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Report on self-evaluation

J. Backhaus (ECN), E. Heiskanen (NCRC),
M. Hodson (SURF), B. Brohmann (OEKO), M. Johnson (NCRC), D. Bauknecht (OEKO),
C.F.J. Feenstra (ECN), R.M. Mourik (ECN), S. Breukers (ECN), S. Robinson (M:KC),
E. Vadovics (GreenDependent), P. Maier (VZ NRW), I. Valuntiené (COWI Lietuva),
M. Saastamoinen (NCRC), S. Marvin (SURF), V. Bürger (OEKO), L. Becker (OEKO),
E. Karakatsani (CRES), V. Papandreu (CRES), Y. Barabanova (CEU), T. Steger (CEU),
L. Smith (M:KC), K. Vadovics (GreenDependent), H. Meinel (VZ NRW), C. Bruhn (VZ NRW),
S. Rinne (Enespa), M. Jalas (Enespa), A. Kamenders (Ekodoma), T. Kallaste (SEI-T)

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Executive Summary

The project ‘Contextualising behavioural change in energy programmes involving intermediaries and policymaking organisations working towards changing behaviour’ (CHANGING BEHAVIOUR) commenced in January 2008 and ended in December 2010. The main aim of the project was twofold: to develop a conceptual framework of behavioural change and to develop a toolkit with practicable tools and advice for managers of demand-side management projects (i.e. energy intermediaries). The conceptual framework of behavioural change was published in June 2009. The Make Energy Change Happen (MECHANisms) Toolkit has been made publicly available online in November 2010.

The objectives of the CHANGING BEHAVIOUR project have been met through a series of work packages (WPs), each with its particular tasks and aims, while at the same time delivering important results and contributions to the overall aims of the project. WP1 culminated in an online database of 100 cases of European demand-side management programmes, showing how much these programmes differ in terms of their target groups, aims, implementing organisations, implementation strategies or instruments and contexts. WP2 developed a model of behavioural change based on results of previous research, behavioural change models from different disciplines and several in-depth case studies. WP3 focused on interaction with European energy intermediaries in order to tap into their knowledge base, test results of WP2 with their experience and improve the understanding of the challenges energy intermediaries are faced with. All insights gathered found their way to a number of Activities (i.e. early versions of the MECHANisms Toolkit) for project managers.

WP4 included the practical testing of CHANGING BEHAVIOUR findings in six pilot projects which were designed and implemented by the practitioner organisations in the consortium, supported by the research institutes. The early Activities for project managers were tested and improved within the framework of these six projects. WP5 combined all work done so far with an analysis of potential Toolkit users’ demands and needs. Based on insights gained, the MECHANisms Toolkit for people or organisations implementing demand-side management projects was developed in several iterations and in close collaboration with potential users. The Toolkit offers information and advice based on a sociotechnical conceptualisation of behavioural change as well as practical insights from literature, previous projects and own pilot testing. A sociotechnical approach to change implies taking into account the relationships and dependencies between people, technologies (e.g. infrastructures), policies, social norms, etc. The Toolkit contains practical management tools and activities to support planning, implementation and evaluation of demand-side management projects. The second focus of WP5 was on project evaluation which resulted in the report this summary forms part of. WP6 has been the backbone of the project by ensuring frequent and effective communication among consortium partners and WPs, including dissemination efforts and timely delivery of progress reports.

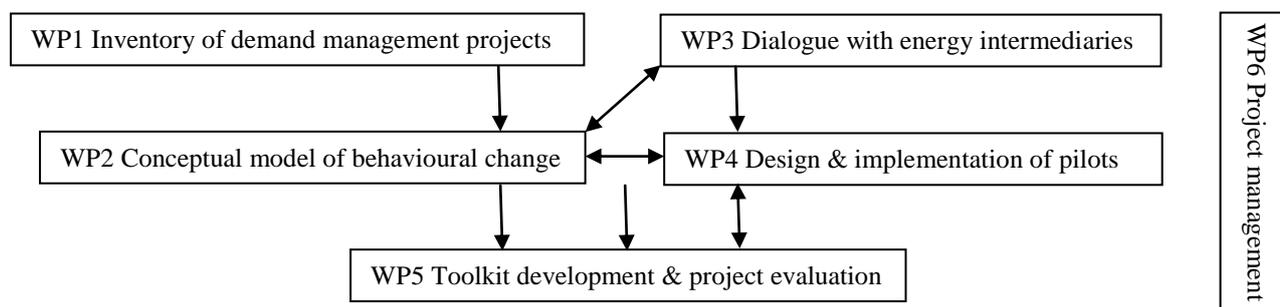


Figure S.1 *Flowchart of CHANGING BEHAVIOUR work packages (WP)*

The remaining chapters of the deliverable at hand contain summaries of each WP, including results and lessons learned or recommendations for researchers, practitioners or policymakers working in the field of demand-side management. Each of the work packages produced one or more deliverables. The table below provides an overview of all project deliverables which offer more elaborate reports on findings of the individual WPs.

Table S.1 *Overview of all CHANGING BEHAVIOUR deliverables*

Work package	Deliverable(s)	Title
1	1	Inventory database of European demand management programmes targeted at small and medium enterprises, the building sector and households and their results (http://www.energychange.ceu.hu)
2	4*	Past 10 years of best and bad practices in demand management: a meta-analysis of 27 case studies
2	5*	Interaction schemes for successful energy demand side management. Building blocks for a practicable and conceptual framework
2	6*	Conceptual framework and model: Synthesis report for policy makers
3	7*	Conceptualising and understanding intermediaries in context
4	12*	Pilot projects: Documentation of initial implementation experiences including stakeholder feedback
5	13*	Report on self-evaluation
5	14	Toolkit for practitioners (http://mechanisms.energychange.info)
6	15	Interactive project website and Open Innovation Platform (http://www.energychange.info)
	2, 3, 8, 10, 11, 16	Internal reports
	17, 18, 19, 20, 21	Progress reports

* All public project reports can be found on the CHANGING BEHAVIOUR website (<http://www.energychange.info/deliverables>).

Project evaluation formed an integral part of the CHANGING BEHAVIOUR project. A complete overview of all evaluation efforts, results and lessons learned has been composed in this deliverable. Evaluation has been conducted in many different forms (e.g. through questionnaires, interviews, brainstorm sessions) and for various aims. In general terms, internal evaluation (among the project consortium) aimed at quick and effective collection of feedback in order to assess the most important insights gained in one task to be used in the next one. External evaluation (involving project stakeholders, e.g. pilot project stakeholders, policymakers, Toolkit users) aimed at receiving feedback on preliminary results in order to improve final results and tailor outcomes better to the needs of the target group they were meant for. ‘Stakeholders’ can be defined generally as people or organisations who were involved in the overall research project or one of the six pilot projects, who may have an interest in its outcomes and who may also be able to influence and improve its impact.

Energy intermediaries form the main group of beneficiaries of the research results and the Toolkit developed. Energy intermediaries have been defined as those individuals or organisations that manage and implement energy demand-side management projects. These can include private and public organisations operating on local, regional, national or international level focusing on climate change, energy saving, sustainability or other issues. The behaviour targeted in their projects can be the more habitual routine behaviour and/or the less frequent, one-time behaviour, e.g. investments.

Policy makers form a second important target group of the research conducted in CHANGING BEHAVIOUR, because they develop energy efficiency targets and support or fund programmes aimed at target realisation. They are able to support and direct programme design and implementation through funding requirements and cooperation with programme managers.

A third target group of the project are researchers and practitioners interested in the action research approach. The consortium employed this approach based on close collaboration between researchers and practitioners. Action research helped to develop an improved understanding of how the management and impact of the important work of energy intermediaries can be enhanced.

Based on project outcomes recommendations are formulated for different target groups. Recommendations for managers of demand-side management projects are taken from the Make Energy Change Happen (MECHANISMS) Toolkit and presented here (S1). Second, key recommendations for policymakers are presented. These have been developed based on project outcomes of the different WPs and have been improved with feedback by the project consortium and members of the CHANGING BEHAVIOUR Policy Board (S2).

Third, a list of recommendations for researchers and practitioners working in action research projects is included, based on a self-evaluation of experiences by the project consortium (S3). Fourth, recommendations are provided for people working in a team aiming to develop an (online) toolkit or guidelines based on experiences made in this project (S4).

S.1. Recommendations for energy intermediaries

Know energy users well – why they would and when they could save energy.

Work together with stakeholders (in addition to your target group) to create a stimulating atmosphere for savings.

Involve your target group by connecting with their needs, ideas, language, communication channels and social networks.

Support learning from and about your target group through regular interaction in order to help them gain good experiences from energy saving.

Look at the future and stimulate changes that persist after your project ends by creating lasting support among your target group and among stakeholders.

Be aware of influence of context – local circumstances create particular possibilities and constraints for energy savings.

Test your ideas with your target group before you start your project on a large scale.

Consider the power of social networks – make sure there is social support and pressure for savings.

Be flexible in project planning and adapt your project to new knowledge gained in the course of your project.

Discuss your project with colleagues or even people outside your organisation to share knowledge and experience.

S.2. Recommendations for policymakers¹

- 1. Ensure continuity in policy and energy demand management programmes** to make change durable and to support long-term changes, for example, by breaking them down into short-term goals that can be achieved within one electoral cycle.
- 2. Support the work of energy intermediaries to change energy use patterns.** Energy intermediaries can make an important contribution to change by developing targeted and effective demand management projects. Policies can support this by providing (financial) resources, institutional support and incentives and by encouraging cooperation and sharing of experiences. The work of intermediaries becomes more effective if policies allow and support adaptation of their programmes to specific contexts and in interaction with energy end-users.
- 3. Develop a better understanding of different national policy and institutional contexts** and how they constrain and enable intermediaries to contribute to policy. Many different people and organisations promote energy efficiency. Effective combinations of these people and organisations may be different across national contexts. European level policymakers in particular should actively encourage comparative understanding of national policy and institutional contexts.
- 4. Create new or adapt existing institutions and policy instruments to meet current challenges.** Examples of supporting institutions and instruments are certification schemes, technological solutions (e.g. metering and consumption feedback devices), new service providers and non-physical institutions like norms and values. Make use of research findings and practical experiences to learn about the most suitable institution or instrument for the targeted behaviour change.
- 5. Develop a better understanding of how different projects and interventions contribute to policy objectives.** National policymakers benefit from research that demonstrates how current efforts and successes contribute to policy priorities and from close interaction with researchers and intermediaries.
- 6. Encourage evaluation to ensure systematic learning and knowledge capitalisation,** for example by providing sufficient funding for evaluation, allowing a flexible approach to evaluation and communicating long-term achievements of demand-side management.
- 7. Make use of synergies between ongoing initiatives and changes on different levels and across different policy domains.** Energy efficiency priorities should be framed and funded through long-term programmes, on national, local and sector level and should link different policy domains, e.g. health, education and social welfare. Projects should be part of such programmes rather than stand-alone initiatives. The results of such programmes should be included in energy policy evaluations.
- 8. Design policy interventions with a broad focus,** paying attention to stakeholders and technologies that may hamper successful, long-lasting change. Support change interventions that simultaneously address technical, economic and social barriers to reducing energy consumption.
- 9. Complement energy efficiency investment projects with behavioural change activities.** The benefits of new or refurbished energy efficient infrastructure may in part be lost without end-user engagement. Collaboration with intermediaries and researchers adds relevant knowledge and experience to develop supportive activities and to feed user experiences into technology design.
- 10. Encourage comparative action research on energy efficiency.** Policymakers benefit from research that demonstrates alternative ways to organise action on energy efficiency. Research funding should be devoted to projects that address real-life and topical problems, but also reflect on lessons learned and thus contribute to more theoretical insights.

¹ For more information on the policy recommendations, see chapters 2, 4 and 6 of this deliverable and deliverables 5 and 6 available at <http://energychange.info/deliverables>.

S.3. Recommendations for action research

- 1. Aim for a good integration of research and practice already in the planning and design of your action research project and involve both sides in this undertaking.** Be flexible enough in your project design to accommodate different expectations and motivations for participation.
- 2. Discuss motivations and expectations at the beginning of the project.** This could, for example, be done through individual presentations at an inaugural meeting. With the range of different groups involved in an action research project – academic, policy, practitioner; energy, governance, user; across different country, organisational and working cultures – there is potential for confusion and tension about what the project is about that will persist unless all partners are aware of each others' motivations and expectations.
- 3. Develop a strong theoretical foundation for your practical work,** e.g. through case study analysis. Try to avoid results that are 'too academic' to be applied in practice by collaborating closely, providing regular feedback and learning to speak each other's language (i.e. use the same terminology).
- 4. Understand and improve your own ways of working throughout the project.** As part of ongoing and reflective learning about how a project has been undertaken, action research projects should seek to understand their own ways of working over the course of the project – what worked well and what could be improved – and seek to share this with others. This could be done through a reflective learning work package that runs throughout the project.
- 5. Build trust and understanding to arrive at results relevant for both researchers and practitioners.** Given the range of partners, their skills, expectations and motivations, it is important – as a means of informing an effective project practice, but also keeping all partners involved in the project over a period of time – to foster project communications in a variety of ways. These multiple modes of communications can range from face-to-face group meetings, to smaller face-to-face or telephone group meetings, email exchange, conferences and presentations. Thereby, everyone can offer the best contributions based on own knowledge and competences.
- 6. Create conditions for a range of different interests, motivations and expectations through effective project leadership.** As there are a range of practitioner and researcher partners, often in different cultural contexts, the role of the project coordinator is to mediate a wide range of relationships both within and external to the project to enrich insights and outcomes. This requires not a one-off intervention but ongoing interactions to facilitate the ongoing functioning of project relationships.
- 7. Action research should be a primary method of conducting research in the area of energy and behavioural change.** The value gained from research-practitioner interaction is clearly evident from the work undertaken. With the urgent need for action on this agenda, research needs to be embedded in the reality of implementation. Also, practitioners are likely to be far more receptive to the results, outputs and recommendations having been shaped by their peers. The process also educates and informs the partner practitioners through project participation.

S.4. Recommendations for toolkit development

- 1. Aim to provide concrete and practicable solutions to problems your (potential) toolkit users face** by grounding the toolkit on a good understanding of causes and effects of these problems. Test in practice whether advice given in the toolkit can provide the support and help users are looking for.
- 2. Develop the toolkit in several iterations**, each ending with review and feedback by potential users as well as toolkit developers in order to inform adaptation done in the next phase.
- 3. Aim to strike the appropriate balance between practical advice and guidance and action prescription for toolkit users.** Stimulate self-reflection to find own (creative) solutions in order to avoid advice which may be too broad or too narrow to support real-life situations.
- 4. Offer multiple ways to use the information provided in the toolkit.** Users of the toolkit can be searching for answers to specific problems they face, for general inspiration, for in-depth information about specific topics or other things. The toolkit should offer information for all these different demands.
- 5. Combine all advices of the toolkit with practical experiences and examples** to illustrate the usefulness and application of the advice in real life. Both users of a toolkit who are searching an answer for a specific problem and those that are looking for general inspiration, profit from not only receiving advice but also to see what the effect of the advice can be in practice.

1. Introduction

Systematic evaluation formed an integral part of the CHANGING BEHAVIOUR project. In all project stages interaction with stakeholders was actively sought in order to test theoretical findings in the light of practical experience, to learn from and about the two main target groups of the project – energy intermediaries and policymakers, and to develop a practically useful toolkit. The following chapters elaborate evaluations of and reflections on the research conducted and results produced in CHANGING BEHAVIOUR: the findings of WPs 2 and 3 that resulted in a conceptual model of behavioural change and inventory and analysis of intermediary work, the six pilot projects implemented in the framework of CHANGING BEHAVIOUR, the action research approach (i.e. the overall methodology employed by the consortium) the first versions of Activities for energy intermediaries as well as the different versions of the Toolkit.

Feedback has been collected in a variety of ways, e.g. through questionnaires, interviews or discussions and through a variety of communication channels, e.g. the internet, by phone and in person. In each instance the choice of method to attain feedback was based on the desired level of depth or breadth of feedback to be collected, what it was to be used for (e.g. summary and analysis of experiences with the action research approach vs. practical application for Toolkit improvement), the size and location of the group to receive feedback from and the group's time and availability.

Table 1.1 *Overview of item, feedback method and feedback aims*

Item	Feedback method(s)	Feedback aim(s)	Chapter
Action research approach	Telephone interview among most consortium partners	Evaluation of action research approach	2
WP 2 deliverables	Questionnaire among all consortium partners	Insight into how much theoretical findings resonate with practical experience	5
WP 3 deliverables	Brainstorming exercise with all consortium partners	Insight into which aspects of project management the Toolkit should focus on	7
Pilot projects	Documentation of design and implementation experiences; Questionnaire distributed or filled in during an interview among pilot project stakeholders	Insight into pilot design, implementation and evaluation processes; Insight in impact of Activities; External feedback on project implementation, management, stakeholder interaction and outcomes	9
Activities	Two rounds of testing and feedback by all practitioner partners	Inclusion of useful and practicable advice Toolkit	11
Toolkit	Feedback on early versions by all consortium partners through commenting function; Workshop with external stakeholders; Online questionnaire for all users	Improve the Toolkit in three iterative steps	12
External stakeholder feedback	Questionnaire among pilot project stakeholders; Questionnaire sent as email link to external stakeholders; Questionnaire available on Toolkit website to collect Toolkit user feedback; Telephone Interview with Policy Board	External feedback on pilot project implementation, management, interaction and outcomes; Feedback on results and relevance of CHANGING BEHAVIOUR outcomes; Insight in practical use and relevance of Toolkit	13

2. Evaluation of the action research approach

This chapter provides an evaluation of the action research approach adopted in the CHANGING BEHAVIOUR project, which involves researchers and practitioners working together in several learning cycles to achieve active change. Therefore our evaluation is also executed by researchers and practitioners together and has involved the experiences of all partners involved. The outcomes of this evaluation yield interesting findings for a variety of policymakers (at the EU, national and local level), researchers and practitioners and our aim is to share with them what we have learned from our research approach.

The purpose of this evaluation was fourfold:

- To understand what action research is.
- To examine how we applied it in the project.
- To assess what worked well, what didn't and what lessons can we learn.
- To provide recommendations for future projects willing to use this approach.

The remainder of this chapter is structured in four sections. First we undertake a review of the action research literature and ask the critical questions: What is it? Why use it? How can it be used? What are its strengths and weaknesses? Second, we characterise the way in which action research has been used in the CHANGING BEHAVIOUR project. Third, through a programme of interviews we qualitatively assess the experiences of project partners in relation to the ways in which they have worked on the project. Fourth, from the experiences of using action research in the project we offer recommendations for future action research projects.

2.1 Action research

Trying to provide one single or simple definition of action research is impossible. There are alternative names for action research - participatory research, collaborative research, emancipatory research, action learning and contextual action research – all of which are variations on a theme (O'Brien, 1998). It is a methodology rather than a method (Walter, 2009).

Action research has since developed from the 1950s in ebbs and flows, expanding from its original focus, covering an increasing number of disciplines and interests including organisational development, anthropology, education, economics, psychology, sociology, and management studies.

Action research is future orientated, collaborative, system developmental and cyclical, theory grounded in action, situational, addressing the practical concerns of people and requires a strong degree of collaboration and interdependence between the researcher and clients or practitioners (Walter, 2009).

Action research implies a cyclical development process, both for the researcher and practitioners. There is an emphasis on capacity building among participants. This is undertaken in 'an iterative process involving researchers and practitioners acting together on a particular cycle of activities, including problem diagnosis, action, intervention, and reflective learning' (Avison et al., 1999, p.94).

Theories generated by action research are grounded in action. The theories which inform action research can themselves be drawn from a range of disciplines. Action research tends to be agnostic in that theories and recommendations developed are open to re-assessment and development.

It is an approach that looks at the human construction of issues and, in doing so, rejects the notion of the impartial observer. Practitioner and researcher are part of the world in which they are researching and are active in the production of knowledge. Action research is potentially useful in operating within a range of social issues.

The strengths and weaknesses of action research

The strengths of action research are that it is flexible, and can be applied to a range of different situations. Its iterative and reflective nature means that new insights gathered from previous cycles can be incorporated into subsequent research, something that can be difficult in a more linear research process.

Topics, questions, knowledge and so forth can be revisited within the research process as there is a learning element for both the practitioner and client which helps to expand knowledge and understanding through each cycle of the research.

Action research is also practical research. It is used to help implement solutions to real world issues, as well as to identify and clarify issues and problems that exist for practitioners and researchers.

There are also a number of weaknesses associated with action research.

There is the possibility of tensions developing within action research through the mixing of politics and research (Brydon-Miller et al., 2003). There can be competing research agendas among the clients and practitioners (Walter, 2009). However, while this can have an impact on the practical nature of action research, such agendas can highlight issues and provide insights, as well as being potentially resolved in subsequent cycles of research.

There are also practical considerations. Getting groups of people together on a regular basis might be impractical. Identifying an end point might not always be possible. There are also a number of challenges for the action researcher to engage with, as part of the overall process and to mitigate some of the issues.

It is always important to consider ethical considerations. There is a need to be open with the clients and practitioners about the nature of the research as well as maintaining confidentiality. There should be equal access to the information generated, the direction of the research needs to be clear, and permission should be sought to examine and participate in the research (O'Brien, 1998).

Finally, when working from an academic environment, it is important to realise that academic language and theory do not always translate well into the everyday world. (Stringer et al., 2008) and conversely that professional languages can often be difficult to comprehend.

2.2 Application of an action research approach in CHANGING BEHAVIOUR

The key methodological assumption, on which CHANGING BEHAVIOUR is built, relates to the value of an 'action research' approach. In brief, we assume that better demand management practices can be developed by combining theoretical prescriptions with practitioners' experiences and insights; we also assume that theories of technology adaptation and appropriation can be refined by scrutinizing them in contexts of action and practice.

Our overall research strategy in the CHANGING BEHAVIOUR project is based on intensive co-operation between researchers and practitioners. We aim to develop practical tools that are based on a sophisticated understanding of sociotechnical change, in particular in the field of energy. The difference is that we aim to do so in close collaboration with the practitioners who we hope will use these tools. Through a close monitoring of processes and systematic reflection together with the actors involved, we aim to produce results that are both theoretically valid and practically actionable.

In CHANGING BEHAVIOUR, our approach to action research involves the close co-operation of researchers and practitioners who are actively involved in implementing energy efficiency and other demand management projects and programmes. The researchers' role is to inventory, analyse and evaluate existing practices. They bring to this process their knowledge of recent theory, methods and tools in the analysis of socio-technical change, as well as a broad interdisciplinary knowledge base on the adoption of new energy technologies and behaviours. Their conceptual understanding helps to make explicit the tacit knowledge accumulated in previous programmes.

The practitioners bring to the process their prior experiences of demand management programmes, their tacit knowledge of what works and what does not, their knowledge of their operating environment and the practicalities of programme management. This work format enables a rapid dissemination of the research outcomes to their immediate beneficiaries, and facilitates a dialogue between science and its users. The practitioners involved in the project represent different types of demand management programmes (targeted at households, small and medium enterprises (SMEs), buildings, energy service company (ESCO) projects) and different geographical regions; in the project, they mobilise their networks and their knowledge of different contexts.

The CHANGING BEHAVIOUR project aims to bring theoretical insights and practical experience into fruitful dialogue in a number of stages:

An inventory of European demand management programmes is assembled in order to identify existing programmes, collect various indicators of their successfulness, as well as of the ways in which they interact with their target groups and stakeholders.

A conceptual framework of sociotechnical change is developed by combining theoretical insights with a meta-evaluation of previous demand management programmes to identify factors influencing the success of such programmes, in particular ones that relate to the interaction with actors, context and timing.

The framework thus developed is further refined by organising dialogue workshops with intermediary organisations working in energy demand management in different parts of Europe. At this stage, we also pay particular attention to assessing the ‘transferability’ of programmes from one national context to another, and the identification of contextual features that need to be taken into account. The conceptual framework is further tested and refined by organising pilot projects, in which context-tailored best practice programmes are implemented in different European countries. The lessons learned throughout the process are evaluated and a Toolkit for practitioners is developed, again in close co-operation with the prospective users of that Toolkit. We have hence adopted a multiple-method approach consisting of the following dimensions:

First, we apply inductive research and analysis, e.g., by conducting surveys and comparative case studies on European demand management programmes.

Second, we apply deductive research and evaluation, e.g., by building a conceptual model of end-user behaviour based on theories and inductive findings, and testing the model in interactive practitioners’ workshops.

Third, we also apply an ‘abductive’ approach by building a ‘Toolkit of best practices’ that will be based on the integration of the ideas and experiences of the researcher and practitioners included in our multinational team. We also initiate and conduct demand management pilot case studies, which serve an ‘abductive’ purpose, to develop and test new approaches based on our best visions of the elements of successful action.

To reemphasise, we call our approach an exercise in ‘action research’, because it fundamentally combines practical and theoretical elements and goals; it also balances between two different starting points, the one of energy saving technological fixes, and the other of ‘social fixes’ or the variety of methods that aim at an improved social interaction and negotiation.

2.3 Successfulness of action research in CHANGING BEHAVIOUR

In this section, so far, we have sought to understand what action research is, and how we aimed to use such an approach in the CHANGING BEHAVIOUR project. In this section we draw upon the reflections on the experiences of those involved in the CHANGING BEHAVIOUR project. Information was collected through a programme of 10 interviews by telephone or email CHANGING BEHAVIOUR partners undertaken between April and June 2010. Although personal interviews were the main and preferred method to collect feedback, questionnaires were answered by email in case of scheduling problems. The following results are based on experiences reported by the six practitioner organisations who participated in the CHANGING

BEHAVIOUR project. In addition, feedback by four of the six research partner was collected. The aims of this undertaking are:

- To assess what worked well with the action research approach used in CHANGING BEHAVIOUR, what did not and what lessons we can learn,
- To provide recommendations for future projects willing to use this approach.

What we do here is assess the interviews that we undertook and synthesise the critical issues emerging from the interviews. We do that in terms of nine sets of issues related to the application of action research in CHANGING BEHAVIOUR.

Motivations

The first of these is about the motivations of different partners for their involvement in the project and subsequently the ways in which the issues for research became framed. This meant understanding why partners became involved in CHANGING BEHAVIOUR. The reasons for getting involved were numerous, including:

CHANGING BEHAVIOUR offered an avenue for a continuation of funding for some. For others it was about serendipity – there was an unsolicited invitation to be involved in the project. Among some partners there was a sense of ambivalence, almost an indifference to whether at the *start* of the project the project would come to fruition, whether the project would actually be funded, and that this project was one of a number of bids they put in and it was one of a number of opportunities. There were also a set of motivations that were about following on from working with collaborators in previous projects and CHANGING BEHAVIOUR offered an avenue or a vehicle for the continuation of a set of what they perceived to be fruitful working relationships. Still others were invited to participate as a practitioner partner by a research partner. This informed by a motivation that, on the one hand, was with the project's focus on behavioural change and, on the other hand, the connection of research with practice and thereby helping information and experience flow between researchers and practitioners.

What we can see in a sense here is that there was a different set of motivations at the beginning of the project which is understandable giving the vast range of different people who were involved.

Not only were there different reasons and motivations for being in the project at the start but there was a sense that this also changed over time for quite a number of colleagues. So, in one example, somebody who initially was indifferent to whether the project was funded or not, did see the opportunities of the project and later through the course of the project's development cultivated a particular professional interest and methodological interest in relation to the development of the project. The extent to which partners articulated such a view of the integration of their own objectives with those of the project was highly variable.

Expectations

That leads to questions about the sorts of skills and expertise that people brought to the project. Very few colleagues had worked the way that we worked on CHANGING BEHAVIOUR prior to the project – particularly the active bringing together of researchers and practitioners in an action research project. There had been some degree of involvement in practitioner-academic style projects but not in the way suggested by CHANGING BEHAVIOUR.

The project partners encompass a mixture of social scientists from different disciplines, but also policymakers and practitioners, engineers and so on. This involved bringing together in an action research approach a variety of motivations and reasons for being involved in the project together that change over time. It is not surprising that - given there were a number and a range of motivations that changed over time - there were different views at the outset about what colleagues thought the project was trying to achieve. The broad impression was that at the beginning of the project the possibilities and purpose of the project were not things that they had greatly reflected on.

Trying to understand what partners initially thought the project was trying to achieve resulted in responses that ranged from a difficult pause to a literal re-statement of some of the aims and objectives of the bid. Where there was a difficulty in answering the question or answering it in terms of the official bid document-

tation, this may suggest a limited degree of personal reflection in some instances about what the project could be about. At the same time, three years after joining the consortium and working on this project, some people may have had difficulty recalling what their original intentions and expectation with respect to this project were.

We developed this further by asking: 'what do you think was the issue, the problem that the project was seeking to address'? By asking this we started to be able to unpick some of the issues and get at why people were interested in being involved with the project.

For some it was, if not always directly stated in these ways, it was a political issue - it was about trying to address issues to do with climate change, for example. For others it was more of a methodological challenge, it was about trying to find ways for practitioners and academics to work together in effective ways. Whilst for others it was a continuation of long-standing professional interests, for example, about working with users and consumers.

There were also expectations that the project offered an opportunity to better understand context-sensitive project design and to help project managers design their projects. Some believed that CHANGING BEHAVIOUR was trying to assess how energy actors could influence attitudes towards energy habits: energy consumption reduction, to influence participants to change their energy habits, investing in energy efficiency measures or through education and awareness raising initiatives. The expectation that followed from this was that the project would create the opportunity to test and research various approaches and methods that influence behavioural change among different target groups and cultures. Others took the view that practitioners would pilot the same or very similar projects in order to get comparable results and that the project would come up with a new or revised model for behaviour change that would be tested in six pilot projects.

What you start to see is a variety of different motivations, different sets of expectations and consequently a range of views of what could and would be achieved by this project.

Practice

We moved on from understanding people's motivations or expectations of the projects to how the project would be undertaken. We did this through looking at ways in which the work programme of CHANGING BEHAVIOUR was organised in terms of five sets of work packages and whether these had been particularly useful in achieving aims, but also whether the inter-relationships between work packages worked well or whether they could have worked better.

Generally there was a sense that there was logic to the work packages and the inter-relationships between the work packages worked well. When this was pushed in the interviews, a broad view was that Work Package Four (WP4) - which was about the pilot project - was a focus of much interest for a lot of partners.

Indeed one person suggested that it may have been useful rather than to build up to the pilot projects in work packages, to start with WP4 and to build all the other work packages around that work package. This idea was put to a number of other interviewees, it was thought about, but rejected for the reason that there was a logic to building up to understanding demand management programmes through an inventory, to understand something conceptually about the facts that influence success and to try and refine these through dialogue, before bringing them to the pilot projects.

Another issue raised was that there was generally seen to be some value in having an inventory as laid down in WP1. But when we discussed this further it seemed very difficult to understand what purpose the inventory was produced for. So there were views that can be characterized as follows: yes, there is an inventory of 100+ programmes and that in itself may be interesting, but how does that then connect to other work packages? There was difficulty trying to understand, from the interviews, how that could be so and how the lessons have been utilised in the project.

Most interviewees suggested that there was much value in the conceptual work that took place in WP2 and the bringing together of case studies. That it was useful to try and locate the successful and unsuccessful issues which influence demand management programmes and that there was some pride and value in trying to

produce a piece of work like this through practitioner-researcher interactions. On the other hand there was some discussion that this was 'too academic' and 'too theoretical and conceptual work'. Both practitioners and researchers felt that there was a reasonably successful integration from both academics and practitioners in working on these different work packages.

There was a point of view that WP3 had been very useful for some practitioners in reflecting on and understanding their role as an intermediary organisation. In addition, the view was expressed that perhaps practitioner partners should have been involved more in the design of the Toolkit (WP5) – not just to comment on it but also to actually deliver some parts since they are the ones directly involved with delivery. Some partners also had a particular interest in the dissemination activities in WP6, especially taking part in writing academic papers and delivering presentations.

Overall, the flow of WPs was regarded as smooth, with the integration being mainly achieved through the development of Activities. Nonetheless, quite a few views were expressed that there could have been greater clarity in the relationship between WPs 2 and 3 and also between WPs 3 and 4 and how the interrelationships between those work packages functioned. Also, some felt they required more time to plan and deliver WP4 and there was not sufficient time to integrate lessons from WP2 and WP3.

Toolkit

One of the other significant issues addressed in the interviews was about the value of a Toolkit and the extent to which a Toolkit would be used. There was a degree of 'dancing around' this issue. This was undoubtedly on the basis that all partners were committed to producing the Toolkit given that it was in the bid document that all had signed up to. But there was some suggestion, in a number of interviews, that it was actually the process of trying to 'hit the buttons' of the European Commission which formed the basis of a commitment to producing a Toolkit rather than, necessarily, a Toolkit being of significant value in its own right. Having said that, other interviewees were not necessarily suggesting that a Toolkit was not valuable, but that we had to decide in advance for what purpose we were going to produce the Toolkit.

There were different positions in terms of the value of the Toolkit which could be summarised as follows:

- For some practitioners, much of the value of being involved in the CHANGING BEHAVIOUR project was being forced to reflect and confront one's own habitual practices. Hence the Toolkit acts like a reference guide or a check list for project managers when structuring their work, bringing to their awareness central aspects that they would otherwise consider or perform only implicitly.
- Other potential uses of the Toolkit mentioned included helping beginner project managers with project planning, delivery and evaluation by acting as a reference guide, and helping more experienced project managers to improve, review or evaluate their project planning and delivery (and thus plan and implement more successful projects).
- Some have even suggested that the way the Toolkit is designed may also make it suitable for use in education, or customisable for various uses in various organisations.

The process of undertaking the research has allowed practitioners space and has provided a cultural context to question these assumptions and in some sense, some of the messages that were coming through from the interviews is that actually this sort of intervention from the Toolkit is required rather than something that is highly descriptive. There was no consensus across these different positions.

Coordination and roles of partners

Almost entirely the collective view was that the project was very effectively co-ordinated and led by the project coordinator. This was suggested because people viewed CHANGING BEHAVIOUR not as project led in a command-and-control sort of way but it was very effectively steered, governed and led allowing for the flourishing of different motivations and viewpoints and the democratic, free flow of ideas.

Partners assumed many different roles – individually and as part of divisions of labour - within CHANGING BEHAVIOUR: a pilot project leader, a counter partner, a co-ordinator, etc. The characterization of different aspects of partners' roles were different at points in time. So for example, the practitioner role in the pilot project would be very different to the practitioner role in providing material for an inventory. The sections below develop aspects of these roles further.

Making pilot projects work together

A significant issue was the pilot projects and how the research partners and pilot managers worked together on the pilot projects. There were very different styles of working in terms of those relationships. These different styles we can characterize as follows:

- One style was about the researcher working alongside the pilot project manager and being central in driving the project along, seemingly as much as the project manager themselves. One view is that this worked well as the capacities and skills of two organisations nicely complemented one another.
- A second style saw the researcher at least one stage removed from the pilot project and with a role very much as a sounding board and as a resource for the project manager to come along to ask questions and to talk about their experiences; and for the researcher to use their resources, skills and research background to ask what they thought were a relevant set of questions to prompt and probe the pilot manager's experiences.
- A third way of thinking about those relationships could be characterised as being at a distance. In this way physical distance between pilot manager and researcher was addressed through telephone communication, electronic communication, email, Skype, and the exchange of notes, but also through periodic face to face involvement, not only with the pilot manager but also with other stakeholders.

In certain cases, there were challenges in managing the relationship between the partners. There was a difficulty in working out what the role of each partner really was.

Communicating with stakeholders

How the pilot managers and research partners presented what they were doing to user groups, stakeholders and other interested groups was fundamentally important. The question of how the key messages of the pilot project were communicated to these different groups was done in multiple ways through one to one meetings, workshop meetings, through door step interactions, mail shots, newsletters and so on and so forth. There were very different modes of communication with people. One of the issues this raised was how the enthusiasm of some pilot managers and researchers was then channelled to resonate with stakeholders and target groups and how that was maintained. The view was that it was difficult to initially enthuse users - but in cases where some people were enthused how that was maintained over a period of time was critical.

Internal project communication

The issue of communication is not only germane to the external context of the project but also in terms of the effective functioning of the project and its partners working together. The communication and participation between the different pilot projects and the researchers in a wider forum and meetings were seen as broadly helpful. This was not necessarily just for the formal communication in terms of what one pilot project tells another about what the other is doing - though there was some value in that and some people took lessons from the techniques that have been used by a project. It was also about the informal communications between colleagues and the more tacit forms of knowledge and experiential exchange, such as over coffee and dinner and so on. It was thought that the pairing of project managers and research counterparts has helped their integration in the project.

Achievements

Returning to what has been produced in terms of the project. According to the interviewees the project has produced many different things that can be useful in many policy and academic contexts.

There are new and different connections across academic communities - certainly methodologically, around the action research method. This involves sociologists, economists, political scientists and policy analysts from Finland, Germany, Hungary and the UK collaborating in the development of a theoretically, conceptually and empirically informed Toolkit for energy-related behavioural change. The conceptual material and the integration of research and practitioner knowledge coming out of WPs 2 and 3.

Interesting lessons about ways of working and the ways in which academics and practitioners have been able to work together highlight that the term 'academic' or 'practitioner', should not be seen as homogenous enti-

ties because they have very different interests and different motivations for being involved in these initiatives. There are difficult issues about how you maintain those relationships between academics and practitioner groups.

2.4 Conclusions and recommendations for future action research projects

Given the ways of working in CHANGING BEHAVIOUR and the ways in which holding together these different social interests has been so important, we asked the interviewees if they could talk about the two or three key lessons and recommendations; what are the things that worked well and the things that did not work well. Here we highlight the more significant of each of these points.

Worked well

The majority of partners talked about the importance of good leadership and how this had worked particularly well within CHANGING BEHAVIOUR. The importance of the informality and about being able to meet with colleagues and being able to talk through what they do. Overall there was a successful integration and balance between research and practice (pairing of researchers and pilot managers).

The integration of the work accomplished by partners in different work packages into the design of Activities/Toolkit was thought to provide a focal point. The variety of methods (literature review, workshops, case studies, interviews, pilots, etc) used, brought about more substantial and robust results and outcomes. The diversity of the partners' countries brought diverse experiences in energy matters to the project. The project benefitted from the enthusiasm and active engagement of partners.

Worked not so well

There were mixed views on the length of the project. This is a 36 months project, with probably six or eight months in terms of the development of the bid - so there was an issue about how you keep an active engagement between all of those different interests over that period of time. There were a number of suggestions that the project or the pilot projects could have started earlier to have some even greater sense of relevance for practitioner partners. Some pilot project managers may not have received very concrete advice on their pilot project design and implementation as initially expected. In some cases the researcher-practitioner relationship did not work out so well or as planned. The timing of the planning phase for pilot projects was too short according to some. The limited involvement of pilot managers in the Toolkit as designers or authors was seen by some as losing out on potentially useful practical inputs and experience.

The added value of the CHANGING BEHAVIOUR research approach

Some of the different methods of the research approach we employed are used across many different, 'conventional' research approaches. The very particular added value of using an action research approach can be summarised as follows. The working relationships between research partners and pilot managers and how they worked together on the project is the critical difference in how this research was undertaken and what makes it different from other research approaches. As we have discussed above, how that happened involved different styles and modes of interaction between research partners and pilot managers. These we can characterise as being about:

- The co-constructed production of research and project through research partner and pilot manager working alongside each other on implementing the pilot project.
- The co-constructed production of research and project through the pilot manager doing the pilot project and the research partner positioning themselves as a constant but supportive questioner of the process the pilot manager is undertaking. This was done both in face to face settings and electronically.

Fundamentally the difference that the action research approach has made in CHANGING BEHAVIOUR has been through the different co-constructive ways that research partner and pilot manager have worked together to 'deliver' the project. The value has been in learning not only about how this has been undertaken in different contexts but also learning about the ways in which different researcher-pilot manager combinations have worked together in doing so.

Recommendations

On the basis of our findings in this report we provide five key recommendations for policymakers with responsibility for funding future action research projects²:

1. The fundamental issue that supports a successful action research project is effective leadership. As there are a range of practitioner and researcher partners, often in different cultural contexts, the role of the project coordinator is to mediate a wide range of relationships both within and external to the project. This requires not a one off intervention but ongoing interactions to facilitate the ongoing functioning of project relationships. *It is fundamentally important that project leadership in action research is viewed not as a mode of 'top down' command and control. It should be seen as being about creating the conditions for a range of different interests, motivations and expectations to be able to have their voices and ideas heard in ways which enrich the development of the project.*
2. With the range of different groups involved in an action research project – academic, policy, practitioner; energy, governance, user; across different country, organisational and working cultures – there is potential for confusion and tension about what the project is about that will persist unless all partners are aware of each others' motivations and expectation. *It is critical that each partner explicitly lays out at the beginning of the project their motivations for involvement in the project and their expectations of what they hope to achieve by their involvement. This could be done through individual presentations at an inaugural meeting.*
3. Partners bring not only different motivations and expectations to a project but also varying skills and capabilities. In short, partners are good at some things and less good at others. When partners work with each other this is likely to lead to different ways of working with each other. In a search for consistency and commonality this may be seen as a weakness – it should not be seen in such a way but should be better understood. *As part of the ongoing and reflective learning about how a project has been undertaken, action research projects should seek to understand their own ways of working over the course of the project – what worked well and what could be improved – and seek to share this with other researchers. This could be done through a project reflective learning work package that runs throughout the project.*
4. What all the previous recommendations rely on is good communication. Given the range of partners, their skills, expectations and motivations it is important – as a means of informing an effective project practice, but also keeping all partners involved in the project over a period of time – to foster project communications in a variety of ways. *An action research project should involve multiple modes of communications – from full face-to-face group meetings, to smaller group meetings where appropriate, teleconferencing between smaller groups, email exchange, conference and presentations involving mixed members of the project and so on.*
5. Action research should be a primary method of conducting research in the area of energy and behavioural change. The value gained from research-practitioner interaction is clearly evident from the work undertaken. *With the urgent need for action on this agenda, research needs to be embedded in the reality of implementation. Also, practitioners are likely to be far more receptive to the results, outputs and recommendations having been shaped by their peers. The process also educates and informs the partner practitioners through participation the project.*

² These recommendations were included in the recommendations developed for the Executive Summary of this report and were slightly amended after receiving feedback from the CHANGING BEHAVIOUR consortium and Policy Board.

3. Summary of work package 1: Database of demand-side management programmes

Official title: WP1 – Inventory of European demand management programmes

The overall aim of the inventory was to identify the relevant demand management programmes and their operating contexts. The inventory was to include demand-side management (DSM) programmes (concluded, ongoing and planned) operating in different contexts, such as:

- Different European countries.
- Diverse local contexts.
- Different sectors (SMEs, built environment and households).
- Various target groups and stakeholders.

The milestones of the Work Package 1 included the design of a questionnaire which would be the base for the inventory of DSM programmes. The design phase involved drafting of a questionnaire and its subsequent improvement through a round of comments from partners. On the next stage the questionnaire was transformed into an online platform which could be used by all partners for entering cases into the inventory. After the approval of the final version on one of the project meetings, all partners proceeded to filling out the online questionnaire. On the final stage of Work Package 1 the inventory web page was created and was made publicly available. To date, the number of cases submitted to the inventory is 100, and it has had over 10,000 visits since it was made available online (www.energychange.ceu.hu).

3.1 Approach

In order to compile a comprehensive inventory of the DSM programmes, an online questionnaire was developed with the input from all partners. The questionnaire consisted of 45 questions that covered various aspects of DSM projects and programmes, including goals and objectives, target group and stakeholders, implementation specifics and evaluation issues. Each partner selected up to ten programmes or projects from his or her country to be included into the inventory. Depending on the availability of the information, the partners collected and systematized the data on each programme using the following techniques:

- Desk research (international or EU databases, legislative documents, academic literature, websites of the programmes, public and non-public reports and archival data).
- Interviews with experts involved into the programme or knowledgeable about its development.
- Focus groups.

After all partners submitted the selected programmes, the online questionnaire was made available to the wider public. In addition to the inventory of DSM programmes, all partners contributed to the creation of the country profiles that can be downloaded from the inventory's web page. Another separate document that is available on the database webpage is the summary of innovative programmes for travel demand management which reviews some innovative cases, particularly from the perspective of the private car use. The online template permits all partners to enter new programmes at any time.

3.2 Results

To date, the number of collected programmes and projects, to which we refer as case studies, is 100. The collected cases have a wide geographic scope including 36 national case studies, 35 local case studies and 8 European case studies. A number of cases represent interstate level and New Member states. Cases from new Member States have not been covered in similar databases and some of them are innovative in nature.

The gathered cases differ in the time frame, spanning from 1978 to 2020 and giving a broad picture of completed programmes and projects. However, the majority of cases are those that have been implemented in the

last decade. The majority of cases collected deal with informative and fiscal mechanisms. Other mechanisms such as infrastructure support and education are also well represented.

The inventory highlights a number of challenges that occur in the implementation of DSM programmes. For example, one of the common challenges in new Member States is limited funding and a difficulty to get governmental support for some target groups (for instance, in social housing projects). Another challenge that these countries face is in sustaining interest and active involvement of the target group, particularly in informal network types of organisation.

In the old Member States, most common challenges also relate to the funding issues. Some programmes highlighted a lack of funding for long-term marketing or for proper systematic evaluation. Ensuring continuous participation on behalf of the target group whose enthusiasm is often worn off after some time was a challenge in several projects of Old Member States. Thus, both Old and New Member States face similar challenges in the implementation of DSM programmes and projects.

3.3 Conclusions and recommendations

Firstly, the inventory includes a number of cases from New member states, some of them with an innovative approach (e.g. Social Housing Energy Efficiency Renovation Programme, Hungary). These cases have not been recorded in other, comparable databases. The inventory shows that there are programmes that can provide useful lessons for both new and old member states and that there are commonly experienced challenges. These challenges have led to the formulation of several recommendations for policymakers.³

1. Policymakers should encourage implementers of DSM programmes to specifically aim for continuous participation and interest among the project target group and other stakeholders. This recommendation concerns both programmes and projects in both New and Old member states.
2. Policymakers should also provide support for those initiatives where energy conservation and energy efficiency are embedded in broader programmes so that energy issues are targeted in an appropriate way. The inventory shows that energy conservation and energy efficiency are today increasingly embedded in broader programmes (e.g. programmes run under an 'environmental' or 'climate' heading). It also suggests that the results of these programmes should be included in energy policy evaluations.
3. It is recommended that sufficient amount of funding is directed to conducting evaluations in energy efficiency programmes to ensure systematic learning from previous success and failure. The cases in the inventory reveal that there is still not much systematic evaluation of demand-side programmes for energy conservation and energy efficiency. This confirms findings from analyses of other similar databases (e.g. the IEE-funded BEHAVE project). The most likely reason for this is that there are limited funds available for evaluation.

³ The recommendations for policymakers developed in WP1 were included in the recommendations developed for the Executive Summary of this report and slightly amended after receiving feedback from the CHANGING BEHAVIOUR consortium and Policy Board.

4. Summary of work package 2: Conceptual framework of behavioural change

Official title: WP2 – Development of the conceptual model: success factors, underlying models of social and technical change, and methods of target group interaction.

The overall aim of work package 2 was the development of a conceptual model of demand-side management (DSM) programmes in order to understand success factors and reasons for failure. The model aimed to uncover implicit working assumptions in DSM programmes and to find needs for improvement which can then be integrated in practical activities for intermediaries operating in the field of demand side management.

4.1 Approach

WP2 consisted of several main tasks:

During a project meeting the consortium which consisted of researchers as well as intermediaries (i.e. DSM programme implementers) was asked to make an inventory of all behavioural determinants influencing success and failure of DSM programmes based on existing knowledge and experience. Additionally, factors conducive to success that DSM programme implementers can control were collected.

A literature review was conducted focusing on scientific publications from a variety of disciplines dealing with behavioural change and on insights from earlier research projects related to DSM. The review allowed definition and operationalisation of success criteria for demand-side management programmes.

From a data base of 100 implemented DSM programmes collected during WP1, 27 case studies were selected and analysed in-depth to distinguish best and bad practices of the past 10 years in demand-side management. The analysis was based on available reports and statistics. In many cases interviews with project managers, policymakers and other key stakeholders were conducted, especially for those programmes that seemed the most or least successful. Focal points of the analysis were:

- Assumptions about technology adoption and behavioural change that guided the DSM project.
- The means with which the projects obtained knowledge about and interacted with its target group.
- The kinds of organisations involved in each project (with special focus on the role of intermediary organisations).
- Demand reduction potentials identified in different sectors (e.g. households, small and medium enterprises, etc.) and specific reduction potentials of target groups within the sector.

Insights gained were collected in a number of deliverables. Table 4.1 provides an overview of the different deliverables and how they relate to the main aims of WP2.

Table 4.1 *Overview of WP2 deliverables and their relation to defined aims*

WP2 aims	WP2 deliverables
Development and operationalisation of success criteria for demand-side management programmes	<p>Deliverable 3: knowledge of CHANGING BEHAVIOUR partners extensive literature review formulation of potential reasons for success or failure of demand-side management programmes</p>
Identification and analysis of best and worst practices in demand-side management, including an analysis of existing schemes of interaction of DSM programme implementers with target groups/stakeholders (i.e. how DSM programmes are currently developed and implemented)	<p>Deliverable 2: selection criteria for case studies presentation and analysis of 27 individual cases</p> <p>Deliverable 4: comparative analysis of the 27 case studies focus on context, timing and actors</p>
Development of a conceptual model of demand-side management, including factors for success and failure, different approaches to stakeholder interaction, the role of DSM programme implementers, and more.	<p>Deliverable 3: formulation of potential reasons for success or failure of demand-side management programmes</p> <p>Deliverable 4: comparative analysis of 27 case studies</p> <p>Deliverable 5: summary of D3 and D4 development of conceptual framework/model of demand-side management</p> <p>Deliverable 6: Synthesis report of D5 for policy makers</p>

4.2 Results

Below the content of each WP2 deliverable is summarised in order to present the most important results. Deliverables will not be presented in the order they are labelled, but how they are related (see Table 4.1).

D3: Conceptual approach of the project: background paper

The purpose of deliverable 3 was to serve as background paper for the development of a theoretically rich, yet practicable model of sociotechnical change involved in energy demand-side management programmes. The model (finalised in *D5: Interaction Schemes for Successful Energy Demand Side Management* – see below) enabled an identification of improvement needs in assumptions of social and technical change underlying demand-side management programmes and the ways in which programmes interact with and learn about their target groups. D3 provides a synthesis of an inventory of available tacit knowledge amongst the CHANGING BEHAVIOUR project partners and an extensive literature review.

D3 delivers an overview of varying estimates of saving potentials in the building, household, municipality and small and medium enterprise (SME) sectors. In addition, the main barriers to change are listed for each of these sectors. The most common ones mentioned for each of the four sectors are lack of knowledge (or expert advice), lack of finances, and focus on other (possibly more pressing) problems.

The literature review of scientific research in the fields of economics, (social) psychology and sociology helps to understand different approaches, intervention instruments and their effectiveness in terms of energy efficiency and conservation. An economic take on demand-side management is mostly concerned with cost (e.g. of technology dispersion) and argues for monetary support (e.g. tax exemptions or grants) or institutional solutions allowing a transfer of investment risks (e.g. ESCOs). (Social) psychology aims to understand what motivates individual behaviour and how energy consumption behaviour can be influenced, e.g. by means of feedback on energy consumption (e.g. audits, smart meters). In addition, psychological approaches

to behaviour allow for a distinction of frequently (i.e. habitual/curtailment) and less frequently occurring (i.e. single-shot/investment) behaviour and call for different intervention measures depending on what kind of behaviour is targeted.

Sociological approaches focus on social practices and view energy consumption behaviour as partially governed by social norms, values and institutions and embedded in sociotechnical systems of energy production and consumption. In order to achieve change, more efficient consumption behaviour needs to start 'making sense' to people in a particular context requiring groups (communities) of people to commit to and pursue change. This can often be facilitated by establishing networks of relevant actors or institutions supporting such change (e.g. multi-stakeholder programmes). Important aspects are flexible programme design in order to align and accommodate interests of a number of stakeholders and allowing for durable change extending beyond the active period of intervention.

D3 concludes with a summary section combining the results of the literature review and of the inventory of tacit and practical knowledge with first findings from the case studies to lay the groundwork for the conceptual model.

D2: Summary database of the past 10 years of best and bad practices in demand management

This deliverable analyses 27 of the 100 DSM programmes collected in WP 1. Cases were selected such that they covered a broad range of different intervention methods, target groups, countries, etc. Another selection criterion was the successfulness of the programme in order to make sure that programmes that succeeded as well as those that failed were included in the analysis. Each project partner carried out one or more case studies, following a guide/template to enable comparison etc.

The deliverable employs the concepts of single- and double-loop learning in order to arrive at success criteria for DSM programmes to be used in a subsequent meta-analysis. Single-loop learning is concerned with reaching (or failing to reach) a pre-set number of goals and thereby learning about intervention instruments and goals. Double-loop learning was identified as a main indicator of the successfulness of a programme due to the fact that behavioural change usually requires changes of infrastructure, conventions and social structures. It refers to learning about linkages between the targeted behaviour and the larger sociotechnical system it is embedded in and how changes in the former can be facilitated by the latter.

D2 provides an overview of the 27 cases selected for the meta-analysis reported in *D4: Past 10 years of best and bad practices in demand management* (see below).

D4: Past 10 years of best and bad practices in demand management: a meta analysis of 27 case studies focusing on conditions explaining success and failure of demand-side management programmes

Deliverable 4 presents the in depth meta-analysis of the 27 demand-side management cases from various EU countries (presented in D2) in terms of causes for success and failure, with a special focus on the role of context, timing and actors. The analysis shows that well-known success factors are, amongst other, a strong financial basis, clear focus and goals, sound background in energy and technical data, sufficient time and regular feedback to programme participants. Less known but no less important success factors are found to be: a flexible approach to the planning and design of a programme, allowing to adapt to (wishes by) the target group or other stakeholders taking context 'on board', i.e. the ability to make programme design dependent on the context or vice versa, making use of windows of opportunity, working with an engaged target group and stakeholders or being able to motivate the target group/stakeholders well (e.g. by aligning expectations), linking the programme to regional development, or other ongoing programmes and policies, having a good understanding of the target group's needs, capabilities and interests, offering multiple benefits beyond energy saving, e.g. increased comfort.

D5: Interaction Schemes for Successful Energy Demand Side Management. Building blocks for a practicable and conceptual Framework

Deliverable 5 brings together all results of WP2 in a conceptual, yet practicable framework for successful demand-side management which forms the basis of the CHANGING BEHAVIOUR Toolkit. The model developed by the CHANGING BEHAVIOUR consortium differs from previous work in that it considers specific energy consumption behaviours and the context in which they occur.

Table 4.2 summarises the CHANGING BEHAVIOUR conceptual framework. The combination of theoretical and practical building blocks arrives at a coherent conceptual framework of processes involved in energy-related behaviour change. Based on this framework, guidelines could be formulated for project management, (choice of) intervention instruments and interaction schemes between project implementers (i.e. energy intermediaries), their target group(s) and other stakeholders. The theoretically sound framework constitutes the basis for the development of a Toolkit supporting the practical work of energy intermediaries in work package 5.

D6: Conceptual framework and model: Synthesis report tailored for policy makers as target group

A practical and conceptual framework of intermediary demand-side practice. Deliverable 6 is a condensed version of D5 written for policymakers and DSM intermediaries.

Table 4.2 *CHANGING BEHAVIOUR conceptual framework*

1. Key units of analysis in energy-related behavioural change	Actors: these can be individuals (that may include ‘internalised others’, via social norms) or groups. Actors can form networks. Social practices: routine behaviours enabling/constraining the scope of action for individuals Broader context in which behavioural change takes place: society at large; systems of provisions (including markets), institutions (formal and informal rules, regulation, norms); sociotechnical networks (configured around technologies)
2. Logic of action ⁴ of intermediary practitioners/ programme managers	Acknowledgement that programme managers come in different sorts: they may act according to rational calculation, or according to ‘rules of appropriateness’ (norms and conventions). They may be more or less reflexive. In any case, they are part of the society that they intervene in. Their choices and interventions are structured by the particular social-institutional context that makes part of.
3. Logic of action of end users	End users are neither homogenous nor static in their logic of action. Multiple ways of thinking and acting can be distinguished, as well as multiple motivations for action (e.g. calculated self-interest, altruistic, rules of appropriateness’ (norms and conventions). In addition, their behaviour (and changes in this) is structured by the particular social-institutional context that they are part of. Through their actions, actors can influence this context.
4. Issues pertaining to energy efficiency	Multiple issues: perceptions of risk, of long payback times; limited availability of capital Market failures: high information costs, externalities (e.g. when environmental costs are not reflected in current prices); transaction costs (e.g. costs of information), agency issues (e.g. tenants cannot force their landlord to install energy efficient applications). psychological issues (lack of feedback or information processing capacity; lack of social pressure; lack of perceived self-efficacy; lack of skills & opportunities; habits; helplessness) (social) system issues (discouraging energy efficient behaviour) that relate to the characteristics of our present system of provision: prevailing infrastructures, institutions and networks (and concomitant power relations), ‘ways of doing’ , norms, culture.
5. How can actors be motivated and mobilized to save energy?	By addressing issues at different levels. market failures: providing cheaper information, new institutions, incentives information, feedback and (social or economic) incentives in suitable formats & combinations By aiming a strategy at social interaction and mobilisation: collective action interaction, negotiation and reorganisation of sociotechnical networks (networks around innovations and the technologies that are part of these innovations) capacity building
6. What intervention instruments (with relevance to energy demand-side management programmes) are relevant	Measures that transfer risk or that address some of the transaction costs & agency problems (e.g. performance contracting, energy service contracting) Instruments to correct market failures, e.g. financial instruments, information (audits and feedback) and combinations of instruments Instruments that address

⁴ ‘Logic of action’ here refers to particular goals, strategies, and bases of evaluation that are common in a particular context (Friedland and Alford 1991). A logic of action embodies certain goals or values, appropriate means to realise those goals or values, and criteria for judging success that appear to be mutually consistent to those following that logic. An economic logic of action, for example, involves utilitarian reasoning, efficiency and means-ends calculations.

<p>7. How to evaluate successful action/ successful interventions?</p>	<p>pre-disposing factors (motivation, knowledge, norms and self-efficacy) enabling factors (providing means for change: resources & skills) reinforcing factors (mobilization of resources and strengthening intentions - feedback) Strategies that take account of the broader social system in which current practices are embedded and that aim at transforming current systems. Focus on interaction between promoters of solutions, end users and other stakeholders. Learning from bottom-up alternatives (e.g. new systems of co-provision) Encouraging processes of learning (group dynamic, user participation and flexible design) Market transformation, transformation of urban infrastructures.</p> <p>Evaluate success by addressing: efficiency & effectiveness (energy saved, cost-effectiveness; ‘free-rider’ and rebound effects; social welfare) lasting behavioural change, potential for changes in the social system learning processes.</p>
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4.3 Conclusions and recommendations

The following recommendations for policymakers⁵ were derived from the conceptual model of successful demand-side management:

1. Support the important work of intermediaries, e.g. by providing (financial) resources, institutional support and incentives.
2. In order to achieve systemic changes (e.g. market transformation, urban multi-stakeholder programmes) develop coherent and longer-term policies, on national, local and sector level.
3. To support new energy-efficient behaviour, create new institutions, such as certification schemes, permanent bodies including end-user representatives, permanent technological fixates (e.g. metering devices), new service providers, or new rules of appropriate behaviour’.
4. Collaborate among policymakers, researchers and intermediaries to combine theoretical knowledge with practical experience and encourage evaluation and learning.
5. Allow intermediaries to adapt their programmes to specific contexts by allowing more flexible project planning and evaluation.
6. Aim for long-term changes by breaking them down into short-term goals that can be achieved within one electoral cycle. Thereby, continuity can be ensured.

A more flexible approach to evaluation accounting not only for techno-economic but also for socio-cultural changes can contribute to the growing need for behavioural demand-side management programmes. This can be achieved by including the establishment of lasting changes, institutions and new networks in the evaluation of the efficiency and effectiveness of a project.

⁵ The recommendations for policymakers developed in WP2 were included in the recommendations developed for the Executive Summary of this report and were slightly amended after receiving feedback from the CHANGING BEHAVIOUR consortium and Policy Board.

5. Evaluation of work package 2 deliverables

The aim of the evaluation of WP2 deliverables was to check which elements of these deliverables are most relevant to practitioners working in the field and should become part of the Toolkit developed in WP5. Furthermore, first ideas were collected how (i.e. in what format and structure) to present the large amount and variety of information to Toolkit users.

5.1 Approach

These deliverables were evaluated by means of a questionnaire distributed among all consortium partners in the end of 2009. D5 of WP2 collects all relevant material and knowledge from WP2 and was used to develop eighteen ‘pieces of useful advice for energy intermediaries’. The questionnaire consisted of multiple-choice questions to measure the relevance of each ‘piece of advice’ as well as a number of open questions related to the content of the deliverable and how it can be integrated into the Toolkit which is developed in the CHANGING BEHAVIOUR project (Table 5.1).

Table 5.1 *Topics & questions of the questionnaire*

<p>1. Engaging the community Advice to use peer-to-peer communication Use social support and social pressure Make sure everyone ‘does his/her bit’ Engage stakeholders</p>
<p>2. Influencing habitual behaviour Predisposing factors Assessing susceptibility to change Creating awareness of habits Emotional appeals concerning habits Rational appeals concerning habits Building on ongoing change processes</p> <p>Enabling & Reinforcing Commitment and goal-setting for changing habits Prompts (reminders) and other physical changes in the users’ environment Feedback for changing habits Competition in changing habits</p>
<p>3. Influencing investment behaviour Predisposing factors: Emotional appeals for efficiency investments Rational appeals for efficiency investments Enabling & Reinforcing Trust and confidence in efficiency investments Transparent and understandable information Support and services for efficiency investments</p>
<p>4. Open questions: What else did you find particularly useful or interesting in D5? What other advice should we include in the Toolkit in relation to engaging the target group? Are there pitfalls that should be ‘warned’ about in the Toolkit? What other advice should we include in the Toolkit in relation to building a strong, supporting network? Are there pitfalls that should be ‘warned’ about in the Toolkit? What other advice do projects need for project implementation? What sources of good advice should we add as links to our Toolkit?</p>

For each ‘piece of advice’ listed under the three broad topics ‘engaging the community’, and ‘influencing habitual behaviour’ and ‘influencing investment behaviour’ the following questions were asked:

- How would you rate the evidence-base of this piece of advice?
- What is your own experience with following this advice?
- In what situations do you think this is good advice?
- In what situations do you think this is bad advice?

The questions relating to specific Activities were answered by all practitioners and three out of six research partners. The open questions at the end of the questionnaire were answered by all practitioners and research partners of the consortium.

The aim of the evaluation was to find out to what extent the work in WP2 has been relevant to the intermediary organisations involved as project partners and to learn how far WP2 findings resonate with the experience and knowledge base of the whole consortium. The outcomes of the questionnaire helped to improve the Toolkit developed in WP5 by providing information on what advice intermediaries experience as helpful in what kind of projects or situations⁶. As all ‘pieces of advice’ are the result of an interactive learning process among the project partners, it is not surprising that all Activities were evaluated as being useful and important. It provided insights into the extent to which project partners agreed with the conclusions put forward in deliverable 5 (D5) and in how far they see the theoretical conclusions and the resulting advice substantiated by and useful for their daily work.

5.2 Results

Answers concerning the different ‘pieces of advice’ are summarised in the following tables and answers to the open questions below.

Table 5.2 *Engaging the community*

“Advice”	Own experience, Rating	When is it good advice?
Engage stakeholders	3.6	When end-users are very dependent on stakeholders; requires real win-win situations and alignment of stakeholder interests.
Use peer-to-peer communications	3.4	In most situations, especially when the target group is fairly homogeneous and trusts each other. Sometimes it may be difficult to do this in practice or to monitor whether the message gets through.
Make sure everyone ‘does their bit’	3.2	Especially for long-term and large interventions, when achievements can really be monitored (not just rhetoric).
Use social support and social pressure	2.9	Requires good understanding of social dynamics – who influences whom? May be difficult to manage in practice.

* 4 = very positive / 1 = totally negative

⁶ A more extensive discussion can be found in: Backhaus, J., Heiskanen, E. (2009) Rating Expert Advice on How to Change Energy Behaviour, Summary of a survey (<http://www.energychange.info/articles>)

Table 5.3 *Influencing habitual behaviour*

“Advice”	Own experience, Rating*	When is it good advice?
Assess susceptibility to change	3.4	When funding bodies offer flexibility to start with easy things, when the target group is not too diverse.
Create awareness of habits	3.4	When used with care: people may find it insulting if an outsider tells them they are “doing it wrong”.
Give feedback	3.4	When people have the opportunity to change their behaviour, and the information is not too overloading.
Use rational appeals	3.4	Once you have people signed up for your project. When the rational argument is sufficiently dramatic.
Use emotional appeals	3.2	When backed by facts. Not easy to use for people with a technical background.
Build on ongoing change processes	3.0	May be useful in some situations, but ongoing change situations can also be stressful.
Competitions	3.0	When rules are fair, when groups of people (not individuals) compete with each other. Danger of dissatisfaction, might not promote long-term change.
Change the users’ environment	2.9	When the target group is willing to change. But prompts, for example, can lose value with familiarity and can be annoying.
Use commitment and goal-setting	2.4	When goals are clear, agreed on in society and measurable and when frequent feedback is available.

* 4 = very positive / 1 = totally negative

Table 5.4 *Influencing investment behaviour*

“Advice”	Own experience Rating	When is it good advice?
Use rational appeals	3.6	When the case is strong and communicates with a diversity of user concerns (including some immediate benefits); sometimes personal circumstances don’t fit in a general rationale
Build trust and confidence	3.5	Practical examples and peer recommendations are usually useful. It is important to know whom or what people will trust.
Provide transparent and understandable information	3.5	Always, but requires skills to assess balance between information overload & transparency
Provide support and services	3.2	Across contexts – but can be costly and risky to manage in small projects
Use emotional appeals	3.1	When supported by personal advice and unbiased evidence, when people can afford the investments.

* 4 = very positive / 1 = totally negative

The questionnaire ended with a set of open questions (see Table 5.1, point 4). Respondents indicated that they appreciated D5 as “a rich source of information dealing with theoretical, scientific background material, examples of empirical work and practical advice on how to approach end-users”. In particular, project partners found the case study analysis and concrete suggestions for intervention instruments (e.g. campaigns, audits, etc.) and project evaluation very helpful. Furthermore, the practitioners involved in the project expressed they liked how D5 helps “to raise self-awareness of their work and the roles they take (e.g. mediating role, facilitator, enabling role, etc) when working between DSM projects and target groups”.

In addition, respondents provided useful recommendations for the development of the CHANGING BEHAVIOUR Toolkit for project managers based on the work presented in D5. They gave very practical advice on ‘how to engage the target group’ and ‘how to build a strong network’ based on own experience. General recommendations for Toolkit development focused on the inclusion of ‘trust building tools’, short

‘knowledge bites’, ‘motivational quotes from colleagues’, ‘learning tools’, ‘real examples from WP1 and WP2’, ‘alternative evaluation options’, ‘project self-check’, and ‘overview of and links to existing guidelines on demand-side management and energy efficiency projects’.

All feedback and recommendations given by consortium members have been collected and analysed. Overall, the evaluation of WP2 deliverables provided valuable insights into what kind of support and advice intermediaries require and how they would like to receive such information. WP2 covered the challenges and advice for intermediaries to a large extent but the evaluation indicated that further work was required to include more of the findings of WP2 in the Toolkit and to present everything in a useful format. Many of the issues mentioned were integrated into the first draft of the online Toolkit for energy intermediaries. For those points raised that were more difficult to take up and integrate (e.g. a ‘self-check for intermediaries guiding them through the Toolkit’) plans were developed on how to integrate such features in subsequent versions of the Toolkit.

6. Summary of work package 3: Interaction with intermediaries

Official title: WP3 – Researcher-practitioner dialogue with intermediary organisations

The aim of WP3 was to initiate intensified interaction and co-operation of the CHANGING BEHAVIOUR project with intermediary organisations. This was to seek to accelerate the active and transformational role of intermediaries in energy demand management through developing an enhanced understanding of context, actors and transferability. WP3 was at the centre of CHANGING BEHAVIOUR because it involved the mobilisation of a broad group of intermediary organisations into an ongoing dialogue process.

6.1 Approach

The WP was organised around five Tasks. These were as follows:

- Mapping intermediaries and, in particular the social and technical organisation of energy intermediaries in different local contexts.
- Initiating dialogue with partner intermediaries, and building a dialogue and engagement focused on exploring the relations between practitioner experience and academic research perspectives on sociotechnical change. In doing this four regional workshops for the broader intermediary community and their stakeholders were designed, and organized.
- Validation of findings where researchers and intermediaries discuss and refine key aspects of the conceptual model developed in WP2.
- The identification of relevant projects in different contexts that are potentially transferable to other local contexts.
- Localisation processes, where through workshops with intermediaries, custom-tailoring measures necessary for successful project transfer are identified.

The research design used multiple methods, including:

- A conceptual development of the role of energy intermediaries through a review undertaken to situate energy intermediaries.
- Original research produced 25 case studies of energy intermediary practices.
- Analysis of these 25 cases addressed the issues of who intermediaries are, how they are funded, how and why they are organised the way they are and their purpose in functioning.
- The WP recognised that energy intermediaries work within wider sets of national ‘landscape’, policy and institutional constraints and possibilities – a review of these possibilities and constraints was undertaken in relation to Finland, Germany, Hungary, The Netherlands and the United Kingdom.
- Dialogue between the research findings of Work Package 2 and over 150 practitioners from countries across Europe at four workshops, that involved all project partners, was utilised to assess common and distinctive aspects of intermediary practice.

6.2 Results

The conclusions and implications of these processes are organised in four output deliverables:

D8 was an interim report entitled: Identification of intermediary practices across countries for assessing piloting. This was completed in November 2008.

D7 was a major detailed report: Conceptualizing and understanding intermediaries in context. This was completed in July 2009. The report recognized that there are many different ‘types’ of energy intermediary. In doing this it:

- Classified different kinds of energy intermediaries
- Analysed the different roles of energy intermediaries in different conditions and settings
- Identified the strategic capabilities needed by energy intermediaries

D9 involved the design, organisation, undertaking and reporting back of 4 workshops of energy intermediaries and practitioners from across Europe to identify localization and transferability measures and processes. A report of these workshops and their critical findings was produced in 2009.

D10 was completed in August 2009 and produced a list of context-tailoring measures that need to be addressed for effective intermediation, in relation to households, SMEs, municipalities and schools. It did this through the range of methods outlined above.

6.3 Conclusions and recommendations

The critical conclusions of WP3 have resulted in the development of a framework for effective active and configurational energy intermediaries. The framework is based on our analysis of:

- What energy intermediaries are.
- Whose priorities they work to promote.
- Where they operate.
- And whether their responses are organised on a project or programmatic basis.

From our analysis the emergent framework consists of seven interrelated issues which are necessary but not sufficient factors to inform effective, active and configurational intermediation (see Table 6.1).

The framework does not offer a prescription nor does it offer short-cuts to success for practitioners. What it does do is to provide a series of issues that need to be seriously addressed in order for intermediaries to function effectively. These issues need to be developed and populated further in relation to different intermediary contexts, taking account of national and sectoral contexts.

Table 6.1 *Context-sensitive framework for active and configurational intermediation*

1. Financial issues	<p>Intermediary needs to:</p> <p>Develop a context of broad-based and stable sources of funding – as a means of reducing the risk of funding being withdrawn.</p> <p>Additionally this offers the potential for financial independence.</p> <p>Long-term funding creates the conditions where the priorities of the intermediary are not largely dictated by the reactive chasing of funding and the priorities of different funders</p> <p>This is important in creating stability in relation to a series of further issues – see below.</p>
2. Staffing	<p>Security of funding provides the potential for underpinning the security of core employee positions.</p> <p>It creates the stability and backdrop where staff training and skills programmes can be developed.</p> <p>Where stability means that resources are available so that staff and employees within the organisations can be incentivised, feel rewarded and not subject to the whims of short-term funding.</p> <p>This begins to form the basis for an organisational commitment to the careers of employees.</p>
3. Organisational structures and cultures	<p>This is particularly important where the framework within which many energy intermediaries work is one of a small core with a broad network of a variety of partners where a stability of organisational resources and organisational commitment provide the basis for a shared organisational culture and clarity around different organisational positions.</p> <p>Small capacities require energy intermediaries to be able to effectively ‘plug in’ to the networks of partners to enhance capacity but to be able to do so from a shared organisational view.</p> <p>This very dynamic set of circumstances means that energy intermediaries must develop effective learning cultures and develop the ability to adapt to changing pressures and new issues.</p> <p>In this respect, the development of shared organisational cultures is unlikely to be</p>

	effective through project-based thinking and funding but rather should be systemic, strategic and long-term.
4. Knowledge base	The adaptability and learning required by energy intermediaries means that they must constantly work at developing and re-developing the knowledge base to which they have access. In addressing long-term, systemic and strategic issues a wide variety of technical, policy and local forms of knowledge need to be constantly negotiated and effectively integrated.
5. Communications	Negotiating and effectively integrating different knowledges requires the alignment of different sets of social interests and their priorities and the creation of communications forums to be able to do so. This requires that energy intermediaries develop a local presence and good local networks through proximity and face-to-face communications. Energy intermediaries also need to develop effective relationships and resources, beyond what may be the limits of local networks, with national policymakers.
6. Credibility	This requires that energy intermediaries think carefully about how they represent what they do to the variety of different partners they build relationships with. They may need to recognise that perceptions of impartiality, neutrality and their reputations as experts need to be represented in an appropriate way. This is important in communicating credibility and building trust with a variety of partners, who in other aspects of their work and business may have competing priorities. Symbolic visibility in the local and national media is important, as is symbolic exemplification through demonstration and showcasing. This is part of the positioning of the energy intermediary as distinctive, as ‘first mover’ and ‘the people to turn to’.
7. Influence	These previous six issues are important in embedding the energy intermediary within a local context and facilitating the development of the resources, relationships, forms of knowledge and communications and, thus, visibility, to be able to effect a credible influence. But the energy intermediary also needs to develop a shared organisational view as to how it would know if it was influential beyond the often narrow metrics of external funders.

In addition D10 details key problems and issues to consider for intermediaries working specifically in relation to households, SMEs, municipalities and schools.

From the findings of WP3 we outline four key recommendations for policymakers⁷ in engaging and influencing more effectively energy intermediaries.

1. Energy efficiency priorities should be framed and funded through long-term programmes. Projects should sit within these programmes rather than as standalone initiatives.
Policymaking on energy efficiency takes places across many policy areas. Energy efficiency programmes should be developed that link together different policy domains.
2. Energy efficiency is not an end in itself – it is a means of achieving numerous other priorities. A clearer understanding of ‘to what question is energy efficiency the answer’ is required. As such, energy efficiency needs to be understood better and demonstrated more convincingly at local levels as there are many different ways of framing energy efficiency.
A more sophisticated understanding of the wide variety of ways that energy efficiency programmes can and should operate at a local level needs to be developed. It is recommended that policymakers fund comparative action research on energy efficiency at a local level. Policymakers responsible for, or being appointed to overview, projects would benefit from research that demonstrates that there are many alternative ways to organize action on energy efficiency.

⁷ The recommendations for policymakers developed in WP3 were included in the recommendations developed for the Executive Summary of this report and were slightly amended after receiving feedback from the CHANGING BEHAVIOUR consortium and Policy Board.

3. Better understanding is required of the ways that intermediaries do, can and should collaborate, compete and overlap with the competencies of each other.

It is important that policymakers do not only understand how energy efficiency operate at a local level but also that they have an overarching understanding of the ways in which the range of different projects and interventions contribute to policy objectives.

4. Many different people and organisations promote energy efficiency. The combinations of people and organisations working on energy efficiency may be different across national contexts. A better understanding is, therefore, required of different national policy and institutional contexts and the ways in which they constrain and enable intermediaries and the extent to which intermediaries can contribute to policy. European level policymakers in particular should actively encourage and fund comparative understanding of national policy and institutional contexts.

National policymakers would benefit from research that demonstrates the range of and interrelationships between different institutions contributing to policy priorities and the extent they do so.

In these recommendations we provide a means to both practically utilise the findings of this work package and to build upon them through further work that requires contributions from but also offers potential benefits for policymakers.

7. Evaluation of work package 3 deliverables

This section details an evaluation led by the Centre for Sustainable Urban and Regional Futures (SURF) of the University of Salford involving the CHANGING BEHAVIOUR consortium in order to identify the strengths of the critical outputs of Work Package 3 (WP3) of the project.

The method used for doing this has been to qualitatively engage the CHANGING BEHAVIOUR consortium in reflecting on the critical output of WP3 – a Context-Sensitive Framework for Effective Intermediation – through asking them to think about, discuss and respond to five questions (see below).

Representatives of the CHANGING BEHAVIOUR consortium were involved in the production of the critical outputs of WP3. This involved each project partner undertaking at least one qualitative case study of energy intermediary organisations. A wide range of project partners also attended four research-practitioner-policy maker workshops across Europe.

More specifically 19 consortium representatives took part in a specifically convened WP3 evaluation session at the CHANGING BEHAVIOUR project team meeting in Vilnius, Lithuania in March 2010.

7.1 Approach

Refining the framework

In seven small groups the 19 project partner representatives at the WP3 evaluation session in Vilnius were asked to read the Framework with their own experiences in mind. They were then asked to discuss and respond to the following five questions:

- Which of these 7 issues do you consider to be the most important consideration for an intermediary organisation in operating effectively? (if you feel there is more than 1 please say so).
- Why do you consider this issue(s) to be the most important consideration? (please use examples, your experience, existing knowledge etc to justify your choice in 3 or 4 sentences).
- Which of these 7 issues do you consider to be the least important consideration for an intermediary organisation in operating effectively? (if you feel there is more than 1 please say so).
- Why do you consider this issue(s) to be the most important consideration? (please use examples, your experience etc to justify your choice in 3 or 4 sentences).
- Are there *important* issues that are not included in the framework that you feel should be? If so, what are they? Why should they be included?

The groups then shared not only their findings in a plenary session but also the processes through which the groups had arrived at their findings. The group work and the subsequent discussions were ‘captured’ in notes that were taken.

7.2 Results

Important considerations for intermediaries - justifications

A common view of the groups was that all the issues in the Framework are important ones. This is not particularly surprising as the Framework was designed in recognition of the need to address a series of interrelated problems for intermediaries.

There were nuances in respect of the relative importance of issues highlighted by the groups. The most pertinent issues across seven small groups of project partners are captured below.

Table 7.1 Most important considerations for intermediaries

Financial issues	3 of the 7 groups at the Vilnius evaluation highlighted financial issues as the most or joint most important issue. This is not to suggest that there were not differences of emphasis between group members but that financial issues were agreed as being particularly important. Among these groups the justifications for its importance were: financial aspects are the basis for all other issues in the Framework; it is a pre-requisite; without funding there won't be much that follows.
Staffing	1 group highlighted staffing issues as the most or joint most important issue. Among this group the justification for its importance was: that this is where intermediation starts, with the ideas of people.
Organisational structures and cultures	<i>Not selected as most important.</i>
Knowledge base	1 group highlighted the knowledge base as the most or joint most important issue. Among this group the justification for its importance was: that knowledge is what an organisation starts with and what it seeks to complement to be able to act effectively in meeting emerging challenges.
Communications	<i>Not selected as most important.</i>
Credibility	4 of the groups claimed that credibility is the most or joint most important issue. Among these groups the justifications for its importance were: that credibility leads to influence and opens the door to funding; that credibility is a pre-requisite for long-lasting relevance in a context and for influence, finances and communication; that credibility opens the door to accessing funding and hence staff resources; and because all the other issues are dependent on being credible.
Influence	1 group highlighted influence as the most or joint most important issue. Among this group the justification for its importance was: influence is the effect of all the other six issues working effectively.

For some *influence* was the most important issue to consider and was a product of all other issues. The point here being that if you are not able to exert influence in the first instance – which can be done in many ways, contexts and with variable consequences – you are unable or limited in your ability to leverage financial support, unable to attract skilled staff, unable to develop an effective organisational structure around staff, unable to cultivate an appropriate knowledge base, unable to communicate effectively and, therefore, lack credibility. Related to this is that if you can attract financial support you can attract staff, to develop organisational structures and cultures and so on.

Money and financial issues were often cited as being important as a pre-requisite to intermediary activity – with a view that you can't do an awful lot without money. The availability of finance frees up significant time to work on issues rather than searching for income. Although one contrary view was that a lack of finance can actually force intermediaries to be creative and also that the availability of significant funding does not guarantee good intermediary activity. Money does not guarantee visionary leadership and the forms of emotional intelligence that are necessary for effective intermediation. In this respect organisational cultures and structures were deemed to be important issues.

The overriding view was that effective intermediation cannot neglect any of these issues and that this addresses many of the generic issues that need to be addressed.

Least important considerations for intermediaries - justifications

As has been mentioned the groups thought that all the issues in the Framework were important to consider and that there was an interrelationship between these issues.

Table 7.2 *Least important considerations for intermediaries*

Financial issues	1 group highlighted financial issues as the least or joint least important issue. Among this group the justification for its lack of importance was: money isn't necessary to be an effective intermediary.
Staffing	<i>Not selected as least important</i>
Organisational structures and cultures	3 of the 7 groups highlighted organisational structures and cultures as the least or joint least important issue. Among these groups the justifications for this were: it does not matter to some extent but it has some significance; organisational culture is important but it is in the background where problems can be compensated by additional resources; any intermediary will have a structure and a culture however ineffective. This means this is an area for improvement but is not necessarily critical.
Knowledge base	1 group highlighted the knowledge base as the least or joint least important issue. Among this group the justification for this was: it is important but it is not so important to have knowledge in the organisation – it is sufficient to have access to external knowledge.
Communications	<i>Not selected as least important</i>
Credibility	<i>Not selected as least important</i>
Influence	1 group highlighted influence as the least or joint least important issue. Among this group the justification for this was: influence is a product of the other six issues – you can't work on it on its own.

There was agreement that change and flexibility is required in intermediaries that need to be continually open to change and aware constantly of their context. Yet for some group members this did not translate into a preoccupation with the importance of organisational structures and culture – which they saw as being more of a background issue. This resonated with a further issue that for some was considered of lesser importance which was the development of a knowledge base. This brings us back to the issue of finance which was seen as being more or less important among different group members. One view was that money was the least important issue as many community projects can be undertaken with limited income. One implication of that view would be that there is a need for developing a knowledge base of more local and embedded knowledge.

For some group members different issues were among the least important to consider. For one group of partners gaining credibility was necessarily a critical issue in working effectively. Yet the issue of credibility is not a straightforward one. One reason that credibility is important is that intermediaries and practitioners in the energy efficiency and demand management area are fighting an uphill battle against a dominant mainstream agenda.

Additional issues to consider

The group members suggested that the Framework covered a lot of relevant material. In addition they suggested that a number of issues would further develop the Framework. In particular, in relation to all the issues in the Framework the role of leadership could be emphasised more clearly, and issues to do with charisma, passion and commitment. Also the need to develop a richer understanding of the wider political and policy environment within which an intermediary organisation operates – which is detailed within deliverable 7 of the project – should be integrated into the Framework. There was also a view that a greater emphasis could be given to the role of personal contacts. This is captured in the framework under organisational structures, knowledge base and communications but could be made more explicit. Similarly it was thought that greater emphasis could be given to working together with similar organisations to create a greater effectiveness. The importance of administrative support could be better integrated into the Framework as a means of freeing up the intermediary organisation to undertake many of the other priority issues mentioned in the Framework. The ongoing nature of the need to continually work at adapting the intermediary to changing circumstances should be emphasised.

The process of undertaking an evaluation with project team members after WP3 had been completed was as a means of understanding in what ways the Framework was effective and where 'gaps' still remain. The purpose of this was so that researchers, practitioners and policymakers who wish to use, engage with and develop the Framework in the future have the experiences of 'users' in pointing out strengths and be able to more easily address 'gaps'. This evaluation is thus most usefully read in conjunction with deliverable 7.

8. Summary of work package 4: Implementation of six pilot projects

The overall aim of WP4 (Context-tailoring and piloting of best practices) was to apply the knowledge gained in WP2 (Development of the conceptual model) and WP3 (Researcher-practitioner dialogue with intermediary organisations) under real-world conditions. The respective experience was fed back in the further development of the practitioner Toolkit (WP5). This Toolkit is one of the core outcomes of the CHANGING BEHAVIOUR project. The overall aim of WP4 can be specified as follows:

Firstly, this work package aimed at applying the conceptual model and context-tailoring measures and tools developed in WP2 and WP3. The measures and tools were applied in six different pilot projects that were developed and implemented in the course of the CHANGING BEHAVIOUR project. The purpose of the measures and tools was to improve the effectiveness (e.g. in terms of the amount of saved energy or reduced CO₂) and programme efficiency (e.g. in terms of cost-effectiveness reflecting the ratio of resources used to energy saved) of the pilot project concepts by better adapting them to the context in which they were implemented.

Secondly, the work package aimed at testing the tools (so-called Activities, see below). These Activities were developed to transfer the theoretical background from WP2 and WP3 into practical instructions. Here the leading question was whether the Activities were understandable and applicable by practitioner organisations and if they were attractive/motivating enough to be applied. The attractiveness of the Activities was deemed important because the external context practitioners are embedded in – including time and financial constraints – may reduce the time available to the practitioners to apply the tools. This working step produced valuable feedback from the practitioners' point of view (including the feedback and view of different stakeholders that were involved in the pilot projects), which helped to develop a user friendly and motivating practitioners' Toolkit.

Thirdly, the work package aimed at better understanding the nature of context and its influence on the design as well as on the success or failure of DSM projects. Based on the experience of context tailoring in the six pilot projects different scales of context (internal, target group, external) but also different ways of context tailoring will be structured and analysed. This had the purpose of providing a typology to practitioner organisations that enables them to take context into account when developing DSM projects.

8.1 Approach

WP4 initiated and carried out six pilot projects in six different countries, including three New Member States. The six pilot projects have the following foci:

Table 8.1 *Overview of the six pilot projects implemented in CHANGING BEHAVIOUR*

Implementing partner	Research counter partner	Country	Focus and scope
Manchester: Knowledge Capital	University of Salford, SURF Centre	UK	Manage collaboration between own and two other organisations to train recruited volunteers, in climate change communication in order to increase referrals to the domestic energy efficiency services by the national Energy Savings Trust.
Consumer Organisation of North-Rhine Westphalia	OEKO Institut	DE	Train school children to become energy advisors for their families and neighbours and thereby increase the use of inexpensive, everyday energy saving measures.
GreenDependent	Central European University	HU	Establish a climate club in order to increase awareness and knowledge of the link between climate change and household consumption and creating a responsible attitude and behaviour among participants.
Enespa	National Consumer Research Centre	FI	Provide ESCO services to private consumers in the form of energy audits, advice and technical support for more efficient heating systems.
COWI Lietuva	SEI-Tallinn	LT	Provide frequent and tailor-made information on energy consumption and energy saving measures to office employees in order to decrease energy consumption at work.
Ekodoma	Energy research Centre of the Netherlands	LV	Offer independent expert advice to a building management company and its residents in order to develop and implement energy efficiency measures (i.e. building renovation).

8.2 Results

All pilots have documented their implementation process and experiences within a common evaluation framework, suggested and defined by the CHANGING BEHAVIOUR project (CB). This section summarises the main lessons learned in this process.

Define your goals

An early definition of goals and success factors seemed to be of high importance for a well grounded project management, and was mentioned by several pilots. One pilot recommended to look at similar projects and their success factors and to talk to experts who know your own target group already and who are familiar with working with your target group in the thematic context of your project.

The handling of success factors and the selection of indicators within the pilots showed that the definition of goals could serve as an orientation but should be flexible enough to meet possible needs of adaptation due to changes of context conditions.

Learn about your target group

Early and even beforehand knowledge of the respective target group in order to focus the needs of potential actors and stakeholders is valued quite important by several pilots. Thus, the target group has to be reflected on carefully and has to be specifically defined. It should be clear and properly considered how the needs of the target group correlate with the objectives of the project. It was also mentioned that a project should be quickly integrated into existing structures and adapted to the internal and external context.

Context is key

An important aspect concerns the timing of a project with regard to its external context. One pilot discussed the difficult situation of implementing the project under the effects of the worldwide economic crisis. Similar to other pilot experiences, the original design of this project suffered from the uncertainty on further investments. One negative effect for the pilot implementation was that people were more reluctant than before to take a loan in order to invest in renovations - a prerequisite of the design. One of the conclusions was, to hold the project design as flexible as possible and check the context carefully.

Ensure availability of budget

All pilots struggled with funding issues, be it a limited budget or a change of priorities of funders, the cancellation of planned investments or the reluctant reaction of private investors. The availability of an adequate budget concerns all stages of a project. In this context, also the aspect of the development of available budget over time – due to the respective needs of the project in its various stages - is of importance and has to be ensured at an early stage of planning.

Build on existing expertise

Within the pilots it was referred to the importance of existing knowledge and expertise and the need to use and spread this in a careful manner. One pilot mentioned that the final project design was largely influenced by the combination of the pilot manager's expertise with ideas generated in the CHANGING BEHAVIOUR project. Also the inclusion of target group knowledge was rated helpful and was gained by the pilots carefully through the regular reception of stakeholder feedback.

Implement Feedback

The pilots learned how to provide and receive feedback by using instruments from the CHANGING BEHAVIOUR Toolkit. Nevertheless, several pilots addressed the problem to implement feedback tools and respond to feedback adequately. It was summarized by one pilot that despite the CHANGING BEHAVIOUR project had a strong focus on including stakeholder feedback, some reluctance to collect and integrate stakeholder feedback revealed on a broader scale. It was concluded that this reluctance may be caused due to a lack of time or a lack of experience in how to practically tailor a project to feedback and how to proceed with the feedback.

Reflected use of CHANGING BEHAVIOUR Toolkit

It was discussed by some of the pilots to use the Activities of the Toolkit in a way that not the full process has to be followed - given the levels of knowledge of experienced actors. In that regard, some 'picking and mixing' of what will help intermediaries at different times and context situation was recommended. It also was seen helpful to have the Activities less prescriptive and more an orientation to help intermediary or project practitioners reflect, and learn about the process they are involved in.

8.2.1 Context-tailoring measures

Based on the context-tailoring measures employed in the six pilot projects, WP4 has drawn up a context-tailoring typology for structuring context-tailoring measures. This typology is based on two dimensions: Firstly, we differentiate between different scales of the context, in line with the definition of context in the CHANGING BEHAVIOUR project. Secondly, there are different types of tailoring the instrument applied to the specific project context and vice versa.

Different scales of context

The CHANGING BEHAVIOUR project differentiated between different scales of the context:

(A) *The project's internal (organisational) context*: how does the project fit the project manager's institutional set-up, its capacities, values and knowledge-base?

(B) *Target group*: how does the project design fit the target group?

The project's external *context*: how does the project fit the institutional set-up of the project's surroundings, including the political context, the values that prevail in society and on the regional level, and the existing infrastructure and new technologies on the market? We differentiate between two types of external context

- External context I: the immediate social context of the project, which includes for example project partners, involved institutions.
- External context II: the broader external context which includes institutional, technological etc. developments that are typically beyond the project partners' and target group's sphere of influence.

Moreover, for each of these we can differentiate between knowledge, values, institutions and technology, economy, and policy.

Different ways of context-tailoring

Secondly, there are different ways of tailoring a project to its context. There is not always a clear-cut difference, but this represents an attempt to differentiate different types found in the pilot projects.

The project, including the instruments applied and the context where it is applied need to fit together. This can be achieved by:

- Tailoring the project and its instruments to the context.
- Selecting an appropriate context for a pre-selected instrument or project design (cf. the differentiation between top-down and bottom-up project design in deliverable 5 of the CHANGING BEHAVIOUR project).
- Trying to tailor both the context and the project and its instruments to get a good fit.

There are different ways of tailoring a project to its context. Tailoring project design to the context: This refers to decisions about the project design that are made due to the context, but are not necessarily about tailoring a generic instrument to the context, e.g. decisions about project objectives or role of partners. Tailoring an instrument used elsewhere to the context: This is probably the most obvious type of context-tailoring: An instrument was used before in a different context and the recommendations obtained are now translated into the new context. This is about transferring an instrument from another practical context to a new project context.

Turning generic assumptions into a concrete project design: In the survey of the pilot projects it became clear that it is often not so much about translating results from one context to another, but rather about turning abstract and generic recommendations into concrete and practicable approaches for the context at hand. For example, you should involve stakeholders, but how do you do it in your concrete context? In other words this is about transferring an instrument from a theoretical context into a practical context, which requires substantiating the theoretical assumptions and recommendations. Changing assumptions about how an instrument works: In some cases, the insights achieved in a project may not only require tailoring an instrument to this context, but may make it necessary to revise the assumptions behind that instrument.

Selecting the context rather than tailoring the project/an instrument to the context is the second way of tailoring. In these cases, the project context is not taken as given, but the project manager chooses an appropriate context or even tries to influence it. Selection of the context: In this case, it is not the instrument that is adapted to the context, but the context is selected according to the requirements of the instrument or the resources available. For example, in the pilot projects there are a number of cases where the target group was selected according to different criteria. Changing the context: Rather than selecting the context, projects can also aim at changing the context in the course of the project. Eventually, this should be the objective of all projects in one way or another. While this may be possible for the immediate social context of the project, the broader external context is typically beyond the reach of a single project.

8.2.2 Context-tailoring in the pilot projects

Context-tailoring in the pilots has shown that there are different types of context-tailoring. The pilot projects in the CHANGING BEHAVIOUR project have adopted a broad variety of different types of context-tailoring measures in different scales. A particular focus has been on context-tailoring measures with regard to the target group.

Importantly, the experiences in the pilot projects show that context-tailoring is not a one-off event at the beginning of the project, but a continuous learning process throughout the project.

The following table combines the two dimensions set out above to provide an overview of different types of context-tailoring measures and examples from the pilot project.

Table 8.2 *Context-tailoring typology with examples from the six pilot projects*

Context Dimension / Types of context-tailoring	(A) Internal project context	(B) Target group	(C) External context I (immediate social context of the project)	(D) External context II (broader external context)
(1) Tailoring project design to the context	<p>Selection of project objective depending on internal context: Power instead of energy saving Looking for possibilities for ESCO-investments in the residential sector</p> <p>Selection of instrument based on availability of resources: No investment resources, only non-financial measures</p> <p>Role of project manager depending on project network Role as coordinator between other partners 'Personal'/building energy advisor.</p>	<p>Role of project manager may change depending on the target group or sector Include the target group in the decision-making process.</p>	<p>Development of project design in collaboration with stakeholders.</p>	<p>Project design based on national policy priorities and funding opportunities (e.g. pilot project 'Energy efficiency in Latvian dwellings').</p>
(2) Tailoring an instrument used elsewhere to the context	<p>Tools such as the CB Activities may be tailored to the project, e.g. due to limited time resources.</p>	<p>Take into account existing knowledge base of target group</p> <p>Take into account potential motivation of target group No financial incentive Focus on co-benefits target group is most interested in during information events to trigger motivation and support</p> <p>Differentiate between different target groups where necessary</p>	<p>Set up a supporting network Some recommendations made elsewhere may not be possible to implement in the new context (e.g. "Competition not possible") Timing is important Adapt the instrument to existing plans and ideas of stakeholders.</p>	<p>Instrument 'personal contact between target group and energy advisor' employed to discuss governmental co-financing as one financing option with target group.</p>

Context	(A) Internal project context	(B) Target group	(C) External context I	(D) External context II (broader external context)
Dimension /			(immediate social context of the project)	
Types of context-tailoring				
(3) Turning generic assumptions into a concrete project design		<p>Use different ways of communication depending on the target group</p> <p>construct questionnaires based on prior experience/knowledge</p> <p>Tailoring the instrument to the technical context, e.g. availability of individual heating regulation in office rooms.</p>	<p>Trust is important: set up a suitable network</p> <p>Involve stakeholders: But which ones are important in this specific project</p> <p>Build on existing networks: But which ones?</p>	
(4) Changing assumptions about how an instrument works		<p>Personal contact is important: But with whom? But how?</p> <p>Provide only relevant information and concrete figures</p> <p>Use existing internal web-based network</p> <p>But where and when: Build on existing meeting routines</p> <p>General recommendation: Target group interaction and network mobilisation, but this can be difficult in practice.</p> <p>E.g. The context was a lot more 'ordinary' and 'unenthusiastic' than many of the examples in the literature, and getting people on board requires quite a lot of resources → resource needs for</p>		

Context Dimension / Types of context-tailoring	(A) Internal project context	(B) Target group	(C) External context I (immediate social context of the project)	(D) External context II (broader external context)
(5) Selection of the context		<p>social mobilization</p> <p>Target group does not simply react to price signals, ‘financial instruments should best be supplemented with information campaigns and tailored energy advice.</p> <p>Selection of target group, according to</p> <ul style="list-style-type: none"> Interest of target group Availability of data Availability of resources Interest of project partners Requirement of funders Which target groups are already addressed in other projects? Other activities of target group and project partners Continuity in existing networks In cooperation with project partner. 	Selection of stakeholders.	Present project results, raise awareness among policymakers.
(6) Changing the Context		<p>Change the knowledge base of the target group (Building cohesion and new shared understandings of the benefits of the project within the target group).</p>	<p>Attempting to shape the interests of other external stakeholders of the project</p> <p>Build up networks for future projects.</p>	Present project results, raise awareness among policymakers etc.

9. Evaluation of the six CHANGING BEHAVIOUR pilot projects

The following chapter encompasses main aspects of the planning and implementation processes of six pilot projects carried out in the course of the CHANGING BEHAVIOUR project⁸. The documentation focuses on the use and measurement of success indicators that have been defined by the pilot projects themselves. Additionally, the testing of earlier versions of the CHANGING BEHAVIOUR Toolkit is discussed in the light of the different interventions and instruments used in the pilot projects. Finally, the importance of stakeholder involvement and feedback is stressed in the context of participatory projects.

9.1 Measuring success in the pilot projects

Within CHANGING BEHAVIOUR it was decided to identify success and failure of Energy Demand Side Management (DSM) pilots on the basis of efficiency, effectiveness and learning criteria. These criteria and a model of measurement have been previously developed by CREATE ACCEPTANCE, an earlier research project involving some of the same partner organisations, which defined successfulness in terms of outcome, process and context (Heiskanen et al., 2007). The criteria were adopted and translated into the following set of success factors and indicators⁹: Success can be operationalised in terms of *effectiveness*. Effectiveness refers to the actual success of the project in reaching the intended goals or realizing benefits in a way that is lasting. A successful DSM project has:

- a positive reducing effect on total energy consumption. In other words, the effectiveness of a DSM project (and program) can be measured by means of the share of energy saved / total energy consumption or energy conservation potential.
- reached the desired effect (e.g. behavioural change and energy savings) aimed for in the target group, in other words the goals as set out in the project were achieved.

Following the above mentioned indicators, a successful effectiveness would consist of a project that actually has achieved durable energy savings and behavioural changes.

Efficiency of a project refers to the achievement of its respective goals and effects. A successful project shows high efficiency and cost-effectiveness. In other words, the resources used for the project have to be taken into consideration. Cost effectiveness can be measured by identifying the ratio of resources used to energy saved or other desired outcome achieved. The ability to operate with relatively low funding can also be taken as a sign of cost-effectiveness. A project can be considered efficient if it achieved its goals within the intended time-scale and within a given budget. For example, a project with high efficiency has reached its goals at relatively low cost per CO₂/ton and with relative low usage of other less quantifiable resources within a given time and budget.

The above sets of indicators to identify success in terms of effectiveness and efficiency have been complemented by indicators for social learning. For evaluating the aspects of social learning (i.e. double-loop learning) one can use two types of indicators: process indicators and content indicators. While process indicators prominently describe the interaction with the target group or different stakeholders, content indicators address the outcome of learning in terms of

⁸ For a more detailed report and analysis of the pilot project experiences, see D12: Pilot Projects: Documentation of initial implementation experiences (<http://www.energychange.info/deliverables>).

⁹ For a more detailed report on success factors for demand-side management projects, see D4: Past 10 years of best and bad practices in demand management: a meta-analysis of 27 case studies (<http://www.energychange.info/deliverables>).

adjustments of the project process and interventions or the institutional setting (of project managers / intermediaries).

CHANGING BEHAVIOUR discussed a variety of learning factors, e.g. learning by project managers on their target group, learning on best practices, learning on technology and institutional context, etc. A *successful learning* – e.g. by the project manager – could result in the meaningful engagement of all relevant stakeholder and a proper reporting (system) to record lessons learned.

In the starting phase of pilot documentation, all six pilot projects commonly suggested and discussed indicators to measure their potential outcome on the basis of the above mentioned model. The respective three aspects address effectiveness, efficiency and social learning and were translated into adequate indicators by the pilot project managers and their research partners. On the basis of a questionnaire ‘Evaluation of the Pilots in terms of selected Success Factors’ provided by work package 4 of the CHANGING BEHAVIOUR project, all pilots described their first set of success indicators. These indicators should help to reflect their role, to evaluate results and to document the success of their efforts and interventions.

Effectiveness – as described above – has been expressed by quantitative indicators, e.g. the reduction of CO₂ emissions, energy savings or the number of energy audits requested by local residents.

Efficiency should be measured in monetary terms like the achievement of goals with a given amount of money.

Social learning as the expression of single and double loop learning should be measured through content (learning-what) and process (learning-how) indicators of different kind. For evaluating the aspects of social learning all pilots discussed process indicators and content indicators.

During the implementation phase of pilots, indicators or targets have been adapted due to different reasons. It became obvious that the measurement of efficiency and effectiveness might not be adequate for the specific needs of the pilot projects. Instead of further developing efficiency indicators, the goals of social learning became more important and were described by respective indicators.

The pilots mentioned various reasons for changing their success indicators, e.g. missing information or data or data that could not be achieved within the given timeframe or with the given implementation measure. Mentioned reasons for changing project targets were context factors, e.g. the reduction of funding or lack of realised investments by target group. Learning about the target group and context of the project also brought about changes to targets and indicators measured in some projects. The definition of new and more appropriate indicators was promoted by the specific Toolkit Activities on ‘Monitoring, Evaluation and Feedback’.

In particular four types of changes were documented by the pilots:

- The measurement has been adjusted: e.g. number of commitments instead of implemented (heating) systems are measure.
- Additional indicators have been developed and introduced: e.g. number of customers reached or involved are additional counted.
- Indicators became more specific: e.g. from interaction to the improvement of interaction among stakeholders
- Indicators were dropped: e.g. the competition of households was skipped as intervention measure.

Table 9.1 Overview of success indicators and their adjustment during project implementation per pilot project

Pilot	Success Indicators	Measurement / Comparison to Baseline	Adjustment of Indicators
Power Agents	Number of groups trained in one year; Number of participants per workshop; Number of workshop units held in one year; Events organised by the 10 groups of Power Agents in one year; (Amount of) Knowledge gained during the Power Agents training	Track record of groups, workshops, events; Questionnaire measuring knowledge gained (comparison of status before and after training)	Additional indicators: <ul style="list-style-type: none"> • amount of consultations performed in households • number of energy saving hints given during these consultations
The Energy Academy	Engagement with 600 residents; Predicted carbon savings of 891 tonnes (lifetime); Community action teams of advocates set up; 15 trained advocates; 5 action groups, projects or events set up; 5 talks / workshops delivered to community groups; 18 Community meetings attended; 24 events attended; 15 articles and press releases	Documentation of amount of engaged residents, trained advocates, action teams of advocates; Documentation of number of action groups, workshops/ talks, events attended, articles; Calculation / estimation of carbon savings	Final success criteria / targets have been scaled-down due to a budget reduction by 50%
Micro-ESCO	Viability of the system (1); Existence of an organisational form that allows residents to control the system (2); CO ₂ reduction compared to baseline, use of innovative technology (3); Visible presence in Mynämäki and in the carbon-neutral project (4); Amount of discussion, new themes, reframing of decision context (5); Public discussion on ESCO	Number of commitments to upgrade heating system (1); Prospects and lessons for local heating systems (2); CO ₂ estimated on the basis of investments/commitments (3); Stakeholder satisfaction (4); Documentation of amount of (5); Documentation of media / events (6)	Modification of indicators (1) , (2) and (3): measuring prospects, plans and commitments instead of implementation and existing systems
Towards energy efficiency of dwellings in Latvia	Learn about processes that might favour or hamper people's support of energy efficient renovations (social learning) (1); Improve interaction between residents and their building management company to increase trust and the establishment of mutual interests concerning renovation (2); Develop strategy for improving the	Questionnaire (before and after project implementation), documentation of meetings with residents (1), (2) and (4); Documentation of development of renovation plans (3);	Shifted: from interaction to <i>improved</i> interaction among residents and their building management company; from the development of renovation plans to <i>strategy</i> for the development of renovation plans

Pilot	Success Indicators	Measurement / Comparison to Baseline	Adjustment of Indicators
	energy efficiency of participating buildings (3); Increase support of renovation plans among residents (4)		
Climate Club Gödöllő	People capable of doing simple energy audit at home; People involved; Increased climate-awareness and knowledge of households; Strengthened community; Low(er) carbon community; Increased visibility of the project; Low energy consumption; Usable accounting methodology	Track record of distributed material, people involved, people reached by campaigns, people with specific knowledge... <i>Beyond pilot runtime:</i> <ul style="list-style-type: none"> • Amount of energy saved in households (KJ) • Amount of CO₂ emission reduced in households • Elaborated and tested methodology 	Additional indicators on No. of distributed material (flyer, poster, press releases); No. of people with specific knowledge on energy audits; No. of recipients of a newsletter; No. of people reached by DM campaign; No. of times a DM campaign is applied; No. of presentations about project; Dropped: Competition of households
Northtown Technology Park	Difference in heat, electricity and water consumption before and after project implementation	Quantitative estimation of heat, electricity and water savings calculated from the readings of meters; Qualitative assessment based on questionnaires designed to evaluate the changes of the energy saving behaviour of office workers	<i>No adjustment</i>

As reported in the documentation of the pilots¹⁰, behavioural changes and social learning have been successfully introduced by the projects and generated an encouraging outcome and might gain substantial impact in the long run.

Behavioural changes were realised in a variety of context situations. Even though the selected indicators to measure pilot project outcome and success have the same origin, outcome and impact are difficult to *compare between* the different pilot projects.

Due to different starting points (e.g. energy prices, regional economic situation), chosen baseline (e.g. what is a realistic business-as-usual development) and timing (e.g. when and at which price level savings will occur), the comparison of impacts of project interventions can only be estimated with caution. All pilots have gained (at least) estimations on potential future energy savings. It turned out that – due to different context conditions, e.g. lack of trust or lack of time – real-time measurement of energy related data was not feasible for the majority of pilots.

With the exception of two cases, also efficiency has not been measured by the pilots in a quantitative manner. One pilot discussed its observations of social learning and expected effects in detail. As a consequence of increased importance of social learning and the decrease of quantitative goals another pilot concluded that *"In the future there should be more qualitative indicators (- even though funding bodies are usually not in favour of them)..."*.

¹⁰ For the full documentation of pilot project experiences, see D12: Pilot Projects: Documentation of initial implementation experiences, including stakeholder feedback (<http://www.energychange.info/deliverables>).

Nevertheless, the learning experiences achieved by all pilots have been properly documented and were substantially grounded by empirical surveys.

9.2 Reflections on effects of the CHANGING BEHAVIOUR Activities

During the process of implementing their interventions, pilot project managers used CHANGING BEHAVIOUR Toolkit Activities to promote and refine their management efforts. In the following sections the respective impulses provided by the Toolkit Activities are documented for each project. The table below provides a general overview.

Table 9.2 *Overview of main impact of the CHANGING BEHAVIOUR Activities on the six pilot projects*

Pilot project	Main impact of Activities
Power Agents	<ul style="list-style-type: none"> • Narrowing-down of target group to a more homogeneous group • Modular intervention approach to provide flexibility • Focus shifted from energy efficiency to energy saving
The Energy Academy	<ul style="list-style-type: none"> • Intangible impact: Activities have helped increase understanding of people involved, gaining their input and creating a shared sense of understanding and trust amongst the three intermediaries involved
Micro-Esco	<ul style="list-style-type: none"> • Improved understanding of end-users, reinforcing focus on lowering investment costs and catering for diverse interests and needs of users • A broad set of stakeholders have been involved, influencing the project design
Towards energy efficiency of dwellings in Latvia	<ul style="list-style-type: none"> • Narrowing-down of target group • Objective has shifted to understanding of target group's attitude and barriers to change and relationship/trust between stakeholders • Role of intermediary has changed to a more central/active one • Design of intervention has been concretised step-by-step
Climate Club Gödöllő	<ul style="list-style-type: none"> • Flexibility analysis has improved understanding of fixed and flexible elements in the project design
Northtown Technology Park	<ul style="list-style-type: none"> • Stakeholder analysis, clearer understanding of their relations, definition of target group within the network of stakeholders

9.2.1 Power Agents

The German Power Agents pilot is aiming at pupils' qualification in energy savings and supporting them as promoters for household advices.

For the Power Agents pilot the identification of their stakeholders, target group and related network was crucial to design appropriate interventions. Thus, the team of the Power Agents project started with a systematic assessment of potential target groups and thereby they began to think about what the different groups need and also what benefits they could bring to the project. Additionally, the pilot managers were interested in how to best work with the different actors: for this exercise they used the tool 'Strategic Assessment of Partnerships'. The pilot manager viewed the visualisation and clustering of their stakeholders as helpful to understand the needs and requirements of each group in a more detailed manner.

One consequence of assessing partnerships was the link of the Power Agents project to another – already ongoing – successful campaign, using its layout for training materials and its function

as an effective marketing instrument for the Power Agents project. Being committed to this other project, the Power Agents team has to take part in meetings and report about the development of their efforts – and finally benefitted from the colleagues as multipliers and supporters of the Power Agents.

At the start of the project it was decided to build on existing networks of potential target groups and stakeholder. In this respect the intermediary VZ NRW originally planned to work with volunteers in well-known youth organisations.

In the implementation phase and with the support of the ‘Strategic Assessment of Partnerships’, it appeared more practical to focus on classes and working groups in schools under the supervision of a teacher. This change of the target group brought about a better continuity of working groups and less fluctuation of participants, as the pilot managers pointed out.

9.2.2 Micro-ESCO

One priority of the Finnish pilot project Micro-ESCO was to explore the possibilities for a shared heating infrastructure for multiple detached houses in a residential area as well as for a resident-based organisational structure (co-operative) to own and manage a new heating infrastructure.

A good understanding of the context of a project is an important prerequisite to adapt appropriate interventions and instruments accordingly. Therefore, the CHANGING BEHAVIOUR Toolkit has a strong focus on supporting project implementers in gaining such understanding.

The pilot managers of the Micro-ESCO project reviewed newspapers, interviewed key persons and organised meetings with people from the municipalities they planned to address with their project. In doing so, the pilot managers learned about the municipalities’ reasons behind joining initiatives like the Climate Neutral Municipalities project. With this enhanced knowledge at hand, they decided to focus on one of the municipalities and to narrow the target group down even further to one residential area.

One learning effect of this experience of applying the CHANGING BEHAVIOUR Activities was the pilot managers’ realisation that a better understanding of context in many cases requires committing to a certain context before getting to know it very well.

As recommended in CHANGING BEHAVIOUR Activities, the pilot project involved residents in the preparatory work of the project at a very early stage and thought out project design and implementation. People with a similar background as their potential target group were invited to a focus group discussion on the first communication material that was planned to inform residents and to help them to learn about the energy standard and technical potential of their houses.

With the objective to build a trustful relationship the pilot managers planned next steps of the project and technical details together with members of the target group: initial ideas were collected at public meetings while details e.g. on the upgrade of heating systems were discussed and planned at smaller meetings with the residents who were actively participating.

The pilot managers summed up that opportunities and barriers to implement DSM were discussed at every internal project meeting, and that these discussions continually refined their own understanding of prerequisites. The Toolkit questions helped them to focus on and monitor key issues during these discussions.

9.2.3 Climate Club Gödöllő

The Hungarian Climate Club raised awareness of climate change issues in households and involved households in a carbon emission reduction platform. The pilot implementer GreenDependent tried out several Activities of the Toolkit and found them to be quite useful for their pilot project. Experiences reported mainly focussed on Activities relating to project evaluation and target group motivation.

With regard to feedback measures and motivation – as expressed by Toolkit activity ‘Motivate your target group’ and ‘Learn from others’ – the project managers stated that it would be important to keep in touch with the participants of the Club on a regular basis, e.g. by publishing a newsletter as well as using email, etc. This regular communication ensures participants to stay up-to-date with the developments and also to learn about each other’s achievements. Furthermore, the newsletter supported the motivation of new recipients in featuring success stories of Climate Club participants and in sharing the knowledge on climate issues, as was mentioned by the pilot managers.

According to GreenDependent, an evaluation process – as initiated by the Toolkit Activities - is highly important for improving an ongoing project and learning for future projects. In the starting phase of the pilot, the pilot managers defined quantitative and qualitative criteria against which the overall success of the project could be measured. These criteria were entered into a template provided as part of the ‘Define progress and manage external demands’ section of the Toolkit.

Later on, GreenDependent used the ‘Evaluate and Improve’ template of the Activities for documenting the mid-term and final evaluations of the Climate Club. The ‘Reflective Table’ was explicitly rated to be supportive to follow the development of success indicators adequately as it provides transparency on the effects of particular interventions, e.g. marketing efforts and allows to react or even to direct interventions in a more successful way.

GreenDependent also used a mid-term questionnaire for Climate Club participants to check the motivation for new activities and the general satisfaction of the people involved. The pilot managers considered this questionnaire as very helpful to highlight new topics to be discussed during the meetings. The given answers also provided suggestions for the improvement of the design and changes to the format of the meetings have been made.

9.2.4 Energy Academy

The pilot project implemented in the UK aimed at increasing awareness of climate change and the need for personal action at local level. Volunteers (so called advocates) are recruited and trained in order to support local residents in reducing their energy demand.

The pilot manager of Manchester Knowledge Capital (M:KC) described the CHANGING BEHAVIOUR Toolkit to be generally supportive of a learning experience during their project.

The pilot managers identified the respective Activities as being particularly relevant to their project - then they took selected actions and this improved the understanding and deliverables of the project. It was stated by the pilot managers that they did not use the Toolkit Activities explicitly or in detail but that they were inspired by the different steps and supported in processing and reflecting own management tools, e.g. a reporting system developed by one project partner and an evaluation tool on project’s input and output.

The pilot managers attested that the Toolkit covers many aspects of a project’s life from beginning through to implementation and learning. It helped them to think and learn about the project process. And – as indicated – the Toolkit initiated critical reflection on own practices. In this

regard, it was pointed out that the interplay and partnership of three different intermediaries involved was a challenge. Working with new partners requires a shared sense of understanding and of working ‘culture’.

In the course of the project M:KC learned to mediate and manage the different expectations of stakeholders – both within the project group (intermediaries) and also with volunteers and the public. Also the ways in which internal organisational aims could be aligned with external opportunities were discussed by the pilot management. They identified four insights of the CHANGING BEHAVIOUR Toolkit as important for their pilot project:

- Brainstorming – internal and external organisational discussions on what sort of project was required and what M:KC’s role would be in that.
- Partnering with existing projects and campaigns – based on making use of existing projects and campaigns, and by building collective capacity that was greater than the existing projects.
- Windows of opportunity – in terms of existing projects, sources of funding and existing relationships.
- Reconsider project aims – working effectively with different project partners meant constantly keeping in mind what the project’s aims should be.

The progress of the Energy Academy was assessed through a series of criteria, e.g. the number of advocates that have been trained, the number of community meetings and events and also efficiency indicators, e.g. CO₂ savings compared to total budget.

These criteria were used to monitor, evaluate and learn to what extent the aims and objectives of the Energy Academy are met – it also provides the basis for the project group to understand the progress of the project. Progress was monitored and discussed through a mixture of regular steering group meetings, via presentations, email exchanges, written summaries and informal meetings.

9.2.5 Towards energy efficiency of dwellings in Latvia

The pilot project in Latvia provided detailed and tailored information for residents of multi-apartment dwellings about renovation options and their consequences, e.g. in terms of energy efficiency. Additionally, possibilities of financing renovation were discussed in order to stimulate building renovation. The project also aimed at improving the interaction between residents and their building management company.

One of the first steps in the implementation of the project was a problem analysis by using the tool ‘Problem Tree’. The pilot managers liked the visualisation of the problem in a tree-format: it made them understand the causes and effects of the problem and it helped them to decide on how to proceed. To gain more insights into people’s concerns and interest in building renovation and energy efficiency, they distributed a questionnaire to the residents and held several interviews with building elders and other residents. When it became obvious that trust between residents and the building management is crucial, they invested time in establishing a close contact with the building manager and the building elder, in order to make also other residents feel that they could trust the pilot manager as well.

The pilot managers underlined that there is no *one* best way to engage a target group. It depends very much on the context and focus of the project. In their specific context they used the following CHANGING BEHAVIOUR tools to encourage residents to take a common, approving decision.

Based on this context, they chose to combine different measures. They build on:

- Using emotional appeals – thus, during meetings with residents many pictures were on the often poor state of their buildings as well as on already renovated buildings to help residents imagine the effects of a renovation.
- Using rational appeals – the presentation of investment cost calculations and possible savings based on previous expertise answered a lot of the resident's questions.
- Provision of transparent and understandable information – e.g. by using and explaining images of the buildings, thermo graphic pictures and graphs in face-to-face meetings with residents.
- Building trust and confidence – by inviting elders of already renovated buildings, to discuss problems and benefits related to renovation during informational meetings with residents of non-renovated buildings.
- Providing support and services – in an environment familiar to the residents who only had to walk out of their door to join the meetings of residents and building managers. The shift from an external meeting place to a familiar environment leads to a successful result: a lot more people joined this kind of staircase meetings.

9.2.6 Northtown Technology Park (NTP)

The pilot project Northtown Technology Park (NTP) in Lithuania supported the change of employees' energy behaviour routines in order to lower the overall energy consumption in two targeted office buildings.

Following the CHANGING BEHAVIOUR Toolkit advice to tailor a project well to its target group, the NTP pilot managers arranged several meetings with stakeholders that know the target group well. In this regard, the technical director of NTP turned out to serve as a key resource person. Additionally, a questionnaire and some face-to-face interviews helped the pilot managers to learn about the target group and their level of awareness about energy saving.

The CHANGING BEHAVIOUR Toolkit provided support concerning the right format and communication channel to disseminate advice. The pilot managers arranged meetings with the NTP management group to discuss the target group's information needs and adjusted energy advice given accordingly, e.g. by using a smart meter.

Knowing more about the target group helped select the channels and frequency of information dissemination more efficiently. All information shared with NTP employees during the project was concerned with issues regarding 'why to change', 'how to change' and 'how to acquire new habits'.

In the design phase of their pilot, the project managers decided to use an energy consumption baseline to compare how behavioural changing could affect heat and electricity demand. Electricity and heat consumption data were collected and results visualised to meet the needs of the target group, as presumed by the pilot managers on the basis of the above mentioned interviews.

Following this analysis and the Toolkit advices, already preliminary results were presented during face-to-face interviews with the target group. These interviews and a mid-project evaluation allowed learning more on how understandable the provided information was for the target group of employees. More emphasis was put on how to change habits and actually achieve changes in energy consumption. As many members of the target group were technically educated, the pilot managers decided to even include comprehensive technical information and have received positive feedback on this.

The pilot managers summarized the CHANGING BEHAVIOUR Toolkit 'Mid-project and end of project self-evaluations' as follows: *"It helped us to find out that we did not pay sufficient*

attention to evaluation and the use of evaluation results in our project. We improved this issue by providing more feedback to the target group. It seems to us it would be also very useful to perform this self-check in the initial design phase of the project.”

9.3 Stakeholder Feedback

All pilots have realized an intensive interaction and exchange with their stakeholders and also provided feedback to stakeholders in many different ways.

Due to the fact that the interventions of most of the pilots consist of communication activities, e.g. meetings, interviews, audits or public events, the project managers were confronted with constant feedback by different stakeholder groups. Not every pilot used an elaborated documentation system for stakeholder feedback received from the beginning. With the progress of implementation, pilots applied elements of the CHANGING BEHAVIOUR Toolkit (Monitoring Evaluation and Feedback Activities) for collecting and documenting feedback.

In parallel the pilots developed their own feedback routines like surveys, workshops or focus groups. All pilots tried to address the needs of their target groups by modifying communication measures or services. At a later stage of the CHANGING BEHAVIOUR project a stakeholder questionnaire¹¹ has been provided (since February 2010) to specifically address important pilot stakeholders – and in a slightly modified version also general stakeholder that are familiar with the CHANGING BEHAVIOUR project.

9.3.1 Pilot Stakeholder Interviews

It was agreed upon within the CHANGING BEHAVIOUR project to collect structured feedback by means of a brief questionnaire (see in detail Table 9.3). The commonly designed questionnaire includes eight different types of questions, reflecting the satisfaction of involvement, interaction/communication and learning effects.

Three prerequisites should be considered: the questionnaire should serve as a base for a brief interview, it also should work as a stand-alone tool and the questions should be as ‘simple’ as possible. The table below documents the selected questions.

Table 9.3 *Questionnaire for pilot stakeholder feedback*

How would you judge your involvement in the pilot?
Was it easy for you to interact with the project?
Were you able to influence the way the pilot was organised?
Did you learn anything new about other stakeholders' interests or concerns (related to energy saving)?
How satisfied are you with the outcomes of the project?
Did you gain new information or contacts through the project?
What changes did the project bring to your private/professional life? (in your way of thinking, learning, working or doing things)
Would you get involved with this kind of project again?

Most of the pilots had to adjust the questionnaire for their specific purpose because of the different types of interviewees. Due to the ‘closeness’ and involvement of stakeholders some of the

¹¹ See Appendix B for the form used to collect pilot stakeholder feedback.

questions had to be skipped or adjusted – some of them needed further explanation or specific embedding by the project managers.

The pilots suggested a number of stakeholders to be interviewed personally or by using a specific internet poll.

9.3.2 Results of Pilot Stakeholder Poll

60 pilot stakeholders have been interviewed by the pilot managers. In most cases stakeholders were quite satisfied with the process of the pilot, the communication provided of the pilot and the learning steps they gained.

While the majority of interviewees (90%) found it very easy or at least easy to interact with the pilots, also most of the stakeholders were at least 'somewhat' satisfied with the outcome (77%). Most of the interviewees would participate in this kind of project again (89%). 2/3 of the stakeholders gained new information or useful contacts.

75% Stated to have learned something while the question if and what changes (e.g. energy savings) the pilot brought to their private or professional life was answered approvingly by 54%. All interviewees were encouraged to provide additional comments. From these comments, pilots partially could draw conclusions for the design of interventions and information material (see next section).

9.3.3 Adjustments of implementation and interventions after feedback

The interventions and measures of the pilots were tailored based on the suggestions made by stakeholders. Feedback from stakeholders motivated one pilot project management to shift information provision from text to graphs and images to make it better understandable for residents.

As a further result of stakeholder interviews, one pilot planned to involve their target group better at the next stage of their project. This involvement should take place by offering more responsibility to the clients for the running of the institution of a Climate Club and providing presentations and expertise by themselves. Furthermore, the visibility of services on the local level should be increased (e.g. by participating at fairs and festivals). Also a common reduction target and the regular recording of (energy) consumption should be implemented.

One of the pilots pointed out that modifications have already been included during the implementation phase – while valuable hints also for next steps and future projects were gained from the stakeholder feedback.

Another pilot mentioned that its design was modified extensively due to the responses of their clients and secondly with regard to external circumstances. They gradually downsized the content of the original planning. Nevertheless, the pilot also felt encouraged by the stakeholder feedback to follow a more ambitious planning in the future and for upcoming projects. To support planning efforts in this context a guidebook was developed and information events are foreseen. As a lesson learned it was also mentioned that the aspect of awareness-raising is quite important and that more time should have been devoted to this task.

As a result of the stakeholder interviews one project worked on remodelling the teaching during workshops in accordance with feedback from teachers and group leaders. Some further adaptations to these methods and materials used in the workshops have been made as a result of feedback received from the target group and other stakeholders already at an earlier stage of the pilot project.

9.4 Conclusions and lessons learned

With respect to their implementation process and experiences, all pilots described a number of core lessons learned. Within a common evaluation framework provided by the CHANGING BEHAVIOUR project, e.g. by means of the Toolkit Activities they monitored and adjusted many steps and management requirements as for example the process and documentation of internal project decisions.

Some of the pilots suggested using the Activities of the Toolkit in a way that they do not have to be followed step-by-step. Some ‘picking and mixing’ of what will help intermediaries in the context they are working in was recommended. It also was seen useful to formulate the Activities less prescriptive but rather as guidelines to promote reflection about the project design and implementation process project managers are involved in.

The pilots were encouraged to early define project goals and success factors by the CHANGING BEHAVIOUR Activities. This turned out to be of high importance for their project management, and was mentioned as a crucial aspect by several pilots. The handling of success factors and the selection of indicators within the pilots showed that the definition of goals could serve as an orientation but should be flexible enough to meet possible adaptation due to changes of context conditions.

One prerequisite of such kind of participatory DSM projects is knowledge of the respective target group and the conditions of implementation. Thus, the target group has to be carefully defined – as was initiated by the CHANGING BEHAVIOUR Activities and confirmed by the pilots’ practice. In this regard, pilot projects described the tool ‘Pinpoint your problem and target group’ a fundamentally useful step. For most of them it turned out to be one of the most important Activities – besides the ‘Monitoring, evaluation and feedback’ Activities.

The provision as well as the reception of stakeholder feedback was carefully promoted by the CHANGING BEHAVIOUR Toolkit and the pilots reported successful learning steps by using the feedback instruments of the Toolkit.

While some pilots reported the adjustment of their design and interventions as consequence of the stakeholder feedback (see above), one pilot still underlined the problem to implement feedback tools and respond to feedback adequately.

Some pilots referred to the importance and inclusion of existing knowledge and expertise and the need to use and spread this in a careful manner. Also the knowledge of the respective target group was rated helpful and was gained by the pilots carefully through the regular reception of stakeholder feedback.

One additional recommendation was – based on negative experiences by different pilots - to keep the project design as flexible as possible and check the context carefully. In this context, also the aspect of the development of available budget over time turned out to be of particular importance to safeguard implementation adequately. It has to be ensured at an early stage of planning and adapted to the respective needs of the project in its various stages.

Within the measurement of success, social learning turned out to be the most important (and favoured) indicator in the context of all pilot projects, probably due to the focus of the projects. They all aim at behavioural change mainly promoted by laymen, e.g. local volunteers, school kids, employees or residents. Thus, in the (time-limited) course of pilots, only first steps of infrastructural or technical changes could have been realised, whereas all perceptual and educational efforts already succeeded in these first steps.

10. Summary of work package 5: Toolkit development and project evaluation

Work package 5 of the CHANGING BEHAVIOUR project consisted of two large parts: the development of the MECHANisms Toolkit and the (self-)evaluation of the project and the project consortium.

10.1 Development, translation and dissemination of the Toolkit

An elaborate overview of the evaluation of the MECHANisms (Make Energy Change Happen) Toolkit is given in chapter 12. The following paragraphs summarise the planning and main outcomes of the different stages of Toolkit development, and the translation and the dissemination of the Toolkit after finalisation.

10.1.1 Development of the MECHANisms Toolkit

MECHANisms has been developed through three iterations (**Fout! Verwijzingsbron niet gevonden.**). Feedback was collected on early versions of the Toolkit, the so-called Activities, both through questionnaires and in face-to-face sessions (see chapter 11 for details). These Activities were descriptions of actions combined with helpful instruments for managers of demand side management projects. The outcomes of the evaluations of the Activities formed the basis for the first draft of the online Toolkit developed in the first quarter of 2010 via a web development platform by the 'Toolkit task force' (a selection of partners responsible for the writing of the Toolkit led by NCRC). The Activities were translated into steps and several associated categories were made: knowledge quick bites, templates, backgrounds, case studies, country profiles and target group descriptions.

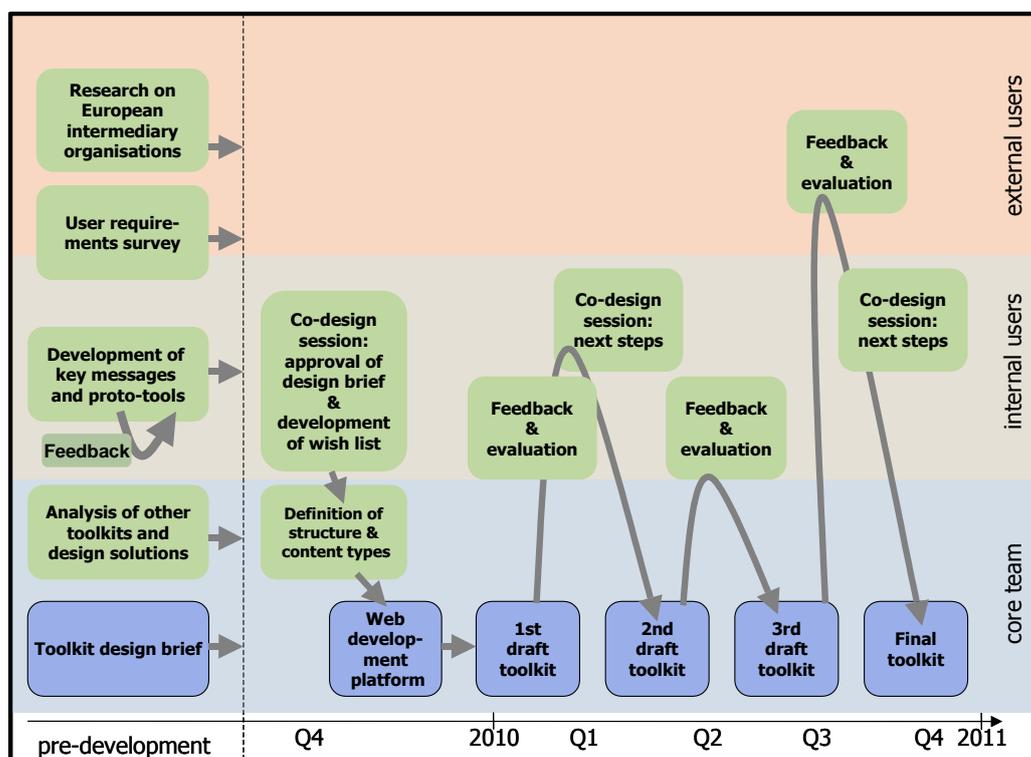


Figure 10.1 Overview of the Toolkit design process (see chapter 12 for more details)

This first draft was commented on by all project partners via ratings (on quality & importance) and open comments per page. Based on these comments a large number of improvements have been made in the second draft. Most important improvements were:

- Navigation & structure related improvements (including images).
- Adding project stories of the pilots (to illustrate ‘why you need this for each step’).
- Adding a self-check and list of do’s and don’ts.
- Shorten the country profiles and add links to external country resources.
- Many small and larger revisions in the (wording of the) steps, knowledge quick bites and tools.

The second draft was again commented on by all project partners via a rating and open commenting function at each page during the summer of 2010. To make sure that all pages of the Toolkit were evaluated, a task division was made in which each partner was assigned to evaluate specific parts. Most important improvement made in September 2010 on the base of the outcomes of this commenting round were:

- Improvement self-check and ‘about section’.
- Detailed review of the project stories.
- Rewriting of the target group descriptions & re-categorisation of target groups.
- Reducing the length of several texts and adding more examples.
- Decision on Toolkit name: MECHANisms (Make Energy Change Happen).

The third draft of the Toolkit was evaluated by external reviewers via the Toolkit Clinic (in October 2010 in Duesseldorf). 12 representatives of intermediaries used and tested the Toolkit for their current projects before and during the Clinic. The most important improvements made in the last quarter of 2010 to the final version of the Toolkit based on this third evaluation round were:

- Adding more examples.
- Develop a ‘marketing video’ for the Toolkit.
- Adding a list of resources and further readings including links.
- Adding a ‘printable version’.
- Shifting of some steps, tools and texts.

10.1.2 Translation of the MECHANisms Toolkit

During the last quarter of 2010 the final version of the MECHANisms Toolkit is translated into Greek, German and Hungarian. Because translation of the complete Toolkit including all the resources and downloads is not feasible within the time and budget of this project, a selection needed to be made of parts that need to be translated. This selection was based on the importance of the different parts of the Toolkit (indicated by the project partners and participants of the Toolkit clinic) and included (according to priority):

- Frontpage.
- Menus and buttons.
- All steps and related tools.
- Checklists and templates.
- Project story of one or more pilot projects.
- Knowledge quick bites.
- Tools for small scale research.
- Any other things.

10.1.3 Dissemination of the MECHAnisms Toolkit

During the last months of the CHANGING BEHAVIOUR project all project partners have disseminated the MECHAnisms Toolkit within their country. Different dissemination activities took place, ranging from face-to-face contacts between project partners and future users of the Toolkit, to indirect communication via newsletters and articles. Dissemination materials specifically developed for Toolkit dissemination were used as well: a 2011 MECHAnisms calendar and a flyer. Based on type of effort and size of the target group, the dissemination efforts can be categorised in three groups.

Face-to-face interaction. Many project partners had personal meetings with potential users of the MECHAnisms Toolkit. During these meetings with individuals or groups of people (e.g. employees of an organisation) the Toolkit was presented, demonstrated and in some cases used for specific tasks during a hands-on training. These direct face-to-face dissemination events were tailored to the specific audience and allowed discussion of practical problems as encountered in projects and possible solutions as offered by the Toolkit. It can be assumed that this type of dissemination is most effective in reaching potential users. However, to make these meetings effective, only a small group of people and organisations can be involved.

Personal contact. All project partners have informed potential users in their network via personal emails or distribution of dissemination materials (i.e. flyer and calendar) at conferences, seminars or other locations. During such brief personal encounters limited interaction between the target group and the project partners can take place. It can be assumed that these activities are less effective in reaching potential users and communicating the wealth of information the Toolkit has to offer than face-to-face interaction. However, a larger group of people and organisations can be reached within a shorter period of time.

Indirect contact. Most project partners have performed many different indirect dissemination activities, e.g. publishing an article about (or just a web link to) the Toolkit on a website or in a newsletter. Often the project partners did not know the receivers of the information personally and the effectiveness of reaching potential users via these type of dissemination activities can vary largely. The advantage, however, is that a large group of people and organisations can be reached at once.

For an overview of all Toolkit dissemination activities of all CHANGING BEHAVIOUR partners, see Appendix F.

10.2 Self-evaluation of the project and consortium

The second large element of work package 5 is the so called self-evaluation of the project. For the self-evaluation several elements of the different work packages of the project were selected and evaluated via different means and reported on by different partners. Also the methodology used in the project to let researchers and practitioners cooperate (the action research approach) was evaluated. This report describes the self-evaluation and its outcomes.

Apart from the project partners themselves also the members of the Policy Board were asked in short telephonic interview to evaluate the project (outcomes) and indicate what they found most important elements for policymakers in November 2010. Six of the eleven Policy Board members were able to provide feedback.

All of them gave very positive feedback on the project CHANGING BEHAVIOUR in general and the valuable results produced. More specific feedback with respect to the recommendations for policymakers included the following requests to:

- Explain the concept of ‘energy intermediaries’ briefly.

- Explain how we use the concept of ‘institutions’ as e.g. also referring to certification schemes, or even better, use another concept such as ‘tools’.
- Emphasise the words ‘collaboration, ‘evaluation’ and ‘continuity’.
- Stress the importance of broad and long-lasting change which is “more than the sum of a number of individual changes”.
- Keep the 10 recommendations fitted to one page.
- Mention which recommendation(s) may be most relevant for policymakers on the municipal, national or European level.
- Include the Do’s and Don’ts for energy intermediaries to give an example of our practical advice.

All points raised during interviews with Policy Board members and those raised in feedback received by project partners have been integrated into the final version of the 10 recommendations for policymakers.

11. Evaluation of the CHANGING BEHAVIOUR Activities

One of the main aims of the CHANGING BEHAVIOUR project is the development of an online Toolkit that can help intermediary organisations in the design, implementation and evaluation of demand-side management (DSM) projects. The Toolkit is based on an in-depth and thorough theoretical and empirical knowledge base developed in the course of the project. This chapter first addresses very briefly how the CHANGING BEHAVIOUR Activities (early versions of the Toolkit) have resulted from the theoretical and empirical work done in the project. Second, we discuss the testing of and feedback on the Activities by all partners involved in the project. The most important suggestions for improvement that have been done regarding the content, structure and style of the Activities are summarised to give an impression of the changes that have been implemented on the way to the first version of the online Toolkit. The chapter concludes with some reflections on the main challenges we were confronted with in our efforts to arrive at a practicable Toolkit that is grounded in an extensive knowledge base yet practicable and attractive for the prospective users – the intermediaries.

The development of the CHANGING BEHAVIOUR online Toolkit is roughly based on the following project phases:

- Theoretical knowledge development.
- Empirical knowledge development.
- Translation of knowledge into ideas for intervention (draft Activities).
- Testing of these ideas for intervention (Activities) in six pilot projects (see chapters 8 and 9).
- Using the feedback and lessons learned from these pilots for the development of the Toolkit.

The Toolkit is intended to help intermediaries improve their understanding of the context in which they work and their own role in the process of making a DSM project work. As a precursor of the Toolkit, a set of Activities has been developed.

These Activities are based on an extensive theoretical and empirical inquiry into the relevant conditions that affect behavioural changes. The outcomes of this study regarding the conditions affecting DSM practice included already well-known conditions like sufficient finances and resources, a clear focus and goal for the planned DSM project, sound energy and technical data and sufficient time for change, regular monitoring during project implementation and feedback to participants as well as good collaboration with other projects and institutions. In addition, less-well known conditions were identified.

These conditions are as follows: paying attention to the context the planned DSM project is to be implemented in, timing the intervention well in accordance with other occurrences in the target group's life, making the intervention meaningful to the target group, making use of long-term networks, and finding a balance between top-down and bottom-up planning processes by including the target group and other stakeholders in project design (see chapters 4 and 5). The first Activities developed mostly focused on these conditions (Table 11.1).

Table 11.1 *Relevant conditions translated into Activities for intermediaries*

- A: Pinpoint your problem and target group
- A1: Analyse the problem. *Tool: problem tree*
 - A2: Learn to know your target group. Task: learn to know your target group
 - A3: Test your ideas with the target group. *Task: test your ideas*
- B: Exploiting opportunities in the context & building a powerful network
- B1: Understanding your existing intermediary network and context. *Tool: Reflection checklist*
 - B2: Mapping your network and context *Tool: Visualise your network in context*
 - B3: Identifying opportunities and barriers in the context *Tool: Visualise your target groups' network in context*
 - B4: Get your timing right. *Tool: Questionnaire on timing*
 - B5: Strategic assessment of partnerships *Tool: Strategic assessment of partnerships*
 - B6: What does a successful network look like? Task: Informal meeting utilizing your visualization
- C: Develop a learning culture
- C1: Assess your project approach *Tool: identify the flexibility of your project*
 - C2: Learning questions *Tool: learning questions*
- D. Monitoring, evaluation and feedback
- D0: Define progress: defining a baseline in relation to your success criteria, in order to be able to judge your progress and develop ideas on how to reach your targets.
 - D1: Learn from others: ways in which you can learn from your target group and other stakeholders
 - D2: Evaluate and improve: reflecting on progress in the project and deciding whether you need to make changes
 - D3: Motivate your target group: based on the collection of feedback and the evaluation, customising feedback to your target group in order to motivate it
 - D4: Fit to external demands: fitting your success criteria to external demands while ensuring that your own criteria are not sidestepped.
 - D5: Feedback to yourself: Learning about the project and its process via 'feedback to yourself.'
-

11.1 Approach

The first versions of the Activities have been tested and evaluated in practice in the six CHANGING BEHAVIOUR pilot projects. Results of this evaluation fed into the further development of the Activities and Toolkit. In addition, the application of the Activities was also intended to improve the design, implementation and evaluation of the pilot projects. The fact that the Activities themselves were still under development in this phase of early testing may have affected their usefulness (see e.g. some comments regarding the user-friendliness of the draft Activities).

When testing Activities, not all pilot projects made use of all Activities, as not every activity is equally relevant to everyone. Relevance depends on the particular project, the particular intermediary organisation and the challenges they face. The final toolbox intends to be a 'pick-and-mix' rather than a chronological exercise.

The first set of Activities was developed in 2009 and tested and evaluated in 2009/2010. It included the Activities related to 'pinpointing problem and target group', 'exploiting opportunities' and 'developing a learning culture'(sets A, B and C in Table 11.1). Feedback was collected

from the pilot partners by means of a questionnaire that included closed and open questions. In addition, one research partner and one pilot partner have gone through the texts accompanying the Activities to suggest improvements.

The second set of Activities related to monitoring, evaluation and feedback of projects (set D in Table 11.1) was first evaluated with respect to set-up and language. After integrating comments received, the Activities were tested in the six pilot projects. Feedback with respect to experiences in practice was collected by means of a questionnaire in early 2010.

All Activities and all feedback received built the bases for the subsequent development of the CHANGING BEHAVIOUR online Toolkit.

11.2 Results

First set of Activities

Pilot managers gave feedback on the Activities related to ‘pinpointing problem and target group’, ‘exploiting opportunities’ and ‘developing a learning culture’ (parts A, B and C in Table 11.1).

Generally, the basic theory and concepts underlying the Activities were considered highly relevant by the pilot partners. However, as most intermediaries only have a very limited amount of time available in order to implement new Activities, they emphasized that it is crucially important that the benefit of each activity is clear at first sight.

Clarity could be improved by shortening and structuring the texts accompanying each activity more and by adding more details and examples. Furthermore, a ‘layered’ approach was proposed: short texts were providing essential bits of information and optional sections provided additional assistance and examples for each activity. Regarding the language used, pilot managers expressed the importance of using the language of practitioners (no academic jargon and taking care not to sound patronizing). Additionally, pilot managers suggested to provide an estimate of the time needed to complete each activity and to include printable tables and checklists to fill in.

Second set of Activities

The second round of testing addressed the Activities related to monitoring, evaluation and feedback (part D in Table 11.1). Some of the comments received were immediately implemented to improve the Activities. Other suggestions were more relevant for the development for the online Toolkit.

Feedback concerning style and language asked for terminology that is more in line with concepts practitioners already use and for shortened texts. One suggestion was to provide short explanatory text for each tool in the Toolkit and to offer further optional reading behind ‘knowledge quick bites’, ‘short and simple activity instructions’, ‘background theory’, and ‘examples’).

Regarding content, issues raised involved the overlap between Activities; the rather rigid definitions of goals and monitoring; the lack of providing room to flexibly address Activities (which should fit to a variety of project types and stakeholder constellations); the need for indications of time required to complete each activity; the need for an invitation to reflect on progress so far; the need for a recommendation to have a simple, easy to replicate baseline and metrics for measuring progress or at least some examples of what kind of indicators and data could be used to measure progress.

Furthermore, feedback indicated that clear guidance was needed on what to do with results/insights gained by using the Activities in further project design and implementation, and that more in-depth knowledge and (narrative) examples would be an asset for the online Toolkit.

After practical testing of the revised Activities for monitoring, evaluation and feedback, practitioners were asked regarding each activity how they usually take up this task, how the activity was helpful to their work, what was missing to make the activity easier to use, how any tables or templates aided understanding, how the activity could be more fun and engaging, if any problems had arisen during the testing of the activity and how much time the practitioner had spent on the activity. The feedback collected addressed both content and style issues on a rather detailed level, which was helpful for the consortium partners responsible for development of the first version of the CHANGING BEHAVIOUR Toolkit (see chapter 10).

11.3 Conclusions and lessons learned

The biggest challenge of the step from a detailed report on literature review and case study analysis to a Toolkit for managers of demand-side management projects turned out to be to make tacit or theoretical knowledge practicable.

With the development of the Activities and their evaluation it has become increasingly clear that the ‘strength’ of the Activities (and resulting Toolkit) also incorporates its ‘weakness’. An important strength of the Toolkit is the depth and wealth of knowledge and information it is based on stemming from a thorough understanding of behavioural change and experiences with the tools in practical try-outs. A weakness of this wealth of knowledge is that it is hardly of use if it is simplified too much, while intermediaries, unfortunately, often lack time and resources to spend much time on additional research and implementation of its results. Therefore, care must be taken not to overwhelm prospective users of the Toolkit with too much information.

A partial solution to this challenge lies in the structuring of information. Practitioners have given substantial advice how to make the information better accessible and ‘layered’ so that users have the option in determining themselves how deep they want to dive into background knowledge. The readability of the texts also received a lot of attention – avoiding academic jargon and confusing terminology. Another ‘weakness’ of extensive background knowledge and information provided in the Toolkit is becoming seemingly prescriptive rather than inspiring. This entails the risk of stifling instead of stimulating reflection. Only flexible and inspiring tools which can easily be adapted to a variety of user-needs, DSM projects and their contexts can deliver a fun element.

To conclude, making the knowledge gathered practicable, tailored and part of a user-friendly Toolkit is quite a challenge. However, by having several ‘learning loops’ starting with the evaluation of the Activities and proceeding with the actual online Toolkit gives the project team the opportunity to learn about and remedy the shortcomings of earlier versions. The eventual Toolkit will again be evaluated thoroughly by a team of practitioners, researchers, both internal and external to the project.

12. Evaluation of the MECHANisms Toolkit

The MECHANisms Toolkit, developed in work package (WP) 5, is the main result and product of CHANGING BEHAVIOUR. It is based on the principles and ‘success factors’ of demand management projects defined in WP2 and refined in WP3, and also on ongoing work during the course of the pilot projects (WP4). Our original aims and specifications (Annex 1 of the Grant Agreement) included the following:

“The Toolkit will be sensitive to the influence of context, timing and actors, and will thus facilitate the cross-country transfer and adaptation to local context of European best practices. In particular, the Toolkit will address the diversity of conditions in old and new EU Member States. The detailed format and content of the Toolkit will be designed in co-operation with the intermediary organisations involved, and tested with users in a final workshop for intermediaries. Particular attention will be devoted to developing useful contents and a user-friendly format.”

CHANGING BEHAVIOUR stresses the importance of understanding user needs and involving users in demand-side project design and evaluation. Hence, we had to apply the same principles in our own development work. Moreover, CHANGING BEHAVIOUR stresses the importance of context. Hence, we are sensitive to the problems of giving ‘one-size-fits-all’ prescriptions. This chapter presents how we used the action research approach of CHANGING BEHAVIOUR and a participatory design approach to derive our selection of ‘advice’ and the format for its online presentation for intermediary organisations working to promote energy saving and climate action.

Action research (AR) and participatory design (PD) share a common history and many similar features. The earliest participatory design studies in Scandinavia were explicitly termed action research (Bødker 1996). However, an analysis of present day AR and PD practice (Foth and Axup 2006) identified some difference in focus: AR is more likely to focus on a broad definition of needs and problems (also non-design specific ones) related to work in a particular context, whereas PD is more focused on developing specific design requirements and prototypes for solutions. Hence, AR may provide a more helpful method at early stages of a development project (see chapter 3.5), whereas PD may help to funnel the lessons learned into concrete solutions (see Foth and Axup 2006). This is what we have done in CHANGING BEHAVIOUR, where the early stages of the project were more reflective and wide-ranging, and later stages have focused on participatory design of a particular artifact, the MECHANisms (Make Energy Change Happen) Toolkit.

This chapter describes and evaluates the participatory design approach used in CHANGING BEHAVIOUR. We do so by providing an overview and illustrative examples of the design process and by presenting and discussing the feedback received during the process and how it was used to improve MECHANisms. We complement this with some statistics on the development of the Toolkit quality. In conclusion, we present some of the lessons learned during the course of the project.

12.1 Approach

Participatory design stresses the importance of first-hand experience of the users’ work and embeddedness of the design process in organisational change (Bødker et al. 2004). CHANGING BEHAVIOUR, however, aims to create a Toolkit for many different workplaces (intermediary organisations working to change energy use in different European countries). Hence, instead of ethnographic analysis of the workplace, we have used (a) research on intermediary organisa-

tions working in Europe and their challenges and (b) the experiences of project managers in our CHANGING BEHAVIOUR TEAM in using the Activities in the pilot projects.

The first online version of the Toolkit was based on these Activities. It was preceded by the development of a design brief approved by all consortium members, as well as extensive analysis of other toolkits and various design solutions. The first structure and content sketch of the Toolkit was developed on the basis of input by all consortium members. The actual writing work was done by a smaller team of research-partners on a web platform created by our software usability engineer. The web platform was based on an open source content management platform, Drupal, which is used by about 7 million websites, among them BBC, Amnesty International, United Nations, Harvard University, and Warner Bros.

The Toolkit has been formatively evaluated after each completed draft. The first evaluation, carried out by consortium partners, focused on usability (easy to learn, easy to use, easy to remember, error tolerant, and subjectively pleasing) and accessibility. Subsequent evaluations focused more on utility (value added, support for users to reach their goals), informational quality (reliability and presentation of information), and social and practical acceptability. Feedback received was used to develop the second draft of the Toolkit, which was again evaluated internally. The third version of the MECHANisms Toolkit was the first public one, launched in September 2010. For this version, feedback was obtained from external users, i.e., energy efficiency practitioners invited to a Toolkit Clinic workshop in October 2010. This feedback is used to finalise MECHANisms.

In the following, particular aspects of the Toolkit development process are highlighted. We focus on the evolution of the main messages, expected users and uses, the participatory design process, and illustrate the type of feedback gained on the first version of the Toolkit.

12.2 Main messages: Sensitivity to actors, context and timing

The starting point, and also a key message of MECHANisms, is the need for a more contextualized understanding of energy end-users. We have tried to take the critical points raised by sociologists of energy use serious (e.g. Guy and Shove 2000; Wilhite et al. 2000). They have been critical of the dominant techno-economic and psychological approaches to promoting energy conservation. They argue that a focus merely on individual behaviour obscures the fact that individual choice is limited by the way cities, energy supply systems, housing designs and products are configured (Wilhite et al. 2000). From the end-users' perspective, energy use is largely a side effect of other activities like living, raising a family and working. Much of our energy use is habitual and many energy-use habits are further consolidated as conventions (Shove 2003), i.e. socially shared expectations about appropriate practices. Finally, policymakers and the institutional system are often sending ordinary energy users 'mixed messages' (e.g., Biggart and Lutzenhiser 2007). This is a very challenging environment for project managers trying to change end-users' energy behaviour.

These ideas informed our meta-analysis of previous projects and the factors influencing their success or failure, were further verified and refined in the WP3 workshops to ensure their relevance for project managers working in different contexts (see chapters 4 and 6).

12.2.1 Evolution of main messages: feedback from pilot projects

Among the main messages from WP2 and WP3, 'making use of the power of long-term networks' serves as a good example of how our main messages evolved. When developing the Activities, we stressed the role of networks as concrete manifestations of the user context: actual people like retailers, bank managers, service providers and local government representatives who influence the extent to which end-users can change their energy behaviour, and who thus

need to be identified and potentially engaged in the project. The importance of networks also resonates with the literature on sociotechnical change, starting with actor-networks (Latour 1992), the social shaping of technology and its emphasis on ‘relevant social groups’ (Bijker et al. 1987), energy sociologists’ concerns with broader societal drivers of energy use (e.g. Wilhite et al.), and literature dealing specifically with how to promote energy change (Rohracher 2001; 2003).

However, our diffuse notions of networks did not resonate with the experiences of all our project manager partners. Some even suggested that networking “can be a waste of time” and “does not usually lead to any concrete actions”. It may also divert the project from its course and start setting too many expectations and pressures on project managers. Our ideas of multistakeholder networks were also too diffuse: were we talking about the project managers’ networks, the end-users’ immediate social networks, or networks that are present or should be present in the local context?

As a result, we changed the word ‘networks’ to ‘stakeholders’, which was less ambiguous and did not suggest that everybody should necessarily be involved in the same way. We identified three roles in which stakeholders can be important: (1) stakeholders that can help the project by providing resources and competences (e.g., partners, funding bodies, related projects), (2) stakeholders influencing the target group and their possibilities to save energy (e.g. service providers, municipal authorities) and (3) stakeholders who are influenced by the project and may support or oppose it (e.g. family members, neighbours, co-workers).

The pilot projects spent a lot of effort identifying and engaging stakeholders – in many cases, with very positive results. However, we also learned about some of the challenges in engaging stakeholders. Stakeholders can have different interests: different from those of the project managers, and different from each other. Finding agreement, aligning interests and developing a win-win situation in which all stakeholders gain some benefits from participating can take a lot of time and effort – and may not always succeed. The stakeholders can improve relations with the energy end-users, but only if you find the ‘right’ stakeholders who are trusted by the target group. Finally, engaging stakeholders can require compromise: striking a balance between the project’s original aims and stakeholders’ diverse expectations.

The final Toolkit ‘message’, as presented in Step 4: Identify relevant stakeholders, is shown in Figure 12.1. As a result of experiences gained in the pilot projects, we added a tool called “strategic assessment of partnerships”. Here, project managers are asked to answer the following questions:

- What are the main parties influencing the problem you are working with?
- What are they doing about the problem now?
- What are their main interests in relation to the focus of your problem?
- Do you have interests in common?
- Do you have contradictory interests?
- What would happen to your project if you completely disregard the interests of this party?
- What would happen to your project if you make your project exactly fit the interests of this party?

This provides input for project managers to decide which stakeholders to (a) work with closely, (b) keep satisfied but not compromise with too much, (c) monitor and keep informed and (d) just keep informed. This advice is fairly ‘streamlined’ and managerial when compared with the original ideas, but we feel it is also more actionable for project managers.

Home » Step-by-Step » Step 4: Identify relevant stakeholders

View Why This Edit Ratings Editors' comments Outline Revisions

Step 4: Identify relevant stakeholders

To approach your target group better and reach your project's goals, you might need to involve external organizations and people. These may include stakeholders in some of the following roles:

- stakeholders that can help your project by providing resources and competences (e.g., partners, funding bodies, related projects)
- stakeholders influencing your target group and their possibilities to save energy (e.g. service providers, municipal authorities)
- stakeholders who are influenced by your project and may support or oppose it (e.g. family members, neighbours, co-workers)

Key Instructions:

1. Think about which stakeholders might help your project to save valuable resources, time and effort (See Knowledge Quick Bites: Why are stakeholders important?).
2. Map out your stakeholders (See Tools: Visualize your stakeholders).
3. Assess who should be involved, when and how (See Tools: Strategic assessment of partnerships).
4. Consider the possibilities for permanent networks that will help to sustain the behavioral change after your project is finished (See Backgrounds: Networks promote durable change).

Step-by-Step

- Understand
 - Step 1: Pinpoint your problem
 - Step 2: Get to know your target group
 - Step 3: Understand your context
 - Step 4: Identify relevant stakeholders**
 - Step 5: Is the time right?
- Plan & Do
- Evaluate & Learn

Why do you need this?

Claudia Bruhn, VZ NRW: "The visualisation and clustering of our stakeholders helped us understand the needs and requirements of each group better. We discovered that the stakeholders might have different requirements for the Power Agents project, but could benefit from each other as well."

[MORE ►](#)

Related

Backgrounds:

Figure 12.1 Example page from *MECHANisms Toolkit*, status August 2010

12.2.2 Role of pilot project managers in developing core content

The Toolkit has been developed as a collaborative process by the entire CHANGING BEHAVIOUR consortium. Some research partners had more time allocated to this work and have been responsible for the main content development. However, MECHANisms contains important ‘user’ input in from the pilot project managers, all of whom are experienced managers of projects to change energy use. They have significant experience of what works and what does not work in real life and practical contexts.

This experience was used to qualify particular messages that derived from previous research and the literature. One example of such messages relates to the practical value of particular tools to engage various target groups in various situations. In the context of routine and habitual behaviour, for example, the ‘tool’ of ‘commitment to goals’ is often identified as one of the most powerful and effective ways to influence energy-related routines and habits (Abrahamse et al. 2007). However, this finding derives mainly from experimental and quasi-experimental research in particular contexts, and the usefulness of advice based on such research depends on the social, physical and institutional context in which it is applied (Kurz 2002).

Practical experience on the value of such measures of influencing different types of behaviours was obtained through a survey to CHANGING BEHAVIOUR partners, in which partners were asked to rate both the evidence-base and their own experiences in using these tools and provide examples and suggestions (see chapter 11) (Backhaus and Heiskanen 2010). This survey produced valuable ‘caveats’ and qualifications to research-based tools. These were used in MECHANisms by adding to overall descriptions of tools sections on ‘When does it work?’ and ‘What do you need to look out for’ (Figure 12.2). These ‘caveats’ reflect the resources of and practical constraints on real-life work to change energy use patterns.

Home » Tools and Ideas » Tools » Use commitment to goals

View Example

Use commitment to goals

Commitment to goals refers to the selection of a certain reference point , e.g. 15% reduction in electricity use within 6 months. The aim is to reinforce motivation by getting your target group to set targets and keep track of how they are being met. The power of commitments depends on how seriously your target group takes their commitment. Serious commitments require a sense of urgency about energy and climate problems. Commitments work better when the participants' peers will monitor achievements and respect participants that stick to their commitments (see "social support and social pressure").

What you need to do:

- Involve your target group in deciding on the goals.
- Select goals that are specific, measurable, achievable, relevant and time-bound. Some studies indicate that they should also be challenging (i.e., 20% rather than 2%) to have an impact on energy use.
- Remember to make sure that feedback is available: people need to see whether they have achieved their goals.
- Provide advice and support. Goals cannot be met unless there is adequate support available to help people reach their goals.

When does it work?:

There are some good results from using this tool, but there is also evidence that commitments are not always taken seriously. It can be an appropriate tool when:

- there is wide agreement on why the goals are important, why they are urgent, and how the target group can make a difference
- you have some idea of what kind of goals are realistic and achievable, and when you have the means to measure progress
- people are highly motivated and take their goals seriously
- your target group has the means to reach their goals
- there is support from a peer group and advisors

What do you need to look out for:

This Tool is part of
Tools for influencing habitual behaviour

Practical Example

The Green Office case provides an example of setting targets for reducing energy use and CO₂ emissions in offices. The Municipal Energy Efficiency Agreements case gives examples of setting goals for

Practical experience from project managers helps to qualify research-based advice

session about timing
How to motivate with feedback
Mid-project self-evaluation
Opportunities and obstacles in your context
Problem tree
Reflective table for evaluating and improving

1 of 2 >>

Figure 12.2 *Practical experience from project managers helps to qualify research-based advice*

12.3 Research on expected users and uses

From the start, the Toolkit has been primarily designed for practitioners working in intermediary organisations that promote energy saving and climate action. This refers to a wide variety of organisations working at different scales and in different contexts (see chapter 6). Policy makers, researchers and others working in the field of changing energy behaviour are a secondary target group of the MECHANISMS Toolkit. The Toolkit can support them in the design of energy use related policies and research by increasing their knowledge and insights in the field (see Mourik et al. 2009b).

Six members of our project team work as energy intermediaries, but we needed to gain a broader view of the field in Europe. Hence, in stage 3, we conducted a ‘mapping’ of energy intermediaries, including interviews and the collection of other data on 24 organisations in 12 different European countries. This helped us identify some of the challenges that these organisations face (Hodson et al. 2009):

- Developing a broad and long-term funding base
- Increasing employee security, commitment and competence development
- Creating stable structures and effective learning cultures to respond to changing pressures
- Continual development of their knowledge base
- Communication to create a local presence and good local networks and relationships
- Building credibility and trust
- Gaining influence through the above and by developing ways to measure effectiveness and impact.

Some of these challenges cannot really be solved using a toolkit, but they provide a good perspective on the context in which the Toolkit is likely to be used – one of short-term funding and projects when the organisations themselves would like to develop a broader influence and a more permanent presence. Other challenges speak more immediately to the Toolkit development, such as the need to transfer experiences from each project to the next one, and the need to

develop good networks and relationships in order to create an amenable context for permanent change in energy use patterns.

In order to gain a more concrete view of what intermediary organisations expect from a toolkit (i.e., user requirements), we conducted a small survey among volunteer workshop participants interested in using a toolkit (N=13):

We identified different *user types* depending on their work context ('entrepreneur', 'project administrator' and 'team player' - i.e. someone working in or closely with a certain type of end-user organisation). They varied in terms of experience gained and the organisation of their work (more long-term vs. short-term interaction with clients, working alone or with others, younger vs. older staff). These kinds of issues influence contents, but also expectations about language, style and how the contents are organized:

- In terms of *requirements for contents*, i.e., what they want advice on, the respondents most commonly mentioned project management (mentioned by 7), interaction with end users (6) and interaction with stakeholders (6). Other topics of interest included obtaining project funding and following new energy technology developments.
- In terms of *ways of using a toolkit*, we identified three different basic use cases: (a) step-by-step guidance, (b) reference manual and (c) browsing in search for inspiration. Among these, the reference manual was the most popular (8 respondents), but the step-by-step guidance also gained support, and many suggested they wanted a combination of these two approaches.

We also asked them *what information sources they usually use and what kind of information they look for*. The Internet and colleagues turned out to be the most commonly used information sources. Among types of information searched for on the Internet, guidelines (7 respondents) and similar cases (6) were most often mentioned, but also checklists and training material were frequently used.

The survey, although small, was helpful for our design team. Firstly, it indicated that *less experienced users* are likely to be the primary users of the Toolkit (as most of the respondents fell in this category). It also indicated that *project management* (a less-relevant topic for the experienced project managers in the CHANGING BEHAVIOUR team) was an important type of content for them, alongside interacting with end-users and stakeholders. We were also inspired to develop a hybrid structure for the Toolkit, with step-by-step guidance for first-time users, but also reference manual structures, cases, inspirational stories and downloadable checklists and other material.

12.4 Participatory design approach

The design process was based on participatory design, done collectively by our entire project consortium, and translated into concrete prototypes by a professional usability software engineer in our team. Most of the participants (even most of those within the "core team") had no experience of developing an online Toolkit and there was limited time for face-to-face design work in our project. The consortium worked face-to-face on the Toolkit design at three project meetings, for a total of approximately 10 hours. (Of course, this has been complemented with phone conferences, e-mail, internal surveys and a special commenting/rating function on the Toolkit development platform). Our participatory design approach has developed a number of streamlined methods to overcome these temporal constraints.

The first structure and content of the Toolkit was derived through a simple exercise at one of our project meetings. Our software usability engineer first gave a presentation on various toolkit design principles and structure solutions, with illustrations of exemplary toolkits. After this, participants were given 10 minutes, in pairs, to complete the following assignment:

- Imagine the tool front page.
- What would you like to see on the frontpage?
- Write down front page items on post it notes (5-10 notes).
- Put them on a sheet of paper with the title 'Toolkit frontpage'.
- Please also note items that you don't want on the front page: put them on the backside of the sheet.

After this, each pair presented their front page to the entire group. This very effective exercise resulted in the list of expectations or requirements for the front page presented in Table 12.1.

Table 12.1 *List of desired elements for the front page, defined in first co-design session*

Find yourself	Tools
Find your problem/solution	Practical examples
Language choice	Nice pictures + very short welcome paragraph
Eye-catcher: photo + one-liner	Search engine
Background info	"Pimp up your project"
Link to past projects	What do I get
Select language	Different visual + auditive approaches
Introductory question	Brainstorm your project
What will I find (politicians, govt. officials, consultant)	Target group
Slogan	Context tailoring, Networking
Clear minimalistic design	Monitoring, Evaluation
Clear description of (or link to) the content	Feedback in the form of recommendations
Presented main content	Clear navigation structure
Clear short named easy words menu	Search
Link to the CHANGING BEHAVIOUR webpage	Introduction
Option to choose language	Step by step
Today's menu -wise words	Expert mode
Experienced Web One-Off (entrepreneur)	Selection box
Heuristic orientation (principles, guidelines)	Link to case studies, forms, procedures
User: decision maker, practitioner, etc.	Title; background; target group
Positive message	Benefit of use
Not too crowded	Link to references
Some kind of menu	Overview of elements
Fun, good-looking pictures	Selection box / bar
Positive example	Link to CHANGING BEHAVIOUR website
Step-by-step	Toolkit by topic
Case studies	Feeds from popular changing behaviour and environmental websites
Forum	Case study search
General guidelines	Web 1.0 simple assessment tools
Statistics	

Many later iterations were made to develop the final front page (see Figure 12.3), but many of the core solutions were derived from this simple exercise.

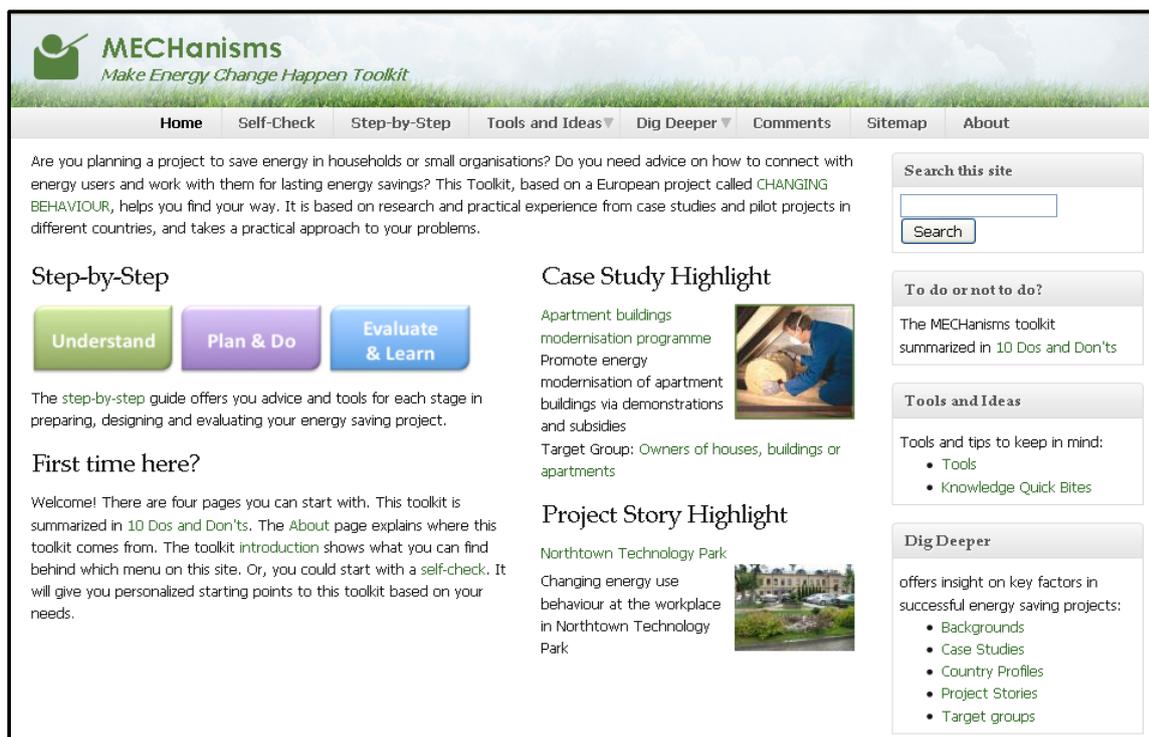


Figure 12.3 *MECHANisms Toolkit frontpage (status August 2010)*

12.5 Feedback gained during the development process

The feedback on the first versions was provided by our own team members, most importantly, the practitioner partners in our team. This was extremely valuable, and as team members, people had the patience to struggle through the first versions, and also had a clear idea of what the end product should look like¹². The most important feedback received included the following:

The overall impression from the first round of feedback was that our ‘internal’ users found lots of valuable resources in the Toolkit, such as easy methods to learn about users and tools for engaging the target group. Tools aiming to translate research insights on how energy saving organisations can enhance their influence and transform the energy end-users’ social context were found to be valuable, but not sufficiently tool-like: long lists of questions for reflection should be followed by advice on ‘so what?’ and ‘what next?’. In general, we noticed that cautions should be followed by clear advice on how to avoid the problems: otherwise, they leave the user feeling hesitant and discouraged. The most important feedback received on the first version indicated that the structure of the Toolkit needed further development to improve ease-of-use.

Language has been a subject of intensive discussion throughout the development process. We wanted to avoid prescriptive language, but in some cases, this led to vague and nondescript formulations. We frequently got comments suggesting a more “fun” and “engaging” tone.

The first feedback round and ensuing discussions also gave rise to some new ideas, e.g. the inclusion of short motivational stories illustrating how a project manager in our team used a certain Toolkit step in their own project and what they learned from it.

In Autumn 2010, version 3 of MECHANisms was distributed to a first group of external users for evaluation and feedback. These were volunteers from various intermediary and other organisations interested in using MECHANisms. They were invited to a ‘Toolkit Clinic’ – a one-day workshop focused on using MECHANisms for key problems in their work and hence collecting feedback on the utility and usability of the Toolkit (see Appendix A for the programme of the day).

¹² In addition to our own team members, we are extremely grateful to Sea Rothman from New Zealand Energy Agency (EECA) and her colleagues for their valuable feedback.

Those participating were from the following organisations:

- CRES, Greece.
- Demos Helsinki, Finland.
- Energia Klub, Hungary.
- Energieambassade, the Netherlands.
- Green Evolution SA, Greece.
- KredEx. Estonian Crediting Organisation, Estonia.
- Lomonosov Moscow State University, Russia.
- Motiva Ltd, Finland.
- Siemens AG, Germany.
- Tallinn University of Technology, Estonia.
- UCPartners, the Netherlands.

Toolkit Clinic participants were asked to test parts of MECHANisms before the workshop and fill in a small questionnaire. The following quotes illustrate the type of pre-workshop feedback received:

I wonder if the toolkit is open for learning and growing from users? Maybe this could be more prominent mentioned on the MECHANism website. Make every user part of a community and ask for feedback and when possible project descriptions, results and things that worked from the toolkit, things that didn't work and things to add. This will make the tool grow and keep it up to date.

Thank you! I'm very impressed with the tool, it is extensive and its step-by-step nature is very handy, this can make many consultants and researchers into experts within one project. I can't wait to use the tool in a real project.

The toolkit provides information in a very systematic and user-friendly way. The toolkit content covers many aspects of changing energy behaviour but information overload is easily avoided through the use of steps and the shortcuts according to the problem in question. From personal experience, when tackling a project on behavioural change, the picture can often seem blurry and the results unattainable!

Valuable feedback was also gained at the workshop itself. Participants were mostly able to use MECHANisms to find solutions to their problems and considered it a valuable and helpful tool. However, the discussion at the Toolkit Clinic also contributed to some major suggestions for improvements:

- More examples, less text, more pictures & graphs.
- Need to make examples in templates visible on the Tools page ('template preview').
- More links to outside energy data, readings...
- Improve tutorial video, make separate marketing video.
- Set up LinkedIn user community group for users to share their own experiences.
- Highlight search function – make users notice it.
- Separate page with Toolkit structure and definitions.

12.6 Statistical data on quality development of MECHANisms

Statistical data were collected on the quality of MECHANisms at all stages of the Toolkit development process. Each page was rated by members the CHANGING BEHAVIOR consortium in terms of its importance and quality. Because the structure of the Toolkit changed significantly between versions 1 and 2 and many new pages were added, and the number of evaluators also

changed, it is not possible to compare the results of these ratings from version 1 to 2 in detail. An overall conclusion, however, is that ratings improved during these stages.

One measure of quality improvement was used systematically to rate the quality of the MECHANisms Toolkit at three distinct points in time. This was a standard usability test filled in by users after version 1, after version 2, and after version 3 by the first external MECHANisms users. Figure 12.4 provides an overview of the development of the quality of MECHANisms in terms of these usability criteria.

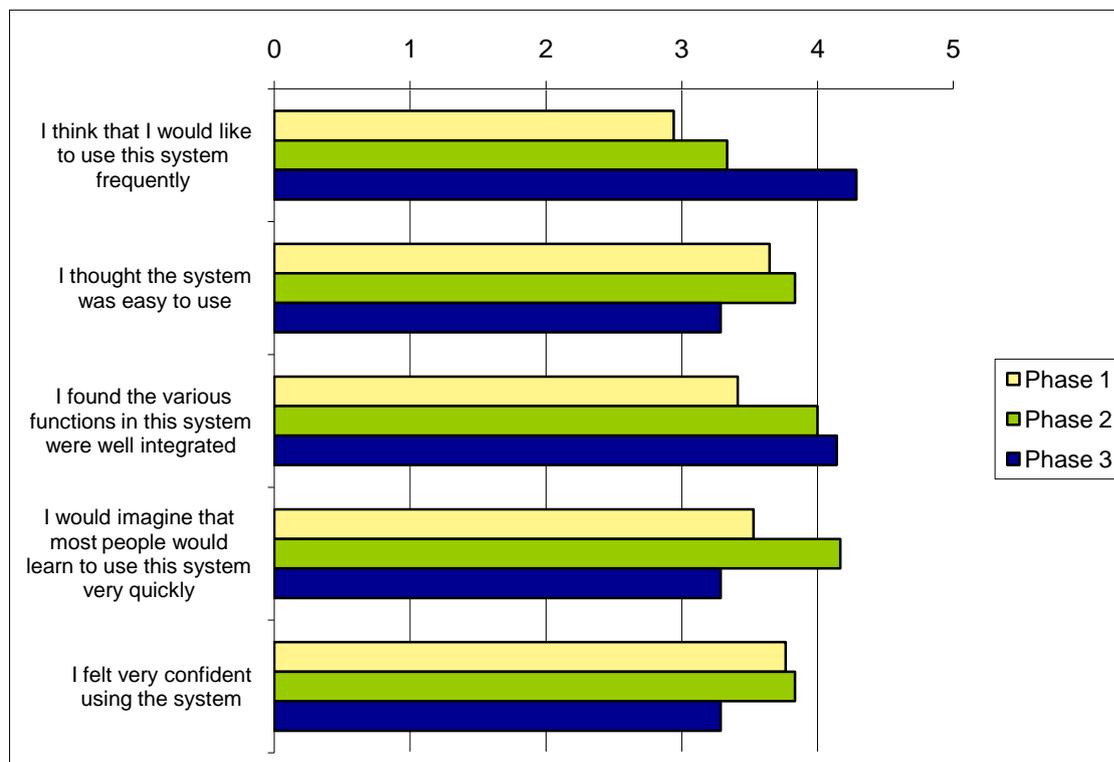


Figure 12.4 *Development of usability through three versions of MECHANisms (selection of items from the usability test)*

The three measurement points are not symmetrical. Phases 1 and 2 involved members of the CHANGING BEHAVIOUR consortium, whereas Phase 3 refers to evaluation by our first external users. Improvements can be seen from phase 1 to phase 2 on all aspects. There are improvements from phase 2 to 3 in terms of interest in using the system (first item in the graph) and perceived integration of functions (third item in the graph). Lack of improvement in the other respects is likely due to the short time that our external users had spent on using MECHANisms. Nonetheless, ease-of-use and learnability were improved after phase 3 by improving instructions and developing a video tutorial.

12.7 Conclusions and lessons learned

MECHANisms is currently publicly available at <http://mechanisms.energychange.info/>. Final touches will be added to complete the Toolkit by the end of 2010. MECHANisms is also being translated into at least three languages: German, Hungarian and Greek. The option is available to add more language versions once funding is found for further translations. Organisations can also customize MECHANisms into an internal tool or guideline by placing it on their Intranet and adding or modifying content.

We learned valuable lessons during the design process. Collaboration between researchers and practitioners through multiple cycles of iteration led to quality improvements. Because the practitioners (project managers) knew about their own resources and contexts, we were able to tailor our advice to what is practically achievable in real-life situations. We illustrated this above when discussing the evolution of our ‘main messages’. It would not have been possible to create the advice in the Toolkit without input from our project managers’ earlier experience, as well as concrete feedback gained from the pilot projects and external users.

Our experience suggests that designing a toolkit in an interactive, co-design process is a lot about *balance*. Consortium members have been highly aware of the diversity of environments and situations in which the Toolkit will be used. If we are too prescriptive, our advice and exercises might put off the prospective users – or even worse, lead them astray by suggesting that they do not need to think for themselves. If the advice is too ambiguous and abstract (i.e., “on the one hand... but on the other...”), then it does not energize the user and give them confidence to actually implement the advice (cf. Brunsson, 1985). Our action research and co-design approach has helped us in finding the appropriate balance.

A toolkit is a practical way of disseminating research results to users. However, the value of a toolkit depends on whether it is used. By involving toolkit users in the design of MECHANisms, we have been able to gain a group of users who are likely to use the Toolkit in their future work and adapt it further. Flexible access control is required to support the collaborative editing and commenting on this type of user-generated and collaboratively developed content. Our experiences thus have some implications also for the technologies used in this kind of participatory, collaborative toolkit design process, which should be based on open source software. Moreover, our experiences suggest that users should be involved at all stages when designing tools to support practitioners and policymakers.

13. Evaluation of external stakeholder feedback

Feedback from stakeholders of the CHANGING BEHAVIOUR project has been collected throughout the project, in various ways and formats. These include the workshops organized in WP3, feedback received when giving presentations to various stakeholder groups, and feedback received when designing and implementing the pilots (see chapters 4 and 13). Feedback has been used to enhance the project by:

- Identifying issues that stakeholders are concerned about and adding them to the agenda of the project.
- Tailoring language and concepts to stakeholders' needs.
- Tailoring ways of working in the project to the various stakeholders' needs.

The consortium has also systematically collected feedback from four groups of stakeholders:

Pilot stakeholders: These include members of the target group, partners and funding bodies, public authorities, service providers and others participating in the six best practice pilots).

General stakeholders: These include national and local policymakers, energy demand-side project managers, intermediary organisations, educational institutions, related research projects and other research users with whom the project has co-operated.

Toolkit users: These include organisations to whom the MECHANisms Toolkit has been disseminated, such as energy demand-side project managers, intermediary organisations and energy project and programme administrators.

Policy stakeholders: These include officials of governmental ministries and agencies and international organisations.

13.1 Data collection for systematic stakeholder feedback

Pilot project stakeholder feedback was collected by questionnaire with an online feedback form (Appendix B). Pilot project managers and their research counterparts filled in the form while or after interviewing selected stakeholders (N=60).

The form included both closed-ended questions concerning stakeholders' involvement in the project, their satisfaction with the process and the outcome of the project, and their willingness to get involved in another similar project. It also included open-ended questions where comments and suggestions by the stakeholders could be entered.

Pilot project stakeholder feedback was collected between January 11 and July 21, 2010, depending on the specific timing of the particular pilot project. In some cases, the feedback was received sufficiently early to enable changes in the pilot projects – especially the last stages. The feedback has also influenced the follow-up plans of the pilot managers.

General stakeholder feedback was collected by partners by sending via e-mail a link to the feedback form (Appendix C). This short form aimed to capture the views of stakeholders outside the pilots (e.g. policymakers, other results users, educational institutions and related users), and includes mainly closed-ended questions as well as one open-ended question for suggestions and ideas. The data collection is still in progress (N=33), and more feedback will be collected before the end of the project.

The general stakeholder feedback collection started in August 2010. Some of the earliest suggestions received have been used to improve project communications. By the end of 2010, 71 stakeholders had given feedback.

Toolkit user feedback was collected via a link on the MECHansims Toolkit site. This includes two short closed-ended questions on the usefulness and usability of the MECHANisms Toolkit, as well as one open-ended question for users' suggestions or other comments (Appendix D). This feedback collection has just started, and will remain open until January 2011. By the end of 2010, 38 stakeholders had given feedback on MECHANisms.

Policy stakeholder feedback was collected at several instances during the project. The CHANGING BEHAVIOUR Policy Board was invited to comment on several project deliverables. During a meeting at the end of the project runtime Policy Board members had the possibility to hear about all work conducted in CHANGING BEHAVIOUR and to provide feedback on the Toolkit and dissemination strategies. Furthermore, phone interviews were conducted with six Policy Board members in order to receive feedback on the policy recommendations developed for this deliverable 13.

13.2 Results of the pilot stakeholder feedback survey

With regard to pilot stakeholders - which has been defined a specific group of actors that is closely linked to the pilot process - the following groups have provided feedback:

- Cooperative partners (e.g. research partners),
- Customers from own target group,
- Promoters of pilot,
- Manager of funding institutions,
- Municipal officials,
- Others, e.g. colleagues within the same institution.

In total 60 interviews have been realized by the pilot managers mostly via face-to-face interviews, but also by phone or electronically.

The mayor part is the group of customers from own target group – they cover 44% of the interviewees, followed by the group of promoters with a share of 23%.

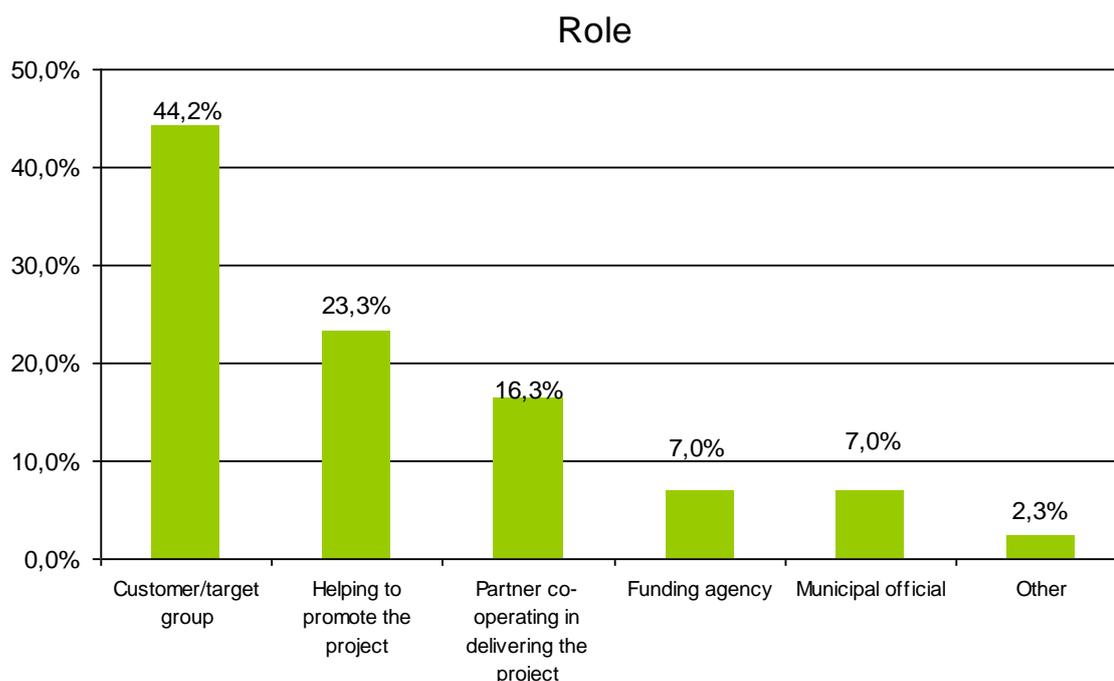


Figure 13.1 *Feedback by pilot project stakeholders: role*

For most of the interviewees it was very easy to interact with the pilots respectively with the responsible persons. Most of the interviewees have been involved with the pilot since the start (48%). One interviewee, who rated it as 'very easy', indicated in his comments that he has been in close collaboration with the project, another pointed out the comprehensibility of information provided and his satisfaction about the possibility to get in contact with the pilot managers.

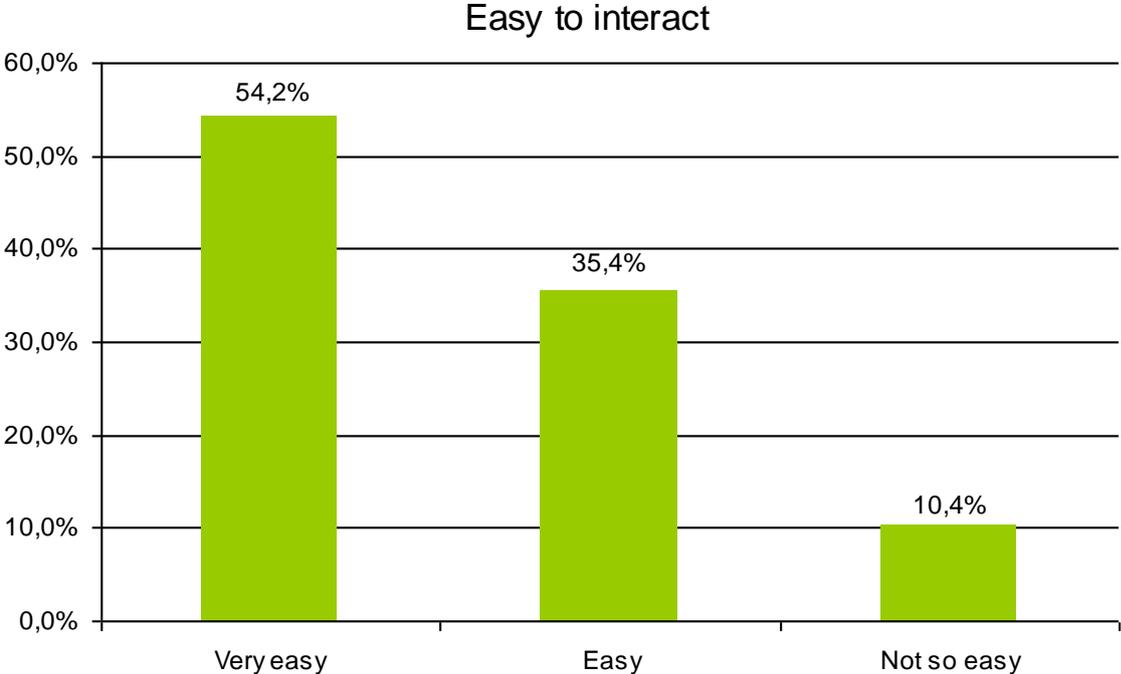


Figure 13.2 Feedback by pilot project stakeholders: interaction

A very small group of 10 % rated it not so easy to interact with the pilot. Asked for reasons, one representative of this group commented that *“It was difficult to follow the project because the plans changed so often.”*

Figure 13.3 shows that most of the pilot stakeholders are very satisfied with the outcome of their respective pilot. In this regard it was commented by one interviewee that the highest *“value was seen not in the novelty of the information provided, but on attention to the everyday habits”*.

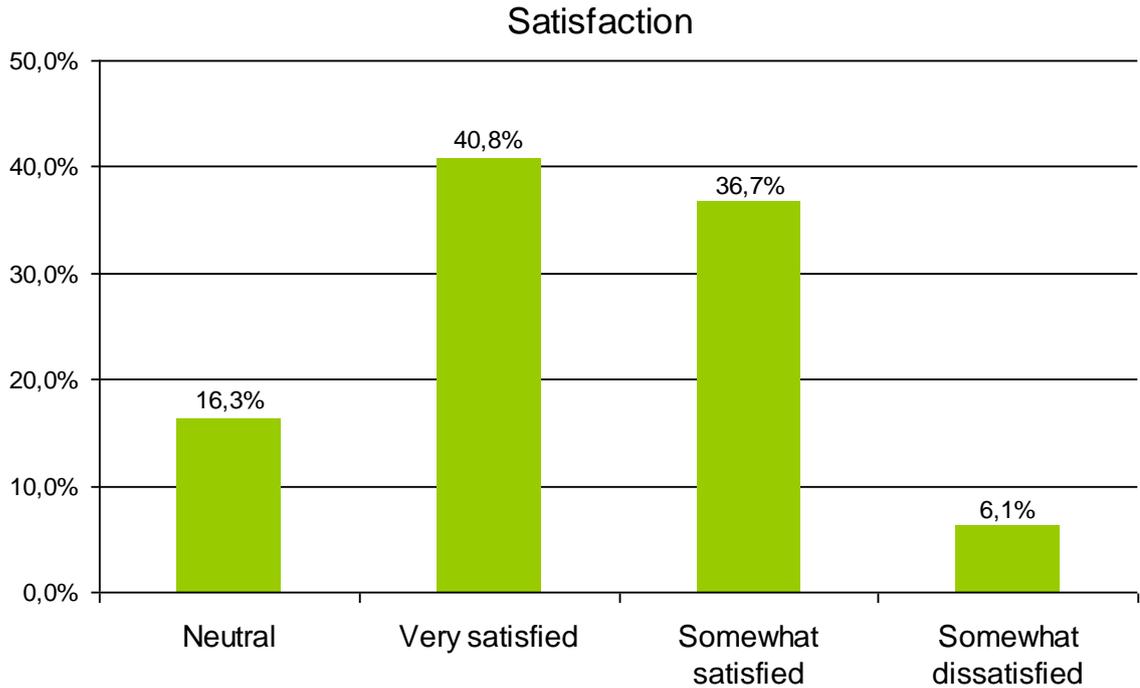


Figure 13.3 *Feedback by pilot project stakeholders: satisfaction*

While 54% report on changes in their private or professional life due to the influence of the pilot, also 35% of the respondents affirm that they have learned ‘a lot’ and 40% have learned at least ‘somewhat’ from the input given by the pilot project (Figure 13.4).

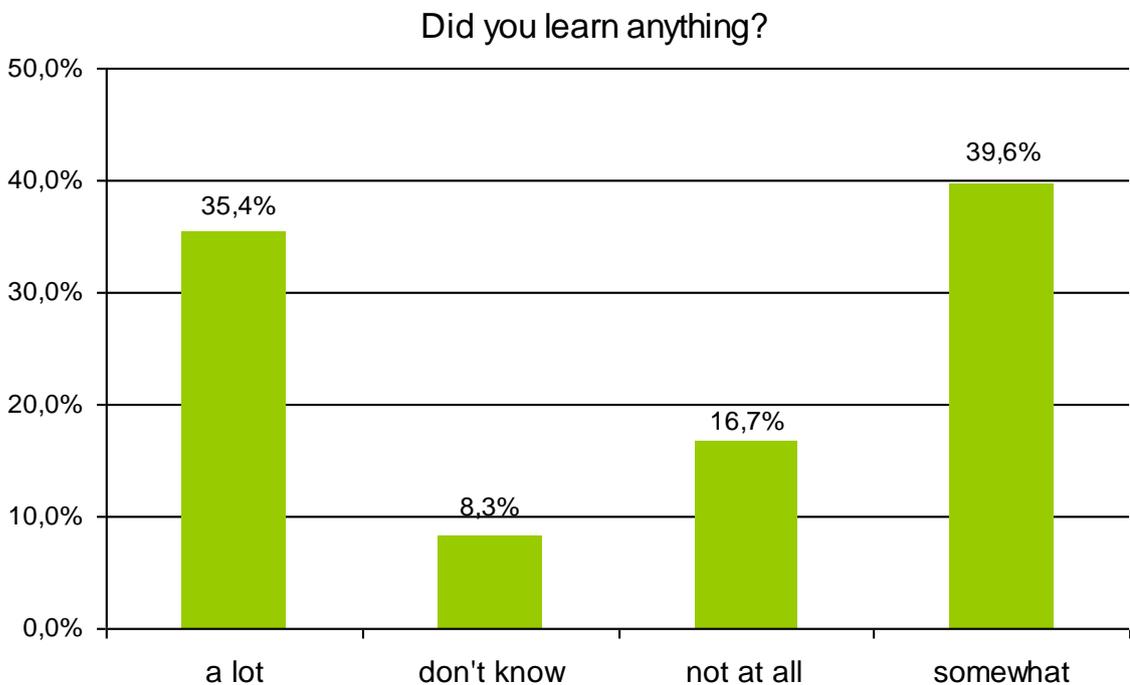


Figure 13.4 *Feedback by pilot project stakeholders: learning*

At the end of the interview, the pilot stakeholders were asked if they would get involved with this kind of project again and an overwhelming ratio of 92% is positively interested to participate again.

13.3 Results of the general stakeholder feedback survey

As concerns the feedback received by the end of 2010, the following types of ‘general’ stakeholders (N=71) had provided feedback:

- Related research projects: 23.
- Policy makers or project managers: 17.
- Educational institutions, students: 6.
- Other users of research results: 25.

Table 13.1 gives an overview of these ‘general’ stakeholders’ experiences with CHANGING BEHAVIOUR. It shows that most stakeholders learned something new from CHANGING BEHAVIOUR; about one-third even learned a lot. Similarly, most gained some useful new information or contacts via the project: about one-fourth even gained a lot.

Table 13.1 *Summary of responses by ‘general’ stakeholders concerning learning and new information and contacts gained via CHANGING BEHAVIOUR (N=71)*

	A lot	Somewhat	Few or none
Did you learn anything new from CHANGING BEHAVIOUR?	28	41	2
Did you gain new information or useful contacts?	14	47	10

Most of the stakeholders providing feedback were satisfied with the results of the CHANGING BEHAVIOUR project (Table 13.2). Almost half of them were very satisfied with the results of the project.

Table 13.2 *Satisfaction of ‘general’ stakeholders with the results of CHANGING BEHAVIOUR (N=36)*

	Very satisfied	Somewhat satisfied	Neutral
How satisfied are you with the project’s results?	37	23	11

The open-ended question provided some nice responses and encouragement for CHANGING BEHAVIOUR. For example, these encouraging comments were received by *project managers* using the results of the project.

The content is internationally relevant and closely linked with other international research. Much of the research I see is out of the US so it has been valuable having a European perspective. I think the European focus is slightly different. Intermediaries research particularly valuable for a community sector organisation designing projects and advocating for policy changes on a national level. Also, it was great to get a personal response to my emails and the newsletter has hooked me up with other research findings, projects and organisations. Thanks a lot!

It was very helpful to discuss the case-study-questions and to get feedback and another view on our work as practitioner. I hope to find some time to read more about your project results and to learn using the toolkit. I wish you success and a further following project with international knowledge exchange!

The tool is very comprehensive. It would be good to use it in more case studies and a larger range of stakeholders per country.

However, some critical viewpoints were also raised by project managers:
Newsletter should be shorter, more often, very concrete and rather in own language, that is would be read...

Stakeholders representing *related research projects* were similarly positive:
I am extremely impressed by the communication of the project and its website.

The project with the toolkit as an outcome enables me to make a quicker start in starting up changing behaviour projects; I foresee it helps convincing other parties to engage in a behavioural change project. Moreover it is an extensive database of best practices and knowledge that can help overcome many project managers to take steps that are proved not to work and to take the right steps straight away.

I first heard about the project at a conference. Since then I have visited the site several times and found it very useful. I hope that it will remain online after the end of the project because it is the repository of so many useful materials.

I am extremely impressed by the communication of the project and its website. The reason that the project has not directly affected the related project where I work more is that their focuses are not that close. The indirect impacts may still become great, but they usually take time.

I have just only one suggestion, which is relevant for all European projects. EU projects gives space to exchange experiences in the scientific community, but most contacts and exchanges take place on national conferences. It would be very helpful if there would be an annual meeting of the European projects organized by the EU (and not by each co-ordinator itself like at the Sustainable Energy Week).

Additionally, encouraging comments were received from *policymakers* and other knowledge users:

The issue of changing behaviour is of fundamental importance tool to reduce energy consumption and greenhouse emissions and same time right way to create low carbon economy.

Some follow-up meeting might be good idea: At the workshop Project Manager could give tasks - of topics dealt with at the workshop - for participants. Then at the follow up meeting things could be checked - if they have developed in real life or not.

The project leader has been lecturing/discussing very actively and professionally issues re the project. This has been very useful, and would also be, after the project.

13.4 Feedback by Toolkit users

The collection of feedback from users of the MECHANisms Toolkit started on November 11, as the dissemination of the Toolkit started in the beginning of November 2010. A brief summary of the feedback received to date is given in Table 13.3:

Table 13.3 *Feedback from users of the MECHANisms Toolkit (N=38)*

	Average rating on a scale of 1-5, 1= strongly disagree, 5 = strongly agree
I found MECHANisms useful for my work	3.9
It was easy to use MECHANisms	4.3

This preliminary feedback indicates that the first users considered MECHANisms easy to use, and most are also satisfied with the usefulness of MECHANisms. Some samples of comments received from users are provided here:

I think that the strategy for reaching the goal of energy saving projects using the toolkit proposed is universal and could be applied for various other problems also!

The toolkit provides information in a very systematic and user-friendly way.

I couldn't look through everything but it seems very useful and easy to use.

The toolkit animates to organize and be organized. And it is organized ...I think I will learn a lot.

The cases studies were interesting and helpful.

Great website! Congratulations!

Looks carefully designed and useful, would be nice to know real experiences on its use.

I think that this toolkit contains also very important information useful for project acquisitions (dealing with new targeted clients)

I'll have a look at it in detail at my next project.

As a first impression, the toolkit looks great and useful!

Make sure project managers are made aware of MECHANisms!

Additionally, many stakeholders asked for translations of the toolkit in new languages, such as Finnish and Latvian.

13.5 Feedback by the Policy Board

Members of the Policy Board stated during a project meeting in October 2010 that they value the work done and results produced by the CHANGING BEHAVIOUR consortium and would like to see the Toolkit to be used widely. Additionally, it was discussed that a greater sense of urgency needs to be created among policymakers in order to raise awareness and create action against climate change. This point of discussion and feedback collected during phone interviews with Policy Board members were included in the policy recommendations. See section 10.2 for more details of Policy Board feedback.

14. Summary WP6: Project management and dissemination

The overall aim of this work package is to ensure that project objectives are achieved on time and within the costs estimated. This means co-ordinating all work conducted in the project, overseeing the tasks and work packages, ensuring the development and production of deliverables, reporting to the EC, as well as dealing with other administrative and financial issues and changes in the project. Under WP6, it is also the task of the coordinator to ensure that appropriate levels of communications are maintained among partners in order to achieve expected levels of scientific and technical outputs. Naturally, the flow and ease of communications also depends on how the consortium members participate and co-operate.

The management of the work of the consortium and the communication between partners has been partly addressed in chapter 2, and is dealt with in detail in the Final Report to the EC. It is thus not the main focus of this chapter.

This chapter focuses more on a third task under WP6, dissemination of the project's results. The Description of Work (Annex 1 of the Grant Agreement) includes a detailed dissemination plan and a number of dissemination targets. The dissemination achievements of CHANGING BEHAVIOUR are evaluated in comparison to those plans and targets. This comparison also gives rise to some reflection on the appropriateness of those targets, in hindsight. Furthermore, the role of web-based dissemination is evaluated and discussed.

14.1 Consortium management and communication among partners

Management activities undertaken have included making sure that all partners understand the management structure and procedures of the project, including procedures for decision making, quality control, communication and dissemination. Moreover, management activities have focused on specifying the work of the project, in terms of specifying the scope and scale of various work packages, fine-tuning their interlinkages, and discussing the expectations and roles of the various project partners. This has occurred, in particular, at the following project meetings organised during the three years of the project.

- Kickoff Meeting, February 5th, 2008, Helsinki (hosted by NCRC).
- Project Meeting, April 7th -8th, 2008, Amsterdam (hosted by ECN).
- Project Meeting, November 26th -27th, 2008, Tallinn (hosted by SEI-T).
- Project Meeting, February 4th-5th, 2009, Budapest (hosted by CEU).
- Project Meeting, June 17th -18th, 2009, Athens (hosted by CRES).
- Project Meeting, November 2nd-3rd, 2009, Riga (hosted by Ekodoma).
- Project Meeting, March 22nd-23rd, 2010, Vilnius (hosted by Cowi Lietuva).
- Project Meeting, October 14th, 2010, Duesseldorf (hosted by VZ NRW).
- Project Meeting, December 10th, 2010, Brussels (hosted by the EC).

These meetings have been very successful, though somewhat constrained for time considering the large size of the consortium. Partners have learned to know each other, open questions have been addressed, a commonly agreed scope for the project has been identified, and the Description of Work (Annex 1 of the Grant Agreement) has been carefully reviewed and specified where necessary. The partners and work package leaders have made a significant contribution to project planning by identifying interlinkages and interdependencies between work packages.

Three meetings of the Consortium General Assembly have been held in connection with the Kickoff Meeting, the Budapest meeting and the Vilnius meeting to review budget and resource management issues. A Project Review was conducted at the Consortium General Assembly

meeting in Budapest and a second review was conducted at the meeting in Vilnius; additionally, regular progress reviews have been conducted at every project meeting.

Under WP6, the coordinator has also dealt with a number of administrative issues, such as submission of the periodic reports and financial claims (Forms C), one Amendment to the Grant Agreement, and a number of changes in the administrative status of various partners. These have been lengthy processes but overall have ended well.

Communication among partners has been supported by e-mail, phone conferences, and a document repository hosted at the Partners' Workspace of the CHANGING BEHAVIOUR website. Some partners actively used the document repository, or at least downloaded documents from it.

On the basis of common planning at the project meetings, work on WP2 and WP5 was launched earlier than envisaged in Annex 1 of the Grant Agreement. It was also noted that setting up the pilot projects (WP4) required more human resources than was expected in Annex 1, and this was one of the reasons for requesting an amendment to the Grant Agreement.

The project has benefited from the expertise of a Policy Board, which includes nine members from policy making organisations in the participating countries as well as from the IEA DSM Program. Two meetings for the Policy Board were organized – one in October 2008 and one in October 2010 to review the results of the project. Policy Board members have been updated on the programme via e-mail, telephone and through personal meetings.

14.2 Dissemination plan and dissemination targets

Today, project results and outputs have to compete for the attention of their targeted audiences. The CHANGING BEHAVIOUR project has aimed to tackle this challenge by specifying clear goals, messages, target audiences as well as sources and messengers. In particular, it has addressed this challenge by involving target groups throughout the project and by making effective use of peer-to-peer networks and by systematically enrolling new messengers for the project.

Dissemination of the project outputs to policymakers and intermediary organisations is crucial for the CHANGING BEHAVIOUR project. This aspect has been taken account of already in the design of the project, as many of the target groups were involved in the project at various stages. We will utilize the local, national and international networks of the project partners and the Policy Board members to make sure our dissemination makes a difference and our results are actually used.

Dissemination is integral to the research conducted in the project, in the form of joint workshops with intermediary organisations:

- A series of workshops for both partner and non-partner intermediary organisations were hosted under WP3, enabling a joint evaluation and identification of best practices. The consortium was successful in mobilizing intermediary organisations to these workshops.
- In connection with Work Package 5, a workshop for intermediary organisations was arranged in order to invite ideas and feedback for the Toolkit design.
- Further participation of users and civil society has been facilitated via the interactive website of the project. The inclusion of a range of intermediary organisations as project partners has helped to ensure that dissemination activities are appropriately targeted, and partners have provided access to suitable networks in each participating country.

Moreover, we set as a target to use the newest Internet-based dissemination measures, such as Web 2.0, i.e., peer-to-peer networks. These included plans to launch an Open Innovation Platform for assessing innovative programme ideas as well as developing and tailoring innovative

programme plans in a collaborative, open innovation process. Web-based questionnaires will be used to collect feedback on interim results of the project. Plans were also made to use discussion forums, webcasts and workshop websites.

The overall goal of the project dissemination has been to provide knowledge tools for policy-makers and intermediary organisations to deal with the sociotechnical change involved in demand side measures and to increase their capabilities to move the energy industry toward an energy services approach. This overall goal was divided into the following short-term and supporting goals:

- Raise interest in CHANGING BEHAVIOUR and raise awareness of the need for better knowledge of context, timing & actors.
- Involve policymakers, practitioners & their stakeholders in evaluating past success and failure, identifying best practices and conditions for their mobility, as well as in exchanging best practices.
- Empower policymakers and practitioners by providing them with a conceptual model that takes account of context, actors and timing and enables them to deal with end-users and stakeholders in an effective way.
- Identify expectations for Toolkit content, structure & format; raise awareness of the Toolkit, gain first Toolkit users; gain feedback from first Toolkit users; disseminate final version of Toolkit.
- Disseminate other project results (database of demand management projects, summary database of best and bad practices, synthesis report for policymakers, report on intermediaries in context, workshop reports, pilot project documentation, self-evaluation report).

As the main users of the research, we identified (1) practitioners, i.e., intermediary organisations but also e.g. energy efficiency practitioners in the energy industry, (2) policymakers, (3) programme/project stakeholders and (4) Related projects and networks, including international, transnational and national networks and organisations active in the field.

It was also recognized that influential spokespersons are important to enhance the credibility of the message. Many important spokespersons were directly involved in the project, including the participating practitioners & their networks and well as the Policy Board members representing the policy stakeholders in the project. Moreover, new spokespersons to support the message of the project were enlisted throughout the project, in particular through the workshops for intermediary organisations, but also by participating in various international, national and local events.

A number of channels, primary target groups and responsibilities were identified in the dissemination plan (Table 14.1).

Table 14.1 *Dissemination plan of the CHANGING BEHAVIOUR project*

	Channel	Primary target group	Timing	Responsibilities
	Policy Board	Policy makers	month 10; month 34	coordinator (organizer), WP leaders (presenters)
	Project partners (practitioners)	Intermediary organisations and other stakeholders in their local networks	throughout the project	practitioner partners inform other professionals and local stakeholders
	Workshops for intermediary organisations (4 workshops, 4 different regions, part of the work in different languages)	Intermediary organisations and other stakeholders	months 6-20	project partners (practitioners & researchers), each partner participates in at least one workshop, WP3 leader and co-ordinator in all
Face-to-face	Presentations at scientific & practitioner conferences and meetings organized by related networks and projects	Other practitioners and researchers; policymakers; related projects and networks	throughout the project and after it	each partner gives at least one presentation
	Presentations at events organized by NGOs, participation in fairs and events for the general public	General public, programme stakeholders, citizens	throughout the project and after it	each partner participates in at least one event
E-mail	Mailing list and newsletter for intermediary organisations	intermediary organisations	starting month 6	coordinator, each partner participates
	Project website: project summary, partners, aims, etc.	interested parties, esp. intermediary organisations & policymakers, related projects & networks	starting month 1	coordinator organizes (partners contribute to creating different language versions)
Web: informative	Project outputs and reports (downloadable)	interested parties, esp. intermediary organisations & policymakers, related projects & networks	when completed & approved	coordinator organizes
	Workshop information in different languages	intermediaries invited to the workshops	starting month 6	coordinator organizes, all partners help in producing
	Discussion site	intermediary organisations and their stakeholders	starting month 6	coordinator organizes, moderates
Web: interactive	Open innovation platform	intermediary organisations and their stakeholders	starting month 10	coordinator organizes, moderates, all partners participate
	Toolkit: interactive first version (open for comments)	intermediary organisations and their stakeholders	months 32-34	WP 5 leader & coordinator organise
	Web surveys for practitioners and stakeholders	intermediary organisations invited to the workshop + stakeholders of the pilot projects	months 32-36	Coordinator & WP5 leader
	downloadable version (different languages) customizable platform version	intermediary organisations and policymakers intermediary organisations and policymakers	month 35 month 35	Coordinator & WP5 leader Coordinator & WP5 leader
TV, Toolkit	dissemination of the Toolkit	intermediary organisations & policymakers	month 36	All partners, to at least 5 user organisations
	Project brochure	interested parties; policymakers; related projects & networks	month 2	Coordinator, with input & feedback from partners
Print media, radio	Press releases, articles for/interviews given to the general public (national & local newspapers, TV, radio)	interested parties; policymakers, general public; local stakeholders	throughout the project	All partners (one in each language)
	Articles in/interviews given to practitioner journals Articles in scientific journals	intermediary organisations, policymakers other researchers, policymakers	throughout the project throughout the project	All partners WP leaders, partners

From this plan, a few key targets were selected as the most important measures of successful dissemination in the project (Table 14.2)

Table 14.2 *Most important dissemination targets of CHANGING BEHAVIOUR*

Evaluation criterion	Target	December 2010
Number of Policy Board members	10	9 ¹³
Number of workshop participants (in total)	100	170
Number of presentations at conferences	20	37
Number of presentations for the general public	20	71
Number of mailing list recipients	200	206
Number of visitors on the project website	60 000	118 781
Number of entries in the discussion site and Open Innovation Platform	300	Poll respondents: 259 Innovative ideas for energy efficiency programmes: 17 Words of wisdom for energy practitioners: 123
Continued growth of the website discussants' community	20% growth per year	2008-2009: 57% 2009-2010: 33%
Dissemination of the Toolkit and results of the project	at least 5 targeted users/stakeholders in each participating country = 65	-
Total number of registered Toolkit users	100	-
Number of published articles on the project (general public & practitioner)	40	39 ¹⁴
Number of published articles (scientific)	10	12
User and stakeholder satisfaction as measured by website survey	number of respondents 200	169 respondents

14.3 Role of the Internet in dissemination

Internet-based and interactive communications were stressed in the Description of Work, and they have been an important source of communications (see chapter 13 on stakeholder feedback).

The public website includes a section on Project Outputs (Inventory Database, Case Studies, Conference Papers and Articles and Six Best-Practice Pilot Projects), an Events Calendar, links, information on the workshops and a feedback function, published newsletters, as well as a project description, partner descriptions and contact information, and a list of Policy Board members, polls and the Open Innovation Platform. The website also contains a continually updated 'News' section. All public project deliverables, conference papers and the WP1 database are available via the project website.

¹³ While 9 organisations are officially represented in the project's Policy Board, a tenth organisation, the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM) has participated in the work in 2010.

¹⁴ This figure does not represent the final result, as some information from consortium members is still coming in.

In the Description of Work, an Open Innovation Platform was also envisaged. The idea was to use the Open Innovation Platform for assessing innovative programme ideas as well as developing and tailoring innovative programme plans in a collaborative, open innovation process. Web-based questionnaires were also envisaged to collect feedback on interim results of the project.

The Open Innovation Platform was started in the form of polls for visitors (3 different polls have been conducted), as well as a feedback function. Feedback has been received from stakeholders. The Open Innovation Platform phase 2 was launched in November 2008, with a site presenting innovative programmes and inviting comments, as well as new submissions of programmes for further development and refinement by the user community. As the last Open Innovation activity, a competition for best slogans (words of wisdom) to guide energy saving practice was launched. This competition inspired a total of 123 entries.

Since the launch of the project, more than 118 781 visitors from 81 countries have viewed the CHANGING BEHAVIOUR website. However, we have noticed that the ‘short and easy’ forms of interaction work better than more extensive discussion forums. So the web polls and slogan competition were very successful, but there has not been much extensive discussion on the Open Innovation Platform section ‘Innovative Ideas for Energy Efficiency Programmes’.

There were also plans to use webcasts to engage larger numbers of people in the project’s workshops. However, this did not turn out to be practicable for very interactive events. Instead, we have complemented the face-to-face events with two videos:

- Film CHANGING BEHAVIOUR goes Tallinn
<http://www.youtube.com/watch?v=Y6AJAlyTHvc>,
- Marketing video for the MECHANisms Toolkit (in progress).

Because not everyone is such an eager user of interactive Internet sites, we complemented the interactive, web-based communications with more conventional forms of dissemination, including:

- Newsletter, published twice a year, with 206 subscribers,
- Two project flyers (a brochure on the project in general, and a flyer for marketing the MECHANisms Toolkit).

14.4 Reflections on the dissemination plan and dissemination targets

The dissemination plan was very ambitious, both in terms of scope (numbers of targeted people) and in terms of different activities to be conducted. So it has been quite an effort to manage to perform all the promised dissemination activities. In some aspects, more has been easily done than promised (e.g. international conferences or events for the general public), whereas others like interactive web communications and articles for the general public or practitioners have required more efforts. We are, however, likely to meet all or almost all of our dissemination targets, and many are exceeded.

The challenging targets have, on the one hand, provided motivation for participating in various events even when time was constrained, and have helped to engage a wide network of ‘friends of CHANGING BEHAVIOUR’. This might not have been the case in a more strictly research-oriented project with mainly academic dissemination efforts. On the other hand, since everybody is incredibly busy all the time (including the target groups for dissemination), engaging with a very wide audience does not always allow for very intensive and tailored interaction. Hence, somewhat less ambitious targets would have allowed more time to spend with individual stakeholder organisations and would have allowed for more selectivity in terms of who to engage with and how.

In terms of the targeted audiences (1) practitioners (2) policymakers, (3) programme/project stakeholders and (4) related projects and networks, CHANGING BEHAVIOUR has succeeded

well in reaching especially practitioners and related projects and networks. At least these are the ones who have given us the most feedback on a voluntary basis. Some particular policymakers have also been well engaged in countries where particular policy developments related to CHANGING BEHAVIOUR are on the agenda. The pilot projects have interacted intensively with the stakeholders in their own projects.

Language has been an obstacle to wider interaction between project stakeholders and CHANGING BEHAVIOUR. It might have been good to have separate language pages on the project website, but it would have been a huge job to administer them and keep them 'fresh'. Also newsletters in different languages might have been a good idea, but would have entailed a huge amount of work. However, many of the articles and presentations of the project have been in other languages than English.

At the Policy Board meeting in Duesseldorf in October 2010, a new target group for dissemination was identified. The Policy Board members suggested that we should interact more with politicians, as in many countries in Europe, initial high levels of interest and support for energy efficiency and behavioural change have waned as new governments have taken office. So fairly late in the project, we started to engage this target group, mainly however on the municipal level, as contacts to state-level politicians are not so easy to establish.

The experiences of the CHANGING BEHAVIOUR project show that this type of project requires extremely differentiated kinds of dissemination:

- Some younger people are eager to use the Internet, but not everyone can or wants to spend a lot of time online.
- Many practitioners are too busy for 'general discussions', and if they have time, prefer face-to-face interaction. Hence, the Open Innovation platform was preferably used in polls and the slogan competition, and few participants were eager to start longer discussions.
- Some people are eager to communicate in English, but for others this is a barrier to participation. This is probably one of the reasons why interactive Internet discussions were not so popular, but short and small things like polls were.
- Dissemination works best when it is connected to very topical, urgent concerns of the target group, which requires a lot of flexibility and 'customer-responsiveness'. Face-to-face meetings with different target groups, when and where they want to organize them, are thus the most important and effective forms of dissemination.

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Appendix A Programme of the Toolkit Clinic



Changing Behaviour

ENERGY CHANGE Toolkit Clinic

A workshop for improving your project ideas and testing our Toolkit

Workshop programme

October 12, 2010

Verbraucherzentrale Nordrhein-Westfalen

Mintropstr. 27

40215 Düsseldorf

10:00	Coffee and registration
10:30	Introduction and aims of the workshop National Consumer Research Centre, NCRC
10:40	Toolkit presentation: what, who and why Energy research Centre of the Netherlands, ECN
10:50	Participant and project introductions (NCRC) all: short intro (5 min.) based on slide handouts
11:50	Short coffee break
12:00	Interactive roundtable: experiences in improving my project using the Toolkit (ECN) all participants, based on questions that we prepare
13:00	Lunch
14:00	Clinic in small groups: using the Toolkit to solve particular problems (NCRC) 5-7 small groups, each with a facilitator from CHANGING BEHAVIOUR
16:00	Coffee break
16:30	Plenary: small group reports, discussion, conclusions and follow-up (ECN)
17:30	Sightseeing in Düsseldorf (NRW VZ)
19:00	Dinner

Appendix B Pilot stakeholder feedback online form

Pilot stakeholder feedback

Interview guideline "pilot project stakeholders"

This questionnaire should serve as a guideline for your interviews with selected stakeholders which are cooperating with your pilot (such as business partners, sponsors, NGO, media partners etc.).

In the first section you'll find questions on the profile of your interview partner – please add the available information. In the following sections, please tick the prepared boxes while you are talking and add a comment in case you gain additional information after your phone - or personal – interview. While you thank the interviewee for his/her willingness to spend time and answer your questions, you should mention, that the information will only be used anonymised and for scientific reasons within CHANGING BEHAVIOUR.

1a) Name of the pilot

- Climate Club Godollo
- Micro-ESCOs
- Northtown Technology Park
- Power Agents
- The Energy Academy
- Toward Energy Efficient Buildings in Cesis

1b) Role and institution of interviewee

- Customer/target group
- Helping to promote the project
- Local NGO
- Municipal official
- Business partner
- Funding agency
- Partner co-operating in delivering the project
- Other

1c) For how long was the interviewee involved in the project?

- Since the start (about 1 year)
- A few months
- Just recently
- Contacted by pilot manager
- Contacted by 'multiplier' (e.g. peer advisor) in the pilot
- Interviewee joined on their own initiative

Any comments by interviewer on section 1. Please add age group and sex of your interviewee

These questions are about the opinions and experiences of the interviewee

2a) How would you judge your involvement in the pilot

- closely involved and well informed
- partially involved
- could have been better
- fits my needs

2b) Was it easy for you to interact with the project?

- Very easy
- Easy
- Not so easy
- Difficult

2c) Were you able to influence the way the pilot was organised?

- a lot
- somewhat
- not at all
- don't know

Any comments by the interviewer on section 2

3a) Did you learn anything new about other stakeholders' interests or concerns (related to energy saving)?

- a lot
- somewhat
- not at all
- don't know

3b) How satisfied are you with the outcomes of the project?

- Very satisfied
- Somewhat satisfied
- Neutral
- Somewhat dissatisfied
- Very dissatisfied

3c) Did you gain new information or contacts through the project

- A lot
- Some
- Few
- None

3d) What changes did the project bring to your private/professional life? (in your way of thinking, learning, working or doing things)

- Large changes
- Some changes
- Minor changes
- None

3 d) What kind of changes, please elaborate

Any comments by the interviewer on section 3

4a) Would you like to comment on any of the questions? *(Please note here the answers of your interviewee briefly)*

4b) Do you have any recommendations for the pilot project? *(Please note here the answers of your interviewee briefly)*

4c) Would you get involved with this kind of project again?

- Yes
- Possibly
- Don't know
- No

Submit

Appendix C General stakeholder survey online form

CHANGING BEHAVIOUR stakeholder feedback survey

Thanks for taking the time to complete this small survey. It will help us evaluate our project and improve our work.

1. What is your relation to the CHANGING BEHAVIOUR project

- Project manager using research results
- Policy maker using research results
- Other user of research results
- Related research project
- Educational (university, polytechnic)
- Other

2. Did you learn anything new from CHANGING BEHAVIOUR?

- a lot
- somewhat
- not at all
- don't know

3. Did you gain new information or professional contacts through the project

- A lot
- Some
- Few
- None

4. How satisfied are you with the outcomes of the project (information, workshops, website, reports, network or other products)?

- Very satisfied
- Somewhat satisfied
- Neutral
- Somewhat dissatisfied
- Very dissatisfied

5. Did the project bring any changes to your professional life?

- Large changes
- Some changes
- Minor changes
- None

6. Do you have any comments or suggestions for the project

Appendix D Toolkit user feedback survey

**MECHANisms**
Make Energy Change Happen Toolkit

Search

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Home

Give Us Some Feedback

What do you think about the toolkit? Tell us!

***Rate the MECHANisms toolkit:**

	Strongly disagree		Strongly agree		
	1	2	3	4	5
1. I found MECHANisms useful for my work	<input type="radio"/>				
2. It was easy to use MECHANisms	<input type="radio"/>				

Other feedback on MECHANisms?:

Submit

Appendix E Detailed dissemination achievements of CHANGING BEHAVIOUR

Status December 2010, with some information from consortium members still missing.

E.1 Peer-reviewed articles (published or forthcoming)

- Breukers, S.C., Heiskanen, E., Brohmann, B., Mourik, R.M. & Feenstra, C.F.J. (2010 forthcoming): Connecting research to practice to improve energy demand-side management. Forthcoming in *Energy*.
- Heiskanen, E. & Lovio, R. (2010): 'User-producer interaction in housing energy innovations'. Energy innovation as a communication challenge. *Journal of Industrial Ecology Journal of Industrial Ecology*, 14: 91-102.
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- Heiskanen, E., Johnson, M., Robinson, S., Vadovics, E. & Saastamoinen, M. (2009): Low-Carbon Communities as a Context for Individual Change. *Energy Policy*, Articles in press, doi:10.1016/j.enpol.2009.07.002.
- Heiskanen, E., Johnson, M., Saastamoinen, M. & Vadovics, E. (2009): How Does Consumer Behaviour Change? Examples from Energy Conservation. In *Proceedings of the Conference Future of the Consumer Society*, pp. 286-294.
- Heiskanen, E., Johnson, M., Saastamoinen, M., Robinson, S., Vadovics, E. (2009): Yhteistoiminta kestävässä kulutuksessa: esimerkkinä hiilipäästöjen vähentäminen (Cooperation in sustainable consumption: carbon emission reductions as an example). *Janus* 17(3): 200-218.
- Heiskanen, E., Lovio, R. & Jalas, M. (*in press*). Path Creation for Sustainable Consumption: Promoting Alternative Heating Systems in Finland. Accepted for publication in *Journal of Cleaner Production*.
- Hodson, M., and Marvin, S., (2009 – inaugural piece for Urban Worlds section): 'Urban Ecological Security' A new urban paradigm?', *International Journal of Urban and Regional Research*, vol. 33:1, pp. 193-216.
- Hodson, M., and Marvin, S., (2009): 'Cities Mediating Technological Transitions: Understanding Visions, Intermediation and Consequences', *Technology Analysis and Strategic Management*, vol. 21:4, pp. 515-34.
- Hodson, M., and Marvin, S., (2010): 'Can cities shape socio-technical transitions and how would we know if they were?' *Research Policy*, 39:4, 477-485.
- Hodson, M., and Marvin, S., (2010): Urbanism in the Anthropocene, *City*, 14:3, 299-313.
- Hodson, M., and Marvin, S., (2010): Can Cities Shape Socio-Technical Transitions and How Would We Know If They Were? accepted for publication in *Research Policy*.
- Backhaus, J. (2010). Intermediaries as Innovating Actors in the Transition to a Sustainable Energy System. *Central European Journal of Public Policy*. 4(1), 86-109)

E.2 Book and book chapters (published or forthcoming)

- Bulkeley, H., Castan-Broto, V., Hodson, M., and Marvin, S., (eds) (2010): *Cities and Low Carbon Transitions*, London: Routledge.
- Hodson, M., and Marvin, S., (2009): 'The right to the city – energy and climate change', in Brand, U., Bullard, N., Lander, E., and Mueller, T., (eds) *Contours of Climate Justice -*

- Ideas for shaping new climate and energy politics*, Critical Currents No.6, October 2009, Dag Hammarskjöld Foundation: Uppsala.
- Hodson, M., and Marvin, S., (2010): *World Cities and Climate Change: Producing Urban Ecological Security*, McGraw Hill: Maidenhead.
- Hodson, M., and Marvin, S., (2010): 'Governing the Reconfiguration of Energy in Greater London: Practical Public Engagement as "Delivery"' in Devine-Wright, P., (2010) *Renewable Energy and the Public*, Earthscan: London.
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E.3 International conference papers and posters

4. Project poster and presentation at the Sustainable Consumption 2008 conference in Budapest at Corvinus University (GreenDependent). Conference proceedings are available from the GreenDependent website and also from <http://www.tve.hu/sustcons>.
- Backhaus (ECN): *Innovating actors in the energy system: the importance of intermediary organisations*. Paper presented at 3rd International Conference on Indicators and Concepts of Innovation – The Social Dimension of Innovation, October 1 -2, 2009 in Prague.
- Backhaus, Mourik, and Breukers, (ECN): *Learning in single & double loops – interaction as key to scientific and practical insights*. Paper presented at EASST conference 2010, September 2-4, Trento, Italy.
- Breukers (ECN), Brohmann (OEKO), Heiskanen (NCRC), Mourik and Feenstra (ECN): *Connecting research to design: interactive and iterative learning about energy demand side management*. Paper presented at the 5th Dubrovnik Conference on Sustainable Development of Energy Water and Environment Systems, September 29 - October 3, 2009.
- Breukers, Backhaus, Mourik, (ECN), Hodson, M., Marvin, S. (SURF), Brohmann, B. (OEKO): *Practicing learning and learning in practice. Testing learning tools for energy demand side management projects*. Paper presented at ERSCP-EMSU conference 2010, October 25-29, Delft, The Netherlands
- Feenstra & Backhaus (ECN) & Heiskanen (NCRC): *How to change consumers' energy-related behaviour? Improving demand side management programmes via an action research approach*. Paper presented at the First European Conference Energy Efficiency and Behaviour, October 18-20, 2009 in Maastricht.
- Heiskanen (NCRC), Mourik, Feenstra & Pariag (ECN): *Beyond Individual Behaviour Change – Why and How?* Paper presented at the First European Conference Energy Efficiency and Behaviour, October 18-20, 2009 in Maastricht.
- Heiskanen, E., Hodson, M., Kallaste, T., Maier, P., Marvin, S., Mourik, R., Rinne, S., Saastamoinen, M. & Vadovics, E. (2009): *A rose by any other name...? New contexts and players in European energy efficiency programmes*. Paper presented at Act! Innovate! Deliver! Reducing energy demand sustainably. Eceee 2009 Summer Study, Cote d'Azur, June 1-6, 2009.
- Heiskanen, E., Johnson, M, Saastamoinen, M. & Vadovics, E. (2009): *Creating Lasting Change in Energy Use Patterns through Improved User Interaction*. Paper presented at the confer-

- ence Joint Actions for Climate Change. Greening of Industry Network, Nord-LCA and European Roundtable for Sustainable Consumption and Production. Aalborg, June 8-10, 2009.
- Heiskanen, E., Johnson, M., Saastamoinen, M. & Vadovics, E. (2009): How does consumer behaviour change? Examples from energy conservation. Paper presented at the Future of the Consumer Society conference, May 28-29 2009, Tampere, Finland.
- Heiskanen (NCRC), Feenstra (ECN), Johnson (NCRC) & Vadovics (GreenDependent): Learning about users and developing co-design capabilities for energy saving on the local level. Paper presented at ERSCP-EMSU conference 2010, October 25-29, Delft, The Netherlands
- Hodson, M., and Marvin, S., (2009): 'Urban Ecological Security: A New Paradigm?' International Conference on Human Ecology, Manchester, June 29-July.
- Hodson, M., and Marvin, S., (2010): 'Mediating Low Carbon Urban Transitions,' American Association of Geographers, Washington DC, 14-18 April 2010.
- Marvin, S., and Hodson, M., (2009): 'Urban Ecological Security: A New Paradigm?' The Biopolitics Resilience Second Workshop, Claus Moser Research Centre, University of Keele, June 18-19.
- Marvin, S., and Hodson, M., (2009): 'Urban Ecological Security', Geography Dept, University of Leicester, 24 September.
- Marvin, S., and Hodson, M., (2010): Emerging Strategies of Urban Reproduction: the UK Low Carbon Transition Plan, American Association of Geographers, Washington DC, 14-18 April 2010.
- Paper (extended abstract): Verbraucherzentrale NRW, Bridging the gap between economic and ecological efficiency by individual energy consultancy – A case study. Paper presented at the conference Joint Actions for Climate Change. Greening of Industry Network, Nord-LCA and European Roundtable for Sustainable Consumption and Production. Aalborg, June 8-10, 2009.
- Paper: Action research to translate socio-technical theory into useful tools for practitioners (ECN, NCRC), presented at the 4S/EASST 2008 Annual Meeting, August 20-23, Rotterdam, The Netherlands.
- Paper: CHANGING BEHAVIOUR EC FP7 Project: Research and development of energy saving practices in Finland and Estonia (NCRC and SEI-T), Presented at the Nordic Clean-Tech solutions seminar, Helsinki Sept. 12, 2008.
- Paper: From Sociotechnical Theory to Sociotechnical Practice: An Action Research Project (NCRC), Presented at the 2nd SCORE conference (Brussels, March 10-11, 2008), published in the conference proceedings.
- Paper: Hodson, M., and Marvin, S., (2008): 'Secure Urbanism and Resilient Infrastructure: Reproducing Cities and the New Politics of Ecological Security', AAG Annual Meeting, Boston, 15-19 April, 2008.
- Paper: Hodson, M., and May, T., (2008): 'Urban Ecological Security and the Political Economy of Knowledge', public seminar, RMIT, Melbourne, 10 June.
- Paper: Improving DSM practice by analysing previous success and failure (NCRC, ECN, VZ NRW), presented at the 12th European Roundtable for Sustainable Consumption and Production conference, 23 - 25 September 2008, Berlin.
- Paper: Involving consumers in combating climate change. Presentation at the international Climbus Seminar 'Creating Business, Mitigating Climate Change'. June 10, 2008, Hämeenlinna, Finland.
- Paper: Marvin, S., (2008): 'Urban Ecological Security', The University of Tokyo, Japan. 5 June.
- Paper: Reconfiguring Systems of Energy Production and Consumption: what role for intermediaries? (SURF), presented at the 12th European Roundtable for Sustainable Consumption and Production conference, 23 - 25 September 2008, Berlin.
- Paper: The role of timing in the success of energy saving programmes (NCRC and ECN), presented at the Sustainable Consumption Conference, Budapest, October 2008.
- Poster: CHANGING BEHAVIOUR presented at the 12th European Roundtable for Sustainable Consumption and Production conference, 23 - 25 September 2008, Berlin.

- Poster: CHANGING BEHAVIOUR: A European Action Research Project at ASCEE Workshop “Policy Instruments to Promote Sustainable Consumption”, 29 May, 2008, Brussels, Institute for European Studies.
- Presentation “CHANGING BEHAVIOUR EC FP7 Project: Research and development of energy saving practices in Finland and Estonia (NCRC and SEI-T)” provided at international workshop "Energy in housing: consumption patterns and awareness rising of inhabitants on energy saving measures in houses". 5-6.Nov. 2008, Baltic Environmental Forum (BEF) seminar in Sigulda, Latvia.
- Presentation: Consumer behaviour and smart meters (ECN), plan to present at the 2008 Annual Metering and Billing conference, Amsterdam, September 24th. Cancellation due to unforeseen issues, but presentation was published on conference website.
- Presentation: COWI Baltic: presentation made by Inga Valuntienė in the seminar "Energy in housing: consumption patterns and awareness rising of inhabitants on energy saving measures in houses" organised by BEF Latvia (Baltic Environmental Forum) which was held on 5-6 November, 2008, in Sigulda, Latvia. Tiit Kallaste from Estonia, SEI - Tallinn (Stockholm Environment Institute Tallinn Centre) and Agris Kamenders from Latvia, Ekodoma was among other participants. In order to present the project to a broader audience, presentation is placed on the BEF (Baltic Environmental Forum) group homepage <http://www.befgroup.net/general-office/events/seminar-on-awareness-raising-and-energy-efficiency/?searchterm=None> and on the Riga Energy Agency homepage www.rea.riga.lv.
- Presentation: ECN: Learning about interventions – Changing Behaviour & Beyond. Presentation at the ‘Successful interventions for sustainable consumption workshop’ at ERSCP-EMSU conference 2010, October 25-29, Delft, The Netherlands
- Steinestel, Maier, Meinel & Sieverding (VZ-NRW): Changing behaviour of energy consumers and motivating private investments in energy efficiency by individual and neutral on site energy consultancy for private house owners. Paper presented at the First European Conference Energy Efficiency and Behaviour, October 18-20, 2009 in Maastricht.
- Vadovics (GreenDependent), Heiskanen, Johnson and Saastamoinen (NCRC) and Robinson (M:KC): Low-Carbon Communities as a Context for More Sustainable Energy Consumption. Paper presented at the Sustainable Consumption Conference in Budapest, September 25, 2009.

E.4 Presentations for the general public and decision makers

- CEU: Centre for Climate Change and Sustainable Energy Policy (C3SEP) highlighted CHANGING BEHAVIOUR as one of the key programs currently associated with the university at the Centre opening in April, 2008.
- COWI Baltic: presentation of the CHANGING BEHAVIOUR project and the pilot project idea for the representatives of Vilnius city municipality via e-mails and phone conversations and for the representatives of Northtown Technology Park and Association Knowledge economy forum in the meeting.
- ECN Ruth Mourik; Succeeding with Demand Side Management Programmes, Scandinavian Metering conference, March 2009, Oslo.
- ECN Ruth Mourik; Utilities, Customers and (service) Technologies: understanding customers in their home. Presentation at 3rd Annual conference on Customer experiences and relation management for Utilities. September 2009, Prague
- ECN Ynke Feenstra; How do you change the behaviour of consumers. Lessons from European practices. Presentation for the Dutch National Thinktank, August 26, 2009.
- ECN: a webpage on the project CHANGING BEHAVIOUR on the website of ECN: <http://www.ecn.nl/en/ps/onderzoeksprogramma/transitiemanagement/changing-behaviour/>
- ECN: Discussion of EU Project CHANGING BEHAVIOUR and its results at the Intelligent Energy Demand for Electricity Summit, Amsterdam, January 28th.

ECN: Discussion of EU Project CHANGING BEHAVIOUR and its results at the EFONET workshop on social acceptance of new energy technologies, May 27th and 28th, Paris.

ECN: Presentation of EU Project CHANGING BEHAVIOUR and its results at the Smart Metering Scandinavia 2009 conference in Oslo, March 4th.

ECN: Presentation of the EU Project CHANGING BEHAVIOUR (“How to change consumer behaviour?”). Presentation for employees of ECN on March 11th (in Amsterdam) and March 12th (in Petten) 2008.

Ekodoma: Presentation for elders, BMC in Cesis and local press representatives May 22, 2009, Cesis

Enespa (Mikko Jalas & Samuli Rinne) & NCRC (Eva Heiskanen) CHANGING BEHAVIOUR Energiansäästön muutosagenttien voimaannuttaminen. Presentation at the Low-carbon community event at Mynämäki City Hall, Nov.3, 2009.

Enespa (Samuli Rinne and Mikko Jalas). Presentation for residents of Mynämäki on the Micro-ESCOs pilot, Laurin koulu, March 31, 2009.

Enespa (Samuli Rinne and Mikko Jalas). Presentation for residents of Mynämäki on the Micro-ESCOs pilot, Raimela Village Fair, August 23, 2009.

Enespa (Samuli Rinne and Mikko Jalas). Presentation for residents of Mynämäki on the Micro-ESCOs pilot, Laurin koulu, October 21, 2009.

Enespa (Samuli Rinne) Pientalojen kustannustehokas energiansäästöpotentiaali: case HINKU-kunnat. Presentation at Energiatohokkuuden rahoitus pientaloissa, seminar organised by the National Consumer Research Centre, Helsinki, Nov. 20, 2009.

GreenDependent distributed CHANGING BEHAVIOUR brochures at the Green Week event in Brussels.

GreenDependent: Information about and invitation to the Budapest workshop on the greenfo website (www.greenfo.hu, the main environmental and sustainability news page and electronic magazine in Hungary), both in English and Hungarian.

GreenDependent: Presentation of the EU Project CHANGING BEHAVIOUR to a group of local non-profit organisations (known collectively as Gödöllő Green Roundtable, potential WP3 workshop participants as practitioners), 15 March, 2008.

Heiskanen, E. (2009): Action Research on Behaviour Change. Presentation at the conference The Impact of Behaviour Change Programmes. European Sustainable Energy Week, Brussels, February 11, 2009.

Heiskanen, E. (2009): CHANGING BEHAVIOUR – the project. Presentation at the Tekes EU R& D secretariat training: Ingredients of a Good Proposal. May 20, 2009.

Heiskanen, E. (2009): CHANGING BEHAVIOUR – the project. Presentation at the CLIMATE ARENA seminar, National Consumer Research Centre, May 26, 2009.

Heiskanen, E. (2009): CHANGING BEHAVIOUR Funded by the EC FP7 THEME ENERGY (contract 213217). Presentation at Finnish Environment Institute, February 24, 2009.

Heiskanen, E. (2009): Changing Behaviour: toimintatutkimus energiansäästön edistäjien voimaannuttamiseksi (Changing Behaviour: an action research project to empower energy efficiency practitioners). Lecture at Helsinki School of Economics, Friday Seminar, March 13, 2009.

Heiskanen, E. (2009): Kokemuksia energianeuvonnasta Euroopassa (Experiences of energy advice in Europe). Presentation at the meeting of the Working Group on an Architecture for Energy Advice, Finnish Innovation Fund, March 3, 2009.

Heiskanen, E. (2009): Kuluttajat ja energiansäästö (Consumers and Energy Conservation). Presentation at Seminar of the Energy Efficiency Committee, Helsinki, January 27, 2009.

Heiskanen, E. (2009): Kuluttajat ja energiansäästö (Consumers and Energy Conservation). Presentation at Helsingin Energia, February 19, 2009.

Heiskanen, E. (2009): Sustainable design and consumer practices. Lecture for industrial designers at the University of Art and Design, Helsinki, March 19, 2009.

Heiskanen, E. (2009): Taloustieteellisiä, psykologisia ja sosiologisia näkökulmia energiatohokkuuteen (Economic, psychological and sociological perspectives on energy efficiency). Lecture at the Open University Course, Helsinki Institute for Science and Technology, March 11, 2009.

- Hodson, M., and Marvin, S., (2010): Making Low Carbon England, Architectural Association, London, 16 June.
- Hodson, M., and Marvin, S., (2010): Response - Built environment, economic activity and place, Commission for Architecture and the Built Environment (CABE), London, 28 July.
- Information on SEI-Tallinn (www.seit.ee) and EKJA (<http://www.ekja.ee/index.php?m=249&l=35>) web-sites on above-mentioned seminars. Also the presentations exposed on web.
- Marvin, S., and Hodson, M., (2009): 'Urban Ecological Security: A New Paradigm?' Planning for a Low Carbon City, Cape Town, South Africa, 11th – 12th November.
- NCRC (Eva Heiskanen) Asumisen energiatehokkuuden parantaminen: tutkimuksen ja kehittämisen haasteita (Improving the energy efficiency of housing: challenges for research and development). Presentation for Finnish Housing Fund, May 19, 2010, Helsinki.
- NCRC (Eva Heiskanen) CHANGING BEHAVIOUR: the project. Presentation at BEAWARE seminar, Helsinki Institute of Information Technology, Espoo, June 11, 2010.
- NCRC (Eva Heiskanen) Changing consumer energy behaviour: key challenges and new approaches. Presentation at Consumer Advice on Energy Workshop, Sept. 27-28, 2010
- NCRC (Eva Heiskanen) Esteitä kustannustehokkaiden hankkeiden rahoitukselle ja kansainvälisiä ratkaisuja. Presentation at Energiatehokkuuden rahoitus pientaloissa, seminar organised by the National Consumer Research Centre, Helsinki, Nov. 20, 2009.
- NCRC (Eva Heiskanen) Hyvät käytännöt energiatehokkuusviestinnässä ja –neuvonnassa (Best practices in energy efficiency communications and advice). Presentation at annual Electricity Trade conference (Finnish Energy Industries), Gustavelund, Tuusula, November 20, 2009.
- NCRC (Eva Heiskanen) Käyttötavat näkyviksi – energiansäästö yhteiseksi hankkeeksi (Make energy behaviour visible – make energy saving a common challenge). Presentation for the Maunula energy efficiency project, May 15, 2010, Helsinki.
- NCRC (Eva Heiskanen) Käyttötavat näkyviksi – energiansäästö yhteiseksi asiaksi. Presentation at the seminar Yhteisvoimin energiansäästöön – Vantaa ympäristökeskus, October 18, 2010.
- NCRC (Eva Heiskanen) Pinttyneet tavat romukoppaan – yhteisvoimin pienistä teoista suuri muutos! Presentation at the annual Eco-Support Network event, Messukeskus, Helsinki, Oct 6, 2010.
- NCRC (Eva Heiskanen) Saving energy – a community approach. Presentation at Eco-support Activity workshop: Changing attitudes in theory and practice April 27, 2010, Hämeenlinna.
- NCRC (Eva Heiskanen) Seitsemän syytä, miksi ekotehokkaan ICT:n visiot eivät ole toteutuneet + joitakin ratkaisuja (Seven reasons why visions of eco-efficient ICT have not come true + some solutions). Presentation at the Tekes seminar Intelligent City, March 26, 2010, Helsinki.
- NCRC (Eva Heiskanen) Sosiaalinen näkökulma ilmastonmuutoksen hillintään (A social approach to mitigating climate change). Presentation for the Ilmankos-project seminar Climate Change and Everyday Life, April 13, 2010, Tampere.
- NCRC (Eva Heiskanen) The attitude-behaviour gap - an opportunity for sustainable design? Lecture at the Sustainable Product Design course/Creative Sustainability programme, Aalto University, Nov 9, 2010.
- NCRC (Eva Heiskanen) Uusien polkujen luominen energian kulutuksessa – kokemuksia menneisyydestä, näkemyksiä tulevaisuudesta. Presentation at the Aalto University STS Event, Aug 18, 2010.
- NCRC (Eva Heiskanen) Yhteisöllinen näkökulma ympäristövastuulliseen toimintaan: ihmisten kaupunki mahdollistajana. Presentation at the Environmental Educators' Annual Event, Helsinki, Oct. 8, 2010.
- NCRC (Eva Heiskanen). Eväitä asennemuutokseen... (Ingredients for attitude change...). Presentation for the Finnish Association for Nature Conservation, March 19, 2010, Helsinki.
- NCRC (Eva Heiskanen). Mitä hyötyä verkostoitumisesta? (What's the point in networking?). Presentation for the City of Helsinki Eco-Support Network, February 10, Helsinki.

- NCRC (Eva Heiskanen). Mitä uutta tarvitaan, jotta käyttäjät saadaan aktiivisesti edistämään energiätehokkuutta? (What new approaches are needed to get users to actively promote energy efficiency?) Presentation at the Future Forum for a Low-Emission Finland, January 27, Espoo.
- NCRC (Eva Heiskanen). Yhteistoiminta avain muutokseen (Co-operation is the key to change). Presentation at conference organised by the 4V project (Care about your living environment, Influence decision making, Enjoy life and Feel great), Helsinki Metropolitan Region. Nov. 12, 2009.
- NCRC: Changing Behaviour. Lecture for the course MA Industrial Design at the University of Industrial Arts, Helsinki, Nov. 10, 2008.
- NCRC: Presentation 'How to write a successful proposal' at the FP7 training event organised by Tekes, the Finnish Technology Agency, Oct. 20, 2008.
- NCRC: Presentation 'Social conditions for conserving natural resources' at the seminar Where are the consumer-heroes, Helsinki, Oct 23, 2008.
- NCRC: Presentation 'Social conditions for sustainable consumption' at the seminar Environment and Social Policy, Helsinki, Sept. 28, 2008.
- NCRC: Presentation of the EU Project CHANGING BEHAVIOUR. Presentation for the Energy R&D Programme of SITRA – The Finnish Innovation Fund, March 3, 2008.
- NCRC: Presentation of the EU Project CHANGING BEHAVIOUR. Presentation at the CLIMBUS (New business opportunities in the global market created by the climate change mitigation efforts) Collaborative Forum, Tekes (Finnish National Technology Agency), April 1, 2008.
- NCRC: Three presentations at different divisions of the National Energy Saving Committee (Industry and Services, Aug 19, 2008; Buildings, Sept. 3, 2008; Households Sept 17, 2008).
- NCRC: Traditions in consumer research and their relevance for sustainability: the EU FP7 project CHANGING BEHAVIOUR as an example. Lecture at the University of Helsinki, Department of Economics, March 19, 2008.
- OEKO/VZNRW. Effizientes Energieverhalten: Auch auf die Verbraucher kommt es an! Organisation of a special session at the Berlin Energy Days, 10 May.
- Presentation: Presentation on behavioural change programme of Manchester is my Planet including CHANGING BEHAVIOUR Project to 30 MEPs of the PHSE (Socialist) group (M:KC), November 2008.
- SEI-T (& EMÜ)? (Tiit Kallaste & Veljo Kimmel). SEI-Tallinna europrojektide kogemused energia säästmisel (SEI-Tallinn's experience from EU granted projects on energy saving). Presentation at Annual Conference on *Energy Efficiency and RES wider promotion TEUK XI*, 12.Nov.2009 in Tartu.
- SEI-T (Tiit Kallaste) Energy Saving Week was co-organised together with KredEx, Tartu Science Park, Ministry of Economy and Communication, As Eesti Energia, Tallinn City Municipality et al. <http://www.energiatark.ee/>
- SEI-T (Tiit Kallaste): *Energia tarbimise harjumuste muutmine (Changing habits in energy consumption)*. EK 7. RP projekt "CHANGING BEHAVIOUR". Presentation, Final conference of Energy Saving Week by KredEx in Estonia, Nov. 16, 2009. Web-published at „Energiatark“ (Energy-wise). <http://www.energiatark.ee/> see for the presentations; *energiasäästunädal/materjalid*.
- SEI-T (Tiit Kallaste): *Energia tarbimise harjumuste muutmine*. EK 7. RP projekt "CHANGING BEHAVIOUR". Presentation at Energiatark, Seminar on Energy Saving week by KredEx, Nov. 16, 2009.
- SEI-Tallinn. Seminar "Options to save energy in offices and companies" for Estonian Association of Environmental Management (EKJA). 23.01.2009. Venue: National Library. 25 participants.
- SEI-Tallinn. Seminar to KREDEX on EU 7th FP project CHANGING BEHAVIOUR and EU IEE Programme project ENERGY TROPHY+ on energy saving non-investment approaches and possibilities in office buildings. 09.01.2009. Venue: KREDEX office. 35 participants.

- SEI-Tallinn. The CHANGING BEHAVIOUR project was introduced at the international Conference “Biomass and Bioenergy 2009” in Tallinn, organized by Swedish Embassy, Swedish Trade Council in Estonia and Swedish Bioenergy Association Svebio on the 12th of May. T.Kallaste participated in concluding discussion at round-table.
- SURF: Environmental Infrastructure Workshop. SURF presented at the policy workshop of the UK Environment Agency funded project on the costs of environmental infrastructure, 28 November 2008.
- SURF: Paper and panel discussion: Hodson, M., (2008), ‘Urban Energy Transitions’, Carbon Crucible, Portcullis House London, 8 December. Invited presentation and panel discussion.
- SURF: Presentation: Marvin, S., (2009) ‘Retrofitting Cities – Challenges, Issues and Solutions’. 100 Month Club, Radio Regen,. Manchester. April 21.

E.5 Articles by and on the project in practitioner journals and the popular press

- COWI Baltic: presentation of the EU project CHANGING BEHAVIOUR via interview for the Newsletter of the Agency for International Science and Technology Development Programmes in Lithuania (www.tpa.lt), issue July, 2008.
- ECN (Mourik; Breukers; Feenstra; Backhaus). Energie besparen? Makkelijk gezegd. Changing Behaviour brengt gedrag in kaart. Gezond Bouwen en Wonen 2-2010, pp.40-41.
- ECN: Article in external newsletter ECN. Fairy-tales from energy-users difficult to replace
- ECN: Article in the Transition Network Netherlands Newsletter.
- ECN: Gedragstraining voor consumenten (behaviour training for consumers). Article on the project CHANGING BEHAVIOUR in the international Newsletter of ECN (March 2008). Also published on the website www.stroompunt.nl <http://www.ecn.nl/nl/nieuws/nieuwsbrief/maart-2008/changing-behavior>.
- ECN: Hoe verander je het gedrag van consumenten? (How do you change consumers behaviour?). Article about CHANGING BEHAVIOUR on the website of the Dutch Energy Council. <http://www.algemene-energieraad.nl/newsitem.asp?pageid=3086>.
- Ekodoma: Article in the magazine "Pārvaldnieks" (specialized magazine for Building management companies) “A Pilot project for building energy efficiency is being implemented in Cesis” March, 2009;
- Ekodoma: Article in the magazine “Pārvaldieks” (specialized magazine for Building management companies) “Information about workshop in Cesis” May, 2009;
- Ekodoma: interview in the newspaper “Druva” (local newspaper in Ceshiregioan), “Palīdzīprastsiltināšanaslietderību” (Help to understand the meaning of insulation) May, 2009.
- Enespa & NCRC: Omakotiasujille tarjolla kustannustehokkaita ratkaisuja hiilipäästöjen vähentämiseen (Cost-effective solutions for homeowners to reduce carbon emissions) Newspaper Vakka-Suomen Sanomat, December 17, 2009.
- Enespa (Jalas) and NCRC (Heiskanen) Käyttäjät kestävien innovaatioiden kehittäjinä. (Users as developers of sustainable innovations). Article for the textbook Yritysvastuu (Corporate Responsibility), forthcoming spring 2011, Helsinki, Gaudeamus.
- Enespa: Yhteisellä maalämmöllä säästää energiakuluihin (Common ground source heat to save energy costs). Newspaper Vakka-Suomen Sanomat, April 1, 2009
- GreenDependent (Antal, O., Vadovics, E.) Klímabarát háztartások. Útmutató családoknak. [Climate-friendly households. A Guidebook for Families]. GreenDependent, HU. 2010 Available from: <http://www.greendependent.org/KEOP/csaladi.pdf>
- GreenDependent (Vadovics, E.): Mi tesznek a gödöllői klíma-klubozók a szén-dioxid kibocsátás semlegesítése érdekében? [What do climate club members do to offset their carbon-dioxide emissions?] In: Gödöllői Hírek, XIV:10., Május 11., 2010.
- GreenDependent: Articles on Gödöllő Climate Club in Electronic media (examples).
- Heiskanen, E. (2009): Loppukuluttaja ohjaa tuotantoa (End-users steer production). Article in the Final Report of the Climbus Technology Programme. Helsinki: Tekes, spring 2009.

- Hodson, M., and Marvin, S., (2010): Making Low Carbon England and Wales, Town and Country Planning Association Review.
- Hodson, M., and Marvin, S., (2010): Urban Retrofit: From engineering projects to systemic transition, Town and Country Planning Association Review.
- Manchester: Knowledge Capital Ltd and Action for Sustainable Living: Energy Academy. Empowering communities to tackle climate change. July 2010.
- NCRC (Eva Heiskanen) Energiansäästön edistäminen: parhaat neuvot puntarissa (Promoting Energy Saving: Rating the best advice). *Ympäristö ja terveystieteet* 2010; 41 (1-2): 78-83.
- NCRC (Eva Heiskanen) 'Sticky information' holds up energy-efficient housing *Science for Environmental Policy* 22/4/10. DG Environment News Alert Service. Online at: http://ec.europa.eu/environment/integration/research/newsalert/archive/climate_change_10.htm
- NCRC (Eva Heiskanen). Eväät käyttötapojen remontiin (Advice for changing energy habits). *Motiva Xpress* 2010; (1): 12-13.
- NCRC (Heiskanen) Ympäristötietoisuuden kehittämisen uudet lähestymistavat. (New approaches to promoting environmental awareness). Forthcoming in the book *Ympäristötietoisuus (Environmental Awareness)*, forthcoming spring 2011, Demos Helsinki & Ministry of Environment.
- NCRC (Heiskanen, E.) Ethics in the retail trade. Interview for *Kuluttajalehti*, August 2010.
- NCRC (Heiskanen, E.) Finns are drowning in clutter. Interview for *Ylioppilaslehti*, Oct 15, 2010.
- NCRC (Heiskanen, E.) Sufficiency in consumption. Interview for *Tekniikan Näköalat* magazine, special issue on Resource Limits, Sept 17, 2010.
- NCRC: Aloituspotku (Kickoff). Article for the magazine *Euroopan Tiede ja Teknologia* 2/2008 (European Science and Technology) Published by Tekes, the Finnish Technology Agency.
- NCRC: article in the newspaper *Keskisuomalainen*, 9 August, 2008.
- NCRC: interview for the national daily *Helsingin Sanomat*, 11 October, 2008.
- NCRC: interviews for articles in *Tekniikan näköalat* (Views on Technology), 4/2008.
- NCRC: Ongoing Project Changing Behaviour: In ConriN Newsletter 4/2009.
- NCRC: Viikon kysymys: lemmikkien hiilijalanjälki (Question of the week: how to compensate for your pet's carbon footprint). *Kansan Uutiset*, Dec. 10, 2009.
- OEKO: Energy efficiency – yes but please how? 04/2008_eco@work
- SEI-T & EMÜ: Tiit Kallaste and Veljo Kimmel. Energiat säästes tulevikku (Looking for future with energy saving). *Keskkonnatehnika (Environmental Technology)* Nr 8, 2009.
- SEI-T (& EMÜ)? : Veljo Kimmel & Tiit Kallaste (2009) SEI-Tallinna europrojektide kogemused energia säästmisel (SEI-Tallinn's experience from EU granted projects on energy saving) TEUK XI (<http://www.emu.ee/495568>), Taastuvate energiaallikate uurimine ja kasutamine üheteistkümnenda konverentsi kogumik. Proceedings of Annual Conference on Energy Efficiency and RES wider promotion, pp. 22-32. Also, web-published; <http://www.emu.ee/orb.aw/class=file/action=preview/id=495580/TEUK+XI.Kimmel+%26+Kallaste+%5BCompatibility+Mode%5D.pdf>
- SEI-T: Veljo Kimmel & Tiit Kallaste (2009) SEI-Tallinna europrojektide kogemused energia säästmisel (SEI-Tallinn's experience from EU granted projects on energy saving) TEUK XI, Taastuvate energiaallikate uurimine ja kasutamine üheteistkümnenda konverentsi kogumik. Proceedings of Annual Conference on Energy Efficiency and RES wider promotion, pp. 22-32.
- SEI-Tallinn. Informational Bulletin/Leaflet on EU 7th FP project CHANGING BEHAVIOUR and EU IEE Programme project EnergyTrophy+ printed in 500 copies. Also, electronic version available on SEI-Tallinn web-site (<http://www.seit.ee/failid/490.pdf>).
- UAB "COWI Lietuva" (Eglė Jaraminienė, Natalija Siniak, Inga Valuntienė) Energijos vartojimo efektyvumo didinimas: sociologinio ir inžinerinio požiūrio sandūra (Increasing of energy efficiency: the junction of sociological and engineering approach). Pranešimas konferencijoje *Šilumos energetika ir technologijos-2010* (proceedings of the conference Heat energy and technologies-2010), Kaunas, February 5, 2010.

UAB COWI Lietuva: presentation on the web site of the North Town Technology Park, available on <http://www.smtp.lt/index.php?id=1113> (in Lithuanian)

<http://www.naturezone.hu/2010/01/25/klima-klub-godollon/>

<http://www.reginaprogram.hu/haz/node/195>

<http://www.reginakozpont.hu/haz/node/126>

<http://www.hedvig.hu/node/1612>

<http://www.hedvig.hu/esemeny/20100422/fold-napi-csaladi-akadalyverseny-godollon>

<http://www.hedvig.hu/esemeny/20100508/greendependent-egyesulet-szilvafak-es-karbon-labnyom>

E.6 Other

CHANGING BEHAVIOUR Newsletters 1/2008, 2/2008, 1/2009, 2/2009, 1/2010.

Film: CHANGING BEHAVIOUR goes Tallinn. 2008. Available on the CHANGING BEHAVIOUR website <http://www.energychange.info>.

Green Dependent Presentations about the Climate Club: GreenDependent started a nationwide project called “Large families – small footprint” in which GD experts train families on how to organize everyday life in a climate-friendly way and save energy (and money) at the same time. The example and case study of the Climate Club is used extensively

Green Dependent website (in Hungarian) with link to project site:

About the project: <http://www.greendependent.org/hu/projektek/futo/58-changing-behaviour-szokasaink-megvaltoztatasa.html>,

About the pilot project:

http://www.greendependent.org/index.php?option=com_content&view=category&layout=blog&id=44&Itemid=74&lang=hu.

Regular news items on the main page, with downloadable materials. For example:

http://www.greendependent.org/index.php?option=com_content&view=article&id=86%3Amegejelent-klima-hirleveluenk-6-szama-&catid=46%3Ahirlevelek&Itemid=75&lang=hu

Heiskanen, E. (2009): Suomalaisten energiakäyttäytymisen ja energiatehokkuuden sosiaalinen potentiaali (Energy behaviour of Finns and the social potential for energy efficiency). Annex 4 of the *Committee Report of the Energy Efficiency Committee*, Ministry of Employment and Economy, spring 2009.

Heiskanen, E. Member of the Working Group on an Architecture for Energy Advice, Finnish Innovation Fund (Sitra), spring 2009.

NCRC and Enespa Ltd. (with the Finnish Environment Institute, Carbon-Neutral Municipalities Project). Asiantuntijaseminaari Pientalojen energiaparannusten rahoitus (Expert seminar on financing energy improvements for detached houses), with 20 invited experts from ministries, finance and advice organisations. National Consumer Research Centre, Nov. 20, 2009.

Promotion of the Climate Club (the pilot project): **DM campaigns** with the help of our own printed “postcards” (see example in picture) on 3 occasions to cc. 50 postal addresses (+ cc. 200 electronic)

SEI-T (Tiit Kallaste –moderator of Nordic Council of Ministers Forum). Forum on *Use of bio-energy and opportunities for cooperation in the Nordic countries and Baltic States*.

20.Oct. 2009 in SOLARIS CENTRE, Tallinn. See also the Radio-interview [Estonia has a chance in investing in bioenergy](http://www.norden.ee/en/activities/nordic-forum/pf-2009/273-bioenergia-kasutamine-ja-koostoevoimalused-pohja-ja-baltimaades.html) at <http://www.norden.ee/en/activities/nordic-forum/pf-2009/273-bioenergia-kasutamine-ja-koostoevoimalused-pohja-ja-baltimaades.html>

VZ NRW: Internal presentation about main findings of the CHANGING BEHAVIOUR - project with emphasis on effective project setup (“activities to learn more about the target group”) for heads of unit and project manager of Verbraucherzentrale NRW aiming at transferring also to other topics than energy efficiency (e.g. nutrition, environmental affairs)

VZNRW: Together with OEKO invited more than 200 stakeholders from Germany to the Budapest workshop. This provided a unique opportunity to inform broadly about the project

an its objectives. Positive feedback gathered from about 10 stakeholders (beyond the workshop participants) who wish to keep informed about developments in the project.

Appendix F Detailed Toolkit dissemination activities of CHANGING BEHAVIOUR

General (coordinator): Europe	
<i>Target group description</i>	<i>Dissemination of MECHAnisms</i>
1. <i>CHANGING BEHAVIOUR Newsletter subscribers</i> (210)	Newsletter 2/2010 to be sent out on Dec. 7, with feature on MECHANisms + link and special feature in e-mail body
2. <i>Participants</i> of previous workshops in Tallinn, Budapest, Manchester, Athens & Dueseldorf (about 130)	E-mail update on MECHANisms on Dec. 7th
3. <i>MECHANisms LinkedIn group</i> (15 members on 16-12-2010)	Make Energy Change Happen LinkedIn group established end Oct. – new invited
4. <i>Users of Wikipedia</i>	Adding some text and the link to the MECHANisms Toolkit in items related to demand side management, behavioural change, etc.

NCRC: Finland	
<i>Target group description</i>	<i>Dissemination of MECHAnisms</i>
1. <i>Creative Sustainability</i> is a programme for students at the Aalto University providing education on sustainability issues to engineering, business and design students	Presented, with demonstration of selected tools, at course Sustainable Design, Aalto School of Art and Design, November 9, 2010
2. <i>National network for consumer energy advice</i> –common network meetings for local energy advice providers (local energy agencies, NGOs, local authorities).	Short demonstration for nation-wide network of energy advisors (local energy agencies, energy utilities, NGOs, government bodies) at Annual Consumer Energy Advice Event, Nov. 18, 2010 (85 people present). E-mail follow-up to selected participants.
3. <i>SAVE Energy</i> Finnish network coordinated by GreenNet Finland joins the forces of various parties working to reduce energy consumption in buildings: schools, municipalities etc.	Presented, with demonstration of selected tools, to SAVE Energy workshop participants (about 30 people present) at seminar on November 30, 2010
4. <i>Eco-support network</i> is a network of volunteers nominated by municipalities to promote energy and environmental improvement at workplaces. There are eco-support persons in each municipal workplace (e.g. hospitals, schools, youth centres, daycare centres). They have already shown lots of interest in MECHANisms at numerous occasions.	Toolkit presented at annual nation-wide eco-support network event, October 6, 2010. Eco-support network people present at the national energy advice network + the SAVE Energy event. Reminder about MECHANisms sent by e-mail to coordinator Marika Visakova & Helsinki coordinator Silja Sarkkinen, Dec. 1, 2010.
5. <i>EnR European Energy Network</i> is a European network of national energy agencies and similar bodies. It has a working group on Energy Related Behaviour Change with 22 partners.	Irmeli Mikkonen from Motiva, chair of the Energy Related Behaviour Change group, kindly promised to e-mail all group members with a small information letter and the MECHANisms flyer (Dec. 1, 2010)
6. <i>Motiva Xpress</i> is the quarterly magazine of Motiva, the Finnish “energy agency”, with a circulation of 7 000 subscribers.	Small news item on MECHANisms to appear in Motiva Xpress 4/2010.
7. <i>Maunula ET</i> is a programme to promote energy efficiency in a part of Helsinki, Maunula, by a local facility management company.	MECHANisms to be disseminated at Maunula ET meeting, December 13, 2010

NCRC is on the advisory board and has given presentations at meetings for residents.	
8. <i>WWF Green Office</i> staff wanted to join the Toolkit Clinic but couldn't, so it was agreed to organise a separate training event for them	Still in planning, but discussed with Green Office CEO Helka Julkunen – specific date to be set in December

ECN: the Netherlands	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>National Ministry of VROM</i> (Housing, Spatial Planning and Environment) is developing a nationwide programme to reduce the energy use in households via an approach on 'neighbourhood-level' ('blok voor blok').	<p>Presentation at a meeting with policymakers working in department 'energy in the build environment'.</p> <p>Presentation and discussion via Policy Board meeting and bilateral contact with Marcel Tijs (working in the department of 'energy in the build environment')</p>
2. <i>Agency NL</i> (a department of the national Ministry of Economic Affairs) is currently developing a guideline/handbook for municipalities to reduce energy use in households via behavioural changes (mainly curtailment behaviour).	<ul style="list-style-type: none"> Presented and discussed at meeting with representatives of Agency NL developing the handbook for municipalities. Review of the handbook for municipalities based on MECHANisms Toolkit content. Demonstration of MECHANisms planned in January 2011 for developers of "favourable approaches for energysavings" as a start for cooperation.
3. <i>SEV</i> (Housing Experiencing Steering Group) started recently a nation wide innovative programme (Energiesprong) to push the market of energy efficiency in the build environment	Presentation and demonstration (twice) of the Toolkit to employees of SEV. Currently bilateral discussions about future cooperation and use of the MECHANisms Toolkit in the Energiesprong-programme.
4. <i>Maastricht Green Office</i> is a sustainable campus initiative organizing several activities to promote sustainability within the different faculties of Maastricht University and among students	<p>Email contact with coordinator Green Office. He forwarded link to 20 international participants of the Oikos Winterschool.</p> <p>When website of initiative is set up, a link to the Mechanism Toolkit will be added.</p> <p>Possible cooperation in future activities of the Initiative</p>
5. <i>Readers of digital ECN-newsletter</i> (Dutch version (Nov 2010) distributed to 2,000 people in the Netherlands (http://www.ecn.nl/nl/nieuws/newsletter-nl/2010/november-2010/make-it-happen-leidraad-voor-gedagsverandering/)). English version (Dec 2010) distributed to 1,000 people in Europe	<p>An article about the MECHANism Toolkit including links to the Toolkit and the Changing Behaviour websites.</p> <p>Some reactions from new potential users received on this publication with which bilateral contact is now set up.</p>
6. <i>800 'Transition professionals'</i> in the Netherlands working in the field of transition who receive the 'transition newsletter'.	Article about MECHANisms Toolkit including link to the website published in Transition newsletter
7. <i>Dutch intermediary organisations, policy-makers and researchers</i> working in the field of behavioural change	Plan to hire an intern to develop a detailed communication plan and organize an event and other dissemination activities to promote the Toolkit among intermediaries, policy-makers and other researchers
8. <i>Readers of (online) newsletters and magazines</i> in the Netherlands	Investigation of existing newsletters and magazines existing which might be interested to publish an article, column or note on the MECHANisms Toolkit
9. <i>50 colleagues</i> at Policy Studies department of	Demonstration of the MECHANisms Toolkit in

ECN	two lunchcolloquia for colleagues working at energy related issues at the Policy Studies department of ECN in December 2010 and January 2011.
10.13 individuals in the Netherlands working in the field of demand side management with which we have been in contact during the Changing Behaviour project.	A letter about the Toolkit together with calendar sent in December 2010 by regular mail.

SURF: UK	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>UK Environment Agency</i> is a Non-departmental Public Body responsible to the Secretary of State for Environment, Food and Rural Affairs and an Assembly Sponsored Public Body responsible to the National Assembly for Wales. Its principal aims are to protect and improve the environment, and to promote sustainable development.	These five organisations are all leaders in their fields – utilities, local authorities, government agencies and consultants. Senior management in these organisations are also active members of SURF’s advisory board. The MECHANisms Toolkit was introduced to senior management in each of these five organisations through a personal letter explaining the context of MECHANisms’s development and a link to access it.
2. <i>Tameside MBC</i> is a local authority in Greater Manchester	
3. <i>United Utilities</i> owns and operates the water network in north west England. The company supplies 2,000 million litres of water every day via a network of over 42,000 kilometres of water mains, over 1,400 kilometres of aqueduct and 100 water treatment works. It covers a population approaching seven million people and 3.2 million households and business premises.	
4. <i>AGMA</i> is the Association of Greater Manchester Authorities is the voice of the ten local authorities of Greater Manchester and works in partnership with a wide range of organisations both private, public and voluntary within the city-region and beyond.	
5. <i>Jacobs</i> is an engineering management consultants who, among other things, manage projects relating to sustainable design and environmental management.	

OEKO: Germany	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>Hessen energy agency</i>	Email with description, flyer and link to Toolkit sent on December 15
2. <i>German federal energy agency DENA</i>	Email with description, flyer and link to Toolkit sent on December 15
3. <i>German Alliance of Climate Active Cities,</i>	Email with description, flyer and link to Toolkit sent on December 15
4. <i>CO2 online network</i> – energy advice given at different levels, certifies energy advisors Engineering firms doing groundwork and engaged in planning on the local level	Email with description, flyer and link to Toolkit sent on December 15
5. <i>Federal Environmental Protection Agency UBA</i>	Email with description, flyer and link to Toolkit sent on December 15. Toolkit announce-

	ment might be included in the agency's newsletter.
6. <i>Engineering firms</i> doing groundwork and engaged in planning on the local level	Email with description, flyer and link to Toolkit sent on December 15
7. <i>Employees of Oeko-Institut and other readers of eco@work</i>	Toolkit will be featured in the newsletter 01/2011 of the institute.

CEU: Hungary	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>Levegő Munkacsoport</i> (Clean Air Action Group), one of the most known NGOs in Hungary	Email with description and link to the Toolkit sent on November 22
2. <i>Védegylet</i> (a fast-growing environmental NGO in Hungary)	Email with description and link to the Toolkit sent on November 22
3. <i>KÖVET-INEM Hungária</i> (an association and NGO that promotes environmentally aware management)	Email with description and link to the Toolkit sent on November 22
4. <i>Magyar Energia Hivatal</i> (Hungarian Energy Office), a national public administration body in the energy sector	Email with description and link to the Toolkit sent on November 22
5. <i>EnergiaKlub</i> (a well-known NGO in the field of energy and energy efficiency)	Email with description and link to the Toolkit sent on November 22
6. <i>D.V.D Ltd.</i> (a private company that implements energy efficiency, renovation, renewable energy projects in Hungary)	Email with description and link to the Toolkit sent on November 22
7. <i>Center for Climate change and Sustainable Energy Policy</i> (3CSEP)	Will be featured in the news and/or links section of the website http://3csep.ceu.hu/
8. <i>Department of Environmental Sciences and Policy</i> , CEU	The Toolkit is featured since December 5 on the Departmental website in the news section: http://www.envsci.ceu.hu/news/2010-12-05/mechanisms-is-launched

SEI-T: Estonia	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. Communication manager in the <i>Ministry of Economy and communication</i> , head of units in energy department	Presentation on Changing Behaviour project and Toolkit. Leaflets and Estonian version of the calendar of MECHANism have been disseminated. Dec. 2010.
2. Communication manager <i>Ministry of Environment</i> , Department of Technology.	Presentation on Changing Behaviour project and TOOLKIT have been performed, leaflets and Estonian version of the calendar of MECHANism disseminated. Dec. 2010.
3. <i>Staff of KredeX</i> – dealing with energy efficiency (The head of the unit of energy efficiency was present at Toolkit Clinic).	Hands-on training on the use of MECHANisms on the 17 th of Dec. 2010. Dissemination of flyers and Estonian version of the calendar.
4. <i>Staff of the department of Thermal engineering of Kena</i> (Climate & Energy Agency under KREDEX)	Hands-on training of the researchers on the use of MECHANisms Dec. 2010. Dissemination of flyers and Estonian version of the calendar.
5. Researchers of the <i>Department of Thermal engineering at the Technical University</i> (The leading researcher on energy efficiency was present at Toolkit Clinic) ECO association – and other active organisations	Hands-on training on the use of MECHANisms 20 Dec. 2010. Dissemination of flyers and Estonian version of the calendar.
6. Visitors of <i>website of ECO</i> (10 environmental	Dissemination of the Toolkit website. Decem-

NGOs in Estonia).	ber 2010.
7. <i>Employees of the Natural History Museum in Tallinn</i>	Hands-on training on the use of the Toolkit. Dissemination of flyers and Estonian version of the calendar. 17 Dec 2010
8. <i>Participants of the national Energy Saving Week 2010 (Week 45)</i>	Dissemination of the Estonian version of the Toolkit calendar
9. <i>Participants seminar of the Tartu Region Energy Agency</i>	Introduction to the project and hands-on demo of Toolkit.
10. <i>Energy experts, university researchers, students, enthusiasts of RES, business representatives, etc. present at the Republican conference on Renewable energy TEUK XII, Tartu 11th Nov 2010.</i>	T.Kallaste. Energiatarbija käitumise mõjutamine säästlikkuse suunas. (Impact on energy consumers habits towards saving). (web-published). Dissemination of Estonian version of the calendar. The main organizer of conference, University of Life Sciences in Tartu might want to develop the TOOLKIT further). Dissemination of flyers at congress sessions
11. <i>Energy experts, physicists, climate experts, environmentalists, ESCO representatives, grid managers, energy planners, building experts, etc present at various side events of the COP 16 in Cancun, including:</i> a. the Latin American Congress of Biotechnology. 4 th --8 th of Dec 2010. b. REEEP Energy Efficiency Coalition panel event "Energy Efficiency buildings: the no-brainer for mitigating climate change". On 6 th of Dec.2010. c. a International Emissions Trading Association and REEEP Energy Efficiency Coalition side event t COP 16 in Cancun: "Finance to push forward clean technology: a forum for business and policymakers". On 7 th of Dec. 2010. d. "A Smart grid is green grid: why a smart grid and its "negawatts" are needed to achieve climate goals". Side event at COP 16 in Cancun. On 1 st of Dec. 2010.	Dissemination of the leaflet to congress participants on various side-events (seminars). Presentation on Changing Behaviour project. Presentation of Toolkit at SEI stand no 183. 30 th of Nov.—8. Dec.2010. A Short comment on Toolkit and dissemination of flyers at session.

COWI Lietuva: Lithuania	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>Employees of the Vilnius Gediminas technical university Faculty of Environmental Engineering Department of Building Energetics deals with energy efficiency projects.</i>	Promotional material disseminated on November, 2010.
2. <i>State enterprise Energy Agency deals with drafting the National Energy Strategy, other programs regarding the improvement of efficient use of energy resources and energy and use of local, renewable and waste energy resources; organisation of their implementation, updating and revision; preparation of legal, economic and organisational energy efficiency measures for implementation of the national policy</i>	Personal visit was made to the director of the Energy Agency and promotional material delivered on hand, in order to be spread among the workers of the Energy agency (about 24 persons) on November, 2010.
3. <i>Ministry of Transport and Communications</i>	Personal visit was made to the Heads of the

<i>Transport Environment Division and European Union Affairs Division deals with energy efficiency projects in transport sector.</i>	Transport Environment Division and European Union Affairs Division and promotional material delivered on hand, in order to be spread among the workers of the divisions (about 10 persons) on November, 2010
<ul style="list-style-type: none"> 4. <i>Ministry of Energy</i> 5. <i>Ministry of Finance</i> 6. <i>Ministry of National Defence</i> 7. <i>Ministry of Culture</i> 8. <i>Ministry of Social Security and Labour</i> 9. <i>Ministry of Transport and Communications</i> 10. <i>Ministry of Health</i> 11. <i>Ministry of Education and Science</i> 12. <i>Ministry of Justice</i> 13. <i>Ministry of Foreign Affairs</i> 14. <i>Ministry of Economy</i> 15. <i>Ministry of the Interior</i> 16. <i>Ministry of Agriculture</i> 	Calendar presented to all ministries (except Ministry of Environment) vice-ministers, responsible for the relations with the EU, participating in the regular meeting on 14/12/2010
17. <i>Lithuanian Business Support Agency</i> deals with management and administration of financial assistance to energy efficiency projects by the European Union Structural Funds and National Support Programme.	Promotional material disseminated on December, 2010. It was suggested about to place the link to Toolkit on Agency's web page www.lvpa.lt .
18. <i>COWI Lietuva</i> web site www.cowi.lt (in Lithuanian)	Article about changing behavior project and Make Energy Change Happen Toolkit presented on the web page on December 2010
19. <i>COWI Intranet</i>	Article about changing behavior project and Make Energy Change Happen Toolkit presented on the web page on December 2010. More than 2000 readers – COWI employees word-wide
20. <i>North town technology park</i>	Make Energy Change Happen Toolkit presented via e-mails to all tenants of the Northtown technology park buildings (up to 350 persons). personal presentation to management of the Northtown technology park on December 2010

ENESPA: Finland	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. <i>Key persons of Carbon-Neutral Municipalities</i> , a project led by the Finnish Environment Centre. The target is to reduce emissions of 5 municipalities faster than the state-level schedule.	Has been presented to the key persons of the project. This project has co-operated with the Changing Behaviour project.
2. Policy maker at <i>Ministry of Employment & Economy</i>	Toolkit disseminated to Pentti Puhakka, working with e.g. energy saving measures of detached houses
3. Managers at <i>Finnish Association for Nature Conservation</i>	Toolkit disseminated to Riku Eskelinen and Teemu Kettunen, Eco-Energy managers
4. <i>Helsingin Energia</i> (utility that must do something, promote energy savings)	Toolkit disseminated to Helsinki City Environment Centre, with which we have had plans to have a project to promote energy saving
5. An energy saving advisor at Jyväskylä, local energy company, providing heat and electric-	Toolkit disseminated to Kai Tamppinen,

ity	
6. Energy advisor at <i>the Energy Centre of Central Finland</i> which gives impartial advice to consumers, SMEs etc.	Toolkit disseminated to Lauri Penttinen, an energy advisor
7. Professor at <i>Lappeenranta University of Technology</i>	Toolkit disseminated to Jero Ahola, professor, teaching e.g. energy saving techniques. He might offer MECHansims as study material for students of energy engineering

M:KC: UK	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. Members of the <i>Northwest Climate Change Partnership</i>	<ul style="list-style-type: none"> • Presentation to NWCCP on 29.11.10 • Email to c.40 energy sector organisations throughout the Northwest Region of the UK
2. 100 <i>Local, National & EU Partners</i>	Email to energy sector organisations throughout Greater Manchester, UK and wider EU
3. 10 <i>Members of M:KC Board</i>	The board members received information on the MECHANisms Toolkit in late November 2010
4. Recipients of the <i>MIMP ebulletin</i> (6,000)	Article on MECHANisms in eBulletin to be sent in early 2011
5. 3 <i>Local Changing Behaviour Partners</i>	Presentation and email to Trafford Council, EST local, AsF who actively promote to community groups
6. <i>Behaviour Change Policy Unit "Nudge unit"</i>	Emails to Number 10 Policy Unit and Richard Thayer – Nudge Theorist
7. Several hundreds of readers of <i>The Northwest in Brussels eNewsletter</i>	Article on MECHANisms in edition of December 2010
8. Contact point and sub-group of <i>Greater Manchester Low-Carbon Economic Area for the Built Environment</i>	<ul style="list-style-type: none"> • Email to primary contact point • Presentation and active input to domestic retrofit Behaviour Change sub-group

GreenDependent: Hungary	
<i>Target group description</i>	<i>Dissemination of MECHANisms</i>
1. GreenDependent has a nation-wide project ("Small footprint" targeting households) in the frame of which <i>climate coordinators</i> (i.e. people organizing local climate clubs and low-carbon events) are trained and a guide-book for climate coordinators is written and printed.	The MECHANisms Toolkit was introduced at the training as well as in the publication (available online in electronic format and printed in 150 copies)
2. Readers of the <i>Small Footprint newsletter</i> of GreenDependent (1,000 Recipients - but it is also available for download on the Small footprint project website)	Introduce the MECHANisms Toolkit in an article
3. <i>NCP FP7 Energy</i> expressed interest in Changing Behaviour and the MECHANisms Toolkit	GreenDependent presented it to other researchers and policymakers at a knowledge exchange event to about 20-25 people in 2009 when the Toolkit was not ready. These people are contacted again in 2010 once the Toolkit is ready.
4. MECHANisms Toolkit is recommended to the <i>Development Directorate of the Ministry of Environment and Water</i>	The Toolkit is recommended to people working in the department responsible for managing sustainable lifestyle behaviour change campaigns in the framework of the Environ-

<i>vironment.</i>	Einārs Cilinskis from Climate Policy and Technology Department, responsible about Climate Change Financial Instrument (KPMF) funds. He expressed interest to receive information about results achieved.
<i>Baltic Environmental Forum, called "BEF"</i> The BEF was founded by the Baltic Ministries of Environment, Germany and the European Commission as a technical assistance project aiming at strengthening the co-operation among the Baltic environmental authorities.	Information was disseminated via e-mail and then by phone. MECHANISMS Toolkit and other findings of CHANGING BEHAVIOUR. Representative Irina Aļeksejeva, junior environmental expert, dealing with energy related projects like "Using ecological construction materials in new, energy efficient buildings in the Baltic States".
4. <i>Riga Technical university, Institute of energy systems and environment.</i> Scientific research and study programs for bachelor, master, and Phd program students in environment engineering.	Toolkit demonstration and information about project (06.12.2010). Meeting with researchers and PhD students in university. Possible result implementation in Energy management course for bachelor students.
5. <i>Latvian energy auditor association. Association</i> Association of energy auditors.	Toolkit presentation to energy auditors Natalija Beļska and Gatis Žogla, board member and chairman of the board. (16.11.2010)
6. <i>10 colleagues at Ekodoma</i>	Demonstration of the MECHANISMS Toolkit and demonstration. Discussion about possible implementation in our other projects, pilot project result evaluation. During company meeting, 01.11.2010.

VZ-NRW: Germany	
<i>Target group description</i>	<i>Dissemination of MECHANISMS</i>
1. <i>Colleagues at VZ-NRW</i>	Workshop to introduce MECHANISMS in own organisation (energy but also advice on other topics like nutrition)
2. <i>85 member organisations</i> (including various consumer associations) and stakeholders	<ul style="list-style-type: none"> • Letter with calendar sent including invitation for a Toolkit presentation in Düsseldorf on the 08.04.2011 • Article in newspaper for the member organisation of all consumer associations

CRES: Greece	
<i>Target group description</i>	<i>Dissemination of MECHANISMS</i>
1. <i>Co-workers at CRES</i>	Dissemination to many other departments in CRES (building, marketing)
2. <i>Participants local seminar</i> , part of effort to create a Greek sustainability building sector.	CRES coordinates this cluster and will disseminate MECHANISMS at a local seminar with those actors through an appropriate presentation
3. Policy makers of <i>Ministry of Environment, Energy & Climate Change</i>	Send policy recommendations when defined
4. <i>Participants of 3rd International trade for Passive House and Urban Area "Building Green expo"</i> , 10-13 Dec 2010, Expo Athens Centre, Anthousa, Athens	Distribution of flyers
5. <i>ENERMED project partners: LAORE SARDEGNA, E-Zavod – Institute for Comprehensive Development Solutions, Georama, Scuola Superiore Sant'Anna, PACA Region,</i>	Dissemination in parallel with the project meeting (16 & 17 December 2010 in Marseille, France) ()

Region of Crete, Ayuntamiento de La Pobla de Vallbona, Ayuntamiento de Benissa, Energy Institute Hrvoje Pozar	
6. <i>MedStrategy project partners</i> : Intermunicipal Consortium “Tindari-Nebrody”, National Association of Sicilian Municipalities, Municipality N. Kazantzakis, Province of Teruel, Pembroke Local Council, Foundation for Social Development, Region of Sicily – Tourism Department, Province of Messina – Department of Territorial Policies, Infrastructures Planning, Parks and Natural Reserves, Civil Protection, Local Council Association of Malta, Environment Department of the Regional Government of Aragon, Region of Crete	Dissemination in parallel with the project meeting (14-17 December 2010 in Pembroke, Malta)
7. Readers of <i>Low Carbon Societies Network Newsletter</i> of December 2010 and/or visitors of their website	Short article on MECHANisms