

CAPTURING THE VALUE OF INFORMED TRAVEL CHOICES

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ABSTRACT

Since 1996 DHC has developed and refined techniques for micro feedback loops for transport providers, customers and their partners. Offering partners the opportunity to work in partnership to share evidence and feedback on transport delivery offers great potential but delivery is not easy. In July 2009, the Government's Technology Strategy Board funded Derek Halden Consultancy (DHC) to deliver a £500k pilot scheme in Wigan to test the ways in which a new technology platform could be developed to help facilitate delivery.

The new technology has been operational since late 2010 and offers a new communication system with personalised information and rewards for members. By partnering with major employers and companies including the football and rugby clubs in Wigan, offers can be made to any of the 20k+ smartcard holders in the town.

The approach is designed to be fully commercial. By rewarding sustainable travel behaviour by citizens, the plan is to encourage more people to travel locally allowing those who benefit from sustainable development to pay for it. The approach seeks to address social market failure resulting from citizens being poorly informed about sustainable transport, creating value by rewarding more efficient travel decisions.

Efficiency improvements include improved yield management in public transport, and shorter trip lengths with lower costs for travellers. The design of the technology uses similar marketing approaches to those already deployed by online retailers like Amazon, with targeted information and incentives – “people who like the football on a Saturday also find the bus to be convenient”.

The research and application shows how to build a new social infrastructure business in a town, to use the power of information to deliver more rewarding travel experiences for businesses, public agencies and travellers. Feedback and dialogue is part of the approach, providing a rich data set on what people like about local current travel solutions.

1. INTRODUCTION

Transport professionals have strong skills in infrastructure supply and management, but there is considerable potential for marketing techniques to be used to support more informed traveller decisions. Marketing techniques are used in most industries to encourage demand which matches supply. A supplier of goods or services needs to market these to align consumer demand with supply. However, transport has a poor track record in demand management relative to other sectors, reflecting the culture of the public authorities who provide and fund much of the infrastructure.

Although it has been evident for 20 years in Scotland that not all demand for travel can be met (e.g. Scottish Office 1992), public authorities have faced difficulties leading the transport policy debate on which demand should be met and which should be suppressed (County Surveyor's Society 2008). Public authorities have sought to tackle this information market failure through a range of approaches but a comprehensive system that overcomes all barriers to access is still developing.

This paper explains a new approach to use new technology to increase the investment in social marketing. It draws particularly from research supported by the Technology Strategy Board transport programme to pilot new technologies for sustainable transport in Wigan.

2. WHAT SHAPES CURRENT ATTITUDES AND BEHAVIOUR?

In recent years the gap has been growing between people's understanding of the challenges and opportunities in transport and the realities of transport delivery. Closing this information gap offers the potential for new value from transport delivery. Sustainable transport supply can only succeed if sufficient demand is stimulated for viable delivery.

Transport publicity is dominated by commercial issues where the value of the benefits creates an incentive to fund the marketing activity. However transport has cross sectoral impacts where broader social concerns drive the need for marketing. New forms of partnership, innovation and accountability are needed to build a broader society within which these issues can be addressed (Adonis 2010).

Social and business networks help to shape current attitudes and increasingly marketing techniques tap into these networks to communicate messages. For transport to draw together the required skills requires new partnerships. In particular, retail skills in smoothing out fluctuations in price, and in balancing supply and demand will be needed to offer attractive lifestyle solutions. Within retail marketing, techniques to support customer engagement are becoming increasingly sophisticated and suppliers and users of transport need to tap into these new marketing techniques to develop a progressive dialogue.

When looking at social marketing in transport it is important to recognise that commercial transport brands are amongst the most influential lifestyle products available in modern economies (BCSC 2006) with:

- Commercial markets for car, bike and fuel purchase

- Sports, leisure and tourism markets - walking, running, cycling, motor sports, horse riding, special interest groups (train enthusiasts, cycle campaigners, vintage cars, etc.), and holiday travel (business tourism, group travel, etc.).
- Land and property markets – car free housing, car parking offers, streets to socialize and for cafes, etc.
- In some areas of public policy, strong social brands have emerged from within public service delivery, and it may be that there are lessons for transport from these. For example the National Health Service in the UK is a particularly powerful brand that is used when seeking influence over public health behaviour. Various local and national transport brands have received public investment (e.g. UK Travelwise) but none of these is widely recognised and very little brand loyalty has been achieved.

The investment required in social marketing of transport appears to be beyond what is acceptable in a democracy. This is seen in practice each time a government attempts social marketing; opposition political parties criticise what they paint as a misuse of public funds to promote a particular social perspective not shared by the opposition. The identification of social need by public authorities is largely absent (SEU 2003), and it has become difficult to distinguish social from political need.

Small changes in transport can affect the viability of businesses, and the quality of life for people, so each change is hotly contested. For balanced development of attitudes and behaviour there would need to be sufficient social marketing to ensure that people are as well informed about the non market choices as market ones.

3. WHY IS THERE A NEED FOR A NEW TRANSPORT ECONOMY?

Since the middle of the last century the growing importance of fossil fuel consumption to the economy has meant that any policy or action which reduced consumption was unlikely to succeed. Transport as a major consumer of oil has been critical for economic growth in the oil economy, delivering oil consumption, profits and taxation revenues. However, the point has been passed at which increasing demand for oil can be sustained (UKTF 2010)¹. There are now greater benefits to be gained from reducing fossil fuel consumption and growing the knowledge and experience economy (treasury 2006).

Although oil still accounts for over 98% of all the energy used in transport, there are rapidly growing markets for lower carbon access. Relative to the high carbon transport economy, low carbon markets are small, but increasingly the new markets rely on people paying for access rather than ownership. This reflects a wider trend in the economy. Just as consumers now

¹ Up until about 2008 the rising cost and production of oil had boosted economic growth. However once oil prices exceeded \$100 a barrel the cost of oil weakens the wider economy and further oil consumption suppressed economic growth. This then led to a fall in the oil price back below \$80 a barrel but in 2008 the point was passed at which more oil could be pumped without triggering a recession. This is often referred to as 'peak oil'.

access music rather than buy records and CDs, low carbon access is also a feature of transport with: growing use of transit systems (bus, rail, tram), e-access substituting some travel, public bike systems and car clubs where users share ownership, shared taxis and shuttles, and other similar low carbon transport solutions. There are also indirect investments in access, such as pedestrianised streets where walking or footfall is financed through taxes on retail property and sales.

There are also growing markets to reduce transport carbon as a waste product. Although trading in other waste materials has supported investment in waste reduction, the carbon trading markets have insufficient incentives built in for progressive emissions reductions. These new markets are developing and it is likely to be several years before they can be successfully marketed to deliver transport emissions reductions by consumers (IPPR 2009).

Overall there are therefore three main areas where marketing can support the development of new sustainable markets:

- The ownership economy - How to accelerate progress with the transition to low carbon transport by systematically removing barriers to rapid deployment.
- The economy of local places - How to encourage people to walk and cycle more within their local communities for more of their travel often linked with the localism and community development agendas.
- The access and sharing economy – shared vehicle provision (bikes, cars, taxis, buses, trams and trains) smart and integrated ticketing (DfT 2009), and e-substitution of trips.

Before looking at the piloting of marketing techniques to support these concepts it is worth starting with a discussion of the main elements of change.

4. COMPONENTS OF CHANGE TOWARDS LOW CARBON ACCESSIBILITY

Transport accounts for more than 15% of household spending and transport change does not develop in isolation from other changes in society. Just as mobile phones have seen the evolution of the telecommunication sector into a lifestyle industry, the people that buy low carbon transport may work differently, shop differently and engage with their communities in new ways.

The rate of investment in new approaches will depend not just on technical challenges, but on how to mould these into the changing social, cultural and economic landscape. A 'smart' view may be quite different from a purely infrastructure led view. Delivery will be as dependent on the planning system, a changing regulatory framework, consumer culture and fiscal incentives, as they are on the vehicle technological capabilities and low carbon service delivery which have attracted most attention. The new revenue streams may also attract new players into the market.

To deliver lower emissions, locally based packages known as 'smarter choices' have become common ways of referring to smart transport delivery.

The focus of these packages has generally been social marketing to influence travel behaviour, but it is also common for packages to invest in places with improvements to local services such as leisure facilities, investment in walking and cycle facilities, and support for e-working.

Research into the potential for smarter choices to deliver lower carbon transport in Scotland surveyed over 12,000 households and showed that there are four main motives for travel behaviour change that smarter choices interventions could tap into (Halden et al 2010):

- Support for regeneration and investment in the places people live and work
- Residents of a town want to build a stronger community spirit.
- Health messages are important but the least healthy are the least motivated.
- Environmental motives are to protect, save and maintain, the crossover between environmental aspirations and behaviour is not strong, and the people with the greatest concerns about climate change tend to be those that drive most.

Motivations to change are most likely to be socially driven and behaviour change could be supported by:

- Targeting people who are both willing and able to change.
- Build change incrementally with sensitive and responsive delivery. Value needs to be added steadily to local campaign brands working closely with local media and community groups responding flexibly to local views.
- Integrate low carbon behaviour into broader lifestyle changes.
- Working with trusted local partners to create organic growth in new patterns of behaviour.
- Informed choices based on the real costs of travel. Whilst people have a reasonable appreciation of the time it takes to walk or cycle, they rarely consider the potential cost savings which could be made from change.
- Systematic action is needed to overcome real and perceived barriers and this requires support to overcome all of the safety, reliability, comfort, and other factors can all act as barriers to change.

Where change starts to be delivered it is important to remember that traditional players in transport markets will not go quietly. Fiscal levers and new partnerships will need to be used to manage the transition as smoothly as possible with:

- The use of taxation and new charges to drive consumer behaviour being acceptable to consumers as voters. Taxation, charging and marketing need to run in parallel. Tariffs for mobile phones have shown that people may be prepared to pay more for convenience and this can help to lever more value than could be delivered through taxation.
- Business success and survival depends on shaping and meeting the demands of (often fickle) consumers. Change takes place incrementally and will need to be economically and socially viable at every stage.

In managing change, culture, economics and policy all interact in complex ways, and it will be the interaction between factors that will determine what can be delivered.

The change from an ownership to an access economy is associated with wider social change, new networks and improved networking, and more sharing. Not only is this demonstrated by the growth in shared vehicle provision such as public bikes, car clubs, and public transport, but shared spaces in local town centres are becoming an increasing focus of local transport policy.

The new approaches to transport delivery are being taken with a broader view of transport benefits (DfT 2005) which requires three main new areas of delivery:

- **Joining things up** – These include techniques for supporting organisations outside the transport sector in thinking about their travel, and making more efficient choices. By identifying shared aims between businesses, public agencies, transport authorities and others the agenda for joint delivery can be specified.
- **Information and marketing** – There is scope to significantly improve the marketing of all transport. The motor industry has a strong track record and new approaches seek partnerships for commercial marketing of public transport, and social marketing of non-commercial transport benefits.
- **Administering accessible transport** – New approaches include ways of increasing opportunities for people to share scarce resources such as bikes, cars, buses and space.

5. DELIVERING CULTURE CHANGE

Attitudes and behaviour can be represented in two main ways:

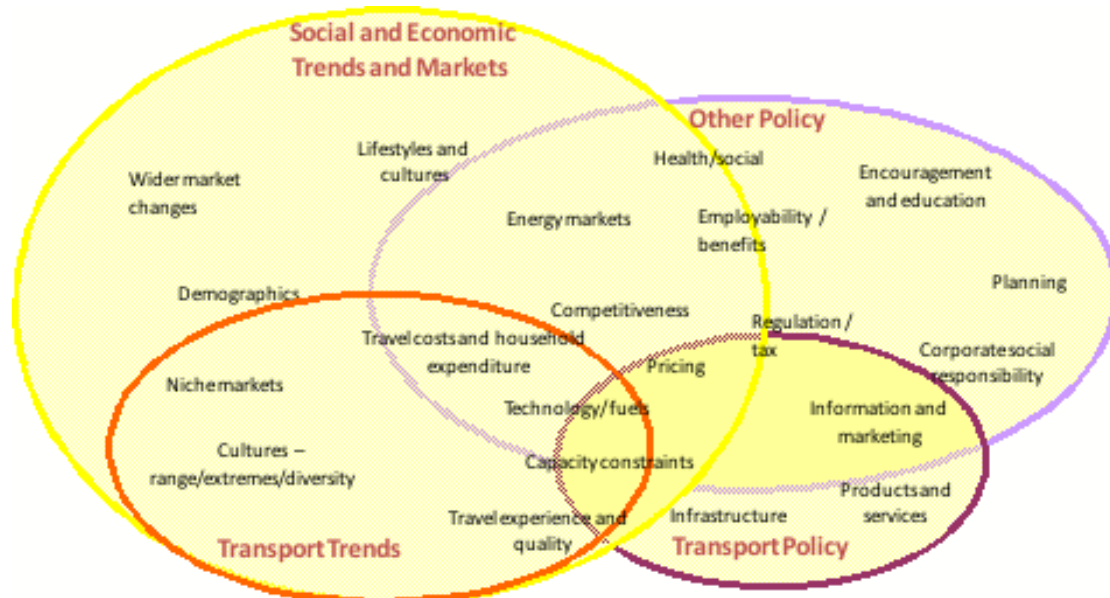
- **Social attitudes towards a low carbon economy and the propensity of citizens to support and vote for public investment.**
- **The way in which individuals perceive the options and opportunities and buy into the low carbon economy themselves as consumers.**

For viability, the combination of public investment and consumer expenditure must be greater than the costs involved in delivering any solution. There are three main mechanisms for changes in attitudes and behaviour (Anable et al 2006):

- **Providers influencing individuals** – By making investment in marketing, publicity, campaigns and through the use of economic levers, providers can influence the values, attitudes, beliefs, identity and intentions that affect behaviour.
- **Interpersonal relationships** – The way that individuals influence each other through their trust in friends and participation in social networks.
- **Evolving communities** – Society is changing and transport is only one part of the change. Social structures, institutional change, societal norms and culture and new ways of interacting will all have an effect.

Figure 2 summarises some of the main influences on transport change. The greatest impacts are not in fact made within transport policy but arise from lifestyle change, taxation, education, health and planning (Halden 1996). The factors such as taxation that act through policy, social trends and markets will result in the most rapid change with the widest impacts.

Figure 2 – Some Factors affecting Transport Change



Systems theory has been seen as a promising way to bring together the various dimensions of culture change. For example bio-mimicry seeks to copy the main principles of sustainable eco systems to shape the systems of the future (ICE 2008). The systems theory suggests that we need to reorganise ourselves, and that this will be underpinned by partnerships, multi-disciplinary working, and community ownership. However the levers available to tap into this new eco-system are still developing.

People listen to messages that come from sources that they trust. Trust takes time to build and some social attitudes relate to core values that are hard to change. The required change in social attitudes depends on tapping into the deep seated needs and desires of each section of the population. If the marketing is to be effective it needs to engage in a dialogue that ensures that people can object, be listened to and be informed.

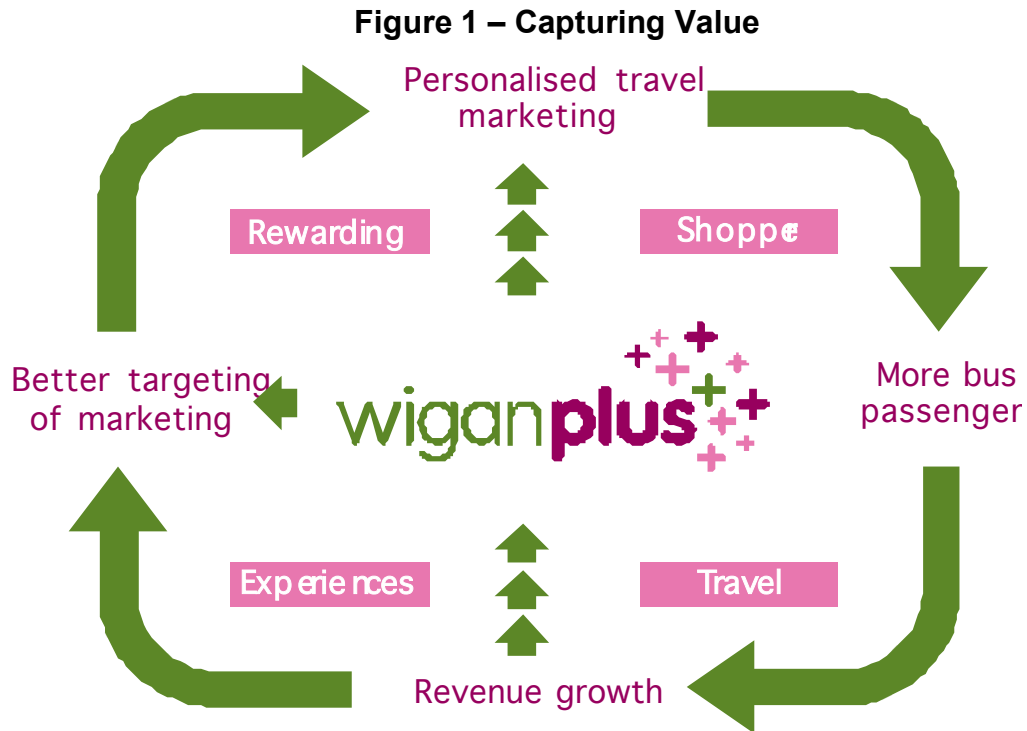
6. A NEW BUSINESS ECO-SYSTEM - THE WIGAN PILOT

The key elements of the new business approach are to use new technology to facilitate:

- A new platform that allows stakeholders from different sectors to engage more easily.
- A system where the rewards that a traveller, shopper, business, public agency or transport operator can get more out than they put in – capturing the value of integration.

- A communication system that allows people from different cultures and sectors to engage progressively by identifying shared value.

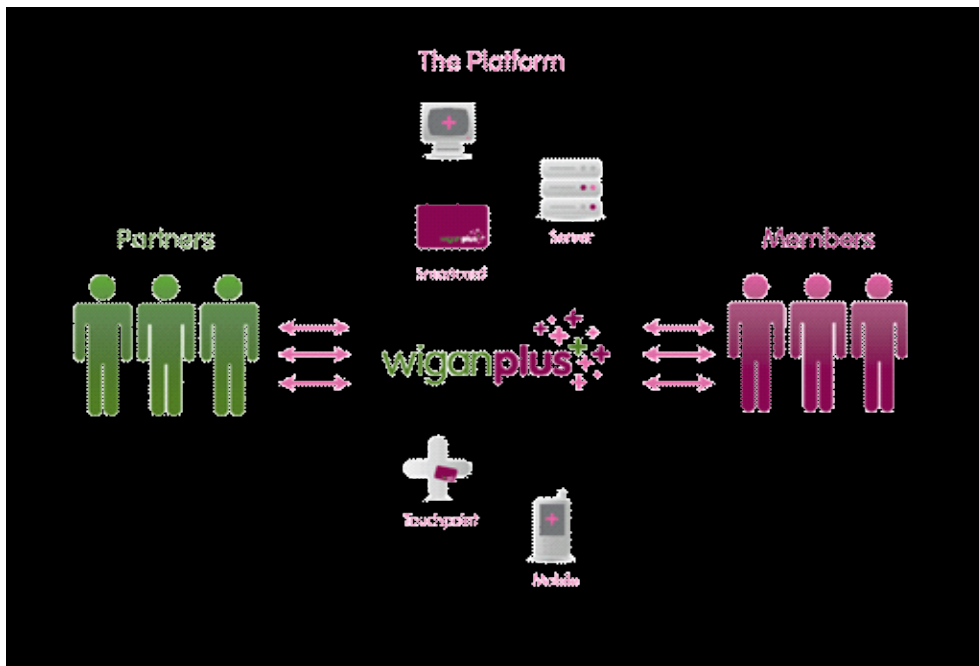
Figure 1 shows how the system has been conceptualized so that the investment made by “WiganPlus” delivers both value and benefits from behaviour change. WiganPlus is the brand adopted in the town and can be used equally by transport and non transport sectors to promote “added value” of sharing marketing.



The platform allows consumers and suppliers of services to have a progressive dialogue. They can make and share offers and rewards on a common platform as shown in Figure 2:

- Customers can be targeted with relevant and timely information if they join the system and state their preferences and preferred choices.
- Businesses and public agencies offering services and products can match offers to customers to deliver targeted promotions.

Figure 2 – Communicating Using new Technology



The system was designed and developed in 2009 and after testing it went live to the public in late 2010. The pilot partnership is led by DHC and includes marketing and technology experts Drumbeat Creative, bus company Arriva, retail consultants Insite Asset Management, and hardware/materials supplier Fortress GB.

The system comprises:

- Terminals in the shopping centres where offers, including bus ticket vouchers, can be accessed and printed.
- Smartcards issued to local people and (20,000+) existing smartcards held by Wigan Warriors (rugby) and Wigan Athletic (football) fans enabled through a partnership with the rugby and football clubs.
- An online portal has been developed where transport operators, retailers, educational establishments, council leisure services providers, cinemas, and others can sign up as partners to deliver targeted incentives for local travel.
- An online customer interface where members can sign in, view offers and update preferences.
- A customer relationship management system which links provider offers with customer preferences.
- A smartphone app allowing users to log in, receive offers and update preferences on the move.

Travel behaviour change programmes have been tested with targeted journey information and offers e.g. cinema experience where a bus offer and cinema offer are combined to offer a public transport dependent journey.

From 2011 it is planned to roll the approach out to other towns across the country offering a better value approach to travel plan delivery than has hitherto been possible. Provided a critical mass of cardholders are identified in a location, the approach should be commercially viable anywhere.

However, establishing the new business eco-system is just the starting point. A parallel research effort is needed to learn what works and optimize incentives to influence behaviour. The viability of the platform depends on capturing sufficient value from partners who make greater profits from:

- More local shopping journeys capturing a higher proportion of local retail spend in Wigan and reducing the distance people choose to travel.
- Better utilisation of transport with promotions of under-utilised off peak capacity.
- Footfall in the local town centre contributing to the revitalisation of the town centre, increasing local spend and contributing to a more robust and resilient local economy.
- Better communication where citizens, consumers and employees can connect with businesses, councils and other public and private bodies.

Over 40% of the shoppers in Wigan arrive by bus so the transport and retail economies are closely linked. Both sectors have been declining for some years and public investment has largely been used to slow the decline. The new eco-systems offers an opportunity to support public policy deliver including:

- Economy – The technology is not just a good value toolkit for investing in local bus services, but the Council is able to use it to help tackle congestion with incentives to avoid travelling in peak periods, information on when to travel, and investment in encouraging more local journeys.
- Digital economy and technology – Transport travelcards and smartcards can be linked upgraded to include integrated functions helping transport authorities communicate better with customers.
- Regeneration and employability – Personalised travel services could be managed efficiently for jobseekers including timely workwise journey plans and offers.
- Land use and development planning – The technology offers a toolkit to manage travel plans and offers to staff and customers. It has the potential to become an efficient and auditable way to manage travel plan delivery through the development planning process.
- Education and skills – The system can be used to deliver scholar passes, provide timely information to students e.g. to improve attendance at colleges by not missing the bus, and allow target personal offers of training.
- Improved health – By building a dialogue it is possible to offer incentives for people to behave in healthier ways with lower transport emissions and more active travel. Hospital travel cost scheme and other support to improve access to healthcare could be managed more efficiently on the system.

7. LESSONS LEARNED

The delivery approach uses micro-feedback loops for both partners and members. At any point, users of the platform can log into the system and review the dialogue with other partners and members. Impact reporting is not separate from delivery, as in traditional transport monitoring approaches but an essential part of delivery.

Table 1 shows some of the ways that evidence is being built in to sustain and expand delivery. Partners are able to review what works for any target group. There are opportunities for partners to share data within the system so that feedback from one local user can be made available to others. Each member or partner owns their own data and can at any time choose which data they want to share and the data they want to remain confidential or linked to a single relationship.

Table 1 – Monitoring and measuring socio-economic impacts

<i>Socio-economic impacts</i>	<i>Measured by</i>	<i>Data Source</i>
Impacts on people's wealth and the profits of local businesses	Changes in spending on transport and associated changes in consumer surplus.	Household expenditure derived from travel patterns in member feedback.
Is there a fairer distribution of wealth	Comparing the change in wealth for those that have changed behaviour with the population as a whole	Member feedback compared with trends in national travel from national travel survey
Improved capabilities of people, agencies and businesses	From the diary of events showing things like more cross agency work e.g. between jobcentres and transport departments, new integrated payment mechanisms, take up of smart technologies.	Member and partner feedback/surveys where questions will be asked about use of technology. Number of people using smartcards/phones.
Impacts on people's health	Partnerships with health and leisure services and evidence of more active travel choices	Take up of offers for health and fitness. Member feedback/surveys on travel choices.
Stronger more cohesive communities	Perceptions of the local town as a safe place to live, and community involvement by residents	Member and partner feedback/surveys
Improvements to the local environment and emission levels.	Lower emissions from transport, improved streetscape, other environmental improvements	Emissions calculated from survey responses on travel behaviour change. Records of investment in local infrastructure e.g. new shops opening up improving the quality of the town centre.

Some of the lessons learned so far are that:

- Discounting of costs is the most common approach that partners make for offers, but price sensitivity varies between sectors and options. For example small discounts in bus fares for non bus users have little impact.

- Experiential offers attract greater interest, possibly since integrated offers are more readily understood by consumers if linked to particular events. Examples include an evening out at the cinema with associated restaurant and travel offers, or a matchday experience for football/rugby supporters.
- Partners need triggers to remind them load offers. These triggers need to be integrated into their management systems.
- Consumers need timely reminders to take up offers. Targeted reminders to mobile phones have the greatest potential.
- Although public agencies sign up as partners, further work is needed to develop a culture within which social marketing can sit comfortably alongside commercial marketing. For example the Council were concerned that if they made an attractive offer, other partners might link in offers they did not support (e.g. use the council leisure services and have a discounted pint afterwards).

Overall the business model has proved to be successful in integrating transport into the wider economy of a town. By linking beneficiaries of marketing directly with the costs of the marketing effort, commercial and social marketing becomes much more sustainable. The technology platform has been successful in delivering behaviour change, but the use of technology is not essential for success. The added value from a technology solution is to reduce costs to make integrated working more affordable.

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