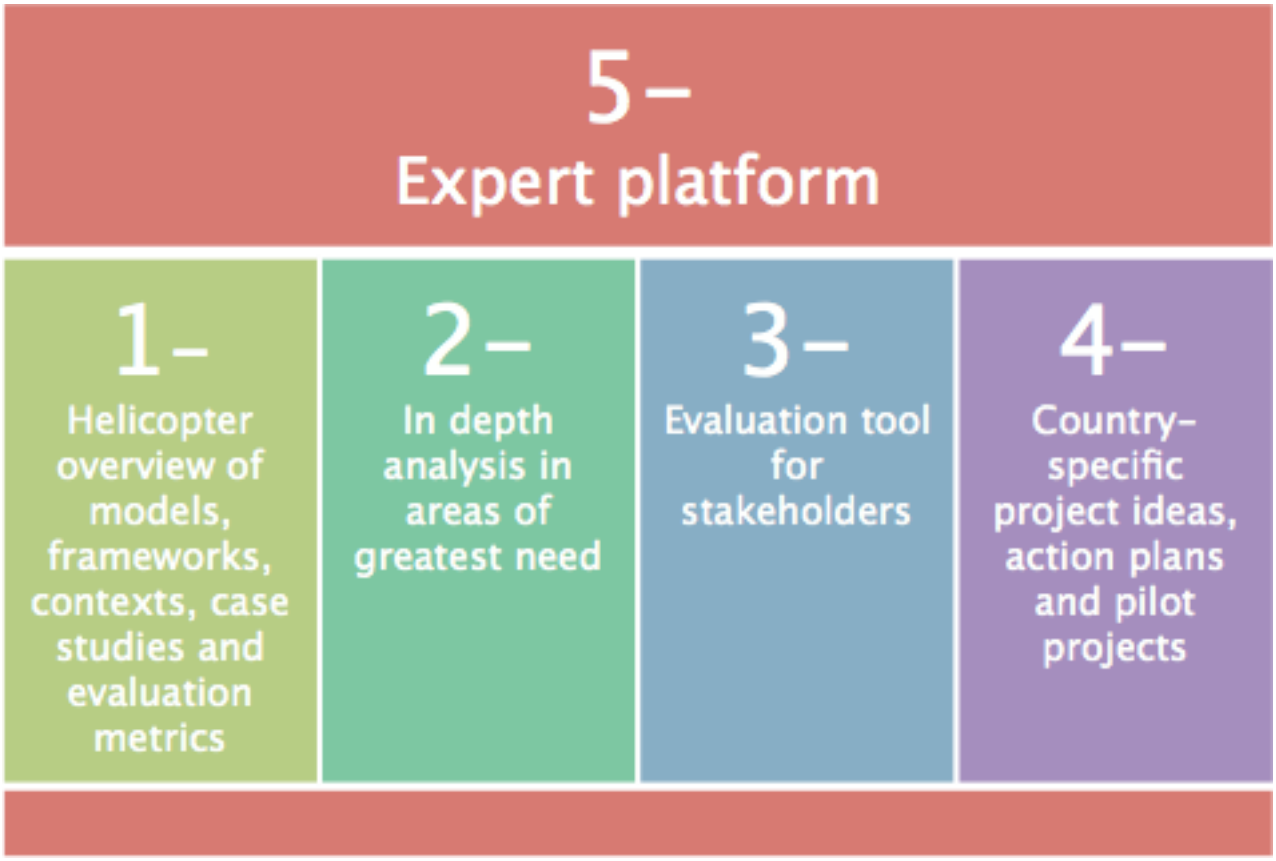
INTERNATIONAL ENERGY AGENCY

IMPLEMENTING AGREEMENT ON TECHNOLOGIES AND PROGRAMMES FOR DEMAND SIDE MANAGEMENT

Task XXIV: Closing the Loop - Behaviour Change in DSM: From Theory to Practice



Annual Report October 2012

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Prepared for the EXCO meeting in Espoo, November 14-16, 2012.

DESCRIPTION

The year 2012 brought the start of new work that concentrates specifically on energy end user behaviour, and how to improve it. There is great opportunity for Demand Side Management programmes if this behavioural potential (estimated to be as vast as 30% of total energy demand - Dietz *et al*, 2009) could be easily accessed and directed. However, as many other IEA DSM Tasks have discovered, the 'market failure' of energy efficiency is often due to the vagaries of human behaviour and choice. The best ideas, policies and programmes have been shown to fail again and again in achieving their desired outcomes. The current social and policymaking norm is still NOT to see energy saving behaviour as a major priority in achieving a transition to a sustainable energy system.

There are several reasons for these challenges and this Task sets to uncover, unravel and define them in order to provide clear recommendations to policymakers and DSM implementers. One of the main challenges is that humans are often still regarded as economically rational actors whose behaviours can be influenced by fiscal incentives alone. However, the complexities influencing human behaviour are so vast and manifold that such simplistic approaches almost invariably fail. It is imperative to uncover the context-specific factors (from infrastructure, capital constraints, values, attitudes, norms, culture, tradition, climate, geography, education, political system, legislature, etc) that influence human behaviour in specific sectors (the factors that influence our transport behaviours often differ from the ones driving our hot water usage, for example).

In addition, there are a large variety of research disciplines that endeavour to study human behaviour (social and environmental psychology; environmental and behavioural economics; anthropology; science technology studies; practice and innovation diffusion theory etc), each with their own models and frameworks, advantages and disadvantages. Unfortunately, they usually do not communicate well – not with each other and not with the end users of their research – the policymakers, technology developers, and DSM programme designers and implementers. This leads to confusion and lack of context- specific programme or policy design that is based on the best behavioural information or models.

Another crucial issue relates to monitoring, understanding, learning about and adapting initiatives in a more systematic manner. DSM projects demonstrate a great diversity of goals, scope, participants, resources, etc to meet the diversity of implementing environments. As a consequence, developing a generic evaluation and monitoring framework that is widely applicable and does justice to this diversity is difficult. However, there is a real and urgent need for more appropriate and effective monitoring, evaluation and learning of successful DSM implementation. The fact that there is little robust and concrete evidence on the contribution of DSM to a more sustainable energy system is not helpful when trying to garner support and demonstrate value to investors, policymakers and other relevant actors – especially when different actors are likely to be interested in different contributions and outcomes. Currently, DSM policymakers and other relevant stakeholders fund and/or support DSM programmes on a rather ad-hoc basis because they lack the means of assessing their impact on contributing towards a more sustainable energy system.

In conclusion, there is no behaviour change 'silver bullet', like there is no technological silver bullet. Designing the right programmes and policies that can be measured and evaluated to have achieved lasting behavioural and social norm change is difficult. We hope that this two-year Task will help address these difficulties and come up with guidelines, recommendations and examples of best (and good) practice and learnings from various cultures and contexts. We will rely on sector-specific experts (researchers, implementers and policymakers) from participating and interested countries to engage in an interactive, online and face-to-face expert platform and contribute to a comprehensive database of the variety of behaviour change models, frameworks and disciplines; various context factors affecting behaviour; best (and good) practice examples, pilots and case studies; and guidelines and examples of successful outcome evaluations. In the end, there will be several deliverables, the most important being the expert network and platform for continued exchange of knowledge and successes.

Task aims and objectives

The main objective of this project is to create a global expert network and design a framework to allow policymakers, funders of DSM programmes, researchers and DSM implementers to: I. Create and enable an *international expert networ*k interacting with countries' expert networks
II. Provide a *helicopter overview* of behaviour change models, frameworks, disciplines, contexts, monitoring and evaluation metrics
III. Provide *detailed assessments* of successful applications focussing on participating/sponsoring countries' needs (smart meters, SMEs, transport, building retrofits)
IV. Create an internationally validated *monitoring and evaluation template*
V. Break down silos and *enable mutual learning* on how to turn good theory into best practice

The benefits for the participating countries and for the DSM agreement will encompass:

- Participation in the IEA DSM Behaviour Change Expert Platform and knowledge exchange with a large variety of international and national stakeholders
- Maintaining an ongoing platform of shared learning, best practice examples and know-how
- A database of global knowledge and examples of behaviour change programmes, models and outcomes
- Mutual feedback, coaching and experience exchange for country- and context-specific issues
- Reducing the silos in research disciplines and fostering inter- and intradisciplinary sharing and research end user involvement
- Better ability to get funding and collaborations involving behaviour change programmes and interventions
- Ability to monitor, evaluate and prove ongoing success of behaviour change outcomes leading to energy and CO_2 savings, health and social benefits, financial savings and community benefits
- Contribute to an IEA DSM competence centre.

Approach

The Task is broken into 6 subtasks (see schedule of deliverables and subtasks below).

Phase / Duration of the action (in months)	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
Subtask 0: Management of the task												
0.1 Set-up an advisory board												
Workshop to finalise task definition in Austria/NL plus VC, 6-monthly ExCo meetings. Annual Advisory Board (AB) meetings		WS AT/ NL	Ex Co		AB	Ex Co			Ex Co		AB	ExCo
Subtask 1: Helicopter overview of models, frameworks, contexts, case studies and evaluation metrics												
1.0 Development of template to analyse models, frameworks, disciplines and evaluation metrics												
1.1 Inventory of available models, frameworks and disciplines and analysis of applicability of models in differing contexts												
1.2 Deliverable on definitions of models and frameworks and their contextual applicability												
1.3 Build-up and continuous updating of database (wiki style)												
Workshops in BEL (August 2012) and UK (October 2012)				WS BEL	WS UK							
Subtask 2: In depth analysis of topics of particular interest to participating countries												
2.1 Detailed characterisation of targeted cases and development of case study template												
2.2 Collection and analysis of case studies for different selected sectors, themes and countries with inventory of key context factors and success stories and learnings. Insert in database developed under ST1.3												
2.3: Development of deliverable on context factors influencing DSM activities in topics of particular interest to participating countries												
Workshops and webinars in BEL and UK (same as in ST1)				WS BEL	WS UK	Web						
Subtask 3: Evaluation Tool												
3.1: Identifying relevant indicators/metrics/tools for monitoring and evaluation of DSM project and programmes												
3.2 Assessing context sensitivity of indicators/metrics/tools, dependent on stakeholder needs												
3.3: Developing and testing monitoring and evaluation tool												
Workshops New Zealand, Norway, Switzerland								WS NZ	VC	WS NO	VC	WS CH
Subtask 4: Country-specific project ideas, research priorities, to do/not to do lists and ideas for pilot projects												
4.1 Development of stakeholder-tailored to do's and not to do's for successful context (country) sensitive implementation, monitoring and evaluation of DSM projects on selected topics and target groups (i.e. smart metering, SMEs and transport)												
4.2 Development of country specific research priorities, project ideas and pilot plans - to be put in practice if task extension is approved												
4.3 Dissemination of the to do's and not to do's												
Workshops Switzerland, Norway, New Zealand and others if other countries become participants						Web		WS NZ		WS NO	VC	WS CH
Subtask 5: Social media expert platform												
5.1 Overall coordination of the project												
5.2 Design of a Stakeholder Engagement Plan												
5.3 Design of the online platform and specification of its individual components in consultation with experts												
5.4 Utilisation of ongoing expert platform												
Workshop to finalise task definition in Austria/NL plus VC, ExCo meeting sign-off in Norway April 18, 2012. Ongoing online interaction		WS Aut/ NL	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web

Note: VC = video conferencing or webinars; Web = web-based engagement; WS= expert workshops; ExCo = DSM Executive Committee meetings (6 monthly); AB= Advisory Board meetings. Also note that not all countries mentioned have already signed Notice of participation letters.

Deliverables

Subtask	Deliverable	Deliverable name	Type of deliverable	Month of completion
0	D0	Advisory committee	Network	8
1	D1	Database/wiki listing collected models, cases	database	12 but ongoing
1	D2	Final 'report' on work in ST1	Interactive format	12
2	D3	Surveys and post-evaluation of detailed case studies topics of particular interest to participating countries	Report/interactive	12
3	D4	Tool to evaluate 'successful outcomes' of DSM programmes	Interactive	16
4	D5	To do's and not to do's, priority research areas and ideas for pilots and projects for participating countries and stakeholders	Briefs and other formats	24
5	D6	Social platform and meeting place for DSM and behaviour change experts and implementers	Online social media platform	ongoing

Definitions

It is important to explain the approach and terminology used in the context of this IEA DSM Task and the policies of its participating countries. The target audience for this task is *not the energy end user*, but the *end user of behaviour change* ***research***. We therefore aim not at changing energy using behaviour *per se*, rather, help improve policymaking and programme design by intermediaries who have this goal, via on the one hand offering them better insights into how to turn good theory into practice and on the other hand provide research developers better insight into how to frame and develop research that is being seen as useful in practice and policy.

Demand Side Management (DSM): DSM generally refers to changes that originate from the demand (energy user) side. DSM refers to policies, mechanisms and techniques designed to influence energy behaviour, and encompassing the entire range of management functions (planning, implementation, evaluation and monitoring). Note, we concentrate on all fuels, not just electricity in this Task. The intention of the influence may include changes in energy:

- **conservation** (overall reduction in energy use),
- **efficiency** (the energy services provided per unit of energy input) and
- **load management** (shifting patterns of energy use).

Thus, energy conservation may or may not be associated with an increase in energy efficiency, depending on how energy services change. That is, energy consumption may be reduced with or without an increase in energy efficiency, and energy consumption may increase alongside an increase in energy efficiency. The DSM goal is to achieve large-scale energy efficiency improvements and overall consumption reduction, usually (but not exclusively, we mainly focus on behaviour-driven efficiencies here) by deployment of improved technologies.

Energy-using behaviour: Energy-using behaviour refers to all human actions that relate to the use of externally acquired energy. It includes the practices of acquiring energy- related technologies and materials and functions, their maintenance; and consumption of energy. Or simply: what we do, with what and with whom. The behaviour can be **intentional** (e.g. investment in energy efficient technologies) or **routine** (e.g. switching off the lights when leaving a room), but this is not

a clear distinction, rather a continuum dependent on the individual and their specific context and situation. And the behaviour can be viewed from the individual but also the collective or social perspective.

A successful behaviour change outcome, in this Task, results in **improved energy use** by households and businesses. This does not necessarily focus solely on reduction in total energy use (although this is the medium to long-term goal), but on the *most efficient and environmentally friendly use of energy to derive the services that underpin societal and economic wellbeing* (e.g. comfort, mobility, entertainment, cleanliness, production etc). This means that we include case studies (on pilots, projects, programmes, issues or themes) and examples that may have had 'perverse' energy outcomes, e.g. due to rebound, or which may have had social or health drivers as primary focus for behaviour change interventions.What is defined as successful outcome is very much dependent on different stakeholder perspectives, expectations, temporal issues and contexts and can refer to both the process and the outcome of the process. We will explicitly aim to be sensible to this situated definition.

A model of understanding, framework or discipline includes all disciplinary and interdisciplinary **theoretical approaches and insights** to investigating, assessing, influencing or intervening in, and measuring energy-using behaviours in individuals and society. Models of understanding can refer to actual models, such as e.g. Energy Cultures, an inter-disciplinary model from New Zealand. A framework can relate to a wider theory, eg Attitude Theory, which provides a framework of understanding energy-using behaviours. And a discipline can refer to the wider academic distinctions of e.g. environmental psychology vs behavioural economics. We have created a template to collect information on approaches from all these areas in this Task. The template aims to collect information about issues that are deemed relevant to understand the interaction between a model and an energy practice and its context.

Contexts affecting behaviour change: To meet the complex behaviour change challenge, approaches that point out the importance of the **direct and wider context** or environment in which DSM efforts are situated, have been developed. If this environment is not supportive of changing behaviour towards more efficient energy use, then it is very difficult (sometimes even impossible) for individuals to uphold these new behaviours after the support of a DSM programme has finished. To achieve ongoing, effective DSM outcomes, individuals as well as their social, institutional, physical, technological, economic and cultural contexts (see Table below) need to be targeted. We aim to collect information on context factors that have been assessed in pilots, programmes and policies; and that form important parts or foci of various models of understanding.

Context 'factors'	How they affect opportunities towards lasting behavioural change
People	Behaviours are affected by the people around us: direct peers like family, friends, neighbours, colleagues. In order to reach long-lasting behavioural changes, it is important that peers also support or take up these new behaviours. Moreover, people learn best from other people so building social networks is important in DSM interventions. Stakeholders on a more distant level are important as well, e.g. policy actors who facilitate or inhibit change through policy support; or banks providing finance to new initiatives; energy companies.
Norms & Values, Culture	Practices are underpinned by norms which are socially-shared among smaller or larger groups of people. Changes in practices need to be supported by changes in social norms which provide the changed behaviours' legitimacy. Opportunities for change are affected by (local, regional, national) cultures, but cultures can of course also change due to changes in practices (over longer periods of time). Factors influencing cultural differences: learning culture; tradition and upbringing; risk attitude; prior experience of community engagement with similar projects and/or project developers; social cohesion/ interpersonal relations; individual vs. group involvement; community trust; attitudes to new technology; privacy
Political factors	History of civic democratic engagement; types of government policies; stability of national policy; partisanship or collaborative governance (political culture); centralisation or federalisation of national government; tradition of top-down vs bottom-up initiatives; regulation and legislation.
Physical infrastructure	Urban and spatial infrastructure can inspire, encourage, constrain or even inhibit the uptake of more sustainable lifestyles. In cities, the uptake of healthier travel behaviour is not always supported by pedestrian-friendly or bike-friendly infrastructure. Physical infrastructure refers to all sorts of technologies, applications and products that are part of our daily lives and ways of doing (e.g. the short lifecycle of products limits possibilities to use these products sustainably).
Technology and Material 'Culture'	What technology is available and rolled out; the scale of a DSM project (large or small, centralised or decentralised, radical or incremental); technological flexibility and advancements; how technology fits into existing infrastructure. Also, energy-related materials and technology's direct influence on energy practices, eg ability to change heat settings, complexity of its operation, convenience of use.
Geography	Options to behave more energy efficiently are constrained by climate, land availability, rural vs urban locations etc
Socio-Economy	The overall economic situation affects peoples' daily lives, and ways of doing – and hence also opportunities for behavioural change (e.g. the need to save money may be a first trigger to change practices). Availability of natural resources and social acceptability of their exploitation; energy prices; technology and other input prices; perception of foreign investment; importance of energy independence; security of supply; interest in local employment and job creation; nationally-competing technologies and innovators.
Policy and implementation	Policy support is crucial and can either support or inhibit DSM interventions in several ways and on several levels. How is DSM implemented (community/local, regional or national level); organisational strength and make-up of policymakers and implementers

An end user of behaviour change research includes actors and stakeholders on various levels of DSM:

1. **Intermediaries who work directly with energy users to implement energy behavioural change programmes** (e.g. local NGOs, ESCOs, transition town initiatives, technology developers and implementers to DSOs etc)
2. **Policymakers** who design, implement and measure policies aimed at improving energy use at local, city, regional, national, EU, international (OECD) levels
3. **Funders/investors/social entrepreneurs** who are interested in financing energy DSM initiatives, and who are interested in learning how to evaluate and judge existing and new projects and initiatives.

Behaviour change interventions (policies, programmes, projects, pilots) refer to **designed attempts to achieve improved energy use**. They will be used to demonstrate how various models of understanding, frameworks and disciplines have been utilised in the past, intentionally or implicitly. To collect this information, we have created two templates (one for programmes, one for policies). We aim to get insights and learnings into the role of the individual, role of the energy practice, role of social context, role of technology, actors and institutions, behavioural change processes, social change, relevant conditions and factors affecting behaviour change, context particularities and monitoring and evaluation that has been undertaken in real-life examples. To differentiate (modified from Vreuls 2005):

Policy measure: A specific type of political action or market intervention designed to persuade energy consumers to improve energy use and encourage market parties to promote energy-efficient goods and services.
Programme: An organised set of projects targeted towards defined market parties over a specific time period to achieve increased end-use energy efficiency or reduced use of energy services. A package of selected policy measures is used. This selection is based on a programme theory.
Project: An organised set of activities to create output(s).
Pilot: A smaller study (often called feasibility study) conducted in advance of a planned project.

Evaluation and monitoring of interventions: Because DSM projects/programmes/pilots/ policies demonstrate great diversity of goals, scope, participants, resources etc (necessary to meet the diversity of implementing environments), developing a generic evaluation and monitoring framework is problematic. There is an enormous diversity in terms of aims, goals, scale, scope, sort of participants involved, modes of involvement/engagement, management structures, involvement of other stakeholders, availability of locally committed participants with relevant skills (e.g. social, technical, political) and possible metrics used to collect data to evaluate change. Many energy DSM projects include goals relevant to different stakeholders, for example goals for both policymakers (energy-related goals i.e. energy savings and carbon reduction) and end-users (e.g. improved health, comfort, financial savings, social cohesion). In addition, both the process and the outcome of a policy/ programme/project/pilot can be monitored and evaluated and the description of the process or outcome can differ depending on the stakeholder doing the description. This diversity requires the tailoring of projects to the particular contexts in which they are implemented. To ensure the success of the project and increase its potential for mainstreaming, criteria for success for different stakeholders need to be met to gain the essential support from these stakeholders. Finally, there is no collectively designed set of indicators and methods to assess the successfulness that is sensitive to the above challenges.

Problem 1: It seems to be a waste of effort if the DSM programme and policy implementers do not know how well their intervention has achieved what it set out to achieve (and/or what else it might have achieved). Without this learning, interventions will replicate previous unsuccessful interventions and slow up progress towards the goal of improving energy use in households and businesses.
Problem 2: Many interventions set out to achieve changes in energy use but either (a) don't set out to evaluate whether the intervention achieved what it intended, or (b) do carry out an evaluation but it is poorly done (e.g. not rigorous enough to stand scrutiny, evaluates the wrong things, fails to account for change occurring from other sources, is not long enough to show ongoing change), or (c) do carry out an evaluation but are unable to compare it with anything else so have no sense of relative effectiveness of the intervention.

Problem 3: It is very difficult to show a simple, linear relationship between an intervention and actual changes in energy-using behaviour. The longer or more complex an intervention is (and a 'toolbox' of interventions has often been shown to be most effective in changing behaviours), the more difficult it is to measure direct impact.

This Task, therefore, sets out to develop means to **evaluate ongoing successful behaviour change outcomes** (leading to improved energy use), in a way that makes sense to the actor or stakeholder who initiated an intervention. We need to collect and understand a variety of evaluation metrics and examples that have been used to assess (un)successful behaviour change outcomes in the past. We also want to know which evaluation methods are best suited to various models of understanding.

Mainstreaming best behaviour change practice: Mainstreaming depends on the **success of best practice to diffuse** amongst the micro-contextual level of households and from this micro-context to the meso level of society, facilitated by (changes in) the macro (wider, global) level. To achieve lasting and mainstreamed changes in behaviours we need to understand what is happening on all levels, from individual to systemic; from the micro to the macro level and all the various interconnections. In order to provide optimal support to research end users, insights into the different levels and how to affect them with interventions, have to be provided. The table below clarifies the different levels to consider.

Micro-level	DSM interventions can trigger behavioural changes and social innovation that are still niches or experiments, in the early stages. New rules and norms are not yet institutionalised, but flexible and unstable. However, the 'old' ways of doing have partially been replaced by 'new practices'.
Meso-level	The meso-level constitutes the context of 'normal' practices. Thus, the challenge is to accomplish that 'new practices' become normal in the course of time. This level entails systems of provision, which enable and constrain choices and behaviours. They are built up over a longer period of time, and they do not change overnight.
Macro-level	The macro-level is the wider background setting for social innovation, enabling and constraining opportunities for meso-level change (socio-economic, demographic, political and international developments; e.g. wars or environmental disasters). This layer is difficult to influence and usually changes quite slowly.

Four main themes in the IEA Task

The participating countries have indicated four main topics as being of special interest for Task XXIV. These topics fall under two end users (households and SMEs) and two sectors (transport and buildings), with smart meters as an overarching technology. We hope to collect intervention examples, and more in-depth case studies from each of the topics on both, routine and intentional behaviours. However, some of the case studies may overlap among themes, for example, building retrofits and smart meters in SMEs; smart meters and transport; transport and SMEs etc.
The table with examples below is intended to keep track of whether we are collecting cases that cover all four themes and different behaviours (e.g. efficiency & curtailment; or investment & routine behaviours). We know they are sitting on a continuum, rather than being black & white delineations.

	Households Efficiency behaviour	Households Curtailment behaviours	SMEs Efficient behaviours	SMEs Curtailment behaviours
Transport	eg fuel efficient vehicles	eg switching to biking or walking	eg fuel efficient vehicles	eg switching to fewer trips, consolidating
Transport Smart Metering	eg EVs connecting into a smart grid, smart house with smart appliances	eg using fuel consumption feedback device to drive more effectively	eg EVs connecting into smart grid	eg using GPS and fuel consumption feedback to encourage smarter driving
Building renovation	eg installing insulation	eg removing the bathtub and installing a shower	eg Installing efficient HVAC system	eg removing number of lifts to encourage staff to use stairs
Building renovation Smart Metering	eg installing smart metering and feedback displays	eg ripple control	eg installing smart building management system	eg providing feedback clues to encourage conservation behaviour (eg green light when to open window)

Smart metering and consumer feedback devices

We take the widest scope of 'smart metering' in order to collect projects and case studies in this task - smart grids, smart meter technology and feedback displays - as long as they have means and ways to affect energy using behaviour. Smarter metering here consists of all sorts of feedback systems that allow for a tailored information feedback to end-users and customers and home energy management. Smart meter devices have the potential to support a shift of use by end-users as well as a reduction of energy usage. As such they can support behavioural changes towards enhanced energy efficiency and demand reduction.

Building renovation/retrofits

Since renovations are moments of change, these can offer windows of opportunity to address energy behaviours (both investment and routine behaviours). We look at all types of building retrofits (residential, single-housing, apartments and commercial buildings), but they may fall under either the 'household' or 'SME' sector in the collected case studies and examples.

SMEs

'SME' stands for small and medium-sized enterprises – as defined in EU law. The main factors determining whether a company is an SME (also in the sense of this Task) are:

1. **number of employees** (medium <250; small <50) and
2. either **turnover** (medium <€50m; small <€10m) or **balance sheet total** (medium < €43m; small <€10m).

Next to households, schools and public buildings, SME's offer a huge potential for energy saving through behavioural change. But problems include (a) energy often being such a small element of their whole outgoings that its not seen as worth addressing and (b) huge diversity in the sector and thus very hard to address across the board (far more diverse in types of energy used than households).

Transport

Transportation in this Task refers to:

1. Any device used to move an item from one location to another. For simplicity, we will concentrate on 4-wheel transport (unless we discuss mode- shifting, see below) here.
2. The process of shipping or moving an item from point A to point B. We will look at case studies that involve fleet/vehicle and fuel purchases; mode shifting (eg driving to walking and biking); and fuel-efficient driving behaviours.

Dissemination of Results and Discussion with Stakeholders

Task XXIV has produced a number of publications and given presentations at various conferences and workshops to disseminate and discuss the Task results. It is also widely disseminated and publicised online, via social media and social networks. Furthermore, stakeholder workshops and webinars were organised in conjunction with each project meeting to discuss behaviour change topics relevant to the host country of the meeting.

Task XXIV Publications and reports

- IEA DSM Spotlight 45 Issue, June 2012 - on social media
- IEA DSM Task Flyer XXIV (updated)
- IEA DSM website Task XXIV (updated)
- Draft positioning paper for Brussels workshop
- Positioning and definitions paper for Oxford workshop
- Template for Models of Understanding Behaviour Change
- Template for Programmes and Pilots
- IEA DSM Task XXIV Pecha Kucha presentation (powerpoint/film)
- 5 participating countries' Pecha Kucha presentations (powerpoint/film)
- Brussels workshop meeting minutes (powerpoint)
- Interviews of experts' own energy stories (film)
- Belgian DSM and behaviour change story (film) - underway
- UKERC Meeting Place report of Oxford workshop - Dec 2012

Previous publications

- IEA DSM Spotlight 43 Issue, December 2011
- IEA DSM Task Flyer XXIV
- IEA DSM Initial Positioning Paper on Behaviour Change
- IEA DSM Task XXIV Draft and Final Workplans
- IEA DSM website, twitter, facebook and linkedIn groups
- On the company website of Dr. Ruth Mourik, DuneWorks
- In the internal ECN (Energyresearch Center of the Netherlands) Newsletter, December 2011

Online sharing and administration of Task XXIV

- Widely disseminated via IEADSM on twitter, linkedIn and facebook group; also ECEEE columns and energy and behaviour linkedIn groups
- Weekly publication of Behaviour Change & Energy News by Dr Sea Rotmann
- Expert platform went 'live' in July 2012: www.ieadsmtask24.ning.com, to join: www.bit.ly/jointask24 - includes videos, photos, discussion fora, subtask groups, events
- Mendeley (www.mendeley.com) Task XXIV Group and bibliography database of >400 behaviour change and energy publications
- CRM Capsule (www.crmcapsule.com) contact relationship management system, collects all emails and contact information related to the Task
- Behaviour change and energy pearltree (www.pearltree.com) to collect and manage related websites etc
- Task XXIV dropbox (www.dropbox.com) to share templates and collected models etc
- Task XXIV wikipedia (under development)

Meetings and workshops held in 2012

Date	Place	Total # Experts	# of countries	Type of meeting	Government	Business	Academic
10/4	Utrecht, NL						
10/4	Graz, AUT	5	2	Task kick-off	4	1	1
11/4	online	13	6	Webinar - Task kick-off	2	2	9
3/5	online	6	5	Webinar - Expert Platform	1	1	4
	Utrecht, NL			Stakeholder Meeting NL			
30/8	Utrecht, NL			Stakeholder Meeting NL			
7/9	Brussels, BE	24	8	Expert Workshop	3	8	13
9-10/10	Oxford, UK	55	9	Expert Workshop	3	13	39
19/10	online	TBC	5	Expert Webinar			

Seminars and/or Conferences where Task was presented in 2012

Date	Place	Total # Experts	# of countries	Type of meeting
8/5	Linköping, SE	20	2	Presentation on Task XXIV to University
29-31/8	Basel, CH	~300	15+	Task Presentation at 3rd Intl Sustainability Conference
19/9	Helsinki, FI	20	3	Task Presentation to Finnish Experts
20-21/9	Helsinki, FI	~250	15+	Task Presentation and session chairing at BEhavE conference
24-25/10	Berlin, GER	100s	10+	Attendance at 'Energy Recovery in Industry: Opportunity for energy efficiency' conference by EEIP

Positioning of the Task – vs. other bodies

Task XXIV “Closing the Loop - Behaviour Change in DSM: From theory to practice” is a unique Task in providing an international expert platform for anyone designing, implementing, evaluating and funding programmes, policies and initiatives aimed at changing behaviour via improving energy using practices. The members of the Task work and cooperate with their respective national bodies and programmes and are involved in a variety of other international projects, dealing with behaviour change research and the implementation of energy efficiency. On top of the national experts from five participating countries, we have a very large number of experts from over 12 countries involved in the Task. Over 90 experts are currently on the Expert Platform (www.ieadsmtask24.ning.com), and dozens others have attended Task workshops and webinars.

We have invited Task XXIII experts to participate in our largest workshop in Oxford (October 9-10), and will attend their first Task meeting on October 11. The two Tasks will work closely together to ensure maximum knowledge sharing and no duplication of efforts. ISGAN is also very interested in our Task and have attended some workshops/webinars. The IEA energy efficiency policy unit (contact: Sara Pasquier) is in close contact with the Task Operating Agent and promotes it actively.

Technology development success stories

Task XXIV is not developing any particular technology itself, however it is examining the interaction of behavioural practices and technology, especially smart metering. To this end, several multi-national technology developers are interested in, and contributing to the Task. We are currently examining a possible Task extension which may have a stronger focus on tchnology-based interventions.

Reports and Publications planned for 2013

- Subtask I - Helicopter Overview Database of models, contexts and evaluation metrics
- Subtask I - interactive report-back
- Subtask II - analysis of case studies and best practice in four overarching themes
- Subtask III - template to enable better evaluation of successful behaviour change outcomes depending on the stakeholder point of view
- Subtask IV - Country-specific recommendations, to-do’s and plans going forward
- Subtask V - social media ‘paper’ to be presented via social media at ECEEE summer study 2013
- ECEEE summer study paper and poster on Task XXIV
- BECC conference paper on Task XXIV
- Special Issue on Sustainable Knowledge Society and Role of Social Media - academic paper
- Spotlight issues on NZ participation and various aspects of the Task

Meetings planned for 2013

Several meetings, both face-to-face and online, are planned for 2013. We will have 2-monthly webinars with our national experts (unless there is a face-to-face workshop instead) to discuss ongoing work and any potential issues or questions. Our next face-to-face expert workshop will be in New Zealand on February 14, following from a 2-day workshop (to which all Task experts are invited) by the NZ ExCo member, the National Energy Research Institute (www.neri.org). Further expert workshops are planned for Norway and Switzerland later in the year. In each expert workshop, hosted by a participating country, the country will get to tell its unique behaviour change and DSM ‘story’. A collection of these stories (via film) will be provided at the end of the Task.

Activity Time Table

Task XXIV started its operation in January 2012, although its final work programme was not officially balloted by the ExCo until July 2012. We would therefore ask the ExCo to consider taking the official Task starting date as July 2012, which will mean it will finish in June 2014 (at no extra cost to participating countries). A 3-year Task extension is planned to turn theory into practice via

action research projects to be standardised and contrasted amongst participating countries. Particular emphasis will lie on evaluation methods of ongoing, long-term behaviour change outcomes which can be linked back to specific DSM interventions.

Subtasks	2012		2013		2014	
Subtask 0 - Admin						
Subtask I - Helicopter Overview						
Subtask II - Case Studies						
Subtask III - Evaluation Template						
Subtask IV - Recommendations						
Subtask V - Expert Platform						

Costs

Description personmonths/costs	Cost (Euro)	personmonths Sea Rotmann per subtask	personmonths Ruth Mourik per subtask	total costs Sea Rotmann	total costs Ruth Mourik	total sum
Subtask 0	4500	2	1	9000	4500	13500
Subtask 1	4500	4	2	18000	9000	27000
Subtask 2	4500	4	2	18000	9000	27000
Subtask 3	4500	6	3	27000	13500	40500
Subtask 4	4500	4	2	18000	9000	27000
Subtask 5	4500	4	2	18000	9000	27000
Total personmonths/costs		24	12	€108000	€54000	€162000
Description costs	Costs					
OAs travel costs	25000	costs travel Sea Rotmann and Ruth Mourik including extended stay in Europe of Sea Rotmann and frequent face to face meetings RM and SR (4 times travel SR to Europe from New Zealand and one time RM from Europe to New Zealand)				
stakeholder analyses	5000	separate meetings and costs associated with stakeholder analyses				
website and data management	5000	including website, webinars, VC, social media, blogs/vlogs, database etcetera				
overheads and incidentals	3000					
Total	€38000					**€200000**
We expect the participating countries to reimburse the experts that attend workshops.						
We expect the participating countries to finance the organisation of the workshops in their countries						

The probable number of participants is at the moment 5 - 8. The countries will be invoiced in two amounts (during 2012 and 2013).

In addition to the cost sharing for the OA budget, each country will be required:

- to provide expert time of approximately 42 days in total
- to attend up to six meetings/workshops of the Task and prepare for them
- to host a meeting/workshop during the lifetime of the Task
- to carry out the national dissemination activities
- to provide us with all relevant publicly available material produced in that country, plus
- to actively engage in the expert platform.

Accomplishments since June 2012

Negotiations with all potential participating countries are continually underway. New Zealand has re-joined the DSM Implementing Agreement specifically to participate in this Task. Over 100 interested experts from 10+ countries have expressed interest and/or contacted their relevant ExCo members to foster support for country participation. We still hope to have 8 countries participate and/or sponsor this Task, as it requires the widest input of experts and case studies possible.

The international interest in the Task is enorm, this was demonstrated clearly at the BEhavE conference in Finland, where the Task was widely publicised by the organisers and the IEA Secretariat. The 'social' nature of the Task - from the very successful expert platform (which is invite-only, and which has organically grown to 90+ experts in <4 months), to the amount of experts coming to workshops, stakeholder meetings and webinars - clearly works, and befits the topic (of human behaviour). In addition, the Task is very strongly represented in global behaviour change exchange via social media eg the twitter hashtag #behaviourchange is largely associated with this Task. Several experts who are highly involved in the Task have been attracted to the Task via social media - either via the Operating Agent's linkedIn profile, the 'Behaviour Change & Energy News' editorials, the ECEEE column or her tweets. Although it is obviously not possible to forego face-to-face workshops and meetings, it is highly advisable for a Task such as this to increase and foster participation via social networking.

We are still collecting models of understanding and examples of best (and not so good) practice programmes, policies, pilots and initiatives. We have received many from our national experts, but also from interested participants. We have also received good input and feedback from various (national and otherwise) experts on the draft positioning and definitions papers. The Oxford workshop, funded by UKERC Meeting Place, was one of the fastest-filled workshops in UKERC's history and several people had to be turned away. The Dutch stakeholder meetings, initiated by Agency NL, also turned out to be extremely successful. So much so, that we hope to find a way to replicate them in the other participating countries. The participating countries' Pecha Kucha (www.pecha-kucha.org) presentations were excellent, as were the short interviews of various experts' own energy 'stories'. We generally feel very humbled and grateful for the extensive showing of humour and goodwill from participating experts, especially when it comes to pushing the boundaries via creative ways and means of dissemination and collaboration.

Participation

Eleven countries expressed strong interest in the Task, the Netherlands, Norway, Belgium, New Zealand and Switzerland have confirmed their participation. We await final notice of (non-) participation from the US, UK, Finland, Sweden, France and Austria. Several non-DSM countries have also expressed interest, including Germany, Denmark, Australia and Saudi Arabia. In addition, there are countries that have expressed the willingness to participate as sponsor with in-kind expert time (Spain for example offered 1.5 to 2 expert person months).

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