

**REIMAGINING IRELAND'S INNOVATION LANDSCAPE TO REALISE THE
POTENTIAL OF SERVICE INNOVATION**

TRACK: Innovation, Entrepreneurship & Small Business Management

COMPETITIVE PAPER

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ABSTRACT

Internationally, the transformative potential and relevance of service innovation to all industry sectors and firm sizes has and continues to gain both policy and industry interest. However, in an Irish context, the legacy of prioritising a narrow product/technology conceptualisation of innovation continues to dominate the landscape (Strategy for Science, Technology and Innovation 2006-2013). This is in spite of service innovation's proven capacity to support the restructuring of existing businesses and the creation of new industrial structures, product/service offerings, channels to market, business models, global value chains and customer experiences (McKinsey, 2010; Expert Panel on Service Innovation, 2011; PWC, 2013). Indeed, despite the emerging international consensus of service innovation as a demonstrable engine for economic growth and transformation, Ireland's engagement in and exploitation of the discipline is at an embryonic state. Hence, firstly, this paper will explore this enigma by examining the current situation through a service innovation lens, drilling down into the causes and critical issues impacting on this landscape. Secondly, this paper will seek to surface recent developments, such as the identification by DJEI/Forfás, of 'Innovation in Services and Business Processes' as a key national priority. Thirdly, this paper will propose suggestions in respect of the dedicated resources and infrastructure needed to realise service innovation's potential; for instance, the need for "*...dedicated business support measures to promote R&D and innovation capability in services companies and to facilitate the development of services by manufacturing enterprises*" (Forfás, 2008:17). Fourthly, this paper responds to calls (European Commission, 2012) for a more comprehensive dialogue on how service innovation can be promoted and scaled indigenously and internationally, by incorporating triangulated data from desk research with empirical policy and academia stakeholder interviews and cross-sectoral industry workshop data. Ultimately, this paper proposes a roadmap, informed by international best practice, and incorporating multiple innovation stakeholder views (industry, academia and policy), to re-imagine Ireland's innovation landscape. Accordingly, the research impacts and has implications for various levels of Ireland's innovation landscape, most notably in terms of policy, stakeholder, industry, research and academic perspectives.

INTRODUCTION AND CONTEXTUALISATION OF THE SERVICE INNOVATION AGENDA

The increasing importance of service innovation can be credited to the realisation that innovation is broad and does not have to be limited to technology-based innovations (Vargo & Lusch, 2008; Ojasalo, 2009; BusinessEurope, 2011). While no universally accepted conceptualisation of service innovation exists, in essence, the phenomenon encompasses:

"...new or significantly improved service concepts and offerings as such, irrespective of whether they are introduced by service companies or manufacturing companies, as well as innovation in the service process, service infrastructure, customer processing, business models, commercialisation (sales, marketing, delivery), service productivity and hybrid forms of innovation serving several user groups in different ways simultaneously" (EC, 2012:12).

The foregoing implies that service innovation represents end-to-end innovation processes (Schulteß et al., 2010; Dörner et al., 2011) ranging from “...*idea or concept generation through to business analysis, design, testing, and launch or commercialization*” (Song et al., 2009:573). This means that the concept has relevance for a myriad of business types and across all sectors; particularly, as the concept promotes businesses, regardless of the industry, becoming more in-tune with their customers’ demands and creating value. Critically, the transformative potential offered by service innovation, in accelerating market, customer, export, employment and societal growth, and disrupting “...*traditional channels to market business processes and models*” (EC, 2012:12) is gaining traction as a high priority topic on the European and indeed, Irish agenda (EC, 2007; EC, 2009a; EPISIS; Expert Panel on Service Innovation, 2011, DJEI/Forfás, 2012). This attention at policy levels is echoed in the business world, as highlighted by reports such as McKinsey 2010; BusinessEurope, 2011 and PWC, 2013.

However, despite representing a prevailing European-wide policy and business priority, research into the development of service innovation is a relatively embryonic domain which only began to evolve in the late 1980s (Europe INNOVA, 2010). The relative newness of the discipline means there is challenges associated with its operationalisation and implementation (Burger et al., 2010; Pedersen & Nysveen, 2010). Furthermore, questions have continually been asked regarding Ireland’s readiness to engage fully in a broad spectrum of innovation (Forfás, 2006:2008; Forfás/DJEI, 2012; Rhisiart, 2013). In response, this paper explores the phenomenon of service innovation in the context of Ireland’s innovation landscape and proffers a responsive roadmap to support the realisation of service innovation’s potential through incorporating EU best practice and consultations with key innovation stakeholders. The methodology employed to address this pressing issue is detailed in the section to follow.

METHODOLOGY

To explore the task of reimagining Ireland's innovation landscape in the context of service innovation, a triangulated research design was developed to gather and utilise multiple sources of evidence to reflect the diverse domains of the innovation ecosystem. Within this, data and method triangulation was deployed to promote the credibility and validity of the research investigation and its outcomes (Yin, 2003; Ritchie & Lewis, 2003; Bryman, 2004; Denzin & Lincoln, 2008). Adopting a triple-helix lens, the respondents encompassed policy/implementation, enterprise, and academic stakeholders, and the specific research methods include:

- National and EU secondary research activities to uncover and document the emerging literature, themes, best practice and priorities associated with service innovation facilitation and implementation;
- Semi-structured interviews (3) with policy development/implementation and (2) academia/research stakeholders to assess Ireland's orientation to service innovation and identify avenues for intervention and development;
- (3) Industry consultation workshops involving 46 business owners/managers, across service and non-traditional service sectors from the South East region, organised to understand the bottom-up prevalence, demand and requirements for service innovation at the firm-level.

IRELAND'S INNOVATION ECOSYSTEM – ALIGNED TO SERVICE INNOVATION?

This section serves to provide a synthesised overview of the national innovation governance system through a service innovation lens. Innovation in general, has and continues to represent a strategic priority in Ireland from productivity, sustainability, efficiency, employability, export and growth perspectives (DETE, 2008; SSTI 2006-2013; NDP 2007-2013; Innovation Taskforce, 2010). In terms of the orientation of Ireland's innovation policy and strategy, policy makers and national advisory/implementation bodies have traditionally pursued innovation from a scientific and technological perspective (Strategy for Science, Technology and Innovation (SSTI) 2006-2013) which has resulted in service innovation being relatively uncharted in terms

of policy implementation/measures (Power et al., 2010). Table 1 below highlights that science and technology have remained at the forefront of innovation policy, reports and reviews.

Table 1 Irish Innovation Policy Documentation

Year	Document	Source
2000	National Development Plan 2000-2006	Government
2003	Industrial Development (SCIENCE FOUNDATION IRELAND) Act 2003	Government
2004	Building Irelands Knowledge Economy – The Irish Action Plan for Promoting Investment in R&D	DETE
2004	Sustainable Development in Ireland: The Role of Science and Technology	ICSTI
2004	Science and Technology in Ireland	Forfás
2004	Ahead of the Curve	Enterprise Strategy Group
2004	Innovate Market Sell: A Review of the Sales, Marketing and Innovation Capabilities of Irish Exporting SMEs	Forfás
2006	Strategy for Science, Technology and Innovation 2006-2013	Irish Government
2006	Services Innovation in Ireland – Options for Policy	Forfás
2007	National Development Plan 2007-2013	Government
2007	Tomorrow's Skills: Towards a National Skills Strategy	Expert Group on Future Skills Needs
2008	Catching the Wave: A Services Strategy for Ireland	Forfás & SSG
2008	Innovation in Ireland	DETE
2008	Innovation in Ireland Policy Statement	DETE
2008	Ireland's International Engagement in Science, Technology and Innovation	Advisory Science Council & Forfás
2008	The Report of the High Level Group on Manufacturing	Forfás DETE
2008	Building Ireland's Smart Economy – A Framework for Sustainable Economic Renewal	Government
2008	First Report on Strategy for Science, Technology and Innovation	Government
2009	Science, Technology and Innovation – Delivering the Smart Economy	DETE
2010	Innovation Ireland – Report of the Innovation Taskforce	Innovation Taskforce
2012	Research Prioritisation 'Innovation in Services and Business Processes'	DJEI/Forfás

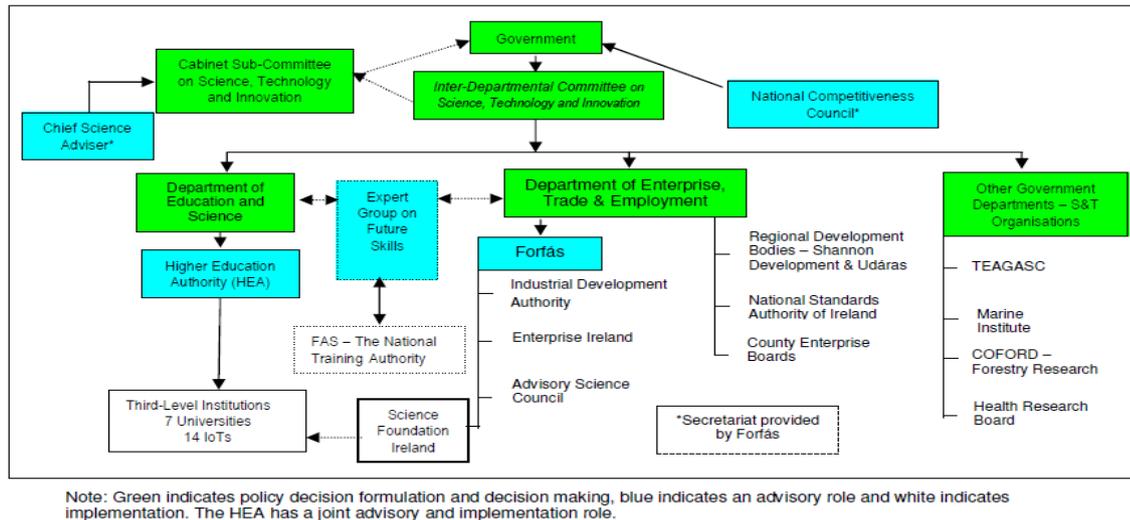
Source: Adapted from Power et al. (2010) Rethinking Innovation Policy in Ireland: A Critical Critique, p.15.

Stemming from the overarching innovation policy legacy, established innovation metrics and/or performance indicators (patents, trademarks, invention disclosures, IP, R&D personnel rates etc.¹) are not explicitly aligned to service innovation which is characterised by less tangible measures. This in part can be attributed to the emerging nature of service innovation coupled with the “...historically dominant position of manufacturing in providing the performance indicators” (Forfás, 2006:1). Mindful of this, the Report of the Innovation Taskforce (2010) identified that emerging efforts should focus on a broader conceptualisation of innovation including innovation design, business processes organisational design, informal R&D and

¹ SSTI indicators, see http://www.djei.ie/publications/science/2011/SSTI_Indicators_December2011.pdf

business modelling; and that future actions. Turning to Ireland’s innovation governance system, Figure 1 below illustrates the major players in the national innovation ecosystem.

Figure 1 Ireland’s Innovation Policy System



Source: European Commission (2009b) Innovation Policy Progress Report Ireland, InnoPolicy Trendchart².

At the apex of this system, the government’s approach to innovation policy is to group science, technology and innovation (STI) under one umbrella. Within this approach, a number of advisory bodies also contribute to the aforementioned government departments and agencies in terms of innovation policy development and implementation. Forfás and The National Competitiveness Council encompass the advisory elements of the national innovation governance framework. Regarding the execution of innovation related policies, there are three major categorisations of implementation bodies – scientific (Science Foundation Ireland), third-level (The Higher Education Authority) and enterprise (Enterprise Ireland, Industrial Development Authority, InterTradeIreland and local enterprise boards, chambers and skillnets). With reference to these implementation bodies and infrastructures, a range of concerns have been raised in terms of their capacity to support service innovation:

² Since this chart was published the government departments for Education and Science and Enterprise, Trade & Employment have been renamed/refocused to Department of Education & Skills and Department of Jobs, Enterprise & Innovation respectively.

- “...business leaders should be wary that enterprise policies suffer from an over-emphasis on the role of science and technology...Innovation policies must be designed to support the activities of businesses, facilitating the easy establishment of new businesses or the introduction of new products/services or processes to the market” (Jordan, 2009);
- “...Ireland’s development agencies need to consider whether they can deliver appropriate and effective services innovation support to Irish companies using a support framework and portfolio that relies substantially on a relatively narrow technological concept of innovation” (Forfás, 2006:9);
- “[there is a need for]...dedicated business support measures to promote R&D and innovation capability in services companies and to facilitate the development of services by manufacturing enterprises” (Forfás, 2008:17);
- “To enhance the innovative capability of industry in services and business processes, the Government should establish a focused and coordinated research capability in the higher education sector with the research agenda being informed by industry” (DJEI/Forfás, 2012:78).

As a periphery state on the edge of Europe, Irish innovation policy is very much impacted by the wider environment and critically the European agenda; hence there is a need to provide an overview of European policy to date, to situate any recommendations for the future.

EMERGING EU SERVICE INNOVATION POLICY/INSTRUMENT BEST PRACTICE

According to PROINNO Europe (2012), the service innovation policy debate catalysed from work within the Innovation Policy Project in Services (IPSS), European Policies and Instruments to Support Innovation in Services (EPISIS) projects in terms of shaping policy recommendations at national and EU levels. Subsequent developments including two EC Staff Working Documents (EC, 2007; 2009a), Expert Panel on Service Innovation, 2011, and the establishment of the European Service innovation Centre³ have supported the development of learning and the disseminated best practice at national and regional levels. More recently, the policy focus (Expert Panel on Service Innovation, 2011) has been dictated by efforts to coordinate actions under the Europe 2020 Strategy. However, this European interest has yet to manifest in systematic and substantial impacts on policies at a national level (PROINNO Europe, 2012).

³ European Service Innovation Centre (ESIC) , see http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item_id=6289&lang=en

Indeed, Europe's Member States have and continue to address, to varying degrees, the policies to support service innovation. The EPISIS policy mapping study of national approaches to service innovation promotion (EC PROINNO Europe, 2012:33) identified a picture of “...an evolving service innovation policy in practice; countries are at “...different stages of the learning curve” as many national policies still bear the legacy of narrow conceptualisations of innovation. They identified Finland (Serve Programme and TEKES), the Netherlands (Service Innovation and ICT programme), Denmark (Danish Innovation Strategy, ICE project, Innovation Network Service Platform), Sweden (Strategy for Greater Services Innovation and VINNOVA) and Germany (Innovation with Services programme and High Tech Strategy 2020) as exemplars in the field. Based upon the EC PROINNO Europe (2012) synthesis of the aforementioned service innovation policy mapping findings, the overarching trends in terms of policy approaches and instruments deployed to support service innovation include⁴:

- Dominance of neutral and horizontal innovation policies targeting all sectors;
- Paucity of specific policies and instruments targeting service innovation;
- Supply-side policies still dominate Member States' policy portfolios;
- Initiatives aimed at supporting service innovation within a specific industry or sector, i.e. Knowledge-based and creative industries;
- Service innovation objectives within technology or 'grand challenges' context;
- Emerging emphasis on stimulating demand-driven and user-driven innovation.

Mindful of the evolving nature of service innovation policy and instrument development across the European Union, the recently published Smart Guide to Service Innovation (EC, 2012) identified that a range of instruments have demonstrable potential to unlock the transformative power of service innovation as illustrated in Figure 2 below.

⁴ See Appendix for a visual illustration of select EU Approaches to Service Innovation based upon data contained in EC PROINNO (2012).

Figure 2 Overview of support instruments to unlock the potential of service innovation

Support instruments at the company level	Support instruments at the sectoral, business environment level	Support instruments at the market level and to promote spill-overs
Design innovation clinics	Design centres	Regional awareness raising measures
Supply-side innovation vouchers	Living Labs	Incentives for cooperation between manufacturing companies and designers
Innovation management support	Support to clusters in emerging industries driven by service innovation	Demand-side innovation vouchers
Facilitating access to finance	Innovation assistance	Public procurement initiatives
Service incubation centres		
Supporting a holistic approach		

Source: EC (2012) Smart Guide to Service Innovation, p.22.

In relation to the foregoing it has been identified that a one-size fits all policy approach to service innovation is ill-advised (EC, 2007) and as such, it has been noted that: *“The blind copy-pasting of measures that do not correspond to a region’s development level and/or specific profile should thus be avoided”* (EC, 2012:17). For this reason, the following section, through incorporating the perspectives of key policy stakeholders, aims to contextualise and in turn, validate requirements for potential policy and instrument adaption and/or intervention to support Ireland’s service innovation agenda.

IRELAND’S INNOVATION POLICY STAKEHOLDER VIEWPOINTS

At a high level, the voice of Ireland’s innovation ecosystem stakeholders represented in this study indicates that service innovation is very much at an embryonic stage in terms of awareness and implementation. This is evidenced through the surfacing of a dominant NPD legacy of innovation policy and practice which in turn, has and continues to manifest in existing policy focus/metrics, governance structures, policy instruments and enterprise awareness. Despite the ambiguity surrounding service innovation, data from the workshops and interviews highlighted growing demand to explore the business case, differentiation and consumer-centric benefits

associated with enhancing services offerings, organisational processes and customer relationships. As such, this paper responds to calls for further insights into how service innovation can be promoted and scaled; hence this section specifically addresses five major themes, as documented below, originating from the stakeholder consultation process.

1) Innovation Policy Mind-Sets

Although service innovation is still an emerging discipline which only began to evolve in the late 1980s (Europe INNOVA, 2010) and is at best characterised as emerging and hindered vis-à-vis established innovation mindsets; a wealth of experience has been accumulated on business cases where instruments have been proven to enhance existing services and to create new service offerings (Spath and Ganz, 2008; Aas and Pedersen, 2010; Gallouj & Djellal, 2010; EC, 2012). Hence, it was of interest to contextualise the research by exploring the innovation policy mindsets of industry, policy and academic stakeholders. In line with emerging EU policy findings (Expert Panel on Service Innovation, 2011; EC PROINNO, 2012) the shifting of policy mindsets and priorities, particularly for national innovation systems with a NPD technological legacy, is a fundamental element to unleashing the potential of service innovation.

Workshop findings: The workshop participants considered non-technological/product focussed innovations and the support/funding structures surrounding them were overlooked. As such, it was felt that there was a lack of information regarding service innovation in terms of resources, supports, and policy measures. Nonetheless, the participants viewed service innovation very favourably regarding how it “...*challenged long-existing practices*” of business operations and centralised the “...*voice of the customer*”. Particularly it was seen as necessary for “...*changing mindsets...which should be integrated into all aspects of a business*”. Top down support was seen as essential to support organisational change efforts and the use of ‘champions’ and engagement from all staff was a recurring theme.

Interview Findings: Interviewees were of the opinion that existing innovation mindsets related to “...new technology and not so much on developing a sustainable innovation stance or how to structure an organisation”. Moreover, it was openly acknowledged that service innovations were not understood by policy implementers “...[Service innovations] are not understood by the funding committee members, they have no great experience in supporting or in seeing the scalability”. As a result, “...the concept of service innovation is confused” and service innovation policy remains poorly defined. This presents a unique set of challenges to be addressed relating to “...shaping people’s perspectives on a service approach” and overcoming the “ingrained” product oriented viewpoint. Responding to this, it was highlighted that “Government agencies need to focus more on service innovation which has begun with Enterprise Ireland’s workshops. Our agencies should support firms in terms of assessing their ability for service innovation and then provide structures and processes for intervention support”. Reflecting the relatively embryonic positioning of service innovation within Ireland’s innovation ecosystem it was acknowledged that it will take time to shift mindsets through awareness raising activities “...there is a newness, a recent relationship that EI has with services so this is not going to change overnight”.

2) Service Innovation Awareness

In the words of Gallouj & Weinstein (1997), service innovation is ‘fuzzy’, and as such, it is difficult to measure and often goes under-reported or unobserved (McDermott & Prajogo, 2012). The relative newness of the discipline means “...that there is a lot of ambiguity, misunderstanding and even, disagreement on the key terminology and definition of the phenomenon itself” (EPISIS, 2011:13). Moreover, much of the research output on service innovation emphasises the strategic importance of the discipline without offering absorbable processes or methodologies by which to design, embed, test or measure performance/impact

(Fährlich & Meiren, 2007). Due to the foregoing, it was of particular interest to investigate levels of awareness of service innovation.

Workshop Findings: Notably, the workshop findings revealed that there were limited levels of awareness of service innovation. Some perceived the concept as a ‘buzzword’ whereas others had actively engaged in activities related to customer, marketing and process innovation and/or business development but did not consider this as service innovation nor were they familiar with any specific tools or methodologies for such purposes. Upon receiving a briefing on the relevance, processes, methods, tools and impact of service innovation all the workshop attendees agreed the discipline had relevance to their business operations and articulated an appetite for further information “...*getting the word out about the value of service innovation is critical*”. In terms of raising awareness it was identified that “*The impact of service innovation must be identified*” to sell the business case, and in this vein, it was suggested that “...*service innovation ought to be discussed about in terms of customers and costs, as they are the ideas and language that they can understand and relate to*”.

Interview Findings: The interviews mirrored the aforementioned workshop findings in terms of a lack of awareness and the resulting need to educate and promote the relevance and application of service innovation. The interview respondents underscored the pressing need to remove the ‘buzz-word aspect’ through documenting and disseminating information about relevance, application and impact:

“...if you were to put a generalisation on it I would say most companies don’t understand it [service innovation] fully, they see it as a buzzword but they don’t see it as adding value to their bottom line.”

In terms of raising awareness of service innovation it was recognised that there is a body of work to be done in terms of profiling successful examples as “...*there aren’t great role models in Ireland for service innovation...*”, in addition to coordinating demand-side measures “*I think if*

there is any piece of work that needs to be done it's kind of marketing and branding why this is important and what the impact could be". Reflecting the EC (2012) Smart Guide's recommendations for awareness raising instruments, actions have started to be implemented in this regard. Enterprise Ireland have recently hosted an awareness raising event "Outside/In-Transforming Business Growth through Service Innovation" and likewise, Service Cluster Ireland⁵ - a multidisciplinary promotional and knowledge sharing network has been established.

3) Funding

Irish SMEs have previously articulated that support measures in terms of innovation are not easily identifiable or readily accessible to them due to the traditional prioritisation of product innovation metrics and supports (Forfás, 2008). Indeed, organisations who do not conduct formal R&D "*...often fall outside the remit of current research and innovation investment and support programmes*" (Innovation Taskforce, 2010:53). Accepting that service innovation embodies a distinct skillset from established forms of innovation and mindful of the national R&D funding infrastructure, it was considered pertinent to explore the funding environment for Ireland's innovation stakeholders.

Workshop Findings: While the workshop participants recognised the need to invest in service innovation as it has the potential to impact on both their back office and front-facing customer/delivery activities, the availability of financial resources was a major stumbling block "*Money is being spent on keeping the business afloat as opposed to investing in risky projects no matter how warranted they are*". The recurring theme in this regard was that enterprises are overwhelmed with balancing day to operations and increasing sales and did not have the capacity to explore or innovate across the service innovation spectrum. Related to the shifting

⁵ Service Cluster Ireland is an industry led initiative created to help service intensive businesses innovate and grow – see <http://www.serviceclusterireland.com/>.

policy mindsets and awareness raising themes, the workshop attendees identified a lack of knowledge about existing funding supports which could be utilised for service innovation projects. They perceived that funding supports “...typically favoured start-ups” and were mostly aligned to NPD or internationally traded services.

Interview Findings: Under the finance umbrella, the interviewees outlined some concerns about service innovation engagement at the firm-level “...it’s especially challenging to them when costs are a big issue, spending on something that is speculative, that is strategic and that might not result in business in the short term”. In turn, it was noted that responsibility should lay with agencies to promote and financially support service innovation through R&D mechanisms:

“Agencies need to promote the importance of and the how to of service innovation....this doesn’t particularly require new structures or programmes, it’s more so an expansion and/or a communication of existing offers”.

The limited availability of funding within policy agencies was also identified in the course of the interviews which impacts upon the feasibility of implementing financial support measures and instruments: “...of course it makes absolute sense to proactively develop and fund strategic policy initiatives around service innovation but we are going to struggle with getting internal resources to do anything strategic. For this reason, it was identified that a pragmatic sectoral approach to financially supporting projects is currently being prioritised within Enterprise Ireland:

“...there are a couple of areas where we are trying to zone in on as opposed to doing it for everybody so from a sectoral perspective we are looking at the whole BPO companies and how we can transform their business models such that it is very strongly export focused, we are looking at legal services in a similar way and we are looking at the whole recruitment and training area and then the other one is digital agencies and digital marketing.”

Echoing the findings presented under the Policy Mindshift theme it was acknowledged that in general R&D funding is geared towards projects with ‘hard or tangible’ outputs ; however, it

was equally noted that service businesses or service innovation related projects are not precluded from existing funding schemes. One response to this issue was that “...*marketing and branding*” existing funding instruments to service companies and service innovation projects is warranted:

““Ideally we should make it more user friendly for service businesses and service innovation type projects to apply for R&D funding”.

4) Firm-level support

Allied to the aforementioned lack of awareness, there is a lack of firm level data and statistics on service innovation adoption and impact in Ireland. In addition, while Enterprise Ireland offer firm-level support in respect of general management development programmes, service innovation is not highlighted (if addressed at all, it is under the topic of lean approaches). Consequently, it was of critical importance to uncover the reality facing stakeholders in terms of firm-level requirements, as a means of informing future support measures.

Workshop Findings: Overall, the consensus was that the businesses would benefit from independent, external facilitation, and that this “...*outside and neutral support*” and “*hands on approach*” would be of considerable value. Similar to the Funding theme above, the participants highlighted that *service innovation supports* “...*need to be more extensive and easily available*” and there was also considerable interest in “...*information on the grants that may be available*”. The workshop findings indicate that industry representatives were unsure of how to begin the process, and stated that training or education is warranted. Echoing the instruments suggested by EC (2012), the workshop participants suggested a range of supports would have merit, which included: specific skills development, facilitation/mentoring, collaboration infrastructures/incentives, resources (conducive creative space, flexible materials for use in early prototyping, recording facilities, latest technology tools and templates) and dedicated centres or physical hubs, which they described as a “...*one-stop-shop*” to address their needs.

Interview Findings: The interviews with those already implementing the current business supports echoed the workshop findings in many respects in that the need for educational or training supports was further confirmed:

“Improvements and advancements around the education and skills piece is needed, otherwise you would be dragging companies kicking and screaming”.

“...maybe the area we need to focus in on the most, and we haven’t done so really, is the area of management capability, so if we can affect change in terms of the management teams understanding of services and innovation in services then it will flow through the rest of the organisation.

Mindful of the importance of the education and skills agenda, Enterprise Ireland has and continues to develop programmes and initiatives to embed and transfer knowledge that is relevant to service innovation:

“What we have been doing to address it is around the learning piece, through workshops such as the Inside Out event... we also have produced different material in terms of the Voice of the Customer”.

“The innovation capability programme takes clusters of companies and provides knowledge of how to create and manage innovation and that includes the whole service model and how value is delivered. The business accelerator programme also has relevance to service innovation in terms of optimising business and organisational processes and opportunities”.

This stakeholder group drew attention to how current business supports could be adapted to suit service innovation, as illustrated in the following comments:

“Our agencies should support firms in terms of assessing their ability for service innovation and then provide structures and processes for intervention support”.

“...this doesn’t particularly need new structures or programmes, it’s more an expansion and/or a communication of existing offers”.

The foregoing findings imply that there is consensus on the priorities to be addressed in terms of firm-level supports and scope for improvement in their implementation and reach.

5) Applied Research

In recent years a growing body of knowledge on service innovation has been accumulated (see Gallouj & Savona, 2009; Gallouj & Djellal, 2010); however, this body of research is

thematically fragmented with limited empirical grounding (Gallouj & Savona, 2010). Resultantly, the success rate for service innovation is low (Rubalcaba et al., 2010) and this may be attributed to much of the research output being strategically orientated and driven by policy-makers without offering absorbable processes or methodologies to design, embed or test service innovations (Bullinger et al., 2003; Fähnrich & Meiren, 2007; Burger et al., 2010). As such, there is a lack of practical instruments for planning, designing and developing services. In light of the foregoing, it was of interest to uncover the stakeholders' perspectives on the role for applied research at this time.

Workshop Findings: The findings suggest that more research regarding the impact of service innovation is required before firms can fully recognise its importance (as explored further in the Awareness and Mindset themes above). In relation to such research, the participants identified that they wanted 'practical and commercially orientated' research, more than pure academic knowledge. The participants pinpointed that facilitation and collaboration with multiple stakeholders particularly with academic/research knowledge providers, would be beneficial in instigating the internal changes they needed in order to capitalise on service innovation, and cited the Innovation Voucher scheme as a positive example. Notably, the service centre concept offered potential for: "*Clustering small groups of businesses for brainstorming, open innovation and networking*" which reflects the EU 2012 Smart Guide's suggested supports for clustering/networking supports for emerging industries.

Interview Findings: It was identified that Enterprise Ireland has taken a sectoral approach to supporting innovation in general. This includes the Technology Centre frameworks but also in the types of companies they have delivered clustered support to such as BPOs and financial services: "*At a sectoral level is how things have been done previously*". Turning to the role of research institutes, the consensus from the interview findings is that research groups and centres

within Ireland's universities and institutes of technologies are integral stakeholders within Ireland's innovation ecosystem:

"... [Research institutes] are central to it; if that connection isn't there you are not going to see some best practice and bright thinking deployed or being connected into our client base such as the skills that have come from the research institutes going in as talent into our client companies.

"Given the recent Forfás prioritisation of service innovation the challenge for research institutes is to stand up and align to respond and this has to be a network activity to drive value".

Despite the articulated importance of Ireland's research institutes to the Irish innovation ecosystem, a number of challenges within the sector were surfaced during the interviews. Firstly, there is a lack of dedicated service innovation research centres and groups within Ireland *"NPD still dominates innovation curricula...academics are confused about service innovation"*. Secondly, it was identified that there is applied research gaps which hampers collaboration between research and industry *"Academics are mostly interested in student numbers and producing case studies – the urgency isn't there to support industry challenges through research"*. Specifically, the interviewees also highlighted issues regarding the paucity of tools and models to support service innovation in practice *"...there are a lack of models for how to engage with clients and for scaling export gains"*. It was apparent from the interviews that the role of Industrial PhDs (as seen in Denmark) or service innovation specific applied research programmes (e.g. TEKES) are yet to gain ground in the Irish setting.

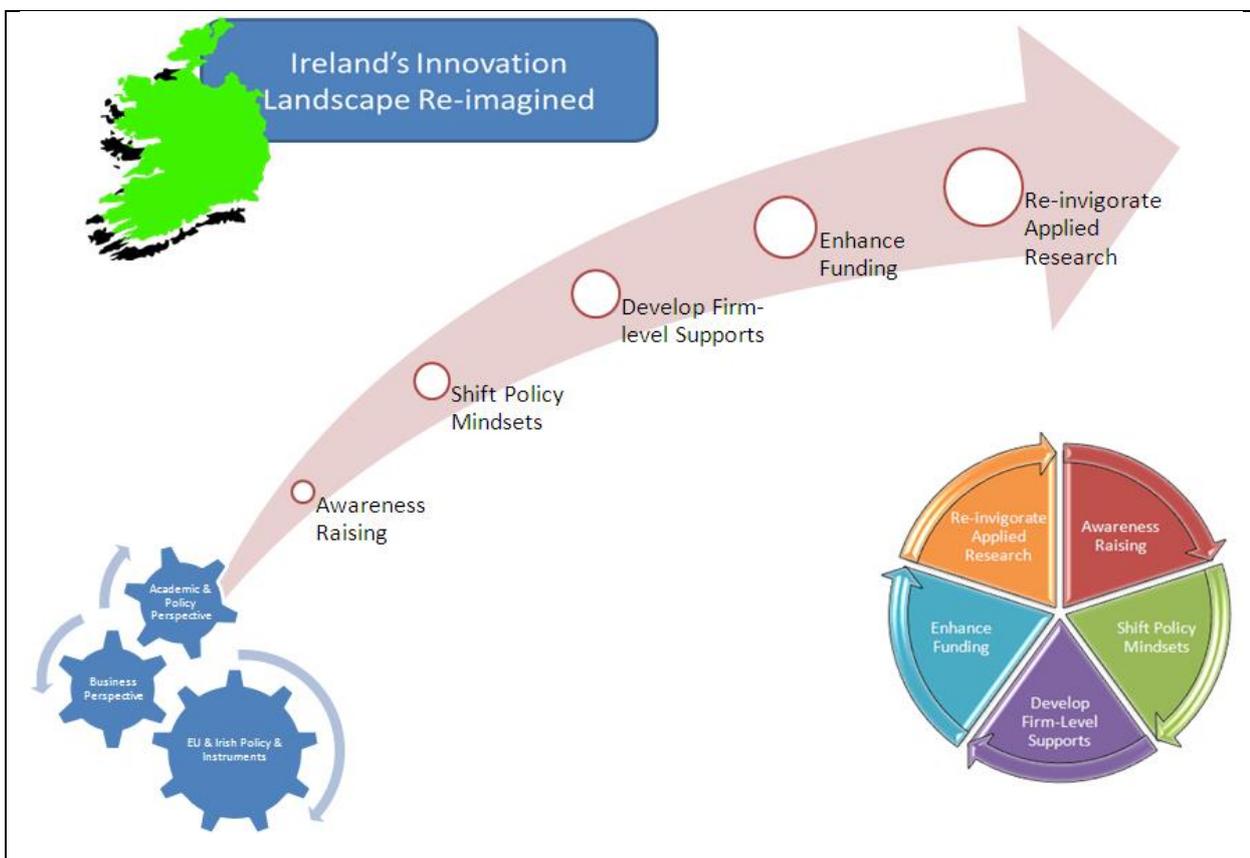
A RESPONSIVE ROADMAP FOR RE-IMAGINING IRELAND'S INNOVATION LANDSCAPE FOR SERVICE INNOVATION

Based upon the foregoing research findings, and informed by EU strategy and policy recommendations and best practice (Expert Panel on Service Innovation, 2011; PRO INNO Europe, 2012), this section of the paper serves to provide a roadmap for re-imagining Ireland's innovation landscape to realise the potential of service innovation. Despite Ireland's foresight (Forfás, 2006:2008) and more recent (Forfás/DJEI, 2012) service innovation policy recommendations,

the national innovation ecosystem is at a relatively embryonic base-level in its service innovation underpinning.

Mindful of this early stage of service innovation maturation, the components of this roadmap and the proposed measures/instruments therein are contextualised to align with Ireland’s existing innovation landscape in terms of mobilising and extending existing resources, instruments, infrastructure and strengths to disseminate, facilitate and support the emerging service innovation agenda across all economic sectors. This roadmap, as illustrated in Figure 2 and discussed subsequently, represents a working, non-prescriptive document and serves to stimulate further debate and contribution.

Figure 2 Roadmap for Re-imagining Ireland’s Innovation Landscape for Service Innovation



Awareness Raising

To address the ambiguity/confusion surrounding service innovation, government and policy implementation agencies in collaboration with researchers/academia should engage in an extensive programme of awareness building and knowledge transfer to encourage service innovation adoption by Irish firms. This course of action may be facilitated through informative and knowledge transfer vehicles/instruments. Workshops and documentation associated with the voice of the customer have been already instigated by Enterprise Ireland; equally Service Cluster Ireland presents additional opportunities for engagement and dissemination. Building upon this, a focus on business modelling, service design and practical methodologies and toolkits to offer firms, and profiling Irish case studies is suggested.

Suggested Actions/Instruments:

- Knowledge transfer workshops between government agencies, implementation bodies, research and academia and industry practitioners;
- Knowledge transfer curricula development to inform industry stakeholders of the concept, processes and methodologies of service innovation;
- Clinics similar to EC Smart Guide proposal
- Methodological, toolkit and metric development to offer stakeholders the necessary tools to engage in and deploy service innovation within their respective operations and;
- Case study development profiling Irish examples, best practice and impacts derived from service innovation.

Shift Policy Mindsets

Ireland's innovation policy is orientated towards science and technology and this is reflected in policy content, funding instruments and output metrics. Going forward, innovation policy needs to be responsive to all sectors of Irish industry and achieve balance between science and technology and particularly, industry, business modelling, commercialisation and consumer considerations. To achieve this, policy makers, policy implementing bodies and enterprise stakeholders themselves need to review, and adapt where necessary, existing Irish innovation frameworks to nurture and support a service innovation mindset.

Suggested Roadmap Actions/Instruments:

- Mapping international policy instruments to demonstrate international best practice and learning;
- Production of service innovation policy whitepapers to inform the on-going policy debate;
- Multi-disciplinary and regional workshops with Ireland's key innovation ecosystem stakeholders, to represent a diverse range of viewpoints and requirements to the policy debate and;
- Conducting of a policy efficiency/impact assessment to capture the current state of art and to identify policy areas requiring attention.
- Dissemination/knowledge transfer mechanism related to 'awareness raising'

Develop Firm-Level Supports

For firms of all sizes, engaging in innovation presents many in-company capability and capacity challenges. Due to limited resources in terms of headcount, management capabilities, funding and expenditure levels and time to devote to service innovation activities, many companies and particularly SMEs, experience difficulties in engaging in service innovation and accessing agency supports and external research expertise. The current Irish commercial operating environment is not conducive to a management focus on creativity and service innovation vis-à-vis cost and day-to-day productivity concerns. Accordingly, funding and management development related to service innovation needs to be more user-friendly and accessible to Irish firms and a significant role for enterprise support agencies and academia has emerged to cater for the demands and operating contexts of Irish industry.

Suggested Actions/Instruments:

- National enterprise survey to assess firm-level service innovation needs and capacities;
- Review of national R&D and management capability and skill building programmes to explore their fit for purpose in the context of service innovation;
- Continue of Technovate graduate placement schemes linking industry with researchers tailored to the specific components of service;
- Development of regional and national service innovation training and management capability programmes, modularised training and blending learning techniques;
- Pilot scheme - Service Innovation Vouchers (adapting existing instrument);
- Disseminate success stories to stimulate demand, better communicate existing R&D funding/management capability programmes for service innovation applications

Enhance Funding

Evidence indicates that Ireland's legacy of product and technological innovation and the relative newness of service innovation have precluded service innovation related project funding. Funding instruments are needed to support the use of applied research, business incubators, mentor and investment networks, and co-operation with export promotion organisations and enterprise boards/chambers of commerce, to support start-ups and SMEs to market their offerings both nationally and internationally. Based upon the foregoing, increased funding support

Suggested Actions/Instruments:

- Impact assessment studies and case study developments of previously funded service innovation related projects to demonstrate the benefits derived from funded research;
- Feasibility studies to explore the potential for increasing R&D, applied research and management development funding for small and large scale service research projects;
- Establishment of dedicated Services funding programme (basic and applied research) where the structure and funding criteria reflect the interdisciplinary and dynamic nature of services;
- Lobbying exercise by Ireland's Framework Programme contact points to secure EU funding/participation in the forthcoming Horizon 2020 Framework Programme.

for practically-oriented concept development, business modelling, market validation, customer interface, service design and business development projects are increasingly required from both public sponsors of R&D and research institutes that provide applied R&D services.

Re-Invigorate Applied Research

While Ireland's research infrastructure and research links with industry have been signalled as important and fertile assets in Ireland's innovation system, higher education institutes (HEIs) remain an underutilised source for innovation-led collaborations outside of the Science and Technology domains. There is a paucity of dedicated service innovation research acumen within Ireland's HEIs and consequently, the level of innovation transfer activity is insufficient and warrants addressing. To surmount the challenges associated with Irish firms' service innovation absorptive capacity deficiencies and the fragmented corps of service innovation expertise in higher and further education institutes' specific programmes and collaborative infrastructures and initiatives are required to leverage the benefits available from applied research.

Suggested Actions Instruments:

- Alignment of Ireland's emerging service innovation research centres to establish a critical mass of expertise;
- Acceleration of mode 2 type research and collaborations;
- Establish dedicated service laboratories/centre(s) and facilities to serve local, regional and national industry clusters;
- Prioritise service innovation within the existing competency centre framework/infrastructure;
- Applied service innovation research project acceleration and applied research skills development;
- Review and develop academic taught programmes and modules to ensure the emerging graduate pool is equipped with wide innovation skills.

CONCLUSION

Accepting that service innovation has a vital role to play in assisting Ireland to sustain, transform and regenerate its economic-base, this paper's exploration of the task of reimagining Ireland's innovation landscape in pursuit of realising the increasingly prioritised service innovation agenda contributes a timely, relevant and novel focus. Within this, the background to the existing innovation landscape was synthesised and the over-emphasis on scientific and technological innovation at the expense of service innovation was surfaced. Based upon this underpinning, and acknowledging that service innovation is addressed differently across EU, a

roadmap for initiating on-going debate, dialogue and further research in terms of developing/adapting policy approaches and instruments is proffered.

By incorporating multiple innovation stakeholder perspectives this paper has pinpointed a range of high-level themes and action points for Ireland's innovation ecosystem stakeholders to consider in terms of exploring, nurturing and supporting service innovation engagement and implementation. Mostly, notably the paper highlighted the paradox associated with Ireland's vociferous articulation of the importance of service innovation in comparison to its readiness and capacity to engage in and exploit the discipline. The findings equally highlight disparity amongst key stakeholders, the enterprise base are calling for a range of distinct service innovation supporting initiatives infrastructures and instruments; whereas, innovation policy implementers are favouring the utilisation of existing horizontal innovation mechanisms and piloting sectoral based priorities across internationally traded service sectors and research stakeholders identified an inherent paucity of appropriate research infrastructure and acumen to contribute to the service innovation agenda.

In terms of limitations, this paper and the proffered roadmap serves to represent a starting point, as opposed to prescriptive or exhaustively validated consideration points, for further dialogue and research, as Ireland's service innovation maturation levels evolve. Additional research in terms of surveying the national enterprise-base and the entire range of innovation stakeholders (at advisory and implementation levels), in addition to international best practice would significantly inform this agenda going forward. Nonetheless, this research impacts and has implications for various levels of Ireland's innovation landscape, at this early stage in the service innovation life-cycle, most notably in terms of policy, stakeholder, industry, research and academic perspectives.

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Appendix

A Snapshot of Select EU Policy Approaches to Service Innovation

	Specific Service Innovation Policies/ Instruments	Relevant Supply Side Innovation Measures	Relevant Demand Side Innovation Measures	Key Actors		
				Government	Enterprises	Research
Austria	<ul style="list-style-type: none"> • Sector's needs policy measures, not service innovation specific • Industry needs policy measures, not service innovation specific 	<ul style="list-style-type: none"> • R&D tax credit • Innovation Vouchers • EU services funding initiative • Creative industries promotion and training/awareness subsidies • Knowledge Coupon Programme • Knowledge Pilot Programme (Innovation Assistants Programme) • The Industrial PhD Programme • The Open Funds Programme • Strategic Centres for Science, Technology, and Innovation • R&D programmes • Applied Research Programmes • Triax S&T/E- Pioneers of Service Business programme • European Regional Development Fund • Competitive clusters (NEREJ) • R&D partnership funding and tax credits • The Strategic Investment Funds (SIF) • Technological Platforms • SME dual innovation projects (S&TIP) • R&D-Programme "Innovation with Services" • National and regional funding programmes (non-SME focused) • R&D transfer programmes • Research cooperation funding • Systematic action programmes • R&D and training funding • Innovation Partnerships and Vouchers • Competence Centres • Innovative Business Models for International Services Companies • IDA: Services Innovation Programme (SIP) 	<ul style="list-style-type: none"> • Tax relief and preference • Government funds and projects • Investments, education and training • The Innovation Consortium Programme • The Innovation Network Programme (Service Platform) • The Innovation Incubators Programme • ICE project (Innovation, Customers, Employees) • Demand and use-driven innovation policy framework and Action Plan • Public procurement initiatives • Domestic credit initiatives • Internationalisation of service initiatives • The Centre of Expertise (Clustering) programme • Ministry Action Plan generating impact on service innovation • OSBO and ANS funding agencies • Competitiveness Clusters • Services represents a specific field in the High-Tech-Strategy 2020 • Services 2020 Action Plan • Regional measures focused on developing clusters and improving the infrastructure 	V	V	V
Denmark				V	V	V
Finland	<ul style="list-style-type: none"> • TEES Service – Pioneers of Service Business Programme 2006–2013 			V	V	V
France	<ul style="list-style-type: none"> • Horizontal sector-based innovation policy/instruments 			V	V	V
Germany	<ul style="list-style-type: none"> • Innovation with Services 2006-2012 Programme - (SIF/EIP) • Services 2020 Action Plan 			V	V	V
Ireland	<ul style="list-style-type: none"> • Horizontal support for manufacturing and internationally traded services 			V	V	V
The Netherlands	<ul style="list-style-type: none"> • Horizontal innovation policy/ instruments • Service innovation and ICT programme 			V	V	V
Norway	<ul style="list-style-type: none"> • Horizontal innovation policy/ instruments 			V	V	V
Sweden	<ul style="list-style-type: none"> • national service innovation strategy 2010, 2012 			V	V	V
UK	<ul style="list-style-type: none"> • Horizontal innovation policy/instruments with the exception of specific industries (especially the creative industries). 			V	V	V