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TASK 24 POLICY BRIEF

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BEHAVIOUR CHANGE IN DSM: OR HOW MONSTERS, FAIRY TALES AND MAGIC CARPETS CAN HELP CHANGE BEHAVIOURS

- There is no behaviour change silver bullet, just as there is no silver bullet technology or business model that can change everything
- But we have learned that some approaches work better than others
- Viewing the energy system through the 'human lens', starting by understanding end user needs, and taking a whole-system, collaborative approach to designing behavioural interventions is key
- We have trialled and tested the tools to facilitate a collective impact approach to behaviour change with many different sectors, countries and stakeholders
- To help policy and decision makers design better policies, programmes and pilots, we have developed a toolbox for behaviour change interventions from A to Z.

WHAT'S THE ISSUE?

As environmental and societal pressures continue to rise, OECD governments are doing more and more to meet rising energy needs with greater sustainability policies. Low carbon policies and targets, as well as the Paris Accord are shaping the future of our energy system. We have taken massive inroads into increasing the proportion of renewable energy technologies, with rapid cost reductions and are tracking towards low carbon electricity production.

However, it is clear that current efforts and technologies will not be enough to achieve a 1.5C climate change target. The transport sector is still locked into a largely fossil fuel-dependent near-term future and the shift to 100% renewable energy will take several more generations.

WHY IS THIS IMPORTANT?

One area of great potential of up to 30% energy consumption reduction has been largely overlooked: human behaviour and changes in energy consumption habits and investment decisions. Even though many studies and projects have attempted to change behaviours, and several large-scale efforts have been undertaken via utilities (e.g. with Opower), only very few have managed to sustain long-term 30% reductions in energy use. Without achieving societal change in (energy) consumption habits and routines, it will be close to impossible to achieve the carbon targets that can stall runaway climate change.

WHAT CAN POLICY MAKERS DO?

Why is achieving long-term change in energy habits so elusive? One of the issues is that we continue to address humans under the lens of the current neoliberal socio-economic system – as largely utility-maximising, rational actors. However, studies have shown that over 90% of energy use is entirely habitual and routine. That means that most neoclassical economic approaches based on the 'deficit model' (i.e. that a deficit in information and financial ability is the reason for inefficient energy behaviours) will only work in a small number of instances. For example, during so-called "**Moments of Change**" when people move home, or buy a new car or large appliance, when they

renovate or retrofit or maybe have a baby. During those times, they can become more aware of their energy use, and, with the right "**Middle Actors**" (e.g. tradespeople, appliance or vehicle salespeople, realtors etc.) in place to give them the most energy-efficient advice, they can be prompted to make (rational) decisions – usually on large investments. These will have long-term, ongoing positive effects as new energy behaviours and habits get locked in.

Identifying these *Moments of Change* and the relevant, associated *Middle Actors* who can be trained to 'lock them in', should be part of a policy maker's toolbox. But they cannot do this alone. Most policy makers do not have direct access to *End User* lives and associated changes in lifestyles and (energy) consumption. In addition, this still does not address the 90% of routine energy use. One way these much more intransigent and complex societal behaviours can be addressed is via a so-called "**Collective Impact Approach**" (CIA). This was designed by social entrepreneurs who are dealing with complex problems and many different (and often) difficult stakeholders. This approach, aimed at long-term social change, proposes a collective, rather than an individual approach for solving social problems.

The *Collective Impact Approach* encompasses a framework to facilitate multi-stakeholder collaboration. Its main features are: A common agenda; mutually-reinforcing activities; continuous communication; shared measurements; and a backbone support organisation. To create a more hands-on tool to identify and work on the five conditions of the CIA, IEA DSM Task 24 developed the so-called "**Behaviour Changer Framework**". This was later dubbed "**the magic carpet of behaviour change**" by the largest utility in California.

This framework was created to have an overview of the social system focusing on all relevant stakeholders, not just policy or decision makers. We call them "**Behaviour Changers**" and they fall into five main sectors (government, industry, research, the third, and service sectors). This "magic carpet" framework focuses on a chosen

behavioural problem and starts from the perspective of the *End Users*: their behaviour (which we are trying to change), and their context in terms of technology, social aspects, infrastructure and wider environment. It also visualises each of the *Behaviour Changers* in the system, what their main mandates, stakeholders, restrictions and tools are and how they interact with one another and with the *End User.*
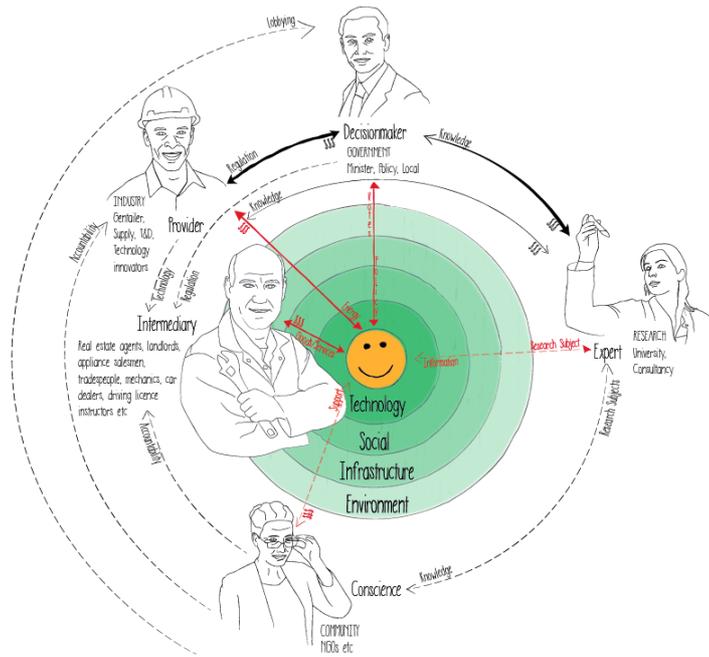
The Task 24 Behaviour Changer Framework (see Rotmann, 2016 for full description)

HOW DOES THIS APPLY IN REAL LIFE AND TO POLICY MAKERS?

This "magic carpet" framework gets used in association with relevant *Behaviour Changers* and other creative and engaging tools developed by Task 24. These include "the Monster" - an in-depth review of different models of understanding behaviour using real-life case studies and pilots, how to use storytelling and fairy tale story spines effectively and how to evaluate the multiple benefits of behavioural interventions for all stakeholders, "beyond kWh" and "beyond energy". Even though these tools sound rather whimsical, they are truly tried and tested and perform very strongly, in real life. For example, we have applied the "magic carpet" in over 20 workshops with over 300 *Behaviour Changers* on topics as wide-ranging as changing Building Management Operators' behaviours in U.S. hospitals (with savings of up to 40%); increasing the uptake of mobility-sharing platforms in Austria; developing a roadmap for ICT use in Dutch universities; using libraries as successful *Middle Actors* to loan out residential energy saving kits in Ireland; and improving green leasing in commercial office buildings in Sweden.

The benefits of using these whole-system tools that focus on all the actors and stakeholders within a given energy system and start from understanding the *End User* needs and contexts first, are clear. Instead of attempting to change the energy system from a purely technocratic perspective, e.g. by promoting use or uptake of a new fuel or technology; we assess it from a purely human perspective first. Promoting understanding, empathy and insights into the *End User's* and other *Behaviour Changers'* needs, contexts, mandates and restrictions will enable a more holistic approach to policy- and decision making. However, this is also more complex and difficult and needs the full support and inclusion of all different actors to partake, and agree on a common goal.

WHERE TO NEXT?

These tools have been developed, trialled and tested to some extent in several different countries and energy sectors, under IEA DSM Task 24. This Task is soon coming to an end although the the real work on human behaviour and societal change in the DSM Programme has only just begun. In a new "people-focused work stream" of the IEA DSM, we plan to build on the community and case studies compiled in Task 24 Phase I and the preliminary models and tools developed in Phase II to work with a suite of acclaimed project partners and experts to develop and test an internationally-validated process for behaviour change programmes that can be applied by stakeholders across the DSM landscape for years to come. The more we can test our "A to Z toolbox of behaviour change" with different actors, sectors and countries, the more we can show that there is indeed a way to reduce our consumption habits and behaviours. This way depends on taking a human view of the energy system, starting with an understanding of End User needs, and strong, multi-stakeholder collaboration towards common goals and solutions.

To find out more, please go to:
www.ieadsm.org/task/task-24-phase-2/

SOURCES

Mourik, R. & Rotmann, S. (2013). *Subtask 1 "The Monster" Analysis*. IEA DSM Task 24 Phase 1. 156pp.
Kania, J. & Kramer, M. (2011). *Collective Impact*. Stanford Social Innovation Review, p. 36-41.
Rotmann, S. (2016). How to create a 'magic carpet' for Behaviour Changers. BEHAVE conference, Coimbra, Portugal, September 2016.
Karlin, B., Ford, R. and C. McPhearson Frantz (2015). *Exploring Deep Savings: A Toolkit for Assessing Behavior-Based Energy Interventions*, IEPEC Conference, Long Beach, USA.
Rotmann, S. (2017). *"Once Upon a Time…" Eliciting Energy and Behaviour Change Stories using a Simple Story Spine*. Special Issue on Storytelling and Narratives in Energy and Climate Change Research, *Energy Research and Social Sciences,* p303-310.