

Services and Innovation

- Mapping of Policies and Support Measures in Ireland -

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Executive summary

This report provides results from the Irish mapping study on services innovation policy and support measures. The report was commissioned by Forfás from CM International¹ as part of its ongoing research into both services and innovation. It also forms an input into a wider mapping exercise undertaken within the European network for 'Innovation Policy Project in Services (IPPS) 2006-2007' and shares a common methodological approach².

The key findings from the current research indicate that services innovation is receiving widespread policy attention in Ireland. Forfás is proactive and a primary driver in this area of policy. This has culminated in a significant study of the current state of services innovation in Ireland³, and the more recent establishment of a dedicated in-house Services Policy Group in early 2007.

All existing policy measures for innovation were found to be available to internationally traded services in Ireland, although the predominant focus of such measures is on science, technology and R&D. While this is clearly an important component of services innovation, such measures it is argued can provide implicit disincentives to services participation for some groups of companies, principally those that do not view R&D as an activity relevant to their business.

Relatively few of the policy measures reviewed have been designed specifically for services. Even fewer have been designed for services and innovation. This is perhaps not surprising given the fact that services innovation, as a policy issue, has only recently been elaborated in Ireland, the wider EU and OECD Member States.

Policy measures focusing on both the **supply- and demand-side** of services innovation are dominated by measures targeting services product development support. This appears to be particularly true for explicit forms of innovation support, for example R&D and other technological supports. Conversely, support for other types of services innovation (Customer Interface and Business Models) is in many cases be found in policy measures that are not explicitly considered to be innovation supports. A good example of this phenomenon can be found in measures targeting **Customer Interface innovation**. Here, such measures typically focus on targeting export development of SMEs. Similarly, support measures for **Business Model innovation** can also be found in areas such as integrated support for entrepreneurship and organisational development⁴.

¹ Cardiff. CBTC. Senghenydd Road, Cardiff, CF24 4AY. United Kingdom. www.cm-intl.com/en

² The IPPS project is a study by a European network for 'Innovation Policy Project in Services (IPPS) 2006-2007' and aims to 'collect information on the existing policy measures supporting service innovations in the partner countries. TEKES is the lead partner of the project and Forfás is one of the network partners.

³ Forfás (2006a) 'Services Innovation in Ireland - options for innovation policy'. Commissioned by Forfás from CM International.

http://www.forfas.ie/publications/forfas060928/forfas060928_services_innovation_full_report_webopt.pdf

⁴ For example, Enterprise Ireland's Productivity Fund, Exhibit 4.

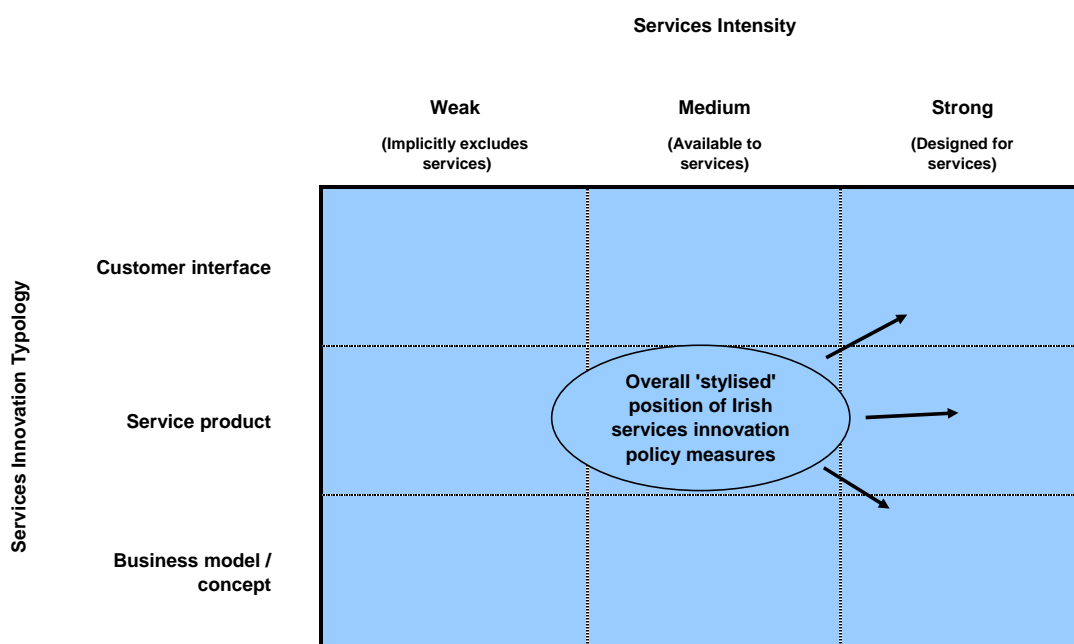
The overarching **Framework Environment** for services innovation in Ireland is broadly supportive. Substantial developments, for example, have been made in helping to address competition issues within the non-internationally traded services activities. Skills and training are further areas that have begun to be adapted to the particular requirements of internationally traded services, as well as broader skills needs.

Other aspects of positive framework development include scientific investment in ICT and broadband infrastructure support. IPR framework conditions are also assessed in the report suggesting that the predominant focus of patenting support is product related, although other aspects such as copyright are more broadly relevant to services.

A number of possible pathways for services innovation policy are evident on the basis of the mapping results (see section 6):

1. Rely on a status quo position, with the majority of policy measures continuing to be focused in the area of medium services intensity, and service product focus (see the 'oval' within the centre of the following figure).

Future options for developments in Irish services innovation policy



2. Broaden out existing policy measures / develop new policy measures with both a stronger services intensity focus, aligned greater attention to multidimensional forms of service innovation policy measures in areas such as business model, customer interface and service products (as denoted by the arrows in the figure above).

These approaches are further elaborated in relation to possible future support measures in section 6.

1. Introduction

The role and position of services innovation has become an important policy issue for Ireland in recent years. This has been reflected in a series of studies undertaken by Forfás in scoping out both concepts and current levels of services innovation activity. Its most recent study entitled 'Services Innovation in Ireland - Options for Policy' (2006) provides detailed analysis of international good practice, activity and needs of a range of sectors, as well as areas for policy development. The options set out in the report are currently subject to a national consultation process.

Against this background, this report provides findings from a complementary policy mapping study of the existing policy measures supporting service innovation.

The report was commissioned by Forfás from CM International⁵ as part of its ongoing research into both services and innovation. The report begins by outlining the methodological approach taken to 'mapping' (Section 2) and the current position of innovation policy, with respect to services activities (Section 3). The report also assesses a range of policy measures against the criteria of services intensity and a service innovation typology (Section 4), before identifying future planned developments in this area (Section 5). The report then draws together the principle conclusions from the mapping analysis in Section 6.

2. Methodological approach

The framework for the study, as noted above, is set out in a 'Policy Mapping Template' developed by TEKES as part of a European network initiative for 'Innovation Policy Project in Services (IPPS) 2006-2007', of which Forfás is a member. This is informed by a recent report by Luke Georghiou on 'Effective Innovation Policies for Europe' (2006), and structured around three major blocks of analysis⁶:

- A. Policy mapping: what is the position of service innovation in Ireland's policy bodies and policy statements?

- B. What are the main service innovation-related policy measures that flow out of this context? Here the Mapping template employs the following typology to capture this information:
 - i. *Supply side measures*: measures targeting service businesses, including financial and non-financial support for R&D and innovation in companies.

⁵ Cardiff. CBTC. Senghenydd Road, Cardiff, CF24 4AY. United Kingdom. www.cm-intl.com/en

⁶ A more detailed categorisation can be found in the Annex (to follow for the final report).

- ii. *Demand side Measures:* measures targeting customers & markets, including efforts to support the capacity of companies to innovate, or the likely success of innovation.
- iii. *Internationalisation measures:* measures acting as a catalyst for innovation and growth through a focus on service exports and inward investments.
- iv. *Framework conditions:* activities designed to facilitate innovation through an effective regulatory environment (competition, IPR, etc.).
- v. *Horizontal measures:* activities focusing on promoting horizontal policy co-ordination in support of multidimensional service innovation.

C. Future policy measures - what is the status of policy development with respect to services innovation

In operationalising this framework for the Irish context services innovation has been defined as:

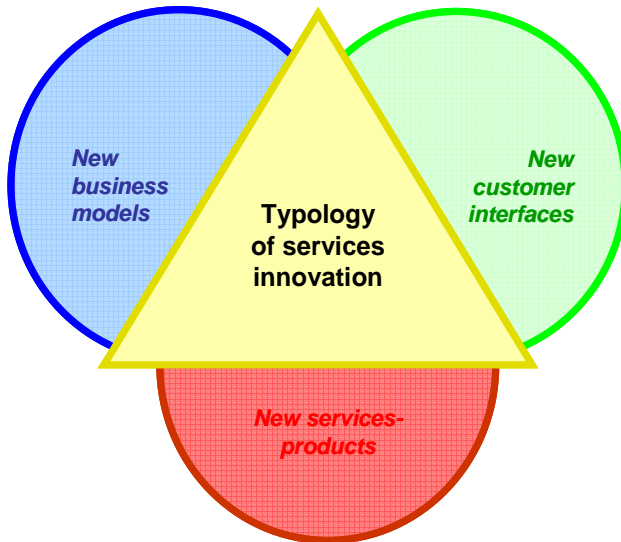
*A new or considerably changed service concept, client interaction channel, service delivery system or technological concept that individually, but most likely in combination leads to one or more (re)new(ed) service functions that are new to the firm and do change the service/good offered on the market and do require structurally new technological, human or organisational capabilities of the service organisation.*⁷

In order to oversee the mapping research in Ireland, Forfás set up an Ireland IPPS Working Group to inform and consult with principal stakeholder. A full list of its members can be found in Annex II.

⁷ van Ark, B. and den Hertog, P. (2003) 'Service Innovation, Performance and policy: A review', Ministry of Economic Affairs, The Hague, Netherlands.

The study has also sought to maintain the link to the typology of service innovations identified in the recent services innovation study⁸.

Exhibit 1: Typology of services innovation⁹



- **New business models/concepts**
 - A complete or substantial change in the way in which revenues and profits are earned.
- **New customer/delivery interfaces**
 - Improving the dynamic exchange of information between the customer and a service provider
- **New service-product offerings**
 - Analogous to traditional manufacturing based innovation activity.

A further methodological feature of the research was the adoption of an 'audit' focus to the mapping of policies / activities, rather than evaluation of effectiveness *per se*. In this respect the research has not sought to evaluate individual policy measures, but rather to identify support measures and their focus / potential focus on services innovation.

The research employs a combination of research methods, including analysis of findings from earlier studies, other desk research, and interviews with policy bodies and agencies. These interviews largely took place in December 2006. The intention, here, was to allow the multiple dimensions of innovation in services to be fully explored in a range of policy areas - a number of which were not directly connected to innovation *per se*. Interviews typically lasted between half-an-hour and one hour in length, and were undertaken on both a face-to-face and telephone basis.

The mapping research sought to collect information on a variety of policy mechanisms, including:

1. Initiatives that have been designed and developed for services
2. Initiatives that are available to services and other types of company
3. Policies or measures that implicitly exclude all, or a substantial proportion of services activities.

Greatest emphasis in the report, however, is given to those policy and policy measures designed for services innovation, as required by the Mapping Template.

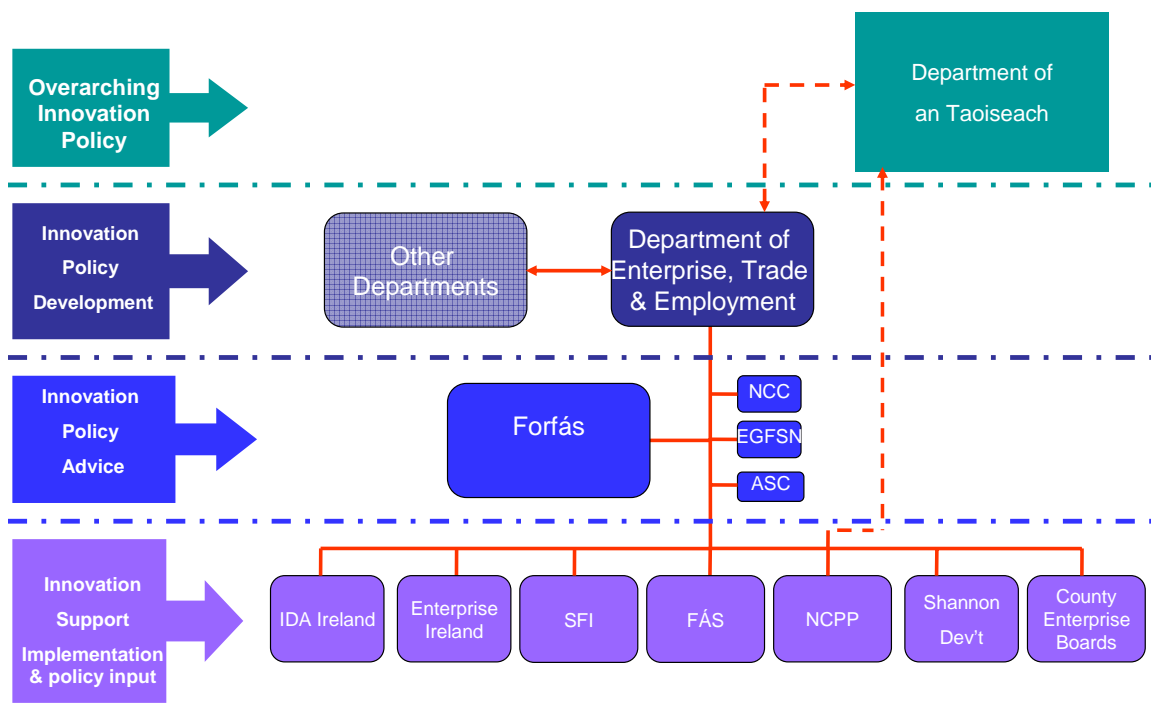
⁸ Forfás (2006a) 'Service Innovation in Ireland - options for innovation policy'. Report to Forfás.

⁹ Forfás (2006a) 'Services Innovation in Ireland - options for innovation policy'. Report to Forfás.

3. Service Innovation Policy in Ireland

The Irish policy landscape incorporates a range of organisations in the services innovation field with responsibilities ranging from policy development to policy implementation in Ireland. The following diagram illustrates these organisations and the inter-relationships, followed by analysis of policy and delivery in each 'layers'.

Exhibit 2: The Irish services innovation policy landscape



3.1 Innovation policy development

Key points:

- The DETE is the lead Government department with respect to science, technology and innovation policy in Ireland. The cross cutting nature of innovation, however, draws in other departments within this policy area.
- DETE has recently published a key policy statement on innovation - the recent Strategy for Science, Technology and Innovation (STI) 2006-2013¹⁰.
- The Strategy sets out a strong agenda for developing an internationally recognised system of innovation based around excellence in research and knowledge generation. It does not seek to focus specifically on services

¹⁰ <http://www.entemp.ie/publications/science/2006/sciencestrategy.pdf>

innovation. Indeed much of its explicit focus on innovation relates to scientific and technological forms of innovation.

- The Strategy identifies internationally traded services as a core driver of economic prosperity in Ireland.
- A range of priorities identified in the Strategy have potential relevance to services innovation-focused supports, for example:
 - Development of Competence Centres in strategically important areas
 - Establishment of Industry led networks
 - Promotion of HE industry links
 - Support for innovation in humanities and social sciences

Department of Enterprise, Trade and Employment (DETE) aims to “work for Government and the people to grow quality employment and national competitiveness”. It is organised into seven Divisions, which broadly reflect distinct functional units but there is also a substantial degree of cooperation and interaction between Divisions. Those divisions which are of particular relevance to services innovation include: the Competitiveness and International Affairs Division; the Science, Technology and Intellectual Property Division; Consumers, Competition and Commerce Division; and Enterprise and Agencies Division.

DETE’s strategy is based upon the following four pillars:

- Enterprise, Innovation and Growth
- Quality Work and Learning
- Making Markets and Regulation Work Better
- Business Delivery, Modernisation and Customer Focus.

DETE also has policy responsibility for a number of other offices and state sponsored bodies that are relevant to services innovation including: City and County Enterprise Boards; the Competition Authority; Enterprise Ireland; FÁS; Forfás; the Health and Safety Authority; IDA Ireland; InterTradelreland; National Standards Authority of Ireland; Science Foundation Ireland; and Shannon Development.

DETE’s approach to services innovation:

DETE is responsible for the development of the primary innovation policy document in Ireland - the Science, Technology and Innovation (STI) Strategy 2006-2013¹¹. This strategy does not explicitly identify services innovation. Indeed it is relatively neutral with respect to sectors, although ICT and biotechnology (technologies) are identified as priorities.

The strategy is, however, a cross-departmental initiative recognising the role of STI activities / budgets *across* government. This is also reflected in the creation of ‘Technology Ireland’, bringing together Forfás, IDA Ireland, Enterprise Ireland, Science Foundation Ireland (SFI) and so on to implement ‘technological’ aspects of

¹¹ Ministry for Enterprise, Trade and Employment (2006) ‘Strategy for Science, Technology and Innovation 2006-2013. 2006’. Government Publications Office.

the Strategy. Within this framework it will be the role of this group to bring forward implementation needs. From this perspective the Strategy provides the broad framework and the specific sector / thematic requirements that can inform its implementation. Services innovation may therefore have a stronger role within the Strategy's implementation than is currently identified.

3.2 Innovation policy advice

Key points:

- Forfás is currently leading research, debate and discussion on services innovation policy in Ireland. This has seen expression through its study: of 'Options for innovation policy' (2006), and current participation in the IPPS network.
- Elsewhere services and innovation are growing in importance amongst other relevant policy advisory bodies:
 - The National Council for Competitiveness (NCC), for example, has recently called for a Service Innovation Policy to be adopted in Ireland.
 - The Expert Group on Future Skills Needs (EGFSN) has also brought a stronger focus on services activities to its research and advisory activities - alongside its more traditional production / manufacturing activities.

Forfás is the National Policy and Advisory Board for Enterprise, Trade, Science, Technology and Innovation. It aims to "inform and to build coalitions for change, which will influence and underpin implementation of ambitious, coherent and widely understood enterprise, science and innovation policies."

Forfás' approach to services innovation:

Forfás has played a leading role in researching and generating debate around services innovation issues. This initially began with a review of Product, Process and Services (2004) which highlighted the need to consider policy for this area. As a result a Scoping Study was commissioned in 2004¹² which provided the methodological foundations for the 2006 study of 'Service Innovation in Ireland - Options for innovation policy'¹³. Forfás' current involvement in the IPPS network is a further indication of the seriousness attached to this issue in Ireland.

Alongside this activity Forfás have also produced a range of services sector studies as part of its aim to better understand this important sector of the economy¹⁴.

¹² Forfás (2004a) Scoping Study - Innovation in Services Sector in Ireland. Report commissioned by Forfás from InnovationLab Ireland Ltd,. Internal document.

¹³ Forfás (2006a) Services Innovation in Ireland - Options for innovation policy. Report commissioned by Forfás from CM International.

http://www.forfas.ie/publications/forfas060928/forfas060928_services_innovation_full_report_weboprt.pdf

¹⁴ For example, Forfás (2006b) 'The Changing Nature of Manufacturing and Services - Irish Trends and International Context'.

Advisory Council for Science Technology and Innovation (ASC) is the Irish Government's high-level advisory body on Science, Technology and Innovation (STI) policy issues. It serves as the primary interface between stakeholders and policymakers in the STI arena. The Council is charged with contributing to the development and delivery of a coherent and effective national strategy for STI and to advising Government on medium and long-term policy issues. Its work programme is implemented through the establishment of Task Forces.

Advisory Science Council's approach to services innovation:

In its response to the STI Strategy, the ASC welcomes the additional resources allocated to promoting in-company R&D and technology application. Ms Cryan, the Chair of the national Advisory Science Council, commented that, "the support being provided to double the number of indigenous and overseas companies doing R&D in Ireland and to double their sales from new innovations recognises the reality that there is no other source of sustainable competitive advantage for enterprises competing in global markets than to engage in a continuous process of innovation". While recognising the importance of innovation the Advisory Science Council's response to this STI strategy does not explicitly identify the potential contribution of research to innovation in the services sectors.

Expert Group on Future Skills Needs (EGFSN) is a body appointed by the Irish Government to advise on education and training issues related to the future skills requirements of the enterprise sector of the Irish economy. The Group is composed of representatives from business, employees, education, Government departments and State agencies. The EGFSN carries out studies into the supply and demand for skills in individual business/industrial sectors and occupations, and puts forward recommendations. The Group reports to both the Minister for Enterprise, Trade and Employment and the Minister for Education and Science.

EGFSN's approach to services innovation:

The EGFSN has traditionally focused on production- and manufacturing- based sectors, but in recent years it has started to address skills issues in the services sectors through its research activities and policy discussions. For example, the EGFSN's fourth report in 2003 included recommendations for skills development in the ICT and logistics sectors as well as financial occupations and generic soft skills training. The EGFSN has also recently commissioned a substantial report on the future skills requirements of internationally traded services. Other EGFSN reports that are potentially relevant to the services sectors including the following:

- The International Digital Media Industry;
- SME Management Development;
- The Skills Requirements of the Digital Content Industry in Ireland;
- Innovate Market Sell - Review of the Sales, Marketing and Innovation Capabilities of Irish Exporting SMEs;
- Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs;
- Skills Needs in the Irish Economy: The Role of Migration;

- Languages and Enterprise; and
- Financial Skills Monitoring Report.

The 'Innovate-Market-Sell' report for example, was jointly commissioned by the EGFSN, Forfás, Enterprise Ireland and Bord Bia. It adopts a broad definition of innovation beyond the traditional concern for product or technology development to include 'the development of new products and services, new ways of working, new commercial arrangements with the marketplace, and ways of getting the best out of people'. It outlines the following six types of innovation: new technologies, new products and services, new customer experiences, new processes, new channels and new business models.

The report identifies customers as the most important source of innovation. The report's recommendations for the promotion of innovation among SMEs recognise the need for CEOs to "become aware of the strategic importance of innovation and that it embraces more than the traditional areas of product, technology and manufacturing processes". It also identified that most Irish SMEs, "focus on the traditional areas of product, technology and manufacturing process innovation to the exclusion of other areas such as service and customer experience". It recommends the adoption of regular benchmarking and skills audits.

The report also calls for support for collaboration between innovation functions and marketing functions in SMEs to ensure innovation is market led. This broader approach to the conceptualisation of innovation and the identification of skills development supports can therefore be viewed as of greater relevance to the services sectors, compared to the traditional preoccupation with technological development.

Higher Education Authority (HEA) is the statutory planning and development body for higher education and research. It has advisory powers covering the third-level education sector and is the primary funding authority for the universities and a number of designated Higher Education Institutions (HEIs).

HEA's principal functions of the HEA are to:

- further the development of higher education;
- maintain continuous review of demand and need for higher education;
- assist in the coordination of state investment in higher education and to prepare proposals for such investment;
- allocate among universities and designated institutions the grants voted by the Oireachtas; and
- promote the attainment of equality of opportunity in higher education and democratisation of higher education.

HEA's approach to services innovation:

The HEA's role is one of 'nurturing a prominent role for research in facilitating the generation and exploitation of new knowledge'. The HEA supports the provision of core capacity and capability for the Irish higher education sector to conduct research and development. HEA funded research programmes are facilitating collaboration between institutions and disciplines in Irish research. The HEA's role in services innovation can be considered to be one of providing a supportive environment for research and ultimately skills development. In this respect it perhaps unsurprising that the HEA does not have a distinct policy for higher education research and development that is specific to the services sector.

The National Competitiveness Council (NCC) is a social partnership body, which reports to the Taoiseach on key competitiveness issues facing the Irish economy together with recommendations on policy actions required to enhance Ireland's competitive position. Council Members are appointed by the Minister for Enterprise, Trade & Employment, and include representatives of the employer and trade union movements plus individuals with relevant expertise in competitiveness. Each year the NCC publishes the two-volume Annual Competitiveness Report. The NCC also issues statements on key competitiveness issues such as innovation.

NCC's approach to services innovation:

The NCC has recognised the importance of services innovation through publications such as its 2004 Statement on Innovation and its 2005 Competitiveness Challenge report. The former comments that, 'the development and diffusion of innovation, whether in products, *services*, organisations or processes, are the key sustainable sources for improvements in productivity, living standards and national competitiveness.' It argues that Ireland must establish the optimal regulatory regime to encourage this development and diffusion. The statement also calls upon Irish managers to, 're-orient company strategies towards a greater level of innovation and the provision of higher value goods and services...'.

In addition the NCC's 2006 Competitiveness Challenge¹⁵ specifically calls for a services innovation strategy. In the R&D and innovations section, it notes that: "The role of science in innovation needs to be complemented by a broader account of the diverse sources of innovation that sustain our economy and society. As science and innovation become more international, Ireland's greatest assets may be its openness to international collaboration and its ability to combine advances in basic science with insights from other disciplines, such as psychology, finance, social sciences, the humanities, and law. Given that, our economic growth is increasingly being driven by services activities, such as finance, health, logistics and tourism, a services research and innovation policy should be developed."

¹⁵ NCC (2007) 'Annual Competitiveness, Report 2006 Volume 2: Ireland's Competitiveness Challenge'.

3.3 Innovation Support, Implementation and Policy input

Key points:

- The lead policy implementation agencies in Ireland have increased the service focus of their supports and activities
- This has seen internationally traded services as strong proportion of overall client base for enterprise supports in both IDA Ireland and Enterprise Ireland
- It has also been reflected in organisational / functional / strategic structures developed by agencies, for example:
 - IDA Ireland has created a financial services department
 - Enterprise Ireland has similarly created a software and services department, as well as the publication of the Internationally Traded Services (ITS) Strategy 2007
 - FÁS is primarily focused on individual training supports, but has, in recent years developed training for particular service activities in sectors such as logistics
- All agencies are being challenged by the implications of growth of services / service innovation for policy supports. The Forfás Services Innovation study has played a primary role in generating this internal debate

IDA Ireland is the Irish Government agency with responsibility for securing new investment from overseas in manufacturing and internationally traded services sectors. It also encourages existing investors to expand and develop their businesses. It aims to ‘win for Ireland, its people and its regions, the best in international innovation and investment so as to contribute to the continued transformation of Ireland to a world-leading society which is rich in creativity, learning and personal and social well-being.’

IDA Ireland’s approach to services innovation:

In recent years IDA Ireland has begun to place increasing emphasis on internationally traded services within its overall portfolio of activity as part of its strategy for Ireland to become a knowledge-based economy¹⁶. This has seen particular emphasis on service sectors such as financial services. This shift in part reflects a transition in the nature of inward investment opportunities open to Ireland. In this respect manufacturing investment opportunities have become less prevalent due to cost considerations. High-end services¹⁷ opportunities in areas such as financial services, software, internet, retail have begun to be seen as an opportunity for Ireland (Google, Amazon, Ebay are examples of recent high profile investors) – both in terms of attracting such companies, but also in embedding such companies in the country. Here, the skills, high qualifications, young age of the Irish workforce, low corporation tax rates, access to Europe, diversity of languages and so on, are promoted as valuable framework / environmental conditions for such companies.

¹⁶ ‘Ireland now a knowledge economy’, <http://www.idaireland.com/home/index.aspx?id=625>

¹⁷ For example, customer support functions

In common with other agencies in Ireland the IDA has not developed specific service innovation supports. This largely reflects the holistic approach adopted in response to the specific needs of the companies concerned.

Enterprise Ireland is the State body charged with assisting the development of Irish enterprise. Its clients include manufacturing and internationally-traded services companies employing more than 10 people, as well as high-potential start-ups.

Enterprise Ireland aims to 'accelerate the development of world-class Irish companies to achieve strong positions in global markets resulting in increased national and regional prosperity'. Enterprise Ireland's corporate strategy for 2005-2007 sets out the following objectives: 'to help transform Irish companies into market-focused and innovation driven businesses across all regions and sectors; to increase their exports, sales and employment; and to develop a highly competitive, self-sufficient, world-class industrial structure'.

Enterprise Ireland's approach to services innovation:

Enterprise Ireland has identified research and innovation as central objectives for its work. It has developed a range of supports for this area (see section 4) including both financial and non financial supports. These, however, have typically not been developed from the perspective of multidimensional types of services innovation. Instead their primary focus is on technological innovation supports linked to the development of new products or processes. Other forms of service innovation are supported however, they are not typically 'branded' as innovation projects and can be relatively niche is outlook.

Enterprise Ireland, as noted above, has developed a service sector focus to its work, with a particular reference to software / ebusiness support. There are, however, no specific service *innovation* measures currently in operation.

Shannon Development is Ireland's only dedicated regional development agency, focusing on the broader regional economic development of the Shannon Region. Its primary focus is to identify the critical needs or obstacles to development in the region, and to lead and encourage the identification and development of solutions. The Company plays a key leadership role, in relation to important regional development issues, such as airport access, transport infrastructure, and broadband connectivity. Shannon Development's Knowledge Network is of particular relevance to services innovation.

Shannon Development's approach to services innovation:

Following the transfer of enterprise functions to Enterprise Ireland in 2007, Shannon concentrates on: potential of Shannon Airport; counter-pole to the eastern seaboard; less developed areas; issues of the broader Atlantic Region; property-based initiatives; regional tourism. With respect to the services sector, Shannon Development personnel find that service company needs are quite different from more manufacturing oriented companies in that services innovation is generally more focused on HR and human capital, i.e. developing the capabilities and skills of the management rather than looking at costs and outputs as would be the case for manufacturing oriented companies. Generally speaking, the perception is that fixed asset investment is not a feature of services innovation.

Shannon Development has delivered a range of specific services oriented measures, which have attracted a high level of take-up, including:

- Shannon Region Knowledge network: a property-based initiative of smaller technological parks in Tralee, Thurles and Birr, linked to higher education institutions, networked around the central hub of the National Technological Park in Limerick, catering for a substantial number of innovative service enterprises.
- Tourism: Support is provided on a locality basis (e.g. Lough Derg, Shannon River etc.) or sector (e.g. holidays) basis rather than individual company basis. Focus is very much on a network approach, getting companies working together.
- International Services: On the Shannon Zone these are predominantly aviation related. Support offered is in relation to inward investment and premises.
- Digital Content: Support again is centred on groups of enterprises and the creation of networks via European programmes.
- Design (graphic & product design): A regional design movement 'Design Shannon'¹⁸ was created with a view to integrating design into businesses and strengthening design by companies.

Shannon Development personnel have found that support for companies is more beneficial when provided through informal networks. This is also considered particularly effective for training and mentoring of groups of enterprises. In addition, property measures such as the eTowns initiative and the Ennis Information Age Park have been specifically targeted at the services sector and have received a strong take up from the services sector. One of the challenges that Shannon Development has experienced, however, in providing support to services companies is that the demand for service oriented policy measures are not always well articulated.

Science Foundation Ireland (SFI) was established in 2000, as a sub-board of Forfás, to administer Ireland's Technology Foresight Fund. SFI provides awards to support scientists and engineers working in biotechnology and information and communications technology development. SFI's mission is that 'through strategic

¹⁸ <http://www.designshannon.ie/>

investments in the people, ideas and partnerships essential to outstanding research in strategic areas, Science Foundation Ireland will help build in Ireland research of globally recognized excellence and nationally significant economic importance.' To achieve its vision, SFI will "build and strengthen scientific and engineering research and its infrastructure in the areas of greatest strategic value to Ireland's long-term competitiveness and development."

SFI's approach to services innovation:

Science Foundation Ireland's €646 million investment between 2000-2006 into scientific research and engineering represents an important contribution towards Ireland's goal of becoming a leader in the global knowledge based economy. Although the services sector receives only minimal coverage in SFI's vision statement for 2004-2008, SFI's support for academia-industry research partnerships, in particular in ICT and biotechnology, could assist the supply of important technological research outputs to the innovation activities of services companies operating in these sectors.

The SFI vision statement outlines a commitment to: 'Initiate centres, institutes and teams that establish valuable research links between Irish research institutions and both Irish- and foreign-owned companies engaged in BioT or ICT research, including by attracting or substantially increasing the research and development (R&D) investments in Ireland of at least ten foreign-owned multinational firms and by producing at least five significant research collaborations between research institutions and indigenous companies.' While the link between SFI and services innovation may not be as strong as it is for other support organisations within Ireland's innovation system, SFI's programme of investment represents an important impetus for Ireland's research base and the supply or transfer of knowledge into Ireland's more knowledge intensive services sectors.

FÁS is Ireland's Training and Employment Authority. Its mission is to, 'promote a more competitive and inclusive knowledge-based economy, in collaboration with our stakeholders, by enhancing the skills and capabilities of individuals and enterprises.' It provides a wide range of services to the labour market such as:

- Training and re-training
- Designated apprenticeships
- Recruitment service
- Employment schemes
- Placement and guidance services
- Assistance to community groups
- Advice for people returning to Ireland, and those seeking employment elsewhere in the EU. FÁS is divided into 8 regions comprising 20 Training Centres and 62 Employment Offices.

FÁS' approach to services innovation:

FÁS recognises that the services industry will become the main source of employment growth in future years. It is also recognised that productivity within the services sector, which is dominated by SMEs, is very low compared to manufacturing. In response to these challenges FÁS has begun to (indirectly) support services innovation within industry through a number of different supply-side policy interventions that seek to promote workforce development by upgrading the competencies and qualifications of the workforce, and by providing and facilitating targeted training programmes and services to employers and employees.

Specific examples include the Competence Development Programme, the 'One Step Up Initiative' and Management Training, which are of general relevance to services innovation in the sense that they support the development of skills that may help to contribute indirectly towards the development of new service-products, customer-delivery interfaces and business models. In addition, FÁS has also introduced an International Sales and Placement Programme for graduates and experienced professionals, which may contribute towards the overall internationalisation of companies thus reconfiguring their business models or customer-delivery interfaces.

Another example of FÁS support for services innovation can be seen through the provision of new training programmes within the logistics industry that integrate transport, procurement, warehousing and stock control together in ICT environments and integrated supply chains. Again this form of training could potentially support all three types of services innovation.

The performance of the service sector is increasingly viewed as the barometer of the labour market within FÁS, which has concluded that it has no option but to focus on making continued improvements to the productivity of those employed in the services industries. This is likely to involve a greater segmentation in policy between different services sub-sectors such as financial and personal services.

National Centre for Partnership and Performance (NCPP) operates under the auspices of the new National Economic and Social Development Office (NESDO, a statutory body established in Jan 2007).

The functions of the NCPP are to support and facilitate organisational change and innovation based on partnership, in order to bring about improved performance and mutual gains, and to contribute to national competitiveness, better public services, higher living standards, a better quality of life and the development of the workplace of the future.

The NCPP also plays a leading role in implementing the National Workplace Strategy and supporting the implementation of recent social partnership agreement *Towards 2016*. Both of these initiatives position workplace development as a source of innovation at the heart of economic policy.

The NCPP is led by a 17-person Council appointed by the Taoiseach. The Council is responsible for the overall policy direction of the Centre. The 9-strong executive team delivers the work programme.

The NCPP's approach to services innovation:

The strategic focus of the NCPP over the next three years is to realise the vision of the future workplace as set out in the Government's National Workplace Strategy. This identifies the need to 'enhance the role and recognition of workplace innovation in the overall development of a national system of innovation and improve resources and support accordingly'.

Towards this objective, the strategy proposed a 'three year dedicated fund under the aegis of the Council of the NCPP to promote innovation and research in human resource development, organisational change and lifelong learning.' The Workplace Innovation Fund¹⁹ (€9 million) has therefore emerged out of the Workplace Strategy and is designed to support transformation in workplaces through the support of strategic capacity improvements. The fund is being implemented by Enterprise Ireland - as the grant aiding body - over three years. Its early stage will be focused on identifying exemplars including those in internationally traded services. It will build on the results of the organisational learning programme developed by the NCPP and FÁS.

The National Workplace Strategy also asserted that workplace innovation should be incorporated more explicitly into existing criteria for public policy and state funding aimed at supporting R&D and organisations. The strategy emphasised the importance of enhancing the existing framework of networking with a focus on the dissemination of good practice and know-how within and across sectors.

The NCPP is pursuing a broad-based approach to innovation of relevance to both manufacturing and services companies that extends beyond R&D to include non-technological activity such as human resource development, organisational change and lifelong learning.

¹⁹ The Workplace Innovation Fund was launched by the Taoiseach, Mr. Bertie Ahern, TD on 10 January 2007. http://www.ncpp.ie/press/press_detail.asp?newsId=269&zoneId=2&catId=21

4. Services innovation related policy measures

In the course of the mapping study a wide range of supports were examined. A full list of these can be found in the accompanying Microsoft Excel database, complete with a summary description. The main focus of section 4 is to draw together the results from the mapping research under a number of analytical headings. This analysis utilises a mapping framework developed for the purposes of this study:

- i. *Supply side measures*: measures targeting service businesses, including financial and non-financial support for R&D and innovation in companies.
- ii. *Demand side Measures*: measures targeting customers & markets, including efforts to support the capacity of companies to innovate, or the likely success of innovation.
- iii. *Internationalisation measures*: measures acting as a catalyst for innovation and growth through a focus on service exports and inward investments.
- iv. *Framework conditions*: activities designed to facilitate innovation through an effective regulatory environment (competition, IPR, etc.).
- v. *Horizontal measures*: activities focusing on promoting horizontal policy co-ordination in support of multidimensional service innovation.

In operationalising this framework an accompanying mapping tool has also been developed. An example of this tool can be seen in Exhibit 3 below. In simple terms the tool allows all the supports identified to be categorised / mapped according to their services intensity (weak - strong focus on services) and type of service innovation supported (business model, service product and / or customer interface).

A further important aspect to the analytical matrix is the use of black and red reference numbers. This seeks to address the complexity presented by the fact that several policy measures address multiple types of innovation. For example a measure may focus on business model and customer interface innovation, or indeed all three types of services innovation denoted in the matrix. In such cases, where a measures can be included in one or more type of service innovation we have highlighted this by applying a red reference number. This is intended to allow the reader to identify corresponding red reference numbers in the other innovation typology cells.

Care should be used when interpreting the exhibits. In particular, the definition of services innovation applied in this analysis is relatively broad, including new profitable developments that are new to the company (and not necessarily 'the world'). This has the effect of bringing in a much wider range of policy measures. The diagrams also consider measures that are not directly focused on R&D and innovation. Finally, it should be noted that the

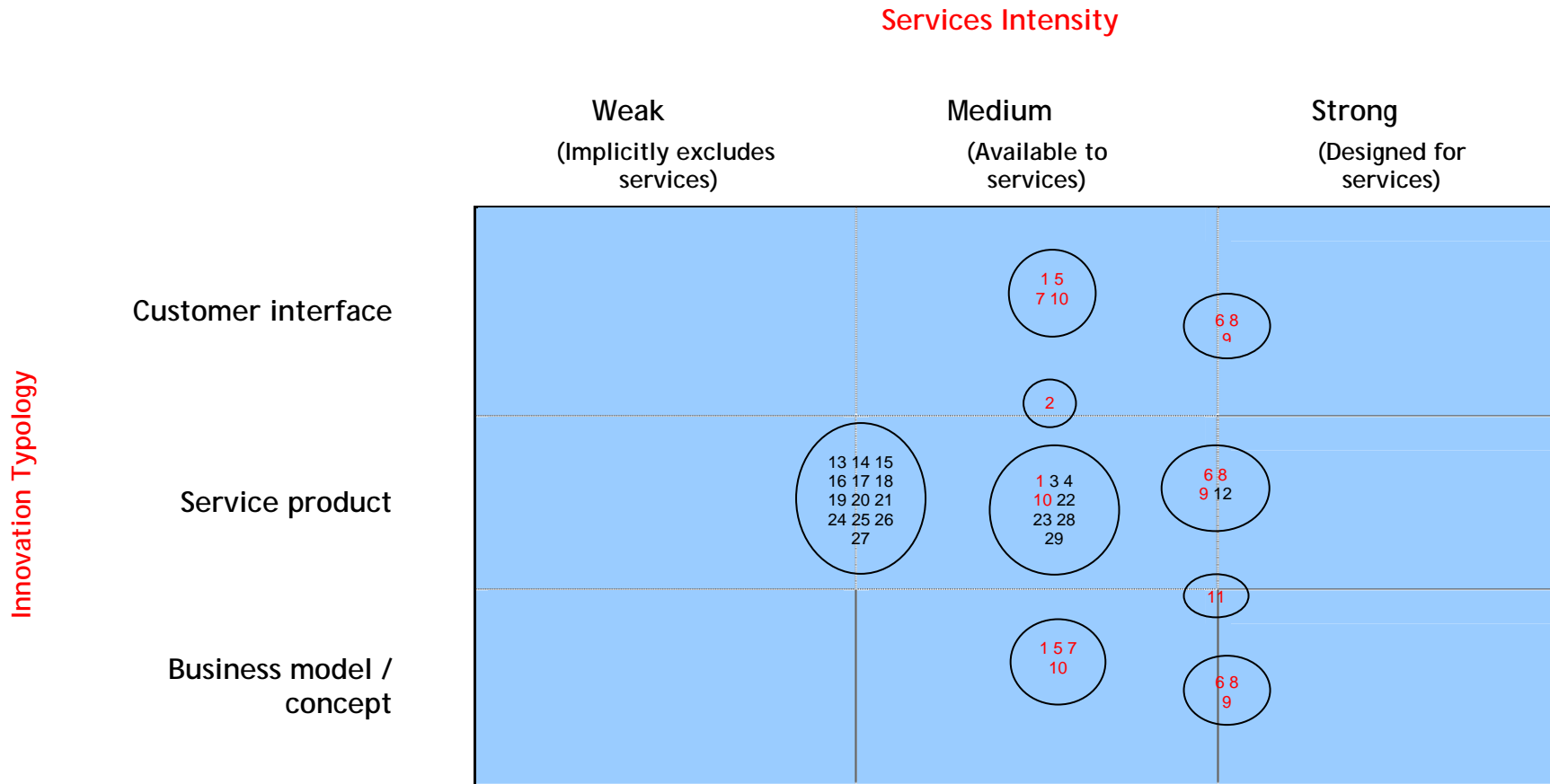
overall picture in relation to supports is more important than the precise location within individual cells. A number of innovation supports were also reviewed that do not impact directly on the three types of services innovation considered.

4.1. Supply side measures

In Ireland supply-side measures in support of services innovation constitute by far the largest category (in relation to number of measures). Supply side measures, as discussed in section 2, can include policy measures targeting service businesses, including financial and non-financial support for R&D and innovation in companies.

Indeed the number of such measures could be considered to be even higher were it not for the category of 'services internationalisation'. In this respect many of the Enterprise Ireland and IDA Ireland measures identified as linked to 'services internationalisation' (see section 4.3 below) can equally be considered to be supply side in focus.

Exhibit 3: Supply-side measures



1	Enterprise Ireland	High Potential Start Up
2	Enterprise Ireland	Funding for expansions
3	Enterprise Ireland	Seed & Venture Funds
4	Enterprise Ireland	Seed Capital Scheme Certification
5	Enterprise Ireland	Benchmarking
6	Enterprise Ireland	Supply Chain Management Support
7	Enterprise Ireland	Open up to ebusiness
8	Enterprise Ireland	Strategy Development Supports
9	Enterprise Ireland	Strategic consultancy grant
10	Enterprise Ireland	Business Acceleration Programme
11	Enterprise Ireland	Productivity Improvement Fund
12	Enterprise Ireland	Campus Enterprise Programme
13	Enterprise Ireland	Feasibility Study Grants
14	Enterprise Ireland	R&D Awareness Initiative
15	Enterprise Ireland	RTI Scheme
16	Enterprise Ireland	Significant R&D projects
17	Enterprise Ireland	Business Incubation Centre Programme
18	Enterprise Ireland	Innovation Relay Centre
19	Enterprise Ireland	Innovation Partnership Initiative
20	Enterprise Ireland	Intellectual Property Advice
21	Enterprise Ireland	EU Framework Programme
22	Enterprise Ireland	Informatics Research and Commercialisation
23	Enterprise Ireland	Biotechnology Ireland
24	Enterprise Ireland	TecNet
25	IDA Ireland/Enterprise Ireland	Innovation Management
26	Enterprise Ireland	Commercialisation Fund - Proof of Concept
27	Enterprise Ireland	Commercialisation Fund - Technology Development
28	Enterprise Ireland	Commercialisation of Research and Development (CORD)
29	Enterprise Ireland	Initiatives in Specific Advanced Technologies
30	Enterprise Ireland	Technology Transfer Initiative
31	Enterprise Ireland	TechSearch
32	Enterprise Ireland	Mentor Network Service
33	SFI	Centres for Science Engineering and Technology: Campus Industry Partnerships

Policy measures highlighted in RED span a number of innovation typology boundaries

The mapping analysis suggests that while, as outlined in Exhibit 3, all support measures are technically available to internationally traded service companies and manufacturing companies; relatively few of the supply-side measures can be considered to have been developed specifically for the services sector. This can be seen by the lack of policy measures that fall squarely within the right hand cells of the matrix.

It should also be noted that several measures, while not developed specifically for such companies, can be considered to be particularly relevant to the needs of innovation in services. Examples here include Enterprise Ireland’s Supply Chain Management programme (Measure 6) and strategy supports (Measures 8 and 9), and Shannon Development’s support for the design industry (no longer in operation

under the Shannon Development brand following incorporation of business support within enterprise Ireland).

Supply side measures such as 6, 8 and 9 are particularly noteworthy because they provide support that 'spans' a number of service innovation types. In this respect they have the potential to work on the multidimensional nature of service innovation needs through the context of one mechanism. A further illustration of this approach can be found in the support for workplace innovation (currently under development) within Enterprise Ireland's Productivity Fund (Exhibit 4).

Exhibit 4: Enterprise Ireland Productivity Fund (incorporating the Workplace Innovation Fund)

Enterprise Ireland's Productivity Fund provides financial assistance for capital and technology acquisition and training and management development to help SME client companies achieve greater competitiveness by increasing their export potential. Within this fund Enterprise Ireland is in the process of developing (with the NCPP) support for workplace innovation. This is specifically focused on wider types of organisational innovation, including

- Strategic capacity for change - building capacity for participation at leadership level
- Working in partnerships - enhancing capacity for change among employees and their representatives
- Building commitment and loyalty to a better workplace - ensuring that the capacity for change is continually improved

Although not formally launched at the time of publication of the mapping study, it is anticipated that this support will specifically seek to include internationally traded services companies in the early phase to act as 'demonstrators' and bring the support to the wider attention of such companies.

Exhibit 3 suggests that while, measures that 'span' a number of innovation types are clearly important ways of addressing the multidimensional nature of services innovation, by far the largest category of initiatives are targeting service product developments - most notably those measures with a science, technology or R&D focus (see initiatives in the central cell of the matrix - medium services intensity, aligned to service product focus) and not customer interface or business model innovations.

The central columns of the matrix identify those initiatives that are simply available to services companies (without being designed specifically for them). Again the most interesting initiatives here are those targeting multiple types of services innovation, for example, the Enterprise Accelerator programme. This aims to connect individual Irish client companies with an in-market Business Accelerator (Reference 10) - an industry expert within a specific sectoral and geographical market, with the experience, knowledge and contacts to support the company's expansion and development into a key export market. In this respect programmes

such as this are able to bring in particular service related expertise to support development in a number of business areas.

At the opposite side (left hand side) of the matrix Exhibit 3 suggests that a number of initiatives may - in part - actually implicitly exclude services activities from innovation support. Such exclusion can often be the result of a type of 'self exclusion' on the part of the services companies who do not perceive technical supports such as R&D to be relevant to their particular needs (for example the HPSU, Reference 1; RTI scheme, Reference 15; IDA Ireland / Enterprise Ireland Innovation Management programme, Reference 25; Enterprise Ireland Commercialisation Fund, References 26-28).

An important caveat is needed when drawing such conclusions however since many services sectors make strong use of technology as an enabler in the delivery of service products. The main point here is that such supports provide support for innovation in selected niches of the services sectors (and the majority of manufacturers).

4.2. Demand side measures for services innovation

The results of the mapping research reveal that there are relatively fewer innovation support measures in place with a demand-side focus in Ireland. Demand-side measures focus on activities designed to provide a stronger incentive for companies and individuals to innovate in services. They can be focused on either markets or sectors in scope. Moreover, the general picture indicated by the analysis in exhibit 5 below is one of medium service intensity, and a service product focus to those measures. This is consistent with the research undertaken by Georghiou (2006), which found that 'demand side' measures such as systemic policies, regulation and public procurement) are the missing component of European Innovation policy.

In many respects the demand-side measures follow a relatively similar picture (although smaller in number) to the supply-side measures. While all measures are technically available to internationally traded services no policy measures have been designed specifically for the needs of services.

Conversely, while no measure was found to explicitly exclude services activities a number of cases of (potentially) implicit exclusion were found. The Irish tax credits scheme provides a good illustration of this process at work. For, while available to internationally traded services, the credits have not proven to be particularly attractive to this sector of the economy (Exhibit 6, Reference 1). One factor likely to be relevant is the nature of projects that are capable of support under the programme (scientific and technological) may not prove to be substantially to a large number of services. It should also be recognised that the tax credit is relatively new in Ireland. It is surprising, thought, that more technologically-oriented services (such as software, financial services and so on) have yet to take

advantage of the scheme. The low take up these credits by services, however, is clearly worthy of further study²⁰.

While demand-side measures are typically focused on financial incentives for innovation, a range of non-financial measures are also evident in Exhibit 6. These include activities targeted at awareness raising with a strong focus on science and engineering (see Reference 6), as well as a multitude of networks operating across Ireland. In the course of this research it has not been possible to do justice to the large number of cluster and networks across Ireland²¹. Exhibit 5 of Enterprise Ireland's industry-led networks scheme below illustrates how such initiatives can potentially impact on services innovation at multiple levels, and in different sectors.

Exhibit 5: Enterprise Ireland Industry - led networks scheme

The Industry-Led Networks Pilot is designed to support groups of companies who wish to undertake a time limited collaborative project that has the potential to result in measurable benefits to the companies involved and to the wider economy. It is designed for companies to come together to identify and address enterprise needs and interests with an economic development focus.

The scheme is available to internationally traded services (although not designed specifically for this group), and has funded one project in the software sector to date. While not focused around innovation per se, the needs identified by such companies can clearly have the potential to be relevant to different types of innovation in services, linked to the areas identified below:

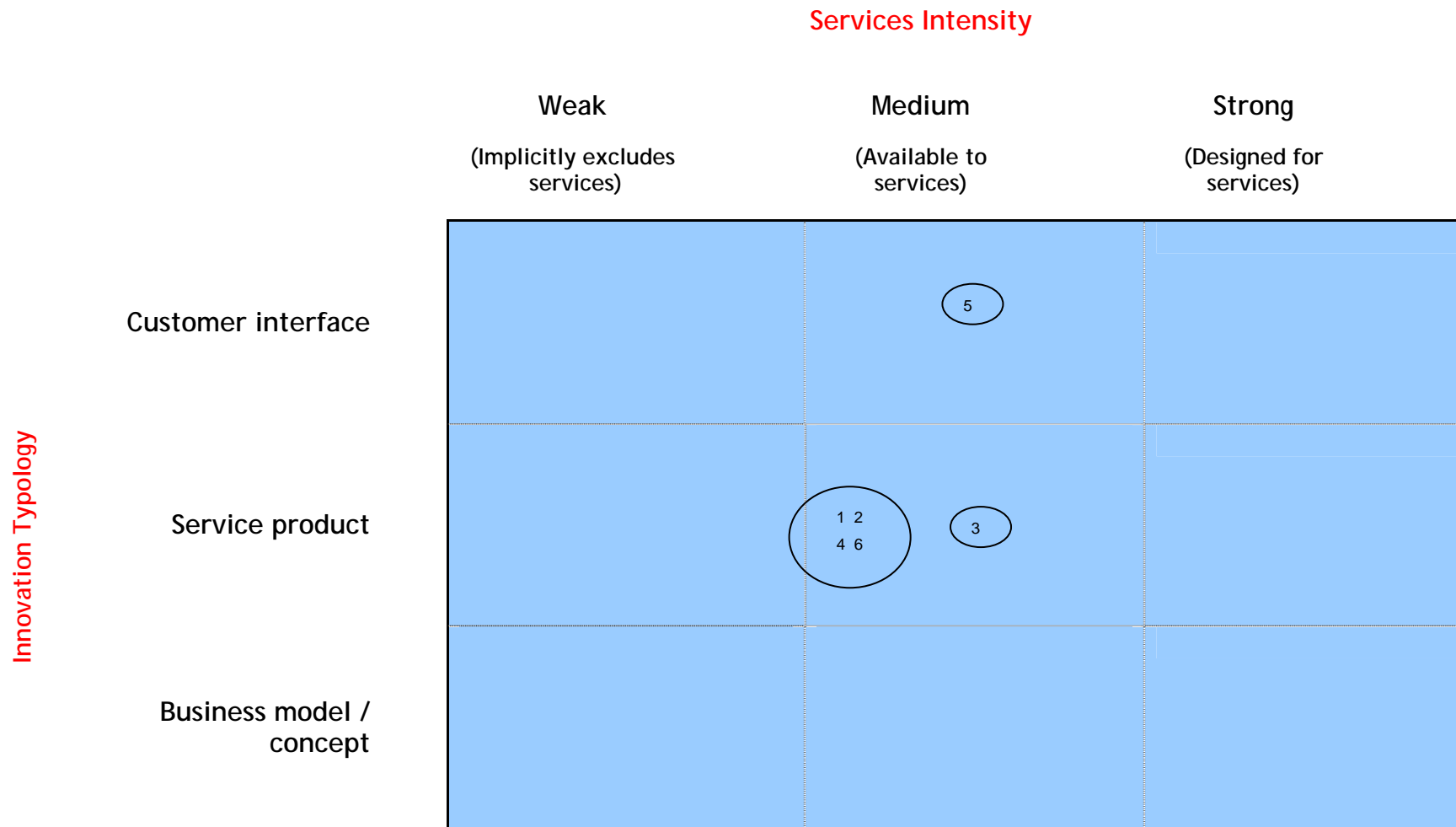
Project funding is available for:

- Sectoral/sub-sectoral Development Initiatives
- Supply-chain optimisation
- Developing Scale of Operations/Realising Economies of Scale
- Exploring Export Market Opportunities
- Virtual Networks

²⁰ And may be reflected in other countries with similar tax credit schemes in operation (Research carried out by CM International in the UK 2006)

²¹ See InterTradeIreland (2006) 'Business networks on the island of Ireland' for more details.

Exhibit 6: Demand-side measures



1	DETE	R&D Tax Credit
2	DETE	Stamp Duty on Intellectual Property
3	Enterprise Ireland	Industry Led Networks Programmes
4	Enterprise Ireland	Technology Road Mapping
5	InterTradeIreland	Network and Getwork
6	Forfás	Discover Science and Engineering

4.3. Internationalisation measures

Irish internationalisation measures in support of services innovation fall into two main groups:

- those measures that target companies wishing to innovate in service exports (and the service export process),
- those wishing to encourage service innovation investment from outside Ireland.

The key agencies in relation to exporting support are Enterprise Ireland and the Irish Exporting Association (IEA). Together these organisations provide a range of tailored advice to internationally traded services and manufacturing companies. Interestingly, the IEA report that services companies represent a particularly strong and growing component of its client base.

In relation to inward investment IDA Ireland is the key agency. IDA Ireland's mission is one of encouraging investment by internationally traded services (and manufacturing companies) to either locate and/or remain in Ireland. To this end they are able to bring together a mix of technological and non-technological support measures that respond to the specific needs of potential investors (Exhibit 7).

Exhibit 7: IDA Ireland's support offer for internationally traded services

The IDA Ireland approach to services and innovation is particularly interesting, as it is primarily one of adapting to the precise needs. In this respect its offer is capable of being applied to any opportunity. To this end the IDA has a wide range of support measures it is able to draw on (including a number of measures that are similar to those available within Enterprise Ireland). Areas in which support is available include R&D, employment support, training support, capital and consultancy.

Within the area of innovation IDA Ireland's support for service activities clients have typically been drawn from sectors such as financial services, and technology / internet / IT sectors. In this respect support measures related to R&D and employment subsidy grants are felt, by the IDA Ireland, to be most relevance to the needs of existing company needs. Examples of practical innovation support given to companies include the establishment of an R&D for a multinational financial services company, employment and recruitment support for high level staffing requirements of international service companies.

Exhibit 8 indicates that while many exporting support measures are capable of being adapted to internationally traded services (see, Exhibit 8 below - the InterTradelreland Focus scheme, Reference 17), most have not typically been developed from the perspective of services. For this reason many such measures (from both an exporting or inward investment perspective) fall into the ‘medium’ services intensity category - ‘available to services’.

Exhibit 8: *InterTradelreland and Sales development*

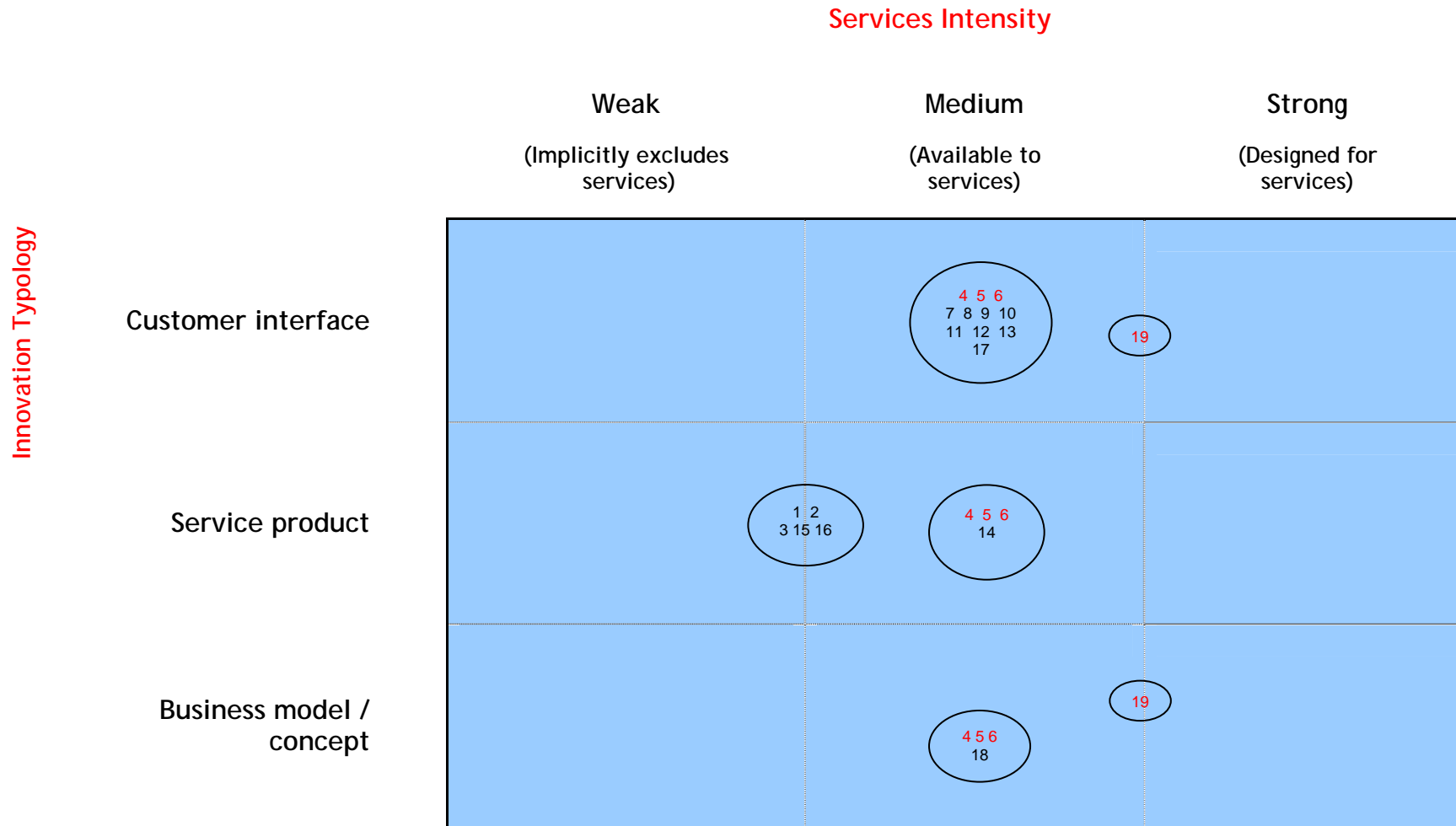
Focus is InterTradelreland’s all island strategic marketing and sales initiative. The project facilitates partnerships and projects between companies; private sector business, on an island wide basis. This aims to provide companies with the skills and resources needed to identify and capture new cross-border market opportunities, through carefully targeted market research, practical consultancy support and salary support for a sales professional or business graduate.

A final group of initiatives, positioned in the far left hand side of the matrix (low services intensity) adopt a largely technological focus to services internationalisation. This is related to the potential for implicit exclusion to services activities seeking to innovate in non-technological activities.

From a service innovation typology perspective support for innovation in services internationalisation through exporting is primarily targeted at innovation in customer interfaces, enabling services to develop routes to market.

The relatively tailored nature of advice provided by export support schemes, however, suggests that they are capable of adapting to the particular needs of services activities. Indeed, there are a number of supports that have the potential to span a number of innovation types that are of particular relevance, for example IDA Ireland’s human resource related measures in areas such as training and employment (see References, 4, 5 and 6 for example). While it is likely that such measures will have the potential to recruit and develop staff that play a prominent role in services innovation, it should be recognised that such measures will often be relatively ‘upstream’ to actual services innovation activities.

Exhibit 9: Services internationalisation measures



1	IDA	R&D Support Grant
2	IDA	R&D Stimulating & Enabling Grant
3	IDA / Enterprise Ireland	Innovation Partnership Initiative
4	IDA	Training grants
5	IDA	Employment grants
6	IDA	Consultancy support
7	Enterprise Ireland	Overseas Office Network
8	Enterprise Ireland	Market development skills
9	Enterprise Ireland	Market Research/Intelligence
10	Enterprise Ireland	Trade Fairs/Trade Missions
11	Enterprise Ireland	Introductions to Third Party Services
12	Enterprise Ireland	Graduate Placements - Export Orientation Programme
13	Enterprise Ireland	'First Flight Programme'
14	Enterprise Ireland	EU research programmes, e.g. EUREKA and eTEN
15	InterTradelreland	Fusion
16	InterTradelreland	Innova
17	InterTradelreland	Focus and Acumen
18	InterTradelreland	Microtrade
19	InterTradelreland	All Island Supply Chain Champions' Programme

Policy measures highlighted in RED span a number of innovation typology boundaries

4.4. Framework conditions

Framework conditions refer to the wider structural and regulatory conditions that provide the environment for innovation in services. In the course of the mapping research a number of areas were identified for consideration. These are discussed in turn below, beginning with the outputs of the recent research on services innovation undertaken by Forfás.

■ Innovation Policy statements

The primary policy statement on science, technology and innovation is the STI Strategy. This, as described in section 3, is primarily focused on technological forms of innovation. It is clear however, that Forfás has begun to focus on the issue of services innovation in a strong fashion, through a range of studies. Indeed, the most recent

Forfás report (2006) on 'Policy options for services innovation' in Ireland identifies a clear policy statement as a core option for future development.

Exhibit 10: *'Conclusion 1' from Forfás' Report on 'Services Innovation in Ireland - options for innovation policy (2005)*

'A distinct services innovation policy needs to demonstrate that government and its agencies recognise that services innovation in Ireland is vital and needs to be acknowledge, supported and promoted in its own right and with equivalent success as has been achieved in traditional innovation policy'.

■ **Science framework**

In recent years the science framework in Ireland has received significant policy impetus from the publication of documents such as the STI Strategy and the national R&D Action Plan²². This has been complemented by key investments in initiatives such as Science Foundation Ireland (SFI), with its focus on ICT and biotechnology, as well as the development of Research Councils and new funding streams for higher education institutions (for example the Strategic Innovation Fund operated by HEA).

While no funding mechanism, or indeed competence centres, focusing on services innovation currently exist in Ireland, the role of the SFI in promoting ICT research is noteworthy. In particular such investment can be considered as contributing towards the development of expertise in an important enabler of services innovation. Indeed ICT is particularly important in the Irish services context given the importance of software and related services (for example Ireland's role as a centre for companies such as Microsoft, Amazon, Dell etc. providing services across the wider Europe and Middle Eastern and African areas).

Exhibit 11: *Science Foundation Ireland (SFI)*

SFI was established by the Irish government in 2000 to support globally competitive scientific and engineering research in strategic areas that advance the country's technological and economic success and reputation.

The policy 'aims to generate clusters of world-class technology-based companies, both Irish- and foreign owned that work in new knowledge areas in collaboration with university researchers. Together, they will advance scientific knowledge, commercialize research output, create high-level jobs, and build an entrepreneurial environment in which new technology based businesses will prosper'²³.

SFI's investment programs are geared to research that underpins biotechnology, as well as information communications technology (ICT) - an important enabler of services innovation. These sectors were selected on the basis of a national Technology Foresight exercise, and linked to Ireland's industrial activities in these areas.

By late 2005, SFI had committed over €230 million in ICT hardware and software projects, funding almost 700 researchers, 80 of whom are Principal Investigators leading substantial research teams. Several large industry-academia partnerships (CSETs) have also been established in the areas of nanotechnology, web technologies, telecommunications and software engineering.

²² Inter Departmental Committee on Science, Technology and Innovation (2004) 'Building Ireland's knowledge economy: the Irish action plan for promoting investment in R&D to 2010'

²³ SFI (no date) 'SFI Brochure' http://www.sfi.ie/uploads/documents/upload/32893_SFI_Brochure.pdf

Ireland's support for less technologically oriented areas of research is also potentially important to services innovation. Here the funding stream provided by the Irish Research Council for Humanities and Social Sciences should also be noted. Indeed, such research has the potential to contribute to important aspects of services innovation in Ireland - for example organisational development, human aspects of sales delivery and so on.

■ Intellectual Property Rights (IPR) framework

The Irish framework IPR is synonymous with that developed by Europe, and can be broken down into a number of areas such as:

- Patents
- Copyright
- Trade Marks
- Registered designs

The patent regime, for example, is typically associated with technological inventions linked to new products or processes. In relation to services innovation this framework is recognised to largely favour IT related innovations, providing limited opportunities to protect business systems and models. Again, these issues are not limited to Ireland specifically, and are likely to be evident in other mapping countries.

Other forms of IPR are potentially highly relevant to services, such as Copyright and Trade Marks. The mapping research did not, however, identify any particular ways in which the Irish IPR framework was specifically supporting innovation in services.

■ Competition framework

The Irish framework for competition is defined by domestic and European Competition Law, and enforced by the Irish Competition Authority. In its role as primary enforcer of competition law the Authority has taken an active role in addressing uncompetitive practices in so-called 'non-internationally traded services'. Such services are typically traded within Ireland, with little competitive pressures from competitors from outside of the country.

The position, here, emerges from Ireland's geographical location in relation to the core markets of the EU, but also the imposition of practices that can limit competition (Exhibit 12). In recent years the Competition Authority has been active in addressing such issues in sectors such as architecture, financial services, legal services and so on, with a view to both opening up markets and generating innovation as a result.

Exhibit 12 *Addressing competition in the non-investment banking sector in Ireland²⁴*

In 2005 the Competition Authority undertook a detailed review of competition in the non-investment banking sector. This focused on competition in personal current accounts, lending to small businesses and the payments clearing system.

Competition in the Irish banking sector was found to be working against the best interests of consumers and small business. Current accounts, for example are dominated by two banks. This, it was found, has contributed towards the situation whereby customers face high switching costs when moving between banks. There were also significant barriers facing banks who want to offer new services to customers. Small businesses are not getting the full benefit of lower interest rates on their working capital loans. The sources of these problems are both the behaviour and structural arrangements of the banks themselves, and unintended consequences of government regulations.

■ **Skills framework**

Skills are a central pre-requisite for service activities, as skilled individuals are often the primary delivery mechanism. In recent years education policy in Ireland has focused on the generation of a strong qualifications / skills base. This has seen the development of education and training infrastructure, delivered through organisations such as FÁS, Universities, Institutes of Technology and so on.

Services and innovation have not formed an explicit part of this framework. However, the activities of policy advisory organisations such as the EGFSN have identified issues such as management and soft skills as important areas in which Ireland will need to respond in the coming years. Similarly training and enterprise bodies such as FÁS and Enterprise Ireland also provide access to training supports with a potential relevance to services activities, for example Logistics skills training.

The importance of the knowledge economy and Ireland’s position in relation to internationally traded services has seen particular focus on its younger children. Here, initiatives such as Junior Achievement Ireland²⁵ have increased the focus on entrepreneurship skills. Similarly language has been an area in which support has been developed (Exhibit 13).

Exhibit 13: *Primary and Post Primary Language Support*

In 2005, the Expert Group on Future Skills Needs undertook study into the role of languages skills in Ireland’s future enterprise development. Foreign language skills, it found, represented an important area in which Ireland could benefit from prospective future benefits for exports and FDI, linked to a greater capacity in relation to language skills.

The report addressed the importance of foreign language skills for two key sectors of the Irish economy, namely exporting indigenous firms and foreign-owned firms engaged in international service activities.

²⁴ The Competition Authority (2005) ‘Competition in the (non-investment) banking sector in Ireland’, <http://82.195.149.137/templates/index.aspx?pageid=936>

²⁵ www.juniorachievement.ie

Its conclusions, here, suggests that internationally-traded services is a growing component of FDI; as effective communication with customers is at the heart of service provision, the availability of an internal supply of foreign language skills will enhance the attractiveness of Ireland for foreign multi-nationals wishing to establish such activities;

A key recommendation from this report was the further development of a number of schemes targeting languages at an early age, including the of the Modern Languages in Primary Schools and the Post-Primary Languages Initiative should also be expanded and the existing language provision at post-primary level should be reviewed in the light of the lessons learnt, to increase the quality and value of the language learning experience for students.

The Post Primary Languages Initiative was launched by the Dept. Education & Science in 2000 to diversify and enhance the teaching of languages in second level schools, with Spanish, Italian, Japanese and Russian as the target languages, and is now operational in over 400 schools.

Attention has also been given to the precise needs of Ireland's key sectors such as IT and financial services, for example the creation of the International Financial Services Centre (IFSC) Diploma, FÁS training support to logistics, and various Skillnets (Exhibit 14).

Exhibit 14: Skillnets

Skillnets is an enterprise-led support body with a focus on enhancing the skills of people in employment in Irish industry to support competitiveness and employability. Skillnets is funded from the National Training Fund and its stakeholders include leading employer and employee representative bodies.

Through the creation of enterprise-led Learning Networks, Skillnets supports groups of firms to come together and devise training and development initiatives to meet their collective skills needs. Networks receive grant aid and other forms of assistance from Skillnets through the Training Networks Programme.

Between 1999 - 2005, Learning Networks supported the activities of over 6100 companies and 35,000 trainees. Skillnets are a good example of a sectorally designed initiative capable of being 'designed for services'. It allows network of companies to come together to address particular skills needs. This has seen the creation of a number of networks with strong relevance to services, addressing issues such as design, financial services, retail and so on.

Other areas in which skills development is potentially contributing towards services innovation include policy measures targeting enterprise skills and organisational development. Notable measures here include Excellence Through People (ETP) - Ireland's national standard for the development of human resources. This is designed to promote competitiveness through the development of good practice in the training, and development of people in order to leverage competitive advantage and achieve business goals.

■ **ICT infrastructure**

In recent years take up of broadband has become a central ICT infrastructure issue in Ireland. In Policy terms the Government's broadband action plan of 2002 'New Connections: A strategy to realise the potential of the Information Society' identified the following key objectives for broadband supply in Ireland:

- Making open-access, affordable, always-on broadband infrastructure and services for businesses and citizens available throughout the State within the next three years
- Broadband speeds of 5Mbits/s to the home and substantially higher for business users as the minimum standard within 10-15 years

In line with these objectives, the Government has invested approximately €85 million in telecommunications infrastructure. Yet despite substantial improvements in DSL availability in Ireland, coverage is amongst the lowest in Europe, at 72% of population.

Recent research by the NCC has linked take up to Ireland's productivity and overall competitiveness²⁶. Here, the NCC identifies the need for greater Government leadership in two areas: broadband infrastructure deployment in key towns around the country, and stimulating demand for broadband services, and putting in place measures to stimulate demand for broadband services to coincide with the infrastructure roll-out.

Elsewhere, Forfás has undertaken annual broadband benchmarking studies on Ireland's performance since 2002. This research has indicated that while take-up has increased, Ireland's relative performance has not improved. Key reasons that have been identified for improvement, include greater competition both between infrastructure platforms (such as cable and DSL) and within the DSL market, as well as initiatives to drive demand, for example, the integration of ICT into the education system.

A key driver for broadband infrastructure development are the opportunities presented by eBusiness. Here a national e-business strategy was produced in December 2004²⁷ with an emphasis on SME engagement with ICT to boost enterprise productivity and performance. This argued that eBusiness strategy should 'be more closely aligned with wider innovation policy issues'. Moreover, ICT applications, it was argued, have their greatest impact when tailored to sector-specific business processes; deployed in a sequence that builds capabilities over time; and co-evolved with the business.

4.5. Horizontal measures

The Irish policy context for services innovation is characterised by a number of horizontal activities in areas such as enterprise strategy, competitiveness and future skills needs as well as in innovation policy itself. In these areas policy advice is provided by a cross-cutting group of experts from a range of different backgrounds.

Services innovation represents an important area of horizontal policy development activity. This is principally linked to the research activities undertaken by Forfás since 2003. In each of the studies launched by Forfás, a group of experts have been brought together from a range of policy agencies in Ireland (IDA Ireland, Enterprise Ireland

²⁶ NCC (2006) 'Annual competitiveness report 2006'.

²⁷ Information Society Commission (2005) 'Learning to innovate', http://193.178.1.117/attached_files/Pdf%20files/Learning%20to%20Innovate.pdf

etc.). While the membership of these groups has varied according to the particular needs of the study in question (the study of services innovation policy options in 2006, for example, drew together a group of representatives from the six case study sectors), a core membership has been retained from organisations such as IDA Ireland, Enterprise Ireland and Forfás thus helping to retain a horizontal focus on the development of this policy area.

Outside of the area of services innovation a number of relevant, horizontal policy groups have been established to inform Ireland's economic development strategy. One the most prominent groups, in this respect, has been the *Enterprise Strategy Group* (ESG), operating in 2004 under the chairmanship of Eoin O'Driscoll. This included members from a range of industry sectors and produced a final report that identified implications for a diverse range of areas including:

- Enterprise development and policy agencies
 - Science and technology
 - Labour force development
 - Competition authorities
- Departments of Communications, Marine and Natural Resources; Education and Science; Environment, Heritage and Local Government, Finance, Foreign Affairs, and the Department of Taoiseach's 'infrastructure committee'²⁸

From a services innovation perspective the final report outlined an agenda for the growth of enterprise in Ireland. This highlighted, amongst other things, the importance of the internationally traded services sector to the Irish economy arguing that the sector 'will be a growing source of high skilled, knowledge intensive jobs and competitive advantage over the next decade'.

The *National Competitiveness Council* is also worthy of note in this context, as a group that draws upon expertise from a wide range of sectors for policy development purposes. As noted in its most recent competitiveness statement makes explicit note of the NCC - the 2006 Competitiveness Challenge statement specifically calls for a services innovation strategy.

Other relevant horizontal policy groups in Ireland include the *Expert Group on Future Skills Needs* - which has begun to address issues relating to services activities in its work.

²⁸ Forfás (2004b) Ahead of the Curve Action Plan. Enterprise Strategy Group.
http://www.forfas.ie/publications/esg040707/pdf/esg_ahead_of_the_curve_full_report.pdf

5. Current activity in Irish services innovation policy

Forfás, as noted in section 3, has been at the forefront of generating debate and research on services innovation in Ireland. It has also begun to take action on its recent report into 'Options for innovation policy' by consulting on the recommendations contained in the report. This is likely to be launched formally in the first quarter of 2007, through a series of industry workshops. Alongside this Forfás is also creating a time-limited Services Policy Group with a focus on intelligence and policy advice to further develop this policy agenda (Exhibit 15).

Exhibit 15: Forfás Services Policy Group

The recent Forfás study on services innovation has generated recognition, internally, that there is a general need to further understand the role and position of services in the Irish economy. This has seen increased focus on services, through a number of recent reports. In order to harness the work being undertaken in this area, and ensure a sharper focus and joined up thinking Forfás will be establishing a dedicated services research group in the first half of 2007.

The Forfás report on services innovation has also propelled debate and discussion within a number of key economic development agencies. IDA Ireland, for example, has recently hosted an international workshop on services innovation, attended by leading multinationals in Ireland.

Enterprise Ireland is also considering the implications of the Forfás research in the context of its forthcoming Corporate Strategy in 2007. This has seen the creation of a group with a services focus, and another on innovation / R&D. Interviews with leading members of these groups suggest that the role of services innovation has been an active consideration amongst the groups. Recent research has also been undertaken by Enterprise Ireland on the needs of services, including understanding business models, identifying locally traded services with the potential for e-trading, as well as product companies with the potential to receive support for adding an additional services stream.

In short, it would appear that the Irish policy context for economic development is characterised by strong consideration of the horizontal policy implications for services innovation.

6. Conclusions

The results of the services innovation mapping study suggest that services innovation is receiving widespread policy attention in Ireland. Forfás, as noted above, has led this development with a range of studies and the establishment of a dedicated Services Policy Group in early 2007. It has also issued a report outlining possible options for development in this area and intends to undertake a formal consultation with companies in the first quarter of 2007. Ireland's enterprise development agencies such as Enterprise Ireland and IDA Ireland have also begun to audit their current offer of support measures with respect to services and innovation.

The analysis of current policy measures for innovation, suggests that all are available to internationally traded services (alongside manufacturing companies) although the predominant focus of current innovation support measures, however, is on science, technology and R&D. While this is clearly an important component of services innovation, such measures it is argued can provide implicit disincentives to services participation for some groups of companies (principally those that do not view R&D as an activity relevant to their business).

A further issue revealed by the mapping study is the fact that, of the policy measures reviewed, relatively few have a high services intensity. Having said this, the mapping study reveals that there are currently few policy measures designed specifically for services innovation activities. This, perhaps, should not be seen as a surprise, however. The case the services innovation has only recently been elaborated in Ireland. Moreover, the case for services innovation is also only recently beginning to be elaborated at the EU and OECD levels.

The results also identify the type of services innovation targeted by supports. In this respect the analysis of both **supply- and demand-side measures** indicate that by far the largest category of measures can be found in the area of services product development support. This conclusion is particularly true for explicit forms of innovation support, for example R&D and other technological supports. Paradoxically, support for other types of services innovation (for example customer interface and business models) can in many cases be found in policy measures that are not explicitly considered to be innovation supports. **Customer interface innovation**, for example, is in many cases, promoted through measures targeting export development of SMEs. Similarly support measures for **business model innovation** can also be found in areas such as integrated support for entrepreneurship and organisational development (Exhibit 4, Enterprise Ireland's Productivity Fund).

The results of the mapping study indicate that the **framework environment** for services innovation in Ireland is broadly supportive. Substantial developments, for example, have been made in 'enabling areas' such as addressing competition issues within the non-internationally traded services activities. Similarly, skills and training have begun to be adapted to the particular requirements of internationally traded

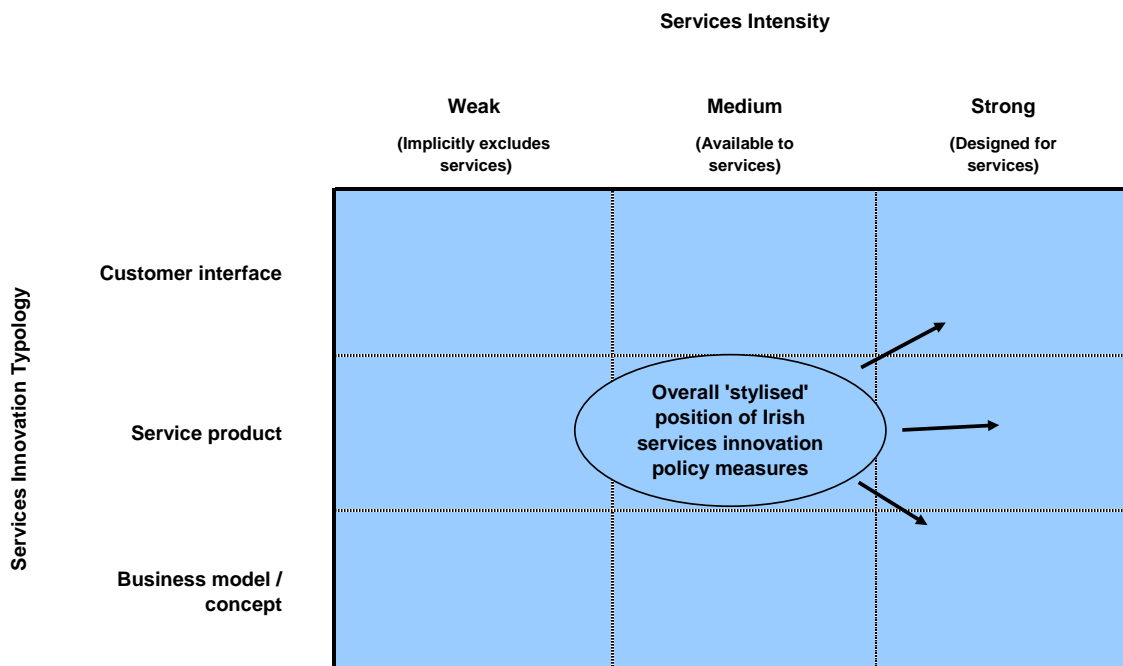
services (for example languages, financial services, ICT needs and so on), as well as broader skills needs.

Other aspects of framework development include scientific investment in ICT and broadband infrastructure support. IPR framework conditions were also assessed in the report. Here the findings suggest that the predominant focus of patenting support is product related, although other aspects such as copyright are more broadly relevant to services.

The specialised approach of IDA Ireland is also worthy of note in respect to policy measure supports. IDA Ireland essentially provides a flexible package of supports related to the particular needs of companies. To this end it is able to bring together a support package that is specifically adapted to the needs of a company - be it a manufacturing or an internationally traded service. Here the IDA argues that its offer in relation to innovation is well placed to respond to the requirements of services activities.

The results contained in the mapping study suggest a number of possible pathways for services innovation policy. One possibility would be to rely on a status quo position, with the majority of policy measures continuing to be focused in the area of medium services intensity, and service product focus (see the 'oval' within the centre of Exhibit 16 below).

Exhibit 16: Future options for developments in Irish services innovation policy



A further option for services innovation policy development would be to broaden out existing policy measures / develop new policy measures with both a stronger services

intensity focus, aligned greater attention to multidimensional forms of service innovation policy measures in areas such as business model, customer interface and service products (as denoted by the arrows in Exhibit 16 above). A number of examples of possible directions for services innovation are outlined below²⁹:

Innovation through business models:

- Promote a **culture shift** to allow new thinking regarding services and the relationship between customer value and profit opportunities.
- Improved **futures, foresight and competitive intelligence** capacity and capabilities through creation of new centres of excellence in futures thinking and leading edge competitive intelligence approaches.
- Increased emphasis on **strategic planning and evaluation of possible futures** for businesses and organisations.
- Increased **capacity and capability for creativity** at all levels including from schools, Institutes of Technology and locations where businesses can be trained and supported.
- **Flexibility** in workforce conditions by working with enterprise organisations and trade unions to adapt employers and employees to new business models equitably and efficiently.
- Specific encouragement for the adoption of new business models involving temporary companies; part time collaborations; portable employment portfolios etc.

Innovation through service delivery and customer interfaces:

- Investment in new, speculative ICT applications at sector, company and research centre level
- Support for acquisition and implementation of ICT (without employment criteria)
- Improved ICT infrastructure conditions throughout Ireland

Innovation through new services products:

- **Futures, foresight and competitive intelligence** capacity and capabilities through the creation of centres of excellence in futures thinking and competitive intelligence

²⁹ Adapted from Forfás (2006a) 'Services innovation in Ireland - options for innovation policy'.

- Centres of excellence in **convergent thinking** designed to support convergence centres where opportunities for the creation of new services can be identified and developed as opportunities for new services etc.
- Feasibility supports for **new service launches** aimed at indigenous services companies with high growth potential to become ITS companies.

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Annex II: Ireland IPPS Workgroup

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