TRANS*form* Scotland
the campaign for sustainable transport

THE RAILWAYS MEAN BUSINESS

Attracting Business Travellers from Air to Rail

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EXECUTIVE SUMMARY

Background to this report

Climate change is one of the most important challenges currently facing our society, and transport is a large and growing contributor to greenhouse gas emissions. The high volume of business travel between Glasgow/Edinburgh and London is largely carried out by air instead of rail. This is of concern as air travel produces far higher climate change emissions than rail travel. In other countries with similar distances between major cities, rail accounts for a majority of the market, and so a modal shift from air to rail for business travellers on the Glasgow/Edinburgh routes is possible.

However, environmental concerns alone are unlikely to convince all businesses to change their travel habits. Air travel is often assumed to hold an advantage over rail because of shorter travel time. But minimising travel time is a narrow aim: a more useful goal when travelling is to maximise productivity. In light of these issues, Virgin Trains commissioned TRANS*form* Scotland to produce this report in order to evaluate the business case for travelling by rail instead of air between Glasgow/Edinburgh and London. This report considers whether rail is competitive with air regarding key aspects of business travel, what communication messages should be used to emphasise rail's advantages to the business community, and where service improvements could make rail more competitive. The focus is on items that can be implemented at relatively low cost and in relatively short timescales, specifically excluding large infrastructure projects.

Key findings

When considering the issues most important to business travellers, this report finds that rail travel between Glasgow/Edinburgh and London is competitive with air travel on each issue. In particular, the *existing benefits of rail include*:

- Higher punctuality and reliability with an on-time arrival rate of 84%–87%, more than 21%–22% better than air services[1]

- The opportunity for increased productivity when compared with air travel due to: (1) a richer working environment on the train and; (2) an additional 60–212 minutes lost working time on a single flight compared with the equivalent rail journey

- A comfortable and low-stress travel experience without the need to queue – this compares with air travel's cramped conditions, high levels of stress, and frequent queueing

- Quality catering in a pleasant environment

Furthermore, increased business travel by rail between the Scottish Central Belt and London could be achieved if the *rail operators take the following actions*:

- Target investment and marketing so that trains are seen as a mobile office, and that travelling by rail is considered part of the working day

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1. The on-time arrival rate for airlines over the same time period and routes was only 69%-72%.

- Provide best-of-class online ticketing across all major rail ticket websites, using recent improvements in this area as a starting point

- Ensure rail is given prominence in company travel policies, and rail ticketing is fully integrated with company travel portals and travel agent booking systems

- Present a straightforward fare structure and emphasise rail's value for money

- Target economy class business flyers in order to capture the largest segment of the market

- Consider introducing an iconic service (for example, free massage) in first class to high-light the low-stress and refreshing nature of rail travel

- Encourage corporate buy-in to rail travel through joint rail operator programmes – such as an improved frequent traveller scheme and an environmental 'Green Star' scheme

Scope of this report

One of the goals of this report was to draw together disparate sources of information and make them useful and accessible in relation to the topic of attracting business travellers from air to rail. In light of this, no primary research was undertaken. This report instead provides insight through research into the existing body of work in relevant areas.

In its analysis and findings, this report specifically considers the non-sleeper services between Glasgow/Edinburgh and London on the West Coast and East Coast mainlines. Some of the findings are, however, relevant to the Glasgow/Edinburgh sleeper services. The business travel under consideration is that where the origin or ultimate destination is London, and not those trips taken as part of a journey for travel further afield.

1. INTRODUCTION TO THE REPORT

A high volume of business travel exists between Glasgow/Edinburgh and London due to the presence of significant business and financial communities and the Scottish Government in Scotland's two biggest cities. However much of this business travel is by air instead of rail. Edinburgh and Glasgow are the fourth and fifth top destinations from London's airports, and 75%–93% of business travel between Scotland and London and the south-east of England is by air. However the distances between Glasgow/Edinburgh and London are such that rail can offer a competitive service to air. In other countries with similar distances between major cities, rail accounts for a majority of the market (DfT, 2003; London SDC, 2004; Pepy, 2007). And success on routes in England shows that an attractive rail offering can compete well with the airlines. In the face of successful competition from Virgin Trains, airlines have entirely abandoned the route between Liverpool and London, and have been replaced by rail as the most popular form of transport between Manchester and London.

Anthropomorphic climate change is one of the most important challenges we currently face as a society, and transport is a large and growing contributor to climate change emissions. There is a pressing need to bring about a shift from air travel, with its high climate change emissions, to rail travel, with its substantially lower emissions. However, businesses are unlikely to shift from air to rail purely on environmental grounds. A number of studies and statistics already exist on the preferences of business travellers, attitudes to rail travel, and attitudes to air travel. At the same time, there are several popular assumptions about both air and rail travel. Importantly, some of air travel's assumed advantages are only relevant to the narrow aim of minimising travel time, instead of the more useful goal of maximising productivity.

With these factors in mind, Virgin Trains commissioned TRANS*form* Scotland to bring together the disparate sources of information to provide a clear view of how rail travel compares to air travel, and to present practical recommendations on how to attract more business travellers to the rail network. The recommendations will not look at major infrastructure changes but rather at service level changes and priorities for publicity. These are issues that are important in attracting business travellers but can be addressed in a shorter timescale and at less cost than infrastructure projects.

2. SCOPE OF THIS REPORT

This report specifically considers business travel between Glasgow/Edinburgh and London on the non-sleeper services, specifically those provided by Virgin Trains and GNER[2]. Whilst some of the lessons in this report will be applicable to sleeper services, they are not the focus as sleepers take an approach that is fundamentally different in key aspects. In general, when referring to the Glasgow to London route, the west coast route operated by Virgin Trains is the focus. Business travel between Scotland and the continent or between Scotland and non-

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2. Virgin Trains runs direct services down the West Coast Main Line between Glasgow Central and London Euston, and also Glasgow Central and Edinburgh Waverley to/from Birmingham New Street. GNER runs direct services down the East Coast Main Line between Edinburgh Waverley and London King's Cross (with some that originate or terminate at Glasgow Central, Inverness or Aberdeen). (National Express will operate a new East Coast franchise from 9 December 2007, covering the services currently run by GNER.)

London stations in England will not be considered. However data from these routes will be referred to if they are appropriate to the Glasgow/Edinburgh-London routes.

The strategy used in compiling this report was to collect, analyse, and present information from existing research rather than attempting to carry out a new body of original research. Where further original research might be useful, this is noted, but the scope of this project did not allow for meaningful original research to be carried out. Some of the research cited is based on surveys of business travel in general, including international business travel. However, the Barclaycard Business Travel Survey shows that even in these cases, 73% of business travel is within the UK (Barclaycard, 2007 cited in ABTN, 2007A). Therefore, the general UK business travel surveys can be used to draw useful conclusions.

The focus of this report is on changes that can be made to the services, quality issues, facilities provided, and important communication messages to attract business travellers. Issues such as track upgrades, signalling replacement, rolling stock alterations, and other larger infrastructure projects are specifically excluded. Essentially, this report looks at changes that can be made in a relatively short timescale and without massive cost implications.

Finally, it should be noted that while this report will point out key themes and communication messages, it does not attempt to provide a marketing strategy. The aim is to highlight issues that a marketing department could then use when considering how to focus and present their campaigns.

3. IMPORTANT FACTORS FOR BUSINESS TRAVELLERS

3.1. Introduction to this section

Before looking into details of what may or may not be useful in attracting people from air to rail, it is useful to understand which issues affect business travellers most. Consideration of all aspects of the journey, from booking tickets through to arrival is necessary. This section considers these issues, grouped according to topic. In some cases, the focus is only on travellers' opinions on flying as these views can be used to inform service changes or marketing messages that will be useful in attracting these people to the railways.

3.2. Delays and cancellations

In a recent business travel survey carried out by American Express, the top concern when booking travel, cited by 99% of respondents, was reliability. When flying, 84% of business travellers were annoyed by flight delays and cancellations (American Express, 2007). This is backed up by other surveys of business travellers. The annual business travel survey carried out by Barclaycard (2006) asked respondents what was the worst thing that happened to them whilst travelling. The most common answer was "cancellations, missed connections and delays". The British Chambers of Commerce (2006) found that "reliability and punctuality" are businesses' greatest priorities for rail improvements, with 69% responding that it was their first or second priority[3]. For comparison, only 18% claimed that speed improvements were one of their top two priorities[4]: "There is a clear message that reliability is more important than speed." A similar sentiment was apparent in the section of the British Chambers of Commerce survey on flying. The second most desired improvement for air transport was "punctuality/reliability", with 46% citing it as their first or second priority[5]**.**

The importance of reliability and punctuality over speed and price for business travellers is sensible when one considers the purpose of travel. As Brown and O'Hara (2003) point out, the purpose of business travel is for workers to coordinate themselves and their activities with other workers. Therefore "time coordination", rather than simply the time taken, is often the primary concern of business travellers. Put another way, it's often more important for a worker to know they will definitely make a 12:30 meeting than it is to have the option of scheduling the meeting for 9:30.

3.3. Journey Time

Although punctuality and reliability are the top concerns for those booking travel or travelling by train, different factors come into play when convincing business travellers to make a switch from another mode of transport. When Barclaycard (2006) asked business travellers what would make them travel by rail more, the most popular response, at 43%, was "faster trains". The Barclaycard survey looked at all types of business travel and so will include those who are making a choice between the train and the car. In these cases, slow local or regional services would certainly affect the responses. However, the importance of speed should be considered

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3. Of businesses surveyed, 42% stated that reliability and punctuality were their first priority for rail improvements and 27% that it was their second priority.

4. Six percent claimed speed was their first priority for rail improvement and 12% stated it was their second priority.

5. Improved reliability when flying was the top priority for 23% and the second priority for a further 23% of respondents.

even on the high-speed routes studied by this report, and journey times will be looked at in a *Section 4*, *Section 5*, and *Section 7*.

3.4. Cost

The British Chambers of Commerce (2006) survey found that cost is the second most important area for rail improvement with 65% stating it was either their first or second priority[6]: "[The primary importance of punctuality and reliability] is closely followed by the cost of travel." When looking at why there was an increase in air use, the same survey found that 49% of respondents stated it was because they felt air transport is cheaper. This was the top reason given related to domestic travel and the second most popular reason overall.

An internal survey completed by the Scottish Executive (2006) also found cost was commonly cited as an issue that played a role in decisions of how to travel to London. It is important to note here that some respondents made specific reference to the total cost of the trip. This included, for instance, whether overnight accommodation would be necessary and the cost of time spent not working. *Section 6* and *Section 7* of this report will address the issue of travel time productivity and how rail actually offers a better proposition than flying. However, travelling 400 miles to and from London in the same day by rail will always require a long day for the traveller and this is also the case (though currently less-so) with air travel as well.

However, the importance of cost has also been shown to rank sixth in a list of top travel considerations. The American Express (2007) business travel survey found that as an important concern when booking travel, cost ranked below reliability, safety, airline security, the ability to change plans at short notice, and access to customer service. It is important to keep in mind that even with this ranking, cost was still an considered important concern for 84% of business travellers

Taken together, these surveys show that cost is an issue, even for businesses. However, the importance of cost is not always amongst the top five concerns and it will likely include more than just the individual ticket price. The competitiveness of rail fares will be considered in *Section 5*.

3.5. Convenience and comfort

Amongst business travellers who fly, waiting appears to be a major irritation. According to the American Express (2007) survey, 69% of respondents struggle with long check-in queues. The same survey also found that eliminating queues was the top demand when travellers were asked what would most enhance their flight experience, garnering a 66% response rate. The third most popular demand, with a 63% response rate, was speedy baggage retrieval. With the recent increased security checks at airports, it appears likely that air travellers will spend even more time waiting around and queuing (BBC, 2007).

The routes flown by airlines, and how often flights leave, are also important convenience aspects for business travellers. Accenture's UK Travel Survey (2005) of business travellers found that almost half of respondents would increase their use of low-cost airlines if they provided more flights into main airports. Beyond this, however, Accenture found that the top influence when choosing an airline was a convenient schedule.

Barclaycard (2006) also found that when business travellers were asked what would encourage them to travel more by rail, the second-most popular response, at 40%, was "[a] more regular service". It is necessary to keep in mind that this survey also looked at those making the choice between the train and the car. There are many local or regional rail services

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6. The split in cost's importance was 39% stating it was their first priority and 26% stating it was their second priority for rail improvement.

that have a low frequency, especially compared with the immediate availability of a car. On the long-distance routes considered by this report, rail often has a higher frequency of service than air. However, these findings underscore the importance of looking at the competitiveness of rail services' frequency and publicising this when it is better. This will be considered in *Section 6*.

Ticketing is another aspect that is important to consider with regard to business travellers. The majority of business travellers book tickets within two weeks of their travel dates. Barclaycard (2006) found only 27% of business travellers book more than two weeks in advance, whilst Accenture (2005) found only 23% did so. The largest segment of travellers actually book their tickets only the week before – 38% according to Barclaycard (2006) and 51% according to Accenture (2005). These figures include a significant group of between 7%–11% that purchase within twenty-four hours of travel. Clearly, being able to purchase desired tickets without planning significantly in advance is important.

Once tickets are booked, however, the flexibility to change them is also valued amongst business travellers. American Express (2007) found that when booking travel 91% of travellers were concerned with their ability to change plans at short notice, and 45% of respondents were then irritated by not being able to easily change their flight bookings. Furthermore, being able to change flight timings easily would enhance the flight experience for 53% of respondents.

3.6. Working whilst travelling

According to Barclaycard (2006), the most-used technologies when travelling (including stays at hotels) were power points for laptops and phones (used by 66% of respondents) followed by remote email access (40%) and WiFi hotspots (29%). GNER also estimates that of their passengers who have switched from air to rail, 22% did so because of WiFi availability (Silicon.com, 2006). Considering the effect of technology has had on travelling, 84% of business travellers felt that access to email has had the biggest impact. This can be partly explained by the finding from American Express (2007) that 43% of respondents complained of needing to catch up on work when they get back to the office. But the ability to work whilst travelling is about more than just power points and WiFi. As Brown and O'Hara (2003) point out, mobile workers are concerned about the nature or overall environment of the places in which they work.

3.7. Miscellaneous

Two other, unrelated, items worth mentioning briefly are safety and catering. With a 96% response rate, safety was cited as the second most popular concern when booking travel for respondents to the American Express (2007) business travel survey. Finally, in its response to the East Coast InterCity franchise consultation, Passenger Focus (2007) stated that they believe GNER's restaurant service is one of the factors which influences passengers' choice of rail of air.

3.8. Summary of important factors for business travellers

The above discussion can be summarised into a list of the factors that have been found to be important to business travellers when considering how to travel:

(1) *Punctuality and reliability* tend to be the most important factors when making travel choices, and are stated as being more important than speed.

(2) *Cost* is an important factor but consideration is given to more than just the ticket price.

(3)   The factors that would most encourage business travellers to use rail instead of driving or flying are *faster trains* and *a more regular service*.

(4)   Business travellers find it *frustrating and irritating to wait* (in queues).

(5)   *Routes and frequency of schedules* have a significant effect on choosing what company to travel with.

(6)   *Booking tickets close to the travel date* is necessary and the *flexibility to easily change bookings* is very desirable.

(7)   Providing *power points, internet access*, and a *conducive work environment* to allow travellers to minimise the amount of catching up required when they return to the office.

(8)   *Safety* is of high importance.

(9)   A quality *catering* experience can help to attract travellers from air to rail.

4. ACKNOWLEDGED ADVANTAGES OF RAIL TRAVEL

4.1. Introduction to this section

A few of rail travel's advantages are already established in the public mind; these are briefly discussed here. This section concentrates only on those advantages that are widely assumed and rarely (if ever) contested. Because of the established nature of these issues, they will not be treated in depth in the rest of the report. However they do provide important context, and reminders of these advantages will be components of presenting an attractive proposal to business travellers. Rail advantages which are not commonly acknowledged by the general public are covered in *Section 6*.

4.2. Environmental benefits of rail over air

Rail travel is widely perceived to result in significantly lower negative environmental impacts than air travel. This assumption, held amongst the general public, underpins numerous transport-related media stories and political initiatives. For instance, the Conservative Party recently proposed a moratorium on new runways until there is "compelling evidence that railways cannot offer lower-emissions alternatives". A senior source was quoted as saying that one of the motives behind the call for a moratorium is that "nearly a quarter of flights from Heathrow are on routes reachable by rail" (Observer, 2007). This position assumes that rail travel is better for the environment than air travel, but the assumption is so widespread that it is not even explained in the article. A similar assumption can be seen in a Guardian (2007B) article about Flybe's launch of an aeroplane eco-labelling scheme. At the end of the article a campaigner points out that many of Flybe's destinations can be reached by high-speed rail. There is nothing to explain why this is better than flying – the established understanding being that rail is better for the environment than air.

The environmental benefits of rail have been noted for many years. In 2002, the Times ran an article about a report by the Royal Commission on Environmental Pollution which found that rail travel is far less polluting and could replace nearly all domestic flights. The frequent underscoring of these facts combined with increased general concern over the environment has recently resulted in a shift of people's travel habits. In the Times (2006), the managing director of travel agent European Rail noted that, "growing concern among consumers for the environment has driven a lot of people towards train travel". The same article quoted SNCF's[7] UK operation, Rail Europe as saying, "there's no doubt that environmental considerations are influencing people's travel choices nowadays. Train travel is the green option." More recently the Economist (2007) noted that, amongst other factors, concern over climate change has made the train an increasingly attractive alternative to flying as a full high-speed electric train emits between one-tenth and one-quarter of the carbon dioxide of an aeroplane. Even the popular no-frills carrier EasyJet has found that concern over the environment has started to affect sales (Guardian, 2007C).

Rail's superior environmental performance over air has come about largely because aeroplanes require such a vast amount of energy to operate. Recently, however, the rail industry has started to specifically focus on measuring and reducing the environmental impact of rail travel. For instance, Virgin Trains has measured the CO_2 emissions from its services and begun working on the entire environmental impact of their operations. This has involved considering issues such as energy use in Virgin's buildings, recycling of waste, sourcing environmental and

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7. The French National Railway.

ethical products, and calculating their carbon footprint (Virgin Trains, 2007A). Measuring their environmental performance, instead of relying on general assumptions, has allowed Virgin Trains to launch their *Go Greener, Go Cheaper* campaign, advertising the specific environmental advantages of rail travel on their network. EasyJet subsequently launched a challenge to this campaign. But this only resulted in more positive publicity for rail travel when the Advertising Standards Authority upheld Virgin Trains' claims that its West Coast trains emit 76% less carbon dioxide than the same trip by a car or aeroplane (Guardian, 2007C). Furthermore, this campaign appears to be paying off, with the Manchester Airport Group citing it as one of the factors leading to a dramatic decline in passengers on the Manchester–London air route (Guardian, 2007D).

Earlier this year, the Department for Transport launched its InterCity Express Programme which will develop replacement train sets for the East Coast and Great Western mainlines. The programme requirements note that, "environmental concerns are an increasingly important consideration in relation to long term rail strategy… The train fleets in use currently perform relatively poorly in this regard." One of the primary objectives is therefore to, "deliver an environmentally sustainable solution in terms of improved energy efficiency and reduced noise and emissions, and more sustainable construction and maintenance compared to existing trains" (DfT, 2007).

As a final example, Eurostar launched *Tread Lightly*, a comprehensive programme to improve its environmental performance. This includes a target to reduce CO_2 emissions by 25% by 2012 and creating a plan to tackle the environmental impact throughout their operations (Eurostar, 2007A). The programme has already influenced the catering contract recently awarded by Eurostar, which requires the on-board caterer to use only biodegradable or recyclable materials for disposable items, to segregate waste, and to use organic and FairTrade food and drinks (Eurostar, 2007B).

As can be seen, the rail industry already benefits from the perception that rail travel is better for the environment than flying. Instead of taking their environmental advantage for granted, key players in the competition with air travel are now addressing and improving their environmental performance. These efforts will serve to ensure that rail retains and increases its advantage over flying in this key area.

4.3. City centre departure and arrival and the journey time 'tipping point'

The rail routes between Glasgow/Edinburgh and London have departure and arrival points in the centres of the respective cities[8]. When travelling by air, however, it is not possible to both depart and arrive from central locations and only a small fraction of routes (those utilising London City Airport) offer a central location for even one end of the journey. Furthermore, several airports are located over 30 miles outside of the city centres. The majority of businesses are located centrally, and there are good transport links from railway stations for those that are not right in the centre. Therefore rail has an advantage in getting the traveller to their final destination with a minimum of hassle and extra time.

Because of convenience factors such as railway stations' city centre locations, a journey time 'tipping point' has emerged. When rail journey times are at or below the tipping point, a significant percentage of travellers will take the train even if the route is served by airlines and the flight time is less than the rail journey time. Traditionally, the tipping point has been three hours, but this threshold has recently increased to between four and four-and-a-half hours for business travel. SNCF has found that on journeys of less than four-and-a-half hours where they compete with airlines, their share of the market is over 50% (Pepy, 2007). This is backed

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8. London's centre does not have a compact focal point like Glasgow or Edinburgh, but the stations serving the Scottish routes are both in the central London area.

up by other European rail companies, which are capturing more than 60% of the business market from airlines on four hour journeys[9] (Economist, 2007).

4.4. Summary of acknowledged rail advantages

The following advantages of rail travel are already firmly established in the general public's mind. These aspects of rail travel do not need to be 'proved', but should not be ignored. They could be useful to build on when designing service improvements or creating publicity based on suggestions in this report:

(1) Travelling by rail has a *significantly lower environmental impact than flying*.

(2) Long-distance *railway companies are specifically targeting their environmental performance* to manage and improve it over their entire operations.

(3) Rail travel provides the unmatched *convenience of departing from and arriving at central locations*, which are often close to the final desired destination and have convenient links to the surrounding city and region.

(4) Due to convenience factors associated with rail, *there is a 'tipping point' when journey times are below 4 to 4.5 hours*, after which a significant percentage of business travellers take the train instead of flying.

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9. For leisure travel, rail captures a similar percentage of the market from airlines on six hour journeys.

5. PERCEIVED DISADVANTAGES OF RAIL TRAVEL

5.1. Introduction to this section

The converse of the previous section is that there is a general perception amongst the public that rail travel provides certain disadvantages. This section considers three key areas – journey time, performance, and cost – where rail is often considered to be inferior to flying. The veracity of these assumptions will be explored to provide solid data that can refute those that are false.

5.2. Performance: punctuality and reliability

Travellers often complain that trains often arrive late. Given the paramount importance of punctuality and reliability to business travellers these are potentially the most important issues to address. Business travellers value punctuality and reliability over total journey time and cost, as discussed in *Section 1*. In reality, the official figures show that rail travel performs significantly better than air travel. *Table 1* compares the percentage of trains arriving 'on-time' to the percentage of aeroplanes arriving 'on-time' averaged over 2006. This shows that, between Glasgow/Edinburgh and London, rail services' punctuality rates were 21%–22% higher than air services' punctuality rates in 2006. But this does not tell the whole story: not only was the punctuality of flying low at 69%–72%, the definition of arriving 'on-time' is looser for aeroplanes than for trains. For an aeroplane to be considered on-time, it must arrive within 15 minutes of its schedule. However, the calculations assume there are no delays when taxiing to the gate, and so the 'arrival' does not necessarily mean that passengers can disembark immediately. Additionally, the flight statistics do not factor in services that are cancelled or diverted to other airports. On the other hand, a train must arrive within 10 minutes of its scheduled time to be considered on-time, this arrival is at the platform so passengers can disembark immediately, and cancelled services are factored in to the statistics to provide an overall assessment of performance. If it were possible to use the same conditions for comparing on-time arrival of trains and aeroplanes, the gap in performance would likely be larger.

Table 1. 'On-time' arrival of rail and air routes between Glasgow/Edinburgh and London in 2006. Note that an aircraft is considered to be 'on-time' if it arrives within 15 minutes of the schedule, and delays taxiing to the gate and cancelled or diverted flights are not included. A train is considered to be 'on-time' if it arrives within 10 minutes, arrival is at the platform, and cancelled services are reflected in the figures. London airports include Gatwick, Heathrow, London City, Stansted, and Luton; Glasgow airports include Glasgow and Prestwick.

	Trains arriving 'on-time'	Aeroplanes arriving 'on-time'
Glasgow ↔ London	87%	72%
Edinburgh ↔ London	84%	69%

sources: National Rail Trends Yearbook 2006–2007 (ORR, 2007) & Punctuality Statistics: Annual 2006 (CAA, 2007)

The whole year's figures also hide important month-by-month variations. For instance, GNER commissioned a study of the Edinburgh–London route, which classified on-time train arrivals as being within 15 minutes of the schedule in order to achieve a certain parity with airline figures[10]. The study found that train on-time arrivals remained high on a monthly basis, with

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10. While this balances out the difference in how much of a delay is still considered 'on-time', it does not address the fact that figures for flights assume no delay in getting to the gate once an aeroplane has landed and they do not include cancelled or diverted flights.

only one month falling below 82% (in October 2006, when 75% of trains arrived on-time). However, from June to September 2006 only between 58% and 60% of flights arrived on-time (GNER, 2007).

Furthermore, 2006 was not an isolated year. As *Figure 1* shows, the trend over the past four years has seen on-time performance on the Edinburgh–London rail route improve continuously while punctuality for air has remained constant, but with a drop in 2006. There is good reason to expect rail performance to continue to improve: it was very high until the Hatfield crash of 2000 resulted in widespread speed restrictions across the rail network. Recent years have seen rail performance start to recover as speeds have been reinstated and the benefits of track and signal renewals start to pay off.

Figure 1. Four-year trend of 'on-time' arrivals for travel between Edinburgh and London. For the data in this figure, 'on-time' is arrival within 15 minutes of the schedule for both rail and air. London airports include Gatwick, Heathrow, London City, Stansted, and Luton

source: 2006 Travel Calculator (GNER, 2007)

The trend also hints at one of the reasons why rail punctuality is often considered poor amongst the general public. Part of this mindset was likely created or reinforced by the significant number of delays in the years following the Hatfield crash. Given the importance of punctuality and reliability to business travellers it is important to challenge people's assumptions and publicise the current high level of rail performance on the Glasgow/Edinburgh–London routes, especially when compared with the poor punctuality of flying.

One last item to note related to punctuality is the compensation available when a service is late. The airlines do not offer compensation for flights that arrive late: only if a flight is expected to depart more than *five hours* late will they offer a full refund if the traveller chooses to cancel their trip. In contrast, the rail companies will offer a 25% or 50% refund if the train arrives more than an hour late or a full refund if the train arrives more than two hours late[11] (EC, 2004; Virgin Trains, 2003; GNER, 2006). Whilst a partial or full refund can not make up for arriving late, it demonstrates a higher level of customer service and commitment to running punctual services than that provided by the airlines.

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11. For delays of an hour, Virgin Trains offers a 25% refund on the Glasgow route and GNER offers a 50% refund on the Edinburgh route. Refunds are in the form of vouchers that can be used for any future rail travel, except in the case of arriving more than three hours late on GNER's Edinburgh–London route where a cash refund is provided.

5.3. Journey time

The second frequently perceived disadvantage of rail travel between Glasgow/Edinburgh and London is that it takes significantly longer than flying and so involves more 'wasted time' or is not practical for day trips. However, when considering flight times, it is important to recognise that the time quoted by the airline is only a small part of the overall journey. When travelling by train, it is possible to show up a few minutes before the departure time and walk off the train, in the city centre, immediately upon arrival. Therefore, to perform a meaningful comparison, it is necessary to calculate the full city centre-to-city centre journey time for Glasgow/Edinburgh to London flights.

When calculating journey times, the departure and arrival points do not have to be exactly the same, but simply need to be in a city's central area. For instance, with a flight from Glasgow to London via Heathrow the journey is taken to start at George Square and end at London Paddington Station, as these are central points where transport links to and from the airports are available. The journey start and end points are therefore chosen to be most appropriate for air travel and do not attempt to give rail an advantage by using the train stations served by the Glasgow/Edinburgh to London routes[12].

Even though no direct train services run between these two locations, London Paddington is considered as central as London Euston (the station that serves the Glasgow west coast rail route). A short onward journey will likely be necessary in both cases to reach the desired place of business. *Table 2* gives an example of how the total journey time for a flight is calculated, using the Glasgow to Heathrow route. *Table 3* then lists the full journey times for several Glasgow/Edinburgh to London air routes. Details of the calculations for all of these air routes can be found in *Appendix A*.

Table 2. Calculating the best-case journey time when flying between Glasgow and London via Heathrow. Origin and destination are both city centre locations to provide comparison with rail travel. Online check-in prior to leaving is assumed as this would likely be the most convenient option for a business traveller.

Journey Section	Minutes	Source
City Centre → Glasgow Airport	35	GlasgowFlyer.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end[13]
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Glasgow → Heathrow	80	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Heathrow Express	10	Heathrow Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Heathrow → Paddington	15	Heathrow Express website
Total	222	**3 hours, 42 minutes**

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12. In the example here, direct trains from Glasgow to London do not run from Glasgow Queen Street station (the closest station to George Square) and the London terminal is Euston, not Paddington.

13. This time is the same as, or faster, than driving to the airport when parking is taken into account.

Table 3. Full journey times for air routes between Glasgow/Edinburgh and London. Timing for the return flights only varies by a maximum of five minutes. Details of the journey time calculations can be found in *Appendix A*.
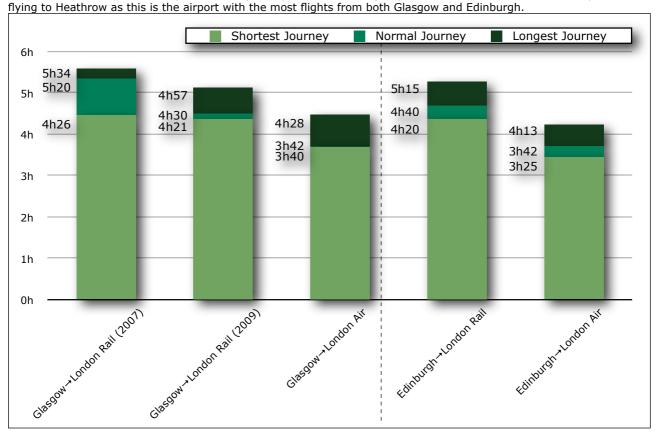
Route	Journey Time
Glasgow → London via Heathrow	3 hours 42 minutes
Glasgow → London via Gatwick	4 hours 10 minutes
Glasgow → London City	3 hours 40 minutes
Glasgow → London via Prestwick and Stansted	4 hours 28 minutes
Edinburgh → London via Heathrow	3 hours 42 minutes
Edinburgh → London via Gatwick	4 hours 05 minutes
Edinburgh → London City	3 hours 25 minutes
Edinburgh → London via Luton	4 hours 13 minutes

Most rail journeys from Glasgow to London are around 5h20 with a couple only taking 4h30. On the return route, journeys are slightly shorter with most being just over 5h00 but only one under 4h30. The Edinburgh to London route is faster with most journeys down taking 4h40 but several coming in around 4h20[14]. On the London to Edinburgh return the journey is slightly faster with most being between 4h20 and 4h30 and the fastest journey being 4h12. From the beginning of 2009, a new timetable will come into effect that will see major improvements to the west coast Glasgow services[15]. The provisional 2009 timetable shows that as well as more services, the journey times will be significantly reduced. Most journeys from Glasgow to London will be around 4h30 with a couple at 4h21. The return journey from London to Glasgow will generally take 4h26 with one service only taking 4h10 (Virgin Trains, 2007B). *Figure 2* shows a comparison of these rail journey times with the full journey times for air on both the Glasgow to London and Edinburgh to London routes.

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14. There are twice as many direct Edinburgh↔London trains (18) as Glasgow↔London trains (9).

15. Technically the new timetable will come into force in December 2008 but because of holidays it will essentially take effect from January 2009.

Figure 2. Comparison of rail and flight journey times between Edinburgh/Glasgow and London. The 'Shortest Journey' or 'Longest Journey' for rail represents the scheduled service with the shortest or longest journey time; for air it represents the airport pairing that results in the shortest or longest total journey time. The 'Normal Journey' for rail represents the journey time for the majority of scheduled services; for air it represents flying to Heathrow as this is the airport with the most flights from both Glasgow and Edinburgh.

As can be seen from *Figure 2*, rail journey times are generally longer even when taking into account the full journey times when flying. But the differences in journey times are generally no more than an hour on the Edinburgh and 2009 Glasgow route, and on the fastest rail services the journey time is as fast or faster than the longer flight routes. It is also necessary to keep in mind that the journey times in *Figure 2* assume that everything runs smoothly and there are no delays. As already discussed, on-time flight arrivals are low at 69%–72% whereas on-time rail arrivals are between 84%–87% and improving. If delays are experienced, the journey time for an air journey will approach or exceed that of rail journeys. This serves to underscore the already-cited primary importance of punctuality and reliability.

Nonetheless, rail should not generally aim to compete on journey times using raw numbers. More important than absolute journey time is the impact a journey has on the working day and the stress involved, as these will determine how effective a person can be in their work. And the point of travelling for business is to facilitate more effective work. A rail journey might take an hour longer, but rail travel will result in less lost work time, a richer environment in which to work, and a less stressful journey. The details of these benefits are discussed in *Section 6*.

5.4. Cost

As noted in *Section 3*, cost is an important issue for business travellers. Though only 27% of respondents to Barclaycard's (2006) survey stated that cost was a reason for choosing low-cost airlines, 23% percent of businesses responding to the British Chambers of Commerce (2006) survey increased their air travel because "air transport is cheaper". However, further investigation shows that rail ticket prices are generally competitive.

As 31% of business travellers book their tickets 1–6 days before travel, an example booking enquiry was made for a return journey between Glasgow and London one week in advance using the relevant companies' websites (Barclaycard, 2006). Rail tickets were available on Virgin Trains for £77 in economy and £118 in first class. The lowest price on British Airways was £121 for economy, more than the first class ticket on Virgin Trains, and there were more departure times to choose from on the train. The lowest price on EasyJet was £68. Though this is slightly less expensive, it does not include the costs of getting to and from Glasgow Airport and London Luton Airport, which would add another £10, making the total cost more expensive than taking the train. Travel to the airports for the British Airways flights brings its cost up to £142.

This is just one anecdotal example but GNER has already studied the average cost of rail versus the average cost of flying between Edinburgh and London. They used a booking horizon of 1–14 days, which is when 72% of business travellers book their tickets (Barclaycard, 2006). The results showed that rail cost 9.6p/mile while air cost 14.8p/mile (GNER, 2007). Again, this does not include the costs of getting to and from the airports.

Between Glasgow and London, British Airways' fully-flexible *standard class cabin* return fare of £398 for Heathrow is significantly more expensive than Virgin Trains' fully-flexible *first class* return fare of £347[16]. The British Airways ticket is hugely more expensive than Virgin Trains' fully-flexible standard class return fare of only £98, without even considering the costs of getting to and from the airports. And in practice, the average fare paid on Virgin Trains for a return between Glasgow and London is £62 for standard class and £129 for first class, although prices can be as low as £35 and £86 (Virgin Trains, 2007D).

It is always possible to find specific flights that are less expensive than specific rail journeys, but the above information shows that rail prices are generally competitive in the business travel market. However, as noted above, there is a general belief amongst a significant percentage of businesses that rail travel is too expensive. Part of the problem is likely that businesses find rail fare structures complicated. The British Chambers of Commerce (2006) found that, "trains running on time and a simpler tariff system are the main requirements". One way to tackle this issue is through the way in which rail tickets are presented to those booking business travel, and suggestions on this will be detailed in *Section 7*. The other action that is important is to publicise the competitive fares to change the general public perception. For £86, a first class return between Glasgow and London, which includes free meals and drinks, is a great deal. The Virgin Trains *Go Greener, Go Cheaper* campaign is the type of publicity that is necessary to change public perception. Both Virgin Trains and GNER should target the business community with this kind of message, as cost is an important issue, even for business travel. It is also important that a reasonable number of low-fare tickets are available so that business travellers feel there is substance behind the publicity.

5.5. Summary of rail's perceived disadvantages and issues to address

Significant portions of the population believe that rail travel entails certain disadvantages. The accuracy of these beliefs and suggested actions to change opinions can be summarised as follows:

(1) On the Glasgow/Edinburgh to London routes, *84%–87% of rail services arrive on-time*, a rate *more than 21%–22% better than air services*, of which only 69%–72% are on-time.

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16. British Airways only offers a standard class cabin between Glasgow/Edinburgh and London.

(2) The four-year trend for the Glasgow/Edinburgh to London routes shows *the rate of on-time rail arrivals is increasing* but for airlines it is constant or decreasing.

(3) *Given the primary importance of punctuality and reliability* to business travellers *it is vital to change public perception by publicising rail's high level of performance* on the Glasgow/Edinburgh–London routes, especially when compared with the poor punctuality of flying.

(4) *Rail companies provide compensation for services that arrive one hour late* with compensation for the full ticket price after two hours. *Airlines to not pay any compensation* for delayed arrivals.

(5) When the full city centre-to-city centre journey time of air travel is calculated, *it takes between 3.5 and 4.5 hours to fly* between Glasgow/Edinburgh and London.

(6) In terms of raw numbers, *rail travel generally takes about an hour more than flying* between Glasgow/Edinburgh and London though *the fastest rail journeys are as fast or faster than the slower air routes*[17].

(7) *Poor punctuality undermines the raw time advantage of air travel*, underscoring the importance of maintaining high punctuality and reliability on the railways.

(8) *Rail travel* cannot generally claim to have an equal or shorter total journey time than air travel but *results in less lost work time, a richer environment in which to work, and a less stressful journey*. These factors are more important in determining how effective someone can be in their work.

(9) *Rail fares are generally competitive with air fares* especially when travel to and from the airport is factored in. The average return price paid on Virgin Trains between Glasgow and London is £62 for standard class and £129 for first class, and fully flexible tickets are significantly less expensive by train.

(10) *Businesses find rail fare structures complicated* and this likely leads to the perception amongst a significant percentage that rail travel is expensive.

(11) *There is a need for publicity about rail's competitive fares to target the business community* and ensure enough low-fare tickets are available so that business travellers feel there is substance behind the publicity. Cost is an important factor, even for business travel.

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17. These numbers refer to the improved Glasgow to London west coast timetable to be introduced in 2009.

6. EXISTING ADVANTAGES THAT SHOULD BE EMPHASISED

6.1. Introduction to this section

There are several advantageous aspects of rail travel which are not always considered by those making travel decisions. According to Barclaycard (2006), 80% of business travellers believe low-cost airlines are a good alternative to trains. By highlighting lesser-considered advantages of trains it is possible to show how low-cost airlines can't compete on the overall offering. This section focuses on aspects of rail travel which might be acknowledged when thought about, but are frequently overlooked by the general public. It is also worth restating the importance of emphasising rail's superior punctuality and reliability when compared with flying (detailed in *Section 5*). As discussed in *Section 3*, punctuality and reliability are of primary importance to business travellers.

6.2. Market context

To set the rest of this section in context, it is useful to consider who currently travels by rail. The British Chambers of Commerce (2006) found in their survey that rail usage is greatest amongst public and voluntary services (where 84% of respondents use rail travel) and business services (75%), and businesses based in London (86%) and Scotland (78%). The same survey found that for 94% of London businesses and 85% of Scottish businesses, this rail use is for business travel (as opposed to staff commuting or freight). Clearly, using the railways for business travel is already common amongst certain sectors in London and Scotland, though not necessarily on the long-distance Glasgow/Edinburgh to London routes.

Considering the individual, Barclaycard (2006) found that women have a strong preference for rail travel, with 39% stating it was their preferred method of travel, versus 25% who chose flying[18]. There was less of a difference for men, but they still slightly prefer rail (30% of respondents) over air (29%)[19]. As a whole, 32% of business travellers prefer travelling by rail against 29% who prefer flying.

Taken together, rail is already widely used for business travel and enjoys a slight advantage in terms of individual's preferences. Much of this existing travel is likely to be on shorter-distance routes. Any work to encourage business travel by rail between Glasgow/Edinburgh and London should seek to build on the existing preferences. It is worth noting that as a group women business travellers are already more disposed to travel by rail than any other form of transport.

6.3. Convenience and comfort

There are aspects of travel that do not grab the headlines, but cumulatively make a large difference to the experience. These are the parts that glue a journey together: convenient departure times, whether it is necessary to spend time queueing, and how easy it is to change plans. The research discussed in *Section 3* shows that these aspects of travel are very import-ant to business travellers. They can have a significant impact on the convenience and comfort of a particular mode of travel.

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18. Another 32% preferred travel by car, though this would not be attractive over the distance involved in travelling between Glasgow/Edinburgh and London.

19. The clear preference for men was car travel, stated by 38% of respondents, though this travel mode is not relevant on the routes being discussed in this paper.

6.3.1. Departure times and frequency

The importance of a convenient, frequent schedule was discussed in *Section 3*. Though the Barclaycard (2006) survey included shorter-distance travel and car users, it found that "[a] more regular service" was the second most popular improvement that would encourage business travellers to switch to the train. And Accenture (2005) found that for those who fly, a convenient schedule was the top influence when choosing an airline. Clearly, having frequent and convenient travel times is a big draw for business travellers who do not want to spend any more time than necessary waiting for a service.

A frequent, predictable schedule is an area where rail travel can offer a real advantage over air travel. On the route between Edinburgh and London, trains leave on the hour, every hour throughout the day with additional trains on the half hour at certain times (these are often referred to as 'clockface' times). This kind of schedule makes planning a journey much easier for a traveller. It compares favourably to flying where there are only a handful of flight times for each airport and airline combination. Flight departures are also at odd times past the hour, making them difficult to remember. The frequent, easy-to-remember schedule of the route between Edinburgh and London should be publicised as a way of making business travel more convenient and smoother.

Currently, the west coast route between Glasgow and London does not benefit from the same level of frequency or predictable departure times. However, at the beginning of 2009 a new timetable will come into effect which will take advantage of the completed West Coast Main Line upgrade. The provisional new timetable will have a more frequent service, with one train per hour during most of the day. The departure times will be more predictable, especially from London where trains are planned to leave at half-past the hour. Though there will be no trains at 10:30, 12:30, or 14:30, there will be additional services at 16:57 and 17:57. Leaving some two-hour gaps to allow for a half-hourly service in the early evening is likely a good choice. It provides a more convenient schedule for business travellers, which should be the focus when devising a timetable designed to encourage them to switch from air travel. Trains from Glasgow will generally depart at forty minutes past the hour except for some in the early morning that are planned to leave at half-past the hour (Virgin Trains, 2007B). When it is introduced, the convenience and frequency of the new timetable should be a useful tool in persuading more business travellers to switch to the train.

6.3.2. Queueing and waiting

Survey results described in *Section 3* showed that queueing and waiting are major irritations for business travellers who fly. To briefly recap, the top priority for enhancing the flight experience for business travellers is reducing waiting times or getting rid of queues (American Express, 2007; British Chambers of Commerce, 2006). Furthermore, the American Express survey found that speeding up baggage retrieval was the third most popular improvement. These are areas where rail travel offers real advantages. Even though the time spent on the train is longer than the time spent on an aeroplane, there is no queueing or waiting around to get on the train, and no waiting for bags at the other end. When the train arrives, passengers simply get off and continue on their journey. Given the frustration business travellers have with queueing and waiting when flying, this low-hassle aspect of rail travel should be highlighted as part of the smooth travel experience that trains offer.

6.3.3. Changing travel plans

Almost half (45%) of respondents to the American Express (2007) survey were irritated by the inability to easily change flight bookings. When flying on a flexible airline ticket, a traveller must contact the airline to change their booking, and their change may be refused if there are no available seats. In contrast, when travelling on a flexible rail ticket, the traveller can simply show up for a different train if they decide to change their plans. There is the option to make a

new seat reservation by contacting the rail company if desired, but this is not necessary. The result is a smoother experience if plans change at the last minute when travelling by rail versus air.

6.3.4. Comfort of trains

When discussing the outcomes of their survey, the British Chambers of Commerce (2006) noted that improvements to the comfort and convenience of taking the train were not always acknowledged by business travellers. They found that most (74%) of those who increased their use of rail "suggest that this is due to road congestion as opposed to cost, rail network coverage, comfort, convenience, speed, etc.; surprisingly, given the efforts to improve the safety, comfort and speed of trains! The inference here may be that the railway industry still faces a major marketing challenge to fully convince the business community that the overall service offer has improved."

As with other results of this survey, shorter travel distances are included, so it is not possible to directly apply them to the long-distance Glasgow/Edinburgh to London routes. It is also worth noting that since the survey was conducted, Virgin Trains has run a series of adverts emphasising the comfort of rail travel. However, it is worth remembering that views in the business community might not reflect the current state of comfort when travelling by train, and continued emphasis should be placed on this advantage. Trains can offer a significant advantage in comfort as none of the flights between Glasgow/Edinburgh and London offer a business or first class cabin.

6.3.5. Social aspect

There is a social aspect to rail that can be especially pronounced with business travel. Because railway stations are located in city centres, there are plenty of opportunities to socialise with clients, customers, or colleagues after any formal business. It is easy to go out for a drink or a meal before catching the train back. As well as being enjoyable, this opportunity to spend informal time with others helps to build relationships which are important for future work. Because of their more isolated locations and the hassle of check-in and security procedures, airports are not well suited to this kind of socialising.

6.4. Productivity

In the American Express (2007) survey, 43% of business travellers complained of the need to catch up with things when they get back to the office. Furthermore, a higher rate of productivity on trains can offset longer journey times and result in less time 'wasted' when travelling by train than when flying. This section looks at how rail travel already provides the opportunity for greater productivity than when flying; further potential productivity improvements will be considered in *Section 7*.

6.4.1. Working environment

Using conservative estimates, Transport 2000 (2002) calculated that the value to the UK economy of work done on trains is already £713 million per year. The train has a better environment for working because there is space to work, with tables even in standard class. On an aeroplane, however, travellers find that there is not enough space to work with a laptop and briefcase (Perry *et al.*, 2001). In a recent study, the train was preferred over the aeroplane for laptop use by mobile workers (Jain & Lyons, n.d.). Furthermore, trains on both the Glasgow and Edinburgh to London routes provide power sockets for charging laptops and mobile phones. Business travellers cited power sockets as the most-used technology when travelling, with 66% of survey respondents making use of them (Barclaycard, 2006).

Brown and O'Hara (2003) found that mobile workers juggle their activities in order to fit the working environment they find themselves in. The richer working environment offered by a

train allows for a wider range of activities. This can allow travellers to carry out some tasks that would have to be saved for the office if travelling by aeroplane.

Many business travellers already work when travelling by train. The National Passenger Survey found that 58% of business travellers felt they had made some use of their time and 27% felt they had made very worthwhile use of their time. When looking at all types of travellers, more passengers in first class felt they had made very worthwhile use of their time, at 33%, than those in standard class, at 23% (Lyons *et al.*, 2007). This suggests that the higher price of a first class ticket may be offset by the ability to get more work done due to the improved working environment. However, the other point to take away from these figures is that there is scope for business travellers to do more work on the train, thus reducing the cost of travel to the working day. Even those travellers who responded that they had made use of their time may not have considered rail travel as an opportunity to work before taking the journey. Therefore they would not have planned accordingly which would have allowed better use of the time.

6.4.2. Type of work

The working environment on a train can also be more conducive for some activities than being in the office. The lack of interruptions from colleagues means that tasks such as reading long documents, working through email, and solid periods of writing can often be completed more satisfactorily than at the office. Work done when travelling is not always an activity that would have been done at the office, but is sometimes a unique opportunity to get certain tasks done (Holley *et al.*, n.d.). In fact, Brown and O'Hara (2003) found that mobile workers develop strategies to plan tasks so that appropriate ones are allocated to travel time.

Though working is the most prevalent activity amongst business travellers, Lyons *et al.* (2007) found that only about one-half of business travellers did some work on rail journeys with just one-third spending most of their time working. However, in the National Rail Passenger survey, 86% of business travellers said that they had work which could be easily undertaken on the train (Holley *et al.*, n.d.). This implies that there is an opportunity for more business travellers to use their travel time for work. If companies viewed part of the rail journey as working time, more business travellers would likely work on the train thereby decreasing the amount of the working day lost to travel.
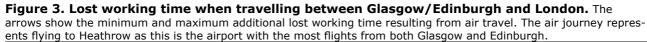
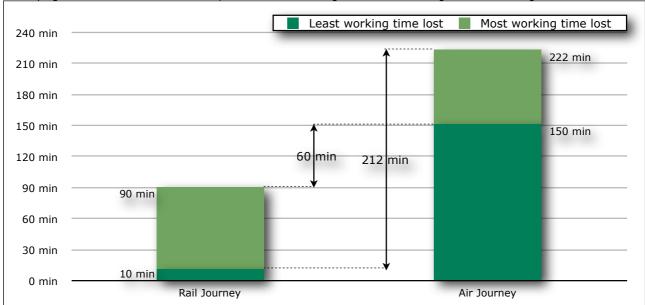### 6.4.3. The 'type' of time that is available

When flying between Glasgow/Edinburgh and London, there are several periods when a traveller could theoretically get work done. For instance, there will likely be time waiting in the departure lounge before boarding and the time on the aeroplane itself. However, lots of little bits of time are a lot less useful than having one big block of time. It is periods of uninterrupted time that are best used for work (Jain and Lyons, n.d.). Brown and O'Hara (2003) spoke with a business traveller who would not get his laptop out to work in an airport departure lounge. There was enough space, but the time associated with the departure lounge was not suitable for engaging in useful tasks.

The journey by air between Glasgow/Edinburgh and London is highly fragmented. As demonstrated by *Table 2* in *Section 5*, the only time an air traveller is sitting down for more than 35 minutes on a typical air journey is the 80 minute flight. Working time will be diminished by take off and landing procedures and, as discussed above, the working environment for the remaining minutes is significantly poorer than that of a train. The end result is that in the best case scenario when flying, with a traveller who does not take any time to relax on the aeroplane, the typical 3h42 journey affords a bit over an hour for working. The net result is a loss of at least 2h30 working time, rising to 3h42 lost working time if the traveller decides to use the short flight time to relax. To compound the situation, the non-flight travel time is generally stressful and not relaxing (as discussed below). Therefore, for the majority of the journey, the

traveller does not even gain the benefits associated with 'downtime' which allows the subconscious mind to work on problems and results in greater overall productivity (Csikszentmihalyi and Sawyer, 1995, cited in Holley *et al.*, n.d.).

In contrast, on a 4h40 train journey a dedicated traveller could work for 4h30 (allowing time to unpack and pack up). A more realistic journey would probably see the traveller using some of the time to relax. Even in this case, though, a rail traveller could accomplish over three hours of work and still have more than an hour to relax. And this time to relax would be proper downtime that allows the traveller to unwind and for their subconscious to work on problems, increasing overall productivity. The net result with rail is a loss of between ten minutes and one-and-a-half hours of working time, but in the latter case with time available for relaxing. Note that in the case of rail services with a longer journey time, the result is not additional lost work time but instead more time available to work on the train.

Figure 3. Lost working time when travelling between Glasgow/Edinburgh and London. The arrows show the minimum and maximum additional lost working time resulting from air travel. The air journey represents flying to Heathrow as this is the airport with the most flights from both Glasgow and Edinburgh.

As shown in *Figure 3*, this means that a single air journey results in an additional 60–212 minutes of lost working time compared with the equivalent rail journey. In the Scottish Executive (2007) travel survey cited in *Section 3*, respondents were specifically concerned about the total cost of a particular travel option, including cost due to lost working time. One respondent recognised the advantage of being able to work on the train, but another one viewed time on the train as unproductive. By shifting the latter view, trains will be seen to allow for greater productivity and minimise the cost due to lost working time.

6.4.4. Putting it all together

As Holley *et al.* (n.d.) note, the business world is no longer dominated by "clock-controlled time" characteristic of industrial activity. "Task-based time" is more prevalent, where an individual regards whether the time available is suitable not based simply on their location or the time of day, but on whether a particular task can be completed. Many attitudes to travel time are still stuck in the industrial mindset – travel is outwith the working day because it happens away from the 'place of work'. Yet when travelling by train, the journey can be a part of the working day, as business travellers are not bound to a particular place like a factory worker would be.

It is vital to shift perception so that business travellers see the train as a type of mobile office, a place that can be part of the working day. One way to shift the public to thinking about the task-based nature of working time would be to use publicity to show tasks that can be accomplished on the train but not on the aeroplane. In combination with public understanding of the full journey time and the extra lost working time associated with air travel, this gives a clear advantage to rail travel when considering which mode has the least impact on available working hours.

6.5. Well-being and health

6.5.1. Flying is stressful

In 2004, research from Airbus showed that airline passengers experience a real stress surge at arrival and check-in which is followed by a gradual rise until boarding, after which stress levels decline (Business Traveller, 2004). A more recent survey by American Express (2007) confirms this with a focus on business travellers. When flying, 43% of business travellers felt stress before reaching the airport and 74% experienced the most stress before even getting on the aeroplane. Almost all (95%) of respondents think that the stress associated with business travel is staying the same or increasing. These high levels of stress help explain why the Barclaycard (2006) survey found that the primary reason people do not enjoy travelling for business (cited by 58% of respondents) is because it is tiring and stressful.

Aside from the fact that high levels of stress are unpleasant, they impact on a person outside of the stressful situation. Studies have shown that "non-work" downtime is important for the well-being of employees. It results in better productivity at work and is also important for the "creativity" which is essential to knowledge work (Holley *et al.*, n.d.). If a traveller is experiencing high levels of stress, they are not experiencing this downtime which is so important for general productivity and creativity in their work. Rail travel can offer a much less stressful travel situation due to the lack of queues, security checks, or needing to arrive far in advance of the departure time. Once onboard, the extra space and ability to walk around adds to a more relaxing travel environment.

6.5.2. Air quality

The quality of air on an aeroplane is often quite low due to a significant amount of it being re-circulated. There is much anecdotal reference to the poor air quality inside aircraft (*e.g.* the "Air Travel Health News" website). To investigate frequent complaints, in 2002 the US National Academy of Sciences conducted research into the environment inside an aeroplane. They found several areas of concern. Airline ventilation standards for outside air per minute per occupant were less than one-half to two-thirds that recommended by the American Society of Heating, Refrigerating, and Air Conditioning Engineers. The air pressure standards were also found to be inadequate as at the required levels air may be too thin for those with heart and lung problems. And the researchers raised concerns about potentially excessive exposure to ozone and carbon monoxide as well as noting that lubricating oils, hydraulic fluids, and de-icing fluids often enter the air supply. Because of poor monitoring, definitive health effects resulting from exposure to these compounds could not be proved, but the researchers felt they were potential areas of concern (NAS, 2002).

In contrast, the air inside a train is similar to that in many 'normal' indoor environments. There are no problems with low pressure, dry air, or exposure to the compounds associated with air travel. This has two significant benefits: a much more comfortable travel environment and lower health risks from repeated travel.

6.6. Summary of rail advantages that should be emphasised

There are several existing advantages of rail travel that are not always consciously recognised by business travellers when making their travel decisions. Emphasising these points will help to change the general mindset and image of rail travel.

Context

(1) In London and Scotland, many businesses in the *public/voluntary services and business services sectors already use rail for business travel*, but not necessarily on long-distance routes.

(2) *Women* business travellers *have a strong preference for rail travel* over both driving and flying.

(3) *Overall, business travellers display a slight preference for rail travel* over flying.

Convenience and comfort

(1) *Rail's punctuality rates are over 20% higher* than airlines' on the Glasgow/Edinburgh to London routes.

(2) The convenience of *predictable, easily remembered, and frequent departure* times should be highlighted for routes that provide such a timetable. Convenient and frequent schedules are key factors in encouraging business travellers to switch to the train.

(3) Travelling by rail *does not involve spending time in queues before boarding or waiting around for luggage* upon arriving.

(4) When travelling on a flexible rail ticket it is possible to *simply show up for a different train than the one originally booked, if plans change*. Contacting the rail company first is not necessary.

(5) Rail travel provides a *high level of comfort*. It is important to continue marketing this feature of rail travel to firmly plant it in the minds of business travellers.

(6) Because train stations are located in city centres, rail travel provides the opportunity for socialising by *having a drink or meal with clients or colleagues* before catching the train back home.

Productivity

(1) Trains provide *tables, space to work with a laptop and briefcase, and power sockets* for charging laptops and phones.

(2) Only *a limited set of tasks can be worked on when travelling by aeroplane*, whereas the richer working environment of *a train allows for a much wider range of tasks* to be worked on.

(3) *Almost 60%* of business travellers already consider that they *make use of their rail journeys*.

(4) *First class rail passengers are more likely to feel they have made very worthwhile use of their time* compared to standard class passengers. This extra productivity could offset the higher price of a first class ticket.

(5) *Certain tasks can be completed more satisfactorily on the train* than in the office due to the lack of interruptions. Mobile workers have strategies to allocate appropriate activities to take advantage of the unique opportunity rail travel can provide.

(6) The fragmented nature of time when flying means that most of the travel time cannot be used for work. This results in the opportunity for *greater productivity when travelling by rail, as a single flight results in an additional 60–212 minutes of lost working time* compared with the equivalent rail journey.

(7) Unlike the non-flight portions of an air journey, the *non-working time on a train can be used to relax*, increasing overall productivity.

(8) Shift perception so that business travellers view the train as a mobile office, *rail journeys as part of the working day*.

(9) Publicity could *highlight work tasks that can be done on the train but not on an aeroplane*.

Well-being and health

(1) *Flying results in high levels of stress* and these levels of stress are staying the same or increasing. Trains can offer a comfortable, low-stress travel experience.

(2) High levels of *stress prevents air travel from providing effective downtime, which is necessary for an employee's productivity* and creativity when at work.

(3) Re-circulated air forms a large percentage of *air in aircraft* which *is dry, of excessively low pressure, and often contains contaminants*. This creates an uncomfortable atmosphere and has the potential to cause adverse health effects. In contrast, the atmosphere inside a train is 'normal' and comfortable.

7. POTENTIAL IMPROVEMENTS TO THE SERVICE OFFERING

7.1. Introduction to this section

Improving certain aspects of the rail service, will encourage more business travellers to take the train instead of flying. This section considers both aspects that should be improved and areas where there is an opportunity to build on existing advantages. As noted in *Section 2*, this report will not look at improvements requiring infrastructure changes. Rather, this section considers changes that could be implemented more easily and quickly.

7.2. Performance: punctuality and reliability

While on-time arrivals on the Glasgow/Edinburgh to London rail routes is already good and much better than the air routes, it could be higher still. For instance, at times train boarding and dispatch at intermediate stations can take several minutes which can contribute to late-running services. A greater sense of urgency and discipline on behalf of the staff may help to shorten this process. Both Virgin Trains and GNER have a goal of 90% punctuality in their passengers' charters, and they should seek to reach and even exceed this number on a consistent basis (GNER, 2006; Virgin Trains, 2003). Improving punctuality, maintaining it over the long term, and publicising the figures will attract business travellers.

7.3. Ticket booking

The breakdown of methods used to book business travel in the UK is shown in *Figure 4* based on results from Barclaycard (2006). There are a slightly different set of issues to consider with tickets self-booked online, tickets self-booked on a company's intranet, and those booked by travel agents (whether internal or external to a company). These cases are discussed separately below.

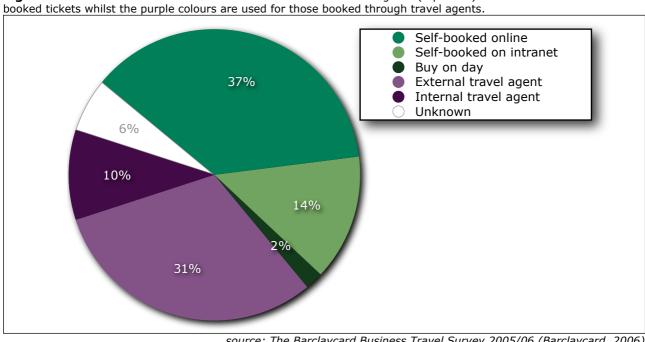**Figure 4. How business travellers book their tickets.** The green (top three) colours are used for self-booked tickets whilst the purple colours are used for those booked through travel agents.

source: The Barclaycard Business Travel Survey 2005/06 (Barclaycard, 2006)

7.3.1. Tickets self-booked online

It can be seen that the most popular method of booking business travel is self-booked online. In their survey, the British Chambers of Commerce (2006) summed up attitudes to rail as: "Trains running on time and a simpler tariff system are the main requirements". These two facts underscore the importance of providing an easy-to-use online rail booking system that provides a clear presentation of available tariffs. Earlier this year, Virgin Trains introduced a new ticket booking website that is a big improvement over the previous system in the ease of searching and simplifying the display of available fares. The National Rail Enquiries website has also had improvements including a simplified fare display. However, other websites are still awkward to use. Drawbacks include:

- It is necessary to create an account or log in just to see ticket prices

- Ticket prices are displayed in a complicated matrix, including fares that are inappropriate because less expensive ones with the same restrictions are available

- Multiple steps are necessary to buy a ticket after choosing one from the matrix – up to six screens are presented before arriving at the one to enter credit card details and actually buy the ticket

Unfortunately, while the National Rail Enquiries website (which is well known and used by travellers) doesn't have the above problems, it is not possible to buy tickets from the it. Once a fare is chosen, National Rail Enquiries displays a list of train company and travel agent websites but cannot successfully transfer the traveller's selection to these websites. So the traveller has to go through the whole search and selection process again, often using a more confusing site. Instead, the traveller should be taken directly to the check-out page on the corresponding website with their already-chosen services selected.

Thus, with certain key exceptions, booking train tickets online can be a confusing experience especially for those who have not done it before. Given the importance of online booking to the purchasing of business tickets, it is vital that the situation is improved[20]. And even with improved websites it is necessary to continually strive to be better. The number of business travellers booking their own tickets online has been increasing and this will likely continue (ABTN, 2007B). Furthermore, consideration needs to be given to sites other than those of Virgin Trains and GNER. For instance, research by Virgin Trains indicates that around 25% of business customers (the largest group) use TheTrainLine for journey planning (Virgin Trains, 2007C).

If necessary, rail companies or the Association of Train Operating Companies (ATOC) should conduct research and development to ensure that online rail ticket purchasing offers a best-of-class experience. In particular consideration should be given to providing e-ticketing options. In the Barclaycard (2006) survey, 27% of respondents stated that e-ticketing would encourage them to travel by rail more. Whilst some e-ticketing trials have been carried out, none have been conducted on the Glasgow/Edinburgh to London routes. And no e-ticketing solutions have been rolled out as a permanent, fully-integrated option for purchasing rail tickets.

7.3.2. Tickets self-booked on the company intranet

It can be seen that whilst the majority is carried out online, a significant portion of self-booking is done on company-provided intranet travel portals. Travel portals are sites on a

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20. Since this report was researched, the rail industry has continued to seek improvements on websites and as the report was being prepared for publication GNER also started rolling out a more user-friendly site.

company intranet that include travel policies and allow staff to book their own journeys, "secure in the knowledge that they will only be able to make purchases within the terms that the company has set down" (Brown, 2007). Furthermore, whether or not they are using a travel portal, almost two-thirds of travellers are given a company travel policy (Barclaycard, 2006).

Clearly, company travel policies can have a significant effect on the choices made by business travellers. It is important that rail operators work to ensure rail travel is given prominence in travel policies. The ability to book rail tickets through travel portals is also crucial, as 14% of all business tickets (and 26% of self-booked tickets) are purchased in this way.

7.3.3. Tickets booked by agents or administrative support

Whilst *Figure 4* shows that the majority of travel is self-booked, 41% is still booked through travel agents. Moreover, at individual institutions, the numbers can be quite different. For instance, at the Scottish Executive (which has a lot of Glasgow/Edinburgh to London travel) 66%–67% book travel through administrative support, 24%–32% book through the internal travel agent, and only 2%–9% order tickets themselves (Scottish Executive, 2007). Some of the administrative support-booked tickets will be done online (and the previous discussion applies to those tickets) but some will also be done through the internal travel agent.

Travel agents use global distribution systems (GDS) to search for and book airline tickets. Rail booking on popular GDSs is available through AccesRail which appears as an airline and where rail services throughout Britain are represented as flights. This system goes some way to showing rail options side-by-side with flights, though because of the longer running time (regardless of total journey time) trains "are rarely first on [availability] displays where we compete with air" (AccesRail, 2007). Additionally, the GDS provider Amadeus recently announced that they will improve the integration and availability of rail booking on their system (ABTN, 2007C). Rail operators should continue to work with the GDS companies to ensure that rail services are presented alongside air services without the agent specifically requesting rail. Additionally, consideration should be given to whether the GDS can use an accurate reflection of full journey time, based on the traveller's origin and destination. In this way, the short period of time in the air when flying (which is always the minority of a total air journey between Scotland and London) would not push rail options off the screen, and a more realistic comparison can be presented.

It is also worth investigating ways of engaging with training events for travel agents. For instance, the business travel news service ABTN has run training days in the past and plans to run more in the future due to their popularity (ABTN, 2007D). Getting involved in events like this where appropriate could be a good opportunity to discuss the benefits of rail with travel agents.

7.4. Productivity

As discussed in *Section 6*, rail travel already offers productivity benefits that air travel does not. However there are opportunities to increase this advantage further. This section considers both how the facilities for working can be improved and also how different approaches can be used when considering travel time.

7.4.1. Working environment

As Holley *et al.* (n.d.) note, work activities are not a series of unrelated items, they are an ensemble of "mutually interlocking tasks". An office environment provides flexibility to complete these tasks through access to documents, information, technology, colleagues, and knowledge of who to seek support from. When travelling, this flexibility is lost. Many locations in which mobile workers find themselves have inherent uncertainties and these impact on the

activities they will choose to do. For instance, the ability to send and receive emails is often not available (Brown and O'Hara, 2003; Holley *et al.*, n.d.; Perry *et al.*, 2001).

The flexibility to work when travelling by rail could be increased by providing WiFi internet access and consistently strong mobile phone signals throughout the journey. Currently, GNER offers WiFi on its trains, but Virgin Trains does not, although installation is progressing on a system to allow continuous, enhanced, reception for mobile devices on board Virgin Pendolino trains. In 2006, after a partial roll-out of WiFi, GNER already found that 22% of those who had switched from air to rail did so because of the WiFi facility (Silicon.com, 2006). Mobile phone reception on both operators can be weak during parts of the journey. By ensuring both of these facilities are a certainty, then the range of activities that can be completed whilst travelling by rail increases, and business travellers will start to associate rail travel with a flexible working environment. Barclaycard (2006) found that after power sockets[21], email access and WiFi hotspots were the most-used technologies when travelling, used by 40% and 29% of respondents. Whilst email access will be aided for some by strong mobile phone signals, WiFi will make it available to a wider range of business travellers (as any standard modern laptop can use the WiFi signal).

7.4.2. Perception of travel time

Over two thirds of respondents to a survey *did not agree* that "the only good thing about travelling is arriving at [their] destination" (Mokhtarian and Salomon, 2001 cited in Lyons and Urry, 2005). There is already an acknowledgement amongst a majority of the population that travel time itself can be beneficial. Jain and Lyons (n.d.) suggest exploiting the concept that travel time can be a gift by considering how the travel environment limits or promotes activities. This can be a useful way to target investment and marketing at improving the train as a place for work.

It is also worth considering how to shape the service so that trains come to be seen as "points of meeting and social engagements instead of just 'people movers'" (Lyons and Urry, 2005). The train can be seen not just as an opportunity for solitary work but as one where meetings can be conducted. And by reshaping travel time as an opportunity, travellers might also be more likely to plan how they will use their time in advance. Research has shown that those who plan before travelling are more likely to consider their travel time useful (Lyons *et al.*, n.d.).

7.5. Well-being and health

When planning improvements to their services, rail operators should consider how they can be designed around increasing rail travel's advantage in the areas of well-being and stress. The primary reason given by those who don't enjoy travelling is because it is tiring and stressful (Barclaycard, 2006). Being able to market ways in which rail companies are making travellers' lives less stressful and more comfortable can be a real competitive advantage.

Improvements should look at how to help business travellers feel more refreshed when they arrive at their destination. For instance, Virgin Trains already provides complimentary meals to its first class customers, and this includes fresh fruit. But there is scope for designing part of the menu specifically around refreshing and nutritious food, and customer satisfaction surveys have shown that business travellers feel that the quality of food, while very good, could be improved (Virgin Trains, 2007C). Making improvements would allow marketing around the theme of looking out for customers' well-being.

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21. Power sockets are already provided on all Virgin Trains and GNER services.

Another, bolder, move would be to introduce free massage for first class passengers. This is something that Eurostar provides in its first class lounge in London and Virgin Atlantic Airlines provides in business class on long distance flights. Providing massages on the train could be an iconic way to show the difference between the stress and hassle associated with flying versus the low-stress and refreshing nature of rail travel.

7.6. Targeting the service appropriately

7.6.1. Class of travel

The majority of business travel takes place in standard class. Amongst business travellers who fly, only 27% use a premium class of travel versus 43% who use economy and 30% who book on low-cost airlines. On the railways, 22% of business travellers throughout the country and 18%–24% of business travellers on Virgin Trains' West Coast Main Line routes use first class (Barclaycard, 2006; Virgin Trains, 2007C). These figures must be taken in context as the survey was about all types of business travel. Many flights within the UK do not offer a premium class of travel and on shorter rail journeys customers might have less of a desire to travel first class. Both of these factors will impact the results. A survey that only considered the Glasgow/Edinburgh to London rail routes might result in different figures. For instance, between November 2006 and January 2007 of the seven business travellers surveyed on the Glasgow to London west coast route, five were travelling first class (Virgin Trains, 2007C). However, this sample size is too small to draw any further conclusions and it is safe to say that a significant portion of business travel takes place in standard class on the routes considered by this report.

These figures show that to convince more business travellers to take the train, it is necessary to target those who travel in standard class as well as those travelling in first class. This will impact both on how services are marketed and how improvements to the standard class offering are designed. If only the first class rail services are targeted at business travellers, then a large section of the market will be left to the airlines.

There is also scope for targeting economy class business flyers with advance purchase first class rail tickets. Given that 73% of business travel is booked within two weeks and 38% is booked within one week of departure, most of these economy flyers will not be getting the lowest fares (Barclaycard, 2006). Switching to rail can be seen as a way to upgrade from the cramped environment of an aeroplane's economy class service to the luxury of a train's first class service, for a similar (or lower) price.

7.6.2. Departure times and reduced journey times

The proposed 2009 timetable changes for the west coast route between Glasgow and London were detailed in *Section 6*. They will result in a huge improvement on the current situation, however attempts should be made to improve the predictability of the services further. Specifically, the additional early evening London to Glasgow services should be scheduled to depart on the hour instead of three minutes before the hour. Consideration should also be given to scheduling the Glasgow to London trains to leave at half-past the hour instead of forty minutes past[22]. That way travellers would know that, regardless of the direction of travel, they can show up at the station for half-past the hour and catch a train. Changing the departure time of trains leaving Glasgow is arguably the less important suggestion as passengers will be in time for the services, even if they show up expecting a train at half-past the hour. Timetables are complex to work out, especially on a route as busy as the West Coast Main Line, so these adjustments may not be possible. However, since the 2009 timetable is not yet

22. As they depart very early, it is arguably not as important for the first train in either direction to follow the same scheduling pattern. Those catching these trains would likely check when the first train leaves instead of assuming trains are running regularly before 6:00.

finalised, serious consideration should be given to the advantages of improving the predictability of the timetable further, especially in light of the cited research on business travellers.

The other timetable alteration worth considering is to schedule certain rail services to directly compete with popular air services. These rail services could depart from Glasgow/Edinburgh at a similar time to when travellers would need to get to the airport for the flight. The service would then run fast down to London without stopping after leaving Scotland, resulting in a rail service that is closer to the total journey time of the average air journey. The existence of the many air services shows that substantial demand exists just from people travelling between Scotland and London without stopping at intermediate English locations. Return services that run fast from London without stopping before Scotland could then be run to compete with popular return flights. This has the potential to wipe out the marginal journey time difference with certain air routes.

7.6.3. Loyalty card improvements

Barclaycard (2006) found that 15% of business travellers say that frequent flyer schemes boost their enjoyment of travel. However, research has found that at least 91% of business travellers on the Virgin West Coast route are not members of the Virgin Trains frequent traveller scheme (Virgin Trains, 2007C). Further research needs to be undertaken to understand what would make frequent rail traveller schemes more likely to attract business travellers, including the possibility of a scheme that was valid across multiple long distance rail operators for added flexibility.

7.7. Incentives for environmentally-conscious businesses

More and more large companies are attempting to improve their 'green' credentials, and by doing so in a public way they likely hope to benefit from the positive publicity (BBC, 2004; Guardian, 2007A). As noted in *Section 4*, Virgin Trains has now measured the specific carbon emissions of the Glasgow to London service and this enables specific environmental claims to be made. One way to encourage more rail travel amongst businesses that want to publicly commit to environmentally-friendly practices would be to create incentives for them to buy into rail travel on a corporate basis. For instance, Virgin Trains and GNER could create a 'Green Star' certification scheme that awards businesses a certain number of stars based on the percentage of Scotland to London travel taken by rail. This would represent a specific amount of carbon savings over flying, and companies could publicly display their stars and carbon savings.

7.8. Summary of potential service improvements

Not all improvements to rail services require expensive infrastructure changes. What follows is a summary of improvements that could be made to the existing rail services which would help to attract more business travellers.

Performance: punctuality and reliability

(1)   Punctuality on the Glasgow/Edinburgh rail route is already good and much better than the airlines, but the train operators should *improve punctuality to 90% and above, maintain this over the long term, and publicise the figures*.

Ticket booking

(1)   While recognising the improvements made to key online ticket buying websites, *simplify the online ticket buying experience* on other important train company and travel agent websites, including better links from the National Rail Enquiries website. Self-booked online tickets account for 37% of business travel.

(2)   *Continue to improve online ticket booking* websites, including National Rail Enquiries and TheTrainLine. The number of business travellers self-booking online is increasing.

If necessary, research and development should be undertaken to *ensure online ticket buying is a best-of-class experience*.

(3) Consider *introducing comprehensive and fully-integrated e-ticketing* options for buying rail tickets.

(4) Work with businesses to *ensure rail is given prominence in company travel policies*.

(5) Work to *integrate rail booking facilities in companies' internal travel portals*.

(6) Ensure that *rail services are offered alongside air services on travel agents' GDSs* without needing to specifically search for rail journeys.

(7) Investigate *whether GDSs can more accurately calculate total air journey* time when ranking and comparing air and rail journey times.

Productivity

(1) *Provide WiFi internet access and consistently strong mobile phone signals* on all direct services between Glasgow/Edinburgh and London.

(2) Consider how rail travel limits or promotes activities and use this to *target investment and marketing so rail travel comes to be seen as an opportunity* to work and trains are seen as *points of meeting and social interaction*.

Well-being and health

(1) When planning *improvements*, consider how they can be *designed around increasing the well-being and health advantages* of rail travel.

(2) *Add menu items designed around refreshing and nutritious food* and market on the theme of looking out for customers' well-being.

(3) Investigate the feasibility of providing *free massages in first class* to highlight the low-stress and refreshing nature of rail travel compared with the hassle and stress of flying.

Targeting the service appropriately

(1) *Target business travellers who use standard class* to capture the largest segment of the business travel market. This should inform decisions when designing service improvements to standard class and also how the service is marketed.

(2) *Target advance first class rail tickets at* the large group of *economy class business flyers*. Given when most business travellers book their tickets, this would be an upgrade to the luxury of first class rail travel for a similar or lower price to flying economy.

(3) When devising timetables, attempt to *schedule trains to run at a regular, frequent interval and depart at easily remembered 'clockface' times*. Specifically for the 2009 London to Glasgow timetable, schedule the extra early evening services to leave on the hour instead of three minutes before.

(4) Consider scheduling *fast services that pick up in Scotland and run fast down to London without stopping, timetabled to directly compete with one or two popular air journeys*, with one or two complementary return journeys from London. This could remove the marginal total journey time advantage certain air routes have.

(5) Undertake research on how to *improve frequent rail traveller loyalty schemes to attract more business travellers*, including the possibility of a scheme that works amongst multiple long distance operators.

Incentives for environmentally-conscious businesses

(1) Encourage environmentally-conscious businesses to use rail by *creating incentives for businesses to buy into rail travel on a corporate basis*, such as a 'Green Star' scheme that awards stars based on the percentage of business travel a company uses rail for.

8. CONCLUSIONS

8.1. Setting an example

This report has looked at rail travel's competitiveness with air travel between Glasgow/Edinburgh and London. Rail travel can offer significant benefits, especially in key areas important to business travellers. However there are also some public misconceptions about rail travel that need to be challenged. One way both to highlight rail travel's advantages and to counter misconceptions would be for the main Scottish to London rail operators to work with a major organisation to switch a significant portion of their Glasgow/Edinburgh to London business travel from air to rail. The Scottish Government is an example of the type of organisation that could be targeted – they require frequent travel between Glasgow/Edinburgh and London, and staff currently feel flying is the assumed mode of travel on these routes (Scottish Executive, 2007). TRANS*form* Scotland has contacts with the Scottish Government and other organisations that could be useful to the rail operators in exploring an initiative such as this. The experience of an organisation making a significant switch to rail would provide concrete examples for other businesses and also show how to reconsider the role of travel and the opportunities it offers.

8.2. Summing it all up

When considering the issues most important to business travellers, this report has found that rail travel between Glasgow/Edinburgh and London is competitive with air travel on each issue. Multiple surveys have shown that punctuality and reliability are the most important factors for business travellers. This is an area where rail travel has a significant advantage over air on the Glasgow/Edinburgh to London routes – 84%–87% of trains arrive on-time versus only 69%–72% of aeroplanes. However, there is often a perception amongst travellers that trains are "unreliable" (in the sense that they often arrive late). This report noted other areas where public perception is out of step with the figures. It is vital that rail companies work to shift the public's perception so that it reflects the reality of the situation, especially on an issue as crucial as punctuality.

In certain cases the rail operators needs to change the public's perspective on an issue. One example of this is the issue of travel time between Glasgow/Edinburgh and London. While the total journey time when flying will normally be shorter than when taking the train, rail travel allows for greater productivity as the amount of lost working time is greater when flying. If businesses approach travel by considering the impact on the working day rather than as a journey time minimisation exercise, rail is extremely competitive.

On several issues, rail travel is already competitive but improvements will widen the gap and make rail's advantages harder to ignore. For instance, travelling by rail provides a much better working environment and a solid block of time compared with the cramped space and fragmented bits of time when travelling by air. By ensuring comprehensive and consistent WiFi and mobile phone signal availability, the rail companies could throw this into stark relief. Instead of losing four to five hours travelling, the rail journey could be marketed as spending four to five hours in a mobile office. Publicity should aim to ensure travellers' consider the rail journey an opportunity, rather than a burden.

Finally, there are some areas of rail travel that need to be improved. For instance, the ticket booking process can be time consuming and complicated. Ticketing needs to be better integrated with the channels businesses use to book tickets, and the online booking experience for individuals needs to be smoother and more straightforward. Virgin Trains has made noticeable

progress in the area of online booking, but this needs to be adopted by more ticket booking sites and continual improvement is necessary.

When considering these recommendations, it is worth recognising that in certain areas it could be beneficial for the rail companies operating the Glasgow/Edinburgh to London routes to work together. Some of the communications messages such as aiming to change public perception, and improvements in areas such as ticketing and loyalty cards will promote rail in general as an alternative to air. Joining together to attract business travellers from the airlines could provide more effective competition.

While rail travel is acknowledged to be a more environmental choice than air travel, in the past it has been seen as involving trade-offs. This report has found that rail travel between Glasgow/Edinburgh and London is in fact competitive with air travel when looked at from a business perspective, offering significant advantages in certain areas. Some improvements could be made to improve rail's advantages and other improvements could be made to make planning rail travel easier and more attractive for business travellers. Certain inaccurate negative public perceptions also need to be challenged. But rail travel already provides a much more punctual service, the opportunity for greater overall productivity, and better comfort than air travel. With relatively inexpensive service improvements, and by further refining and targeting publicity, rail's advantages over air could become even more difficult to ignore.

9. KEY RECOMMENDATIONS

9.1. Communication messages

Below are the main messages this report recommends should be communicated to businesses. These messages would be a useful way to promote rail and make it more attractive to business travellers. Note that these facts and figures relate specifically to the routes between Glasgow/Edinburgh and London as set out in the scope of this report above (*Section 2*):

9.1.1. Performance: punctuality and reliability

(1) **Rail travel is more punctual than air travel.** Rail's on-time arrival rate is more than 21%–22% better than airlines' between Glasgow/Edinburgh and London. On these routes, 84%–87% of rail services arrive on-time compared with only 69%–72% of air services. Punctuality and reliability tend to be the most important factors in business travel decisions. Given this, it is vital to change public perception by publicising rail's high level of performance on the Glasgow/Edinburgh–London routes.

(2) **Rail punctuality is improving, air travel's punctuality is not.** The four-year trend for the Glasgow/Edinburgh to London routes shows the performance of rail is increasing but for airlines it is holding steady or decreasing.

9.1.2. Cost

(1) **Rail travel offers value for money.** Target publicity about low-fare rail tickets at businesses and ensure enough of these tickets are available so that business travellers feel there is substance behind the publicity. It is important to shift the perception that rail travel is expensive – the average return price paid on Virgin Trains between Glasgow and London being £62 for standard class and £129 for first class.

(2) **Flexible rail tickets are much cheaper than flexible air tickets.** Fully flexible tickets are significantly less expensive on the train.

9.1.3. Travel time and productivity

(1) **Taking the train means less lost working time.** A single flight results in an additional 60–212 minutes of lost working time. The fragmented nature of time when flying means that rail travel allows for greater productivity.

(2) **Trains provide a more productive working environment.** Working time on a train can be used much more effectively because of the richer working environment compared with the narrower range of tasks that can be worked on when flying. Trains provide tables, space to work with a laptop and briefcase, and power sockets for charging laptops and phones. Publicity could highlight work tasks that can be done on the train but not on an aeroplane.

(3) **Use the train as a mobile office.** Shift perceptions so that business travellers see the train as a 'mobile office' and view rail journeys as part of the working day. Rail travel should come to be seen as an opportunity to work, and trains should be seen as places that can provide space for meetings and social interaction.

(4) **For increased productivity, businesses should book first-class.** First class rail passengers are more likely to feel they have made very worthwhile use of their time compared to standard class passengers.

(5) **The train is also a good place to relax, before and after work.** The non-working time on a train can be used to relax, increasing overall productivity and creativity when at work. High levels of stress when travelling by air prevent it from providing effective downtime for the majority of the journey.

9.1.4. Convenience and comfort

(1) **A high level of comfort.** It is important that the high level of comfort provided by trains is widely recognised by business travellers.

(2) **No queueing or waiting for luggage.** Business travellers have stated that the need to queue and wait around are serious irritations when flying.

(3) **No need to change reservations with a flexible rail ticket.** With a flexible rail ticket it is possible to simply show up for a different train than the one originally booked without first contacting the rail company, which is not the case when travelling on a flexible air ticket.

(4) **Predictable, easily remembered, and frequent departures.** Where routes provide a timetable with these features, their convenience should be highlighted.

(5) **Social and networking advantages.** Due to the city centre locations of railway stations, rail travel provides the opportunity for socialising by having a drink or meal with clients or colleagues before catching the train back home.

9.1.5. Well-being and health

(1) **Quality food.** Publicise the quality catering offered on Glasgow/Edinburgh–London rail journeys.

(2) **Low stress.** Compared to the high levels of stress involved with flying, rail travel can offer a comfortable, low-stress travel experience.

(3) **Fresh air.** The re-circulated air in aircraft is often of low quality and can contain contaminants such as oils and high levels of carbon monoxide. In contrast, the atmosphere inside a train is 'normal' and comfortable.

9.2. Improvements to existing services

Various improvements would either increase rail's competitiveness in certain areas, or would make the process of booking and travelling by rail easier to do. The recommended improvements are as follows:

9.2.1. Performance: punctuality and reliability

(1) **Improve punctuality, maintain it, and publicise the figures.** Poor airline punctuality undermines the raw time advantage of air travel, underscoring the importance of increasing performance to 90% and above on the railways.

(2) **Ensure travellers know that they can claim compensation.** Rail companies offer compensation when rail services are more than an hour late, in contrast to the airlines who do not pay any compensation for delayed arrivals.

9.2.2. Cost

(1) **Present a straightforward fare structure.** Businesses find rail fare structures complicated and this likely leads to the perception amongst a significant percentage that rail travel is expensive.

9.2.3. Travel time and productivity

(1) **Increase the speed and frequency of rail services when possible.** This is important to keep in mind when devising new timetables.

(2) **Compete directly with one or two popular air journeys.** Consider scheduling fast services that pick up in Scotland and run fast down to London without stopping, timetabled appropriately, with one or two complementary return journeys from London.

(3) **Provide WiFi internet access and consistently strong mobile phone signals.** These features should be present on all services between Glasgow/Edinburgh and London.

(4) **Focus investment and marketing on trains as a 'mobile office'.** Consideration of how rail travel currently limits or promotes business activities should be used to target investment and marketing appropriately.

9.2.4. Convenience and comfort

(1) **Create regular, frequent, easily remembered timetables.** When devising timetables, schedule trains to run at a regular, frequent interval and depart at easily remembered times. For instance, for the 2009 London to Glasgow timetable, schedule the extra early evening services to leave on the hour instead of three minutes before.

9.2.5. Ticket booking

(1) **Create a best-of-class online ticket buying experience.** While recognising the improvements made to key ticket booking websites, simplify the online ticket buying experience on the websites of other relevant train companies and general rail ticketing agents, including better links from the National Rail Enquires website. Continue to improve these online ticket booking websites, ensuring the experience is as straightforward as possible and best-of-class, including options such as e-ticketing.

(2) **Integrate rail with corporate travel policies and portals.** Work with companies to ensure that rail is given prominence in travel policies and that rail booking facilities are fully integrated in internal travel portals.

(3) **Properly integrate rail services with travel agent global distribution systems (GDSs).** Ensure that rail services are offered alongside air services without extra effort. Further, investigate whether GDSs can more accurately calculate full travel time when ranking and comparing air and rail journey times.

9.2.6. Well-being and health

(1) **Add refreshing and nutritious food.** Design menu items around these qualities and market on the theme of looking out for customers' well-being.

(2) **Increase rail travel's well-being and health advantages.** Consider how any service improvements can be designed around strengthening these existing advantages.

9.2.7. Targeting the service

(1) **Target business travellers who use standard class.** Consider this group, both when designing service improvements and marketing, in order to capture the largest segment of the business travel market.

(2) **Target economy class flyers with advance first class rail tickets.** Because of when most business travellers book their tickets, this would provide the luxury of first class rail travel for a similar or lower price to flying economy.

(3) **Research improvements to frequent traveller schemes.** Investigate how to improve frequent rail traveller loyalty schemes to attract more business travellers, including the possibility of a scheme that works amongst multiple long distance operators.

9.3. New services to offer

The following two new service suggestions could create iconic examples of the benefits of rail travel. They could provide genuine benefits and raise rail travel's profile:

(1) **Free massage in first class.** Investigate the feasibility of providing massages to highlight the low-stress and refreshing nature of rail travel compared with the hassle and stress of flying.

(2) **Create corporate incentives to travel by rail.** For instance, environmentally conscious businesses could be encouraged to use rail by creating a 'Green Star' scheme. Green stars would be awarded based on the percentage of business travel a company carries out by rail.

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APPENDIX A
CALCULATIONS OF FULL JOURNEY TIMES FOR FLIGHTS

In all cases, origin and destination are both city centre locations to provide comparison with rail travel. Online check-in prior to leaving is assumed as this would likely be the most convenient option for a business traveller. In calculating the time to get to Glasgow, Prestwick, and Edinburgh airports public transport was used as the journey times are the same as, or faster, than driving to the airports when parking is taken into account.

Table 4. Glasgow to London via Heathrow.

Journey Section	Minutes	Source
City Centre → Glasgow Airport	35	GlasgowFlyer.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Glasgow → Heathrow	80	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Heathrow Express	10	Heathrow Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Heathrow → Paddington	15	Heathrow Express website
Total	**222**	**3 hours, 42 minutes**

Table 5. Glasgow to London via Gatwick.

Journey Section	Minutes	Source
City Centre → Glasgow Airport	35	GlasgowFlyer.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Glasgow → Gatwick	90	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Gatwick Express	13	Gatwick Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Gatwick → Victoria	30	Gatwick Express website
Total	**250**	**4 hours, 10 minutes**

Table 6. Glasgow to London City.

Journey Section	Minutes	Source
City Centre → Glasgow Airport	35	GlasgowFlyer.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Glasgow → London City	100	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk out of the airport	10	Estimate
Total	**220**	**3 hours, 40 minutes**

Table 7. Glasgow to London via Prestwick and Stansted.

Journey Section	Minutes	Source
Glasgow City Centre → Prestwick Airport	60	Rail journey of 45 minutes (National Rail Enquiries) plus 15 minutes (estimate) waiting for the train & walking to the terminal
Through security to gate	50	RyanAir check-in closing time (Independent, 2007)
Prestwick → Stansted	75	RyanAir website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Stansted Express	5	Based on information from Stansted Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Stansted → Liverpool St	46	Stansted Express website
Total	**268**	**4 hours, 28 minutes**

Table 8. Edinburgh to London via Heathrow.

Journey Section	Minutes	Source
City Centre → Edinburgh Airport	35	FlyByBus.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Edinburgh → Heathrow	80	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Heathrow Express	10	Heathrow Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Heathrow → Paddington	15	Heathrow Express website
Total	**222**	**3 hours, 42 minutes**

Table 9. Edinburgh to London via Gatwick.

Journey Section	Minutes	Source
City Centre → Edinburgh Airport	35	FlyByBus.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Edinburgh → Gatwick	85	British Airways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to Gatwick Express	13	Gatwick Express website
Wait for next train	7	Median wait, as trains run every 15 minutes
Gatwick → Victoria	30	Gatwick Express website
Total	**245**	**4 hours, 5 minutes**

Table 10. Edinburgh to London City.

Journey Section	Minutes	Source
City Centre → Edinburgh Airport	35	FlyByBus.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Edinburgh → London City	85	ScotAirways website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk out of the airport	10	Estimate
Total	**205**	**3 hours, 25 minutes**

Table 11. Edinburgh to London via Luton.

Journey Section	Minutes	Source
City Centre → Edinburgh Airport	35	FlyByBus.com express shuttle, allowing 10 minutes to wait for the bus and then walk to the terminal at the other end
Through security to gate	50	EasyJet minimum (Independent, 2007) plus 10 minute buffer
Edinburgh → Luton	75	EasyJet website
Disembark & walk to main terminal area	25	Estimated time for getting aeroplane doors open, disembarking, and walking to the main terminal area
Walk to shuttle bus	10	Estimate
Shuttle to Luton Parkway	12	Luton airport website, plus an estimated waiting time for the bus
Wait for next train	7	Estimate based on frequency of trains (National Rail Enquiries)
Luton Pkwy → King's Cross	46	National Rail Enquiries
Total	**253**	**4 hours, 13 minutes**

About this report

The high volume of business travel between Glasgow/Edinburgh and London is largely carried out by air instead of rail. This is of concern as air travel produces far higher climate change emissions than rail travel. In other countries with similar distances between major cities, rail accounts for a majority of the market, and so a modal shift from air to rail for business travellers on the Glasgow/Edinburgh routes is possible.

However, environmental concerns alone are unlikely to convince all businesses to change their travel habits. Air travel is often assumed to hold an advantage over rail because of shorter travel time. But minimising travel time is a narrow aim: a more useful goal when travelling is to maximise productivity.

This report considers whether rail is competitive with air regarding key aspects of business travel, what communication messages should be used to emphasise rail's advantages to the business community, and where service improvements could make rail more competitive.

About TRANSform Scotland

TRANSform Scotland is the national sustainable transport campaign. We campaign for a more sensible transport system, one less dependent on unsustainable modes such as the car, the plane and road freight, and more reliant on sustainable modes like walking, cycling, public transport and freight by rail or sea.

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