ABSTRACT
Site-based mobility management or 'travel plans' address the transport problem by engaging with those organisations such as employers that are directly responsible for generating the demand for travel, and hence have the potential to have a major impact on transport policy. To do this effectively however, travel plans need to be reoriented to be made more relevant to the needs of these organisations, whilst the policy framework in which they operate needs modifying to better support their diffusion and enhance their effectiveness. One key barrier, is a lack of available tools for these reoriented travel plans to apply. This paper therefore seeks to help identify potential market niches where ICT developers could help address this issue. Specifically, a framework is presented and suggestions offered as to which particular areas may benefit most from ICT interventions.

Categories and Subject Descriptors
A0.0 General Literature, Conference Proceedings.

Keywords
Travel Plans, Sustainable Transport, ICT, Market Niche

1. INTRODUCTION
1.1 The Transport Challenge
Local transport systems worldwide are facing significant challenges. In particular, whilst increased car ownership and use has generated huge benefits to many individuals in society it has also led to an array of difficulties. These include increased congestion and a deteriorating environment in urban areas and to more dispersed development patterns in suburban and rural areas that become ever more difficult to serve by public transport as a result, thus pushing more people to own and use a car further exacerbating the problems. This situation is important to address because the transport system is integral in allowing people, organisations and nation states to function.

1.2 The Travel Plan Solution
Travel Plans comprise a means of delivering measures to help facilitate sustainable transport through an additional ‘mediating institution’. Otherwise known as (among other things) site-based mobility management plans, employer transport plans, commuter plans, green transport plans, from the perspective of some local authorities they can be an attractive mechanism for delivering transport improvements. This is because they can be quick, cheap and effective to introduce, whilst also being politically acceptable. By contrast, traditional approaches tend to have significant downsides. Thus, building new roads or railways can be effective but is expensive, time-consuming and disruptive; improving public transport services is acceptable but expensive and has marginal impact on car use; and restricting or charging for car parking can be cheap, quick and effective but unpopular.

These strengths of the Travel Plan concept arise because of two key differences from other transport policy instruments. First, rather than being a single policy instrument, the Travel Plan is actually a delivery mechanism of a package of several other policy instruments. This blend can be tailored to the specific needs of a site so as to offer a balanced strategy that can ensure that car use is sufficiently controlled but that incentives are accurately targeted enough to maintain the acceptability of the plan to the users. Second, Travel Plans are implemented not by the local authority, but typically by organisations such as employers. This has two key effects:

- Travel plans are developed effectively at the neighbourhood level and consequently focus directly on the transport needs of the users in that local area;
- Travel plans replace the largely negative relationship between local authority and citizen with a more positive (or at least more intense) relationship (e.g. between employer and employee).

Crucially then, Travel Plans work by developing highly user-focused balanced packages of incentives and disincentives in a partnership that involves local government, transport providers, organisations and perhaps most importantly, individual users. In theory, if done properly Travel Plans offer transport and wider benefits to individuals (through more travel choices); to implementing organisations (cost savings, happier and healthier staff and better company image); to providers (through additional business opportunities); and to government (congestion reduction, improved air quality).

Yet despite these strengths and all round benefits the take up of Travel Plans, even in countries where they have been known for a decade or more, is relatively low. Such a state of affairs is sub-optimal and derives from transport generating organisations not acknowledging their role in addressing transport problems.

1.3 Research Gap and Hypothesis
The literature (as extensively and recently reviewed in Enoch [1]), suggests that ‘traditional’ travel plans be ‘reoriented’ in five key ways so as to make them more effective. Specifically:
1. Re-oriented Travel Plans should focus on the needs of organisations more than those of transport policy makers. In other words, Travel Plans should become predominantly business management rather than public policy tools;

2. Re-oriented Travel Plans should consist of ‘easy to implement’ individualised measures that can be incorporated into existing management practices such as ISO 14001 and EMAS rather than a holistic ‘package’ of measures that are typically applied as an additional function;

3. Re-oriented Travel Plans should be implemented ideally by organisations incentivised to do so, rather than by being required to do so;

4. Re-oriented Travel Plans should be implemented at a time that is convenient to the organisation rather than as and when a local authority has the necessary resources;

5. Re-oriented Travel Plans should be promoted by faces familiar to organisations (for example management consultants, environmental experts) rather than by transport consultants with whom an organisation is not likely to have a pre-existing relationship.

As noted in point 2 above, one key barrier is a lack of available tools for these re-oriented travel plans to apply. This paper therefore seeks to help identify potential market niches where ICT developers could help address this issue.

In analyzing this, previous work linking travel plans and ICT seems to be confined to a single publication from the Energy Savings Trust [2]. This suggested six areas for development, such as measures to encourage home working, lift sharing and planning new bus services. However, while useful, this report did not appear to take a view of how ICT might support travel plans on a more strategic basis, and this is what this paper seeks to attempt.

2. FRAMEWORK DEVELOPMENT

Enoch [1] proposes that travel plans have developed along four axes – segment, scale, structure, and support. He adds that for the ‘segment’ axis, travel planners should generally target those destination-types most suitable for travel plans, namely public sector employers, transport interchanges, private sector employers, schools, and (large scale) planned events. Moreover, within these destination types, it is suggested that business trips, supplier trips, emergency patient trips to hospital, commuting and education trips offer the most promising journey types to focus on. Looking at ‘scale’ meanwhile, it is clear that larger organisations, or local networks of smaller organisations should be prioritized (rather than smaller organisations individually). Regarding ‘structure’, this relates to the five core features of the re-oriented travel plans mentioned earlier, that they be organisation-focused, easy to implement, incentive-based, and introduced at an appropriate time by a ‘friendly face’. Finally, ‘support’ refers not only direct information, regulatory, subsidy and fiscal mechanisms relating to travel plans, but also indirect measures that still may have a significant bearing on the effectiveness of travel plans. From these observations, it is possible to cross match the stakeholder groups involved in travel planning with the various motivations underlying the adoption of travel plans, which then allows more focused thought to be applied to determining exactly which grid squares offer the best prospects for travel plan and ICT interventions.

3. RESULTS

From this, it becomes clear that there are four key stakeholder groups which might benefit from ICT tools, namely Government (national, regional and/or local); the travel plan industry (transport operators, consultants, other suppliers); mediating organisations (employers, local travel plan networks, schools etc.); and users (employees, visitors, shoppers, pupils). Of these, the unique contribution of travel plans is the presence of the mediating organisations, and so one might argue that in the first instance the ICT sector should focus its efforts on providing tools to either:

1. support Government and/or the travel plan industry to specifically help these non-traditional members of the transport sector; or else

2. provide tools to the mediating organisations to provide services to their users.

Beyond this, there are obviously a whole range of motivations that could be addressed, ranging from public policy-styled society-level issues (often to do with meeting transport goals), to far more organisation-focused motivations which are often directly or indirectly associated with making or saving money, and it is the latter where the main opportunities probably lie. Similarly, focusing on incentive-based, easy to implement measures would seem to be sensible. Next, targeting business trips, supplier trips, emergency patient trips to hospital, commuting and education trips, to and from public sector employers, transport interchanges, private sector employers, schools, and (large scale) planned events makes sense. In terms of the tools, information measures are an obvious ICT contribution, but opportunities exist too for enhancing payment, charging, monitoring and enforcement facilities, as well as for improving the provision of alternatives to car use such as lift sharing schemes, teleconferencing facilities, and HR, CSR, environmental or tax management systems. Finally, ICT providers should work both with the traditional travel plan industry of transport consultants, local transport authorities and public transport operators, as well as consultants from other sectors, (e.g. management, Corporate Social Responsibility, environment, Human Resource and Tax), and ideally with their professional accreditation bodies. This is vital if organisations are to be approached at times when they are already open to trying out new tools and procedures, which offers the best hope for mainstreaming the travel plan product.

In conclusion, ICT providers should develop tools for Government/the travel plan industry, and to mediating organisations. Such tools should be incentive-based, easy to introduce and meet organisation-focused needs, and should target business trips, supplier trips, emergency patient trips to hospital, commuting and education trips, to and from public sector employers, transport interchanges, private sector employers, schools, and (large scale) planned events. Lastly, ICT providers should look to work with partners beyond the current industry.

4. REFERENCES
