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Item Type	Meetings and Proceedings
Authors	O'Rafferty, Simon;de Eyto, Adam;Lewis, Huw J.
Publisher	Design Research Society
Download date	2026-05-08 14:37:29
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Link to Item	https://hdl.handle.net/10344/5122

Open Practices: lessons from co-design of public services for behaviour change

Dr. Simon O'Rafferty^{a*}, Dr. Adam DeEyto^a, Dr. Huw Lewis^a

^a Design Factors, DMT, University of Limerick, Ireland

*Corresponding author e-mail: simonorafferty@gmail.com

Abstract: This paper explores what the distinctive value of design may be in a policy context. The paper broadly supports the contention by Smith and Otto (2014) that design offers a “distinct way of knowing that incorporates both analysing and doing in the process of constructing knowledge”. The paper will also outline potential limitations of the direct translating of design practice and methods into a policy context. To achieve this, the paper uses insights gained from an on-going design research project, Open Practices, which aims to co-design services and policy interventions to enable sustainable behaviour change. In this case, co-design, as a method and context for policy design, interweaves alternative ideas and perspectives (e.g. interdisciplinary knowledge, desirable visions of future behaviours), new policy practices (e.g. co-creation, policy labs, practical experiments, ethnographic study) and new social relations (e.g. new networks and actors).

Keywords: co-design; policy; public services; behaviour change

1. Introduction

The last few decades has seen design practice and research move from a singular focus on the methodological and technical considerations of artefacts to include the psychological and sociological considerations of people, publics, policies and the relationships between these. More recently a small but growing number of designers and design researchers are working with and within the public sector and at different levels of government in order to assist in the development of policy and public services.

On the one hand we are seeing direct transplanting of contemporary design practices such as user-centred design and design ethnography into a public sector context to suit the interests of governments e.g. cost saving and austerity, weak service models or policy failures. On the other hand there also appears to be a desire to use design as a pragmatic yet speculative approach to policy making to counterpoint the existing normative, ideological or utopian approaches.

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Broadly speaking, designers working on policy and public services have been aligning themselves with participatory policy methods that have become more prevalent in recent years (Bason, 2014, 2010). This is a break from the traditional top-down approach to policy that is guided by political expediency and technocratic methods. It has been argued by deLeon & deLeon (2002) that an approach to policy implementation could involve a greater emphasis on citizen participation and a wider democratic ethos. This would involve a shift in the policy process towards co-designing services with citizens and stakeholders, design activism and an increased role for designers in policy formulation.

A number of tensions and questions emerge from this. For example, to what extent is design practice constructed, commissioned and bounded by policy and politics?; how do designers broker between the government and the public at various stages of policy-making and how effective and meaningful are these discourses?; how is representation and participation articulated? How does design for policy use and create meaningful evidence?; what value and values does design bring to the policy process in direct relation to other disciplines and domain expertise?

In relation to this last question, Smith and Otto (2014) have contended that design, in particular design anthropology, offers a “distinct way of knowing that incorporates both analysing and doing in the process of constructing knowledge”. This has important implications for how designers use and create evidence to support the development of policy and the design of public services. There are significant differences between the nature of evidence for policy and for services and it is important to not assume one is directly applicable to the other.

2. Relationship between design and policy design

In order to begin setting the context for the rest of the paper, it is important to outline how design and policy making interweave.

The design community is relatively new to the debate on policy design. The study of policy design has been ongoing for the last three or four decades (Bobrow, 2006; Dryzek, 1983; May, 2006, 1991; Parsons, 1995). Dryzek (1983) defined policy design as the “conscious invention, development, and application of patterns of action in problem resolution”. Policy design has been defined as a process by which a number of policy actors seek to improve “policy making and policy outcomes through the accurate anticipation of the consequences of government actions and the articulation of specific courses of action to be followed” (Howlett and Lejano, 2013).

Howlett (2011) also suggested that policy design could be considered as the ideal configuration of “policy elements” that are directed at achieving specific outcomes within a governance context and that “meta-policy designing” is the process by which these ideal types are identified and refined.

These definitions suggest that policy design is problem oriented and the intention is to address a problem through the action of a problem owner or community of interest. The definitions may seem intuitive or axiomatic to designers and design researchers. For example, an enduring definition of design is that it is best understood as the human endeavour of converting actual situations into preferred situations (Simon, 1969).

To further illustrate the parallels, Richard Buchanan (1990) argued that design is an integrative, supple discipline that is “amenable to radically different interpretations in philosophy as well as in practice”. Buchanan went on to suggest that design affects contemporary life in at least four areas. These include the design of symbolic and visual communication, artefact and material objects, activities and organised services (strategic planning) as well as complex systems or environments for living, working, playing and learning (systemic integration). Design for policy and public services can be related to each of these four areas, either individually or collectively.

There are two other common themes in the literature on policy design. Firstly, policy design is a multi-level and multi-actor process that is socio-technical in nature. Secondly, policy design is a knowledge intensive activity in that it requires solid knowledge on what has happened previously, what interventions are likely to work and new methods of sense-making so that future desired states can at least be articulated.

Linder and Peters argued that a “design orientation to analysis can illuminate the variety of means implicit in policy alternatives, questioning the choice of instruments and their aptness in particular contexts...More important, such an orientation can be a counterweight to the design biases implicit in other approaches and potentially redefine the fashioning of policy proposals” (Linder and Peters, 1990).

3. A specific policy dilemma: sustainable behaviour change

Almost all government policies and public services aspire to change or shape the behaviour of individuals, organisations and businesses in order to meet policy or societal objectives. In an idealised scenario this action by government is in response to a clear market or system failure and is applied in areas of perceived individual and collective good, such as smoking cessation or household energy consumption.

In the context of climate change and the circular economy, the policy narratives around behaviour change have become increasingly explicit. One of the key drivers of this is a growing understanding that many current regulatory and non-regulatory policy interventions for sustainable behaviour change have been ineffective, or worse, counter-productive. In this instance, “sustainable behaviour change” refers to the behavioural changes that orientate a person’s actions and decisions towards sustainable development goals.

This counter-productivity of existing policies and services can be seen most clearly in the unintended rebound effects that are brought about by a legislative and service framework

that emphasises technological efficiency improvements that are decontextualised from the social context. For example, many early technology oriented solutions for sustainability over-estimated the environmental motivations of people while under-estimating other factors such as compatibility with lifestyles, aesthetics and socio-economic context (Hertwich, 2005).

Some approaches to designing interventions for sustainable behaviour change have sought to develop passive and techno-mediated systems that form themselves around user behaviour and social practices. For example, the use of intelligent technologies, functionality matching or more recently through the "internet of things" (Rodriguez and Boks, 2005; Wever et al., 2008). Other approaches have sought to enable, constrain or motivate behaviour through the use of physical and cognitive interventions, including design scripts, affordances, or persuasive technology (Fogg, 2003; Heijs, 2006; Jelsma and Knot, 2002).

While these interventions typically focus on individual interactions and changes in behaviour through new forms of consumption there is also the need to develop policies and public services that use behavioural insights in their design, delivery and evaluation. Behavioural change policies and services informed by behavioural insights emphasise the unconscious, automatic, social and emotionally oriented drivers of human behaviour and the socio-technical context of organisational behaviour. Additionally, sustainable behaviour change is not the domain of any single government department or organisation as it is a multi-level challenge that has a socio-technical dimension.

Proponents of behavioural change policies and related interventions typically argue that the transformation in behaviour can be pursued through traditional interventions such as incentives, education, and prohibition, but these require augmentation with human centred and more emotionally-oriented interventions.

4. Problems with the design of existing services and interventions

Some of the early theoretical frameworks that informed policy interventions assumed a direct correlation or linear progression between knowledge on environmental issues which would lead to environmental awareness and concern (attitude) and that this in turn would lead to pro-environmental behaviour.

This rationalist model of pro-environmental behaviour was built on the assumption that educating people about environmental issues would bring about pro-environmental behaviour (i.e. the 'deficit' and 'regulation' models). Recent empirical studies have shown that "anomalous behaviour" such as status quo bias, endowment effect, loss aversion, framing effects, anchoring and preference reversals can render such interventions ineffective.

In the behaviour change literature there is a dominance of behaviour change models that focus on cognitive processes and decision-making. Southerton et al (2011) also conducted a review of international behavioural change campaigns and suggested that there is a

'disproportionate focus' on the individual within these campaigns. Additionally, the social context is treated as hermetic and therefore behaviours are assumed to not change or interact with other elements of social life (Shove and Pantzar, 2005). Southerton (2011) suggested that behaviour change campaigns should go beyond the individual to include mechanisms that intervene in the social and material contexts.

This "beyond the individual" perspective has also become a dominant frame in the sustainable behaviour change literature. One of the increasingly popular perspectives in this regard is social practice theory that argues that the determinants of human behaviour need to be understood as a dynamic and interconnected arrangement of 'elements' that include physical and mental activities, norms, meanings, technology use and knowledge. The social practice perspective tends to be more focussed on the everyday lives of people as opposed to specific aspects of behaviour (Reckwitz, 2002).

Social Practice Theory has been applied to understanding sustainable behaviours, in particular in the fields of energy use, transport and waste (Chatterton, 2011). It is seen to be useful in this context as it acknowledges the need to consider both the individual and the context they live within. A key premise of Social Practice Theory in this context is that consumption occurs through everyday practices (Warde, 2005) and that many of our resources are consumed for the purpose of maintaining standards of comfort, cleanliness and convenience in our everyday life (Shove et al., 2012).

Similarly, many interventions to support sustainable behaviour in business have been based on a linear understanding of innovation that has been contested in the literature. For example, policy interventions often address specific market failures such as externalities, imperfect and asymmetric information but undervalue the interaction between actors and institutions within the wider innovation system. The co-evolutionary view of socio-technical systems highlights system failures such as lock-in and path dependency failures, hard and weak network ties, capability and learning and infrastructure that make interventions ineffective.

These factors are of interest to policy makers because some interventions, such as nudge type interventions, may change behaviour in the short term but not the underlying drivers of behaviour such as habits, attitudes or motivations. For example, changing the choice architecture or introducing a tax may only change behaviours while the tax is in force. It may be the case that the behaviour will revert once the charge or tax is removed. It may also be the case that the charge or tax may be high and the response may simply be the displacement of behaviour or the circumvention of the charge.

5. Open Practices: a co-design approach

With this context in mind, it would be useful to look at an existing case where some of these insights are being applied in a policy context.

Open Practices is a design research project that is exploring how government interventions and services in Ireland can create better outcomes for businesses and communities in terms of sustainable behaviour and practices. Traditionally, the Irish Government have attempted to create the conditions for Sustainable Behaviour Change through semi-public infrastructure, public information campaigns and supply-side interventions (e.g. business support programmes, demonstration projects). There is a growing understanding that many current policy interventions for behaviour change in business and households can be ineffective, or worse, counter-productive.

The research is integrating emerging knowledge on sustainable behaviour and practices with empirical insights from existing Environmental Protection Agency (EPA) interventions with businesses and communities. The project has been developing new insights from in-depth research with businesses, policy makers and experts in intermediary organisations as well as co-design workshops with public sector organisations across Ireland. The research applies design research methods such as ethnography, user journey mapping, service safaris and contextual interviews.

While much of the work on sustainable behaviour change is focussed on individual behaviour (e.g. energy use in the home, sustainable consumption etc.), Open Practices is currently focussed on services and policy interventions aimed at businesses. This is an under-researched but important context because businesses participate in and impact on the socio-technical conditions that drive long-standing behaviours and habits among the wider public.

5.1. Problem space research

The first stage of the project was focussed on mapping the landscape of interventions and services for businesses and defining the problem space within which the research should be conducted. This involved a series of interviews with policy makers and experts from intermediary organisations as well as desk based research.

Based on these insights, 199 different environmental policy interventions and services in Ireland were identified and then classified by the author. This classification sought to develop a comparative framework of key services, interventions, mechanisms, target sectors, beneficiaries and lead organisations.

The interventions reviewed ranged from national strategies, regulatory instruments, bans, obligations, voluntary agreements, information tools (Toolkit, Leaflets, Website), fiscal instruments (fines, charges) and grants (Figure 1).

Another finding was that there are a wide number of organisations delivering services and interventions (Figure 2). Each of these organisations shares common policy outcomes but each have niche and specific policy interests e.g. competing policy rationales, funding cycles, immediate business interests and the interests of the wider public.

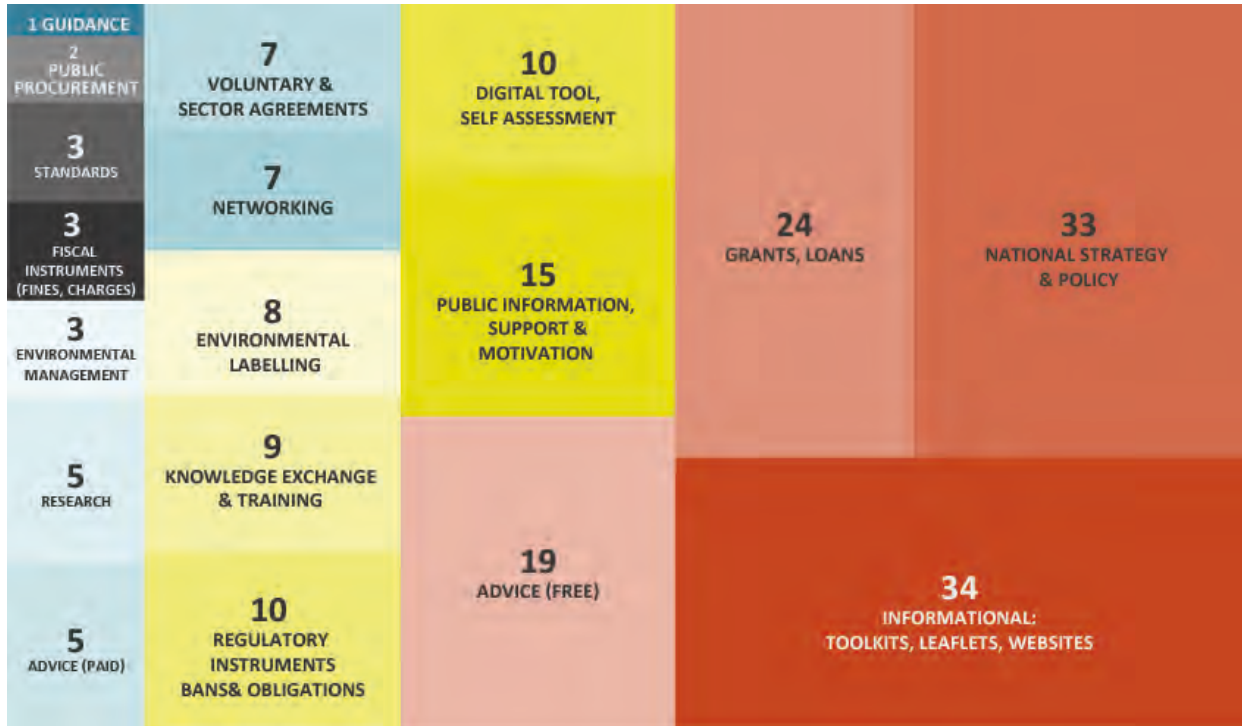


Figure 1: Classification of existing services and interventions by type and number

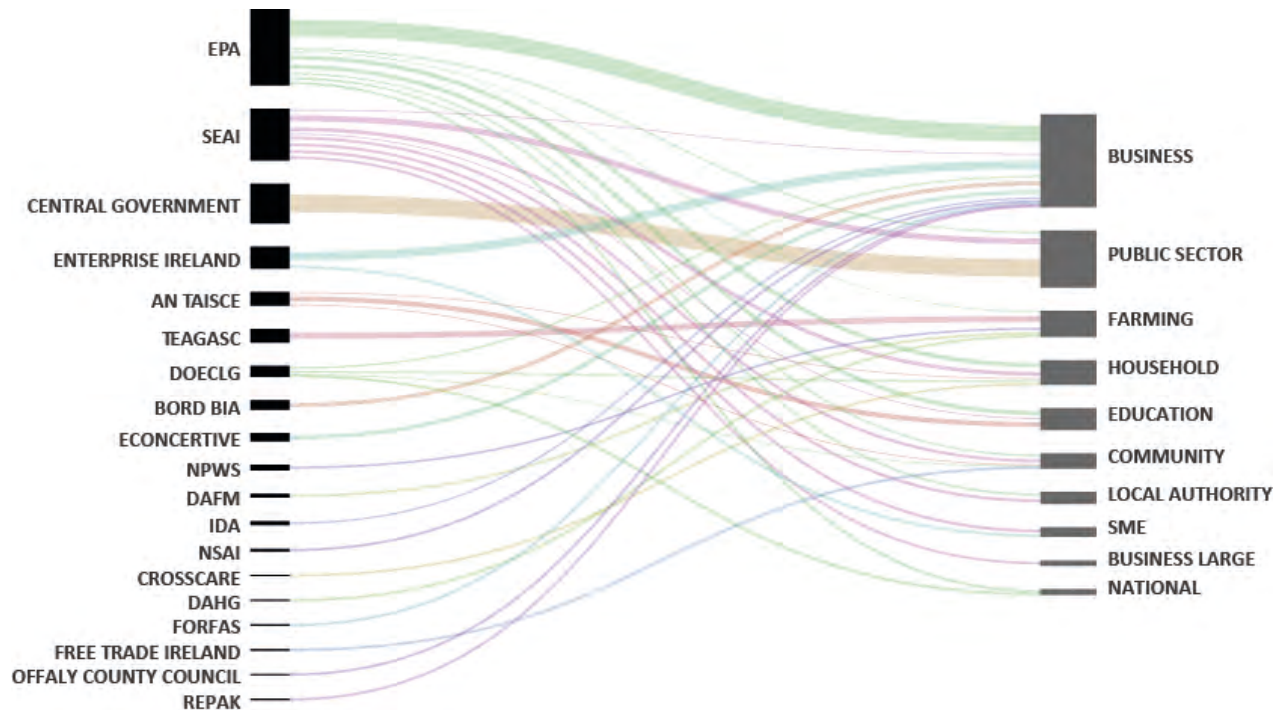


Figure 2: Intermediary organisations and their related beneficiaries (by sector)

An early stage insight was that many of the existing interventions and services are not radically different from each other in terms of design and delivery. This suggests that there are a number of opportunities for collaboration and alignment across Irish government programmes.

The specific economic, cultural, regulatory, technological and innovation system of Ireland needs to be considered but a refinement of existing interventions could occur in the short to medium term and new, more radical interventions can occur in the medium to long term. The aim should be to strengthen existing actions to support businesses, clarify the level of opportunity to deliver the newly designed interventions and how practically these might be implemented.

Following the mapping of the national landscape the research team focussed on analysing the system of services and interventions being delivered by the EPA itself. Figure 3 highlights a comparatively complex service delivery system for one organisation.

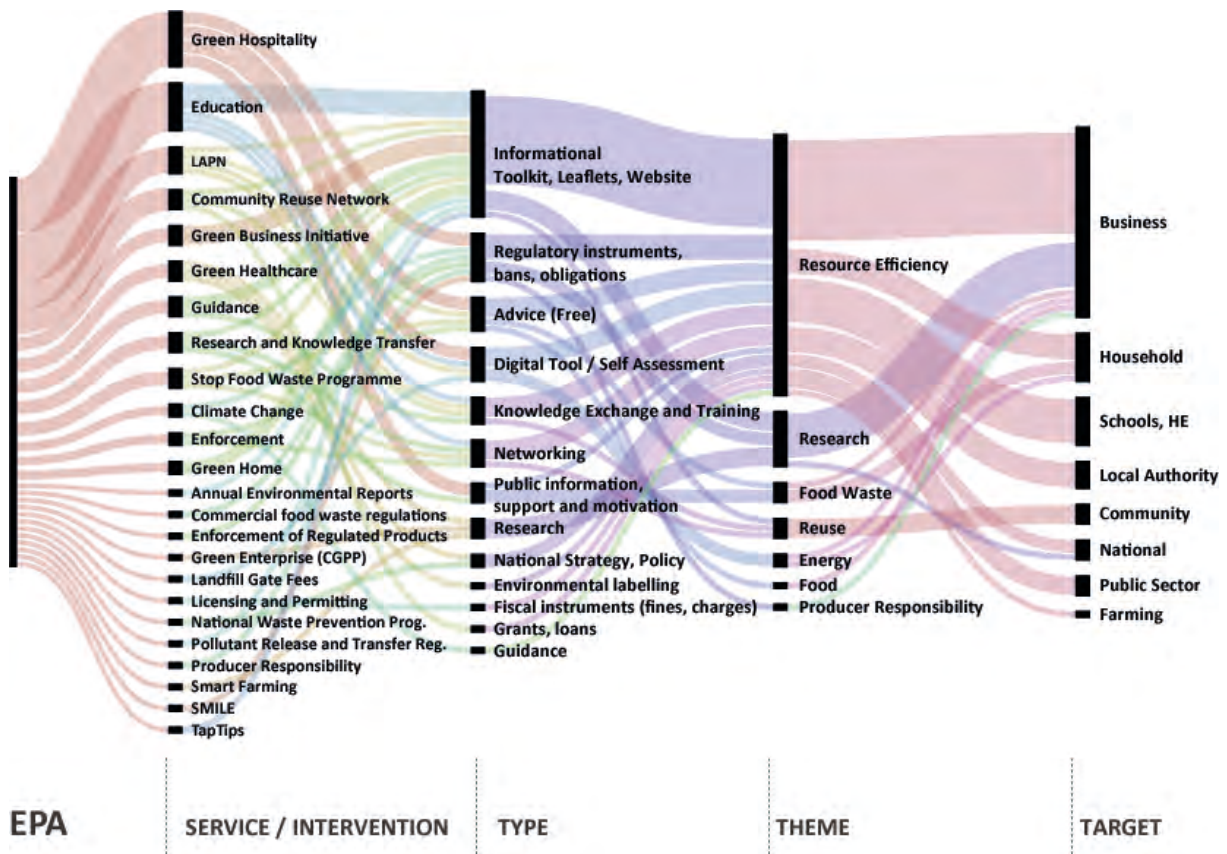


Figure 3: Typology of EPA interventions highlighting the services/intervention, type, theme and target

5.2. Design ethnography within businesses

In order to build on the insights from this first stage of the research, the Open Practices project began to focus in on two key business support services offered by the EPA and conducted in-depth research with businesses. The research applied design research methods such as ethnography, user journey mapping, service safaris and contextual interviews. The aim of this phase of research was to provide insights into businesses, and specifically staff with environmental responsibilities, going about their daily lives in work as well as interviewing them about the business behaviours associated with resource efficiency and their experiences of interacting with the public sector. Importantly, the research reflected a

variety of circumstances, sectors and regions and sought to go beyond the existing understanding of business behaviour.

The research team was curious to understand how businesses interact with the public sector and the extent to which they are affected by competing signals, and whether existing policy and services help or hinder them in making decisions around resource efficiency and sustainability. In addition to the design ethnography, the Open Practices project also undertook service safaris with intermediary organisations conducting resource efficiency assessments as part of a business support service (Figure 4).



Figure 4: Sample images from the service safari with intermediary organisations

A small selection of the insights gained through the research with businesses include:

- While environmental practices are becoming normalised, the staff with environmental roles tend to be “double-jobbing” and can have other roles (e.g. technical manager, production manager). The current systems of compliance tend to be administratively complex and the individuals are often snowed under with paper work.
- Businesses in Ireland tend to be relational and there is a perception that personalised support was important to support longer term behaviour change as opposed to a broader international trend towards “digital-first” services. This has obvious implications for how services are delivered, what resources are allocated to these services and how opportunities for alignment between digital and non-digital services can be achieved.

- There is an expectation that support services should be available but that the current offerings can be difficult to navigate or differentiate between providers. There is a relatively complex network of providers of support and each of these is operating to the best of their ability but with limited reach and resources.
- There is some resistance to moving past the “low hanging fruit” of resource efficiency e.g. waste management. This may be related to the weak links between resource efficiency and wider innovation activities in businesses.
- Positive impacts from existing services and interventions (e.g. input additionality) can go unmeasured and misattributed because the teams do not have resources to evaluate over the most appropriate timeframes.

5.3. User journey maps

Based on the above research insights a number of user journey maps were created based on interviews with businesses across Ireland. These journey maps highlight the stages each company went through e.g. the point they considered resource efficiency, accessed support services, developed projects and in-company initiatives and what happened after they exited the services.

The user journey maps were then synthesised into a single meta-journey map that presents the combined journey map and touchpoints for two key EPA services (Figure 5). Not all companies interviewed went through every stage of the services. There was a need to explore where the friction points in user journey were and how the design of some stages of the service prevented companies from progressing. To make the user journey manageable the journey maps were designed around four key stages 1) Trigger to action 2) Formalisation of possible actions 3) Accessing and using service 4) After service.

a. Trigger to action

Each company outlined the various triggers for action on exploring the value of resource efficiency or sustainability. These triggers were clustered into external, internal or a combination of both. The most frequently cited external triggers to considering resource efficiency were regulations and licensing; information provided by intermediary organisations, trade bodies and sector organisations. The most commonly cited internal triggers were introduction of new management, capital investment, the creation of new roles (e.g. EH&S) or attendance at a specific event (e.g. Green Business Events) resulting in new information relating to possible benefits of resource efficiency. There were also a number of ad-hoc triggers. These included actions being undertaken without any explicit intention to be resource efficient i.e. Waste management, lean manufacturing.

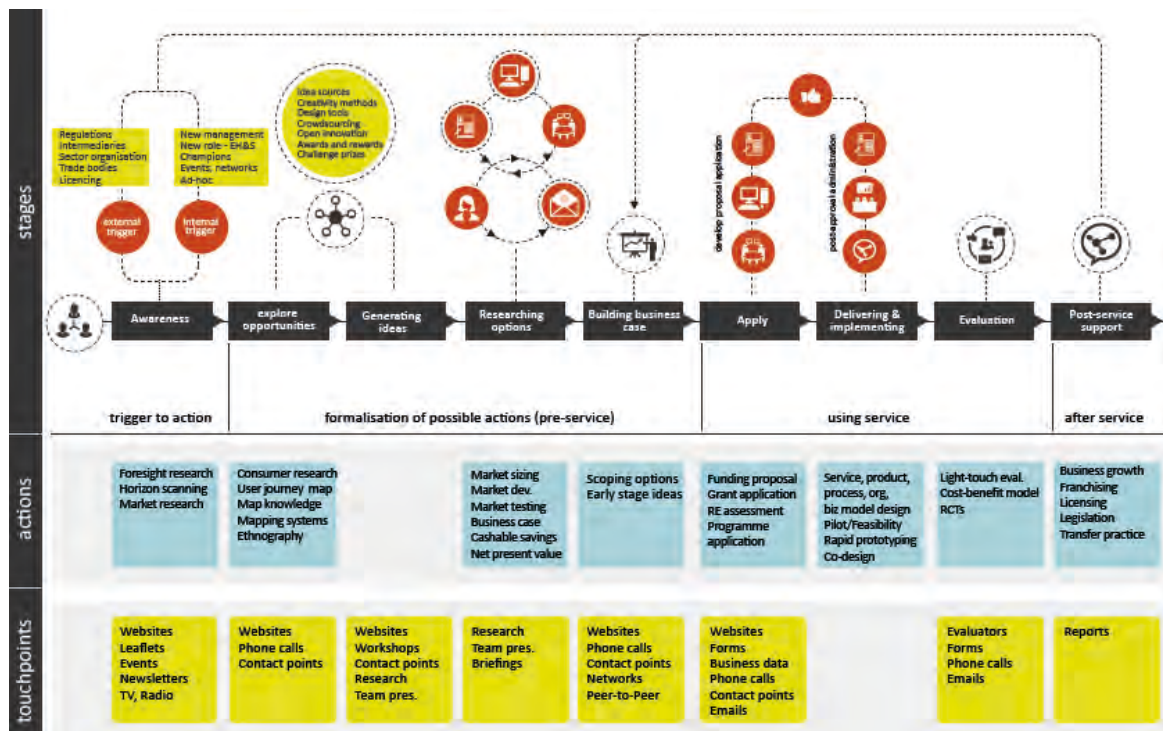


Figure 5: Overview of meta-journey map

b. Formalisation of possible actions

Following the initial trigger there was a process of formalisation of ideas and identification of opportunities for resource efficiency. What was clear from the interviews was that while there were common characteristics, the specific process was unique to each company.

- Explore opportunities:** This is generally an ad-hoc phase of exploring the opportunities of resource efficiency. In many cases this was the first step towards building a business case. It was often the role of an individual e.g. the person with an environmental management role. At this stage there was typically a combination of web searches, informal dialogue with experts, report reading and viewing webinars.
- Generating ideas:** Once possible opportunities were identified there was a process of generating ideas around these opportunities. This would often be focussing on specific resource efficiency hot spots e.g. water use, energy consumption, waste. There was often a lack of readily available data to support the process.
- Researching options:** Once ideas had been generated there was a further stage of research into the specific characteristics of the opportunity. This would often require additional research, contacting suppliers for data, preliminary tests on existing processes and equipment.
- Building the business case:** These previous stages typically fed into some form of business case development. While many of the companies used board and team meetings as the space within which these business cases were presented, discussed

and deliberated on there was no common or consistent form to the business case. In many cases it was a verbal or Powerpoint presentation and in some cases there were more formal documents presented.

In some cases the process was bottom up (environmental manager presenting to senior management) but in other cases it was the reverse i.e. a top down approach. In the cases where the initiative did not come from top management there was a potential problem in the capacity to successfully build the business case. This could be due to a lack of skills and knowledge on how to make the business case or due to a restricted awareness of wider planning issues occurring across the company.

c. Accessing and using service

Once the business case had been met and agreed upon the process of accessing support is initiated. This is a relatively complex process as it occurred through many stages, channels and is often a non-linear process. In the case of the two key services, there is a series of stages required to develop an application or project proposal. This involved a number of touchpoints (e.g. websites, emails, phone calls, meetings). There can be a high degree of uncertainty in the process, especially in the case of first-time applicants.

Once the company applied there was a period of waiting for approval and this created additional uncertainty. Once the project had been approved there are a number of additional processes and steps required in order to build the infrastructure and resources required to deliver the project (e.g. teams, project management materials, additional finance, match funding, consultants).

For some companies the time-lag between idea development and project approval meant that the commercial circumstances and context have changed. This sometimes meant a restructuring of the original proposal. Once the project was finalised, formal project completion reports that were submitted.

d. After-Service

Once a business left the services there was often no direct follow up, continued dialogue or longer term evaluation. The sense that many companies had was that service relationship is completed once the project has been completed. This was generally the case because of resource issues on behalf of the service providers.

5.4. Co-design workshops

Following the development of these journey maps and personas, co-design workshops were held with key and front-line staff from national intermediary organisations involved in delivering services related to sustainable business practices (Figure 6). The key aim of these workshops was to interrogate the existing research and to allow the service providers 'see the person' in the business. The aim was to place the business experience at the centre of future service design, delivery and evaluation.



Figure 6: One of the co-design workshops with intermediary organisations

5.5. Service prototypes

At these workshops the staff were involved in co-designing preliminary prototypes of new possible services. The staff applied some basic service design tools such as personas and stakeholder maps (Figure 7). They then used simplified service blueprints in order to develop initial service prototypes. These initial service prototypes have been further developed through visual story boarding and wire-framing.

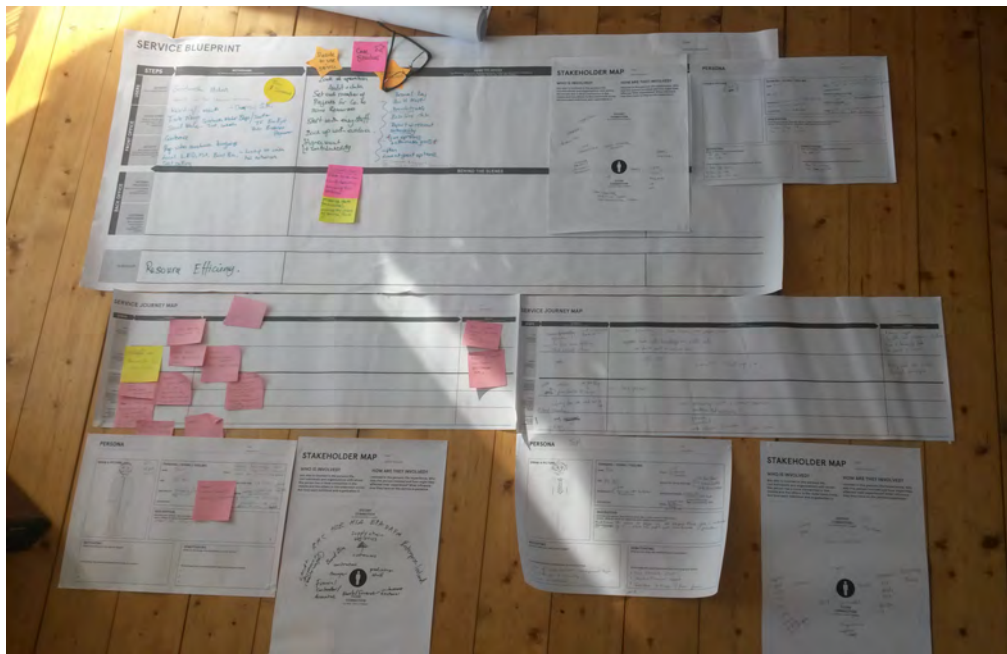


Figure 7: Sample of the initial prototype service blueprints developed by the intermediary organisations

5.6.2nd round of co-design workshops

The next stage of the process is to run a series of co-design workshops with the businesses that were involved in the initial ethnographic research. This work will be reported on in mid 2016.

6. Dilemmas of co-design

While this process is developing new insights and prototypes of new services a number of reflective observations have been made over the course of the research. Some of these reflections have been discussed previously by O'Rafferty et al (2015) but are expanded on below.

6.1. Evidence

One of the obvious challenges within this form of co-design process is that the evidence for action that is generated is the antithesis of the ideal evidence base required for developing a policy and, albeit to a lesser degree, services. The co-design research has needed to be supported by a great deal of desk-based research to ensure that the context and power structures are properly understood.

6.2. Legitimacy and authorisation

Legitimacy in the most practical sense refers to how legitimate the co-design activity is perceived to be. Factors that impact on this perceived legitimacy include the depth and breath of involvement from stakeholders and beneficiaries. Coupled with this is the challenge of gaining political legitimacy. While the co-design activity provides significant opportunities in terms of situating innovation in a safe mediating space, if it does not receive management buy-in it will struggle to find legitimacy.

6.3. Embeddedness

Embeddedness refers to how embedded the co-design activity is within the policy innovation system. The degree of embeddedness is in general terms how connected and aligned the co-design activity is with the wider processes or actors in the policy innovation system. This principle can be viewed from the perspective of "structural embeddedness" or "relational embeddedness" which emphasise the social context of innovation.

6.4. Binding

A key dilemma with co-design is the issue of binding or ties between the various actors within the co-design process. Typically the ties are seen to be weak or strong and the nature of these can impact on the effectiveness of the co-design activity. For example, frequent and intense interaction between many actors in a dense network structure can lead to rapid redundancy of knowledge but significant innovation opportunities. On the other hand, strong ties formed through well-established relationships within a highly localised context can lead to informal lock-in and reinforcement of existing practices.

6.5. Coherence

Coherence refers to how coherent the co-design activity is in relation to the wider policy and social context. Supply and demand-side coherence can be a useful way to frame this dilemma. Supply-side coherence relates to the level of alignment between the co-design activity and existing policies and policy processes and the recognition of this alignment among policy makers and other actors in the co-design activity. Demand-side coherence relates to the recognition of this alignment among the wider public or beneficiaries of the outputs of the co-design activity.

7. Conclusion and discussion

The general aim of this paper was to initiate a discourse on co-design for policy and public services, with a particular focus on sustainable behaviour change. The paper suggested that the ineffectiveness of existing policy interventions and services could in part be explained by the behavioural assumptions that underpin the design of existing interventions. The paper then suggested that policy-making needs to consider ethnographically informed insights and co-design methods.

These ethnographically informed insights and co-design methods can provide a richer evidence base that augments existing forms of evidence and evidence gathering. This is particularly true for the evidence used to inform the design of services and policy interventions related to sustainable behaviour change. A key value of this type of evidence is that it allows for the development of services and policy interventions based on real rather than assumed behaviours. The co-design process can also allow for a richer evidence base in that it allows for a deliberative process between different stakeholders over and above what would have occurred normally in the Irish context.

It could be argued that design may temper the instrumental rationality of policymaking that is dominated by scientific and technical knowledge with an approach that is human centered, action oriented, reflexive and communicative. One of the overarching dilemmas is how designers working in the policy context can shift from solely articulating, making desirable and reinforcing existing policy perspectives and power structures towards seeking to articulate dialogically the values and interests of the public within policymaking.

A key reflection from this paper is that situating new co-design practices within the multitude of tasks expected of government is no easy task. This challenge is compounded by the fact that policy design is contingent and contested, not least in respect of the roles played by citizens and non-governmental intermediaries. Another reflection is that the competencies and mind-sets required for co-design are not typically found within the public sector organisations that are responsible for environmental policy in Ireland. There are a number of policy labs that are working to combine innovation and co-design methods alongside better evidence of the effectiveness of interventions.

To build on these reflections there are a number of possible avenues of further research. Firstly, defining and developing the operating conditions under which meaningful citizen, business and policy-maker collaborations can be developed. Secondly, an exploration of how inclusion of co-design approaches affects specific policy domains. These two avenues alone imply that further development of the theoretical and practical framework of co-design for policy and public services is required.

Acknowledgements: The authors would like to thank the Irish Environmental Protection Agency for funding this research and in particular to Dorothy Stewart, Odile Le Bolloch and Shane Colgan for providing ongoing support to the research.

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About the Authors:

Dr. Simon O’Rafferty is a Postdoctoral Fellow. His research, funded by the Environmental Protection Agency, is examining the design of public services policy interventions for sustainable behaviour change. Simon has acted as an advisor to governments on design for sustainability and social innovation.

Dr. Adam DeEyto lectures in Product Design and is the co-coordinator for the Design Factors research group at University of Limerick. He has a specific research expertise and interest in Design for Sustainability, New Product Development, Sustainable Product Service Systems and Transdisciplinary education.

Dr. Huw Lewis Huw is the Dean of Graduate Studies at the University of Limerick. Huw’s research areas are linked with environmental manufacture and recovery processes and risk management.