821	1	1,100	1
Costs for UK haulage industry	1,172	1	814	1
Data validation	319	0.2	131	0.1

NB The figures in this table represent the baseline calculations and do not take account of the HM Treasury ‘optimism bias’ calculation, which would increase the cost assumptions

6 Financial analysis

6.1 The table below summarises the financial results for the base case of the vignette scheme as conceived by the study team. All numbers with a monetary value exclude VAT at present day (i.e. 2007) values as no inflation has been built into the financial model.

	5 years (+2 set-up)	10 years (+2 set-up)
Costs	£98 350	£181 746
Revenues (excl. econ benefits)	£157 884	£331 812
Revenues (incl. econ benefits)	£165 742	£348 651
BCR without HM Treasury optimism bias calculation (excl. econ benefits)	1.61	1.83
BCR without HM Treasury optimism bias calculation (incl. econ benefits)	1.69	1.92
BCR with HM Treasury optimism bias (incl econ benefits)	1.06	1.25
NPV (excl. econ benefits)	£49 664	£115 849
NPV (incl. econ benefits)	£56 451	£129 234
Breakeven (excl optimism bias and econ benefits) in qtr after scheme launch	6	6
Breakeven (incl. econ benefits but excl optimism bias) in qtr after scheme launch	6	6

6.2 The study team produced financial analyses assuming scheme durations of 5 years, on the working assumption that the scheme would be superseded by the effective

alternative EU legislation by 2015, and 10 years, using the assumption that full UK-wide road pricing would be introduced by then.

6.3 In reality, due to the time and costs associated with setting up any vignette scheme, an extra two years prior to scheme launch were added to acknowledge the fact that any scheme would require a period for establishing it so that the scheme was in place ready for the launch date.

Sensitivity analysis - HMT 'optimism bias'

6.4 In order to determine how the costs and benefits varied according to certain assumptions, a number of analyses were performed varying elements of these assumptions, as shown in the following table. The most significant variation was to apply the HM Treasury 'optimism bias' calculation. Complex Government schemes such as any vignette scheme invariably show a more optimistic BCR estimate prior to implementation than is actually delivered when implemented. This is because high-level analysis tends to miss costs, and overestimate the degree to which benefits could be realised. HM Treasury has computed an 'optimism bias' to allow for this effect, and applying that resulted in optimism bias figures of between just 1.06 and 1.25. In order to focus limited resources on substantial benefits, accepted practice would be to proceed only with schemes where the BCR was around or over 2.

7 Marketing and communications

7.1 The study team found that the introduction of any vignette scheme would require a considerable marketing effort aimed at foreign operators, and to a lesser extent at UK ones. The nature and costs of such an exercise were considered and have been included in the cost model.

7.2 The main target of the marketing campaign would be drivers and operational staff in domestic and non-UK freight operators that operate in the UK. Freight haulage organisations and trade bodies would also be informed, as would organisations that support the operation of the scheme, such as ports, carriers and ferry operators as well as those who could operate facilities to purchase a vignette

7.3 The study team developed a potential marketing approach on the basis that international hauliers would tend to be larger firms than ones which only operated domestically. Recent surveys commissioned by the DfT have shown a strong correlation between fleet size and the extent to which information technology was used and accepted as a business enabler by an operator. This would allow the use of the web as a channel for non-UK operators; the owner/driver population of the domestic market would require additional channels.

7.4 The study team concluded that for any vignette scheme operated as per the model set out in Section 3 to be regarded successful it would require a compliance rate above 80 percent. Other schemes have recorded compliance rates as high as 95 percent for their schemes in time, and it would be essential for the UK vignette scheme to reach a similar level as soon as possible after launch.

7.5 The focus of any marketing effort would therefore be to ensure that at least 80 percent of non-UK HGVs on UK roads would have a valid vignette. To achieve this target

for non-UK HGVs would mean that the owners of these vehicles would have to be aware of any scheme and have sufficient motivation and knowledge of how to comply with its standards.

7.6 The study team's working assumption was that 80 percent of the non-UK HGVs would be owned by 20 percent of the target population. The proposal was that 20 percent of the target population would be selected (through the activity of list creation) on the basis of their fleet size and personally engaged with by skilled members of the implementation team (account managers). Experience was that this form of marketing activity usually leads to a very good response from users and high levels of compliance.

7.7 To enhance the impact of account management and reach beyond the targeted 20 percent of non-UK operators, a range of other more conventional marketing interventions would ensure that a significantly high percentage of the target population were aware and informed about the scheme.

7.8 The study team devised a marketing and awareness raising approach that combined a full range of pre- and post- implementation measures. The approach identified key points in the implementation plan for enhanced marketing and awareness raising activity, emphasising the need to target early activity on measures to encourage a critical mass of registration prior to any implementation date. Collaborative marketing and awareness raising initiatives between Government and industry, and among UK and European organisations was seen as key, and the study team felt there would be value in any vignette scheme having a flexible and scalable account management structure to collaborate closely with, initially, all the major non-UK operators, with the aim of providing a service to the 20 percent of large operators representing 80 percent of the total population of non UK HGVs.

8 Risks

8.1 The study team assessed the programme risks associated with any vignette scheme. Each risk was categorised, and for each the likelihood of the risk occurring, and the impact on the programme were that risk to occur were assessed. The study team suggested an initial mitigation action or design principle for each risk, expecting that further mitigations and actions to reduce the impact of a risk would be identified during any implementation.

8.2 The study team judged the main risks to the scheme to be as follows:

8.3 **State aid:** It would be necessary to ensure that the design of any scheme was compliant with EU state aid rules. Any challenge could delay or otherwise significantly affect the implementation. Schemes introduced elsewhere in Europe had succeeded and had not been challenged, although their underlying objectives had not included safety as a main aim. To mitigate against this risk, the study team advocated consultation with the European Commission (EC).

8.4 **Trans European Road Network (TERN):** The Eurovignette Directive makes it clear that no road on the TERN shall attract both a (point-to-point) toll and a (time-based) user charge for its use, with certain exceptions being granted in the cases of mountain passes, bridges and tunnels. The M6 Toll Road presents a particular issue in that it does form part of the TERN, and charge for its usage could be seen to be in contravention of the

Directive if any national vignette scheme were applied. The risk of successful challenge was considered and the study was not able to arrive at a definitive assessment of whether there were approaches available to ensure compliance with EU law. The study recommended further consultation with the European Commission. A formal or informal view might be received by the EC, but if the scheme was challenged, it would ultimately be for the European Court of Justice to make a decision.

8.5 Industrial pressure: Adverse industrial pressure or action by UK hauliers on implementation of the scheme could cause the Government to amend the scheme. Domestic freight interest groups were consulted as part of the study and broadly UK industry is in favour of measures which clearly demonstrate an opportunity to “level the playing field” with foreign operators. To mitigate against this the study advocated the maintenance of strong relationships with UK haulage trade associations to ensure continued support.

8.6 Northern Ireland differential treatment: Lack of enforcement capability on the Northern Irish / Republic of Ireland border could undermine compliance and lead to legal challenge from continental European hauliers, as their treatment and enforcement regime would be perceived to be different. The Northern Ireland land border with the Republic of Ireland was an issue for enforcement, as there were a large number of crossing points, in contrast to ports for entry into the Great Britain where they are relatively few and entry could be more easily monitored. Ineffective enforcement here could be perceived as differential treatment by hauliers using other routes into the UK. The study team proposed that compliance be enforced in Northern Ireland by effective use of their Department of Environment staff running enforcement checks as well as deployment of mobile camera enforcement units.

8.7 Compliance rate: Compliance rate dropped after initial high take up leading to the failure of the scheme. The study team considered that enforcement would need to be maintained for a period to ensure that any vignette scheme became well established, and communications maintained with a high profile enforcement campaign being run through early stages of the programme until compliance behaviour was well embedded.

8.8 Overall the study team assessed the risk profile to be similar to other complex programmes requiring changed behaviour from the public with some significant legal risks which required further analysis and resolution before any scheme could be progressed towards implementation.

9 Conclusions

9.1 Of the schemes studied throughout the Freight Data Feasibility Study, the study team concluded that only a vignette scheme would provide a database which was likely to approach being sufficiently complete and accurate to allow VOSA to target non-compliant foreign operators' vehicles in a similar manner to those of UK operators, and to identify the operators of non-compliant vehicles in order to bring proceedings against them. But the case for even a vignette scheme was not compelling and there were a number of key risks and considerations that rendered it a poor value for money choice.

Maximising the use of the road network

9.2 The study team concluded that a vignette scheme could help enable enforcement agencies to enforce vehicle condition standards, vehicle weight and drivers' hours legislation more effectively. The use of a vehicle operator database based on any vignette scheme could help

- result in foreign vehicles belonging to operators with poor compliance history being targeted for roadside checking, and thus immediate remediation of serious defects;
- with appropriate publicity, lead to improvements in the entire foreign fleet as operators learned that legislation was being enforced and that non-compliance was expensive and would cause delay; and
- as a result, contribute to improved road safety, congestion, vehicle reliability and reduced wear to the highway.

9.3 While the study demonstrated that these effects would be real, the magnitude of the improvement would be very limited. In particular, the road safety case, which was the primary driver of the study, was not made to any significant degree, and the eventual business case was influenced far more by the revenue from any vignette charge than by any other benefit.

Business case

9.4 The study team concluded that the headline benefit to cost ratio showed an excess of benefits over costs, but not one which overwhelmingly supported implementation. Moreover, the identified benefits would arise in large part through the sale of vignettes, with the quantifiable economic benefits of the scheme forming a small proportion of the total. Applying the HM Treasury 'optimism bias' calculation reduced an already non-compelling benefits to cost ratio to between just 1.06 and 1.25, set against an accepted practice to proceed only with schemes where the ratio was around or over 2.

Legality and capability of implementation

9.5 Whilst the study found no definite legal impediment in UK or European law to the introduction of a vignette scheme for HGVs on the UK's roads, it did highlight a number of legal issues that would have to be addressed. The actual implementation of the scheme would be legally complex and if the inherent legal risks were to be successfully managed there would need to be further dialogue with the EC on the details of the scheme and careful management of stakeholders throughout. If the UK Government wished to proceed it must be prepared to address legal issues and recognise that some, perhaps substantial, adjustments to the scheme could be necessary.

9.6 The study team concluded that getting the legislation for the scheme right would also present some challenges given the complexity of the subject matter. As mentioned in paragraph 8.4 above, any legal challenge would result in referral to the European Court of Justice for a final decision.

9.7 The study prepared an outline of the steps needed to implement the scheme along with a possible timetable. The study team concluded that if appropriate measures were taken without delay and all issues resolved positively, a vignette scheme could feasibly be in operation by 2010.

Fair competition in the UK haulage market

9.8 The study team concluded that any vignette scheme operated as per the model set out in Section 3 would make contributions to fair competition, albeit with varying levels of impact, in a number of respects:

- The cost of a vignette, borne by all HGVs, would go only a small way to equalising the burden of UK taxes and charges between UK and foreign operators.
- The need to pay for a vignette might serve to dissuade foreign operators from remaining in the UK and engaging in excessive cabotage.
- It would serve to redress the perceived inequality where UK operators had to pay to use other countries' roads, but foreign operators did not pay to use the UK's roads.
- It could somewhat improve compliance of all drivers with drivers' hours legislation.

9.9 None of these factors had a value which could be readily estimated. The study team concluded that the effect on the domestic freight industry would be positive but limited in extent. Less than £7, on average, could be raised per foreign HGV per day - due to the limitations imposed by the Eurovignette Directive.

Policy issues

9.10 Government policy could be directed by a number of policy areas including safety, congestion, socio-political benefits, the environment, ensuring a fair market and revenue generation. The aim of the freight data feasibility study was to explore how far populating a database to address the primary purpose of addressing the safety policy area would work, with the expectation that any scheme could also contribute towards other areas. However a vignette scheme as envisaged as per the model set out in Section 3 would only address the safety outcome to a limited degree. The business case for a vignette scheme was better than for other designs considered earlier in the study simply because there was a revenue stream associated with it.

9.11 The study concluded that there are a number of reasons why the vignette does not address the safety issue as well as hoped:

- Non-compliance rates for non-UK vehicles are reported as 47 percent for mechanical defects, 20 percent driver's hours offences and 26 percent overloaded². Therefore any scheme must improve targeting rates from an already high baseline.
- Compliance with the proposed vignette scheme, whilst expected to be high, would likely be as a result of good operators following the rules. The operators who were consistently breaking the safety rules were most likely the same group of operators who would evade the charge.

² Checks by VOSA in the South East of England quoted by Dr Stephen Ladyman MP in response to Parliamentary Questions asked on 23 April 2007 by Mr Hands MP

9.12 The study team concluded that this did not compel a decision against proceeding with any vignette scheme. However if the decision was to proceed it would be for the achievement of the benefits identified, rather than an expectation that the safety outcome would largely be achieved.

9.13 The study concluded that if the safety outcome remained the principal driver for considering a database solution, then regardless of the decision whether or not any vignette scheme proceeded, consideration should be given to whether there was a case for further work to be done to identify alternative measures to strengthen the enforcement regime and improve compliance by implementing effective sanctions against unsafe drivers, vehicles and operators by a means other than the population of the database.

European Legislation

9.14 The EU has proposed a Regulation on 'Access to the Profession of Road Transport Operator'. One of the proposals is for an interoperable database of road transport operators. Depending on whether the proposals are accepted by Member States, and as importantly, what data Member States agree should be shared, such a database could offer the potential for ensuring all operators, regardless of nationality, are equally enforced against when contravening road transport law.

Road safety legislation

9.15 The study team concluded that it was generally accepted that the key aspects to creating enforceable legislation were:

- persuading the sector that the legislation was sensible and ultimately in their (or society's in general) best interests;
- creating a perception that the legislation was being enforced and that violators ran a significant risk of being caught; and
- applying penalties for violation which were sufficiently deterrent to overcome any perceived burden of adherence.

9.16 In terms of the legislation relating to vehicle condition, drivers' hours and so on which the study focussed, the study team felt that what appeared to be missing was the significant risk of being caught. Even given the most favourable estimates, an operator database applied to the current regime of stopping vehicles would only increase the risk of being caught by 50 percent – say from 3 to 4.5 percent for any single journey of a foreign HGV.

9.17 Stated from the rogue operator's perspective, the study team felt that the chance of *avoiding* being caught would thus change from 97 to 95.5 percent, and although once caught, the operator's probability of being fined might increase, the overall impact would in all probability not be much of an increased deterrent.

9.18 The study found that if, instead of any complex scheme, the number of VOSA traffic examiners were simply doubled, the capture rate could also be doubled. This would probably be achieved quite rapidly without any new facilities being built, as the study team believed those facilities in existence were operated for less than 50 percent of the time.

Such a measure would entail a significant manpower cost, but there would be monetary benefits from increased levels of fines (which could be collected under the planned GFPD scheme mentioned earlier) and economic benefits from increased road safety and reduced congestion, which would be greater in scale than those from a vignette or any other scheme studied.

9.19 If any vignette scheme operated as per the model set out in Section 3 were implemented, European legislation would require any net revenue to be hypothecated for transport purposes, and consideration could be given to the use of such funds for improving the inspection and enforcement regime.