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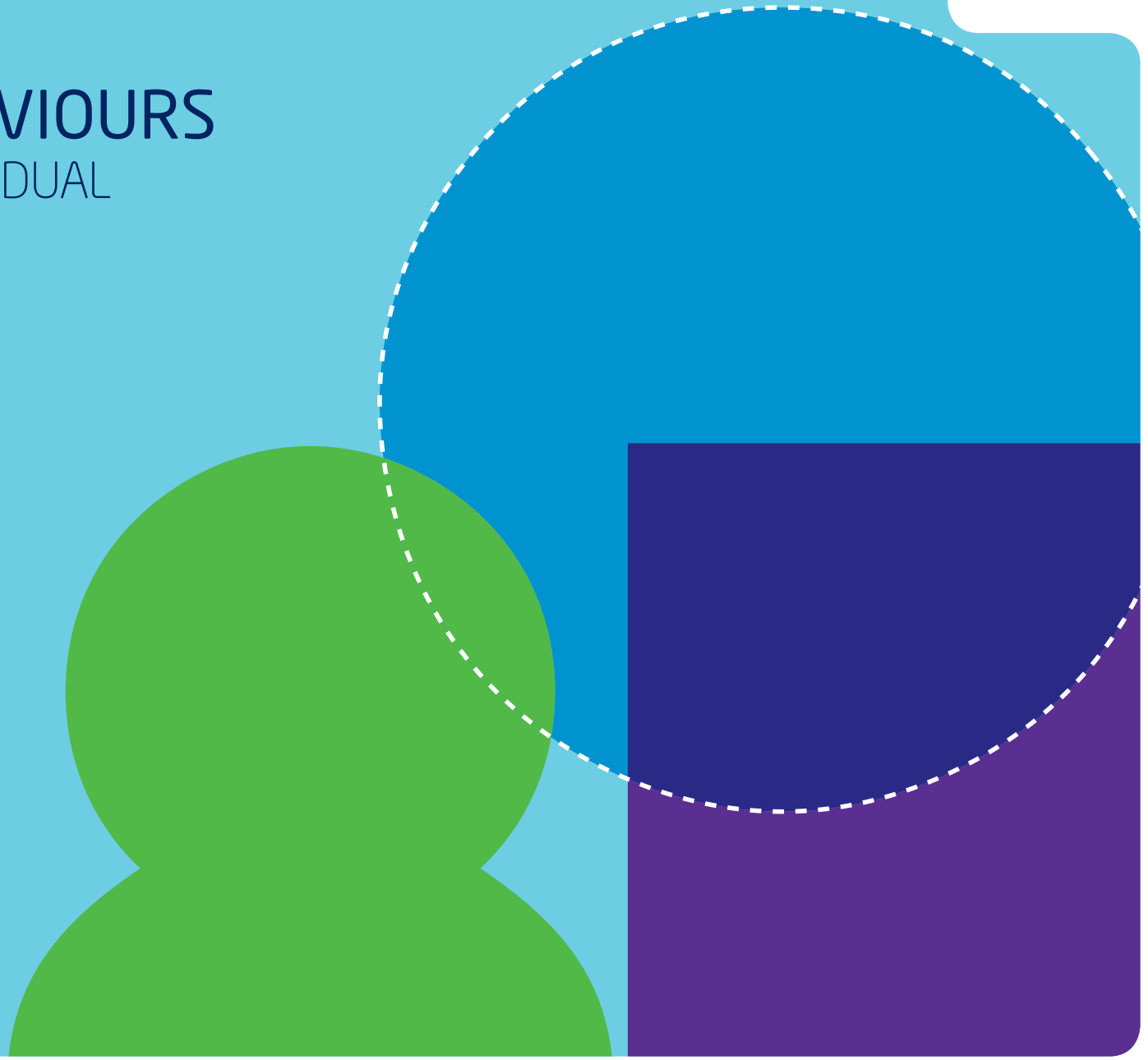
INFLUENCING BEHAVIOURS
MOVING BEYOND THE INDIVIDUAL

A USER GUIDE TO THE ISM TOOL

ANDREW DARNTON AND JACKIE HORNE



social research

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The Scottish Government, Edinburgh 2013

The views expressed in this report are those of the researchers and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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The authors of this guide would like to thank all of those who have given time and thought to developing the ISM tool. The ISM language originated with Dale Southerton and colleagues at the University of Manchester, while Paul Tyrer in the Scottish Government saw its potential as a practical tool. Scottish Government and other colleagues have since helped to trial and refine the tool and comment on the guide.

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INTRODUCTION

Influencing how people behave, whether it be using less energy in the home, eating healthily or using public transport rather than driving to work, is often the ultimate goal of government policy. Yet, influencing behaviours can be difficult to achieve, with no off-the-shelf nor 'magic bullet' solutions.

Over recent years, governments across the UK have been applying insights from behavioural science to policy problems. The interested practitioner has several approaches to follow. This ISM user guide belongs in the same tradition, but is different in that it brings together the main concepts from across the principal academic disciplines, and turns them into a practical tool to be used throughout the policy process.

The ISM user guide is therefore designed for policy makers and practitioners whose work ultimately aims at engaging people and influencing their behaviours in order to deliver improved outcomes. ISM should be particularly helpful when facing policy problems where significant levels of social change are required.

ISM is based on 'moving beyond the individual' to consider all of the contexts that shape people's behaviours – the Individual, the Social and the Material. By understanding these different contexts and the multiple factors within them that influence the way people act every day, more effective policies and interventions can be developed.

This user guide introduces and explains the Individual, Social and Material contexts and the different factors that influence behaviours, with various examples that illustrate the applicability of ISM for successfully influencing behaviours. The guide then outlines how the tool can be used in a workshop setting to develop new strategies and ideas, and gives an example developed in a workshop at the Scottish Government (purchasing an electric vehicle). It also briefly notes how ISM can be used to evaluate new and existing interventions.

An accompanying technical guide provides all the background on the development of the tool, and the contextual factors and influences. That guide is effectively a short introduction to the field of behaviour change, seen through the Individual, Social and Material contexts. It also outlines the three main behavioural disciplines that have been brought together within ISM, and provides recommendations for further reading.

WHAT IS ISM?

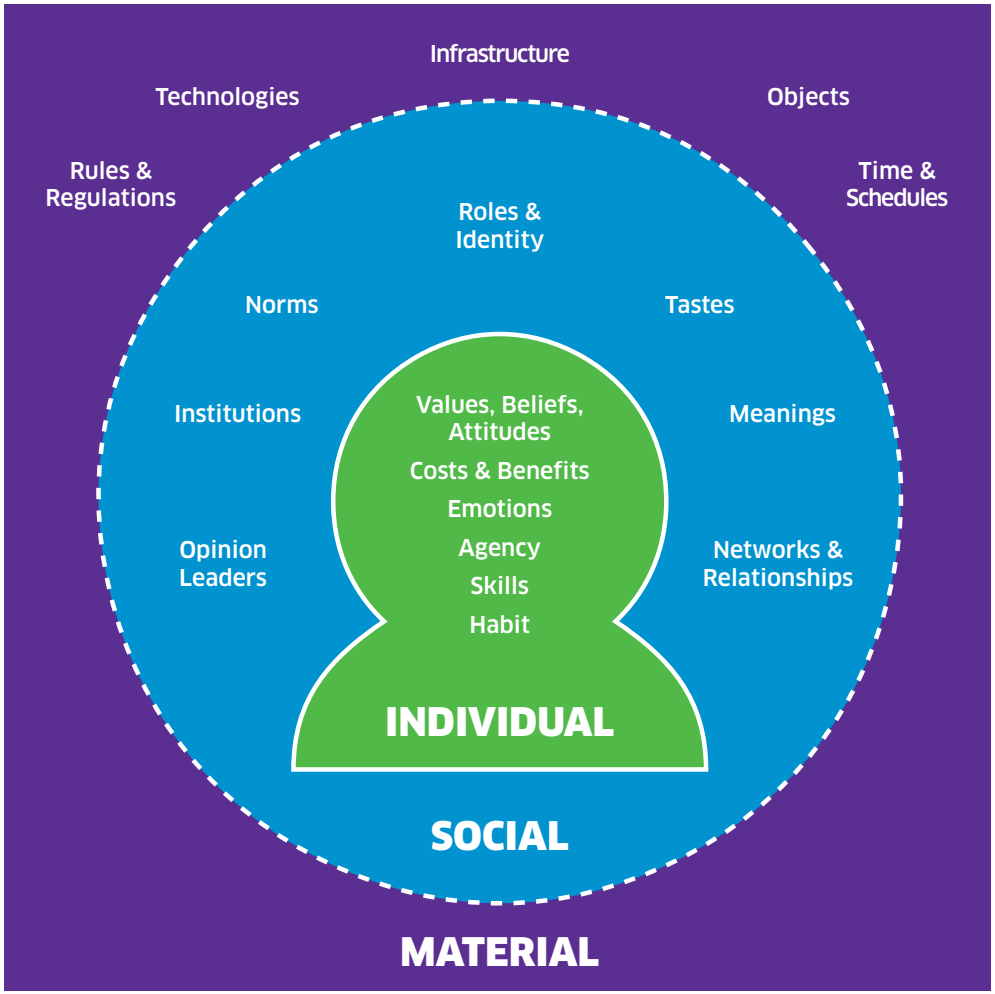
ISM is a practical tool that has been developed from a sound conceptual model and refined through research and live projects. The ISM tool has grown out of Southerton et al's (2011) International Review of Behaviour Change Initiatives where the Individual, Social and Material contexts were used to examine the effectiveness of environmental behaviour change interventions.

ISM is based on theory and evidence which shows that three different contexts – the Individual, Social and Material – influence people's behaviours. The model is shown in figure 1 on page 4. One of the key principles of ISM is that interventions should take account of influences across multiple contexts – I, S and M – in order to achieve substantive and long lasting change.

Traditional behavioural interventions have tended to focus on either the Individual, or on the Material contexts, and sometimes on both of these. However, this is often insufficient to lead to the change in behaviour that practitioners are expecting. The approach described here has more chance of success because it encourages broader thinking and points towards collaborative working to develop a more integrated package of interventions.

ISM can generate a wide range of ideas for interventions because it draws on insights from all three of the main disciplines which study behaviours and practices – social psychology, behavioural economics and sociology, mostly theories of practice. The ISM tool has its origins in encouraging sustainable behaviours, but it is also applicable to a range of other policy areas and social challenges, including health and transport, to name but a few.

FIGURE 1
FACTORS THAT INFLUENCE BEHAVIOUR IN THE INDIVIDUAL, SOCIAL AND MATERIAL CONTEXTS ('THE ISM MODEL')



THE INDIVIDUAL CONTEXT

This includes the factors held by the individual that affect the choices and the behaviours he or she undertakes. These include an individual's values, attitudes and skills, as well as the calculations he/she makes before acting, including personal evaluations of costs and benefits.

THE SOCIAL CONTEXT

This includes the factors that exist beyond the individual in the social realm, yet shape his or her behaviours. These influences include understandings that are shared amongst groups, such as social norms and the meanings attached to particular activities, as well as people's networks and relationships, and the institutions that influence how groups of individuals behave.

THE MATERIAL CONTEXT

This includes the factors that are 'out there' in the environment and wider world, which both constrain and shape behaviour. These influences include existing 'hard' infrastructures, technologies and regulations, as well as other 'softer' influences such as time and the schedules of everyday life.

The two case studies below – on Scotland's approach to tackling alcohol misuse, and on kerbside recycling – illustrate the relevance and applicability of the ISM model. The examples also illustrate how interaction between interventions across the three contexts is important in developing a coherent approach to influencing behaviours and achieving social change.

CHANGING SCOTLAND'S RELATIONSHIP WITH ALCOHOL: A FRAMEWORK FOR ACTION

This framework sets out a strategic approach to tackling alcohol misuse in Scotland, highlighting over 40 measures aimed at preventing and reducing alcohol related harm. The strategy draws heavily on the international evidence base and behavioural science to identify those measures which offer the greatest chance of success.

The strategy therefore includes a range of interventions:

Individual: Prevention and treatment initiatives (e.g. targeting alcohol 'brief interventions' at those who are drinking above sensible limits) aiming to change habits.

Social: Measures aimed at changing attitudes and cultural norms around drinking in Scotland, e.g. campaigns aimed at influencing women's alcohol consumption, and advice for parents to support them to talk to young people about the effects of alcohol and to reflect on their own consumption. These policies are being delivered via a comprehensive strategy aimed at the whole population with particular targeting for high-risk groups.

Material: Regulatory measures such as alcohol licensing reforms and price based interventions (e.g. banning quantity discounts, minimum unit pricing and restricting alcohol promotions in off-sale premises).

Whilst the strategy is based on the best available national and international evidence, a peer reviewed monitoring and evaluation framework was developed alongside the strategy. The evaluation, due to report in 2015, will assess the extent to which desired outcomes have been achieved, including the extent to which the different measures highlighted above have contributed to the success of the strategy.

HOW DID RECYCLING BECOME THE NORM?

Across the last 10 to 15 years, kerbside household recycling has become an 'everyday' behaviour for many people across the country. How did this society wide behaviour change happen? ISM would point to multiple actions by diverse actors covering a range of factors across the Individual, Social and Material contexts.

Individual: A lot of messaging was provided about the importance and benefits of recycling and 'doing your bit', working on people's attitudes and emotions. Recycling was made easier by introducing a wide range of collections infrastructure, including kerbside collections, and providing clear and simple 'how to' information, thereby highlighting the ease and lowering the 'costs' of participating.

Social: Kerbside collection boxes sent out strong visual signals about who was (and wasn't) recycling, thus working on the power of social norms. Recycling was also promoted within people's workplaces, schools and colleges – some people take home their new behaviours from there. Consistent branding (Waste Aware Scotland/Recycle for Scotland) was also used to create a sense of collective national action.

Material: The introduction of EU directives on waste management, and associated regulation in the UK (e.g. landfill tax), incentivised local authorities to provide collections infrastructure for household recycling. More recently, changes in the scheduling of recycling kerbside collections relative to other household rubbish (e.g. weekly for recycling, fortnightly for residual waste) have further incentivised people to take practical action to manage the different wastes and sent out further signals to householders about the need to recycle.

UNDERSTANDING ISM

Within each of the three ISM **contexts** there are a number of **factors** which influence behaviours.

INDIVIDUAL – factors that shape behaviour

Values, Beliefs, Attitudes: The basic elements of an individual's motivational system, moving from the most abstract and broad based values (e.g. pursuit of wealth or power), through beliefs or more particular worldviews (e.g. that we should preserve the environment for future generations) to attitudes, which are individual's views on specific things such as objects, activities or other people (e.g. I should not have to pay more for sustainable products).

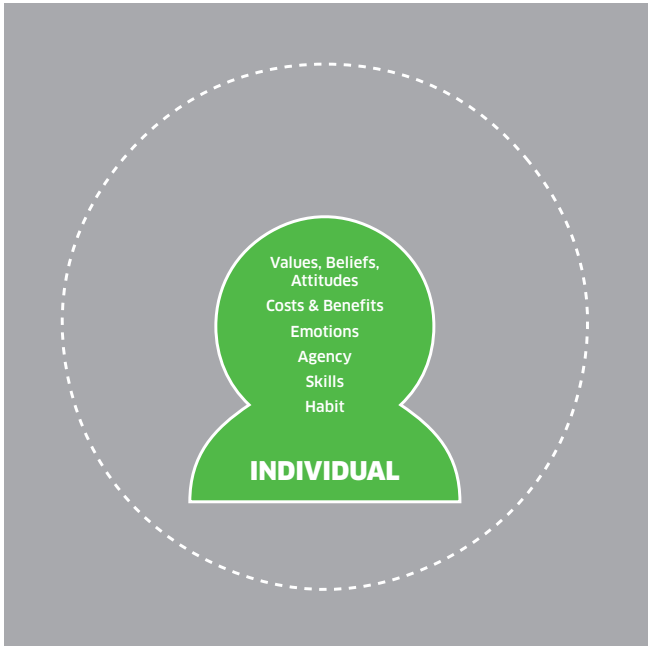
Costs & Benefits: The cost/benefit calculation is the basic method of decision making, in which the perceived benefits (or 'utility') of acting are weighed against the perceived costs of doing so, including non-monetary costs such as time (e.g. deciding whether the extra time spent walking to work is worth the health and environmental benefits). However, recent research has shown that much of this decision making is based on mental shortcuts, which can introduce errors, rather than effortful calculations.

Emotions: How people feel about something – their emotional response – is one aspect in their behavioural decision making (e.g. fear, virtuousness or apathy). Some theories contrast 'hot' evaluations, based on emotions, with 'cold' evaluations, based on attitudes and rational choice.

Agency: Agency relates to self control and a person's confidence that they can undertake the behaviour in question, and see it through to completion. It usually relates to a specific object or situation (e.g. installing and using microgeneration technologies in the home), but people can also be described as 'low agency' (generally lacking in confidence).

Skills: Skills are the things a person needs to know in order to carry out a behaviour. These include both procedural knowledge ('know how') and factual knowledge ('know what') (e.g. fuel efficient driving techniques).

Habit: Habits are those behaviours which are undertaken automatically and frequently, with little conscious thought, and usually in the same time or place. These can also be understood as routines (e.g. commuting by car or using the tumble drier even in good weather).



The range of factors that influence people's behaviours show that people are not necessarily conscious of the influence on their behaviours, nor are they always based on thinking things through on a 'rational' basis.

SOCIAL – factors that shape behaviour

Opinion Leaders

Opinion leaders can be thought of as individuals who have a strong influence over others, for instance in shaping social norms. In social networks, these people could be network nodes, who connect together numerous others. In everyday life, examples could include faith leaders or celebrities.

Institutions

Institutions influence how groups of individuals behave when they are engaging in particular activities or interacting with other people. Institutions can be formal (such as the legal system) or more informal (such as family life). In either, shared expectations about how members should behave are transmitted (e.g. eating together as desirable). Shared understandings may also take shape as explicit rules and regulations.

Norms

People's perception of how other people (especially 'significant' others) would view their behaviour. In turn these perceptions have a strong influence on the behavioural decisions that people make (e.g. people being aware that they are not supposed to fly for domestic trips, but observing family, friends and others doing it).

Roles & Identity

Roles relate to a person's different repertoires of behaviours and attitudes, based on the role they are fulfilling at the time (e.g. mother, employee, football supporter etc.). The related concept of identity is a person's innate sense of who they are (e.g. being a good person or identifying as a 'green').

Tastes

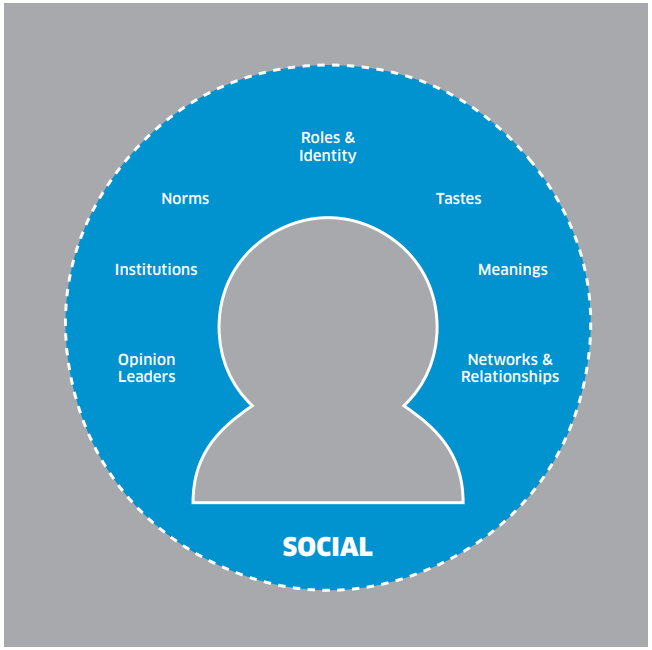
Tastes can be understood as preferences through which people signal their belonging to particular social groups (e.g. kinds of music listened to, or table manners). These preferences are collectively developed, and are based on shared understandings of appropriate and desirable conduct.

Meanings

Meanings are culturally constructed understandings of daily life which can include images, ideas, metaphors, and associations. These meanings effectively set the frame for a behaviour or practice, and in so doing influence how it is undertaken, and how it is understood (e.g. smoking in popular culture used to mean sophistication and glamour, but now is more likely to mean an unhealthy lifestyle).

Networks & Relationships

Connections between individuals, which people identify and draw upon in identifying and carrying out possible courses of action (this is sometimes called 'social capital'). In aggregate, social networks can help to explain how ideas, innovations and behaviours can spread (e.g. growing your own food).



MATERIAL – factors that shape behaviour

Rules & Regulations

At their most basic, rules and regulations are set out by formal institutions, such as government, to prescribe or prohibit certain kinds of behaviour (e.g. through the taxation system). Yet rules and regulations are also implicit, for instance determining appropriate conduct for individuals in informal institutions (e.g. not disposing of recyclable materials in the general waste bin in the workplace).

Technologies

Technology is sometimes contrasted to behaviour, in that techno-fixes are presented as ruling out the need for individuals to change their behaviour. However, individuals and technologies interact, and this can influence the effectiveness of a technology in terms of its desired impact (e.g. smart meters and how they are used in practice). This interaction also enables new practices, and the meanings of these practices, to spring up and take hold quickly (e.g. tweeting).

Infrastructure

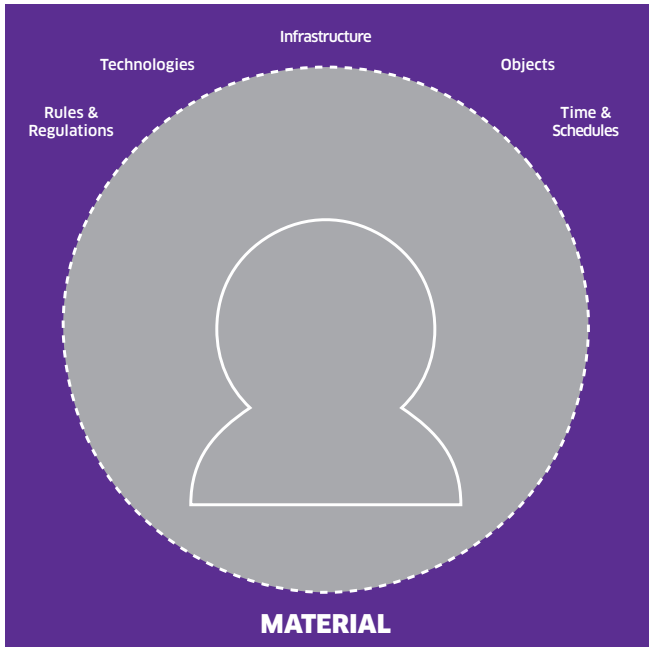
Hard infrastructure relates to the firm boundaries to people's behavioural choices presented by the environments in which they live (for example, without a bus service, there will be no chance of bus use). Such factors can often prevent even motivated people from undertaking the behaviour in question. Alongside hard infrastructure, soft infrastructure emphasises features of everyday life which also bound individual action, but are not concrete (see Time & Schedules, and Rules & Regulations).

Objects

Many behaviours (e.g. cycling to work) involve the use of objects (e.g. a bike, cycle racks at work), and the lack of necessary objects can stop a practice from being undertaken. As with technologies, objects and individual users interact, such that sometimes the object can 'act back' on its owner and heavily influence how much time an individual spends on which practices (e.g. waste in the home 'acts back' on the householder who spends time cleaning and sorting recycling for collection).

Time & Schedules

Time is a finite resource that gets used in the course of carrying out everyday activities. Like money, it is a scarce resource that people have to allocate across competing demands. Changes in schedules (e.g. set by formal institutions) can often result in changes in individuals' practices, for instance, school hours and commuting habits.



A further ISM case study is provided opposite. The example of using mobile phones whilst driving illustrates that using traditional policy levers of information and regulation can be insufficient against fast growing or entrenched social practices. By considering the various factors that influence behaviours – including the social factors – ISM can provide a different perspective which may prove to have more traction on these types of behaviours.

UNLOCKING MOBILE PHONE DRIVING

By the early 2000s, researchers began to present substantial evidence showing an increased risk of road accidents due to drivers using mobile phones*. Legislation on the use of mobile phones while driving is reserved to Westminster. The UK Government moved to address the issue by introducing UK wide legislation banning the use of handheld mobile phones and similar devices while driving. Initially this reduced reported levels of handheld phone use while driving, but evidence started to emerge from 2005-2007 that the proportions were gradually starting to increase again. Accordingly the UK Government increased the on-the-spot penalty (from £30 to £60), and added an automatic three points to the driver's licence. Advertising about the dangers of mobile phone driving (and the new penalties) was also undertaken as part of the Department for Transport's Think! campaign. Again, evidence suggests handheld phone use decreased initially, before beginning to rise again.

The case of using mobile phones whilst driving illustrates how even the 'stiffest' measures – prohibitive legislation with automatic penalties attached – can be insufficient against fast growing social practices. In ISM terms, traditional policy levers of providing information and regulation have not been enough to curb undesirable behaviour. The UK Government has been looking at alternative approaches, which in combination may prove to have more traction on this behaviour, while Police Scotland continue to actively target people who use mobile phones whilst driving.

* See, for example, Laberge-Nadeau C, Maag U, Bellavance F, Lapierre SD, Desjardins D, Messier S, Saïdi A, 2003. Wireless telephones and the risk of road crashes. *Accident Analysis and Prevention* 35(5): 649-60.

An ISM approach to tackling mobile phone use while driving would look to address a range of key factors, giving rise to the following ideas to strengthen the influence of existing interventions:

Individual:

- Costs & Benefits: Show that it's not worth the risk by publicising prominent cases in which people have been caught and prosecuted for mobile phone driving, including the loss of their licence.
- Habits: Encourage people to plan their communications before they travel, in the same way they might go to the toilet before they set out, or provide visual reminders (e.g. Road Safety Scotland previously developed mobile phone shaped in car air fresheners as a visual reminder of the risks and penalties involved).

Social:

- Norms: Work to reshape social norms by making mobile phone use while driving socially unacceptable. This might include giving messages about only making calls when it is safe to do so; or empowering people to end calls when they suspect the person at the other end is driving.
- Meanings: Weakening the idea of the car as 'personal space' could lead to people being more ready to change their established in car behaviours in line with social pressures and rational risk based arguments. This could have dividends for other policies (e.g. smoke-free places).

Material:

- Time & Schedules: Encourage drivers to schedule mobile phone calls as part of rest breaks (e.g. with adverts in service stations); or work with courier companies, taxi firms and others employing drivers to introduce systems and itineraries that mean they don't need to make calls while on the move.

HOW TO USE THE ISM TOOL: A STEP-BY-STEP APPROACH

This next section of the guide shows how to use ISM as a practical tool for influencing behaviours. In theory, the ISM approach could be used as a planning tool by one person sitting at their desk. However, experience in developing effective strategies shows that you are more likely to be successful if you can bring together a group of people to use ISM as a practical tool in a workshop setting.

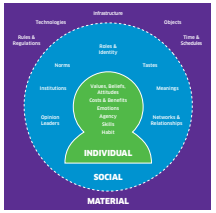
The following steps are suggested as the basis of a workshop which seeks to provide insights for the development of policy and practice. A summary diagram and a more detailed explanation are provided.

1. TARGET BEHAVIOUR

Specify in advance which behaviour you are targeting.

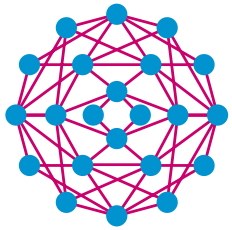
2. GOOD MIX OF PEOPLE

Invite a diverse group, with depth and breadth of understanding.



3. INTRODUCE ISM TOOL

Introduce or recap ISM tool, depending on prior knowledge.

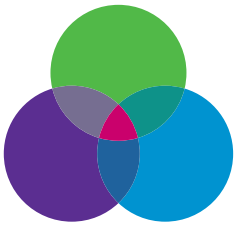


4. EXISTING CONTEXT

Briefly outline the existing policy and practice context.

5. ISM BEHAVIOUR MAPPING

Start mapping the target behaviour using the ISM tool.

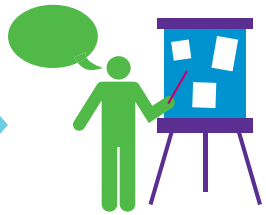


6. COVER ALL ISM FACTORS

Check each relevant factor has been covered.

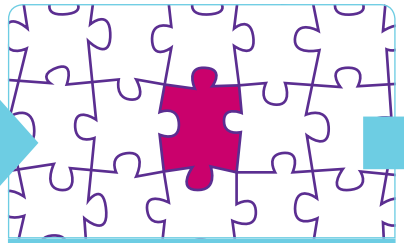
7. IMMEDIATE OBSERVATIONS

Stand back – note priority factors, key insights and initial ideas.



8. POLICY MAPPING

Chart existing policies and interventions against ISM.



9. IDENTIFY GAPS & IDEAS

Generate ideas where ISM factors are not addressed by existing work.

10. TAKE ACTION

Develop a coherent package of interventions spanning I, S & M.

1. DECIDE IN ADVANCE THE TARGET BEHAVIOUR

'If you want to change a behaviour, first specify that target behaviour' (GSR Behaviour Change Knowledge Review, 2008). In other words, this is a specific behaviour (e.g. installing loft insulation) undertaken by the same group of people (e.g. house owners rather than landlords). Note that this is not necessarily the same as a policy goal. For instance, a policy goal might be 'to save energy in the home' but from the householder's perspective this could involve turning down the thermostat, and/or installing double glazing or solid wall insulation. All of these are different behaviours, with different contexts and influences, and each would need to be targeted differently. It is critical that the targeted behaviour is clearly understood and agreed in advance with the people attending the workshop.

2. GET A 'GOOD MIX' OF PEOPLE TOGETHER

It's important to get 'the right people' together; people with a good knowledge of the behaviour in question, the current policy and practice landscape, and knowledge of research and evidence. Policy leads, analysts, specialists in the field from different disciplines, and practitioners who work at the coal face would be ideal to invite along. A group of up to ten people is a good workable number.

The ISM tool should itself provide a challenge to received wisdom by identifying the wide range of different contexts and factors that influence behaviours. However, it may also be a good idea to invite along a 'critical friend' to challenge people's assumptions. In other words, aim to achieve a diverse range of participants with a deep understanding of the factors that influence behaviours in order to maximise the possibilities for creative insights.

Ideally, one person acts as convenor or customer for the session: they outline the problem and are the main arbiter of whether and how to action the ideas generated. As well as a facilitator who is knowledgeable in behaviour change theory and research, and has experience of working with ISM, it's worth appointing an able note taker who can capture points as they are being raised.

3. INTRODUCE THE ISM TOOL

It's a good idea to provide a short introduction to the ISM tool, covering explanations of the contexts and the different factors which influence behaviours. For those who are already familiar with the tool, a brief re-cap should suffice.

4. EXPLAIN EXISTING CONTEXT

The customer or convenor of the session should briefly outline the existing policy and practice context, covering the current uptake of the target behaviour, the main things government and others are currently doing to encourage this behaviour (i.e. the policy context), and any reflections on key issues or problems. Try and keep this to five minutes maximum. If more detail is required, it will emerge in subsequent stages of the exercise.

5. START ISM BEHAVIOUR MAPPING

This should follow smoothly on from step 4, and pick up on one or two of the main points noted there, observing the useful principle of 'starting where people are at'. The facilitator or note taker should start capturing the key points being raised about the different factors, either on to flip charts or PowerPoint, so that the group can view them as they work through the remaining steps.

There will be different ways to use the tool depending on whether it is being used for developing effective strategies or evaluation. Depending on the assumptions and skills of the participants, you may wish to put a different emphasis on the different contexts in the tool: for example, highlighting Individual or Social factors when previous work has been led by a focus on Infrastructure or Technologies, and by contrast emphasising the Material when participants are more inclined to turn to 'communications-based' solutions.

6. COVER ALL THE CONTEXTS AND FACTORS

It is useful to capture linkages as the conversation flows from factor to factor, and across contexts. Although we do not suggest running the exercise as a rigid checklist which goes through all separate ISM factors in order, there may be a need towards the end of the session to prompt the group on any factors that have not come out spontaneously. This in turn leads naturally into the next step of standing back and prioritising.

Furthermore, at this point, do not worry too much about the details of the supporting evidence. Work from the group's expertise, which step 2 highlighted should include people with knowledge of the evidence base. After the session, it is a good idea to ground and cross check the 'facts' as reported in the session – especially if it is a crucial element in the chosen intervention approach(es).

7. NOTE IMMEDIATE OBSERVATIONS – PRIORITY FACTORS AND KEY INSIGHTS

Key insights are likely to be those which were the most striking to participants when they first came up, or which keep being referred back to by the group. Others may be apparent by reviewing the completed mapping to see which factors link most with other factors. Note any initial ideas for step 9.

8. EXISTING POLICY ISM MAPPING

Picking up from step 4 above, note existing policies and interventions by government and others to encourage the target behaviour, before moving on to the next step.

9. WHAT'S MISSING? IDENTIFY GAPS AND IDEAS

Note what factors are not covered by existing policies or interventions – the gaps – and note people's ideas for how these gaps can be addressed. In other words, what should we be doing to impact on key behavioural factors that we are not already doing?

Some ideas will come naturally to the fore and may already have been generated as part of the mapping of behaviours (steps 5-7), whilst others may require more creative thinking. It may be helpful to focus in on the potential linkages between factors, both within and across the different contexts, to generate ideas.

This step should also consider what factors would benefit from being strengthened. For example, a clearer understanding of the costs and payback period (under 'Individual') was identified in the electric vehicles workshop – see worked example below.

10. TAKE ACTION – DEVELOP A COHERENT PACKAGE OF INTERVENTIONS

Take a step back and reflect. Decide the priority factors to address and ideas to take forward. Ideas which impact on a range of different factors which have been identified as gaps are likely candidates. The wider evidence base may also be helpful in deciding which ideas to take forward.

Possibilities for implementing more than one idea at a time should be explored, working on as many contexts and factors as possible, to develop a coherent and coordinated approach. Evidence shows that this is more likely to be effective in influencing behaviours than developing and implementing one intervention at a time. Consider the roles of government (central and local), business and other stakeholders, such as communities and the third sector, in taking forward different interventions.

It may also be a good idea to prototype or pilot new approaches and evaluate them in order to learn lessons before roll out. In any event, evaluation of the implemented package of interventions is good practice.

Finally, it may not be possible to cover all of the steps in the same workshop. Therefore you may wish to reconvene the same or a different group of people to reflect on the issues and ideas raised and to develop an action plan for moving forward.

The next section of the guide provides a worked example which illustrates the insights and ideas which can be gained from using the ISM tool.

WORKED EXAMPLE – BUYING AN ELECTRIC VEHICLE

Increasing individual, business and public sector use of electric vehicles (EVs) is a key proposal within the Scottish Government's Second Report on Policies and Proposals (RPP2) which outlines how Scotland will meet its ambitious climate change targets. Whilst the technology (one of the Material factors) is already available and improving all the time, making EVs a common purchasing choice is challenging. As the behaviour mapping below shows, appealing to the multiple factors in the three different contexts is critical if the government and car manufacturers are to break the current 'catch 22' of non-use or niche purchase, and significantly increase the uptake of EVs. The worked example below identifies a wide range of factors – many of which are interlinked – which all need to be addressed if a step change in EV use is to be achieved. For presentational purposes, the worked example captures the main issues raised within the workshops rather than providing an exhaustive list.

Note – the example focuses on people's decisions to buy an EV. As per step 1 above, the factors which influence organisations' decisions to buy electric vehicles will be somewhat different, and are best modelled separately.

INDIVIDUAL FACTORS

This section provides a description in summarised note form of the Individual factors which influence people's decisions to buy an EV, rather than a petrol/diesel vehicle.

Values, Beliefs, Attitudes

- Range anxiety (in fact, c.60-100 miles)
- Lack of critical mass (chicken and egg between vehicles and charging network) – when will a tipping point be reached?
- (Mis)perceptions of inconvenience

Costs & Benefits

- Purchase price is high (battery costs up to 50% of car price)
- But factor in very low running and maintenance costs
- Leasing agreement for battery (ongoing cost), plus purchase car outright
- Length of payback unclear
- No resale market (yet) so resale price unknown
- Hard to calculate vs fuel prices (future uncertain, including level of fuel taxes)
- Incentives currently available (£5k – or 25% – off purchase price)

Emotions

- Initial distrust/suspicion...gives way to pleasant surprise on test driving

Agency

- Range anxiety plays into concerns about completing journey/not running out of charge

Skills

- How to drive an automatic
- Knowing where/how to recharge

Habit

- Car buying habits (including preferred make and model)
- Refuelling routines (new charging habits need forming)

The factors identified as part of the **Individual** context underline how new a behaviour buying an EV is. There is uncertainty around Costs & Benefits in terms of purchase price, resale value and payback period, set against a background of ingrained car buying Habits and refuelling routines. Beliefs, Attitudes and Agency are all influenced by 'range anxiety'. This is the worry about not being able to complete your journey due to running out of charge, despite 98% of car and van journeys being less than 40 miles*, well within the range of an EV. Skills and 'know how' are also an issue in terms of knowing how and where to refuel, and how to drive an automatic.

*Scottish Household Survey 2011, travel diary data

SOCIAL FACTORS

This section provides a description in summarised note form of the Social factors which influence people's decisions to buy an EV, rather than a petrol/diesel vehicle.

Opinion Leaders

- TV shows including Top Gear/Clarkson
- Taxi drivers (especially if driving an electric cab)
- Celebrity drivers

Institutions

- Key stakeholders including:
  - Manufacturers
  - Car hire market
  - Car media (e.g. Auto Trader)
  - Petrol stations (install charging points here?)
- NB some of these already on E-cosse stakeholder working group

Norms

- None! Should be good for using norms: highly visible behaviour – but currently not happening or talked about

Roles & Identity

- Car attachment very strong – sense of social conversation: 'my car is me'

Tastes

- Assumptions and preferences about car styles/ looks, driving styles and journey patterns

Meanings

- Electric cars as milkfloats or Sinclair C5s (vs e.g. Teslas or new electric F1 cars)
- Committed car drivers as 'petrol heads'
- EV could appeal to 'techie', early adopter people – but EV cars seen as a bit of a joke
- Ownership models of buying and leasing

Networks & Relationships

- Personal contact with someone who drives an EV
- ...failing which films and case studies with new EV drivers
- Target early adopters and spread new norms

The factors identified as part of the **Social** context again underline newness: most notably, there are no clear social norms around purchasing an EV yet. Meanwhile current Norms for car purchasing are petrol based; indeed the whole meaningfulness of cars only relates to petrol versions. Cars are critical to the 'social conversations' which we have as part of consumer society: what would driving an EV say about the kind of person you are? The Social context also highlights the role of Institutions and key stakeholders – manufacturers, the car hire market, car media and petrol stations – who all have a role to play in promoting and facilitating the uptake of EVs across the different Social, Individual and Material factors.

MATERIAL FACTORS

This section provides a description in summarised note form of the Material factors which influence people's decisions to buy an EV, rather than a petrol/diesel vehicle.

Rules & Regulations

- Financing Arrangements (e.g. government grants/discounts)
- A resale market (none yet)
- Spatial planning guidelines (e.g. siting the charging network)
- Congestion charging (e.g. exemptions for EVs)

Technologies

- Electric vehicles themselves, mostly small to medium cars at present
- Batteries (with increasing ranges/decreasing costs)
- Various charging arrangements (vary by point type and EV)

Infrastructure

- Charging points (and parking spaces)
- Homes with space to fit charging points (ideally with dedicated cabling) – NB government financial support with this from 2013
- EV dealerships

Objects

- Info/maps on charging points
- Eye-catching branding on charging points

Time & Schedules

- Recharging routines at home (e.g. plug in overnight)
- Scheduling breaks in long journeys to recharge (around 30 mins required for 80% charge)
- Trip patterns and accurate assessment of how often long car journeys are undertaken – e.g. 98% of car journeys are less than 40 miles

The mapping of factors in the **Material** context highlights that most work undertaken to date to encourage EV use has been in the Material context: for example,making the Technology viable, more affordable and accessible, and putting in the (hard) Infrastructure, such as charging points, to support the technology. Less has been done to date on information and maps of charging points, and maximising the visual impact of the latter through branding (Objects).

The focus on Time and Schedules highlights another linkage, this time to the Individual context and people's reported 'range anxiety': how many of people's car journeys exceed 100 miles without stopping, and how inconvenient would a 30 minute (recharging) break be in those irregular longer journeys?

The importance of financial arrangements and incentives, and planning guidelines, is highlighted under rules and regulations, some of which is under the control of the government.

However, focusing on Rules and Regulations and Technology highlights an overlap with Social factors around Institutions. While the government can lead on the charging Infrastructure and offer incentives, the Technologies and overall market and pricing are largely in the hands of manufacturers. Therefore close collaboration between government and industry will be important.

DEVELOPING NEW POLICY AND INTERVENTIONS

The next part of the workshop exercise mapped existing policies and interventions (step 8), before identifying ideas for further consideration and development (step 9).

The following existing government schemes designed to encourage the purchase of electric vehicles by consumers were identified:

Funding and incentives (Individual impacting on Costs & Benefits)

- £5k (or 25%) purchase discount, whichever is higher
- 0% rated road tax (also example of Material – Rules & Regulations)
- Subsidised home charging kit installation

Infrastructure (Material, impacting on Agency)

- Building the charging network (soon to reach 500 charging points, with an aim for a point every 50 miles on the trunk road network)

Ideas generated

A number of ideas were generated as part of step 9. The first three ideas explain the ISM factors in full and how they interact, whilst the rest are in summary form.

Increase visual impact of charging points

Increase the visual impact of charging points ('M': Objects), including through branding, to show people that Infrastructure ('M') to support EV purchase is growing, and to help normalise the use of electric vehicles. Even better if people can be seen using the charging points!

This has potential to impact on the following factors including:
'I': Beliefs and Attitudes – giving people proof in their daily lives is the best way to change attitudes, here by showing them that charging points away from home are available.
'I': Skills – the 'know how' required here includes where to recharge – for instance the ability to spot charging points when driving will build knowledge of how to complete journeys by EV.
'S': Norms – seeing 'people like me' using charging points will be the best way to normalise the behaviour.

Explore alternative charging networks

Home charging at times of low electricity demand is the primary aim, but alternatives which make a wider range of journeys viable are important too. Alternative charging sites ('M': Infrastructure) could include petrol stations, service stations, cafes and other places where people break long journeys.

This has the potential to impact on the following factors including:
'I': Agency – the availability of alternative charging points will make a wider range of journeys viable, which will increase people's confidence in using EVs.
'I': Habit – encouraging EV users to link their recharging activity with other purposes (shopping, resting) should help to make the practice of recharging a routine, and less of a strange chore, until it becomes as established as filling up the tank.
'S': Institutions – clearly, partner organisations will be required here to spread the charging networks.
'S': Meanings – where charging points are located can change the meaning of the act of recharging. If in a petrol station, it would appear more like normal refuelling, but if at a café it could feel more like part of a social call.

Provide better information – maps and apps of the network of charging points

Accessible maps and apps of the charging network, tied into satnav where possible ('M': Objects).

This has the potential to impact on the following factors including:
'I': Agency – the knowledge of how and where to recharge will physically make it easier for people to complete their EV journeys, especially for new and more wide ranging trips. This will further increase their sense of confidence that EVs can meet most, if not all, of their journey needs.
'I': Habit – when people are learning new routes they seek out and focus closely on relevant information; once that route has formed into a routine, their use of information becomes much more 'blinkered'. New charging points call for new route information.
'M': Objects – the maps themselves are needed (at least initially) to support the practice of driving and recharging EVs; having them in electronic formats integrates the task of route planning into other practices, like driving, in the case of the satnav.
'M': Time & Schedules – maps make new routes possible, which in turn make new trips possible, joining different places on an itinerary together to make the best use of time and distance. This includes the possibility of 'trip combining' using different transport modes.

Encourage networks of EV drivers

('S': Networks and relationships), first to encourage demonstrations and norming of EV use ('I': Skills, Agency) then as people switch to EVs, encourage users to offer their charging points to others ('M': Infrastructure). Connecting EV users into networks not only builds webs of knowledge, but physical networks of charging points, potentially in places where other infrastructure hubs (e.g. arterial roads, garages) are more scarce. There is also the potential to tie into the existing Energy Saving Trust Green Homes network, to build networks across the Scottish Government's ten key low-carbon behaviour areas.

Raise awareness of EVs amongst the general public

('I': Values, Beliefs, and Attitudes), through influential TV shows showing celebrities ('S': Opinion Leaders) or ordinary families ('S': Norms) using EVs long term in their everyday lives. This could combat (mis)perceptions that EVs are far less convenient and much more difficult than other fuelled vehicles, especially for long journeys, if timed carefully in terms of the growth of charging infrastructure. A related idea is to increase public exposure to EVs as taxis, hire cars, branded trade vehicles, etc.

To help calculate payback, cost comparison websites

('M': Object) for EVs versus fuelled vehicles for different models, mileages and journey types would be helpful. Information on the actual costs and other aspects of EV use, such as range and speed, will be important to enable people to make informed decisions about the relative advantages of buying an EV (I: Costs & Benefits).

Think about your mobility

Helping people understand their journey habits better, particularly on the mileage relating to everyday driving such as commuting, shopping and leisure, with the dual aim of counteracting EV 'range anxiety' ('I': Agency and Emotions) and educating people about alternative transport options. For example, asking people to keep a record of how long their journeys actually are could help circumvent range anxiety. Information on trip habits could also be captured and fed back out to drivers, such that they can get a better sense of what is 'normal' in terms of journey distances and journey patterns ('S': Norms).

Concluding comments

Looking at the insights and opportunities for intervention generated above, it is apparent that most of the ideas address multiple factors, across different ISM contexts. As noted in step 10 above, it is useful to consider these interactions when developing a coherent package of interventions to influence behaviours. For example, although the first three examples above are Material interventions, they impact on the softer Individual factors – Beliefs, Agency, Skills – as well as working to influence Habits, and the key Social factors of Norms and Meanings.

It is also worth considering the roles of government (central and local), business and other stakeholders. Although government holds or can influence a number of levers, industry and other sectors hold many of the remits that can help make widespread EV use a reality. Examples include: the right type of vehicles must be available at an attractive price, with dealer support (automotive industry); support for installation of domestic charging points and transparent and competitive electricity tariffs to encourage EV recharging at home at times of low demand (energy supply industry); and continuing improvements to technology, such as battery life and more efficient electric motors, will help combat concerns around EVs and make them more comparable to conventional vehicle use. Other stakeholder groups could have a role to play in developing and extending networks of EV users, including to people who are considering EV use.

The Low Carbon Vehicle Policy Team in Transport Scotland are considering the ideas generated in the workshop, alongside existing interventions. The Roadmap for Electric Vehicles will be published in summer 2013.

ISM AS AN EVALUATIVE TOOL

So far we have shown how the ISM tool can be used to develop interventions, broadly in the earlier stages of the 'policy cycle' (to plan, prototype and pilot).

However, the ISM model can also be used as a framework for evaluating the effectiveness of pilots or interventions that have already been rolled out. Evaluation could be undertaken in different forms, from an initial workshop session to identify key evaluation issues to a more formal research project. The former would be akin to the session described above but with a stronger focus on evaluation of the effectiveness of existing policies rather than generating new ideas. The advantages of using the ISM model as a framework for evaluation is that it captures the breadth of contextual factors that influence behaviours, but when combined with evidence, also supports homing in on the most important issues for a particular behaviour.

For example, for EV use to be become widespread in the future, it will be important that charging becomes 'automatic', i.e. a habit. Therefore any evaluation of electric vehicles would need to look not only at the material infrastructure – the type, range and distribution of charging points (e.g. supermarkets and service stations, cafes, etc.), but also at how and when people charge their EVs. Can and do EV users combine charging with a variety of other tasks (e.g. shopping)? Or is it seen as an additional and standalone task? A positive answer to the former would suggest that charging is becoming a routine habit, linked to other activities. This would work positively in encouraging other people to buy EVs, as opposed to a situation with limited charging points in which re-charging is difficult.

Of course, a variety of other ISM contexts and factors would also need to be addressed in any evaluation of electric vehicles. In keeping with the working methods of ISM, in which multiple factors across three different contexts are addressed by various stakeholders, a thorough ISM evaluation would involve multiple research methods and sources of evidence (e.g. usage and charging data, travel/activity diaries, attitude surveys, media/discourse analysis). In the final analysis, these measures would be presented against the background of the take up of the desired behaviour of buying an electric rather than a fuelled vehicle.

CONCLUSION

A number of reports on behaviour change and public policy have noted the importance of working across the range of different contexts that influence people's behaviours in order to achieve substantive and long- lasting change in the population's behaviours. The ISM tool is based on 'moving beyond the individual' to consider explicitly the social and material contexts that both shape and constrain people's behaviours. Many unsustainable behaviours are an entrenched or fast growing feature of everyday life. Addressing complex and multi-faceted issues, such as transitioning to a low-carbon society, requires creative and effective solutions, involving multiple stakeholders working across different contexts to implement a coherent and co-ordinated package of interventions. The ISM tool is designed to help achieve this: working collaboratively to define a problem, to identify solutions, and to deliver and evaluate interventions.

ISM has drawn on the latest behavioural science thinking, encompassing three disciplines, in order to develop a single practical tool to help design and improve behavioural interventions. In this way, ISM gets round the problem of which of the many behavioural models a practitioner should choose, because it brings together the main insights from across them all. However, those single discipline or behaviour-specific models and theories will still be valuable to focus in on particular behavioural issues or influences.

By bringing together all of the different contexts and factors that influence behaviours into one practical tool, it is hoped that ISM will help deliver more effective policies and strategies, resulting in lasting social change which benefits everyone.

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