



IEA Technology Collaboration
Programme on Demand Side
Management Technologies and
Programmes

Fourty Nineth Executive Committee Meeting
Pre-Meeting Document (PMD) – Part 1

11 – 12 May, 2017
Dublin, Ireland



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MATTERS FOR THE EXECUTIVE COMMITTEE

<p>Proposal Task 17 - Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages – Phase 4 – responsive prosumer networks.</p> <ul style="list-style-type: none">➤ Approve the Proposal for Phase 4
<p>Concept paper: How to ‘do’ behaviour change in DSM. The A to Z of behaviour change</p> <ul style="list-style-type: none">➤ Approve the Concept Paper
<p>Task 16 – Phase 4 – Innovative Energy Services – Life-Cycle cost; ‘Deep Retrofit’; Simplifies M&V; (Crowd)-Financing & Energy Services Taxonomy</p> <ul style="list-style-type: none">➤ Approve the Task Status Report➤ Provide guidance on future work after June 2018, if desired by ExCo
<p>Task 25 – Business Models for a More Effective Market Uptake of DSM Energy Services</p> <ul style="list-style-type: none">➤ Approve the Task Status Report➤ Reaction to new work proposed for Phase 2 and expression of interest
<p>Task 24 – Behaviour Change in DSM: Helping the Behaviour Changers – Phase 2</p> <ul style="list-style-type: none">➤ Approve the Task Status Report
<p>Programme Visibility Report</p> <ul style="list-style-type: none">➤ Approve the Status Report
<p>DSM University</p> <ul style="list-style-type: none">➤ Approve the Status Report
<p>Task Zero</p> <ul style="list-style-type: none">➤ The ExCo is invited to approve the Task ZERO report to deal with the common obligations and discuss how performance could be improved in terms of both finance, visibility, importance and concern for participants as well as outreach to new partners.
<p>PMD Part 2: Financial Report 2016</p> <ul style="list-style-type: none">➤ Approve the financial report 2016

AGENDA

IEA Demand-Side Management Energy Technology Initiative
Forty Ninth Executive Committee Meeting
10 – 12 May, 2017, Dublin, Ireland

Wednesday 10 May

09:00 – 17:00

DSM DAY

Location to be determined

18:00 – 20:00

Operating Agents Meeting – venue TBD
Visibility Committee Meeting – venue TBD

Thursday 11 May

9:00 – 17:00

Executive Committee meeting

Hilton Hotel
Charlemont Place
Dublin 2

Friday 12 May

9:00 – 14:00

Venue:

Hilton Hotel
Charlemont Hotel
Dublin 2

09:00 – 10:00

1. GENERAL BUSINESS/WELCOME

1a. Welcome – Rob Kool

1b. ExCo approval of the Agenda

DOC A

1c. ExCo approval of the Forty Eighth ExCo meeting Minutes – Brussels, Belgium

Distributed earlier

1d. Status of the Implementing Agreement

1e. IEA Relations

- Secretariat news

DOC B

- Specific note from the IEA Energy Efficiency Division

DOC C

- Contacts with possible sponsors/new participants

- *Rob Kool*

- IA relations, BCG and ECG, – *Rob Kool*

- Report from the Project Preparatory Committee (PPC)

Rob Kool

- Operating Agents meeting report – *Rob Kool*

10:00 – 10:30

Coffee break

10:30 – 12:30

2. NEW WORK

2a. Proposal: Task 17 Phase 4 – Responsive prosumer networks DOC D
- *René Kamphuis, TNO, the Netherlands*

2b. How to 'do' behaviour change in DSM – The A to Z model of behaviour change – *Sea Rotmann, New Zealand, Beth Karlin, USA* DOC E

2c. Big Data

The proposed New Tasks discussion will aim at one of the following decisions:

1. Decide to initiate the new Task based on work done to date.
2. Decide to initiate the Task Definition for a new Task. Interested countries must be prepared to assign the appropriate expert(s) to participate in that process.
3. Decide that additional work is needed on the concept paper. Interested countries must be prepared themselves, or to assign the appropriate Experts to help further develop the concept.
4. Decide to pursue the subject in co-operation with other parties within the IEA or elsewhere
5. Rejection (or moth-balling)

12:30 – 13:30

Lunch

3. CURRENT TASKS – LOAD LEVEL CLUSTER

13:30 – 14:00

3a. Task 16 – Phase 4 – Innovative Energy Services Life-Cycle Costing; ‘Deep Retrofit’; Simplified M&V; Crowd-Financing & Energy Services Taxonomy
– Task Status Report
– *Jan W. Bleyl, EnergeticSolutions, Austria*

DOC F

14:00 – 14:30

3b. Task 25 Business models for a more effective market uptake of DSM energy services. Task Status Report –
– *Ruth Mourik & renske Bouwknegt, DuneWorks, the Netherlands*

DOC G

14:30 – 15:00

Coffe break

4. CURRENT TASKS – LOAD SHAPE CLUSTER

15:00 – 15:30

4a. Task 24 Closing the Loop – Behaviour Change in DSM: Helping the Behaviour Changers – Phase II. Task Status Report
– *Sea Rotmann, SEA - Sustainable Energy Advice, New Zealand*

DOC H

15:30 – 16:00

5. PROGRAMME VISIBILITY

5a. Programme Visibility Report *Sea Rotmann*
– *Sea Rotmann*

DOC I

16:00 – 16:30

5b. Development of the DSM University
– *Hans Nilsson*

DOC J

16:30 – 18:00

6. ADMINISTRATIVE MATTERS

6a. Task Zero, status report

DOC K

6b. Financial Report 2016 – *Andreas K. Enge*
Accountax Status Report
Status of Common Fund payments

PMD Part 2

6c. Decision on plans for the Fiftieth (October 2017) and Fifty First (April 2018) ExCo meeting



19:00 Hosted Dinner

Friday 12 May

09:00 – 10:00 **7. PRESENTATIONS:** by ExCo members and Observers

10:00 – 10:30 Coffee break

10:30 – 12.30 **8. DISCUSSION:** Strategy of the IEA DSM TCP

12:30 – 13:30 Lunch

APPENDIX TO THE AGENDA “Issues for the decisions and the process to reach decisions”

The delegates are URGED to prepare their responses to presentations carefully and primarily by contacting possible stakeholders before the meeting. The format for these proposed New Tasks will be a brief presentation that focuses on the:

- Motivation for the proposed work (what issues does it tackle?) what is it trying to achieve? Who is the target audience?;
- Objectives;
- Approach to accomplishing the proposed work;
- Expectations/Results and Deliverables
- Dissemination plan – what will need to be done to get the results adopted? Who will do it?
- Required resources

Concept and Task Definition Papers (Process and phases)

Before a new Task is starting the concept has to be defined and presented in order to attain the interest of possible participants.

PHASE 1: IDENTIFY NEW ACTIVITIES

Resulting in a CONCEPT PAPER (2-5 pages) containing

- Motivation
- Objectives
- Approach
- Expectations/Results

PHASE 2: DEFINE NEW ACTIVITIES

Requiring an EXPERTS MEETING to propose

Table 1. Task Work Plan Resource needs: Task or cost sharing

Table 2. Dissemination, Task Information Plan

CONTENTS OF PROPOSALS FOR NEW WORK

The document that will propose the new work to the Executive Committee could be organized and have the

Following contents:

1. Background and motivation
 2. Objectives
 3. Issues for the new work (scope)
 4. Structure (sub-tasks)
 5. Management (responsibilities of the Operating Agent, Subtask leaders and Experts)
 6. Deliverables (for whom, target groups)
 7. Time Schedule and milestones
 8. Funding and Commitments (Resources needed)
 9. Meetings plan
 10. Information activities
 11. Co-operation with other IA's, the Secretariat and other interested parties
 12. Country contributions to funding and Tasks
- Annexes: Detailed description of Subtask

REPORT FROM THE IEA SECRETARIAT

1. IEA Secretariat

Accelerating and broadening outreach

A priority of the IEA is to strengthen and accelerate co-operation with non-member countries (partner countries). Chile and Mexico are Accession countries (in the process of becoming members of the IEA).



Association countries deepen the partnership between the IEA and these countries for a more sustainable and secure energy future. The Association programme provides a platform for the IEA to engage more extensively with partner countries including on energy security, energy data and statistics, and energy policy analysis. It also enables partner countries to participate in a variety of activities, including IEA committees, and training and capacity-building activities. There are now six Association countries: China, India, Indonesia, Morocco, Thailand, and Singapore.

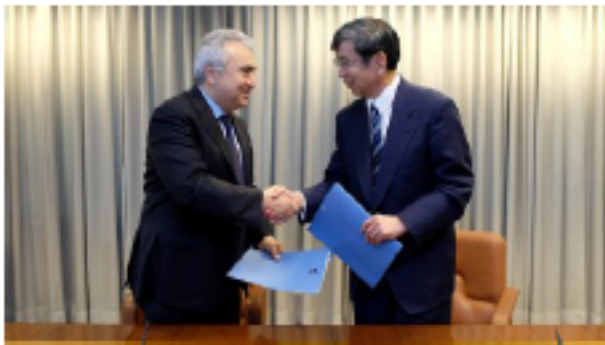
Examples of strengthened co-operation include an Indonesian Ministerial-level event (<https://www.iea.org/newsroom/news/2016/february/co-host-iaa-helps-open-bali-forum-with-launch-of-centre-of-excellence-for-clean-energy.html>) held February 2016, which opened the way to creation of an Indonesian Centre of Excellence. Six TCPs contributed to an expert level workshop “Bridging the Gap, Promoting Global Partnership”. The IEA and China have launched the process of establishing a joint energy centre in Beijing and have deepened ties with an extensive three-year work programme (<https://www.iea.org/newsroom/news/2017/february/iea-and-china-deepen-ties-with-extensive-three-year-work-programme.html>).

The Clean Energy Ministerial (CEM) is now hosted at the IEA. “Having the CEM Secretariat within the IEA will enable us to coordinate our efforts to accelerate clean energy technology and work even more closely with countries beyond our current membership,” announced the IEA executive director, Fatih Birol. The CEM members that are not members of the IEA are: Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa and the United Arab Emirates. The 2017 CEM Ministerial will be held in Beijing, China. See information on the can be found at: www.cleanenergyministerial.org/

The IEA is also seeking enhanced engagement with Mission Innovation. Launched at COP21, Mission Innovation (<https://www.iea.org/newsroom/news/2016/july/mission-innovation-a->

[global-partnership-that-seeks-to-accelerate-clean-energy-innovation.html](#)) is a global initiative of 22 countries and the European Union to dramatically accelerate global clean energy innovation. Members pledge to double their R&D in energy technology over five years while encouraging greater levels of private sector investment in transformative clean energy technologies. Mission Innovation has defined seven Challenges: Smart Grids, Off-Grid Access to Electricity, Carbon Capture, Sustainable Biofuels, Converting Sunlight, Clean Energy Materials, and Affordable Heating and Cooling of Buildings.

This year's **World Energy Outlook** (<https://www.iea.org/workshops/world-energy-outlook-2017-high-level-workshop-on-energy-and-development.html>) will focus on energy and development. A high-level workshop was held to discuss the key issues linked to energy poverty, strategies for the goal of energy for all by 2030, the role of centralised vs. decentralised energy, economic growth and broader implications of achieving universal TCP forum: www.iea.org/tcp/forum username Forum password network access to modern energy in terms of the nexus between energy, development, water and climate. For more information on the WEO, see www.worldenergyoutlook.org/



The IEA and the **Asian Development Bank** have committed to step up co-operation by formalizing an agreement through a memorandum of understanding. The IEA and the ADB will expand cooperation on energy technology assessments, energy data and statistics, energy efficiency, supply, demand and investment modelling, renewable energy deployment, and energy security analysis.

2. Committee on energy research and technology

IEA Medium-term Strategy for Energy Research and Technology 2018-2022

After consultation with the Working Parties, the CERT is scheduled to approve the final draft of the IEA Medium-term Strategy for Energy Research and Technology 2018-2022 at its meeting 14-15 June 2017 in view of a review by the Governing Board later this year.

Universal meeting of TCPs

It is anticipated that a universal meeting of all TCPs will be held during October 2017. Once the date has been set, TCPs will be invited to attend.

Mission Innovation

The CERT February 2017 workshop was an opportunity to bring together leaders of two of the Mission Innovation Challenges, Affordable Heating and Cooling and Smart Grids. Ten TCPs shared their perspectives on these topics, the first in a series of workshops designed to bring together leads of Mission Innovation Challenges and TCPs.

Linking renewable energy and energy efficiency

Each June, the CERT organises a joint workshop with the Standing Group on Long-term Co-operation (SLT). The SLT is supported by the Energy Efficiency Working Party (EEWP) which focuses on energy efficiency policies. The 20 June 2017 CERT-SLT workshop will focus on two themes: Integrating High Shares of Variable Renewables and Integrating renewable energy and energy efficiency policies. Relevant TCPs will be contacted to contribute as the agenda takes shape.

New Technology Collaboration Programme C3E

In March 2017 the Governing Board approved creation of a new TCP, the Implementing Agreement for a Technology Collaboration Programme on Clean Energy Education and Empowerment (C3E TCP).

Communication Framework

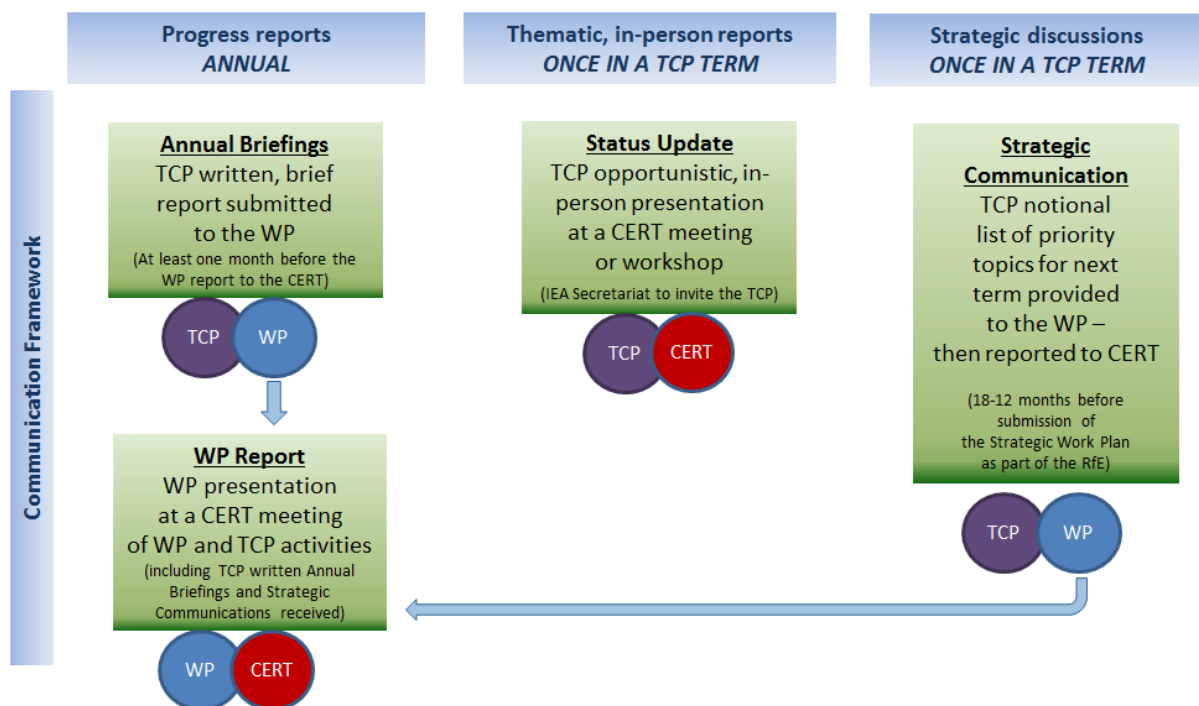
Adopted by the CERT in February 2016 as a companion to the request for extension process, the aims of the **Communications Framework (CF)** are to:

TCP forum: www.iea.org/tcp/forum username Forum password network

- Enhance communication between the CERT, WPs and the TCPs
- Provide opportunity for discussions of TCP strategies
- Strengthen the role of the Working Parties (WPs)

The CF consists of four parts:

- TCP annual written briefings to the relevant Working Party (Annual Briefing)
- TCP in-person oral report to the CERT meetings or workshops (Status Update)
- TCP strategic communication with the CERT through the Working Party (Strategic Communication)
- Working Party periodic oral report to the CERT (Working Party Report)



The CF is applicable on a voluntary/trial basis from March 2016-May 2017. In June 2017 the CERT will discuss any feedback from the WPs and if necessary, may agree further modifications, after which the revised CF will be fully applicable. The list of end-use TCPs and reports under the CF are listed below.

	Beginning of current term	Status Update presented	Strategic Communications due by	Strategic Communications presented	End-of-term
WORKING PARTY ON ENERGY END-USE TECHNOLOGIES (EUWP)					
AMT TCP	01-Mar-13	–	Sep2016-Feb2017	–	28-Feb-18
HPT TCP	01-Mar-13	Feb2016, Feb2017	Sep2016-Feb2017	–	28-Feb-18
4E TCP	01-Mar-14	Feb2017	Sep2017-Feb2018		28-Feb-19
AFC TCP	01-Mar-14		Sep2017-Feb2018		28-Feb-19
DSM TCP	01-Mar-14	Feb2017	Sep2017-Feb2018		28-Feb-19
EBC TCP	01-Mar-14	Feb2017	Sep2017-Feb2018		28-Feb-19
Combustion TCP	01-Mar-17	Feb2016, Feb2017	Sep2015-Feb2016		28-Feb-19
AMF TCP	01-Mar-15		Sep2018-Feb2019		28-Feb-20
HEV TCP	01-Mar-15	Feb2017	Sep2018-Feb2019		28-Feb-20
DHC TCP	01-Mar-16	Feb2017	Sep2019-Feb2020		28-Feb-21
ECES TCP	01-Mar-16	Feb2017	Sep2019-Feb2020		28-Feb-21
HTS TCP	01-Mar-16		Sep2019-Feb2020		28-Feb-21
IETS TCP	01-Mar-16		Sep2019-Feb2020		28-Feb-21
ISGAN TCP	01-Mar-17	Feb2016, Feb2017	Sep2020-Feb2021		28-Feb-22

Notes: Grey text indicates a Status Update during the previous term. A dash indicates that the Strategic Communication was not required as the Communications Framework was not yet required of all TCPs.

If you have any comments (or questions) on the CF please contact your EUWP Vice-Chair or Carrie.pottinger@iea.org.

3. Working parties

Increasing co-operative activities between TCPs

The recent workshops of the Buildings Coordination Group (BCG) and the Working Party on Energy-End-Use Technologies (EUWP) provided excellent opportunities for TCPs to share gaps, barriers and challenges together. The EUWP workshop (<https://www.iea.org/workshops/gaps-and-barriers-for-technology-development--deployment---a-view-from-the-tcps.html>), the first where all end-use TCPs participated, described a number of gaps and barriers:

- Some are of technical nature and can be addressed in future Annexes or Tasks within the different TCPs.
- Others relate to policy, infrastructure investment and challenges of human behaviour. In these cases decision makers might be supported by findings from TCPs. Policy briefs and/or policy papers were identified as one instrument to further develop this.
- A number of issues discussed are related to the integration of different systems and sectors. It was suggested to organise more cross-cutting work between TCPs to address this problem.
- Nearly all TCPs identified very practical management issues such as timely communication between TCPs, organising joint work between TCPs, targeting IEA partner countries etc.

The recent workshop Scaling-up renewables through decentralised energy solutions (<http://www.iea.org/workshops/scaling-up-renewables-through-decentralised--energy-solutions-.html>)

was organised by the **Working Party on Renewable Energy Technologies (REWP)** with participation of selected end-use TCPs. The workshop report is available here (<http://www.iea.org/media/workshops/2017/rewpworkshop2017/Summary.pdf>).

The annual **Energy Efficiency Week** provides an opportunity for the EUWP, **Energy Efficiency Working Party (EEWP)** and the International Partnership for Energy Efficient Co-operation (IPEEC) (<https://ipeec.org>) to share information and identify areas for co-operation. The next EE week is scheduled for September 2017.

To further facilitate co-operation, the list of upcoming TCP ExCo meetings may be viewed on the Forum here (TCP forum: www.iea.org/tcp/forum username Forum password network

4. Technology Collaboration Programmes

Results of the TCP Survey

Thank you once again for your contribution to this effort, which resulted in a record 90% response rate. The elicited views on four focus areas:

1. Opportunities for growth
2. Engagement with Partner countries (PCs)
3. Training and capacity building
4. Co-operation with multilateral entities (MEs)

Opportunities for growth: This section provided an opportunity for TCPs to offer candid, qualitative responses. As illustrated below, one size does not fit all among TCPs (scope, membership, management, and funding).

Questions and cross-section of responses

Q: How could recent developments provide growth opportunities for your TCP and expanded its impact (the Paris Agreement, the UN Sustainable Development Goals, and Mission Innovation)?

- All these initiatives provide justification for countries to continue to participate. There could be a more explicit linkage between high-level policy aspirations and our detailed policy work on energy efficiency. (4E TCP)
- The nationally determined contributions provide an opportunity to expand the visibility and impact of hybrid and electric vehicles. (HEV TCP)
- The MI Challenge “Affordable heating and Cooling of Buildings” will provide a much-needed focus on heat energy which is missing from many country’s priorities for renewable energy supply. (SHC TCP)

Q: Are you facing any challenges, barriers, or limits to achieving your full growth potential and impact?

- Limited national budgets are making it more challenging for members to engage with the full spectrum of activities in our work programme. (Bioenergy TCP)
- Interest in our TCP remains high with one new member each year. The challenge is keeping pace with technology developments. (PVPS TCP)
- A barrier is translating R&D findings into suitable language for policy and decision makers, while retaining the essential meaning. (EBC TCP)

Q: Are there any other opportunities your TCP would like to explore (not mentioned in other sections)?

- We will conduct a survey on how we can improve. (DSM TCP)

Q: How can the IEA Secretariat and the CERT facilitate your TCP in taking full advantage of these growth opportunities?

- The IEA and the CERT could assist in promoting the activities of the TCP to both IEA members and in particular to the new Association countries. (GHG TCP)
- The IEA and the CERT could facilitate contacts and coordination among TCPs to promote a more integrated vision. (ISGAN TCP)

Engagement with Partner countries: Overall, IEA and TCP priorities match – current and potential participations. Among the TCPs with partner countries participating, there seemed to be clear added value and active contributions. China was by far in the lead in terms of current participations (19 TCPs) and among the top-ranking priority country for further membership. Brazil, India and South Africa also ranked highly in terms of TCPs seeking their membership. The renewable TCPs had the most PC participations (OES, PVPS, and SolarPACES TCPs). Some TCPs also mentioned IEA member countries as a priority - in particular Turkey.

Industry engagement: Only 11 TCPs have formal Sponsors from industry, through 23 TCPs have some form of industry co-operation, either through workshops/conferences or informally. Ten TCPs have no involvement, preferring to remain independent from commercial interests, or because industry is not relevant to the scope of the TCP (i.e. fusion). Looking to the near- or mid-term, 22 TCPs plan to increase industry participation, co-operation or relevance in their work.

Training and capacity building: Most TCP ongoing activities are available for free and/or accessible to all. Some TCP activities are particularly well-suited to IEA training programmes (webinars, ‘academies’, tools, guidebooks, awards, and summer schools modules). Top examples include the DSM University, the ISGAN Academy, the GHG summer school, and the ETSAP trainings. Some 59% of TCPs with training activities were in favour of having them posted on the IEA website.

Co-operation with multilateral entities: This area showed the most surprising results, with TCPs co-operating with 72 distinct MEs worldwide (sharing information, participating in respective events, relationship building/networking and joint projects), and are seeking co-operation with a further 23.

The survey results were provided to each of the Working Parties, including charts and graphs and actionable next steps. For more information, contact Carrie.pottinger@iea.org.

Best practice

Does your TCP have any best practice to share? Looking for ideas? The Best Practice section on the Forum covers Management, Raising awareness, Funding mechanisms, Membership, Annual reports, and Requests for extension.

TCP webinars now posted on the IEA WEBSITE

(<http://www.iea.org/openbulletin/tcpwebinars/>)

Be sure to send your webinar announcements and URLs of past webinars to

Diana.Louis@iea.org

Frequently asked questions

The short FAQ brochure on TCPs (http://www.iea.org/media/impag/FAQs_new.pdf) provides an overview of the IEA and TCPs. It is designed to support your efforts to reach out to new members. It may be posted on your TCP website (ExCo, annex/task, workshop, conference), sent to potential partners via email, or printed to hand out during TCP-sponsored workshops or conferences.

Rebranding of implementing agreements as technology collaboration programmes – frequently asked questions

The Branding FAQ (<http://www.iea.org/media/protected/iaforum/TCPnamesFAQFINAL.pdf>) posted on the Forum answers the following questions:

- Why has the term ‘Technology Collaboration Programme (TCP)’ been introduced?
- Does the term ‘Implementing Agreement’ still exist?
- Do we need to update the name and/or references in our legal text?
- When will the term TCP be used?
- Should we use ‘TCP’ in our own communication efforts?
- How can we implement the term TCP with our current title?
- Why is there a short name and an acronym?
- Will there be a new logo for the TCPs?
- Should we still use a disclaimer to explain our relationship to the IEA?
- Will we be receiving additional guidance on implementing the TCP name and brand?

Tips for communicating

In this era of information overload communicating quickly – and effectively – is more important than ever. The short presentation Tips for Communicating (<http://www.iea.org/media/protected/iaforum/Tipsforcommunication.pdf>) provides concrete examples of how to prioritise the information presented, synthesise key messages and to use the right social media depending on the goals you want to achieve. If you have any questions do not hesitate to contact Carrie.pottinger@iea.org

Possible spam alert - web domain names

Several TCPs have recently been contacted by Chinese “web registry offices” (www.cnweb-registry.org; www.chinaregistry.net) regarding the purchase of web domain names in China. The e-mails received often propose domain names which contain all or part of the TCP’s existing web address, indicate that another entity is looking to register the domain name and ask you to provide further information about your activities.

It is unusual to be contacted in this way by a registry office and a number of online resources question the authenticity of such requests, providing example e-mails which are very similar to the ones received by TCPs to date. Unless you have reason to believe that the request is genuine and/or unless the proposed domain name is critical for your operations, the best course of action may be to ignore any such requests.

If you have additional questions, please do not hesitate to contact Rachael.briggs@iea.org

SPECIFIC NOTE FROM THE IEA ENERGY EFFICIENCY DIVISION

We are pleased to have published an insights paper, commissioned by G7 Energy Ministers, that presents a global overview of market-based instruments (MBIs) for energy efficiency, such as auctions, energy efficiency obligations on utilities and white certificate programmes. Our grateful thanks go to everybody who contributed to the study that can be found at: <https://www.iea.org/publications/insights/insightpublications/market-based-instruments-for-energy-efficiency.html>

We are hosting a Ministerial level conference on energy efficiency on 29 June that will be opened by the President of the UN General Assembly, HE Peter Thompson. We have two ministers and several CEOs confirmed. If TCP member would like to suggest relevant high-level delegates from their governments or business connections they would be very welcome to send them to Paola (on copy). (save the date attached)

From 6th to 8th June Mel Slade will be at the Asia Clean Energy Forum. On the 6th we are co-hosting a deep dive workshop on high efficiency NDCs and Mel is also co-chairing the energy efficiency track throughout ACEF. If any members of the TCP are able to attend to share their wisdom they would be very welcome.

And last but by no means least, building on the success of our Paris events in 2015 and 2016, we are delivering four energy efficiency in emerging economies training weeks this year: 12 to 16 June, Paris; 3 to 7 July Singapore; 16 to 20 October, Georgia; and November, Brazil. These events, aimed at the next generation of energy efficiency policy makers, are helping build the global community of practice on energy efficiency. We would appreciate members of the TCP sharing information about the events with their networks. More information can be found at: <https://www.iea.org/topics/energyefficiency/e4/e4trainingweeks/> or through contacting Lucy Lucy.SHEDDEN@iea.org

Many thanks for giving us the opportunity to share.

All the very best for a fruitful meeting.

Melanie Slade/IEA

DSM TASK 17 Integration of Demand Side Management, Energy Efficiency, Distributed Generation and Storage – Phase 4 – *Responsive prosumer networks*

Author: René Kamphuis (TNO, the Netherlands)
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1. Introduction

Phase 3 of Task 17, regarding applying DG-RES, DR and storage in electricity grids, came with a set of conclusions and recommendations [1]. These pertain to new business models and roles of actors in a re-regulated electricity value chain, new tariff structures and transaction mechanisms and new ICT technology options, that facilitate user and actor awareness of energy and electricity use.

The Paris treaty regarding reducing worldwide emission of greenhouse gases has accelerated the energy transition. The transition follows the “trias energetica” with first an increase of energy efficiency, moving to renewable generation and reducing emission for fossil fuels as the third option. The energy transition is also reflected by the European commission in November 2016 leading to the “winter package” of recommendations and directives for energy [2]. The window of opportunity for applying smaller scale resources (from the small commercial and end-customer segment) in the energy system can be seen to become wider in the near future although the existing grid accommodation capacity in some areas reaches its limit. Traditional retail and commercial consumers are in an evolution process to ‘prosumers’ and traditional electricity commodity retailers have to provide additional services in new business models to survive.

Phases 1-3 of Task 17 have collected a valuable amount of information on technologies important for the current energy transition. Key energy transition components as demand response, distributed generation and storage technologies have been extensively analyzed and assessed from a technological perspective as well as from the perspective of operational or commercial electricity market usage in the grid. Cost/benefit models have been analyzed in several national contexts. However in all phases, it also was observed, only a part of the technical and economic potential can be uncovered. An acceleration is desired in line with the points addressed in the conclusion as to uncovering the full potential of demand side flexibility.

In the past five years Smart Cities concepts have been attributed a key role bringing together information and communication technology, urban planning and operation, optimization of



energy and E-mobility related applications like comfort and energy management in buildings and mobility [3], [4]. Information and communication technologies increase aggregation possibilities and low-cost of IoT connected devices increase integration and valuation of the energy process information in the total system. On international and national levels, research programs have been defined and the first pilot projects already have been concluded. This development fits in key concepts in further uncovering the individual flexibility potential and to more powerful aggregation mechanisms and energy consumption/generation process integration levels, that can be validated and verified in the same way as large production facilities and or industrial DR resources.

Phase 4 in Task 17 builds further on the conclusions and recommendations of the previous phases and places them in an extended network perspective viz.

- The electricity system operational and commercial market network context.
- The community aggregation and ICT network context
- The prosumer/supplier/buyer transaction network context

In this project, valuation of aggregation mechanisms of small and intermediate scale PV systems, electric vehicles, electric and heat storage systems, heat pumps, micro-CHP in combination with energy management systems and first and second generation smart meters for implementing new transaction and tariff models will be assessed. Besides, the existing experience base of conducted and ongoing pilot projects which combine these aspects will be extended and analyzed. The application and realization of finalized projects in participating countries with respect to the specific regional differences and requirements are placed in focus.

2. Phase 4

2.1 Scope

The October 2016 ExCo-meeting strategic discussion in the DSM-program did yield a clear requirement for an interdisciplinary approach between technological and behavioral scientists in an innovation eco-system context. Task 17 Phase 4 will try to follow this in the DSM-program portfolio by considering three aspects:

- Responsive. Responsive here reflects pro-activity and reactivity of the technological end-nodes but also of the (aggregated) users in providing responsiveness to different types of stakeholder requests in the energy commercial system and physical infrastructure.
- Prosumer. Prosumer, here, reflects part of the energy transition viz. the increased and, from a grid stability perspective, possibly disruptive production capabilities of small dispersed producers and also the increasing use of the electricity grid due to the increased electrification with HVAC (heat pumps) and electric mobility (EVs).
- Networks. The scope of networks considers the role of the physical grid, the aggregator and the, mostly rural, community/smart city dimension.

2.2 Task subdivision

The following subtasks further structure the activities to handle this emerging DG-RES and demand side challenge:

Subtask 14: Context analysis, use cases and SmartCity pilot positioning

Subtask 15: Metering, monitoring and coordination methods required to increase prosumer responsiveness

Subtask 16: Coupling to innovative user feedback, billing and transactive energy schemes

Subtask 17: Conclusions and recommendations

Country Experts input:

Country experts are requested to provide specific information about ongoing country specific developments related to the objectives in each individual subtask. Furthermore they aid in organizing national workshops to inform stakeholders as to the progress of the project and the findings. Country expert activity is estimated to be 200-300 hrs for the 2-year duration of the project.

Operating Agent activities:

The operating agent organizes the events, structures the discussion and analyses the country specific inputs. Deliverable outlines and an overarching and detailed storyline is set. Contributions of participating countries are joined into a consistent package with conclusions and recommendations. After the first and second year international dissemination meetings will be organized, if possible aligned to conferences in the field. Participant country specific activities will also be supported.

3. Phase 4 Subtasks

3.1.1 Subtask 14 – Context analysis, use cases and Smart City pilots positioning

In modern societies, digitalization of all kinds of processes takes place at an increasing pace. This also holds for the electricity sector. Commercial value creation can be achieved with an increasing penetration level of small-scale energy monitoring. Also at the management and control level, using connectivity of customers to the mainstream internet, possibilities increase. Communicating, smart, meters generate power and energy measurements with 10 second and 15 minute resolution, that can be used for local and global commercial optimization. The potential of this metering infrastructure is only partially used.

Instrumentation of MV-(Medium Voltage) grids allows more granular grid operation, based more and more on near real-time monitoring of data originating from lower voltage levels in the grid. To keep the electricity grid stable and allowing higher DG penetration levels, traditional SCADA (Supervisory Control and Data Acquisition) systems used for monitoring and control in DSO (Distribution System Operator) control centers are gradually extending their scope from the primary substation level (serving some 50000 customers) to the secondary substation level (1000 customers) and even the LV-transformer level (50 customers).

A key role in this transition is attributed to electricity flexibility and flexibility aggregation. ICT enables flexible aggregation topologies. Apart from self-consumption as an option, aggregation, in this sense, may be done (simultaneously) on the locational level, confined to a certain area, or on the global level, sharing certain optimization objectives like commercial portfolio optimization in the market or pairing renewable production and consumption in communities.

These technologies cannot be massively rolled out in one step. Pilot tests with Virtual Power Plants (VPPs), originally started 10-15 years ago within contexts of up to 50 to 100 customers. Scaling up at this moment takes place especially in Smart City contexts with support from EU research programs and national initiatives.

Detailed objectives:

- Define the existing context, common practices and state-of-the-art in the sector as-a-whole and on a per-country basis
- Analyze and refine the role and level of aggregator and aggregation in common use cases
- Derive the energy transition and Smart City context based on the EU and individual country perspective

Deliverables:

IEA-DSM-17.4.14: “Context analysis, flexibility aggregation and Smart City initiatives”

The Operating Agent number of person hours is estimated to be 320 hrs.

3.1.2 Subtask 15 – Metering, monitoring and coordination methods required to increase prosumer responsiveness

An important conclusion of the work in Task 17 phase 3 was, that end-user tariff components only have a distant link to the impact of the consumption and production of electricity of the electricity system as a whole. The electricity market cost mapping mostly is calculated from synthetic profiles derived from a averaged set of electricity consumers or producers. In this way, end-user demand response actions, that generate flexibility, cannot be rewarded on an individual basis. Reconciliation using real measured profiles, based on the smart meter readings, makes it possible to map this price component more precisely on the actual power profile of the customer. In a number of countries, experiences with these types of reconciliation already exist.

For the transport and distribution components of the end-user electricity price also a similar mapping mismatch of real cost to tariffs occurs. Asset recovery based tariffs like connection capacity fees are common. Also tariffs, based on the maximum capacity used in a certain period, also hardly form a suitable component for rewarding end-user demand response. Distribution grids, previously having a one-design-fits-all-principle, with the current increased electrification of energy streams, are becoming more-and-more diverse. Functionality ranges from extended residential areas with high penetration of heat pumps to cities with large capacity requirements for (fast) charging of EVs. These changes require distribution tariffs with better opportunities to reward “grid-friendly” user behavior.

A third electricity price component is government energy taxes and subsidies. Several tax levying and subsidy schemes exist on the electricity commodity. At some occasions renewable in-feed comes to saturation limits. On the market level, subsidized priority in-feed of wind energy can lead to lower day-ahead prices that reduce the allocated amount of low-CO₂ fossil generators, Also, curtailment schemes for PV, needed for grid stability, are complex to implement due to loss of accompanying subsidies. In some cases this component has a different and even opposite effect in achieving the original, desired target.

A considerable part of the increase of flexibility delivery will take place via automated controls operated via “soft” coordination algorithms and techniques (e.g. openADR) also establishing and maintain the virtual power plant connections. The interaction of these information architectures with possible tariff scheme component modifications has to be determined and evaluated.

Detailed objectives:

- Develop view on how to come to a better mapping of commercial tariffs on DR and DG customer behavior
- Make inventory on current and future distribution grid asset management, operation modes and associated tariff scheme components
- Develop view on possible new tax and subsidy schemes
- Assess the relation to already existing and future automated control schemes

Deliverables:

IEA-DSM-17.4.15: “Metering, monitoring and coordination methods required to increase prosumer responsiveness”

The Operating Agent number of person hours is estimated to be 250 hrs.

3.1.3 Subtask 16 – Coupling to innovative user feedback, billing and transactive energy schemes

In the small commercial and end customer energy sector, depending on the volumes, financial transactions and accounting take place with monthly or in most cases yearly intervals. This creates a large feedback time. Currently, energy management apps on smart phones, in combination with smart meters allow instant, day-to-day feedback on energy usage. Currently these systems do not allow transforming this information into financial transactions. The Gridwise alliance, a consortium of energy service providers and technology developers in the US, has defined a transactive energy framework, that aims to split large overall transactions between stakeholders in commercial and grid operation into micro-transactions. The scheme enables multiple parallel transactions between actors in the electricity system to reconcile portfolio and grid management operations and services. In the Netherlands, the USEF (the Universal Smart Energy business Framework) consortium was designed a reference implementation, that is currently tested in the field. In this task this translation, paralleling transaction schemes in the B2B-sector, are inventoried and assessed.

Detailed objectives:

- Make an inventory of existing feedback, reconciliation and billing systems for electricity
- Assess a number of pilots, that have been implemented on micro-transaction based approaches
- Develop common view on feedback and billing innovation

Deliverables:

IEA-DSM-17.4.16: “Innovative user feedback, billing and transaction schemes”

The Operating Agent number of person hours is estimated to be 250 hrs.

3.1.4 Subtask 17 – Conclusions and Recommendations

Conclusions and recommendations will be arrived at in close interaction with the experts’ opinions and will at least provide a ranking based on impacts, costs and likely future penetration of suggested frameworks.

Deliverables:

IEA-DSM-17.4.17: “Conclusions and recommendations realizing responsive prosumer networks”

The Operating Agent number of person hours is estimated to be 200 hrs.

4. Collaborations and Dissemination

Collaboration with internal and external activities in the field will be continued.

4.1 IEEE-Standards Association, IEC and Cenelec

OAs currently are within the IEEE- IEC- and Cenelec Standards Association Industry Connections.

4.2 ISGAN

There are good connections to ISGAN as one of the task 17 phase 3 OAs is the Austrian representative for ISGAN in related fields.

4.3 National Stakeholder Groups

An essential pre-requisite is national dissemination of project results. Per participating organization stakeholders resonance platforms are active checked upon.

4.4 Other IEA-DSM Tasks

Task 16 Innovative energy services

Task 23 The Role of Customers in Delivering Effective Smart Grids

Task 24 Closing the Loop – Behaviour Change in DSM: from theory to policies and practice

Task 25 Business models for a more effective market

5 Time schedule, budget and resources

IEA-DSM TASK 17 - Phase 4	Q3 17	Q4 17	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Subtasks								
Subtask 14 - Context								
Subtask 15 - Metering, monitoring and billing								
Subtask 16- Billing and transactive								
Subtasks 17 - Conclusion and recommendations								
Expert meetings								
Biannual country expert meeting								
Workshops								
Workshops with stakeholders and experts								
Reports								
Subtasks reports								
Final report								

The estimated budget and resources needed are summarized below.

Management and feedback on OA-activities

	OA/hrs
Operating Agent bi-annual meetings with country experts	40
ExCo-meetings bi-annual	20
Number of occurrences	5
Travel and subsistence (800 Euro per meeting)	7200

Operating agent (cost shared)

OA-Activity	OA/hrs
Subtask 3.14	320
Subtask 3.15	250
Subtask 3.16	250
Subtask 3.17	200
Sum (hrs):	1020 + 325
Travel and subs.:	7200

The efforts for the operating agents are travel costs and personnel costs / resources necessary for editing and analyzing country specific inputs for the reports. Total cost of phase 4 is in the order of 160 k€ and will be covered by task fees per participating country. As in other tasks in the annex, the task fee is defined by the number of participants and a measure of the size of the electricity system of the country. It is assumed that the minimum number of participating parties is 5.

With an increase of the number of countries, some extra coordination overhead is included.

Total operating agent costs per country				
Number of countries	5	6	7	8
Costs per country	32k€	30k€	27k€	24k€



6. References

[1] “Task 17 – Integration of Demand Side Management, Energy Efficiency, Distributed Generation and Renewable Energy Sources.” [Online]. Available: <http://www.ieadsm.org/task/task-17-integration-of-demand-side-management/>. [Accessed: 31-Aug-2016].

[2] European commission, “Commission proposes new rules for consumer centred clean energy transition,” 30-Nov-2016. <http://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>

[3] “Digital single market”. <https://ec.europa.eu/digital-single-market/en/smart-cities>

[4] Amsterdam municipality, “Smart cities”. <https://amsterdamsmartcity.com/map>

CONCEPT PAPER: HOW TO 'DO' BEHAVIOUR CHANGE IN DSM. THE A TO Z OF BEHAVIOUR CHANGE

1. Background and motivation

This concept paper follows on from the 6 years of work of IEA DSM Task 24, drawing on the many insights, tools and recommendations to date. Task 24 is called *Behaviour Change in DSM* and was initiated in early 2012. Phase 1, called *Closing the loop: from theory to practice*¹ was finalised in April 2015. Phase 2, called *Helping the Behaviour Changers*² will finish in April 2018. It was the first global research Task focusing solely on demand-side management through behaviour and has received large-scale support from 300+ behaviour change experts in government, research, industry and the third and service sectors in 20+ countries. Their support has included participation in Task 24 workshops, co-authoring conference and peer-reviewed publications, supporting National Experts with report-writing or case study analyses, networking, peer review and subject expertise in almost every sector, discipline or energy behaviour imaginable. This concept paper outlines the natural progression of the important work the DSM TCP, and the IEA, should do in providing international guidelines and tools, tailored to national and multi-national sectors and behavioural problems.

The overarching goal of this Task is to “*provide a helicopter overview of best practice approaches to behaviour change interventions and practical, tailored guidelines and tools of how to best design, implement, evaluate and disseminate them in real life*”. In Rotmann (2017, *forthcoming in Energy Research and Social Science*), the Task is visually described as a “multi-tool of energy behaviour change”.

In addition to its global expert network, the Task has a wide-ranging, multi-stakeholder audience, which includes so-called ‘Behaviour Changers’ from government (*Decisionmakers*), industry (*Providers*), research (*Experts*), the third (*Conscience*) and the service sectors (*Middle Actors*). The term *Behaviour Changers* is used to denote those that can affect the conditions for energy saving and efficiency behaviours in energy *End Users*. They each play an important role, but none of them can create systemic change in isolation. They are interdependent on one another and they also operate in different contexts confronted with political, financial and social pressures. Their mandates may be insufficient to affect large-scale behaviour change, or in direct conflict to it. Complex problems that include technical, organisational, social and behavioural dimensions ask for collectively addressing the challenges. To be able to do so successfully and to enable shared learning, a trusted *Facilitator* and ‘translator’ is crucial. Task 24 takes on this role.

2. Objectives

Our objective is to clearly outline the next steps that need to be taken to make ‘Behaviour Change in DSM’ truly work in real life. This will focus on tools developed by Task 24 in Phases 1 and 2 and will also incorporate and extend a framework for research-based behaviour change programmes developed by our project partners, the SEE Change Institute³. The outcome will be

¹ www.ieadsm.org/task/task-24-phase-1/

² www.ieadsm.org/task/task-24-phase-2/

³ <http://www.seechangeinstitute.com/>

a clear process of how to 'do' behaviour change research in real life, tailored to the needs of different countries, non-state actors from different sectors and different *End User* behaviours.

We also propose a different model of funding to what we have previously known in the DSM Programme. This is meant to:

- reduce the pressure on individual countries having to provide all the funding and expert capability to support the Task,
- enable all DSM countries and partners to participate in this important research, and
- stimulate non-state actor engagement in this crucial next step of field research and trialling of real-life pilots.

It has become clear in Phase 2 of Task 24 that the most relevant *Behaviour Changers* to successfully conduct participatory field research trials are not found on the state level but in the non-state sector. They have the finances, motivation, leadership buy-in and fewer political pressures compared with e.g. some of our governmental ExCo members. The ExCo will still be the overarching steering committee of the research, but instead of focusing on only a few financially-participating countries, the whole ExCo will play an important function and role in steering the work.

3. Scope

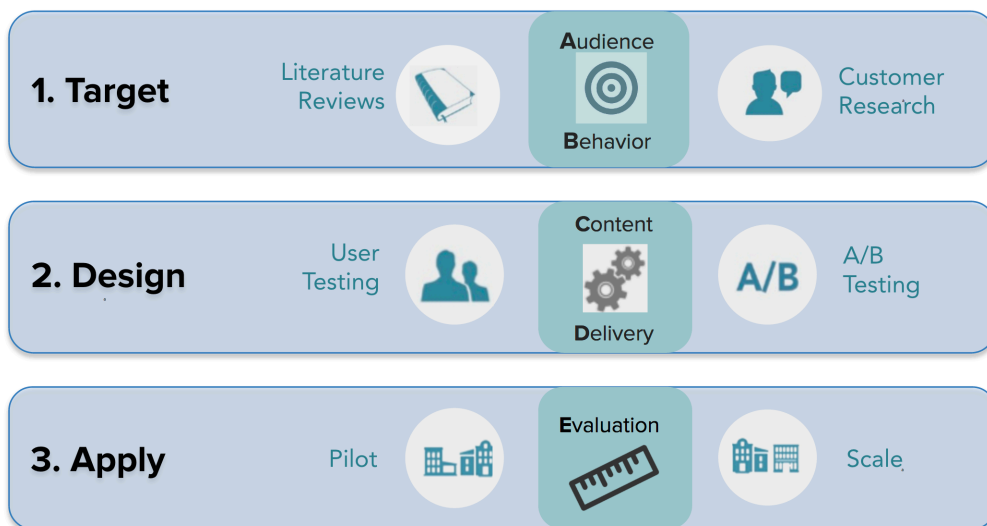
Due to its diverse audience drawn from multiple sectors, disciplines and domains, the Task has continued to walk the tightrope of being practical and understandable by a highly variable audience whilst also having academic validity. The tools and reports that were developed for this Task thus had to incorporate the following criteria:

- Relevance to *Decisionmakers* in government agencies, energy agencies and policymakers on the international, national, and local level;
- Broad appeal to a *global audience* spanning largely OECD countries and including developed and developing countries from northern and southern hemispheres, from 5 continents;
- *Country-context* specific, as it informed how tools were tailored and recommendations were provided. This included cross-cultural comparisons in several reports;
- *Multiple sectors* as target audiences for case studies and pilots in Task 24. They spanned a variety of sectors including *hospitals* (US and Canada); *DSOs* (NL and NZ); *the residential sector* (SE, NL, NZ, IT, US, AT, IE); *transport* (SE); *higher education* (NL) and the *legislative sector* (AT);
- *Four domains* to collect all case studies and pilots from: *transport*, *small to medium enterprises (SMEs)*, *building retrofits* and *smart technology/feedback*;
- *Models and theories* from all research disciplines studying behaviour change in energy. Analysis was grouped into 3 main disciplinary approaches: *psychology*, *economics* and *sociology*;
- Inclusion of creative, entertaining and engaging features and *storytelling* as the overarching 'language'.

It should be clear from this list of criteria that Task 24 had an almost impossible mandate, yet feedback to date (including continued funding from countries and non-state actors, new experts joining the expert network, being invited to become technical steering committee and panel members of key behaviour and energy efficiency conferences and co-editing a special issue in *Energy Research and Social Science*, among others) has suggested that the Task has managed to achieve this feat. It has become a global voice for *Behaviour Changers* and shown the importance of taking a whole-system, collaborative approach to behaviour change. That is why this important work should continue, preferably under the IEA (DSM) banner, to ensure its global applicability and roll-out.

The See Change Institute (SCI) Process blends insights and best practices from behavioural science, human-centered design, and community-based social marketing to optimise how we solve problems. It is a comprehensive yet straightforward approach that identifies key issues at both the applied (implementer) and empirical (researcher) sides of a project, as well as identifying the outputs that should result at each step. At the highest level, the SCI Process answers the *Why, How, and What* of a proposed solution(s) through a series of implementation (Define, Design, Deploy) and research (Observe, Test, Evaluate) steps. Task 24 tools provide the additional steps of answering the *Who, So What and Now What* using the tested *collective impact approach* and facilitation of multi-stakeholder collaborations in real-life issues that demand better behavioural interventions. SCI has [recently undertaken a landscape analysis](#) for PG&E, a large Californian utility (Karlin et al, 2017). In it, they coded programmes along 5 key characteristics referred to as *the ABCDE model* (Audience, Behaviour, Content, Delivery and Evaluation).

The participatory action research that is proposed to be conducted here, will combine the Task 24 tools and the *ABCDE model* and apply them to real-life DSM problems in a variety of countries, sectors, and behaviours. We will create an overarching international standard of how to ‘do’ behaviour change in practice by showcasing how it is ‘done’ in (best) practice. Hence, we call this the *A to Z (model) of behaviour change*.



4. Structure of Subtasks

Subtask 1 – International Expert Platform (continuing from Task 24 ST5)

Subtask 2 – The Who (Behaviour Changer Framework and Collective Impact Approach; continuing from Task 24 ST7 & 8)

Subtask 3 – The Why (Define audience and behaviour, observe theory of change, deliver problem and mission statements; SCI Phase 1 and Task 24 ST6)

Subtask 4 – The How (Design content and delivery, test internal validity, create optimised design and working pilot/prototype, SCI Phase 2 and Task 24 ST11)

Subtask 5 – The What (Deploy and evaluate, test external validity and multiple benefits, launch and reiterate programme, SCI Phase 3 and Task 24 ST7 and 9)

Subtask 6 – The So What (Develop full process of A-Z of behaviour change, tailored to different sectors, stakeholders and behaviours, Task 24 ST 8)

Subtask 7 – The Now What (Overarching summary and future research, continuing from ST10).

5. Management

The proposed management of this work is by keeping the Task 24 Operating Agent, Dr Sea Rotmann (SEA Ltd, NZ) as the main contact with the IEA DSM ExCo. The SEE Change Institute, led by CEO Dr Beth Karlin will be a close project partner, conducting the *ABCDE model* and analysis. Other project partners, like Duneworks and highly-engaged Task 24 experts, will continue to be part of this work on a per-need (based on the country, sector and/or expertise needed) basis.

6. Deliverables

Subtask	Deliverable	Deliverable Name	Deliverable Type
1	D1	Social Meeting Place for Behaviour Changers	Online platform
2	D2	The Who - Behaviour Changers	Database
3	D3	The Why – Problem & Mission Statements, ToC	Report
4	D4	The How – Optimised design/pilot	Roadmap
5	D5	The What – Evaluation beyond kWh & energy	Metrics, Analysis
6	D6	The So What – A to Z of Behaviour Change	Online Guidebook
7	D7	The Now What – Summary and next steps	Report

7. Time Schedule and milestones

This work can be ongoing but it is planned to last at least 2 years from January 2018 to December 2019. Main milestones will be to:


- Find at least 3-5 non-state actors participating in action research pilots that will be fully, independently funded
- Develop roadmaps for each pilot research study
- Analyse and evaluate each pilot study, further developing the 'Beyond kWh' and other Task 24 tools to be tailored with different modules to different sectors, audiences and behaviours (e.g. the hospital sector and commercial office building sector)
- Write final reports and recommendations for each pilot study, all
- Contributing to an online guidebook and international best practice standard.

8. Funding and Commitments

We appreciate the financial and political difficulties in funding large-scale DSM research Tasks, such as this one, that many ExCo countries are facing. Thus we propose the following 3 funding models, for the ExCo to discuss:

Model 1 – Entrepreneurial Model:

We would ask for a very small contribution from each ExCo member to the tune of €3,000 p.a. (€51,000 total for 17 members). This is not dissimilar to how the DSMU is funded. This will ensure there is enough baseline money to fund the administration of this work. Each case study will be funded in full by a non-state actor who want to answer specific behavioural questions and focus on a specific sector and DSM problem (a good example was the Task 24 ST11 work with Carolina Health Services, in the US). It will ensure buy-in from the whole ExCo and provide each ExCo member a place on the steering committee overseeing and guiding this work. They will not have as much say in what sectors and DSM problems the work will address as in Phase 2 of Task 24, however, they can still propose and provide contacts in their own countries to attract co-funding to the work. No in-kind commitment or national expert is needed. This model will also ensure that this important and highly visible work stays in the IEA DSM and will continue to attract new experts, dissemination and visibility opportunities (like the dozens of conference proceedings, key notes and peer-reviewed publications, reports and articles written so far) and potential funders and countries to the IEA DSM Programme.



This is our preferred model as it provides us with the buy-in from the full ExCo as steering committee; the ability to follow our own networks and shape the work programme on an as-need basis; the flexibility of tailoring the work according to the amount of funding and pilot research studies we receive; and the continued promotion of behaviour change in DSM in this TCP.

Model 2 – Collaboration Model:

This would involve another TCP, such as ISGAN, which may be able to fund the administrative role of the OA and provide case studies and expert support. It would mean that ISGAN, not DSM, is the main steering committee for the work or that the whole behaviour change work will move over to ISGAN. No contact has been made with ISGAN yet, as we wanted to run this proposal past the IEA DSM ExCo first. The IEA Secretariat, and ISGAN are very interested in continuing the behaviour change work we have started. They do not have the capability yet, and we are the obvious experts.

This model is our least preferred as it would mean losing the work for the DSM Programme, including our established relationships with the DSM ExCo members.

Model 3 – BAU funding with this being Phase 3 of Task 24:

This would involve a similar funding model as the IEA DSM is used to – approximately €25,000 per annum (4 minimum countries) but would put the onus again on the National Expert and ExCo member to identify case study pilots and contributors. It would also lead to similar issues around the need for flexibility and tailoring of the work and the fact that government agencies are not the best placed National Experts to conduct participatory action research. It would mean that established experts, networks and tools will stay in the IEA DSM and some countries will control the future direction of behaviour change in DSM.

This model is our 2nd preferred option as it would mean secure funding and a known model of running the Task. However, it will also likely continue with similar problems as encountered in Phases 1 and 2, like not enough contribution from National Experts, not enough guidance from participating ExCo countries and a mis-match between the need to showcase how behaviour change works in practice and the more theoretically-based approaches most ExCo are used to.

TASK 16 – INNOVATIVE ENERGY SERVICES PHASE IV – LIFE-CYCLE COSTING; ‘DEEP RETROFIT’; SIMPLIFIED M&V; CROWD-FINANCING & ENERGY SERVICES TAXONOMY

Operating Agent:

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1. Summary

In Task 16 “Innovative Energy Services”, energy service experts and partners from countries around the world join forces to advance know how, experiences and market development of performance-based energy services. We view energy services as a ‘delivery mechanism’ in order to implement energy efficiency and renewable energy projects in the context of energy policy and climate change goals.

Main subtasks are country-specific National Implementation Activities, an Energy Services Expert Platform for mutual exchange and support as well as national & international dissemination activities including the DSM University. Furthermore national & international stakeholder workshops are organized to discuss energy service topics relevant to the host country and to present and disseminate results of Task 16.

The Think Tank is the common research platform with previous publications such as the ‘Integrated Energy-Contracting’ business model, the ‘Facilitator’ concept, ‘Simplified Measurement & Verification’ of energy savings, or Comprehensive Refurbishment of Buildings (‘deep retrofit’) business models. In Phase IV “Life-Cycle Cost; ‘Deep Retrofit’; Simplified M&V; (Crowd)-Financing & ES Taxonomy”, which started in July 2015 and will end in June 2018, the Think Tank is working on Life-Cycle Cost appraisals, ‘Deep Retrofit’ of buildings; Simplified Measurement & Verification of savings (sM&V); (Crowd)-Financing for EE & RE projects and on energy services taxonomy.

For more information or to explore options how to collaborate, please feel free to contact the Operating Agent Jan W. Bleyl under +43 650 7992820 or EnergeticSolutions@email.de.

2. Objectives and accomplishments since last report

Subtask 19 – Energy Service Expert Platform

Objective: The platform is the internal and external communication hub of Task 16. It consists of the national experts, the operating agent, invited guests and cooperation partners. The platform hosts the internal experts meetings as well as public stakeholder workshops and other seminars.

Progress towards Subtask objectives

- Execution of a series of teleconferences with Task 16 experts to discuss and prepare a joint paper on life cycle cost benefit analyses of building deep energy retrofit in combination with Multiple Benefits
- Preparations for the 20th experts meeting to be held on 28-29 May 2017 in France (back to back with ECEEE summer study 2017).

Subtask 19 + 23 – Stakeholder workshops (national & international)

Objective: The expert platform hosts a series of public national or international stakeholder workshops. They are held either back to back with expert meetings or as national stand alone events to discuss energy service topics relevant to the host country of the meeting and to present and disseminate results of Task 16.

Progress towards Subtask objectives

- No stakeholder workshop held

Subtask 20 - Think Tank for innovative Energy Services

Objective: Applied research, development and testing of innovative, performance-based energy service models and support tools => publication of the results.

Progress towards Subtask objectives

1. Joint paper Building Deep Energy Retrofits: Using dynamic cash flow analyses and Multiple Benefits to convince investors. Finalized and accepted for publication and presentation at ECEEE summer studies 2017. In close cooperation with all Task 16 experts and IEA ECB Annex 61
2. Simplified Measurement and Verification Using Quality Assurance Instruments: A Proposed Concept for Energy, Water and CO₂-Saving Projects. Paper re-submitted for peer-review and (hopefully) publication to the journal 'Applied Energy'. In close cooperation with EfficiencyOne, Nova Scotia, Canada
3. Crowd-Financing for Energy efficiency and renewable investments: Can Crowd-Financing contribute to solve financing bottlenecks for EE and RE projects? E.g. through access to equity or (cheaper) debt financing? In particular for smaller projects in SME and communities? Bridge the mezzanine financing gap? Reduce risks and transaction cost? Analyses based on detailed LCC modeling of 2–3 cases studies. Report finalized in cooperation with GIZ and KRITTER Advisory Services

Subtask 21 - Coaching of individual National Implementation Activities (NIA)

Objective: Support implementation of country specific national activities to develop know-how and energy service markets.

Progress towards Subtask objectives

- Implementation of the individual NIA plans to develop know how and energy service markets were followed up, the experts gave presentations and exchanged experiences and good practices during the last platform meeting and through teleconferences in between meetings

Subtask 22 – Dissemination and cooperation

Objective: Dissemination of Task 16 results and experiences through presentations, stakeholder workshops, publications, cooperation with other ES projects and the DSM University

Progress towards Subtask objectives

Publications and presentations at various national and international conferences and seminars were given, e.g.:

- Integrated Utility Service model for a state utility in Vietnam: Scoping mission and strategy advice for 50 Mio EUR credit line (in cooperation with EVN and KfW)
- Continuation of know how transfer and supervision for a start-up ESCo in Croatia => 1 MW_{el} wood chip gasification + CHP for heat & green electricity supply project (5,5 Mio EUR investment) and other RE and EE investments (ongoing)
- Co-operation with other ongoing energy service projects and institutions:
 - ECB Annex 61 => 'Deep retrofit' business models
 - Linköping University => ES taxonomy and other topics
 - FH Pinkafeld - applied science university => Master class on energy services

Subtask 23 - Management and Reporting

Objective: Project management and reporting

Progress towards Subtask objectives

- No particular activities in addition to regular management and reporting work

Experts meetings/seminars/conferences held in past six months

Experts meetings

Date	Place	# of Experts	Type of meeting	Government	Industry	Academic
Sep. '16 – March '17	Series of Telcos on DER and MB paper	5-7 (each)	Experts meeting	1-2 (each)	3-4 (each)	1-2 (each)
Aug. '16 – March. '17	Series of Telcos on sM&V paper	2-3 (each)	Experts meeting		2-3 (each)	

Seminars/Conferences/Workshops

Date	Place	Participants	Type of meeting	Government	Industry	Academic
12.-16. Sept.	St. Kitts, Caribb.	50	Workshop	15	30	5
04 Oct.	Nyenrode, Netherlands	150	Key note	120	30	10
12 Oct.	Vienna, Austria	17	Lecture	0	0	17
21 Oct.	Vienna, Austria	9	Seminar	3	5	1
25.-28. Oct.	Vietnam	10 x 7	Meet./WS.	10	55	5
17 Nov.	Conf.call	15	Conf.call	0	15	0
20.-23. Dec.	Vietnam	5 x 6	Meet./WS.	5	25	0
Dec. + Jan.	Pinkafeld, Austria	34	Lecture	0	0	34
23 March	Vienna, Austria	13	Seminar	5	7	1

Publications/reports produced in the past six months

- *Building Deep Energy Retrofits: Using dynamic cash flow analyses and Multiple Benefits to convince investors. Accepted for publication and presentation at ECEEE summer studies 2017 (in cooperation with IEA ECB Annex 61)*
- *CF4EE – Crowdfunding for Energy Efficiency Can Debt or Equity Crowdfunding contribute to scaling up Energy Efficiency in Developing Countries? Analyses based on detailed LCC modeling of 2–3 cases studies. Report finalized in close cooperation with GIZ and KRITTER Advisory Services.*

3. Objectives for the next six months

Subtask 19 – Energy Service Expert Platform

- Execution of the 20th experts meeting, to be held on 28-29 May 2017 in France (back to back with ECEEE summer study 2017).
The main agenda items will be presentation and discussion of national implementation activities, discussions on current Think Tank topics (Deep Energy Retrofit, Life cycle cost appraisals, Multiple Benefits) and dissemination activities
- Continue to hold expert platform teleconferences (e.g. on selected Think Tank topics such as life cycle cost analyses and multiple benefits)

Subtask 19 + 23 – Stakeholder workshops

- Presentation at the ECEEE summer study

Subtask 20 - Think Tank for innovative energy service models and support tools

1. *Simplified Measurement and Verification Using Quality Assurance Instruments: A Proposed Concept for Energy, Water and CO₂-Saving Projects.* Follow-up of re-submission for peer-review and (hopefully) publication to the journal 'Applied Energy'. In close cooperation with EfficiencyOne, Nova Scotia, Canada
2. *Second draft for a Taxonomy paper on Energy Services Taxonomy paper to be published in a peer-reviewed journal in cooperation with Linköping university for internal discussion*

Subtask 21 - Coaching of individual National Implementation Activities (NIA)

- Continue implementation of individual NIA plans to develop energy service know how and markets.
- To follow up, experts will give detailed presentations and exchange experiences and good practices during the next platform meeting and through teleconferences in between meetings

Subtask 22 – Dissemination and cooperation

Publications, presentations or workshops planned:

- Integrated Utility Service models scoping mission and development for small island states in the Caribbean (in cooperation with GIZ and CARICOM) (March + April 2017)
- Life-Cycle Cost workshop for evaluation of energy efficiency and renewable projects - an introduction (Vienna, June and Nov. 2017)

- Another Task 16 Leonardo ENERGY IEA DSM University webinar (Q3 or Q4 2017)
- Continue Co-operation with other ongoing energy service projects and institutions:
 - ECB Annex 61 => Deep retrofit pre-feasibility and bankable project analyses
 - Linköping University => ES taxonomy and other topics
 - TU Wien => Lecture on performance-based energy services
 - Fh Pinkafeld (University of applied sciences) => Masterclass on energy services

Subtask 23 - Management and Reporting

- Regular management and reporting activities + search for one or two more participating countries

Experts meetings/seminars/conferences planned in the next six months

Planned Experts meetings

Date	Place
28-29 May 2017	France (before ECEEE summer study)

Planned seminars/conferences

Date	Place
April '17	IUS models, Carribean
29/05 – 02/06/17	ECEEE Summer Study
12/10/17	Austrian Energy Agency
Oct. 17	TU Vienna (Lecture)
06+ 07/11/17	Vienna, Austria (Seminars)
Dec. '17 - Jan. '18	FH-Pinkafeld, Austria (Lecturing)

Reports/Publications planned for the next six months

- *Building Deep Energy Retrofits: Using dynamic cash flow analyses and Multiple Benefits to convince investors.* Accepted for publication and presentation at ECEEE summer studies 2017 (in cooperation with IEA ECB Annex 61)
- *Simplified Measurement and Verification Using Quality Assurance Instruments: A Proposed Concept for Energy, Water and CO₂-Saving Projects.* Re-submission for peer-review and (hopefully) publication to the journal 'Applied Energy'
- Contributions to IEA DSM Spotlight and other shorter formats

4. Outreach of the Task – Success stories

The Austrian military has decided to energetically renovate one of its military trainings grounds based on the Integrated Energy Contracting (IEC) model, which was developed within Task 16. The scope of energy services is planned to encompass energy conservation measures in the building stock as well as a conversion of the heat supply to local biomass. An update of the project can hopefully be presented at the next Task Status Report.

5. Ideas for new work

As an input to the ExCos thoughts on possible future work of the TCP, we would like to flag the topic of Multiple Benefits (MB) again. As we probably all agree, MBs offer very interesting perspectives on demand side energy efficiency and renewables and the opportunity to identify drivers and strategic allies for DSM programs and projects.

This approach is further encouraged by our work: In our recent paper we have developed a rather straight forward methodology how to factor MBs into a building Deep Energy Retrofit

investment calculation by taking a look from a bottom up case study perspective. This approach could probably be transferred to other DSM topics as well. Results are turning out to be very interesting (among others with regard to the split incentive dilemma, where to put priorities and also for policy design).

This recent work reinforces my conviction that it is worthwhile and needed to put more applied research into MBs and that the DSM TCP could and should put it back on its agenda. If desired by the ExCo, Task 16 would be happy to help revitalize Task 26 (or any another MB format).

6. Finance

An overview of the current budget situation (total budget, cumulative and %-spending as well as remaining budget) is displayed in the following table:

Budget and cost accumulation by item (in EUR excl. VAT as of 1 April 2017)

Subtasks <i>unit</i>	Total budget <i>EUR</i>	Cumulative spending <i>EUR</i>	% spent <i>%</i>	Remaining <i>EUR</i>
19 Energy Services Expert Platform	22.000	11.880	54%	10.120
20 Think Tank for innovative Energy Services	73.920	46.640	63%	27.280
21 Coaching of National Implementation Activities	14.520	8.800	61%	5.720
22 Dissemination & Cooperation (international + national)	15.840	8.712	55%	7.128
23 Management & Reporting (to ExCo)	37.840	19.800	52%	18.040
Subtotals	164.120	95.832	58%	68.288
Travel costs	14.700	7.497	51%	7.203
Other costs	2.880	0	0%	2.880
Totals	181.700	103.329	57%	78.371

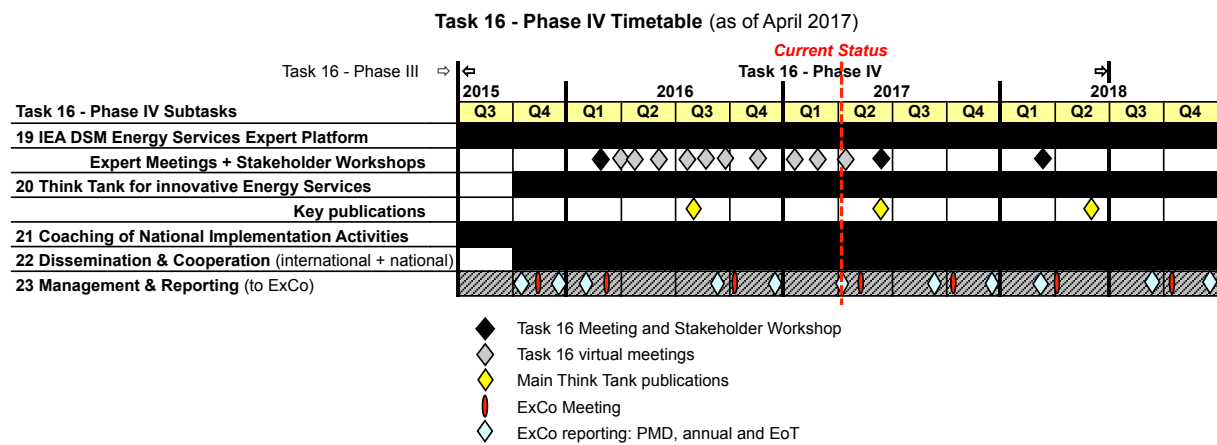
The current Task 16 – Phase IV budget is 181,700 EUR (comprised of 3 participants x 3 years x 15,000 EUR/year + Belgium for 2 years x 15,000 EUR + GIZ for 1st year only x 15,000,- EUR + surplus of 1,700 EUR from Phase III).

The spending of the last reporting period was 52,428 EUR adding to a total expenditure of 103,329 EUR, which equals 57% of the total budget.

The income during last reporting period was 45,000 EUR (against 45,000 EUR billed). This adds to a total realized income of 106,700 EUR (59% of total budget).

7. Activity Time Schedule

Task 16 Phase IV has started operation on 01 July 2015 and will end 30 June 2018



All scheduled events and reporting targets have been met.

8. Matters for the ExCo

Recommend the ExCo to approve the Task Status Update Report.

Provide guidance on future work after June 2018, if desired by the ExCo.

9. Participating countries

Belgium (*since July 2016*), EfficiencyOne Nova Scotia, Canada (*in kind*); Germany (*in kind cooperation with Annex 61 (Deep Retrofit)*); GIZ (*until April 2016*); The Netherlands; Norway; Switzerland (*in alphabetical order, as of April 2017*).

TASK 25: BUSINESS MODELS FOR A MORE EFFECTIVE MARKET UPTAKE OF DSM ENERGY SERVICES

Operating Agent

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1. Summary

This Task focuses on identifying existing business models and customer approaches providing EE and DSM services to SMEs and residential communities, analysing promising effective business models and services, identifying and supporting the creation of national energy ecosystems in which these business models can succeed, provide guidelines to remove barriers and solve problems, and finally working together closely with both national suppliers and clients of business models. The longer term aim of this Task is to contribute to the growth of the supply and demand market for energy efficiency and DSM amongst SMEs and communities in participating countries.

2. Objectives for the last six months

This Task started November 1st 2014.

Subtask 0 : Pre-scoping

Completed.

Subtask 1

This subtask is dealing with all management issues.

Progress towards Subtask objectives: Ongoing for all objectives below

- Overall project coordination and management, including contact relationship.
- Attendance of ExCo meetings, conferences and reporting to IEA DSM ExCo.
- Set-up Task Advisory Board (AB) of stakeholders (ExCo, IEA, intermediaries from research, industry, government, community sectors). It was decided and approved in a previous ExCo meeting that the national experts, and the workshops with stakeholders in the participating countries would consist of our 'advisory' board. Their feedback on the usefulness of the work, both in scientific and in pragmatic terms is most important and guiding our work.

Subtask 2: Identify proven and potential business models for energy services

There are many energy service business models "out there" and often they are closely linked to existing market structures and policies. In other words, business models are often country and context specific. We perform an inventory of different existing business models, both in the participating countries and also including global examples of successful business models. In the different participating countries we analyse what business models exist, and what frameworks (market and policy) accompany them.

Progress towards Subtask objectives: completed for all objectives with of some, where South Korea contribution needs to be added

- Identifying country specific suppliers, clients, and their stakeholder networks and trying to establish national advisory expert networks to continue work of Task. **COMPLETED**
- Narrowing down the focus of both services, target groups and typology of business models in close cooperation with national experts and other relevant stakeholders. **COMPLETED**
- Clarifying how the different parameters of success of business models and services will relate to each other in the analysis – economic profitability, scale of impact and real savings, business creation, growth rate, synergies with other values, adoption rate etc. **COMPLETED**
- Developing a task specific typology or categorisation of business models and services for EE. **COMPLETED**
- Developing an overview of existing energy service business models in the participating countries and their frameworks/ecosystems and how they meet and incorporate client needs.
 - Longlist overview of existing services and business models **completed for all countries except South-Korea**
 - Shortlist overview of services **completed for all countries except South Korea**
- Reviewing global existing business models and their frameworks/ecosystems with a clear focus on quantifying and qualifying effectiveness (e.g. amount of customers reached, market share, savings aimed for, other outcomes, ROI). **COMPLETED**
- In-depth comparative analysis of around 4 similar business models in different countries and around 12 per country. Determining patterns, drivers and pitfalls. **Completed for all countries except South Korea.**
- Identifying key factors that make services (and their vendors) succeed in the participating countries through an in-depth analysis of country specific markets and policies for energy services and their influences on business models. **COMPLETED**
- Organising country workshops with service providers and clients. **Completed for all countries except South Korea.**

Subtask 3

- We started with development of frameworks for potentially effective business models and services in co creation with national stakeholders, e.g. suppliers and clients. We did so in face-to-face workshop with the national experts and other relevant stakeholders. Kick-off meeting in Brussels October 14th. **Decision was to develop an online toolkit for business developers and a workshop format for the participating partners. We decided that D5 (the database with cases) will be part of this toolkit.**
- Started with creating policy guidelines with necessary policies and strategies of different stakeholders, and their timing, to encourage market creation and mainstreaming of selected business models in participating countries. **We decided to explore this in the ECEEE paper and recommendations were included there. In addition we plan to write one final positioning paper together with Sweden and Norway on the topic of policy**

system, economic system and the development of energy efficiency services. We decided that this paper, will be Deliverable 6.

- Start with contributing to the setting up of piloting activities in each participating country. This activity will be initiated on the basis of the lessons learnt that we would like to turn into practice. We will do this during workshops or in the form of a coaching of entrepreneurs. Exact form to be decided. **The exact form is the online toolkit we are developing. We are also closely collaborating with Sweden on this as a pilot partner.**

Subtask 4

- Set up a stakeholder communication and engagement plan. **Completed.**
- Traditional dissemination to external stakeholders and academia. **On-going.**
- Creating and facilitating a good connection to existing digital and off-line expert platforms within the IEA, e.g. the expert platforms of Tasks 16, 24 and other relevant tasks and the expert platforms for other Implementing Agreements. This connection is meant to provide a 'matchmaking' service to enable trans-national, inter-disciplinary teams of experts and end users to collaborate and learn. **On-going with focus mainly on IEA secretariat and other TCPs.**

Experts meetings/seminars/conferences held so far

Experts meetings so far (including past six months)

- January 8th 2015 Online webinar kick off Task 25
- March 10th 2015 Eindhoven Netherlands, Subtask 2
- Many telco and skype meetings with individual experts
- Expert meeting Sweden December 2015
- Expert meeting Switzerland January 2016
- Expert meeting Austria January 2016
- Expert meeting Stockholm March 2016
- National expert meeting with representatives from Sweden, Norway, Austria, Netherlands, ECI and South-Korea, October 14th 2016, Brussels-Belgium

Seminars/Conferences

Date	Place	Participants	Type of meeting	Government	Industry	Academic
30-03-2015	Cape Town	mixed	Conference	>20	>40	>40
October 2015	Halifax Nova Scotia	mixed	workshop	>10	>10	
12-13 November 2015	Paris, France	mixed	IEA workshop on influencing business behaviour	>15	>15	>15
November 2015	Dublin-Ireland	mixed	Short meeting To entice Ireland to participate in Task 25	2		
19-11-2015	Webinar Task 25 DSM University	mixed	webinar	>50	>50	>50
December 2015	Stockholm Sweden	mixed	workshop	4	8	4
January 2016	Bern Switzerland	mixed	workshop	5	10	5
January 2016	Graz Austria	mixed	workshop	2	12	1

March 2016	Stockholm Sweden	mixed	DSM day	33%	33%	33%
March 2016	Stockholm Sweden	Entrepreneurs	Expert workshop	2	10	2
May 2016	Linz-Austria, coinciding with Smart Grid Week	mixed	IEA meeting where our Austrian national expert presented the Task 25 work	?	?	?
September 2016	Behave conference Coimbra, Portugal	mixed	conference	10	10	10
September 2016	Leadership Summit WGBC	mixed	conference			
October 2016	DSM Day Brussels	mixed	DSM day on Demand response and flexibility	33	33	33
October 2016	Green World Building Council conference on renovation	mixed	conference	200+	200+	200+
January 2017	Webinar DSM university	mixed	webinar	?	?	?

Reports produced (including in the past six months= bold)

- Literature review user centric design in business models
- Presentation of Task 25 as a webinar (online publication)
- Presentation of Task 25 at IEA workshop on influencing business behaviour and decision making towards increased energy efficiency
- Presentation at IEA DSM EXCO Canada DSM day
- Thesis with analysis of Dutch shortlisted cases and impact of user centered design and service orientation on business models
- First Task 25 newsletter
- Global analysis of business models, longlist and shortlist (confidential for now, distributed amongst partners only)
- Spotlight issue on results of analysis
- Article in the Swedish Magazine Energy Efficiency on the Task 25 work in Sweden.
- D2: report with typology and description of existing services and business models in each participating country and their framework/ecosystem; Completed for Sweden and Netherlands, Norway, Switzerland, Austria,
- D3: report with review of global business models and services in non-participating countries and their framework/ecosystem; delivered by CREARA
- D4: report with comparative analysis and key factors for success, including overview of success parameters to assess effectiveness of business models and services. We decided that the three papers for the BEHAVE conference (which is about the theoretical background), the ECEEE conference paper on the comparative analysis and the paper submitted to the Journal for Cleaner Production on user centered design in business modelling will constitute Deliverable 4.
- Conference paper and presentation Behave conference on business models, capabilities, context
- Spotlight article on findings so far in Task 25

- Contribution to the Energy Efficiency Market Report of IEA 2016
- **Contribution to overview of Tasks for IEA Paris EE meeting October 2016, presented by Svetlana Gross**
- **Paper for special issue Journal for Cleaner Production on user centered business modelling for energy efficiency services ACCEPTED FOR PUBLICATION UNDER REVISION**
- **Paper for special issue Energy Efficiency Journal on business models, capabilities and context ACCEPTED FOR PUBLICATION UNDER REVISION**
- **Collaborative effort with EDNA 2016**
- **Contribution to ISGAN ExCo meeting in exploration of cooperation**
- **Talks about collaboration with the H2020 Dr BoB project, delivery of workshops on business modelling**
- **Webinar Renske**

3. Objectives for the next six months

Subtask 1 Task management: on-going management

Subtask 2: Identify proven and potential business models for energy services:

Only on going with respect to country report South Korea and potential workshop in South Korea in September.

Subtask 3: Creating country specific business models and guidelines for up-scaling

- We will finalise the online toolkit and workshop format.
- We will finalise the positioning paper on policy, economy and services
- We might potentially organise a workshop in Sweden for piloting the toolkit and Norway for disseminating the findings.

Subtask 4 expert platform

- Link to existing DSM IA expert platforms and experts and maintain a section for Task 25. We decided that the website is sufficient since much of the work is performed at conferences, workshops and in national networks.
- We have on going discussions with representatives from ISGAN, EDNA, and the IEA secretariat

Experts meetings/seminars/conferences planned in the next six months

Planned Experts meetings

Date	Place
June 2017	ECEEE
September?	Workshop in South Korea if required
	Workshop in Norway

Reports/Publications planned for the next six months

- Acceptance of papers submitted to Energy Efficiency and Journal for Cleaner Production
- Positioning paper D6.

4. Outreach

See our dissemination activities

5. Ideas for new work: Phase 2 of Task 25

- After analysis of the 42 cases so far we have a working hypothesis about service oriented BMs outperforming the more traditional ones. However, the data we collected is very rich and more valuable analysis could be performed, for example wrt the patient mother, context, other issues explaining the inertia of EE uptake. In addition the business model logic appears to be different in wall insulation than in lighting or home automation? We feel that there are additional valuable insights to be gained from a further analysis of the case data, and this could be a topic for a potential phase 2.
- In addition we would like to Continue with collection of interesting new cases and analysing their business model (subtask 2) with a range of new topics, including
 - Demand Response energy service business models,
 - ICT and open data energy services business models
 - Cases explicitly focused on delivering multiple benefits first and EE/energy savings second
 - New roles/new aggregators services around DR
- Set up a strong training system based on subtask 3 toolkit and workshop format; and do roadshows with you and or other relevant organisations in the countries (e.g. business development agencies, advisors) to train policymakers, entrepreneurs and other relevant stakeholders in more service oriented business modelling and the necessary ecosystem changes.
- Organise user centered business modelling interventions in different countries (including the users of the services). Which means we organize interaction between business model/ energy service developers and actual (potential) end-users to experiment with end-user centered business models
- Set up a MOOC based on the task, in close cooperation with Leonardo academy/DSM university
- Proactively target other technical driven implementing agreements and offer them Task25-tools and cooperation

6. Finance

- Austria, Sweden and Switzerland, Norway, Netherlands have paid 100% of their contribution
- Copper institute has been delivering in-kind
- A pre-seed payment of 7500 euro was received in 2014 and paid back
- Korea joined the Task, first payment received. Second invoice sent

7. Activity Time Schedule for time and tasks left

- At the Canada 2015 Exco it was decided to extend the Task with 1 year, with no additional payments required, but to accommodate later entries. The task will run till December 2017. **Especially ST2 and ST3 activities were extended into 2017.**

Subtask 1: Management of the task	May 2017	June	July	August	September	October	November
1.1 advisory board							
1.2 Annual Advisory Board (AB) meetings, exco meetings							
1.3 Overall project and financial and administrative duties							
Subtask 2							
2.5 Identifying existing business models and frameworks in participating countries SOUTH KOREA							
2.9 organising workshops In South Korea and Norway							
2.10 reporting results							
Subtask 3							
3.1 Developing toolkit and workshop format							
3.2 positioning paper							
3.3 piloting toolkit with some BM in Sweden (potentially)							
Subtask 4							
4.2 Dissemination to academic journals, participation in conferences, creation of outreach material							
4.3 Connection to and utilisation of IEA expert platforms							

8. Matters for the ExCo

- Approval of Task Status Update Report.
- Reaction to new work proposed for Phase 2 and expression of interest

9. Participating countries

- Switzerland
- European Copper Institute
- Austria
- Sweden
- Norway
- Netherlands
- South Korea

Task 24 – PHASE II: BEHAVIOUR CHANGE IN DSM – HELPING THE BEHAVIOUR CHANGERS

Operating Agent:
Sea Rotmann

1. Summary

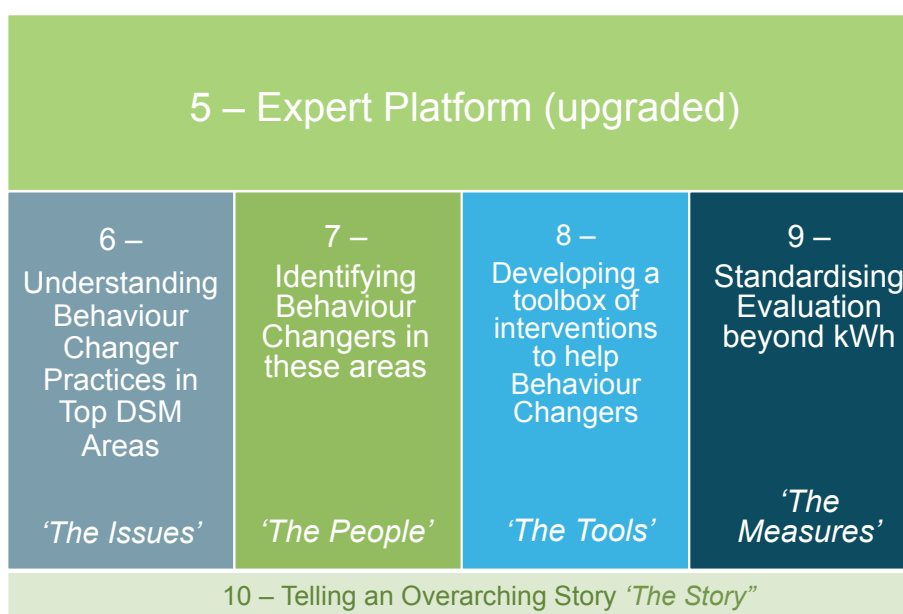
There is no behaviour change ‘silver bullet’, like there is no technological silver bullet that will ensure energy efficient practices. Designing the right programmes and policies that can be measured and evaluated to have achieved lasting behavioural and social norm change is difficult. We believe that this Task, and its extension, helped address these difficulties by developing guidelines, recommendations and examples of best (and good) practice and learnings from various cultures and contexts. We rely on a large, global network of sector-specific experts (researchers, implementers and policymakers) from participating and interested countries to engage in an interactive, online and face-to-face expert platform and contribute to a comprehensive database of a variety of behaviour change models, frameworks and disciplines; various context factors affecting behaviour; best (and good) practice examples, pilots and case studies; and guidelines and examples of successful outcome evaluations. Phase I of this Task has been finalised in 2015 and Phase II (How to help the Behaviour Changers) will finalise in April 2018.

Phase II of Task 24 takes the theory into practice. Building on the solid theoretical foundations of [Phase I](#), we now look at the:

- What?
- Who?
- How?
- Why? and
- So What?
-

We use a *Collective Impact Approach* methodology and *storytelling* as the overarching language and bring together Behaviour Changers from all sectors (industry, government, research, middle actors and the third sector) with the end users whose behaviour they are ultimately trying to change.

The Subtasks of Phase II



For more information, visit www.leadsm.org



2. Objectives for the last 6 months

Subtask 5

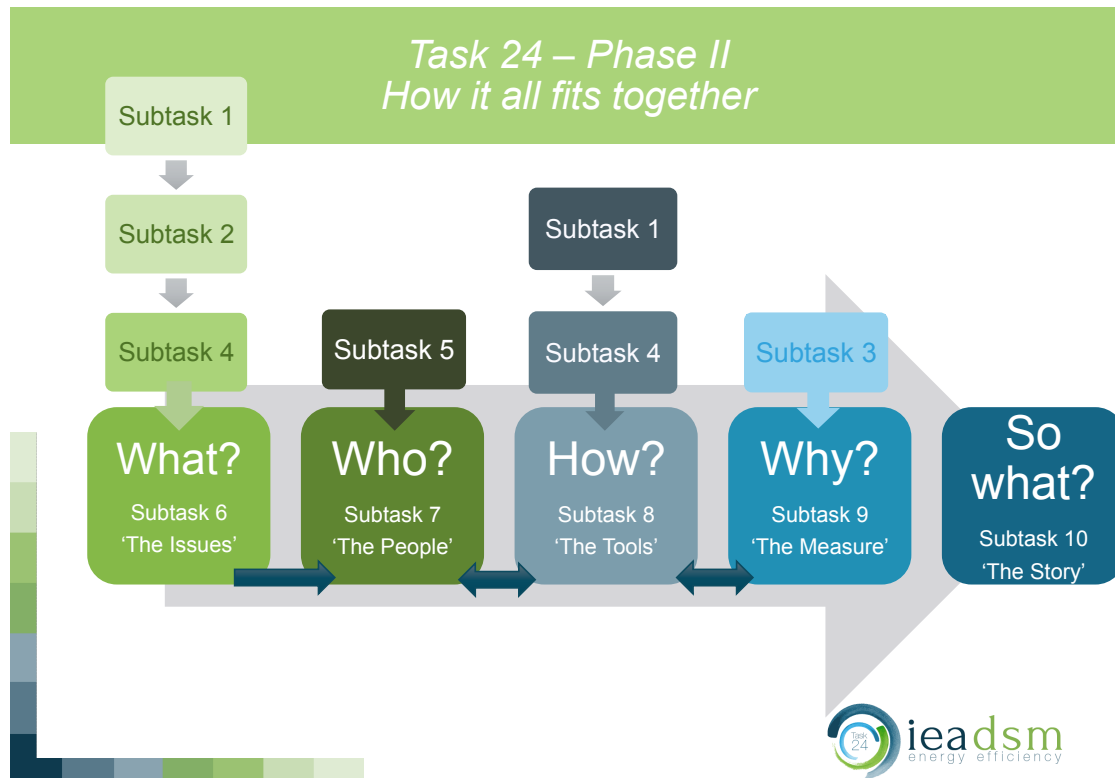
Objectives

- Expert platform continually growing and getting used
- New content including presentations, videos and reports uploaded
- Continue publicising and dissemination of Task 24, including at international conferences

Progress towards Subtask objectives

Progress in last six months was satisfactory, we now have >245 experts on the expert platform. Its usefulness is coming to a natural end, as most information is now on the IEA DSM Task website and expert collaboration is undertaken via emails or in face-to-face or skype meetings. We use the IEA DSM Events page to advertise workshops and conferences now. All final and draft Task reports are on the IEA DSM website, which has been updated recently. We continue having great successes in matchmaking experts, spending time at each other's Universities, for example, or developing new research collaborations. The dissemination of the Task is going extremely well, we have been invited to publish two peer-reviewed papers for Special Issues in the high-profile *Energy Efficiency* and the *Journal of Energy Research and Social Science*. We were also chosen to be co-editor for a Special Issue on "Storytelling and Narratives in Energy and Climate Change Research" for *Energy Research and Social Science*. We received and accepted over 50 abstracts for this publication, which will provide a hugely valuable contribution to the subject of storytelling and energy. Its publication is to be expected in mid-2017. We were also asked to become project partners for 'Clair City' and present on behalf of our UK expert Dr Tim Chatterton from UWE at their conference in Hungary in May 24, 2017. In addition, we were invited to become expert panel members on a panel on healthcare and energy at the

prestigious Behaviour, Energy and Climate Change (BECC) conference in Sacramento this October.



Subtask 6

Objectives

- Building on work from Subtasks 2 and 4, develop lists of common top 3 DSM *implementable* issues and their potentials in each country
- Use the *Collective Impact Approach* and the Task 24 Expert Platform to research and review current approaches and practices, nationally and internationally, on these top issues and provide feedback from the different disciplinary perspectives and their collaborative discussions and negotiations from available case studies and narratives that could illuminate some of the approaches (based on work in Subtask 1, 2 and 7)
- Feed these cases, and the ones analysed in Subtask 1 and 2 into a *Toolbox of Interventions* (ST 8)

Progress towards Subtask objectives

Subtask 6 has now had over 20 workshops, in NL, NZ, CA, SE, IE, US and at the ECEEE summer study and Energy Cultures, BECC and BEHAVE conferences. We have started collecting lists of DSM interventions and energy efficiency and behaviour priorities in most of these countries and have created a report template, which has been filled in for Sweden, NL and NZ. We have discussed the top 3 issues during workshops and have decided on the following main interventions: Powering tomorrow's neighbourhoods via smart grid sharing in New Zealand; supporting building management operators in hospitals to produce better documentation and communication of energy savings in Canada (on hold as the funding didn't eventuate); empowering building operators in hospitals to re-set BMS setpoint overrides in Charlotte, North Carolina (participant of Subtask 11); landlords and tenants co-designing green leases in commercial buildings in Sweden; promoting better use of ICT in Universities in the Netherlands; using libraries as Middle Actors to distribute energy-saving kits in Ireland and

developing better evaluation methods for DSM intervention under the new energy efficiency legislation in Austria.

Subtask 7

Objectives

- Identify, with help of the ExCo, National Experts and existing Expert Platform the most appropriate Behaviour Changers focusing on at least one of the top 3 DSM issues chosen by each participating country (can include the residential, business and transport sectors)
- Collect detailed information on their specific interests, organisations and past and current work, get each to tell their 'Sector Story'
- Use the Collective Impact Approach to initiate discussions between different disciplinary perspectives and sectoral contexts. An explicit focus will be on deepening the understanding of the political-institutional context Behaviour Changers are operating in and what it means for their capacity to take a more systemic approach to behavioural change
- Develop national Behaviour Changer dialogues in each participating country by holding (bi) annual workshops (1-2 days per country per year, all up maximum of 6 days per country - note some of this time includes work from ST 6 and 8)
- Foster mutual engagement, collaboration and shared learning amongst Behaviour Changers, enable them to build relationships on neutral, trusted ground
- Backbone support to set a common agenda, measurement systems, mutually reinforcing activities and ongoing communication between the Behaviour Changers
- Evaluate Behaviour Changers' impressions on the effectiveness of the Collective Impact Approach and use of narratives as a common language to overcome barriers
- Collect examples of successful matchmaking stories.

Progress towards Subtask objectives

Behaviour Changers have been identified for the top issues decided on in Subtask 6 for Canada, Sweden, Ireland, the Netherlands, Austria, US and New Zealand. Their sector stories have been told during workshops and we have initiated deep discussions around relationships, mandates, stakeholders, restrictions and value propositions for each of the Behaviour Changers using the 'Behaviour Changer Framework'.

Subtask 8

Objectives

- Use the *Collective Impact Approach* to unite Behaviour Changers from all 5 sectors on a specific DSM issue (both chosen in ST 6 & 7) and develop, in collaboration, a common agenda, shared measurement indices, mutually reinforcing activities (a 'roadmap'), continuous communication and the backbone support function necessary to make it happen. Evaluate this approach continually via stakeholder analyses
- Collect information for a *Decisionmaking Tree* to pick the most appropriate case studies and models of understanding analysed by Task 24 (ST 1, 2 and 6) and test its usability with the Behaviour Changers
- Develop the *common language of storytelling* further and provide different examples of using storytelling and narratives in practice and how to best do it in the specific areas of focus and each of the Behaviour Changers' sectors
- Identify all the tools in each Behaviour Changer's *Toolbox of Interventions*, analyse their pros and cons, risks and opportunities, where they fall short and how another tool from another Behaviour Changer could overcome this deficit
- Continued testing and development of the *Evaluation Tools* (ST 3) that can prove if a (toolbox of) intervention/s leads to actual, ongoing behaviour changes in practice. The Behaviour Changers will feed back on its potential applicability, risks and additional

- needs by working through (hypothetical or real life) examples chosen in ST 6 and using double-loop learning approaches to assess multiple benefits of interventions
- Collaborative development of a testable *Toolbox of Interventions* for each top DSM focus area, where each Behaviour Changer sector has clearly identified and measurable roles and responsibilities. This intervention may then be taken into a real-life setting and trialled in practice (either as ST 11 or outside of Task 24)
 - The toolbox is built on *national and sectoral context specificities* but will be synthesised and tested (e.g. in the international conference (ST5)) for the general aspects that are of international validity (ST10 - the overarching story).

Progress towards Subtask objectives

We are currently working on a Special Issue on Storytelling for the *Journal of Energy and Social Science Research*. Our 'Behaviour Changer Framework collaboration tool has just been published at the ACEEE summer study and the BEHAVE conference and will be presented 'in action' at the ECEEE Summer Study this year. We have successfully trialled design charettes to co-design a pilot intervention in the 2nd largest hospital network in North America, Carolinas Health Services (CHS) as part of Subtask 11. This work will be presented by an international expert panel, which Task 24 is part of, at this year's BECC conference and published with the ACEEE. Work on the Decisionmaking Tool is underway and we are collecting insights on multiple benefits of interventions in each of our country workshops.

Subtask 9 Objectives

- The goal of this research is to develop and validate a set of tools and metrics that can be used consistently for the evaluation of behaviour-based energy programmes, including but not limited to, eco-feedback, home audits, information and rebate programmes, and social games
- An in-depth assessment of current (best) practice, cultural and disciplinary idiosyncracies, country drivers and needs and the best possible international standard (along the lines of psychometric tools like the IQ test - arguably not a perfect indicator of intelligence, but valuable in terms of enabling measurement and comparison).

Progress towards Subtask objectives

Karlin (the Principal Investigator of this Subtask) et al have published papers at the IEPPEC conference in August 2015 and 2016 that outline the basics of the Beyond kWh toolkit they are developing for Subtask 9, and the results from the psychometric testing. It was co-funded to the tune of ~US\$100,000 by PG&E and Southern California Edison and received very positive feedback at the BEHAVE Task 24 conference, attended by over 70 experts. As it stands, the tool will not be able to be validated in each of the participating countries as only 3 countries paid to contribute (instead of the 4 needed for the contract). However, the tool will be tailored and tested on the highly-relevant residential energy-savings kit trial in Ireland and its usability will be discussed in the Task 24 workshop in Austria in May. We are working on finding funding to develop different 'modules' for the tool, for example, in the commercial office sector (SE and AT) or hospital sector (US and CA).

Subtask 10 Objectives

- Collate, analyse and distil all information collected in Subtasks 6-9. Develop an international, interactive handbook with guidelines and recommendations including:
- Evidence of the usefulness of following a Collective Impact Approach to solve complex whole-system, societal energy problems in practice.
- A decisionmaking tool from 75+ cases collected in Subtasks 1, 2 and 7.
- A practical guide on storytelling with the many examples and stories collected here.
- Overview of countries' and sectors' toolboxes of interventions, common findings and learnings.

- Overview of usefulness of the evaluation tools for each country and sector (as developed in ST 3 and ST 9).

Progress towards Subtask objectives

This Subtask will not start until end of 2017.

3. Objectives for the next 6 months

Subtask 5

Continue attracting experts to the Task. Finalise reviewing >50 papers for special edition on storytelling. Finalise revisions on peer-reviewed publications.

Subtask 6

Start writing issues reports and collate DSM lists in New Zealand, Sweden, the Netherlands, Ireland and Austria.

Subtask 7

Will hold another 6 workshops in next 6 months (ECEEE Summer Study, Netherlands, Sweden, Austria, New Zealand and Ireland). Will pull together most relevant Behaviour Changers in each participating country. Workshop notes all written up, workshop protocol finalised, all Behaviour Changer Frameworks (BCFs) animated in prezis.

Subtask 8

Continue working on storytelling and evaluation guidelines, including the paper for the special edition on storytelling in energy. Finalise decisionmaking tree.

Subtask 9

Continue working on 'Beyond kWh' toolkit and see how we can best utilise it in Austria and Ireland.

Subtask 10

Not until End of 2017.

4. Outreach

Outreach of this Task was successful and manifold. We gave more seminars and lectures in Australia and New Zealand. We attended several more conferences and seminars, including on fuel poverty. Another German University and ADEME are interested in participating in the Task, most likely as part of Subtask 11. We will publish another paper and run an informal session at the ECEEE summer study and run another international workshop at the largest behaviour change conference (BECC) this year.

Experts meetings/seminars/conferences held in past six months

Experts and stakeholder meetings

Date	Place	# of Experts	Type of meeting	Government	Industry	Academic
Oct 2016	Stockholm	10	SHM	4	3	3
Oct 2016	Charlotte, N.C.	15	SHM	1	12	3
Jan 2017	Dublin	15	SHM	8	5	2
Feb 2016	Charlotte, N.C.	20	SHM		16	4
Mar 2017	Netherlands		SHM			

Seminars/Conferences/Lectures

Date	Place	Participants	Type of meeting	Government	Industry	Academic
Feb 2017	Charlotte, N.C.	12	Expert panel		8	4
Feb 2017	Wellington, NZ	>50	Conference			

5. Ideas for new work

Task 24 has put forward a concept paper for how to 'do' behaviour change, together with our project partner, the SEE Change Institute.

6. Activity Time Schedule

Based on 4 participating countries.

Subtasks	2015	2016	2017	2018
ST 0 Admin				
ST 5 Platform				
ST 6 Issues				
ST 7 People				
ST 8 Toolbox				
ST 9 Measure				
ST 10 Story				
ST 11 Pilots				

7. Finance

We have invoiced and received payment from 5 out of 5 countries for Year 1 and 4 countries for Year 2 so far. Austria has unfortunately not paid for its Y2 budget yet. Budgets are on-track.

8. Matters for the ExCo

Please also accept this Status Update.

9. Participating Countries

Austria (only 2 years)
New Zealand
Sweden
The Netherlands (only 2.5 years)
Ireland

VISIBILITY COMMITTEE REPORT

Prepared by Sea Rotmann, Chair of the Visibility Committee

Annual Report

The 2016 Annual Report, including a Theme Chapter on “What does DSM mean in your country?” was made available electronically to Executive Committee members, Operating Agents and the EUWP and EEWP by the end of January 2017 and was uploaded to the IEA DSM website. It was decided at the ExCo meeting in Stockholm, March 2016 that printed copies will not be available any longer, however the IEA would like to be able to print on demand and Anne Bengtson confirmed that a printable pdf version from the desktop publisher is already/will be provided every year. Executive Committee Members and Operating Agents were told to ensure that links to the report are distributed widely to all interested parties.

Website

The website has been updated and has been operational since July 2015. It has undergone annual maintenance and upgrades. All ExCo delegates and Operating Agents are strongly encouraged to review the whole website regularly, particularly areas relevant to their activities. It is very easy for information to become out-dated and it is particularly important to upload any new reports and publications as soon as they come out (also include them as headline news items by ticking the appropriate box). Operating Agents have considerable freedom to keep their own Task areas up to date, but other feedback, reporting of functions that appear not to work and suggestions for further improvements should be made via Anne Bengtson anne.bengtson@telia.com and/or the Visibility Committee. In particular, we would be interested to know how useful the social network links are.

Statistics

Total website hits:

September 1, 2016 to March 31, 2017: 7,168 Sessions, 4,820 users

Hits per day:

September 1, 2016 to March 31, 2017: 33.8

Average time on website:

September 1, 2016 to March 31, 2017: 2mins 38 seconds

Google Analytics

GA from September 1, 2016 to March 31, 2017 show 7,168 sessions (up from 5125) with 4,820 unique users (up from 1327) who spent an average of just under 3 minutes per session on the website, viewing an average of 2.5 pages. 65.7% of them were new visitors.

The breakdown of sessions by country is as follows:

	Country	Sessions	% Sessions
1	Russia	674	9.40%
2	United States	632	8.82%
3	United Kingdom	532	7.42%
4	Sweden	427	5.96%
5	Netherlands	325	4.53%
6	France	316	4.41%
7	China	295	4.12%
8	India	278	3.88%
9	Italy	275	3.84%
10	Belgium	274	3.82%
	All Others	3140	43.80%

Visits from Russia have increased substantially, however Russian visitors are less engaged than average, with an average session duration of just 27 seconds. Swedish users were the most engaged in the top 10, spending an average of 4 minutes and visiting 3.2 pages. Of note is a significant increase in engagement from Iran, with a 178% increase in traffic (145 visits up from 52) and an average time on-site of 11mins.

Downloaded reports for Tasks – we had 633 total downloads since Sept 1, 2016 (up from 91) of which 316 were unique files (including legal texts but excluding Spotlight newsletters which do not show up in this analysis). The top 5 topics for report downloads were: Task 17, Task 25, Task 24, EGRD and Task 13.

Website

Maintenance

The maintenance contract for the website is up for renewal in June. The hosting charges have slightly increased and the outstanding costs have now been paid. From now on, there will be a slightly higher yearly charge to continue hosting the site, as indicated in the last report.

issues

Members should review the website regularly and update their own work/interests, especially reports, any filmed workshops for youtube, presentations for slideshare etc

Spotlight Newsletter

In the past 6 months, two DSM Spotlight newsletters were published so far.

Articles in Issue 63/Dec 2016:

- Thailand
- Chairman's note
- International Day
- Market report
- Energy efficiency future
- Task 17: New reports now online
- DSM University
- DSM publications

Articles in Issue 64/March 2017:

- Task 24: Creating “Magic” with Non-State Actors
- Chairman’s note
- IEA DSM: at Work on Innovative Energy Services
- Switzerland
- DSM University

The next dates for submission to the Spotlight Newsletter issues are:

Issue 65/June 2017 – articles due 15 May

Issue 66/September 2017 – articles due 15 August

The Spotlight has a new look and Pam is looking for articles on DSM work in different countries and other work Operating Agents and Executive Committee members are involved in. The Programme has tremendous news to share so please continue to think about, suggest and submit future articles. The Editor is happy to work with you on an article in any form – completed article by you or someone else, information for an article that you would like for the Editor to write, a conference paper that the Editor can convert into a newsletter article or just an idea that you think would make an interesting article. If you have an article to contribute, please email it to Pamela Murphy [pmurphy@kmgrp.net].

Issues

Four newsletters are proposed to be published in 2017.

Brochure

The brochure and inserts have been updated with the new logo and branding.

Task Flyers

Task flyers are up to date.

Key Publications

During the past six months no key publications have been added to the website:

See latest publications: <http://www.ieadsm.org/publications/key-publications/>

Executive Committee members and Operating Agents are reminded that it is up to them to nominate publications to become “key” to the Visibility Committee Chair, Dr Sea Rotmann.

Social Media

The Implementing Agreement is getting more traction on social media. We now have a presence on:

- Facebook (IEA DSM Group) with 190 members and growing. Even though most posts are by Anne Bengtson, Rob Kool and Hans Nilsson, there are regularly posts and questions by other participants;
- LinkedIn (IEA DSM Group) with 33 members and staying static. The ExCo has decided to close this group.
- Twitter (@IEADSM) with 450 followers. This is the fastest growing social media platform and has fostered a lot of great engagement, re-tweets and mentions. Especially the Academic and Industry sectors seem to respond to this medium. Dr Sea Rotmann is posting for this group.

- IEA DSM Youtube Channel with 66 videos – 35 are Task 24 videos and 31 are DSM University webinars. We need more content from other Tasks. If we start filming some Executive Committee workshops, this would be a great channel to distribute visual information fast.
- Slideshare IEA DSM Programme Bengtson: static at 142 slideshares. Unless Operating Agents send their slides to the Secretary to upload with specific instructions to do so, the slides will become outdated.
- IEA DSM Task 24 Expert Platform - 245+ members, invite-only (www.ieadsmtask24.ning.com). Very successful multi-media platform to distribute findings from Task 24. The platform is also linked to a dropbox, a Wiki (www.ieadsmtask24wiki.info) and a Twitter.
- Templates have been developed for reports and power points, please use them and make sure to use the ones with correct fonts (NOT HelveticaNeuSt).

Communications Plan and Dissemination Strategies

The Visibility Committee Chair has written a communications plan for the Implementing Agreement and it has been signed off by the ExCo. In it, we analyse in detail our communications history, what works and what doesn't, who our audience is and how well we service them and how we can improve our plan going forward. It should ultimately include individual Task Dissemination Strategies to ensure that the website, Spotlight newsletters and social media channels are utilised well by all Tasks to report their findings and other relevant events.

Dr Sea Rotmann
Visibility Committee Chair

DSM UNIVERSITY

1. Summary

The DSM University develops largely according to plan and in a steady pace where we can deliver in a way that creates confidence from users and interested parties. The “Heartbeat” of the DSM-U is the webinars that are delivered once a month.

The concept has attracted some interest from the IEA TCP family when presented at a conference in Milan in the presence also from the IEA CERT and EUWP chairs.

2. Objectives for the last six months

Webinars

There has till 2017-04-20 been arranged 32 webinars.

Leonardo changed the platform for administering all webinars where all webinars are announced (<http://www.leonardo-energy.org/calendar>) and it looks as if this has given us a wider audience (see attachment).

The webinars are recorded and both slides and supporting material is made available for registered users. There has been produced a flyer (<http://www.ieadsm.org/wp/files/DSMU-flyer-December-2016-corr.pdf>) that provides data on past webinars and on where material can be found for registration and downloading from Leonardo and from YouTube..

Contacts with the IEA Secretariat and IPEEC has been particularly fruitful and will be further developed. The University was presented and discussed at a joint TCP meeting in Milan in the presence also from the IEA CERT and EUWP chairs.

Some voices were raised that the IEA should have its own facility for webinars but it looks quite obvious that the cooperation with the Copper Institute benefits our outreach. Only the latest 8 webinars has attracted registrations from 116 countries (see attachment)!

31	Integration of energy efficiency and renewable energy - multiple benefits!	Aalto Univ.	Peter Lund
32	Big data for greater energy efficiency	Delft Univ.	Kornelis Blok
33	Demand-side policy: success, failure and the future	UK Govt.	Peter Warren
34	Saurabh Kumar (EESL)?		2017-06-22
Reserv	David Shipworth (Blockchain applications for peer-to-peer community energy trading)		
	CANDIDATE LECTURES FOR the future		
	The BEE example (India)	Teri	Ajay Mathur?
	Applications in growing economies (Tanzania, Mongolia)	GIZ	Sven Emedal?
	Municipalities in Germany	Wuppertal	Peter Hennicke ?
	Energy efficiency and renewables in Japan and China	Chalmers	Thomas Käberger

3. Objectives for the next six months

Webinars

The webinars will be arranged and announced in a rolling 6 months plan.

Other guest opportunities

- a) Guest TCPs: 4E, ISGAN
- b) Policy issues: Club of Rome (Wijkman), Municipalities (Mayor NN), EE in buildings (Adrian Joyce)
- c) Planning and integration follow up on DSMU 31: Peter Lund (Helsinki University)

Attraction-knowledge

Problem: High quality content remains underexploited.

Solution: develop short policy briefs (~2 pages) post-webinar to re-promote content.

A “test” package of past webinars have been composed and sent to some universities as a teaser (Attachment 2)

“Tracks, programmes and Certification”

Tracks: DSM for regulators, DSM for utility engineers

Future: Organising webinars into learning programs leading to certification

DSMU 101: Basic elements of DSM and energy efficiency explained in short presentations that can be downloaded at any time

4. Outreach

The next issue is to find “outlets” willing to engage in making use of the material and put it into use in their regular activities. The organisations mentioned above have all shown interest but could be prompted further in particular now when our substance mass has reached some maturity.

The webinars will be more actively promoted on Facebook and LinkedIn.

5. Ideas for new work

Steps on the ladder

From this first step follows two more that successively builds the DSMU

1. Platform (to share)

Presently there have been 32 webinars most of them based on material from tasks that have been performed and some ongoing. This makes the platform for the DSMU and it has been shared with organisations that have similar objectives such as ISGAN, eceee, IPEEC, RAP and S3C (an EU project). Thereby the outreach is widened and the DSMU made relevant for bigger audiences.

The webinars are recorded and available both on LEONARDO and on YouTube. The Leonardo source also contains slides from presentations and extra material such as task-publications and articles/papers of relevance.

2. Substance (themes)

Next step, creating a substance of texts-presentations that can be replicated and used by interested parties according to their own wish, is in preparation. It goes under the workname "DSM 101" and will be a series of internet-based short courses (20-30 minutes each) on the themes for DSM:

- The logic of DSM
- Governance
- Energy efficiency - Load level (technical issues)
- Flexibility - Load shape (technical issues)
- Integration (with RES and distributed generation)
- Business models

1. **The Logic of DSM**, in which motivations and overview is presented in particular to decision makers and people who wants to see how issues connect to each other
 - a) **Strategies for DSM**
 - b) **The role of Efficiency and flexibility in systems (IDSM)**
 - c) **Actors, and their roles/relations, to make DSM a reality**
 - d) **DSM potential and costs (including rebound)**
2. **Governance (or DSM Management)**, in which incentives, cost/benefit, planning, evaluation and regulation are dealt with but also institutional behavioural issues such as barriers and biases.
 - a) **Incentives (carrots and sticks)**
 - b) **Evaluation**
 - c) **The plethora of benefits (and for whom)**
 - d) **Planning and regulation**
 - e) **Barriers and biases**
3. **Energy use (Load Level)**, technologies and measures to promote load level changes including strategic shifts of energy use to reduce carbon emissions.
 - a) **Obligations and certificates (applications and practice)**
 - b) **Network and grid issues**
 - c) **Equipment**
 - d) **Calculation**
 - e) **Business models**
4. **Flexibility – (Load shape)**, technologies and applications in DR systems and as regards customer benefits and participation
 - a) **Incentives (Pricing to reflect capacity needs)**
 - b) **Demand response practices and market segments**
 - c) **Technologies**
 - d) **Market models**
5. **Integration**, putting energy efficiency, storage and RES together to systems
 - a) **Preparing for integration**
 - b) **Practical examples**
 - c) **Incentives**
6. **Business models**, to deliver energy services
 - a) **Empowering users**
 - b) **ESCOs and EPCs**
 - c) **Municipalities**
 - d) **Market Transformation**

3. Consolidation

Finally there is a need for consolidation so (a group of) participants can rely on that the information provided has a stability and is meaningful in communication. This may call for a system of examination and that there is a responsibility for maintenance and updating. Preferably this will be established in cooperation with a university or an organisation that has reputation in the field of energy efficiency.

Several of our operating agents for different tasks have such roles and might serve as “midwives” for this final step.

6. Finance

	3m	6m	9m	12m	15m	18m	21m	24m	Budget (days)
Developing Products									
A. Webinars.	One every month (Scheduling by Chairs and secretary)								Moderation and communication by ECA (32)
B. 1. Task reports. 2. WEB-casts	Exists								
			1	1	1	1	1	1	Duty of OAs (6)
C. Issue-reports.		1	1	1	1	1	1	1	Editing (7)
D. Theme-Summaries.			2	2	2	2	2	2	Compilation (12)
E. Blogs.	1	1	1	1	1	1	1	1	Writer (8)
F. Key messages.			1	1	1	1	1	1	Writer (6)
G. E-learning.						x	x	x	-
H. Expert advice.						x	x	X	-
I. DSM-U Café.	1	1	1	1	1	1	1	1	Moderation (8)
Management	2	2	2	2	2	2	2	2	(16)
Reporting	2	2	2	2	2	2	2	2	(16)
SUM									111 days at 1k\$

7. Matters for the ExCo

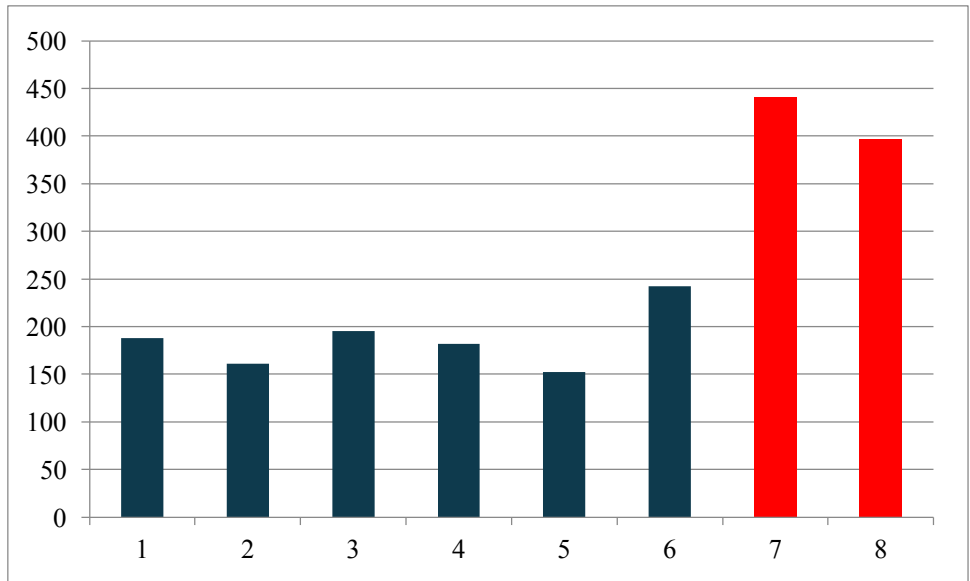
‘Recommend the ExCo to approve the Task Status Update Report’.

Statistics (attachment 1)

	<u>DSMU</u> <u>25</u>	<u>DSMU</u> <u>26</u>	<u>DSMU</u> <u>27</u>	<u>DSMU</u> <u>28</u>	<u>DSMU</u> <u>29</u>	<u>DSMU</u> <u>30</u>	<u>DSMU</u> <u>31</u>	<u>DSMU</u> <u>32</u>
Afghanistan								1
(AE) United Arab Emirates						2	1	4
Argentina								4
(AL) Albania	1	1	1			1		
(AM) Armenia	1							
(AT) Austria	4	2	2	2	3	6	5	10
(AU) Australia		1	1	1		1	2	3
Azerbaijan								1
(BD) Bangladesh	2	1	2		1	1	3	1
Belarus							1	
(BE) Belgium	32	29	31	32	22	22	28	27
(BH) Bahrain	1							1
(BO) Bolivia, Plurinational State Of	1						1	1
(BA) Bosnia And Herzegovina					1			
(BF) Burkina Faso			1				1	1
(BG) Bulgaria		2	2	2	1		2	2
(BH) Bahrain		1		1				
(BR) Brazil	1	5	6	21	2	16	17	9
Cameroon							2	
(CA) Canada	7	6	4	10	7	7	15	15
(CH) Switzerland	4	3	4	4	1	9	11	8
(CL) Chile	1		2	2			6	5
(CN) China	1		1			3		
(CV) Cape Verde	1	1		2	1	1	2	1
(CZ) Czech Republic				1	1	1	1	2
(CO) Colombia	3	2	2	1	1	3	6	5
(CW) Curaçao					1			
(DE) Germany	8	9	10	5	4	14	23	25
(DK) Denmark	4	4	3	4	4	4	7	9
(EC) Ecuador					1	1	3	4
Ethiopia						1		
(EG) Egypt	2	1					1	
(DO) Dominican Republic	1							
Democratic Republic of the Congo								1
(DZ) Algeria			2	1		1	2	2
(ES) Spain	11	7	9	5	5	4	22	17
(FI) Finland				1	5	1	7	6
(FR) France	8	7	8	5	6	11	16	19
(GB) United Kingdom	8	6	12	13	4	24	25	26
(GE) Georgia		1						

(GH) Ghana	1	1				3	2	1
(GR) Greece	1	4	1	3	4	3	4	8
(GT) Guatemala	1						1	1
(HN) Honduras		1		1			2	
(HR) Croatia	2	2	1	1	2	1	6	4
(HU) Hungary	2	1	2			1	3	3
(ID) Indonesia			1				1	2
(IE) Ireland	1	1	5	3	4	2	7	5
(IN) India	4	8	7	5	14	11	24	28
(IL) Israel			1		1	1	1	
(IM) Isle Of Man			1					
(IR) Iran, Islamic Republic Of			1				2	3
(IT) Italy	8	8	8	5	7	6	14	14
Jamaica							1	
(KR) Korea, Republic Of		1				3	3	3
(KZ) Kazakhstan		1					1	
(JP) Japan	1		1	1		2		1
(KE) Kenya				1				
Lebanon							2	
(LK) Sri Lanka	1	1	1	1		1		1
(LT) Lithuania					1			
(LY) Libya			1					
(LU) Luxembourg	1							
Malaysia							3	
(MA) Morocco	2	1			1	1	4	1
(MK) Macedonia, The Former Yugoslav Republic Of	1	1	1		1	1	1	1
(MN) Mongolia	1	1		1				
(MT) Malta			1	1			2	1
(MX) Mexico	3	3	2	3	3	5	25	6
Monaco								1
Micronesia (Federated States of)							1	
Montenegro						1		
(MY) Malaysia	2					1		3
Morocco						1		
(MZ) Mozambique	1							
Niger						1		
(NG) Nigeria	2	3	3	1	1	3	6	2
(NL) Netherlands	8		8	4	5	1	6	18
(NO) Norway		1	1				1	
Oman							1	1
(NZ) New Zealand	1							

Panama							1	
(PE) Peru	2	2	2	1	1	2	4	3
(PH) Philippines	1					1	3	
(PK) Pakistan					1			1
(PL) Poland	2	1	1	2		3	4	5
(PT) Portugal	5	6	10	7	7	7	13	20
(RO) Romania	1	1		1	2	1	4	2
(RS) Serbia	1	1					1	1
(RU) Russian Federation		2	2			1	2	1
Saint Lucia						1		
Saudi Arabia						1		1
(SD) Sudan		1				1		
Senegal						1	1	1
Slovakia								1
(SE) Sweden	4	5	6	8	10	3	15	5
(SG) Singapore		1	2			1	3	1
Somalia							1	
(SI) Slovenia	1	1			2	1		5
(SV) El Salvador	1				1			1
Syrian Arab Republic							2	1
Swaziland							1	
(TG) Togo					1			
(TH) Thailand	4	1	2	2	1		1	2
Trinidad and Tobago							5	
(TN) Tunisia	1	1	1		1	1		1
(TR) Turkey	2		2	2	1	1	1	6
(TW) Taiwan	2	2	1	2	1			
(UA) Ukraine		1	1	2		1	4	1
(UG) Uganda				1		1	4	
(US) United States	11	3	11	7	6	28	21	18
(VE) Venezuela, Bolivarian Republic Of		2					3	3
(UY) Uruguay	4		1	1		4		1
(ZA) South Africa		1	2	1	1	1	5	3
Vietnam							1	
(ZM) Zambia			1				1	1
(ZW) Zimbabwe		1		1				
Registered	188	161	195	182	152	242	441	397
Sum countries reg	56	54	53	47	47	62	76	73
Sum countries abstained	60	62	63	69	69	54	40	43





Registrations for the last 8 webinars DSMU 25-DSMU 32

Attachment 2: DSM today and tomorrow. A selected package from the DSM University

The IEA DSM-Programme has been active since 1992 and has seen, and shaped, the development of Demand Side Management practices worldwide. To further disseminate the experiences made in the work we have formed the DSM University in collaboration with the European Copper Institute. The vehicle for this is to arrange monthly webinars and together with these provide reading material for users who want to dive deeper into the matter.

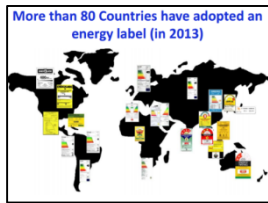
One of the questions often asked is where is DSM heading? In particular now when a great part of the world have embraced the idea that there is an urgent need to transform the energy systems and to find ways to ensure that the energy use is made efficient.

We have gathered some of the webinars in a package that can give an input to answering the question. How can we address the issues for next century (1), what can be done in the companies that use energy (2), how can efficiency be communicated for everyday purposes (3), selling verified energy services (4) and how can (must) business models be adapted (5). Please find a short description below

Title	What is it about
<p>1. DSM for the 21st century http://www.leonardo-energy.org/resources/898/dsm-for-the-21st-century-58456f6ba065f</p> 	<p>DSM (Demand Side Management) has changed since it was first introduced in the 1980s as an active policy instrument to make energy systems perform better and more economically. In the years since and primarily in the early years of the new millennium technology has provided new opportunities with smarter applications, decentralised power making use of local renewable sources and with a booming IT for management. We rather talk about Integrated DSM (IDSM).</p> <p>Policy challenges to make energy systems sustainable and reduce (prevent) climate change has been more pronounced with the Paris accord as the ultimate example. Still market uptake is slow and well beyond expectations (and needs).</p> <p>It is time for DSM to shape up and deliver!</p>
<p>2. Energy efficiency: a profit center for companies http://www.leonardo-energy.org/resources/110/energy-efficiency-a-profit-center-for-companies-a-strategic-57a83f643e70f</p> 	<p>Investments in energy efficiency not only result in a reduction of energy consumption — the energy benefit— but they also entail non-energy benefits such as improved product quality, reduced production time or improved comfort in sales area. Non-energy benefits significantly improve the business case of energy-efficiency investments in the business sector by raising their strategic character.</p> <p>Within this context, the aim of this webinar is to discuss a methodology to describe and analyse the industrial non-energy benefits of energy efficiency. Linking energy, operational, strategic and financial aspects, this new conceptual framework enables to move away from the common view of energy as a commodity (where the only goal is to save kilowatt-hours) to adopt a new perspective on energy and energy services as strategic value for businesses.</p>

3. A brief history of energy efficiency labelling

<http://www.leonardo-energy.org/resources/106/a-brief-history-of-energy-efficiency-labelling-57a839e8e62c3>



Energy Labelling has progressively become a must-have in the energy efficiency policy toolbox. When implemented with care, energy labelling presents a face that energy efficiency –also known as the invisible fuel– often misses. Energy labels help end-use consumers to make more informed decisions when purchasing a product, equipment or system. Fascinating too is to see how energy labels facilitate and shape market transformation strategies when combined for instance with fiscal or financial scheme. What lessons can be learned from the implementation of the European energy labels? What are the possible options for consolidating such high -visibility policy instruments in the future? The presentation will recall the conditions of the elaboration of the first European labels, discuss achievements and share views to reinforce existing schemes.

4. Simplified Measurement & Verification for Energy, Water & CO₂-Savings

<http://www.leonardo-energy.org/resources/102/simplified-measurement-verification-for-energy-water-co2-sav-57a1d73662f4c>)

Motivation: From 'NWh' to saving cash flows.
How to simplify?

M&V is a prerequisite to:

1. assess the **quantitative outcomes** of saving measures,
2. translate physical savings into **cash flows**, e.g. for re-financing

But in reality, M&V of savings:

1. always an **estimate based on calculations** => accuracy?
2. (perceived as) **complicated**: lack of data, resources and comparability between baseline and reporting periods
3. a full scale M&V plan is not suitable, e.g. for **smaller projects**
4. not applied for **individual saving measures** (IPMVP options A&B) in ESCo markets (e.g. Germany, Austria)
5. often **not done at all** (particularly with in-house projects)

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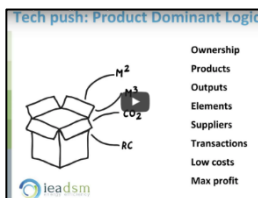
Measurement & Verification (M&V) is a prerequisite to assess the quantitative outcomes and performance of energy, water or CO₂ saving measures and to translate 'NWh' into savings cash flows for financing and other purposes.

Task 16 proposes simplified M&V approaches for electricity, heat, water or CO₂ saving measures in combination with so called quality assurance instruments to verify the functionality and quality of ECMs, but not necessarily their exact quantitative outcome.

We would like to introduce the concept and discuss applicability and limitations of these approaches.

5. What job is Energy Efficiency hired to do? A look at the business models

<http://www.leonardo-energy.org/resources/101/what-job-is-energy-efficiency-hired-to-do-a-look-at-the-prop-57a1d59d9eafd>



[energy.org/resources/101/what-job-is-energy-efficiency-hired-to-do-a-look-at-the-prop-57a1d59d9eafd](http://www.leonardo-energy.org/resources/101/what-job-is-energy-efficiency-hired-to-do-a-look-at-the-prop-57a1d59d9eafd)

This webinar focuses on first results of Task 25, a project aimed at learning about new business models and propositions that actually contribute to the market uptake of Energy Efficiency. We will discuss what type of business models and propositions work when, where and why. We will concentrate on learnings about the influence of user centric business development, the role of entrepreneur and his/her skills and the impact of wider context. Examples in retro-fitting, smart energy services, heating, and lighting will illustrate the presentation.

TASK ZERO

1. Summary

Task ZERO was presented to the ExCo at the 44th ExCo-meeting in Graz. The ExCo agreed for establishment of the task to administer the common fund and the common tasks and a letter explaining the reasons has been distributed to the delegates (see appendix). The comments received have been in favour for this organisation and for a raise of the fee for participation to 11000 USD per year.

This decision was confirmed by the 45th ExCo and explained more in detail in a letter that has been distributed to all.

This report is the third trying to provide a comprehensive overview of how administration and common issues develop. Details are, as earlier, provided in specific documents under separate agenda items.

2. Objectives (reprint from 44th and 45th ExCo)

The mission of the IEA DSM-Programme is to deliver to its stakeholders, materials that are readily applicable for them in crafting and implementing policies and measures.

In order to do so we have several tools that we need to maintain but also develop to ensure that results are disseminated in ways that are useful for people in everyday practice.

This concerns our:

- Administration
- Informational tools
- Our networks and in particular the local ones run by ExCo-participants
- Dissemination and the extension with the “DSM-University”

To ensure that the activities are coherent it is proposed to gather all these actions in a context that we call “Task ZERO”. A task that is a mandatory for participants and builds on both cost-sharing and task-sharing.

The management of the IEA DSM-Programme requires the following responsibilities to be executed:

Administration

Executive Secretary:	Cost-shared	Task-shared
➤ Make and distribute agendas, minutes and other documents of Executive Committee meetings	X	
➤ Prepare decisions and recommendations	X	
➤ Assist the Executive Committee and its Chairmen in carrying out their responsibilities including the running of the Project Preparatory Committee (PPC)	X	
Output and visibility (technical facilities and content)		
➤ Website,	X	(x)
➤ Spotlight newsletter,	X	X
➤ Social media,	X	X
➤ Flyers	X	

Dissemination

	Cost-shared	Task-shared
Improved dissemination by development and running of the DSM University	X	X
Local dissemination and “anchoring” within the areas of the participants and to support them in recruiting the expertise necessary for tasks in which they have decided to participate, but also to gather material of interest for other tasks who need local points of contact for their work (Task-sharing)		X

3. Management and Outreach

The task is lead by the Chair who may delegate responsibilities in particular to the secretary and the vice-chairs and who has the Project Preparatory Committee, PPC, as “steering committee”.

The Programme Secretary is the co-ordinator for Task ZERO. The co-ordinator together with the “Visibility Committee”, gathers the necessary information from those concerned with subtasks described above in order to produce a work-plan and a budget for the Executive Committee members to decide upon annually.

The chair has run 3 Project Preparatory Committee (PPC) meetings to discuss and prepare the development of the TCP. An issue has been interest from new countries and other parties to participate:

- Hungary: information is sent.
- Taiwan and Japan. Tyler and Peter have been there, they might have contacts.
- Mexico appears frequently on the DSMU list
- Germany: Sea has contact with Marcel Schweiker of Karlsruhe
- Associate countries: Hans will see who we can find in the DSMU list. Tyler will be asked for addresses. Then we'll contact them, using the introduction material Anne usually sends. We may want to find ways to bring such partners “up to speed” on DSM
- Saurabh (India) is now working on the biggest ESCO of India. The have a huge contract on LED lightning. Hans will follow up on the contact.
- The Indian project on DSM for agriculture is now made an Indian national service
- Some states in the US are very advanced in different DSM aspects and there have been interest to participate in single tasks
- “Crowdfunding” has been discussed
- The preparatory work on “Multiple benefits” has been useful and the project is now a part of a EU Horizon 2020 application under leadership of Fraunhofer Institute in Germany and with Catherine Cooremans as one of the leading partners.

There has been a joint TCP meeting in Milan for the DSM, ISGAN, 4E and Superconductivity TCPs in which task 24, 25 and the DSM University where presented and discussed with colleagues.

4. Finance

The costs for the administration has developed as follows (USD)

2012		2013		2014		2015		2016		2017	
Budget	Performance	Budget	Performance	Budget	Performance	Budget	Performance	Budget	Performance	Budget	Performance
168,000	162,074	168,000	145,985	144,000	176,213	144,000	192,659	176,000	??	176,000	-
+6000		+22000		-32000		-49000		??		-	

With the new level on the fee for the common fund we could expect to balance the budget. The common fund presently, with 16 participants paying 11,000 USD each, receives an income of 176,000 USD per year.⁴

The expenses between years fluctuates widely, partly because of fluctuations in exchange rates. The Programme has managed to meet rising costs and rising expectations during its life-time with rationalising the work not the least by making full use of the IT-development. During these years we have also managed to build a common fund that has been touching the limit of 300,000 USD. This has allowed the Programme to facilitate upstart of new tasks from a seed-fund.

The value of work put into the DSM University is approximately 45,000 USD per year. Part of this is covered by in-kind contributions, part of it is covered within the budget.

5. Report (for the period October 2016-April 2017)

The following table is an attempt to pull the task zero elements together and provide a comprehensive overview. Further details are presented under other agenda items as indicated.

ISSUE	See agenda ITEM																																																
Administration	Financial report To be provided																																																
Informational tools	<p>Programme visibility Statistics</p> <ul style="list-style-type: none"> Total website hits: Sept 1, 2016 to March 31, 2017: 7,168 Sessions, 4,820 users Hits per day: 33.8 Average time on website: 2mins 38 seconds viewing an average of 2.5 pages. 65.7% of them were new visitors. <p>The breakdown of sessions by country is as follows:</p> <table border="1"> <thead> <tr> <th></th> <th>Country</th> <th>Sessions</th> <th>% Sessions</th> </tr> </thead> <tbody> <tr><td>1</td><td>Russia</td><td>674</td><td>9.40%</td></tr> <tr><td>2</td><td>United States</td><td>632</td><td>8.82%</td></tr> <tr><td>3</td><td>United Kingdom</td><td>532</td><td>7.42%</td></tr> <tr><td>4</td><td>Sweden</td><td>427</td><td>5.96%</td></tr> <tr><td>5</td><td>Netherlands</td><td>325</td><td>4.53%</td></tr> <tr><td>6</td><td>France</td><td>316</td><td>4.41%</td></tr> <tr><td>7</td><td>China</td><td>295</td><td>4.12%</td></tr> <tr><td>8</td><td>India</td><td>278</td><td>3.88%</td></tr> <tr><td>9</td><td>Italy</td><td>275</td><td>3.84%</td></tr> <tr><td>10</td><td>Belgium</td><td>274</td><td>3.82%</td></tr> <tr><td></td><td>All Others</td><td>3140</td><td>43.80%</td></tr> </tbody> </table> <p>Of note is a significant increase in engagement from Iran, with a 178% increase in traffic (145 visits up from 52) and an average time on-site of 11mins.</p> <p>We had 633 total downloads since Sept 1, 2016 (up from 91) of which 316 were unique files (including legal texts but excluding Spotlight newsletters which do not show up in this analysis). The top 5 topics for</p>		Country	Sessions	% Sessions	1	Russia	674	9.40%	2	United States	632	8.82%	3	United Kingdom	532	7.42%	4	Sweden	427	5.96%	5	Netherlands	325	4.53%	6	France	316	4.41%	7	China	295	4.12%	8	India	278	3.88%	9	Italy	275	3.84%	10	Belgium	274	3.82%		All Others	3140	43.80%
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⁴ The fee to the common fund has been 8000 USD per annum since the programme started more than 20 years ago but is now raised to 11000 USD for the majority of the participants.

	report downloads were: Task 17, Task 25, Task 24, EGRD and Task 13.
Our networks and in particular the local ones run by ExCo-participants	Still poor local connections and ExCo engagement
Dissemination and the extension with the "DSM-University"	DSM University <ul style="list-style-type: none"> • Growing development in terms of webinar participation. More than 100 countries registered in the last 8 webinars • Fruitful connections with "supportive" organisations • DSM 101 Under way • Possible base for an extended IEA University and collaboration with institutions for education

6. Matters for the ExCo

The ExCo is invited to approve the Task ZERO report to deal with the common obligations and discuss how performance could be improved in terms of both finance, visibility, importance and concern for participants as well as outreach to new partners.

MISCELLANEOUS

Action items resulting from the 48th Executive Committee Meeting

11 – 12 October, 2016 – Brussels, Belgium

WHO	ACTION	WHEN
India Korea Spain	Pay Common Fund invoice for 2015	ASAP
India Spain	Pay Common Fund invoice for 2016	ASAP
Anne Bengtson	Keep reminding those who have outstanding payments to the Common Fund	On-going
Andreas K. Enge	Start discussion with Joe Miller and set up a contract between him and the DSM Programme	NOT DONE
ExCo members	Let Joe Miller and Anne Bengtson know when an invoice is paid	On-going
Rob Kool Sea Rotmann	Maintain contacts with China (NDRC), Thailand (EGAT), IBM (Germany), Australia, Portugal and Chile.	On-going
Hans Nilsson Hans de Keulenaer	Move forward with the DSM University according to plan – as well as continue to plan/hold webinars the first weeks of every month	On-going
Harry Vreuls Diego G. Carvajal	Work together to further the topic on Power System Flexibility as the pillar towards higher vRES shares	On-going
Harry Vreuls	Contact Executive Committee members from countries not present at the meeting	NOT DONE
Matthias Stifter	Further the concept on Data Analytics for Energy Efficiency into a proposal and present at next ExCo meeting	NOT DONE
Rob Kool Sarah Mitchell	Establish contact with Efficiency One social media team to help DSM TCP with their social media	NOT DONE
Operating Agents	Update a more clear definition in Legal Annex text of their Task	ASAP
Matthias Stifter René Kamphuis	Further proposal for a Task 17 Phase 4 and present at the next ExCo meeting	DONE
Sea Rotmann Anne Bengtson	Close the DSM LinkedIn group	NOT DONE
Anne Bengtson Josephine Maguire	Prepare administrative details for the Forty Ninth Executive Committee Meeting in Dublin, Ireland	DONE
Anne Bengtson	Send out invitations first week of March	1-7 March 2017
ExCo members	Review website regularly and suggest further developments	On-going
ExCo members	Suggest topics for the Spotlight Newsletter and provide input for those articles to Pam Murphy	On-going
All	Follow Visibility Committee Chair recommendations to update the website	On-going
Operating Agents	Prepare Task Information Plans and include in each Task Status Report.	On-going
Pam Murphy	Distribute issues of the DSM Spotlight Newsletter	December 2016 March 2017
Operating Agents	Include 1-2 slides in Task presentation, highlighting the main findings to date in respective Task(s).	Present at next ExCo meeting
Jan W. Bleyl	Task 16 Phase IV: Continue talks with interested countries	On-going

Cont. Action Items

Hans Nilsson	Task Zero: Prepare Task Status Report and send to Anne Bengtson for inclusion in the Pre-Meeting Document.	Friday 7 April 2017
Hans Nilsson Hans de Keulenaer	Prepare Status Report on the development of the DSM University and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 7 April 2017
Jan Bleyl-Androschin	Prepare a Task Status Report for Task 16 Phase 4 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 7 April 2017
Matthias Stifter René Kamphuis	Prepare Task Status Report for Task 17 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 7 April 2017
Rob Kool	Prepare PPC progress report and send to Anne Bengtson for inclusion in the Pre-meeting Document (PMD).	Friday 7 April 2017
Matthias Stifter René Kamphuis	Prepare further developed proposal on further activities in Task 17 and send to Anne Bengtson for inclusion in the PMD.	Friday 7 April 2017
Matthias Stifter	Prepare proposal on Data Analytics for Energy Efficiency and send to Anne Bengtson for inclusion in the Pre-Meeting Document	Friday 7 April 2017
Sea Rotmann	Prepare Task Status Report Task 24 Phase II and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 7 April 2017
Ruth Mourik	Prepare Task Status Report for Task 25 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 7 April 2017
Andreas K. Enge Anne Bengtson	Prepare Financial Report and send to Anne Bengtson for inclusion in the Pre-Meeting Document	Friday 7 April 2017
Sea Rotmann	Prepare Visibility Committee Report for inclusion in the Pre-Meeting Document.	Friday 7 April 2017
Weber Web	Provide statistics for every Task every six months and send to Sea Rotmann/Anne Bengtson for inclusion in the Pre Meeting Document.	Friday 7 April 2017
Anne Bengtson	E-mail pdf file of Pre-meeting Document for the Forty Sixth ExCo meeting to the Executive Committee members and Operating Agents.	Monday 17 April 2017

PARTICIPATION TABLE

Participant	In force						Proposed Tasks/ extensions
	17 Phase 3	24 Phase 2	25		16 Ext. Phase 4		
	Integration of DSM, Distributed generation, Phase 3	Behaviour Change in DSM – Helping the Behaviour Changers	Business models and the effective market update of DSM Energy Services	DSM University	Competitive Energy Services Phase 4		
Australia				☺			
Austria	X	X	X	☺	☺		
Belgium			☺	☺	X		
Finland			☺				
India	X						
Italy				☺			
Korea			X	☺	☺		
Netherlands	X	X	X		X		
New Zealand		X		☺			
Norway			☺	☺	X		
Saudi Arabia							
South Africa							
Thailand							
Spain				☺			
Sweden	X	X	X				
Switzerland	X		X	☺	X		
United Kingdom		☺	☺				
United States	X	u		☺			
RAP *				◀			
European Copper Institute*	◀		◀				
Efficiency One		u	u	u		u	
OPERATING AGENT (OA)	Matthias Stiffer & René Kamphuis	Sea Rootmann & Ruth Mourik	Ruth Mourik	Hans Nilsson, Hans de Keulenaer	Jan W. Bleyl-Androschin		

X = participant

☺ interested

* = Sponsors

◀ = in-kind

GLOSSARY

Abbreviation	Explanation
APEC	Asia-Pacific Economic Cooperation
BCG	Buildings Co-ordination Group (consists of 7 Implementing Agreements)
CERT	Committee on Energy Research and Technology in the IEA
CIGRE	International Council on Large Electric Systems
CTI	Implementing Agreement on Climate Technology Initiative
DHC	Implementing Agreement on District Heating and Cooling
DSM	Implementing Agreement on Demand-Side Management
EC	European Commission
ECEEE	European Council for an Energy Efficient Economy
ECES	Implementing Agreement on Energy Storage
ECI	European Copper Institute
EEWP	Energy Efficiency Working Party in the IEA
ENARD	Electricity Networks Analysis, Research & Development
EOT	End of Term
ESD	Energy Services Directive in the European Commission
ETE	Energy Technology Essentials (3-4 page briefs)
ETSO	European Transmission System Operators
EU	European Union
EUWP	End-Use Working Party in the IEA
FBF	Implementing Agreement on Future Buildings Forum
GHG	Green House Gas
HPC	Implementing Agreement on Heat Pump Centre
ICLEI	International Council for Local Environmental Initiatives
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
ISGAN	International Smart Grid Action Network (ISGAN)
JFS	Japan Facility Solutions (Japanese Sponsors participating in Task XVI)

KIER	Korea Institute of Energy Research
NEET	New and Emerging Environmental Technologies (IEA networking project - Gleneagles G8)
NDRC	National Development and Reform Commission, China
PMD	Pre-Meeting Document
PVPS	Implementing Agreement on Photovoltaic Power Systems
REEEP	Renewable Energy and Energy Efficiency Partnership
SANEDI	South African National Energy Development Institute
SANERI	South African National Energy Research Institute
SHC	Implementing Agreement on Solar Heating and Cooling
TSO	Transmission System Operators

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EXECUTIVE COMMITTEE MEETINGS OF THE IEA DSM ENERGY TECHNOLOGY INITIATIVE

(table excludes the European Union)

Meeting #	Date	Country	Participants	Countries on ExCo
interim	1 –2 April, 1993	Stockholm, Sweden	14	14
1	28 – 29 October, 1993	Kerkrade, Netherlands	13	14
2	24 – 25 March, 1994	Madrid, Spain	12	14
3	13 – 14 October, 1994	Washington D.C., USA	14	15
4	23 – 24 March, 1995	Schaffhausen, Switzerland	15	15
5	19 – 20 October, 1995	Fukuoka, Japan	14	15
6	21 – 22 March, 1996	Paris, France	14	15
7	31 Oct – 1 Nov, 1996	Sydney, Australia	12	15
8	10 – 11 April, 1997	Helsinki, Finland	14	15
9	10 – 13 September, 1997	Oslo, Norway	9	15
10	25 – 27 March, 1998	Seoul, Korea	10	15
11	7 – 9 October, 1998	Chester, United Kingdom	12	15
12	14 – 16 April, 1999	Copenhagen, Denmark	12	17
13	28 – 29 October, 1999	Amsterdam, Netherlands	14	17
15	3 – 6 April, 2000	Ankara, Turkey	12	17
16	12 – 13 October, 2000	Athens, Greece	13	17
17	3 – 4 May, 2001	Eskilstuna, Sweden	12	17
18	3 – 5 October, 2001	Barcelona, Spain	13	17
19	18 – 19 April, 2002	Milan, Italy	15	17
20	3 – 4 October, 2002	Graz, Austria	15	17
21	8 – 10 April, 2003	Canberra, Australia	9	17
22	14 – 15 October, 2003	Paris, France	15	17
23	15-16 April 2004	Trondheim, Norway	16	17
24	13-15 October 2004	Atlanta, United States	13	17
25	20-21 April 2005	Saariselkä, Finland	15	17
26	October 2005	Madrid Spain	14	17
27	April 2006	Copenhagen Denmark	14	17
28	October 2006	Maastricht Netherlands	9	17
29	April 2007	Seoul Korea	10	18
30	11-12 October 2007	Brugge Belgium	15	18
31	2-4 April 2008	New Delhi, India	11	19
32	October 2008	Milan Italy	13	19
33	April 2009	Vienna, Austria	11	20
34	September 2009	Chester, UK	11	20
35	April 2010	Paris, France	11	19
36	October 2010	Stockholm, Sweden	9	19
37	April 2011	Washington, USA	8	18
38	2 – 4 November 2011	Jeju Island, Korea	14	18
39	18 - 20 April, 2012	Trondheim-Tromsø, Norway	10	15
40	September 14-16 2012	Espoo, Finland	10	16
41	24 - 26 April, 2013	Utrecht, The Netherlands	11	17
42	16 – 18 October 2013	Lucerne- Rigi, Switzerland	11	17
43	17 – 21 March 2014	Wellington, New Zealand	9	16
44	15-17 October 2014	Graz, Austria	9	16
45	25 – 27 March 2015	Cape Town, South Africa	9	16
46	22 – 23 October, 2015	Halifax, Nova Scotia, Canada	9	17
47	17 – 18 March, 2016	Stockholm, Sweden	11	18
48	11 – 12 October, 2016	Brussels, Belgium	11	18
49	11 – 12 May 2017	Dublin, Ireland		

No's of Executive Committee meetings held in each country

Netherlands	4	Australia	2	Japan	1
Sweden	4	Denmark	2	Turkey	1
Austria	3	Italy	2	South Africa	1
France	3	Switzerland	2	Nova Scotia	1
Finland	3	UK	2	Ireland	1
Korea	3	Belgium	2		
Norway	3	Greece	1		
Spain	3	India	1		
USA	3	New Zealand	1		