UK AIRPORT SURFACE ACCESS STRATEGIES: THE ROLE OF TARGETS AND INSTRUMENTS.

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Abstract

Airport surface access is increasingly seen as a major problem not only in the UK but worldwide given its impact in terms of both traffic congestion and environmental degradation. In 1998 the UK Government published a White Paper entitled 'A New Deal for Transport' (DETR, 1998) in which it introduced the idea of Airport Transport Forums to be established by UK airports in order to set targets for the reduction in the proportion of journeys to/from the airport made by car based modes and instruments for achieving those targets. In this paper the authors critically assess the targets developed for achieving the objective of a greater use of public transport in making journeys to airports. Evidence is presented as to how UK airports have developed targets, strategies and instruments in order to respond to the Government's initiative.

Keywords: Airports; Surface access
Topic Area: A3 Airports and Aviation

1. Introduction

Airline travel worldwide has doubled over the last fifteen years and is forecast to double again over the next twenty years and as a result there will continue to be an increase in surface access to airports, most notably in terms of the private car (ACI 2003). One of the major consequences of this growth has been congestion on the road network in and around airports and a deterioration in the quality of the environment.

In terms of the mode split figures for both employees and passengers the private car dominates. For smaller airports the dominance of the private car can be partially explained by a lack of critical mass in terms of traffic flows that can sustain competitive public transport links.

In response to this, in the UK, airports have been tasked by the Government with both setting targets in terms of achieving a mode shift from the private car to public transport, (for both passengers and employees), and with selecting policy instruments (both market and non-market based) capable of achieving these targets. Both targets and instruments are incorporated in an Airport Surface Access Strategy (ASAS) which each airport in the UK is responsible for producing.

The aim of this paper is to examine the targets and instruments utilised by UK airports in order to address their surface access problem. To achieve this aim a comparative analysis of both UK airport ASAS's and the academic literature relating to target setting has been undertaken. In addition, this has been verified by a number of informal interviews with UK airport staff responsible for implementing surface access policy.

In order to assess Airport Surface Access strategies a sample of 13 strategies (from a total population of 27), stratified with respect to airport size, were collected in 2002. In addition, one airport claimed that their strategy was still being written and 4 airports

claimed that they had no knowledge of Surface Access Strategies. The airport strategies reviewed as part of this paper are given in Table 1.

The ASAS's reveal a diverse range of practice largely depending on airport size and there is great variation in the level of detail, rigour and sophistication. In the main most were produced in house, however several airports have used consultants to produce their ASAS.

2. Background

Airport trips can be segmented into three categories each with differing characteristics, namely: workers, passengers and meeter-greeters (Ashford *et al* 1997, ATAG, 1993, Humphreys, 1987, Kazda and Caves, 2000). Relative to literature that considers passenger access, there has been only a limited body of work that considers employee trips and their characteristics (Ashford *et al*, 1997, Bonnett, 1980, Vandermeer 2001).

The proportion of trips generated by employees is typically one third of the total passenger trips but this depends upon the number of associated companies on the airport site, whether or not there are offices for a based airline and the impact of aircraft related businesses such as maintenance facilities (Ashford *et al* 1997, Gosling 1996,). All of these can raise the number of employees on site. In terms of employee trips an airport that generates 1 million passenger access trips per annum might generate around 520,000 employee trips and an airport with 5 million passengers might generate 2,6 million employee trips per annum - calculated by number of employees x 2 daily trips x 260 days (5 day week). This gives an approximate sense of the size and significance of employee trips relative to passenger trips.

As airport traffic has increased, the impact on the surrounding road and rail network has led Governments to attempt to make airports partly responsible for the traffic their activities generate. In recent years airport expansion plans have only been approved subject to implementation of measures to encourage greater use of public transport or the provision of improved road access. Examples where this has been the case include: Heathrow Terminal 5, Manchester 2nd runway, Schiphol, Oslo Guardemon, Charles de Gaulle and Frankfurt airports. (ATAG 1998, Caves and Gosling 1999, Graham, 2001, Vandemeer 2001).

In charging the 27 airports in England and Wales which have above 1000 or more air transport movements per annum to establish an Airport Transport Forum, the UK government is seeking to encourage a *partnership* between airport operators, transport operators, local authorities, local businesses and other interested parties.

In the DTLRs guidance on ATFs (1999) it states that Forums should achieve the aims through the following objectives, namely to:

- draw up and agree challenging short and long term *targets* for decreasing the proportion of journeys to the airport made by the private car at the same time as increasing the share of journeys made by other modes;
- devise a strategy for achieving those targets, through managing traffic on local and trunk roads accessing airports in addition to promoting alternatives to the private car;
- Oversee strategy implementation.

The importance of ATF's and ASAS's was also emphasised as an essential part of a future, long term, sustainable National Airports policy (DETR, 2000). Whilst the government has not been prescriptive in terms of the specific measures that Forums should adopt in terms of achieving their targets, they have stressed that their strategies need to be consistent with the Government's White Paper on Integrated Transport Policy (1998). A number of policy instruments are proffered by the government for consideration when dealing with the problem (DETR 1999).

The characteristics of a good ASAS, as stated by the Government, include:

- A clear analysis of existing surface access arrangements, identifying constraints and opportunities to secure modal shift;
- A mix of short term actions and longer term proposals and policy measures to tackle problems and deliver targets;
- Clear indication that airport, ATF members and, where appropriate, local economic and regeneration agencies are signed up to delivering the strategy;
- A set of performance indicators and other output measures which can be used to assess whether the strategy is delivering its stated objectives and targets.

The strategies reveal a diverse range of practice largely depending on airport size. There is great variation in the level of detail, rigour and sophistication with respect to the ASAS's. In the main most were produced in house, however several airports have used consultants to produce their ASAS.

The mode split figures for both passengers and employees are given in Tables 1 and 2. It can be seen that the private car dominates the airport access mode used by both passengers and employees. For smaller airports the dominance of the private car can be partially explained by a lack of critical mass in terms of traffic flows that can sustain competitive public transport links. The issue is highlighted by Sheffield City who in their ASAS point out that, "Significant funding would be needed to subsidise such an introduction (of a second bus service) at today's level of passenger and staffing numbers." Equally, given the financial remit of airports in the UK to make money for their shareholders, public transport links are unlikely to be provided unless there is a clear economic rationale. In short, the larger the airport the wider the range of public transport services that might be viable but the larger the traffic problems are likely to be.

Table 1 Passenger airport surface access mode split

Airport	Terminal Passengers 2001	Year of data	Car %	Rail and Bus %	Taxi %
Heathrow	60 453 702	2001	35.6 + (3.2 hire car)	13.0 (bus & coach) 13.1 (tube) 8.4 (rail)	26.6
Gatwick	31 096 563	1999	67.5 (private car, hire car or taxi)	32*	
Manchester	18 565 735	1996/7	53 + (3% car hire)	6 (rail) 3 (bus & coach) 11 (courtesy bus)	24
Stansted	13 653 739	1996	56	19 (rail) 14 (bus & coach)	11 (taxi & hire car)
Birmingham	7 492 221	N/a	70	10 (rail) 3 (bus)	17
London Luton	6 540 198	Jan-Mar 2001	62	13 (bus & coach) 17 (rail)	8
Newcastle	3 206 070	1994	71 (3)	3 (bus & coach) 4 (metro)	19
Bristol	2 673 229	1999	73 + (3 hire car)	5 (bus)	16
East Midlands	2 379 573	1999	N/a	2*	56 (taxi or were given a lift)
Liverpool	1 980 021	1999	64.8 + 3.4 (car hire)	4.5 (bus & coach)	9.1 (taxi) 17.9 (mini-cab)
London City	1 618 833	1996	23	1 (bus) 1 (metro) Dockland Light Rail n/a	56
Leeds Bradford	1 523 554	1992/ 93	78	2 (bus & coach)	20
Sheffield City	32 956	1996	61 + (2 hire car)	2 (bus)	32 (taxi) 3 (chauffeur driven)

Notes: * Denotes public transport.
Source: Airport Surface Access Strategies

Table 2 Employee airport surface access mode split

Airport	Year of data	Car %	Rail and Bus %	Taxi %	Walking and Cycling %	Motor-cycle %
Heathrow	1999	72 (car driver) 4 (car pax) 10 (public bus or coach) 1 (works bus)	6 (underground)	1	1 (cycle) 1 (walk)	2
Gatwick	1997	78.3 (car driver) 4.8 (car pax)	8.6 (rail) 2.7 (bus & coach)	1.4	1 (cycle) 0.6 (walk)	0.8
Manchester	1996	82.7 (car alone) 5.9 (driver and 1 or more pax) 2.5 (car pax)	1.3 (rail) 3.7 (bus)	1.1 (taxi)	1.8 (cycle)	1
Stansted	1997	93 (car driver) 3 (car passenger)	2*	-	-	-
Birmingham	N/a	86	9 (rail) 4 (bus)	1	-	-
London Luton	2001	82	3 (rail) 3 (bus)	2	6 (walk & cycle)	1
Newcastle	2000	80	6 (metro) 3 (bus/metro)	3	4	-
Bristol	1999	85 (car alone) 11 (car shared)	0 (bus)	-	2 (cycle) 1 (walk)	1
East Midlands	1999	84 (car alone) 9.8 (driver with pax) 4.4 (car pax)	3.5 (bus)	0.1	1.5 (cycle) 0.1 (walk)	2.4
Liverpool	2000	63 (on own) 10 (with others)	1 (train) 8 (bus)	4	5 (cycle) 8 (walk)	1
London City	1999	66 (travel alone) 8 (car share)	17 (bus) 4 (airport shuttle bus)	-	-	-
Leeds Bradford		No information apparent from the ASAS				
Sheffield City	2000	95				

Notes: * Denotes public transport.
Source: Airport Surface Access Strategies

In order to formulate strategy for the future it appears essential that an understanding of current travel behaviour is developed and ASAS's appear to have stimulated this process. Information made available by two of the larger airports in the sample implied that data gathering and surveys to understand travel behaviour had become more detailed, more frequent and sophisticated. One manager reported that "…the Government agenda to improve surface access has led to more sophisticated travel data collection and a boost to initiatives for trying to reduce the number of vehicle trips".

The private car share of the modal split for employees is considerably higher than for passengers, possibly due to most having a car available, starting their trip from a home address and many public transport links failing to serve the full range of employment

locations dispersed around an airport. Potential to improve the employee share by public transport should be seen as a priority area since these trips do not involve the carriage of baggage and to a degree are perceived to be more susceptible to the control and influence of airport management.

On closer examination the airport management-employee relationship is complex with only 7-10% of employees directly employed by the airport management, the rest are working for third party contractors (Graham, 2001). This means that to achieve mode shift the airport can not simply dictate terms but has to work in partnership with the variety of companies on site. Take Manchester airport, over 100 different companies on its site are employing around 15,500 people.

Instruments

Strategies represent a multi-faceted package of measures to be implemented together in order to achieve the desired modal shift and the targets set. Strategies include major initiatives such as the construction of new infrastructure through to improvements in facilities for cycling. In summary the main strategies are:

Short term:

- A closer analysis of the current situation to understand travel patterns and behaviour
- Improved public transport bus services in terms of frequencies and new routes
- Provision of facilities to enable cycle access
- Encourage walking
- Raising of car parking fees
- Examination and implementation of car sharing schemes
- Improved Public Transport marketing
- Through ticketing and staff concessions, often in the form of travelcards
- Video Conferencing

Long term:

Development of rail links

- Improve rail, bus and coach services
- Consider busway development
- Development of ground transport interchanges
- Get employers to sign up to Travel Plans and to implement

As for these instruments, airports have primarily adopted non-market based 'softer' options when dealing with the problem. In the medium to long-term it would appear that more draconian market-based measures will become a necessity if airports are to seriously tackle the problem of surface access congestion and environmental degradation. In addition, airports need to continue to develop partnerships with privately owned public transport operators over which they have no direct control.

Larger airports tend to include a broader range of approaches to try and tackle surface access modal shift issues. Birmingham, Manchester, Heathrow, Gatwick, Stansted and Luton, the large-medium sized airports are all talking of themselves as developing into transport interchanges. These interchanges will act as hub points and will bring together urban bus and rail services at the airport providing a single facility where passengers can change between different modes. Ultimately this will allow passengers and employees to access the airport but will also act as an interchange point for non airport related traffic. This role requires the construction of new infrastructure and the re-routing of some public transport services.

Perhaps the most significant of these strategies is at Manchester airport with the expansion of its rail facility into a Ground Transport Interchange. This should contribute to the airport achieving its target of 25% of trips to the airport by public transport by 2005 and should improve the viability of the public transport network.

The rationale for these developments is to concentrate public transport activity on the airport site and in doing so improve the critical mass on more routes, in order to improve the market viability of a greater range of public transport services to/from the airport. Is the ground interchange concept the way to reduce vehicle trips to airports? What will the consequences be of raising the number of total trips in order to reduce the percentage by car?

The research suggests that Airport Transport Forum's (ATFs), bodies responsible for producing ASAS's, are an important mechanism for bringing stakeholders together in order to co-ordinate and promote airport ground access. Whilst recognising the different contexts of other countries a significant question arising from the UK case is: What formal mechanisms are required to facilitate co-ordination and collaboration among the many different stakeholder groups to improve ground access and are they in place? Even at airports where ground access comprises entirely public bodies, there could be benefit from a degree of co-ordination. Should airports be responsible for leading such initiatives?

Problems identified in this paper associated with reducing the number of vehicle trips by employees such as high staff turnover, the third party nature of airport employment and the dispersed nature of trips are likely to apply in a wider context. Awareness of these issues by planners should be considered carefully when formulating airport employee based travel initiatives.

The range of strategies produced and their diversity reflect the multi-faceted nature of the airport access problem and the possible solutions, yet within the UK there appears to be little sharing of best practices between Airport Transport Forums. A mechanism for dissemination of good practice across the UK could provide forums with an insight into the processes of implementing various initiatives. An issue for Governments is how can lessons learnt from airport access strategies and their implementation in one part of the country be transferred and shared with airports elsewhere. Given the increasing ground access problem, if traffic forecasts are realised, then perhaps there is a need for the Airports Council International to lead the facilitation of knowledge transfer and application on an international basis so that airside capacity enhancements are complemented by appropriate ground access improvements.

3. Target setting

Targets can have an important part to play in creating effective management control within an organisation. They can be used by external (governmental or regulatory) bodies to influence the behaviour of organisations. Marsden (2004) concludes that '*the use of targets as a means to drive and reward performance is a relatively new discipline with little behavioural understanding. However, what evidence there is suggests that targets do have an impact on decision makers and that having the right targets is therefore important.* (Marsden 2004, p.1).Button 1999 argues that improved quantitative information is required to better manage air transport and also to consider the need for better performance indicators for '*the environmental damage associated with air transport beyond the issues of noise nuisance*' (Button, 1999, p.85). There is a need to measure what is important to measure not what is easy to measure. Simplistic targets such as a percentage using public transport may be attractive (and indeed well meaning) but may not fully encapsulate the desired outcomes of the measure.

The rigour with which targets are set is also an important issue. It can be argued that allowing an individual or organisation to set their own targets frequently results in an element of slack being included in any targets set. However involving the organisation may allow it to set more realistic targets that it feels it has some 'ownership' of with the targets increasing motivation to achieve the targets. Had the targets been externally set and seen as unrealistic/unachievable then such motivation may be diminished. Likerman (1993) stressed the need to '*establish realistic levels of attainment before the first targets are set.'*

Performance measurement is not a passive activity as is elegantly expressed in the so-called performance measurement paradigm *"what gets measured gets done"* It must be realised that when performance measures are established and targets set people will work towards achieving them. This is fine when the targets are congruent with the desired outcomes. There have been examples of the dysfunctional affects that can arise from a determination to meet the target. There is a risk of having a narrow focus on meeting a target and not the desired outcomes. Target setting must therefore be viewed from a behavioural perspective. There is evidence that as well as any positive benefits that may arise from establishing performance indicators it may encourage the following managerial behaviour characterised by Smith (1993) each of which has occurred or has the potential to occur in the context of surface access indicators:

(a) ***Tunnel Vision****: concentration on areas…to the exclusion of other important areas;*

(b) ***Sub optimisation****: the pursuit …* [of] narrow objectives at the expense of strategic coordination;

(c) ***Myopia:*** *concentration on short term issues*;

(d) ***Convergence:*** *An emphasis on not being exposed as an outlier… rather than a desire to be outstanding*;

(e) ***Ossification:*** A disinclination to experiment with new or innovative methods;

(f) ***Gaming:*** *altering behaviour so as to obtain strategic advantage*;

(g) ***Misrepresentation***: creative accounting and fraud.

Source: Adapted from Smith 1993

4. Findings and discussion

Targets

In terms of the targets set for achieving an improved public transport share of the modal split, certain airports have required little change in travel behaviour whilst others appear to be over optimistic (See Table 3).

The targets are set internally, there is a lack of common methodology in terms of monitoring and appraisal and thus there is limited comparability across airports. Questions raised include: Are the targets selected the right ones? and Is percentage by public transport used, because it is easy to measure compared to the total number of vehicle trips by different modes and the number of people delivered?

Such a measure would expose the problem of empty taxis circulating; the full implications of kiss and fly and the issue of courtesy buses from remote car parks carrying very few people per load. One airport manager reported that the airport site already had automatic traffic counters at the main site entrances. The measure of the percentage of passengers by public transport misses important detail in terms of the number of access trips. "The available evidence suggests that increasing public mode use to airports above 30% may be quite challenging".

Table 3 Selected ASAS targets

Airport	Targets
Heathrow	• Double number of employees from 1999 figure of 1.3% cycling to work at Heathrow by end of 2002 (current target) • Achieve 40% of air passengers travelling to/from airport by public transport by end of 2007, with longer term aim of 50% (new target) • Increase number of car sharers to 2000, with 65% actively sharing cars at least once a week by 2003 (new target).
Gatwick	• The proportion of non-transfer pax choosing to use public transport for journeys to/from Gatwick by 2008 (a target of 40%) • The proportion of airport staff living in the Crawley/Horley area choosing to use local bus services following the successful implementation of the Fastway system (a target of 12%). • At least double the number of home to work trips made by bicycle/on foot by 2008
Manchester	• To actively encourage the use of public transport for journeys to/from the Airport, increasing use from 10% (1992) to 25% by 2005 and reduce dependence on the private car as a means of Airport access.
Stansted	• Reduce staff car drivers as a percentage of the workforce from 93% to 88% by 2003. • In 1997 3% of staff arrived as car passengers and we aim to increase this to 25% by 2004 • More than double the number of staff cycling to work by the end of 2003.
Birmingham	• The Airport shall use all reasonable endeavours to achieve a public transport modal share of 20% by 31 December 2005 or when the number of air pax is at a rate of 10 million passengers per annum, which ever occurs later.
London Luton	• An increase in the proportion of air passengers travelling to/from airport by public transport from 23% to 30% • Increase in proportion of employees travelling to/from the airport by foot and bicycle from 4% to 5% • Increase in proportion of employees travelling to/from the airport by public transport from 4% to 6%
Newcastle	• No targets appear to be given
Bristol	• The number of car journeys to the airport expressed as a proportion of the total vehicle journeys to the airport will decrease from an estimated 93.1% (1999/00) to 91.3% in (2005/6) • Increasing the Bristol Flyer passengers from 3% (1999) to 5% by 2005/6. • Car sharing will increase to 15% of staff • Cycling will increase to 3% of staff
East Midlands	• Increase by 5 percentage points the proportion of journeys to/from the Airport, made by site employees, using a mode other than as a single occupant in a car. This increase, bringing the total for these modal choices to 26%, to be achieved by the end of 2005 • See 5% of pax and staff incorporating rail transport as part of their journey to East Midlands Airport within 5 years of the Midland Mainline East Midlands Parkway station opening
Leeds Bradford	• Achieve a public transport mode share (excluding taxis) of say 10% by 2011, a five fold increase from 1992/3 levels
Liverpool	• The Airport Company will use reasonable endeavours to achieve the following: • Employees: 63% single private car use (2000), 53% (2005) • Passengers: 4.5% final mode public transport use (2000), 10% (2005)
London City	• Rather general, such as, To encourage more local bus services to divert into LCA or to stop at the bus stop on the airport boundary, through discussions with local bus companies
Sheffield City	• Reduction in total car usage (private/rental car and taxis) as a means of surface access to the Airport from a combined 1999 figure of 98% of total access to 90% by 2006.

Source: Individual ASAS

It should be remembered that the indicators are not always congruent with the desired outcomes. If for example the desired outcome is to reduce congestion then the number of cars arriving at peak hours may be a key component of this. However with the growth in absolute number of passengers and a non uniform arrival pattern the percentage of people using public transport overall will not be 100% correlated to congestion. In particular while relative measures (such as percentages) can be a useful way of conveying information they

can also be dysfunctional - for example where passenger numbers are increasing a fall in the relative (percentage) number of those arriving by cars may obscure an increase in the absolute number arriving by cars.

Perhaps an additional metric for airports to reduce the ratio of cars to passengers airport access/egress trips is needed to incentivise airports to reduce the number of cars per person trip, a measure that unlike existing percentage figures would capture the benefits of car sharing. The measure would also detect the number of circulatory movements by taxi, drop off vehicles and shuttle buses, serious contributors to access traffic and all currently undetected in the measure of percentage of people arriving by public transport. This might incentivise airport management to promote long stay parking for which 2 vehicle trips are made as opposed to the practice of taxi or kiss and ride access where 4 vehicle trips are made to deliver a passenger to/from the airport. The practical problem with this target is the complexity and cost of measuring it, however costs should be weighed up in relation to management needing improved information with which to manage for the benefit of the airport and the surface access system, since existing data has a number of weaknesses, this might undermine particular strategies to improve access and may hide the causes of congestion. It might be that a vehicle trips to/from the airport in relation to number of people accessing the airport site would expose the need to manage circulating traffic and could lead to measures such as charging per vehicle to access the airport site.

If targets are set relative to existing performance (and if they were in absolute terms not percentage) they would at least represent an improvement on the existing status quo…a step in the right direction. Allowing airports to set their own targets may also be more cunning than first thought since the resultant targets may be more realistic and the airports may feel more obligated to achieve them. This does not rule out external comparison (or even dreaded league tables!) of the standards actually achieved (not targets!). A further issue that is not made clear is the one of who counts in the percentage of trips by public transport? If non-airport related trips to a transport interchange at an airport count in the statistics for raising mode share then is this sending out a contradictory message to airport planners?

Finally, how achievable are the targets as seen in Table 3 and what are the consequences for airports of not meeting them? On first sight given the forecast increase in airport related trips from employees and passengers the numbers required to switch to public transport appear to be optimistic in a number of cases. In other cases the targets set have already been achieved. For example, in the London Luton ASAS it states in terms of progress towards short-term targets listed in the Table have already been achieved. For passenger data the CAA's National programme of surveys is used as a common basis from which to derive passenger modal split figures, however the employee modal split is calculated by each airport, often with varying methodologies and typically low response rates. In one ASAS it was stated that an Employee Survey was circulated to all companies on the site. A response rate of about 15% was achieved and on this basis employee access mode share was derived. Interviews with three airport managers unearthed a modal split figure based on less than a 5% response rate to an employee survey. There is a need therefore to question the robustness of some of the figures. At another airport a Travel to Work Survey was distributed to over 4000 employees with a response rate of 19.3%, again an indication of low response rate.

The targets in most cases are monitored by the airport themselves based on samples derived by each airport, there appears to be no single methodology for all the airports and so the figures that are presented may or may not be comparable depending on the sampling methodology, size and frequency used by each airport. In cases where airports have to

achieve particular targets as part of planning agreements then monitoring and transparency of the figures are necessary in order for the results to be considered credible.

Evidence from one of the airports revealed the possible dysfunctional side effects of performance measures. Targets to achieve a certain percentage of surface access trips to the airport by public transport modes had led to the relocation of the car parks to a site outside the airport boundary. Passengers park and catch a courtesy bus into the terminal area and these trips are counted as public transport modes. This is clearly a way of meeting the targets without achieving the operational shift in activity that the performance measure was supposed to induce – an increase in the level of public transport access to airports. Performance measures need monitoring to check against these effects so that any issues can be identified and the performance measures adapted accordingly.

In light of this discussion it is interesting to reflect on the issues raised here in comparison to the problems public sector control identified by Smith (1993) not least the fourth item!

1. The difficulty in securing a consensuses as to what the output and objectives …should be;
2. The difficulty in measuring such output and eventual outcome of public sector intervention;
3. The difficulty of interpreting any output and outcome measures that can be developed;
4. The difficulty of persuading citizens to take any interest in performance measures and their interpretation.

(Adapted from Smith, 1993 p.135)

6. Conclusion

A diverse range of instruments were found to be in use to address the surface access problem across the range of airport sizes and contexts. Two common themes emerged. Firstly, airports were keen to promote and engage in the use of softer measures that relied on incentives such as discounts for public transport and improved public transport services as opposed to hard measures such as raising parking charges, charging employees directly to park or imposing restrictions on where and how often.

Secondly, airports had introduced a number of small ‘quick win’ measures such as the introduction of cycling facilities in order to have an immediate impact.

In terms of targets it is clearly better for airports to be setting targets than not, however there needs to be a rigorous collection of data in support of this objective plus transparency in how the figures are calculated. There is also a need for a common methodology in terms of target setting between airports and a harmonisation of data collection for both passenger and employee data. The additional costs of collecting the data may be outweighed by the improved quality of information for both Government, airport management and stakeholders in the surrounding community to monitor and measure the surface access situation at each airport. The introduction of a metric to measure passengers/employees per vehicle trip onto the airport site may be more difficult to measure but would offer a measure that more accurately captures airport access behaviour, with resultant targets that could incentivise car sharing and monitor the airport access problem by allowing limits on the absolute number of trips to be made. This would replace the percentage of trips by public transport measure that is easy to measure but has a number of flaws, not least that the total number of trips to the airport site can rise while the percentage of trips to the airport could simultaneously expand, a likely scenario given the 4-5% annual growth forecast for air transport.

Targets can be made obsolete at short notice, particularly at the airports with less than 2 million passengers per annum due to the rapid growth stimulated by low cost carrier services. In order to maintain meaningful and useful targets feedback mechanisms and frequently updating of targets in conjunction with major stakeholders is needed and could be delivered by the Air Transport Forums.

The major challenge for airports and all stakeholders that provide airport access services is to overcome the difficulty of persuading those making access trips to take any interest in the access performance measures or their interpretation.

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