

# **Implementing a fleet safety programme in UK-based small and medium sized enterprises (SMEs)**

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## **Abstract**

This paper reports on a recently completed project to support small and medium sized enterprises (SMEs<sup>1</sup>) in West Yorkshire in the UK to implement suitable quality systems to improve the road safety of their employees. The key elements of a European Regional Development Fund (ERDF) supported project are set out, including: rationale, funding, implementation issues, outputs and areas for further study. The focus of the paper is on the process and implementation issues involved in attempting to improve the quality, efficiency and safety of commercial vehicle operations by allowing SMEs to implement quality systems for the assessment, monitoring, training and management of occupational drivers.

The main limitation of the study was the difficulty and time spent in 'getting into' traditionally secretive and cautious SMEs. This meant that a large part of the 12 months allowed for the project was spent on identifying potential participants and 'selling' them the benefits of participation. Less time than planned was therefore available for implementing and evaluating the actual initiatives. Despite this, positive outcomes were seen in several of the 16 participating organizations.

The paper offers several benefits that are new in the field.

- Process skills in working closely with SMEs.
- Low cost IT-based tools for driver assessment and monitoring, which have the potential to become web-based. These are particularly useful for organizations operating in rural and remote regions on a very low budget.

## **Introduction**

The Driver Assessment and Monitoring Project (DAMP) is a collaborative University/Industry programme to support businesses in West Yorkshire in the UK. The programme was supported by the European Regional Development Fund (ERDF) and took place between September 1999 and September 2000. More detailed evaluation and several continuation projects are now being explored and implemented.

For the two years prior to the project the University of Huddersfield was involved with risk management company called IDS ([www.roadskills.com](http://www.roadskills.com)) in developing two CD-ROMs: (1) for driver assessment and training and (2) to manage and monitor their performance in a way that is simple to use and understand. A management guide on 'Creating a crash free culture' (Murray and Dubens 1998) and a workshop-based training programme on managing transport safety ([www.hud.ac.uk/sas/transold/evaluate.htm](http://www.hud.ac.uk/sas/transold/evaluate.htm)) have also been successfully launched.

These products were partly developed with SMEs in mind but the take up had tended to be by larger companies. For this reason European funding was sought to support SMEs in West Yorkshire to implement these quality systems for driver, fleet and risk management. The rationale for the programme, project aims, finding companies, contents of the programme and initial evaluation results are all described in the paper. Finally the programme is evaluated against its original objectives and ideas for future follow-on projects are suggested.

## **The rationale for the programme**

Published statistics (such as the *Motor Transport* quarterly cost tables) and company figures show that normally the largest elements of transport costs are the vehicle itself (30-50%), fuel (20-30%) and the driver (about 30-

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<sup>1</sup> SMEs are defined as employing <250 people and having an annual turnover of <£25 million.

50%). This project is concerned with the last element, the commercial vehicle **driver** and allowing SMEs to implement suitable quality systems for their management. At the beginning of the project in mid 1999 several problems were identified in relation to freight transport management in the UK. Most of these remain current in the UK and several, including driver shortages, are emerging in Australia.

- Smaller organisations have been slow to implement quality systems into their transport, or to invest in long term planning or staff development.
- There is a major shortage of drivers (RHDTA 1995, FTA 1998), with the number of people taking the large goods vehicle (LGV) test having fallen by over 40% in 1997 (DSA 1998).
- There are arguments about who should initiate and pay for initial and on-going training.
- Once the LGV test has been passed there are no statutory requirements for any further training or assessment until a medical must be undertaken at 45. There is no national quality standard or requirement for any further monitoring, assessment or training of any drivers in the UK (Murray 1998).
- Skill levels and post-test assessment and training are generally low, particularly amongst SMEs.
- Safety levels are low, particularly amongst SMEs, and 95% of crashes are at least partly attributable to human error (Sabey and Taylor 1980). Deficiencies exist in the amount and quality of data for vehicle fleet management, particularly in relation to safety (Murray and Dubens 1998) and fuel efficiency (Coyle 1998). Crashes can have a significant effect on costs and also to the community.
- Many managers, particularly in SMEs, do not have the time or the skills to put in place quality systems, nor to undertake effective data collection and analysis to improve operations.
- Temporary driver supply agencies are unregulated, often have no mechanisms in place for quality, driver assessment, training and monitoring and are criticised for the low skill levels of their staff and their poor quality of service (Murray 1999).
- Many companies, particularly SMEs, often do not see themselves as having the funds, time, knowledge or resources to put in place the quality systems required to assess and train drivers, particularly as much of this traditionally takes place in the vehicle.
- The cost of fuel was set to rise at 6% above inflation over the next 10 years, and the driver is the single biggest influence on fuel utilisation (Coyle 1998). This 'fuel escalator' has since been watered down, but fuel costs remain high in the UK.
- The UK transport industry was generally struggling due to rising costs and falling incomes (Stanton 1999). It was felt that improved management, particularly of drivers, could play a major role in turning this around.

Data analysis and previous case studies involving proactive and often larger operators have shown that better management and the implementation of driver assessment, training and monitoring can help to reduce many of these problems and make transport more profitable (Taylor 1999, McCorry and Murray 1993, Murray 1995). The University of Huddersfield has done a great deal of work on improving transport safety at the company level (McCorry and Murray 1993, Murray and Whiteing 1995, Murray 1998 and 1999), particularly with larger companies - although the approaches are relevant to SMEs also. Improving management and driving standards and better crash data analysis are two key recurring issues. The University's research and management development programmes over the past 10 years have developed many countermeasures for making these improvements.

To date such programmes have mainly been taken up by larger national organisations, but very few local SMEs. The main aim of DAMP was to disseminate this work and make best practice management and quality approaches available to smaller, local organisations as well. This project therefore aimed to improve the quality, efficiency and safety of commercial vehicle operations by allowing SMEs to implement quality systems for the assessment, monitoring, training and management of drivers – particularly IT-based processes to manage their drivers better and implement needs-based assessment and training.

Over several years the University worked closely with Brighouse-based IDS in the development of two CD-ROMs for (1) assessment and training of drivers and (2) to manage and monitor their performance in a way that is simple to use and understand.

The driver assessment CD can be used initially with existing drivers to benchmark their skills, knowledge, attitude and hazard perception. This assessment can also be used to give feedback to drivers about areas to improve their performance. It can then be used for reassessments and as a recruitment tool when assessing new drivers. Where users gain a benefit is that it cuts assessment and recruitment costs by taking a large proportion of the assessment out of the vehicle and by creating a ready made benchmarking database. Murray and Dubens (2000) provide more detail on driver assessment.

The data analysis CD monitors and manages the safety performance of a group of drivers/fleet vehicles. For example after each crash, near hit or traffic violation information is entered into the system about the driver involved, the vehicle and the incident. The system automatically produces performance monitoring graphs and exception reports to allow managers to monitor the operation, including assessing the benefits of undertaking driver assessment and training. Murray and Dubens (1998) provide more discussion on crash data analysis.

### **Project aims**

Based on the literature and research discussed above, ERDF funding was used to provide participants with access to the following transport safety and quality systems free-of-charge. More details about most of these initiatives are provided on the news pages of the University of Huddersfield's internet site ([www.hud.ac.uk/sas/trans/transnews.htm](http://www.hud.ac.uk/sas/trans/transnews.htm))

- A management seminar on the costs and causes of road crashes and ways to reduce them.
- An initial safety audit.
- Copies of the 'Creating an accident free culture' management guide (Murray and Dubens 1998).
- Other management guides on defensive driving, safe reversing and managing agency drivers.
- A risk management/data analysis CD-ROM for crash data evaluation and costing.
- A driver assessment CD-ROM that covers knowledge, attitude, behaviour and hazard perception.
- On-going advice and evaluation, including a business breakfast, regular mailshots, company visits, a project discussion meeting, a presentation evening and an email/telephone-based helpline service.

These elements of the project are discussed further throughout the remainder of the paper. As well as providing participants with the material, the project also allowed substantial improvements to be made to the material itself, its implementation, use and evaluation.

In negotiating the funding, seven key quantitative targets/aims for the project were stipulated in the agreement with the ERDF.

1. Create three direct permanent jobs.
2. Create one direct temporary job.
3. Assist 15 SMEs.
4. Assess/train 130 beneficiaries.
5. Provide 15 SMEs with new/improved quality systems.
6. Assist 15 SMEs become more aware of accident causes and costs.
7. Help 15 SMEs become better equipped to understand how to improve their safety record.

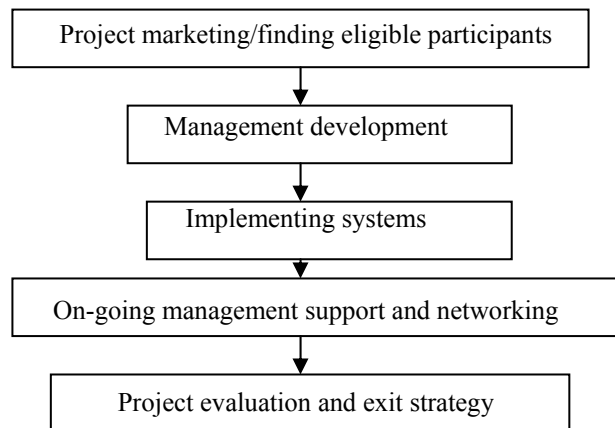
As well as these quantitative aims, there were also a range of more qualitative outcomes that emerged as the project developed. The project methodology used to achieve these aims and actual outcomes is described next.

### **Project Methodology and process**

The outline methodology for the project is shown in Figure 1.

Experience from other research programmes (eg Coyle 1998) suggested that 'getting into' SMEs was a difficult task, as they tend to be very secretive and also to be very focused on day to day issues rather than developing longer term programmes. For this reason, the early stages of the project were particularly concerned with **marketing** – identifying, building databases of and targetting eligible participants. This involved personal contacts, driving and cycling around the relevant areas (essentially the BD11, BD19, WF12, WF13, WF15, WF16 and WF17 postcode areas to the north of Huddersfield), existing databases (such as the Chamber of Commerce, Road Haulage Association, Freight Transport Association, Recruitment and Employment Confederation and Business Link), internet and telephone directories (eg yellow Pages), developing a internet site ([www.hud.ac.uk/sas/transold/dampbre.htm](http://www.hud.ac.uk/sas/transold/dampbre.htm)) and a large PR effort in the local and transport press. This led to a business breakfast at the University, attended by 5 of the final 16 participant companies ([www.hud.ac.uk/sas/transold/damprel.htm](http://www.hud.ac.uk/sas/transold/damprel.htm)). Further intensive marketing, PR and word of mouth ensured that other organisations slowly joined the project over time to make up the eventual 16 participants.

Figure 1 – Outline project methodology



The **management development** element of the programme took several forms, including a one-day workshop ([www.hud.ac.uk/sas/transold/dampfli.htm](http://www.hud.ac.uk/sas/transold/dampfli.htm)), a range of guidance and self-audit material and company visits. The initial company visits served three purposes: (1) get to know the organisations (2) implement the IT-based elements of the programme (crash data analysis and driver assessment) and (3) begin to develop and monitor the attitudes of the company managers towards improved safety. This stage of the project saw the emergence of several key **implementation**-based issues.

- Change management.
- Finding a mechanism for the systems to fit within the existing structures and management chains in the organisations.
- Giving managers and drivers the opportunity to use the manuals and undertake the assessment.
- IT issues, such as setting up the computer correctly for the software, or more simply actually deciding which is the most suitable computer to use.

Later company visits aimed to gain more feedback about the systems themselves, implementation and change management issues, evaluate the success of the programme and identify avenues for future funding bids. On average each company was visited 4-5 times during the 12 months of the project.

As well as these company visits, **on-going support and networking** was achieved through a project steering committee that met every six weeks and two further events, a mid-point project evaluation day and a curry night presentation and ‘exit strategy’ evening. The mid-point event covered the following areas and achieved several important outputs, which have been used to help develop the driving and data CD-ROMs as well as the ‘Accident free culture’ management guide.

- General progress check, project feedback and actions required.
- Problems raised by companies who had installed the systems.
- Benefits from the project.
- Summary of action required based on the specific feedback from individual delegates.
- Project administration, particularly action required on timesheets and overheads.
- Keynote presentation on road safety by Mary Williams, OBE, Executive Director of Brake.
- Software demonstration for new companies and action required based on it.
- Future training needs analysis and action required based on it.

At the meeting, participants identified the driver assessment CD as a key element of the project. They described how they were using it to (1) assess existing drivers, (2) improve driver education and standards, (3) recruit drivers, (4) create a safety culture and increased safety awareness for drivers and managers, (5) improve health and safety policy, (6) cut crash costs, (7) assess agency drivers before sending them to clients, (8) undertake sales pitches to potential new clients and (9) assess training requirements. The crash analysis CD was being used to keep a track on costs, types of crashes, vehicles and driver records.

Participants highlighted the project's best features as (1) clarity/ease of system use, (2) reports and information, (3) drivers thinking about safety more, (4) safety culture growing within the company, and (5) being workplace-based means drivers do not need to attend an external course.

The main problems identified with the project were loss of data due to computer problems when upgrading to a server-based system, management time to exploit the systems fully, ways to assess non-computer users, computer availability and how to fit the assessments into the drivers' already busy work schedules.

During the programme industry group support and involvement was identified by the ERDF as an important element of such projects. This process had already been ongoing through links with the Chamber of Commerce, Road Haulage Association, Freight Transport Association, Recruitment and Employment Confederation and Business Link. Other links for the project were also developed with Kirklees Council's Road Safety Centre, the Government Office for Yorkshire and the Humber, the Parliamentary Advisory Council for Transport Safety, Brake and the North Kirklees Partnership for economic development. The project also received good coverage in the local and transport media in the UK.

The later stages of the project focussed on the management of change, **evaluation**, dissemination and highlighting areas for further action. This involved a curry night presentation and 'exit strategy' evening and final visits to participant companies. The visits provided more detailed information about the usefulness of the project, which is summarised below.

- Its made the whole company think about and involved in safety. It's a talking point, which has got people's mind onto safety and good driving.
- It's a great PR tool for use with our clients/potential clients and insurers.
- Managers and office staff were assessed first, then existing regular drivers, then new drivers. Being 'out of vehicle' makes it excellent for agency drivers. Training is planned based on the CD results.

The visits also focussed on identifying areas for improvement.

- How to sell the benefits to drivers and directors.
- Implementing new systems in a busy operation – both implementation and driver time to do it.
- Basic IT problems including availability of PC to run it from, PC not having a sound card, obtaining a server compatible version, faulty CDs and negotiation over who has priority for a shared PC – the transport or personnel manager. (The latter won the battle!)
- Dealing with the fact that some drivers are not computer orientated.
- System does not cover softer issues and non-driving duties such as drop times and customer service.

It was felt to be important not to 'just leave participants by themselves' once the project was over. This project **exit strategy** has been successfully achieved in three ways. (1) All existing participants have been offered free access to helpline support mechanisms on an on-going basis. (2) Several new funding bids are planned as follow-ons to the project (see Conclusions). The existing participants identified most of these, which suggests that they are needs-based. (3) Participants have been encouraged and already started to network amongst themselves.

### **Project outcomes and initial evaluation against its original objectives**

Overall 16 organisations (Table 1) were recruited into the project and implemented the material and CD-ROMs. Different participants entered the project at different stages, meaning that some were more advanced than others. Some participants were also more motivated than others, and took part more fully and enthusiastically. Table 1 attempts to summarise the participation levels and feeds into Table 2, which shows the extent to which the project's aims and targets were met.

Table 1 – Summary matrix of project outcomes

Participant	Vehicles	Drivers	Breakfast	Crashes PA	Seminar	Workshop	Presentation evening	Questionnaire	Staff assessed	Overall quality
1. Bus and coach 1	6	?	N	?	N	Y	N	Y	17	OK
2. Waste disposal service	30	30	N	?	N	N	N	N	?	Poor
3. Transport 1	38	38	N	28-48	Y	N	Y	Y	49	V. good
4. Transport 2	15	10	N	?	N	Y	N	Y	4	Late entry
5. Manufacturer 1	14	14	Y	?	N	Y	N	Y	15	V. good
6. Manufacturer 2	30	22	Y	6	Y	Y	N	Y	?	OK
7. Transport 3	28	25	N	?	N	N	N	Y	26	Late entry
8. Recruitment 1	4	112	Y	6	Y (2)	N	N	Y	55	Good
9. Transport 4	50	38	Y	20-40	Y (2)	Y	Y	Y	25	Good
10. Recruitment 2	3	50	N	50?	Y	Y	Y	Y	30	Good
11. Manufacturer 3	12	12	N	6	Y	Y	Y	Y	6	OK
12. Equipment servicing	14	17	N	3	Y	Y	Y (2)	Y	0	OK
13. Manufacturer 4	?	?	N	?	N	Y	N	N	?	Late entry
14. Locomotive hire/servicing	16	17	N	?	N	Y	N	Y	15	Late entry
15. Bus and coach 2	23	20	N	4	Y	Y	Y	Y	22	Good
16. Transport 5	30	24	Y	?	N	N	N	Y	0	Late entry
<b>Total</b>	<b>313</b>	<b>429</b>	<b>5</b>		<b>10</b>	<b>11</b>	<b>7</b>	<b>14</b>	<b>264</b>	

Overall the participants included a good mix of five transport specialists, four manufacturers, three service providers, two driver recruitment specialists and two passenger transport operators.

Table 2 – Summary of project aims and targets

Aim	Target	Achieved
No of direct permanent jobs.	3	2?
No of direct temporary jobs.	1	4+?
No of SMEs assisted.	15	16
No of beneficiaries trained.	130	296
No of SMEs with new/improved quality systems.	15	14
No of SMEs more aware of accident causes and costs.	15	16
No of SMEs better equipped to understand how to improve their safety record.	15	16

Table 1 shows that the 16 participants included transport specialists, recruitment agencies, manufacturers and service providers, who between them operate 300+ vehicles and employ 400+ drivers. Five participants attended the initial breakfast, 10 the management seminar, 11 the project evaluation workshop and seven the project presentation evening. Fourteen of the 16 respondents returned the end of project evaluation questionnaire. Five participants also provided more qualitative end-point feedback. (See below).

**Monitoring and evaluation** was a key element of the project, occurring through company visits, meeting/workshops, steering committee meetings, telephone-based communication with participants and a final evaluation questionnaire, to which 14 of the 16 participants responded. These responses clearly help to meet targets 3-7 in Table 2 above. Thirteen respondents said they had met the relevant objectives, and had assessed/trained almost 300 managers, supervisors and drivers through the project. Crash outcomes were purposefully not included as one of the initial project targets for several reasons. Past experience with SME's suggested that participants would be secretive about such data, or may not even monitor it and would be more difficult to convince to participate in the project if it was required. It was felt to be better to concentrate on more proactive outcomes, particularly the implementation of processes and systems. As shown in Table 1, the quality of the data was also a problem, with different managers in the organisations providing different figures about the number of crashes. In some cases participants did not know because their claims data is held by their insurance broker.

Those who did not complete the questionnaire, or gave little information, are worthy of most discussion. Three participants only joined the project in the final stages. Of these Companies 13 and 16 both attended one project event and were visited at least twice during the project. Company 2 was 'encouraged' to join the project by its insurance broker and was the least proactive or enthusiastic of all the participants. Company 12 suffered IT problems that meant it was unable to start using the project software, however one or two of its managers attended three project events and were visited several times during the project.

Aims one and two also appear to have been met. At the University of Huddersfield four temporary jobs were created at various times during the 12 months of the project. Of those four, two have since returned to higher education and one has gained a very good permanent job in the transport industry. The fourth was the main project researcher. He has secured permanent employment with project partner IDS. IDS themselves have also been able to take on two other permanent staff, a commercial manager and a driver training manager, as a direct result of the project.

Company 3 in Table 1 was the most enthusiastic participant. They said that the project has been helpful in monitoring their crash costs and making the drivers aware that the company is focussed on the issue. They use the data analysis system to understand their current situation, negotiate with their insurers and demonstrate costs to staff. They use the assessment CD with both existing and potential new drivers. They are also keen to explore future avenues for continuing driver training and apprenticeships for young drivers.

Qualitative feedback at the end of the project from four other participants provided the following information.

- We use the systems to help give drivers a better awareness of safety issues and managers to create a safer working culture. We shall continue to use the information provided by the systems to better understand our crash causes, effects and costs. Our lack of IT skills and equipment and the need for an LGV-specific assessment are the two main areas for improvement. (Company 9)
- We have assessed all our 13 driving staff. We have entered and analysed all our vehicle, driver and crash details onto the data CD. We are now integrating the driver assessment tool into our induction, recruitment, risk assessment and health and safety policy as part of our process of developing a crash free culture. Improvement could be made to the hazard perception element of the assessment CD and the data CD could include more vehicle running costs. (Company 5)
- The networking element has been a key benefit – meeting local managers with similar problems and issues. Your enthusiasm has made a big impression and is now passing down to our drivers. We hope that you can secure future funding for the proposed in-cab driver training. Time and lack of IT skills have been the main limitations. (Company 15)
- As a company the project seminars and networking have made us aware of our shortcomings regarding road safety issues and the need for us to take action. (Company 12)

Further, 12 months post-project discussions with Company 3, revealed the following ongoing uses and benefits of the project.

- Tool to continually negotiate with their insurance broker. It is increasingly difficult for fleets to get cover as the insurance market has hardened. The company has remained with the same broker for the past five years – helping to develop a good relationship – in which the broker is profitable – but the company gets a good deal.
- All existing drivers have been assessed and all new drivers are assessed as part of the interview process.
- Agency drivers are currently not assessed – but could be in the future. This is an issue to consider, as the biggest/worst crash last year involved an agency driver. Overall the company only works with two agencies, who know their needs and with whom they generally have a good relationship.
- The project has made staff more aware of safety issues and costs – and its effect on their pay and bonuses.
- Three other project participants have visited the company to see how the systems are being used.
- The statistics and figures from the ‘crash counting’ system are very useful and have helped the company to review its route planning and the culture of the organisation.
- The project has changed the culture of the company’s managing director himself – making him more aware of the costs and opportunities. For example he now does more detailed crash investigations and questions third party claims in much more detail. As a next step in this process he is issuing all drivers with cameras to take pictures of the vehicles involved and crash scenes.
- Recruiting enough drivers remains a big issue, as there is a shortage. Any support available in this area would be very useful. A train the trainer programme would also be useful.

Other participants revealed similar benefits, but had not been as proactive in its use as Company 3. In 4 of the participant SME management changes (mainly staff leaving) meant that the project had not progressed past the initial stages.

## **Conclusions**

This paper has described the key processes, implementation and initial evaluation issues that emerged in the recent European Regional Development Fund (ERDF) supported Driver Assessment and Monitoring Project (DAMP) to improve the management of occupational road risk in 16 West Yorkshire SMEs.

All the initial project aims were met, and much has been learnt about how to manage similar projects in the future. DAMP has received praise and future suggestions from most participants, although it is not without its limitations. It has also received encouraging feedback from a range of external bodies. These include the Chamber of Commerce, Road Haulage Association, Freight Transport Association, Recruitment and Employment Confederation, Business Link, Kirklees Council’s Road Safety Centre, Government Office for Yorkshire and the Humber, Parliamentary Advisory Council for Transport Safety, Brake and the North Kirklees Partnership.

As well as improvements to the CDs and materials, the main limitation of the project is that a much more detailed process and outcomes-based evaluation, including individual interviews with each participant and a review of cost and claims data, is still required to answer the types of questions below.

- How can problems with the systems, implementation and change management be overcome?
- Were there any quantifiable improvements in management and driving standards measured by the crash data and driver assessment systems?
- Are there any trends in time or differences between companies and can these trends or differences be explained, for instance by differences between organisations?

This is no easy task given the traditional secrecy and constant ‘fire fighting for survival’ that surrounds many SME organisations.

As well as the need for a detailed evaluation, several other potential spin-off projects for improving occupational road risk have emerged, for which support bids to the European Social Fund, European Regional Development Fund and Business Link are already in progress or currently being planned.



1. A follow-on project with on-road driver training for some of the current 16 SMEs.
2. A follow-on project to train new large goods vehicle drivers, involving some of the current 16 SMEs.
3. Extending the current project to SMEs in the wider Yorkshire and Humberside area.
4. Running transport management and safety workshops for managers in regional SMEs.
5. Supporting individual SMEs to improve their performance, for example helping a 'start-up' driver agency to build safety and driver assessments into its marketing and quality plan. This project has recently been successfully completed with funding support from Business Link. Details are available at [www.hud.ac.uk/sas/trans/fleetmaster.htm](http://www.hud.ac.uk/sas/trans/fleetmaster.htm) and [www.hud.ac.uk/sas/trans/driveragenciesreport.htm](http://www.hud.ac.uk/sas/trans/driveragenciesreport.htm)

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