Measuring the effectiveness of campaigns: lessons for mobility management from the EU TAPESTRY project

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Introduction
TAPESTRY (Travel Awareness, Publicity and Education supporting a Sustainable Transport Strategy in Europe) was a three-year EU Fifth Framework research project, concluding in October 2003. The project aimed to increase knowledge and understanding of how to develop effective communication programmes or campaigns which support sustainable transport policies and encourage sustainable travel behaviour in Europe. A key element of the project was the development of a common assessment framework to measure the effectiveness of eighteen case study campaigns, many of which took place in the context of wider mobility management initiatives.

This paper will first outline the approach TAPESTRY developed to assess every part of the campaign life cycle, from setting objectives, to examining the impacts. The model developed to assess changes in awareness and attitudes, which usually have to precede any changes in travel behaviour, will then be presented.

The TAPESTRY approach to assessment will then be illustrated by three examples of case studies, which are relevant to mobility management: a school based campaign in Geel & Mol (Belgium), a second school based campaign in Gävle (Sweden) and a bus line marketing campaign in Nantes (France).

To conclude, the paper will summarise the lessons learnt by TAPESTRY, which are of interest to mobility managers and others involved in the design, implementation and assessment of travel plans.
TAPESTRY approach to monitoring and assessment

It is now widely recognised that in order to demonstrate the value of campaigns, they must be as rigorously monitored and assessed as any other initiative, such as the introduction of a new bus line. However, as a review of existing best practice for TAPESTRY demonstrated, there are very few tools available which are appropriate for the assessment of communications or mobility management. Those that do exist tend to focus on measuring impacts on travel behaviour (e.g. modal shift away from the car) or wider impacts on the transport system (e.g. reduced congestion). Whilst these factors are important, they ignore other elements, which can help to build up a more accurate picture of the effectiveness of a campaign or mobility management measure.

The TAPESTRY approach attempts to provide a comprehensive framework that can be applied to all types of campaign. This is illustrated below (Figure 1). For each of the elements in the diagram, data or contextual information needs to be collected. In the case of those in the ‘Strategic Management’ box, it is primarily a question of recording early on the history of the campaign and the policy background which will shape its development. Here it is important to also note any other policy initiative, which could also have impacts on travel behaviour, and which otherwise might mistakenly be attributed to the campaign (non-campaign measures). The next stage is to define and record the campaign objectives. These are normally strongly linked to the policy background of the campaign (e.g. to reduce car use in a particular area).
However, wherever possible, these objectives should be specifically defined and measurable, e.g. to increase the number of staff walking and cycling to work by 25% in 2 years. The experiences of some of the TAPESTRY partners showed that the absence of measurable objectives made it very difficult for those managing the campaign to assess progress. An element which is often forgotten in the monitoring process is the tracking of decisions made at the campaign design stage. This includes the definition of the target audience(s), crucial when looking at the impacts of the campaign, and the choice of messages, materials and media.

The blue shaded box encompasses all the elements important throughout the implementation of the campaign. These include monitoring inputs and outputs, but also the way in which the campaign is managed. Again, this is an element that is often forgotten, but can strongly influence the campaign. Examples of factors that are useful to
record include the management structure for the campaign, changes in leadership and the types of partnerships formed either to help fund the campaign or to aid its implementation.

Before the impacts of any campaign can be established, there needs to be some estimation of the extent to which the messages have reached the target audience. This is traditionally measured through campaign recall, which tests whether someone can remember or recognise elements of the campaign. However, this may not always give an accurate picture, since it misses subliminal effects, which may be very important – e.g. a person has heard and been affected by a campaign message, but does not consciously remember anything to do with the campaign.

Finally, TAPESTRY developed a new model, to measure campaign impacts. The ‘Seven Stages of Change’ Model attempts to set out the stages in the process of changing travel behaviour and provide a “barometer” against which any progress that individuals exposed to a campaign make towards the ultimate goal of lasting behavioural change. (See Figure 2)
1. **Awareness of problem or of opportunities**

   Awareness of the problems caused by car traffic (e.g. congestion, pollution etc.) is the first stage. Being aware that there are problems to be solved is a pre-condition to accepting the need for action to help solve them. However, in some cases, it may not be a question of being aware of problems, but rather of the opportunities that exist to change travel behaviour.

2. **Accepting responsibility or relevance**

   The second stage is to accept a level of personal responsibility for the problems and for contributing to the solutions. Car users are unlikely to move any further towards changing their behaviour as a result of a campaign if they don’t accept that they have a personal part to play in alleviating problems caused by car traffic. Equally, this stage could also be to accept the relevance of a particular message, policy or service, having been made aware of the opportunities they may present, e.g. how a new tram line could be used to access the city centre.

3. **Perception of options**

   How alternative modes are perceived will have a strong influence on whether they are viewed as viable options in place of the car. The most important factors at this stage are related to the “**system**” (e.g. whether public transport is seen to be on time, safe, efficient, easy to use), and those related to “**society**” (e.g. an individual’s reliance on the views of other people in shaping their own attitudes and behaviour). The latter include the valued opinions of family members, friends, work colleagues and what is seen to be “normal” in their community.

4. **Evaluation of options**

   People may perceive different modes in different ways. However, the way in which they prioritise the characteristics of the alternatives may vary according to particular circumstances. People will only consider voluntarily changing their preferred mode if they have a positive perception of the alternatives with regard to factors which are most important to them. For example, if the most important factor for them is cost, they are
unlikely to favour buses if they think the tickets are too expensive, even if a bus trip is seen to be quicker than the same trip by car. This stage therefore will assess which factors are most important in travel choices.

5. Making a choice
This fifth stage relates to whether an individual really intends to change to using an alternative mode for certain trips. The establishment of an intention to change is one step before a change in behaviour can be measured.

6. Experimental behaviour
Trying out the new mode for certain trips for a short time on an experimental basis is the penultimate step. If the experience is positive, then this change may become more permanent. If, however the (positive) perceptions are not confirmed by experience, then it may lead to a re-evaluation of the options and a relapse to the old behaviour. It may also lead to a re-assessment of their actual / stated level of concern about the underlying problem, or their willingness to accept personal responsibility.

7. Habitual behaviour
The final stage is the long term adoption of the new mode for certain trips. When this stage has been reached, the old habitual behaviour has been broken and a new pattern established. This is final goal of a programme to change travel behaviour, but it is the most difficult to achieve.

The model was as a basis for drafting a common questionnaire, to be used “before” and “after” the TAPESTRY campaigns.

Case Study Examples
The following three examples illustrate the way in which the TAPESTRY assessment approach was applied.
Geel & Mol (Belgium)

The campaign in Geel & Mol engaged both primary and secondary schools in initiatives to reduce the number of pupils driven to school and promote cycling and walking. The campaign involved a total of 25 schools, with 4500 pupils. A key element of the campaign was the partnerships created between the school communities (teachers, parents and pupils), the local municipalities, the Flemish Regional Government and private companies. The campaign actions included:

- The development of school travel plans. These were then translated into a format that could be easily understood by children within the classroom and adapted into appropriate material for use in lessons. Each of the schools was requested to set a measurable objective, e.g. a 5% reduction in the number of pupils in the 9-12 year old age bracket being driven to school.

- The creation of 'traffic-educating routes' (a signposted route for pedestrians and cyclists which enables pupils and parents to cycle and walk safely, whilst learning how to do so in real traffic conditions).

- A “TAPESTRY project week” held in the last week of September 2002, which involved a mix of fun and serious activities for pupils and their parents, such as the launch of the “traffic educating routes”, a car free school day and theatre performances.

A sample of 534 pupils, mostly in the 9-12 age group, were questioned before, and 431 after the campaign, to measure the impacts on their attitudes and behaviour in relation to their journey to school. As with other TAPESTRY campaigns focusing on children, this involved developing a special version of the common questionnaire. A draft version was tested on a small number of pupils in this age group to ensure that it was appropriate and the questions could be understood.

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1 This is the focus of another paper “Are today's children key targets for softer measures?” by Patrick Auwerx, Langzaam Verkeer, as part of Workshop 6.
The results were very positive. There was both a significant decrease in the reported frequency of car use and a significant increase in the reported frequency of cycling to school. These reported changes in behaviour appear to be corroborated by significant changes in the pupils’ perceptions of the car and cycling. There was an increase in the number of pupils who saw cycling as convenient, having a good image and being an enjoyable way to travel, with a corresponding decrease in the number of pupils who perceived the car positively with regard to these factors.

Two out of the ten schools selected for the assessment process were identified as a “control group”. These were not involved in developing a school travel plan. However, they were exposed to some of the other campaign activities. This did cause some problems when analysing the results. In addition, levels of campaign recall were not measured before campaign, but 27% of respondents only ticked correct campaign messages when asked in the “after” questionnaire.

The way in which the campaign managers can clearly show the positive results of the campaign have led to considerable interest from other Flemish municipalities.

Gävle (Sweden)
The second example is also a school based campaign. The Hageström School in Gävle, was selected by the City Council due to its problems with high levels of traffic around the school gates. The school has 300 pupils from 7-13 years old. As in Geel & Mol, the campaign aimed to reduce the number of children being driven to school and increase levels of cycling and walking. However, very different techniques were used, targeting not only the pupils, but also parents. These included visits to the school by a nurse, a Local Agenda 21 coordinator and a road safety officer, plus a free cycle check for pupils and their parents. In addition, letters were sent to the parent to reinforce the message that those children who cycled and walked to school were more likely to be alert during classes.
One of the most innovative elements of the campaign also served as a useful monitoring tool. The pupils filled out simple travel diaries each day, recording how they had travelled to and from school. These were collected each week by the campaign manager and trips made on foot or cycles converted into a total number of kilometres for the school as a whole. The cumulative total was then plotted on a specially designed ‘map’ of Europe, displayed in the school playground, near the entrance. The map also showed how much CO₂ emissions had decreased as a result of the reduction in the number of car trips.

Questionnaires were sent out to all parents via their children before and after the campaign (May and November 2002). The results revealed that the percentage of pupils driven to school every day had dropped from 19% to 1%, with 13% being driven to school 2-4 times a week, compared to 21% before the campaign! These results were even more encouraging when compared to those from another school, chosen as a “control”. Here the percentage of pupils driven to school every day had increased from 6% to 13% and for those driven 2-4 days a week, from 13% to 21%. In addition, the campaign also had a positive impact on non-school trips. There was a significant increase in the number of men who cycled to and from work and a significant decrease in the number of women who reported travelling to work as a car passenger.

By looking at parents’ travel behaviour for trips other than those to or from school, the assessment process successfully picked up on the knock-on impacts of messages linked to children’s well-being.
Nantes (France)

In Nantes, the public transport company, SEMITAN, ran a campaign which aimed to promote a particular bus route, the 21/23 line, which linked a residential area with the city centre, in particular for off-peak trips. Households along the bus corridor, i.e. those within 300 metres of a bus stop, were targeted, using a specially designed mailing shot. This included a letter of introduction, a brochure highlighting the benefits of taking the bus for leisure or shopping purposes, a game, and a credit-card sized timetable with map of the route.

The mailing was distributed to households (2450 in all) during the annual “Public Transport Week”, which was held in September 2002, to coincide with the European Mobility Week, culminating with the European “In Town Without My Car” day on 22 September 2002. The idea behind this choice of timing was to be able to compare solely the impacts of the larger Public Transport Week / European Mobility Week campaign with the impacts this campaign combined with the impacts of a targeted action (the mailing).

Telephone questionnaires were carried out using a sample of 400 people living along the corridor just before the mailing was delivered and again shortly after the campaign week. A further 150 people from households along the corridor who did not receive the mailing were surveyed at the same time, to act as a control group.

The results were very encouraging. There were significant improvements in perceptions of the bus, particularly for those aspects which were highlighted by the mailing (enjoyable way to travel, environmentally friendly), but not significant changes in the control group. In addition, there was a high level of campaign recall after the campaign (65.1%), although it should be pointed out that ‘false’ recall before the campaign was 23.4%. However, out of those respondents who recalled the mailing, 27.9% found it “interesting, 34.1% “well designed” and 25.9% “directly relevant”.

The campaign therefore demonstrated the value of well designed and targeted materials.
Conclusions

The lessons from TAPESTRY for the mobility management sector are numerous and diverse. The project has made a useful contribution to the development of a comprehensive process which enables the entire life cycle of a campaign, or measures, to be assessed. It has also demonstrated the importance of measuring changes in awareness and attitudes, as well as any changes in travel behaviour, particularly when it may not be realistic to expect changes in modal shift in the short term. The Seven Stages of Change model is therefore a significant tool to monitor and demonstrate progress towards long-term goals. Last but not least, TAPESTRY has highlighted the value of investigating the impact of publicity and marketing materials on a target audience, not only to better understand / demonstrate the link between them and any positive impacts, but also to learn valuable lessons about what types of design and messages could be effective for future initiatives.

*This paper is based on work carried out under the European Commission’s TAPESTRY Project. TAPESTRY aimed to increase understanding of developing travel awareness and communications programmes in support of sustainable transport strategies. A number of demonstration sites across Europe developed and tested travel awareness, publicity and promotional strategies in a variety of settings. The schemes paid special attention to encouraging multi-modal transport use, changing the attitudes of citizens towards cars and addressing wider health and environmental issues. The project was co-ordinated by Transport & Travel Research Ltd, UK with research co-ordination by University of Westminster, UK.*