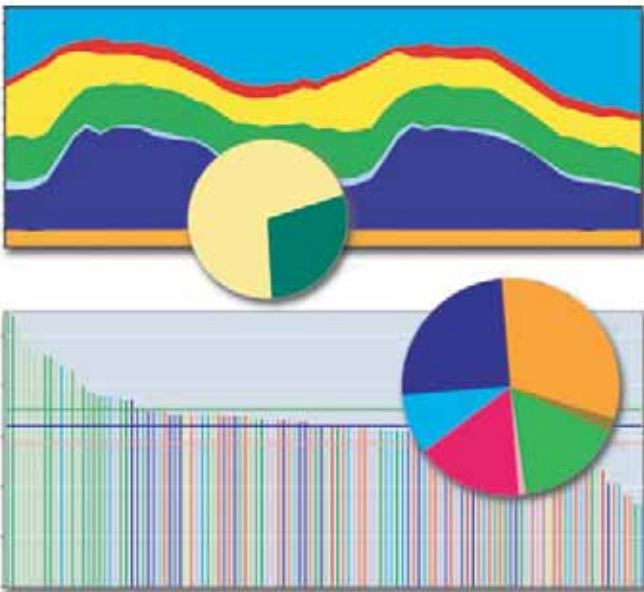


Key Performance Indicators for Non-Food Retail Distribution

Benchmarking Guide



Acknowledgements

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Littlewoods Retail Ltd

Lloyd Fraser Holdings

Marks and Spencer plc

Next Retail Ltd

TDG plc

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Foreword

Every successful organisation needs to manage its assets effectively and benchmark its performance against that of its direct competitors.

Over the last few years, the Department for Transport, through the Freight Best Practice programme, has supported a series of benchmarking surveys that have developed a range of Key Performance Indicators (KPIs) in a variety of industry sectors.

KPIs are essential tools for the freight industry. They provide a consistent basis for measuring transport efficiency across different fleets, comparing like with like.

This Benchmarking Guide aims to help operators identify real opportunities to maximise transport efficiency, reducing both running costs and environmental impact.

1 Introduction

The aims of this pilot survey in the non-food retail distribution sector were:

- ➡ To show participating companies how their own relative performance compared with others
- ➡ To highlight how the best operators in class are able to achieve their ratings

There are significant environmental pressures on operators in terms of engine emission limits, maximum noise levels and delivery restrictions placed on many retail sites. For example, new vehicles have had to conform to the introduction of tighter noise and emissions limits through the introduction of the type-approval specifications known as Euro 1, 2, 3 & 4. There will be a further tightening with the mandatory introduction of Euro 5 in 2008.

Of ever increasing significance is the impact of road congestion, which causes delays, reduces efficiency and increases both energy consumption and fleet operating costs.

Better operators will aim for improved fleet utilisation, through 24 hour scheduling, by increasing the number of deliveries performed at night (where local authority planning and environmental health restrictions permit) or through developing more complex trips, perhaps to include collections from suppliers.

A wide range of factors, such as customer requirements and access restrictions, mean that operators have peak demands on their resources. This can lead to under-utilised vehicles within fleets and increased traffic congestion.

Basically, an operator must strike a fine balance between tight scheduling and the need to allow for congestion and other restrictions.

The relative efficiency of a transport fleet also depends in part on wider supply chain factors and could be driven by, for example, the need for higher customer service.

1.1 Study Steering Group

This Benchmarking Guide briefly describes how the survey was performed, the KPIs measured and gives a detailed analysis of the results.

A copy of the research report, which gives more details about the survey methods, can be downloaded from www.freightbestpractice.org.uk

The study was managed by The Logistics Business on behalf of the Freight Best Practice programme. A steering group, made up of representatives from five participating companies, guided the development of the study and agreed the KPIs to be measured. This ensured the study met the needs of participating companies and those of Freight Best Practice.

The companies represented at the steering group were Argos, B&Q, Comet, House of Fraser and Woolworths.

Because non-food retailing includes such a huge range of products and retail formats, the study was extended to accommodate a variety of relevant handling units and vehicle types.

Survey participants included department stores, clothing, DIY, consumer durables, electrical products, fast moving consumer goods (FMCG) and furniture retailers.

1.2 The Key Performance Indicators

The five KPIs measured during the study were:

- ➡ **Vehicle fill** - measured by degree of loading against actual capacity by weight, volume (cube) and unit loads carried
- ➡ **Empty running** - in absolute terms the relocation of empty vehicles, but including legs where returns and packaging were carried
- ➡ **Time utilisation** - measured by seven categories of use, including being loaded or running on the road
- ➡ **Deviations from schedule** - covering any delay deemed to be significant, with causes such as congestion en route or waiting at delivery point

➔ **Fuel consumption** - actual fuel used, correlated to factors such as loading and airflow management equipment

These KPIs were chosen because they fulfil a number of key requirements, namely:

- ➔ Measurement of energy use
- ➔ Relevance to operators
- ➔ Ease of understanding by those compiling the data
- ➔ Relevant to analysis of individual vehicles and fleets
- ➔ Relationship to data already collected by operators to measure effectiveness

A range of additional data was collected in order to correlate actual energy consumption with other factors, including use of delivery windows and use of airflow management equipment.

1.3 Survey Statistics

The survey was carried out over a continuous 48 hour period from 0400 hours on 4th September 2002. 23 fleets submitted data for analysis and comparison. The total number of trips and the total number of units delivered were also collected for a one-week period.

A total of 1,879 vehicle combinations were monitored by the survey, covering seven different types, ranging from less than 7.5 tonnes gross vehicle weight to 44

tonnes articulated trucks. These were made up of 705 tractors, 1,734 trailers and 145 rigid vehicles, which travelled a total of 744,087 kilometres, on 2,496 trips. There were 6,411 individually monitored legs, giving an average of 2.57 legs per trip. A summary of statistics is shown in Table 1.

Table 1 Survey statistics

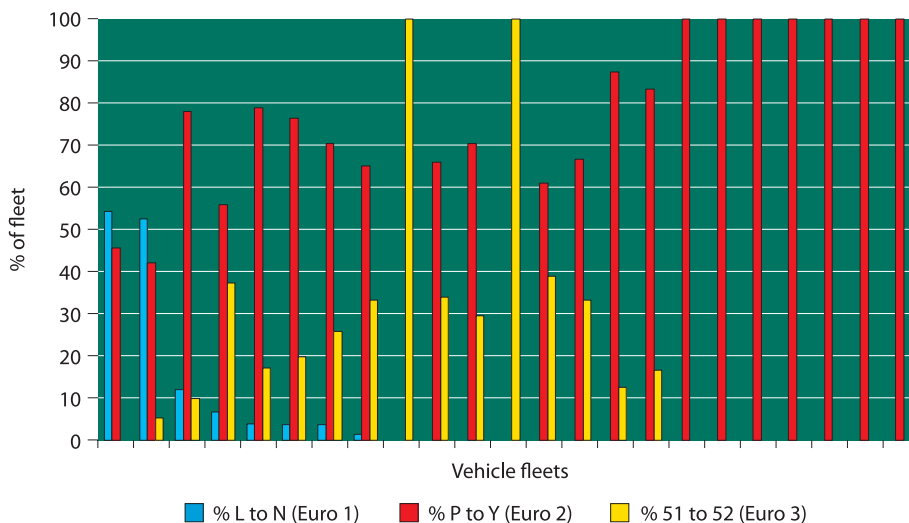
| | |
|-----------------------|---------|
| Tractors | 705 |
| Trailers | 1,734 |
| Rigids | 145 |
| Vehicle trips | 2,496 |
| Vehicle legs | 6,411 |
| Average legs per trip | 2.57 |
| Kilometres travelled | 744,087 |
| Average kms per leg | 116 |
| Unit loads delivered | 136,664 |

The age of vehicles was collected by their registration year index, grouped to correlate broadly with the various Euro engine specifications. The spread of the vehicle age is shown in Figure 1.

The average tractor/trailer ratio was 2.46 trailers per tractor (1,743 trailers/705 tractors). This ratio may not be representative of companies operating trailers in a company-wide pool, where each tractor unit in the fleet may have access to a much greater number of trailers.

The results presented here are anonymised and Individual companies are told only which is their data.

Figure 1 Age profile of all 23 fleets grouped by registration



2 Vehicle Fill

Vehicle utilisation or fill was measured from what rigid vehicles and trailers actually carried during the survey period.

Companies participating in the survey used a wide range of unit loads. This was to be expected due to the great diversity of products within the sector.

These covered pallets (1200mm x 1000mm), roll-cages in seven different sizes with heights from 1.0 to 1.85 metres, totes carried on pallets or dollies, hanging garment sets and loose items.

Loading was assessed according to the percentage of each type of unit load carried. Despite the wide variety, unit loads are important measures as some operators manage their loading by vehicle capacity purely in these terms, rather than by weight or volume (cube) capacity.

Vehicle fill was measured against the vehicle capacity by weight, volume and number of unit loads (represented by deck length use) carried for each leg. This was weighted by the distance travelled on each leg.

Depending on the type of load carried, one of the above criteria will be the limiting factor. Consequently many fleets record their loading only by the limiting factor. Responses were received from 22 fleets indicating deck utilisation and/or weight or volume utilisation. These are illustrated in Figure 2. The overall averages are shown in Table 2. So, in the non-food retail industry, weight based measures of vehicle utilisation are generally lower than the equivalent measures for deck utilisation. Efficient operators optimise both weight and volume by mixing of loads.

Table 2 Limiting factors

| | Average (%) | Range (%) |
|-----------|-------------|-----------|
| Weight | 54 | 18.7-80.9 |
| Volume | 51 | 22.6-88.6 |
| Deck area | 74 | 57.5-91.7 |

Some companies record cube as if each unit load (e.g. a roll-cage) were full, as even a single package requires a whole unit load. Others record the cube of the merchandise, which gives a better measure of vehicle productivity, but does not allow for a nesting effect when the product is placed in a roll cage or tote.

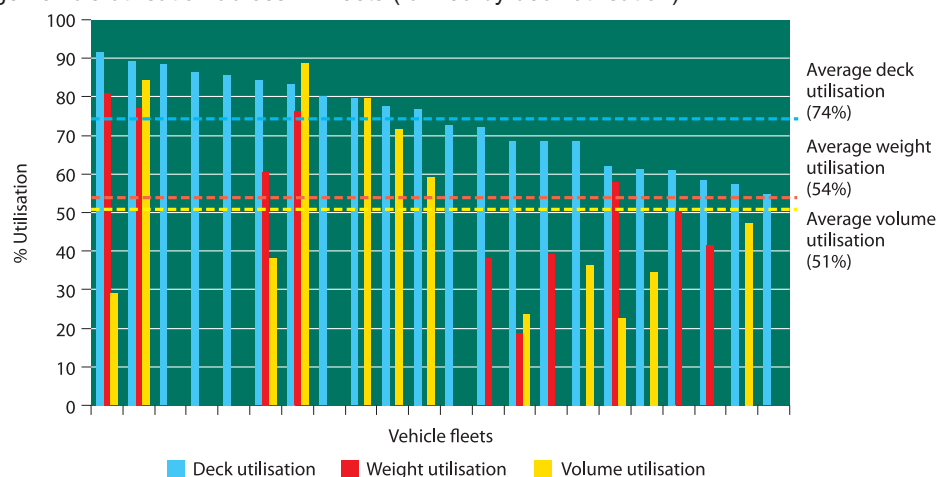
A greater variety of pack shapes is more likely, the more diverse the range of products sold. This makes efficient nesting within the unit load less achievable. The ability to record all attributes of the load gives a greater opportunity to identify possible improvements. For example, recording both the volume of the merchandise and utilisation of the handling units would highlight inefficiencies caused by either the pack shapes or the use of inappropriate units.

Unsurprisingly trips involving a number of legs with multiple deliveries of merchandise from the same initial load, the first leg has the best utilisation.

As loads are reduced in multiple leg trips, vehicles can collect items for return, thus helping to maintain load factors. But in such trips, collecting returns can prevent subsequent deliveries being made, due to the inaccessibility of merchandise. Efficiencies are likely to be reduced if returned items have to be removed each time a delivery is made. This will, of course, depend on vehicle body type and stresses the importance of planning both original vehicle specification and in-service allocation.

If complete legs are empty or lightly loaded there are

Figure 2 Percentage vehicle utilisation across 22 fleets (ranked by deck utilisation)



opportunities to improve vehicle utilisation. This could include collection of inbound merchandise from suppliers, internal movements between distribution centres, or even movements on behalf of other organisations (e.g. from a supplier to a competitor). At least two of the companies that participated in the survey currently do this.

Nearly a quarter, 23.2% (543), of the final legs originated at a factory or distribution centre. Some operators are clearly collecting new merchandise from suppliers or other locations within their network.

With all of these competing but effective uses for return loads, it is essential that needs are known and planned for in advance to enable optimum vehicle utilisation through efficient scheduling. This is an area companies are beginning to investigate, especially with increasing trends towards factory gate pricing.

The relatively high utilisation on first legs, with lower utilisation on intermediate legs is shown in Figure 3. This variation is due to the reduced load carried on multi-drop trips. Final legs are used for supplier collections and returns from stores, so utilisation is higher than intermediate legs.

High utilisation was defined as 90% of capacity or more. By number of unit loads this accounted for 25.1% of legs, by volume it was 6.0% and weight 2.7%.

Legs where 50% or more of the load consisted of returns, empty handling units or packaging, were also

measured. These accounted for 23.8% of legs measured by number of unit loads.

The causes of low utilisation are many and must be seen in the broader context of a company's supply chain operations. In order to maximise efficiency all aspects should be analysed for improvement.

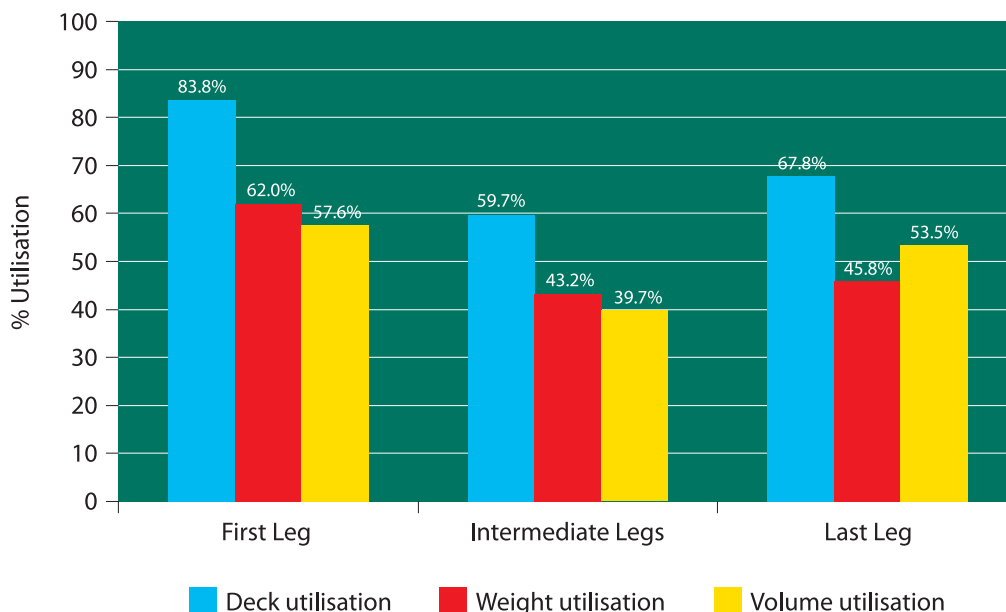
Current factors that may limit efficiency include:

- ➡ A lack of data measurement, so failing to raise awareness of the problem
- ➡ Purchase of standard vehicle sizes or body types that are not appropriate
- ➡ The inherent or perceived need for fleet consistency or flexibility
- ➡ Allowance for future business growth
- ➡ Other issues from within the business, which require priority to be given to parameters such as frequency of delivery

Costing the trade-off between vehicle utilisation and other factors such as ease of handling, cost of packaging and service frequency to stores may well lead to a review of existing processes, in favour of increased utilisation.

In fact, many of the participating companies have recognised the financial and environmental benefits of increased utilisation on second and subsequent legs and have changed their operations accordingly.

Figure 3 Vehicle utilisation by leg within all trips



3 Empty Running

Strictly speaking, empty running is defined as the relocation of an empty vehicle or trailer.

As supply chains have developed, many retailers have extracted benefit by centralising their waste management. This increases the opportunities for recycling and reduces the costs of using landfill, resulting in both financial and environmental benefits.

As a consequence, many return legs are run laden with used packaging material. Any form of handling unit used has to be returned when empty. Using unit loads speeds up vehicle turn-round times and can reduce the need for additional packaging which would subsequently require disposal. Moving these units quickly back up the supply chain reduces the total volume of equipment needed and thus saves investment and resources.

In some cases, each delivery vehicle will take quantities of returned items (spoilt merchandise). Alternatively, this may be left until there is sufficient to make a full load for a single vehicle, enabling other delivery vehicles to perform tasks, such as collections from suppliers. A number of companies are investigating the potential benefits of controlling this

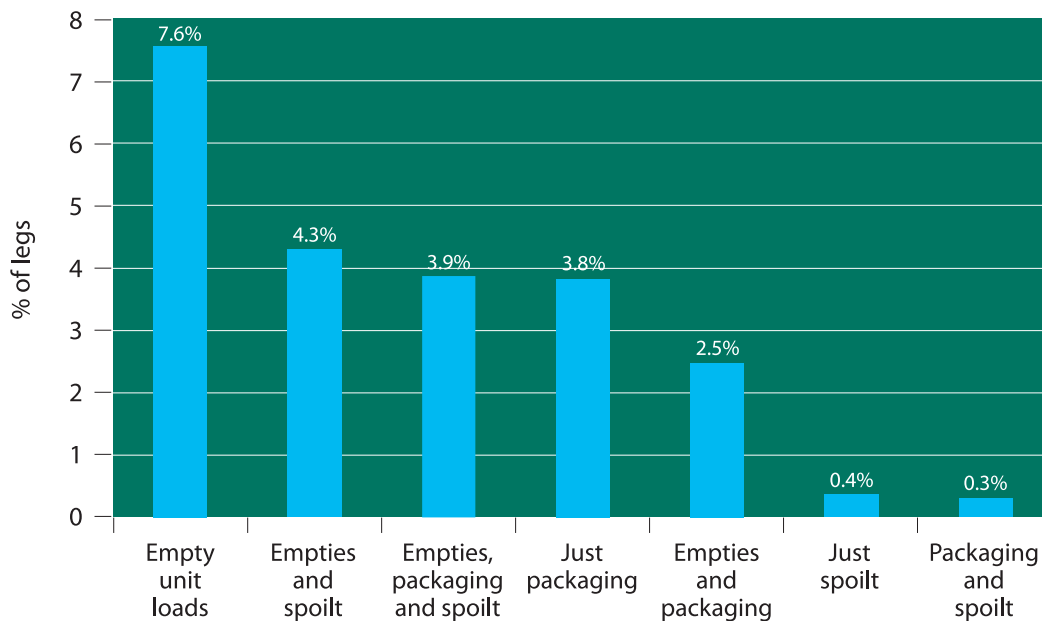
reverse logistics process from a central location to improve co-ordination.

Empty legs comprised 11% (705) of the total legs. This level of empty running compares favourably with the average of 26.4% for the UK truck fleet as a whole in 2001.

However, the carriage of empty handling units, packaging for recycling and returns accounted for a further 21.5% (1,376) of legs with the detail shown in Figure 4. In fact, the number of legs where only merchandise was delivered accounted for 58.0% (3,719) of all legs. The balance of leg activity was 3.5% (224) where no delivery was made and 6.0% (387) where the data was unclear.

Companies must strike a fine balance to ensure intermediate and final legs are better utilised while still ensuring the fleet's primary role, i.e. delivery, is protected and optimised. Any operator who records a significant percentage of reduced vehicle fill should review their internal systems to minimise the causes and so improve their efficiency.

Figure 4 Analysis of legs carrying returned items classified by type of returns, based on legs where data was provided (6,024)



4 Time Utilisation

From an hourly audit of what vehicles were doing during the survey period, they were productive, i.e. in the process of being loaded/unloaded or running on the road, for only 38% of available hours.

Allowing for safety inspections/maintenance (7%) and breaks from driving taken on the road (1%), vehicles were unproductive for 54% of available time. The figure for time taken as breaks from driving may seem low but it should be noted that this relates solely to those breaks taken specifically on the road and does not include breaks from driving taken on site, for example while waiting to be loaded/unloaded. Breaks taken in this way will be included in the figures for other categories of vehicle use. The various categories of use are summarised in Figure 5.

Significantly, 21% of a vehicle's time is spent preloaded awaiting departure. This inactivity can be caused by constraints elsewhere in an operation, such as the number of loading docks or the unavailability of vehicles and drivers. It is also

possible that vehicles, especially trailers, have to be ready for immediate despatch to make up for delays encountered in other trips. Spreading the use of vehicles in this way can lead to reduced utilisation (but faster turnaround times). Reporting needs to focus ideally on the effectiveness of each vehicle used, not just of the total fleet.

This creates two opposing arguments, specifically in terms of the size of trailer fleets. On one hand improvements in efficiency could lead to reductions in the sizes of trailer fleets. This would have positive operational implications, including reduced capital investment and lower maintenance costs (vehicles are inspected partly on a time basis whether used or not).

Conversely, actually increasing trailer numbers could help to improve efficiency. A larger trailer pool could reduce turnaround times due to opportunities for preloading. This would reduce inactivity and could lead to financial savings through reductions in the overall number of drivers and tractor units required in the operation.

Figure 5 Summary of typical use of rigid or trailer

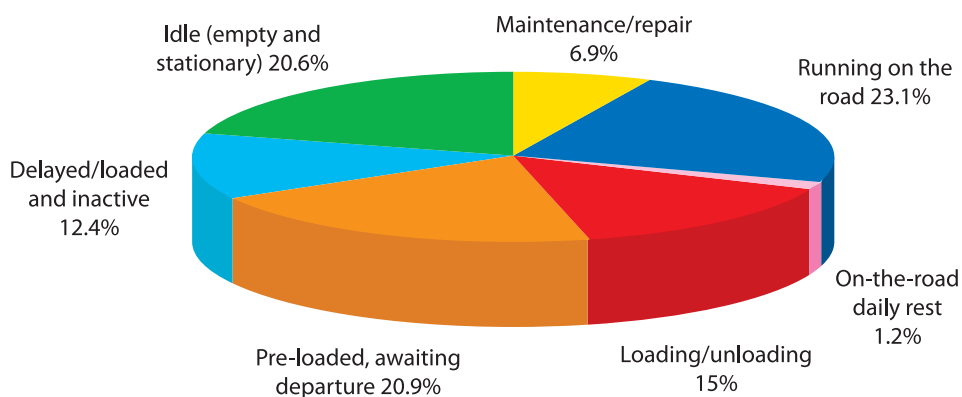
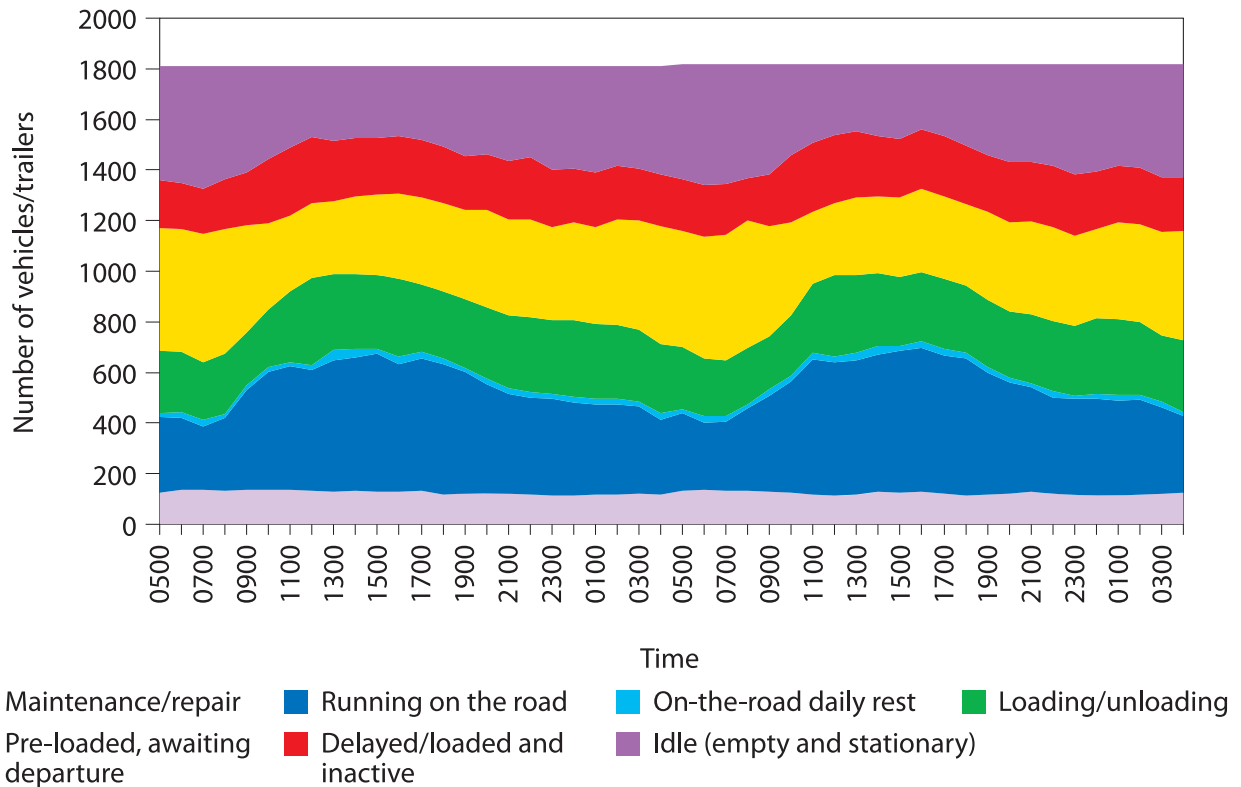


Figure 6 Time utilisation profile - 48 hour vehicle audit



A detailed analysis of the data for hourly use shows that at least 28% (525) of the total fleet of 1,879 vehicles were in productive use throughout the 48 hours. Also 16% (300) of vehicles were always completely idle and empty. The average proportion of the fleet in use per hour was 39%. This demonstrates both a practice of 24 hour working and a significant amount of under-utilised capital. The hourly audit is summarised in Figure 6.

One cause for this under-utilisation is the demand made on the fleet through delivery bookings. Where provided, these showed a peak between 07:00 and 08:00 hours and a dominance of 06:00 to 12:00 hours. This close grouping contributes to road congestion, that in turn results in higher fuel consumption.

If acceptable to customers, companies should consider arranging delivery times more evenly spread throughout the day.

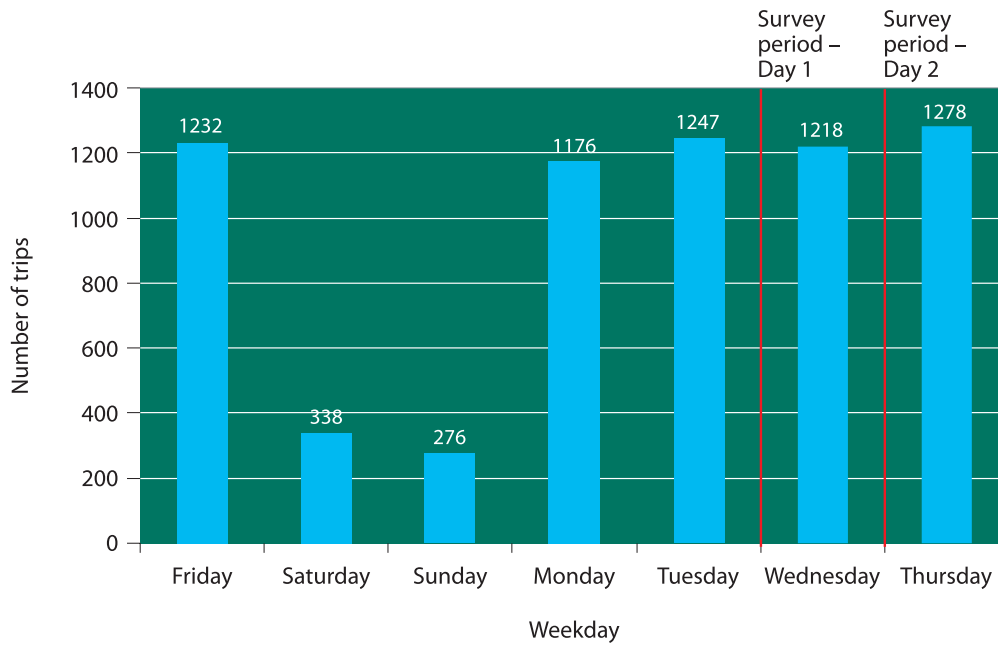
Examples from individual fleets include:

- ➡ An operator with 15 vehicles on the road at 09:00, rising to 30 at 12:00
- ➡ A second operator with 17 vehicles driving at 07:00 but only 7 at 10:00 due to a concentration of unloading activity
- ➡ A third operator with 35% of their vehicles loading or unloading at 09:00, with the percentage on the road falling from 40 at 07:00 to 28 at 09:00

If these peaks were flattened and activity were more evenly spread throughout the day, operators would reduce congestion and improve the time utilisation of vehicles.

Despite the impact of seven day trading in the retail sector, Saturday and Sunday deliveries together only account for 9.1% of the total trips. The survey days

Figure 7 Profile of daily activity for the week of the survey - all fleets



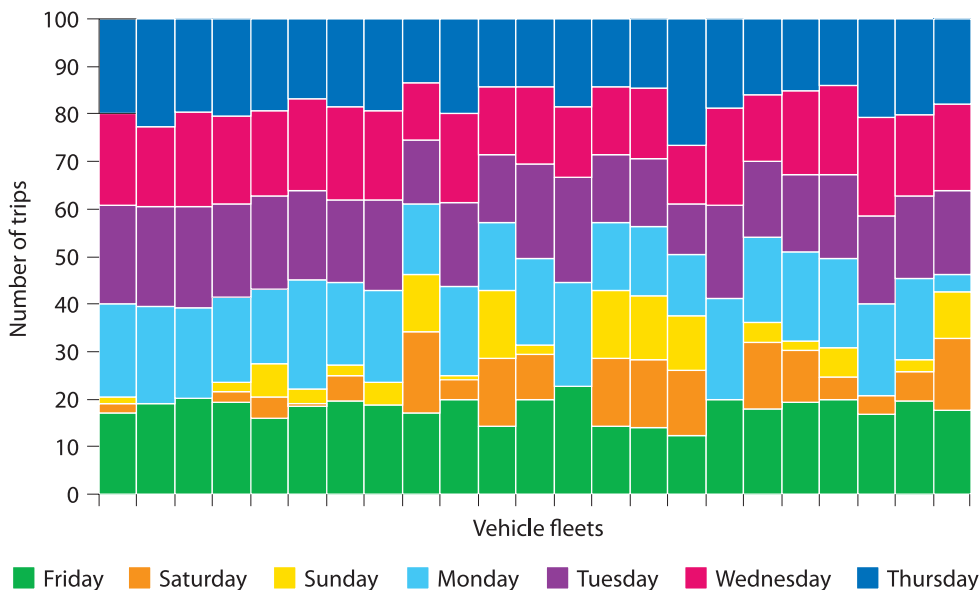
accounted for 16.7% and 17.3% of trips respectively for a seven-day week. For a five-day week they were about average at 19.6% and 20.7% of trips. The spread of results for the survey week in trips is shown in Figure 7.

and the forthcoming Working Time Directive (WTD). Fleet operators will be reviewing the impact of WTD on their schedules and this process could be widened to identify potential benefits from changes to working practices.

Increasing activity at weekends may be difficult if businesses do not work more than five day weeks as standard. In addition, fleet operators need to understand the implications of six and seven-day working, taking into account drivers' hours regulations

Not all companies had the same peak days or weeks and not all fleets operate 24 hours per day or seven days a week. The variation by fleet is shown in Figure 8.

Figure 8 Weekly profile of activity by fleet



In the participating sample, companies operated:

- ➡ five fleets that worked seven days per week with roughly equal activity throughout
- ➡ 12 fleets that worked seven days, with one or two relatively light days
- ➡ two fleets that worked six days with varying levels of daily activity
- ➡ four fleets that worked five days with roughly equal activity throughout

Operational constraints are many and varied and include drivers' hours regulations and restrictions on access during unsociable hours. In addition, some companies do not require deliveries more than five days a week. If the spread of deliveries across five, six or seven days (as applicable) is unequal, then a fleet may potentially be larger than necessary to accommodate these imbalances. This excess in assets has obvious implications for utilisation and investment.

5 Deviations from Schedule

Survey participants were asked to record significant delays affecting schedules against six possible reasons. Participating companies could attribute delays on each leg to more than one cause, these are summarised in Table 3.

Delays affected 18.6% (1,189) of all legs, with an average delay length of 50.6 minutes. This equates to a significant 1,003 hours over the 48 hour period. Since the average time utilisation achieved across this sample fleet is 9.12 productive hours per day (38% of 24 hour period, from Figure 5) and 1.68 hours for safety inspection/maintenance time/refuelling (7%), this corresponds to delays worth 45 vehicle days every 24 hours.

The impact of delays on energy use is significant but it also results in increased capital investment in vehicles and higher employment costs.

Over half of the delays recorded were due to traffic congestion. Some companies already allow for known congestion in their planning and scheduling routines, so the real impact is partially hidden.

Effective monitoring to determine trends as to where and when congestion regularly occurs can enable operators to reroute and reschedule movements accordingly.

It is interesting to note that although congestion was deemed responsible for 57% of all delayed legs, the average resulting time delay (25.5 minutes) was less than half that of any other type of delay.

Booking times were used by a total of 19 fleets and the range of recorded arrival time indicated the possible impact of the deviations from schedule. The length of the time windows used varied from 0.5 to 8 hours with an average of 0.74 hours, or just 45 minutes. The prevalence of delivery windows throughout the industry is illustrated by the fact that only 17.8% (1,139 legs) did not have such a window.

Being too early for a delivery can be as disruptive as arriving too late, due to limited access or a lack of waiting areas. Although 18.6% (1,189) of all legs were affected by delays, late arrivals actually accounted for only 7.7% (496) of legs. This indicates that companies may be building in extra time in their delivery schedules to accommodate potential delays. This would be logical since although having a vehicle waiting at a delivery point is undesirable, an early arrival is still preferable to a load refusal due to a missed delivery window.

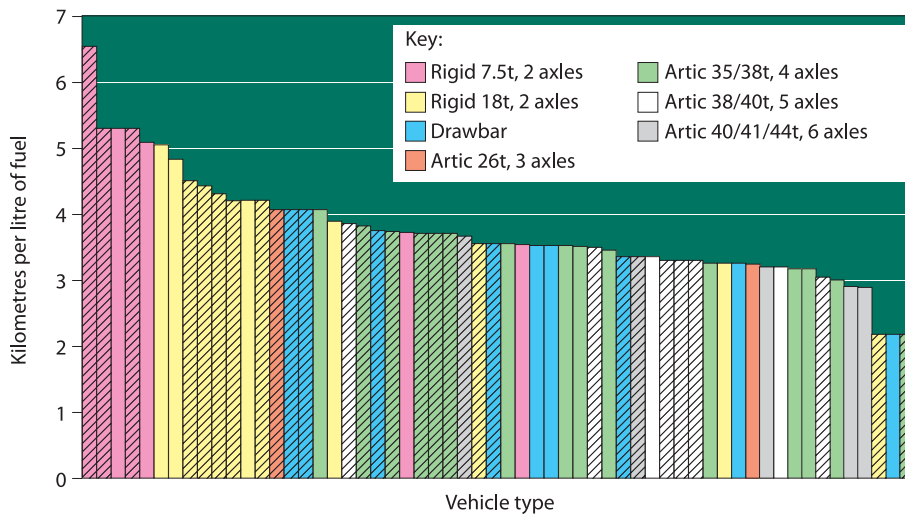
Failed legs, either wholly or partially, cause unnecessary activity and result in wasted resources. If delivery failure is due to non-loading then vehicle utilisation is affected and the energy consumed is less effective (this only occurred in 0.4% of all legs).

Table 3 Causes of delay (where known)

| | No driver | Other (Internal) | Collection Point | Delivery Point | Congestion | Breakdown |
|----------------------|-----------|------------------|------------------|----------------|------------|-----------|
| Legs | 13 | 308 | 67 | 212 | 683 | 21 |
| % of all legs | 0.20 | 4.80 | 1.05 | 3.31 | 10.65 | 0.33 |
| % of delayed legs | 1.09 | 25.9 | 5.63 | 17.83 | 57.44 | 1.77 |
| Av. delay, minutes | 52.1 | 81.8 | 60.7 | 51.2 | 25.5 | 67.3 |
| Total delay, minutes | 677 | 25,192 | 4,066 | 10,859 | 17,380 | 1,414 |

6 Fuel Consumption

Figure 9 Fuel consumption by vehicle type (Patterned data indicate that >30% of fleet has air management kit fitted)



Fuel consumption, measured in kilometres per litre, was recorded by vehicle type (tractors and rigid) for each fleet during the survey period.

The rate at which vehicles consume fuel is affected by a range of factors, including:

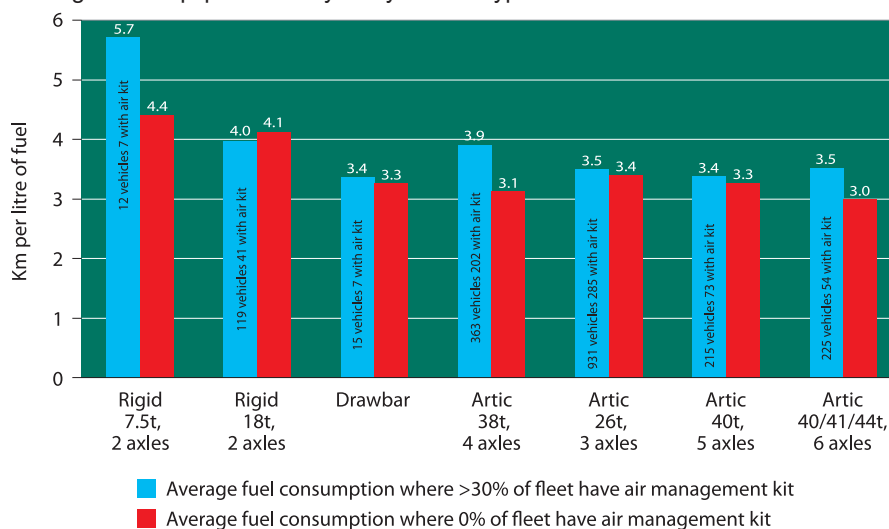
- ➔ The weight of vehicle and load
- ➔ The nature of the driving conditions and the frequency of stops
- ➔ Driving technique
- ➔ The specification of the vehicle including airflow management equipment

As expected, this range of factors led to a large variation in consumption rates recorded for each vehicle type in the different fleets. An analysis by vehicle type is shown in Figure 9.

The range of fuel consumption for each vehicle type gives some idea of the potential savings for poorer performers. For example, for 40 tonne trucks on 5 axles the range of fuel consumption was 3.1 to 3.8 kilometres per litre. For the worst performer to match the best performer a 22.6% improvement is required. Travelling 100,000 kilometres per annum, with an approximate fuel cost of 65p per litre (ex-VAT), this improvement would lead to an annual saving of approximately £4,000 per vehicle. This corresponds to a reduction of over 15 tonnes of CO2 emissions per vehicle per annum.

Correlating the use of airflow management equipment, such as aerofoils, spoilers or skirts, against the fuel consumption rates, illustrates the benefits for all but one vehicle type, as shown in Figure 10.

Figure 10 Airflow management equipment analysis by vehicle type



Again, the improved fuel efficiency provides benefits both in reduced costs for the operator and reduced CO2 emissions for the environment.

In total, 669 vehicles were fitted with airflow management equipment. The recorded improvements in fuel efficiency by vehicle type, due to this equipment, ranged from 3% to over 22%. For example, for articulated vehicles over 40 tonnes the difference was 0.51 km/litre or 14.5% between vehicles with and without aerodynamic equipment.

For more information on airflow management equipment see Freight Best Practice Guide on Truck Aerodynamic Styling.

The productivity of the fuel consumed by each vehicle is measured by energy intensity. This is defined as the millilitres of fuel consumed for standard pallet equivalent carried per kilometre travelled. This definition takes into account the loading on the vehicle and involves converting the different types of unit loads (used by most fleets as their planning constraint) to industry standard 1200mm x 1000 mm pallets. The energy intensity per fleet of the 22 respondents who supplied deck utilisation data is shown in Figure 11.

In addition to the vehicle specification, a range of factors affect fuel consumption rates including the age of vehicles in the fleet and the use of telematics to record both driver and vehicle performance.

Nine fleets participating in the survey had telematics equipment fitted in some vehicles. The proportion of vehicles within these fleets that had systems fitted ranged from 35% to 100%. Some of the functionality of this equipment is for communication and vehicle tracking. The information recorded varied from simple average speeds and fuel consumption through engine idling time and gear use to the monitoring of actual driving styles such as harsh braking, acceleration and excessive speed.

Since companies are able to download this information easily and frequently it can be linked to outputs from planning and scheduling systems to produce a picture of overall efficiency for each day.

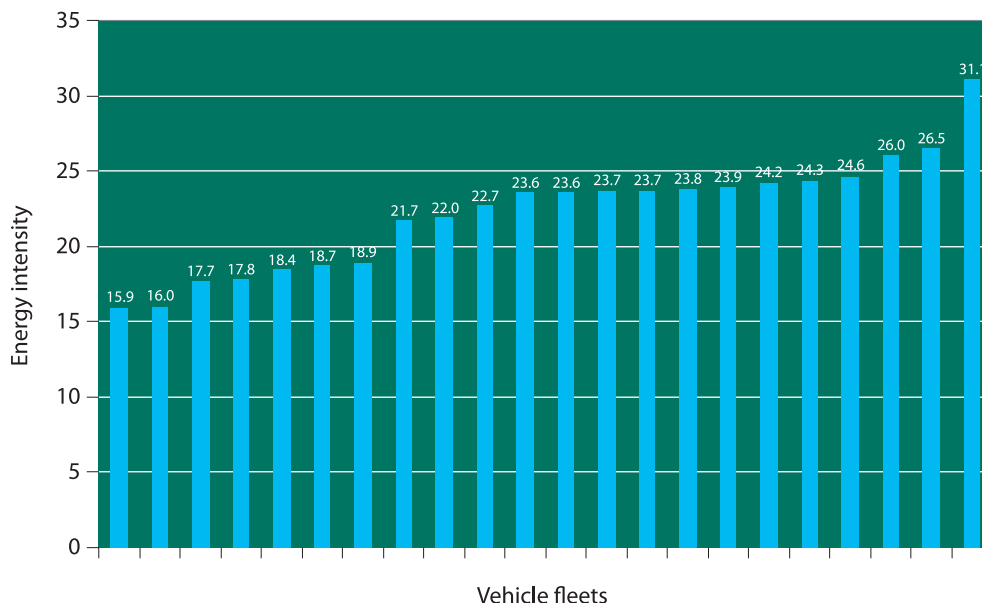
More information on telematics can be found within the Freight Best Practice Telematics guide.

The wide range of free Freight Best Practice publications give more information on what can be achieved by encouraging a culture of fuel efficiency within an organisation and by implementing best practice.

Order from the Hotline on **0845 877 0 877** or the website at **www.freightbestpractice.org.uk**

As a starting point, the Fuel Management Guide should be essential reading for any operator aiming to reduce fuel consumption. The guide outlines a programme of work to enable operators to develop and implement a practical fuel management programme.

Figure 11 Energy intensity by fleet



7 Summary

This survey has highlighted a variety of opportunities within the non-food retail sector for operators to improve fleet utilisation and energy efficiency.

Vehicle fill was calculated as only 51% of available weight capacity, 47% of available cube capacity but a higher 74% of the available deck length capacity. The use of double and triple deck trailers can offset this imbalance and increase vehicle fill by weight, volume and deck length use. 146 double-deck trailers were included in this survey.

Utilisation is reduced further by an inability to fill all unit loads, e.g. roll cages, efficiently. Few operators measure this aspect so the size of the potential saving is unknown.

With 23.2% of last legs (and 8.5% of all legs) being used for collections from suppliers, there is considerable scope for improved cooperation and coordination to improve vehicle utilisation and reduce fleet mileage.

Significant use is made of return legs to collect waste from stores, to return empty unit loads and to collect new merchandise from suppliers. However, this is often done on an ad hoc basis. Reverse logistics flows need to be centrally managed in order to make efficient and coordinated use of the vehicle fleet.

An average of 39% of the survey fleet was in use each hour, with a minimum of 16% always in use. This corresponds broadly to night use. Although there will be external constraints, such as restrictions on delivery times, there is scope for many operators to reduce fleet sizes by spreading activity throughout the 24 hour period with beneficial reductions in associated running and management costs.

Delivery bookings were predominant in the period 0600 to 1200 hours, with 30% occurring between 0600 and 1000. This coincides with one of the two daily peaks in road congestion. In contrast, the 12 hours from 1800 to 0600 cover only 25% of delivery bookings. By reviewing the need for movement during peak times and changing delivery schedules, companies would reduce inefficient running.

Fitting airflow management equipment showed a positive improvement in fuel consumption. If all the vehicles involved in the survey had been fitted with this type of equipment, a 5% improvement in fuel

consumption would have been evident. In terms of benefits, this would give operators a saving equivalent to over 3p/litre and significantly reduce environmentally damaging CO2 emissions.

Accurate measurement is the key to assessing existing performance and to enable improvements to be monitored. By measuring the key performance indicators used within this study individual fleet operators can identify key areas in need of attention. This benchmarking exercise will assist them in maximising the benefits of any changes implemented.

7.1 Actions for Operators

So what can fleet operators do to improve their efficiency?

- ➡ Measure key elements of the operation
 - Record fuel consumption by trip (the ideal) but, as a minimum, record details by driver shift to monitor individual performance
 - Record utilisation of each vehicle by leg, volume, weight and unit loads
 - Use KPIs to benchmark performance internally e.g. between depots
- ➡ Identify the impact of various aspects of vehicle specifications such as airflow management equipment, engines and wheel rim sizes
- ➡ Monitor actual use of each vehicle and review fleet size
- ➡ Review fleet specification to identify how utilisation might be increased through changes that match the operation performed more accurately. Many fleets in the retail sector have introduced double or even tripledeck trailers into their fleets
- ➡ Where unit loads (e.g. roll cages) are used, the amount of merchandise in each of these should be monitored to give a more detailed measure of vehicle utilisation
- ➡ Collaboration, i.e. movements on behalf of competitors or even third parties should be considered to increase vehicle utilisation
- ➡ Review existing telematics systems to see if they can be used to measure KPIs remotely and easily

Freight Best Practice publications, including those listed below, can be obtained FREE of charge by calling the **Hotline** on **0845 877 0 877**. Alternatively, they can be downloaded from the website **www.freightbestpractice.org.uk**

Saving Fuel



Fuel Management Guide

This is the definitive guide to improving the fuel performance of your fleet. It gives step-by-step explanations of the key elements of fuel management, how to measure performance and how to implement an effective improvement programme.

Developing Skills



Safe Driving Tips

Written especially for commercial vehicle drivers, this pocket-sized guide provides essential safety hints and tips on all aspects of driving safely.

Equipment and Systems



Information Technology for Efficient Road Freight Operations

This guide provides an overview of the available and relevant systems, covering their uses, likely benefits, issues to consider and associated costs.

Operational Efficiency



Expert Advice Helps Cut Fleet Costs

This case study shows the savings achieved by Denholm Industrial Services Ltd as a result of the measures implemented as part of a site specific efficiency improvement plan.

Performance Management



Performance Management for Efficient Road Freight Operations

This guide explains the process of measuring performance effectively. It includes advice on how information is best collected and interpreted to allow informed decision making in order to achieve operational efficiency improvements.

Public Sector



Freight Quality Partnership Guide

This guide provides step-by-step guidance on how to set up and run an effective Freight Quality Partnership.

