Editorial

There is a strong management theme to this issue of STR. Steve Stradling and David McGuigan show that concerted action to plan for young driver safety could succeed in saving lives with short term fixes being complemented with longer term education and enforcement. Business and professional groups also suggest that, although there are many promising ideas for improving Scottish ferry services, a planned approach is needed to ensure that the needs of remote communities are being met. Planning how to raise the funding to deliver better transport is one of the greatest challenges, and STSG’s constitutional change project is investigating whether changes in the constitution could open up opportunities for new more visionary approaches to integrated transport.

Any period of change brings uncertainty and the news pages highlight that many companies are battling to keep going. However the future of transport is bright and new EC research shows that the opportunities for a step change in the way transport is delivered means that future is not what it used to be.

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The committee of the Scottish Transport Studies Group agrees the editorial direction for STR but we rely on active practitioners wanting to share what they are doing in order to disseminate interesting practice. Please send the editor Derek Halden editor@stsg.org articles about interesting projects or research.

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Constitutional Change and a New Blueprint for Mobility

Derek Halden STR Editor

The motor manufacturer Ford has arguably done more for mass car ownership than any other company. The excellent museum of the automobile in Turin also reminds us that the Wall Street Crash in 1929 was also a critical factor in stimulating the popular car market. Until then car manufacturers derived most of their profits from selling elite cars to wealthy people. So when at the 2012 Mobile World Congress in Barcelona, Bill Ford executive chairman of Ford set out his company’s plan for joined up mobility it is worth paying attention. In 1929 the motor manufacturers were faced with less spending from their core market, so looked to ordinary people for their future. In 2012, faced with weak US and European economies, Ford now sees itself as a key player in delivering a smart transportation system to link modes and offer common payment systems. Has the time for integrated transport supply finally arrived, and does Scotland have the capabilities to pioneer leading approaches?

“More consumption was critical for economic, social and environmental change in the 20th century, but in the 21st century big economic success stories are as much about new experiences and getting smarter”

Clearer leadership is needed in Scotland linking social goals with transport delivery. Transport and logistics account for more than 20% of Scotland's economy, and the government takes an increasing proportion of its revenue from transport taxes, particularly vehicle fuel and aviation. Social change, taxation and spending are being discussed as part of STSG’s constitutional change and transport project. This started in March 2012 and a thinkpiece will be published later in the summer. Scotland's transport economy is thriving in some ways, with decisions like that of Amazon to locate its logistics headquarters in Dunfermline demonstrating international competitiveness. However, the integrated transport blueprint requires a more dynamic approach to transport legislation, taxation, and funding to be able to make the most of the emerging opportunities.

The balance of transport taxation and spending in Scotland relative to the UK as a whole is a key part of this project. Scots are relatively more dependent on aviation, and the £157 million per year in aviation taxes go to Westminster rather than the Scottish Government. Lower car ownership in Scotland means that the £2.2bn in fuel duty tax from Scotland works out less per person that the UK average despite Scotland’s remoteness. There are many other motoring taxes that hit Scots hardest. Cars rust more quickly in Scotland, so there is a newer car fleet compared with the UK resulting in a relatively great burden on Scottish motorists from new car and van taxes. If the gap widens in Scotland between what government takes from transport and what it puts back into transport spending, then this could look like a weak commitment to a sustainable transport ecosystem. A government that was slow to invest in critical transport delivery could then find the transport taxation burden hard to defend.

The integrated transport blueprint is increasingly clear, but organisational, social and governance changes will also be critical to make the most of emerging opportunities. If Scotland’s transport sector is to remain competitive, then the ability to recognise the potential for growth and to set in place a legislative, taxation and funding regime for growing sectors to thrive will be critical. Commitments to deliver complex schemes like renewable energy for land based transport require good communication between consumers, manufacturers, planning authorities, taxation authorities, funders, transport operators and others. Bill Ford will be piloting his plans in US cities, and BMW, Mercedes and VW are already testing similar systems in Germany. We need more rapid delivery of leading Scottish pilot schemes. Future competitiveness depends on building from Scotland’s traditions of innovation, a strong sense of community, and hard work, to develop a new Scottish transport ecosystem. Whether or not this requires changes in policy, or further constitutional change for Scotland, can be analysed further in the coming months.

David Connolly at MVA is co-ordinating inputs to the STSG transport and constitutional change thinkpiece. Contributions would be welcomed from STR readers, from short statements to detailed analysis of modes or sectors. Please send comments to constitution-project@stsg.org.
The young driver problem

On average, 34 young drivers (aged 17 to 25 years) were killed, 233 were seriously injured, and 1690 were slightly injured each year in Scotland between 2005 and 2009. This equates to 34% of all fatal, 30% of serious, and 29% of all slight injuries involving car drivers over this time period. The estimated cost to the Scottish economy was £160 million per annum.

Figure 1 illustrates how: young males in Scotland are more than twice as likely to be killed or seriously injured driving a car than their female counterparts; young males and young females are most at risk aged 18 to 19 years; males aged 18 and 19 years are more than three times as likely to be killed or seriously injured driving a car than those aged 26+; and more than four times as likely as those aged 31+.

Across the UK, reports show:
- Over-representation of those aged 16-24 years old in road traffic collisions compared to other age groups.
- Males tend to be more prone to being involved in road collisions compared to females.
- Speeding is a key contributory factor to collision involvement with young drivers exceeding the speed limit and driving too fast for the conditions.
- Collisions involving young drivers are likely to occur in the night time hours, rural roads, single vehicle, on Fridays and Saturdays, and often involve distraction from passengers.
- Young drivers are involved in collisions where they failed to cope with unexpected situations due to their inexperience (Husband 2010).

The particular skill deficits of young drivers were well summarised for the US Department of Transport Federal Highways Administration:
- **Visual search** – young drivers tend to be more vehicle focused than looking ahead for hazards
- **Automaticity** – young drivers have a lack of experience and therefore have not acquired fluid switching of driving tasks under stressful conditions
- **Hazard detection** – young drivers detect hazards slower compared to older more experienced drivers. Young drivers with a lack of experience are likely to have deficiencies in their hazard perception compared to those more experienced older drivers.
- **Perception of risk** – risk tends to be underestimated by young drivers
- **Attention allocation** – young drivers are easily distracted by passengers and in car electronics
- **Self assessment** – young drivers tend to overestimate their ability to drive
- **Vehicle control** – young drivers have less experience at making emergency manoeuvres and are vulnerable to over compensating and losing control
- **Anticipation** – young drivers are less likely to look ahead for developing situations and emerging hazards" (Lerner (2001)).

Theory in the area of driver behaviour (the Task-Capability Interface Model – Fuller, 2005; Risk Allostasis – Fuller, 2011) states that a loss of control of the driving task, and thus potentially of the vehicle,

... necessarily arises when the demands of the driving task exceed the available capability of the driver and that control is maintained when those demands are less than the driver's capability." (Fuller 2005, p.46)

Figure 2 suggests that the core of ‘the young driver problem’ is that many – though not all – young, novice drivers need re-calibrating. They tend to underestimate the task demand and overestimate their capability.

The Young Driver Debate

Scottish Government (2009) made a commitment in Scotland’s Road Safety Framework to conduct a public debate on young driver issues including graduated licences and additional training. The process involved young people (defined as those aged between 17 and 25), their parents and carers, and stakeholders from the road safety community. The debate used a range of engagement approaches including:

Semi-structured interviews with representatives of Transport Scotland, Road Safety Scotland, RoSPA (Scotland), IRSO, ACPOS, Fire and Rescue Service, Institute of Advanced Motorists and Association of British Insurers

Figure 1. Number per thousand population killed or seriously injured while driving a car in Scotland (2005 to 2009 average). Source: Analytical Services, Transport Scotland 2010
Focus groups
- Secondary school pupils in Fife aged 17 (one male and one female group)
- Apprentices attending Borders Technical College (two male and one female group)
- Students from University of Aberdeen (one male and one female group)
- Workers aged 17 to 25 years, from a number of companies who drive for work in Strathclyde (one male and one mixed group)
- Young people not in employment, education or training (NEET) in Edinburgh (one mixed group)
- Call Centre workers in Edinburgh (one mixed group)
- Low income workers in the Highlands (one mixed group with 17 to 20 year olds and one mixed group with 21 to 25 year olds)

Online survey of 108 young male drivers, 152 young female drivers, and 383 parents and carers of young drivers.

In total, over 700 people were involved in the debate. A report was presented to the Scottish government (Atkins and Professor Stephen Stradling, 2011).

Findings
Parents were invariably more supportive of any intervention than young people, and young females tended to be more supportive of any intervention than young males. But the great majority of the respondents – road safety stakeholders, male and female young drivers and their parents – all wanted:
- Cheaper insurance and help with costs of learning to drive
- Road safety awareness for pre-drivers, learner drivers, younger drivers and young driving offenders.

A majority of each group wanted:
- Road safety awareness for employers and parents of young drivers
- Lower drink drive limit
- Minimum period before a person takes the test
- Harder driving test
- Probationary period; P plates.

All groups except the young drivers themselves supported the kinds of constraints on night time driving and on young passengers typical of Graduated Licensing Schemes. Opposition reduced with age, from 17 to 20 years to 21 to 25 years to beyond, and most forms of graduated licensing constraints would be supported by the majority of drivers on the road in Scotland, particularly those over 25 years.

Recommendations
Young novice drivers are most at risk in the first year or two after passing their test. They need help to manage the transition from too little control over the driving task and too much confidence in their ability to mature, responsible, adult drivers who can recognize developing hazards and resist impulses to unsafe acts.

Action recommendations (implement now):
- Continue to encourage a life-long approach to learning in all schools, as part of the Curriculum for Excellence through the provision of free resources and support, to help ensure that all pupils are taught about road safety issues as pedestrians and cyclists, as car passengers, and as future drivers. (Before)
- Introduce a lower drink drive limit in Scotland for all drivers. (During & After)
- Ensure police enforcement continues to be a priority and is undertaken in a strategic and targeted manner, focusing on those young drivers most at risk. (During & After)
- Work with employers to improve the safety of young drivers at work. (After)
- Raise awareness amongst parents regarding their role in young driver safety and how they can best perform this role, highlighting resources already available (e.g. Road Safety Scotland’s ‘So, Your Teenager is Learning to Drive leaflet) and “Insurance Premium Tax as a mechanism to raise revenue to fund road safety interventions”

What they need is a raft of measures before, during and after learning to drive. Seventeen recommendations were made to Scottish Government, categorised as ‘action’, ‘collect evidence/evaluate’ and ‘advocate’, given the mix of devolved and reserved powers over road safety matters in Scotland.

Figure 2. Relations between actual and perceived task demand and actual and perceived capability in the driving task leading to underestimation of actual safety margin separating present state from lack of control (from Kinnear 2009)
providing advice on parent-young driver agreements. (Before, During & After)

✓ In consultation with service users, improve public transport availability at night, in conjunction with ‘reduce mileage/don’t travel’ messages, focused on locations where there are high numbers of young driver casualties and limited public transport provision. (Before, During & After)

✓ Encourage better governance and evaluation of interventions. Ensure that road safety education and awareness interventions are based on scientific theory and evidence of effectiveness, and represent good value for money. (Before, During & After)

✓ Explore the possibility of using Insurance Premium Tax as a mechanism to raise revenue to fund road safety interventions.

✓ Undertake a trial and evaluation of an optional road safety awareness course for young driver offenders, as an alternative to a Fixed Penalty Notice and penalty points. (During & After)

✓ Undertake separate pilot projects for use of speed limiting technology and black box data recorders, and evaluate the interventions. (During & After)

Advocate recommendations (encourage others to take action):

✓ Encourage the Driving Standards Agency to review the case for a minimum period of learning and a requirement to demonstrate experience in different driving conditions via a log book or practical assessments, in no more than five years time. (During)

✓ Feed into the work of the Driving Standards Agency to develop a Continuous Professional Development intervention and encourage or require Approved Driving Instructors to participate in additional training. (During & After)

✓ Continue to press the UK Government to make not wearing a seatbelt an endorsable offence which could result in penalty points on a driver’s licence and a fine for passengers (as in Northern Ireland), in the context of all drivers. (Before, During & After)

**Conclusion**

Stakeholders from the road safety community considered the most effective interventions to be strengthening the learner driver training and testing approach, a greater focus on pre-driver and post-test education and training as part of a life-long approach to road safety education, and some form of graduated licensing. They identified the need for more enforcement by police, diversion-from-prosecution courses for young driver offenders, greater involvement from parents and employers, and an evidence base and routine evaluation for all interventions. These views are reflected in our recommendations. Implementation would help save young lives and public money.

**References**


**Rural Road Safety of Children and Young People in Northern Ireland – Possible Lessons for Scotland**

David McGuigan retired but formerly with SKM Colin Buchanan

A report on a recent research study undertaken by SKM Colin Buchanan comprised both quantitative and qualitative research into road safety for children and young people in rural areas in Northern Ireland.

The quantitative analysis was conducted first to inform the scope and form of the qualitative work to follow. The quantitative analysis involved a detailed review of road collision data for the ten year period 2000–2009. These comprised records for 63,340 collisions involving 102,997 casualties of which 38,440 were under 25 years old.

The key findings from the collision data review were related to car drivers (aged 17–24) and vehicle passengers of all ages (0–24). Casualty rates for drivers and passengers peak at the age of 19 with the highest rates experienced on rural non built-up roads.

The rural non built-up rate for 19 year old drivers is 122 casualties per 1,000 population per decade and this is significantly higher than the equivalent rate of 50 for urban built-up areas. The equivalent rates for passengers are 82 and 40 respectively (see Figure 1).

These overall results mask a number of other features including significantly higher rates for males (than females) and KSI rates for rural non built-up roads (than urban built-up roads). They also mask the fact that a very high proportion of young people are killed and injured late in the evening or early morning on Fridays, Saturdays and Sundays.

For younger passengers in cars there was evidence that children up to the age of 11 tended to wear seatbelts and were seated in the rear of the car but that as children move on to secondary school, seatbelt wearing becomes less prevalent and there is more travel in the front seat. For bus passengers the significant majority are injured when seated but the numbers and proportions of standing passengers injured rises for children in the 12–15 year old age group.
Turning to the qualitative aspect of the study. In total there were eight focus groups, one rural and one urban for each of the four age groups 8-11, 12-15, 16-19 and 20-24. The purpose of the groups was to probe more deeply into the underlying travel patterns, behaviours and attitudes.

The feedback from the focus groups proved to be very helpful. The youngest groups (urban and rural) for 8-11 year olds indicated that that they all wore seatbelts and sat in the rear of the car and this was matched by very low observed car front seat passenger casualty rates.

By the age of 12-15 the children in focus groups reported that seatbelts were not always worn and that front seat travel was becoming more common. This shift was matched by significantly higher observed casualty rates as front seat passengers.

Combining the feedback from the two young adult age groups (16-19 and 20-24), a very different picture emerges particularly for those resident in rural areas. The rural respondents indicated that a range of risky behaviour was quite commonly adopted with drink and drug driving and other dangerous practices being self-reported. These included:

- “messing” with the driver’s seat
- passengers pulling hand brake on when in motion
- passengers put on indicators, lights, wipers, etc
- having the music up loud
- not wearing a seatbelt
- using mobile phones and texting
- eating whilst driving
- drinking and driving
- speeding when in a rush
- overloading car
- watching portable TV/DVD
- not advising friends not to drive when drunk

As passengers, the respondents far from being passive occupants reported they were often active in “messing about” by applying the hand brake, switching on wipers, playing with the lights and creating other distractions to safe driving. The urban respondents reported similar behavioural traits but the evidence was much less marked than from the rural respondents.

This self-reported risky behaviour is in evidence in the collision data where the highest driver and passenger casualty rates are found on rural non built-up roads with significantly lower rates on urban built-up roads.

It is clear that the quantitative and qualitative outcomes of the study are self-supporting.

In Northern Ireland there are many good interventions in place which inter alia relate to pre-driver education and publicity. These can be effective in shaping the attitudes and behaviour of younger children but less so for young adults who reported they were not influenced by publicity. It does seem that publicity and training which seeks to change attitudes and behaviour is unlikely to be successful in achieving a step change in behaviour by young people and – as a consequence – the high casualty rates experienced by them.

The report concludes that more radical measures should be considered including:

- raising the driving age
- limitations on night time driving and the carrying of passengers based on age or on length of driving experience
- hit hard on young drivers responsible for certain types of collisions either through more focussed penalties from loss of licence to a suspended loss of licence subject to an offence-free period
- introduce the use of GPS technology to identify erratic and risky driving behaviour and link this to setting and adjusting insurance premiums

The situation in Scotland is unlikely to be very much different from the experience in Northern Ireland. Scotland’s Road Safety Framework to 2020 document sets out a comprehensive plan for road safety activities and interventions for this decade. In this document there is much to be commended. However, the focus seems to be on education and enforcement which is unlikely to have a significant short or medium term impact on rural road casualties for young drivers and passengers.

If there is a priority to make a step change in the casualty rates for young drivers and passengers in Scotland then more radical measures would need to be considered.
Scottish Transport in the News

**STR summarises what the papers have been saying**

**AVIATION**

EasyJet travel to and from Scotland has grown at twice the rate of other easyjet flights to and from UK. Demand for overseas leisure travel remains strong.

Suriving is to start twice-weekly Glasgow-Toronto flights and Emirates is increasing Glasgow-Dubai flights from 1 to 2 per day in summer 2012.

At 9.5% Aberdeen Airport had the highest UK growth in passenger numbers in 2011 with Edinburgh being second highest at 6.5%. Manchester was third at 6% with Heathrow up 3.7% and Glasgow at 3.2%.

The consortium currently running Gatwick airport are the preferred bidder for Edinburgh Airport.

Passenger numbers at Prestwick have tumbled from 2.3m in 2008 to 1.3m in 2011 with Ryanair expanding elsewhere. Ryanair is planning 4 new summer routes but withdrawing two.

A second daily flight between Glasgow and Dubai will start this summer. Route had been very successful since it opened in 2004 with many onward connections being possible at Dubai.

There are fears that the planned BA takeover of bmi will reduce competition on Scottish routes to London.

Jim O’Sullivan, managing director at Edinburgh Airport, has said that Ryanair “must pay its way” after the airline cut eight routes to the airport claiming the airport had failed to offer them a competitive deal. Mr O’Sullivan has said that he can’t offer an extension to the airline’s five-year base agreement due to the owners of the airport, BAA, putting the airport up for sale. Ryanair claims that the cut in its routes from Edinburgh could cost 500 jobs. HIAL and Shetland Council are facing £2.5m repair costs on Sumburgh runway extended into the sea in 2006. Storms are causing serious damage to these extensions.

Edinburgh airport has been rated the second best in Europe and amongst the best in the world for customer satisfaction according to the annual Airport Service Quality survey.

January passengers at Glasgow Airport were down 0.4% on previous January with Edinburgh down 4.4% but Aberdeen up 13.9%. Weather affected these figures and moving yearly totals saw Edinburgh up 8%, Glasgow up 4.6% and Aberdeen up 12.1%. Overseas flights remain more buoyant.

**MARITIME**

The Scottish Government has admitted that the performance of the new passenger-only Gourock-Dunoon ferry is unsatisfactory.

As part of RET expansion, more West Coast ferry tariffs have halved but fares to the Northern Isles will rise 6.5% in 2012.

Tourism groups have complained that delays in announcing summer fares have prejudiced tourist bookings.

The draft Ferries Plan was finally published just before Christmas but remains silent on the issue of possible break-up of the CalMac network.

Proposals include later evening services, extra sailing days on several routes and concentration of all Lismore services on a short vehicle-ferry crossing from Appin. More Islay services would go to Port Askaig rather than Port Ellen.

Sic companies will compete for one or more of the lifeline services to Orkney and Shetland, presently receiving £36m a year of public funding.

Edinburgh City Council has refused a planning application for a Kirkcaldy-Portobello hovercraft service. However, a passenger ferry service across the Forth could start from next summer between Burntisland and Granton. Pentland Ferries have confirmed that they are in early talks about operating ferries for commuters.

A record number of cruise ships are expected to visit Scottish ports in 2012. Cruise passengers are expected to reach almost 350,000 this year compared to 64,902 in 1998.

Public Inquiry on proposals for a container terminal at Rosyth has started with opponents claiming it will be a white elephant.

**RAIL**

In early January 2012 the UK government announced support for a slightly amended HS2 route from London to the West Midlands open by 2026 with details of extensions to Manchester and Leeds agreed by 2014 and built by 2032. There is Scottish concern that this would only cut London-Glasgow/Edinburgh times to 3 hours 30 minutes by 2032 but the Scottish Government is examining opportunities for High Speed Rail on most or all of the corridor to Scotland cutting times below 3 hours and giving significant gains before 2032. The Scottish Government, supported by business and leading city councils, has started work with DfT on the design of HSR through to Scotland with a desire for some work in Scotland to come ahead of completion of HSR on the full corridor likely to be selected after further studies.

Transport Scotland data shows that rail routes with passengers standing for more than 10 minutes have risen from 6 in 2008 to 34 in summer 2011 with particular problems between Glasgow and Edinburgh and on the routes from north-west Glasgow to Lanarkshire. Plans to ensure additional trains have still to be made public. ScotRail had doubled the number of seats on the Inverness-Aberdeen route to relieve overcrowding into Aberdeen.
Network Rail has appointed construction group Morgan Sindall to carry out the £25m modernisation of Haymarket station.

The escalators from Waverley to Princes St are now open.

More action is being sought against noisy and disrespectful passengers on ScotRail trains with police providing more support for staff.

Under a new £9.5m programme, provision for disabled people and other improvements are to be improved at Dunblane, Dyce, Newton, Rosyth and Shotts stations.

Transport Minister Keith Brown is reported to be considering options for Glasgow Airport public transport links – including a tramtrain service from Glasgow, greater bus priorities on the M8 or an extension of Braehead Fastlink bus services to the airport.

Work has started on an £11m upgrade of Dalmarnock station ready before the Commonwealth Games. Glasgow City Council is seeking extra stations on the Cumbernauld line via Stepps. Transport Scotland has given some favourable indications for a new halt serving Thornhill on the Nithsdale route but remains very cautious about other new stations on existing routes, including suggested sites at Reston and at Eastriggs.

Industry experts have advised that the Borders Railway project is to be delayed by another year with one source commenting that the line would not be finished by 2014.

The Office of the Rail Regulator has found that rail support per passenger carried amount to 15.5p per passenger kilometre compared to 7.5p in England. Passengers carried per train in Scotland average 84, lower than across Britain.

Network Rail plans to add barriers to 23 open level crossings in Scotland over the next two years.

The Transport Minister Keith Brown announced a new £30 million fund will help create new stations and upgrade current stations as part of Scotland’s rail service. However, these funds will not be available for another two years.

Scotland’s rail network north of Perth has been deemed “unfit for purpose.” The Scottish Chambers of Commerce is calling for faster links to the Highlands and North-East in order for passengers to arrive in Edinburgh or Glasgow in time for meetings.

Data for the reopened Airdrie-Bathgate line shows 90,000 passengers at Armadale, 69,000 at Caldercruix and 40,000 at Blackridge in 2011. Usage of existing stations on the new electrified route was up 14%. Data was influenced by the delay in providing a full quarter-hourly service and by the slowdown in new housing scheduled along the route.

**TRAM AND SUBWAY**

Official documents released under Freedom of Information have indicated that Finance Secretary John Swinney personally approved the decision to remove Transport Scotland from the Edinburgh trams project board in 2007. The removal of Transport Scotland was heavily criticised in a report by Audit Scotland. The Gogar tram depot in Edinburgh and some 500 metres of track is now operational. Track from the Airport through Gogar to Haymarket is expected to be complete by September 2013 with St Andrew’s Square reached by March 2014 and opening for public use in late summer.

Infrastructure Minister Alex Neil has opposed any plans for early work on the extension to Leith, but Edinburgh Transport leader, Councillor Gordon Mackenzie wants a firm decision on completing this section by the new city council due to be elected in May. The Scottish Government insisted that it would not fund Edinburgh’s tram network beyond 2014, although the council said officials are investigating the feasibility of further routes.

Forecasts drawn up by Edinburgh City Council predict that 5.4 million people a year will use the trams between the airport and St Andrew Square. This compares to a previous forecast indicating that 12 million passengers will use the route. The tram project is expected to lose £5 million for the first three years of operation before breaking even in the fourth year.

A UN committee is set to examine whether Edinburgh’s trams project is causing a large increase in pollution in the city.

The £300m Glasgow Subway modernisation is proceeding with plans for driverless trains.

Scottish Government has revived plans for hard-shoulder bus running on the M77 into Glasgow but Edmund King of the AA has warned of safety risks to motorists if cars break down on the motorway.

Government has allocated £725,000 towards the expected £6m cost of the scheme.

**BUS AND TAXI**

Bus journeys in Scotland have fallen to their lowest level for more than a decade. Passenger numbers fell by 6 per cent to 438million in 2009/10. North of the central belt the number fell by a quarter last year and the only area to show any growth was around Edinburgh.

Lothian Buses has won the Top City Operator of the Year accolade at the UK Bus Awards. Lothian maintained hourly services on key routes in Edinburgh on both Christmas and New Year’s Day.

Enforcement of bus lanes remains a problem as police claim they lack sufficient staff. City councils in Edinburgh and Aberdeen may become more involved.

Campaigners are seeking the extension on bus audio information on stops and destinations for blind and partially sighted people.

A report from TAS sees a bleak future for the local bus industry with bus fares in Scotland up 10% as bus firms are squeezed by public funding cuts and rising fuel prices. More routes are likely to be scaled back or axed. The Scottish government is attempting to bring the concessionary travel scheme under budget, which could lead to more funding cuts for bus companies. A review of the reimbursement rate paid to firms for carrying the disabled passengers and those over 60 will be published by the middle of the summer. Bus Service Operator Grant support is being reduced and a cap imposed on free bus travel compensation. Tailoring BSOG to mileage rather than fuel used from April should encourage fuel efficiency and benefit rural areas.

The closure of a major First Group depot may leave many rural communities without bus services. The company attributes its decision to the challenging economic climate, high fuel prices and funding cuts. 200 jobs will likely be cut.

The final report of Competition Commission concludes that excessive mergers and big, mainly area-based, companies have hit bus users by reducing competition. CPT disputes this view saying present system works reasonably well.
Scottish Transport Review Issue 54, 2012

ROADS AND PARKING

Lives are being put at risk because vital safety markings are missing from a huge proportion of Scotland’s roads, motoring groups have warned. Emergency repairs are required to repaint white lines on 87 per cent of the road network north of the Border.

The Auditor-General has told Holyrood’s Audit Committee that road pricing and workplace parking levies may be needed to meet targets for 42% CO2 reductions on 1990 by 2020.

The Scottish Government anticipates a 15% to 20% growth in road traffic by 2020 as the economy comes out of recession.

RAC estimates average costs of running a car rose 14% in 2011 with fuel costs up 12.4% but larger rises in insurance. January to September sales of petrol have fallen from 16.3 bn litres in 2008 to 13.9 bn in 2011, reflecting both cuts in mileage and shifts to more fuel efficient cars and driving patterns. Contributions from electric cars were negligible.

Car sales in Scotland are bucking a downward trend elsewhere in the UK but statistics confirm a slight fall in car use

The AA has reported that Scotland has the highest level of potholes in the UK and the second worst rate of road deterioration.

The Forth Estuary Transport Authority is to be privatised and merged with a new body controlling both Forth road crossings.

Government has delayed completion of the A8 motorway upgrade between Baillieston and Newhouse to 2017.

Campaigners are seeking action to arrest the deteriorating condition of the A83 between Kintyre and Loch Lomond.

There have been more landslide delays at Rest and be Thankful.

Landslides have closed the A890 at Loch Carron resulting in temporary restoration of a limited car ferry service at Strome Ferry.

Highland Council has launched further consultation on plans to complete a ring road round the south of Inverness. Popular plans for an £85m combination of tunnels and high-level bridges for crossing the Caledonian Canal and River Ness may be dropped in favour of swing-bridge and low level bridge options at around £25m.

Glasgow City Council is studying ways to move from deficit to surplus on its city parking account.

Government rejection of proposals for increases in penalties for breaches of city parking rules up to £100 is likely to lead to earlier rises in the general level of parking charges.

Edinburgh Council is proposing to end general parking on Chambers St at the National Museum of Scotland and on sections of the Royal Mile. This will improve conditions for pedestrians and street activities. Edinburgh is also to proceed with the gradual pedestrianisation of Princes St in advance of the coming of trams in 2014.

Lib Dem MP Alistair Carmichael is under scrutiny for his 5p per litre rural fuel rebate scheme. It is estimated that those in the Highland pay on average 7p more per litre than the AA’s average petrol price, whilst the Islands fair worst with fuel costing up to 20p more per litre in places. Carmichael’s move has been criticised for not doing enough to make a significant difference to the price discrepancies. The Office of Fair Trading is now investigating claims the recent price rises have been in anticipation of the 5p rebate scheduled.

Local councils are paying out rising amounts for pothole claims and there is a growing crisis in road maintenance with a rising backlog in renewals.

Government is proceeding with detailed assessments of A82 improvements to the Pulpit Rock section on the A82 on Loch Lomondside.

In the final Budget debate, £72m was found for increased transport spending, mainly on roads. This included £10m towards £28m cost of A737 Dalry Bypass, £21m for A77 grade separation south of Kilmarnock and £25m for the A75 Dunragit Bypass. Midlothian Council still lacks assurances for grade separation at the Sheriffhall roundabout on the Edinburgh bypass.

Abortive plans for a bridge to Bressay have cost Shetland Council £7m for a bridge never built.

The Scottish Government announced that work will start on dualling the A9 from Perth to Inverness and is expected to be completed by 2025.

WALK AND CYCLE

Edinburgh City Council has increased the budget allocation for cycling while there was a belated rise in funding to encourage cycling and walking in the final Scottish budget debate.

Bikeability Scotland has appealed for adult volunteers to assist with more realistic on-road bike training for children.

Edinburgh City Council is considering options for Princes St once trams are in operation. One is to reserve the street for trams, pedestrians and cyclists with buses diverted elsewhere and some terminating on the edge of the city centre.
Recent Scottish Transport Statistics

The Scottish Government has published Scottish Transport Statistics 2011. These statistics show that:

**People are travelling less.**
- The decline in trip making has been greatest for longer trips.
- There had been a 1.7% fall in the volume of traffic on Scotland's roads between 2009 and 2010.
- There were 438 million passenger journeys (boardings) on a bus in 2010/11 – a reduction of 6% on 2009.
- There were 21 million air terminal passengers at airports in Scotland in 2010 – almost 1.6 million (7%) less than in 2009.
- There was a 3% fall in vehicles and passengers carried on the major ferry routes between 2009 and 2010.
- However rail travel is up slightly, Scotrail journeys have increased by 1.8% in 2009/10.

**Fewer new vehicles are being registered.**
- New registrations fell by 3 per cent to 209,000, the lowest level since 1997.
- The number of vehicles licensed remained similar to 2009 levels (2.69 million).

**Transport expenditure has seen above inflation increases.**
- Bus and coach fares have risen in line with inflation.
- Other motoring, fares and travel costs have risen by more than the UK retail prices index rose by 5% between 2009 and 2010.
- Expenditure on petrol and oil for motoring rose by 17% between 2009 and 2010 and expenditure on Vehicle tax and insurance rose by 27%.

**Most freight lifted in Scotland is carried by road, though the proportion has fallen in recent years.**
- 132 million tonnes of freight lifted by UK HGVs in Scotland in 2010, the same as 2009.
- In 2007, road freight accounted for 71% of freight lifted in Scotland. This fell to 65% in 2009.
- Almost 10 million tonnes of freight were lifted by rail in 2009-10, 6% less than 2008-09 but almost 18% more than the amount lifted ten years earlier.
- Around 34 tonnes are lifted by water and 27.6 by pipeline.

**The roads are becoming safer**
- The numbers killed on Scotland’s roads fell by 8 (4%) to 208 between 2009 and 2010 and the lowest ever recorded.
- The numbers seriously injured fell by 322 (14%) to 1,964 in 2010.

**We are making fewer trips abroad.**
- Scottish residents made an estimated 3.6 million trips abroad in 2010, the lowest since 2000, down from 4.8 in 2008 (a fall of 24%) and 3.9 in 2009. 3.4 million of these trips were by air.
- Glasgow airport had 6.5 million terminal passengers in 2010, a 10% decrease on 2009, Edinburgh airport had 8.6 million (-5%), Aberdeen had 2.8 million (-7%) and Glasgow Prestwick 1.7 million (-9%).
- The most popular destination for international flights was Spain, accounting for 16% of passengers.
- There have been small increases in ferry travel. In 2010 1.9 million passengers travelled on services to/from Northern Ireland and 54,000 between Rosyth and Zeebrugge.
Changes in Travel Needs Resulting from new Social Networks and Internet Use

Pawel Bugajski DHC based on research at Napier University

This research analysed the interrelation between belonging to social networks, the Internet use and travel. The work started from the theory of these relationships as defined in the academic literature, and researched these with new primary data using an online questionnaire in the Edinburgh area (N=216). The study suggests that there is increased offline social activity with increased time online. The Internet plays an important informative role in the social life of the individuals. By increasing activity participation, social networks and Internet use also and help to tackle social exclusion, with important consequential implications for travel. Widespread use of social networking websites and applications change how people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers.

Previous work had shown that new communications and technology changed travel demand by complementing some travel and substituting for some trips. There was also previous work looking at the social consequences of the Internet use. This research brings new insights by looking jointly at some trips. There was also previous work looking at the social consequences changed travel demand by complementing some travel and substituting for some trips. There was also previous work looking at the social consequences.

Widespread use of social networking websites and applications change how people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers. Widespread use of social networking websites and applications change how people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers. Widespread use of social networking websites and applications change how people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers. Widespread use of social networking websites and applications change how people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers.

Key conclusions from research are:

- Increased time online is often associated with increased number of offline meetings. This issue requires further recognition, having potential policy-shaping implications.
- The Internet plays an informative role in the social life of individuals, with checking locations and looking for information about them being significantly popular activities. This issue is rarely directly addressed in the research, possibly due to its location on joint of few disciplines. Due to ubiquity of various Internet applications (e.g. Google Maps) the way people perceive city has changed. While in the era before the ‘information age’ people have known their city from their own experience and only few from paper maps, nowadays maps in various forms, from Chinese restaurants’ leaflets to smartphone applications help to develop mental maps of the twenty-first century man, people interact. This affects policy and changes the ways that transport authorities and providers exchange information with travellers.

In earlier research Axhausen identifies two survey challenges that hadn’t been looked at: the social content of the activities and their participants, and structural information about the egocentric network of the individual. Analyses of social content of the activities that are located online requires a broader research perspective including:

- The social purpose of the activity and of the obligations fulfilled with it,
- The beneficiary of the activity,
- The composition of the party (or parties) participating in online event and having meaningful interaction with the respondent,
- The planning horizon of the activity (if any),
- The number of previous online interactions,
- The secondary activities undertaken along the activity

The investigation on structural information about the egocentric social network of the respondent is, much simpler in case of online social networks when compared with traditional forms of social network through face to face contact. The number of contacts and their locations, are often available online before starting the analysis. A list of Facebook friends may be therefore treated as the form of name generator. One of the concepts from social network analysis may be the

![Figure 1. Social network of postgraduate student as generated from Facebook friends' list by SNA software (Gephi 0.8 alpha)](image)

"Information technologies stimulate and feed needs to travel, and physical contact may stimulate more information exchanges"
generation of a valuable dataset for visualization and statistical processing, as in the example on Figure 1. Such information could be then combined with mobility biographies or/and be included as a part of the survey in order to better understand which clusters of friends and to what degree generate (or have this potential) additional trips of the individual.

A mobility biography of the respondents, although present in mobility research for a while as life course and biography research presents greater challenges in research. Social networks that are shaped or sustained online, attempt to capture the changes in the social networks that are happening due to the Internet use. Therefore, such analyses could include the weakening of ties over time due to lack of physical contact, re-activation of social bonds that were lost due to lost physical contact, influence of meeting new people online on travel behaviour, etc.

Interrelation of travel by ICT does not have great recognition by policymakers. For example, the Edinburgh Local Transport Strategy 2007-2012 recognizes only the role of teleworking and shopping from home as viable options providing alternative to the car use. It can be read physical world being separated and separable from each other may be at least inaccurate, if not untrue. The same authors also call attention to the risk of technological determinism in context of seeing electronic and physical world as intrinsically hierarchical. As they claim, its effects may be seen in ability to produce powerful narratives about the future, therefore shaping individual opinions and public policies.

On the other hand, Hjorthol and Gripsrud (2009) suggested that relations between virtual and physical mobility may not be very strong. They argue that, comparing to the older ICT services, many new ICT services do not have their functional equivalents in the physical world. Mokhtarian (2008) also points out that there are a number of ICT activities that do not have their physical counterparts, providing arguments for travel and ICT being themselves non-replaceable.

A desirable consequence of Internet access might be that virtual mobility will substitute for physical travel, therefore contributing to reduction of trip making (e.g. Lyons, 2002). A net reduction of travel may be impossible as the number of induced trips may be higher than those substituted by communication technologies (Brown et al., 2005). Time saved by telecommunication technologies that are replacing the routine trips may be used to generate other trips (Ericsson, 2010). But, even if substitution and enhancement of travel by Internet use occur simultaneously, and its net effect may equal zero, it does not equate to there being no effect (Lyons, 2002). The mere fact that activity patterns change, and there is a redistribution of trip-making in time and space is sufficient enough for transport planners to be interested in the influence of Internet use.

Finally, it needs to be understood that the casual relationship between communication technology and travel might be impossible to establish. More helpful is to treat both as integral part of everyday experience, enabling us to be better connected and giving us more opportunities that otherwise wouldn’t have been available.

"The mere fact that activity patterns change, and there is a redistribution of trip-making in time and space is sufficient enough for transport planners to be interested “

that ‘these options do reduce the need to travel, although some factors may give rise to additional journeys. Home deliveries of goods may well increase, and additional leisure or other journeys may substitute for the journey to work by teleworkers’ (The City of Edinburgh Council 2007, p.89). It maybe therefore be anticipated that a higher level of recognition of the ICT-related issues by researchers would help to better address transport policy objectives.

Fast changing reality and technological advances also keep providing new themes for the researchers. It has been found by Ofcom in 2011, that around 17 percent of households in the UK are currently using mobile broadband to access online services, and for 7 percent it is the only Internet access they rely on. Also, development of the Internet services may contribute to it. It was announced in July 2011 than Facebook will add video feature to his website in cooperation with Skype.

The way we currently think about the relation between physical travel and virtual reality may need to be reconceived. In addition to social exclusion and accessibility, there are other arguments to treat communication and travel jointly. Information technologies stimulate and feed needs to travel, and physical contact may stimulate more information exchanges. In the ‘networked society’ the relationship between ICTs and travel is changing how and when people meet or communicate and how they live their lives. John Urry’s research shows that as virtual travel becomes part of everyday life, it produces a life that transforms what we think of as near and far, present and absent. It indissolubly changes the character of co-presence. It may be expected that in the future differences between physical and virtual will be more diluted. As Barry Wellman claims: ‘many community ties are complex dances of face-to-face encounters, scheduled get togethers, dyadic telephone calls, emails to one person or several, and broader online discussions among those sharing interests’ (Wellman 2001, p.237).

Schwanen with colleagues (2008), when reflecting on generation/substitution dualism of ICT and travel, observe that digital and physical realms are not sharply divided in the everyday lives of people of urban areas. Hence, common-sense presupposition about electronic and

References


Taking Smarter Steps to Reduce Carbon

With transport still accounting for nearly 25% of the UK’s carbon emissions and at a time when governments are agreeing to move forward together on reducing emissions, the release of this discussion document, compiled by a team of transport professionals within the Chartered Institute of Logistics and Transport (CLT) Public Policies Committee, is very timely. The Report was published in November 2011 and is summarised and reviewed by Tom Hart for STSG who participated in the CILT Symposium in London in May 2011.

This wide-ranging report calls for a balanced approach to carbon management and better assessment of the carbon impact in making transport investment choices. It starts by stressing that the report is ‘a snapshot in time rather than the final word on a topic where the evidence is always changing’. It divides into eight sections plus appendices and a summary of the May 2011 Symposium. After an Introduction, it covers Carbon in Fuel, Carbon in Movement, Carbon in Vehicle Manufacture and Scrappage, Infrastructure Carbon, End-to-end trip issues, Policy and Demand issues and Conclusions and Advice for Decision Takers.

Taking part in the Transport Carbon study has proved an interesting experience – not least in showing the scale of the problems reaching agreement among professionals on the nature of the evidence and on what this may imply for the future. The Study started with preoccupations with longer-distance passenger movement and carbon emissions per passenger kilometre. The dominant aim seemed to be how best to lower these emissions – a single-issue study rather than a wider view of transport energy and emissions in a changing economy and society.

Latterly, there was change of approach recognising that passenger transport carbon in the UK was a more important issue than a study confined to longer-distance internal transport – though still leaving leeway for further reports on freight transport carbon and on the carbon used on external links both by air and by sea and land. The other change of approach was to raise the profile of the demand and policy side of passenger movement. Changing trends in passenger movement by car and public transport were acknowledged together with stress on the importance of demand management, carbon pricing, emissions trading and other fiscal/pricing policies. This led to more balanced and wider conclusions than might have come from the original remit.

Total demand for energy is expected to rise to 2020 but then edge downwards but these changes will include a substantial shift to using power in electrical form. With government expecting generation from coal and, to a lesser extent, gas to fall, there was heavy reliance on increased generation from renewable and nuclear sources – though with Scotland having a higher emphasis on renewables. Power from renewable and nuclear sources was projected to rise from 19% in 2010 to 42% in 2020 with further rises in following years. While this would reduce carbon used in the production of fuel and in electricity generation and transmission, there were uncertainties on the rate of progress to lower carbon in fuel supplies for transport – and a possible rise in transport carbon use at peak periods involving use of back-up fossil-based electricity without effective carbon capture and storage. A relatively small, but significant, reduction in transport carbon could come from biofuels.

Evidence is reviewed, with a focus on present and future levels of transport carbon per passenger kilometre.

Key findings are:-

- cars perform poorly at present if poorly loaded (though tend to be better loaded on longer trips) but have scope to use energy more efficiently and in electrical form (though this being less likely for longer trips)
- long-distance coaches perform better than rail at present as they are well loaded but have uncertain evidence on further improvement
- long-distance rail performs better than trains on shorter trips (especially if stops are limited and load factors high. But average load factors are low and long-distance trains operating above 125mph use more energy per passenger even after allowance for improved design. However, trains deliver almost zero carbon if electric and taking power from low-carbon sources)
- short-haul aviation involves higher carbon than long-haul (industry envisages 50% cut in carbon per passenger km as deliverable over 20 years but there is doubt on the realism of this target)

Carbon in Vehicle Manufacture/Scrappage/Recycling Present data suggests that rail performs best due to long vehicle life followed by aviation and coaches with cars in bottom place and worsening due to car usage slowing relative to ownership. Car carbon costs in this category could be over 15% of estimates for total carbon with other modes performing better. Some overall improvement is expected in coming years.
Infrastructure Carbon

This had been a neglected area of study though now attracting more interest.

In terms of maintenance, road infrastructure costs were mainly related to HGVs rather than cars.

For existing well-used infrastructure, the share of infrastructure carbon in total transport carbon was low and, for obvious reasons, especially low for air travel. However, there were substantial carbon costs in new infrastructure for surface transport which needed closer evaluation. In percentage terms, these became less important provided there was clear evidence for high levels of usage without the possible disadvantage of encouraging modal shift from lower transport carbon movement to higher carbon movement. The McNulty Report on Rail Delivery offered prospects for lowering rail infrastructure carbon with added benefits from increased utilisation and lowered carbon in rail movement. Conversely, road schemes had to take account of increasing evidence for stabilisation or reduction in road vehicle movement.

End-to-end Trips

The transport carbon added by shorter trips from origins and to destinations at either end of longer trips was investigated in case studies. These found that such trips were a small part of total transport carbon but lower if greater use was made of public transport, walking and cycling for access to longer trips.

Policy and Demand

Key issues were the assessment of how:-

• provision of transport affected total transport demand and mode share and
• policies , global price changes and changing consumer attitudes affected transport use and mode share. Would overall outcomes be slower or faster shifts to lower carbon transport?

The Report recognises recent evidence of stabilisation in internal passenger movement but with car use falling relative to higher growth in public transport. Population growth was now the main influence on internal passenger movement after averaging out cyclical movements in the economy.

Lesser growth in car use could influence decisions on extra road capacity and raise the profile of road pricing and other demand management measures at pinchpoints. There was an issue of release of latent demand if road capacity was increased or congestion reduced. This would tend to raise transport carbon unless linked with demand management.

Rail raised similar problems if extra capacity became available. The Report makes reference to the Network Rail ‘New Lines Report’ estimates that London-Edinburgh high-speed rail by 2030 could add a further 4.2m annual passengers to an existing base of 2.2m. Of these extra trips, 2.6m would be generated from a general rise in demand and changing business and personal preferences. Only 1.4m would transfer from air and 0.2m from long-distance car travel. This project could therefore worsen rail transport carbon if the pace of electricity decarbonisation was slow. Rail demand constraint through fares and other policies could be an alternative.

Conclusions, Caveats and Advice for Decision-takers

Gaps and issues concerning the evidence are emphasised – also the fact that most internal passenger transport carbon arises from trips below 100km. Calculations of transport carbon per passenger kilometre were very sensitive to load factors, the pace of electricity decarbonisation and the sources of peak electrical power.

Further electrification appeared to offer considerable advantages unless extra peak demand came from coal. A large rise in the use of electric cars (powered by batteries or hydrogen coming from off-peak electricity) was unlikely in the longer-distance market. The importance of early recognition of (and encouragement for) changing trends was recognised.

What should decision makers do?

• develop robust estimates
• ensure a more rapid decarbonisation of electricity
• decide on pace of High-speed Rail within other rail and transport priorities, including a wider programme for rail electrification, city region developments and push for higher load factors
• compare options for electric road vehicles with opportunities for greater efficiency and redesign improving oil-based fuel consumption
• increase measures for road demand management and bottleneck relief
• review extent and location of increases in airport capacity
• reserve limited volumes of biofuels for use in aviation
• further development of carbon pricing, carbon accounting and emissions trading with related improvements in appraisal and phasing

There is a general conclusion that an improving economy and a growing population will lead to more movement including trips to and from the UK. This could mean more transport carbon even if carbon per passenger kilometre fell but other opinion saw scope for absolute cuts in transport carbon as essential within government targets for 2020 and 2050. The suggested aim is a framework which encourages cuts in transport carbon where this is more effective than carbon cuts elsewhere in the economy. Conversely, there would be cases where some rise in transport carbon could offer benefits higher than the costs of cutting carbon elsewhere in the economy.

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<th>kg CO2 per rail pass.km</th>
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“some rise in transport carbon could offer [wider] benefits higher than the costs of cutting carbon”
Scottish Ferry Services – Draft Plan for Consultation

This Article summarises key points from the Responses from the Scottish Council of Development and Industry and the Chartered Institute of Logistics and Transport

The Scottish Ferry Services Draft Plan for Consultation recognises that the economic, social and cultural well-being of Scotland’s Islands and Remote Peninsula Communities is important for the identity and distinctiveness of the whole of Scotland, and for each individual island community.

A considerable fault line runs through the heart of this draft document. The document provides no appraisal of the trade-offs and balances to address the widening difference between expectation levels and the realities of service delivery. For example affordability and public acceptability are central parts of any transport planning process. The current document could contribute to the appraisal of ferry services, but falls well short of a draft plan. Any consultation on its contents needs to be viewed in this light.

“The application of crisis management approaches like ‘demand suppression when all else fails’”

The fault line is perhaps clearest from the significant social commitments being made (such as on RET) without an appraisal of how these relate to other needs such as affordability. The concept of ‘lifeline services’ uses simplistic criteria such as direct routes to the mainland and primary/secondary routes. If good practice had been followed, then lifeline needs would have been defined in terms connectivity and access, enabling a more robust and defendable review.

The Ferries Review process was initially described as a maritime equivalent to the Strategic Transport Projects Review (STPR) for road and rail linked to the Scottish Government’s strategic purpose of increasing sustainable economic growth. The outcomes of the STPR were structured on a tiered approach to investment, based around the priorities of:

1. maintaining and safely operating existing assets
2. promoting a range of measures, including innovative solutions, that make better use of existing capacity; and
3. promoting targeted infrastructure improvements where these are necessary, affordable and practicable.

SCD and CILT both comments that they do not believe this is what the Draft Ferries Plan can be said to deliver. SCDI note that they would have liked to far greater analysis of “spend-to-save” investments in infrastructure. In many cases improved harbour infrastructure would enable greater use for commercial access, in addition to more efficient vessels being procured for ferry routes. Ferry Services are often the only transport links for the communities they serve and play a vital role in supporting economic development in some of the most fragile of our communities. Minor improvements or reductions in service can have a huge positive or negative impact on the sustainability of a community. Ferry services should, as much as possible, integrate with other forms of public transport in order to provide better connectivity between rail, bus and ferry services. There may be scope to make improvements as part of the next rail franchise.

In addition to residents, services must support industry and tourism in order to support economic development. With the need to upgrade harbour infrastructure as well as the procurement of new vessels, upfront costs need to be weighed against longer term efficiency and environmental benefits. The plan needs to be able to respond to changing demand and opportunities as they emerge.

Appraisal and management

The draft plan suggests detailed and ambitious service upgrades across the whole of Scotland, with aspirations for additional services, extended operating hours, and the implementation of an RET fares structure across the whole of the network. However the costs of delivering these commitments are not explored so it is difficult to consider the options objectively. This is revealed in the plans for the application of crisis management approaches like ‘demand suppression when all else fails’ implying that the planning process falls short.

Island communities tend to be associated with sensitive political issues so the need for good practice is particularly important to narrow the “expectation gap”. This draft plan could de-stabilise the debate and run the risk of damaging unintended impacts.

There appears to be a reliance on the tendering process to achieve the significant operational savings required to achieve the increases in services set out within subsequent chapters of the document. This may be a challenging aspiration, particularly given the relatively prescriptive nature of the future service levels outlined later in the report. Recent experience of ferry operations highlight increased costs associated with fuel costs, and also a trend for newer vessels to have increase fuel and power requirements, also tending to increase costs. In this context, reductions in operations costs can perhaps only realistically be achieved by more radical proposals related to significant changes in crewing, which also then have consequential implications on the design and operation of the vessels.

Community and private ferries make a useful contribution to the network and more constructive engagement is needed between Government and these operators. All modes of transport rely on the community sector for some local services, and there is scope for new partnerships with private operators to deliver better value procurement. The draft plan needs to address the interactions between the public service ferries and the community and private operations.

How Should Ferries be funded and Procured

The Ferries Plan is only up to 2022. Ferry vessels generally have an economically useful life of 30 to 35 years, which is similar to Treasury

1. maintaining and safely operating existing assets
2. promoting a range of measures, including innovative solutions, that make better use of existing capacity; and
3. promoting targeted infrastructure improvements where these are necessary, affordable and practicable.
economic appraisals for capital expenditure, and the Scottish Government’s climate change targets are for 2050. The Ferries Plan should therefore look beyond 2022 and set out high level appraisals over 30 years. Over this longer period, there is the potential for hubs to be developed – either at existing ports or on new sites – alongside the introduction of larger or faster ferry services, and improved transport infrastructure on land. This would allow the consolidation of existing ports and services, while improving service frequency and overall journey times for all ferry users. Thorough research, consultation and piloting of this would be needed.

The scale and urgency of the investment requirements in our ferry services must be realised. The average vessel age will reach 22 years by 2013, double that of 1980 and the removal of the MV Muirneag from the Stornoway-Ullapool crossing in October 2013 highlights the need for the Scottish Government to move more quickly in the procurement of vessels. Given the age of the current fleet, decisions on how the Scottish Government is to meet the vessel requirements going forward must be taken as a matter of urgency.

This Draft Plan shows that the Scottish Government is not able at present to determine the level of funding required over the period of the Ferries Plan and that the timing and funding of any changes is yet to be agreed. We understand the economic pressures the Government faces and the need to ensure that future ferry services are affordable and will meet the needs of communities.

The affordability and feasibility of new operating times and routes proposed have not been properly addressed in this Draft Plan and we would have liked to have seen STAG appraisals included. Along with proposals as to how new vessels will be procured and the timescale for their procurement we hope that full STAG appraisals will be part of the final Ferries Plan.

Significant cost savings in vessel procurement and operation could be achieved through collaboration, aggregation and standardisation. It is estimated that multiple orders could save tens of millions of pounds. Standardisation would allow for interchange between routes when breakdowns occur – reducing disruption to lifeline services – and provision of a relief vessel. There is also the opportunity to create further economies of scale through joint procurement of vessels with Ireland and Northern Ireland.

Vessels and harbour expenditure should also be planned together. Harbour developments could open up the network for use of more conventional vessels and harbour expenditure should also be planned together. Harbour breakdowns occur – reducing disruption to lifeline services – and provision of a relief vessel. There is also the opportunity to create further economies of scale through joint procurement of vessels with Ireland and Northern Ireland.

Any move towards CMAL taking ownership of Harbours used in the provision of subsidised ferry services would need to undergo full consultation with local authorities affected and a consensual agreement reached. Neither party should be adversely affected in the transfer of any ownership.

Further discussion is also needed to look at how best to ensure our harbour infrastructure meets not only the future needs of ferry services but to enable more conventional vessels can make use of them. With offshore renewables there is potential for our harbour facilities to develop commercial traffic and for our ferry network to support the growth in this sector. Whilst the provision of ferry services will be the priority, scope should be allowed to ensure the full utilisation of our port and ferry infrastructure and develop commercial traffic.

Alternative ways should be found to promote innovation. The incumbent operators are presently too tightly constrained in the changes that they can make. Route development funds and rewards for service improvements, efficiency gains and control of operational costs should be considered.

The top priority in questions on how ferries should be funded and procured must be meeting the needs of users and the local and national economies. Where there is competition, the evidence suggests that it can work in the interests of passengers and businesses. Western Ferries and Pentland Ferries both successfully compete with and complement the public sector operator on individual corridors, helping to reduce prices and add more capacity. The freight only service operated by Streamline on the same routes as NorthLink between the Northern Isles and Aberdeen has also ensured that there is competition.

The introduction of the Road Equivalent Tariff (RET) in the Western Isles has shown the positive impact that good value fares can bring to an island community. The roll-out of RET is welcome given that positive impact and a simple overarching fare-setting framework is welcome. The proposals to stagger the roll-out of RET could however disadvantage certain communities. The result of this will be cheaper fares to certain islands whilst fares on routes to other islands e.g. the Clyde islands could continue to rise in the region of 6% per annum until RET is introduced.

Many of the proposals in relation to fares have been welcomed, helping to ensure services are affordable and that fare structures are understood, however the decision that larger commercial vehicles should not benefit from RET when it is rolled out, and that it should be withdrawn from larger commercial vehicles on the current RET routes, is disappointing. Whilst there is a proposed enhanced pre-RET discount scheme for the Western Isles, Coll and Tiree, this is not believed to be sufficient in mitigating the loss for commercial vehicles on these routes. Hauliers have indicated that they will be unable to absorb the additional costs when RET is replaced and these will subsequently be passed onto the customer increasing the price of construction materials, agricultural supplies, fuel and food. SCDI would hope that this could be reconsidered to ensure that communities affected are not disadvantaged by this move.

On shorter ferry crossings such as those to the Clyde Islands and Gigha, RET could have a negligible impact on fares. Many low income families and frequent ferry users currently rely on multi-journey discount tickets and these passengers could therefore be disadvantaged if these tickets are replaced by RET. Consideration should also be given to the impact that removing multi-journey tickets could have on operator cashflows.

Fares

Ferry services are a lifeline for the communities they serve. They sustain island economies and can be an enabler for future growth. When drawing up any fare structure it is vital that it balances the diverse needs of a wide range of users and operators and that it supports economic, community and tourism development.

The top priority in questions on how ferries should be funded and procured must be meeting the needs of users and the local and national economies. Where there is competition, the evidence suggests that it can work in the interests of passengers and businesses. Western Ferries and Pentland Ferries both successfully compete with and complement the public sector operator on individual corridors, helping to reduce prices and add more capacity. The freight only service operated by Streamline on the same routes as NorthLink between the Northern Isles and Aberdeen has also ensured that there is competition.

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ScotRail and Adopt A Station: The indirect benefits of community involvement in public transport spaces.

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In recent years the customer role has evolved from a passive recipient of services to a proactive co-creator in the activities of an organisation. Customers are increasingly viewed as a resource with firms increasing collaboration to increase benefits to both parties. Co-creation activity can offer improved predictability and quality in the exchange for the firm and feelings of self-efficacy, enjoyment and psychological benefits for customers. Research exploring co-creation focuses mainly on direct relationships between a firm and its customers and the benefits accrued therein. Little attention has explored the extent to which collaborative activities might have an indirect effect on parties not directly involved in the process. This paper is based on a doctoral study which measured how value co-creation within a public transport setting can offer both direct and indirect benefits to users.

The study was conducted using a case study of ‘Adopt A Station’, a community engagement scheme administered by ScotRail, a scheme with its roots in England and Wales and the community rail movement in the 1990s and part of ScotRail’s franchise commitment. The results of the case study informed a multi-level study using hierarchical linear modelling (HLM) to explore how station level attributes (level 2) might impact on customers (level 1). The scheme allows communities to utilize unused space within their local railway station in order to provide services or facility improvements to benefit the community. The scheme was introduced in 2005 and to date over 110 stations (from a total of 346) have been adopted with schemes including gardening, charity bookshops and community meeting spaces. The scheme provides an opportunity to empirically test the extent to which co-creating with smaller groups of passionate individuals can positively impact on a wider group of customers who potentially have little interest in co-creating with the firm beyond that needed to enable their day to day travel.

The case study element consisted of station visits, interviews with adopters and staff from the ScotRail. A range of participants were interviewed with data supplemented by field notes, direct observation, photographs and other secondary data. The case study indicated that the success of the scheme was dependent on strong interaction and dialogue between ScotRail’s external relations manager and Adopters resulting in a high level of trust and the swift resolution of problems. ScotRail cedes control to adopters allowing them a degree of empowerment over their activities resulting in strong feelings of ownership. For ScotRail adoption represents an opportunity to improve public perceptions of the firm and contribute to improvements in quality control. For the community improved environments and facilities are recognised and appreciated by the wider community.

Case study results suggest that passengers not directly involved may experience enhanced satisfaction derived from improved station

“community cocreation is a crucial component in ensuring a satisfactory experience for rail users”

Gardening at Uddingston Station
environments and these may be related to perceptions of improved feelings of safety, general reductions of stress and increased enjoyment of the commute. The involvement of the community by association could result in improved perceptions of the firm from passengers and influence future usage.

The multi-level model used in the research is shown in Figure 1 and indicates the constructs to be measured at both level 1 and level 2. The first stage of the multi-level study consisted of a commuter survey (a homogeneous sample with high travel frequency and predictable travel times). The survey used the suburban rail network around the south and west of Glasgow and 1381 surveys were collected at 58 stations (94.5% of respondents started their journey from the same station; 78.7% of the sample travelled at least 4 days a week). The second stage of the study used independent assessment of stations by 6 raters who graded each station on a range of items include aesthetic appeal, use of vacant facilities and the extent of customization. Other level 2 variables were based on data relating to passenger brand loyalty, station facilities (such as ticket office, toilet, waiting room etc), journey factors (e.g. average ticket price, travel time).

The results of this two level model are shown in Table 1. These show that as the passenger level satisfaction is influenced by commuter stress, enjoyment and perceived safety. More importantly, the 2 level model indicated that satisfaction was significantly influenced by the level of cocreation at the station level. There were also highly significant effects for journey factors, station facilities and brand loyalty. Crucially though, the cocreation measures had the strongest positive effect on customer satisfaction with the station. The second model assessed the effect of station level variables on the satisfaction-word of mouth part of the model. The results indicate that at the passenger level word of mouth is strongly influenced by station satisfaction but no direct effect of cocreation on word of mouth. However, there would be an indirect effect given the direct effect of cocreation on satisfaction.

"public transport firms can therefore look to community engagement schemes as a strategic imperative"

Table 1 HLM Model Results

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coefficient</th>
<th>t-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 (dependent variable is Station Satisfaction)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commuter Stress</td>
<td>0.121</td>
<td>3.930</td>
<td>0.000</td>
</tr>
<tr>
<td>Commuter Enjoyment</td>
<td>0.126</td>
<td>3.921</td>
<td>0.000</td>
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<tr>
<td>Passenger Safety</td>
<td>0.224</td>
<td>7.623</td>
<td>0.000</td>
</tr>
<tr>
<td>Level 2 (dependent variable is the intercept at level 1)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cocreation Rating</td>
<td>0.248</td>
<td>3.764</td>
<td>0.001</td>
</tr>
<tr>
<td>Station Facilities</td>
<td>0.162</td>
<td>2.492</td>
<td>0.016</td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td>0.222</td>
<td>5.131</td>
<td>0.000</td>
</tr>
<tr>
<td>Journey Variable</td>
<td>-0.254</td>
<td>-3.619</td>
<td>0.001</td>
</tr>
<tr>
<td>Level 1 (dependent variable is Word of Mouth)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station Satisfaction ($S$)</td>
<td>0.52</td>
<td>15.190</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Customising the Station at North Berwick

The Adopt A Station scheme represents successful community level cocreation on a number of levels. Firstly, the firm harnesses local knowledge and passion of community actors to take ownership of the environment and make improvements that offer benefits for firm, community and a wider set of stakeholders. Secondly, adopters are empowered to customize the station outside of standard commercial boundaries according to the needs of the group and the community. Groups are legitimised and represent their community to the outside world. Crucially, Adopt A Station is not a traditional ‘outreach’ community programme but ‘inreach’ and as a result benefits are shared between the firm and adopters but also indirectly received by other passengers. The effect is superior to all the other elements that make up the commuting experience suggesting that community cocreation is a crucial component in ensuring a satisfactory experience for rail users in this context. Adopt A Station moves beyond altruistic forms community engagement by utilising community passion to enhance the value proposition of the firm.

The benefits of the scheme are not simply targeted corporate investments but emerge from the engagement of the community and the relationship between the firm and the adopters. The impact on commuters is not simply related to cosmetic evidence but may represent an attachment to the station and the community it represents; the greater the ownership of the station by the community, the greater the attachment from passengers. Within our ‘big society’ public transport firms can therefore look to community engagement schemes as a strategic imperative and offer improvements for multiple stakeholders.

References

Figure 1 – Conceptual Model for HLM study