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SPECIAL THEME

Climate Change and Transport

WHAT'S INSIDE:

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The Scottish Transport Studies Group (STSG)

STR is the newsletter of the Scottish Transport Studies Group (STSG) and is largely funded from STSG membership subscriptions. STSG was formed in 1984 and now has corporate and individual members from transport operators, industry, national government, local government, universities, and consultants.

The aims of STSG are "to stimulate interest in, and awareness of, the transport function and its importance for the Scottish economy and society: to encourage contacts between operators, public bodies, users, academia and other organisations and individuals with interests in transport in a Scottish context; to issue publications and organise conferences and seminars related to transport policy and research". STSG has charitable status.

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Who decides what goes in STR?

Firstly the members of STSG - We rely on STSG members and others telling us about interesting studies they have completed or knowledge they have. To keep subscriptions low we need members to invest time to share their knowledge. STSG has some funds to commission some analysis and reporting but the editorial work is undertaken voluntarily.

Secondly the Editor Derek Halden, assisted by the STSG Committee tries to fit the contributions into 16 pages and create a readable document.

If you can contribute to STR please e-mail editor@stsg.org

Building Relationships with Bus Customers

Elaine Rosscraig, Research and Development Manager, and Les Warneford, Managing Director of Stagecoach UK Bus

Breaking New Ground

'Where You Want to Be' is a constantly evolving customer acquisition program, which has been managed and run centrally by the Research and Development Team Stagecoach UK Bus over the last five years. The program is operated across the entire Stagecoach UK Bus business(consisting of twenty operating companies) and is supported locally by local marketing activity aligned to the Business Plans of each Operating Company and the individual Kick Start activity associated with each. The program has also been successfully trialled within the rail and tram businesses. The program is formulated around a set of templates, which provide parameters for all forms of marketing media, including radio to be utilised at a local level in line with Head Office acquisition activity.

The program is targeted specifically at non bus users who have a propensity to switch mode of travel to bus and been developed in house by The Research and Development team Stagecoach UK Bus using sophisticated targeting and segmentation techniques as pioneered by major retailers and financial institutions. This propensity is derived using ongoing customer research both online and offline. To date the team have contacted more than 600,000 customers and issued in excess of 250,000 free travel vouchers, contributing to organic growth across the Stagecoach business and for third parties. It is estimated that to date the team have generated in excess of 3.5M additional passenger journeys per annum for the business, 2.45M of which will previously have been made by car. By using the data strategically and tailoring the message according to the customer segment being targeted the team are currently achieving average response rates of 21% using Direct Mail and 25% for Telemarketing. These rates compare to an expected DMA level of 2% for Direct Mail and 7% for Telemarketing. Interestingly an exercise undertaken for the South West Trains Business in Clapham recently realised a response rate of 49%

Because it talks about 'intelligent car use' and is not anti-car, there has been an incredible response from householders

Information

The information issued to each prospect customer serves to break down those barriers to bus use, which the Research and Development Team have established through ongoing research with non bus users. Using primary research the team have established templates for simple bus timetables and route maps, in a format easily comprehensible format for non bus users. The provision of this information is continually researched to ensure the maintenance of appropriate levels of customer satisfaction with communication throughout each campaign.

Interest in the product

Customer interest in the bus product is generated using tailored Direct Mail or by a tailored telephone call as driven by the prospect database. The initial contact with the customer is then followed by the issue of an information pack that contains a personalised weekly free travel voucher for use by the customer. Further customer interest is generated by synchronising these initial points of customer contact with a full range of additional marketing media to raise the profile of the product and generate subsequent customer interest.

Objectives achieved.

1. Facilitate modal shift from car to bus. To date it is estimated that the team have generated in excess of 3.5M additional passenger journeys per annum, 3M of which will previously have been made by car.
2. Stemmed patronage decline in existing areas experiencing historical decline. In Barrow where the network had experienced five years of continual decline, the programme stemmed the decline.
3. Facilitation of modal shift in areas undergoing major investment in infrastructure and vehicles.
4. Increased awareness of the Stagecoach brand and provided a further customer contact point
5. Enhanced partnerships through working together with Local Authorities and County Councils to achieve government targets for modal shift in line with local Kick Start Schemes.
6. Improved perception of public transport both amongst existing customers and prospect customers.

All stages within the overall program are continually monitored. By adopting this approach the team can continually refine and improve the approach to ensure that we use the most effective tools for each segment of the market we contact.

Sustainability

At each stage of acquisition the customers are contacted three months after redeeming their voucher to establish levels of sustainability. The post campaign research has highlighted that the campaigns are sustainable if both operational performance and customer communication are maintained at a local level. Current research suggests that t here is minimal (below 5%) customer attrition post each of these campaigns.

Future

Traditionally there has been very little customer data available for analysis within the bus industry as onboard purchases of bus tickets for a one-off journey are broadly anonymous. The Where you Want to Be program has provided a significant data capture opportunity which continues to grow as the program gathers momentum. The team now hold customer information of in excess of 500, 000 customers across the UK Business. Access to the customer information now enables the team to continually communicate with these customers utilising the appropriate Direct Marketing channel in an integrated and informed manner.

The primary steps undertaken to date have formed the foundation of a Stagecoach Customer Relationship Mechanism, which will facilitate ongoing modal shift and enable relevant customer communication whilst driving customer satisfaction and customer retention in an effective manner.

This is probably the most sophisticated campaign ever undertaken in the UK to attract more people to public transport and deliver modal shift. Because it talks about 'intelligent car use' and is not anti-car, there has been an incredible response from householders. It is interesting that, unlike the response to some telemarketing campaigns, people are willing to spend time to discuss their transport choices because these are issues that really matter to them.

Our success is also down to our strong partnerships with our stakeholders. We will continue to work hard to make our services even better in the future to get more people in Britain back on board the bus.

How much transport, how much carbon?

Aileen McLuckie, Principal Consultant, ERM and Bruce Davidson, Partner, ERM

With many thousands of air miles behind them, delegates the United Nations Climate Change Conference in Bali have been seeking agreement on a new round of carbon reductions and a more sustainable approach to transport is inevitably part of the solution.

What will this mean for transport operators and their customers? Closer to home there are numerous, often contradictory initiatives aimed at providing an efficient, customer friendly yet sustainable transport infrastructure. Freedom of movement for people and goods has long been a political imperative, yet in Scotland, this may soon have to be reconciled with the Scottish Government's pending Climate Change Bill which is likely to include an ambitious 80% target for emissions reductions by 2050.

Inevitably new transport schemes – road and rail – will have to take the climate change issue on board and there are always trade offs. A new publication *Motoring Towards 2050: Roads and Reality*, published by the RAC Foundation, highlights the importance of good transport links while also accepting the environmental concerns which inevitably accompany plans to expand the transport infrastructure. It accepts the need for environmentally sensitive planning and road building yet highlights the "huge progress" improved vehicle and fuel technology has made in reducing or eliminating harmful emissions.

Putting faith in new technology and innovation is certainly one part of the climate change equation. In ERM's experience, this can range from clients seeking alternative sources of energy – for example, wind, solar, biomass etc. - to more efficient use of energy – for example, use of re-generative braking in the rail industry. Understand your impacts and think about how to move forward is a useful dictum in this instance.

Politicians continue to make the case for joined up transport planning while delivery, in Scotland and the rest of the UK, has at best been patchy. This leaves individual operators grappling to find their own strategic approach to climate change and sustainable transport – unsure about future targets but nevertheless seeking to be proactive and risk averse.

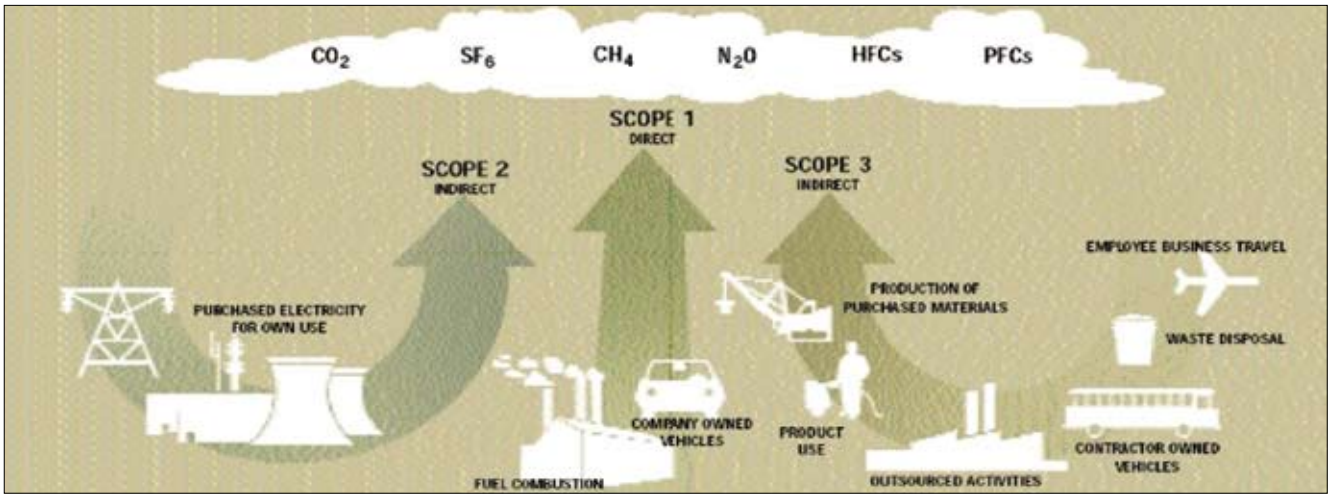
ERM's clients in the rail industry recognize that they have something of a head start when it comes to carbon emissions, although recognise at the same time that there is often more that can be done. While cars and taxis, for example, account for 55% of CO2 emissions in the UK, the figure for passenger rail and freight rail combined in just 3%. If you look at CO2 emissions per passenger kilometre, mainline rail comes out at under half those for car travellers – and this with trains operating at a national average of only 31% capacity. Clearly rail has a carbon advantage but road is frequently seen as a more flexible, convenient and cost effective alternative.

Rising above both of them, aviation is also an important part of the climate change and transport debate. Arguments for increasing airport capacity in Scotland and the rest of the UK inevitably give rise to heated debate with operators understandably feeling the need to demonstrate improving environmental performance in order to justify expansion. While to date aviation has been excluded from the EU's emissions trading scheme it looks as if it will be brought into the second phase (2008-2012) with fuel and ticket taxation among other carbon constraining options under consideration.

There are generally four main climate change risks to businesses, organisations and projects: regulatory risks from tightening legislation; operational and asset risks from extreme weather events; competitive risks such as a rise in the cost of transportation and reputational risk which in its simplest form may arise from an organisation being seen to do nothing. With regard to organisations addressing the issue of climate change, ERM has developed a specialist diagnostic tool which helps businesses identify the areas where change can be most effective.

A frequent starting point – or point of reference – for ERM's clients is to look at the impact of their operation through some form of carbon footprinting as well as looking at the potential risks climate change poses to their business. A carbon footprint, for example, can be used to measure everything from a passenger train journey to a particular construction process. Once the footprint has been calculated, there is scope for both carbon reduction and, if required, for carbon offset.

If it is to be robust and reasonable in its scope, carbon footprinting should incorporate what we call 'lifecycle thinking' which should allow all relevant activities, direct and indirect, to be considered from the cradle to the grave. Clearly there are approaches to carbon footprinting studies which



The Draft Climate Change Bill

Sarah Baillie, Anderson Strathern LLP

Policies are very much an indication of commitment or strategy – they do not have the force of law without a statutory backing. The UK is becoming the first country in the world to establish in legislation – a carbon controlled diet – with its goal of becoming a low carbon economy.

The UK Government published its consultative draft Climate Change Bill in March. It is centred around cutting CO2 emissions; creating new powers; monitoring and reporting; and establishing an independent Climate Change Committee. Targets of reducing carbon emissions by 26-32% by 2020 and 60% by 2050 are set against the 1990 baseline. Targets would be achieved by the implementation of carbon budgets – set for 5 year periods. The Committee would advise on these and report to Parliament on progress. Following responses to the draft Bill, some planned changes have been announced including plans to introduce stronger accountability to Westminster.

On 21 June 2007 the Scottish Government announced it was "*to begin consulting on a Climate Change Bill with a target of cutting emissions by 80 per cent by 2050.*" Although the 60% target would apply to the UK as a whole, in Scotland it is intended to go further. The Scottish Government will have to consult, develop and agree its approach to the issues raised in the UK Bill which has now finished its pre-legislative scrutiny by three Parliamentary Committees. It is the UK Government's plans to introduce a revised Bill to Westminster at the earliest opportunity.

It is not for government to prescribe the precise solutions but to create the policy framework to drive them. Fundamental changes in travel behaviour are necessary to bring about substantial reductions. This will require tough political decisions - carbon issues will have to be at the forefront in transport policy development and implementation. The pace of action and implementation has to change and clear leadership from the Government is required. It is vital that action is taken now to reduce CO2 emissions quickly but tackling them is going to be no easy task.

leave themselves open to criticism because they only provide a very limited snapshot of carbon impacts and often draw tight study boundaries thus giving only a partial footprint.

A further drawback to carbon footprinting is understanding what the study findings mean. Is the carbon footprint good or bad? It could be argued that this is irrelevant as long as action is taken to improve the carbon footprint, but being able to compare a carbon footprint to that of a similar organisation or activity can be illuminating. Benchmark information is limited, especially in the transport sector, mainly due to the complexities in undertaking carbon footprints – for example, how far does your study go, where does it stop, what do you include / exclude / assume? Until more transport related carbon footprints have been undertaken, and a standard methodology becomes adopted this will remain difficult.

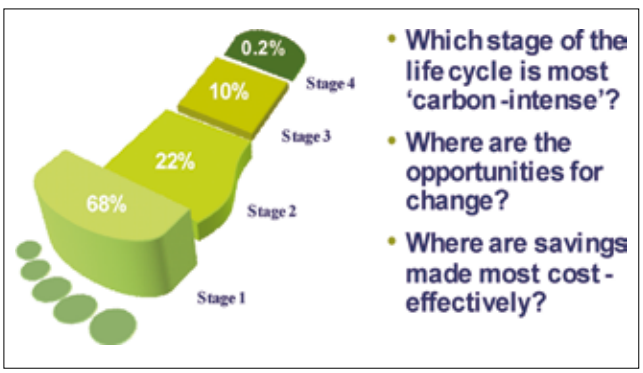
An important factor in dealing with carbon emissions is a commitment to understand the wider impacts of the business, organisation or project. The train operator Eurostar, for example, is continuing to look at a whole range of carbon reduction targets following the launch of its high speed service between London and Paris on the 14th November 2007. While Eurostar makes the point that its passenger journeys are 10 times less polluting than flying it has still made a commitment to reduce CO_2 emissions by 25% per traveller journey by 2012. To achieve the target, the company plans to make changes across all areas of their business, from energy efficiency, paperless ticketing and waste management, through supply chain selection to cultural changes like recycling in their offices.

In this way carbon footprinting and getting a measure of climate range risk can serve as an important catalyst for action. This has been the case for other ERM clients, among them the Docklands Light Railway Limited (DLRL). For DLRL the requirement for a carbon footprint stemmed from the company's position as a public transport provider, a facilitator of regeneration and as an enabler of modal shift away from the private car. Add to this the Mayor of London's target to reduce CO2 emissions by 10% and to increase the share of electricity supplied from renewable sources and it's not difficult to see why DLRL decided to take action.

In this case the ERM study looked at energy and emissions data for the client as a first step towards identifying ways to reduce CO2 emissions. A secondary challenge for DLRL and other operators is to consider what a carbon footprint may look like in the future – taking into account increased passenger numbers, expanding capacity etc. – and then look at the steps that need to be taken to achieve required carbon reduction targets.

In Scotland, it looks as if climate change issues will become increasingly relevant to what is a £3 billion capital investment programme for transport over the next decade. Where should a scheme be sited, what materials should be used, how should construction be undertaken, what sources of energy are viable, what is the carbon footprint – and what should it be? These are all climate change related issues which are likely to form part of the optioneering and feasibility process, long before a transport scheme is up and running. Wider sustainable development issues such as safety considerations and the need to find the right balance between economic growth and quality of life will all form part of the transport development equation. Interesting and challenging times lie ahead.

If you would like to discuss any of the issues raised in this article please contact Aileen McLuckie who can be reached at ERM's Edinburgh office on 0131 624 9587. Email: Aileen.mcluckie@erm.com.



The Financial, Technical, Social and Environmental Context for a Sustainable Railway

Based on a review by June Burnham and James Woods (Transport Statistics User Group) from a talk by Gareth Williams from the Cabinet Office

A consumer's view of evidence and analysis in the railway White Paper raises the following questions:

- What do we want the railway to be providing during the next 25 years?
- How powerful is the evidence to support these aims?
- How sound can analysis be when it is dealing with an uncertain future?

The Railways Act 2005 enabled and indeed obliged the government to issue a Statement setting out a medium-term rail strategy, specifying improvements it wishes to buy, and the funds it will make available to pay for them. In developing the strategy outlined in the White Paper the government had in mind that over the 10 year period 2004-14 it would be committing £50 billion from public expenditure, and steering £55 billion of funding from the private sector. It needed to think ahead about what it wanted to provide with these inputs.

The financial, technical, social and environmental context to the rail strategy included the following:

- The increasing expenditure on rail in recent decades - but which had not on the whole increased capacity
- The growth in demand after privatisation, and therefore the requirement for increased capacity, especially around London and several other major cities where rail traffic was growing fast, partly because of GDP growth, partly because of the shift from industrial to service economies. The focus therefore had to be on increasing inter-urban and regional capacity, not on providing a N-S rail link to answer a problem which has not yet emerged
- The customer agenda, e.g. extending London's Oystercard system to the rest of the country, and other modes would enable travel demand to be expressed at an individualised level
- The environmental agenda, which was not just about using rail to deliver environmental benefits but also about protecting rail from future environmental challenges

Evidence on these and other factors can be found in 3 documents published in July 2007: the White Paper, the Rail Technical Strategy, and the evidence pack.

The limits of the evidence

The evidence pack was composed mainly of transport indicators (travel patterns, capacity, safety, freight...) but it also had some social and economic trends (age distribution, home- and part-time working) and environmental messages (rainfall scenarios, noise maps, carbon emissions). The pack provided necessary but insufficient information to write the White Paper. Demographic trends showing the increase in the proportion of older people (who are currently less inclined to use rail) really needed to be interpreted in conjunction with information about their propensity to travel (will they be more likely to take the train when they can no longer drive safely?) and to be examined for the safety implications (e.g. falls while exiting trains?). Would older people cope with a spread of fares available only by internet? For example, could the post office become the place of last resort to buy a rail ticket when everyone else bought them on the web?

The Eddington Study suggested that Britain's compact economic geography meant there was not a great need for a high-speed line. Furthermore, a bar chart of carbon emissions by mode for a London to Edinburgh/ Glasgow journey indicated that 350 kph trains produced more emissions per passenger than 200 kph trains at similar load levels, and were not very much better on emissions than cars when both were 50% or 100% loaded. A TGV at 33% loading produced the same amount of carbon per passenger as a 4-seater car 40% loaded.

Noise maps of Birmingham that compared noise levels from all transport sources with those from rail (the noise from which was lower and quite closely confined around the track). Under an EU directive these maps are already obligatory for certain transport links and large metropolitan areas and must be implemented more widely from 2012. Gareth made the point that these types of evidence on noise and other environmental issues are needed to drive transport policy thinking.

The frustrations of a policy maker included three laws on rail evidence:

1. No number will be where your analysts claim they last left it
2. No two numbers ever agree
3. If they agree today, they will have changed by tomorrow

Rail statistics seem to be producer-led:

'How much did fares go up last year?' depends what you mean by 'go up'

'What percentage of fares are regulated/ unregulated?' meets with the response 'we don't collect those data'.

Policy should have more understanding of the implications of wider social trends, such as the future of retail. It would be useful if transport policy people had such information available as a standard pack.

Media attitudes to the Rail White Paper

'Sound Bites', which appeared in the media when the White Paper was published included:

- The next generation of inter-city trains will be designed differently, because the weight of current trains is damaging the rails. Unlike the Japanese Shinkansen trains, weight was not made a criterion when previous trains were ordered
- Uncertainty and hence flexibility are central features of the White Paper. 'Gone are the days of a 10 Year Transport Plan' when it was thought cost input could be linked to plan output
- People are commuting longer distances. They may be prepared to spend 10% of their salary on fares to work but will they be prepared to spend a third of their carbon allowance?
- It is not possible to build a railway big enough to make a difference to the transport-environmental agenda. But citizens may be grateful if 1% extra is built, just as an extra 2°C will make a difference
- The world is not always what we imagine. Recasting timetables to meet demand could be expected to put pressure on the network and reduce reliability, but the best reliability in the network is on the sections that are most intensively used.
- One newspaper greeted the White Paper with 'Rail fares to soar as the government slashes funding!' But regulated commuter ticket fares have fallen in real terms (though business fares are up), and have decreased in proportion to disposable income, i.e. they are more affordable
- In any case, is it right to subsidise fares? Only 2% of journeys are by rail, and social classes A and B travel most. Groups A, B and C make up 70% of passenger traffic. About 50% of people have never been on a train. Is the current revenue model economically stable? Rail is currently the mode that covers the least of its long term costs; the tab on Railtrack was paid by taxpayers but rail is not used by the poorest people. Current fares policy was not necessarily right, but these factors made it difficult for ministers to set fares that were both equitable and did not encourage overcrowding.

The Death of Analysis

How do we even know what are the important analytical categories when we are forecasting for 30 years hence? In the 1980s, at the same time that one floor of the DfT was making forecasts for the Channel Tunnel Rail Link, another floor was preparing the deregulation of the airlines that would generate its low-cost competitors.

Underneath the apparent stability of transport infrastructure are some difficult-to-forecast changes brought about by new environmental, safety or other considerations. The White Paper had conceived the long-term strategy for the rail industry through simple scenario planning, taking the two dimensions of high and low per capita GDP and high and low concern for the environment. The scenario adopted in the White Paper was the option that was thought to be the most challenging for rail: high concern for climate change but also high GDP per capita, which would help climate change policies to succeed but also increase demand for rail. Consideration was also given to how a rail strategy designed for this scenario would cope with lower GDP or moderate environmental concerns.

Another way the White Paper team had tried to take the future into account was by introducing 'wild cards' symbolising changes outside the transport world that could change how the transport system would work.

- A carbon credit card. The commuter from Peterborough would have to decide whether he or she would still take a winter sports holiday, visit relatives frequently or change house or job. The card would change patterns of housing and travel
- A Penguin/SUICA Japanese-style smart card-phone which essentially gave permission to travel. A Barclaycard and Oystercard combined could be seen as an enabling policy that would reduce some of the difficulties of cost-benefit analyses
- A chicken reminded us of the potential impact on travel patterns of avian flu or a pandemic. Gareth's expertise on the Black Death in Europe, in which people survived at a higher rate in Milan than elsewhere because its city leaders locked the gates after the first local case, warned him that we do not know the effect of panic on travellers or political decision-makers
- The Linden Dollar is a unit of currency in an on-line game in a virtual world ('Second Life'), which some players now trade for real dollars in order to buy an advantage in that world. Suppose this behaviour started to expand into the business world?
- A car called Herbie symbolised the potential threat to rail offered by automotive advances. Currently people can sit in the train and work. Suppose we could do that in our car as well? Auto-pilot systems can be safer than real drivers.
- Green slime was an example of how fuel might be generated in future from algae in water. The car fleet turns over in 12 to 15 years, but the rail fleet takes over 30 years to change, leaving it with a longer exposure to any new disadvantages.

No number will be where your analysts claim they last left it, no two numbers ever agree, and if they agree today they will have changed by tomorrow.

In the face of these uncertainties are the rail vehicles now being commissioned flexible enough. 'What if's' were built into the White Paper on the basis of the statistical analysis in the evidence base so that it could step beyond today's reasoning. However, rail planning seemed to be based on 19th century standards rather than what was being done elsewhere. For example in considering shunting loads on trains that never shunt. The railways add new engineering regulations without taking off the old ones. It is a difficult problem because an agency responsible for one risk cannot take off a risk that is the responsibility of someone else. When a Japanese firm brought a train to the UK recently for trial it had to add 2 tons of wiring to comply with UK standards.

For further details see *Delivering a Sustainable Railway*, Cm 7176: www.dft.gov.uk/about/strategy/whitepapers/whitepapercm7176/, the Rail Technical Strategy: www.dft.gov.uk/about/strategy/whitepapers/whitepapercm7176/railwhitepapertechnicalstrategy/, the 'evidence pack', *Delivering a Sustainable Railway: Summary of Key Research and Analysis* www.dft.gov.uk/about/strategy/whitepapers/whitepapercm7176/railwhitepaperresearch/

Adults' travel to health services

A note by the Scottish Government Transport Statistics branch

At the start of 2007, a number of questions about adults' travel to health services were added to the Scottish Household Survey (SHS). The first six months' interviews provide new insights on travel to health services.

1. Normal mode of transport to health services

A car is the normal mode of transport for 53% of adults travelling to a doctor's surgery, for 70% going to a hospital outpatients' department and for 59% visiting the dentist.

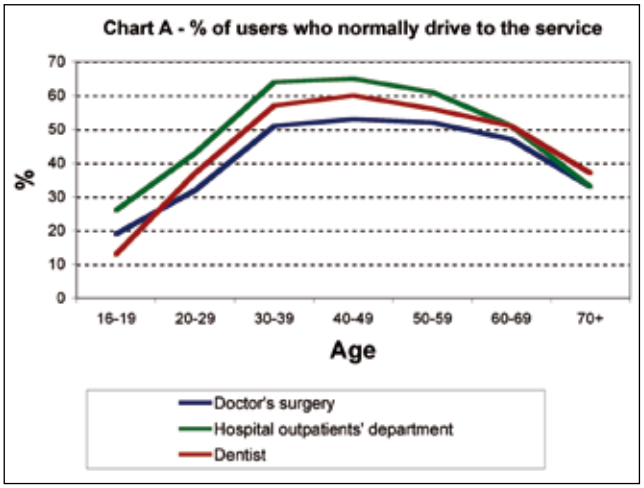
1.1 About 53% of adults who use a **doctor's surgery** normally travel by car (44% drive, 9% as a passenger), 33% walk, 10% take an ordinary service bus, and small percentages use other modes of transport. 52% of men drive, compared to only 39% of women; 12% of women travel as a passenger in a car, compared to only 5% of men.

1.2 Around 70% of adults who use a **hospital outpatients' department** normally travel by car (51% drive, 19% as a passenger), 16% go by bus, 6% walk, 4% take a taxi, and small percentages use other modes of transport. 63% of men drive, compared to only 43% of women; 25% of women travel as a passenger in a car, compared to only 12% of men.

1.3 59% of adults who use a **dentist** normally travel by car (50% drive, 9% as a passenger), 28% walk, 11% go by bus and small percentages use other modes of transport. 56% of men drive, compared to only 45% of women; 11% of women travel as a passenger in a car, compared to only 6% of men.

1.4 In the case of all three services, the percentage who normally drive is highest for people aged 30-59, rises with household income, and is highest in rural areas (***Charts A to C***).

1.5 The percentage who normally travel as a car passenger tends to be highest for people aged 16-19 or 70+ (25% and 17% respectively for travel to a doctor's surgery, 44% and 30% for travel to a hospital outpatients' department, and 33% and 16% for travel to a dentist). The figure tends to be highest for those who were permanently retired, sick or disabled, or full-time students.



1.6 The percentage travelling by bus tends to fall as household income rises, and is highest in large urban areas and for adults who said that they used the bus "every day or almost every day".

2. Can adults who normally travel to health services by car or taxi go by bus or train?

Most of those who go by car or taxi say that they could use a bus or train: 51% of those who travel by car/taxi to a doctor's surgery; 58% for hospital outpatients' department; 59% for dentist.

2.1 51% of adults who normally travel to the **doctor's surgery** by car or taxi said that it would be possible to use a bus or train, 46% said that it would not be possible and 2% did not know. There was little difference between the sexes; the percentage who said that it would be possible tended to be higher for younger adults (around two-thirds of those aged 16-29), and lowest for adults living in small towns and rural areas (around 30-40%) and sick or disabled adults (36%).

2.2 58% of adults who normally travel to a **hospital outpatients' department** by car or taxi said that it would be possible to use a bus or train, 39% said that it would not be possible and 3% did not know. There was not much difference between the sexes; the percentage who said that it would be possible tended to fall with age (from three-quarters of those aged 16-29 to half of those aged 70+), and was lowest for adults living in "remote" rural areas (40%) and for sick or disabled adults (39%).

2.3 59% of adults who normally travel to the **dentists** by car or taxi said that it would be possible to use a bus or train, 38% said that it would not be possible and 2% did not know. There was not much difference between the sexes; the percentage who said that it would be possible tended to fall with age (from two-thirds of adults aged 16-29 to half of those aged 70+), and was lowest for adults living in "remote" rural areas (40%) and for sick or disabled adults (42%).

2.4 ***Chart D*** shows how the percentage who normally travel by car or taxi who said that they could go by bus or train tends to decline with age.

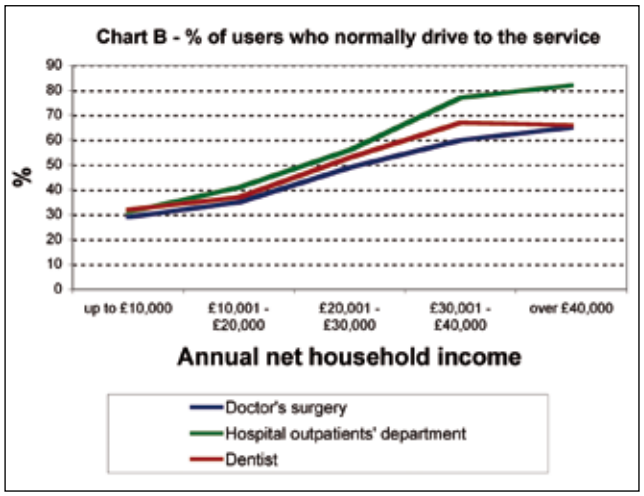
3. Why those who normally travel to health services by car or taxi do not go by bus or train

3.1 Adults who normally travel to health services by car or taxi gave different reasons for not using a bus or train, depending upon whether or not they felt that it would be possible to go by bus or train.

For those who said that it would be possible to use a bus or train, the main reasons were "inconvenient", "takes too long", "prefer to use my own car" and "no direct route".

3.2 The main reasons for not using a bus or train given by those who normally travelled by car or taxi and who had said that it would be possible to go by bus or train were:

- **doctor's surgery** - "inconvenient" (46% of this sub-group), "takes too long" (24%), "prefer to use my own car" (24%), "no direct route" (10%) and "health reasons" (8%).
- **hospital outpatients' department** - "inconvenient" (44%), "takes too long" (32%), "no direct route" (24%), "prefer to use my own car" (17%) and "health reasons" (11%).



- **dentist** - "inconvenient" (44%), "takes too long" (28%), "prefer to use my own car" (22%) and "no direct route" (15%).

No other single reason was mentioned by more than 5% of the relevant sub-group ("health reasons" were mentioned by only 4% of those who normally travel to the dentist by car/taxi and said that it would be possible to use a bus/train).

3.3 Given the sample numbers, it is difficult to be confident that there are large differences between population sub-groups. However, it is worth noting that:

- the percentage saying "takes too long" tended to rise with income (for doctor's surgery: from 16% of adults in the sub-group who were from households in the lowest band to 34% in the highest band; for hospital outpatients' department: from 28% in the lowest band to 40% in the highest band; and for dentist: from 21% to 39%);
- "health reasons" were referred to most by people aged 70+ (doctor's surgery: 24%; hospital outpatients' department: 28%; dentist: 17%) and by sick or disabled adults (doctor's surgery: 44%; hospital outpatients' department: also 44%; dentist: 37%).

For those who said that it would not be possible to go by bus/train, the main reasons were "no direct route", "lack of service", "inconvenient", "health reasons" and "takes too long".

3.4 The main reasons for not using a bus or train given by those who normally travel by car or taxi and who had said that it would *not* be possible to go by bus or train were:

- **doctor's surgery** - "no direct route" (41% of this sub-group), "lack of service" (20%), "inconvenient" (16%), "health reasons" (15%), "takes too long" (9%) and "prefer to use my own car" (7%).
- **hospital outpatients' department** - "no direct route" (43%), "health reasons" (24%), "inconvenient" (20%), "lack of service" (15%) and "takes too long" (12%).
- **dentist** - "no direct route" (46%), "lack of service" (20%), "inconvenient" (19%), "takes too long" (12%), "health reasons" (8%), and "prefer to use my own car" (7%).

No other single reason was mentioned by more than 5% of the relevant sub-group.

3.5 Given the sample numbers, it is difficult to be confident that there are large differences between population sub-groups. However, it is worth noting that:

- "health reasons" were cited most by people who were aged 70+ (for doctor's surgery: 36% of people aged 70+ who were in the sub-group; hospital outpatients' department: 48%; dentist: 22%) and by adults who were sick or disabled (doctor's surgery: 46%; hospital outpatients' department: 47%; dentist: 49%);
- "lack of service" was mentioned most by adults living in rural areas (doctor's surgery: 39-40%; hospital outpatients' department: 29-42%; dentist: 38-44%).

4. Do those who normally travel to health services by bus or train find it easy or difficult?

Of adults who normally travel to health services by bus or train, around four-fifths say that it is usually easy to go by bus or train to the doctor's surgery or the dentists - but only about two-thirds say that for hospital outpatients' department, and about a quarter say that it is difficult.

4.1 34% of adults who normally travel to the **doctor's surgery** by bus or by train said that they felt that to do so was "very easy" and 48% said "fairly easy", so about 82% said that it was "easy". 5% said "neither easy nor difficult", 12% "fairly difficult" and 2% "very difficult" - so around 14% said that it was "difficult".

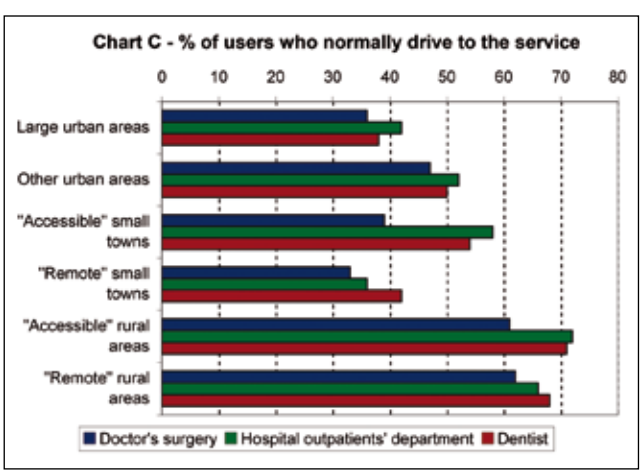
4.2 In the case of adults who normally travel to a **hospital outpatients' department** by bus or by train, 18% felt that this was "very easy" and 47% "fairly easy", so about 65% said that it was "easy". 8% "said neither easy nor difficult", 18% "fairly difficult" and 8% "very difficult" - so around 26% said that it was "difficult".

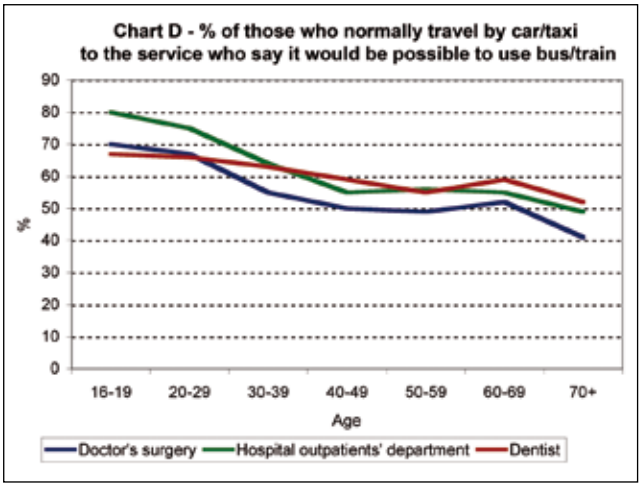
4.3 25% of adults who normally travel to the **dentist** by bus or by train felt that this was "very easy", and 56% "fairly easy", so about 81% said that it was "easy". 7% said "neither easy nor difficult", 8% "fairly difficult" and 4% "very difficult" - so around 12% said that it was "difficult".

4.4 In each case, there was not much difference between the figures for the sexes, and it is not possible to provide more detailed analysis for other sub-groups because of the small sample sizes.

5. Background and Further Information

5.1 This is the thirty-second in a series of short notes on transport-related results from the Scottish Household Survey (SHS). An interview is sought with the highest income householder or his/her spouse/partner





(who provide information about the household as a whole) and with one randomly-selected adult (someone aged 16+) in each household which is included in the sample, which is spread across Scotland. All the results reported here are from the "random adult" part of the interview. The results were weighted to take account of differences in selection probabilities and response rates.

5.2 This note provides some results from questions which were added to the SHS at the start of 2007. The new questionnaire was used for interviews with 5,426 "random adults" in the first half of the year. The interviewer asks about the convenience and frequency of use of each of ten different services, which include "doctor's surgery", "hospital outpatients' department" and "dentist". In the case of each of these health services, adults who say that they use it "about once a year" or more often are asked "when you go to [the service], how do you normally go there?". The interviewer should ask any respondents who say that they use more than one mode, or go to more than one location, to think in terms of the main mode or the place they have been to most often. Answers of "van" are counted under "car", and of "minicab" under "taxi". Subsequent questions depend upon how the person normally travels to the service. Those who say that they normally travel by bus or train are asked how easy or difficult that usually is. Those who normally travel by car or taxi are asked if it would be possible for them to travel by bus or train, and then (depending upon their answers) why they do not usually travel by bus or train, or why it is not possible for them to travel by bus or train - in both cases, the interviewer's pre-coded list of possible responses has entries for 16 different possible answers, and the interviewer can also type in a "free text" version in cases where the pre-coded list does not cover the actual answer.

"Of adults who normally travel to a hospital outpatients' department by bus or by train around 26% said that it was difficult"

5.3 In the SHS urban/rural classification:

- an ***urban area*** is a settlement with a population of 10,000 or more;
- a ***large urban area*** has a population of 125,000 or more;
- a ***small town*** is a settlement with a population of between 3,000 and 9,999, inclusive; and
- a small town or a rural area is described as ***"accessible"*** if it is within 30 minutes drive of an urban area, otherwise it is described as ***"remote"***.

5.4 The overall results reported in **Section 1** are based on data collected from 4,320 adults who said that they used a doctor's surgery "about once a year" or more often, 2,140 adults who said that they used a hospital outpatients' department and 3,602 who used a dentist.

5.5 **Section 2**'s analyses are based on data collected from the following numbers of adults who said that they normally travel by car or taxi to the specified service: 2,409 for "doctor's surgery", 1,545 for "hospital outpatients' department" and 2,116 for "dentist".

5.6 **Section 3**'s figures are based on data collected from the following numbers of adults who said that they normally travel by car or taxi to the specified service:

- doctor's surgery - 1,133 who said that it would be possible to go by bus or by train, and 1,218 who said that it would not be possible to do so;
- hospital outpatients' department - 858 who said that it would be possible to go by bus or train, and 632 who said that it would not be possible to do so;
- dentist - 1,192 who said that it would be possible to go by bus or train, and 869 who said that it would not be possible to do so;.

5.7 **Section 4**'s figures are based on data collected from the following numbers of adults who said that they normally travel by bus or train to the specified service: 443 for "doctor's surgery"; 381 for "hospital outpatients' department" and 440 for "dentist".

5.8 Lists of the topics covered by the SHS, analyses of its transport-related results, and definitions of the urban/rural category, appear in a series of Scottish Government Transport statistics bulletins:

- *Household Transport* (annual, latest edition: October 2007) - provides the results of most of the Transport questions (but *not* the Travel Diary) for Scotland as a whole;
- *Transport across Scotland* (biennial, latest edition: December 2007) - provides the results of the main Transport questions (but *not* the Travel Diary) for each Council area and each Regional Transport Partnership area;
- *SHS Travel Diary results* (biennial, latest edition: March 2006) - provides the main Travel Diary results for Scotland as a whole and some figures for each Council and Regional Transport Partnership area.

Some of the SHS's Transport-related results also appear in *Scottish Transport Statistics*, *Main Transport Trends* and *Bus and Coach Statistics*.

All these publications are available from Blackwells bookshop, or at: www.scotland.gov.uk/transtat/latest.

5.9 Anonymised copies of the SHS data are available from the UK Data Archive (www.data-archive.ac.uk).

Further information about the SHS can be found at www.scotland.gov.uk/shs. Enquiries should be made to the SHS Project Manager: Tel: 0131 244 8420 Fax: 0131 244 7573 Email: shs@scotland.gsi.gov.uk.

Multi-modal transport – competition and complementarity

Barry Hutton, Consultant and Napier University

Over forty years ago transport modelling became possible with the arrival of main frame computers in many of our Town Halls. It was not only possible but desirable: municipal treasurers had to whip up a fat portfolio of work to justify the expense of a main frame, a task helped by free traffic prediction programs bundled with new machines. Computing and storage power were puny by today's norms but even so it was far, far greater than messing about with slide rules and filing cabinets. At first the predictions were limited to journeys-to-work by car: other car trips were guessed by a simple surcharge and trips by other modes were ignored, a reflection of the view that coping with expanding car ownership and use was the major problem.

By the late 1960s it was realised that providing for full motorisation was impossible, not just because of the expense but also because sufficient urban road and parking space could never become available. The Transport Act 1968 required Councils to plan a comprehensive, multi-modal transport system and the subsequent Local Government Act provided the funds to do it through Transport Supplementary Grants.

That created a headache for modellers. The limitation of forecasts to journeys by car did not map onto the policy set out in Memo 1/68 fostering the use of public transport for journeys for which car use was inappropriate. That policy should have been the genesis of new models – computing power was still small by today's standards but it was growing and a new modelling architecture was feasible.

We need to plan for the multi-modal journeys that people actually make.

It did not happen. Instead, existing models were adapted to include a new element, the modal split. Trip generations were still held to be dependent upon the numbers of households, employed persons and cars and the distribution over possible destination zones was by gravity model based upon car costs. Only after Origin and Destination matrices had been produced did public transport get a mention: the sets of trips defined by the combination of car availability the cost of car use were then "split" between cars and public transport using relative journey costs.

The technique was a reflection of an unspoken presumption. No matter what the Transport Act and Memo 1/68 said, the prime task as seen by professionals was coping with road traffic. Other modes provided a temporary alternative, acting as a lake of potential car use, but the long term aim was to build roads to meet predicted demand for travel by car. The calculation of 'modal split' was an ad hoc modification to forecasts of car use, using 'diversion' (sic) curves which were inherently biased against public transport. That fitted in very well with maximising the roads budget. In 1977 Transport Supplementary Grants were withdrawn and once again the Transport Budget became effectively a Roads Budget.

With hindsight the first meaning of "multi-modal" transport becomes clear. The modes were seen to be alternatives, competing one with the other, a competition enshrined in "modal split". The second meaning of "multi-modal", yet to be fully accepted, is that modes are not competitive but are necessarily complementary. All journeys are inherently multi-modal. We enter the transport system immediately we leave our front door and leave it only when we get to our destination door. Walking is not a "soft mode", an alternative to using the car, it is an unavoidable segment in all journeys – we have to walk to, from and within interfaces between modes. We do not choose between one mode and another – we choose between destinations, routes and door-to-door multi-modal strings of segments.

In the early 1990s the political agenda jolted out of a 'predict-and-provide' policy premised upon building a road network to cope with increased car-use, and into 'travel demand management', based upon the provision of a transport network inducing the use of more sustainable modes. Changing the nature of travel demand requires a model of travel behaviour including, first, walking to, from and within the interfaces between modes and, second, the search, capture and retention of parking space.

In the decade since the advent of 'travel demand management' we have failed to produce the new travel demand models necessary to cope with door-to-door, multi-modal journeys: instead we have continued to tinker with models rooted in the years of 'predict and provide' and, in some cases, showing their ancestry back to the programs given for free with the first mainframes. It is a repetition of the failure in the early 1970s to match fundamental change in transport policy with a similar fundamental change in the methodology of transport planning.

And it has had the same effect. Although the politicians in Scotland have set the administrative background for radical change, we are failing to shuck off the legacy of the focus upon roads and traffic. Although we look at trains, buses, trams, cycling and walking, they are considered, not as part of a indivisible transport system, they are sectioned off as semi-autonomous systems in competition with each other. That is not how the travelling public sees the transport network. Their focus is upon knitting together a way to get from where they are to wherever they want to be including any necessary walking, changing and parking: we need to plan for the multi-modal journeys that people actually make.

AVIATION

British Airways is to withdraw Aberdeen-Gatwick flights in March and its Houston service will move from Gatwick to Heathrow, connecting with seven BA daily return trips from Aberdeen to Heathrow. Direct services from Aberdeen to Houston will start in January 2008.

The beach landing strip at Barra is to continue in use but the present ageing aircraft will be replaced. BA is pulling out of its franchise to Loganair to operate Highlands and Islands services. Loganair will now operate these routes directly.

UK Chancellor Darling is proposing a shift from Air Passenger Duty to a Flight Duty by 2009. There is to be consultation on details. The intention is to link the duty to distance but possibly with concessions for lower emission planes and continued concessions for islands and remoter rural areas.

Flyglobespan is introducing an Edinburgh-Cyprus route next year

Air Berlin has withdrawn connecting flights from Glasgow to its Stansted hub, blaming the impact of double taxation on domestic and international flights.

Ryanair introduced direct daily flights from Prestwick to Cork on 13 December.

Thomsonfly and First Choice expect to introduce Boeing Dreamliners in 2009 on direct long-haul routes from regional airports, including Glasgow and Edinburgh.

Average flight delays at Scottish airports for all operators are reported as the worst for 10 years.

SHIPPING & FERRIES

CalMac has been awarded the Clyde and Western Isles franchise for the next 6 years at an annual cost rising to £43m additional to the £31m contract already awarded for services to the Northern Isles. The franchise does not include a hoped for link from South Uist & Barra to Mallaig. The future of the Gourock-Cowal corridor remains uncertain. Transport Minister Stewart Stevenson has left it to CalMac to decide whether a Sunday Stornoway-Ullapool ferry should operate.

Stena has abandoned plans to move from Stranraer to a joint terminal with P&O at Cairnryan. Final decisions on other options, including staying at Stranraer, will be taken over the next six months.

Following the hovercraft trial in July, Stagecoach anticipate that a frequent Forth ferry could handle almost 1m passengers a year and be viable within 4 years. The initial hovercraft route favoured is from Kirkcaldy to Leith but Hyder, consultants to Fife Council, have concluded that a smaller 75 seat fast catamaran would be more cost-effective on a Burntisland-Granton route.

RAIL

Completion of High Speed Line 1 from the Tunnel to London St Pancras in November has opened new opportunities for stronger air-rail competition. Rather than crossing London to Waterloo, access to and from the north and Scotland will be eased through the more convenient transfers from the adjacent Kings Cross and Euston stations.

Rising capital costs on existing rail projects and tight overall budgets are threatening future rail projects being considered as part of the Scottish Government's review of Major Transport Projects.

The Office of Rail Regulation has criticised the scale of some recent fare rises and is concerned that passengers on several routes are being asked to pay fares significantly above the cost of running services. In Scotland, only the Glasgow-Edinburgh route is likely to fall in this category.

In January average rail fares in most of Scotland will rise by 4.8% (1% above inflation and the maximum allowed under the ScotRail franchise) with a rise in the SPT area coming later in the year.

Direct rail freight between Scotland and Europe via the Channel Tunnel is expected to resume in 2008.

BUS, TRAM & TAXI

Despite cost concerns, bids for the Edinburgh tram project are coming within budget. This is improving prospects for the addition of Route 1B from Haymarket to Granton. Completion is likely by February 2011.

In Glasgow, SPT proposals for an expensive 'second circle' Subway serving the East End have been changed to priority for a second subway from Yorkhill/SECC to Parkhead (Celtic Park) open by the 2014 Commonwealth Games. This requires shared running of subway and heavy rail trains on the Argyle Line but there are doubts about this being feasible by 2014. Intensified heavy rail services with lighter vehicles and/or bus shuttles may offer alternatives.

Lothian Buses has modified plans to cut or withdraw services on three less popular routes and has re-introduced a service withdrawn in June 2006.

£2m is being invested in 10 low-floor double deckers for the Edinburgh Airport service while Lothian's airport minibus shuttle to various central Edinburgh locations has been extended to include Bruntsfield and Leith.

In a six-month trial, 8 buses running on chipfat are now operating on Stagecoach's Stewarton-Kilmarnock-Darvel service with fare discounts for customers providing used cooking oil.

National Express has reversed biofuel trials on the grounds that such fuels could raise food costs in developing countries.

In November, SPT launched a partnership initiative with bus operators and local authorities aiming to increase bus usage, advance integrated ticketing and raise quality standards. Extra staff are now undertaking surveys on non-compliant operations with the view to encouraging the Traffic Commissioner to take enforcement action.

SESTRAN is developing a project for up-to-date information on bus timings and delays to be available via mobile phones. The system will be ready by 2009 but will not be able to indicate whether or not buses are overcrowded.

Demand responsive transport and bus seminars in Edinburgh and Glasgw have highlighted the ability to make efficiency gains in managing the spectrum of taxis, private-hire, school, health and community transport and organised car-sharing to offer better social value than existing arrangements. Phone and IT had high potential to deliver better value.

The six year cap of 1260 on black cabs in Edinburgh

looks set to be lifted following legal decisions and complaints at cab fares and long queues at peak times on Friday and Saturday nights.

ROADS, CARS, LORRIES AND PARKING

Road Haulage Association in Scotland has proposed levels of fuel duty falling when oil prices are high but rising if prices fell.

The Freight Transport Association and Road Haulage Association have suggested that major benefits would be achieved from raising the 40mph lorry speed to 50 mph on selected key long distance routes in Scotland which are neither motorway nor dual carriageway.

Honda retail hydrogen car will be on sale in the US and Japan in 2008 but no date has yet been set for UK sales. Range before refuelling is limited to 270 miles and there are few hydrogen refuelling facilities outside California.

While there has been little opposition to Tay Road Bridge toll abolition, most of the evidence to the committee examining the Toll Abolition Bill has questioned the merit of abolishing Forth Bridge Tolls. Political opinion sees equity for Fife as a prime reason for toll abolition.

A consultation on a Replacement Forth Crossing has been undertaken. Most opinion has favoured a new bridge with traffic management measures to moderate traffic growth and with costs reduced by excluding provision for heavy rail. Other options include an immersed tube option, including rail, and also for the alternative of refurbishment of the existing bridge on the grounds that it has not been shown to be beyond repair.

The £35m M9 spur to the south end of the Forth Bridge (replacing the A8000) has opened, easing delays.

Plans for the A8 Baillieston-Newhouse upgrade to motorway have been published.

The urban M74 contract is now 9 months behind schedule though First Minister Alex Salmond has promised completion by 2014.

A landslip after heavy rain closed the A83 Kintyre access route at 'Rest and be Thankful' for two weeks in November.

Work has started on an improved £1.3m Roadhead roundabout on the A737 close to the Renfrewshire/Ayrshire border.

Highland Council has favoured the higher cost (£85m) option for completing the Inverness Southern Orbital Route. This involves a tunnel under the Caledonian Canal.

Health Minister Nicola Sturgeon has ordered a review of hospital parking charges following complaints from visitors and staff. Restricted space is forcing parking onto surrounding streets, causing complaints from residents. Five NHS Boards now apply charges.

Transport Minister Stewart Stevenson has set up a task force to report on ways of reversing recent rises in road deaths – with 2006 having a 10% rise on 2005.

Continuous speed cameras on the A77 introduced in 2005 have cut deaths by 50%.

WALKING, CYCLING AND CAR-SHARING

Edinburgh City Council is supporting plans to improve the public realm to make city centre more attractive for walking and 'café' culture including the Potterow/Bristo Squate area upgrade planned by Edinburgh University. A new public square is to be created and a dual carriageway replaced by a single carriageway and pedestrian priority streets. Walking links to and from public transport are to receive more attention.

NHS Greater Glasgow is encouraging Glasgow to follow the Paris example of inexpensive and convenient bike hire.

A 'Bike Polite' scheme by Spokes in Edinburgh is encouraging cyclists to watch their speed, observe traffic lights and wear visible clothing.

SESTRAN has awarded £60,000 towards the cost of a scheme to install bike counters measuring flows at various points on the cycle network.

Inverness and Nairn Transport Forum has launched a free park and pedal scheme with locker close to bus and rail stations.

Ticket sales for the World Mountain Bike Trials in Fort William have broken previous records – up 40% on 2006.

Sustrans and Glasgow City Council have joined in a lottery funding bid to complete approaches to the to the unused footway/cycleway bridge across the M8 in Anderston.

The SESTRAN TripshareEdinburgh venture is now a year old and has gained 4000 members.

TRANSPORT, PROPERTY AND PLANNING

Developers Keyhaven are creating 313 car-free student apartments in Edinburgh's Fountainbridge. These will also be available for visitors during student vacations.

Prof Ivan Turok of Glasgow University has published research showing that Glasgow has created 22% of all net new jobs and Edinburgh 18% with recentralisation again becoming a feature of employment and property trends. This argues that 'pressures to divert the transport budget to dispersed regions should be resisted'. Cities offere the greatest scope for improved productivity but planning decisions require to be streamlined.

The £350m Silverburn Mall has opened in Pollok adjacent to the M77 and there are £25m plans to expand Glasgow Fort opened in 2004 on the M8 east of Glasgow. A £100m plan to double the Buchanan Galleries in central Glasgow has gained outline planning permission though Transport Scotland has raised concerns that this project may prejudice expansion of Queen St station.

Travel patterns of the 5500 people now employed in the Strathclyde Business Park at nearby Bellshill show that poor public transport and the lack of adjacent shop and leisure facilities has led to high levels of car usage.

The award of the 2014 Commonwealth Games to Glasgow is being seen as an important means of building on existing plans for east end regeneration. An access plan for the Games is under preparation with particular attention to public transport, walking and cycling. The opening ceremony will be at Celtic Park and the closing ceremony at Hampden.

Transport and Tourism Towards 2025

Summary of Seminar held by the Tourism Society in November 2007

Professor Stephen Page of the Chair of Tourism at Stirling University outlined the results of the study of Scottish Transport and Tourism Scenarios to 2025. These ranged from assumptions that a high degree of technical change would allow tourism to continue to expand at recent rates to the view that environmental and energy issues may lead to severe constraints on growth.

To explore the scenarios, interviews had been held to determine the opinions of key stakeholders. Visit Scotland's Moffat model had also been used to test the impact of differing scenarios on relationships between transport, tourism and the economy.

At present, tourism accounts for 9% of Scottish employment and 3% of value added with cars accounting for 65% of tourist access to Scotland. With rising real incomes, it is likely that tourists will continue to spend more on transport and holidays with visits to Scotland rising.

World tourism can be expected to still have average annual growth of 4% over the years to 2025. Scotland is always in competition with new holiday options elsewhere but fiscal, energy cost and regulatory constraints (including targets for CO2 cuts) could lead to slower growth in Scottish tourism relative to other parts of the world. Tourism growth could also be hit by increasing capacity constraints on air, road and rail travel.

Overall it was clear that transport policy was the key to making or breaking Scottish tourism growth and in particular:

- A major shift to urban tourism and metropolitan cities as part of sustainable development could be significant for Scottish tourism products that rely on remote Highlands and Islands destinations for part of the trip. Under this scenario, tourism's share of employment and of value added would show a substantial fall by 2025.
- An alternative pragmatic scenario had been tested involving improved access to the Highlands and Islands though also including some extra costs for travel by air. This scenario included greater business use of a well-connected Edinburgh Airport, with Glasgow taking on a greater role for budget air travel. Testing of this scenario showed a greater ability to retain a higher tourism share of employment and value added though still at lower levels than in 2006.

However there remains considerable uncertainty on several factors. The Moffat model includes only some of the variables needed for the analysis, and neglect of exchange rates, quality and price levels will also be critical for the future level and distribution of global tourism.

Other Recent Research Findings

Examining the Scottish budget, a three member team at the Glasgow University Centre for Public Policy for the Regions has suggested that transport subsidies have received the biggest budget hit.

TUC research has found that the number of people taking more than an hour to reach work has risen 40% in the past decade.

Road monitoring firm Trafficmaster has found that the M8 between Glasgow and Edinburgh has the lowest average motorway speed in Scotland (at 52.7mph) while the mainly rural M74 with low traffic levels had the highest average speeds (71.5 mph – slightly above the official maximum speed).

Statistics Snapshot

- The number of filling stations in Scotland has fallen from 1723 in 1990 to 981 in 2007.
- Traffic at Erskine Bridge is up 23% since toll removal with Skye Bridge traffic up 50%.
- Passenger volumes at the five principal Scottish airports are up 162% on 1990.

The Impact of Removing Bridge Tolls

Steer Davies Gleave

This study provided a largely quantitative assessment of the effects of removing tolls on the Forth and Tay road bridges. It focused on the impacts on Fife and the greater Dundee area, but some effects, such as those on employment, considered a wider area.

The study examined the traffic, economic, social and environmental impacts and the financial and wider costs of retaining or abolishing the tolls on each bridge. The focus of the study was on the impacts of retaining or removing the tolls first in terms of changes in bridge traffic, and then on the consequences of these changes on the economy and local communities in Fife and Dundee and on the environment.

The impacts of removing the tolls were assessed against objectives consistent with Scottish Transport Appraisal Guidance (STAG), which ensures that the economic, environmental and social impacts are addressed in a consistent and standardised manner.

The critical and central issue is whether the reduction in the financial cost of travelling over the bridge leads to other positive or negative changes of equivalent or greater significance than the benefit from removing the tolls.

These wider impacts include alteration of route by car and other vehicles; traffic generation or suppression; or combinations of these effects. Understanding this is fundamental, as the economic, environmental and social consequences stem from this. The conclusions of the research were based largely on surveys and modelling work and suggest that:

- Removing the tolls on the Tay Bridge would create a greater percentage change in travelling behaviour than on the Forth Bridge, including re-routing from the A90 via Perth. However the scale of economic impact from the Forth Bridge is greater since it carries much more traffic.
- As the Forth Bridge is already operating at capacity during peak hours, the increase in demand which would be created by removing the tolls would extend the "peak" period and cause queues to lengthen.
- Despite an increase in congestion, the economic and land-use modelling work shows removal of the financial cost of the toll from the Forth Bridge does lead to a marginal but positive local economic impact for residents of Fife.

The Scottish Budget

The Chancellor's Autumn Spending Review and related change in Westminster allocations to Scotland have cut the real rise in funding coming to the Scottish Government to 0.5% for 2008/09 rising to 2.3% by 2010-11. Though some help in available through the agreement to draw down £900m of unspent funds, Enterprise and Finance Minister John Swinney has reviewed government spending proposals over the next three years. Planned budget spend leaves no reserves and assumes a rise in efficiency savings from 1.5% a year to 2%.

For funding under direct Scottish Government control, ferry support is to be increased but Air Route Development Funding is to be phased out. Exclusive of the 'cost of capital', the trunk road budget will rise by £9m next year rising to an increase of £155m in 2010/11. Design funding for a Forth crossing is provided. Rail and tram funding allows continued work on the Airdrie-Bathgate line, GARL, the Edinburgh tram and Borders Rail projects and a new fund is introduced for smaller rail schemes and rolling stock, starting at £10m a year and rising to £20m.

The concordat with COSLA, should freeze Council Tax and result in real increases in allocations to local government through the abolition of most ringfenced funding. The only transport grants staying ringfenced are the capital grants to RTPs and Cycling, Walking and Safer Route Grants. The latter are to be raised from £6m to £11 a year with immediate effect.

The Bill seeks to integrate transport into sustainable growth so increased transport spending may be very dependent on finding new sources of funding and further reforms to procurement, borrowing powers and fiscal change

One of the greatest uncertainties for transport will be the response of local authorities to the removal of most ringfencing. In theory, this could allow each authority to arrange its funding to ensure appropriate transport programmes in the light of local economic and social needs. In practice, some authorities may be tempted to reduce transport spend, particularly on maintenance and cross sectoral programmes where there is a track record of under-spending in the past.

The discipline of tight finance and rising political pressure to make better use of transport resources may lead to impressive gains for efficiency and social benefit as a direct result of the Bill. The major questions are about whether authorities will have sufficient staff and skills to make such gains. The Budget's apparent downgrading of RTPs needs to be balanced with additional action to increase co-operation and skills more generally in local governance.

PEOPLE

BAA's Chief Operating Officer, Stephen Baxter – formerly head of Scottish Airports - has moved to be chief executive of Peel Ports, including Clydeport and Mersey interests with potential for both port and property expansion.

Niall Stuart has become press and government affairs manager at SCDI. Gareth Williams takes on a new role as policy manager for the north of Scotland (based on Inverness). Iain Duff continues as Policy Manager for Scotland and chief economist. SCDI Chief Executive Alan Wilson is to retire in 2008.

Dr Iain Docherty of Glasgow University has been appointed an adviser to the Scottish Parliament's Transport Infrastructure and Climate Change Committee.

John Fender has taken over from John Yellowlees as Chair of CILT Scotland.

Stephen Lockley has retired after three years as STSG Chair and the new Chair is Derek Halden of DHC.

John Boyle has retired from tie as part of a staff slimdown following the collapse of the EARL project.and approval of the Edinburgh tram scheme.

Councillor Tony Martin is the new Forth Estuary Transport Authority Chair.

Phil Wheeler has become Transport Convener in the Edinburgh City Council LibDem/SNP coalition.

Lang Banks has moved from Friends of the Earth Scotland to be Head of Communication at WWF Scotland.

Selected Transport Business News

easyJet report rising passenger numbers and increased profits, boosted by a gain from a write-back of air traffic control investment. But yields are down 6.8% on 2006. easyJet has called for more rapid scrapping of planes with high pollution levels.

Baggage charges have helped Ryanair to a 24% rise in post-tax profits.

Pre-tax profits at Loganair are up 60% to £3.5m. Chief Executive Jim Cameron has been replaced by Peter Tierney from Vancouver. Scott Grier continues as Chairman.

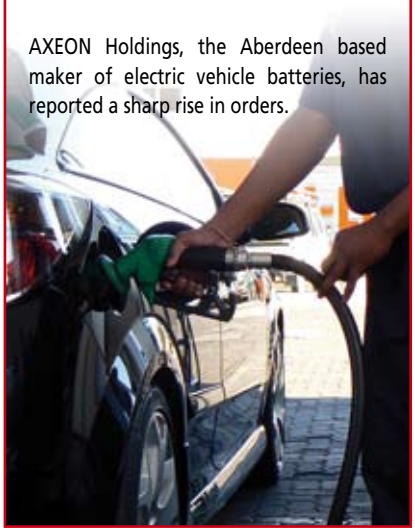
Forth Ports report a 7% fall in interim profits. Total tonnage through its Scottish ports was slack though tonnage at Tilbury rose 10%. Planning permission is being sought for major port redevelopment for housing at Leith.

First Chair Moir Lockhead reports that rising fuel prices are boosting rail and bus travel. Half-year profits are up 24% to £74.5m, including a rising contribution from First ScotRail.

Scott Wilson Railways have gained the engineering design contract for the Borders rail project

TRANS*form* Scotland and FOES have moved from Leith to 5 Rose St, EDINBURGH EH2 2PR. Tel 0131 243 2650 or 0131 243 2700

AXEON Holdings, the Aberdeen based maker of electric vehicle batteries, has reported a sharp rise in orders.



A Rental Bike Scheme for Scotland's Cities

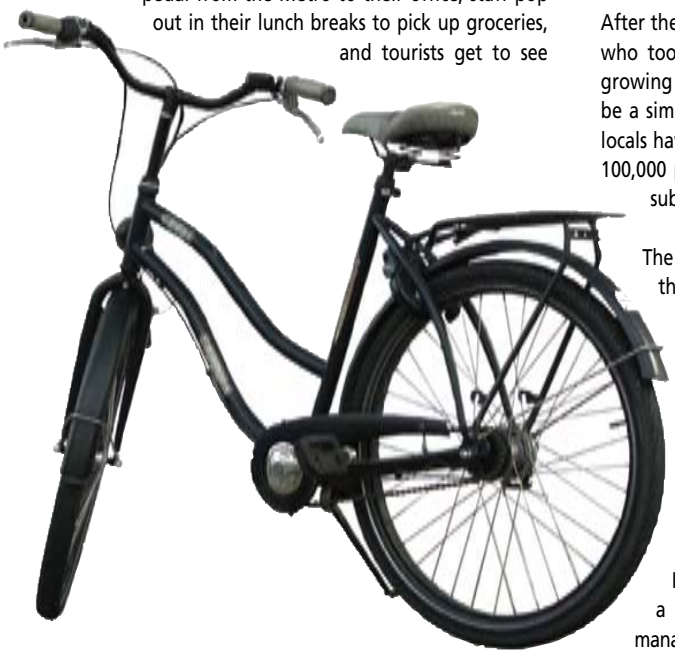
Edited from research by Dave DuFeu of Spokes, the Edinburgh Cycle Campaign

A growing number of cities are setting up self-service rental bike schemes. A French advertising company has won over thousands of Parisians, and cities across Scotland are starting to debate whether they should adopt a similar scheme here.

Paris has become the world capital of bike rentals. The scheme has been developed and run by the outdoor advertising company JCDecaux. They are building nearly 1500 computer-aided rental stations throughout the Paris. They created a unique design of bicycle and the company operates the entire network at its own expense. In return, they get the exclusive rights to sell advertising on the city's urban billboards for the next 10 years.

Users pay €1 per day or €5 per week, or just €29 for the entire year. Once the fees have been paid customers can take as many short trips as they wish. Bikes can be picked up at any station and returned to any station and the first half an hour is free. The rental price rises steeply for longer rentals, which helps to ensure that there is always a good pool of bikes available for local trips. The success of the scheme is seen from the statistics: more than 80 percent of rides have been free and each bike has been rented on average 10 times a day.

With 20,000 bikes available for rent, commuters pedal from the Metro to their office, staff pop out in their lunch breaks to pick up groceries, and tourists get to see more of the city. More than six million rides were clocked up in three months and bike is the fastest way to travel the French capital. Visitors from the UK have been converted to bikes by the French "la Vélorution" which was launched on 15 July 2007.



> *There is a much larger market for cycling than many transport professionals have hitherto appreciated*

After the scheme was introduced it was tourists who took advantage of the service and with growing tourism in Scotland's cities there could be a similar market here. However in Paris the locals have now embraced the idea and around 100,000 people have already taken out annual subscriptions.

The network of parking stations ensures that nearest station is rarely more than 300 metres away. The bikes are maintained by JCDecaux and the company now see themselves as major players in delivering the public transportation network for Paris.

The success is hardly a surprise to towns and cities who have been offering free bikes on demand for many years. However the new scheme provides a sustainable approach to financing, management, maintenance and branding that has proved elusive in other cities with free bikes. It is also proving more flexible for customers. In other shared bike schemes, the customer can leave the bike on any street corner but people never know precisely where to find a bike.

The system in Paris is simple to use since the customer only needs to register once and receives a membership card which is used at each bike station to check in or out the cycle. Electronic readers automatically register every transaction and pass on the data to the control centre.

The cost of running the scheme to provide such convenience is high. The Paris costs include 350 employees to manage the scheme, 50 of whom are occupied exclusively with riding the bikes from one station to another to keep up with demand. Total costs could be up to £2000 per bike per annum in Scotland.

The advertising deal in Paris makes the scheme completely free to the public authorities. Some question whether the Paris authorities could deliver better value by selling the advertising space and tendering the bike rental scheme separately. It seems that other cities look set to improve on the procurement of bikes on demand.

However, the lessons from Paris are clear. There is a much larger market for cycling than many transport professionals have hitherto appreciated. If cycling is made more convenient then more people can benefit from the economic, health, environmental and social benefits. These benefits will almost certainly be much greater than the costs in Scotland's larger towns and cities.