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Department of Design, Development, Environment and Materials

Faculty of Maths Computing and Technology

**Using innovation and business
models to analyse the organisational
embedding of travel plans**

A thesis submitted to the Open University for the degree of

Doctor of Philosophy

By

Helen Roby BSc (Hons) Open, Diploma in Design and Innovation

January 2010

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Abstract

Workplace travel planning began in the UK in the early 1990s. With over ten years of experience in travel plans in the UK, this thesis demonstrates how they have developed, matured and the extent to which they have become embedded into the organisations working practices as a business management tool.

This work is distinct from previous research, as it concentrates on the business perspective of travel plans, through a series of in depth interviews within organisations. These interviews were analysed using innovation and business models, such as elements of Rogers' (2003) *Diffusion of Innovations* and Mintzberg's (1983) *Structure in Fives, Designing Effective Organisations*, to explore the impact of the characteristics and structure of an organisation on the embedding of a travel plan.

This thesis identified factors that have helped to organisationally embed travel plans. A key finding was to show that the motivations for a travel plan change as it matures, from those of external regulation through the planning process, to internal goals such as corporate responsibility and the environment, business growth and human resources issues. This research has shown the importance of linking travel plans to these organisational goals in the embedding process. However, successful embedding is not easy. A travel plan can either remain siloed within an estates function or become so widely dispersed that the benefits are poorly visible. In either case the travel plan runs the risk of being marginalised or lost. The research has also shown that this process of embedding is reliant on the adaptation of the travel plan to match the culture and working practices within an organisation, and that this process of adaptation can be dependent on the position of the travel planner within a strategic area of the organisation.

It is concluded that travel planning policy is too focussed on the early stages of adoption and not enough on growing and maturing travel plans, with the result that they are too narrow, and unlikely to yield the business benefits that will secure their long term future.

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My appreciation also goes out to the travel planners who gave their time to take part in the two surveys. Particular thanks are reserved for the case study interviewees, especially the travel planners, who gave up their time to be interviewed and help to arrange interviews across the organisation.

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Outcomes of Research

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Roby H, 2010, Workplace Travel Plans: Past, Present and Future, *Journal of Transport Geography*, Volume 1, Issue 18, pages 23-30, 10.1016/j.jtrangeo.2008.11.010.

Roby H, 2008, Viewpoint, Policy maker see travel plans as a 'green' tool but do employers see them in the same way?, *Local Transport Today*, No. 498, 11-24 July, page 18

Roby H, 2008, Travel plans dancing to a different tune, *Smartmoves*, Issue 5, page 14, DfT, London

Presentations

Roby H 2010, Applying Business Studies Methods to Transport Research, *UTSG Annual Conference*, Plymouth University, January

Roby H, 2009, The Death of the Travel Plan?, *Loughborough University*, Lunch and Lecture, May

Roby H, 2009, Which Way Forward for Travel Plans?, *UWE, Centre for Transport and Society*, March

Roby H, 2009, The Development of Workplace Travel Plans, *UTSG Annual Conference*, UCL London, January

Roby H, 2008, Workplace Travel Plans, How to Keep Them Going, *ACT/Travelwise Autumn Conference*, Birmingham, November

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Outcomes of Research

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A.

Chapter One

1 Introduction

1.1 Background

Workplace travel planning began in the UK in the early 1990s. With over ten years of experience in workplace travel plans in the UK, this thesis was conceived as a way to understand how these travel plans had developed, matured and the extent to which they had become embedded into the organisations daily working practices.

Since travel plans were first introduced to this country concerns have continued to grow about global warming, as well as about local air quality. Commuting and business travel were the largest emitters of carbon for all modes of passenger transport between 2002/2006, with commuting accounting for 24% and business travel 13% (Department for Transport, 2008a, pages 3-6).

Congestion has also continued to increase as economies have grown, leading to a desire to decouple the growth in traffic volumes from economic growth, the topic of the *Eddington Transport Study* (Eddington, 2006). The journey to work and business travel accounted for 39% of all miles travelled by car in Britain in 2005 (Department for Transport, 2006e), mainly at the busiest times of the day.

With commuting contributing substantially to both carbon emissions and congestion, the notion developed that the generators of congestion, such as employers, should take responsibility and manage the trips made to and from the site; hence the workplace travel plan. Of course business could argue that it is the responsibility of government to supply a transport network to support economic growth, but as Chapter 2 will show, it is now realised that increasing supply to match demand is not a feasible option. Traffic volumes increase to match the additional supply and there are physical, social and environmental limits to the extent to which supply can be increased.

Chapter 1

This led to the concept of managing demand within the existing network, Transport Demand Management (TDM), of which travel plans are one element.

This outline would suggest that travel plans are transport management tools. This is the case, but this thesis will show that to business, they have the potential to be much more. They have the potential to become business management tools that offer a range of benefits, including cost savings, improved work-life balance and recruitment and retention opportunities. It is the understanding of whether a travel plan can migrate from an externally-driven transport management tool to an internally-justified business management tool that is a major theme of this thesis.

1.2 The aims and objectives of the research

Existing research has already been undertaken into travel planning to determine the impact on vehicle numbers and to develop best practice guidance (Cairns et al., 2004a, Department for Transport, 2005b, Department for Transport, 2005c, Taylor, 2007). This existing research has concentrated on the early stages of adoption of travel plans and best practice in initiating and gaining acceptance from management within the organisation. This work is distinct from previous research as it concentrates on how travel plans have been sustained and embedded as part of the daily operations of business. The aim of the thesis is to answer the research question,

What are the factors that have increased the depth of a travel plan within an organisation and so helped to embed it within the company, thus leading to long term sustainability?

This will be achieved by completing the following objectives,

- Determining how the motivations for a travel plan within business develop as it matures
- Identifying what processes a travel plan goes through as it matures
- Identifying how a travel plan is perceived by the wider organisation beyond that of the travel planner

Chapter 1

- Identifying what the benefits of a travel plan are perceived to be to the wider organisation
- Assessing the impact of organisational factors, such as the structure and culture, on the embedding and development of a travel plan.

1.3 The research approach

The research for the thesis was undertaken in two ways. Initially a survey using semi-structured telephone interviews was used. This was to determine the motivations for travel plans when they were first implemented, and what they are perceived to be now and in the future. This was followed up by a further online survey a year later, to determine whether the subsequent global financial crisis and rising oil prices were affecting travel plans. These surveys were then followed by a series of case studies using in depth interviews, in all but one case with private businesses.

The data gathering and analysis of the case studies draws upon elements of business studies. The thesis includes primarily two elements of Rogers' *Diffusion of Innovations* (Rogers, 2003), particularly *The Innovation Process in Organisations* and the five *Attributes of Innovations*, relative advantage, compatibility, observability, trialability and complexity (Rogers, 2003). The innovation process was used to explore how the travel plan matured and began to become organisationally embedded. A key finding from the use of this model was the importance of refreshing and adapting the travel plan to the changing needs of the organisation.

The attributes were used as a framework to disaggregate the data from the case study interviews. Analysing the data in this way highlighted the importance of two of the attributes, *relative advantage* and *compatibility*. It also emphasised the paucity of data to support the business case for travel plans. Most data referred to the advantages of introducing smarter working practices, such as homeworking and the use of virtual technologies to communicate, thus reducing the need to travel, and indirectly achieving the aims of travel plan to manage the commute.

Chapter 1

The analysis of the case study data also stressed the importance of the structure of the organisation and the position of the travel planner within this structure. To explore this element of the research facets of organisational theory were used, particularly those that looked at the types of organisations and the effect that this had on the structure.

1.4 Content Guide

Section 1 covers the literature review; beginning with Chapter 2, a review of the development of transport policy and how the concept of TDM and travel plans have emerged within transport policy. Chapter 3 moves on to review the literature specifically related to travel plans, and Chapters 4 and 5 focus on a review of the research methods that have been used previously and those that could be used in this thesis, explaining the reasons for rejecting or choosing each method.

Section 2 is a short section to explain how the telephone and online surveys were undertaken and to present the results of these surveys.

Section 3 sets the scene for the case studies. It begins by explaining how the case studies were conducted, the problems encountered and how they were overcome. It then moves on to explain the context for the case studies, giving background information about the organisations.

Section 4 is the longest section, where the analysis and results of the case studies are given. It begins by presenting the views of the travel planners on where they considered their travel plan was positioned on the innovation process and then goes on to analyse the interview data through the *Attributes of an innovation*.

Section 5 contains the concluding chapters. Firstly, there is a review of how this thesis contributes to the literature and what it has achieved, explaining how the aims and objectives have been met. It then goes on to discuss the appropriateness of innovation theory and business studies in travel

Chapter 1

plan research and concludes with addressing the question that this research raises; which way forward for travel plans?

The thesis is structured into five main sections, illustrated in Table 1-1

	Chapter one	Introduction	
Literature review	Chapter two	Transport policy and the role of 'smart measures'	Section 1
	Chapter three	The development of travel plans	
	Chapter four	Methods – Diffusion of Innovations and Organisational Theory	
	Chapter five	Research Methods	
Survey methods and results	Chapter six	The survey	Section 2
Setting the scene for the case studies	Chapter seven	Overview of case study interviews	Section 3
	Chapter eight	Case study context	
Case study analysis	Chapter nine	Analysis using Rogers' Innovation Theory	Section 4
	Chapter ten	The attribute; Relative advantage	
	Chapter eleven	The attribute; Compatibility	
	Chapter twelve	The attributes; Observability, trialability and observability	
Conclusions	Chapter thirteen	Review of innovation theory as an analysis framework	Section 5
	Chapter fourteen	Implications for workplace travel plan practice	

Table 1-1: Structure of thesis

Chapter two

2 Literature Review: Transport policy and the role of ‘smart measures’

2.1 Introduction

This chapter looks at the literature that charts the development of transport policy within the UK by developing both a narrative and commentary of the literature. It begins by exploring the historical development of UK transport policy in the 1960s, as car use and ownership became more prevalent. To manage this growth in car use, the solutions were considered to be road building programmes and modifying settlement design to accommodate mass car use, as described in Colin Buchanan’s seminal report *Traffic in Towns* (Buchanan et al., 1963). As this chapter will show, congestion continued to grow and road building was unable to keep pace. There was a growing acceptance that an alternative approach was needed. The alternative was to manage demand rather than increase supply, which formed the core of the next influential report in transport policy, *Transport: The New Realism*, (Goodwin et al., 1991). This led to the concept of transport demand management (TDM), and later to smart choices, of which travel planning is one form. Finally, the chapter will look at transport policy now and what the role for travel planning is within current policy.

2.2 Historical development of UK transport policy

The literature review starts with Colin Buchanan’s report *Traffic in Towns*, (Buchanan et al., 1963). This report is seen to have shaped the road network, urban design and the development of the processes of transport planning. The report could be considered to be largely responsible for the transport planning paradigm of ‘predict and provide’, where traffic numbers were predicted and the road network was developed to support these predictions.

Chapter 2

When the Buchanan Report was written, it was felt that the 'impending motor age' was still at a comparatively early stage, although the expectation was that car ownership would soon be available to the majority of families. The study was to bring together '... the planning and location of buildings and the management of traffic' (The Steering Group, 1963, comment 4), as illustrated in Figure 2-1.

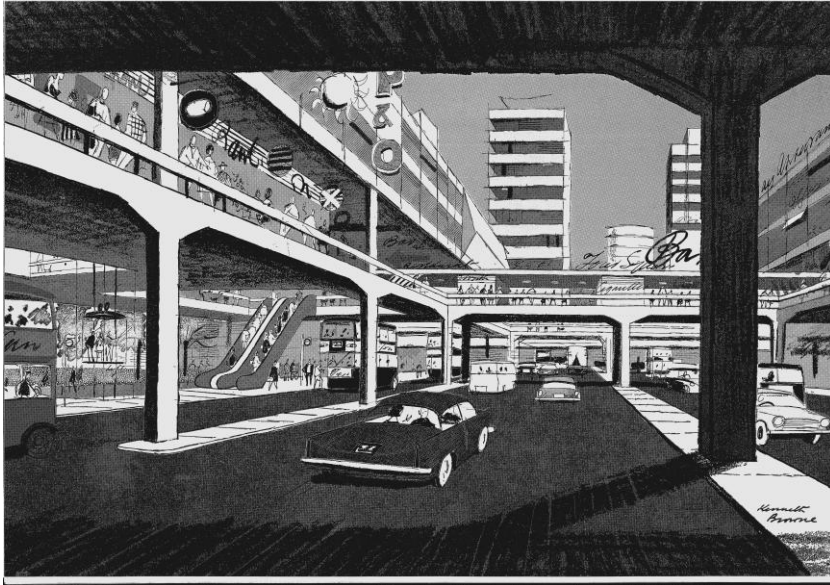


Figure 2-1: A traffic facilitating city redevelopment illustration from *Traffic in Towns* (Buchanan et al., 1963, p 143)

It was already understood that congestion was jeopardising the well-being of people in towns and having an effect on the efficiency of many activities. Small-scale improvements to roads were felt to be insufficient to alleviate the problems of congestion, as no sooner than they were completed than increased traffic would negate the effects of the improvements. Buchanan suggests that the scale of road building needed was enormous as urban areas were already struggling with the present traffic flows, but even with a large road building strategy it would take a long time to catch up with the rapidly growing volumes of traffic. Therefore, deliberate constraint of traffic would be needed until such time as the road network could cope, (perhaps an early acceptance that demand management was necessary) (Buchanan et al., 1963).

Chapter 2

Though the Buchanan report has been credited with the paradigm of 'predict and provide', the policy was actually evident from the late 1950s (Goodwin, 2004), which was when motorway building began. However, it was not until the 1979-1983 Thatcher era, that a greater use of road construction to ease congestion, remove through traffic and/ or improve industrial areas was heralded. A doubling of spending between 1978/79 and 1982/83 on new road construction and widening of existing roads, was justified by the contribution that motor transport would make to national economic competitiveness. At the same time public transport was treated as an anachronism and was increasingly sidelined, and privatisation was seen as a way to remove public transport from the transport policy agenda (Vigar, 2002).

The 'predict and provide' approach of addressing congestion is based on large construction projects, which need both the political and financial backing of government. Conceptually this is an easy solution. The roads are congested, therefore there is too much demand for the available road supply and the supply needs to be increased. The alternative of managing demand was seen in the UK as unpalatable and politically hard to implement, but this was not the case in the US, where another set of circumstances led to demand management emerging.

2.3 The development of transport demand management (TDM) in UK transport policy

TDM first appeared in the US in the 1970s as part of urban transportation policy at both the federal and local levels, as a way to manage increasing demand for existing urban transport systems without the need to build more capacity. This was accompanied by the introduction of federal and state laws to reduce the use of single occupant vehicles, in response to the oil supply disruptions of the 1970s and growing concerns about air quality leading to the *Clean Air Act* (Meyer, 1999).

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However, it was not until the 1980s after a change in opinion towards demand management led to its appearance in the UK. There was growing public concern about large road building programmes, which attracted opposition from protest groups. At the same time in the professional field, there was acceptance and evidence that road building would not be able to keep pace with growing traffic volumes, and so would be unable to meet the challenge of providing mobility and relieve congestion. This concern was confirmed by the publication of the National Road Traffic Forecasts (NRTF) in April 1989, which revised traffic forecasts to a considerably higher level than earlier expectations (Goodwin et al., 1991). However, initially the Department of Transport's reaction to the higher traffic forecasts was to try to obtain more money to build roads, but rapidly it was realised that this was unrealistic, particularly in the light of the economic recession of the 1990s, which resulted spending cuts for capital projects. In fact the 1989 White Paper '*Roads to Prosperity*' (Department of Transport, 1989) was the last time that transport policy included building roads to meet the demand (Goodwin, 2004).

The NTRF in 1989 were seen as being a 'watershed' or policy window to a shift in paradigm away from road construction to demand management. Economically, (particularly during a recession), the country was unable to finance the vast road building programme needed, socially, there were limits in the available land space, and practically construction lead times would be too long to keep pace with the increase in traffic numbers, so a new policy was needed. This was the catalyst for the academic report *Transport: The New Realism*, (Goodwin et al., 1991) commissioned by the Trustees of the Rees Jeffreys Road Fund from the Transport Studies Unit, University of Oxford. This was the first time that network expansion was no longer considered the only solution to congestion. New transport planning techniques were developed, and for the first time treated as a package, rather than individual measures (Vigar, 2002). These measures included the use of traffic restraint and calming, along with public transport and market mechanisms such as road pricing, and a greater emphasis on land use planning (Goodwin et al., 1991).

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The shift in paradigm from 'predict and provide' was developed in the academic field through reports such as New Realism, to what Sue Owens describes as 'predict and prevent' (Owens, 1995). However, it took time for this change in approach to materialise in government policy, even with further reports such as that of the *Standing Advisory Committee on Trunk Roads Assessment* (SACTRA, 1994). This reported that road construction in the presence of congestion would most likely lead to an increase in the volume of traffic (SACTRA, 1994). Terry suggests that the turning point for the government away from 'predict and provide' was in 1994, when Brian Mawhinney witnessed the eviction of protestors from the M11 construction site, one of a number of large road developments driven through in spite of strong protests (Terry, 2004). These concerns about the local environment were matched by global concerns for climate change. Reports such as *Transport and the Environment* (Royal Commission on Environmental Pollution, 2004) was one of many highlighting transport's contribution to climate change.

Finally, the government responded to the SACTRA report and the public opposition to the road building programme with the 1995 '*Trunk Roads Review*' (Department of Transport, 1995). Within this report the emphasis moved away from building more roads to making better use of the existing roads. This was followed in 1996 by the transport Green Paper, *Transport: the Way Forward* (Department of Transport, 1996), that recognised the need to tackle traffic growth through demand management.

With the change in government to Labour in 1997, there was a further shift towards TDM. A new transport white paper was written, *A New Deal for Transport: Better for Everyone* (DETR, 1998a), in which TDM and an integrated transport system were central to transport policy, to support sustainable development and to address the concerns that emerged in the late 1980s and early 1990s about climate change and local air quality problems. The White Paper promoted alternatives to car use and reduced the money available for new road schemes (Terry, 2004), thus taking up the themes of the *New Realism*. These themes were further developed in the Transport

Act 2000 (Her Majesties Government, 2000), which extended powers to local authorities to levy workplace parking and congestion charges. Although *A New Deal for Transport* advocated the new paradigm of TDM, the trunk road infrastructure was not addressed until later in 1998 in *A New Deal for Trunk Roads* (DETR, 1998b). Cairns describes this as the ‘formal demise of predict and provide’. The report allocated a much reduced budget for capital projects of only £1.4 billion, compared to the long-term budget of £6 billion in 1997, and £24 billion in 1994 (Cairns, 1998).

However, in the autumn of 2000, the shift towards TDM faced a major setback. Part of TDM included pricing mechanisms such as the fuel duty or tax escalator, which raises fuel tax annually in real terms. A rapid rise in oil prices coupled with the fuel tax escalator, led to public outcry and direct action by drivers of commercial vehicles, the ‘fuel-tax protests’, which nearly brought essential services in the UK to a standstill (BBC News, 2008b). Although the fuel protestors were small in number, their support was considerable, and the motoring majority managed to influence government policy and the fuel tax escalator was abandoned (Glaister, 2002), and was not re-introduced until September 2009. It was also notable that the ten year transport plan, *Transport 2010* (Department for Transport, 2000), shifted the emphasis away from TDM back to capital spending on road schemes (Vigar, 2002). Although the concept was that any capacity enhancements, such as the widening of the M1, should be locked-in by pricing or other measures, for example high occupancy vehicle lanes, but in practice these have not been used.

2.3.1 The development of ‘soft’ measures

The two white papers *A New Deal for Transport* and *A New Deal for Trunk Roads*, not only saw a change in the transport planning paradigm away from ‘predict and provide’ towards TDM, but they also demonstrated a change in the process of transport planning to a less mechanistic and more dispersed approach, by devolving the control of the transport network to the local authorities and the regions. *A New Deal for Transport* highlights that change does not just happen from above, but behaviour change also occurs from the bottom up. It points out that individuals

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must share responsibility for their travel choices, facilitated by information, better alternatives and demand management (DETR, 1998a). The government begins to see its role changing to one of offering advice and guidance, where it will 'provide advice and guidance, and disseminate the principles of good practice that emerge from our traffic management research programme' (DETR, 1998a, page 53). The concept of demand management was further developed in *A New Deal for Transport*, which included for the first time marketing and information initiatives that were targeting individuals and organisations. This new type of measure as part of TDM saw the development of 'soft measures' (Cairns et al., 2004a).

The DfT report *Smarter Choices – Changing the Way We Travel*, (Cairns et al., 2004a) explored the concept and potential of 'soft' measures to reduce car usage. 'Soft' measures or as they have become known, smart choices, are defined as those that give information about more benign or efficient ways of travelling, where initiatives address psychological motivations for travel choice, with an emphasis on management and marketing rather than operations and investment (Cairns et al., 2004a). Cairns, whilst accepting that there is no simple definition, develops this definition further in a journal article, to include '...improving the *quality* of alternatives to the car'; '...influencing people's knowledge and perceptions of these alternatives' and '...providing entirely new opportunities or alternative ways of doing things' (Cairns, 2004). This is quite different to what was originally conceived as TDM in the *New Realism* report, which suggested the use of road pricing, traffic calming, land use planning and parking restrictions to manage traffic demand. These types of demand management measures, along with physical improvements to the transport infrastructure are described in the *Smarter Choices* report as 'hard' measures.

The *Smarter Choices* report outlines the range of smart choices or 'soft' measures, and the potential to reduce car usage, but what is important to note is that smart choices are delivery mechanisms to help reduce traffic levels, rather than a transport instrument in their own right.

The soft measures or delivery mechanisms outlined in the report include travel awareness

campaigns, public transport information and marketing; car clubs and car sharing schemes; teleworking, teleconferencing and home shopping. Workplace, school and personalised travel plans are also classified as 'soft' delivery mechanisms, which comprise a number of the other delivery mechanisms, such as awareness campaigns, information and marketing, car clubs, car sharing, teleworking and teleconferencing. As well as being considered 'soft' measures, all these mechanisms are also small and dispersed in nature (Cairns et al., 2004a).

2.3.2 Defining TDM and smart choices

UK transport policy can be divided into two main areas; 'hard' infrastructure measures which broadly represent the paradigm of 'predict and provide', to change the transport infrastructure and design of settlements to accommodate vehicle growth, and TDM. However, the definition of TDM is more complex. A review of the literature produces a wide range of definitions for TDM. These definitions include encouraging modal shift, reducing the negative impact of the car, reducing demand for the car, encouraging more efficient use of the transport system, reducing congestion and encouraging behaviour change of the individual. The one definition that possibly best describes these concepts is Meyer's;

"Transportation demand management (TDM) is any action or set of actions aimed at influencing people's travel behaviour in such a way that alternative mobility options are presented and/or congestion is reduced" (Meyer, 1999).

The key point about TDM is to influence 'people's travel behaviour' and manage demand in contrast to 'predict and provide' which aims to accommodate traffic growth by increasing supply. Within TDM there is no one solution to congestion, but a range or combination of solutions. The objectives of TDM, unlike 'predict and provide' also tend to go beyond that of reducing congestion. Meyer suggested that TDM could also provide alternatives to large-scale infrastructure projects, so in effect a cost saving measure; reduce fuel consumption, (which he

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saw in terms of improving security in the face of fuel supply disruptions); improving air quality and reinforcing the concern for land policy and urban densification (Meyer, 1999). Sakano adds reducing pollution, improving safety, reducing vehicle miles and temporal peaks in car demand to the objectives (Sakano et al., 2001).

To address this wide range of objectives there is an equally wide range of measures that include fiscal instruments, such as congestion or road user charging to help disperse peak period congestion, fuel tax, and car parking charges, such as the *Workplace Parking Levy* in Nottingham (Nottingham City Council, date not stated). The need to travel can be reduced through better land use planning or substituting journeys with virtual technologies, as well as alternative working patterns. Finally, at the softer end of the range, the measures may include the provision of information about the alternatives to car use. This range of measures could be broadly summarised into four categories;

- i. Infrastructure – the reallocation of roadspace, traffic calming and enhancing public transport
- ii. Pricing mechanisms such as congestion charging, fuel duty, parking charges and tax concessions for ‘green’ modes
- iii. Regulation – speed limits and planning law including parking standards
- iv. The supply of information about alternative modes.

(i) and (ii) in the *Smarter Choices* report would be termed ‘hard’ measures, but as they are ‘hard’ TDM measures they are distinct from the ‘hard’ infrastructure development to accommodate traffic growth (predict and provide). (iv) fits into the *Smarter Choices definition* of ‘soft’ measures, but (iii) is less clear. It is more akin to pricing and does not involve the supply of information to the users, so might be expected to be classified as ‘hard’ TDM. Overall the ‘hard’ and ‘soft’ TDM distinction is not straightforward, and as a categorisation is not without ambiguity.

2.3.3 Centralisation

An important aspect of TDM, particularly the smart choices or ‘soft’ measures, is the de-centralised or dispersed nature of transport planning, which Figure 2-2 illustrates.

On the vertical axis is the degree of centralisation, where for example, large infrastructure projects are centrally run by Government. In the middle are the TDM projects that have been devolved to the regions and local authorities. Other projects, such as travel plans, have been de-centralised further to the local levels of businesses and individuals. On the horizontal axis is the degree to which the measures are termed ‘hard’ and ‘soft’, as described earlier.

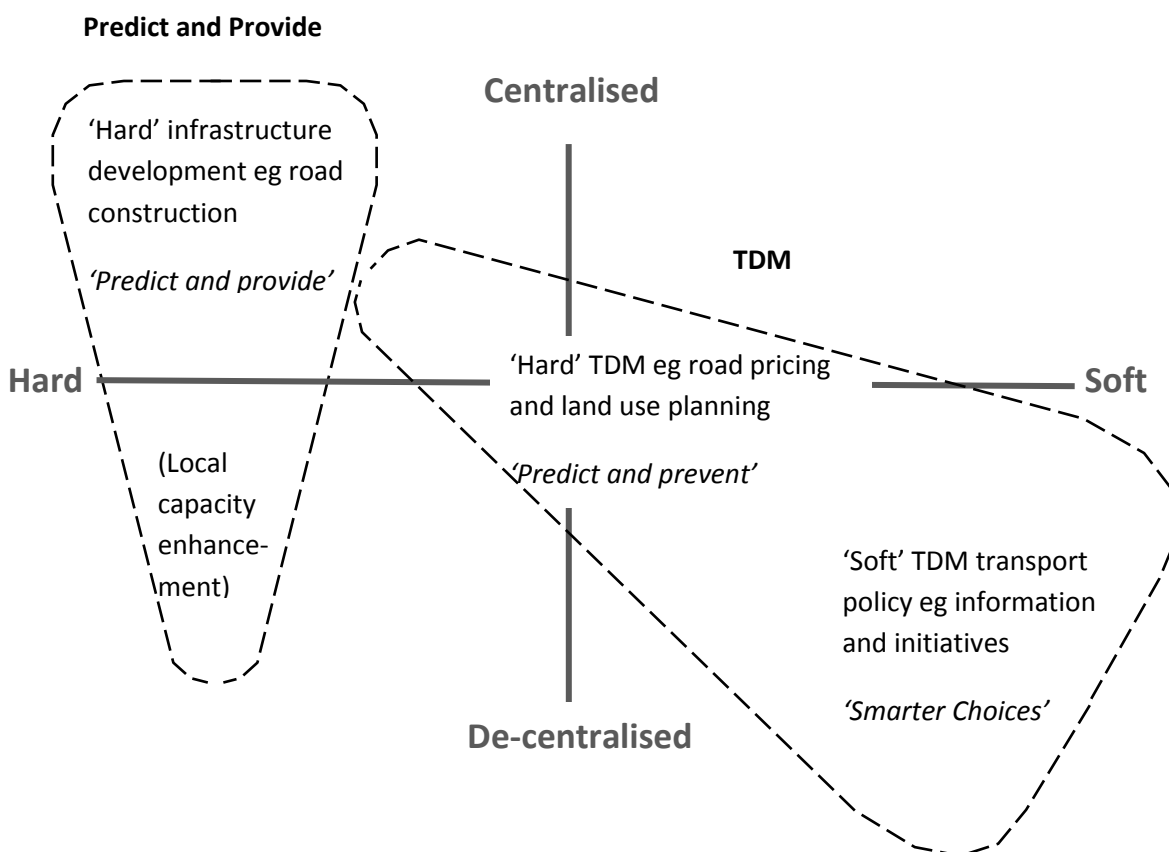


Figure 2-2: Classification of hard, hard TDM and soft TDM measures in relation to degree of centralisation

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What appears to have happened is that as the policies become 'softer' they become more decentralised. Construction projects are centrally controlled, and follow well defined processes, and so are comparatively easy to manage by central Government. The 'harder' aspects of TDM have been largely devolved to local government and the regions as part of the *Transport Act* 2000, but remain easily understood within central Government policy. However, 'soft' TDM, by its nature has to be more individual, focussing on people and the generators of congestion, with small site or area specific sustained initiatives. This new process of transport planning does not fit easily with the practices in Government, so Government struggles to understand how to contribute to the implementation and development of smart choices.

However, the relationship between centralisation and 'hardness' can vary depending on the specific project. There are extremes of construction projects, from large motorway construction projects run centrally by government, which would be in the top left hand quadrant, to local capacity enhancement projects, such as cycle paths or local road building schemes, in the bottom left hand quadrant.

The majority of construction projects are centrally controlled, but some smaller projects are run locally, hence the triangular shape that narrows to the de-centralised range. TDM projects such as road pricing may be implemented as a large national project as suggested in the *Eddington Study* (Eddington, 2006), but with much of the responsibility devolved to the regions, most are implemented as local projects, as in London and Durham. 'Soft' measures such as travel plans are small scale and de-centralised, though there may also be larger area wide projects such as the Bucks Car Share scheme. Generally 'soft' measures target a change in individuals travel behaviour through marketing and information, but this is often backed up by hard measures such as improved cycling and walking facilities. This again is illustrated in Figure 2-2, with the triangular shape widest where most of the TDM activity occurs in the de-centralised area, but some aspects at the 'harder' and more centralised end of the range.

The development of TDM has led to a different process in transport planning, for which the role of Government also needs to change to support the user involvement and buy-in, where marketing has become an important aspect of transport planning. However, even with this change in process, the main objective of transport planning has not changed significantly, in that the aim is still to reduce congestion, but with a focus on supporting economic growth and reducing carbon emissions. What is notable is that there has been a shift in delivery of the objective, away from supply to demand management. However, there has been an unwillingness to implement the more politically sensitive TDM measures of road pricing and parking restrictions, leaving the politically less sensitive 'soft' measures.

2.3.4 The characteristics of 'predict and provide' and TDM

The change in process of transport planning to become less centralised is accompanied by a range of other characteristics that distinguish 'predict and provide' from the 'hard' and 'soft' features of TDM. Table 2-1 illustrates the range of characteristics between these three paradigms of transport planning, which are drawn from a range of sources including *Traffic in Towns* (Buchanan et al., 1963), *Transport: The New Realism* (Goodwin et al., 1991) and *Smarter Choices: Changing the Way we Travel* (Cairns et al., 2004a).

Within the *Smarter Choices* report, it highlights that 'soft' measures are likely to be funded and designed locally, so picking up on their dispersed nature. The dispersed nature is further developed through recognising that smart choices are distinct in targeting behaviour change from the perspective of individuals and organisations, in contrast to construction projects that have no behaviour change or individual emphasis. 'Predict and provide' was a centralised government controlled process of planning and implementation of projects that are built, completed, and then the next one is begun. Smart choices cannot be run in the same way. They need to be sustained local initiatives to manage change over a prolonged period of time by offering information and support. An important factor pointed out in *Smarter Choices* is that soft measures cannot work in

isolation, and need to be combined in a package of measures with ‘hard’ measures, developing an interdependency across the spectrum of transport planning measures, in contrast to ‘predict and provide’ projects, which can be run largely in isolation. What is important to realise is that these ‘soft’ measures as delivery mechanisms, require very different skills from the design and engineering skills of infrastructure construction, and to a lesser extent, other types of TDM.

Predict and Provide	Hard TDM	Soft TDM
<ul style="list-style-type: none"> • Generally large sized projects • Centrally controlled • Finite duration • Little information • No emphasis on behaviour change • No individual emphasis • No incentives or disincentives • Limited interdependency between projects • Infrastructure instrument 	<ul style="list-style-type: none"> • Can be large or small projects • Can have central or dispersed control • Can be long or short term projects • May involve information • Behaviour change important • No individual emphasis • Often uses disincentives • Limited interdependency between projects • Demand management instruments 	<ul style="list-style-type: none"> • Small scale projects • Dispersed control • Sustained initiatives • Information central • Behaviour change central • Strong individual emphasis • Uses incentives and disincentives • Greater interdependency between measures • Delivery mechanisms
<p>Examples: Construction projects and road improvements</p>	<p>Examples: Road pricing, land-use planning, parking restrictions, traffic calming</p>	<p>Examples: Travel plans, teleworking, travel awareness campaigns</p>

Table 2-1: Characteristics of hard and soft measure

2.4 The development of travel planning

So far this chapter has examined the development of transport policy from 'predict and provide' through to smart choices and developed the concepts of 'hard' and 'soft' measures and their impact on the process of transport planning. Now it will move onto discuss the development of travel plans within UK transport policy and how they fit into transport planning.

A travel plan is defined in *Smarter Choices* as,

"...a package of measures put in place by an employer to try and encourage more sustainable travel, usually meaning less car use, particularly single occupancy car use (Cairns et al., 2004a)."

More recently the Dft website defines a travel plan as,

"... a package of measures produced by employers to encourage staff to use alternatives to single-occupancy car-use. Such a plan for example, could include: car sharing schemes; a commitment to improve cycling facilities; a dedicated bus service or restricted car parking allocations. It might also promote flexible-working practices such as remote access and video conferencing"

(Department for Transport, date not stated).

Travel plans are a de-centralised approach of dealing with congestion at the point of generation, with the overall aim of changing travel behaviour that is site specific. The package of measures can include reducing the need to travel by allowing flexible working hours or teleworking. The choice of modes can be increased by improving walking, cycling and public transport provision, or by introducing a car share scheme. These are all likely to be supported by marketing and information campaigns to inform the staff of the new or existing choices available. Included in the package may be the disincentive of car parking charges, or the incentives of subsidised public transport cost or car parking cash out schemes. The balance between the choice of 'hard' and 'soft' travel plans measures maybe due to the specifications of the site, or maybe due to the culture of the organisation.

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From these definitions it is clear why travel plans are a form of smart choices. They are a de-centralised approach, concentrating on small individual projects to change travel behaviour, mainly through the incentives of improved choices and the supply of information. However, they also spread across the boundaries into some harder TDM and infrastructure measures, though on a small scale. The TDM measure of car parking charges and restrictions can be used to lock-in the modal shift, and 'hard' infrastructure improvements may be needed to improve cycling and walking facilities or bus access. Travel plans therefore epitomise the new process of transport planning, using the interdependent nature of the range of measures to reinforce each other.

Travel plans first appeared in UK transport policy in *A New Deal for Transport* (DETR, 1998a) as 'green commuter' or 'green transport plans', (The historical development of travel plans will be covered in more detail in Chapter 3, Section 3.4.1). *A New Deal* recommended that all major employers should look to introduce a green transport plan that addressed commuting and business travel. The DETR pledged to help local authorities secure the widespread voluntary adoption of green transport plans. This would suggest the main route to engage business in transport (travel) plans would have been through voluntary adoption, but this has not been the case, as will be discussed in Chapter 6. The main route has been land use planning law to require an organisation to adopt a travel plan, (land use planning law will be discussed in more detail in Chapter 3, Section 3.2.2). Government planned to lead by example and set a target that 'all headquarters and main buildings occupied by Executive Agencies and Government Offices for the Regions should have green transport plans by March 1999 and other buildings by March 2000' (DETR, 1998a, page 131). This chapter will return to this point later.

2.5 UK transport policy, 2009

So what is transport policy in 2009? Transport policy now appears to be driven by two main themes.

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- The economic cost of congestion
- The impacts of transport on climate change

These themes have been raised in two key reports, *The Eddington Transport Study* (Eddington, 2006) and the *Stern Review: The Economics of Climate Change* (Stern, 2006).

The Eddington Study examines 'transport's role in sustaining the UK's productivity and competitiveness'. However, it also refers to an earlier report by Sir Nicholas Stern, which highlights the cost to the economy of climate change and accepts the need for action to reduce emissions from the transport sector. Eddington considers that in broad terms the existing transport network 'provides the right connections, in the right places, to support the journeys that matter to economic performance'. However, there are 'pinch points' in the transport network that have strategic economic importance. These pinch points are concentrated in 'congested urban areas and their catchments; the key inter-urban corridors; and key international gateways' (Eddington, 2006, page 1). Eddington suggests that the current levels of congestion could cost the economy £7-8 billion per year. To prevent a restriction in economic growth from congestion, Eddington proposes prioritising the parts of the network that are critical in supporting this growth, but are also showing signs of not performing, (not that dissimilar to the Thatcherite policy of justifying road building to support national economic competitiveness). The report recommends making the best of the existing network, traffic flow management and the use of pricing mechanisms. Eddington accepts that there may be a need to increase capacity, but cautions against large projects with speculative benefits or relying on untested technology, recommending smaller projects that can offer higher returns. The report also recommends the use of pricing mechanisms, such as congestion charging and environmental pricing across all modes of transport to reduce congestion, and as a way to ensure that the transport sector, including aviation, meets its full environmental costs (Eddington, 2006). What is notable about this study is that the

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solutions focus on the harder measures of targeted infrastructure projects and TDM pricing mechanisms, but there is no mention of the softer measures outlined in *Smarter Choices*.

Where Eddington investigates the cost of congestion to the economy, the *Stern Review: The Economics of Climate Change* (Stern, 2006), examines ‘the economic impacts of climate change itself, and explores the economics of stabilising greenhouse gases in the atmosphere’ (Stern, 2006, page i). The review does not specifically discuss transport, but highlights it as contributing greenhouse gas emissions. As with the Eddington study the solution is an economic approach by ‘creating price signals and markets for carbon, spurring technology research, development and deployment’ (Stern, 2006).

In response to these reports the DfT produced the report *Towards a Sustainable Transport System, Supporting Economic Growth in a Low Carbon World* (Department for Transport, 2007).

This report broadly accepted the findings of the Stern and Eddington reports and sets out five goals for transport policy.

- i. Maximising competitiveness and productivity of the economy through the sophisticated policy mix proposed by Eddington of making the best use of the existing networks by ‘getting the prices right’, targeted infrastructure investment and adapting the delivery chain to meet changing demands.
- ii. Addressing climate change by following the advice given by Stern of ‘putting a price on carbon’, developing a range of low-carbon technologies and the softer measures of supplying information, labelling and sharing of best practice to enable people and business to make ‘greener’ decisions.
- iii. Protect people’s safety, security and health for workers in use and users, and also from crime.

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- iv. To improve quality of life. (This has redolence with the aims of the Buchanan report which also recognised the negative impacts on quality of life caused by transport.)
- v. Promoting greater equality of opportunity by reducing social exclusion through poor access (Department for Transport, 2007, pages 8-10).

A strong theme of the report is demand management and devolving powers to the regions, with smart choices and travel plans seen as part of this. However, the plans for demand management, specifically congestion charging, have not been well received by the public. The report offers an example of devolving powers and demand management with the Greater Manchester Transport Innovation Fund (TIF) bid. This bid aimed to use congestion charging to help pay for improvements to the public transport system within Greater Manchester. The proposal to introduce a congestion charge was put to a local referendum, but, it was overwhelmingly rejected. Only 169 businesses were in support, with the remaining 279 opposing the congestion charge. More importantly, the proposal was rejected by the public, with 64% voting no, and only 36% voting yes (United City, 2008, Ottewell, 2008, Saulter, 2008). Congestion charging would appear to be a politically unacceptable option for demand management, as shown by the response to the Manchester TIF bid, the public outcry to the Eddington study, which led to a Downing Street petition (Roberts, 2007), and the countless other Downing Street petitions objecting to congestion charging (No.10.gov.uk The official site of the Prime Minister's office, 2009). This leaves a policy dilemma, where TDM is necessary, but pricing TDM mechanisms have failed to win public acceptance. Infrastructure TDM is costly and only works well when coupled with pricing, and 'soft' measures have not really moved to become central.

The link between the environment and transport is a strong theme in two further Government reports; *The King Review of low-carbon cars* (King, 2008) and the DfT's *Low Carbon Transport A Greener Future, A Carbon Reduction Strategy for Transport* (Department for Transport, 2009b).

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The *King Review* is in two parts. Part I sets out the potential to reduce carbon emissions from road transport by considering the technological options now and in the future. Part II sets out the policy recommendations to deliver reductions in carbon emissions from cars. The review proposes a range of solutions to reduce carbon emissions from cars. These include;

- Reducing vehicle emissions through technology improvements.
- Cleaner fuels such as electricity, hydrogen and biofuels, but only when research into the indirect effects of biofuel production has been completed.
- Consumer choices by stimulating demand for less carbon intensive vehicles and behaviour change.
- Research and development to speed up the process of innovation in cleaner technologies.

The focus of the report is to reduce carbon emissions by technological means, however, it is accepted that even though technological improvements are being made, they are long term solutions and it is recognised that behaviour change will deliver more immediate reductions. In fact smart choices and travel plans are mentioned in four of the twenty eight recommendations. The review suggests that all local authorities should have smart choices as a priority in their local transport strategy, that there should be wider implementation of personalised travel planning, all large public sector bodies should have workplace travel plans in place by 2010 and that local authorities should consider promoting car clubs in their areas. Later in the review travel plans are discussed in more detail, and the role of the DfT's National Business Travel Network (NBTN), in working with private business to develop workplace travel plans. The review then goes on to suggest that 'all large private sector organisations should look to introduce workplace travel plans' (King, 2008, page 78). These targets seem remarkably similar to those set in *A New Deal* back in 1998, ten years earlier.

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The report *Low Carbon Transport: A Greener Future* addresses specifically the need to reduce carbon emissions from the transport sector, which it reports account for 21% of the total UK domestic emissions and is seen as a key element in decarbonising the economy. In contrast to the *King Review*, this report looks at all modes of transport rather than just the car. The strategy to reduce carbon emissions is based on three themes,

- i. Supporting a shift to new technologies and fuels
- ii. Promoting lower carbon transport choices
- iii. Using market-based measures to encourage a shift to lower carbon transport

(Department for Transport, 2009b, page 16).

Not surprisingly as the emphasis is to lower carbon emissions, this report does not set out plans for the development of the network, but concentrates on the use of technology, fiscal measures to put a price on carbon, and the TDM measure of land use planning to reduce the need to travel.

It also emphasises the importance of technology such as telepresence, to reduce the need to travel, but with the caveat that home-working does not always reduce carbon emissions. The report does not specifically recommend travel plans or smart choices, but does suggest a new role for the NBTN in exploring 'the option of a voluntary carbon reduction target for members...'

(Department for Transport, 2009b, page 82). This absence of smart choices or travel plans within

the report could be explained by the assessment of these measures in the *Impact Assessment of the Carbon Reductions Strategy for Transport, Low Carbon Transport: A Greener Future*

(Department for Transport, 2009a), which questions the robustness of the data to show that smart measures can reduce carbon emissions.

2.6 Discussion

So what are the key changes in transport policy since the 1960s? Transport policy has shifted from the infrastructure development of ‘predict and provide’ to a more balanced approach of targeted building and TDM measures. Figure 2-3 shows diagrammatically this shift in emphasis.

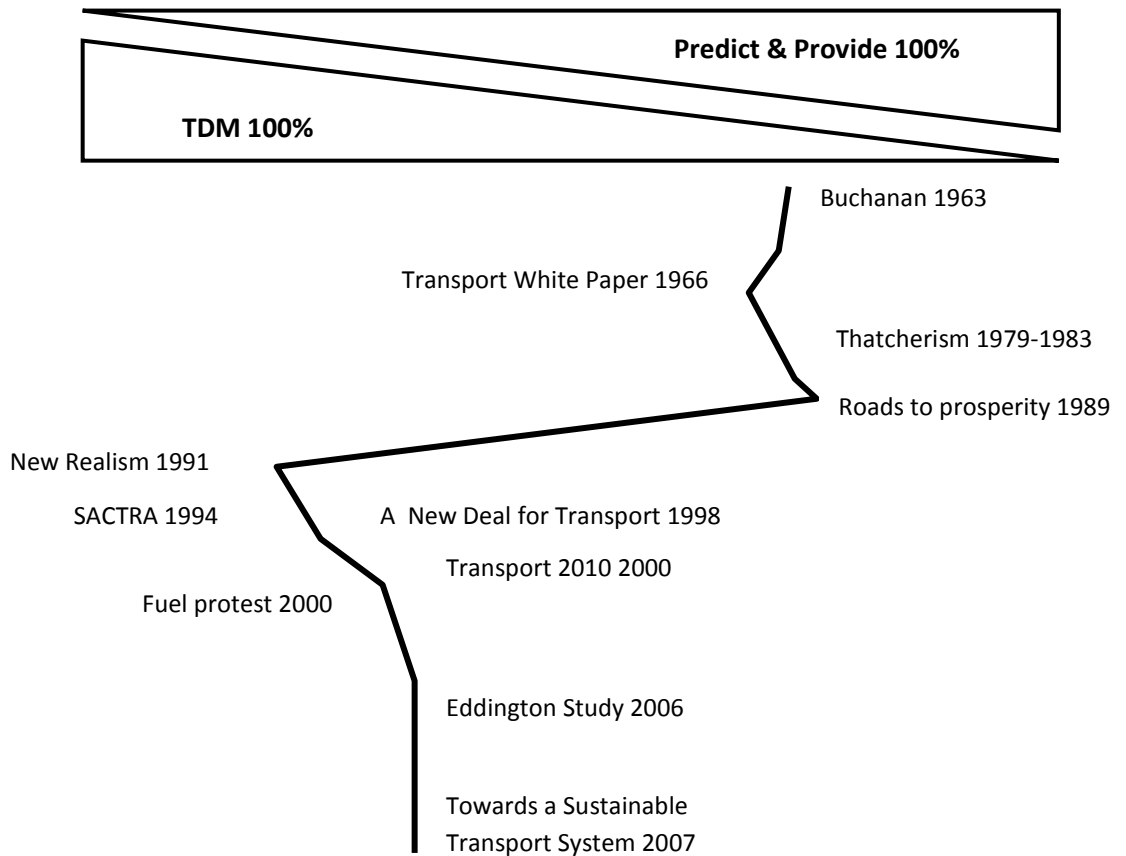


Figure 2-3: The shift between TDM and predict and provide over time

Starting with Buchanan, the emphasis was on the need to predict demand for road infrastructure and build the supply to match demand, but accepting the need to limit demand until such an infrastructure could be built. Government policy moved marginally towards TDM for a while until Thatcherism, with the privatisation of public transport and the promotion of freedom of choice for car drivers.

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By the 1980s there was a growing acceptance that matching supply to demand did not solve the problems of congestion. This coupled with public disquiet at the ecological damage caused by the road building projects and a general rise in concerns about climate change, resulted in a major swing towards TDM; the *New Realism Report* in 1991. Since then the emphasis has started to swing back to an equilibrium between 'predict and provide' and TDM. Finally, with Eddington setting a strong agenda for TDM through road pricing, with a degree of road building where the economic benefits are clear and the impacts on the environment are considered.

It is striking that in a number of ways, proposed transport policy has not actually changed that much in the last forty or so years. Even Buchanan in *Traffic in Towns* accepted that there was some need for demand management. What Figure 2-3 illustrates is that what has changed is the balance between 'predict and provide' and TDM. However, even the *Eddington Study* echoes the philosophy of the Thatcher policy of *Roads to Prosperity*, linking road construction to economic prosperity, but in a more measured and targeted way. Road pricing has been proposed as a part of transport policy since *New Realism* in 1991, but as yet this has only been implemented in a small number of instances, such as London and Durham and the M6 relief road toll. What has changed is that more control and powers are devolved to the regions and local government, and the role of the Highways Agency has changed from one of network construction to network management. There is no doubt that the emphasis in transport policy has shifted to demand management, catalysed by the urgent need to reduce carbon emissions.

So what about travel plans? How has the role of travel planning changed within Government transport policy? Since the first introduction of travel planning into Government policy in *A New Deal for Transport* in 1998, the answer would have to be not that much. It is conspicuous that the recommendations made in *A New Deal*, setting targets for the introduction in Government agencies and the promotion of widespread adoption of travel plans within private business are repeated again ten years later in the *King Review*. In Chapter 6 it will be shown that the voluntary

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adoption of travel plans by business has been limited. Government Agencies and Departments, in the *King Review*, have been set a new target of 2010 to implement travel plans. A report written by JMP for the Sustainable Development Committee (SDC) and the Office of Government Commerce found that there was 'little evidence to suggest that departments are influencing employee travel choices or accounting for carbon emissions from commuter travel' (JMP Consultants Ltd, 2009b), so clearly the targets of 1998 have not been met. However, in response to the JMP report, the SDC accepts it as a priority to introduce travel plans across Government Departments.

The main change in travel planning within Government policy appears to be a change in focus to that of reducing carbon emissions, by linking travel plans to the ACT on CO₂ campaign (NBTN, 2009, Department for Transport, date not stated), which is also a wider focus of Government and transport policy. Hopefully with greater interest from Lord Adonis, Secretary of State for Transport and Ed Milliband, Secretary of State for Energy and Climate Change, both asking to visit organisations with travel plans (McInroy, 2009), Government will finally take travel planning more seriously and begin to lead by example.

Chapter three

3 Literature Review: The development of travel plans

3.1 Introduction

The previous chapter concentrated on the development of UK transport policy from the early 1960s to the present day. Within that development of policy, the appearance of TDM, smart choices and travel plans was described.

The focus of this chapter is the literature relevant to travel planning, which because of the synergies that travel planning has with other areas, also includes the wider remit of smart choices, alternatives to travel and behaviour change models. This chapter again consists of both a narrative and commentary on the literature. It will start by reviewing Government support and advice, including land use planning law. It will then move on to review research into travel planning, both commissioned by Government and independently within academia. The chapter concludes by identifying a gap in research and how this thesis fits into this gap.

3.2 Government support for travel planning

With the diversification of transport planning techniques from the predominant method of road construction to include TDM and smart choices, the role of Government has also changed. Power and responsibility for the implementation of aspects of TDM and smart choices have been devolved to the local authorities and Government's role, particularly travel plans, has been one of supplying advice and guidance.

3.2.1 Guides and advice, Department for Transport

Entering the Department for Transport (DfT) website shows a wide range of guides related to travel planning. These guides include advice on implementing a travel plan, how best to use the

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planning process to secure travel plans, the role of human resources and unions in travel planning, the best way to set up a travel plan network and a variety of research documents.

The most recent guidance issued by the DfT is *The Essential Guide to Travel Planning* (Taylor, 2007), which replaced the previous more extensive publication, the *Travel Plan Resource Pack for Employers*, (Department for Transport, 2006f). The *Resource Pack*, (still available in hard copy from the DfT) described itself as a "... 'one-stop' resource for organisations looking to develop and implement their own travel plan" (Department for Transport, 2006f). It gives detailed information on the steps that should ideally be taken in the process of developing a travel plan. *The Essential Guide* is less detailed in approach, but has the same aim of guiding the reader through the process of developing and implementing a travel plan. The guide outlines the benefits of a travel plan to business, the users and the local community. It again covers the process of setting up a travel plan and best practice, using a series of case studies as illustrations. It gives advice on developing staff travel surveys, marketing, the alternatives to single occupancy car use, business travel and the development of travel plan networks. However, what neither of these guides addresses is how to sustain a travel plan. The advice concentrates on the initial implementation phase, but gives little advice on the need to develop a travel plan and to keep refreshing it to sustain interest from both the staff and the business.

The concept of travel plan networks is developed in more detail in a separate guide, *A guide on how to set up and run travel plan networks* (Department for Transport, 2006a). It explains that a travel plan network is a network or group of organisations that work together to manage and reduce car use. The guide explains the benefits of these networks to offer mutual support, the sharing of ideas and facilities and the exchange of information and good practice. One of the big advantages of travel plan networks is to bring together organisations so that they are in a position to be an effective bargaining force, and make viable the provision of services that would not be possible for organisations on an individual basis.

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Other guides supplied by the DfT are notably aimed at different areas of the organisation from the travel planner, but are also of use to travel planners in working with these areas and selling the idea of a travel plan to them. Important departments that a travel planner needs to work with are Human Resources and Trades Unions. The DfT with the Energy Savings Trust have developed a guide to help with this process, *The Role of Human Resources Staff and Trades Union Representatives in Supporting Travel Plans* (Department for Transport, 2006c). This guide explains the importance of these groups in the development of a travel plan, highlighting that travel plans can affect the way organisations go about their business, as well as the travel behaviour of the employees. The report goes on to describe that a travel plan may affect the terms and conditions of employees and relocation packages, both important issues to human resources (HR) and unions. HR can also play a role in gathering data as part of a travel survey, such as home postcodes and work locations, times of travel, business travel policy, relocation packages that encourage people to live closer to where they work, as well as the wider implications of introducing travel substitution technologies and new ways of working. There is an important role for HR and unions in the development of a travel plan, but often the support is only evident at the implementation stage, when changes in policy may be required. The support should not just be when the travel plan is first implemented; it should be maintained through the years, to support the long term process of behaviour change.

Another important guide for those introducing a travel plan as a result of a planning application is *A Guide on Travel Plans for Developers* (Department for Transport, 2006b). The issue of land use planning and travel plans will be discussed in more detail in the following section 3.2.2, along with the more detailed research document *Using the planning process to secure travel plans* (Department for Transport, 2001b). However, this section will briefly outline the content of what is a less technical and briefer introductory guide. The aim of the guide is to first explain to developers what the purpose of a travel plan is, and to 'demonstrate the benefits of making

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sustainable travel elements an integral part of their [planning] proposal' (Department for Transport, 2006b, page 2). It is aimed at a wide range of people including,

- Property developers
- Site managers
- Planners
- Architects
- Engineers and designers
- Consultants
- Local planning officers

Interestingly the list does not include travel planners, which is strange as they are the ones that will have to ensure the planning consent is complied with in operation. This could be explained by the focus of the guide, which concentrates on the strategic development aspects of location, density and mix of land uses, design and layout of the development, rather than the application of the consent to the travel plan in use. The information for travel planners to explain their obligations under land use planning law seems to be an area of advice and guidance that is missing from Government information.

Another one of the DfT guides raises the benefits of travel planning to information technology (ICT) organisations, *Travel plans: new business opportunities for information technology providers* (Department for Transport, 2006g). This guide is aimed at suppliers of ICT products and services, and in house ICT departments of organisations looking to develop a travel plan. It seems a little strange considering who the guide is aimed at, that it only appears on the DfT webpage, not the obvious place for ICT suppliers to look for new areas of work. However, for a travel planner to use and pass onto in house IT departments, it offers a comprehensive guide to the ways that they may

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become involved with the development of a travel plan. It uses real life examples to illustrate the contribution that ICT can make to,

- Homeworking
- Teleconferencing
- Improved public transport information
- Lift sharing databases
- Staff travel surveys
- Publicity and awareness raising campaigns involving graphic design, mapping services and contact databases
- Planning new bus services
- Fleet management

The guide also importantly outlines the tax incentives available for the purchase of ICT equipment for travel plans.

The final guide that again is not specifically designed for travel planners, shows how travel plans can be included in environmental management systems (EMS), *Transport and environmental management systems* (Department for Transport, 2006d). The aim of this guide is to 'promote the integration of transport initiatives and environmental management systems' (Department for Transport, 2006d, page 1). The guide is jointly aimed at managers of environmental performance, transport managers, to improve their understanding of how emissions from transport contribute to the wider environmental management and auditors of EMS, to ensure that transport is considered in the process. The guide gives the two internationally recognised EMS, ISO14001 and the EU Eco-management and audit scheme (EMAS). Notably, the report points out that of organisations with formal EMS in place, only 20% of EMAS and 55% of those with ISO14001 identify transport as an important environmental aspect of their emissions. This shows an

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opportunity for greater inclusion of transport within environmental monitoring, but at present transport is not a required part of ISO14001.

The range of guides designed for HR, IT and so on, show an awareness at the DfT that travel plans go beyond the bounds of the role of the travel planner, but what they do not seem to have acknowledged is that these people are not necessarily going to be searching the DfT website as they are not transport professionals. The guides are available on the Energy Savings Trust website, but only after a detailed search, so you need to know to look for them there as well. To market the information successfully it needs to be available in places where the appropriate professionals are likely to look, such as the relevant Government department websites and from the appropriate professional sources. The other important factor about these guides is that they all concentrate on the initial stages of setting up and implementing a travel plan. They do not discuss how to develop and mature a travel plan or sustain and lock-in behaviour change. These Government guides are useful sources of information, however, the role of Government needs to go further to include support to business that encourages the development of travel plans, and policies that help to sustain and lock-in behaviour change.

The DfT has also developed the role of guidance and advice to business, particularly aimed at the private sector with the forming of the National Business Travel Network (NBTN). This is a network that is free to all members sharing advice and best practice, and offering networking opportunities for those organisations involved or planning to be involved in travel planning. The aim is to work with the FTSE 350 businesses to help promote travel planning and smart choices along with the DfT's ACT on CO₂ programme (NBTN, 2009). The management of the NBTN, in October 2009 was taken over by Business in the Community (BITC) (Department for Transport and NBTN, 2009). This could be a significant decision by the DfT. BITC promotes corporate responsibility within private business and so potentially could offer useful links for the NBTN.

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The other way these guides have been used is in travel planning training courses, such as the MSc at Loughborough (Department of Civil and Building Engineering, date not stated) and the continuing professional development course at the Open University (Open University, date not stated). However, these courses mirror the focus of the guides on setting up rather than developing and maturing a travel plan and concentrate on the role of the local authority travel planner.

3.2.2 Land use planning law and transport

This chapter will now move on to discuss the role of land use planning law in the development of travel plans.

A travel plan may be required alongside a planning application in new developments and those undergoing expansion, which could be of both buildings and / or car parks. This is currently the only route by which an organisation can be required to develop a travel plan, but as this section will show there has been varied success in this policy.

The role of land use planning law for transport has been defined through the *Planning and Policy Guidance 13: Transport* (PPG13) (Department for Communities and Local Government, 2001). The purpose of this report is,

“...to integrate planning and transport at the national, regional, strategic and local level to promote more sustainable transport choices for carrying people and moving freight” (Department for Communities and Local Government, 2001).

The objective of PPG13 is to use planning law to promote sustainable travel choices, accessibility to jobs, shopping, leisure facilities and services by sustainable travel means and to reduce the need to travel, whilst accepting that in rural areas the car will remain an important means of transport. There is clearly a role for travel planning within land use planning, especially in light of

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the maximum parking standards within PPG13, which are used to limit the permitted number of spaces at a development, so could lead to parking congestion which will need managing. The national maximum parking standards are set out in Appendix D for developments over specified thresholds, and also dependent on the form of the development. However, in the consultation paper for the new *Planning and Policy Statement 4* (Department for Communities and Local Government, 2007), the proposal is to remove the national parking standard and give the responsibility to local authorities to set their own standard. This could be detrimental to travel plans if neighbouring local authorities are competing for the location of businesses, and use a higher maximum parking standard as a way to entice a business to the area.

Land use planning law gives local authorities a mechanism to develop legally binding agreements with developers to commit to the funding of travel plan initiatives (Rye, 2002). This obligation or agreement is known in England as a Section 106 (S106) of the *'Town and Country Planning Act'* (1990). (Although it should be noted that S106 was not designed specifically for travel plans, but more generally for developer's contributions to the development or planning gain.) Travel plan initiatives can also be secured through a one-off planning condition that requires certain facilities to be in place before a development opens, such as bus shelters, cycle paths and sheds. In contrast an obligation requires ongoing funding for such things as bus services, but this commitment also has a time limit.

The role of travel plans in land use planning is described towards the end of PPG13 in Section 4, *Implementation*. The guidance sees the Government's role as one of raising awareness, but expects local authorities to,

"...consider setting local targets for the adoption of travel plans by local businesses and other organisations and to set an example by adopting their own plans" (Department for Communities and Local Government, 2001, point 87).

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The definition of a travel plan within PPG13 is quite different from those of the DfT website and the *Smarter Choices* report given in Chapter 2. The PPG13 definition takes a wider remit to include road safety and freight movements and recognises the individuality of a travel plan.

“There is no standard format or content for travel plans, and they may have a variety of names (such as green transport plans, company travel plans and school travel plans). However, their relevance to planning lies in the delivery of sustainable transport objectives, including:

1. Reductions in car usage (particularly single occupancy journeys) an increased use of public transport, walking and cycling.
2. Reduced traffic speeds and improved road safety and personal security particularly for pedestrians and cyclists; and
3. More environmentally friendly delivery and freight movements, including home delivery services (Department for Communities and Local Government, 2001, point 88).

PPG13 then moves on to outline which planning applications a travel plan should be submitted alongside. These include developments which are likely to have significant transport implications including all major development; smaller developments which would generate significant amounts of travel in, or near to, air quality management areas; new and expanded school facilities and where a travel plan would address a particular local traffic problem associated with a planning application. An important point in PPG13 is who the responsibility for the condition or obligation rests with. The guidance makes it clear that this responsibility is transferred with the ownership or occupier of the land. In the case of a condition it is enforceable against the developer or any subsequent occupier and in the case of an obligation with the person who entered into the obligation and any person who then goes on to derive title from that person. During conversations with a transport consultant, it became clear that in his experience, this is a

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point frequently forgotten or misunderstood, but is essential for the longevity of a travel plan (Adams, 2009).

Further detailed guidance on how to apply the guidance in PPG 13 is presented in *Using the planning process to secure travel plans, Best practice guidance for local authorities, developers and occupiers* (Addison and Fraser, 2002). The guide is described as being applicable to local authorities, developers and occupiers, but it would appear to be aimed at local authorities, setting out the procedures that they should use to secure travel plans through the planning process. It only becomes relevant to developers and occupiers to help understand the processes and expectations of the local authority.

The planning process could be an effective tool to engage business in travel planning, but there are a number of limitations to the process. The most obvious limitation is that the planning process is only effective when a planning consent is being sought. Another major limitation is that a planning obligation (S106) is only enforced for a limited period of time, and so relies on the travel plan becoming sufficiently embedded before this time to be sustained, and a condition applies to a development before opening rather than a sustained commitment. The lack of, or poor implementation of a travel plans as part of the planning process is a problem with this method of securing travel plans. Research by Rye et al of planning and transport authorities in England, demonstrates this,

“Some 46 out of 86 respondents indicated that there were examples of travel plans in their area that had not been implemented or were likely to be in breach of their condition/obligation for some reason. (Some 27 out of 86 respondents did not answer this question.) Only 12 said that there were no such travel plans in their area” (Rye et al., 2008, page 10).

The research also highlights the inconsistent levels of monitoring by local authorities of travel plans secured through the planning system, with 21% stating they did not monitor. ‘Of the

remainder a further 20% were unable to point to any specific mechanisms that they used for monitoring...' (Rye et al., 2008, page 10).

It would appear from this research that the planning process, though delivering some successful travel plans is far from a perfect tool to implement travel plans.

The planning process has the potential to ensure that multiple forms of access are included at the design stage of a new development, but the process can also be used to retrofit travel plans into sites that are being extended or enlarged. However, in both cases the travel plan has to be supported by other transport planning measures, such as transferring road space to sustainable transport modes, to encourage further behaviour change and ensure the change that has already occurred is locked in. Other methods to help lock-in and support behaviour change could include grants, subsidies or fiscal measures. It is interesting that the UK is the only country to have focussed so heavily on the planning process as a method of implementing travel plans. Other countries, such as some states in the US have a more generic approach, where all companies over a certain size are required to implement a travel plan.

3.2.3 Grants and subsidies

The guides have concentrated largely on the implementation of travel plans, which is a theme reflected in the subsidies that have been made available for workplace travel plans. In 1999 subsidies were made available to support a site specific advice scheme. This involved five days of adviser's time including up to three site visits to help with the development of a travel plan (Department for Transport, 2005a). This scheme was only short lived, and the take-up from business was limited, though it was used a lot by schools. Though this scheme was short lived, travel plan advisors within local authorities continue to exist. However, as with the site specific advice, the number of workplace advisors is limited, with the majority concentrating on schools, where most Government funding has been committed.

3.2.4 Fiscal measures

Fiscal measures are an area that is traditionally within the role of central government and could be a measure used to help lock-in behaviour change. However, the use of fiscal measures for travel plans has been limited. Fiscal measures have largely been used to remove the disincentives to sustainable travel rather than provide a framework of incentives to change behaviour (Enoch and Potter, 2002).

The fiscal measures can be split into three categories, corporate, business expenses and personal. Corporate fiscal measures do little to support travel plans. The only concessions are the limited travel plan measures that can either be set off against tax, such as capital allowances for expenditure on cycle racks and pool bikes, or are fully tax deductible, such as travel planning running costs (Department for Transport, 2006f), but even these are nothing special as they are a standard tax treatment for business costs.

In the business expenses category, the rates and allowances for travel for business do little to encourage the use of sustainable modes of travel. The rate for the first 10,000 business miles in a tax year for cars and vans is 40p, for motorcycles 24p and for bicycles 20p. The rate for cars drops to 25p for a distance travelled over 10,000 miles in a year (HM Revenue and Customs, 2007). The current rates do little to encourage walking and public transport. The higher car mileage allowance gives you the opportunity to make a small profit from the journey, the cycling allowance does the same, but at a much lower rate, so is less of an incentive, but you get nothing for walking, and only the reimbursement of fares for public transport use.

In the personal category very little is done to support travel plan measures, as commuting is a private cost, so the employer support is taxable. There are some minor exemptions to this for subsidies for bus services and fares, (but not train, tram or tube services), negotiated discounted tickets for public transport and loans for season tickets.

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Salary sacrifice is used where a tax exempt measure is not provided free by the employer, but by using the salary sacrifice scheme, the charge to the employee is in effect tax and National Insurance Contribution (NIC) free. The employee agrees to a reduction in their salary to go towards the purchase of, for example, a bike. Not paying tax or NICs means that the cost that is paid is reduced by 33%. The employer also benefits through a reduction in their NIC, although this is largely absorbed by the administration costs of the scheme. The *Bike to Work* salary sacrifice scheme is a frequently used option, but it can also be used for the purchase of tickets on works buses (National Business Travel Network, 2008).

Another area that government could help support travel plans through fiscal measures would be through the use of disincentives that discourage car use, which could be a useful way to help lock in the reduction in car use. There is an opportunity to use the fiscal measures as a package of 'carrots and sticks' or incentives and disincentives, but issues such as congestion charging and taxing car parking are seen to be too politically sensitive. Congestion charging in Manchester was rejected, as outlined in Chapter 2, Section 2.5. The only place that is proposing the introduction of a tax on parking spaces is Nottingham with the Workplace Parking Levy. This is aimed to provide funding to improve public transport, including the tram system (Nottingham City Council, date not stated). However, this are unpopular with local businesses, with both the AA and the British Chamber of Commerce raising their objections (Millward, 2009). The result is a confused message from government, where it offers the advice and guidance on one side, the legislation through the planning process on the other, but no support to lock-in or encourage behaviour change through fiscal measures, so there is a risk that any reductions in traffic levels will be offset by induced demand, with no net improvement in traffic levels on the network.

3.3 Evaluation and monitoring

As travel plans have developed, so have the methods to determine their effectiveness. These methods have moved away from evaluation of the travel plan measures, to the evaluation of outcomes delivered by the travel plan. Monitoring tools are of particular importance to local authorities, where a travel plan has been implemented as part of a planning consent, to ensure that the obligations and conditions of that consent are being met. The other aspect of travel plan monitoring is that of assessing the effect of an awareness campaign on behaviour change. This is an area that has been principally developed and researched through EU projects. A new development in the evaluation of travel plans was the launch of the BSI specification, PAS 500 (BSI, 2008), which rather than monitoring the effectiveness of the travel plan, assesses the quality of the travel plan. The other area of monitoring that could also be included is that of environmental monitoring through the EMS, as discussed in Section 3.2.1. This next section will describe some of the monitoring tools that have been used to evaluate travel plans, including those that monitor the success of a behaviour change marketing programme.

3.3.1 Workplace travel plan monitoring and evaluation tools

Workplace travel plan evaluation tool

The DfT developed in 2002 an evaluation tool, *Workplace Travel Plan Evaluation Tool*, which was designed for organisations developing a travel plan, developers and others proposing a travel plan as part of a new development and local authorities who are assessing the credibility of a travel plan from a developer (Department for Transport, 2002). The tool worked by aiding the choice of travel plan instruments, and enables the user to predict the change in numbers of vehicles as a result of said instruments, highlighting areas of strength and weakness within the plan. However, this tool is no longer available from the DfT website. This tool evaluated inputs, where a travel plan was assessed on the basis of which measures were included and the resulting predicted change in vehicle numbers. The major problem with this tool was that it was often only used to

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assess the credibility of a travel plan for a planning application, with no process to assess the impact of the initiative on a sustained basis. This resulted in a number of travel plans being developed to be effective in terms of the evaluation tool, but either never implemented, or poorly implemented and failing after a short period of time.

TRICS and iTrace

The importance of monitoring the effectiveness of a travel plan for local authorities has meant that some have started to develop their own travel plan monitoring and evaluation tools. Two of these include *TRICS* and *iTrace*.

The TRICS monitoring tool is not travel plan specific, but is used to evaluate all transport impacts of a new development. The TRICS system is privately marketed and maintained on behalf of the TRICS consortium of six County Councils in the South of England (TRICS.org, date not stated). It is a database of trip generation data, allowing local authorities and developers to estimate trip generated from a new site, assessing the residual traffic impacts and the measures needed to mitigate these impacts, including the effect of a future travel plan (TRICS.org, date not stated). The major difference between TRICS and the DfT evaluation tool is that the system is an output based approach, allowing for flexibility in the travel plan instruments used to achieve the planned trip output. It is also designed to be used once the development is complete, to allow the local authority to assess whether the travel plan is actually having the required impacts on travel behaviour (TRICS.org, date not stated). The database has a further use in helping to improve the trip generation predictions. By collecting more and more trip information data, it increases the accuracy of the predictions for the transport impacts of a new development.

iTrace is a computer based travel plan monitoring tool used by Transport for London (TfL) and the London Boroughs. Rather than determining trip generation data, it is used to monitor the effectiveness of a travel plan. It is aimed at producing data for the local authority and the site

travel planner, both of which have access to the database. The local authority is able to request information from the site via the system, such as site audits or staff surveys. For local authorities it is a useful tool to assess the performance of the travel plan against targets, planning conditions and obligations (iBase Systems, 2008). However, it offers little benefit to the business actually doing the travel plan, other than producing the reports required by the local authority automatically and some site specific reports, such as mode of transport usage and travel survey summary reports. The database does not produce staff travel surveys, that is left to the travel planner, although it supports a range of online and paper surveys.

Both these monitoring and evaluation tools are output based tools, a development from the workplace evaluation tool. However, these tools are developed with the local authority requirements in mind rather than those of the private business. The monitoring in these tools is designed to be sustained over a period of time and therefore if enforced, can go some way to ensure a travel plan implemented as part of the planning process, is maintained by the organisation.

3.3.2 Behaviour change monitoring and evaluation tools

TRICS and iTrace are mechanistic tools used to monitor specific outputs. However, to monitor the success of a campaign to change behaviour requires a different process of monitoring. Behaviour change is a sustained process, concentrating on the individual, so the monitoring needs to be designed to take this into account. Interestingly, the two monitoring and evaluation tools for travel plans that monitor the levels of behaviour change and success of an awareness campaign have been developed in Europe rather than in the UK.

MOST-MET

The first of these tools is the MOST-MET evaluation tool. It uses indicators to measure the levels of personal acceptance of a travel plan measure. The term mobility management (MM) is used instead of travel plan. However, it is also used as a term covering other “Smart” measures.

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The toolkit sets out different assessment levels of acceptance of a measure, for each of which a target and indicator is set.

Assessment Levels

1. Knowledge of MM measure - is there an awareness of MM and which MM instruments are known
2. Usage of MM measure - estimates attractiveness and usage levels of a service
3. Satisfaction with MM measure – are the users happy with the measures or could they be improved
4. Acceptance of Travel Option – actively taking an interest in the measure e.g. joining a car pool scheme
5. Experimental Individual Travel Behaviour – willingness to try alternatives
6. Satisfaction with Travel Option – are the users happy to continue using the option or can it be improved.
7. Permanent Individual Travel Behaviour – permanent change of mode of transport
8. System Impact – estimation in reduction in motorised trips or kilometres travelled

(Finke et al., 2003)

This is a monitoring tool to assess an individual's progression down the process of accepting a new travel option and the corresponding impact this has on the transport network.

Tapestry

Tapestry is also a European initiative. There are a lot of similarities between this evaluation tool and the MOST-MET tool. However, the difference is that it evaluates the success of a travel plan communication programme to change travel behaviour. Tapestry monitors this success through seven stages, starting with awareness raising, to acceptance, intention to act, action and onto the goal of a habitual change in behaviour, Figure 3-1.

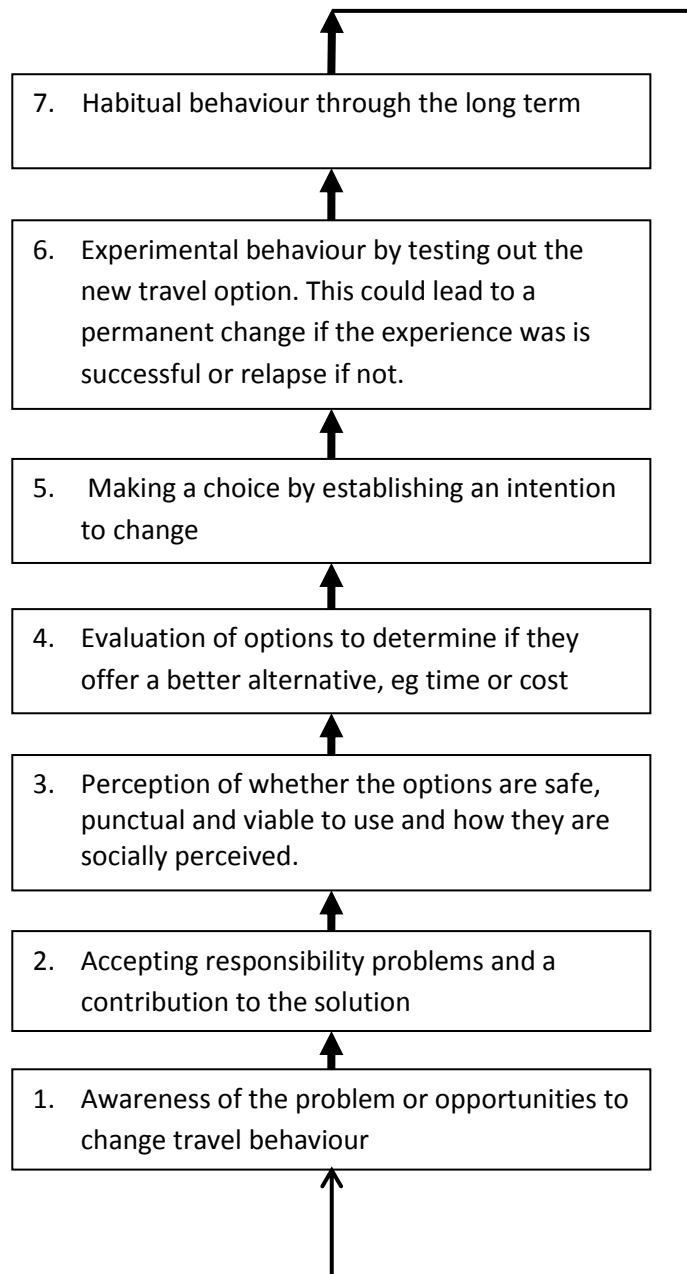


Figure 3-1: Seven stages of change model (Tapestry Partners and EU Commission, 2003).

Tapestry monitors and assesses the effectiveness of a campaign by assessing whether the campaign has moved an individual along the process of change to the ultimate goal of a permanent change in travel behaviour.

These two monitoring tools both evaluate where an individual is on the process of behaviour change. The tools are therefore designed to monitor the initiative over a sustained period of time.

This is a very different process in the monitoring and running of a travel plan from those required in TRICS and iTRACE, which are linked to local authority objectives rather than those of the individual. MOST-MET and Tapestry accept that behaviour is a slow process that needs to be supported and monitored over a prolonged period, and focuses the campaign on the individual through market segmentation, the sorts of techniques used in social marketing.

3.3.3 Publicly Available Specification (PAS) 500

A new development in the assessment of travel plans is the BSI specification, PAS 500 (British Standards Institute, 2008). PAS 500 was sponsored by the London European Partnership for Transport (LEPT) and supported and funded by TfL. Rather than monitoring the effectiveness of a travel plan or predicting the outcomes of trip reduction measures, this specification assesses the quality of a workplace travel plan, so perhaps more like the Workplace Travel Plan Evaluation Tool, although it takes the concept further. The aim of PAS 500 is to improve the quality and consistency of a travel plan. It defines the requirements for developing a travel plan, but does not establish specific targets, objectives or outcomes. What it does do is to set out the processes that should be included in a travel plan to qualify for the standard, for example, securing senior management support, the use of a baseline survey, defining aims and objectives and so on. It then sets out criteria to determine the quality of the travel plan. These include,

- Response rates for staff surveys
- Level of travel planner training
- Level of funding
- Level of senior management support
- Length of implementation and marketing strategy
- Evidence of modal shift
- Degree of success in achieving targets

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- Longevity of travel plan

Depending on how well the travel plan meets these criteria will determine whether it is awarded a *General, Bronze, Silver or Gold Award*. Insisting on particular elements to be done as part of the travel plan process would appear to be reverting back to a more prescriptive inputs based evaluation. When PAS 500 was launched at the 2008 Autumn ACT/ Travelwise Conference the price of applying for this award was quoted to be approximately £500, plus the cost of the travel planner completing a relevant course in travel planning. However, other than the awarding of a 'shiny plaque' to the organisation, the specification seemed to deliver little benefit to a business, particularly during the recession of 2009, when costs are being cut.

What is notable about these evaluation tools is that the ones developed within the UK are closely linked with the requirements of the local authorities, so requiring organisations to monitor details that may not be of particular importance to them. This could be part of the reason why there is reluctance within business to monitor travel plans. The other issue is that few organisations have any form of automatic monitoring process that can record the number of cars entering and leaving a site or people using other modes of transport. The monitoring can then only be done through manual counts, sometimes with security staff counting the number of cars, or through staff travel surveys, which can have poor response rates, time consuming to administer and may not produce comparable results. The European tools in contrast are about how user engagement develops, but none of the tools are about business engagement.

3.3.4 Environmental monitoring

A form of monitoring that has the potential to be of more relevance to an organisation is that of carbon emissions. The inclusion of transport in EMS such as ISO14001 and EMAs was discussed in Section 3.2.1, but as previously mentioned, these tools do not specifically include transport.

Others monitoring tools are specifically designed for transport, for example *Yearly Emissions and*

Travel Information, more commonly known as YETI. This tool is designed to monitor carbon emissions from both commuting and business travel to allow better management (JMP Consultants Ltd, 2009a). Carbon emissions can also be monitored through car share software systems, which work on either an average carbon emissions for a car or the more sophisticated *CarShare Online*, which uses actual vehicle emissions data from the DVLA based on the vehicle registrations (CarShare Online Ltd, 2009). The environment is an area which is growing in interest with business as will be shown in Chapter 6, when the motivations for travel plans are explored.

3.3.5 Conclusions

Government has produced much advice and guidance for travel plans and activities related to travel planning, but their role seems confused. They struggle to centralise the process of travel planning adoption, relying on local authorities. The local level for travel planning may indeed be the best place to concentrate the resources due to the independent nature of travel planning. However, there is a greater role for Government to support the process through fiscal, 'hard' TDM measures such as the re-allocation of road space to lock-in behaviour change. But there appears to be an unwillingness to do this as some of the measures are politically sensitive and perhaps there are problems with support and communication with other Government departments to implement some of the fiscal measures.

3.4 Previous Research

Having explored the advice and guidance available for travel planning largely from Government sources, this chapter will now move on to review the research to date in travel planning and to an extent smart choices, as the research into smart choices is often relevant to travel planning. The research falls largely into four main areas,

- i. The effectiveness of travel plans
- ii. The effectiveness of specific travel plan measures or alternatives to commuting

- iii. Behaviour change and marketing methods
- iv. Motivations for a travel plan

This section will begin by examining where the concept of travel plans was developed and how it appeared within the UK. It will then move onto review a selection of the research into travel planning to date covering the four areas outlined above, moving on to the alternative methods of adoption for travel planning (to the planning process), which have been suggested in the research, and concluding with the slightly unusual view that commuting can be seen as a 'gift'.

3.4.1 Historical context

The concept of a travel plan or at least elements of it have been around for over thirty years, although there were antecedents in the US and UK in World War II, as illustrated in Figure 3-2.



Figure 3-2: Early car sharing promotional image (Potter et al., 2009, page 10)

The first travel plan appeared in the US in the 1970s during the oil crisis, where car sharing was encouraged as a way to reduce petrol consumption and ensure a continuity of operation within organisations. The range of measures within a travel plan increased from that of purely car sharing in the 1980s as travel plans developed within California. This was in response to a

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widening of motivations to include recruitment and retention and to limit traffic impacts from new developments. The idea began to spread to the UK as the Department for Transport developed guides on car sharing, which was implemented in local authorities such as Essex and Yorkshire.

Travel planning within the US expanded, particularly in California in the late 1980s and early 1990s, as concerns about pollution grew. The introduction of the Air Quality Management Plan in California and the Federal Clean Air Amendment Act required organisations with over one hundred employees to implement an employee transit plan. A travel plan became a package of measures, rather than isolated initiatives. The idea then began to spread to the Netherlands and Toronto in Canada.

It was not until the early 1990s that travel plans or 'green commuter plans', (as they were known then) really arrived in the UK. They started first in Nottingham with the development of a resource pack for employers in the area, and then spreading to other regions across the country (Coleman, 2000). Travel plans developed in the UK from the bottom-up, with local authorities trying out new ideas such as car sharing and then developing this into what we know today as a travel plan. It was not until 1998 in *A New Deal for Transport* that travel plans were mentioned as part of central government policy (DETR, 1998a). The initial travel plans concentrated on large workplaces, but have developed in segment to include schools, leisure facilities, shopping centres and residential areas and within residential areas, personal travel planning (Enoch, 2008).

3.4.2 The effectiveness of travel plans

Travel plans are a relatively novel concept to transport planners, within transport policy and to the organisations that are tasked or choose to develop them. To prove their effectiveness in delivering their objective of reducing single occupancy vehicle (SOV) trips, a range of research projects have been undertaken.

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The most high profile of these projects was the *Smarter Choices* report. The report drew on a range of case studies to determine what the potential reduction in peak hour traffic could be for the entire range of smart choice options. For travel plans specifically, the report suggests an average potential of reduction in traffic of 17.8% (Cairns et al., 2004a), which is very similar to the figure quoted in the report *Making Travel Plans Work* of 18% (Department for Transport, 2005c). The *Smarter Choices* report shows that travel plans are relatively cheap, typically costing the local authority between £2 - £4 per head. Evidence shows that soft measures as a whole are remarkably cost effective, where every £1 spent could bring about £10 of benefit in reduced congestion. The report highlights a range of other benefits from a travel plan including,

- Income from bus use and associated ticket revenue
- Increase walking and cycling associated with health gains
- Reduced social exclusion
- Better conditions for employees
- Improved staff recruitment and retention
- Good public relations for business
- Opportunity to contribute to environmental management standards
- Financial savings
- Better estate management (Cairns et al., 2004a)

These benefits are more targeted at the business, but none of them are quantified within the report.

Other reports give varying levels of traffic reduction from a travel plan. Meyer gives a traffic reduction figure in the US for a TDM programme, at an individual employment site, of between 30%-40%, but only expects a net reduction at a nationwide level of 4-8% due to induced traffic on the clearer roads (Meyer, 1999). This is a point also picked up by Rye in *Travel plans do they work?*

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He felt that although travel plans could make a difference to modal shift at a site level, at the network level it was unclear what the benefits were, due to others taking the available space (Rye, 2002).

One of the issues surrounding travel plans is the lack of monitoring. Rye complains about the 'paucity of data' (Rye, 2002), (although in fairness his research was completed comparatively early in the life of travel planning within the UK). Humphreys and Ison raise concerns that where targets were set for airports to develop surface access strategies in *A New Deal*, Government did not appear to be monitoring the targets that it had set. Without this external 'stick' the airport travel plans could be in danger of losing focus and either becoming less effective or failing (Humphreys and Ison, 2005). This lack of data has become more of an issue for travel plans and smart choices in 2009, with the publication of *The impact assessment of the carbon reduction strategy for transport* (Department for Transport, 2009a), which criticises the lack of robust data on the effectiveness of smart choices, and therefore does not see them playing a substantial part in transport's carbon reduction strategy.

There seem to be two problems with the collection of data for travel planning. The first is that only 10% of large private businesses (over 100 employees) have adopted a travel plan (Enoch and Ison, 2008). The second problem appears to be that of those businesses with a travel plan, they are not consistently monitoring the modal shift or reduction in single occupancy vehicle numbers to the site. One report suggests that 63% of businesses that had a travel plan had not started monitoring (Department for Transport, 2001a). Hence the data that is needed to determine the effectiveness of a travel plan is not available. The other question is how to evaluate the effectiveness of a travel plan. Simply showing that car trips or vehicle miles travelled are reduced is unlikely to be sufficient for Government. An approach that has been used in the *Eddington Study* and others is that of benefit to cost ratio (Cairns et al., 2004a, Eddington, 2006, Department for Transport, 2009a, Tisato and Robinson, 1999). All these reports show a good benefit to cost

ratio for travel plans and other smart choice measures, but due to the novelty of the idea the evidence needs to be more robust than would be expected for other areas of transport policy.

This lack of monitoring by business could be for a number of reasons, including the time it takes to do a staff survey, which may have a poor response rate so offering little valid data. One of the other problems with a staff survey, which was alluded to in Section 3.3, is that the modal shift is not an outcome that is of direct importance to a business. Therefore, this shows there is another layer of data that is missing; that is the data that shows the business case for a travel plan, which is essential to those trying to sell the concept to a business on a voluntary basis. This data is perhaps even harder to monitor due to the complexities of trying to isolate the cause and effect of various measures. This is a topic that will be returned to in Chapter 14.

3.4.3 The effectiveness of specific travel plan measures

However, some of the specific travel plan measures have been more successfully evaluated for their effectiveness, such as the use of financial incentives or disincentives and trip substitution methods such as teleworking.

Financial incentives and disincentives

One of the conclusions from the *Smarter Choices* report was that for a travel plan to be successful it needed a mixture of incentives and disincentives. Travel plans with car parking charges were more likely to reduce car journeys than those without (Cairns et al., 2004a). This is a conclusion repeated in work done by Meyer on TDM at employment sites in the US (Meyer, 1999). Shoup found that when cash out schemes were offered in California, over the eight firms included in the study, solo drivers fell by 17% and car poolers or sharers increased by 64%. He also found that transit (public transport) riders increased by 50%, vehicle miles travelled fell by 12 % and CO₂ emissions fell by 367kg per employee per year. Cash out schemes were considered to be a fringe benefit by employees, which appeared to help recruit and retain staff. Interestingly, his work

showed that cash out schemes were revenue neutral for the employer, as it was considered to be a more flexible way to use resources previously devoted to subsidising car parking. However, the work accepts that a cash out scheme is only likely to be acceptable to staff when the alternatives to driving alone exist, such as car pooling or good transit systems (Shoup, 1997).

The area of financial incentives and disincentives may not always be easy to introduce to a business. Although Shoup was able to show that incentives such as cash out schemes are revenue neutral, it is not an option that has been widely adopted within the UK, with only a small number of organisations such as Pfizer, Eon and the University of Hertfordshire adopting this approach. Car parking charges or disincentives have also been hard to implement as will be illustrated by one of the case studies, UEA in Chapter 11.

Trip substitution and telecommuting

The other main body of evidence is that of alternative working practices such as telecommuting. There are a range of definitions for telecommuting, but in essence it is the 'use of telecommunications to reduce, shift or eliminate the commute to a conventional workplace (Mokhtarian, 1997). Teleworking is slightly different, as it also includes substituting business travel trips with telecommunications, but often the two terms are used interchangeably.

Telecommuting can be introduced independently in a company without any other travel plan or TDM instruments, but in some case it is promoted as part of a workplace travel plan (Cairns et al., 2004b).

This is an interesting area of research, because it is one of the few areas that actually considers why people travel rather just how they travel. Teleworking or telecommuting are seen as a possible way to reduce the need to travel either to work or for work, where the reason to travel is to be co-present with other people or objects or to access or exchange information (Lyons et al., 2008). This need to travel can be replaced by virtual technologies as the means of communication,

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rather than face-to-face contact. Travel has historically been linked with economic growth, so the use of such technologies could be a way to uncouple economic growth from travel growth. There is evidence to suggest that this may already be happening. Since 1992 GDP has increased by 45%, but road traffic has only increased by 21% and overall travel by 16% (Lyons et al., 2008, page 212), but it is hard to gauge the exact impacts as the size of the workforce is changing as well as the numbers who can and do telework or telecommute (Lyons et al., 2008).

However, there is debate about the extent to which vehicle miles travelled (VMT) are reduced by the ability to telecommute. One argument that is put forward is that humans are mobile animals and that time saved through telecommunications may be offset by a desire or need to travel. This need to travel can be for a variety of reasons including 'cabin fever', the need to still do non-work trips such as shopping or the school run, (which had previously been part of the daily commute), telecommuters shifting from car sharing or public transport on non-telework days to driving alone, or telecommuters living further from work and being prepared to occasionally make 'that' longer journey (Mokhtarian, 1997, Lyons et al., 2008, Mokhtarian et al., 2004). It may also be due to an individual's travel budget, which if it is exceeded efforts will be made to reduce the time travelled, but if it does not reach the desired amount, efforts will be made to maintain the optimum (Salomon, 1985, Lyons and Urry, 2004). This led to the suggestion that travel patterns are likely to be modified rather than reduced as a result of telecommuting (Salomon, 1985).

However, even with the potential of additional journeys or acceptance of a longer commute on an occasional basis, there is unanimity in the research to support that telecommuting does reduce VMT (Mokhtarian et al., 2004, Cairns et al., 2004b), but as with travel planning, there is still debate about the impacts on the network due to latent demand (Mokhtarian, 1997, Mokhtarian et al., 2004). As part of the *Smarter Choices* report, a review of the evidence in the literature concluded that as well as reducing VMT for commuting, there is little evidence to show whether there is an impact from telecommuting on other members of the household, but what evidence

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there is shows little impact. The research also shows that there is little effect as a result of telecommuting on people's choice of where they live (Cairns et al., 2004b). The report shows that for those that telecommute, the VMT travelled per person, per week was reduced by between 43 and 193 miles, with most averaging a weekly reduction of between 45-50 miles (Cairns et al., 2004b). There are also benefits to business through reduced office space, (which saved one case study organisation £400,000 per year), society through reduced traffic and congestion, and to telecommunication companies and the economy through new business opportunities (Cairns et al., 2004b, Handy and Mokhtarian, 1996).

There is potential to increase the numbers telecommuting further. Estimates in 1992 suggested that there were between 3,000 and 10,000 full-time teleworkers in the UK and that between 1999 and 2001 this figure had increased by 21% (Lyons, 2002). The *Smarter Choices* report states that people telecommuting at least one day a week had grown by 13% a year between 1997 and 2001 in the UK, which equates to 2.2million people in the UK, which was 7.4% of the labour force (Cairns et al., 2004b, page 261). Those that telework tend to be in managerial, professional, administrative and skilled professions, but within these groups only between 5%-16% teleworked at the time. The potential growth lies within these groups, which account for 64% of the total workforce and also tend to be the occupations that have seen the biggest growth (Cairns et al., 2004b).

In the recession of 2009 and the concerns of a major flu pandemic, telecommuting is seen as a way for organisations to cut costs by closing offices (Roby, 2009), and as a way to ensure business continuity, by encouraging staff to work at home (Jones, 2009). However, unless the management processes and training occur to support these changes in working practices, the cost savings from office closures may only be short term as staff become de-motivated and isolated, so that productivity levels fall or staff turnover rises incurring additional recruitment costs. There is also the problem that not everyone who is able to telework or telecommute is willing to do so. Some

are concerned about the impact of professional isolation on their career prospects and productivity, there may be issues about job suitability, management willingness, domestic tensions due to using the home environment as a place of work and the desire to use the commute journey as a buffer between work and home and have some 'time to themselves' (Salomon, 1985, Golden et al., 2008, Mokhtarian, 1997). There are other potential wider social costs that also need to be considered, such as a reduction in public transport use that will reduce revenues, possibly requiring subsidies from Government to ensure that those that rely on these services for mobility are not adversely affected (Salomon, 1985).

This approach to traffic reduction is good in that it addresses the need to travel rather than purely the mode, and has the potential to offer advantages to business including cost savings as the result of reduced office space, to transport planners and society by reducing VMT and the associated emissions, and improving the work-life balance for employees, but there are also costs. There is a danger that the responsibility for office space and health and safety will be shifted to the individual, causing additional stress, which may have the effect of reducing productivity. The other issue is that the transport network may not see the reductions in VMT that would be expected as a consequence of induced demand or purely a shift in travel patterns, unless measures are taken to lock-in the change in travel behaviour.

3.4.4 Behaviour change and marketing methods

Another body of literature in the smart choices and travel planning areas is that of behaviour change. Travel planning is in essence an approach to bring about travel behaviour change, it is therefore not surprising to find literature relating to behaviour change and marketing approaches such as social marketing, which is used extensively as part of behaviour change programmes in the health sector, such as stop smoking campaigns.

Work by Anable suggests a need to segment travel behaviour characteristics, an approach often used in consumer marketing, but not previously for travel behaviour. Until this research, the market had been segmented by socio-demographic or economic data, which can be an effective method to identify specific groups. Plaut identified that those who were more likely to cycle or walk were likely to be younger, often male and less likely to own a car, and that those who worked at home were more likely to be older and the highest earners (Plaut, 2005). However, Anable argues that segmenting based on travel behaviour rather than social demographic groupings helps to identify which segments are more likely to be receptive to behaviour change programmes. The work outlines six segments of travel behaviour,

- i. The **malcontented motorist** which accounts for 30% of the population in the study. They are typically increasingly frustrated and unhappy with car driving and see a moral responsibility to change, but do not because they believe the alternative options such as public transport are not viable.
- ii. The **complacent car addict** (26%) admit there are alternatives to driving, but do not feel any moral imperative to change their behaviour.
- iii. The **aspiring environmentalist** (18%) has already substantially reduced their car use, largely for environmental and health reasons, but appreciate that there are practical advantages to car use and so are unwilling to give up the car entirely.
- iv. The **hard drivers** (19%) are very fond of their cars and car driving and believe they have a right to drive cheaply and freely, with negative feeling to all the alternative modes. (The Jeremy Clarksons of the world.)
- v. The **car-less crusader** (4%) has already sacrificed car ownership for environmental reasons and has a positive evaluation of the alternative modes of transport.

- vi. The **reluctant riders** (3%) are involuntary users of public transport due to health and financial reasons. (These are the group that are most likely to be socially excluded) (Anable, 2005).

By segmenting travel behaviour in this way it is possible to improve the message or information as part of the marketing programme, and to target it at those most likely to change such as the *'malcontented motorist'* and the *'aspiring environmentalists'*.

Where market segmentation helps to identify those that are most likely to change travel behaviour other methods are used to show how this process of change happens. As already mentioned in Section 3.3.2, MOST-MET and Tapestry both use behaviour change models to assess the effectiveness of awareness raising campaigns. The work done in the Tapestry project was further expanded in the report and guidance *Making Campaigning for Smarter Choices Work* (Department for Transport, 2005b). This again used the *Seven Stages of Change Model* shown in Figure 3-1, page 45. A similar model was also used by Rye to explain the stages of change that an organisation goes through, but this only contained five stages; pre-contemplation, contemplation, preparation, action and confirmation or maintenance (Rye, 2002). This model can also be used for individuals.

Making Campaigning for Smarter Choices Work uses the theory of *Personal Construct Psychology* (PCP) which 'revolves around two simple building blocks; elements and constructs' (Department for Transport, 2005b, page 29). Where elements are things such as cars, people, things that can be seen, heard, touched and so on. Constructs are the descriptions applied to them, such as good, bad, reliable, unreliable and so on. The theory is that to change a person's behaviour their construct of an element needs to be moved from one pole towards the other. For example if a person's construct of the element buses is at the pole of 'unreliable', marketing and information needs to be targeted to move the person's construct to the 'reliable' pole, as shown in Figure 3-3.

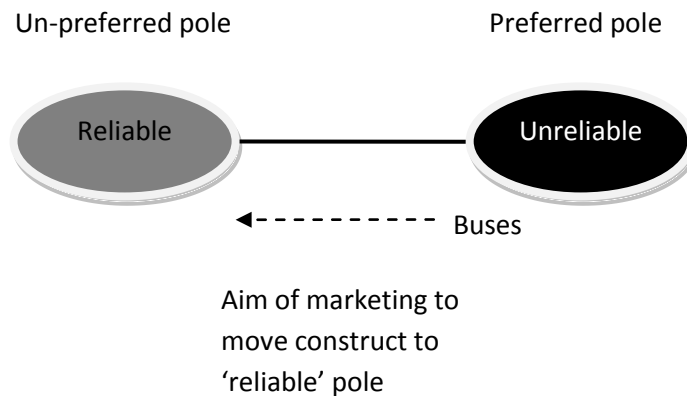


Figure 3-3: Illustration of Personal Construct Psychology

The guidance suggests that to bring about this shift in construct towards the 'un-preferred' pole uses a change mechanism called the *Change Cycle* or *CPC cycle* (circumspection, pre-emption and control). Here new ideas and marketing leads to *circumspection* of the new options. This is reinforced as the personal advantages are spelt out and the new options are assessed for future potential (*pre-emption*). The new idea leads to trials of new behaviour, as the person takes *control* of the change and the new idea is constantly re-tested. In the report it suggests that the CPC model is the 'psychological engine that drives the steps between the seven stages [of change model]' (Department for Transport, 2005b).

Behaviour change methods and psychology have become an important aspect of travel planning and smart choices. Understanding how to sustain the behaviour change of individuals is necessary for the longevity of a travel plan.

3.4.5 Motivations for a travel plan

Different sectors will have different motivations for a travel plan. Local authorities that are advocating the adoption of travel plans to private business and schools have a strong moral obligation to develop a travel plan, so that they are in a position to lead by example, but also as

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part of their local transport functions. Hospitals are required to develop travel plans to control their transport impacts and a number of higher education establishments are expanding and developing so need to use the land more efficiently and manage parking problems (Rye, 2002).

However, the motivations for the private sector are not the same; they do not need to lead by example. Those that develop travel plans on a voluntary basis could be motivated by problems with parking, recruitment of staff due to poor transport links or on site congestion (Rye, 2002).

The need to intensify land use can also be a commercial motivation for private business, as was the case in the studies of airports by Humphreys and Ison, allowing the airports to expand within the existing sites (Humphreys and Ison, 2005). The commercial motivation is always going to be a strong driver for any organisation to introduce a change programme such as a travel plan, particularly if it is seen to bring business advantage through cost savings or greater efficiency (Bradshaw, 1997). Gerwig noted that greater efficiency or productivity improvements were often related to the use of telecommunications technologies. His work outlined ten business reasons for an organisation to participate in a workplace TDM programme or travel plan in the US. These included,

- i. Increases in public health and that of employees through reduced air pollution and lower levels of stress.
- ii. Improvements in regional mobility and thus economic health
- iii. Enhanced customer access
- iv. Possible connection of trip reduction to core business (telecommunications technologies for commuting)
- v. Reduced congestion and parking demand
- vi. Extended working hours of service through alternative work hour programmes
- vii. Enhanced ability to recruit and retain staff
- viii. Opportunities for creative and flexible space planning and sharing

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- ix. Mitigation of new development impacts at a fraction of the cost for new physical improvements
- x. Improved productivity (especially through telecommuting) (Gerwig, 1996).

This range of motivations is strongly related to teleworking, an element that seems to be particularly important to workplace TDM in the US, as seen in the requirements of the *Best Workplaces for Commuters* scheme in the US. This stipulates that for an organisation to qualify for membership of the scheme, one of the conditions is a 'significant telework program' (Best Workplaces for Commuters, date not stated).

Within the UK the motivations are different. The research report *Take up and effectiveness of travel plans and travel awareness campaigns* found the main reasons for business to adopt a travel plan for seventeen out of forty one businesses was the environment; eight out of forty one, securing a planning permission and fifteen out of forty one, parking pressure (Department for Transport, 2001a, page 25). What is notable is that this range of motivations is considerably less than those quoted by Gerwig, and that the emphasis is more towards planning issues and less towards teleworking and business efficiency.

The motivations for travel planning within a private business are going to be driven by commercial reasons, with few businesses willing to adopt a travel plan for altruistic purposes. Chapter 6 will show that the motivations for a travel plan develop as it matures, and the things that drove the travel plan when it first developed are not necessarily those that have maintained it as it matures. However, even though there is a lot of research outlining the benefits and motivations for a travel plan, there is still a lack of robust data for the business case for travel plans, making it hard to justify these motivations and sell travel plans on a voluntary basis.

3.4.6 Alternative approaches to stimulate the adoption of travel plans.

It is therefore not surprising that other routes to stimulate the adoption of travel plans have been suggested. Those interviewed in the *Smarter Choices* report felt there was a need for greater support through such things as tax incentives or rebates on business rates for those with travel plan measures, or possibly making travel plans a statutory access requirement for schools and businesses in a similar way to the disability requirements. Concerns were also raised about the lack of direct power for local authorities or Passenger Transport Executives to set frameworks for public transport to ensure a good quality alternative to the car existed (Cairns et al., 2004a). Rye sees that the main barrier to businesses adopting a travel plan is that they do not see the need, as they do not perceive they have a problem with either parking or congestion. The suggestion is that Government needs to find a way beyond encouragement if it wishes to engage business beyond those that are growing or expanding (Rye, 2002).

The problem is perhaps exacerbated by the perception of officers at the local level that soft measures are not seen as a central part of transport strategy (Cairns et al., 2004a). This is a concern that has been reiterated in the response to the *Impact assessment of the carbon reduction strategy for transport* in practitioner journals such as *Local Transport Today*, which felt that smart choices measures were being sidelined (Local Transport Today, 2009).

This literature review gives a taste of the work that has been done to reduce commuting, but Lyons and Chatterjee suggest there are some benefits to the commute. They admit that congestion is seen to be a big problem within the UK. The UK is subject to the most extensive congestion in Europe, where commuters in the UK have a 19% chance of encountering congestion, compared to 7% in France and 4% in Germany. This is not surprising when 71% of commuter trips are made by car. Congestion is seen as a cost to the economy, a blight on society, as well as the environmental and social costs. At the individual level commuting is a cost burden, a sacrifice of time, as well as the potential physiological and psychological effects of stress and tiredness. However, having

pointed out the problems with commuting, the authors then describe how the commute can actually be beneficial as an 'anti-activity', where the commuter is able to 'shift gears' between work and home, so using the time to get ready for work or relax or at the end of the day, to study or read. The research also found that some commuters actually enjoy the journey and derive pleasure from travelling (Lyons and Chatterjee, 2008). An interesting argument that not all commuting is bad, although it is hard to deny that at present the levels of congestion are too high and there is a need to reduce them for the reasons outlined above.

3.5 Conclusions

What is notable in the review of the literature is that the role of Government is unclear. At one level it offers a wide range of guides and advice, some of which are duplicated at the local authority level. Most of the work engaging with business has been devolved to local authorities, which due to the site specific nature of travel plans would appear to be appropriate. However, other than encouragement, local authorities only have the planning process as a tool to engage business in travel planning.

Where Government could play a bigger role is to broaden the regulatory approach, possibly through fiscal measures or to implement mechanisms to lock-in behaviour change, such as road pricing or workplace parking levies. These sorts of fiscal measures have been politically very sensitive, though accepted academically as an effective way to reduce congestion. The response from Government has again been to delegate this responsibility to local government. As the *Impact Assessment of the Carbon Reduction Strategy for Transport* shows, Government is unclear how to include smart choices and travel planning into a central Government transport policy, which would be needed to ensure the lock-in from behaviour change and prevent any reductions in VMT being lost through induced demand.

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One of the problems with the smart choices and travel planning is the lack of robust data. This lack of data is at four levels,

- i. the network
- ii. the site
- iii. the business case
- iv. the individual

As the section on monitoring showed, most of the monitoring is aimed at local authority targets of assessing whether the travel plan has achieved what it was targeted to do and whether SOV, and modal shift is occurring at the required level. This monitoring does not however, give any information about the impacts of the travel plan on the wider network. The other problem with concentrating the monitoring on the local authority targets is that businesses are monitoring data that has little relevance to their core operational functions or to business efficiency, which could help to explain the problems with businesses rarely monitoring their travel plans. The data that a business is likely to be more interested in is that which demonstrates the business case for a travel plan, and how it could help an organisation to work more efficiently. Potentially, what should be monitored is how effective a travel plan is in delivering the benefits outlined as the motivations for a travel plan, which largely are not transport related. At the individual level, little is known about who is changing their travel behaviour. For example, is it a large number of people changing their behaviour once a week, or a small number who have given up the use of the car? Without this data it is hard to know how to develop the marketing of a travel plan further to bring about greater levels of behaviour change. At the moment the monitoring concentrates on possibly the least useful piece of data SOV and modal shift.

The other 'piece of the jigsaw' that is missing is how a travel plan develops and how to embed and sustain it over a prolonged period of time. The work on sustaining travel plans has been limited

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to sustaining individual behaviour change through the use of psychological research methods and behaviour change models. Little research has looked at how the organisation changes and what it perceives to be the benefits of a travel plan. This area of embedding a travel plan and what the business perceives are the benefits of a travel plan is the focus of this research thesis.

What this overview demonstrates is that both government and academic research have concentrated on improving the breadth of uptake of travel plans, which is understandable as the uptake has been limited, and on a voluntary basis very low. However, one of the other problems has been that of sustaining travel plans after the initial development, particularly as part of a planning application, and then further into the long term. What this thesis aims to do is to fill this gap in the research and answer the research question of *what are the factors that have increased the depth of a travel plan within an organisation and so helped to embed it within the company, thus leading to long term sustainability.*

Chapter Four

4 Methods – Diffusion of Innovations and Organisational Theory

4.1 Introduction

The previous two chapters reviewed how transport policy has developed to include travel planning. The previous chapter highlighted that guidance documents and research has centred on marketing travel plans to individual commuters and assisting organisations in the early stages of adoption and implementation of travel plans. However, this approach seems to have made little impact in terms of the organisational acceptance of travel planning. The review indicates that little research has been done to identify how to sustain travel plans, and so the focus of this thesis is to concentrate on the organisational embedding of travel plans in the long term, answering the research question:

What are the factors that have increased the depth of a travel plan within an organisation and so helped to embed it within the company, thus leading to long term sustainability?

There are a range of research methods that have been used for travel planning research including case study based approaches, cost-benefit analysis and psychological theory, centring on behaviour change theory for the individual. As the focus of this thesis is the organisational embedding of travel plans, methods that explore embedding or adoption of innovations and the organisational context need to be explored. Models that investigate the innovation adoption and diffusion process from an organisational perspective have not previously been used for travel plan research, and so the purpose of this chapter is to review the suitability of such models for the research in this thesis.

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Considering a travel plan as a process innovation, would suggest the use of a method that explores the adoption of innovations. A leading example of this is Rogers' '*Diffusion of an Innovation*' (Rogers, 2003). Rogers notes that the adoption of an innovation within an organisation does not happen in isolation but is dependent on factors such as the structure and processes within an organisation. Therefore, this chapter will not only consider elements *Diffusion of an Innovation* (Rogers, 2003), but also aspects of organisational theory that could have relevance to the embedding process of a travel plan.

This chapter will first review the research methods that have been used in travel planning research to date before moving on to explore the methods for this thesis.

4.2 Review of research methods used in previous research projects

Travel plan research, not surprisingly has been rooted in applied research, with the purpose of improving the process of implementing and developing a travel plan and giving practical guidance to practitioners, both within the organisations that have the travel plan, but also the local authorities who promote and support these bodies. This applied research has been undertaken by a range of people including universities, consultancies and privately run research groups.

The research that has been done has centred on five main approaches, three quantitative and two qualitative.

Quantitative

- I. Surveys, also used as a scoping exercise
- II. Analysis of travel survey data
- III. Cost-benefit analysis

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Qualitative

- IV. Case study research to explore information from the scoping exercise in more depth
- V. Action research to develop behaviour change models

As noted in the previous chapter, research has concentrated on the initiation or early stages of adoption of a travel plan to develop best practice and guidance in setting up a travel plan and starting to deliver behaviour change. Many of the research reports have used a mixture of research methods. *Take up and Effectiveness of Travel Plans* (Department for Transport, 2001a) used a mixture of postal surveys to local authorities and telephone surveys for hospitals and specific organisation. These were followed up by case studies with a smaller sample to probe issues raised in the surveys in more depth. The *Making Travel Plans Work* report (Department for Transport, 2005c) takes a similar approach, but also analyses data from travel surveys to gauge how successful the travel plan has been in changing travel behaviour. This approach is developed further in the *Smarter Choices* report (Cairns et al., 2004a) to forecast the potential of Smarter Choices through scenarios. Academic research, as mentioned in Chapter 3, Section 3.3.2 has used psychological aspects of behaviour change. Rye's *Travel Plans: Do They Work?* (Rye, 2002) considers the application of a five stage behaviour change model in relation to travel plans, but then goes on to use qualitative case studies to assess the success of a travel plan in achieving its goals. The academic European research project *Tapestry* (Tapestry Partners and EU Commission, 2003), used a seven stage model of behaviour change. This was a large project which employed a range of research methods to collect the data for the case studies, including focus groups, panel surveys, attitudinal surveys, travel diaries and stakeholder interviews amongst others. *Tapestry* and other reports such as *Making the Campaign for Smarter Choices Work* (Department for Transport, 2005b), aimed to produce guidance on running behaviour change campaigns. *Making the Campaign for Smarter Choices Work* also includes some action research, where partners in the project share their experience, whilst working with the researchers to improve the guidance.

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Another slightly different approach used by Ison and Rye was to use Gunns *Perfect Implementation* to analyse the implementation of travel plans and road user charging, and to highlight elements of good practice in the process of implementation (Ison and Rye, 2003).

There are two main points that emerge from an overview of the research that has been done to date. Firstly, that there is no one approach that has been used to analyse the data, which has been conducted through a practitioner approach, with no real theoretical perspective. Secondly, the research has concentrated on the early stages of adoption of a travel plan and its effectiveness in changing travel behaviour. The research has not looked at how to maintain a travel plan over a prolonged period of time, nor investigated whether travel plans are delivering wider benefits to an organisation beyond reducing single occupancy vehicle (SOV) use. This is not surprising as much of the research was done in the early days of travel planning, when best practice guidance was needed and the delivery of wider organisational benefits were unlikely to have been fully recognised.

4.3 Rogers' Diffusion of an Innovation

As explained earlier, considering a travel plan as a process innovation suggests the use of elements of *Diffusion of Innovations* (Rogers, 2003) as a theoretical underpinning to analyse why some travel plans appear to have diffused and been adopted more successfully, and become embedded.

Most work on innovation diffusion has concentrated on the diffusion of an innovation among individuals, for example why farmers adopt certain seed varieties or particular computer technologies are adopted by individuals and who these individuals are most likely to be (Rogers, 2003, page 223-224). However, organisations also adopt innovations, either as hard technologies or as processes, such as travel plans. Rogers suggests that innovations within organisations are harder to implement than for an individual, partly due to the potential for a large number of

individuals to be involved in the implementation process (Rogers, 2003). A key feature of the adoption of a process innovation such as a travel plan is that the individuals who need to change their behaviour, generally, are not those who make the decision to implement a travel plan. In these cases the innovation adoption process goes through two stages, firstly adoption of the innovation by the organisation and then adoption by the individual. Zaltman realised this two stage adoption process within an organisation was more complex than for individuals. Where previous innovation studies had concentrated solely on the adoption phase of an innovation, Zaltman recognised that for an innovation to successfully diffuse into an organisation through user adoption, an important part of the process was the implementation or in-use phase (Zaltman et al., 1973).

4.3.1 The innovation process within an organisation

Rogers developed a five stage process to outline the stages that an innovation went through within an organisation, the first two, the adoption or initiation stage and the last three, the implementation or usage stage, Figure 4-1.

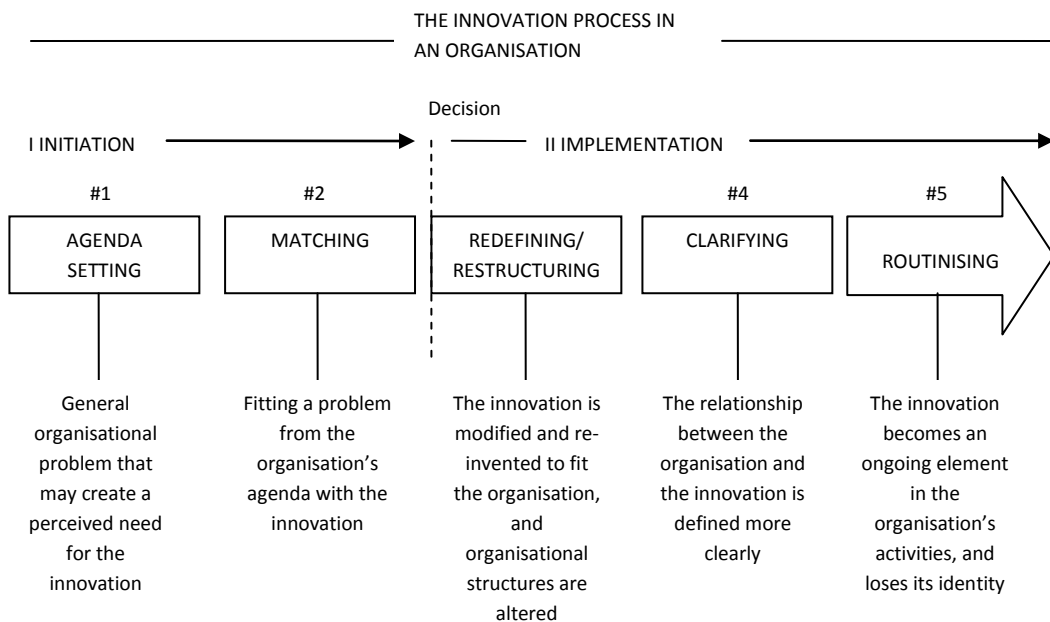


Figure 4-1: Five stages of Innovation in organisations (Rogers, 2003, Figure 10-3, page 421))

1. *Agenda Setting* is the point the innovation process starts. It involves a need or problem within the organisation that has to be addressed. However, sometimes the knowledge of an innovation may initiate the process.
2. *Matching* is the stage at which the problem is fitted with an innovation. Matching the correct innovation to the problem is essential in ensuring the innovation is sustained. At this stage the innovation is adopted.
3. *Redefining and Re-structuring* involves adapting the innovation to fit the needs and structures of the organisation. It can also involve the organisation's structures being redefined to fit the innovation, perhaps by creating a new unit to manage the innovation. Innovations that are internally developed, or externally developed but have the flexibility to be re-invented are more likely to be successfully implemented.
4. *Clarifying* is when the innovation becomes more widespread throughout the organisation, and so more clearly understood by the users as it begins to develop meaning and purpose for the people in the organisation.
5. *Routinising* is the final stage of the innovation process within an organisation. If an innovation becomes routine it is likely to be sustained (the degree it continues to be used after the initial adoption). The level of participation within the organisation will affect the sustainability of the innovation (Rogers, 2003).

These stages within the process of an innovation have some similarities with organisational change models such as '*Systems Intervention Strategy*' (SIS). SIS has three phases;

- I. *Diagnosis or description* to identify an approach to deal with change problems and devise objectives and measures.

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- II. *Design* alternative options to achieve the change.
- III. *Implementation* of the design, by developing a strategy for bringing about and then seeing it through (Centre for Professional Learning and Development, 2007).

However, this model does not break down the implementation phase as far as the Rogers' model. But what it does do, which will be discussed in more detail in Chapter 9, Section 9.2, is to see the process as cyclical rather than linear, which for travel plans is of particular relevance.

4.3.2 The attributes of an innovation

This process of an innovation within an organisation shows how an innovation is adopted, but does not consider why some innovations are adopted more quickly or successfully than others. The rate at which an innovation is adopted and moves through this process is dependent on a range of variables. These can include the structure of the organisation; for example the level of centralisation, formalisation, and organisational complexity (which will be discussed in the next section; 'Organisational Theory'); the number of people involved in the innovation-decision process and the attributes of an innovation.

Rogers suggests five attributes that can affect the rate of adoption of an innovation. The research using attributes has previously been applied to an individual's adoption of an innovation, particularly in trying to identify what the attributes should be and which attributes are most influential in the adoption of an innovation.

- I. *Relative advantage* is the degree to which an innovation is *perceived* to be better than what it supersedes or other competing innovations.
- II. *Compatibility* is the degree to which an innovation is *perceived* to match existing needs and values of the adopters.

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- III. *Complexity* is the degree to which an innovation is *perceived* to be relatively difficult to understand. This is negatively related to the rate of adoption, in that the more complex the innovation the slower the rate of adoption.
- IV. *Trialability* is the degree to which potential adopters are able to experiment with the innovation before adoption. This may be done either directly by the adopters or through the experience of others. Innovations that can be implemented in instalments are more likely to be adopted than those that are indivisible.
- V. *Observability* is the degree to which an innovation is visible to others, either as a product or the results of the innovation (Rogers, 2003).

Rogers suggests that relative advantage and compatibility are the two attributes that can have the greatest impact on the rate of adoption of an innovation.

The attributes will be used in this thesis as a framework to disaggregate interview data to explain why some innovations, such as a travel plan, are adopted and sustained more successfully within certain organisations. There are of course other factors relating to the organisation itself that may also influence the rate and success of adoption of an innovation such as a travel plan.

4.4 Organisational Theory

As previously mentioned, the successful adoption of innovations do not happen in isolation, but are dependent of factors such as the organisation's systems and structures. This suggests that aspects of organisational theory may be another approach that could be used to analyse the qualitative data emerging from this research as well as elements of *Diffusion of an Innovation* (Rogers, 2003).

This following section provides a brief overview of what is meant by organisational theory in this context. Firstly, it will explain what organisational theory is and the difference between the

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organisational structures of an organic and mechanistic organisation. It will then discuss how organisational structures affect innovativeness and change within an organisation.

4.4.1 Organisational theory definitions

Organisational theory is defined as,

“The consideration of how organisations can be structured to improve the contribution they make to society and to the improvement (or otherwise) of all our lives (Crowther and Green, 2004).”

or more simply,

“Organisational theory – a framework for understanding, explaining and predicting organisational effectiveness (Dessler, 1980).”

There are possibly two main areas of organisational theory that are relevant to the long term performance of a travel plan; organisational structure and organisational change.

4.4.2 Organisational structures

Organisational structure is defined as, ‘the degree of complexity, formalisation and centralisation in the organisation,’ where complexity is the ‘degree of vertical, horizontal and spatial differentiation in an organisation (Robbins, 1989).

Organisational structures range between the two extremes of mechanistic and organic, where a mechanistic structure tends to be characterised by high complexity, high formalisation and significant centralisation. This is in contrast to organic structures that are characterised by low complexity, low formalisation and significant de-centralisation (Robbins, 1989).

Organisational theory states that mechanistic structures are more suitable for large undifferentiated and stable environments, with the emphasis on efficiency and centralised decision making and routine and repetitive operations. In contrast, organic structures are more

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suited to an uncertain, complex environment with decentralised decision making and creative and innovative operations (Dessler, 1980).

These characteristics would suggest that more organic organisations would be better suited to creating and developing new products, and have the flexibility and openness to bring about organisational change. This hypothesis is further strengthened when the motivational patterns used to bring about compliance to accomplish an employee's designated tasks are considered for each type of organisation. Katz and Khan's theory claims there are two extremes of control in an organisation; imposed control and self-control. The theory goes on to outline the motivational patterns used to achieve these forms of compliance or control.

- A. The use of legal instruments or rules, where the employees comply as they accept the rules and directives as legitimate job demands or through a fear of sanctions.
- B. The use of rewards such as pay and promotion as an incentive to bring about greater compliance
- C. Internalising patterns of self-determination. The job is sufficiently challenging and interesting to bring about satisfaction and a sense of achievement for the employee.
- D. Internalising the company's values and goals, so that the company's goals become the individual's goals (Dessler, 1980).

The motivational patterns A & B are those used to impose control and tend to be used in mechanistic organisations. Interestingly, there are similarities with the methods of control and what would be considered the 'harder' measures used in travel plans such as car parking management; or financial incentives or disincentives such as car parking charges and cash out schemes.

The motivational patterns C & D are used to encourage self-control and are characteristic of organic organisations. Again there is a similarity between these methods of control and those

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used in a travel plan, though this time it is to the 'softer' measures of awareness campaigns, communication of alternatives and sustained initiatives to change behaviour.

This would suggest that more organic organisations should be better at adopting new innovations such as a travel plan based on awareness raising, and mechanistic organisations should be more inclined towards travel plans that concentrate on the harder infrastructure aspects of a travel plan. This is not surprising as the larger organisations are more likely to have the financial resources and benefit of size to influence local authorities and public transport operators to support the development of the harder aspects of a travel plan.

However, this is in contrast to what Rogers' *Diffusion Theory* suggests. Rogers suggests that larger size organisations are more innovative than smaller organisations. This could be explained by a difference in definition of 'innovativeness'. Within organisational theory innovativeness refers to the ability of an organisation to develop new innovations, but Rogers is concentrating on the adoption of an innovation; two very different processes. To create new innovations probably does need a freer working environment; however, the adoption of an innovation may need the greater number of resources, leading to some slack and a wider range of technical expertise.

4.4.3 Departmental structure

There are three main structures used in organisational theory, functional or process, purpose or product and matrix.

A functional or process departmentalisation is a simple structure where the organisation is divided by functions, such as facilities, human resources and marketing, Figure 4-2. This structure is more suitable for stable, specialised situations and is production or internally orientated (Dessler, 1980). The structure is more commonly found in mechanistic organisations.

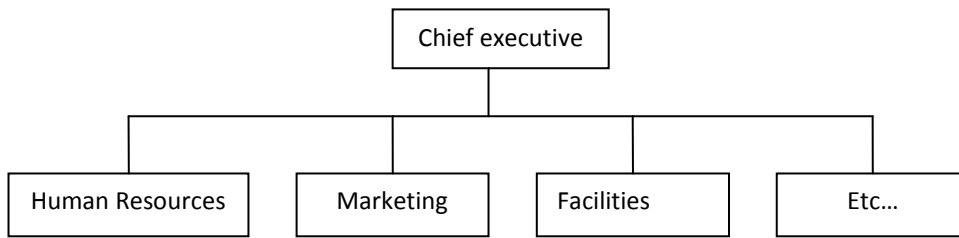


Figure 4-2: Functional Structure

Purpose or product structures are market focused, where the structure is orientated around the product or customer, Figure 4-3. Each department is centred on the product, with the various functions assigned to that department. This structure is criticised for the reduction in efficiency through the overlapping of roles between product groups, however, it leads to greater accountability and is better suited to rapid and unpredictable situations (Dessler, 1980).

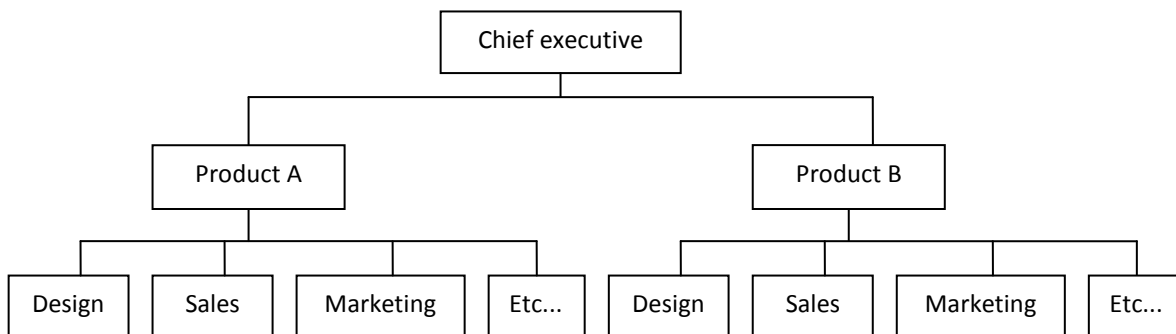


Figure 4-3: Product and purpose structure

The final structure is a matrix structure, which combines functional and product structures, Figure 4-4. This may be only a temporary assignment, where the departments are laid out in functional units and the projects are laid over the top. This has the major drawback of employees reporting to two bosses (Robbins, 1989), though it has the advantage of using the specialities of many functional groups and integrating the project across departments.

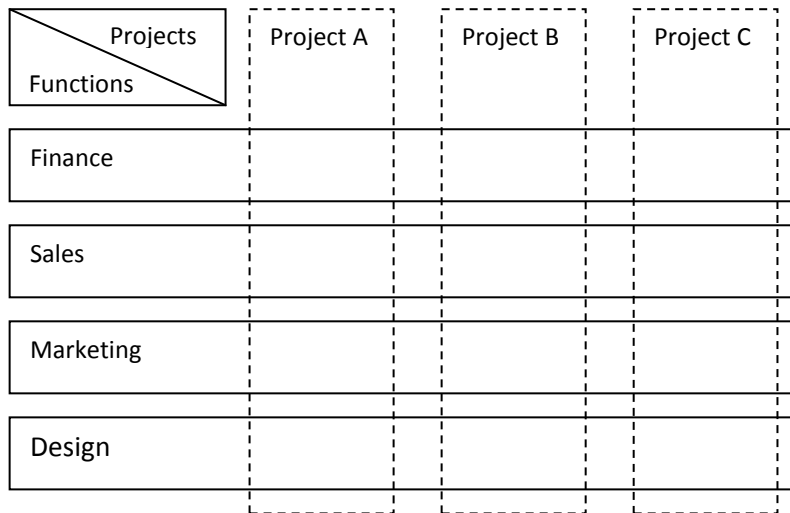


Figure 4-4: Matrix structure

The reality is that within many organisations, they work with a mixture of departmental structures, where the more functionally orientated departments such as facilities and finance will be organised in a functional structure, but the more innovative areas of the business are more likely to be positioned within product departments or a matrix structure.

4.4.4 Structure in Fives

An alternative organisational model to show an organisational forms and departmental structures is that of Mintzberg's '*Structure in Fives*' (Mintzberg, 1993). He developed five organisational forms;

1. **Simple structure** – an organic structure typical of smaller organisations, with a loose division of labour, small management structure and little formalisation of behaviour.
2. **Machine bureaucracy** – typical of larger organisations, with highly formalised, specialised routine tasks. Reliant on a rules and regulations and formalised communication and supported by a large administrative structure. Tends to be functional in structure.
3. **Professional bureaucracy** – typical of universities, schools, hospitals, craft and production firms. Reliant on professional training to standardise skills. These professionals have

considerable control over their work and work relatively independently of their colleagues, but closely with their clients.

4. **Adhocracy** – highly organic structure typical of innovative firms. Staff usually work on projects in small teams. Requires both specialists and a large management team working to ensure liaison between the project teams.
5. **Divisionalised form** – typical of private sector in the industrialised world, particularly large organisations with differentiated products or markets. Similar to a project form but on a larger scale. Tends to lean towards a machine bureaucracy, but can be superimposed onto machine or professional bureaucracy or an adhocracy (Mintzberg, 1993).

These organisational forms are then broken down into five parts, Figure 4-5.

- **The Operating core** is the largest area and contains those who actually perform the tasks that relate directly to the production of the products and services.
- **The middle line** is where the strategic apex is joined to the operating core by the chain of middle line managers with formal authority.
- **The technostructure** is where the certain forms of standardisation in the organisation are controlled. For example, standardisation through training or the development of strategy or policy.
- **The support staff** are specialist units of staff who are there to offer support to the organisation outside the operating work flow. This area includes departments such as facilities management, payroll, catering and other ancillary services.
- **The strategic apex** is charged with ensuring that the organisation serve its mission in an effective way, and also that is serve the needs of those who control or otherwise have power over the organisation. This is basically the board of directors.

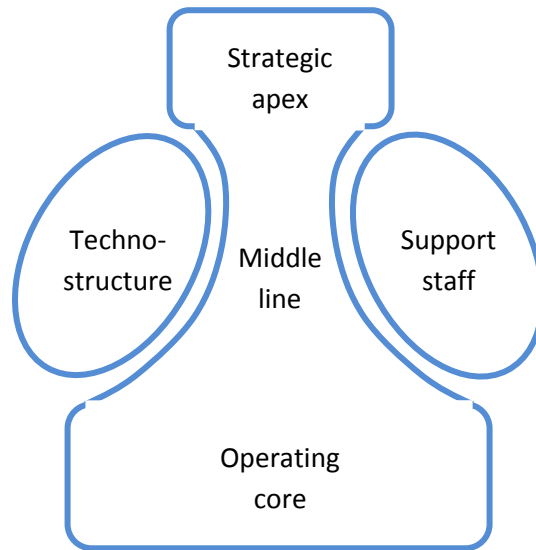


Figure 4-5: Mintzberg's five basic parts of an organisation (Mintzberg, 1993, page 11)

The actual shape of alters depending on the type of organisation. The professional bureaucracy would have a large operation core, helped by a large number of support staff, but because control is exercised through professional training the technostructure is very small (Figure 4-6).

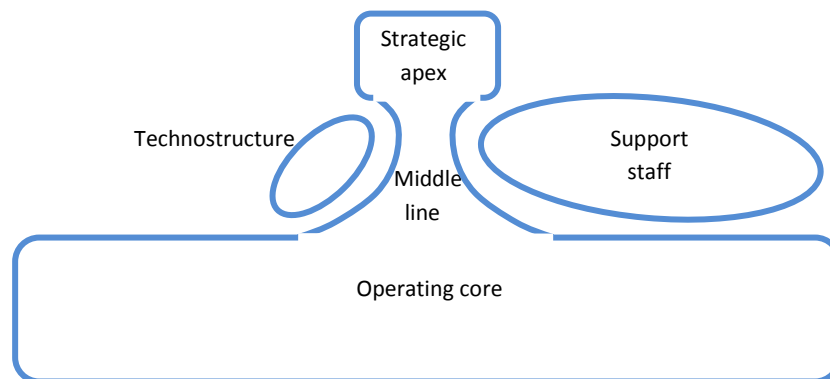


Figure 4-6: The professional bureaucracy

The divisionalised form is similar, but has a larger middle line containing the divisional managers and the operating core consists of each of the divisions as a *Structure in Five* in their own right.

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The main aspect of organisational theory used in this research was that of Mintzberg's *Structure in Five*, as it was possible to identify the organisational form and the position of the travel planner within the structure. However, it was not possible to determine the impact of the organisational structures and form on the embedding of a travel plan as the organisations which were chosen and willing to be case studies, were all large and so inherently likely to be more mechanistic in nature and divisionalised organisations, so no comparison was possible. Nevertheless, the research did identify some evidence to support Rogers' findings that smaller organisations were less likely to adopt innovations such as a travel plan, often as a result of the lack of slack in resources or perceived need. What did emerge from the analysis was the importance of the position and changing role of the travel planner, which will be discussed in more detail in Chapter 13, Section 13.5.3.

4.4.5 Systems intervention strategy (SIS) and organisational development

The other area of interest within organisational theory is that of organisational change. Travel plans as a process innovation require organisational change. There are two main change models which seem to fit the process that a travel plan goes through. SIS has already been mentioned in Section 4.3.1, highlighting its similarities to '*The innovation process in an organisation*'. The other is '*Organisational development*' (OD).

These two models could be used as a way to analyse how the process of implementing a travel plan changes as it matures. Travel plans are likely to be initiated by a change management model such as SIS. This is an organisational change model that focuses on a part or a subsystem of an organisation, which may not necessarily relate to business plans, such as commuter travel. It is applied to change situations that require structured and logical approaches, which are task or project orientated and relatively prescriptive, where the change process is often triggered by the need to resolve 'messy problems'. This change model is suited to circumstances that need logical

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and structured approaches, and so suitable for the early stages of developing a travel plan and the adoption of the innovation by the organisation.

For the later stages of adoption, the implementation stages of Rogers' model, which involve the adoption by the individual, the OD model would appear to be more appropriate. OD assumes there will be resistance to change and focuses on the organisation as a whole, so is integrated into the business planning of an organisation. It tends to be applied to complex process orientated change of a political nature, which travel plans certainly can be. This process of change is most likely to be triggered by the need to achieve organisational objectives or adopt new ways of working, such as more flexible or smarter working practices (Centre for Professional Learning and Development, 2007).

The early stages of the adoption of an innovation such as a travel plan are more closely aligned with the SIS organisational change management model, which can isolate it as a project within a single department. As the innovation matures, if it begins to link into other areas, it is more likely to align more closely with the OD model of organisational change. This could help it to become embedded in the wider organisation.

4.4.6 Champions

One thing that both organisational change models have in common is the role of a project sponsor or champion. This is a topic that Rogers also considers will affect the rate of adoption of an innovation. Rogers suggests that a champion should be a 'charismatic individual who throws their weight behind the innovation' (Rogers, 2003, page 414). He suggests some characteristics that are important for a champion to possess.

- i. Occupied a key linking position in their organisation
- ii. Possessed analytical and intuitive skills in understanding various individual's aspirations

- iii. Demonstrated well-honed interpersonal and negotiating skills in working with other people in their organisation (Rogers, 2003, page 415).

Travel planners position and skills tend to vary greatly, with some employed in administrative roles, perhaps on a part-time basis and others in managerial positions, sometimes supported by a further champion on the board. The level at which a travel planner is employed within an organisation certainly is an indication of how seriously the organisation considers the travel plan to be, but not necessarily how successful the innovation adoption has been.

4.5 Conclusions

This thesis is concentrating on the organisational embedding of workplace travel plans. To do this requires a better understanding of the organisation and the processes and factors involved in embedding a travel plan. This chapter has explored aspects of *Diffusion of Innovations*, specifically the *Innovation Process in an Organisation* and the *Attributes of an Innovation* (Rogers, 2003). It has also looked at the structures and types of organisations.

Organisational theory seemed to offer some interesting perspectives that could possibly help to explain the successful maintenance of a travel plan. As Chapter 14 will discuss, organisational theory could be an area for further research, but it was not possible to explore this area fully within the bounds of this research. There were three main reasons for this, firstly the lack of knowledge of the interviewees of organisational change models such as the SIS and OD models. Secondly, to be able to identify and apply the implications of different change models was beyond the experience of the researcher and as such, potentially ran the risk of becoming the focus of the thesis. Finally, all the organisations used as case studies were large and so were likely to be inherently mechanistic as a function of their size, which meant that there would be no comparison to test the hypothesis of the mechanistic or organic structure affecting the performance of the travel plan.

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This indicated that an approach centred on the use of Rogers and Mintzberg seemed the most appropriate frameworks to use in exploring the embedding of travel plans. The use of the *Attributes of an Innovation* helps to explain why some travel plans are adopted more quickly and successfully than others. Section 4.3.2 explained how they have been used in research with individuals. In this thesis the attributes are applied in a new way to that of previous innovation research. This thesis uses them as a framework to disaggregate interview data from interviews within organisations and to explore the factors that affect the embedding of a travel plan, whilst the *Process of an Innovation* investigates the process of embedding of a travel plan. The use of the Mintzberg structure highlighted the importance of the position of the travel planner. However, it is accepted that other factors can affect the rate and process of a travel plan such as the management willingness to adopt a travel plan and perception of need and availability of financial resources.

Chapter Five

5 Research methods

5.1 Introduction

The previous chapter outlined aspects of *Diffusion of Innovations* (Rogers, 2003) and elements of organisational theory that would be appropriate to explore the embedding of travel plans. This chapter reviews quantitative and qualitative social research methods and details how the Rogers and Mintzberg models were applied in this context for the specific research aim of investigating how travel plans have embedded within an organisation.

5.2 Review of research methods

In Chapter 4, Section 4.2 it was shown how in previous research the methods for researching and analysing a travel plan are still developing, but that they have concentrated on a mixed method approach of quantitative and qualitative data. These two types of research are often used within social science research, either independently or together as mixed methods (Yin, 2009).

5.2.1 Quantitative

Quantitative data is numerical data that has been quantified (Saunders et al., 2007). This data is sometimes collected through surveys, which has been particularly the case in travel plan research. Quantitative data collection can also include cost-benefit analysis and modelling. Surveys involve the structured collection of data from a substantially sized population. They are useful in descriptive, analytical or exploratory research. Surveys usually involve the development of a questionnaire, which can be delivered either by electronic means through the internet or the intranet, postal, delivery and collection, telephone, or as a structured interview. The choice of delivery is influenced by a range of factors including;

- Characteristics of the respondents

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- Importance of reaching a particular person
- Importance of the responses not being contaminated or distorted
- Size of sample
- Types of questions asked
- Number of questions asked (Saunders et al., 2007)

5.2.2 Qualitative

Qualitative research in contrast uses data that cannot be quantified. It is described by Strauss and Corbin as,

“A process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge” (Corbin and Strauss, 2008, page 1).

It is also described as a way of ‘inquiring into the meaning individuals or groups ascribe to a social or human problem’ (Creswell, 2007, page 37). Qualitative research can be split into two forms; deductive and inductive. *Deductive* research develops a theory that is tested using analytical strategies where data categories and codes are predetermined, whereas an *inductive* approach allows the theories to emerge from the data, so there are no predetermined codes or categories to guide the analysis (Saunders et al., 2007). Within an inductive qualitative approach there is a range of different types of analysis, although many of these methods may also have deductive elements. Saunders et al describe the following;

- Data display and analysis
- Template analysis
- Analytic induction
- Grounded theory
- Discourse analysis
- Narrative analysis (Saunders et al., 2007)

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Creswell adds to this list by including phenomenological research, ethnographic research and case study research (Creswell, 2007).

Data display analysis involves three stages; data reduction to summaries or codes, displaying the data in a diagrammatic form, usually either as matrices or networks and finally drawing and verifying conclusions. *Template* is a hierarchical way of developing a list of codes or categories to represent the themes that emerge from the data, however, these codes and categories may be developed deductively from existing literature and theory (Saunders et al., 2007).

Analytic induction or case study research are in depth studies within a real life context, of a selected range of cases to empirically establish the causes of a phenomenon (Saunders et al., 2007, Yin, 2009). Yin describes four forms of case studies in two different dimensions; *single* and *multiple* case study design, and *holistic* and *embedded* designs. Single case studies use a single critical case to test a well-formulated theory; it may represent an extreme or unique case. Single cases are also used where the case is representative or typical of a particular circumstance or condition, or where the case is revelatory. Finally, single case studies may be longitudinal, where the same case is studied at different points in time (Yin, 2009).

Multiple case studies may be chosen for a range of different reasons. Multiple case studies allow for replication of the findings; they can allow for 'two-tail' design where case studies are chosen from the two extremes of a phenomenon are chosen. Multiple case studies also allow the researcher to explore a range of conditions, choosing different sub-groups of cases to cover each condition (Yin, 2009).

The other dimension of analysis holistic or embedded refers to the unit of analysis. A holistic case study treats the organisation as whole, whereas an embedded case study examines individual sub-units such as departments or work-groups within that organisation (Saunders et al., 2007).

Grounded theory is described by Corbin and Strauss as,

“A specific methodology developed by Glaser and Strauss (1967) for the purpose of building theory from data. It can be used as a way to denote theoretical constructs derived from qualitative analysis of data” (Corbin and Strauss, 2008).

The defining part of grounded theory is that it is inductive; allowing a theory to emerge from the data and so is ‘grounded’ in the data. Grounded theory is structured and systematic, with clearly defined procedures to follow. The data is broken apart into blocks of data through the process of *open coding*. The process of recognising relationships between these codes or concepts is known as *axial coding*. It is then possible to start to define a core phenomenon and create strategies around this core phenomenon. This integration of theories then leads to a position where a hypothesis or *grounded theory* is generated. The data collection within grounded theory is done through a process of *theoretically sampling*, where as the theory begins to develop additional cases to be studied are selected to further develop the theory (Corbin and Strauss, 2008, Creswell, 2007, Saunders et al., 2007).

Narrative analysis contrasts with grounded theory in that rather than fragmenting the data it keeps the data whole to develop a story or narrative, which concentrates on the individual, such as a chronological life story (Saunders et al., 2007, Creswell, 2007). *Phenomenological study* is an analysis that ‘describes the meaning for several individuals of their lived experiences of a concept or phenomenon’ (Creswell, 2007, page 57). *Ethnography* goes further to study a cultural group, where the researcher describes and interprets the behaviours and beliefs of the group (Harris, 1968).

Finally, *discourse analysis* analyses the use of language and how and why it is used by individuals in a particular social context, placing an emphasis on how the discourse reproduces or changes the social world rather than revealing the phenomenon (Phillips and Hardy, 2002).

5.2.3 The credibility of qualitative research

Qualitative research is chosen as a research method partly because the research question will dictate that method. Questions beginning 'how?' and 'why?' are more likely to be explored through qualitative research, as it allows the researcher 'to get at the inner experience of participants, to determine how meanings are formed through and in culture...' and '...to see the world from [the participants] perspective and in doing so make discoveries that will contribute to the development of empirical knowledge...' (Corbin and Strauss, 2008, page 12). However, the critics of the qualitative approach suggest that it may lack rigour, especially if biased views have been allowed to influence the findings and conclusions, or that it takes too long (Yin, 2009).

The problems of rigour can be addressed through considering issues of validity and reliability. *Validity* covers whether the findings are a true representation of the phenomenon being studied. For example, a causal relationship may be given to explain why a travel plan does not work at a specific site, by stating that the alternatives to single occupancy car use do not exist, when the reality is that people are not aware of the alternatives. Single case studies are particularly open to criticism, because of the concern that they '...offers a poor basis for generalising' or *external validity* to other research settings (Yin, 2009, page 43, Saunders et al., 2007). However, this can depend on the findings that are being given. The example just given does not need to be generalised, whereas others do. The problem of generalisability can be overcome by using a multiple case study approach, where it is possible to replicate the findings. The other area of concern for rigour is that of reliability. *Reliability* is whether a researcher at a later date, following the same procedures, will arrive at the same findings and conclusions as the original researcher. This problem can be largely overcome by documenting the procedures followed during the investigation (Yin, 2009). However, there are threats to reliability even when procedural documenting is undertaken. Participants may be biased in their replies, as they feel they need to say what the management wants to hear, or specific details may not be recalled accurately.

Anonymity should help to overcome the first problem; the second could be overcome through triangulation.

Triangulation is described as the use of multiple sources, methods and investigators to give corroborating evidence (Creswell, 2007). This could involve interviewing different people within an organisation, documentation, archival reports or case studies undertaken by other researchers within the same organisations to verify the evidence given. However, there is the caveat that different data gathering methods could yield different results, as demonstrated by Mason who used quantitative and qualitative analysis in his family research, expecting different results from each form (Mason, 1996).

5.3 Discussion of the mixed method approach

The previous section briefly explored the differences between quantitative and qualitative research, the range of qualitative analyses and the approaches to ensure credibility. This section will move on to discuss why the methods used in the research were chosen and why other methods were rejected. It will first look at the quantitative survey, followed by the qualitative method and the use of the *Attributes* as an analysis framework.

The research was split into two phases using a mixed method approach. The first phase was a quantitative survey and the second qualitative case studies, thus following the pattern of previous research projects such as the *Take up and Effectiveness of Travel Plans* (Department for Transport, 2001a) and *Making Travel Plans Work* (Department for Transport, 2005c). The case studies used semi-structured interviews, to seek data for analysis using Rogers' innovation work, and to understand the business cases that were developing within the wider organisation.

5.3.1 Quantitative surveys

The first stage of the research was a telephone survey using semi-structured interviews. A survey was chosen firstly to explore some specific issues, such as how the motivations for a travel plan

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change over time, but also used as a scoping exercise to identify potential case studies for in depth investigation. The semi-structured telephone interviews helped to identify issues that could be explored in more depth during the interviews. A telephone survey, as opposed to another form of delivery was chosen at this stage to ensure the correct person within the organisation was contacted and to try to improve the response rate. Further details of the methods and information covered in the survey are found in Chapter 6.

This survey was then followed up a year later with an email survey. Email as a form of delivery was chosen because the survey was much shorter, containing only five questions. It was not necessary to go into as much depth as the first survey as the intention was a review of how external events had affected the travel plan. Again more details on the second survey are found in Chapter 6.

5.3.2 Qualitative research – the case study

5.3.2.1 Multiple case studies

A multi-case study method was chosen for the in depth qualitative part of the research. Multiple case studies were chosen to help improve the credibility of the research, but also to ensure that a complete picture of maturing travel plans could be investigated. Yin suggests several reasons for the use of multiple case studies, credibility through replication being one. His work also suggests the idea of a ‘two-tail’ design and the wish to explore a range of conditions across different sub-groups (Yin, 2009).

Using a multiple case study approach was necessary to build up the complete picture of maturing travel plans. Travel plans range from those that are closely aligned to the goals and targets set by the local authority, as an outcome of a planning consent, through those that are beginning to make links into organisational goals such as recruitment, retention and business growth. At the other extreme of the range are organisations that have changed their working practices to the

extent that work becomes an activity rather than a time or place, which impacts on transport, though it was not the primary aim. A single case study approach would not be able to cover this spectrum of travel plans. The other issue is that travel plans tend to be unique to the organisation, with no one travel plan exhibiting a full range of characteristics.

The multiple case study approach involved firstly identifying travel plans at either end of the range, but then also to identify travel plans that fitted between the two extremes. The aim of the choice of case studies was to build up this picture of the entire spectrum, with case studies overlapping in characteristics to an extent to improve validity through replication, but accepting that they would also offer uniqueness to the research as Figure 5-1 represents.

This approach to build up a spectrum of case studies is a development of the reasons given by Yin to use multiple case studies, and perhaps a criticism that his reasons for the use of multiple case studies are too limited.

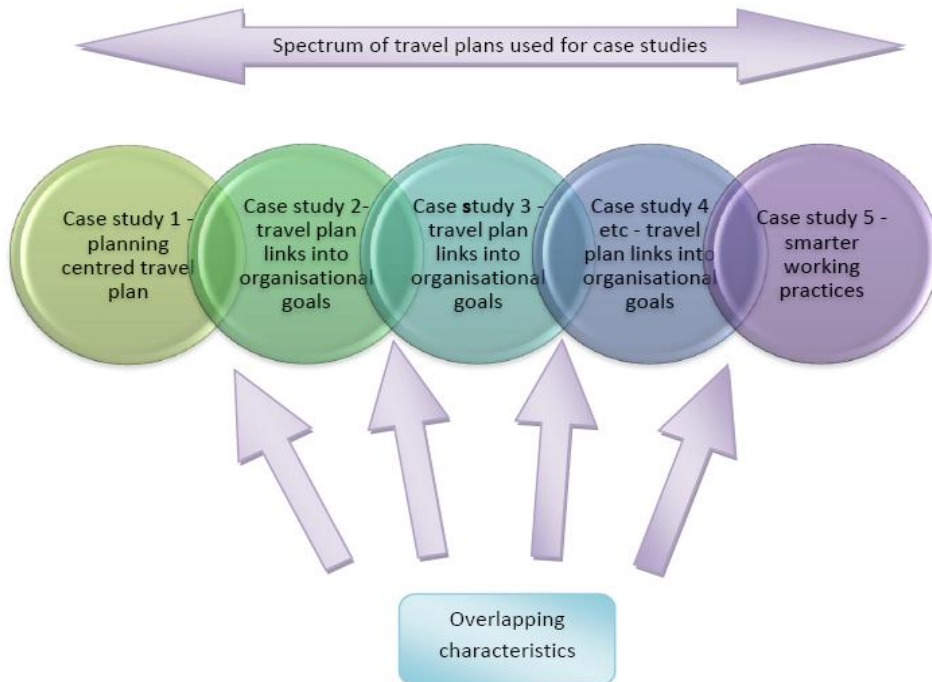


Figure 5-1: Multiple case studies overlapping spectrum

5.3.2.2 The embedded dimension

One of the objectives of the research is to understand not just how a travel planner perceives the travel plan benefits the organisation, but also to gain an insight into what other members of the organisation perceive as the benefits. In order to do this a range of people were interviewed across the organisation in areas such as human resources (HR), information technology (IT), procurement, corporate social responsibility (CSR), and environment and health and safety (EHS). This meant that the case studies were *embedded* rather than *holistic* case studies. This meant that the data collection was in the form of in depth interviews, where the range of sources was drawn from the range of individuals interviewed across the departments.

5.3.2.3 Triangulation

Interviewing a range of people across the organisation was one technique to triangulate the results, comparing the responses from different people to the same questions.

5.3.2.4 Benefits of a travel plan

Part of the process of identifying how a travel plan is embedded into an organisation, involved discovering the business cases or benefits of a travel plan that were developing across the organisation. Analysis of this data is a more inductive process. A range of business cases are stated in the guidance in travel plans as ones that could be achieved, but the objective of this research was to discover what business cases were actually being used. By interviewing people across a range of functions one of the objectives was to find what they considered were the benefits of the travel plan to their department, and also to the organisation as a whole. The benefit of talking to people who were not directly involved in the travel plan, meant that they were unlikely to be aware of the business cases quoted in the literature, so it would be possible to allow the business case or benefits to emerge from their experience rather than from previous knowledge.

5.3.3 Methods not used

This emergent approach used in the business cases would suggest the use of *grounded theory*. However, part of the process of grounded theory is to collect and analyse data, and from that data to *theoretically sample* further case studies. This theoretical sampling is where the problem lies with this research project. Gaining access to organisations was a major barrier, especially where the requirement was to speak to a range of people. Criteria had already been set to have a range of travel plans for the case studies; the additional specifications required for grounded theory would have made it impossible to complete the study.

The research methods used in this thesis is therefore a mixed method approach. It includes two surveys the first a telephone survey, followed up year later with an email survey, both of which are the focus of Chapter 6. To get a more in depth understanding of the embedding and development of a travel plan a multiple, two-tailed case study approach was used, with semi-structured interviews of people across a range of departments and structured around the Rogers' model.

5.4 Conclusions

The overarching framework for this thesis is to use the Rogers and Mintzberg models. A mixed method approach is used to collect the data. Firstly a series of quantitative semi-structured interviews used partly as a scoping exercise to identify suitable case studies and to explore how the motivations for a travel plan change as it matures. This is then followed by embedded in-depth case study interviews, where the data is deductively disaggregated using Rogers' *Attributes of an Innovation* (Rogers, 2003), to identify the factors that have increased the depth of embedding of a travel plan within an organisation. The *Process of an Innovation* (Rogers, 2003) is used to identify the processes and stages that a travel plan goes through as it is embedded within

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an organisation and Mintzberg's *Structure in Fives* (Mintzberg, 1993) is used to help understand the contextual factors that may affect the embedding process.

Chapter six

6 Surveys

6.1 Introduction

The previous two chapters outlined the research methods that were planned for use in this thesis. This chapter will focus on the first part of the research, the quantitative surveys. It will outline the methods used to gain the data and then present the results of the surveys, before drawing conclusions from the results.

6.2 Survey phase 1

As the first phase of the original research, a survey was developed, which took place in late 2007. The survey had two main objectives, firstly to determine whether the motivations for a travel plan change as it matures, but also as a way to help identify organisations for the case studies at a later stage.

6.3 Method

To help with the process of identifying potential case studies for further research, it was decided to do the survey as a semi-structured telephone interview. This gave the opportunity to explore with the travel planners a range of issues and to develop an understanding of how the travel plan had developed and fitted within the rest of the organisation. This method was also chosen as a way to try to improve the response rate to the survey, by making a time for the travel planners to talk rather than leaving them with a postal or email survey that they may look at and then quickly forget.

6.4 Questionnaire design

The first step was to draw up a series of questions to provide the data needed. The questionnaire was developed as a semi structured interview that focussed on exploring how the travel plan had developed and to what extent it was organisationally embedded. The questions centred on the following themes. (Appendix 6.1)

- original, current and future motivations (split into 'primary' and 'secondary')
- links to other departments
- departmental responsibility
- what had sustained the travel plan to date
- time span of the travel plan
- travel plan performance
- background of the travel planner

The telephone call for the interview was planned to last approximately half an hour. This timing worked well and seemed to be a length which respondents felt was not too intrusive into their daily work, but also allowed enough time to explore the issues.

6.5 Identifying survey population

The survey population was drawn from the Association of Commuter Transport-UK (ACT) (now known as ACT-Travelwise) database. This was considered to be as representative of the range of workplace travel plans as was possible. The factors explored in the research particularly applied to private sector organisations, which became the main focus of the study. In consequence, the number of public sector organisations was limited to six. The public sector organisations that were included were partly due to the longevity of their travel plans. It was decided not to pursue the public sector further, because although a number of the motivations were similar, "local authorities and the National Health Service have a strong moral obligation to 'lead by example'

and to fulfil environmental responsibility when developing travel plans” (Enoch, 2008, page 244), which are less likely to be motivations for private business.

Once the survey population was identified a personalised email was sent to fifty travel plan coordinators, explaining the purpose of the survey, pointing out that the survey would be confidential and that the results would only be displayed in a tabular form and asking for their co-operation. (Appendix 6.2) The email asked them to reply if they were willing to help, and state a time that would be convenient for them to participate.

Table 6-1 shows the split by sector and region of the organisations who took part in the survey. It should be noted that the regional split is for the office in which the interviewee was based.

Split by Sector		Geographical Region	
Pharmaceutical	3	South East	7
Financial Services	8	South West	4
Telecommunications	3	Greater London	2
University	3	East of England	3
Utility	1	East Midlands	3
Airport	2	West Midlands	1
Hospital	1	North West	3
County Council	2	North East	1
Retailer	2	Scotland	1

Table 6-1: Split by Sector and Region

However, a number of these organisations both retail and non-retail are multi-site. For reasons of confidentiality it is not possible to give more detailed information about the organisations, except to say that they were all large service sector organisations, including several multi nationals. None of the organisations would be considered as small or medium sized enterprises (SME). It should be noted that the size of the organisation, in some cases has only limited relevance, for example where organisations have large numbers of customers visiting sites. This is particularly so in the case of airports and retail companies where the number of staff within the organisation accounts

for only a small proportion of trips to a site. The twenty five organisations surveyed represent a 50% response rate. Of those who did not reply, for twelve the mail failed, six did not reply, three did not go on to develop a travel plan and the rest mentioned a variety of reasons including only just starting in the job or the travel plan.

6.6 Interview process

At the beginning of each interview, it was re-iterated that all comments would be confidential and treated anonymously, as this research sought quantitative data, rather than specific attributable comments. It was also pointed out that they were free to withdraw at any time, and to refuse to answer any questions. Finally, the reporting method was described, in that a paper would be written with the results, with the aim of publishing in a journal, and that a copy of the paper would be sent to them on completion. The journal article was published in the *Journal of Transport Geography* in 2010 (Roby, 2010).

The interviews were not recorded, but notes were taken during the interview reflecting the comments made by the interviewees.

The semi structured approach was particularly useful in exploring issues of interest that arose during the interview. This method also meant that after a few interviews had been completed, it was possible to adapt and change the questions to pick up on interesting issues that had arisen in the earlier interviews. However, the interviews followed the same basic format, but as each case was very individual it was necessary to allow for this flexibility to ensure the interview stayed relevant to the interviewee.

The interview tended to start by asking the interviewee what they considered were the original motivations for the travel plan, then moving onto what they considered them to be now. This seemed to naturally open up the conversation. The original motivations often brought a very

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short response, but the current motivations tended to result in the interviewee giving more expansive answers. What became evident was the enthusiasm of the respondents to talk about the initiatives they undertook; they seemed to be quite proud of them.

A semi structured interview seemed to work well in helping to understand the context for the travel plan, but in several cases it was also a useful and interesting process for the interviewees. One travel plan co-ordinator who was new to the role, felt that finding the information for the interview had been extremely beneficial in helping to get an understanding of the history of the travel plan, and worked well as an introduction to the role. Another respondent found it useful to re-focus their minds on what the travel plan was there for and what the goals were.

6.7 Results

The answers to the questions were entered into an *Excel* version of the questionnaire. The responses were broken down into

- primary and secondary original and current motivations
- future motivations
- departmental links
- departmental responsibility
- types of HR intervention
- methods of monitoring
- start dates
- respondents by type

The most interesting results from the survey were the change in motivations for a travel plan as it develops; as a consequence these are the first results to be discussed. The results shown here demonstrate how the motivations for a travel plan have changed over time, (though it should be noted that the specific time span of the travel plan had no influence on how the motivations

changed) and the impact this had on the organisational embedding of a travel plan. Initially the results of the primary motivations for implementing a travel plan will be examined, then the secondary motivations, and finally what motivations are anticipated to be in the future.

6.8 Primary motivations

The responses were split into primary and secondary motivations. Primary motivations were the main motivations given for the travel plan. Only one primary motivation for each organisation was recorded, with any other motivations recorded as 'secondary'.

6.8.1 Primary original motivations

The original motivations fell into two broad categories; either external compulsory or internal voluntary ones.

As previously noted in Chapter 3, Section 3.2.2, a planning obligation or agreement gives local authorities a mechanism to develop legally binding agreements with developers or employers to commit to the funding or development of travel plan initiatives. At present this is the only route by which a local authority is able to require a private organisation to implement a travel plan. It is therefore no surprise that for seventeen of organisations surveyed, the original motivation for a travel plan was a planning consent or agreement. Table 6-2 below shows the breakdown of original motivations.

It is less common for a travel plan to be implemented on a voluntary basis. However, four employers implemented a travel plan for Facilities Management (FM) reasons (to address accessibility problems) and three organisations as part of their environmental agenda.

	Original Motivations	Current Motivations
Planning application	17	3
Government Directive	1	
Car parking capacity		4
Congestion/access	4	2
Environmental	3	
CSR/Environmental		7
Recruitment & Retention		2
Business Growth		2
Others		5

Table 6-2: Comparison of original and current primary motivations

6.8.2 Current primary motivations

The original motivations columns of Table 6-2 shows that the range of motivations was very limited, mainly involving an externally imposed planning requirement for a travel plan. But this pattern of motivations has changed over time. The current motivations columns indicate a more diverse range. This wider range of motivations emerged unprompted in the interviews. FM motivations, (car parking and congestion) that were the second main group of original motivations, remained, but it is notable that CSR and environmental concerns are the main current motivation. Links into business expansion have also become more important. Overall, for these established travel plans, the role of an externally imposed regulation through the planning process has diminished notably from seventeen to three. The 'others' section represents a range of motivations including site expansion, being a good landlord and concerns about 'fly parking' in

residential areas. The concern about parking in residential areas is an issue of negative company image.

This comparison of original and current motivations suggests a pattern of travel plans moving away from external reactive motivations impinging only on FM, to internally driven proactive motivations linked to a number of areas in the organisation.

6.9 Secondary motivations

6.9.1 Secondary original motivations

In addition to the primary motivations for a travel plan, some of those surveyed had secondary motivations. Some of these secondary motivations also fell into the category of internally-generated rather than externally-imposed requirements. Table 6-3, below shows that the environment and car parking problems were the predominant secondary motivations, which suggests that even at an early stage, when the primary reason for a travel plan had been a planning consent, a number of organisations did recognise some of the wider benefits.

	Original Motivations	Current Motivations
Car parking capacity	4	2
Congestion/accessibility		3
Environmental	4	3
CSR	1	
Roadside parking		3
Health/wellbeing	2	3
Recruitment and retention	1	
Lead by example	1	

Table 6-3: Comparison of original and current secondary motivations

6.9.2 Secondary current motivations

The secondary current motivations shown in Table 6-3 indicate a more even split between the motivations. As well as an understandable move to encompass wider FM functions, there is more emphasis on the social aspects of a travel plan, such as CSR and the environment; there are also concerns about being a 'good neighbour' (by preventing fly parking), the need to improve access to the site or staff wellbeing.

6.10 Future motivations

The results from the survey of original and current motivations demonstrate a broadening of motivations and suggest that as a travel plan develops, the motivations that initiated them are not necessarily what will sustain them. This clearly has implications for both Government and local authority policies to promote long-lasting and effective travel plans. Although the planning process has had some success in initiating a travel plan, policies that support internal motivations are needed as a travel plan matures. This strategic point is reinforced when the future motivations are considered.

Table 6-4 shows the results of asking the respondents what they anticipated would be the motivations to drive a travel plan in the future. These motivations were not split into primary and secondary, as it was difficult to distinguish between the two when an interviewee was trying to anticipate what the motivations were likely to be.

What is striking is that a wide range of non-FM/planning issues made up the bulk of anticipated future motivations. Environmental issues accounted for fifteen. Several organisations that did not currently involve their travel plan in environmental and CSR policies stated that it was something that was being discussed for the future. An issue that was repeatedly noted was that interest in the environment and climate change was seen as a top-down decision that had risen in importance during the last 12-18 months, largely as a result of media coverage raising the profile. However, there is evidence that environmental issues are also important to some staff. Six (11%)

respondents believed that changing attitudes and awareness of the staff towards climate change and travel problems, would be a future motivation.

	Future Motivations
Planning application	4
Car parking capacity	5
Improved accessibility	3
Car parking charges/congestion charge	3
Road side parking	2
Environmental	15
CSR	1
Changing attitudes of staff to travel / environment	6
Recruitment	3
Health/wellbeing	3
Business growth	2
Expansion/development	3
Consolidation/re-location	3
Fleet/ business travel	3

Table 6-4: Future Motivations

HR related issues did not feature strongly, with only three respondents believing that recruitment was likely to be a motivation in the future and another three respondents expected growing health concerns to be a motivation.

The role of planning either as part of a long standing legal agreement, or developing further sites or branches, still remains an important factor for seven of organisations. Three respondents believed that regulation in the form of a parking levy or congestion charging were future motivations. Practical FM issues of car parking capacity and the impact this had on fly parking was

given by seven respondents. Finally, the use of a travel plan to help improve the efficiency of the real estate, either for business growth, or to help with re-location to possibly cheaper, smaller or out of town sites, was reported by six of organisations.

So, overall, for the future, environmental issues were expected to be important for sustaining a travel plan, with a wide range of other motivations coming from several areas of the organisation.

6.11 Departmental links

As part of the process of understanding the extent that travel plans had become embedded into the organisation, during the interview travel planners were asked which departments the travel plan linked to and the strength of these links. It appeared that most of the links were quite weak. Where the interviewees were probed as to who had initiated the links, in most cases they were unable to remember, others suggested that it had come from both directions, and some of the travel planners had not been there at the time the link was initiated.

The results below (Table 6-5) show the links stated by the interviewees. Considering the high number of organisations stating CSR as a motivation for a travel plan, it is not surprising to see so many organisations with links to this department. Similarly where a travel planner is not positioned within FM, it is not surprising to see that links exist with FM to support the day to day running of the travel plan and car parking management. What was also interesting, and perhaps more surprising was that seven of the twenty five organisations had no links at all with any other departments within the organisation, so the travel plan was isolated within the one department.

The number of links to HR, unlike the other responses, was prompted. This was because the next question was to ask how they linked into HR. This question was to follow up research done for Transport for London (TfL) by Synovate, which suggested that the best position within an organisation to approach to develop a travel plan was within HR (Baverstock, 2006).

	Departmental links out of 25
CSR/environmental/sustainability	8
Health	4
Facilities /Property	6
Business travel	4
Marketing/communications	5
Staff/student unions	2
Security	1
Procurement/ purchasing	2
HR	17
Steering groups	3
No links at all	7

Table 6-5: Departmental Links

What this survey showed was that though many organisations have links into HR, these links are predominately passive and are operational rather than strategic. For example, as Figure 6-1 shows, the links tend to involve HR in administering existing initiatives, such as the ‘Bike to Work’ scheme, concessionary fares and supplying information within the induction pack for new employees. Very few HR departments are using the travel plan to benefit the business proactively and strategically, such as supporting recruitment or as part of the remuneration package.

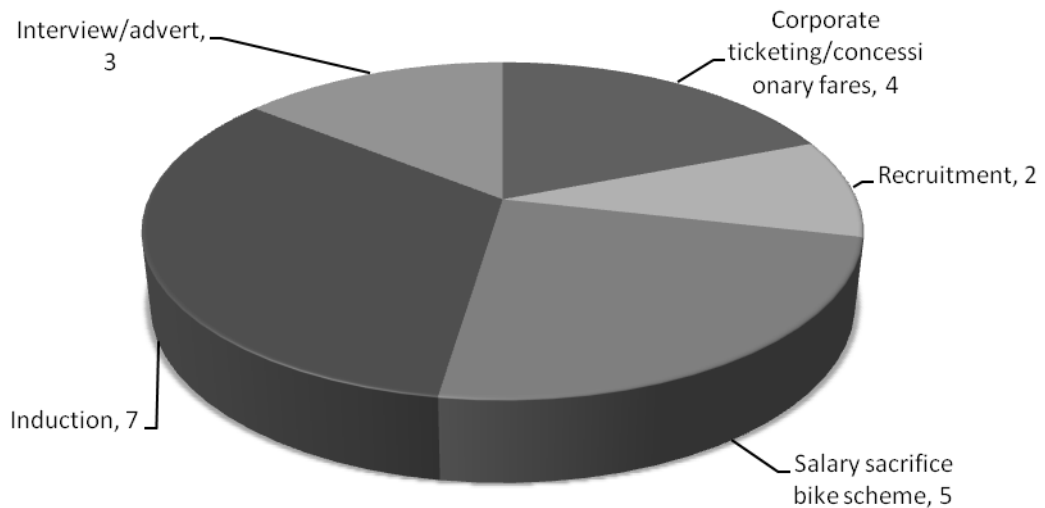


Figure 6-1: Human Resources Intervention

6.12 Time span

The original purpose of the thesis was to investigate how long running travel plans had developed. As part of the survey, to ensure the travel plans were long running, a question was asked to determine when the travel plan started. The earliest travel plans started in 1996, with the majority (fourteen), starting between 2000 and 2002. It was not investigated why so many started at this time. It may have been the economic conditions encouraging more organisations to apply for planning applications. It is not surprising that only a few travel plans started before this period, as the requirement for travel plans within land use planning law within PPG13 did not appear until 2001. The fact that only a small number started after 2002 is a reflection of the survey aim to identify long running travel plans.

6.13 Departmental responsibility and the role of a travel planner

The changing motivations of a maturing travel plan suggests a changing role for the travel planner, from one of developing and promoting initiatives to staff, to one of becoming more strategically aware of the business objectives and developing ways to promote the travel plan to

other areas of the business. Travel plans have tended to be located within FM, which is understandable when so many travel plans are initiated by a planning consent and involve car parking management, which are both FM functions. Table 6-6 shows that more than half of the travel plans were located in FM and property services, which is slightly more strategic, managing the property portfolio across the organisation. The remainder were predominately split between transport and environmental departments.

Department	
Facilities	10
Property services	4
Environmental	5
Sustainable transport	3
Marketing	1
Other	1

Table 6-6: Departmental responsibility

Nevertheless, while travel plans remain located within FM, the change in motivations would suggest a shift away from travel plans being purely a FM function. The original motivations show that only 12% of organisations had motivations that were not a facilities function, but the current motivations show a shift to two-thirds (or more) of primary motivations that are non-facilities functions. This change in the purpose of a travel plan requires different skills to implement it and also a different position within an organisation. Within some larger organisations a trend is beginning to appear where the travel plan is owned by two departments. One is FM, which is responsible for the day to day operations, and the other has a more strategic role and is responsible for the planning and marketing of the travel plan. This has the advantage of positioning the travel plan at the strategic rather than operational level, allowing wider

organisational motivations to be taken into account. However, this approach has the disadvantage that the travel plan budget is split, or that one department has to develop a business case for the other to fund. This is a topic that will be returned to in Chapter 13.

6.14 Monitoring of travel plans

Monitoring and evaluation of travel plans is an area that is still being developed to try to improve the quality of the data and in an attempt to standardise the methods of evaluation. Based on the results of this survey there is a long way to go in standardising what is monitored and the methods used to monitor. Most organisations said they monitored modal shift or single occupancy vehicles (SOV) numbers. Organisations were also interested to understand how particular initiatives were working, particularly how many people had signed up to the car share scheme, and how many were actively sharing. Where organisations funded bus services they monitored bus patronage. Some organisations were looking to see how successful a particular promotion had been. Only one organisation attempted to monitor the carbon emissions from the commute to work.

There was also a considerable variation in the methods of monitoring. A few organisations ran regular surveys of staff travel, which also presented the opportunity to ask what would persuade people to switch to more sustainable modes. A surprising number did labour intensive physical counts of things such as the number of car parking spaces occupied, car sharers, numbers of people on buses, or numbers of people walking and cycling. On the whole the process of monitoring was not automated, only a couple of organisations were able to monitor through swipe card or other automated systems.

6.15 Conclusions

What is clear from the survey results is that the motivations for a travel plan have moved on from the externally driven compulsory motivations to more internally driven voluntary motivations.

The widening range of motivations for a travel plan, as revealed in this survey, opens up opportunities to engage organisations in travel planning on a voluntary basis and support them over the long term. There appear to be two key areas that an organisation could be targeted through internal business motivations. The main area has to be linking into business objectives, particularly when an organisation is in a state of growth. When an organisation is growing, there is an opportunity for a travel plan to help an organisation to become an 'employer of choice'. It can also help the growing firm to increase staff numbers whilst managing the demand for parking and/or office capacity. There is also an opportunity to promote a travel plan to an organisation that is in a state of transition or re-location. This can benefit an organisation by reducing property costs when re-locating to cheaper premises, whilst at the same time making the transition for staff easier. There is an internally-motivated role for travel planning in both situations.

CSR and the environment are the other areas that have been highlighted by the survey. At the moment these links, though developing, are perhaps tenuous, generally offering limited quantifiable benefits. There is a danger of placing too much emphasis on the environment in isolation as a motivation, which risks ignoring other important organisational goals, such as accessibility deepening the labour market, or business growth.

What the results of this survey have shown is that there is a potential for travel plans to develop from the original concept of influencing travel demand and encouraging staff to travel in more sustainable ways, to become much more closely aligned to the concept of a business management tool.

6.16 Survey phase 2

During the course of the research several major world events took place that potentially could impact on workplace travel plans. The first was the large increase in fuel costs, with petrol at the pumps rising from between eighty five to ninety pence a litre at the beginning of 2008 to between

one hundred and ten to one hundred and twenty pence a litre towards the middle of the year. The other major event described at the time as the 'credit crunch', but which later developed into a recession. This has had effects on individuals and business. It has affected business through the concerns about falling profits and recession, resulting in a wish to cut operational and staffing costs. This has meant that individuals are concerned about job security, and due to the reduced availability of credit, looking to reduce their own expenditure. Both the fuel price increases and the credit crunch are issues that could potentially affect travel plans. Because of this it was decided to re-visit the first survey to determine whether the motivations for travel plans had changed during the last year, but most importantly to explore the effect of the rise in fuel costs and the credit crunch.

6.17 Method

The plan was to compare directly the organisations that were surveyed in phase one to see whether the motivations had changed through the year, but also to get a wider perspective by contacting additional organisations through the DfT funded National Business Travel Network (NBTN). The NBTN rather than ACT/Travelwise was chosen this time as the contact method as the membership is primarily private sector, and has a different membership, so increasing the potential number of respondents.

6.17.1 Questionnaire

The objective of this survey was specific and so the questionnaire was limited to the following five questions.

1. *What are the current motivations for the travel plan?*
2. *If these motivations have changed in the last year, please state what they were previously?*
3. *What impact has the rise in fuel costs had on the travel plan if any?*

4. *What impact has the credit crisis had on the travel plan if any?*
5. *What do you consider will be the motivations for the travel plan in the future?*

6.17.2 Contacting the survey population

An email was sent to all twenty five organisations who took part in the original survey, briefly outlining the results of the previous survey and the purpose of this follow up survey. As the survey was limited to only five questions the questions were included in the email (Appendix 6.3).

The survey was also sent out to the members of the NBTN. The survey was sent out directly by NBTN to address issues of data protection. The information that was sent to the members was the same as for those organisations contacted directly, however, the survey information was collated through the web tool 'Survey Monkey'. In this case respondents followed a link in the email to access the survey.

The response rate to both methods was much lower than for the first survey. From the group who participated the first time, of the twenty five approached seven replied (28%). The NBTN sent emails to one hundred and twenty six people with nineteen responses (15.1%).

There is no clear indication why the response rate was low. Of the group who had previously participated, two people were known to have moved onto other jobs, one of the travel planner's roles had been lost and for another three the email failed. From the NBTN survey fifty people opened the email, but of those only nineteen then went onto complete the survey. This could be a reflection of the use of an online survey rather than the previous method of a telephone survey. For an online survey the response rate was about average. This can range from 30% for surveys conducted on the intranet and 11% or lower for surveys on the internet (Saunders et al., 2007).

6.18 Results

Due to the low response rate compared to the first survey, it has not been possible to make a direct comparison of whether the overall trend in motivations has changed in the last year. Of the seven organisations that previously participated the general consensus was that the motivations had not changed within the last year, but had perhaps become a little more focussed, especially on areas such as business travel.

Of those contacted through the NBTN, there was a diverse range of motivations for a travel plan, including CSR, recruitment and retention, leading by example and environmental concerns.

Interestingly none mentioned a planning consent as a motivation, although three did mention re-location. These results fit with the general trend seen in the first survey.

The response to the question about the impact of the increase in fuel costs was that most of the respondents felt that it had no impact on the travel plan. Two felt that it had made the organisation look more closely at business mileage and a couple felt that car sharing had increased as a result. There were also concerns about how the rise in fuel would affect bus services that the organisations ran, as the costs to the organisation would increase.

The response to the question about the credit crunch was very similar. Most of the organisations felt that it had no impact, but some organisations raised the concern that it was still early in the recession and the impacts were still to come. There were links drawn to the need to reduce costs for business travel and bus services funded by the organisation, and from the individual perspective; looking for cheaper alternatives to SOV. Again reference was made to a slight increase in car sharing.

The responses to the questions about the increase in fuel costs and the credit crunch fit with research that has investigated the price and income elasticities of demand for fuel. Graham and Glaister reviewed literature exploring these elasticities and concluded that the short term (less

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than one year) elasticities for fuel were in the region of -0.3 and the long term between -0.6 and -0.8. This suggests that in the short term price increases in fuel will have little effect on consumption, but in the longer term the impacts are more notable. However, Graham and Glaister suggest that this reduction in fuel consumption has limited effects on traffic volumes. The short term elasticity of traffic with respect to price of fuel is about -0.15 and in the long term only rises to -0.30. They suggest that motorists in the long term find ways to economise on fuel, reducing the volume of fuel used rather than volumes of traffic. This inelasticity in demand for fuel is also reflected in the elasticity of income. The research suggests 'the implication is that fuel prices must rise faster than the rate of income, even to stabilise consumption at existing levels' (Graham and Glaister, 2002, page 23).

In early 2000 the price of fuel at the pumps dropped back down to around ninety pence per litre, but rose again to around one pound ten per litre towards the middle of the year, with no outcry in the press, so it would appear that the price increases are unlikely to affect the long term elasticities. However, predictions from the UK Industry Task Force on Peak Oil & Energy Security suggest that this price drop is caused by a global recession, but in the long term oil prices will increase again as the easy to find and extract oil sources run out and the harder to extract more expensive oil sources replace them (The UK Industry Taskforce on Peak Oil & Energy Security, 2008).

6.19 Conclusions

There were four main points to come out from this additional survey.

1. Motivations did not appear to have changed, although business travel has become a stronger feature
2. The 'credit crunch' as yet has had little impact
3. The fuel price increases had only limited short term impacts

4. Of the new organisations who participated in the survey none mentioned a planning application as a motivation

It is not surprising that business travel has risen up the agenda within organisations, as this is a relatively simple way to cut costs with quick results. This seems to have been the only real impact of the 'credit crunch', and this is not directly part of a travel plan. Perhaps the comment that it is still early days within the recession is the most enlightening comment, and with companies reducing staffing numbers every day and predicted to continue to do so into 2010. It will be interesting to see how travel plans survive, when potentially the need to manage car parking capacity reduces. Given this, will other motivations such as environmental and CSR concerns be enough to sustain a travel plan?

It is not surprising that fuel price increases only had limited effects considering the price elasticities of demand for fuel. With increased costs of fuel only at this stage lasting for a few months, the time span was too short to bring about any permanent change in behaviour of individuals. The UK Taskforce report suggesting that the drop in prices will only be brief due to the global recession, and that in the long term much higher fuel prices will be the norm. So again this looks like an area to watch in the future.

The final point of interest was that planning was not mentioned as a motivation, suggesting that more organisations are developing internal motivations as drivers for the travel plan.

Chapter seven

7 Overview of case study interviews

7.1 Introduction

Chapter 5 described the methodological approaches to qualitative and quantitative data analysis and the methods previously used in travel plan research. It then moved on to outline the mixed method approach to be used in this thesis and the use of innovation theory as a framework to analyse the data. Chapter 6 described the surveys, which fed into the design and approaches used in the case studies by acting as a scoping exercise to identify potential case studies and the issues that were likely to be most interesting to explore further.

The purpose of this chapter is to show how the qualitative part of the mixed method approach was applied to the research. This chapter will outline how the in depth case study interviews were undertaken. These in depth interviews were embedded rather than holistic case studies as described in Chapter 5, Section 5.3.2.2, where the focus was to gather data from interviews with a range of people across departments. It will begin by describing how the case studies were identified, the problems that occurred in recruiting the case studies and how these problems were overcome. It will then move on to the process of identifying and arranging interviews with specific individuals within the case study organisations, and finally it considers the questionnaire design and ethical issues involved in the research.

7.2 Objectives of the interviews

The original objective of the case study interviews was to understand what had sustained travel plans in the long term. However, as a result of the information that emerged from the telephone surveys, particularly the way the motivations had changed over time, this was refined to examine how travel plans had begun to be organisationally embedded.

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The interviews were aimed at two main areas of individuals; the travel planners and other people, who though not directly involved in the travel plan, had an interest or link with the travel plan.

The objective of the interviews with the travel plan co-ordinators was to explore some of the issues raised in the telephone surveys in more depth, and to explore aspects of Rogers' *Diffusion of Innovations* (Rogers, 2003) as outlined in Chapter 4. One of the other main purposes of the interviews with the travel planners was to determine who else within the wider organisation should be interviewed.

The purposes of the interviews with people in the wider organisation were slightly different. As well as exploring the *Attributes of an Innovation* (Rogers, 2003), the aim was to explore the factors that have helped to embed a travel plan, through understanding how the travel plan linked into the other areas of the organisation, and what benefits it was perceived to offer these other areas and the organisation as a whole.

7.3 Identifying case studies

When this part of the research was first conceived, the idea was to answer the question of what had sustained travel plans; therefore it was necessary to select travel plans that had been running for a reasonable period of time, for example five years. Because the aim of the research shifted to how travel plans had developed, this was no longer as essential, as newer travel plans were learning from the experience of more mature travel plans. In consequence travel plans in a state of transition were of more interest. The aim was to choose case studies with good links into other departments, so that it would be possible to interview people across the organisation, rather than just the travel planner as previous research had done. The telephone survey was used partly as a scoping exercise to discover the organisations that would match these specifications, and likely to yield the richest data. The telephone survey also worked as an interview process to select those

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travel planners who were more amenable to work with. For example, those who had a grasp of the aims of the research, and those with whom it was possible to build a working relationship.

One thing that became clear in the telephone interviews was that the public sector was less likely to offer the same sort of data that could be obtained from private sector organisations. It was decided not to pursue the public sector further, as described in Chapter 6, Section 6.5. Although a number of motivations are similar, leading by example is unlikely to be a motivation for private business in the same way, and the environmental obligations are also likely to be different. For example a number of local authorities have signed up to *Local Agenda 21* (UN Department of Economic and Social Affairs - Division for Sustainable Development, 2005) so their environmental obligations are led by this commitment. However, this was not the only rationale. As a private organisation, responsible to shareholders to make profits, the travel plan potentially would have stronger links to internal motivations.

7.3.1 Criteria for case studies

To aid the choice of case studies and to help specify the required attributes to ensure the spectrum of case studies, was covered (Chapter 5, Section 5.3.2.1), a range of criteria were developed (Appendix 7.1). The criteria included specifications to identify travel plans that were in a state of transition, such as ones that had declined and been rejuvenated, or where the organisation was in a state of change such as growth or contraction. One of the key criteria was to identify travel plans that had moved on from a reactive state, in response to for example a planning application, to a proactive state, where links were starting to be made into organisational goals. As the objective was to interview people across the organisation, identifying case studies where links to other departments were developing was necessary.

The potential case studies, based on how well they fitted the specified criteria were split into two groups, a first choice of five possible case studies and a second choice of nine. An email request was sent out in January 2008 to the five first choice potential case studies.

7.3.2 Problems of obtaining buy-in

Obtaining buy-in for more in depth case studies, particularly as support was sought across the organisation, proved to be harder to gain than for the telephone survey. One of the case studies replied immediately, agreeing to help. However, other case studies were more problematic. With one of the organisations the problem was that the department was in the process of re-organisation, so it was suggested to call back at the beginning of March when 'things would have settled down'. A further organisation refused straight away, as they were in the process of a major re-structuring and a round of redundancies. It was felt that all the staff, including the travel planner were 'extraordinarily busy', and so were not in a position to help. Another of the case studies never replied.

A further case study was also in the process of restructuring. It was moving from the city centre site, which had been the focus of previous travel plan research, to an out of town site. Initially it was thought that they may be able to help, but there was concern about who in the wider organisation it would be possible to talk to. A telephone conversation followed with the travel planner to try to see if there was any way to proceed, but it was decided this would not be possible. An interesting comment was that the travel planner felt that other people within the organisation would say that the travel plan was nothing to do with them, it was the travel planner's responsibility, and would therefore not be able to help. The other concern was that in trying to re-develop the travel plan for the new site, the travel planner had to use up a lot of 'favours', especially within HR to help with the implementation of the travel plan, and was uneasy about pushing them for any more support. These comments are interesting in themselves as it suggests a poor level of acceptance and understanding of the travel plan within the organisation.

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The biggest problem with recruiting the case studies seemed to be one of timing. In early 2008 a number of companies were in the process of restructuring, partly because of what would be known in 2009 as the early stages of the recession, particularly within the financial sector. Late in 2007 the Northern Rock Bank had been taken into public ownership, and there was a growing concern within other financial institutions, which was beginning to have effects in other sectors.

This feeling was supported by conversations with Norwich Union. Good links had been developed with Norwich Union through involvement with a Carbon Connections project based at the University of the East Anglia (UEA). The travel plan, particularly car sharing, was in the process of being rolled out from the original RAC site in Manchester, across the newly merged sites of the Aviva group, of which Norwich Union is part. From the conversations with the travel planner it became clear that the company was also going through re-structuring processes, with a limited number of redundancies. There was also a greater concern that management support was dwindling and that at any time the support could disappear. So although good links had been developed with Norwich Union, and the travel plan was in a state of transition, they felt unable to participate with the research. Indeed, by the end of 2008 the post of travel planner had been lost.

This left the case study part of the research in difficulty. Of the five companies contacted originally, only one had agreed unreservedly to participate, one wanted to re-assess the situation later in the year and three were unwilling or unable to participate.

7.3.3 Re-assessment of criteria and negotiating buy-in

As a result of the difficulties experienced, it was necessary to find ways to interview other organisations and re-address the criteria for selection, otherwise the research would not be able to proceed.

One possibility, as mentioned above, was to approach the second choice case studies, which meant that the case studies did not meet the specifications as well as the first choices. As a result

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of this a case study that had been running for only a short period of time was approached, as it was run by a travel planner with experience in another private sector organisation, and some of the future plans indicated it could be an interesting choice. However, the travel planner felt it was too early in the process and that awareness of the travel plan across the company and within management was not established enough, and so felt it was an inappropriate time to participate, as involvement could harm the work planned to develop the travel plan.

This brought about the need for a major re-think into how to proceed with the case studies. The use of Yin's 'two tail' (Yin, 2009) approach began to open up new opportunities. Originally the concept was to use travel plans within the private sector with overlapping characteristics, as outlined in Chapter 5, Section 5.3.2.1. However, the criteria chosen did not really identify travel plans at either ends of the spectrum. In order to have this two tail approach, it was necessary to have a travel plan that could be considered more functional and closely aligned to the local authority goals of reducing SOV numbers. The other extreme was not to use a travel plan at all, but to draw on an organisation that had changed its working practices so that more people teleworked. This type of organisation did not necessarily plan to address a reduction in travel; the motivation for change was more likely to be driven by a need to work more efficiently and a reduction in travel was an additional benefit.

Two case studies were identified that fitted these criteria. However one did not fit the original criteria of being private sector. Nevertheless, it was decided to use UEA as a case study to represent a more 'traditional' travel plan, partly because they fitted this criterion well, but partly because access was possible because of involvement with the Carbon Connections project they were running. The other case study was BT, an organisation who is renowned for their flexible working practices, and the research they have done to determine the benefits both to the organisation and the individual.

7.3.4 Conclusions

It was disappointing not to be able to work with the first choice case studies, as they would most likely have given some very interesting and rich data that would have been beneficial to the research. However, the process of being forced to explore the 'two tail' approach along with the overlapping case studies has probably led to more robust and interesting research.

The process of contacting and negotiating access for the case studies was harder than envisaged. It took considerably longer than had originally been planned, as in several instances it was necessary to wait several months until the organisation was in a position to participate. Working with these organisations took a deal of diplomacy and patience; ensuring lines of communication were maintained without putting undue pressure on the contacts.

7.4 Ethics

This delay in starting the case studies did however allow plenty of time to set up some of the administrative procedures such as ethical approval. Ethical approval had to be given for research with humans from the *Human Participants and Materials Ethics Committee* at the Open University. The process involved first a '*triage*' document to confirm the necessity of gaining ethical approval (Appendix 7.2.). There was some question as to whether it was considered necessary to gain ethical approval, but after seeking advice from the Chair of the committee, who felt there were potential issues of harm in relation to anonymity of the participants, it was considered necessary to proceed with approval.

A proforma application was completed (Appendix 7.3). This asked for a range of information including details of the research, schedule, investigators, location of data collection, recruitment procedures for participants, consent and how matters of data protection would be handled. This was accompanied by an example of the consent form to be signed by the participants (Appendix 7.4). The ethical guidelines used to inform this consent were those given by the *British*

Educational Research Association (British Educational Research Association, 2004). Ethical approval was given with the proviso that anonymity should be offered to all the participants, to ensure they were able to talk freely. When the interviews were conducted, several preferred that the organisation should remain anonymous and should be described in generic terms to prevent identification.

7.5 Contacting Interviewees

Gaining access to the organisation through the travel planners was only the first stage of the process. People within the wider organisation first had to be identified and then access to them also negotiated.

This next section details how firstly the travel planners were contacted and the format of the interviews, then looking at how people within the wider organisation were identified and the problems encountered at this stage.

7.5.1 Travel plan co-ordinators

Emails were sent to the travel planners in the organisations chosen as case studies to enlist their help (Appendix 7.5). The emails were then followed up with telephone conversations to confirm the willingness to participate and to clarify any concerns raised by the travel planners. From here dates were arranged to conduct face to face interviews. Face to face interviews were chosen in preference to telephone interviews for three main reasons,

- I. Meeting face to face helped to build up the working relationship
- II. There were several visual aspects involved in the interview that would have been hard to conduct remotely
- III. Attending the site on which the travel plan was based gave a context to the interviews

7.5.2 Identifying interviewees in the wider organisation

Within the interviews with the travel planners, one part of the interview was aimed at identifying which other departments the travel plan linked into, or people who were considered interesting to speak to. The idea was to find people in the wider organisation that already had an involvement with the travel plan, or that were likely to be strategic enough in their thinking to understand how the travel plan could support them in their work or the development of the organisation. To a large extent the choice was guided by who the travel planners felt they had good relationships with and would be able to persuade to participate. However, there were some key departments of interest.

- Human resources (HR)
- Corporate responsibility (CSR)
- Environment

There was particular interest in HR because of the links with the Synovate research report for TfL (Baverstock, 2006). The findings of this report suggested that HR was a good point of contact within an organisation for making the first approach to develop a travel plan, because of their strategic position within the organisation. Corporate responsibility and environment were of particular interest because of the results of the telephone survey, which showed that a large proportion of travel planners saw this area as the main driver for the travel plan both now and in the future.

7.5.3 Contacting the wider organisation

Contacting people within the wider organisation was done in two main ways; either the travel planner contacted the people within the organisation and arranged a time for the interviews, or the travel planner made the introductions to the specified people, explaining the purpose of the

research and asking for their assistance. Contact details were given to the researcher who was then left to contact the people directly to arrange a suitable time and place for the interview.

The actual method used to approach people was determined by the travel planner. The most successful method was the use of an introductory email sent by the travel planner which the researcher was copied in to. This could be for two reasons; firstly the researcher was more motivated to follow up the communication to actually ensure an appointment was made.

Secondly, where the travel planners sent out a 'blanket' email, the impression was that there was already a good relationship with these people, and a greater confidence from the travel planner they would respond. Where the travel planner personally tried to make the appointments the impression was that they did not know these people as well and were less sure of their response.

7.5.4 Problems of buy-in from wider organisation

The success of gaining support from the wider organisation was mixed. Within the case studies it either seemed to go quite smoothly or it was quite difficult. Gaining access to specific departments such as HR or CSR proved quite hard, mainly because they did not see the links between what they did and the travel plan. This was particularly true of HR, unless the conversation was about changing working practices and how this affected the commute to work. With CSR the issue seemed to relate more to the way CSR departments worked. One of their main responsibilities was to write the annual CSR report, so though they were interested in the travel plan, particularly the carbon saving aspects, their interest was largely restricted to obtaining the information needed to complete the report. However, the biggest hurdle was that travel plans were not seen as central to the organisation's CSR agenda. An example of this in February 2009, was when GSK announced that they would be cutting the price of drugs to the developing world and their intent to 'patent pool' (Boseley, 2009b, Boseley, 2009a, Hayler, 2009). The provision of life saving drugs for a pharmaceutical company is inevitably a higher priority for a CSR department than a travel plan.

7.5.5 Conclusions

The organisations where it was easier to gain access to interviewees, tended to be those where the researcher was introduced and then able to contact the people directly. On reflection this is less likely to be the result of the method used to contact the people in the organisation, but more revealing about the structure of the organisation and the importance of the travel plan within that organisation. It may reveal whether an organisation worked in a more functional way or if it worked in a more matrix type structure, where communication between functions was more common. If the organisation is more functional in structure, the various projects and operations are unlikely to be connected and work together. It could also show that the organisation is not really accepting the travel plan and it is remaining siloed within facilities, and so the wider organisation is not really aware of it and it is not becoming embedded.

Finally, within four of the case studies it was possible to speak to a range of people within the organisation. However, it was not possible to talk to people from the originally planned departments of HR, CSR and the environment in every case study. This was enlightening in itself as it raises the question of how appropriate HR is as a department to lead a travel plan. It also raises questions about the validity of the environment and CSR as a motivation for travel plans.

Most of those interviewed in the wider organisation were at fairly senior levels as directors or heads of departments. This proved to be a good level at which to conduct the interviews, as they had a strategic enough view of the organisation to be able appreciate the wider benefits. Where people were interviewed at a lower level they tended to lack this strategic perspective and were more focussed on their specific role.

There were two case studies where it was not possible to conduct interviews across the organisation. One of these was BT, but here it was never planned to talk to a wide range of people as access to a senior director was possible. This director was instrumental in the running and

implementation of the working practices. The other organisation was a utility supplier with successful travel plans across many sites. As it was not possible to talk to people across the organisation, a further interview with the travel planner was arranged to specifically discuss the problems of buy-in from other departments.

7.6 Questionnaire design

While this process of access negotiation proceeded, the questionnaires to be used in the semi-structured interviews were designed. The first stage was to develop some general themes for the questionnaires for both the travel planners and the management.

The interview guides were designed to give information about the *Attributes of an Innovation* and *The Process of an Innovation* (Rogers, 2003). Some of the attributes were planned to be explored through direct questions, while others were planned to be investigated by analysis of the data rather than specific questions as illustrated in Table 7-1.

Issues of the structure of the organisation and how the role of the travel planner fitted into the organisation were also covered, as well as how the travel plan linked into organisational goals and delivered benefits to the organisation. Finally, future developments for the organisation and the travel plan were investigated, considering the effects of external support and influences, as well as internal changes. See Appendix 7.6 for the detailed interview guide.

An interview guide was also developed for those people in the wider organisation. The plan was to ask the interviewee to explain their role, then moving onto how the travel plan linked into this role and their understanding of the travel plan. Next it was planned to explore what was perceived by the wider organisation as the motivations for the travel plan. Then moving on to what were seen as the benefits of the travel plan to the organisation and to their specific area, and finally what were seen as the internal and external factors that were likely to affect the travel plan and the organisation in the future. See Appendix 7.7 for the detailed interview guide.

Rogers' Attribute	Topic of investigation	Method of investigation
<i>Complexity</i>	Issues of integration	Questions
	Complexity of the initiatives	Analysis
<i>Trialability</i>	Were the initiatives trialled before implementation	Questions
	Were other travel plans emulated	Questions
	Were surveys used to test out opinion of initiatives	Questions
<i>Observability</i>	How was the travel plan marketed	Questions
	Where is information available on the initiatives	Questions
<i>Compatibility</i>	How well does the travel plan fit into organisational systems (integration)	Analysis
	How well does it fit with the organisational culture	Analysis
	What are the links to other departments	Analysis
<i>Relative advantage</i>	Cost savings	Analysis of benefits
	Improved access	Analysis of benefits
	Greater employment pool	Analysis of benefits
	Wellbeing	Analysis of benefits
	Reduced CO ₂ emissions	Analysis of benefits

Table 7-1: Methods of investigating for the Attributes of an Innovation

7.7 The interview process

All the interviews were planned as semi-structured face to face interviews, predominately at the place of work of the interviewee. All the interviews were scheduled to last for approximately one hour. This was a timing that seemed to work well. People were prepared to give an hour of their time, but it also allowed time to explore the issues fully. Wherever possible several interviews within one organisation were conducted on the same day to make the process more efficient. However, some of the interviews had to be done over the phone to ease logistical problems with

both the interviewees and the interviewer. The telephone interviews seemed to work equally as well as the face to face interviews.

The interviews were recorded with the interviewees' permission, after explaining that the recordings were purely for the purposes of the interviewer as a record, so that it was not necessary to take copious notes during the interview. An earpiece microphone was purchased to enable recording of the telephone interviews. The recordings were subsequently transcribed to allow for ease of analysis.

All the interviews began with the interviewer running through the ethical consent form and asking the interviewee to sign a copy if they were happy to.

7.7.1 The travel planner

The interviews with the travel planners began by running through the purpose of the interviews and asking if there was anything they wanted to get out of the interviews. To open the interviews a visual element was used, where the travel planner was asked to draw the structure of the organisation and then to add which other areas the travel plan linked into. The rest of the questionnaire plan was worked through, although the semi-structured method allowed the exploration of interesting topics that arose during the interview.

Towards the end of the interview the travel planners were shown the *Process of an Innovation* (Chapter 4, Figure 4-1), and asked to consider where they felt the travel plan was on this process. Finally, the interviewees were thanked for their time and help and asked if there was anything else they wished to add or anything they wished to ask.

7.7.2 The wider organisation

The interviews with people in the wider organisation began slightly differently, as this was the first time the interviewer had spoken with them. The interviews began with an explanation of the

research project, how it would be disseminated, and an overview of the sorts of topics that would be covered during the interview. The process of the interviewees explaining their role helped to set the context for the interview and gave a guide of how to proceed. The semi-structured interview meant that although a general structure was followed, it allowed flexibility to explore issues that arose during the interviews, or to move on from other issues that were of less relevance to the interviewee. This was particularly pertinent here because of the diversity of roles.

When the interview was finished the interviewee was thanked for their co-operation and asked whether there was anything else they wished to add or any questions they wished to ask of the interviewer.

7.8 Conclusions

It was disappointing not to be able to use the first choice of case studies. However, it has led to more robust and interesting research through the use of the two tail approach, by giving a full spectrum of travel plans or initiatives that reduce the volumes of traffic. The process of gaining buy-in from the organisations was considerably harder and more time consuming than recruiting travel planners for the telephone survey. In the telephone survey travel planners seemed keen to talk about their work, possibly because it was rare for them to have the opportunity to talk about it.

The previous business experience of the researcher helped with the process of recruiting case studies. The researcher had also been through the re-structuring and redundancy processes that were being faced by the travel planners, and so was able to empathise with the problems and emotions that were experienced. It meant the researcher was in a better position to understand how to work with the case studies as they went through the process.

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Gaining access to the organisations was only the first hurdle to overcome. Arranging access to people in the wider organisation also required negotiating skills and patience. Although it would have been desirable to speak to more people within HR and CSR, the fact they were not willing to be interviewed was enlightening in itself. It was nevertheless beneficial to speak to people on topics that previously would not have been perceived as directly relevant to the travel plan, such as people in procurement about business travel or IT managers about changing working practices. The problems of gaining access to the organisations and wider management within the organisation were enlightening in their own right, perhaps indicating how the travel plan was developing within the organisations.

The use of semi-structured interviews worked well. This method allowed the researcher to develop the interviews to cover areas of interest that had arisen in previous interviews, so testing out whether a proposition put by one person was replicated both within the same case study and across other case studies.

Chapter Eight

8 Case Study Context

8.1 Introduction

In previous chapters the choice of a mixed method was explored, particularly looking at using case studies. The choice of using a two tailed approach to complement the overlapping spectrum of case studies was explained. The previous chapters described how the actual case studies were chosen and the problems encountered in gaining access to the case study organisations and how these problems were overcome.

This chapter will move on to outline the actual case studies involved in the research, detailing characteristics such as the geographical location, size of the organisation, position of the travel planner and travel plan. It will then go on to look at the links that were suggested existed for the travel plan and how realistic these were when it came to arranging interviews with the wider organisation. Finally, it will draw conclusions on what impact the detail of the context for the case studies has on the travel plan.

8.2 The case studies

The research involved six case studies that were chosen based on the criteria explained in Chapter 7. The context for the case studies will now be described. A summary of this information can be found in Table 8.2 at the end of this chapter. As mentioned within the ethics section of the previous chapter, Section 7.4, some of the organisations wished to remain anonymous; therefore details that could identify these organisations have been omitted.

8.2.1 Case Study A – BT

BT is an international telecommunications company employing 112,000 people in 170 countries, of which 93,000 are employed in the UK. It has a head office in the City of London and numerous offices and sites around the country.

BT was chosen not as an example of a travel plan, but as an example of an organisation that had changed their working practices to introduce flexible working, including home working, hotdesking, tele and video conferencing or

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telepresence, and *'Live Meeting'*. These are measures frequently advocated as part of a travel plan, and so the BT case study explores their use when adopted extensively.

This change in working practices, though originally tried in the 1970s was introduced more comprehensively 12-15 years ago, as a strategic decision to cut costs and to work and compete at a global level. Cutting costs also involved the rationalisation of the premises. A new building strategy was implemented that created hubs as places of work. The location for the hubs was decided after analysis of the postcodes of employees and customers. The rationalisation of buildings meant that the working practices had to change to accommodate the spatial shift. The change in working practices was also driven by the need to work in a global market in international time zones. This could have been accommodated through conventional responses, such as shift patterns, anti-social payments, overtime etc. However, these were seen as expensive options that would make BT uncompetitive in the international market, and not favoured by most employees. Flexible working was seen as a solution that worked both for BT and for the employees.

It was realised that to introduce flexible working successfully a holistic approach would need to be taken. It would not be possible to change the working practices without changing other areas such as the property portfolio, catering, management style, and communications culture. There was recognition that if flexible working was seen as a separate strand, it would never become part of the business plan, and would not be successfully implemented.

BT sees other benefits apart from the cost efficiencies and improvements in productivity of this form of working. There are environment benefits as a result of the reduced property portfolio and travel; reduced absenteeism, retention, and wellbeing through a better work/life balance; and recruitment because of an increased depth of labour market by using virtual technologies as a form of access. These wider benefits are now so embedded into the way that BT work, any business decision is based on these elements. Business decisions have to benefit the organisation in three ways; socially, environmentally and financially. The balance between the three criteria may change, but none can ever be in the negative.

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Although BT as a company does not have a travel plan, some individual sites have developed one in response to a planning application. It is realised that a change in working practices would be expected to reduce not just commuting, but also business travel, by using telecommunications to replace trips. It is therefore not surprising when the same form of trip replacement is used for both business and commuting travel, that there is no distinction drawn between the two forms of travel.

In the future the smarter working practices are seen as a way to ensure good access to the labour market, improving efficiency by developing a more flexible labour workforce and further reducing BT's impact on the environment.

In June 2008 a new Chief Executive was appointed. This was after the case study interview was conducted so it is unclear what impact this would have on BT's approach to flexible working and travel. The recent appointment of a new Chief Executive is a theme that re-occurs in several of the case studies.

8.2.2 Case Study B - Eon

Case study B, Eon, is a large energy supplier and distributor within the UK with headquarters in mainland Europe. The UK division of the company is based in the Midlands, with sixty five sites across the UK, of which six have travel plans. The company employs 88,000 staff, of which 8,000 are based across the sites in the UK. The travel plan was initially started in 2001, but was neglected until late 2006 when a new travel planner was employed. The travel plan was started on a voluntary basis to manage demand for car parking. More recently the motivations have developed to include helping to grow the organisation by bringing more staff onto the sites, the environment, and in the summer of 2008, requests from staff for more staff buses to ease the burden of the rapid rise in fuel costs. The travel plan is now also looking at business travel, by introducing long distance bus services between the sites. In the future the motivations were anticipated to include the Workplace Parking Levy that is to be introduced in Nottingham, the drive to reduce non operational carbon emissions, and greater implementation of smarter working practices.

The travel planner works in Workplace Improvement, which is part of the Business Services Department. The travel planner is in a middle management role, and was appointed in the role as part of an accelerated promotion scheme.

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This case study was chosen because it was a voluntary travel plan that was in a state of transition, where it had been recently rejuvenated. It is not that well linked into other departments within the organisation, although there are good links to the other sites where the travel plan has been introduced. There have been several interesting developments in the past year. The first is the increase in people working at home. The other relates to buses. Demand for works buses increased, largely as a result of the 2008 fuel price increases, but there has also been work to develop an inter-site bus service, primarily for business travel.

The travel plan fits well into one of the main organisational goals to reduce carbon emissions. Issues of the environment are fully supported by the Chief Executive, who sees reducing the carbon footprint as a core value of the business. The environmental agenda is addressed through an overarching policy, which is then disseminated through the organisation by environmental champions. As a large emitter of carbon through energy production, it is seen as important to reduce non-operational carbon emissions by 10% in the next 5 years. Work is being done to monitor the carbon emissions from the commute to work. The car share database has already been set up to enable staff to see how much carbon they have saved by car sharing. The information is fairly accurate as the database is linked to the DVLA website, so the calculations are based on the actual emissions from the car type, rather than an average.

The organisation's sites across the UK include town-based and out of town offices, power stations, combined heat and power plants and both onshore and offshore wind farms. This produces a unique challenge for travel planning because of the number of sites and variety of functions. Because of the diversity involved travel plans have been developed for individual sites, though the plan is to develop a more strategic approach. The large number and diversity of sites has meant that the communication for the travel plan is much more focussed on the individual sites, aimed at the business units and facilities management teams for the individual sites rather than with central functions such as human resources. It was felt that a targeted road show approach for each site was more effective at getting the message across than using the other communication systems, such as the intranet, where staff tended to be bombarded by messages.

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The travel plan is set up so that people sign up to become 'green travellers'. Becoming a 'green traveller' means that staff are eligible for the rewards scheme. The points can be redeemed in three ways. As internal currency, which can be used in staff restaurants; leisure vouchers for use in hotels or on activities and bonus bonds for use in the high street.

The main business case that is used to justify the travel plan is the money saved by not having to rent additional car parking capacity. An average cost for car parking of £450 per year was quoted, but this ranges from £200 up to £1,000. This compares to the £150 per car sharer per year that the rewards scheme costs. Even the works buses are seen as a cheaper option than renting more car parking capacity, and at the present time these buses are free to staff. The other argument put forward is that with so many out of town sites, if buses were not laid on, it would not be possible for staff to access the site, reducing the available labour pool.

8.2.3 Case Study C

Case study C is a large service sector company, with its UK head office based in West London. There are two further sites nearby. The company employs 100,000 staff worldwide, of which 2,100 are employed in the UK. The head office was built specifically for the company. As part of the planning consent the number of parking spaces was limited. The travel plan started in 2000 largely to address the pressure for car parking on site, which was perceived to be a particular problem because of the location and that staff were moving from sites where there was adequate car parking capacity. More recently the travel plan has been spread to the other two West London sites. The motivations for the travel plan have grown to include the need for the organisation to work more efficiently, to support business growth, reduce the environmental impact of the organisation and HR issues such as recruitment and retention, wellbeing and health and fitness. Many of these motivations are felt to be drivers for the travel plan in the future, but with the appointment of a new chief executive and the expectations of staff, there is a plan to also introduce smarter working practices more widely across the organisation.

This case study was chosen for a number of reasons. This was the only case study to be solely based within London, although on the Western edge, and was therefore likely to be influenced by TfLs policies. The organisation is in a state of transition with the appointment of a new Chief Executive in May 2008. He is keen to develop and implement

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more flexible working practices. They did exist at the time of the study, but in a very piecemeal way and the management structures and IT support have not been developed to support a more extensive adoption. The idea is that the travel plan could then become an enabler of people doing their best work, by supporting the flexible working practices.

The travel plan is owned and run by two departments; a change manager within World Wide Real Estate and by a member of the Facilities Management team. The change manager is responsible for the strategic side of the travel plan and the facilities manager for the day to day operational issues, although the facilities manager did not hold any budget for the travel plan.

Historically the travel plan has been sustained because of the problems of parking at the site. The problems are so severe that car parking is only available on site for each employee for four weeks in five, although there is a lottery system to allocate any free spaces to staff who are unable to park that week. The need for a travel plan is well understood amongst staff because of the parking problems and there is a good general awareness of the initiatives available. However, it was felt that things were not co-ordinated, with everyone working on different agendas.

8.2.4 Case Study D

Case study D is a service sector company with a head office based in an out of town commercial area on the edge of Swindon. There are 4,000 staff on the site, which was originally designed for 2,500 staff. Initiatives were first put in place in 1992, when a free lunchtime shuttle bus was introduced followed by a formal car share scheme in 1995 and a much wider campaign in 2005. The travel plan is owned by two departments; the Community and Environmental Affairs department which is responsible for the strategy and marketing side and the Facilities Management department, which holds the budget and has responsibility for the day to day operational issues.

The travel plan was originally started as a way to reduce congestion to the site and to ease the transition as a result of office re-location. The need to manage capacity in the building and car park remains a motivation, but there is also an emphasis on sustainable travel. In the future the issue of logistics remains a motivation, along with the need to support a planning application for additional car parking capacity. It is also anticipated that the travel plan can be

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used to support initiatives such as ISO14001 (BSI, 2009) and 'Business in the Community' credentials (Business in the Community, 2009).

This travel plan was chosen because of its position within Communities and Environmental Affairs, which is what the organisation describes as its CSR department. As described in Chapter 6, with a large proportion of organisations stating that CSR and the environment were a main motivation, this case study could offer an interesting insight into this motivation. It was also interesting in other respects; the travel plan was not monitored and no targets were set for it. The role of travel planner had been vacant for a period of time, and as a result the travel plan had become stale and was in need of rejuvenation.

The travel plan was described as being 'soft and fluffy' because there is no car parking management scheme and no targets. People are persuaded to change their travel behaviour rather than being forced due to car parking management. The main motivation for the travel plan is to manage the problems of car parking in the crowded site. Other attempts to address the overcrowding include a re-alignment of operations, where certain functions have been moved into town centre sites. Interestingly this has concentrated on functions that are not able to work flexibly, such as call centre staff.

In April 2007 a new CEO was appointed. This and the recession have meant that sustainability has moved down the corporate agenda and the organisation has become much more cost orientated. But corporate image is also important, so things that are good for the image and deliver cost savings are going to be important. An area that has become more important is the idea of flexible working practices. They already exist within the organisation, but only to a limited extent. It was felt that they would become a more important part of how the organisation worked.

8.2.5 Case Study E – Stansted Airport

Stansted Airport is the third largest airport in the UK. It is in a rural location North of London close to Bishops Stortford. It employs 10,600 staff, of which 1,000 are BAA employees, and also accommodates 22.8 million passengers per year. The travel plan started in 2004 as a result of a planning application and the need to free up car parking space for other activities and further development. In more recent times the motivations have developed to

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include reducing carbon emissions from the ground side operations, which are linked into ISO 14001 (BSI, 2009). The airport wishes to do a carbon footprint of its ground side activities, which has a major impact on carbon emissions and local air quality.

The main motivation for the future is seen to be plans to grow the airport, which requires the freeing up of land for future development and improved accessibility so that it will be possible to recruit the numbers of staff needed to operate the larger airport. Stansted has problems with recruitment as it is in an area of high employment, and as a result of the nature of the work, has a high staff turnover. Improving access to the site to improve the depth of the labour market was seen as an imperative to ensure growth of the airport. It was also recognised that if expansion was to happen a planning application would have to be submitted, which would need to include a travel plan.

Stansted was chosen as a case study because it appeared to have good links between the access strategy team and other departments, and as a transport operator, access is an important issue. It is in a state of transition in order to accommodate the planned expansion and access will become an important issue with the additional 13,000 staff expected to be employed as well as the additional throughput of passengers.

The airport was unique amongst the other case studies, because it runs a staff travel centre. This is a place where staff can obtain discounted travel cards, sign up to the car share scheme and find information on the public transport services available. The travel centre is run by an employee who works for an external consultancy. However, the strategy for the travel plan is run by the Surface Area Access Manager within the Transport Strategy Team, the Transport Strategy Team then link into BAAs Transport Strategy. The travel plan is financed by income from both staff and passenger parking.

Stansted is unique in another way, in that the majority of people on site are passengers or staff working for other companies, so in effect the airport is a large business park, with BAA as the landlord offering a travel plan service to the tenants. Part of the role of the travel planners is to sell the travel plan to the other employers on the site.

8.2.6 Case Study F – University of East of Anglia (UEA)

UEA is a campus university on the edge of Norwich. The university has 3,000 staff and 15,000 students. The travel plan started in 1998 on a voluntary basis in order to cope with the high demand for car parking. Consultants were brought in to help develop the travel plan. One of their key recommendations was to introduce charges for parking. These charges were not well received by the staff at UEA, as they were seen as an erosion of their terms and conditions and in effect a reduction in salary. There was a lot of bad feeling towards the administration and implementers of the travel plan, leading to a bunker mentality, which has meant that the travel plan has not been seen as something to be proud of.

The travel plan has not been received well by local residents either. They saw an increase in 'fly parking', which was resolved by issuing parking permits to residents, but the residents had to pay for these. The additional bus services to UEA do not really benefit the local residents, partly because they are not necessarily the demographic or market segment most likely to use them, but also they are crowded and not easy to get on.

Car parking demand remains a major motivation for the travel plan as the University expands and car parking capacity is lost to new buildings. This remains a motivation for the future, as more growth is planned for the University, which will require the submission of a planning application.

In more recent times the environment has become a more important motivation for the travel plan. In 2008 a new Vice Chancellor was appointed. He is keen to promote UEA as a low carbon exemplar university. UEA has tried to improve its environmental credentials in the past, but has been hampered by the lack of support at senior management level, resulting in limited amounts of money available to market environmental initiatives such as the travel plan, but it was also accepted that marketing generally at UEA could be improved. The new Vice Chancellor has shown a degree of commitment to sustainable travel alternatives by reviewing the options to the multi deck car park that has already received planning permission. Nevertheless, it should be noted that this is partly cost driven, as the construction costs are high, and this money could be used elsewhere at UEA.

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UEA has a diverse range of roles and functions that make it hard to offer travel plan initiatives suitable for everyone.

Students see their hours as more flexible than staff, although they are likely to live more locally than employed staff and administrative staff have more fixed working hours than academics.

UEA has ring fenced money for traffic management initiatives generated from the car parking charges.

8.3 Case study issues

The above gives a brief outline of the different case studies involved in the research. There are a range of issues that came to light at the early stages of the interviews for these case studies that require further exploring. These include

- The position of the travel plan and travel planner
- The financing of the travel plan
- Departmental links

The following sections will outline the differences between the case studies in these three areas and then discuss the relevance of these points to the embedding of the travel plan.

8.3.1 Position of travel plan and travel planner

The first of these areas to be explored is the position of the travel plan and the travel planner within the organisation and the possible impact this has on the extent of embedding of a travel plan.

Three of the travel planners were situated within non-operational administrative departments. Within Eon the travel planner was positioned in Business Services which includes HR, Facilities and Payroll. Within Business Services the travel plan is positioned within Workplace Improvement. The travel planner has responsibility for the travel plan strategy and implementation across the sites, but the Facilities Management (FM) teams at the sites actually implement the bike sheds, showers etc. This is a similar position to case study C, where the travel plan is in Corporate, which again is the non operational supportive part of the organisation. The responsibility for the travel plan is shared between two departments, World Wide Real Estate (WWRE), which as it suggests is responsible for the international property portfolio and within FM, which only has responsibility for the one site. The role is split

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between the two departments, so that WWRE makes the strategic decisions, while FM maintains the day to day running. This is a similar situation to case study D, where responsibility for the travel plan is split between two departments. However, in this case the travel plan is not the only responsibility for the individuals. The strategic element of the role is maintained within Communities and Environmental Affairs, which is part of Group Development, containing areas such as Change Management, HR, Corporate Affairs and Group Strategy and Planning. Here the interviewee has a wider remit, which includes the sustainability portfolio for the organisation. Within FM, which is part of Group Operations, the travel plan is operated by the Facilities Manager, and other members of the team. The Facilities Manager and the team are not just responsible for the travel plan, but for the whole property portfolio.

Stansted is in a different position from the other case studies. At Stansted as a transport operator with millions of people accessing the site every year, transport strategy is an operational part of the organisation, with Surface Area Access a major component of this strategy. The operation of Surface Area Access is split between three people, who between them take on the role of setting the strategy, trains, buses and coaches, local access, freight and the travel plan.

What all these travel plans have in common is that the interviewee holds a position of middle management within the company, although with case study D the travel plan is not their sole responsibility. This is in contrast to UEA where the travel plan is positioned in FM in a less senior position of Transport Co-ordinator, reporting to the Facilities Manager. Again FM within a university is a non-operational function.

At BT the interviewee was an HR director with a wide remit for People and Policy. In this case the purpose of the interview was not to discuss a travel plan, but the working practices within the organisation, which are now firmly embedded, where no one person takes responsibility for them, so the context of the position of the interviewee was different. Travel plans do not appear to be at this stage of embedding yet, so individuals still champion and have responsibility for the running of the travel plan.

8.3.2 Financing

Another area that gives context to the case studies is the method and degree of funding given to the travel plan. Not only is there variation in the position of the travel plan, there is a variety in the forms of funding, ranging from ring fenced funding, part of a normal budget, to no direct funding at all.

At Eon the travel plan has a substantial budget which is allocated to the travel planner, who then has control over exactly how it is used. The funding is used for marketing and setting up initiatives such as the car share scheme. The travel planner is responsible for the strategic design of the travel plan and works with the individual sites to tailor them to the specific local needs. This means that at the specific sites the FM team will be responsible for the implementation and funding of initiatives such as new cycle sheds.

In case study D the situation is slightly different, in that the person in Communities and Environmental Affairs (C&EF) has no budget for the travel plan, though does give the strategic direction for the travel plan and runs the awareness raising campaigns. The entire travel plan budget is held in FM, but this is not separate from the rest of the FM budget, which is normal for most other areas of expenditure. For any new initiatives to be implemented requires C&EF to 'sell' the idea to the Facilities Manager, who then decides how much of the wider FM budget can be allocated to the travel plan.

Case study C also has the travel plan run by two departments. However, in this case there is no budget. There used to be a large budget when the travel plan was set up, but now it is running, money has to be 'scrounged' from other areas. This gave the impression to the travel planner in FM that the travel plan was not taken that seriously by the organisation.

None of the above organisations charge for car parking, but Stansted and UEA do. At Stansted, the travel plan is funded by a proportion of the car parking charges from staff and passengers. The Surface Area Access Manager is then responsible for the allocation of the funding for the various access initiatives. At UEA the money is also ring-fenced from staff and student parking charges. This has the advantage for both organisations of a guaranteed annual budget.

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At BT, because the working practices are part of the way the organisation works, there is no specific budget for the smarter working practices.

It is an interesting development to see travel plans starting to be treated in a more strategic manner, with the travel plan being jointly run by two departments, one in charge of the strategic position and one in charge of the day to day running of the travel plan and the 'harder' measures of implementing the initiatives. The travel plan being run within two departments has some advantages and disadvantages. Someone in a more strategic position, who is perhaps more senior in the company has the advantage of positioning the travel plan at a higher more strategic level within the organisation where it is likely to be taken more seriously. This strategic/tactical split is not uncommon in other parts of an organisation where the issue is considered to be of strategic importance.

However, in this case the travel plan split between two departments does have the major disadvantage of splitting the budget, or one department having to try to persuade the other to fund new initiatives. In the worst case scenario, neither department has a budget and money has to be 'scrounged' from other areas. Ring fenced money from car parking charges could be the best way to guarantee funding, but introducing car parking charges may not be possible in every case. The introduction of car parking charges can cause ill feeling amongst the staff as was the case with UEA. Car parking charges may not fit with the culture of the organisation, as was the situation with case study D, which was described as 'soft and fluffy'. Introducing car parking charges could be a sign from the organisation that there is acceptance that car parking is a major issue, however, staff could see it as a revenue raising exercise, or even with severe car parking problems be seen as culturally unacceptable.

8.3.3 Departmental links

Funding allocated to the travel plan and the position of the travel planner could be indications of how seriously the travel plan is taken by the organisation. A travel plan that is well funded with a travel planner in a relatively senior position, for example Eon, would be expected to be taken more seriously than one that is not funded, or the role is more junior or travel planning is only part of the role. However, another way to consider the importance of the travel plan is to examine the links that were suggested existed between the travel planner and other parts of the organisation, the level of seniority of those suggested for interview, and those actually willing to be interviewed.

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The different case studies offered a range of suggestions for departments for interviews and levels of seniority of interviewees. As mentioned in Chapter 7, Section 7.4 different methods were used to access the interviewees; the choice of method was guided by the travel planners as well as the choice of interviewee, although the researcher did make suggestions on the choice of departments that could be of interest.

8.3.3.1 Links stated for travel plan to other departments

What will now be examined are the links between the travel plan and other departments and how these related to who it was actually possible to interview. What will also be examined is the level of seniority of those interviewed in the wider organisation, using this as an indication of how important the travel plan appeared to be to the wider organisation.

Appendix 8.1 shows examples of diagrams of the departmental links that some of those interviewed drew, indicating where they perceived the travel plan made links to wider parts of the organisation, and in one case, the strength of these links.

Table 8-1, gives a summary of the departmental links, comparing those stated as existing and those that were willing to be interviewed and their level of seniority. Generally, of the people suggested to be interviewed, the majority were willing to participate. However, it should be noted that there were two cases, one in CSR in Case study C and another person in Community Relations at Stansted, who it became very clear in the interview had little knowledge of travel planning. This is notable since CSR has been given as one of the main motivations for the travel plan.

Case Study	Seniority of travel planner	Position of travel plan	No. of links suggested to travel plan	No. of links actually interviewed	Interviewees	Funding
BT _a	HR Director	Core business function	Fully embedded across the organisation	N/A	HR Director, People and Policy	No separate budget
Eon	Middle Manager	Non – core	8	1 _b Middle	CSR Manager	Allocated annual

		business function		management		budget
Case study C	Middle manager	Non – core business function	6	4 Management and divisional directors	HR & IT Divisional Directors, EHS & CSR Managers	No budget
Case study D	Middle manager	Non – core business function	4	4 Managers	FM, HR Rewards, Business Travel Procurement & Car Fleet Managers	Budget available from wider FM budget
Stansted	Department Head	Core business function	6	4 Dept heads, Group head	Head of Transport Strategy, BAA, Retail, Environment & CSR Managers	Ring fenced car parking charges
UEA	Transport co-ordinator	Non – core business function	4	2 PVC & Dept Head	Pro-Vice Chancellor, Research & FM Manager	Ring fenced car parking charges
	<p>^a BT does not have a specific travel plan, the interview was based on the working practices which are fully embedded within the organisation, so do not have a specific manager or budget</p> <p>^b Eon suggested a number strong links to other areas within the company, but these were to groups, such as business units, site forums and green travellers. There was not specific identifiable spokesman that could be interviewed within these groups</p>					

Table 8-1: Summary of departmental links and funding method

Eon stated that there were eight links to other departments, but it was only actually possible to interview one other

person. This is partly the result of the way that Eon and the travel plan are structured. Eon has a large number of sites, of which six have travel plans. To an extent these sites run autonomously, so much of the work has concentrated on working with interdepartmental groups, such as site forums, business units and the 'green' travellers themselves. Unfortunately, within these groups it was not possible to identify individuals that would be possible to interview. This is not necessarily an indication of poor acceptance or awareness of the travel plan, but more an indication of the communication methods used within the company and by the individual.

Case study C produced some interesting interview candidates in that two of the interviewees were divisional directors in HR and IT and the other two, heads of departments. This meant it was possible to interview people who

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were in strategic managerial positions within the company. Although it should be noted that the Vice President, the next level of seniority, of the division in which the travel plan was positioned did not respond to the interview request.

Case study D produced people across a different range of areas, concentrating more on the business travel aspects. One was involved in the company car fleet management, one in HR rewards, responsible for company cars as benefits; another was responsible for the booking and management of business travel, and finally the Facilities Manager responsible for the travel plan budget. All these interviewees were fairly low level management within the organisation. Links did not appear to exist with people in more strategic positions.

Stansted Airport offered a diverse range of individuals for interview, ranging from Environment, Retail, Community Relations and the group head of Transport Strategy. This was an interesting range of interview candidates that gave a broad perspective of how the travel plan was perceived by the wider organisation and the impacts it made on the day to day running of the airport. The opportunity to speak to the group head gave a more strategic perspective of travel planning and the access strategy.

UEA had very few links to other parts of the university, and the links that did exist were to manage particular promotional exercises rather than long term strategic links. However, it was possible to interview a small range of people across the university, including a department head and a Pro-Vice Chancellor. Although it was suggested that good links existed between the travel planner and the Registrar's office, the Registrar was not prepared to be interviewed.

8.4 Conclusions

There are a range of issues that begin to emerge from the details of the different case studies, which start to indicate the level of importance of the travel plan to the organisation. These issues include,

- Whether the travel plan is considered a core or non-core business function?
- The seniority of the travel planner and whether the role is split between the strategic and the operational functions

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- How the travel plan is funded and whether this is an indication of the level of embedding.

The first of these has to be whether the travel plan is considered to be a core business functional, as is the case with Stansted Airport. Here, the travel plan has major operational importance to the efficient working of the airport.

Other travel plans could be considered to be of operational importance where poor access to the site could reduce the operating efficiency. But most travel plans are in positions that are not core to the operation of the business; partly because most businesses are not transport operators.

The level of seniority of the travel planner also indicates how important the travel plan is to the organisation. In most of the case studies the travel planners were at a middle management level, where the travel plan was the sole responsibility of the individual. This implied a reasonable degree of importance for the travel plan from more senior levels. Where the travel plan was not the sole responsibility of the individual, for example where it was included in the wider remit of sustainability, could improve the links to a wider agenda in an organisation, improving the chances of raising the profile, or it could have the effect of reducing the degree of concentration on the travel plan so that it is more likely to be overlooked. This is what appears to have happened with case study D, where the travel plan seems to have become sidelined in preference for other sustainability issues. When the level of seniority of interviewees available and the lack of specific funding for the travel plan are also factored in, it begins to imply a lack of interest and awareness of the travel plan within the wider management team.

The level of awareness of the travel plan could be reflected in the ease of access and interest in other parts of the organisation in participating in the interviews. However, from conversations with the travel planners the evidence would suggest that this is probably more of an indication of the communication structures within the organisations.

Funding is also a key indicator of the degree of support for the travel plan. Ring-fenced funding from car parking gives security to the travel plan and shows support from the top management. A substantial allocated budget implies the same support. However, no funding may not necessarily imply a lack of support. In the case of BT there is no specific funding for the smarter working practices. They are so well embedded into the way the organisation works, the funding is just part of the normal day to day funding. A total lack of funding, as in case study C, has to be

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considered in context of other factors, for example the seniority of the travel planners and the interest and involvement of other parts of the organisation. A lack of specific funding for the travel plan could be an indication of the travel plan becoming fully embedded into the organisation, as the working practices at BT have become.

Table 8-1 summarises the different organisational aspects that could be an indication of the level of organisational embedding. At the one extreme there is BT where the smarter working practices are just part of the way the organisation works, and then there is Stansted where the travel plan is operationally essential to the running of the airport, meaning full commitment is given. At the other extreme the travel plan appears to have been marginalised, as in case study D, where everything seems to be done in half measures and there seems to be limited commitment to the travel plan, or at UEA where although there is good funding for the travel plan, it is resented by the staff, because of the very car parking charges that maintain it. The range of factors summarised in Table 8-1 only go a limited way to address why some travel plans are more embedded and successful in some organisations than others. The following chapters will seek to explore further the issues that enhance or hinder the adoption of a travel plan within the case study organisations.

Case study	Size	Travel plan started	Location	Sector	Position of travel plan	Position of travel planner	Motivations			Department links
							past	present	future	
A BT	112,000 in 170 countries. 93,000 in UK	Mid 70s first introduce smarter working mid 90s fully implement	London & other locations across the UK	Telecommunications	N/A	HR Director	Reduce costs Work more efficiently Remain globally competitive Environment	Environment Efficiency Reduce traffic Cost savings Retention Wellbeing Reduce absenteeism	Recruitment Need for more flexible workforce Environment	Holistic and linked to all departments
B Eon	88,000 worldwide 8,000 UK	2002 re-juvenated 2006	Midlands & 6 other sites in UK	Energy supplier	Business services	Middle manager	Parking demand Environment	Car parking problems Business travel	Recruitment WPL In house energy efficiency Internal competitive peer pressure Smarter working	Environmental champions Chief exec Health & wellbeing HR, H&S Business units
C	100,000 across 100 countries 2,100 in UK	2000	West London	Service sector	Worldwide real estate & FM	Middle manager	S106 Recruitment & retention	Recruitment & retention Environment Wellbeing Health & fitness Congestion	Environment Wellbeing Recruitment & retention Staff expectations of working practices	Security FM HR Business heads

Case study	Size	Started	Location	Sector	Position of travel plan	Position of travel planner	Motivations			Department links
							past	present	future	
D	4,000 on site	1992 free shuttle bus 1995 formal car share scheme 2005 travel plan	Swindon	Service sector	FM & Communities and Environmental affairs	Dept head & middle manager	Reduce congestion Office re-location	Sustainable travel Building and car park management	Logistics of capacity Re-location ISO14001 BITC S106 for car park expansion	HR Wellbeing Corporate travel
E Stansted Airport	10,600 or which 1,000 are BAA 22.8 million passengers	2004	North London	Airport	Transport Strategy Team	Middle manager	S106 CSR & wider org image Reduce car parking as a commercial imperative	Environment ISO 14001 Greater value for money for public transport	Recruitment Growth Planning	Environment HR, CSR Public affairs Other companies on site
F UEA	3,000 staff 15,000 students	1998	Norwich	University	Estates	Admin manager	Car parking demand Future planning	Car parking demand Future planning Environment	Environment Future planning Growth	Registrar Dean of students Residential services

Table 8-2 case study summary

Chapter Nine

9 Analysis using Rogers' Diffusion Theory

9.1 Introduction

Previous chapters have worked through the process of choosing a mixed method approach and a framework of analysis for the data. Chapter 7 described how the case studies were chosen and the criteria used to select them. Chapter 8 moved on to outline the characteristics of the case studies and began to analyse the effects of these characteristics on the development of the travel plan.

This chapter begins the analysis of the data collected from the interviews in the case studies. The main focus will be to explore the data using Rogers' *'Diffusion of an Innovation'* (Rogers, 2003), as described in Chapter 4. The focus of this chapter is the *'Process of an Innovation in an Organisation'* (Rogers, 2003), exploring where the travel planners considered they were in the process and where they believed they would be in the future. In considering how well the Rogers' model fits to what the interviewees perceived as the process of an innovation, other models of change such as the *Transtheoretical Model of Behaviour Change* (Prochaska and DiClemente, 1983) or *Systems Intervention Strategy* (Centre for Professional Learning and Development, 2007) will also be considered.

The chapter will conclude by considering how appropriate the innovation framework is as a method to understand the development of travel plans.

9.2 Process of an Innovation

Rogers' work concentrates on the adoption phase of an innovation, which is also where the research and guidance has concentrated with travel planning. In the early 1970s Professor G Zaltman suggested that the 'dependent variable' of the innovation process was the

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implementation phase, i.e. the use of the innovation (Zaltman et al., 1973). In response to this,

Rogers developed the idea of the innovation process in an organisation, shown in Figure 9-1

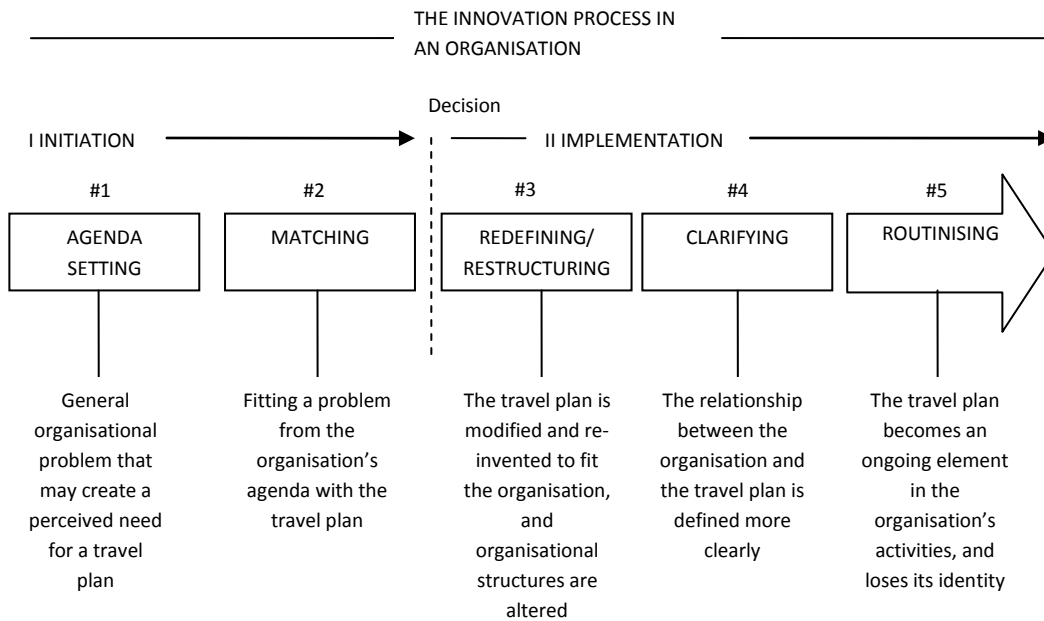


Figure 9-1: Adapted from the Process of an Innovation in an Organisation (Rogers, 2003, page 421)

Stage one and two of the process are prior to adoption of the innovation. They are the stages at which the organisation identifies it has a problem and decides how best to resolve it. These are the stages at which an organisation decides it needs to tackle a problem with car parking or to find a way to be more competitive in the global market, and perhaps uses a travel plan or new working practices. At this stage a decision is made to act.

The second phase, implementation, is the phase that Zaltman was particularly interested in. Stage three is where the innovation is altered to fit with the organisation, and the organisation's structures are altered to fit with the innovation. So with a travel plan this would be the stage when it is adapted to match the needs and expectations of the organisation and the staff, and the organisation starts to change the way it works to accommodate the travel plan. Rogers suggests that innovations that are more easily re-invented are adopted more rapidly, because it is felt to

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be more familiar and compatible (Rogers, 2003). This stage is reflected in the comments made by one of the travel planners who trialled initiatives at different sites, allowing the staff and organisation to become engaged in the process. The concept of trialability will be explored in more depth in the analysis of the attributes of an innovation in Chapter 12, Section 12.4.

Clarifying is the stage at which the innovation is becoming better understood and accepted.

Within the context of a travel plan this could be the stage at which an organisation is beginning to understand the wider benefits of a travel plan and the links to other departments are beginning to develop. Rogers sees the stage of routinising as the final stage of the innovation process, where the innovation loses its identity and becomes part of the way the organisation works.

9.2.1 Development of the innovation process

During the interviews with the travel plan co-ordinators Figure 9-1 was shown to them and they were asked to place where they thought the travel plan was on the process. Two felt they were heading back to stage three from stage five, the others that they were between stages three and four. They all considered they had reached stage five in the past, but because the motivations for the travel plan and goals of the organisation had changed, it was necessary to go back and redefine the travel plan, with the aim of making it routine again in the future.

What was interesting about these comments was that the interpretation of the process was different from that of Rogers. It was felt that the process was iterative rather than linear, that the innovation process did not end with routinising, but looped back to either stage three or four, Figure 9-2. The travel plan became routine, but at this point became stale and needed to be refreshed to ensure it remained observable and compatible with the organisations needs.

Rogers is not necessarily wrong to suggest that the process of innovation concludes with routinising. The responses from the interviewees may be a reaction to the way travel plans are developing.

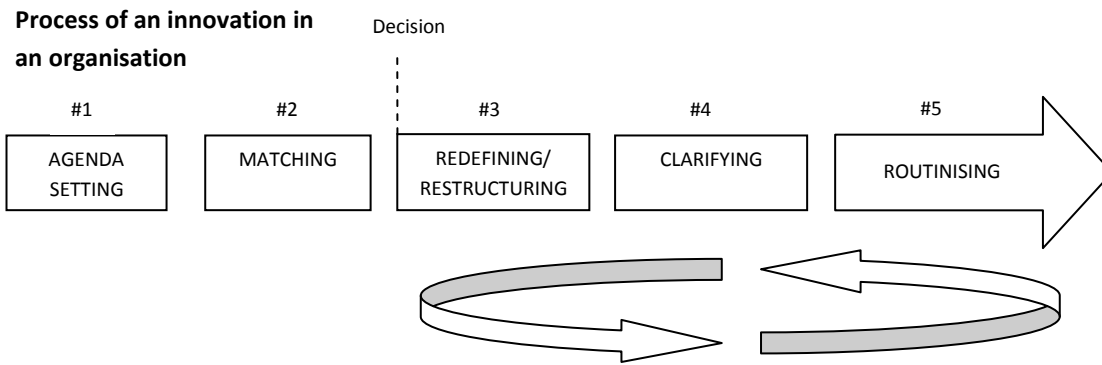


Figure 9-2: The iterative nature of the process of an innovation

A travel plan motivated by external drivers, such as a planning consent, may become routine in that context, but as the travel plan matures and wider benefits are seen to be delivered, a new type of travel plan emerges. This new type of travel plan that links into business objectives requires different strategies and methods, which could explain why the travel planners felt they had gone back to the earlier stages of the process. This model also assumes that organisations are static, whereas in reality they are in a constant state of flux in response to external and internal factors such as market conditions, competitor’s actions, or new regulations. In this case as the organisation changes the travel plan will also need to be redefined, resulting in a more dynamic process which may never reach a steady or routine state in some situations.

9.3 Comparison with other change models

This process of adoption of an innovation is similar to other change models such as behavioural or organisational change models. One of the best known behavioural change model is ‘*Transtheoretical Model of Behaviour Change*’ (Prochaska and DiClemente, 1983), perhaps better known as the ‘*Stages of Change Model*’. This model has been used in travel planning research before, as mentioned in Chapter 3, Section 3.3.2, in ‘*Travel Plans: Do they work?*’ (Rye, 2002). Rye uses the model to explain the stages of change that an organisation goes through in the development of a travel plan. The model goes through the stages of pre-contemplation,

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contemplation, preparation, action, and confirmation. These stages of change map very closely to the stages given in the innovation process, as shown in Figure 9-3, where the top flow line shows the innovation process model and the bottom flow line the stages of change model. The first two stages of each model map very closely onto each other. The point of 'decision' to act and the start of the process of implementing or changing behaviour is also the same, between stages two and three. The only stage that does not closely match between the two models is that of action and clarifying, where action entails actually trying out the new form of behaviour and clarifying is a re-defining stage. The final stage of the innovation or behaviour change model of becoming routine is the final goal for both models.

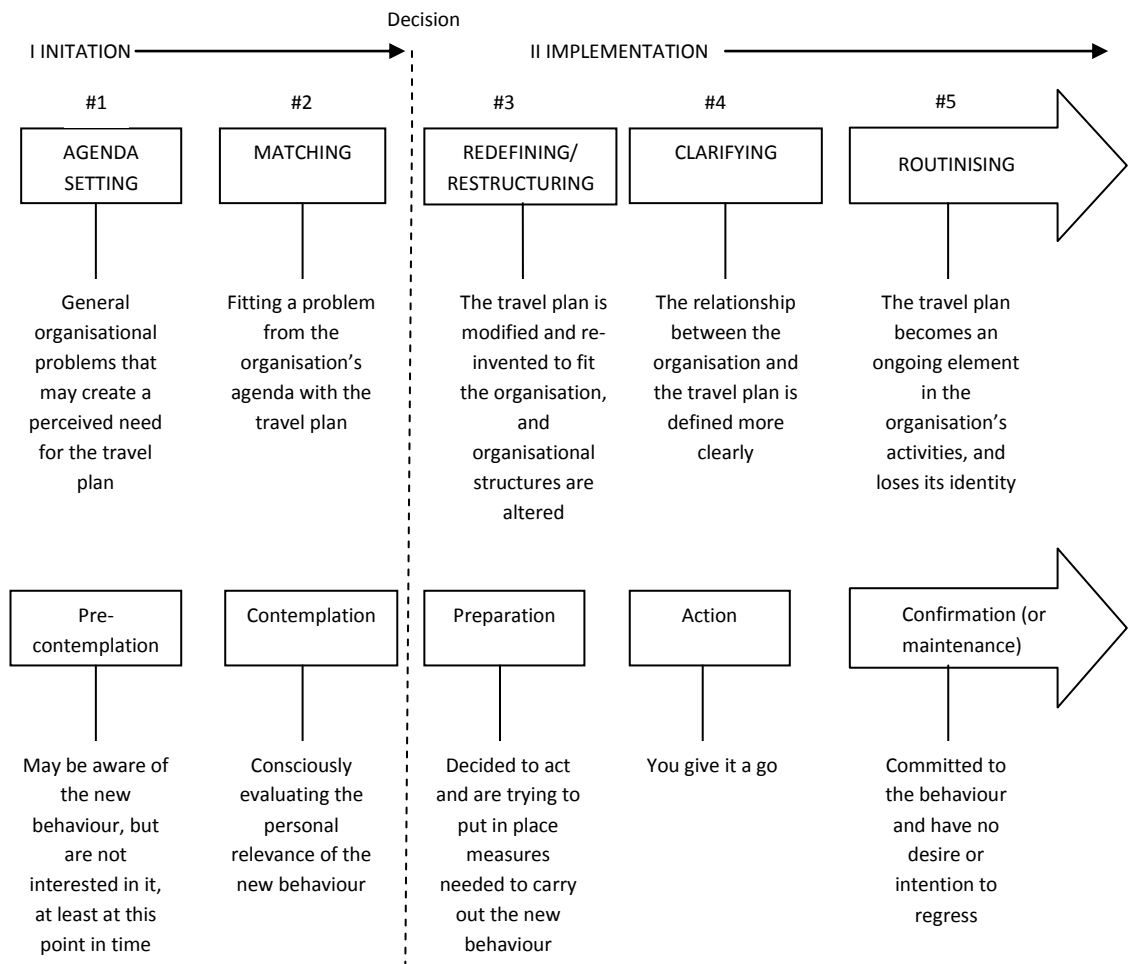


Figure 9-3: The process of innovation and stages of change models

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However, the stages of change model has been criticised for several reasons, which could have some relevance to the process of innovation model. One of them is that when people change behaviour they do not appear to always go through all five stages of change (Davidson, 1992). However, this criticism is refuted by Prochaska, who suggests that all the stages are passed through, it is just that some are passed through so rapidly that they are not perceived as a separate stage (Prochaska et al., 1992). Nevertheless, this is less likely to be a criticism of the innovation process of a travel plan. Organisations spend considerable time confirming that the introduction of an innovation requiring staff and financial resources is the correct decision for the business, so are very likely to proceed through all the phases.

The other major criticism of the stages of change model is that the process of change is shown as linear (Davidson, 1992), when in reality people are likely to relapse back to an earlier stage at any point in the process, although confirmation or maintenance may be reached after a process of experiential learning (Basler, 1995).

This linearity is certainly a criticism that was expressed by the interviewees within the case studies of the innovation model. Because of these criticisms the stages of change model was re-designed to show an iterative element at each stage. Figure 9-4 below shows this iterative process of change, where it is possible to relapse to the previous stage, possibly more than once. This development of the stages of change model is equally relevant to the process of innovation model, although the evidence from the interviews would suggest that the iterative phase concentrates on the last three stages.

However, the big difference between these two models is the end point. Both models consider the routine or maintenance stage as the final stage. The iterative adaptation of the stages of change model, considers the possibility that within the model, even when a point of routine has been reached, there is the possibility of relapsing to the previous stage, but the ultimate goal

remains that of confirmation or maintenance. In the process of innovation model, the results of the interviews suggest a different outcome.

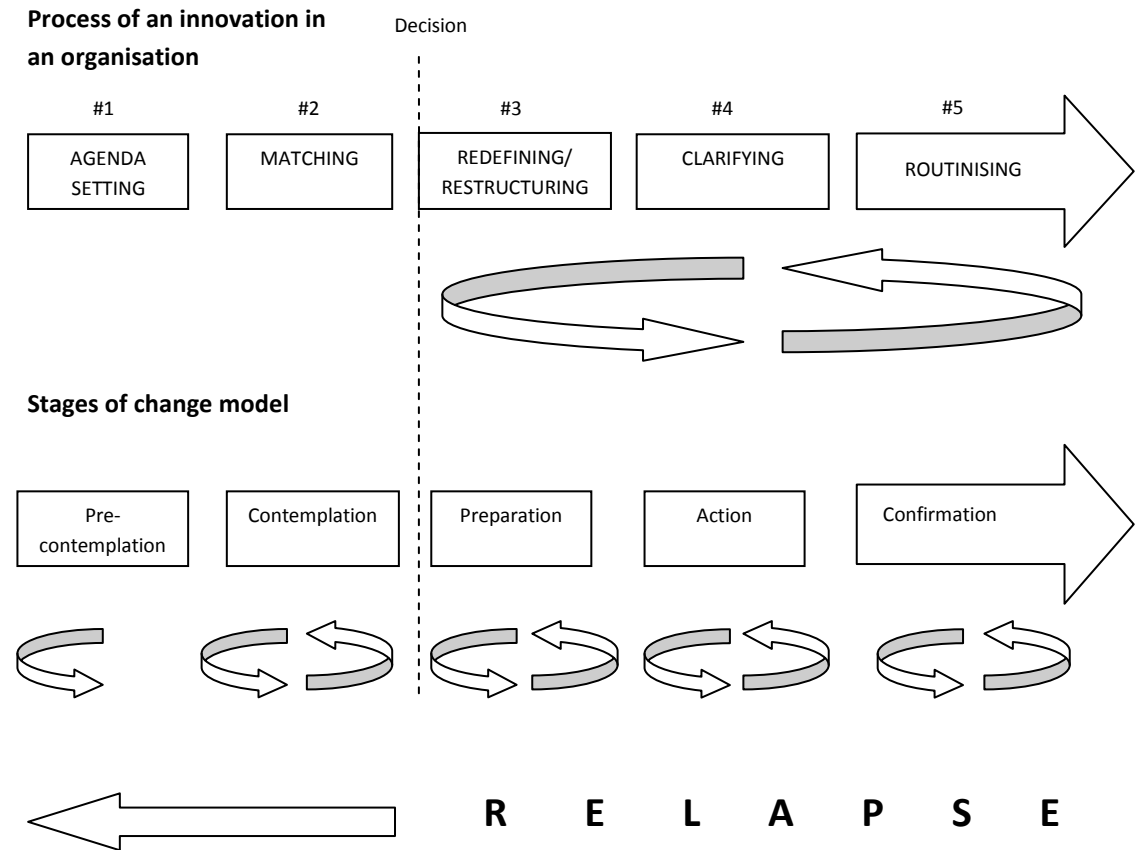


Figure 9-4: The iterative process of change

The interviews suggest that there is no end point and that the travel plan may constantly recycle through stages three to five, as shown in Figure 9-4, in order to re-adapt to the changing needs of the organisation. This is a key point and an important finding from this research. Other studies assume a transition to a final ‘steady state’, at least at this stage in the development of travel planning this steady state is temporary.

Another possibility in both models, even once stage five is reached, rather than just reverting back to the previous stage, it is possible to relapse all the way back to the beginning of the process.

This has happened with travel plans in well known organisations such as Vodafone and Norwich

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Union, particularly during the 2008-09 recession. The role of the travel planner is not seen as a core operational function and has been lost. In less recent examples the organisation has been taken over and staff numbers reduced, so the perceived need for the travel plan disappears and not surprisingly the travel plan is discontinued.

Although there are criticisms of the stages of change model, Hastings points out that it does highlight that behaviour change is a process rather than an 'on/off switch' (Hastings, 2007, page 25), as with the process of adopting and embedding a travel plan.

Another model that could be considered, which also includes the constant re-adaptation to match the changing needs, is an organisational change model, such as a '*Systems Intervention Strategy*' (SIS), mentioned in Chapter 4.

Figure 9-5 shows how the process of an innovation maps onto the SIS model. The innovation process maps closely to the SIS model, with the routinising stage seen as a 'steady state' within the organisation. The SIS model supports the view of the adapted stages of change model that the process of change is iterative, both at the individual stages, as shown in the centre of the diagram, and for the entire process in the outer loop.

It does not consider a relapse phase, although it shows the need to loop back to 'check the reasoning' behind the change. What this model adds to the understanding of the process of adopting an innovation is the inclusion of a product sponsor or champion to drive the change. Product champions can be very important for innovative or niche processes such as travel planning. This is a topic that will be returned to in Chapter 13, Section 13.5.4.

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Although it is possible to map the process of adoption of an innovation onto these two models, what these models do not consider that both Rogers and Zaltman have considered important, is what happens to an innovation in use. This is what the process of innovation model has tried to address. The stages of change model and the SIS model both only consider change as far as adoption. What would be perhaps a better innovation model would be to use the three phases of the SIS model of 'diagnosis', 'design' and 'implementation', but after returning to a 'steady state' include an iterative in use phase of re-defining, clarifying and routinising, Figure 9-6. The comments made during the interviews about the iterative process suggest that travel plans need to go through several iterations around re-structuring, clarifying and routinising before they do truly become embedded and accepted as part of the way the organisation works, and possibly finally lose their identity in the same way as 'total quality management' initiatives or 'smarter' working practices have.

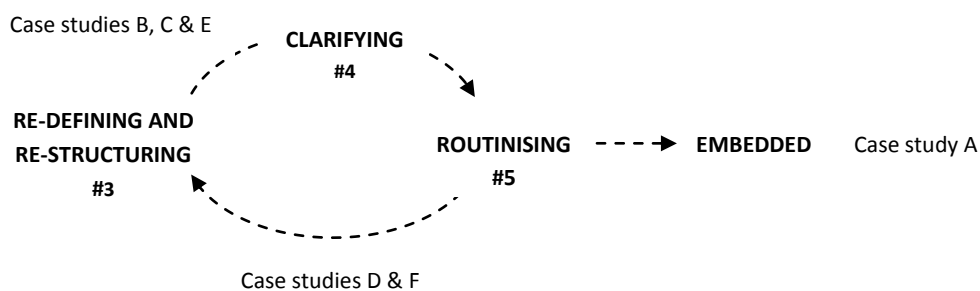


Figure 9-6: Extension to the SIS model

As an innovation, travel plans are struggling to become embedded within an organisation. Many remain sidelined within a FM department and are struggling to make connections into other areas of the organisation. This was shown in Chapter 6, Table 6-5, where with seven of the twenty five organisations interviewed, the travel plan made no links to other parts of the organisation. These travel plans with no links probably fit close to the Rogers' model in that the process of adoption is linear, and a stable or routine state is reached and the travel plan loses its identity, but also stagnates. This was certainly the case with case studies D and F (UEA), as mentioned in Chapter 8, Section 8.2. It was felt that the travel plans had reached stage five and were in the process of

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returning to stage three in Figure 9-1. The other case studies were more actively proceeding through an iterative process. Case study E (Stansted) was required to regularly review and update the access strategy so building an iterative process into the procedures. Case study A (BT) was in a slightly different position as it had reached a point where the smarter more flexible working practices had become routine and lost their identity, as illustrated by the following quote.

“We don’t worry about the bottom line; we see [flexible working] as a way of delivering the bottom line when times get tough. I think that is a real difference. I think that for me it is what makes it all work, because it is embedded. But if you always see it as a separate strand that is managed by facilities or HR or somebody, it never becomes part of your business plan” (HR Director, BT, Case study A).

It should be noted that it has taken forty years for BT to reach this stage of embedding, supporting Hastings point that behaviour change is a long process (Hastings, 2007). The only changes to the processes were incremental changes as the result of improvements in technology or the need to adapt to different market conditions.

Overall, the use of the *Process of an Innovation* model was a useful framework to understand how travel plans are maturing and embedding into an organisation, especially as it considered the in use phase, rather than purely the adoption phase used in other models. However, the use of the model highlighted its weaknesses. It was clear that the process of adopting and embedding was not linear, but an iterative process, showing the need for constant re-invention so that the travel plan changes to meet the new organisational needs. The challenge for transport professionals working with business to develop travel plans is to expand their knowledge of change processes within business, so that they are better able to successfully embed a travel plan.

Chapter Ten

10 The Attributes of an Innovation – Relative Advantage

10.1 Introduction

The previous chapter explored change models, including Rogers' *Process of an Innovation*. This and the following two chapters will present the results of the interview data using the '*Attributes of an Innovation*' (Rogers, 2003).

Chapter 4 described the '*Attributes of an Innovation*', and the use in this research as a framework to disaggregate the case study interview data. Rogers considers an innovation that possesses these attributes is more likely to be adopted. However, the analysis of the data using this framework is not designed to determine whether a particular case study has been successfully adopted or not, but as a framework to determine what factors could be important to the successful adoption and embedding of a travel plan and what the potential barriers are. Rather than judging the success of one particular case study, the idea is to build up a complete picture of the maturing travel plan by using the two-tailed multiple case study approach described in Chapter 5, Section 5.3.2.1. The attributes are used as a way to analyse the interview data from different perspectives to develop this complete picture.

This chapter will introduce how the data will be presented for chapters 10, 11 and 12, and then proceed to present the results for the attribute *relative advantage*. Chapter 11 will present the results for *compatibility* and Chapter 12 will combine *observability*, *trialability* and *complexity*, as there is less data contained within these attributes.

10.2 Diagrammatic representation of the data

In this and in the following two chapters are a series of diagrams used to illustrate how the interview data is broken down into the five attributes. The diagrams are used as a way to

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summarise and visualise the main trends and links that have emerged from the case study data. They are not systems diagrams, but a visual representation of the different topics and issues raised during the interviews and the links to and between the topics and issues, see Figure 9-7 as an example. Each attribute is shown in bold in a box at the top of the page, and then the main topics are shown in the other boxes, showing where they link to each other and the various issues associated and linked to them.

No attempt has been made to place a quantitative weighting to these issues, as this would give an inaccurate picture of the data. As discussed in Chapter 7, Section 7.2, a range of people were interviewed across the organisation to understand how they perceived the travel plan and what they felt were the benefits to their departments, but also to the organisation as a whole. This range of interviewees with different specialities meant that it was not possible to ask exactly the same questions each time, as the questions had to have some relevance to their speciality. Across the case studies, in most instances, it was only possible to speak to one or possibly two people with a particular speciality, or at the same level of seniority, so a direct comparison of issues was not possible. As well as the interviewee's diversity, the case studies were also diverse, in order to achieve the spectrum of case studies required to build up a broader picture. Due to this diversity, it would be misleading to try to attribute a value to the occurrence of a particular topic. Because a topic did not re-occur could be an indication of the specialities and types of organisations involved in the case studies, rather than its importance. However, the advantage of using a range of interviewee specialities, meant that it was possible to develop a wider understanding of the context in the organisation beyond the bounds of the travel plan.

What is very apparent when looking at these diagrams is that there are more topics, issues and links for *relative advantage* (Figure 10-7) and *compatibility* (Figure 11-8), with greater emphasis given to the topics or issues raised for these attributes. The other diagrams for the remaining attributes are more simplistic with fewer links and issues, and the issues covered in these

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attributes were given less emphasis by those interviewed. This supports Rogers' assertion that relative advantage and compatibility are the most important attributes in the adoption process.

Due to the complexity of the diagrams for relative advantage and compatibility, these diagrams are built up stage by stage through chapters 10 and 11. To begin with the main topics raised within each attribute are illustrated, Figure 10-1 for example, then the issues and the links raised in the interviews relevant to these topics are represented on separate diagrams, Figure 10-2, Figure 10-3, Figure 10-4, Figure 10-5 for example. At the end of the chapter the final diagrams (Figure 10-7 and Figure 11-8) are presented to show the overall picture of the network of links between the different topics.

This chapter will begin by exploring the main topics covered in the interviews that related to relative advantage. It will then move on to explore the individual diagrams for each topic, by using examples from the case study interviews to illustrate the topics and issues in each of the diagrams.

10.3 Relative Advantage

The main advantages of a travel plan or developing an access strategy, illustrated in Figure 10-1, were seen to come from changing working practices, by improving business efficiency and linking into HR issues such as enabling the organisation to become an employer of choice. The other main issues centred on cost savings, particularly from time saved by not travelling and by reducing the number of trips made for business travel; CSR and environmental issues; and future development or business growth.

This chapter will now explore these topics individually, and how they link to other topics.

However, as Figure 10-7 illustrates and will become clear in the following sections, these topics are closely inter-related, and can only be considered individually to a point.

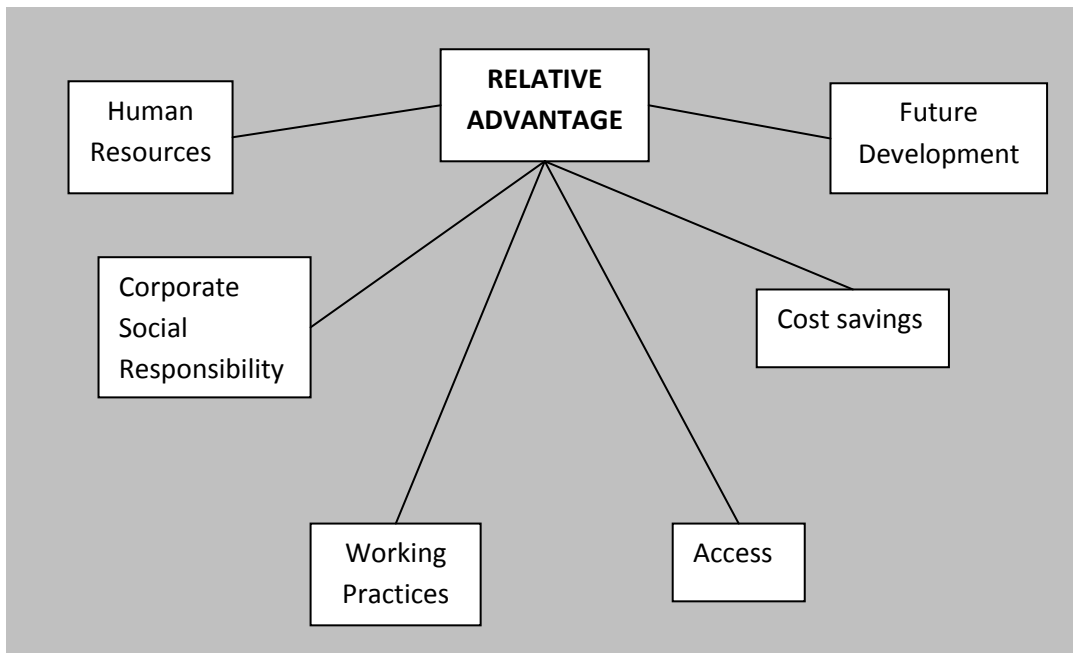


Figure 10-1: Main topics for the attribute relative advantage

10.4 Working practices

In Chapter 5, Section 5.3.2.1 it was explained why a two-tailed, overlapping multiple case study approach was chosen to give a spectrum of case studies. At one extreme an organisation which had adopted ‘smarter’ working practices was included. This was because of the impact that this had on vehicle miles travelled. At the other extreme a case study was chosen where the travel plan was closely aligned to the targets set by the local authority.

A change in working practices to a more flexible model came through as a strong theme within the interviews, partly because flexible working is seen to be a travel plan initiative, but also because some interviewees in the wider organisation were exploring it as a way to deliver a range of benefits to the organisation.

Figure 10-2 illustrates the issues that were linked to the topic of working practices. The diagram shows both the advantages of changing working practices and the issues related to this topic. This

chapter will start by exploring the theme of management style and how this was perceived as important to working practices and then move on to explore the other issues illustrated in the diagram.

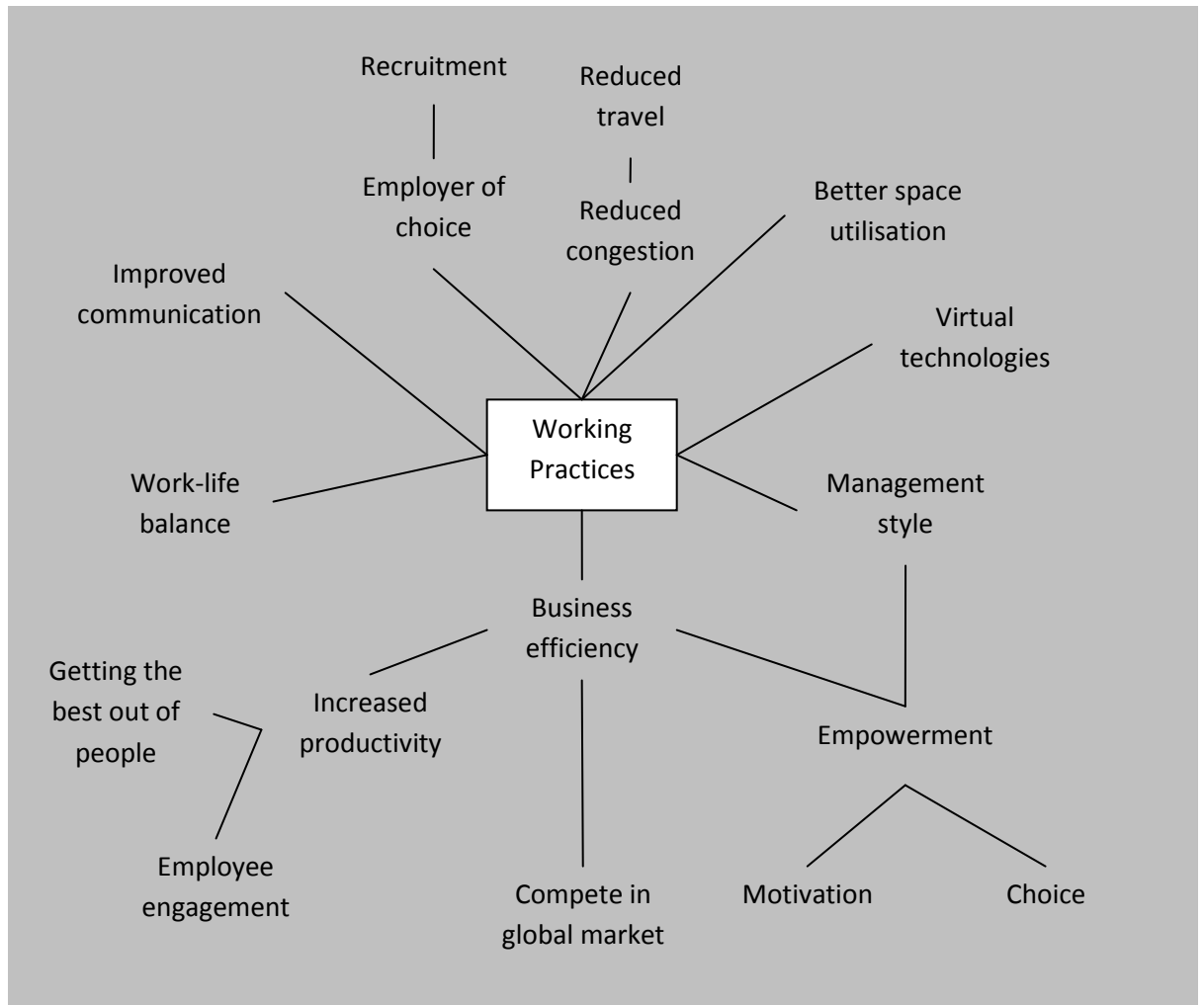


Figure 10-2: Issues raised for the topic of working practices

Management Style

When flexible working practices were discussed, it was not simply to talk about the legal obligation of business to offer flexible working to parents. What was talked about were ‘smarter’ working practices, where telecommunication technologies were used to enable people to work

remotely in a 'virtual office', so that work was seen as an activity rather than a time or a place, and there was a flexibility for the individual to choose how and where they worked.

“[Flexible working] isn't about people who have child care commitments; it is about helping you balance work life in a way that suits you, but enables you to do your job” (HR Director, Case study C)

This requires a complete re-structuring of the management styles and office utilisation, which requires a radical change in culture to find new ways to measure performance, as described by BT, Case Study A.

“The framework that you create around motivation, around performance management, around trust based relationships. That's how you know people are working. Not irrelevant measures like whether you can see them or not. So you can kind of understand why some managers may use that as a performance measure. It is a really poor performance measure, but it's easy. So to re-educate managers around that was a big factor, and for some people, the whole status of well having or I don't have an office anymore, actually I don't even have a desk anymore, who am I? Those were big barriers. And giving people confidence to manage people remotely” (HR Director, BT, Case study A).

Indeed, Felstead in the book *'Changing Places of Work'*, comments that the collective office facilitates a move away from bureaucratic modes of management (Felstead et al., 2005).

Business efficiency and empowerment

It is not surprising that with such an extensive culture change away from bureaucratic management practices, it has taken BT forty years to embed these practices. However, as illustrated in Figure 10-2 there are many advantages that make the long process worthwhile.

These were perhaps summarised best by the IT Director in Case Study C.

“I think [flexible working] is a way of working that we should be embracing and many other companies have, and I think we get a better competitive advantage, because we get better employees. People feel better, they are more empowered they are more motivated. We are able to retain critical folk that we might lose otherwise, through any number of reasons. But allowing that more diverse way of working we are able to do that, and we get some bottom line savings, we have fewer building and spend less maintaining them” (IT Director, Case Study C).

One of the major benefits of introducing smarter working practices is improved business efficiency. It was seen that by empowering people to make decisions about where and when they worked, so changing the measure of success to be based on outcomes rather than visibility, greater efficiency could be delivered. BT gave an example of this from their Cardiff Software Centre.

“...we introduced complete flexibility, (we called it ‘Freedom to Work’) in our Cardiff software engineering unit as a trial. What that meant was that people could work anywhere anytime, no constraints. Very clear definition of what was required, when you needed to deliver it, the way you needed to deliver it, but nothing else. We found the Cardiff Software centre struck up a relationship with a software centre we have in India, and between them they fixed a major glitch in a system that had been giving them problems for months. They resolved all the issues; they bought the new product in three months early” (HR Director, BT, Case study A).

The concept of empowerment was a theme that was linked to improved business efficiency. The theory was that by allowing people to have more control over how and when they worked meant they were more motivated and engaged.

“[It is] about what you deliver, it is not about being there, it is about being clear about what our expectations are, what our standards are, what our measures are and making sure people are very clear about those. And enabling people the flexibility to choose how they do that. On the basis that if people feel empowered and accountable, you will probably end up with better results in terms of what people do deliver. And I think the data tells us that you get much higher levels of employee engagement” (HR Director, Case study C).

Increasing employee engagement through smarter working practices was seen to lead to greater discretionary effort. Discretionary effort also increased by staff not travelling to work, giving them more time for themselves, but also giving something back to the company.

“When we looked at what people do with the time that they would normally have commuted if they worked from home. There is a kind of 60/40 split. They tend to take 60% for themselves and give 40% back to the company” (HR Director, BT, Case study A).

There were other advantages offered for working from home or locally. One interviewee felt that working from home may actually be a better place to work, and by allowing this form of flexibility enabled people to work better, by improving their work/life balance.

“It is more round, is there a need to travel or actually do you work better at home? Do people work better if they are going to their local site, because they have done less travel and are less frustrated? It is more around what enables people to work better, that is where we come from” (HR Director, Case study C).

A theme that emerged from the interviews was a realisation that commuting to the office was not necessarily the most efficient way for employees to spend their time, and empowering staff to make their own decisions about how to work was more productive.

Recruitment and work/life balance

The benefits of a smarter working extend beyond that of improving efficiency to include recruitment. Offering smarter flexible working as a form of benefit, where work-life balance is improved, enabled the case study organisations to recruit the best person for the job. As the smarter working practices are spreading across business, they are in some sectors, seen as the normal practice and expected to be offered. If they are not, there is a danger that the talent will go elsewhere.

“And I think they know that if you can’t provide [flexible working] somebody else can, so it is becoming equally important to them as the package that they get. It is having some time to enjoy their life, or being able to deliver their work more on their terms, not completely, but a bit more on their terms” (HR Director, Case study C).

An argument was put forward that actually work-life balance and the ability to choose when to work can be more important than additional pay, such as overtime payments.

“We don’t manufacture things, so the traditional response to that would be to introduce different shift patterns, to look at anti-social payments, overtime etc. But remember one of the factors that we had to think about was the need to have world class costs, which means that those things aren’t really part of your armoury. We also found that they actually weren’t that effective. Most people would rather have time with their family and friends than work anti-social hours – most. So BTs reaction, our strategic response to this was to introduce flexible working, and in the early days, that was really tough. No one else was talking about it, no-one else was thinking about it” (HR Director, BT, Case study A).

The introduction of smarter flexible working practices has benefits both for the individual who is able to improve their work-life balance, and for the company to be able to compete in the global

market on cost. Interaction with the global market has been a driver for the introduction of smarter working practices, as the technologies that facilitate remote working allow good quality communication around the world. But there is a softer side to it, where a temporal flexibility in the working day results in a greater willingness of staff to work outside normal working hours, with the obvious benefits to global companies.

“People are much more willing to do an out of hours phone call when they are at home than when they are having to stay in the office and leave for home late” (IT Director, Case Study C).

What these quotes illustrate is that by trusting staff to manage how and when they work, giving them greater flexibility, there are a range of important benefits to the organisation in terms of increasing productivity and improving staff morale. Also there are benefits to the staff that are able to work in a way that suits their lifestyle. This will inevitably have impacts on the health of staff and levels of absenteeism, so linking into HR issues. Companies that work in global markets are able to compete on costs more effectively by reducing their overheads, without reducing staff numbers.

Benefits of not travelling

The above were the less quantifiable benefits of changing working practices. There are also more quantifiable benefits in the form of cost savings, environmental benefits and reduced levels of congestion from smarter working practices, which not only benefit the organisation, but society as a whole.

For the organisation the use of technology to replace journeys has the advantage of helping to manage real estate overheads as organisations grow.

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“It is easy to ring into a conference call, and departments are increasingly telling people to work from home as space becomes tighter, secondly people don’t need to commute like they used to with the technology that is around” (IT Director, Case Study C).

As the earlier quote from BT illustrated, there is a considerable benefit of discretionary effort by not insisting staff commute to the office every day. There is an awareness developing that the commute journey is wasted time and that a travel plan that supports a reduction in journey time supports business goals.

“Whereas if you adopt a more flexible way of working here is how the travel plan looks, and here’s how much better it is for each employee, and here’s how much less time they spend travelling as a result. There might be the odd person who loves the two hour drive around the M25 or a crowded tube, but generally the less travel the better I think. That is where you could have a travel plan that supports some business change, because people would look at it and say, you know what under that model employees spend eight hours a week travelling, as opposed to a model today where they spend fifteen hours a week” (IT Director, Case Study C).

By reducing the number of journeys made on an annual basis BT has seen this approach deliver quantifiable benefits in the form of cost savings and reductions in carbon emissions.

“Now in terms of our UK, our more domestic policies around travelling. What we have done by encouraging people to work flexibly, either to work from home. BT has just under 15,000 home based workers. So you imagine we have a massive impact on the amount of traffic. In fact in one year alone we saved 12 million litres of fuel, which for BT saves £10million, which actually also takes 54,000 tonnes of CO₂ out of the atmosphere and reduces congestion” (HR Director, BT, Case study A).

“You know what our 20,000 employees do not need to travel every day, we have come up with a model where actually we are a more effective organisation and the way we are reducing...the way that we have done that actually results in less congestion and you know it is a good thing for the Chancellor, for the economy and a good thing for the environment” (IT Director, Case Study C).

These quotes show that in the wider context organisations are beginning to accept that congestion from commuting is a problem for the economy, but also for their business through the loss of productivity while staff are travelling. To address this problem they are starting from the premise that they need to consider whether the journey is actually necessary, and whether there are more efficient ways to work that do not involve travel. Travel plans still assume the journey needs to be made, so concentrate on addressing improving the sustainability of the journey. In some cases there is no alternative other than to commute and this travel plan approach is appropriate. However, where it is possible to reduce or eliminate the journey, this last section has begun to outline some of the potential benefits for the organisation and the individual of smarter working practices. There are also the added benefits to society as a whole by improving the work/life balance, particularly within families, and reducing congestion and the inevitable environmental improvements this produces.

The point that comes through from these quotes and the links that are made is that reducing SOV numbers or bringing about modal shift is not what is important to the organisation. What is important to them is how they can enable their staff to work more effectively and increase productivity. Transport initiatives are seen as an enabler to help this process and reductions in congestion and carbon emissions are seen as an added bonus.

10.5 Cost savings

As already demonstrated from the above examples organisations are realising costs savings from introducing smarter working practices. Figure 10-3 shows the main issues raised during the interviews in relation to cost savings. Figure 10-3 and Figure 10-2 begin to show how the different topics link together, where both show the relationship with better space utilisation. This was a major issue that was discussed within both topics. The other main issues raised centred on the savings that could result from a change in business travel policy and the impacts this had on efficiency through time savings. This topic also starts to introduce more travel plan related issues associated with car parking.

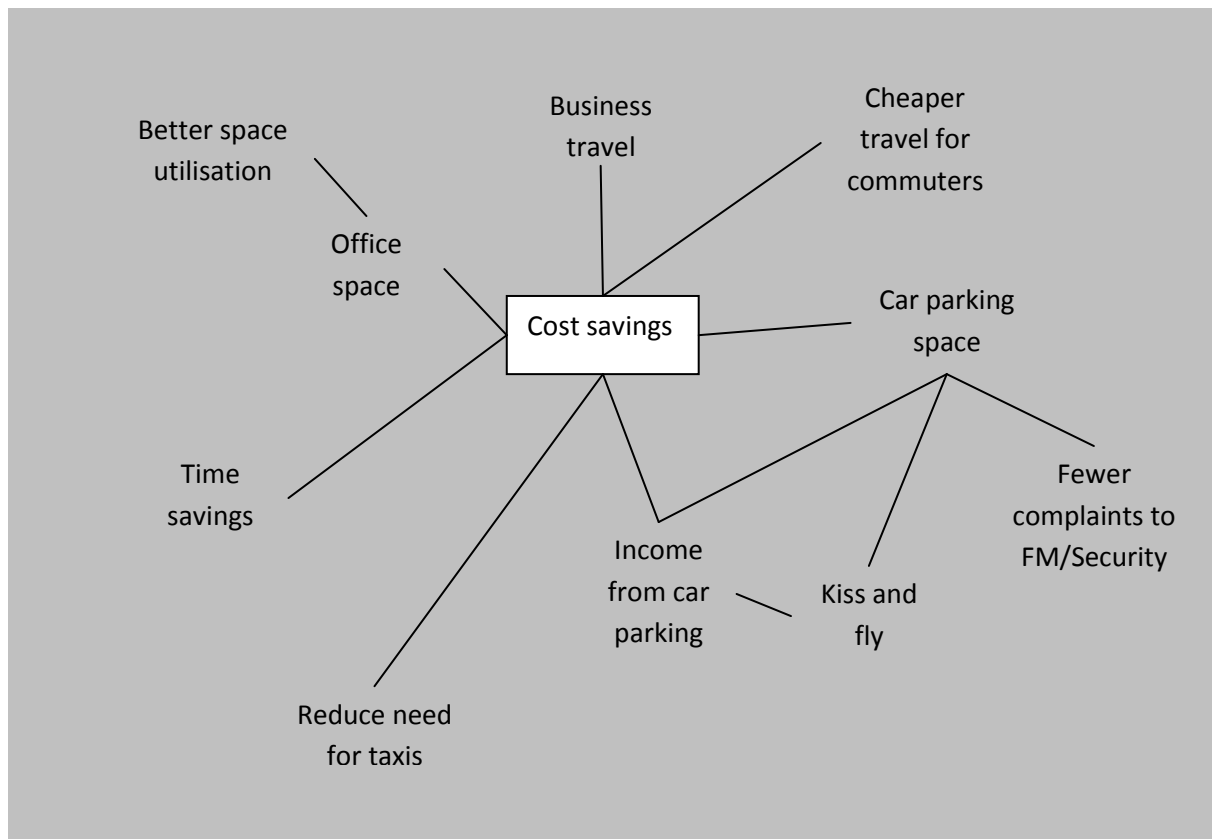


Figure 10-3: Issues raised for the topic of cost savings

Office space

As already mentioned BT has delivered productivity gains through smarter working practices. As part of this process they developed a building strategy to ensure they had offices in the right places for their customers and for their staff, but also to rationalise the property portfolio. This strategy has delivered savings in both travel time and money.

“We’ve got very hard statistical data about the productivity gains, about the cost savings both in terms of travel saved and time taken to travel, and the whole building infrastructure. For example today we spend £700million less on the building infrastructure than we did in 2000” (HR Director, BT, Case study A).

“I think we have saved 18 hundred years of travel time” (HR Director, BT, Case study A).

There would appear to be great potential to reduce the office space required for business based on work done by Felstead. The work suggests that workstations and offices go unoccupied for as much as two thirds of the working week (Felstead et al., 2005).

By using the office space in a flexible way, so that as Felstead describes, office space is only provided when needed (Felstead et al., 2005), there are very few fixed desks and the office utilisation rises.

“We know the benefits of desk utilisation, driving that up. For example this building has a footfall of 10,000 per day. That is people moving through the building, using it because they have a particular piece of work they want to do. They hot desk, they use a meeting room, otherwise a building like this could manage 1,000 people or so at fixed desks” (HR Director, BT, Case study A).

This impressive increase in daily footfall obviously has benefits for the organisation in cost savings and improved space efficiency. However, it has important implications for local authorities and

transport bodies like TfL. This approach may reduce the overall total number of journeys made, but in this case it concentrates ten times the number of staff onto the one site. Although the journeys are likely to be spread throughout the day, it is likely to still put strain on the transport network. This concept that smart working practices may temporally shift the commute to work is supported by work done by Lyons and Haddag, who identify two forms of homeworking; 'varied spatio-temporal working' (VST) and 'business varied spatio-temporal working' (BSVT). VST involves workers who spend some of the day working at home, but may travel at some point in the day to perhaps find a quieter working environment, attend to childcare responsibilities or to avoid congestion. Lyons and Haddag found that nearly twice as many workers operated in this way compared to those working for a full day at home. In contrast BSVT workers trips were planned to attend meetings or offsite meetings. The main motivation for these journeys was to reduce excess driving (Lyons et al., 2008). The example from BT develops this argument further to suggest that changing working practices also changes the way an office is used.

Better space utilisation

BT took a strategic decision to introduce smarter working, which was aligned with a building strategy, to cut costs by reducing office space and to work more effectively. However, the decision to adopt new working practices may be less strategic. Case study C has started to introduce smarter working practices in a less strategic way, more in response to growing numbers of staff.

“I think the strategy was from a space point of view, we probably don't have enough space to have a desk for every person. From a parking point of view if everybody was on site at the same time, we probably don't have enough parking” (HR Director, Case study C).

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The use of smarter working practices, enabling people to work virtually from home is a practice that is beginning to be used in organisations that are growing. In order to grow they need to employ more staff who need to be accommodated. Using the office space flexibly improves the building efficiency, reducing the need to build or obtain additional office and car parking capacity. This is a concept supported by Felstead who highlights the link between flexible working and the ability to expand the workforce without investing in new buildings (Felstead et al., 2005). It can also be used as a cost cutting strategy in the recession to reduce office capacity and the overheads from buildings.

The following example shows that office overcrowding can be a problem that impacts on productivity, yet the benefits of smarter working are still struggling to be accepted or understood.

“And one of the things that we are really trying to focus on is how can we get more value out of the real estate that we have got and that is one angle. And the second piece is how can we do that in a way that actually empowers and enables our employees rather than squeezing people in like battery farmed chickens. But we do have huge amounts of real estate, we do have great technology that can enable people to work in a different way and we are not quite grasping that” (Environment Health and Safety Manager, Case study C).

“Where it sits in terms of where we work in the future I don’t know, but where we just... Working patterns are changing. Why are they changing, space costs a lot of money, travel costs a lot of money, the environmental concerns” (Environment Health and Safety Manager, Case study C).

However, even though an understanding is developing of the benefits of changing working practices for business efficiency and the cost of travel both financially and in terms of time, there still seems to be a need to quantify these costs.

“If we had data put in front of us, saying look, if this is the plan today, this is the time and effort that we waste in terms of people travelling, that would make us think about it a bit more” (IT Director, Case Study C).

Other cost saving measures

Other organisations are beginning to put figures to the cost savings of introducing a travel plan.

“The business case, it’s a tricky one to justify, primarily it’s our average cost per parking space is about £450. I know that comes up in all the presentations, but we end up paying bottom end £200 for some of the overflow up to the Reebok Stadium in Bolton, nearly £1,000 per space. What we have done is mitigated by not having to buy more at that sort of price. For example at Newstead, the benefit of the car share promotion is not going to have to find another 50 piece car park, which the business sees as a benefit. That is a £45,000-£50,000 saving we would pay out if that person car shared every day, we would pay out £110 to that person so £110 vs £450 all for the sake of putting a couple of signs up saying reserved for car sharers, which for a couple of hundred quid you get your money back very quickly” (Travel Planner, Eon, Case study B).

Even with the obvious cost savings of reducing overflow car parking, there was obvious reticence from the travel planner, who described it as a ‘tricky one’. But if you start to link the cost savings with increased productivity for the facilities team, the business case begins to become more robust.

“Yes, because it is assisting the facilities team. Before they were... 8-10 weeks ago, they were getting a lot of flack about people not being able to get spaces. They were getting a lot of traffic through their office which was stopping them looking after the buildings. They are now getting a noticeable decrease in that, to the point they get half the queries a day. Where can I park, where are the overflow car parks? How do I get on the green

travel scheme? Going down from possibly 15-20 per day. There is certainly a productivity benefit there. There are less people complaining about car parking, because they feel they can see something being done” (Travel Planner, Eon, Case study B).

Here the cost savings are fairly immediate, but in another example the savings are more speculative and linked to sustainable development, which although a good business case can be hard to justify.

“What they are doing at the moment is taking a view as a business that the environment will become a more important issue and even if the public aren’t making decisions based on it, Government and local authorities are. And that will affect their ability to grow the airport as they want to. They need to find a solution that will make them able to grow and viable over a longer term. Gearing the airport to be a viable long term business. This may mean in the short term they have to spend money that does not make sense if you look at it over one year period. Funding bus services may not make sense looked at over one year, but looking at securing future growth, absolutely it does make sense” (Environment Manager, BAA Stansted, Case study E).

However, if you then link the cost of these buses into more immediate savings for the retail units, the business case again becomes more robust.

“For example a lot of airside caterers that needed to be in for about 4am were bringing their staff in from London, and they didn’t have transport at that time to bring them in. So each of the businesses collectively were paying for taxis for staff, which was horrendous. It was huge amounts of money to their operation. So they were able to pull some of those resources together to get a local bus route that could bring them in. So it got staff in on time and cut down on their costs.” (Retail Manager, BAA Stansted, Case study E).

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What these examples show is that cost savings alone do not appear to be enough of a business case to support a travel plan, but there is a need to link to other objectives for the organisation, for example the environment or productivity. The following example shows how taking purely a commercial approach may not be realistic or appropriate.

“From the travel plan point of view there are direct commercial benefits if people park in the car parks rather than ‘kiss and fly’. That is a commercial win. If they all switch to using bus or train then that might not be a commercial win. You have to be realistic and base decisions on environmental, commercial and planning objectives going forward”

(Environment Manager, BAA Stansted, Case study E).

This was a philosophy echoed by BT, where every business decision had to have a financial, environmental and social benefit, the balance between the three could alter, but none could ever be in the negative. This has perhaps been an issue with travel plans, in that they have been targeted at one area such as local authority goals of SOV reduction, car parking management, or as the telephone survey in Chapter 6 suggests, now the environment. For travel plans to be sustained there is a need to ensure it supports a well defined range of organisational goals, rather than whatever is the ‘fad’ of the moment. This is an issue that will be returned to in greater detail in Chapter 11.

Another area of potential cost savings is business travel. Travel planners are increasingly becoming involved in business travel. One area that is under review is the company car policy. However, even here the policy also has to support a range of issues. A change in the company car policy to introduce lower carbon emitting vehicles is only seen as feasible option when it reduces costs as well.

“So if it was more expensive to operate a greener fleet, then we would probably have to think twice, but actually there are benefits both ways. So I think the thing that is driving

the change is that our current scheme, for the majority of people who do the work, it is more beneficial for them to be in the company car. Similarly, putting them in a greener car actually reduces their costs more as well. So it is a benefit for the employee as well as [the organisation]" (Car Fleet Manger, Case study D).

What is clear is that cost savings alone, though a good business case, need to be supported by other organisational goals. The examples used here show that commercial and cost reduction measures need to be combined with issues of accessibility and reducing carbon emissions to make a complete business case. This is true for all the advantages of a travel plan shown in Figure 10-7, and illustrated by the interconnecting lines.

10.6 Human Resources (HR)

The HR issues of recruitment, retention, absenteeism and wellbeing are areas that are embedded as advantages for smarter working. However, this is an area that is only just beginning to be understood as a benefit for travel plans.

Figure 10-4 shows the issues raised during the interviews that related to HR. The most robust case put forward was for smarter working practices. The evidence for benefits to HR from travel plans was less evident, and goes some way to explain the problems of gaining access to HR for the study, as they did not see the link between travel plans and their role.

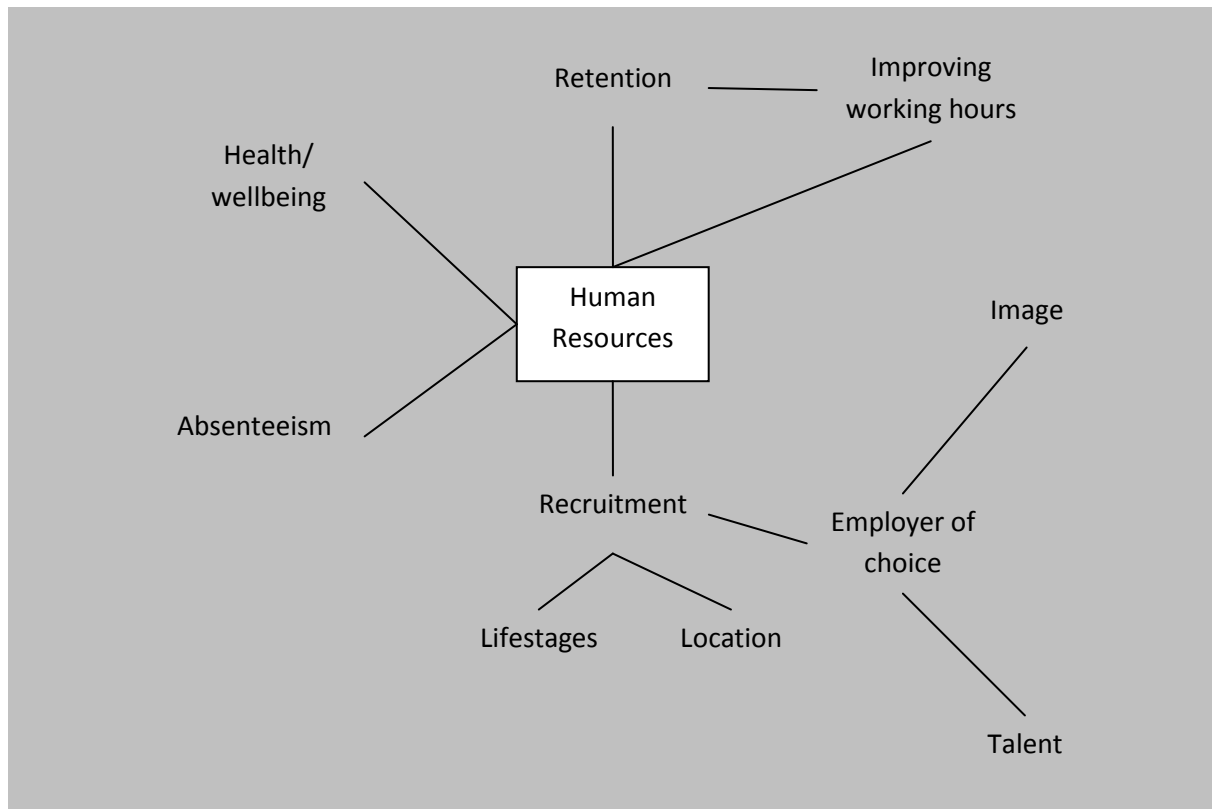


Figure 10-4: Issues raised for the topic of Human Resources

Retention, absenteeism and wellbeing

BT have data that shows their retention rates are higher than the industry average, (which they attribute in part to flexible working), and lower absenteeism rates from the flexible workers.

These lower absenteeism rates come in part from the reduced stress of the working practices, but also from a realistic understanding that some days people might just not be able to face going to the office, but are happy to work from home.

“We are very clear about the impact of flexible working on things like people retention.

BT has a 3% retention rate¹ in an industry where you more commonly see 19%-20%. We see it in the health of our workforce. People who are flexible workers have low sick absence, we see it there. We see it as a major enabler in tackling stress. Stress related

¹ Where ‘retention rates’ are referred to by the interviewee, the context of the statement was in reference to turnover rates.

illnesses, because you are giving people some control, and we see it as saving money as pure travel costs, the impact on society, impact on congestion. We manage this in a holistic way and measure it on all the factors” (HR Director, BT, Case study A).

These figures for the average turnover rates tally closely to those of the CIPD for the IT industry of 17.8% for voluntary leavers and 22.4% for all leavers (Chartered Institute of Personnel Development, 2008, page 21). Reducing turnover rates from 19%-20% to 3% produce sizeable savings to a business, when average costs of recruitment are £4,667 per person. This average figure rises to £5,800 per person when training, induction etc. are also included (Chartered Institute of Personnel Development, 2008).

Travel plans are also linked into reduced absenteeism and healthier lifestyles by taking daily exercise as part of the commute to work. However, this comment from the HR Director, was given after some consideration, which gave the impression that this was not readily seen as a benefit.

“I guess from a wellbeing point of view that has huge benefits, so if we are driving wellbeing and we are asking people to think of different ways of coming to work. So we have walk to work days and things like that. Clearly if our people are healthier, that clearly has a benefit for us as a business. People are clearly ill less and potentially more resilient if they are in better health. So that has a business benefit long term” (HR Director, Case study C).

Specific travel plan initiatives such as car sharing have benefits for HR and for staff. By improving parking provision through car sharing staff are able to work normal hours, which means their working day is shorter, improving the worklife balance and wellbeing.

“It has achieved a few things, it has got more car sharers, it has got more people coming in when they should come, because there is space in a car park for people to start at a

normal hour, rather than people coming in at 8.30 for a 9am start to make sure they got a space, and actually ending up doing half an hour more or sometimes longer on some occasions. It has had a bit of a benefit that way. You start to see car sharers coming in on a responsible shift pattern, and they are going on a responsible shift pattern. So that is a bit of a nicety to have” (Travel Planner, Eon, Case study B).

Recruitment

Recruitment is an important area for HR. Smarter working practices are seen as a way to aid recruitment and deepen the labour market, but travel plans can do this as well. Instead of thinking of modes of transport, modes of access are considered, which can include telecommunications. This is a concept that is developed by Lyons in *The Substitution of Communications for Travel* (Lyons et al., 2008), where the premise is to consider the purpose of the journey which is to communicate with others or to be co-present with others. Telecommunication technologies used in smarter working practices enable this to be done virtually. Using these technologies can open up the labour market to facilitate employing the best person for the job, regardless of a disability or physical location.

“What [flexible working] does, is it allows us to widen the talent pool from which we are drawing from. So nowadays it really doesn’t matter if you have a disability and the journey into work is difficult because you don’t need to make the journey. I can bring the work to you or we can work around the hours that work for you. If you are a parent, if you are living in the Shetland Isles it doesn’t matter. We can genuinely draw from all elements of society and actually be an organisation that is genuinely searching for the best people, because we are not excluding anyone” (HR Director, BT, Case study A).

“If you had a much more flexible model you certainly open it up, you could recruit from anywhere within the country. You could recruit from anywhere in the world, and actually

what you are doing is looking for the best talent, as opposed to putting an artificial restriction on location around it” (HR Director, Case study C).

These examples have shown how flexibility in working practices can deepen the labour market by opening it up spatially and for those with disability. This form of flexibility can also support recruitment and retention of people in different stages of their career, where perhaps working full time in the office is not something they are able to or wish to do. Nevertheless, these people still have skills and knowledge which is valuable to the organisation.

“I think as well you get people who maybe are at different stages within their careers, but could still make a contribution, and you are able to recruit and retain them. So I firmly believe that if you do it well and do it properly, it will make [the organisation] much more attractive and we can get the best people, and they get something from it as well” (HR Director, Case study C).

The ability to recruit the best person for the job by improving access does not need to be only through telecommunications. Improved access through transport provision can also offer this benefit.

“There were times that you could find somebody that you really wanted to employ, but they couldn’t physically meet the shift times if they didn’t have a car. That was quite frustrating because it is incredibly difficult to recruit in this area. There is virtually no unemployment. To have somebody sitting in front of you that was really good, had all the criteria, but couldn’t actually be there for 4 am was really hard. So to work with somebody, though you may not get the route that week, but to have somebody that was aware you had recruitment difficulties and if you could get enough of a catchment area to develop a route, then that did start to improve” (Retail Manager, BAA Stansted, Case study E).

Another airport that was interviewed as part of the telephone survey, gave an example of where they had worked with the local authority and bus operator to develop routes into what would be considered a socially excluded area. The airport was able to ease the recruitment shortages and the bus operator was able to earn additional income. By improving access either through telecommunications or improved transport provision can benefit organisations by deepening the labour market, and at the same time improve problems of social exclusion. However, there is one potential problem with this that needs to be considered. As people move into employment and increase their income, they could be in the position, if they wish, to buy a car.

Employer of choice

Travel plans and flexible working are seen as a way to help an organisation to become an employer of choice. Improving access and reducing the cost of travel through travel cards can be used as a way to become an employer of choice, particularly in areas of high employment

“In order to ensure the organisation can operate these jobs must be filled, so it has become important to be an ‘employer of choice’. The travel plan initiatives help to do this by improving access and reducing the costs of travel for staff” (Travel Planner, BAA Stansted, Case study E).

There is a scheme in America which links travel planning to the issue of ‘employer of choice’, called ‘*Best Workplaces for Commuters*’ (National Centre for Transport Research, 2009). The scheme offers a database of organisations which offer support for staff in the commute to work. Potential employees can access the information to see what each organisation offers before joining the company. The types of benefits that are offered for commuters vary depending on the needs of the employers and their geographical location, but they all offer ‘one primary benefit, such as employer-paid tax-free transit or vanpool passes, teleworking, or parking cash-out (enabling workers to trade free parking for its cash equivalent)’ (National Centre for Transport

Research, 2009). They also offer additional benefits such as shuttle buses, car sharing and compressed working hours.

This section illustrates the wide range of benefits from travel planning particularly to issues important to HR. The problem is that the HR profession is not fully realising these benefits. The benefits from smarter working practices are well documented and on the whole accepted. However, when travel plans are discussed there is less awareness. It can be seen that the comments attributed to HR professionals relate to working practices, and comments relating more directly to travel plans were harder to obtain from HR. It was a problem during the research to gain access to HR professionals as they did not consider the travel plan was part of their remit, and did not identify the benefits to their departments. This is potentially an issue of discussing travel with HR professionals, as it is not seen as their responsibility, whereas working practices are. In order to engage HR in travel planning it needs to be sold to them on a basis that is relevant to them, for example access through deepening the labour market, retention and reduced absenteeism. The problem is that at the moment the evidence to support these cases is not robust enough.

10.7 Corporate social responsibility (CSR)

Chapter 6 showed that CSR was the strongest motivation for travel planning, both now and in the future. With this as such a strong motivation it was an intention of this study to interview people within CSR. It was hard to gain access to these people, and when access was gained, though they felt the travel plan was valuable, they did not see travel planning as an issue of high importance within CSR. In case study C this was partly as a result of the way the CSR department was run, in

that it was very small and the main responsibility was to gather data to produce the CSR report. However, there were some useful discussions on this topic. The main issues covered are illustrated in Figure 10-5.

The BAA CSR report is unusual as it has a large section on surface access and how it links to sustainable growth for the airport (BAA Ltd, 2007). In this case, access is of great importance to the airport and there are concerns about the high level of carbon emissions from surface access. Other reports are more typical and tend to only refer to travel planning in one or two lines or restrict themselves to talking about business travel, for example the Eon CSR report. However, Astra Zeneca, although not a case study for this research is more interesting, as it gives further detail, outlining their work across the world with car sharing and Green Commuter Plans. They also mention that Astra Zeneca is listed in the *Best Workplaces for Commuters'* scheme (Astra Zeneca, 2007).

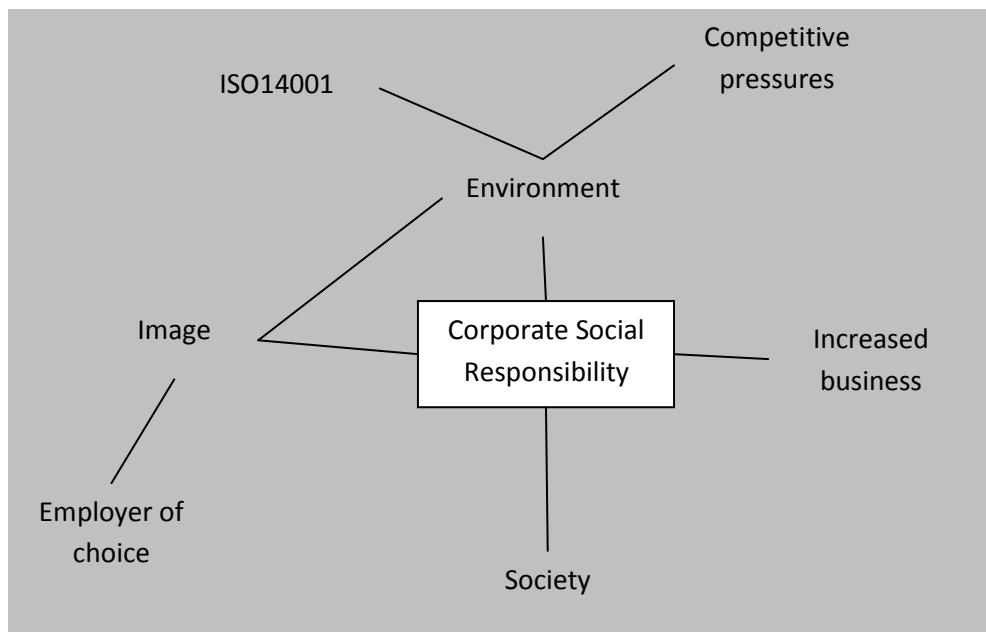


Figure 10-5: Issues raised for the topic of Corporate Social Responsibility

However, when talking to people within the wider organisation in the case studies, they did see some wider benefits of the travel plan linking into CSR, albeit guardedly.

“I guess there is a benefit if we are taking our corporate responsibility (CR) seriously around the whole green issue. And the business benefit of that is clearly that people are much more aware of organisations and how much they truly live their CR. You are seen as a good corporate citizens and organisations. I think there is a broad business benefit for that, but in the whole scheme of things it is quite a small, the travel policy is quite small compared to some of the other CR efforts that you do. But I guess it plays a part of good CR for the organisation” (HR Director, Case study C).

The two main issues that emerged from the interviews in relation to CSR was how a travel plan was good for the reputation of an organisation, and so helped in attracting and recruiting staff. The other was the support it gave to improving the environmental reputation of an organisation.

Image and reputation

The following example illustrates how a travel plan supported recruitment by demonstrating how an organisation cared for their staff.

“Again from and HR the whole wellbeing element is important to us, because it is important that we care about the wellbeing of our individuals, and again from an attraction point of view that is all part of our why people would join [the organisation]. So I can see some benefits, given that more and more of things like lifestyle and wellbeing, and the whole kind of green issue and CR” (HR Director, Case study C).

The existence of a travel plan as part of a wider image for a company was seen as a way to become an employer of choice, so aiding recruitment.

“Definitely being seen to be an employer of choice. I think people who join [the organisation], we want them to have a good feel about our company, where we fit in terms of... where the company fits globally in terms of our mission, which is a mission to try and make people’s lives better. They want to make sure the company fits in locally so the local community, so that we are aware of where we stand in terms of local community and obviously we are able to...we should have an agenda, they would expect us to have an agenda and involve them, not just be the big arrogant corporate sitting in their space. And then they would expect to drill down from the global to the local and then the internal community. They would expect the company they are about to join. It is a nice building but in terms of our...when they arrive there is a real feel good factor in terms of what we do supporting the environment, supporting transport and all these other things” (Environment Health and Safety Manager, Case study C).

Environment

This reputation extends to the environmental credentials of the organisation, which were also seen as an aid to recruitment.

“I mean the travel plan; companies with travel plans are seen to be part of CSR, which is a good thing to have. That wins business, it brings employees. More and more people coming into [the organisation] have an expectation of [it] and what they expect to find. They expect to find that we are environmentally responsible, in fact taking a lead and to possibly expect to see as part of that that we have a travel plan. It will help them as individuals, but also in terms of the profile that that creates for the company that they are about to join” (Environment Health and Safety Manager, Case study C).

Trying to improve environmental credentials was also seen as a way to help attract passengers to the airport, so offering a business benefit of improving passenger numbers and turnover.

“To be able to attract passengers to the airport, [we] have to be able to demonstrate sound environmental management; otherwise passengers may choose to go to other airports. Trying to position the airport to manage environmental risks, but also to grow the airport going forward to secure passengers coming to the airport” (Environment Manager, BAA Stansted, Case study E).

Improving environmental credentials was seen as particularly important to remain competitive with other airports.

“Manchester airport developed a carbon footprint last year. This sent BAA into a mass of work around producing a carbon footprint. This is what I mean by external pressures, where competitors are getting a leg up in a race on environmental work” (Environment Manager, BAA Stansted, Case study E).

However, other interviewees within BAA felt that the environment was a developing driver, and not yet a main driver. It was identified that although the environmental concerns were growing and the organisations commitment to react to this was important, until it could be linked into a commercial benefit it would be a supporting motivation.

Linking the travel plan into a CSR agenda, that portrays the organisation as more caring, ethically and environmentally aware may seem obvious in terms of organisational links, but these types of motivations only apply to a limited number of organisations. In fact the feasibility of linking a travel plan into CSR will depend on the type of organisation and their particular agenda. For example, a pharmaceutical organisation may see the organisation’s CSR objective to be one of supplying life saving drugs; a telecommunications company may be more concerned about the siting of mobile phone masts; whereas an energy supplier may be able to link the travel plan more obviously into carbon reductions.

Within CSR reports, travel plans often appear to be a way to improve organisations environmental credentials and as such offer little quantifiable benefit. This is partly due to the difficulties in monitoring the carbon emissions from the commute to work. An area that will hopefully be addressed through such projects as the 'Yeti' carbon monitoring scheme for business and commuter travel (Department for Transport, 2008b). But at present carbon emissions from the commute to work are rarely seen as an organisations responsibility, so there is a danger that if too much emphasis is put on the environment as a motivation, other key organisational goals such as accessibility will become subsidiary.

However, the survey suggests a strong interest in the area of CSR and environmental issues, and other evidence would suggest the area has future potential. Research undertaken by UCAS and PricewaterhouseCoopers indicates the possibility that this area may need to become more important to organisations to meet the demands of the future workforce. UCAS surveyed 54,240 applicants to universities and colleges aged below 21 about their attitudes towards the environment and CSR. Within this survey, 49% of women and 43% of men considered environmental concerns were important when deciding which organisation to work for (Goodman, 2007). The PricewaterhouseCoopers survey of new graduates found that 71.2% would deliberately seek to work for employers whose corporate responsibility behaviour reflected their own values (Pepper et al., 2007). Interestingly, the UCAS survey also found that less than 30% of respondents felt that owning a car would make them happy, 62% had walked or cycled instead of travelling by car for environmental reasons, and that a further 15% considered they would like to cycle or walk in the future (Pepper et al., 2007).

These results could indicate an important emerging role for travel planning in CSR and as a way to attract staff to an organisation, thus placing travel

plans at a more strategic level. But as yet, even environmental managers see the environment as only one of a range of drivers for a travel plan.

10.8 Access

A topic that emerges from the interviews is the importance of access, although it was not mentioned directly, but as an underlying point. Figure 10-6 illustrates the issues that could be considered directly relating to access, but when Figure 10-7, showing all the topics and issues for the attribute *relative advantage*, is examined it can be seen that access has links to all the topics. This perhaps goes some way to explain why access was raised as an underlying theme.

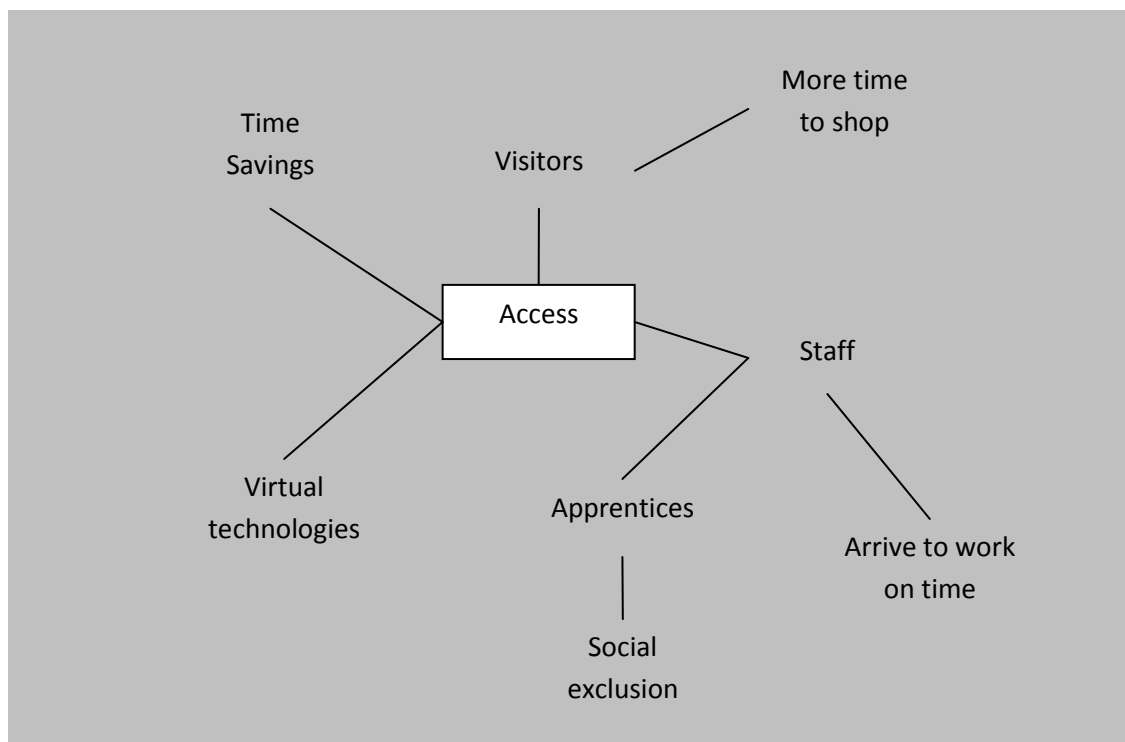


Figure 10-6: Issues raised for the topic of access

Access is important to business for a number of reasons. One interviewee described how he understood the travel plan improved access and benefitted the organisation at the highest level.

“At the highest level it is getting people into work on time so that the business can perform” (Facilities Manager, Case study D).

The interviewee then went onto describe the problem they have with access due to the limited car parking capacity.

“But equally we have a big car parking problem here, that we just cannot get the people that the business relies on into work, so we have got to provide a whole range of other options to get into work, because they cannot park, because we do not have the amount of space” (Facilities Manager, Case study D).

Access is an important issue for those who are without cars. This may be because they are too young to be able to drive, do not own a car or unable to drive as a result of a disability – the type of people who could be considered as socially excluded. An example of how improving access was seen as a commercial imperative was given by Eon. The access problem was how to get apprentices of sixteen and seventeen who do not own cars to the power plants. These apprentices are being trained to run the power plants in the future and replace the existing aging workforce. Eon runs a free bus to the power stations for the apprentices. This is essential due to the remote location of the power stations; as a result there is no public transport and no other way to get the apprentices there. Eon sees this as an investment for the future to keep the power stations running.

Stansted has seen more immediate commercial benefits from improving access by running bus services for staff.

“Not everyone can or wants to drive. So then this kind of led to problems of the units opening late [in the morning], which does not look good when the passengers come through. They’ve got all these lovely shops that they can’t get to. It is not a great

experience if you have left it to the last minute to buy your sunscreen and the shop isn't open. That then affects all their sales and income" (Retail Manager, BAA Stansted, Case study E).

Improving the access options is also about choice. It gives staff and passengers the choice about how they travel, but also when they travel, or whether they need to travel at all.

"Well it might be that I can adjust my plans; because I am going in I can actually travel and go in a different way that day. So I think it is actually trying to tie in the movements of employees. We probably need to change the amount of movements, but we don't just have the expectation that everyone must get to [the office] by 9am and everyone must leave at 5pm. I think for the travel plan to be successful it needs that flexibility, and I think the way to get that flexibility is actually to give the employees the chance to manage that" (IT Director, Case Study C).

Without offering different modes of access the choice for staff is limited, especially when parking space is scarce. Providing a choice of access can help staff morale by reducing the length of the working day.

"So it's me that chooses to go in at 7am rather than the company telling me to do that because otherwise you can't get a parking space....I think where the travel plan comes in it is actually about giving...trying to give the employees choice and utilising some scarce resources..." (HR Director, Case study C).

Considering access rather than just transport widens the concept of travel planning more broadly to include working practices, the ability to access a wider labour pool and issues of motivation and work-life balance. These are

all issues that link into organisational goals, which will be discussed more fully in the next chapter covering the compatibility attribute.

10.9 Future development

The final relative advantage to be explored is that of future development. From the results of the telephone survey in Chapter 6 the implementation of a travel plan in response to a planning consent was seen as the main original motivation. The emphasis of this motivation has changed slightly in that organisations which are expanding and wish to do further building, see the travel plan as a way to support the expansion and ease the planning process.

“But one of the additional benefits is that if the organisation wishes to submit a planning application, the existence of a travel plan makes the process easier, especially if they can prove that it is meeting its objectives and performing well” (Environment Manager, BAA Stansted, Case study E).

The other implication of a functioning travel plan was that it helped with the need to use land more efficiently so that valuable space which at present was used for car parking could be used for future development. This was an issue raised at both Stansted and UEA. The other case studies were not at that time looking to develop the sites, their concern was to manage the demand for the existing capacity.

10.10 Conclusions

What becomes very clear when presenting the results of the data for the attribute relative advantage and illustrated in Figure 10-7, are the wealth of advantages offered for smarter working practices, and how few are offered for a travel plan. The benefits for smarter working have been repeatedly researched and identified giving a robust case in support of their introduction. However, the case for travel planning is less robust. Even where one travel planner

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had identified cost savings as a result of removing rented overflow car parking, there was an unwillingness to put this forward as a business case. Cost savings alone were not seen to be enough of a business case to support a travel plan.

The problem with identifying the benefits of a travel plan is that few can solely be attributed to the travel plan. This is partly due to a travel plan being linked with a wide variety of elements such as flexible working practices, virtual technologies, business travel as well as the more traditional travel planning tools of car sharing, public transport, walking and cycling. Part of the problem could be that what the business case for a travel plan should be is still not clearly defined, as much of the data already exists, but in other forms. If what the business case should be is clearly defined, it should make the process of gathering robust data more straightforward.

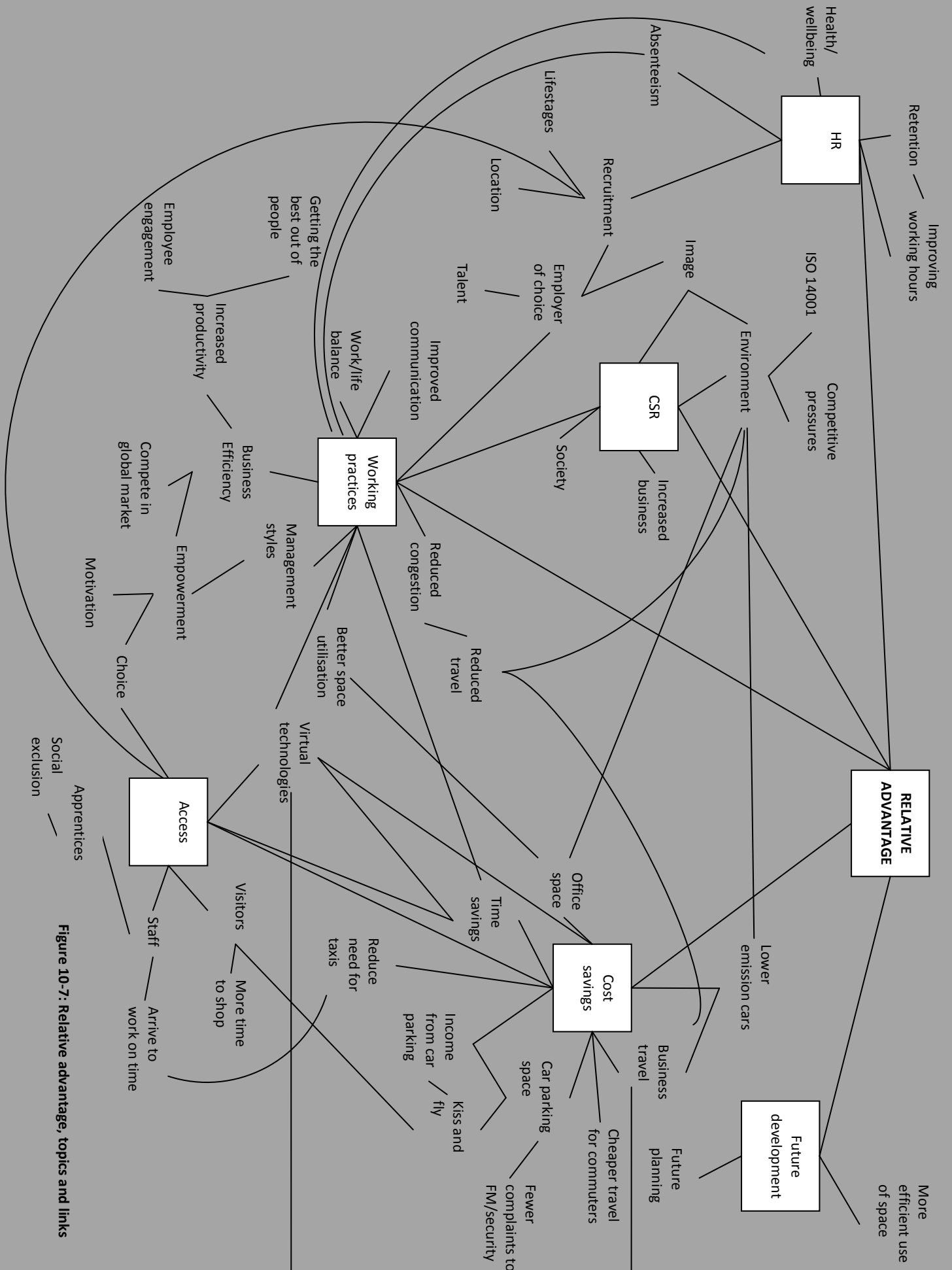


Figure 10-7: Relative advantage, topics and links

Chapter Eleven

11 Compatibility

11.1 Introduction

This chapter will now move on to explore the issues surrounding the Rogers' attribute *compatibility*. For a process innovation to be adopted within an organisation it needs to be compatible with the goals and culture of the organisation. There are a range of topics that emerged from the interviews, which are illustrated in Figure 11-1.

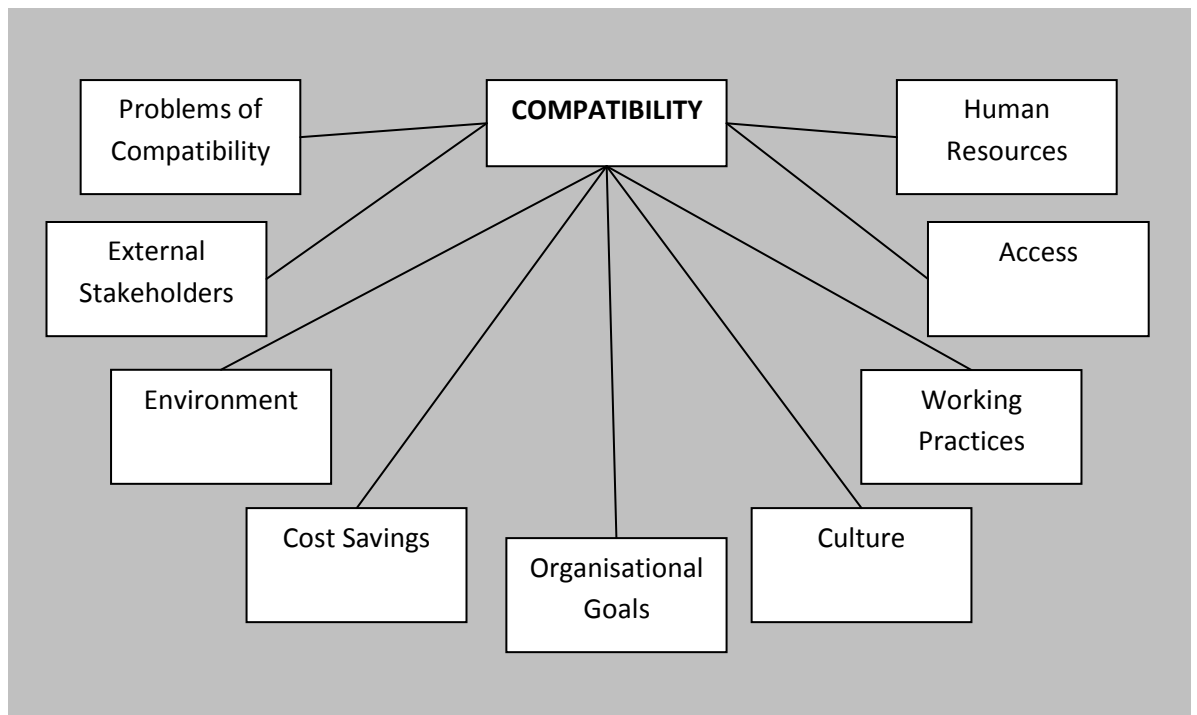


Figure 11-1: Main topics for attribute compatibility

The two most important topics were organisational goals and culture. These were the topics given greatest emphasis by the interviewees who raised them. The other main topics to emerge were compatibility with working practices, environmental concerns, and the expectations of external stakeholders. Other topics raised during the interviews and classified under the attribute

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compatibility have already been covered in Chapter 10 for the attribute *relative advantage*, for example Human Resources, access and cost savings. These topics are also closely linked to other topics in this chapter and are therefore not discussed separately here.

The chapter begins by exploring compatibility with organisational goals before moving on to investigate the culture of the organisation and the impacts this has on the successful embedding of a travel plan.

11.2 Organisational Goals

For a process innovation such as a travel plan or smarter working practices to be adopted it is necessary for it to be compatible with organisational goals. The organisational goals that were raised during the interviews covered five major issues.

- Business wide strategies
- Environment
- Cost savings and efficiency
- Growth and re-location
- Global markets

The links to these issues are illustrated in Figure 11-2. Organisational goals is the central topic, with links to the other topics of environment and cost savings, which both have their own associated themes. How all these topics link together for the attribute *compatibility* is illustrated at the end of the chapter in Figure 11.8, but for simplicity the diagram is divided into the individual topics and the diagram built up through the chapter in the same approach used in Chapter 10.

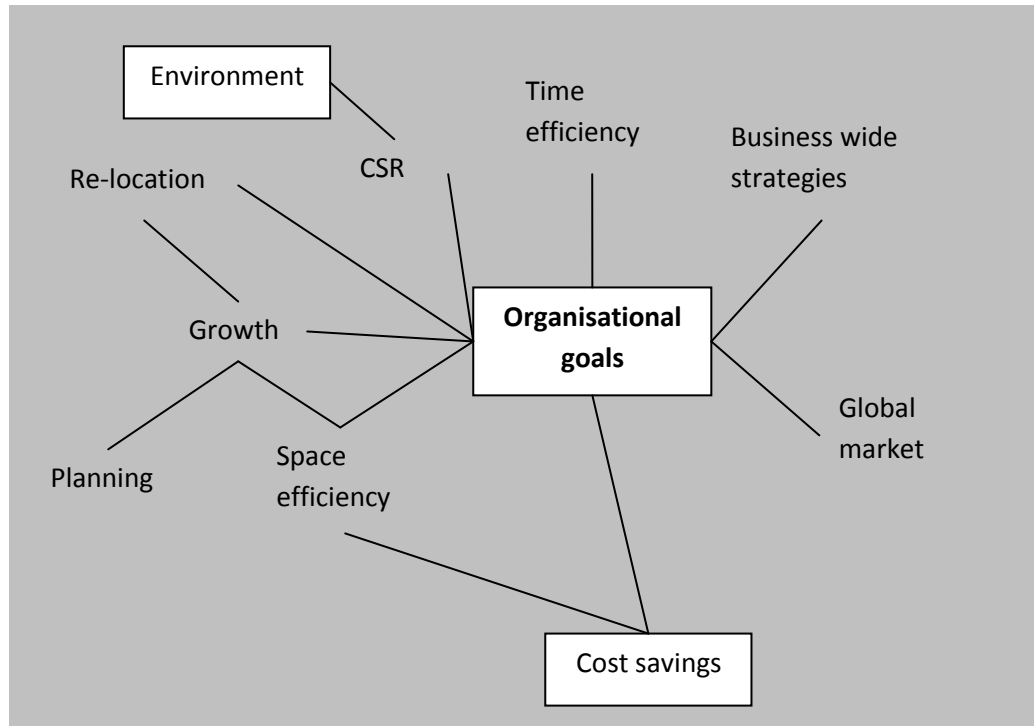


Figure 11-2: Issues raised for the topic of organisational goals

Business Wide Strategies

The first area to be explored is how travel plans are linking into business wide strategies and the goals and strategies of other departments. Linking into wider strategies should help to embed a travel plan and raise the profile through the links to other areas, and therefore a greater chance that it will be sustained and become part of the culture of the organisation. This is likely to be particularly true when the organisational strategy is supported by the top management.

Eon, case study B, has been able to link the travel plan into the company wide strategy of ‘Changing Energy’.

“Therefore, they are buying into [the travel plan] more and with Eons principle on ‘Changing Energy’, which was how to reduce non operational carbon by 10% for the next five years. When we review it again, and each business unit is going away and thinking

about how they can do that and travel obviously slots into that” (Travel Planner, Eon, Case study B).

This is an important strategy to the company and is driven by the Chief Executive, which ensures buy-in across the organisation.

“I think the reason that people get involved with it is because people like Paul Golby at the top saying changing how we travel and reducing our carbon footprint is important and therefore, it is going to become a core value of the business. And then we have underneath that we have a certain number of people who warm to that, who then go out and set their teams and their departments business objectives to reduce travel and change how they travel to work, maybe once a week and buy in. And then equally so they find it quite useful when someone like me comes and knocks on their door and says I can help you do this, and by the way I have a bit of budget and a bit of money to spend on it” (Travel Planner, Eon, Case study B).

There was a similar situation at UEA, case study F, where it is the aim of the new Vice Chancellor to make the university an ‘exemplar low carbon’ university. The travel plan was described as a way to support this goal. It was also felt that there was a potential to link the travel plan more widely to support the goals of other departments within the university.

“There is the potential to link the whole concept of sustainable travel into other departments at UEA. There are the new medical school, the Institute for Food Research and the hospital, all of which could be linked into the idea of healthier lifestyles and healthier travel options” (Pro-Vice Chancellor, UEA, Case study F).

These examples illustrate that travel plans can be used to support wider organisational goals, and those of individual departments to develop a strong coherent message.

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The environment was stated in the results of the survey in Chapter 6 as the main motivation for travel plans now and in the future, and the above examples would support this. However, the environmental manager at Stansted, case study E, suggests that the environment cannot be a motivation on its own and need to be balanced with commercial motivations.

“[I] see that environment will become an increasingly important aspect of decisions made for surface access work. [The access strategy manager’s] challenge is to meet the environmental challenges without messing up the commercial business challenges and the travel plan” (Environment Manager, BAA Stansted, Case study E).

However, within the airport there is an opportunity to pull the two goals of the environment and sustainable travel together to support the policy of reducing the level of ‘kiss and fly’.

“One of the biggest challenges [the carbon footprinting] has thrown up was the identification of ‘kiss and fly’. The implication is that emissions are doubled. The priority of how to influence this ‘kiss and fly’ is to get people to switch to alternative modes, eg car parking, coach and train” (Environment Manager, BAA Stansted, Case study E).

Even so, both the Environment Manager at Stansted and the Transport Strategy Manager for BAA acknowledged an ulterior motive existed, in that more passengers parking would increase the revenue stream for the airport, certainly a core business strategy. Interestingly, Luton Airport in April 2009 planned to implement a £1 drop off fee charge, which they claimed was to improve facilities when passengers are dropped off, but also to remind passengers of the ten minute parking limit (BBC News Channel, 2009b). Subsequently Luton Airport has postponed the introduction of the drop off fee until a full access plan has been produced (BBC News Channel, 2009a). Linking the travel plan to environmental and revenue raising initiatives such as reducing ‘kiss and fly’ can improve the compatibility with the wider organisation.

Another example given of the compatibility of the travel plan with the wider organisation was to a link to the safety message of the organisation, by supporting health and safety promotions.

“If when I have got to get a message across I can link it to safety at home, cycle safety, car safety, all of these things help me when it comes to communication messages. So I use things in a travel plan as levers to help me get other messages across quite often. Or if we are having a general health and safety promotional type thing that might take place in the street, then we would make sure that cycling [is included], because it is [an] environmentalist down there and is it is an opportunity to promote cycle safety down there and also the health benefits of cycling, so it is very very useful” (Environment Health and Safety Manager, Case study C).

The travel plan needs to be compatible with an organisation’s wider goals, and can be a useful tool in supporting these goals, to deliver a coherent message.

Growth and re-location

An important role for a travel plan is as a means to support the goal of business expansion or office re-location.

Stansted Airport, case study E, is expected to expand in the future through the development of a second terminal. The travel plan is compatible with this goal and so gains senior management support.

“At the moment there is good support for the travel plan from management, as they can see it helping with the expansion plans, both with regard to obtaining planning permission and with regard to improving access provision. If the G2 planning consent was to fail there may be apathy within management as the need would diminish. If this was to happen the

travel plan would need to be marketed more heavily within the organisation” (Travel Planner, BAA Stansted, Case study E).

The expansion will increase the number of passengers, which means more staff will also need to be employed. The travel plan can help to improve access so it is possible for these increased numbers of people to reach the airport.

“The main driver for the future is the need to employ and accommodate more staff on the site. The plan is to have another 13,000 staff on the site as well as the additional passengers needing to get to the airport” (Travel Planner, BAA Stansted, Case study E).

Expansion may require moving to bigger premises, possibly re-locating to out of town sites, which leads to different challenges for a travel plan in supporting this move. This type of move again is a strategic decision and out of necessity involves a range of departments within the organisation.

“We have a free bus at lunchtime, because we are an out of town area and I understand that we were at one point in the town centre and this building was a number of different buildings and when we moved out here over ten years ago, the trade unions represented the employees, who all said they felt it was unreasonable to move out of town, and who was going to take them to the Post Office that kind of thing. So at that time, through the HR department, the trade union was quite influential in getting the free buses and all those sorts of things” (Community and Environmental Affairs Manager, Case Study D).

Re-location affects terms and conditions, so what this instance shows is that at the time the travel plan was implemented, it was compatible with the goals of both the wider business to expand, but furthermore those of HR and the unions. Although as the travel plan has matured, these parties have become less involved.

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In the above two examples the travel plan was used as an access strategy to support the airport expansion and re-location. However, the support that a travel plan offers for expansion can be retrospective as well.

“This level of [car parking] capacity has remained more or less the same, but over that time the campus has increased four to five times in size. This means that the per capita car parking spaces are considerably below the recommended level” (Pro-Vice Chancellor, UEA, Case study F).

In this case the existing site is being made to work more efficiently which can help to reduce costs by mitigating the need to buy more land or build multi-storey car parks.

Global

The examples of expansion and growth involve organisational change at the local level, but organisations are also changing the way they work at the global level. Working environments are changing. Where in the past work colleagues would be sat at the desk next to you, with increasing globalisation this is no longer the case. Working practices and technology need to be compatible with the goals of an organisation to work in this global market.

“The whole nature of the business; we are global in the way that we work and our outlook. Most people in [the organisation] will be doing business and talking with people in other countries at different parts of the day. The idea that you go to work and only work with your team mates that sit alongside you and do everything face to face is long gone” (IT Director, Case Study C).

The workplace has exploded beyond the bounds of the physical office, which brings a new dimension to the concept of access. It is no longer sufficient to be able to consider access to work

in spatial terms; access needs to be considered virtually as well, giving people the ability to communicate between locations.

“We still work as a local company would. If you are truly global, then actually an awful lot of your work is not done with people you are sitting alongside in [the office]. You should be actually thinking and working with people on a much broader basis” (IT Director, Case Study C).

Access to the global market through the use of telecommunications and flexible working practices is also compatible with an organisations need to remain competitive at the global level.

“So when we were doing that in the mid-late 70s, the things that we could see were globalisation, new technology moving in an unprecedented rate, increase competition, particularly on a global level. That meant we had to look at our costs in a way we had not had to do previously and an increasingly demanding society. So the days of 9-5, shops closed on Sunday we could see that that was coming to an end” (HR Director, BT, Case study A).

These examples illustrate that there are some major strategic organisational goals that a travel plan could support. To be part of a global market means an organisation needs to consider more than physical transport as a means of access, but to include telecommunications as part of a wider access strategy. Being able to support these goals improves the compatibility with the wider organisation, and so increases the potential for a travel plan to become embedded as part of the day to day running of the organisation.

11.3 Culture

The previous section showed how a travel plan is compatible with the goals of an organisation. It is equally important that a process innovation, such as a travel plan, is compatible with the cultures within an organisation. Exactly what the culture of an organisation is can be hard to define, as it is the essence of the organisation; where it draws on a broad range of things such as the organisational values, working practices, management practices, even what the organisation produces. In *Research Methods for Business Students*, Smircich's objectivist point of view of the definition of an organisation's culture is described as "something that the organisation 'has'" (Smircich. L, 1983, page 109). However, a subjectivist views culture as "something that the organisation 'is' as a result of a process of continuing social enactment" (Saunders et al., 2007). In defining the culture of an organisation Saunders et al discuss that management theory leans towards the idea that the culture of an organisation is something that it 'has', that can be manipulated and changed to match a management ideal. However, they go onto discuss that a subjectivist viewpoint would consider this definition to be too simplistic. Organisational culture is described as being,

"...created and re-created through a complex array of phenomena which include social interactions and physical factors such as office layout to which individual attach certain meanings, rituals and myths" (Saunders et al., 2007, page 109).

Figure 11-3 below supports the subjectivist definition of a complex array of phenomena in relation to a travel plan. The compatibility of the travel plan with the organisation's culture is far from simplistic. It is dependent on a range of issues from strategic decisions about the location of the office, working practices to the values and demographic range of the employees and even something as fundamental as the image of transport.

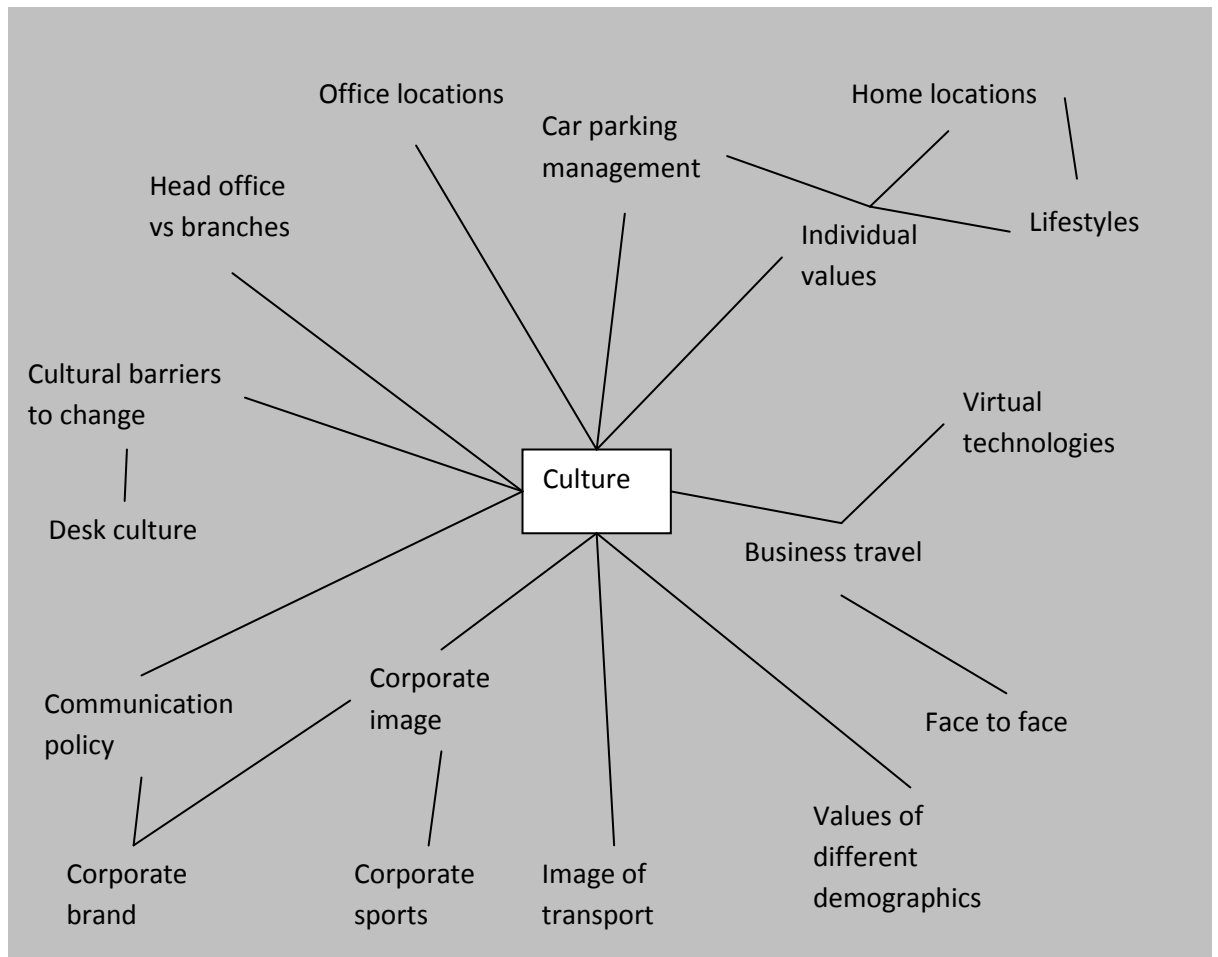


Figure 11-3: Issues raised for the topic of culture

Perhaps one of the main cultural barriers to the acceptance of travel planning within an organisation is the image of transport. Transport was seen by one of the interviewees to be a bit ‘trainpottery’, with few commercial links and so tended to be siloed. Even linking transport to an environmental agenda can have the same result.

“You will keep the anoraks with you, because they will do anything, because it is the right thing to do morally and fits with their environmental belief, but then you will lose the others if you don’t point out the other benefits” (Environment Health and Safety Manager, Case study C).

Demographic influences

However, one of the interviewees felt that the attitude towards sustainable travel varied depending on the age of the workforce, where younger employees believed that a sustainable culture within an organisation matched their own beliefs more closely.

“You have got those who have worked here for donkeys years, but you have got quite a few up to that forty bracket, and I think we might see even in those few years it is becoming more important to people. When you bring in fresh graduates that kind of stuff. [Sustainable travel] is important to quite a lot of younger people. I think the only downside will be is that we have lost the call centre, so the youngest of our staff have moved to another building” (Community and Environmental Affairs Manager, Case study D).

It was also suggested that a younger workforce had a different attitude to the ability to park or park for free.

“I said at that conference, that masterclass the expectations of the students was completely different. They didn’t expect to have parking so they weren’t surprised that it wasn’t going to be there for them. Or there was going to be a cost associated with it, so surely that’s what they are going to take into the workplace if we manage it right.” (Travel planner A, Case study C).

“There is another local company that we have fairly strong links with. Because they have a much younger workforce they find that the attitudes are far more similar to the student attitudes. They come in with completely different requirements; they come in with completely different views on being able to park” (Travel planner B, Case study C).

These comments may be capturing a shift in organisational culture that is supported by the UCAS (Goodman, 2007) and the PricewaterhouseCoopers (Pepper et al., 2007) reports discussed in

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Chapter 10, Section 10.7. These presented the results of surveys of university applicants and new graduates. These reports demonstrated a concern from the younger generation about the environment and of the reputation of an organisation they may work for. The younger staff are also looking for greater flexibility through the use of technology. The ability to have this flexibility through technology is becoming a requirement for younger workforces, as they see it as a cultural norm.

“People coming in, in their twenties, are technology literate, they are tech savvy, they are used to talking to people all over the world. They have mates on the internet, instant messaging, webcams the rest of it that they use. They are a bit puzzled in the office you, can’t have that same sort of flexibility, so I think there will be a general change that will come as more and more tech savvy people will come into the workplace with some very, very different expectations and ideas” (IT Director, Case Study C).

As more companies offer smarter, more flexible working practices, it is becoming an expectation that it will be available.

“Most young people and most people in work certainly in this business. We have 80,000 flexible workers, so everybody either knows someone who works flexibly or is a flexible worker themselves and therefore you have had the experience yourselves. You know how to do it and you know what is good and what is bad” (HR Director, BT, Case study A).

Because of this people are expecting to be given the ability to have more control over the way they work.

“People are a bit more confident and a bit more up front about what they want. They put their position on the table and expect you to meet them as opposed to the kind of days when you were just pleased to get a job. You went in and someone said you’ll do a sixty

hour week and you would say thank you very much. I'll be here at 7 am, people are asking for some flexibility and expecting it" (HR Director, Case study C).

At the other end of the demographic range, more mature people are looking for more flexibility in the way they work to be compatible with their lifestyles. They are looking to reduce their hours so they can begin to enjoy their leisure time more.

"I think gone are the days when people think I will work really hard until I am sixty and then I just stop working. Partly because pension age is creeping up and there is not going to be a time when I stop working or by the time I stop working what will my health condition be given the age of retirement now. So I think people are making more demands to say, I can't say I am going to wait until I retire to do these things, I want to do them now, because I am not going to retire until I am really old, and I don't know what condition I'll be in to be able to do it then. So I think there are more demands from that point of view, people are more aware of that they are going to be working probably until they are much older. Now is the time to do the things they want to do. There is no I'll wait until I retire" (HR Director, Case study C).

A theme that is emerging is the need for organisations to change their working culture to adapt to the aspirations of the maturing staff.

"We are certainly getting more people who are prepared to work for less for more flexibility. Which you see with more people requesting flexible working through reduced days, and people are having more conversations about saying when I get to this age, I am in a situation where I don't have to work five days per week and I plan not to. I plan to just go for three days per week. You know we have many more of those conversations now than we used to have. People are planning at what point they can afford to step back and do less days and less hours" (HR Director, Case study C).

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This change in working practices is compatible with the goals of an organisation to retain and attract valuable and experienced members of staff. It also helps the organisation to be an 'employer of choice' for the younger workforce, by offering a working culture that matches their lifestyle. These examples show the complex inter-relationship between the culture of the organisation and the values and expectations of individuals, which begin to link into Katz and Kahns motivational patterns of internalising patterns of self determination and the company's values and goals discussed in Chapter 4, Section 4.4.2.

Individual values

The above examples demonstrate that flexibility in working practices is becoming more compatible with the individual values of staff by matching their desire to have more control over the working day. These individual values extend to other lifestyle elements, such as where they choose to live.

"The people who commute from further afield, they are not interested in [the travel plan] and they have made a life choice to live outside of our town or a medium to long distance way. They are not interested in [the travel plan], and they wouldn't be because they just rely on a car so much" (Facilities Manager, Case study D).

Travel plans may struggle to be embedded in an organisation where many of the staff live in rural locations. Staff in better paid more professional roles are more likely to live in rural locations and possibly have more flexible working patterns, which are less compatible with the traditional travel plan elements of cars sharing, walking, cycling or public transport. This is an issue that will be returned to when working practices are discussed in Section 11.4.

A view that emerged from the interviews was that the different personal values meant that a variety of motivations drove individuals to change their travel behaviour

“So one of the things we are looking at for personal travel planning for example, is the very issue of what is it that makes people make the choices that they make. And it’s all different motivators, it could be money, it could be time, it could be the green agenda, it could be a one car family, health, there is a whole long list” (Travel planner A, Case study C).

But as with business, a main motivator for individuals is also cost savings.

“Not all staff take on board environmental motivations, it may be money, it may be environmental. Some will be for both, but money will be a main motivator” (Environment Manager, BAA Stansted, Case study E).

For a travel plan to be embedded there is a need for an organisation to understand the personal values of their staff. Where an individual chooses to work for a company because their personal values match those of the company, it is possible this will become an iterative process, where the values of one will influence the values of the other, as in the subjective definition of organisational culture suggests.

Car parking management

Car parking management is an example of this, where the expectation of staff to be able to park drives the business to supply parking.

“I think it has to still be fairly grounded in managing the car parking for now. I think it will be a while yet before it really becomes something else. Merely because we have got so many staff members who expect to be able to park, because historically they have been able to park, wherever they have worked. It is just an expectation” (Travel planner B, Case study C).

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Car parking management can be a difficult issue because there is a culture, especially in out of town sites, that ample free parking will be available. A change in car parking policy, perhaps to introduce car parking charges is not always accepted well by staff.

“One of the main initiatives [the consultants] suggested was the introduction of car parking charges. This prompted a reaction from staff who felt that it was unfair to impose car parking charges without the introduction of a car share scheme” (Travel Planner, UEA, Case study F).

This poor compatibility with the cultural norms of the staff can mean the travel plan becomes siloed, which makes it difficult to embed into the wider organisation.

“The introduction of parking charges was a ‘bloody’ experience. Nasty letters were sent and threatening behaviour occurred, as staff felt their rights were being threatened. This left the administrative staff feeling very uneasy about the experience. Nevertheless, they persevered with the travel plan, but it did leave a ‘bunker’ atmosphere, which made it difficult to talk about the travel plan in a coherent and constructive way(Pro-Vice Chancellor, UEA, Case study F).

The above examples illustrate the problems of introducing car parking charges or rationing, where staff pressure influences the decisions of senior management. One argument to justify the introduction of charges is the issue of equity, so those who travel sustainably do not feel they are being penalised. For those organisations with a number of sites or branches in towns, equity across the organisation is important too.

“But going back to how we are split across the organisation we are proud of the fact that we are very fair across the organisation, but those who work in a branch have to pay to park in a public car park. That would be my argument for charging people. So if you

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charge people you either alienate them or you get them out of their cars” (Community and Environmental Affairs Manager, Case study D).

However, a positive aspect of car parking charges is that organisations may be willing to ring fence the revenue from car parking to support the travel plan. This helps to ensure the travel plan is sustained.

“There is a transport parking levy, which is ring fenced from the parking charges. There is 31p from the public parking [fee] and £10 from the staff car parking [permit]. This then goes into the transport fund from which the travel plan budget is created” (Travel Planner, BAA Stansted, Case study E).

Communication

As the example of UEA showed, car parking charges, and the travel plan by association, can be culturally unacceptable to both management and staff. It is therefore important how a travel plan is communicated and the image that is portrayed to reduce the possibility of rejection.

This chapter will now move on to explore the methods of communication used to market a travel plan and the compatibility issues surrounding them.

From the case studies there seemed to be four main forms of communicating a travel plan to staff.

- Commuter centres
- Through the intranet
- Road shows
- Staff induction packs,

and across the business through staff forums or business unit meetings.

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Which method used is based on the communication culture of the organisation. Stansted, case study E, uses a commuter centre with a dedicated team. This centre was thought to be a major contributor to the success of the staff travel plan. But it was also felt that there was a good communication culture generally at Stansted through what was described as the 'jungle drums'. It was conceded that the actual process of communication was not that well understood, but it remained effective.

The commuter centre seems to work well within the culture at Stansted. However, this format was felt to be less compatible with the culture of other organisations.

"I don't think [a commuter centre] would suit the way [the organisation] works"

(Community and Environmental Affairs Manager, Case study D).

"I think the argument would be that there is a business need for every nook and cranny,

there is a desk in it, or there is something in it" (Community and Environmental Affairs

Manager, Case study D).

However, there were also concerns about how well the intranet alternative worked as a medium for delivering travel plan information.

"I think the way we work at the moment might be a barrier, because if you actively want

to go and find out about [the travel plan] and you don't know where to look, it can be

quite tricky to find out some information" (Community and Environmental Affairs

Manager, Case study D).

Identifying and finding information seems to be generally a difficulty with larger organisations, where the problem is too much information.

"One of the downsides of Eon, because of its size you get a lot of messages bombarded at

you about all sorts of stuff. Some that you care about some that you don't, some that you

completely miss. We have got electronic newspapers, actual newspapers, team briefs and sort of daily scrums in the retail areas where the call centres are, so daily updates, so it can be a case of information overload. People don't always see the right message that you want to show them, because you have a dozen to twenty messages that people are very passionate about that they want out there, but unfortunately not every single one gets the same air space" (Travel Planner, Eon, Case study B).

The solution here, as with Stansted, was seen to be the personal approach, but because a large number of sites are involved, road shows rather than commuter centres were seen as the best approach.

"I prefer the road show approach, where people can come and talk to you. You can run drop in clinics where people can talk to you about what their concerns are, what they want to do. It is more taking it to the people than waiting for them to come to you. We are still at the stage where you have to go to them; people aren't that keen to come to you to talk about it or to raise any issues they have got" (Travel Planner, Eon, Case study B).

Another technique that is emerging is to include information about the travel plan within the staff offer letter or induction pack. This is a good time to give this type of information, to try to develop a sustainable form of travel behaviour before new employees are set in their travel habits.

"[The organisation] automatically distributes induction packs to all new members of staff. We are working with the other employers to help develop their induction packs. Leaflets are already given to the employers on the site outlining the initiatives available" (Travel Planner, BAA Stansted, Case study E).

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This idea is further developed to include looking at the travel options as part of the induction process.

“You do get a travel paragraph in your offer letter. So you get your offer letter and a pack of various different things that [the organisation] can offer you as an employer, and in there it does say that we do do various different travel schemes. And once you get your log on number it is one of the things they ask you to do in sort of your induction week. Get your pass, have you considered car sharing, did you know..?” (Community and Environmental Affairs Manager, Case study D).

These examples show a key point is that the form of communication to staff has to match the culture and the context within the organisation to be effective. One way to do this is by linking into other messages. In the previous section, Section 11.2 the travel plan was linked into other initiatives such as the environment and health and safety. These examples suggest that the travel plan can be used as a way to support wider goals. However, if the travel plan is to become embedded within an organisation, perhaps there is a greater opportunity for other departments to take the lead in communicating the information.

“What we are trying to decide now with this communications plan is do I drive that as an individual, or again do I influence it and get HR to own the communication plan, and they are the ones responsible, because the resource they have got is much bigger than me as the advisor in the CR team” (Community and Environmental Affairs Manager, Case study D).

To engage these other areas of business, another method of communication is necessary.

Communication to the organisation rather than the staff appears to be done through one main route, the use of business unit meetings or forums. At Stansted they run transport forums as a way of communicating the work of the Access Strategy Team to stakeholders, including the

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businesses at the airport and the local community. A success of this strategy has been to get the recruitment team to take ownership of marketing and identifying barriers to recruitment from access as part of the Employment Forum (BAA Stansted, 2009).

Other organisations use site forums or business user group meetings.

“The only way of doing that is by what we call site accommodation forums, which look at the site, how many people are in it, what we are doing to fix it. We have had tagged 15-20 minutes on a weekly basis to talk about travel. And the people who attend that are key business stakeholders or then delegated authority” (Travel Planner, Eon, Case study B).

“We have this group called the business user group, and senior representation from each of the businesses that come in and we have an audience with them really, so we can raise [new travel plan initiatives], and we want an open debate about their concerns, their issues” (Travel planner A, Case study C).

What these examples of communication within the organisation show is that the travel plan is considered important enough to be given time at these meetings, which facilitates access to senior people, raising awareness of the travel plan and how it links into other areas.

The area of communication is perhaps best summed up by the following comment.

“We need to be smarter about how we generally communicate with all staff to have complementary messages which don’t compete with one another, for example customer service, health and safety, environment” (Travel Planner, BAA Stansted, Case study E).

Although this comment relates to staff the point raised is equally important to communication within the business, to ensure a coherent message is delivered that does not compete with other messages.

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Not only are local cultures and practices a barrier to sustainable travel, different cultures around the world can also be a barrier.

“We have only just got over in some departments that you don’t need to fly to Dusseldorf. But culturally from a German point of view they like everyone in the same room. And that’s taken a lot of fight from people here saying, actually we could do that by video conference. We do not need to fly. We do still have those cultural bounds, which is ironic in a way, or slightly odd, as we have big offices in Stockholm and the green agenda has always been strong in the Scandinavian countries” (Travel Planner, Eon, Case study B).

These examples highlight the problem of not having complementary messages, where travel and other issues are dealt with in a piecemeal way, because a consistent strategy has not been developed that can be applied across the whole organisation. This is particularly a problem if the travel plan is siloed within FM and only seen as a transport initiative, maintaining an image of being ‘trainpottery’, or is associated with a poorly accepted car parking management policy.

Corporate image

However, there are opportunities to link into wider messages that link into the corporate image through activities, such as corporate sports.

“[The organisation] has got really good corporate sports, so we need to tie up much more with the clubs and various different associations that we have got” (Community and Environmental Affairs Manager, Case study D).

Office locations

A big hurdle to delivering a complimentary message on sustainable transport is the strategic decision to locate offices in out of town sites. Out of town sites will inevitably increase the trips to work by car.

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“Their view is that there should be space for you to park, why do you have buildings in places where there are poor public transport links. You make it too difficult for me to do anything other than drive” (Travel Planner, Eon, Case study B).

This can cause problems of access logistics and overcrowding in the car parks, which is a particular problem with Case Study D.

“No I think when [the travel plan] started it was certainly a logistics thing. How do you get people to and from work? How are we going to appease them now we have moved out of town? And now it is the car parking capacity. But then we have started to realise that it is good for employee retention and good for the CSR agenda,[which] is good for your business and your brand” (Community and Environmental Affairs Manager, Case study D).

One solution to deal with both office and car parking overcrowding was to move staff to town centre sites, which has the additional benefit of delivering cost savings to the organisation.

“Is the cost of a city centre location in terms of rental actually better than having something off site with no transport links? So it is starting to become part of the property process, but we could always do with more” (Travel Planner, Eon, Case study B).

An interviewee in Case study D suggested that the actual cost for town centre sites may be lower than out of town sites, because at town centre sites there was no need to supply car parking, transport, shops or catering facilities. If a workplace parking levy is implemented this could further push the benefit in favour of town centre sites, particularly if recruitment and retention become harder as a result of the additional costs.

“Now when you are out of town, no-one will come and work for you unless it is free car parking, which is the problem if we put charging in. But how many staff would we lose,

and who would we be able to recruit. It's a tricky one to balance from a business point of view charging" (Travel Planner, Eon, Case study B).

The problem is that without a holistic approach that considers a range of issues including sustainability, cost and efficiency, the method can be fragmented and in some cases one goal may work against another.

"Definitely, we have just...the next block across the way was the call centre; we have shipped them out. I think because of the type of job it is, you tend to find quite a lot of younger people working in that role, and they tend to be people who use public transport more often, because they don't own a car. Now that they have gone, I have seen, because I use the bus, the population on the bus drop quite a lot. It was standing room only, and now you quite often get a seat. We have also seen quite a few of the cars go, so car share is a little more empty, but then some of the more illegal parkers have gone" (Community and Environmental Affairs Manager, Case study D).

From the organisations perspective of freeing office space and moving to a cheaper site, the town centre move has worked well. However, if the aim was to reduce pressure on the car park and maintain bus use, maybe a different business function would have been chosen, where staff were more likely to drive rather than use the bus.

In contrast BT have taken a much more holistic approach to office locations.

"What we have tried to do, when we are looking at reducing the number of buildings 12-15 years ago we had in London. What we did was to look at all the postcode locations of all our employees and our main customers. So we began to understand a bit about where people were commuting from and where they were travelling to in terms of what percentage were working in government, how many were going into Whitehall. We were

able to deploy our new building strategy to create hubs, so we could minimise the amount of travelling people were doing, but also had a logical spread, so that we had good access to other regions. So it has been part of our strategy for a long time, and what we are finding is that there are some great stats. I think we have saved eighteen hundred years of travel time” (HR Director, BT, Case study A).

This more systematic approach was based on a decision to reduce the property overheads, to work more efficiently with the added advantage of reducing travel time.

These examples show that business is beginning realise the problems of out of town sites.

Although they appear a cheap option, with more in depth analysis they are increasingly expensive, particularly due to the need to address access problems, and the additional cost of ancillary services to support the remote location.

The culture of an organisation is a complex area and has the potential to change and be re-created to match the current market needs or the lead of a new CEO. Culture plays an important part in the successful adoption of a travel plan within an organisation, both for the individual and for the organisation. If the culture of an organisation changes, a travel plan that was previously compatible may no longer be, for example if the organisation is sold and staff numbers are reduced. Conversely, a change in management may improve the compatibility, as is the case with UEA, where the new Vice Chancellor’s aim is to make the University an exemplar low carbon university. One of the main points to come from this area is the need to be able to link into the wider agenda of an organisation in a holistic way, and to develop messages that deliver a coherent story.

Personal values or the demographic of the staff and organisational values are important, and measures such as car parking management have to match these values. One of the main cultural areas is that of the methods of communication. A theme that emerged was that a face to face approach seemed more successful in communicating the travel plan, partly because it was an approach that stood out from the others, whereas information on the intranet could get lost amongst all the other messages available.

11.4 Working Practices

In the same way that culture can play an important part in the successful adoption of a travel plan, working practices or the needs of different staff groups can also play an important role. In the previous chapter in Section 10.4, the advantages to a business of adopting smarter more flexible working practices were discussed. This section will concentrate on the effects of different working practices on the compatibility of a travel plan with the organisation.

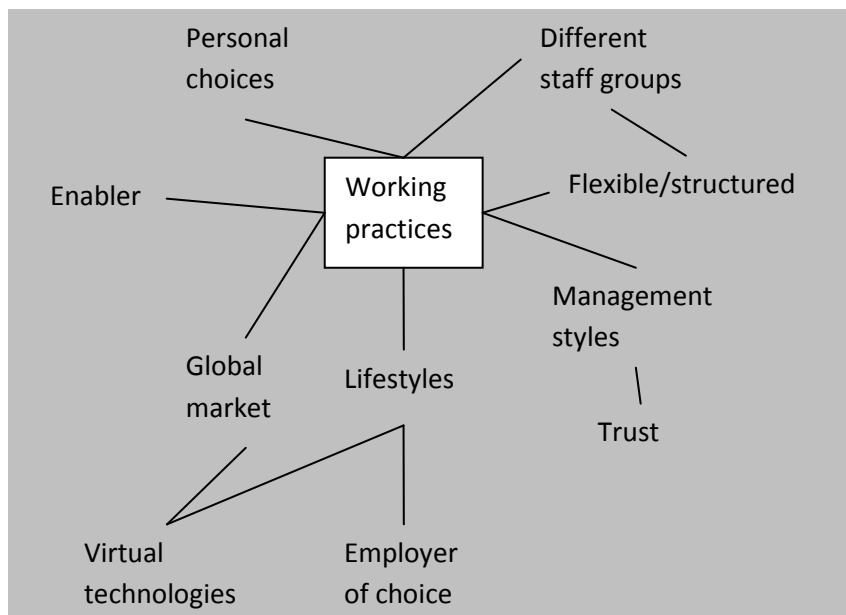


Figure 11-4: Issues raised for the topic of working practices

Figure 11-4, shows the inter-relationship between the different issues related to working practices. The main issue that was raised during the interviews in this area was that of the compatibility of a travel plan with the two extremes of working practices; flexible or structured, and the relation this has to different staff groups.

The previous section, Section 11.3 discussed the problems of access with out of town office locations or where staff choose to live in rural locations. The introduction of initiatives such as car sharing or public transport to out of town sites tends to work better where staff work regular hours, particularly those in more administrative roles. Those that work in more flexible ways, and so have less regular hours, are not necessarily in the office everyday or all day because they attend business meetings, or work from home at least part of the time, and therefore are less likely to take advantage of schemes such as car sharing. These people are likely to have more professional and higher paid roles, so they may also be those who choose to live in more rural locations.

At UEA, case study F, it was felt that the needs of the different staff groups made it quite hard to get buy in for the travel plan across the organisation and required adaptations of the travel plan to be compatible with their needs.

“Perhaps the only institutional barrier is that the different staff sectors at UEA, central services, academic departments and students all have different needs, so the schemes have to be adapted to fit their requirements” (Travel Planner, UEA, Case study F).

Eon, case study B, gave an interesting example of two sites on opposite sides of the road, each with very different working practices. On one site with structured working practices, sustainable travel was easier to implement, but over the road implementing car sharing etc was much harder.

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“That is where...the Newstead and Sherwood site is an example of it. Newstead is a little bit more structured as it is a marketing function 8-6ish. Over the road is primarily IS developer support functions and they tend to do 6-8 and anything in between. So we struggle more at that longer working hour site than we do over the road, and there is literally the width of this room between the two sites” (Travel Planner, Eon, Case study B).

The interviewee then explains some reasons behind why the different working patterns have an impact on the take-up of travel plan measures.

“We found when you go down to a site that has 2,000-3,000 people on it and they do 8-4s or 9-5s, there is better hit rate of finding a match [for car sharing] rather than going in when you want. Also there is the role of the call centre operative. I want to go home now. I’ve done my eight hours on the phone. I’m bored with it. Unless there is overtime on offer they tend to leave on the nose, primarily because they are desk sharing and another person is coming in, either on a later shift or in an hours time to take over that space. So they do tend to go. That we find works a lot better, because the best performing site we’ve got like 47% sustainable [travel] and the car share there is 25-26% [of it], simply because they know what shifts they are working, so they know that person they are sharing with has to go at that time as well as they do, they go” (Travel Planner, Eon, Case study B).

Boredom seems to play a major role as well as the patterns of desk utilisation. Overtime and financial aspects can also be important. People who work in call centres are not well paid and are less likely to put in additional hours unless overtime payments are available. In more professional roles there is likely to be more interest in the work and a greater willingness to remain late or start early.

“Whereas the other guys, the IS guys go, I am developing this piece, it is going to take another hour to do it, I don’t want to do it tomorrow that means if I get it finished, I can test it tomorrow and they tend to put in those more flexible hours. Same with the marketing guys, with the campaign stuff, they can get trapped in that ‘train of thought’ and keep going, whether that time working there is more productive or less productive. They certainly see getting in at the crack of dawn or working late at night as nothing unusual in their roles” (Travel Planner, Eon, Case study B).

These staff are better motivated to complete the piece of work, which although it may be good for the business it is not so good from a sustainable transport perspective. What is emerging is a conflict between the aim of sustainable transport and that of business productivity.

Another theme that emerged was that those staff who had more regular hours and office based working practices, were more likely to be supportive of the concept of a travel plan, because of the greater experience they had of car parking problems.

“Where you get people who are fundamentally office based they are very supportive, because they are on site they don’t go anywhere, they can see the problems day in day out, and they want to do something about it, so they support it quite well” (Travel Planner, Eon, Case study B).

In contrast those staff with more mobile working practices, do not experience the problems on the same day to day basis and are less supportive.

“Where we go into some of the more mobile type units, such as energy services type guys, who are sales, boiler maintenance repair, pretty much like the British Gas type model, they’re harder to convince. Because they turn round and say we only have a

hundred people in this building, why do they have to do anything, go pick on someone else” (Travel Planner, Eon, Case study B).

The other problem is a lack of awareness or understanding of the working patterns of staff, so there is a conflict between the transport options available and the needs of the users, often as a result of poor communication.

“Probably [the bus service manager’s] answer at the time would have been we need to fit the trading patterns to the transport. We need to get the shops to open when the passengers are here. Not really sure how much interaction there had been before that point. But it led to a big conversation and a big piece of work. It was helpful because we started those debates about changing [bus] services where they could” (Retail Manager, BAA Stansted, Case study E).

But as communication improves along with the understanding of the needs of the different groups of staff, commercial benefits can be delivered.

“Yes I think initially everyone was working in their own little departments, not realising that as a team setting trading hours, but at the same time not really thinking about too much how staff were going to get there. We as a business set these trading hours and the trading partners would have to physically worry about how they were going to be able to get staff there to meet them. But then we realised that units weren’t opening on time or were closing early. That is when you kind of had to start asking the question to what can we do to help them achieve that. It is all well sitting there in the office saying you are going to work those hours, but if the business partners are saying we would love to, but we can’t get anyone here. We have a responsibility in helping them to do that” (Retail Manager, BAA Stansted, Case study E).

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These examples illustrate the importance of working practices to the success or failure of a travel plan. Traditional travel plan techniques are not compatible with all working practices, and the travel options have to match the requirements of the business and not those of the transport operator or travel planner. Where work patterns are incompatible with the traditional travel plan alternatives, there is a need to find other ways of reducing travel. As discussed in Chapter 10, Section 10.4 more flexible or remote working practices are one approach. However, a change in working practices brings its own compatibility issues.

Implementing working practices where people work remotely develops a new culture of what the office means, where what you deliver is the important factor.

“And I guess what that has done is driven people to work differently, so more people work from home and people work more flexible hours because they don’t have their own desk to come in to. So we are driving that culture of not being present at your desk. It is not about where you are and how long you sit there for; it’s about what you deliver. But the result of taking away someone’s desk they don’t feel this sense of I need to be at my desk. Which again is this whole kind of cultural thing if you have a desk and have an office; you have this sense of, well it’s there so I ought to go in and use it, because it is there and people expect you to use it. So I think a by product of some of the travel issues has been to drive a different culture in terms of working in a way for that particular building” (HR Director, Case study C).

As well as taking the pressure off staff to be in the office if they don’t have a desk, it also takes the pressure off staff to travel.

“Now the way that we have done that is to have people who are home-based workers, to take the pressure off people to travel. So that for meetings in particular, everybody in BT uses the technology. We do an awful lot of video and telephone conferencing. We have

systems that are built in. Virtually every PC in BT has a Live Meeting button. So that makes it really easy to work effectively like that and reduce the need to travel” (HR Director, BT, Case study A).

This type of working practice is compatible with the way the organisation wishes to work and with the technology available, with the *added benefit* of reducing travel.

However, the introduction of such working practices requires a shift in the management style, which is not always compatible with existing management styles and can be hard for all to accept.

“But for some managers that took a bit...cultural shift. You have got to remember in an organisation like BT we are very long service, so we had people when we were first doing this in the late 70s who had started their working lives in the 40s. Well what a shift for them, and you have to understand that you have to give people new skills” (HR Director, BT, Case study A).

Managers who are used to seeing people working in front of them can find it hard to rely on trust, and be prepared to find different ways of measuring performance. The successful implementation of flexible working practices is a major cultural change within an organisation.

“You need to be very good at setting standards, and actually what you need to do is just let go of your people, trust them, give them freedom, and just be very good at measuring their performance and having great quality conversations when people are not on track. That is quite a...it’s a real skill set for people to be able to do that well. So it is a different organisational capability and it is a real mindset shift for many of our senior people, who have been in the world of work for many, many years and it will be very different, and feel very different for them” (HR Director, BT, Case study A).

Nevertheless, the introduction of flexible home working can fit in with lifestyles of the staff and be seen as an alternative option to the problems of car parking.

“And I mean we know from the survey we did last year, people do want the opportunity to work at home, instead of having to move themselves about on an occasional basis. It would be a first choice, if they knew they couldn’t park here that would be their alternative” (Travel planner A, Case study C).

New technologies help to support new working practices that allow people to work at the time that suits them and suits the business. Increasing flexibility is then compatible with lifestyle and business productivity.

“For example if you are a homeshored² call centre operative, so you have the ability to work from home and do everything that you would do in a call centre. You are more likely to be able to work flexibly around the peak periods that you need to work, so you might work in the mornings have time off to do what you want to do, maybe take the kids to school pick them up and then come back in the evening because you can do that because there isn’t a cost of a journey. It isn’t difficult because of timing because you are going into your spare room or wherever you are working from home” (HR Director, BT, Case study A).

An issue touched on in Section 11.3 was that of demographics. The ability to match the lifestyle needs of different demographic groups, enables an organisation to be an employer of choice.

“Absolutely, well just generally as an employer [flexible working] makes us very attractive, particularly for younger people who... There was a recent survey of graduates by UNAM.

² Homeshoring is a BT facility that enables call centre staff to work at home with access to a full virtual contact centre functionality BT GLOBAL SERVICES (2008) Homeshoring, BT Group Plc, 26/05/09, http://globalservices.bt.com/LeafAction.do?Record=BT_Homeshoring_solutions_gbl_en-gb..

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First was work life balance and flexibility in terms of how they would... in terms of how they would determine it was the right employer for them, salary was fourth” (HR Director, BT, Case study A).

By supporting people’s lifestyle choices through their life, an organisation is able to deepen the labour market and employ the best talent.

“I think there is a whole number of things that can change and the fact that people are living longer, which means they will work for longer, because they just have to. Which means people will not work in the way we have worked in the last twenty years or so. People are going to have to pace themselves over a longer period. We are not going to see a linear approach to life. We are going to see people zig-zagging in and out of employment into periods of not working into periods of education, back into employment. That in itself will drive the need for business and organisations to compete for those kinds of people. Also globalisation will, we can now truly pick from a global workforce. All of those things would drive for a need for greater flexibility” (HR Director, BT, Case study A).

More flexible working practices can help to deepen the global labour market, but they can also enable people to work within the global market, helping to improve business efficiency.

“It allowed us to operate globally, because what we were finding was that if you gave them freedom to work from home and didn’t prescribe it, they would work at the hours that best suited their customers, but also suited them” (HR Director, BT, Case study A).

However, there is a problem with this approach. Flexibility only works if the customers that you are working with also work in the same way. In the case of manufacturing sites, they need to operate with a core of staff, so flexibility is not an option.

“I think our biggest one will be our customers, and our customers working model. And to be honest there are not all parts of our organisation that will be able to do it. So if you think about our manufacturing site. You can’t have a production site running night and day from a cost point of view, you just wouldn’t do that. And allowing people to choose the hours they come in, you actually need a certain body of people there, so there are definitely parts of our organisation that wouldn’t be able to do that at all” (HR Director, Case study C).

Working practices play a fundamental role in the successful adoption of a travel plan. Traditional travel plan approaches can work well for traditional working practices. However, where more flexible working practices exist, a more flexible approach to access management is required. Car sharing and public transport offer limited flexibility and introducing such initiatives in a flexible working environment will be poorly supported. The introduction of greater rather than less flexibility through methods such as homeshoring is an interesting development, which works well for both the individual and the business. Initiatives like this could be an important factor in business efficiency to support the changing lifestyle requirements of the workforce, but also to support increasingly global working practices.

11.5 Environment

As mentioned in Section 11.2 travel planning is being linked to the wider organisational goal of a carbon reduction programme, but in many cases it is seen as a way to support this strategy rather than as an integral part of it. This sidelining of transport to a supporting role stands in contrast with its carbon impacts. In 2006, the transport sector accounted for 24% of UK domestic carbon emissions, of which road traffic was 92% of domestic transport emissions. Commuting and

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business travel were the largest emitters of average carbon emissions for all modes of passenger transport between 2002/2006, where commuting accounted for 24% and business travel 13% (Department for Transport, 2008a, pages 3-6).

Business does not seem to be fully engaging with carbon emissions from transport. The reason for this could be due to the reporting and accounting requirement of the '*Green House Gas Protocol*'. Vehicles owned by a company, for example company cars, are part of *Scope 1*, direct emissions, that is 'emissions from sources that are owned or controlled by the company' (World Business Council for Sustainable Development and World Resources Institute, 2004, page 25). Business travel is accounted for under *Scope 3* emissions, which unlike *Scope 1* emissions the reporting of which are voluntary. *Scope 3* emissions are classified as indirect emissions and the result of 'emissions that are a consequence of the activities of the company but occur at sources owned or controlled by another company' (World Business Council for Sustainable Development and World Resources Institute, 2004, page 25). Emissions that are beyond the bounds of the organisations control, for example commuter travel, are not included at all. It is therefore not surprising that if the reporting of business travel carbon emissions is voluntary, monitoring of carbon emissions from commuting travel, which is considered in the '*Green House Gas Protocol*' to be beyond the responsibility of the organisation, is rarely occurring.

However, some organisations are beginning to accept transport is a major part of their carbon emissions. Figure 11-5 shows the links to the environment made by respondents in the case studies. The main issues discussed were the links to companywide carbon reduction strategies and the compatibility with personal 'green' agendas.

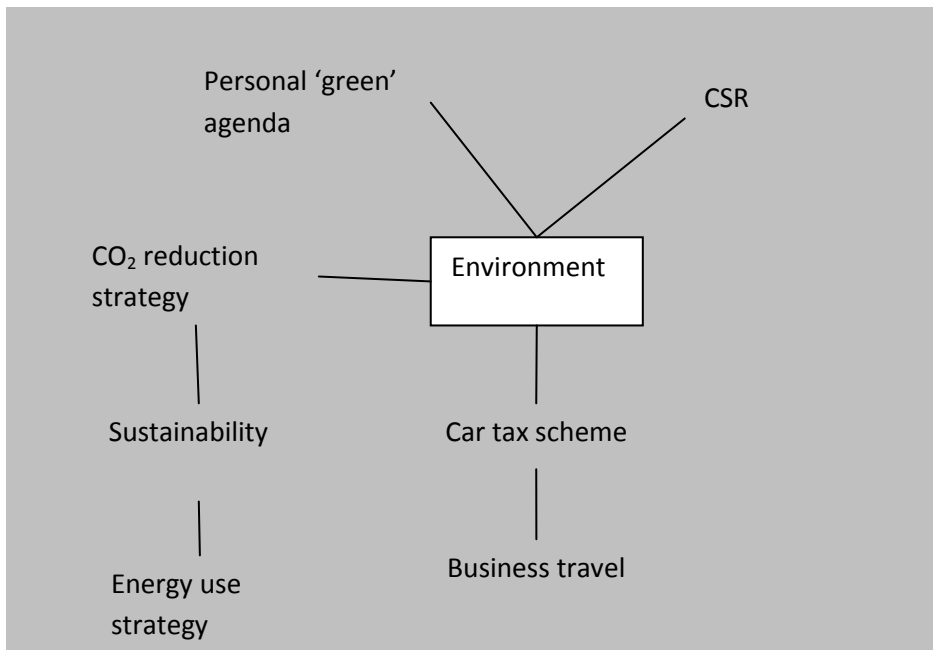


Figure 11-5: Issues raised for the topic of the environment

“We are looking more now at how environment, climate change can impact us as a business, transport is a key part of that” (Community and Environmental Affairs Manager, Case study D).

But it can still be a struggle to get transport included in the carbon reduction programmes.

“Within FM we have got, there are a lot of different areas where we use a lot of energy, lighting, running the building, that kind of thing and there are a lot of initiatives within FM to save energy and so to focus on carbon footprint that kind of thing. But nobody up to now has looked at transport to contribute to that kind of thing. Stefanie is running nine road shows between now and the end of the year. I have basically said to her, you have to involve, you can’t not involve transport. We have not been involved up to now.

The figures will look even better won’t they, because when they’ve been included...

Exactly, so we are ...we almost have to force our way in to participate in this type of thing” (Travel planner A, Case study C) and (Travel planner B, Case study C).

Nevertheless, a theme that emerged was a growing interest of individuals in a 'green agenda', which is beginning to influence business strategy.

“But more people are becoming aware of what they are doing personally, and if you can get them into that mindset, and they then bring that into work. It is just the awareness that is being brought up through [the organisation], giving them targets or tasks, concentrating on sustainability, but also on them as people and the propaganda that has been going on through the local press and the government” (Facilities Manager, Case study D).

It was felt that if business supported an individual's green agenda with ways to travel more sustainably there would be a positive reaction.

“We have also pulled on the whole green issue, so where people are prepared to drive smaller more economical cars that pollute less, such as Smart Cars, we have committed to provide them parking full time” (HR Director, Case study C).

However there is a word of caution.

“I don't think the green argument is the be all and end all, it shouldn't be dismissed either, it is one, a good one, but it does polarise opinion and that isn't always helpful” (IT Director, Case Study C).

The environment has the potential, as the results in Chapter 6 demonstrate, to be a major driver for travel plans and are compatible with the wider organisational goals of business and the values of individuals. However, this motivation is unlikely to be taken seriously by business unless commuting becomes part of the required reporting under the 'Green House Gas Protocol', or included in some other carbon emissions accounting.

Nevertheless, some organisations are already voluntarily monitoring their Scope 3 emissions or signing up to schemes such as ITMs 'Icarus Project' (Institute of Travel Management, 2007) or WWFs 'One in Five Challenge' to reduce business flights by one in five (WWF, 2009).

11.6 External Stakeholders

As suggested in the previous Section, 11.5, external stakeholders such as Government through the introduction of protocols and regulations can influence how business works. The imposition of regulation or threat of regulation, such as the 'Workplace Parking Levy' in Nottingham (Nottingham City Council, date not stated), can be a major influence on the compatibility of a travel plan within an organisation. For example Microsoft in Seattle has a workplace travel plan because it is legally required to as it employs more than one hundred staff. This influence can change the culture of an organisation and force it to accept issues that previously it had ignored.

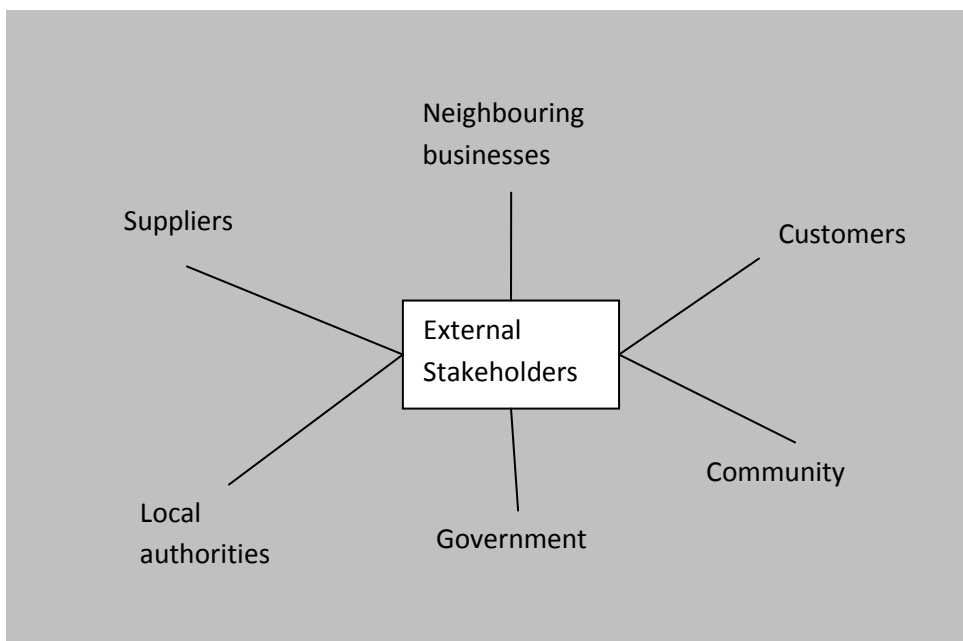


Figure 11-6: Issues raised for the topic of external stakeholders

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Figure 11-6 illustrates the main external stakeholders that influence the compatibility of a travel plan with an organisation. Local authorities and Government are able to influence the travel policies in business through legislation. However, other external stakeholders can influence the culture of an organisation in more subtle ways.

External stakeholders can include businesses that the organisation works with. As mentioned in Section 11.4, the working practices that they use can influence those within the other organisation. Organisations participating in schemes such as the 'Carbon Disclosure Project' (Carbon Disclosure Project, 2009) can influence their suppliers to consider their carbon emissions, which may involve transport related emissions. This influence on suppliers can also occur because of an organisations commitment to sustainability.

"We try and put pressure on our suppliers to think along the lines of our travel plan as well. So can they reduce deliveries, can they use local suppliers. Do we need to, can we do one bigger delivery than several smaller ones, things like that. The suppliers being the one group that we can really put pressure on and ask them to do things" (Facilities Manager, Case study D).

The other main group of stakeholders are shareholders. Public limited companies are responsible to their shareholders. The actions of the business have to be compatible with the requirements of the shareholders.

"I don't think the shareholders are putting pressure on us, but the shareholders are expecting a return on their money by making sure that we are efficient. So what they are looking at is the company being competitive and winning in the world market place and their share price going up, that is what they are after" (Environment Health and Safety Manager, Case study C).

However, external stakeholders can be beneficial where they help to share the risk and the cost of a travel plan initiative.

“Yeah I have started to make contact with [other local businesses]. We have just moved into some of the [neighbouring] buildings. Some of our data staff have moved up there. So I have recently just got some fresh contacts for who are the most appropriate people there. Because they have a lunchtime bus that they pay for as well” (Community and Environmental Affairs Manager, Case study D) .

External stakeholders can be an important influence on the culture and working practices of an organisation. External stakeholders are able to either support or hinder the development and acceptance of a travel plan. They can also influence other organisational development, such as more flexible working practice through their own working practices.

11.7 Problems of compatibility

Where an innovation such as a travel plan is incompatible either with the culture of an organisation or individual values it is unlikely to be successfully adopted. This chapter so far has highlighted some of the issues of compatibility such as communication methods, car parking management and working practices. The problem of compatibility is perhaps the most important aspect in understanding whether a travel plan will be embedded or not. Figure 11-7, below shows the main compatibility issues, where incompatibility between the culture of travel planning and that of any of these areas can make it hard or impossible for a travel plan to be successfully adopted.

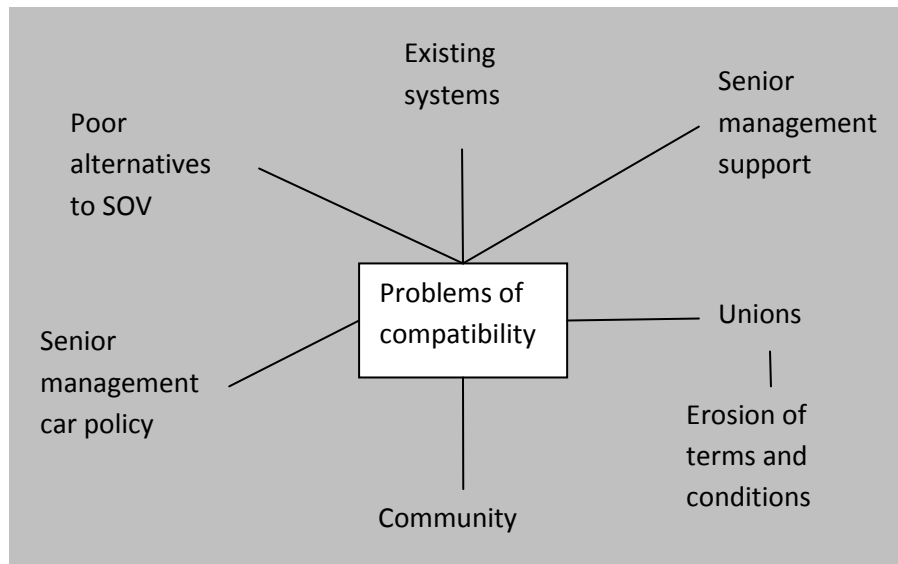


Figure 11-7: Issues raised for the topic of problems of compatibility

Senior management support is essential to a travel plan being accepted and becoming embedded. If the travel plan is linked into a strategy that the board is behind it is likely to be more readily accepted.

“I am in the middle of doing a piece on climate change adaptation strategies, and a lot of it has been welcomed with open arms. Within that I have identified benefits like [discretionary efforts and time savings] to people. We have got operational categories, and people is one of those. And I have been given resource on for the next six months. I have got a consultant assigned to me to help get this embedded in the business. So I am hoping that that is exactly the kind of thing we will consider, but I think at the moment we are not quite there yet. But it is exactly what I need to convince the board. It is less time, people are less stressed, people are in a better mood when they get in, and the environment” (Community and Environmental Affairs Manager, Case study D).

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Unless issues like the introduction of flexible working practices or a travel plan are supported by top level management, it is easy for lower level managers to support these initiatives at their discretion.

“I’d say to add to that is probably the management culture as well. Depending on which group of managers you are working with as an individual those [barriers concerning the inconvenience of using public transport] can be managed or not” (Travel planner A, Case study C).

Not surprisingly one of the main barriers to change is fear.

“The real barriers, which I think is quite common through industry, are attitudinal. And a lot of it is to do with managers fearing the loss of status, or fearing they were losing control” (HR Director, BT, Case study A).

Attitudinal barriers may be as a result of a lack of understanding or acceptance of a problem, which can be compounded by personal values.

“This is perhaps made worse by a lack of joined up thinking and the problem that not all academics accept that climate change exists and is an issue. This has led to unwillingness to take the issue as seriously as it deserves, and for it to be seen as ‘waffly and soft’ and that money spent on promoting this issue would be wasted. This view perhaps stems from the attitudes of some of the management team who have pastimes and lifestyles that would perhaps not be considered particularly sustainable and maybe feel threatened by such an approach” (Pro-Vice Chancellor, UEA, Case study F).

It will be particularly hard for a travel plan to be adopted if there is a belief within the management team that there is an obligation to supply car parking capacity.

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“However, there is one serious barrier to success in this area. A number of colleagues believe that UEA has a strong obligation to provide a car parking space, especially if they are working late or irregular hours” (Pro-Vice Chancellor, UEA, Case study F).

Management who already feel personally threatened are likely to become even more resistant if external stakeholders such as the local community raise objections to the travel plan.

“The introduction of a travel plan at UEA has not been received well by local residents. They believe the travel plan has led to an increase in parking in residential areas. To overcome this problem the local council has introduced parking permits for the residents, but these have to be paid for. The travel plan has increased bus use in the area, which has meant that the buses are more crowded for local residents, and so a less attractive option. These issues have put pressure on local councillors, who though not unsupportive of the travel plan, are in marginal seats and want to react in a way that will win votes” (Travel Planner, UEA, Case study F).

For a travel plan to be successfully adopted not only does it need management support, but also needs the support of the unions and staff. If the objectives are seen to be incompatible with those of the unions acceptance is much harder.

“The most disappointing part of introducing the travel plan and car share scheme has been the lack of support from the unions. The staff union has been opposed to both the travel plan and the car share scheme. The student union, though including a strong ‘green’ contingent, has been inconsistent in their support. In more recent times the car driving lobby has had a stronger voice than that of the ‘green’ lobby. This is largely due to the plans to move student car parking off campus to a site fifteen minutes walk away” (Travel Planner, UEA, Case study F).

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This lack of support from the unions was largely due to what staff saw as the erosion of their terms and conditions as a result of the car parking management policy contained within the travel plan.

“Staff have seen the travel plan as a stealth tax or in effect a reduction in salary, and the potential loss of a car parking permit as an erosion of the terms and conditions, although car parking permits are not included as part of the terms and conditions” (Travel Planner, UEA, Case study F).

In this particular instance the result is that the travel plan has developed an unfavourable image as a car parking management tool, offering little benefit to staff.

“Historically the travel plan has not been seen as something to be proud of. It has not been sold as a benefit to new staff, but seen as a car parking management programme. It is now time to start to be proud of the travel plan” (Travel Planner, UEA, Case study F).

The poor image of a travel plan was seen as something that needed to be addressed to gain wider acceptance and compatibility.

“If we find an angle on it that demonstrates a business benefit and employees would think I won’t have to circle the block four times to find somewhere to park. I think that would make a difference” (Community and Environmental Affairs Manager, Case study D).

These problems of compatibility are compounded if the alternatives to SOV offered are not seen to be viable or do not live up to the expectations of the users.

“Public transport, don’t know whether it is ever going to be able to deliver what it needs to make that a good viable alternative.” (Travel planner A, Case study C).

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This is particularly a problem with out of town sites where the public transport is incompatible with the working practices of the staff.

“And where we are sited it is not a hub of transport. Personally I commute in from Devizes, there is no public transport from Devizes, or not flexible enough anyway and not early enough or late enough. So you know we don’t dictate where people live and how they get here and we have got few options to support alternative means” (HR Rewards Manager, Case study D).

If staff are prepared to travel sustainably, but feel they are receiving no benefit it is hard to sustain their support.

“I think the problem with parking [here] has kind of taken away from it, because you have a situation where even if you car share you can’t always get a space. That is a problem when I car share the number of times you can’t get a space for car share. That is a problem, people have taken the message that it was meant to be a benefit to us, but it is not really a benefit” (Procurement Manager Business Travel, Case study C).

However, many of the problems with public transport may be perceived rather than actual.

“I would say it is actually it is peoples resistance to change on the individual side, because we are quite nicely placed, I know people say there are terrible public transport links here, but I do think that if you do, I guess dependent on where you live, the public transport links are fairly good” (Travel planner A, Case study C).

The other problem of compatibility is with existing systems. As a new system or innovation, such as a travel plan has to be accepted and work within the existing systems. The main issue that was raised here was about the problems of a culture of departments working independently and territorially.

“[The territorial culture] is something that is perhaps indicative of the way UEA works generally, there is an inclination for people to become territorial about their areas. This results in a lack of co-operation, joined up thinking, and swapping of ideas and communication that is needed to get projects working properly” (Pro-Vice Chancellor, UEA, Case study F).

This lack of joined up approach can lead to the travel plan being neglected when decisions are made and only considered retrospectively.

“I think we need to build better links with our business service partners, our FM team. We are quite often involved retrospectively in some of the decisions made there. I think that is because we are not joined up and we need to be” (Community and Environmental Affairs Manager, Case study D).

The main points that emerge from the problems of compatibility are the need to ensure senior management support exists, and that a travel plan matches the culture of the organisation. The ability to link into strategic organisational goals improves the chances of gaining this support.

However, organisational goals sympathetic to the travel plan are critical.

The other main barrier that emerged from the interviews was that of an individual's resistance to change, either due to the image of the travel plan as a 'stealth tax' or lack of viable alternatives to SOV. Senior management support can ensure the travel plan exists, but if the users perceive a lack of alternative modes, the travel plan will fail.

11.8 Conclusions

This chapter has looked at the attribute compatibility to explore the ways in which a travel plan is compatible with an organisation, but also the issues of incompatibility. As a travel plan matures it needs to become compatible with the organisation in different ways. The results of the survey in Chapter 6 illustrate the original motivations for a travel plan were limited, but as it matures the range of motivations become more diverse, and so the travel plan can be compatible with a wider range of organisational goals.

As well as being compatible with a wide range of organisational goals, what is notable and illustrated in Figure 11.8 is the dispersed nature of the themes that a travel plan is compatible with. This dispersed range of issues can mean that the compatibility of a travel plan with an organisation can be fragmented and hard to identify. Often where a travel plan is part of an organisational goal or practice, it is only ever there in a supporting role and rarely central to its success. The result is that because of the dispersed nature of this support, the visibility can be low, and the importance missed, but when all these supporting roles are added up, it is playing a major part in the functioning of the organisation. According to Rogers' innovation process in an organisation, the ultimate goal of an innovation is for it to become so embedded that it loses its identity, but with travel plans still struggling to be accepted as an essential part of an organisations functions, which is partly due to this dispersed supporting role, a high profile needs to be maintained to ensure the importance is not forgotten. Otherwise, as has been seen in the current financial crisis, the travel planner role is lost because it is not seen as a core operational function.

What has emerged from the interviews is that the dispersed nature of support appears to happen almost unnoticed, but when there are barriers to compatibility, these are much more evident and are hard to overcome. The compatibility of a travel plan is very dependent on the culture of the organisation. This culture of an organisation is complex array of phenomena, which captures its

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essence. Figure 11.8 helps to illustrate this complex array, showing how the main topics and their associated issues link together to form this array. The complexity of this array of relationships perhaps illustrates the problem of introducing a travel plan as an independent transport innovation, without looking at the wider complexities in a holistic way. This is perhaps one of the issues with implementing a travel plan, is understanding how to maintain a sufficiently high profile for the travel plan, so that it is considered important enough to sustain, but at the same time understanding how to support the complexities of an organisation and not becoming siloed as a transport initiative.

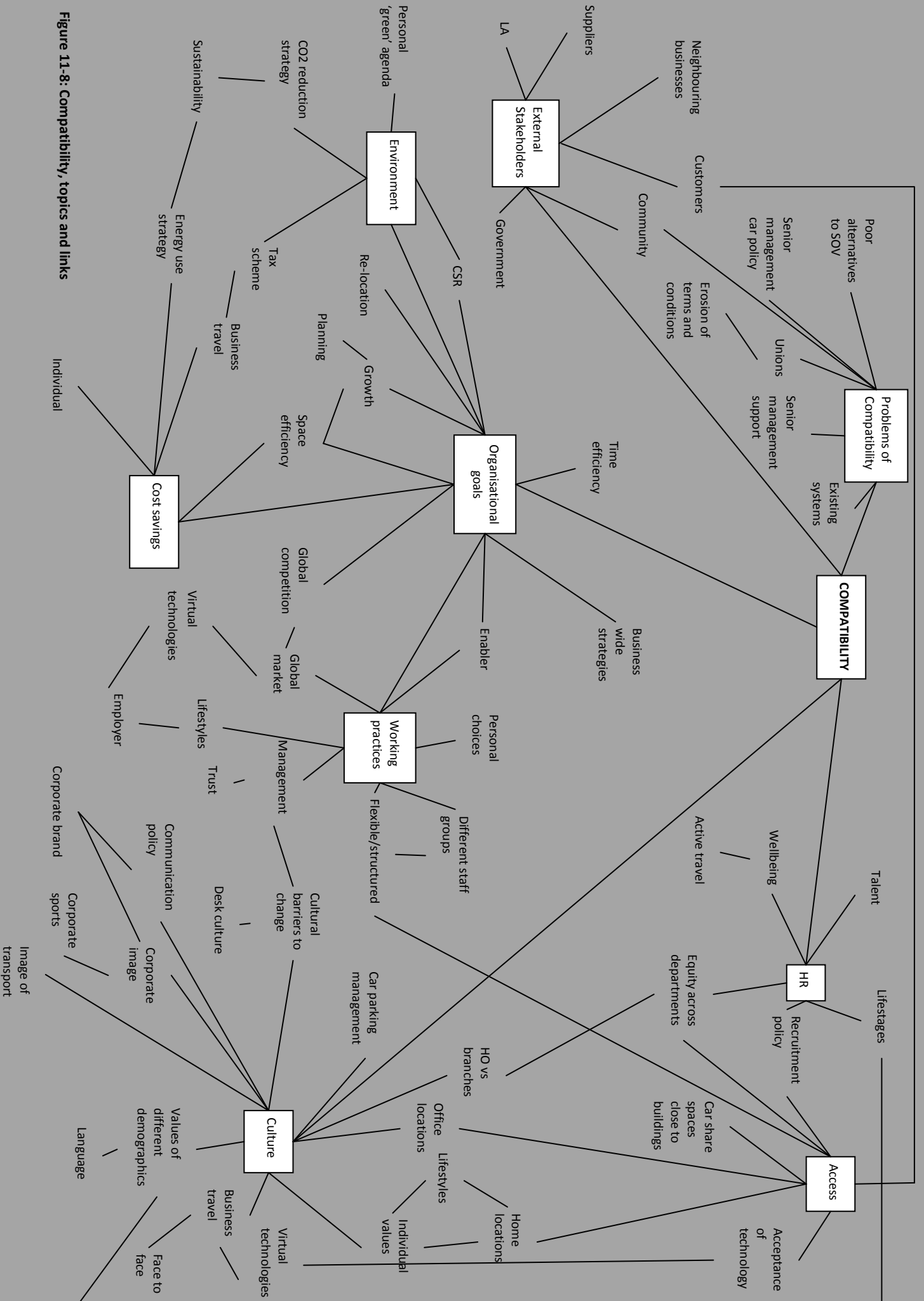


Figure 11-8: Compatibility, topics and links

Chapter Twelve

12 Observability, Complexity and Trialability

12.1 Introduction

This is the final chapter to present the data collected during the interviews and analysed using Rogers' *Attributes of an Innovation* (Rogers, 2003). The previous two chapters disaggregated the data into the attributes of *relative advantage* and *compatibility*. Rogers suggested that these were the two most important attributes for the adoption of an innovation. This was certainly borne out by the amount of data which fitted into these two categories. The last three attributes, *observability*, *trialability* and *complexity* will be explored in this chapter. As can be seen in Figure 12-1, Figure 12-2 and Figure 12-3, the diagrams are much simpler and include fewer topics and issues.

12.2 Observability

The largest of the three remaining attributes is observability. Observability was described in Chapter 4, Section 4.3.2 as the degree to which an innovation is visible to others (Rogers, 2003). It is therefore no surprise to find the main issues that arose for this attribute, illustrated in Figure 12-1, concentrate on communication methods, public relations (PR) and promotions. Many of the issues that appear within this attribute also appeared in Chapter 11, such as communication methods and, stakeholders.

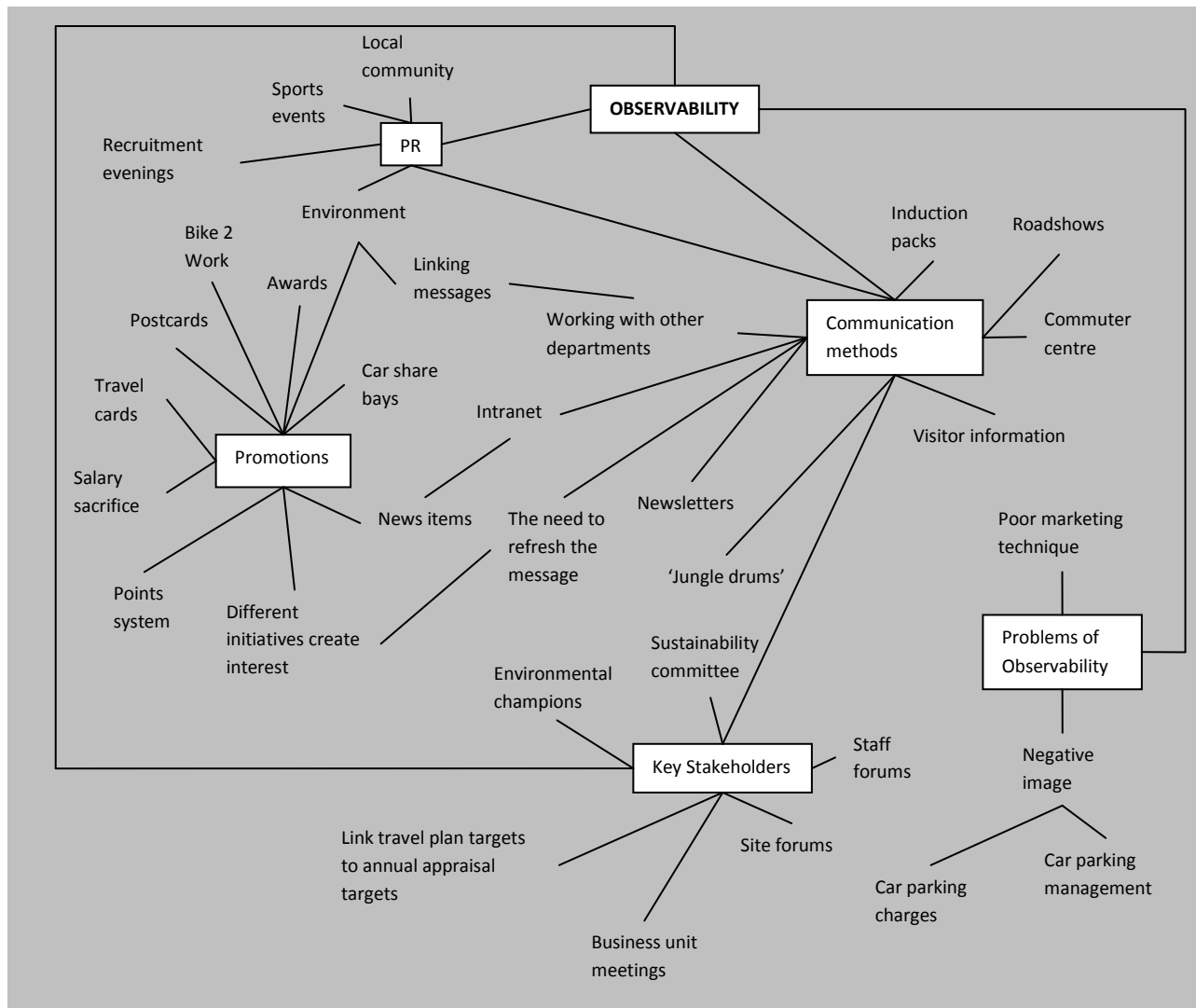


Figure 12-1: Observability, topics and issues raised during the interviews

Communication Methods

As can be seen in Figure 12-1 communication methods is one of the main topics to emerge within the attribute of *observability*. The case studies identified a number of formal and informal communication methods. In Chapter 11 there was a discussion about linking into organisational goals and other areas to develop consistent messages and explore the possibility of other departments owning the marketing of parts of the travel plan. The use of communication channels within other departments is one of the more formal methods of communication and can be beneficial if other departments have already established good communication channels. This is illustrated by a quote from one respondent.

“If the [travel planner] need[s] something promoted and there is a health benefit through cycling for instance. Cycling is an easy one to pick on, then we will pick on cycling because we can sell the environmental message that goes with cycling, but at the same time discretely whatever it is they are looking to promote can go along side it. So it is ‘kidology’ it is a lot of marketing, we come together to help get each other’s messages out. I have one medium and it has quite a large readership. Actually I am probably a more established conduit for getting those messages out than [the travel planner’s] own network. For example, she has cycle user groups, which on this site are quite big, but then she has much smaller groups of senior business groups, but how does she connect with the person? That is where we can help with each other, and we are starting to do that more and more” (Environment Health and Safety Manager, Case study C).

Observability can be improved by making links to particular business practices that already exist and are directly related to the travel plan.

“But [the travel plan] is on our page, so if you visit the Community and Environmental Affairs webpage it is on there. If you want to hire a car, it will say, have you thought about car sharing. If you want to go onto the facilities website and book a car parking space for a visitor, or if you are going to one of the other buildings, there is a link on there back to us. What we haven’t done is looked at car hire and video conferencing; we haven’t linked those together yet, so we will do that quite shortly. I am just looking at redesigning forms, that kind of thing. So it is visible, but it’s not there in your face” (Community and Environmental Affairs Manager, Case study D).

Although these comments relate to business travel, by making alternatives to car driving more observable helps to raise the profile of the travel plan and make people aware that alternatives exist.

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Another good time to raise awareness of the travel plan is when people start in a new job with the company.

“And we do have it in our employee engagement package. So when you arrive, within a certain period of time, you have to go for a half a day training on who [the company] is. And we have got a five minute slot in there. So you will learn about the fact that we support MacMillan and we are involved in disability sport events and the community side of things. And then on the environment side, it will talk about the fact that...where we procure our electricity from, what recycling we have got. So when you are in your office you will see these kinds of things. And we get quite a good sort of intro there to what [the travel plan] is and about the awards, about the car sharing the buses. So each employee will have to do that, so we are working on more [of this] at the moment” (Community and Environmental Affairs Manager, Case study D).

A major point that came through from the interviews was recognition of the need to keep refreshing the messages about the travel plan to keep the visibility high. This was done through a variety of methods including intranet news items or newsletters.

“We have got a news item, so when you log on you get the external facing internet site, and then when you click home you come up with an internal. So we have got a link there to Community and Environmental Affairs...So we can use that as a forum” (Community and Environmental Affairs Manager, Case study D).

“Providing newsletters, getting out, meeting some of the business partners and talking more about what are their needs. I think if we can keep that going, that keeps it fresh in peoples mind as to what is out there for them to use” (Retail Manager, BAA Stansted, Case study E).

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At UEA case study F, it was felt that in order to keep the momentum going, the alternatives to car driving needed to be ‘continually pushed’ (Travel Planner, UEA, Case study F), particularly as the problems with parking were more likely to encourage people to look for alternatives.

Promotions

A method that was frequently mentioned to keep the travel plan fresh and observable was through a programme of promotions. The use of different promotions and initiatives was considered a good method to raise staff awareness and keep the interest going.

“I have people comment subjectively to me that actually there is a lot of information; we do work hard to try and promote different ways to get to work. They like the fact that we have different initiatives and that we create quite a lot of interest” (Environment Health and Safety Manager, Case study C).

As with the compatibility of travel plan initiatives with different staff groups described in Chapter 11, Section 11.4, different marketing approaches work better for different staff groups.

“Recently, more effort has been put into promoting car sharing. Marketing approaches such as postcards to all student study bedrooms have been used. I think this type of direct approach has been more successful than the more blanket approaches of posters and leaflets” (Travel Planner, UEA, Case study F).

Other methods of promotion include points schemes, where the points are exchanged for vouchers that can pay for food in the onsite catering facilities, leisure activities like hotels, or in high street shops. Increasing the number of redeemable points for a specified period can be used as an incentive to change travel behaviour that also helps to raise the profile of a travel plan.

“Double points was a nice easy win, to get the attention of the not so regular and the might if there was a bit more persuasion and it re-enforced the good behaviour of those

that did it. It always does increase the numbers of people travelling those ways for a period, and then you see a tail off 3-4 weeks down the line and those people become irregular again. So those people are bribe orientated” (Travel Planner, Eon, Case study B).

Many organisations also used the Government backed ‘Bike 2 Work’ salary sacrifice scheme, but as with the points promotion it is a short term promotion, not necessarily delivering embedded behavioural change. However, in contrast, the awards scheme described below is a promotion that rewards regular sustainable travellers, so encouraging a more sustained effort and more continuous observability.

“So each quarter we run a campaign as a team where we advertise that we are doing the [travel plan] awards, and people can nominate their colleagues, so if you cycle, if you walk, if you routinely get the bus then you get entered into a pole. We have a little read of the efforts that you have made. And we run a salary sacrifice scheme here, but through that we also run an awards scheme, so if you do particularly well at something you might get £20 towards some wine through the same scheme and we will give you... I think it is a £50 voucher if you win this award and we do this every quarter” (Community and Environmental Affairs Manager, Case study D).

Nevertheless, this interviewee still felt that there was a problem with ‘peaks and troughs’ as the result of a promotion programme.

“We have had annual campaigns road safety week, we support that, which is November time something like that. And we get the borough council to bring their cycling officer in and their sustainability officer for transport, and he comes in and he will map your carbon footprint for you. So again we do do promotions around that, but it’s not a continual presence, we suffer quite a lot with that peak and trough awareness thing. I am doing some work at the moment to try and sort of level that out. I would rather it was slightly

lower and consistent than you run an event and there is massive interest, then a couple of months later everyone has forgotten about it again” (Community and Environmental Affairs Manager, Case study D).

Perhaps one solution is the use of the travel plan initiatives, such as car sharing as a promotion in itself, where the car share bays next to the building promoted themselves.

“People just don’t want to walk. It’s not too bad if you are in Enterprise House, but if you are at the back of the car park and you have to walk to airside, it is actually quite a walk. You could look at it as a positive and think that’s my bit of exercise for the day, but when you are already doing a long shift, if then you have a twenty five minute walk to get to work, that’s quite a bit of extra time, and if it is raining and you are supposed to be a glamorous uniformed assistant in duty free, selling all those wonderful products. If you could actually park at the front of the car park, and you can cut out twenty five minutes of your journey, especially when you have to get up at 3am, it makes a big difference” (Retail Manager, BAA Stansted, Case study E).

An issue that emerged was that travel plans are still struggling to be embedded, so they constantly need to be promoted and the message refreshed. Promotions were seen as a technique to keep the visibility of the travel plan high, but the intermittent nature of promotions causes peaks and troughs in the performance of the travel plan. The need to maintain the observability was an issue raised in Chapter 11, Section 11.8. Poor observability may be as suggested in Chapter 11, an issue of the dispersed nature of travel plan benefits, but it may also be due to a lack of genuine embedding, so that when the travel plan is not promoted it is quickly forgotten.

Public Relations

Promotions can also be a useful tool to publicise the work of the travel plan externally to attract staff at career fairs, so making the travel plan observable to in this case, the next generation of potential employees.

“If I do career fairs with schools, or I go and talk to schools I do mention that we run a car share scheme and that we have a travel card that gives up to 80% discount on fares. I just tell them about those sorts of benefits about getting to work at the airport” (Community Relations Manager, Case study C).

Recruitment evenings seem to be a popular method of raising awareness of the travel plan, but as with most of these ‘softer’ benefits, it is hard to quantify the benefits.

“Other than that it has to be PR benefits, it has to be retention benefit, but I don’t know how to measure the recruitment benefit or the retention benefit of offering [a travel plan]. Because we have started to do recruitment evenings, internal recruitment evenings to tell them about it. People like it, they like the fact they don’t have to pay to get to work, so it must have some positive effect, but not one that we’ve measured. I’m not overly comfortable how you would measure it” (Travel Planner, Eon, Case study B).

These types of public relation promotions also have the advantage of contributing to a continuous promotion of the travel plan.

Key stakeholders

An interesting development in keeping the travel plan fresh in the minds of staff, and so increasing the observability, is the introduction of travel plan targets as part of an employee’s appraisal and incentive targets. This is a strategy that is being trialled at BAA as a way to engage wider parts of the organisation in the travel plan, by setting appraisal targets to implement or

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improve a travel plan initiative. Successfully achieving a target results in a bonus payment. This approach has had the added advantage of improving observability, as those involved in the scheme are now interested in championing the travel plan.

Another approach to keep the travel plan observable to key stakeholders, is inclusion within business unit meetings as discussed in Chapter 11, Section 11.3, as part of the organisations communication culture.

“Business unit monthly meetings. What we tend to find at least a quarterly, well a quarterly invite into the business team meetings with senior management in the room. They ask what is happening; it also allows me to say I need your help, what can you do to support me now? It has a varying level of success” (Travel Planner, Eon, Case study B).

Other committees can be used to target key stakeholders.

“I am proposing the directorate become the directorate for CSR, and what was the sustainability committee comes an integration committee. Then it is kind of implied that every decision we make is part and parcel of day to day business, not a sustainability committee” (Community and Environmental Affairs Manager, Case study D).

This approach could be a good way to mainstream sustainability issues including the travel plan.

Problems of observability

However, regardless of the range of techniques to raise observability within an organisation, there are still barriers to success. These can be the result of poor marketing technique or inexperience.

“I brought in someone who is still part of my team, but is a communications manager as part of her many skills, and she has helped us develop, good clear and effective

interesting communication to help promote EHS³. And she continues to do that for us. We have seen as a result much more acceptance of our programme, people are much more open to come back to us and say, well done, I like that, because we have started communicating in their own language. So the secret of our success over the last two years has been effective communication” (Environment Health and Safety Manager, Case study C).

Sometimes the problem can be the image of the travel plan, so although it is observable it is perceived as a transport initiative, rather than understanding the wider benefits.

“I am aware of the [travel plan] campaign in [the company], but if it is still what it was before, then I know the [travel plan] campaign. We encourage car sharing, cycling and things like that. So I am aware of the overall, yes we have a travel plan and we are trying to reduce the travel into the building and parking” (Car Fleet Manger, Case study D).

When other issues rise in importance, the observability and meaning of the travel plan can change.

“I think [the travel plan did work] when it first came out. There were loads [of promotions] when it first came out, but I think it has lost a little now. I think the problem with parking at [the site] has kind of taken away from it” (Procurement Manager Business Travel, Case study C).

Which returns the argument back to the need to link the travel plan into other business wide initiatives, such as the environment and to target the marketing accordingly.

“There have been some successes in modal shift, but it has been modest. Some people choose to use forms of transport other than SOV, but the marketing of the alternatives

³ EHS – Environment Health and Safety

has not been as effective as it could be. There is a need for the university to be more upfront about its desire to be an exemplar low carbon university, and as part of that the impact that travel can play. If travel was a more explicit part of the environmental strategy then more people would come behind it” (Pro-Vice Chancellor, UEA, Case study F).

12.2.1 Conclusions

The key point to emerge from the observability of a travel plan is the need to keep refreshing the message. What appears to be the problem is that the travel plan is not sufficiently culturally embedded. Without constant promotion to keep the observability high, which leads to peaks and troughs of support, it quickly becomes marginalised and forgotten. Rather than becoming embedded and losing identity, what seems to be happening is that without constant refreshing and promotion, the travel plan is likely to lose its identity and disappear.

12.3 Complexity

The attribute *complexity* as described in Chapter 4, Section 4.3.2, is negatively related to the rate of adoption, so the more complex an innovation is to implement or understand, the less likely it is to be adopted.

Generally, as Figure 12-2 illustrates, there are few issues of complexity in relation to a travel plan. Travel plans are not perceived to be a complex innovation and there are few complexities involved in working with other systems within the organisation.

However, as a travel plan matures, and begins to become organisationally embedded, starting to make links into organisational goals, it does become more complex and is harder to perceive the as a whole.

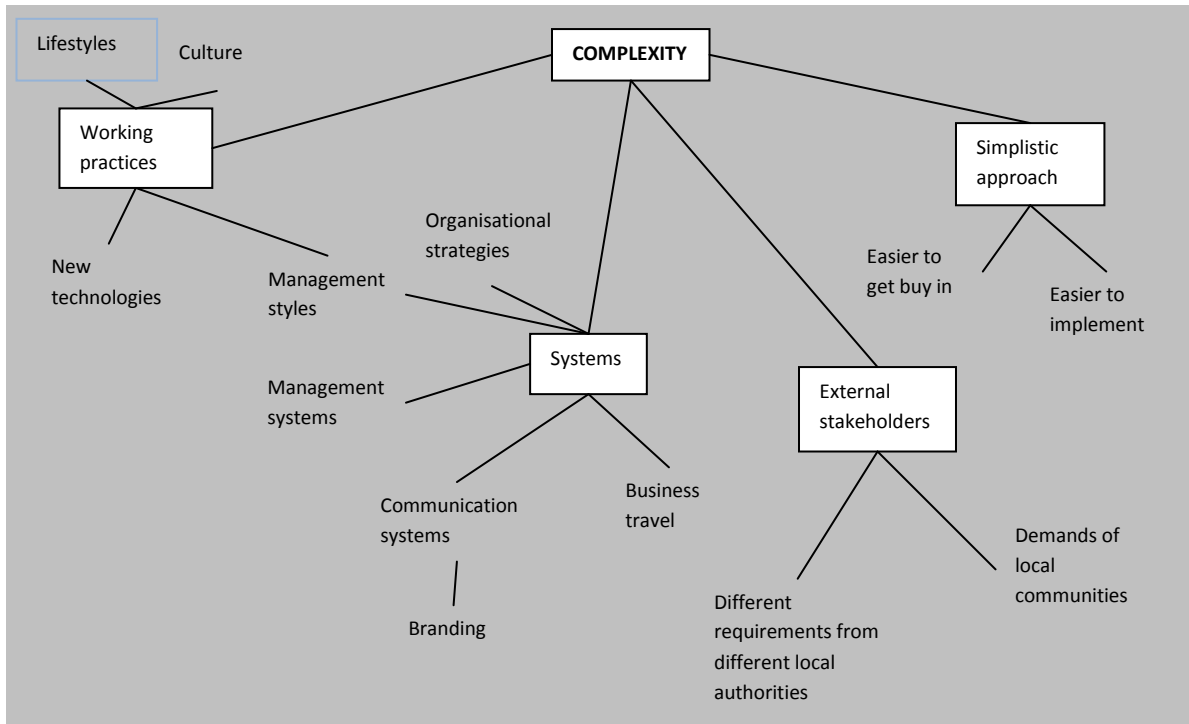


Figure 12-2: Complexity main topics and issues

“It is one of those things that people know that is it there and that thought goes into it, but if you actually asked them put their finger on what it was and how it worked, they could all talk to pieces of it, but I don’t think anyone could describe the full plan. So yeah, people will say they know they do things with cycling and we provide the incentives to cyclists, and I know we put a couple of extra trains and I know we do a parking lottery, but I don’t think anyone would know how the whole plan hung together, and how it fitted in with our business model” (IT Director, Case Study C).

This dispersal and fragmentation of a travel plan was an issue raised in the concluding comments in Chapter 11, Section 11.8. The dispersed nature of benefits can lead to a poor understanding of how the travel plan benefits an organisation as a whole, and the fragmentation of the message reduces observability.

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Communications is again a theme that emerges within this attribute. In Figure 12-2 it is shown within the 'systems' area, but in this case the complexity is the ease of working with the existing marketing material of the corporate brand.

"Brand is a work in progress. This is more from a corporate issue. We have very very strong brand guidelines. They are your photography must be a specific way. Your text font and layout must be a specific way. And we need to crack that, because you come into Eon or any corporate company and its red and white, that's your lot or grey and loganberry. It's got to be shades of these colours, and once everything becomes a shade of a set of colours, people just turn off. And you lose the impact of the message and everything else. So we are trying to work with them to come up with things a little bit more unique and try to work within those guidelines, but that is very much a work in progress, because it links to a UK brand, a global brand. And there is often a lot of toing and frowning and a lot of fraught conversations" (Travel Planner, Eon, Case study B) .

Nevertheless, the general consensus was that there were not any serious problems integrating the travel plan initiatives with existing systems, other than a couple of minor policy issues.

"So with the initiatives that you have introduced; have you had any problems with combining them with the original systems within the organisation at all?"

"No not to my face to be honest. The car share software that we bought in is externally hosted so we did have to jump through a few hoops with our internal security guys to make sure that they were comfortable, and we did have to go down the line of 'white listing' some of the sites and then links within it" (Travel Planner, Eon, Case study B).

In fact the general theme to emerge was that a simplistic approach made it easier to implement travel plan initiatives and involve people in the process.

“When the initiatives were first implemented how easy was it to integrate them into them existing systems? Were there any problems?”

“Very easy – the key thing is to make sure everyone involved knows what is going on”

(Access Strategy Manager, BAA Stansted, Case study E).

At Stansted, Case study E, it was felt that a simple formulaic approach eased the process of gaining buy-in from other businesses to the site wide travel plan.

“It also means that they do not have to do any major work about how to get the staff to the site as they let BAA make all the arrangements. All the employers have to do is to give the information about the travel plan initiatives to their staff. The majority of the businesses have been happy to sign up, as it is simpler for them than developing their own travel plan” (Travel Planner, BAA Stansted, Case study E).

The only complexity issues mentioned fell into two areas,

- Dealing with local authorities
- Introducing flexible working practices

With working practices, the main issues concentrate on the introduction of new management styles, so that staff can be managed remotely as outlined in Chapter 10, Section 10.4 and Chapter 11, Section 11.4. However, as people become more conversant with the technologies that enable remote working, some of the complexities diminish.

“We are starting to see more people working from home; [it] is one of the key areas. It used to be people would do it once a week, but we are starting to see people looking at working from home 2-3 times a week, partly because more people have broadband, more people have speedy access. So I think we are finding that more people have laptops, so they are mobile in that sense. The technology is catching up, but we are nowhere near

the league of BT or IBM or anything like that. People are getting more mobile, they are working smarter” (Travel Planner, Eon, Case study B).

Case Study F, UEA had particular complexities dealing with the local authorities in their area. The main problem is caused by the fact that the site straddles the local authority boundary between South Norfolk Council and Norwich City Council, which have inconsistent planning policies. The situation is further confused by the involvement of Norfolk County Council, which has overall control of transport strategy.

The situation at UEA is probably unique, but this does not detract from being aware that local authorities can make the introduction of travel plan initiatives more complex if the correct support is not forthcoming.

12.3.1 Conclusions

Travel plans in concept and implementation are a simple innovation, and the idea of reducing SOV through modal shift is easily understood. However, as a travel plan matures and begins to link into other areas of the organisation it becomes more involved as it integrates with the complex array of an organisation. Understanding how the travel plan benefits an organisation is where the complexity lays, due to the dispersed nature of benefits and the difficulties in quantifying them.

It is interesting that a change in working practices, which is a much more complex innovation to introduce, the benefits are clearly understood. This is likely to be because, unlike travel plans, the benefits are much more observable and easier to isolate from other initiatives.

12.4 Trialability

This chapter will now move on to explore the issues raised under the attribute *trialability*.

Trialability was described in Chapter 4, Section 4.3.2 as the degree to which innovators are able to trial an innovation before adoption. Trialling can be done through a range of methods as

illustrated in Figure 12-3. Trialling in this context is seen primarily from the perspective of the organisation, rather than the individual.

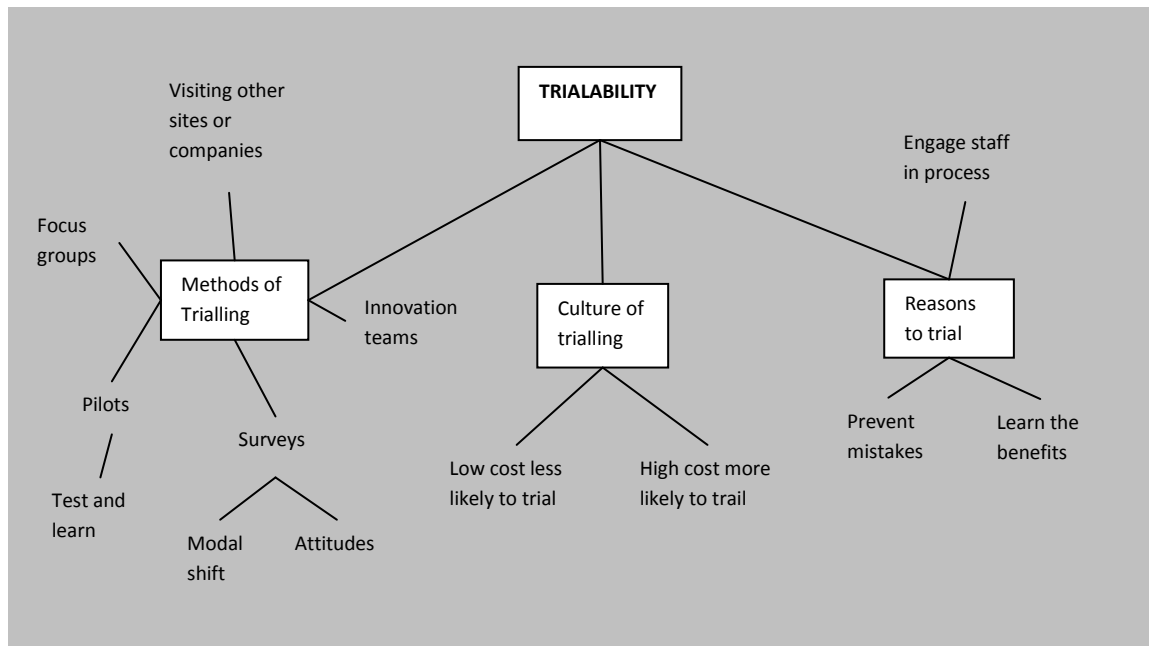


Figure 12-3: Trialability main topics and issues

Figure 12-3 shows there are three main areas related to trialability.

- Methods of trialling
- Culture of trialling
- Reasons to trial

Pilots are a popular method to trial a new initiative before rolling it out to the wider organisation, and to test out which options are going to be the most effective. Pilots played a big part in the development of the new working practices at BT, before widespread implementation

“You can imagine those early days were more difficult, but we had a number of trials and pilots of different things and by 1984 we had a population of about 300 home-based workers, by ‘86 it was a definite part of our strategy because it answered all of the questions” (HR Director, BT, Case study A).

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Stansted, case study E, used pilots as a method to test out and explore the rate of adoption of a variety of different initiatives. One initiative they have been piloting is the use of books of 'carnet' tickets. These are particularly beneficial for temporary staff who are not eligible for the travel card, or new staff awaiting the issue of their travel card. Other pilots include testing out the technology of SMS ticketing, partly as a way to reduce the fraudulent use of the travel card.

The use of pilots can also help to develop an understanding of the benefits of a new initiative, as these may not always be fully understood before implementation.

"It took us a little while as we began to trial and pilot different types of working. It took us a little while to understand the other benefits" (HR Director, BT, Case study A).

Pilots or trials can vary in size. Small trials are less risky, but may not generate the volume of data needed to fully understand the implications of the trial.

"A lot of the trials were pretty big, so for example one of the field force trials was a 6,000 person trial. Because we are quite a big organisation we have very broad data and very broad experience" (HR Director, BT, Case study A).

A similar idea to that of pilots was described as 'Test and Learns', where the purpose is to test out a new initiative and learn from the experience and deliver some quantifiable results.

"What I look at now is I tend to pick pockets of areas. For example at the minute we are kicking off 'test and learn' as we are calling them. 'Test and learn' initiatives in the Nottinghamshire area, which was guaranteed car share until half nine. That has worked really well. Six weeks after launching that we have tripled the numbers. Within two weeks from 24 to 83, not massive numbers, but the offset of trying to find car parking was equivalent to £45,000. That's worked, that's maintained as well. Across the two sites that are neighbours I think 97 car sharers on a weekly basis. We are now looking to roll out to

other sites, by getting an extra guard on and designating those spaces” (Travel Planner, Eon, Case study B).

As well as testing out new ideas and preventing mistakes, piloting new initiatives, is a good way to engage staff in the process, so that they feel some ownership, as well as the benefit of improving observability of the new initiative.

“I come from a marketing propositions background with the energy products. We would often do that with the 2,000-3,000 customers, which is a good way of finding out what they liked and what they didn’t like. Which meant when you went to 3,000-4,000 employees you don’t make a fool of yourselves. We try and spread it around the sites as well. So different tests at different sites, so they feel they are actually getting something and they can actually see something happening, but also engagement is the pure logic behind it. It is actually engaging those that have chosen to buy a cycle or are active parts of the schemes, so it’s actually trying to persuade them, is it a good idea does it actually work” (Travel Planner, Eon, Case study B).

Trialability can be explored indirectly by testing acceptance of a concept with potential users or exploring how an innovation such as a travel plan works elsewhere. Rogers describes how the process of trialling becomes less important for later adopters of an innovation as the early adopters ‘act as a kind of vicarious trial for later adopters’ (Rogers, 2003, page 258). Another method of trialling used is focus groups. This can help to engage staff in the process, helps to develop a better understanding of what the personal barriers to change are.

“We are going to be running some focus groups and understanding what car sharers feel about it. The positives, the attitudes of people who feel negatively about it, so we can understand how to encourage and motivate it a little bit more. So that is something that is on our agenda this year” (Travel planner B, Case study C).

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Staff travel surveys are another common approach, usually used as a method to monitor the success of the travel plan, but more recently they are also being used in the same way as focus groups, to gauge the opinion of a new idea before implementation.

“I think it is important to understand what our staff feel, whether or not we find out the information by focus group or survey. We did a fairly intensive survey last year, where we found out pretty much how they feel, how they travel and also how they feel about those choices, those options. So to understand the various people trying cycling, trying public transport for example. So it is...before we implement anything we have to understand how people feel about it” (Travel planner B, Case study C).

The format of a staff travel survey has developed to include understanding travel behaviour.

“Originally the monitoring of the travel plan concentrated on modal shift, but now it also asks about attitudes, to understand whether people are changing their travel behaviour and what makes them change” (Travel Planner, UEA, Case study F).

Or perhaps to ask what access options people would like to have.

“We have done them in the past and we have done refreshers surveys so. For me on World Environment Day, I think I am going to have that event, and then when autumn comes, I’ll push out another transport survey while the weather is still nice and say if we revise this, what would you want? Give a choice of options” (Community and Environmental Affairs Manager, Case study D).

However, this is not the case with all travel surveys. Some are still quite limited in their remit. At Stansted the travel surveys used tended to include closed questions, and did not ask staff what improvements they would like to see, or what things would be likely to get them to change their

travel behaviour. However, this qualitative information on improvements and motivations for behaviour change was fed back to the team through the Commuter Centre.

Trialling does not have to involve actually testing or piloting new ideas on the site. One of the quickest and cheapest methods of trialling is to learn from the experience of others, by visiting their sites. It has the added benefit that the travel planner can keep up to date with new developments elsewhere.

“Yes – always looking for contacts and ideas especially in organisations which have staff which work similar ideas. Key part of travel plan manager post is to ensure we are at the front edge of travel planning” (Access Strategy Manager, BAA Stansted, Case study E).

New ideas can also be explored through what is akin to a mix between a brainstorming session and focus groups, through what was described as an ‘Innovation Workshop’.

“We also did some innovation workshops. We’ve got an innovation team that sort of do, what’s the best way to describe them? Unusual workshops, it’s basically a very relaxed atmosphere, there’s a very defined process to the idea generation, and literally we did a couple in the East Midlands a couple in the West Midlands, we dragged in via nomination people from different part of the business to come in and sit down and sort of write down and come up with ideas of what their solutions would be. And we are looking at implementing them. It’s increasing company bus networks, it’s looking at the reward mechanism, it’s looking at what we rolled out, which was a better journey matching tool, so we did that” (Travel Planner, Eon, Case study B).

This is a good way to engage staff in the process of developing the travel plan and to raise the profile.

However, it was not always considered necessary to trial the new initiatives. Generic things have already been trialled elsewhere, and lower cost initiatives are less essential to trial as the risks are much lower.

“The generic stuff we do, you can just roll out. You can do a double points car share promotion; you can do that fairly easily, because you know it works, but when you are going to start spending £300-£500 on a Saturday training session, you want to make sure you are getting value for money, but equally so the end users are going to think, come Monday, yeah I’ll ride to work on a Monday and a Wednesday and hopefully that is what we will end up with” (Travel Planner, Eon, Case study B).

“Depending on whether we have had previous experience of an initiative we will trial initiatives such as Carnet tickets otherwise we will go for implementation” (Travel Planner, BAA Stansted, Case study E).

12.4.1 Conclusions

Trialling is an area that seems to have developed and been refined as travel plans mature. It has become more important to understand not just what people are doing, but why they are doing it, or perhaps not doing it. Pilots are a good way to test the level of acceptance of a new initiative and as a trial run to solve problems before rolling it out across the whole organisation.

12.5 Summary of issues arising from the analysis

These last three chapters have presented the data collected through the interviews, and analysed using Rogers’ *‘Attributes of an Innovation’* (Rogers, 2003). What has been very clear is that the two most important attributes are *relative advantage* and *compatibility*, which is exactly what Rogers suggests. However, there is a close interrelationship between the attributes as evidenced by the number of topics that appear within the analysis of each attribute. From the analysis the different topics that emerged form four main themes.

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- The increasing complexity of a travel plan as it matures
- The increasingly dispersed nature of a travel plan as it matures
- The lack of clear quantifiable benefits of a travel plan
- The importance of culture in the successful adoption of a travel plan

The results of the telephone survey in Chapter 6 showed how, as a travel plan matures, the range of motivations increase and diversify, beginning to link into organisational goals. What was a simple concept of reducing SOV numbers and encouraging sustainable travel becomes a more complex business management tool that can offer benefits across the organisation.

Understanding and appreciating these benefits is where the real complexity lies.

In the case study organisations, the non travel planner interviewees were aware of the existence of the travel plan, but primarily saw it from a transport perspective, struggling to identify the benefits to the wider organisation until questioned further. The reason for this appears to be two fold. Firstly, travel plans that are introduced through the planning process are targeted on reducing SOV numbers and modal shift, which unless the organisation is a transport operator, are not targets of interest to the wider business. The result is that the travel plan can be siloed within the estates or FM department. The second issue is that the evidence for the non transport benefits tends to be qualitative, so much harder to introduce as a solid business case. In one case even where a quantifiable business case was presented of cost reductions through reducing overflow car parking, there still seemed reluctance to put this forward as a business case on its own. Added to this, the benefits are also fragmented so that they are hard to identify, and although in the whole they are substantial, as fragmented benefits the risk is that the identity is lost and forgotten. This lack of quantifiable data to support the business case for travel plans may be in part due to the difficulties of isolating benefits as solely the result of a travel plan, as travel plans, particularly those introduced as part of a planning consent, are implemented at a time of

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change within an organisation. Other initiatives may also be implemented at the same time, such as a change in office location or a change in working practices. For working practices, the data is much easier to isolate and quantify. These were points that came out very clearly from the data in Chapter 10, where the advantages offered during the interviews related mainly to those of adopting smarter working practices rather than a travel plan.

An interesting area that emerged from the analysis of the interviews was the importance of the culture of the organisation in the successful adoption and maintenance of a travel plan. This is of course not surprising considering the culture of an organisation is the very essence of what it is, which was aptly described in the quote in Chapter 11 that describes the culture as,

“...a complex array of phenomena which include social interactions and physical factors such as office layout to which individuals attach certain meanings, rituals and myths” (Saunders et al., 2007, page 109).

Matching the travel plan to the culture of the organisation is essential in the successful adoption of a travel plan as illustrated in Chapters 11 and 12, where the importance of linking into things such as organisational goals, working practices, communication methods, individual values and lifestyles were described.

What emerges is that there are two extremes of travel plans. At one extreme it remains a transport function and siloed within estates; the rest of the organisation does not see or understand the wider benefits and the travel plan risks being marginalised or dying. At the other extreme it becomes so dispersed that, although offering an array of benefits, they are so fragmented they are not clearly visible and again the travel plan risks being marginalised and lost. It could be argued that a dispersed travel plan that has lost its identity is fully embedded, and so reached that ultimate stage of the *'Process of an Innovation'* (Rogers, 2003). However, what the evidence from the interviews suggested was that travel plans which appeared to have reached

this stage were more likely to have become marginalised and forgotten. A theme that emerged was this need to continually promote and refresh the travel plan to keep the visibility high, which was particularly highlighted by the re-design of the '*Process of an Innovation*' in Chapter 9 to include a cyclical phase from embedding back to the '*redefining and restructuring phase*'. This suggests a lack of genuine embedding into the culture of the organisation. Perhaps what needs to happen as a travel plan matures is to develop a limited number of strategic links to other departments that are willing to take joint ownership. This could promote an embedding that results in the travel planning activities being incorporated into the systems and culture of the company. The travel plan will lose its identity, but not be discarded.

To develop such positive embedding, the question is what should these strategic links or organisational goals be? The goals that a travel plan links into need to be ones that engender support from the senior management to help maintain the profile of the travel plan. The results of the survey in Chapter 6 suggest that CSR/environment has the potential to be a goal travel plans link into. The concern with this is that transport from the commute to work is not seen as an organisations responsibility and therefore not part of their carbon emission monitoring, so until they are included in statutory monitoring such as the '*Greenhouse Gas Protocol*', (which is currently being reviewed to include commuting as a Scope 3 voluntary emission) (World Business Council for Sustainable Development and World Resources Institute, 2004), or ISO 14001, it is likely to only ever be a supporting measure that appears in CSR reports. However, there are other goals which have the potential to be strong drivers for a travel plan. Expansion and growth were seen to be major goals that a travel plan could link into, as well as a change in working practices. Changing working practices opens up the opportunity to reframe travel plans in a more holistic way as access strategies, which involve modes of access rather than transport, and the area of business travel is included.

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This is a brief summary of the points raised in the last three chapters. The thesis will now move onto critique the use of Rogers' attributes as a framework to analyse the data and consider what is missing from this analysis, before moving onto discuss the above points and their implications in more detail.

Chapter Thirteen

13 A review of Diffusion Theory as an analysis framework

13.1 Introduction

This and the following chapter conclude and discuss the research presented in the preceding chapters. This chapter reviews the use of diffusion theory as an analysis framework in travel plan research and what the research has achieved and how it has contributed to the literature. The following chapter considers the findings in the context of travel plan practice and the implications for the organisational embedding of travel plans.

13.2 Achievements and contributions

The achievements and contributions of this thesis fall into two main areas,

- The development of a new research method for travel plan research.
- A clearer understanding of the processes and factors involved in the organisational embedding of workplace travel plans.

The use of aspects of Rogers' *Diffusion of Innovations* (Rogers, 2003) has added a new dimension to travel plan research by exploring the process of long term organisational embedding. The use of Mintzberg's *Structure in Fives* (Mintzberg, 1993) and aspects of organisational theory show the importance of the structure of the organisation and the position of the travel planner within this structure. The use of these research methods in this new context enabled the development of an understanding of the processes and factors involved in the embedding of travel plans from the organisation's perspective. This contributes to the literature as previous research has focussed on the adoption of travel plans by individuals and the early stages of adoption and implementation by an organisation.

13.3 Answering the aims and objectives

The aim of this thesis was to identify the factors that have helped to organisationally embed travel plans. This research has shown the importance of linking travel plans with organisational goals and needs in the embedding process. However, successfully embedding is not easy. A travel plan can either remain siloed within estates or so widely dispersed that the benefits are poorly visible. In either case the travel plan runs the risk of being marginalised or lost as discussed in Chapter 12, Section 12.5.

The research has also shown that this process of embedding is reliant on the adaptation of the travel plan to match the culture and working practices within an organisation, and that this process of adaptation can be dependent on the position of the travel planner within a strategic area of the organisation and their characteristics as a champion.

The following objectives were set out in Chapter 1, Section 1.2 to answer the research question and were achieved in the following ways.

- Determining how the motivations for a travel plan within business develop as it matures

This was completed through the semi-structured telephone survey reported in Chapter 6.

- Identifying what processes a travel plan goes through as it matures

The analysis using the Process of an Innovation explored the processes of maturing and embedding reported in Chapter 9.

- Identifying how a travel plan is perceived by the wider organisation beyond that of the travel planner

This was reported in Chapters 10 to 12 where the in depth interview data was analysed using the Attributes of an Innovation.

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- Identifying what the benefits of a travel plan are perceived to be to the wider organisation

This was also reported in Chapters 10 to 12, but with a particular focus on interviewees in the wider organisation.

- Assessing the impact of organisational factors, such as the structure and culture, on the embedding and development of a travel plan.

The use of the Structure in Fives and Katz and Kahn's motivational patterns of compliance helped to add to the context of the data presented in Chapters 10 to 12.

This chapter will now move onto explore the appropriateness and limitations of Rogers as an analysis framework.

13.4 How appropriate was Rogers' Diffusion Theory as an analysis framework?

Chapters 9 to 12 used Rogers' 'Process of an Innovation' and 'Attributes of an Innovation' (Rogers, 2003) to analyse the data collected from the case study interviews. This process has not previously been used as a research framework to analyse travel planning. The purpose of this chapter is therefore to consider how appropriate this has been as an analysis framework, and what areas were not covered by the framework or could have been addressed more effectively.

The 'Attributes of an Innovation' (Rogers, 2003) were used as a framework to collect and analyse case study data. Case studies were described in Chapter 5, Section 5.2.2 as in depth studies in a real life context,

"A process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge" (Corbin and Strauss, 2008, page 1).

or as a way of "inquiring into the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2007, page 37).

In this thesis a multiple two-tail case study method was used to build up a complete spectrum of case studies, developing a narrative of the maturing travel plan or approach to reducing the impacts of transport from the commute. To ensure this spectrum was developed, a range of people from different departments were interviewed, which Yin would describe as an *embedded* unit of analysis (Yin, 2009). This also helped to develop a company wide view of the perception of a travel plan within the case study organisations.

A travel plan could be considered as a process innovation, which suggests the use of aspects of innovation theory, such as the process of an innovation or the attributes of an innovation, although it is accepted that the attributes were unlikely to have been conceived by Rogers as a framework to analyse case study data in this way. This led to doubts about the appropriateness of such a framework, particularly whether it would successfully unpack the wealth of information collected into a coherent narrative. It was also a concern whether the use of the framework would be subtle enough not to lose the essence of the interview data.

The use of the attributes as a framework for analysis, where the data categories were predetermined would suggest a deductive method. However, it could be considered as a mix of both inductive and deductive methods, where the theories were allowed to emerge from the data rather than by a process of testing the theories.

Using the attributes as categories to disaggregate the data helped to break the data down, but only to a fairly broad level. This still left a lot of data from which meaning had to be derived, and so needed to be broken down to smaller units. The method that seemed to work best was to develop the diagrams used in Chapters 10 to 12 to help disaggregate and order the various different topics raised during the interviews and to see how they linked together. This form of data display was then used as a framework to develop a narrative of the maturing travel plan.

Did the framework work? Generally it was a useful tool to disaggregate the data and to develop a narrative of the developing travel plan. It made it possible to explore the issues from different perspectives, taking account of the views of a range of people within the organisations. The framework was useful in highlighting where the holes in the information occurred, most pointedly the lack of data showing the real business benefits of a travel plan and the extent to which the advantages were recognised by the wider organisation. The use of the attributes was particularly effective in illustrating the complexity of the relationships between the different aspects of the travel plan and the diversity of areas into which it linked. The network type diagrams showed this very clearly. However, there were some issues that the use of the attributes as a framework did not manage as well. These issues vary from the problems of a lack of refinement in limiting the framework to five attributes, to topics that were completely missed, because they did not fit into the five attributes, although these were few.

13.4.1 Additional attributes

It has been suggested that other attributes could be added to the five that Rogers uses. The two most often quoted are *perceived risk* and *financial and social cost*. Perceived risk was proposed by Ostlund in 1974 as the 'degree to which risks are perceived as associated with the innovation' (Ostlund, 1974, page 24). This is an attribute that could have been used to disaggregate the data. However, risk was not an issue that was raised during the interviews. It could be argued that the issue of risk is inherently present within some of Rogers' attributes, particularly *trialability*. Here the process of trialling reduces the risk to both the organisation and the individual. What also needs to be considered when talking about risk, is that risk to a business may not mean the same as to an individual. Zaltman suggests that risk is actually a state an organisation would choose to adopt in preference to uncertainty. Zaltman outlines three conditions under which decision makers may operate.

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1. Certainty – rarely occurs
2. Risk – which occurs when they have accurate knowledge of the probability distribution of the consequences of each alternative
3. Uncertainty – most common. Unable to assign probabilities for the occurrence of particular consequences (Zaltman et al., 1973, page 54).

Certainty would be the optimal condition, but a position of knowing the risks is preferable to a state of uncertainty. The concept of risk may therefore not be considered a barrier to adoption, as issues of uncertainty can be reduced to risk by the process of trialling.

The other possible attribute suggested by Zeithaml is that of *financial and social cost* (Zeithaml, 1981). Financial cost was largely covered through the attribute *relative advantage*. Although the evidence from the case studies of cost savings from a travel plan is vague, the additional analysis of the data with a different attribute would not have produced any more evidence. The social cost, or in the case of travel plans, benefits, came through largely in the discussions about the benefits of a travel plan to CSR. The area of CSR could be considered as the way organisations internalise and manage or account for externalities, such as carbon emissions or the social impacts generated by the operations of the organisation. In some cases business is beginning to accept that their responsibilities do not end at the 'factory gate', but extends to include the work-life balance, particularly with a blurring of the boundaries of the workplace through teleworking. Social cost is an area that could become increasingly important to organisations. In the analysis the area of social cost was covered under the relative advantages of CSR and the compatibility with organisational goals, but conceivably if this area increases, this could be a useful attribute to include.

However, there is possibly another attribute that could have been used that does not appear to have been previously suggested, although it is a topic raised by Rogers. This is the idea of re-

invention or adaptability of an innovation. The need to re-invent and adapt the travel plan to the changing needs of an organisation was discussed in Chapter 9, and was an important element of the innovation process within an organisation. Rogers describes re-invention as the 'degree to which an innovation is changed or modified by the user in the process of adoption and implementation' (Rogers, 2003, page 180). He suggests that an innovation that is re-invented will have both a faster rate of adoption and a higher degree of sustainability. He goes on to outline a number of reasons why re-invention occurs. Below are the ones most pertinent to this thesis,

- I. An innovation that is a general concept or tool with many possible applications eg the computer or the internet, is more likely to be re-invented. If the innovation is loosely bundled together it is easier to adapt to an individual use.

This could apply to travel plans or working practices, where the basic model is taken and developed to be compatible with the different working practices, sites or divisions within an organisation.

- II. An innovation that is implemented in order to solve a wide range of user's problems is more likely to be re-invented. This is so it is possible to match the innovation best to the problem that needs to be solved.

As the motivations for the travel plan develop and expand, it is plausible that a travel plan or working practices would need to be re-invented to meet the needs of a new range of problems. This could involve where the motivations move from those associated with managing car parking demand, to broader issues of recruitment and retention or the environment.

- III. Local pride of ownership may be a cause for re-invention. The product tends to be modified in minor or aesthetic ways to appear to be a local product.

This has certainly been the case where a travel plan has been implemented at a number of sites, and the travel plan has been re-invented to meet the needs of the individual sites.

- IV. Re-invention occurs when an innovation must be adapted to the structure of the organisation that is adopting it.

This is particularly true for travel plans as a result of the planning process. A criticism of some transport consultant produced travel plans for developers, has been that too many of them are 'cut and pasted', rather than being specific to the site or the organisation.

- V. Re-invention may be more frequent later in the diffusion process, as later adopters learn from the earlier adopters (Rogers, 2003, pages 186-187).

Organisations supporting travel planning such as the National Business Travel Network (NBTN, 2009) or the Association of Commuter Transport and Travelwise (ACT/TW) (ACT/Travelwise, 2008) offer best practice guidance, networking opportunities and training, so that late adopters can learn from the experience of early adopters.

It may have been helpful to use adaptability or re-invention as an attribute, with issues such as travel planners learning from the experience of others in trialability, or how the adaptability of a travel plan helps it to match the company's culture more closely could be included. Adaptability or re-invention of a travel plan, from the comments made about the process of an innovation, appears to be an important aspect of the maturing travel plan and therefore, in future research should be considered for inclusion.

13.4.2 Subdividing compatibility

The main problem that did occur with the use of the attributes as a framework for analysis was that *compatibility* became a very large category, and to an extent lost some of the subtlety of the data. The use of an additional attribute such as *adaptability* may have helped to overcome this

problem. Topics covered in the attribute compatibility such as the need to adapt to organisational change, diverse cultures, or to different office locations, divisions or working practices, could have been analysed differently under another attribute. The attribute compatibility covered such a spectrum of information that perhaps the different levels of compatibility were lost as a result. There are possibly three main levels of compatibility.

- Policy level
- Corporate level
- Individual level

The policy level began to emerge through the topic of external stakeholders. This and the individual level were quite clearly defined and small. However, the corporate level was not as clearly defined. It emerged through a number of topics including organisational goals, culture, working practices and so on. This is not surprising as the corporate level is heavily reliant on the culture of the organisation, which was described in Chapter 11, Section 11.3 as a 'complex array'. The cultural aspects of an organisation also influence the individual level of compatibility. Here issues of demographics, personal values and lifestyles play an important part. The larger volume of data at the corporate level could be a reflection of the way the interviews were structured to concentrate on this level. Due to the complexity of the culture of an organisation, it may have been unrealistic to expect this attribute to have been any smaller or less complex.

13.5 What was neglected by the use of Rogers' '*Attributes of an Innovation*'

A criticism of the use of the attributes to disaggregate the data was that the context of the case studies was lost, and it was not possible to understand the case studies as a whole. What also needs to be considered is the impact of the position of the travel plan within the organisation's structure, and the role of champions.

This next section will review the case studies as a whole firstly by positioning them on the case study spectrum developed in Chapter 5, Section 5.3.2.1, and then summarising them. The intention of this is not to judge how successful a particular travel plan has been, but more to understand the extent to which they are embedded and the contextual factors that affect this embedding. The section will then move on to consider the role of champions within each case study, as these were seen by Rogers to be an important factor in the adoption of an innovation.

13.5.1 Case study context

To help understand the context of the case studies, they have been mapped onto the case study spectrum of characteristics, Figure 13-1, first described in Chapter 5.

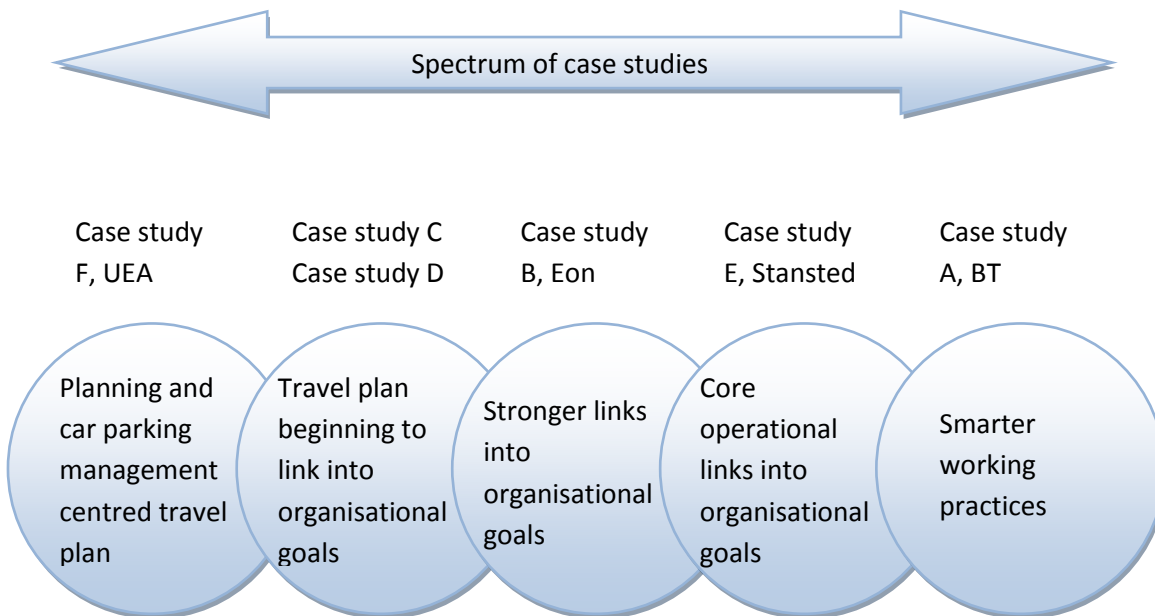


Figure 13-1: Case studies mapped onto spectrum

Case study F, UEA implemented the travel plan to manage car parking demand and to assist with future planning applications. These have remained the main motivations and few links have been developed into other parts of the organisation. As a result the travel plan has largely been siloed within Estates or FM. Although the travel plan has been in existence for a considerable period of

time, there is still resistance to the concept from management, staff and students. What is notable is that the travel plan has neither really developed nor changed in the eleven years of existence. One of the main problems is that of marketing within the University. This could possibly change with the appointment of a new Vice Chancellor who is keen to promote the environmental credentials of the University.

Case study C implemented the travel plan in response to a planning consent when a new corporate headquarters was built. Part of the planning condition limited the number of car parking spaces available at the site. The travel plan was initially very well funded and supported by management. Over time the specific budget for the travel plan has been lost, but the management support does still exist. Visibility is high both amongst staff and management and there are links to other areas particularly Environment, Health and Safety who are willing to support the travel plan through their promotional events. The travel plan has begun to lose its identity as it becomes embedded into the way the organisation works, although it was felt that links with other departments could be further strengthened. When a reduction in the business travel budget was implemented, this gave additional impetus to the travel plan to manage the additional staff on the site using the meeting facilities. The travel plan could be about to face another fresh challenge in supporting the new CEOs plans to introduce smarter working practices.

Case study D implemented the travel plan as part of a planning consent when the organisation re-located to an out of town site in 1992. At this point the travel plan was well supported by management including HR and the unions. It was rejuvenated in 2005 to manage increasing pressure on car parking capacity. Subsequently these links to other areas have diminished and the travel plan has lost its identity and become marginalised. The travel plan measures still exist and are reasonably well used, but this is mainly due to the problems of parking on the site. It was accepted by the travel planner that there was a need to refresh and raise the profile of the travel plan, which has not occurred in recent years as the post was vacant for some time. The

communication method used within the company relied largely on the intranet for the dissemination of information. This appeared to be a barrier to promoting the travel plan. A major hurdle to further development of the travel plan is a lack of support from senior management, who are unwilling to lead by example. The appointment of a new CEO has not improved this situation as his aim is to make the organisation less 'touchy, feely' and more business focussed.

Case study B, Eon implemented the travel plan on a voluntary basis to help manage car parking demand. It was rejuvenated in 2006 when a travel planner was for the first time in the position full time. It is linked into a core organisational aim to reduce both operational and non-operational carbon emissions, an aim of the CEO. Although the links to other departments are not strategic, the context for the travel plan is unique amongst these case studies because of the number of sites involved, each requiring individual attention. The profile for the travel plan is high, with constant promotions and refreshing of the idea. Face to face communication through roadshows at the different sites appeared to be a good way to overcome the problems of excessive information through electronic sources. Issues of reducing demand for car parking and improving access, particularly to out of town sites are beginning to link the travel plan into operational needs of the organisation and are key to the successful adoption and maintenance of the travel plan.

Case study E, Stansted implemented the travel plan in response to a planning consent. Future planning applications for expansion of the airport remains a major motivator. However, expansion involves the use of the travel plan in an operational manner. Expansion is projected to increase staff numbers from 10,600 to 16,800 and passenger numbers from 22 million to 35 million. The travel plan is needed to ensure access for both the additional staff and passengers to the airport. Without the travel plan, staff car parking could become a problem, as pressure and demand for staff parking increases as a result of space available for parking reducing, whilst at the same time the staff numbers are increasing. This is partly to accommodate additional buildings within the

existing site, but partly because staff parking is needed as parking for the additional passengers, which is a revenue stream for the business. The travel plan has remained high profile, largely as a result of the communication culture at Stansted and the visibility of the Commuter Centre. The travel plan is seen as a strategic necessity for the efficient functioning of the airport.

Case study A, BT has not implemented a travel plan, but introduced smarter working practices.

This process first started in the mid 70s, but was not adopted as a companywide strategy until the mid 80s. Reducing transport was not the main aim of smarter working, but the aim was to work more efficiently and to reduce costs. The positive effects of reducing transport were an added benefit. The smarter working practices are operationally embedded into the day to day working of the organisation to the extent that the concept has lost its identity. These working practices are fully supported by senior management and strongly linked into the culture of the organisation. As telecommunications is a core product of BT, the change in working practices and use of the technology is a core process to demonstrate how to use their products and services.

These brief case study overviews begin to show the level of embedding of the travel plan and some issues surrounding methods of communication, longevity, operational links and management support that could affect the successful adoption. But what also contributes to the level of embedding is the structure and position of the travel planner.

13.5.2 Structure of the organisation

This section will consider the structure of the organisation, before moving on to explore the effect that the position of the travel planner has on the successful adoption of the travel plan. Chapter 4, Section 4.4.4 described Mintzberg's *'Structure in Fives'*, outlining the five organisational forms,

1. Simple structure
2. Machine bureaucracy
3. Professional bureaucracy

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4. Adhocracy
5. Divisionalised form (Mintzberg, 1993).

By the virtue of the size and nature of the case study organisations and the organograms supplied by some of the organisations in Appendix 13.1, they would all be considered to be divisionalised forms, apart from UEA which is a professional bureaucracy. However, the extent to which the travel plan covers all the divisions varies between the organisations. BT, in the development of smarter working practices, has had to develop strategies for all the divisions of the organisation. In the same way Eon and Stansted travel planners have had to adapt their strategies to be compatible with the different sites and companies respectively. What these organisations have done is to work to adapt to the different requirements of the different divisions, with the result that the travel plan offer is constantly refreshed and updated. In contrast case studies C and D have concentrated on one site where the extent of division is more limited, so that need to refresh and update the offer is less critical.

The fact that UEA is a professional bureaucracy perhaps explains some of the problems of compatibility that were encountered with the introduction of the travel plan. Mintzberg describes how authority of a professional nature is exercised through the power of expertise, where the supporting roles such as estates are seen to be there to maintain the professional body. In a professional bureaucracy, the professionals control their own work and seek collective control of administrative decisions such as hiring and promotions. Mintzberg describes the emergence of parallel administrative hierarchies, where one is democratic and bottom-up for the professionals and a second that is a machine bureaucracy for the support staff which is top-down (Mintzberg, 1993). To try to introduce or impose a policy in a top-down manner into the professional body is very likely to encounter the same issues of compatibility seen at UEA. However, it could be more readily accepted within the support staff.

13.5.3 Position of the travel plan

Another way to examine a travel plan in relation to the structure of the organisation is to look at the position of the travel planner within an organisations structure, an issue touched on in Chapter 8, Section 8.3.1. Mintzberg developed a structure of an organisation again in five parts, Figure 13-2, the operating core, middle line, support staff, technostructure, support staff and the strategic apex, as described in Chapter 4, Section 4.4.4.

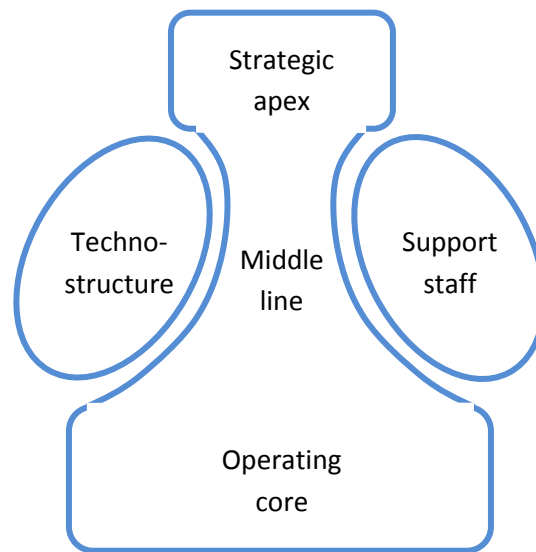


Figure 13-2: Mintzberg's five basic parts of an organisation (Mintzberg, 1993, page 11)

The role of a travel planner has to fit into these structures. The actual part of the structure that the travel planner is positioned in varies between the case studies, as illustrated in Table 13-1.

BT is slightly different from the other case studies in that there is no specific person in the role of managing a change in working practices, but this is interesting in itself. The fact that it is present and linked to all departments shows that it is fully embedded into the functioning of the organisation. This was illustrated by a comment made by the HR Director at BT.

“I think that for me is what makes [smarter working] work, because it is embedded. But if you always see it as a separate strand that is managed by facilities or HR or somebody, it never becomes part of your business plan.” (HR Director, BT, Case study A).

Case Study	Position of travel planner	Links to other areas
BT Case study A	Present in all departments	Linked to all departments
Stansted Case study E	Technostructure	Middle line Operating core
Eon Case study B	Technostructure	Middle line Operating core
Case study C	Technostructure Support staff	Middle line Operating core
Case study D	Technostructure Support staff	No real links
UEA Case study F	Support staff	Operating core

Table 13-1: Position of travel planner within organisational structure

Stansted and Eon have travel planners located within the technostructure, which means they are able to set standards within the organisation. At Stansted the travel planner is actually known as the Surface Area Access Strategy Manager and so is setting the standards for surface access across the site. At Eon the travel planner is within Workplace Improvement and one of their roles is the monitoring of non-operational carbon emissions. Both of these case studies have strategic links to middle line management and the operating core.

What is interesting is that all three of these case studies are positioned at the right hand end of Figure 13-1, and these are the case studies where travel planning appears to have become more organisationally embedded. It is notable that the two case studies where the travel plan is owned by two departments, one in the technostructure and one in the support staff, appear to be less well linked into the organisation’s own goals and more driven by local authority goals. The big difference between these two case studies, is that case study C has good links into the middle line

and the operating core, so should the planned changes in working practices occur, there is a better likelihood that the travel plan will be part of the process. However, case study D does not appear to have these strategic links and so is more likely to be marginalised when strategic decisions occur. UEA, the most local authority centred travel plan, has remained within the support staff area, so the role has little strategic influence within the university. Perhaps because of this, and the poor image that the travel plan seems to have developed, it is not surprising that the links to other areas are poor.

13.5.4 Champions

The position of the travel planner is an organisational decision and is a reflection of the importance placed on the travel plan by the organisation. However, the personal qualities of the individual can also play an important part. Rogers recognised the importance of champions in the successful adoption of a travel plan, (Chapter 4, Section 4.4.6), suggesting that a champion should be a 'charismatic individual who throws his or her weight behind the innovation' (Rogers, 2003, page 414). He also suggested that a good champion would possess the following qualities,

- i. Occupied a key linking position in their organisation
- ii. Possessed analytical and intuitive skills in understanding various individual's aspirations
- iii. Demonstrated well-honed interpersonal and negotiating skills in working with other people in their organisation (Rogers, 2003, page 515).

It was certainly the case that the travel planners at Eon and Stansted matched these criteria for a good champion. Both were positioned in the technostructure with strategic influence. The travel planner at Eon came from a sales and marketing background so was particularly used to the negotiating role. This is in contrast to case studies C & D, where both had people within strategic positions and both appeared to have good interpersonal skills, but they seemed to lack the real charisma and enthusiasm to drive the travel plan forward. UEA was different again, where the

travel planner was an enthusiastic champion of the travel plan, but was not in that key linking position, so lacked the position of authority to successfully have much influence. The case studies would therefore appear to support Rogers' assertions of the importance of the characteristics of a champion.

13.6 Conclusions

There appears to be a pattern emerging from the case studies through analysing the contextual factors of the organisation. Trends have emerged in the case studies between the position of the travel plan on the case study spectrum, the position of the travel planner, the degree of dispersal across the divisions and the degree to which the travel planner is a champion.

Those case studies that are further to the right of the spectrum, Figure 13-1, seem to be more embedded. One of the reasons for this could be the extent to which the travel plan has been adapted to meet the needs of a range of divisions, with the result that it is constantly refreshed and re-invented to sell the idea to each division. BT is probably the best example of this at the furthest end of the spectrum, where the smarter working practices are now fully embedded across the whole organisation. To do this they have had to adapt and develop the working practices to be compatible with all the different divisions and working groups. Eon and Stansted have achieved this to a lesser extent. Eon has adapted the basic travel plan to match the needs of the different sites, while Stansted, which is similar to a large business park or retail site, has had to adapt its offer to match the needs of the various businesses on the site. The other point to note is that in the case of both Stansted and Eon the travel planners are charismatic champions and positioned in a strategic position within the technostructure.

Those organisations that have concentrated on one site or division are further to the left of Figure 13-1. These case studies have not had to re-adapt to the same extent and as a result may have stagnated. Links across to other parts of the organisation are not as strong, and interestingly the

role of support staff within the travel plan is greater. These case studies to the left of Figure 13-1 also have less charismatic champions.

Unfortunately, what is hard to glean from the case studies, is the extent to which it is the organisation or the individual that is the driving factor. Is the most important factor the organisational decision to employ a certain calibre of staff and place the role into a certain part of the organisational structure, or is it because a certain calibre of staff are less likely to promote themselves and the travel plan to be in that more strategic position? Possibly it is a mixture of both.

These contextual trends would seem to support the assertions made by Rogers that innovations in this case which are re-invented are more enduring, and rather than adopted at a faster rate, adopted more extensively. It would appear those travel plans that have been re-invented and adapted to fit a range of divisions or locations have become more embedded and diffused across the organisation more readily.

13.7 Specific topics not covered by the attributes

Having completed an analysis of the impacts of the contextual factors of the organisation using elements of Mintzberg's *'Structure in Fives'* (Mintzberg, 1993), this chapter will now go onto explore the specific topics that were not covered during the analysis using Rogers' attributes.

There appear to have been three main areas that did not come through from the analysis, that of;

- Business continuity
- Links to other transport areas within business
- Benefits and remuneration package

These were not areas that were discussed in any great detail, but are areas that could be of importance in helping to mature and embed a travel plan by developing the business case.

Business continuity

Business continuity is the process of ensuring that business is able to operate in the event of natural disasters such as floods or high winds or other disruptive events, such as the tube strikes in London in June 2009 (BBC News, 2009), the terrorist attacks on the London transport system in 2005 (BBC News, 2008a) or a flu pandemic. Interestingly business continuity was not seen as an important motivation for travel plans or smarter remote working practices, even though business loses money when they are unable to operate normally. Travel plans can support business continuity where modal shift to public transport, walking, cycling or car sharing is promoted, particularly when there are problems with the supply of fuel, such as the blockades of the oil depots in 2000 (Sky News, 2007). Teleworking is an ideal way to ensure business continuity in those businesses that remote working is feasible. However, the only case study that accepted this as a motivation was BT.

“You look at why BT was effective in managing other people’s communication needs during terrorist crisis. Because our own people knew that they only need to travel when it really mattered and we could do most things remotely for people because of the way we were set up” (HR Director, BT, Case study A).

It is not surprising that BT is aware of the benefits of remote working for business continuity as this is a product area that they market. However, the lack of realisation for other businesses that will undoubtedly have disaster recovery programmes is more surprising. As part of a discussion with Sally Cairns (Cairns, 2009) an example was given of where she had emailed an employee in central government during the June 2009 London tube strikes, only to receive a message that this person was on holiday. The reality was that the person was working from home, but unable to access their emails.

The lack of acceptance of the use of travel planning as a way to ensure business continuity is not unique to this country. A survey conducted of members of the *'Best Workplaces for Commuters'* program in the US had some recognition of the benefits, but it was still rated of low importance. The research found that none considered it a purpose of their commute programmes to a 'very great extent', thirteen to 'some extent', twelve to a 'small extent' and the majority, twenty seven, 'not at all' (Winters, 2007). Whether there is potential to develop business continuity as a motivation is unclear from the interviews, though there are obvious potential benefits that could be exploited.

Links to other areas of transport

An area that was touched on in the previous chapters were the links to business travel for travel planning and the impact that a change in business travel policy could have on car parking demand and other ancillary services. What was not covered was the way that the carbon emissions from fleet vehicles have risen in importance and the impact this has on travel policy within business.

"They made announcements about fleet cars reducing down [carbon emissions] to 165gCO₂/km, so it doesn't matter where you are in the [company car] scale; it's going to come down. People were a bit scared; it has got rid of a lot of the top end, but your bog standard company car, your Mondeo or Avensis is still there, comfortably in at around 150g, and they are still getting the specification they want, so they are seeing it as a good thing" (Travel Planner, Eon, Case study B).

There is also interest in reducing emissions from the commercial fleet, partly through the introduction of technology, but also through behaviour change.

"We are working with other manufacturers to see how we can lower the commercial fleet, which is a lot harder. Much of that is about loading techniques as well" (Travel Planner, Eon, Case study B).

The other aspect of this topic is the concept of developing sustainable end to end travel either for the commute or for business travel.

“I am looking at bringing in three hybrid mini buses as a trial at some of our sites that are close to train stations or bus stations, so we can ferry people between the two” (Travel Planner, Eon, Case study B).

“Our energy wholesale business unit is very good. They are very good at pushing rail travel. Why are the people driving long distances? Rail travel to the destination, you have then got to look at a wind farm off the coast. Get your hire car when you get there. They pick it up from the train station when they arrive. The whole business is signed up to teleconferencing, video conferencing, things of that nature.” (Travel Planner, Eon, Case study B).

These examples show the start of an understanding of transport in a more holistic way, so that fleet vehicles are included, although the carbon emission elements could be driven by the requirements of the *Greenhouse Gas Protocol* discussed in Chapter 12, Section 12.5. What is perhaps more interesting is the inclusion of end to end trips and virtual technologies as one concept, so starting to develop a wider access strategy.

Benefits and remuneration package

The final area that was briefly mentioned, and could be of use in helping to embed a travel plan, is that of the benefits and remuneration package. Benefits that could be included are things such as subsidised public transport, Bike 2 Work schemes, interest free loans for season tickets and the ability to work from home. On the whole these items are not included in benefits packages, although Eon was looking to include a salary sacrifice scheme for buses.

“No, [travel plan measures] are not, simply because we haven’t had a chance to link any of them in. The one that we want to add in for next year is bus salary sacrifice and roll that out and we are working to that now with PM&M” (Travel Planner, Eon, Case study B).

The ability to work from home is seen as a benefit to staff and can be a topic of negotiation or discussion during an interview. However, it is not included in the benefits package, as once agreed it is treated as a term or condition of appointment. However, the inclusion of the benefit in recruitment material is more common.

“I think we don’t...for example we issue a total remuneration statement to our people every year. But we don’t say – oh by the way you can work flexibly on the bottom of it. But definitely in all of our material, in all of our recruitment material, in a lot of our retention material” (HR Director, BT, Case study A).

The lack of inclusion into the benefits package is probably more a reflection of the way in which these packages work, in that they include a range of benefits which an employee could sign up to. This range can include pension schemes, share schemes, and in some cases vouchers for child care. In this respect interest free loans would fit well and in some cases they are included. Incorporating, where possible, travel plan initiatives in the benefits package could be an effective way to mainstream the travel plan.

These were the only three key issues that were not picked out through the analysis process using the attributes. This suggests that using the attributes as a framework for analysis was broadly successful.

13.8 Implications for travel planning research

This thesis has explored travel plans in a different way to previous research by investigating what maintains a travel plan, rather than the initial adoption phase. To do this Rogers’ *Diffusion of*

Innovations (Rogers, 2003) was used, particularly the *Attributes of an Innovation* and the *Process of Adoption* of an innovation. This has been combined with aspects of organisational theory to analyse the case study data. The research has looked beyond the scope of the travel plan to understand how it is benefitting the organisation past merely the bounds of transport. The use of this method generated different perspectives to travel plan research and highlighted where the holes in the existing research are.

13.8.1 Gaps in the research

The main gap in the research is that of quantifying the benefits to an organisation of a travel plan. There is a wealth of data that supports the social, environmental, efficiency and cost savings from the use of smarter working practices. However, the only data that is recorded for travel plans refers to modal shift of SOV numbers, and in a limited number of cases, the costs saved by reducing car parking capacity, usually through the disposal of overflow parking. Data on the other benefits of recruitment, retention, absenteeism, carbon savings and so on are not available or gathered.

However, there are three main problems with the collection of the data. The first and most importantly is that the data are not collected. Based on research undertaken by the Chartered Institute for Personal Development, data on the reasons for staff turnover tend to be HR issues such as change of career, promotion outside the organisation, level of pay, lack of development or career opportunities, childcare, redundancy and so on (Chartered Institute of Personnel Development, 2008). But reasons to leave relating to travel or access are not mentioned. These sorts of questions do not appear in exit interviews, although anecdotally people leave for exactly these reasons. Data about the carbon savings through modal shift are not available either. Nevertheless, it is accepted that attempts are being made by TfL through their travel plan monitoring system iTrace to monitor absenteeism rates across the modes of transport (Macbeth, 2009).

The second issue are the reasons why these data are not collected. This is partly due to the complexity of collecting the data. The travel planner at Eon talked of including information about the travel plan at recruitment events, but was unsure how he could monitor the impact of this information on recruitment. With carbon emissions, the monitoring for the commute to work is not a statutory requirement under the *Greenhouse Gas Protocol*, nor included in ISO14001. As yet the monitoring tools have not been widely taken up, and as the Environmental Manager at Stansted pointed out there are still methodological problems with these tools that question the validity of the data. Part of the problem is more fundamental than this. Because departments outside that of the travel planners do not perceive that the travel plan benefits their department, they are unwilling to monitor the potential benefits, but obviously without this data it is hard to prove the need for the monitoring.

Another problem is that some of data would be hard to attribute purely to a travel plan, so there are issues of mixed causes. Even with the work that TfL is doing to identify absenteeism rates across the modes, mixed causes could still be a factor. Factors such as income levels, health and work related stress could all have an impact. So the actual process of obtaining robust and valid evidence is not simple, and possibly explains why this evidence as yet does not exist. However, at the very least, including travel and access in staff exit interviews, would be a start to understanding this situation. The monitoring of the business benefits of a travel plan will be returned to in Chapter 14, Table 14-1.

13.8.2 Which way forward for travel plan research?

So what does all this mean for the research of travel planning in the future?

There are three aspects that have been unique about the research methods used in this thesis.

- The interviews carried out with individuals in a range of positions, not just the travel planner.

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- The use of Rogers' *Diffusion of Innovations* as an analysis framework.
- Exploring the organisations contextual factors using an element of organisational theory, Mintzberg's *Structure in Fives*.

The use of these elements has highlighted the importance of ensuring a travel plan is relevant to an organisation and is compatible with the culture and existing systems within the organisation. At the contextual level it has explored what the travel plan means to the organisation as a whole. The case study work that has been done in the past has not considered this element in such detail.

Under the current methods of implementing a travel plan, either through the planning process or on the voluntary basis there is a need to have a better understanding of the business perspective of a travel plan. Travel plans developed as a result of a planning consent that is required to be in existence for a number of years, will need to develop and mature, so that when the requirement expires the travel plan remains. By developing a better understanding of how a travel plan is adopted and embedded, the impact of organisational structures and the position of the travel planner can help to enable this process. This is also true of voluntary travel plans that are developed to address a particular need in the organisation. As long as that need exists, the travel plan will most likely continue. But there is still a need to support this process of adoption.

Ultimately, how travel plans are researched will depend on what the aim is perceived to be. If it is perceived to be a car parking and congestion management tool, then it will continue to be researched in a transport studies frame. If the emphasis shifts to one of managing carbon emissions, then the targets and measurements of success will be reductions in carbon emissions. The research will then concentrate on developing better tools to measure these emissions. However, if the importance of a travel plan centres on the wider benefits to business then the emphasis of the research will be more business studies orientated, as this thesis has begun to do.

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What this thesis has shown is that the original simple concept of a travel plan, in some cases, has begun to develop into a much more complex business management tool. If travel plans continue on this route a more sophisticated method of analysis, perhaps more closely aligned to business studies, will be needed to fully understand the complex relationships across the organisation.

This area of using business studies methods for research into workplace travel plans is an area that could be developed in further research. One area could be to further understand and explore the links and connections shown in the figures used in Chapters 10 to 12 through a method such as complexity science. The other possibility would be to explore the business studies or management techniques that bring about organisational and structural change and explore how they could be applied to the introduction of a travel plan. However, this is an area for further research and beyond the scope of this thesis.

Chapter Fourteen

14 Implications for workplace travel plan practice

14.1 Introduction

Travel plans have been running in the UK since the 1990s. This research has shown, for some businesses, the concept of a travel plan has moved on from complying with a planning application or a car parking management tool, to something that could possibly be thought of as a business management tool. This could be a turning point in travel planning; where there is an acceptance that travel plans need to be re-framed as business management tools rather than car parking or imposed planning tools.

The intention of this chapter is to draw together the arguments developed in the preceding chapters and implications for the embedding workplace travel plans. The chapter will start by considering what the purpose of a travel plan could be, depending on whether you are central Government, local government or a business implementing a travel plan and what this means for monitoring and developing an evidence base. The focus will then be on travel plans within business, and aspects of the culture of the organisation that affect the adoption of a travel plan to that point of embedding, considering what embedded actually means and the extent to which it is desirable. The chapter will conclude with some recommendations and observations on the role of local and central Government in travel plans.

14.2 The purpose of a travel plan

There are four main groups that have an interest in workplace travel planning.

- i. Central Government
- ii. Local Government
- iii. Business

iv. Individual users

The purpose and goals of a travel plan can be very different for each of these groups, which can lead to a conflict of goals, that can limit the levels of adoption of workplace travel plans, particularly on a voluntary basis. Central and local Government on the whole have similar aims and goals. This is not surprising as many of the local government (authority) goals are set by central Government. As Chapters 2 and 3 showed, the main difference between these two levels of Government for travel planning, is that where local authorities have developed a method of engaging business and understand their role, (how efficacious it is may be debatable), central Government's role is less clear. For business, the main problem with the adoption of travel plans is that the aims and goals of central and local government are very different from their own. Local authorities are trying to reduce congestion and develop sustainable transport systems, whereas a business is looking to improve efficiency and become more profitable and competitive. Figure 14-1 illustrates this dichotomy between the positions of these aims and goals of business and that of government sectors.

On the vertical axis are the two extremes of regulation. At the top is 'self-regulation', for example a voluntary travel plan. At the bottom of the axis, 'regulated', this at present in the UK relates to a planning obligation or condition as part of a planning consent. On the horizontal axis are the extremes of whether a travel plan is linked into core business functions or not. When a travel plan does not link into core business functions, it is not part of what Mintzberg would describe as the *operating core*, but concentrates on transport issues such as modal shift or a reduction in SOV, which are likely to be seen as periphery and possibly positioned within the *support staff* area (Mintzberg, 1993).

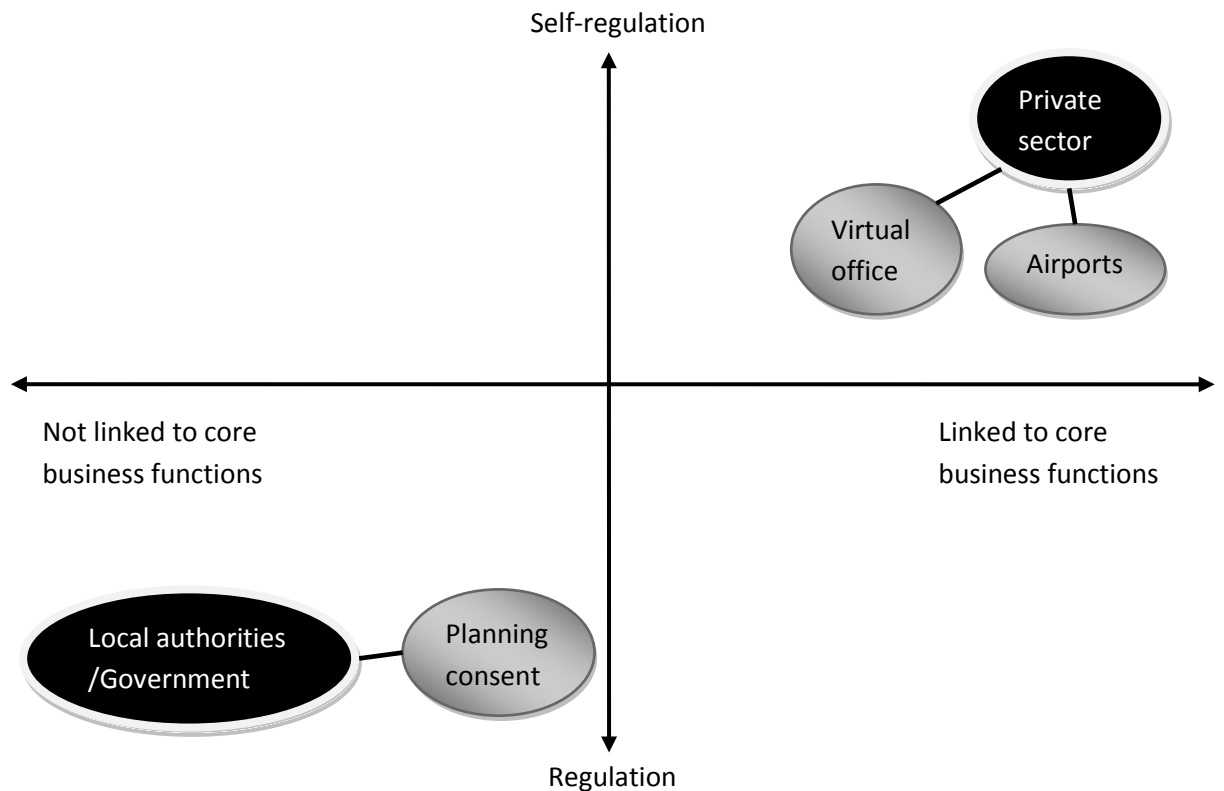


Figure 14-1: The relative positions of Government and the Private Sector for a travel plan

However, travel plans can relate to core business functions when they become integral to the way the organisation works. The most obvious example is when the organisation is a transport operator themselves, such as an airport, where access is paramount. But only a limited number of organisations are transport operators. Nevertheless, a travel plan can become core to the business functions as part of smarter working practices that are embedded into the day to day function of the organisation. These working practices go beyond the *operating core* to become integrated into of all Mintzberg’s five parts of an organisation, as described in Chapter 13, Section 13.5.2. Alternatively, it could be a travel plan that has developed to support a range of organisational needs, including recruitment and retention or Corporate Responsibility issues involving the environment or social concerns, so becoming focused within the *technostructure*.

In contrast, local authorities and Government are understandably concerned about managing congestion at the macro level of the transport network, and see travel plans as a way to help

mitigate the need to build additional infrastructure. The main method for local authorities to engage business in travel planning has been to regulate through the planning process. Local authorities have also been working through the voluntary route, but it should be noted that in the survey (Chapter 6) (Roby, 2010), none of the voluntary travel plans were instigated as a result of local authority intervention. The problem is that the aims and motivations of Government and local authorities concentrate on regulation and transport initiatives that are not considered core to business, and so are firmly fixed in the bottom left hand quadrant of Figure 14-1 of regulation and no link into core business functions.

In contrast the private sector would prefer to self-regulate, which can work if the travel plan is seen to help the business to become more efficient and profitable, so pushing it towards the top right hand quadrant. For travel plans to deliver a good business case to the private sector, they need to be beneficial to an organisation's wider goals, and not necessarily transport related. The measures of success need to be meaningful to an organisation, and are unlikely to be those of modal shift and a reduction in SOV numbers. Even for transport related benefits of a travel plan within business, the measures of success concentrate on the micro level, which is in control of the organisation. The measures include whether the car share bays are full, has the need and cost of the overflow car park been removed, has overcrowding of the car parks and congestion accessing the site been alleviated?

However, there are a range of issues which are not directly transport, but are affected by it, and are more important to a business. The health and wellbeing of staff affects productivity, so reducing the stress caused by parking problems or lateness to work can potentially deliver productivity gains. Problems of retention where staff are unwilling to make 'that journey' everyday, or recruitment because access is only possible by car, can be overcome if access is improved. Offering discounts on public transport, or the ability to work virtually can improve the capacity of the organisation to employ the best talent, because they are seen as the employer of

choice. The facility to work virtually means that location is less of a barrier to employment, so the organisation is able to deepen the labour market. Should the organisation be in a position to expand, additional staff will be needed, becoming an employer of choice aids this process, particularly in areas of high employment. But also by managing the car parking and office capacity more efficiently, it is possible to manage the expansion within the existing site so saving money re-locating or acquiring more office space. Involving wider business objectives creates a more holistic approach to travel planning that could include working practices, business travel and other business goals, so that it is no longer a peripheral commuting management tool.

These are obviously very different goals from those of Government and raises the question what should the measures of success be? With such a diversity of goals and potentially measures of success between these different sectors, one definition of a travel plan is too narrow. Perhaps a different definition for each of these sectors that actually describes what a travel plan means to them would be useful. The next two sections will begin to explore the measures of success and definitions of travel plans.

14.2.1 The monitoring of travel plans

Chapter 3 noted that the monitoring should be done at a variety of levels,

- The road network
- The site level, SOV and modal shift
- The business benefits level
- The individual level

In practice monitoring is largely not occurring at any of these levels. At the macro road network level, monitoring does occur through the traffic statistics to show overall traffic volumes, but there has been little work to determine the effect of travel plans on national traffic volumes. In fact the concern is that any traffic volume savings from a travel plan are lost to induced demand

(Rye, 2002). At the site or micro level, local authorities are reliant on the business to monitor the reductions in SOV and modal shift, but as this is not important to the operation of the organisation it is unlikely to be a high priority and therefore the degrees of monitoring are inconsistent.

At the business benefits level, again the monitoring is not happening, possibly because the business does not recognise the potential benefits, maybe because of the way the travel plan has been framed as a car parking management tool rather than a business management tool. What is interesting is that at this level there is a lot of data available, but little of it is directly related to travel planning. As the results in Chapter 10 for the attribute *relative advantage* show, many of the quantified benefits are for smarter working practices, and even where quantifiable benefits are available from, for example, a reduction in overflow car parking, there is a reticence to use this data.

Table 14-1 shows that there is a lot of quantified data available for what should be the business benefits of a travel plan. The problem seems to be that little is directly related to travel plans, but with fairly minimal additions to the current monitoring systems it should be possible to start building up a more complete evidence base. Although there may still be problems with mixed causes, particularly when a travel plan is implemented as part of organisational change such as expansion or office moves.

Business benefit	What is currently monitored	What needs to be monitored
Human Resources		
Health and wellbeing	Absenteeism and turnover rates. Effects of different working modes on absenteeism and turnover	Effects of different modes of transport on absenteeism and turnover rates
Recruitment	Ease of recruitment. Reasons to join a company e.g. working practices, pay etc.	The impact of travel plan measures on recruitment.
Retention	HR based reasons for staff to	Transport based reasons to

	leave	leave
Productivity		
Time savings	Time saved through reductions in business travel and telecommuting.	Time savings through sustainable travel modes to work.
Discretionary effort	Levels of discretionary effort from flexible working and telecommuting	Discretionary effort from reduced commute time
Punctuality	The punctuality of staff	Whether the introduction of a travel plan affects punctuality or time spent away from home
Cost savings		
Car parking	Cost of overflow parking	Cost of all car parking. Savings delivered through the introduction of a travel plan
Office space utilisation	Space and cost savings from a change in working practices	Space and cost savings from a change in working practices
Efficient land use	Car parking space used for building development	Cost savings by mitigating the need to acquire more land
Commuting costs		Cost savings to the individual from using sustainable transport
Business travel costs	Cost savings made by using virtual meeting technologies	Effect on efficiency and productivity of a change in business travel policy. Effects on demand for car parking
Environment	Carbon emissions from business travel	Carbon emissions from all business and commute trips
Transport		
Congestion levels at site	SOV and modal shift	Punctuality, stress of staff, complaints/queries to FM and security
Car parking management	Usage of car parking capacity and car share bays	Punctuality, stress of staff, complaints/queries to FM and security
Corporate Responsibility		
Stakeholder relations	Benefits of CR to company image and profitability	Whether a travel plan helps improve stakeholder relations, particularly at the local level
Values of staff	How working practices relate to staff values	Whether a travel plan fits with the values of staff

Table 14-1: Travel plan business benefits for monitoring

The individual level in contrast to the other levels, is one that is being monitored through staff travel surveys that also ask for opinions, to try to understand what would bring about a greater

behaviour change. Unfortunately, not all organisations ask these sorts of questions, and few regularly undertake staff surveys. In the telephone survey (Chapter 6), none of the organisations interviewed had completed a staff survey in the last two years. However, there is still a further level of data needed at the individual level that is not currently monitored; the understanding of which people are changing their behaviour. For example, is it a small group who could be described as the ‘*car-less crusader*’, or possibly a larger group of ‘*aspiring environmentalists*’ who forgo their drive alone trips once or twice a week (Anable, 2005)?

If the aim of Government is to engage business in travel planning, then more emphasis needs to be put into developing the evidence base of the business benefits, and accept that the impacts on the road network, though the Government’s goal, are likely to be considered an additional benefit rather than the primary purpose for business. This is the approach at BT, where business efficiency and cost savings were the primary aim of the smarter working practices, and the reductions in VMT and carbon emissions were valuable additional benefits.

14.2.2 The definition of a travel plan

In the same way that there are different levels of monitoring of a travel plan, there may be a need for different definitions of a travel plan for the different sectors. The definition in *Smarter Choices* report and that of the DfT given in Chapter 2, Section 2.4, describe what a travel plan is in transport terms, but fails to describe the business benefits or what a travel plan can mean to a business. Neither definition describes how a travel plan links into overall Government transport policy.

These definitions are in contrast to a definition given in 2005 on the TfL website, which does not mention transport and concentrates on the benefits of the travel plan to the business. Although the scope of the definition is perhaps too narrow; it should possibly include virtual technologies and issues such as business growth and recruitment and retention.

“Travel planning is an effective business management tool which can be used to generate cost savings, lending companies a competitive advantage, and which has additional benefits for the environment and the health of employees (TfL 2005).”

For the individual a travel plan means something else again. The definition could include issues such as improving work-life balance, reducing travel costs and time, improving access to work and choice. What this would suggest is that one definition to cover all these levels is too narrow and that those selling travel plans need to tailor their definition to match the target group. Where individuals have been segmented for marketing travel plan measures, there is also a need to segment for the different groups involved in travel planning, developing a travel plan definition that is appropriate for each segment.

14.3 Travel plans within business

Previous research into travel planning has largely ignored the importance of the culture of the organisation for the adoption and embedding of a travel plan. This research has shown the culture of the organisation to be an important factor in that process. The results of the case study research revealed some important factors about the impacts of culture on the degree of embedding of a travel plan. These include the position of the travel planner and calibre of that member of staff, the structure of the organisation and the degree to which a travel plan is fragmented or treated in a holistic manner. This next section will develop these arguments and consider whether travel plans are ready to lose their identity.

14.3.1 Importance of culture

Chapter 11 showed the importance of compatibility with a range of issues including company culture. Company culture involves a range of issues, including working practices, communication methods, organisational goals, attitude to the environment and so on.

The motivations for a travel plan are also likely to be linked to the company culture. Chapter 6 showed how these motivations had developed as a travel plan matures away from the externally driven regulation to internal motivations, such as managing car parking, but most notably to factors that could be considered organisational goals, for instance reducing carbon emissions, business growth and HR features of recruitment, retention and wellbeing (Table 14-2). As these motivations are internally driven, they are more likely to be linked to the culture of the organisation.

	Original Motivations	Current Motivations	Future Motivations
Regulation	47%	8%	7%
Car parking/congestion	21%	36%	23%
CSR/environmental	21%	33%	39%
Consolidation/business growth		5%	14%
Human Resources	8%	13%	11%
Fleet/ business travel			5%
Others	3%	5%	

Table 14-2: Summary of primary and secondary motivations for the original, current and future

An important aspect of the culture of an organisation is its working practices, which are affected by the goals of an organisation and the type of customers and markets in which the organisation operates. Working practices were shown in Chapter 11 to have a major impact on the successful adoption of travel plan measures, where more structured working practices were more compatible with public transport and car sharing, but flexible working practices made the adoption of these measures much harder. Conversely, where BT has adopted a very flexible

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approach to work, they successfully reduced VMT for both commuting and business travel, although this was not the main objective.

What became evident from the discussions with BT was that to implement smarter working practices it was essential to change the way the organisation communicated, and the motivational patterns used. In Chapter 4, Section 4.4.2, reference was made to Katz and Kahn's motivational patterns used to bring about compliance.

- A. The use of legal instruments or rules
- B. The use of rewards such as pay and promotion
- C. Internalising patterns of self-determination
- D. Internalising the company's values and goals (Dessler, 1980)

Within the BT model, patterns C & D are likely to be the prevalent models, but in organisations with more structured working practices, models A & B are more likely to be found. If this is then considered with Mintzberg's organisational structure, (Chapter 4, Section 4.4.4), what you would expect to see is that an organisation with a large technostructure is likely to use the motivational patterns A & B, and organisations with smaller technostructures, such as a professional bureaucracy, are more likely to use motivational patterns C & D. Organisations with large technostructures that use motivational patterns A & B are likely to be better suited to the more formal and structured travel plan measures such as car sharing or works buses. Those organisations that have smaller technostructures that use motivational patterns C & D, need a more flexible approach to changing travel behaviour, possibly through the implementation of smarter working practices.

What this illustrates is that the culture of an organisation has many elements and to successfully implement and embed an organisational change, such as a travel plan, requires adapting it to a

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wide range of factors including organisational goals, working practices, communication methods and individual values, as well as the more obvious physical specifics of the site.

As part of this culture, Chapter 13, Section 13.5.3 showed the importance of the role and position of the travel planner within the organisation. Deciding the importance of the role and where it should be positioned is part of the culture.

14.3.2 Embedding

Chapter 13 showed that travel planners positioned within the *technostructure* who were strong champions were better at implementing and embedding a travel plan into an organisation. Rather than the department in which the travel planner is situated being the important feature, it is more likely to be whether the travel planner is positioned within the *technostructure* or *support staff*, and the characteristics and belief in travel planning of the travel planner that make the difference to the success of embedding. The reliance on the characteristics of a travel planner could be an indication that the concept of travel planning is still not widely accepted and still needs to be championed.

But what does it mean to embed a travel plan? Should the aim be for the travel plan to become integral to the way the organisation works and so lose its identity, in a similar way to the smarter working practices at BT?

Two important features in the path to embed the smarter working practices at BT was the availability of robust data to prove that the organisational change was right for the business, and after running trials, a holistic approach to implementing the change. As already discussed in Section 14.2.1 there is a lack of robust data for travel plans at all levels, but this is compounded by the fragmented approach to travel plan implementation within organisations. BT explored how people worked, where they worked, where they lived and where the customers were. This is in contrast to travel plans that look at how people get to work, sometimes looking at residential

postcode data, but only to identify what modes of transport are available, or could be made available in that area. To really address transport issues within business, a more holistic approach needs to be used, where it starts from the premise of whether the journey is necessary and includes business travel and working practices.

One of the problems with travel planning is that there is a danger that it can become siloed within a department such as FM, and the wider benefits to the organisation are not realised. At the other extreme there is the potential that the wider benefits of a travel plan are not really understood or accepted by business, because they are too widely dispersed. Figure 10-7, illustrating the *relative advantages* of a travel plan, showed how dispersed the benefits are, making it much harder to produce a convincing headline figure or statement that demonstrates the benefits of travel planning. The trouble here is that in either case the travel plan can lose its identity, but not because it is embedded, but because it has stagnated and interest has been lost.

This is where the importance of the role of the travel planner becomes evident in keeping the profile high and re-inventing or adapting the travel plan to meet the changing demands of the business. Re-invention and adaptation were shown to be an important element of a successful travel plan in the *Process of an Innovation*. Re-invention and adaptation were needed to meet the changing business needs, or to make it applicable to different working groups and cultures within the organisation. The advantage of re-inventing or adapting a travel plan is that it helps it to mature through trialling new techniques and learning the best approaches for the organisation. The research showed that travel plans that had been adapted and re-invented for different sites or groups of staff were more successfully embedded than those that had not been through this process. BT and Eon are possibly the best examples of this. In BT the smarter working practices have been adapted and re-invented to suit all different working groups within the business, and with Eon the travel plan has been adapted to become compatible with the different sites around

the country. What is also interesting about these two case studies is that the initiatives have been linked into organisational goals of greater efficiency, productivity, and carbon emissions.

The danger with travel plans at the moment is that they can be siloed within FM, sometimes losing their identity and becoming marginalised or forgotten, or that they become part of the wider organisational functions and goals, but become so dispersed that the identity is lost, the reason for implementation is forgotten and again they become marginalised or forgotten. At present, travel plans do not appear to have developed to become sufficiently important to the organisation that without a strong champion they are naturally sustained. For this to happen, a travel plan needs to be linked more strongly into a small number of strategic departments in the technostucture such as HR. Until this occurs, travel plans still run the risk of being seen as a non core function that are deemed unnecessary when an organisation is looking to cut costs.

14.4 The role of central Government

The challenge for central Government is to deliver the macro level policy of sustainable economic growth through a transport system that supports the movement of people and goods in a growing economy whilst reducing carbon emissions (Department for Transport, 2007, Taylor, 2007, Stern, 2006, Eddington, 2006), also at the micro business level. The main problem is that business perceives these goals to be the responsibility of Government (CBI, 2009). On the whole unless the organisation is a transport operator, it is unlikely that they will see the need to manage transport or reduce congestion. Carbon emissions are becoming more of a priority within business, but transport, particularly the commute, is not considered a major part of this, partly because it is not a required element of the *Green House Gas Protocol* or *ISO14001*. The evidence of this research would suggest that this may be changing in some cases, but many businesses still perceive the commute is beyond their responsibility.

This research has raised the concern that the role of Government in travel planning has been confused, with the result that it has been limited to supplying advice and guidance for best practice. Possibly the role of Government should move to one of locking-in the local level behaviour change through fiscal means, incentives, the greater use of other TDM measures such as road pricing, better land use planning, or the provision of public transport infrastructure to develop a holistic integrated transport policy. This could be combined with regulation to require business to monitor and reduce carbon emissions from transport, or to require organisations over a certain size to implement a travel plan. However, the problem with any policy that *requires* an organisation to develop and implement a travel plan that does not address the business benefits, is that it runs the risk of only gaining the bare minimum of support from the organisation. The exception to this has been the airports, which were required to develop Airport Transport Forums in the White Paper *A New Deal for Transport; Better for Everyone* (DETR, 1998a), but as transport operators the business benefits of improved access are more clear.

Large projects and command and control mechanisms fit well within Government, as they are seen as the traditional role of Government, but they also need to lead by example and not be in the same position now in a further ten years, where a report such as the *King Review* suggests again that Government departments should have a travel plan.

14.5 The role of local government

What role does this leave for local authorities? Local authorities have been the delivery body of Government for travel plans at the micro level. The local knowledge that they possess puts them in an ideal position to do this; unfortunately the main mechanism through the planning process may not have been the best option.

The use of the planning process has shown to have had limited success in engaging and sustaining travel plans (Rye et al., 2008). However, this does not mean that there is no role for the planning

process in the future of travel plans. The main purpose should be to ensure that a good range of access options are designed in at the outset, reducing the need to retrofit at a later stage. What is needed is a more holistic approach to engage business where the purpose of access rather than the process of travel is at the centre of the policy, reframing a travel plan as a business process that helps an organisation to work more efficiently. This means that local authorities need to be smarter about how they sell travel plans, perhaps starting by abandoning the term 'travel plan'. There is a need to 'play the game', where travel plans are sold to business on their terms, and that local authorities put aside what they would like to see a travel plan deliver, accepting that if a business takes on the management of travel, it will have the added value of delivering improved sustainability and reduced congestion. Business is going to be much more amenable to implementing a travel plan if they believe that it is delivering benefits to them rather than seemingly expecting them to take responsibility for something they consider should be done by government.

However, it is accepted that without robust evidence to support the claims of the benefits to business it is extremely hard to engage business in the process. Currently local authorities when trying to engage business in travel planning on a voluntary basis are expected to sell the concept on faith, which is a hard task. Interestingly from this research, anecdotally, there is a feeling that people either fully understand the benefits of a travel plan and do not necessarily require a firm business case, or the whole concept bypasses them completely. Regardless of the evidence that is presented to them, they are unlikely to accept the concept, possibly Anable's *hard drivers* (Anable, 2005).

The other role for a local authority is to ensure that a travel plan is sustained. At the moment the only way they have to do this is require the monitoring of travel plans implemented through the planning process, in effect using 'sticks' to sustain a travel plan. Conceivably, there could be a role for 'carrots' in this process, where targets are agreed with the business for each year and on

achieving these targets funding is released to help develop the travel plan further. This would be a good way to help improve the travel plan and encourage a business through a financial incentive to sustain it. However, this is unlikely to be a cheap option and would no doubt need Government funding, but that would require a robust evidence base for Government to prove that travel plans are meeting the transport policy objectives in a cost effective manner.

14.6 Conclusions

It is a turning point in travel planning, where lessons have been learnt over the last decade or so. One of the important issues is the need to develop and keep updating the evidence base at all the levels outlined earlier. The DfT commissioned the *Smarter Choices* (Cairns et al., 2004a) research report, which at the time gave valuable information about the potential changes in travel behaviour that smart choices and travel plans could deliver. But now there is some historical data available, it is time to develop the evidence base to show whether smart choices and travel plans are delivering on their potential, and to explore further the would-be benefits for business.

There needs to be a greater clarity of the role of local and central Government. Central Government has largely devolved responsibility to local authorities for travel plans, but without necessarily giving them the support that is needed through an integrated transport policy, so ensuring the changes in travel behaviour at the micro level are locked-in and have an effect at the macro level. The support needs to go beyond that of giving powers to local authorities through local transport plans to levy congestion or workplace parking charges. There is a role for central Government in its capacity of command and control and the management of large scale projects to support the work that is done at the local level.

This research has begun to show that there is a need to work with business in another way, that helps an organisation to work more effectively, but how you package this in a way that engages business and who is the most appropriate person to approach within business is unclear. The

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research has shown the potential to use business studies methods within travel planning research. The use of behaviour change methods and psychological models have been accepted at the individual level. To understand better how to implement organisational change such as a travel plan, requires a better understanding of the processes and culture of an organisation.

Further work is needed to find the best ways to engage business and sustain travel plans. Figure 14-2 shows the potential routes that could be used. One option could be a predominately self regulated route, which links into core business functions by working with business to develop a new business travel policy. Business travel is the responsibility of the organisation and so there is a greater awareness of the costs involved. Reducing time and money spent travelling for business offers efficiency benefits, and therefore a more obvious route to engage business in the process of managing transport. Once business is engaged in this process, it is easier to explain the need to manage commuting travel as well, as any change in business travel policy will inevitably have knock on effects on the demand for car parking and other services.

Table 14-2 shows that the environment is one of the main motivations for travel plans currently and in the future. Presently, the monitoring of carbon emissions from the commute is self-regulated, but when part of corporate responsibility it begins to link into core business functions, so offering another route to aid embedding and engagement.

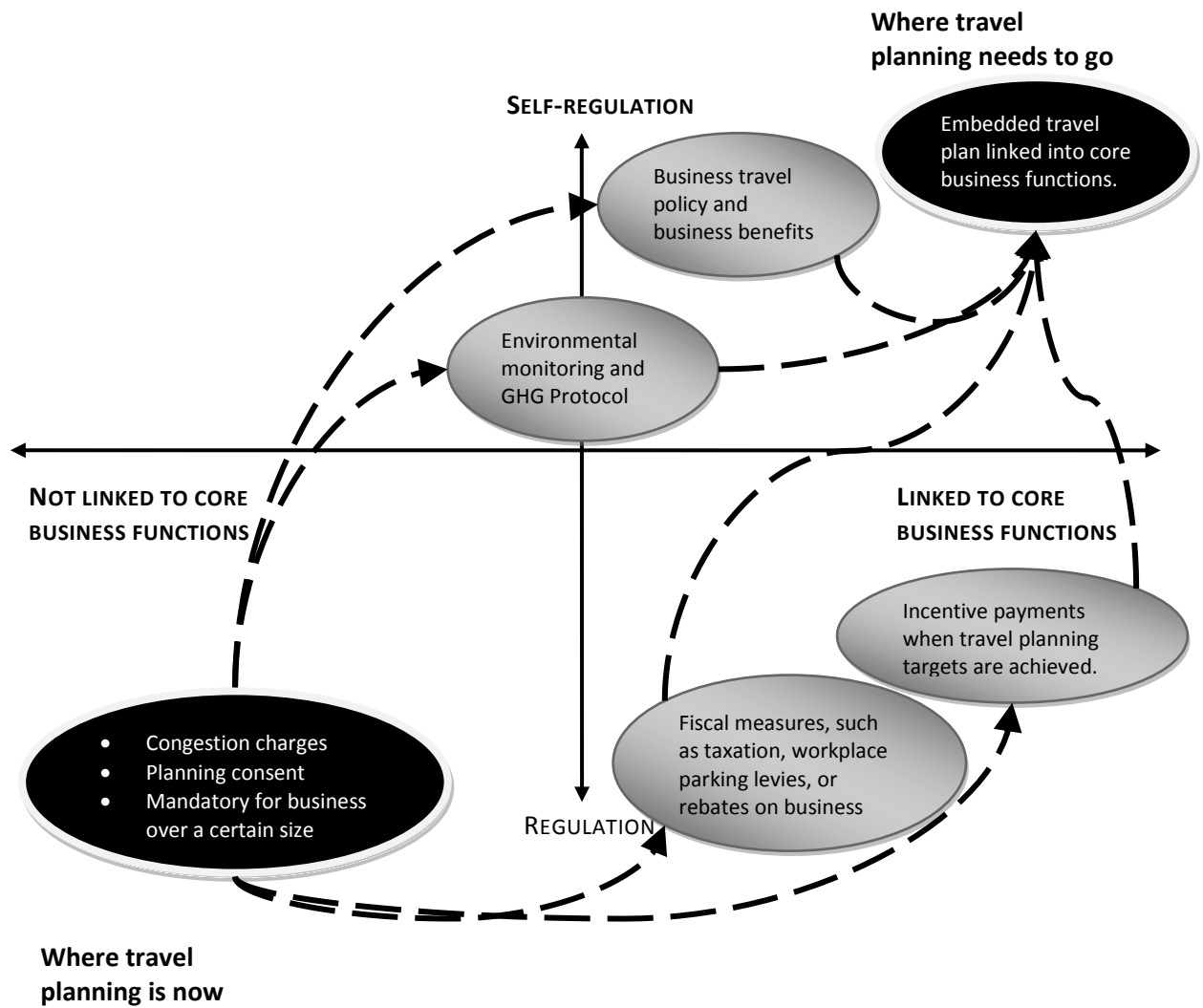


Figure 14-2: Potential routes of engagement for travel planning

From this research it is unclear that should a strong evidence base of the benefits of travel planning to business be developed, whether this would be sufficient to engage business in travel planning and sustain the process. It is likely that additional support through other routes in the regulatory quadrant, such as monetary incentives or fiscal disincentives would still be needed to maintain a travel plan until it becomes embedded. Travel planning is a comparatively novel concept to businesses, which are not accustomed to managing their transport, which is partly why the concept needs to be framed with a new identity that does not concentrate on transport, but on issues that are important to, and understood by business. The case of BT shows that by taking

a more holistic approach where travel is not the focus, but business efficiency and productivity are, it can be an effective way to engage a business in managing their transport, but as an added benefit.

In principle travel plans are an innovative and potentially effective way to achieve the DfT's goals of a sustainable transport system that support economic growth, but they are struggling to become mainstream. This is partly because the method of engagement through the planning process is too narrow, but the options for engagement have been limited by the lack of an evidence base. What is clear from this research is that the planning process and exhortation alone are unlikely to deliver widespread adoption of travel planning. What is needed is a range of measures, such as those illustrated in Figure 14-2 that work in an integrated manner to help drive travel plans from the bottom left hand to the top right hand quadrant.

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