

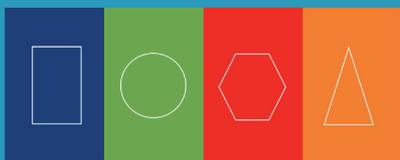
Key Skills for Enterprise to Trade Internationally

June 2012



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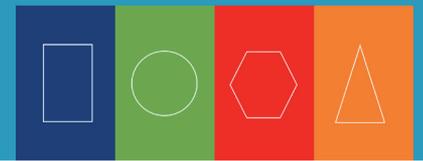
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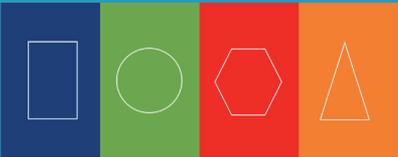


Introduction to the Expert Group on Future Skills Needs

The Expert Group on Future Skills Needs (EGFSN) advises the Irish Government on current and future skills needs of the economy and on other labour market issues that impact on Ireland's enterprise and employment growth. It has a central role in ensuring that labour market needs for skilled workers are anticipated and met.

Established in 1997, the EGFSN reports to the Minister for Education and Skills and the Minister for Jobs, Enterprise and Innovation.

Forfás, Ireland's policy advisory board for enterprise, trade, science, technology and innovation in conjunction with FÁS, provides the EGFSN with research and secretariat support.



Foreword

In the Government's 2012 *Action Plan for Jobs*, the Expert Group on Future Skills Needs has a role to play in researching, analysing and disseminating enterprise trends and vacancies so that future skills supply can be aligned with enterprise needs. A key part of this is the need to ensure the supply of internationally oriented skills necessary to drive trade and export sales performance over the next 3 - 5 years - which is vital to our economic recovery.



The Government's Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015 aims to position Ireland for strong export-led growth both in existing and emerging overseas markets. This Report makes recommendations on the skills necessary to drive enterprise trade and export sales within those markets and sectors, and enhance Ireland's proposition for attracting global business inward investment.

This Report makes recommendations on optimising the use of current resources to ensure that education and training provision and continuing professional development is fully aligned to the international trade skills requirements of enterprise. These skills include global management, international marketing, international sales, project management, overseas customer support & service, product design & development, and foreign languages & cultural awareness. Computing and engineering design skills are important for manufacturing and production.

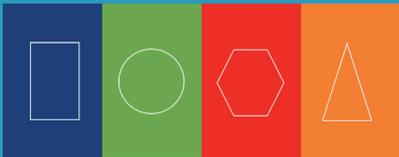
There is a need to improve international sales education and training and for a mindset change regarding sales as a profession - as it is currently held in low esteem. A priority must be to boost the domestic supply of foreign language skills - at the scale and proficiency level required by enterprise. Increasing student internships opportunities with exporting companies at home and with companies abroad will improve the supply of graduates ready for the international marketplace.

Employers have a key role to play in communicating the value of international skillsets for career opportunities, in particular foreign languages proficiency, to students, parents and teachers. Exporting companies surveyed have indicated that they intend to increase their employment levels over the next 3 years. It is essential for individuals to acquire the international skillsets identified to improve their prospects for such employment opportunities. The interest and commitment of enterprises for improved engagement with the education/training system to ensure the relevance and alignment of business and technical programmes for international trade should be built upon.

I would like to express my thanks to all those who contributed to the report. Particular thanks are due to the many industry executives, academics and professionals who contributed their valuable expertise and experience to the report. I would like to record my appreciation to IDA Ireland and Enterprise Ireland for their excellent support and sharing of experience. As chairperson of the Steering Group for the project, I would like to thank each member of the group for their full commitment and support in overseeing the Study. Finally, I would like to thank the team at Forfás for their research and analysis and leading this project to a successful conclusion.

A handwritten signature in black ink that reads 'Una Halligan'.

Una Halligan
Chairperson, Expert Group on Future Skills Needs



Executive Summary

Aim of Study

This Study by Forfás and the Expert Group on Future Skills Needs, focuses on the skills capability of enterprises to enable them to successfully compete in the key markets and for sectoral opportunities - as identified in the *Government Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015*. The development of the skills and talent required by enterprises has the potential to drive export sales performance and enhance Ireland's proposition for attracting inward business investment. This Study is seen as a priority by the development agencies supporting enterprise due to difficulties being experienced by client companies in recruiting international marketing and sales staff and for foreign language skills.

Future skills demand is considered over a 3 - 5 year period in terms of providing the quality, diversity and quantity of skills required. The emphasis is on the skills and competences required in key business functions areas within companies including (i) Management (ii) International Marketing, (iii) International Sales, (iv) Fulfilment (distribution/installation), (v) Customer Service/Support, and (vi) Design and Development. Integral linkages to the manufacturing / generation business function are highlighted including the demand for technical skills and lean manufacturing.

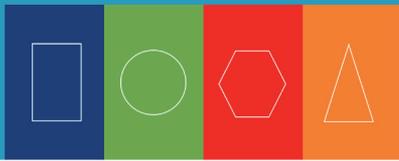
The specific sectors which are examined are (a) ICT, (b) Life Science, (c) Engineering, (d) Cleantech and Sustainable Building, (e) International Business Services, (f) Food & Drink (g) International Education Services, (h) Tourism and (i) the Cultural Sector.

Background

There is a consensus that Ireland's economic recovery will necessarily be export-led. Economic forecasts anticipate continuing growth in Ireland's export position. However, Irish trade is seen as geographically and sectorally concentrated with 85% of the value of total exports resulting from foreign owned companies (with 70% of exports by value coming from IDA assisted companies¹). Enterprise Ireland estimates that client company new export sales grew in excess of €1bn in 2011². There is potential for foreign affiliates and indigenous companies to further grow existing markets in the UK, US, and the Eurozone and to develop new markets including China, Brazil, Russia, India, South Africa (BRICS) and the Middle East. As identified in the *Forfás Making it Happen - Growing Enterprise for Ireland Report* - export led growth requires a whole of enterprise approach. This includes the need for enterprises to embrace innovation, enhance productivity, and improve competitiveness - critical factors for export growth.

¹ IDA Ireland End of Year Statement, 2011.

² Enterprise Ireland End of Year Statement, 2011.



Methodology

The methodological approach used for the study includes the following elements:

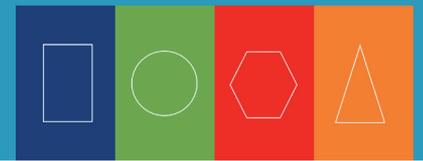
- A concise piece of research work undertaken with 42 selected companies, employing 16,000 staff, both foreign affiliates and indigenous enterprises (of different sizes and at different stages of export market development), around their required skills and competences - within the key export markets and for sectoral opportunities - as identified in the Government Strategy and Action Plan.
- Consultations on these issues with fifteen key stakeholders - both public and private.
- Three workshops with a wider group of sixty companies and stakeholders focused on specific topic areas - SMEs, product exports, and service exports.
- Six case studies of successful international trading firms from different sectors to gain greater insight into their skills and talent capability strengths.
- Examination of international practice in education and training supports for building export capability i.e. Denmark, Netherlands, Finland, Germany, UK and Singapore.

Recommendations made focus on the use and redirection of current relevant public education and training provision and the role for enterprise in continuing professional development. The stated time periods for consideration of the expected implementation and impact of recommendations are (a) Short Term (1-2 years), (b) Medium Term (3-4 years), and (c) Long term (5 years+).

Drivers of Change

Drivers of Change impacting on the trading performance of Irish companies include the following:

- Private and Public Sector Budgets are under strain world-wide, particularly within those major markets into which Irish companies are currently exporting.
- International Trade Agreements which stimulate the growth of international trade are crucial for countries like Ireland with relatively small domestic markets.
- Locations with a critical mass of quality skills and talent best support international trading activity and act as an incentive for inward investment by companies.
- The need to ensure a competitive cost base is resulting in a drive for increased efficiency with a focus on lean manufacturing and improving productivity through the use of new technology, improved work organisation and knowledge acquisition.
- European and USA markets are major sources of export sales for Irish companies. Income level growth within emergent BRICS markets is generating additional market demand. Expanding into new markets requires a ramping up of skills and experience levels.
- Converging technologies such as ICT, biotechnology, nanotechnology and cognitive sciences are presenting new product and service business opportunities and resulting in the development of new skillsets and working practices.
- Country specific regulations/directives, export and import documentation, legal and contractual issues and intellectual property protection differ across countries. Companies must build up the necessary skills and knowledge on these issues.



Different Export Models

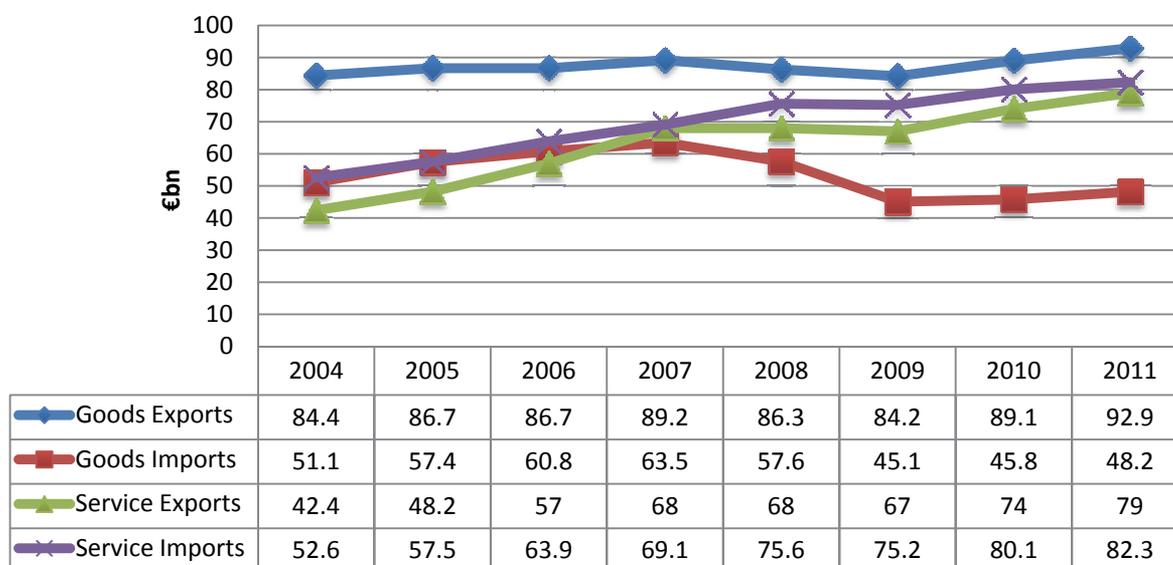
The research undertaken has identified several export business models. These require differing skillsets and talent. Companies may operate elements within these different models. These main approaches are:

- Companies utilising a direct selling approach - where the company has set up its own route to market - with staff and offices located in their target market and / or where the company has identified a Channel Partner, distributor, or agent in the specific market.
- Companies supplying into the global supply chain of another company (either as a first-tier or sub-tier supplier), where there are specific production/service standards to adhere to.
- Companies utilising technological platforms and use of data analytics and social media to offer added value services that drive businesses performance and offer customers the opportunity to design and experience their own products/services.
- Foreign affiliate Headquarter operations based in Ireland which manage global business activities including R & D, sales and marketing, supply chain management and IP management - such as for Europe, the Middle East and Africa (EMEA). These are not necessarily located with the manufacturing sites.
- Foreign affiliate companies with manufacturing sites based in Ireland supplying into their parent internal supply chain based abroad - with the company here having little role in the marketing & sales function. Many of these companies realise the importance of acquiring these key functions to further develop their Irish base of operations.
- Companies that export products/services in global partnership arrangements - or in a strategic alliance with other international companies such as for infrastructural type projects within the Cleantech/Sustainable Building sector or IT consultancy projects.
- Indigenous companies, that as well as exporting from their Irish base, have foreign subsidiaries active in overseas markets, which the company regards as a complementary part of their export model.
- For Tourism and International Education Services - the business focus is on attracting clients/customers into the country. The promotion and design & delivery of the customer experience whilst in Ireland and the related skillsets which help realise this are key.

Ireland's Trade Performance

As can be seen from Figure E.1 below, the value of Ireland's Goods Exports increased by 10% over the period 2004 to 2011 (much of this increase occurring over the last two years). Meanwhile, the value of Goods Imports fell by 6% over this period - recovering somewhat in 2011. The value of Service Exports increased by 86% over this period, with Service Imports increasing by 56%.

Figure E.1: Ireland's Trade Performance 2004 - 2011 (€bn)



Source: CSO, Merchandise External Trade, March 2012 Release and for Services: Balance of International Payments, Dec 2010.

Main Trading Partners (Imports plus Exports)

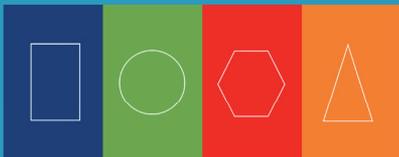
As can be seen from Table E.1, 76% of the value of Ireland's trade is with 10 countries - the USA and UK accounting for 38% of trade between them.

Table E.1: Ireland's top 10 Trading Partners (Imports plus Exports) 2010 (€bn)

Rank	Country	Total Trade Value 2010 (€bn)	% of Total Trade
1	USA	€57.0bn	20%
2	UK	€53.4bn	18%
3	Germany	€21.1bn	7%
4	Netherlands	€18.9bn	7%
5	Belgium	€17.1bn	6%
6	France	€14.8bn	5%
7	Italy	€10.0bn	4%
8	Spain	€8.2bn	3%
9	Switzerland	€7.7bn	3%
10	China incl. Hong Kong	€7.6bn	3%

Source: Analysis of CSO Trade Releases 2010.

Note: Service Imports from the Netherlands mainly represent inter-affiliate service purchased by multi-national companies based in Ireland. Many global pharmaceutical companies operate a distribution centre in Belgium from where their products (including Irish pharmaceutical exports to Belgium) are distributed to other European countries.



Findings and Conclusions

The identified skills and competencies required by enterprise(s) to drive their trade and export performance are highlighted in Figure E.2. This includes existing demand and that arising within exporting companies over the next 3 - 5 years.

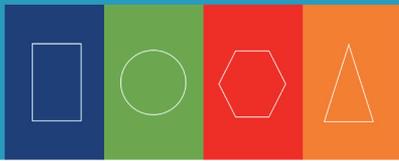
Figure E.2: Key Skills & Competency Requirements



Global & International Management Skills

Strategic export business planning, export sales planning, and market research skills are key areas where Irish SMEs need improvement. SME managers need to build up international management skills to lead and manage projects across countries. Managers in foreign affiliates need to build up global management skills to manage business activities worldwide and to leverage added value business activity for the Irish operation. Global management skills are required for leading cross functional teams, nurturing major global sales accounts and maintaining relationships with customers, partners and suppliers. Product Managers with the skills to manage the process of new product / service innovation and utilise skills from across business function areas are required. Entrepreneurship skills are a core competency requirement for managers - both within foreign affiliates and indigenous SMEs.

It would be valuable if existing trade / export information resources, (i.e. Enterprise Ireland, Bord Bia, and Irish Embassies abroad), were made available through a single portal, including advice and supports available at different stages in a company's trading and export development.



International Marketing Skills

Market research is a key area where SMEs are identified as being weak. SMEs need to prioritise their marketing objectives and focus on offering a unique value proposition to their customers. This requires scale, commitment and a dedicated senior management resource. SMEs should strategically prioritise markets and sectors and undertake preparatory market research. Market research should be conducted by staff with foreign language proficiency & cultural awareness. Companies should be aware of the long lead in time to gaining orders in markets such as Asia Pacific, Russia and Brazil as well as Germany and France. This requires the nurturing and building up of relationships with prospective international customers. Marketing programmes should ensure coverage of the value and use of E-commerce and social media applications. There is potential to more fully exploit international E-commerce sales and purchases. Currently 22% of Irish companies make E-commerce sales to the domestic market while 14% make such sales to another EU country. For E-commerce purchases, 45% of companies make purchases from the domestic market while 15% make purchases from another EU country³. E-commerce skills are required in order to optimise business opportunities in developed markets. Companies' promotional material (web-based and literature) needs to be kept up-to-date and produced in the language of the target market.

International Sales Skills

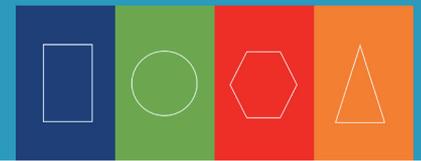
Based upon the research work undertaken, there is need for a change in mindset with regard to sales as a profession, as it is currently held in low esteem. There is relatively little formal international sales course provision within the education and training system. Existing provision mainly covers Business to Consumer sales whereas a main requirement of exporting companies is for Business to Business, Business to Government, and Technical sales. These roles (which may include Inside Sales⁴ as well as field-based sales) require international sales skills and foreign languages. A module on international sales could be included in relevant third level business and technical courses. International marketing programmes and the B.Comm platform, as they currently exist, could have a stream on international sales added to their final year. Post graduate diploma courses in international sales could be introduced. An International Sales Degree programme with foreign languages could be introduced with the active engagement and support of business. Curricula should include Business to Business, Business to Government and Technical sales.

Channel Marketing Skills - Identification/Support and Management

The identification, support and management of the right Channel Partner is a main reason for the success of SMEs in overseas markets. Companies expanding into new markets should conduct a thorough process of research, selection and recruitment of a Channel Partner to meet their market objectives. Contracts with the Channel Partner should clearly spell out the expected performance criteria. The support team based in Ireland should include people with the language proficiency of the target market to manage and provide the necessary support to the Channel Partner/Agent.

³ Eurostat Statistics in Focus 18/2012 - E- Commerce Trading Activity.

⁴ Inside Sales is where a sales team is based in-house rather than in the field. Inside sales staff utilise technological platforms to communicate with customers via the web and by telephone and are engaged in providing business solutions to clients. Such staff require product knowledge, business acumen and foreign language proficiency. Inside sales staff usually have a bigger client caseload than field sales staff. In both cases (Inside Sales and Field Sales) the sales process remains the same.



Fulfilment - Distribution & Installation Skills

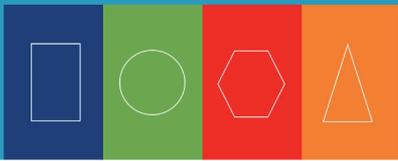
Project Management is an identified skill gap for both SMEs and foreign affiliates, in terms of planning and managing projects and effective working with international partners and suppliers. These skills are particularly valued for Cleantech, Engineering, and IT systems projects. Professional supply chain management skills are valuable in ensuring that products are delivered to the right place at the right time, and for the sourcing and delivery of raw material. There are differing product and services certification and regulations across international markets. Completing the required customs documentation and logistical requirements for emerging markets, especially the BRICS countries, presents a challenge - including for foreign affiliates. While foreign affiliates can afford a dedicated resource for this specialist role, most SMEs cannot. There is a relatively small pool of skills in the country with the ability to complete the documentation and transport logistics requirements for BRICS countries. Feedback from companies is that these specialist skills are relatively overpriced. A base of such knowledge may exist within the purchasing function of companies which import from BRICS markets. Training on these requirements should be included within marketing and sales, purchasing and logistical programmes to build up domestic capability.

Customer Service/Support Skills

Customer service/support positions have a central role in maintaining and nurturing customer relationships and ensuring the quality of customer experience. Foreign language skills, cultural awareness and communication skills are key requirements for personnel engaged in these roles, including technical support staff. There is potential for companies to more fully utilise the wider linguistic and cultural diversity within the 'new arrival' community to fill available positions and as a support for inter-cultural awareness training. Available proprietary online cultural awareness resources, already in use by major companies here could be more widely utilised. Customer service /support staff should receive continuing training in communications (oral, presentations, clear diction, avoiding use of colloquialisms, correct pace of speaking, active listening and social perceptiveness), when speaking to the customer directly or online.

Product/Service Design Skills

Product and services innovation is driven by knowledge and understanding of the customer and offering them a differentiated unique selling proposition. Design skills to meet customer requirements by taking on board 'real time' feedback on improvements are a challenge for Irish exporters. Customising products and services requires a design / innovation culture in all aspects of the business. Similar to the ambitions of Singapore, Ireland should seek to build up a design capability to help enterprises gain wider global business opportunities. An awareness of international design standards and codes and an ability to review and assess these could be built up through continuing professional development (CPD), and within technical and business programmes - for example, engineering. The cross-disciplinary teaching of design disciplines (industrial, fashion, craft, architecture) could be consolidated within the 3rd level education system - with opportunities for students to undertake practical design project work within companies to develop customer insight and commercial awareness. This would also facilitate greater enterprise input into the shaping and delivery of course provision.



Foreign Language Proficiency/Cultural Awareness

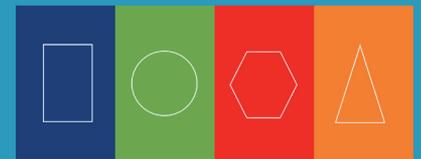
Foreign language capability and cultural awareness are essential for enterprise to compete in an increasingly global marketplace. An improved supply of domestic foreign languages capability would act as a major boost to enterprises achieving their export potential - and enhance Ireland's proposition for foreign direct investment. A National Foreign Language Education Policy needs to be developed with a 5 -10 year horizon vision, to provide an integrated and coherent approach to foreign language teaching in all learning contexts. This would include scaling up the supply of foreign language skills (number, range and proficiency) being taught at third level - for German, French, Spanish, Italian and for emerging market languages including Mandarin Chinese, Japanese, Russian and Arabic (the latter at relatively lower numbers). It would be valuable if the assessment of foreign language learning proficiency outcomes were aligned to the Common European Framework of Reference for languages (CEFR)⁵. The contextualisation of language teaching at third level in terms of its value to students in business and science departments would be valuable - especially for managers, engineers and sales/marketing personnel.

Companies that trade internationally can most clearly communicate a message to students, parents and teachers that foreign language proficiency and cultural awareness are essential skillsets for future rewarding employment opportunities. They can play a lead role, supported by educational and training institutions, in communicating this message. There are a range of business and technical positions within companies requiring foreign language proficiency and cultural awareness. While a basic level of foreign language proficiency is beneficial for introductory meetings with buyers in major European markets, it is essential that business and technical staff possess foreign language fluency for the company to grow market share and become a preferred supplier.

A high proportion of positions within firms that require native language proficiency, such as for positions in Inside Sales, are currently being sourced from abroad. This provides a valuable supply source for companies based here who are operating on a European and global market. However a more sustainable approach over the medium term would be to build up domestic foreign language proficiency levels to fill a greater number of such positions. There is also potential for firms to recruit from within the 'new arrival' community that has built up in recent years and from the pool of international students studying and graduating here. There is a growing demand from exporting companies for affordable and flexibly provided foreign language and cultural awareness training.

For export markets in Asia and the Middle East, foreign language capability, can be addressed in the short term in different ways including, recruitment, upskilling employees, use of professional translation and interpreter services, and the hiring of native speaking Channel Partners / Agents in the target market. It would be valuable for Ireland in the medium to long term to build up a cadre of Mandarin Chinese, Japanese and Arabic speaking business and technical professionals to fully capitalise on growing export market sales opportunities in those regions.

⁵ Some Irish institutions currently utilise the CEFR i.e. UCD Applied Language Centre. The CEFR is currently utilised by the main European Language Learning Institutions. Reference levels are outlined in Appendix 3.



Recent EU research concludes that companies can achieve higher export sales growth through having a workforce foreign language development strategy in place which supports their export business plan ⁶. However, while awareness of the value of foreign language skills is high among Irish exporting companies, it is much lower among companies who do not export and those who export only to English speaking countries. In a recent EU Eurobarometer Report, which surveyed companies across 27 EU countries employing more than 50 employees, only 9% of Irish companies surveyed considered that foreign language skills would be essential for future graduates over the next 5-10 years - compared to a 31% EU average⁷. This was second lowest out of 27 EU member states (only the UK was lower). An employer led information campaign highlighting the value of foreign language capability in driving export sales performance (aimed especially at SMEs) would be valuable.

Irish primary schools currently have the lowest level of foreign language tuition in Europe - across 27 countries⁸. In 2010, approximately 3% of Irish primary school students were studying a foreign language - compared to the UK 69%, and an EU average of 79%. This 3% uptake was due to the Modern Languages in Primary School Initiative launched in 1998. As part of Budget 2012, this initiative will cease at the end of 2011-12 school year, with the savings from this measure going towards the cost of implementing the new Literacy and Numeracy Strategy. As can be seen from Table E.2 below, the percentage of students studying modern languages at both Lower and Upper Secondary level is less than the EU average.

Table E.2: Percentage of Students who Study Foreign Languages - Primary, Lower Secondary and Upper Secondary Levels of Education - 2008 - Selected Countries

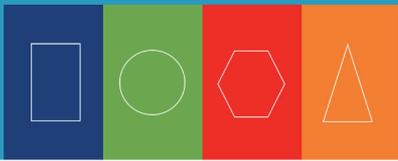
Country	Primary Level % students studying one foreign language	Primary Level % students studying a second foreign language	Lower Secondary % students studying one foreign language	Lower Secondary % students studying a second foreign language	Upper Secondary % students studying one foreign language	Upper Secondary % students studying a second foreign language
EU Average	79%	10%	93%	40%	83%	39%
UK	69%	19%	-	-	32%	12%
Denmark	56%	4%	96%	26%	91%	27%
Netherlands	32%	-	-	-	100%	86%
Finland	68%	5%	99%	92%	99%	92%
Germany	56%	4%	96%	26%	91%	27%
Poland	67%	13%	77%	26%	81%	49%
Ireland	3%	1%	66%	21%	58%	17%

Source: Eurostat Statistics in Focus: 49/2010.

⁶ EU Commission, Report on Language Management Strategies and Best Practice in European SMEs - the PIMLICO Report, 2011.

⁷ EU Eurobarometer Report: Flash EB no 304 - Employers Perceptions of Graduate Employability.

⁸ Eurostat Statistics in Focus: 49/2010.



There have been positive developments at second-level led by the Post-Primary Languages Initiative initiated in 2000 by the Department of Education and Science. Second level students can now take French, German, Italian and Spanish within an engaging teaching approach at Junior Certificate level and a wider range of modern foreign languages at Leaving Certificate, including French, German, Italian, Spanish, Japanese, Arabic and Russian, with other languages being offered on a non-curricular basis⁹. French (49%), German (13%) and Spanish (7%) are the main modern language subjects taken. Japanese has been introduced at Leaving Certificate in 35 schools, with 247 students sitting Japanese in 2011. Japanese is also offered in 31 schools at Transition year for 1,900 students. Russian is established as a Transition year subject in 24 schools¹⁰. A new Chinese language and cultural course has recently been launched for Transition year students. The NCCA is in the process of designing a short course in Chinese language and culture that would be available to Junior Cert students from 2014 as an option.

Currently, in the order of 2% to 3% of total enrolments (combined part-time and full-time) in HEA funded third level institutions are reported as studying a modern foreign language subject (in a modern foreign language only course or with a modern foreign language as a main subject e.g. for B.A Business and French, where the subjects are Business and French¹¹). This figure does not include those studying foreign languages as a module within other courses. The majority of enrolments taking a foreign language only course are studying in Universities. The IoTs represent a small percentage of such enrolments¹². There are only a small number of IoTs where enrolments are taking a modern language as a main subject. In addition to third level enrolments taking a foreign language only course and/or a foreign language subject as a main subject of their course, there are also a considerable number of students, particularly on business programmes, who are studying a foreign language as a module within their course. However, data is not available from Institutions on the quantum of this provision, either in quantity or proficiency attainment terms. This would be a valuable exercise for Institutions to undertake. Such modules are valuable where they include language learning on relevant business and technical programmes.

Findings are that there is a relative lack of Irish graduates with foreign language proficiency and international market experience. Employers value such a period abroad, which increases the students' employability and job prospects. ERASMUS is the EU's flagship education and training programme that enabled 2,508 students¹³ from Ireland to study and work abroad in 2010/11. The research work indicates that it would be valuable if the ERASMUS programme was more focussed on placements in non-English speaking countries, including Germany, France, Italy and Spain - for study opportunities through a foreign language and for in-company placements. There is scope for increasing numbers on student placement programmes into the BRICS countries. National targets need to be set for the sending of Irish students on study and work placement opportunities to Europe (such as exists for the attraction of International students coming to study in Ireland).

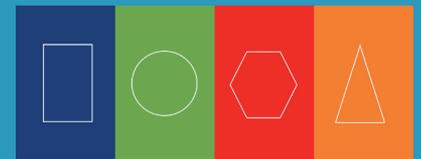
⁹ The list of non-curricular languages at Leaving Certificate level being offered for examination are Latvian, Lithuanian, Romanian, Modern Greek, Finnish, Polish, Estonian, Swedish, Czech, Bulgarian, Hungarian, Portuguese, Danish, Dutch.

¹⁰ Royal Irish Academy Committee for Modern Languages and Cultural Studies - National Languages Strategy, 2011.

¹¹ Source: HEA 2011 (Also as reported in HEA / IRCHSS Report 'Playing to our Strengths: The Role of the Arts, Humanities and Social Sciences and Implications for Public Policy' (2010).

¹² HEA Analysis of all Full & Part time Enrolments in the Academic year 2010/11 by Field of Study (ISCED).

¹³ This was an 18% increase over the previous year.



Specific Employment Opportunities

The 42 companies surveyed for this study, which employ a total 16,000 workforce, indicate a positive employment outlook, with their employment levels expected to increase by between 15% - 20% over the next three years - the ICT sector and International Services sector reporting the most positive outlook.

Drawing upon the research and consultations undertaken for this study, several potential areas for well-designed conversion programmes to fill employment opportunities arising within exporting companies at the wider economy level are highlighted. These programmes with a total capacity for 2,200 places, could potentially be started in late 2012/early 2013.

- Computing Software Professionals (NFQ Level 8 +) - a further 800 places under the NFQ Level 8 Conversion Programme (which is part of the Government's *ICT Action Plan - Meeting the high-level ICT skills needs of enterprise in Ireland*) - in addition to the initial 768 place underway.
- Customer Sales/Service Support with foreign language proficiency (NFQ Levels 7/8) - 800 places.
- Engineers (mechanical, automation, development & design) (NFQ level 8 +) - 250 places.
- International Sales Professionals - with foreign languages (NFQ Levels 7/8) - 250 places.
- International Project Management (NFQ Level 7/8)- 100 places.

There is scope for well-designed conversion programmes, developed in partnership with industry, (e.g. similar to the NFQ Level 8 ICT Skills Conversion Programme launched in early 2012) to help fill these employment opportunities in the immediate term. Potential candidates for conversion are those who possess relevant qualifications and experience and/or those that require a 'topping' up qualification in addition to their existing qualification/experience - and with an interest and aptitude for the role.

Key Skills and Competences required across Business Function Areas

The following Table E.3 provides an overview of the key skills and competences required by the exporting companies surveyed across sectors by main business function areas. This is further broken down by professional skills, technical skills, organisation skills and soft skill requirements.

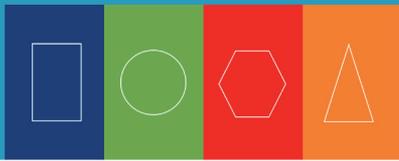
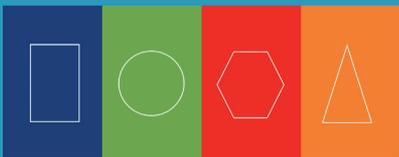


Table E.3: Key Skill Sets and Competency Requirements across Business Functions

Key Business Functions	Professional Skills	Technical Skills	Organisational Skills	Soft Skills
Management	<ul style="list-style-type: none"> ▪ Global Management (foreign affiliates) ▪ International Management (SMEs) ▪ Strategic Export Business Planning ▪ Project Management ▪ Product Management ▪ Foreign Languages & Cultural Awareness 	<ul style="list-style-type: none"> ▪ Selection and Management of Channel Partners ▪ Knowledge of international legal /Contract/IP issues ▪ Lean Manufacturing ▪ Quality Assurance /Cost Control ▪ International Financial Mgt/Risk 	<ul style="list-style-type: none"> ▪ Strategic Thinking ▪ Building Partnership/ Suppliers/ Strategic Alliances ▪ Networking ▪ Relationship Building ▪ Negotiation Skills 	<ul style="list-style-type: none"> ▪ Entrepreneurial Skills ▪ Emotional Intelligence ▪ Analytical Skills ▪ Customer Focus ▪ Communication Skills ▪ Teamwork ▪ Creative Problem - Solving
International Marketing & Sales	<ul style="list-style-type: none"> ▪ Market Research ▪ International Sales Business to Business, Business to Government, Business to Consumer. ▪ Account Management ▪ Foreign Languages & Cultural Awareness 	<ul style="list-style-type: none"> ▪ Target Market knowledge ▪ Product/Services technical know ▪ Design of written and web material for target markets ▪ E-commerce Skills ▪ Social Media Skills 	<ul style="list-style-type: none"> ▪ Sales Team support for Channel Partner ▪ Negotiation Skills ▪ Networking ▪ Relationship Building 	<ul style="list-style-type: none"> ▪ Customer Focus ▪ Entrepreneurship ▪ Commercial Awareness ▪ Emotional Intelligence ▪ Initiative ▪ Teamwork ▪ Communications
Fulfilment - Distribution & Installation	<ul style="list-style-type: none"> ▪ Foreign Languages & Cultural awareness ▪ Knowledge of Sector & Market Regulations/ Customs especially for BRICS countries ▪ Supply Chain Management 	<ul style="list-style-type: none"> ▪ International logistical/skills (air/sea/rail/road/ online) ▪ Export credit insurance ▪ Engineering Skills (automation & industrial design) 	<ul style="list-style-type: none"> ▪ Relationship Building ▪ Customer/ Client Focus Ethos ▪ Networking ▪ Negotiation Skills 	<ul style="list-style-type: none"> ▪ Commercial Awareness ▪ Teamwork ▪ Presentation Skills ▪ Communication ▪ Analytical and Numerical Skills
Customer Service / Support	<ul style="list-style-type: none"> ▪ Customer Service/ Sales Skills ▪ Foreign Languages & Cultural Awareness 	<ul style="list-style-type: none"> ▪ Technical knowledge of Products/Services ▪ Order administration 	<ul style="list-style-type: none"> ▪ Relationship Building ▪ Customer/ Client Focus Ethos 	<ul style="list-style-type: none"> ▪ Communication Skills (oral and written)-person to person and online
Product / Service Development & Design	<ul style="list-style-type: none"> ▪ Design & Innovation Skills ▪ Foreign Languages & Cultural Awareness ▪ Commercial Awareness 	<ul style="list-style-type: none"> ▪ Awareness of customer needs in different markets ▪ Knowledge of international Design Standards and Codes 	<ul style="list-style-type: none"> ▪ Relationship Building ▪ Customer/ Client Focus Ethos 	<ul style="list-style-type: none"> ▪ Creative Problem Solving ▪ Teamwork ▪ Presentation Skills ▪ Communication Skills

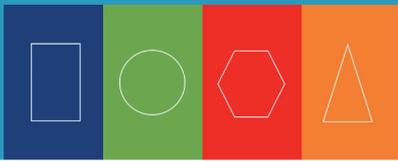


Sectoral Skills Needs

The following Table E.4 provides a concise overview of main skills requirements for each sector included within the scope of the report. These findings are reported on in more detail within Chapter 5 of the report.

Table E.4: Sectoral Skills Needs

- **Life Science:** The building up of strategic export planning, international marketing and sales, foreign languages (Mandarin Chinese & Russian-given plans to target these markets) and legal/IP skills are essential for generating additional value-added opportunities for the Irish operation.
- **Food & Drink:** Strategic export planning, international marketing and sales, foreign languages (German, French, Arabic, Mandarin Chinese, and Portuguese), food safety, quality management, and product development & innovation are key skills needs. SME deficits relating to selecting, managing and supporting Channel Partners/Agents need to be addressed. Supply chain security and consistency is a key requirement for international customers.
- **ICT:** Strategic export planning, management, international marketing and sales with language and cultural awareness skills, E-commerce web design, content management and social media skills are key needs. Foreign language proficiency requirements include German, French, Italian, Dutch, Portuguese, Swedish, Polish, Norwegian, and Danish. There is a demand for high-level ICT Computing skills - (ICT Action Plan to help address this).
- **Engineering:** Project management, international marketing, international sales with foreign languages (German, French, Russian, Mandarin Chinese, and Japanese), and cultural awareness are key skill needs - as well as for software engineers and design engineers with a focus on product design and development.
- **Cleantech:** Strategic export planning, entrepreneurship skills, market research, international sales, and project management are key requirements. There is a demand for marketing, sales and customer service/support staff with foreign language proficiency - including German, French, Spanish, Dutch and Mandarin Chinese) and for engineering design skills.
- **International Services:** International Sales, product/service design skills, entrepreneurship and project management are key skills required for driving export performance. Foreign language skills are required (European and Asian) especially for customer sales and technical support).
- **Tourism:** Irish tourism requires a skilled and professional workforce in order to deliver the highest standards of service. Applied tourism courses should be introduced at NFQ levels 6&7 with a flexible delivery mode on the subjects of E-commerce, marketing & languages - including German, French, Italian, Spanish and Mandarin Chinese).
- **International Education:** Sales with foreign languages, cultural awareness and web based marketing skills are key skills needs. Short courses should be provided for International Office staff on management, marketing, intercultural skills, and foreign languages (Asian and Arabic).
- **Cultural:** German & French language training is required for promoters seeking to exploit untapped markets in continental Europe. Project Management training for artistic events is required. Chinese cultural awareness training is required for twenty groups/organisations.



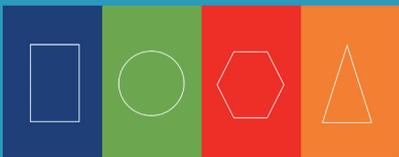
Main International Trade related skills identified for Selected Markets

The following Table E.5 provides an overview of the main skills and competency requirements for enterprises when trading with selected markets. These findings arise from the research work undertaken with companies and from discussions with a range of key stakeholder organisations.

Table E.5: Selected Market Skills Needs

The following are the main international trade related skills identified for selected markets.

- **Germany:** Strategic export business planning, export sales planning and market research are areas where Irish companies are relatively weak. There is a lack of awareness of the degree of support/motivation (in the appropriate language) that a Channel Partner needs. E-commerce skills are required in order to deal with a sophisticated market. Languages and cultural awareness are major inhibitors of Ireland's ability to export to Europe's largest market. Market research requires use of native language speakers to undertake research (locals, consultants or potential use of German interns).
- **France:** The sales cycle lead time can take between 18 months and two years. French companies look in great detail at suppliers. Irish companies need to give sufficient time for developing buyer relationships. Main reasons for the success of Irish companies exporting to France are the selection of right Channel Partner, the development of a unique selling proposition. French language proficiency is essential for building up customer relationships.
- **Russia:** The government sector is more prevalent than in other economies. The acquisition of product certification and import approval skills and awareness of legal/contractual and IP issues are important. It is essential to have access to Russian language skills and awareness of how business is done in both the formal and informal economy.
- **Brazil:** The competition in Brazil is intense and there is a need to prioritise the product/service market. Preparatory market research and relationship building are essential to getting orders. Customers are looking for a long term relationship. The selection of a good Agent/Channel Partner who can support the sale of products / services locally is critical. There is a need for knowledge of import tariffs, custom import documentation and shipment requirements. Brazilian Portuguese language capacity and cultural awareness are important.
- **Asia Pacific:** Irish companies need to prioritise specific markets and follow up on contacts and sales opportunities. This requires scale, commitment and a dedicated management resource at senior management level. Chinese business prefers to deal with suppliers they have built up a close relationship with. Consistency in the delivery and quality of orders and responding to customers in a timely way is essential to sustaining sales. In China & Japan, it is essential for companies to possess a language capability (own or contracted) to conduct business.
- **USA:** Irish businesses need to be well funded and capitalised to ensure they can commit to the long term scaling requirements of the US market. Companies must be aware that their basic product must be augmented with other customer requirements such as guarantees, installation, servicing packages etc., to provide a *Total Service Solution*. Irish companies must undertake comprehensive market research to understand how their product fits in the competitive US market environment. A main factor for commercial success in the US market is the speed at which a supplier can deliver the required product.



Recommendations - Implementation

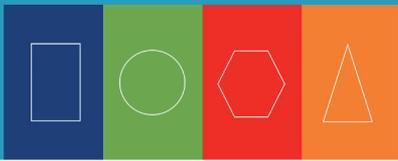
As a small, open and export focussed economy, it is essential that the Irish workforce is equipped with the internationally orientated skills necessary to drive enterprise trading performance. This would also enhance Ireland's proposition for attracting inward investment opportunities. There is scope for optimising the use of current resources to ensure that public and private education and training provision is fully aligned to the skills requirements of enterprise. Companies have a key role to play in ensuring that the continuing professional development of their workforce supports their strategic export business plan.

The following nine main recommendations (and related actions) are made in this regard. They are denoted by time period for their implementation and impact (S/T - Short Term - 1 to 2 years; M/T - Medium Term - 2 to 4 years, and L/T for Long Term - 5 years+). Each recommendation denotes a Lead Partner(s) responsible for its implementation.

1. Develop Global / International Management Skills in Managers and Graduates

Managers in foreign affiliate companies should build up global management skills to both manage business activities worldwide and to leverage increased added value business activity for the Irish operation. Irish SME managers can benefit from greater international management experience.

- Build up Global and Product Management Skills within foreign affiliates for managing cross functional teams, global sales accounts and customer/supplier relationships through flexible continuing professional development. Foreign affiliate managers should actively seek opportunities which develop their Global Management Skills.
S/T to M/T - Lead: Employer Bodies/Companies, Skillnets.
- Build up SMEs' international management skills including strategic export planning and ability to manage projects with partners and suppliers across countries. Irish managers should take up international management experience opportunities (more flexibility is required in this regard).
S/T to M/T - Lead: Employer Bodies/Companies, Enterprise Ireland.
- Build up international graduate placement programmes that have received a strong endorsement including the EI Graduates for International Growth programme, IBEC Export Orientation Programme, Bord Bia Food Export Graduate Programmes and Farnleigh Fellowships.
S/T to M/T - Lead: Enterprise Ireland, Employers Bodies/Companies, Bord Bia.
- Make Public trade related information resources (i.e. EI, Bord Bia, Irish Embassies overseas) more widely available through a single portal to guide companies, particularly indigenous SMEs, in their export/import research and planning similar to EnterpriseOne Singapore.
S/T to M/T - Lead: Enterprise Ireland.



2. Enhance International Marketing Capability

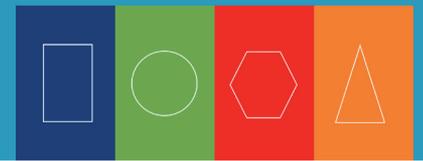
A high professional standard of international marketing and sales capability in Ireland will help drive export / trade growth. The selection, support and management of the right Channel Partner is a main factor for success in overseas markets.

- Build up SMEs' skills for prioritising strategic market opportunities. Ensure preparatory market research is conducted by staff/outside expertise with foreign language & cultural awareness.
S/T - Lead: Employer Bodies/Companies, Enterprise Ireland.
- Improve companies' process of research, selection and recruitment of the right Channel Partner. Ensure the support team within the company has the mandate and necessary skillsets to provide full backing to the Sales Team/Channel Partner in the target market.
S/T- Lead: Employer Bodies/Companies, Enterprise Ireland.
- Strengthen the focus within international marketing programmes on the potential value and use of E-commerce and social media applications.
S/T - Lead: Universities/IoTs, Skillnets.
- Build up skills capacity within companies to more fully exploit the potential for international E - commerce sales and purchasing.
S/T to M/T - Lead: Employer Bodies/Companies.

3. Build-up a Cadre of International Sales Professionals

International Sales Professionals with foreign language proficiency are a key skillset. There is need for a change in mindset with regard to sales as a profession, as it is currently held in low esteem. There is little formal international sales training provision within the third level education system.

- Include a compulsory module on international sales in third level business courses.
- Add a stream on International Sales to the final year (3rd or 4th year depending on whether it includes ERASMUS or placement) of international marketing programmes and the B.Comm platform as it currently exist.
Introduce Post Graduate Diploma course(s) in International Sales with foreign languages at third level e.g. German/French/Spanish. The course should combine education with practical work experience. At least two programmes should be targeted for starting in 2012.
- Introduce an International Sales Degree Programme with foreign languages - with the active engagement and support of business.
- Include Business to Business Sales, Business to Government Sales and Technical Sales in international sales course curricula as well as existing business to consumer sales.
S/T to M/T Lead for above five actions: HEA, Universities, IoTs.
- Offer elements of the EI International Selling Programme and Excel at Export Selling Workshop Series more widely to companies.
S/T - Lead: Enterprise Ireland, Employer Bodies.



4. Build-up Project Management, Logistical and Procurement Skills

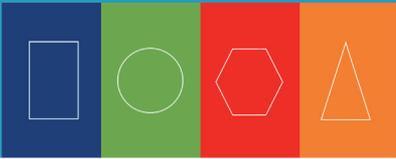
Ensuring the security and consistency of the supply chain, is an essential requirement for international customers. This requires international project management skills and a consistent supply delivered to the right place at the right time to customers.

- Build up international project management skills within foreign affiliates and SMEs, via CPD, for the planning, initiating and management of international projects and collaborating with different partners-especially for cleantech/engineering and IT systems projects.
S/T - Lead: Employer Bodies/Companies, Universities, IoTs, Skillnets.
- Build up knowledge within companies of requirements for international export and import documentation, shipping, warehousing, packaging specifications, tariffs, product specifications and related legal/IP protection especially for BRICS countries, via CPD and public and privately provided procurement and logistical programmes.
S/T - Lead: Employer Bodies/Companies, Universities, IoTs, SOLAS/Education & Training Boards.
- Build up global supply chain management skills, via CPD, for the export of goods and services and import of raw materials to ensure the standard of supply chain security and consistency sought by international customers.
S/T to M/T - Lead: Employer Bodies/Companies.

5. Enhance International Customer Service / Support Skill

Customer service / support positions play a central role in maintaining and nurturing international customer relationships over time and ensuring the quality of the customer experience.

- Ensure customer service/support staff are proficient in the foreign languages/cultural awareness of international customers and that they receive continuing communications skills training (oral, presentations, clear diction, correct pace of speaking, active listening and social perceptiveness, for communications either directly and/or online).
S/T to M/T- Lead: Employer Bodies/Companies, Skillnets, SOLAS/Education & Training Boards.
- Increase the wider use by companies of proprietary online cultural awareness resources, already utilised by major companies here, as well as the Enterprise Ireland programme on *Doing Business in Different Cultural Environments*.
S/T to M/T- Lead: Employer Bodies/Companies, Enterprise Ireland.
- Utilise existing employees recruited from abroad, and 'newcomer' individuals living where the business is based, as a resource for in-company cultural awareness programmes.
S/T to M/T- Lead: Employer Bodies/Companies.



6. Build-up International Design & Development Skills Capability

Ireland should seek to position itself as a niche global design centre and build up a design capability which will help enterprises gain wider business opportunities in the global market-similar to comparable sized internationally trading countries such as Finland and Singapore.

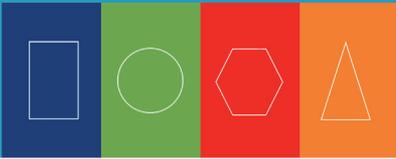
- Consolidate existing design education infrastructure at 3rd level to develop the required breadth and depth of cross-disciplinary design skill sets and strengthened engagement with enterprise-similar to centres of design excellence elsewhere (Aalto University Design Centre Finland, Stanford Design Programme USA, and Central Saint Martin, London).
M/T - Lead: Department of Education & Skills, HEA.
- Review product and service design courses for relevance and content - by consultation with relevant professional and business bodies. Introduce an entrepreneurship module and structured credited placement opportunities on third level product/service design programmes to develop international customer awareness and commercial acumen.
S/T to M/T - Lead: HEA, Universities, IoTs.
- Introduce a design graduate placement programme for export growth orientated SMEs - for work on new product/service design for overseas markets.
S/T to M/T - Lead: HEA, Enterprise Ireland, Employer Bodies/Companies.
- Promote the strategic value of design skills to companies exporting/planning to export for offering a unique selling proposition to customers in international markets (similar to the approach of DesignSingapore Council).
S/T - Lead: Employer Bodies/Companies, IDA Ireland, Enterprise Ireland.



7. Build-up a Multi-lingual Workforce for an increasingly globalised marketplace

An improved supply of foreign languages capability (numbers, range and proficiency) would act to boost enterprise export potential. Foreign language proficiency and cultural awareness is an essential skillset for future employment opportunities in an increasingly globalised labour market. There is an urgent need to increase the domestic supply of modern foreign language skills - at the scale and proficiency level required by enterprise.

- Develop a National Foreign Language Education Policy with a 5 - 10 year horizon vision, to provide an integrated and coherent approach to language teaching (content and method of learning) and cultural awareness at progressive levels of proficiency in all learning contexts.
S/T- Lead: Department of Education & Skills.
- Boost the supply of foreign language skills (numbers and proficiency level achieved) at third level - including German, French, Spanish and Italian as well as Mandarin Chinese, Japanese, Russian and Arabic. This approach should include contextual language learning for specific purposes, such as for managers, engineers and international marketing and sales professionals. Align the assessment of foreign language learning proficiency outcomes to the Common European Framework of Reference for Languages (CEFR).
S/T to M/T- Lead: Department of Education & Skills, HEA, Universities, IoTs.
- Strengthen the focus on language and intercultural awareness and sensitisation at primary level to motivate students learning and engagement with languages at 2nd level-European and Asian.
S/T - Lead: Department of Education & Skills, NCCA.
- Set targets for increased European student placements (ERASMUS and Institution led), with a focus on study opportunities through a foreign language and in-company placements - in Germany, France, Italy and Nordic countries. Support foreign language immersion learning in parallel with studies and placements. Build up current numbers on in-company placement programmes in BRICS countries.
S/T to M/T- Lead: HEA, Universities, IoTs, Employer Bodies/Companies.
- Companies should implement a foreign language and cultural awareness management strategy aligned to their strategic export business plan and put in place the necessary support elements including the professional development of their workforce and potential recruitment from within the 'new arrival' community and the international student supply pool here in Ireland.
S/T to M/T - Lead: Employer & Professional Bodies/Companies.
- Employers should communicate the value and practical application of foreign language proficiency for international business and technical career opportunities to students (particularly at second-level), parents and teachers.
S/T - Lead: Employer Bodies/Companies.
- Increase awareness within companies (both foreign affiliates and SMEs) of the need for acquiring foreign language capability to boost their international trading performance - including through CPD. Utilise case study examples of companies that have achieved export sales growth through the implementation of a foreign language management strategy.
S/T - Lead: Employer Bodies/Companies, IDA Ireland, Enterprise Ireland, Engineers Ireland.



8. Develop Soft Skills and competence for successful international customer working

Soft skills are increasingly a main differentiator for companies recruiting candidates, both for working effectively internally within the company and for effective engagement with international partners, customers and suppliers. It is essential for individuals to build up these competences within their personal skills portfolio.

- Build-up the development of soft skills and competences within 2nd and 3rd level education and training curriculum and continuing professional development through practical project based work and in-company placement opportunities. The NCCA should integrate development of these skills/competences in the current Review of 2nd level education curriculum and assessment.

S/T to M/T - Lead: HEA, NCCA, SOLAS/Education and Training Boards.

The specific soft skills required are:

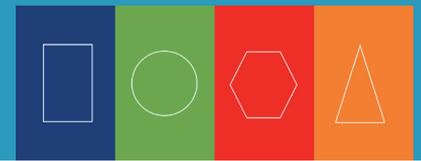
‘Business Skills’	‘People Skills’	‘Personal Skills’
Entrepreneurship	Emotional Intelligence	Initiative
Design & Creativity	Relationship Building	Adaptability/Flexibility
Commercial Awareness	Teamworking	Analytical/Numerical Skills
Customer Focus	Negotiation Skills	Critical Thinking/Problem Solving
Leadership	Communication Skills	Integrity/Ethics

9. Address Opportunities for Employment in International Business

Well-designed conversion programmes can help fill identified employment opportunities arising within exporting companies at the wider economy level.

- Introduce well designed conversion programmes, in partnership with industry, to help fill identified employment opportunities arising within exporting companies. Estimations are that 2,200 Conversion Programme places could be provided starting in late 2012/early 2013. Potential candidates to fill these opportunities should possess relevant qualifications and experience in a related discipline including those that require a ‘topping’ up qualification- and importantly, have an interest and aptitude for the role. The specific conversion programme employment opportunities are for:
 - Computing Software Professionals (NFQ Level 8 +) - a further 800 places under the NFQ Level 8 Conversion programme (in addition to the 768 places currently underway).
 - Customer Sales/Service Support with Foreign Languages (NFQ Levels 6/7) - 800 places. (Specifically German, French, Spanish, Italian and Dutch).
 - Engineers (mechanical, automation, development & design) (NFQ level 8 +) - 250 places.
 - International Sales Professionals - with foreign languages (NFQ Levels 6/7/8) - 250 places. (Specifically German, French, Polish and Russian).
 - International Project Management (NFQ Levels 7/8) - 100 places.

S/T - Lead: HEA, Universities, IoTs, SOLAS/Education & Training Boards.



Chapter 1: Introduction

1.1 Aim of Study

This Study by Forfás and the Expert Group on Future Skills Needs (EGFSN), focuses on the skills capability of enterprises to compete in the key markets and for sectoral opportunities - as identified in the *Government Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015*. The emphasis is on the development of the skills and talent required by enterprises to improve their competitiveness and increase trade and export market sales.

There is a focus in the Study on key international trade ‘front facing’ business functions within companies including (i) management (ii) international marketing (iii) international sales (iv) fulfilment (distribution/installation) (v) customer service/support and (vi) design and development. Integral linkages to the manufacturing/generation function are highlighted, including the need for lean manufacturing. The specific sectors examined are (a) ICT, (b) Life Science, (c) Engineering, (d) Cleantech and Sustainable Building, (e) International Business Services, (f) Food and Drink, (g) International Education Services, (h) Tourism and (i) the Cultural Sector.

The Study considers related integral international business capabilities including forming strong international client and supplier relationships, protection of Intellectual Property, knowledge of country and sector standards and regulations, finance/legal/contractual knowledge as well as soft skills such as commercial awareness, customer focus, analytical/numerical skills, creativity, problem solving, team working, interpersonal skills and adaptability.

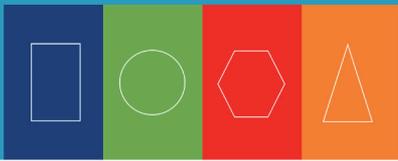
Both IDA Ireland and Enterprise Ireland agreed this project as a priority in the EGFSN work programme for 2011, whilst commenting on the difficulties being experienced by client companies in recruiting experienced marketing and sales staff and for those with foreign language proficiency. The membership of the Steering Group for the Study which oversaw the progress of the report and the shaping up of practical recommendations is given in Appendix 1.

1.2 Background

There is a consensus that Ireland’s economic recovery will necessarily be export-led. Economic forecasts anticipate continuing growth in Ireland’s export position. However, Irish trade is seen as geographically and sectorally concentrated. Around 85% of the value of total exports result from foreign owned companies (with 70% of exports by value coming from IDA assisted companies¹⁴). There is potential for foreign affiliates and indigenous companies to further grow existing markets in the UK, US, and the Eurozone and to develop new growth markets including China, Brazil, Russia, India and South Africa (BRICS) and the Middle East.

To export successfully Irish companies must offer innovative, competitively priced products and services that meet the needs of international customers.

¹⁴ IDA Ireland End of Year Statement 2011.



The Government's *Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015*, highlights several high level key export related objectives to be achieved by 2015. These are:

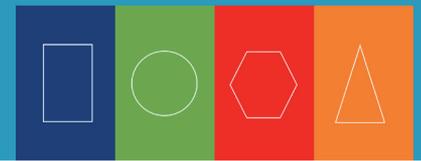
- To increase the number of new jobs directly associated with exporting enterprises by 150,000 in manufacturing, tourism, and internationally traded services, and with the creation of a similar number of new indirect jobs.
- To increase the value of exports by agency assisted indigenous companies by 33% by:
 - increasing the number of exporting firms.
 - increasing the value of exports from existing exporters, both to established markets and to markets offering new opportunities.
- To diversify the destination of indigenous exports by increasing the share of:
 - food and drink exports to countries outside the UK from 56% to 62%.
 - other exports to countries outside the UK, from 57% to 63%.
 - food and drink exports to Asia, from 4.3% to 7%.
- To increase overseas visitor numbers by one million (from 7 to 8 million).

The strategy emphasises the importance of knowledge and skills, along with other key actions, to maximise Ireland's potential in trade, investment and tourism. Sectors targeted in the Strategy are tourism, food, international education services, life sciences, software, Next Generation Network-enabled E-business, 'green' technology and services, eco-construction and the built environment, and enabling technologies for an ageing population. As identified in the *Forfás Making it Happen - Growing Enterprise for Ireland Report* - export led growth requires a whole of enterprise approach. This includes the need for enterprises to embrace innovation, enhance productivity, and improve competitiveness - critical factors for export growth.

1.3 Objectives of the Study

The Study builds upon references to delivering the necessary skills as outlined in the Government's *Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015*. Specific project objectives are to:

- Build on the work already done by Forfás and the EGFSN, which identifies the structural trends and drivers of change in the exporting sector which have the greatest impact on skills requirements. This includes the changing nature of export business models.
- Determine the implications of these trends/drivers of change for the key skills (quality, diversity, and quantity) required by enterprise. The focus is on the development of the skills capability of enterprise to successfully compete within the key markets and for sectoral opportunities - as identified in the Government Strategy and Action Plan.
- Assess relevant current and planned education and training provision.
- Identify any current or anticipated skills gaps and shortages and reasons for this (including an assessment of the need for upskilling of the current workforce).
- Explore opportunities for improved engagement between enterprise and the education and training system for the design and delivery of relevant skills provision.



- Examine international practice re education and training supports for building export capability i.e. Denmark, Netherlands, Finland, Germany, UK and Singapore.
- Put forward recommendations on proactive actions required to ensure that the supply of workforce skills will help drive enterprise exports within the key markets and for sectoral opportunities - as identified in the Government Strategy and Action Plan. This includes the optimum design and delivery of relevant education and training provision.

Recommendations made focus on the use and redirection of current relevant public education and training provision and continuing professional development. The stated time periods for consideration of the expected implementation and impact of recommendations are (a) Short Term (1-2 years), (b) Medium Term, (3-4 years) and (c) Long Term,(5 years+).

Expected outcomes are that the future supply of graduate and workforce skills will help drive Irish enterprises to trade with existing and identified new high potential markets.

1.4 Methodology

The methodological approach includes the following elements:

- A concise piece of research work, mainly qualitative, undertaken with 42 selected companies, both foreign affiliates and Indigenous Enterprises (of different sizes and at different stages of export market development), around their required skills and competences - within the key markets and for sectoral opportunities - as identified in the Government Strategy and Action Plan.
- Consultations on these issues with fifteen key stakeholders - both public and private.
- Three Workshops with a wider cohort of sixty companies and stakeholders focused on SMEs, product exports and service exports.
- Six case studies of successful international trading firms from different sectors to gain greater insight into their skills capability strengths.
- An examination of international practice re education and training supports for building export capability i.e. Denmark, Netherlands, Finland, Germany, UK and Singapore.

1.5 Report Outline

The outline of the report is as follows:

Chapter 1 - Introduction

Chapter 2 - Profiling Ireland's Trading Performance

Chapter 3 - Drivers of Change

Chapter 4 - Supports available across Countries for Enterprise to Trade Internationally

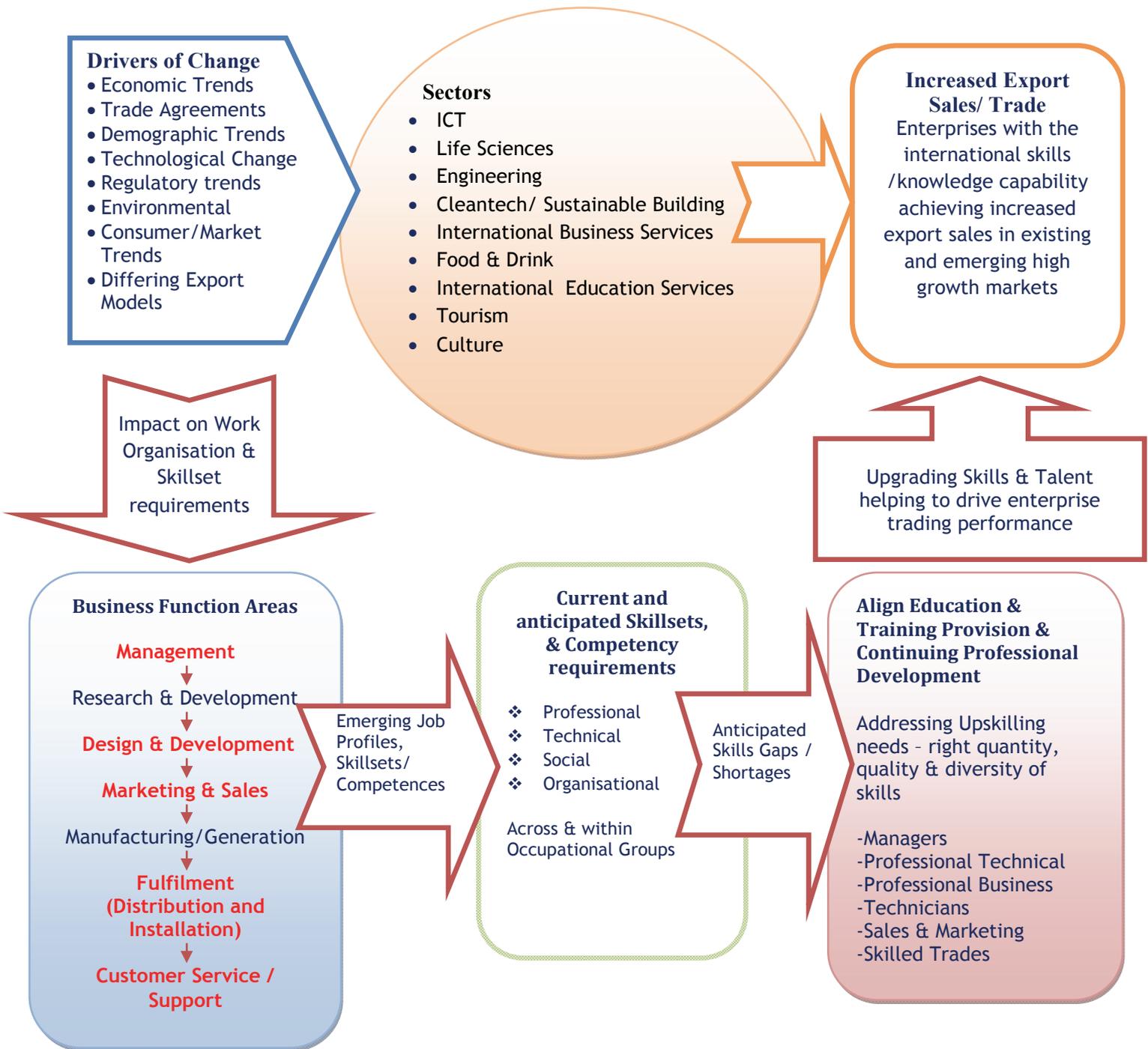
Chapter 5 - Skills Demand for Enterprises to Trade Internationally

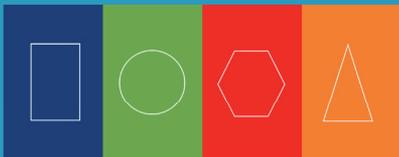
Chapter 6 - Assessment of Provision of Relevant Skills Supply for International Trade

Chapter 7 - Conclusions and Recommendations

Figure 1.1: Methodological Approach

Vision
 The future supply of talent and workforce skills will help drive Ireland’s enterprise potential to trade internationally and increase the value of its export sales - in the key markets and for sectoral opportunities - as identified in the Government *Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015*.





Chapter 2: Profiling Ireland’s Trading Performance

2.1 Introduction

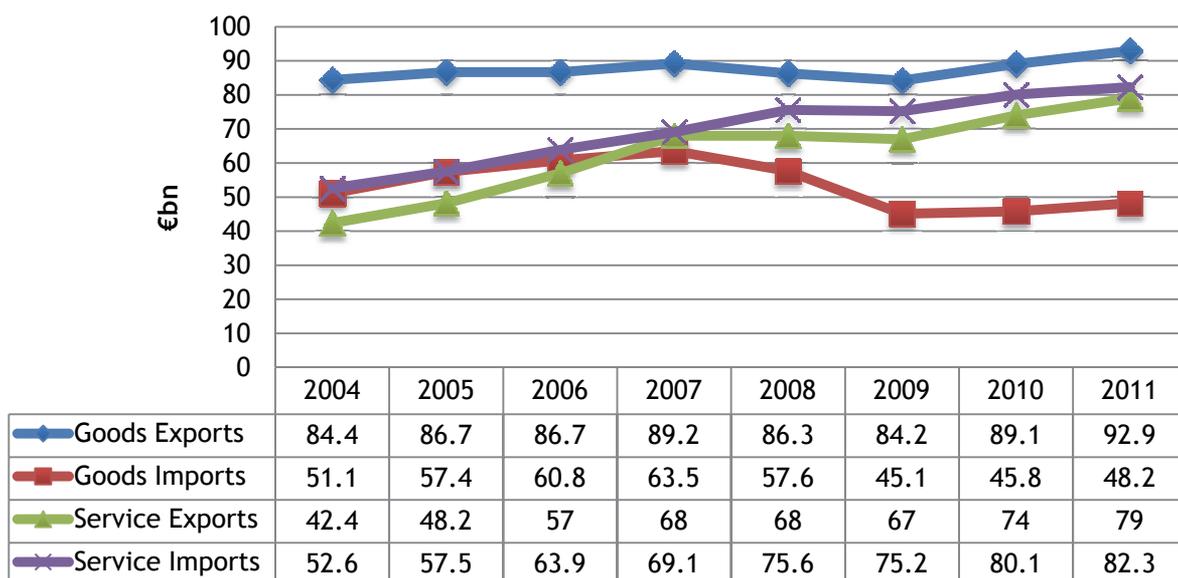
Ireland’s export performance in recent years has shown considerable resilience, with service exports performing particularly well. However, Irish trade is seen as both geographically (USA, UK) as well as sectorally concentrated (Chemicals and Medical & Pharma sectors). Around 85% of the value of total exports is from foreign owned companies. Within indigenous firms, the largest share of exports is food and drink, followed by engineering and construction, services, and software. Objectives within the Governments’ *Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015* are to increase the number of new jobs associated with exporting enterprises, and to increase the value and diversify the destinations of indigenous exports. This Chapter presents an overview of Ireland’s trading performance, including the main trading partners and categories of exports and imports.

2.2 Ireland’s Trade Performance

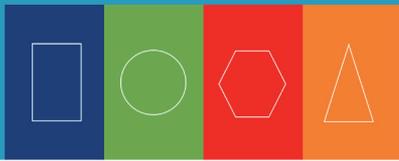
As can be seen from Figure 2.1, the value of Ireland’s Goods Exports increased by 10% over the period 2004 to 2011- much of this increase having occurred over the last two years. Meanwhile, Goods Imports decreased by 6% over this period - recovering somewhat in 2011. Service Exports increased by 86% over the same period with Service Imports increasing by 56%.

The overall trade surplus increased from €23.1bn in 2004 to €41.5bn in 2011 - due to a €44.6bn surplus recorded for Merchandise Trade - offset by a €3.2bn deficit recorded for Services Trade.

Figure 2.1: Ireland’s Trade Performance 2004 - 2011 - € bn



Source: CSO, *Merchandise External Trade, March 2012 Release* and for Services: *Balance of International Payments, Dec 2010*.



2.3 Main Trading Partners (Imports plus Exports)

As can be seen from Table 2.1, 75 % of the value of Ireland's trade (exports plus imports of goods and services) is with 10 countries, with the USA and UK accounting for 38 % of trade between them.

Table 2.1: Ireland's top 10 Trading Partners (Goods and Services Exports plus Imports) 2010 - €bn

<i>Rank</i>	<i>Country</i>	<i>Total Trade Value 2010 (€bn)</i>	<i>% of Total Trade</i>
1	USA	€57bn	20%
2	UK	€53.4bn	18%
3	Germany	€21.1bn	7%
4	Netherlands	€18.9bn	7%
5	Belgium	€17.1bn	6%
6	France	€14.8bn	5%
7	Italy	€10.0bn	4%
8	Spain	€8.2bn	3%
9	Switzerland	€7.7bn	3%
10	China incl. Hong Kong	€7.6bn	3%
11	Luxembourg	€6.9bn	2%
12	Japan	€4.5bn	2%
13	Bermuda	€4.1bn	1%
14	Sweden	€3.0bn	1%
15	Norway	€2.5bn	1%
16	Australia	€2.2bn	1%
17	Russia	€2.1bn	1%
18	Poland	€1.9bn	1%
19	India	€1.5bn	0.5%
20	South Africa	€1.3bn	0.5%

Source: Analysis of CSO Trade Releases 2010.

2.4 Goods Export and Import Performance - by Trading Partners

Comparing 2011 to the year 2010, Goods Exports increased by 4% to €93bn. The USA (22% of total exports), Belgium (14%), UK (13%), Germany (6%), and France (5%), were Ireland's main export markets. During 2011, Goods Exports increased to several main trading partners - the USA by 3% to €21.45bn, the UK by 5% to €13.06bn, Germany by 3% to €6.5bn and France by 11% to €5.02bn. Goods Exports to China, valued at €2.5bn remained at the same level as for 2010.

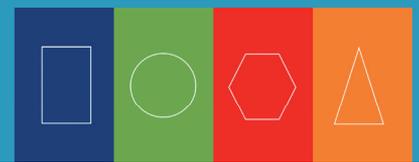
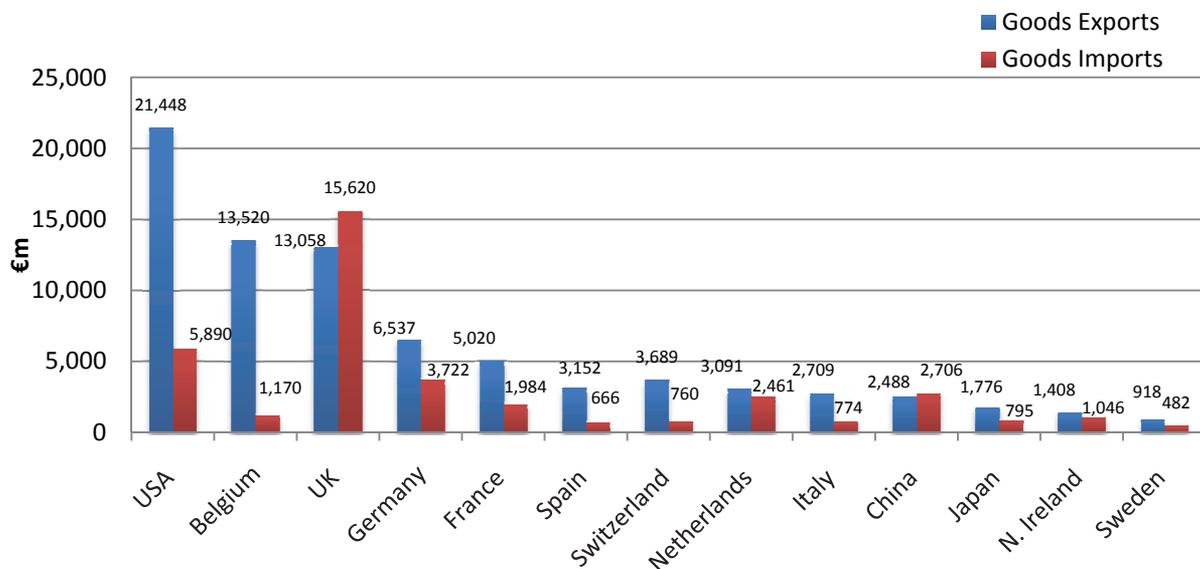


Figure 2.2: Goods Exports & Imports 2011 - Main Trading Partners- €m

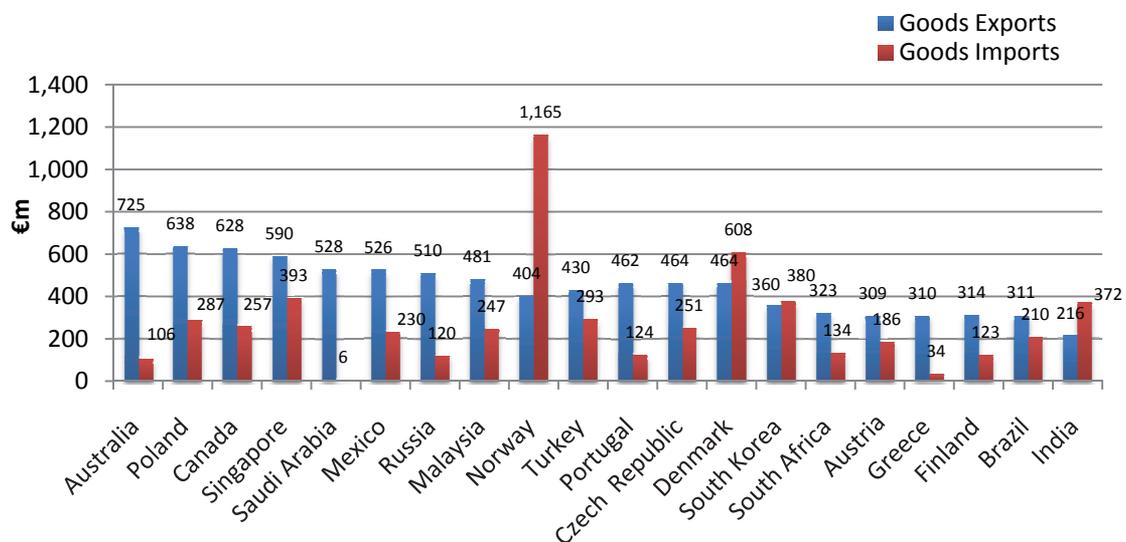


Source: CSO February 2012

Note: Irish Goods exports to Belgium comprise Medical & Pharmaceutical products and Organic Chemicals. Many global pharmaceutical companies operate a distribution centre in Belgium from where their products are distributed to other European countries.

Comparing 2011 to the year 2010, Goods Imports increased by 5% to €48.2bn. The main trends for Goods Imports are that imports from the UK increased by 13% to €15.6bn while imports from the USA decreased by 8% to €5.89bn. The UK (32% of total imports), USA (12%), Germany (8%) and China (6%) were Ireland's main goods import partners. Figure 2.3 presents Goods Export and Import data for Ireland's smaller value trading partners (under €1bn for the year).

Figure 2.3: Goods Exports & Imports 2011 - Smaller Value Trading Partners- €m



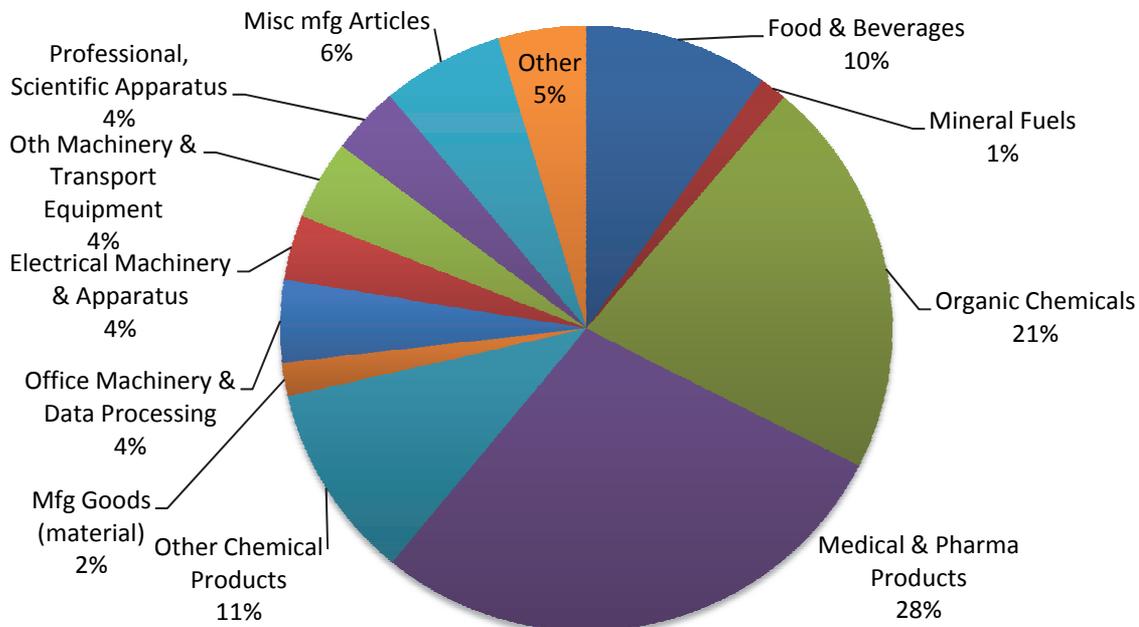
Source: CSO Feb 2012.

Note: Goods Imports from Norway are mainly Petroleum - Crude and non-Crude.

2.5 Goods Exports by Category

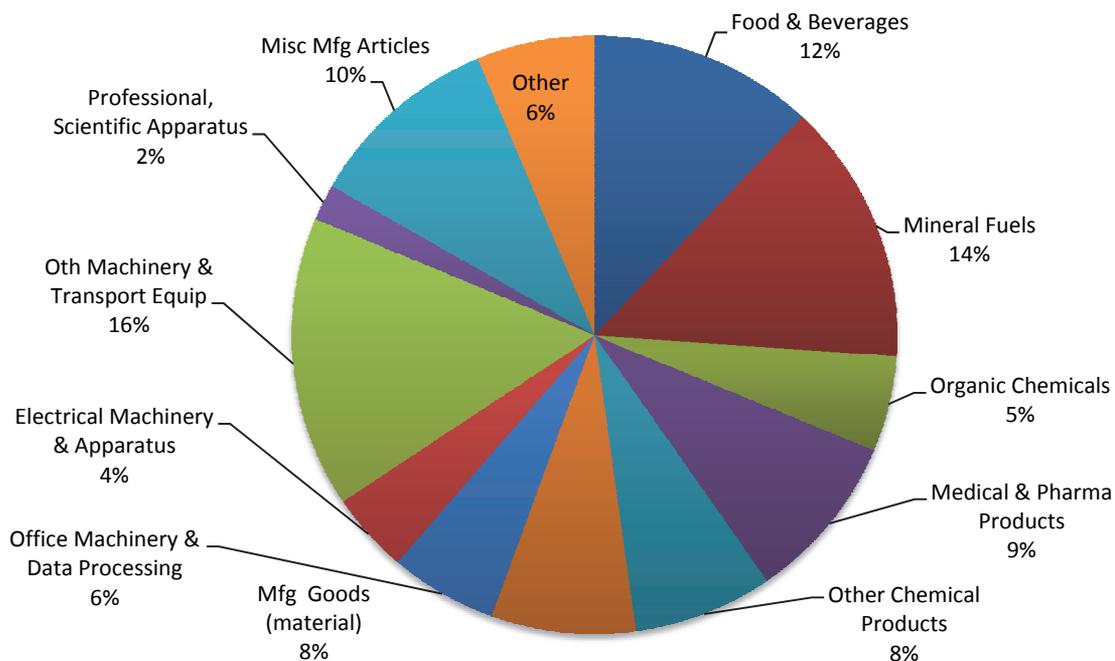
In terms of the categories of Goods Exports, Medical and Pharmaceutical products increased by 9% to €26.4bn, Organic Chemicals by 4% to €19.8bn, Dairy products by 24% to €1.8bn and Meat by 15% to €2.76bn. Meanwhile, the export of Computer Equipment fell by 10% to €4.1bn from 2010 to 2011.

Figure 2.4: Goods Exports by Category Jan - Dec 2011

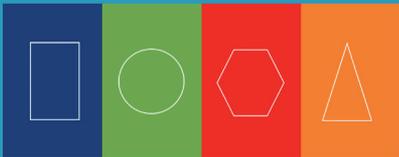


Source: CSO Goods Exports and Imports, January 2012.

Figure 2.5: Goods Imports by Category Jan - Dec 2011



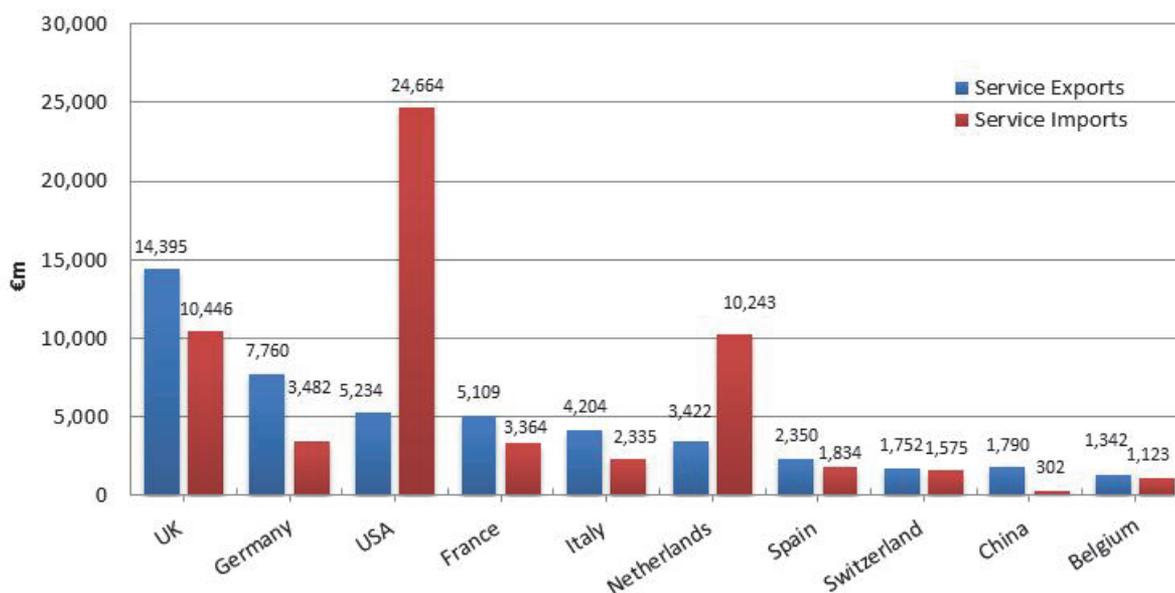
Source: CSO Goods Exports and Imports, January 2012.



2.6 Service Exports and Imports Performance - by Trading Partners

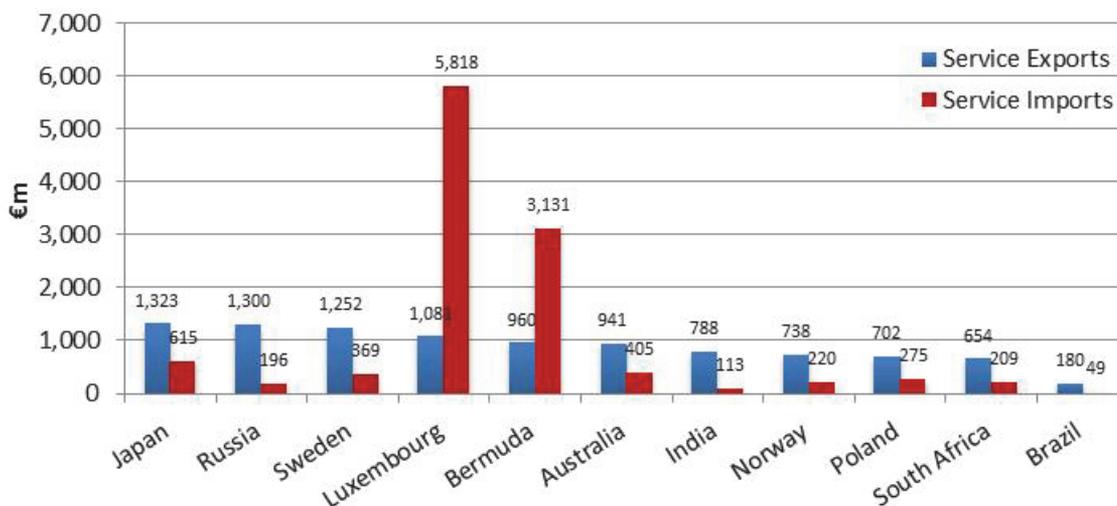
The latest CSO Service Export and Import data are for 2010. Service Exports increased from €67.1bn in 2009 to €73.8bn in 2010 while Service Imports rose from €75.2bn to €80.9bn. The UK (€14.4bn) was the biggest market for Service Exports, followed by Germany (€7.8bn), USA (€5.3bn), France (€5.1bn) and Italy (€4.2bn). Service Exports to Asia increased by €1.3bn between 2009 and 2010 to reach €7.1bn (mainly computer services and operational leasing) - of which China accounted for €1.8bn and Japan €1.3bn. The USA (€24.6bn), UK (€10.5bn), and the Netherlands (€10.2bn) comprised the principal sources of Service Imports. Imports from the USA and the Netherlands mainly represent inter-affiliate service purchases by multi-national companies based in Ireland.

Figure 2.6: Service Exports & Imports 2010 - Main Trading Partners - €m



Source: CSO Service Exports and Imports 2009 and 2010, Sept 2011.

Figure 2.7: Service Exports & Imports 2010 - Smaller Trading Partners - €m



Source: CSO Service Exports and Imports 2009 and 2010, Sept 2011.

Note: For Luxembourg €5.5bn of Service Imports are Royalties / Licence fees.

2.7 Service Exports by Category

Computer services, valued at €28.2bn were the largest Service Export category comprising 38% of total exports. Germany (€4.6bn), the UK (€3.9bn) and France (€2.4bn) were the main European markets for computer services exports. In total €3.1bn of computer services were exported to Asia.

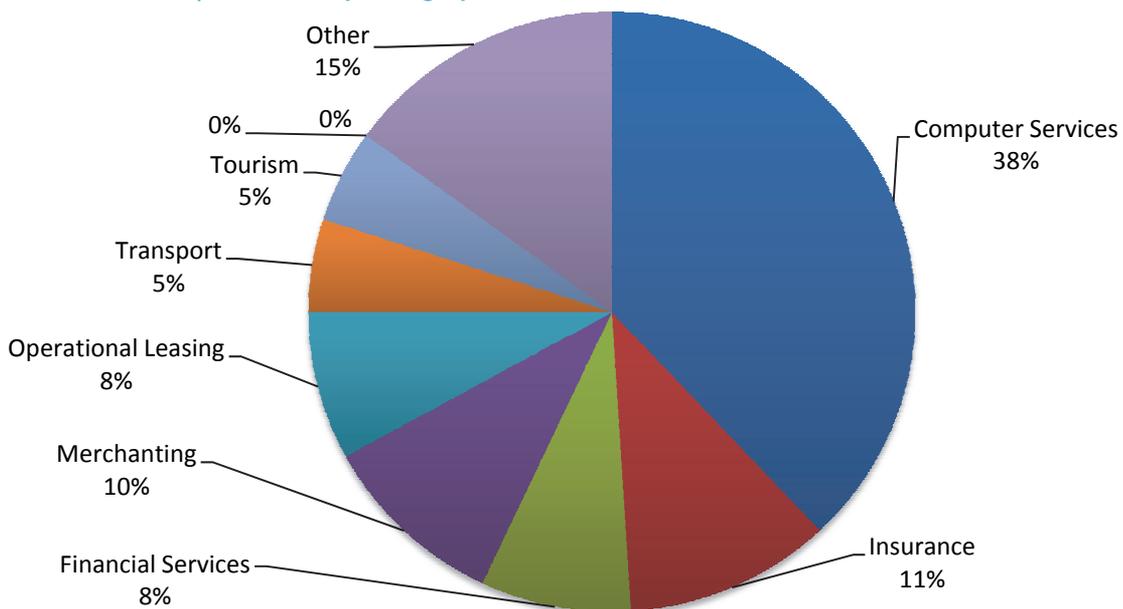
Insurance services exports were valued at €7.8bn (comprising 11% of Service Exports) - the main export markets being the UK (€1.9bn), Italy (€1.45bn) and the USA (€1.2bn).

Merchanting¹⁵ services exports (€7.3bn) comprised the third largest category of Service Exports. The UK (€1.1bn), France (€1.0bn) and Germany (€1.0bn) were the three largest European markets for merchanting services. The USA comprised €0.78bn of merchanting services exports.

Operational leasing service exports were valued at €6.26bn of which the main markets were to China (€0.94bn) and the UK (€0.42bn). Financial services exports were valued at €5.98bn - of which the UK (€1.4bn) and the USA (€0.73bn) were the biggest markets.

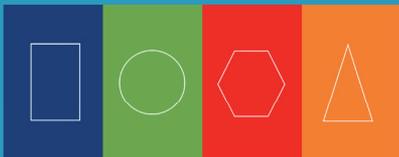
Tourism services exports were valued at €3.1bn - comprising the UK (€1.1bn), USA (€0.6bn), France (€0.16bn), Germany (€0.17bn), Italy (€0.10bn) and Spain (€0.1bn). Total tourism service exports from Asia were valued at €0.13bn of which China comprised €0.11bn.

Figure 2.8: Service Exports 2010 by Category



Source: CSO Service Exports and Imports 2009 and 2010, Sept 2011.

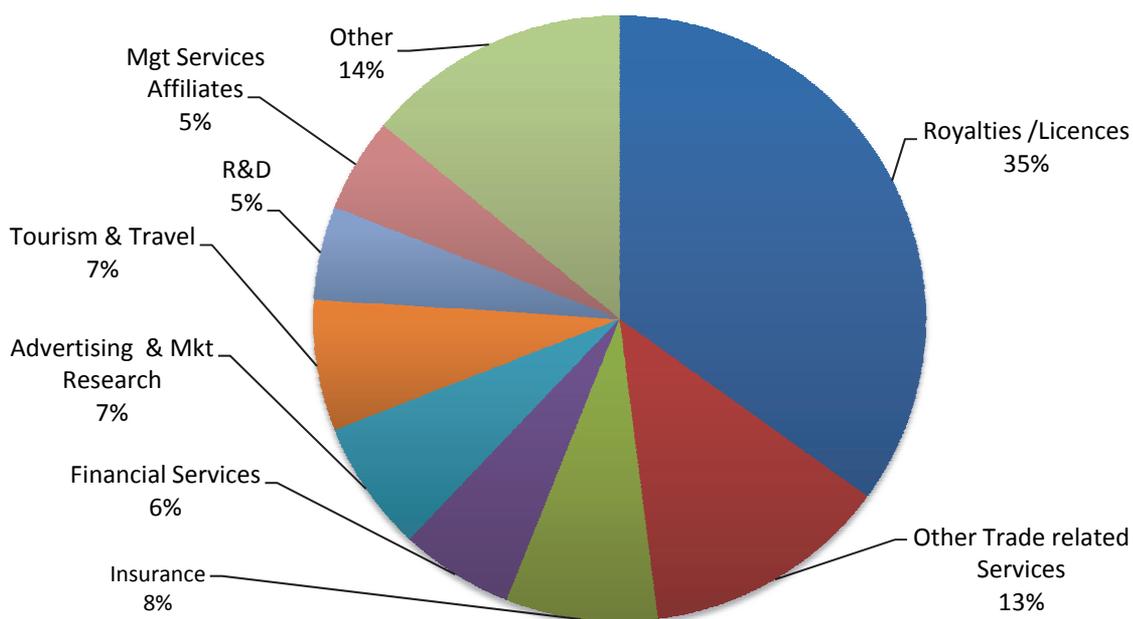
¹⁵ Merchanting consists of the sales net of purchases by Irish resident enterprises of foreign goods bought from and sold to non-residents without the goods entering or leaving Ireland. The net profit resulting from these transactions is recorded as a (positive) service export value under merchanting services. Any net loss from this activity is recorded as a negative export value. The CSO also includes under merchanting the value on a net basis of services delivered by Irish residents to foreign customers through a contracted Foreign Service provider. These services may or may not be associated with the supply of goods or equipment. The amount recorded under merchanting is the amount received by the Irish resident from the foreign customer less the amount paid by the former to the foreign contracted service provider - Source CSO.



2.8 Service Imports by Category

Royalties/Licences valued at €28.5bn were the largest Service Import category comprising 35% of total Service Imports. The USA (€7.6bn), Netherlands (€8.9bn), Luxembourg (€5.5bn), and the UK (€1.2bn) comprised the largest import countries for Royalties/Licences. Much of these Royalties/Licences imports from the USA and the Netherlands represented inter-affiliate services purchased by multi-national companies based here in Ireland. Insurance services comprised €6.1bn of Service Imports - the main import countries being the UK (€1.4bn), North America (€1.37bn) and Italy (€0.8bn). Tourism represented €5.8bn of Service Imports, the main markets for Irish tourism being Spain (€1.1bn), USA (€0.9bn), UK (0.86bn) and France (€0.56bn).

Figure 2.9: Services Imports 2010 by Category



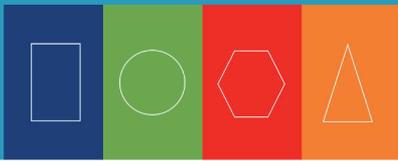
Source: CSO Service Exports and Imports 2009 and 2010, Sept 2011.

2.9 Conclusions

The concentration of Irish exports in a relatively small number of export markets (albeit major economies) and in concentrated sectors of business activity (again major sectors) leaves Ireland potentially vulnerable to global economic downturns and the cyclical nature of sectoral demand.

To a large extent, this is due to the fact that Irish trade is heavily dominated by the FDI component. The challenge is to improve the diversification of Irish trade in terms of sectors and geographic markets. This includes increasing goods and service exports to existing markets in the USA, UK, Germany, Netherlands, Belgium, France, Italy and Spain while at the same time increasing exports to newer markets in the BRICS countries and the Middle East region. There is also an opportunity to reduce input costs by sourcing inputs from a wider range of lower cost countries.

Having the right skill capability and talent is a key requirement for foreign affiliates and indigenous companies to drive their trading and export performance.



Chapter 3: Drivers of Change

3.1 Introduction

Several global, domestic and company-level drivers of change are impacting on the trading / export performance of Irish companies - both foreign affiliate and indigenous. These drivers of change are outlined as follows:

3.2 Global Drivers

3.2.1 Global Economic Outlook

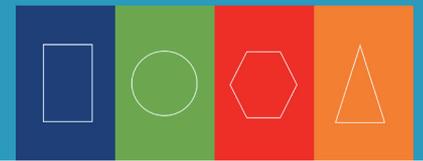
Private and Public Sector Budgets - (e.g. health care budgets) are under strain world-wide particularly within markets into which Irish companies are currently exporting. Many advanced countries are experiencing fiscal constraints necessitated by public deficit reduction measures. Consumer confidence impacts on the demand for and volume of goods and services. This results in enterprises being more cautious about making investment commitments. In addition, uncertainty around the euro is acting as a constraining factor, for example in the UK.

3.2.2 Availability of Skills and Talent

Successful trading companies require a combination of business, technical and language skills. Locations with a critical mass of skills and talent support international trading activity. A positive image of the region where a company is based is crucial for attracting and retaining talent and building up the stock of human capital. The availability of a pool of internationally orientated skills and talent in Ireland acts as an incentive for inward investment by companies scaling up to export to Europe, the Middle East and Africa (EMEA).

3.2.3 Trade Agreements aimed at Liberalising Trade between Countries

International Trade Agreements act to reduce both tariff and non-tariff barriers to trade. Their removal stimulates the growth of international trade, which is crucial for countries like Ireland with relatively small domestic markets. The European Commission has made significant progress in the negotiation of Bilateral Agreements with South Korea, Colombia and Peru and an Association Agreement with several Central America countries. The EU is currently engaged in free trade agreement discussions with India, Canada, Malaysia, and Singapore, with further discussions to take place with Japan and Indonesia. The EU has concluded several rounds of negotiations with Mercosur countries (Brazil, Paraguay, Uruguay, Argentina and Venezuela) around services, investment, customs and market access. The accession of Russia to the World Trade Organisation (WTO) will lead to the lowering of Russia's average tariff ceiling from 10% to 7.8% on all products and provide export opportunities for Ireland in the ICT sector and dairy sector. A revision of the Government Procurement Agreement has been agreed by forty-two countries. This will liberalise US\$100bn worth of public contracts per year, in addition to the US\$500bn already covered by the pact.



3.2.4 Demographic, Population and Environmental Drivers

Emerging Markets, growing world population and demographic change (with a more mature market in many developed countries) are generating a range of new products and services opportunities including for affordable agri-food/nutritional products, educational services, and health care services, i.e. personalised medicine. Climate Change pressures and the need to comply with International, EU and domestic Environmental Directives and Regulations are encouraging public bodies, enterprises and consumers to act on improving energy efficiency.

3.2.5 Maintaining a Competitive Cost Base

To ensure their international competitiveness, firms must continuously improve productivity levels. Maintaining a competitive cost base means that labour costs, energy costs and input costs generally must be kept under control. This is resulting in a drive for increased efficiency with a focus on lean manufacturing and cost control and improving productivity through the use of new technology, improved work organisation and knowledge acquisition.

3.2.6 Market Opportunities and Challenges - Existing and Emerging Markets

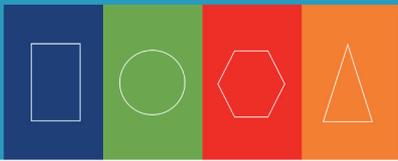
The European and USA markets are major sources of export sales for Irish based companies. Income level growth within new and emergent markets is resulting in additional market demand. There is intense competition in these growing markets. Companies approaching new markets in the Asia Pacific Region, Russia, Brazil, and the Middle East, need to understand business and cultural practices, in those countries. There can be a long lead in time to market and customer relationships need to be nurtured. This requires companies with the necessary scale and resources. Expanding into new markets requires a ramping up of skills and experience levels.

3.2.7 Converging Technologies

Converging technologies such as ICT, biotechnology, nanotechnology and cognitive sciences are presenting new product and services opportunities. Dynamic change in the IT/Telecoms markets is resulting in a wider range of connected devices on offer. The greater availability of high-speed internet access is leading to E-commerce and online growth opportunities. New technologically based opportunities include the use of data analytics (for business operations decision making and predicting customer's needs), cloud computing services/applications, and energy efficiency management. There is a need to focus on the innovative design and development of products and services in terms of how the customer uses them, rather than how suppliers deploy them.

3.2.8 Channel Management, Fulfilment and Procurement

Companies must have the logistical and customer services/support infrastructure in place to deliver consistently. Companies need to acquire/build the skills to manage a Channel Partner network. These requirements can differ across the various markets. In some cases companies may utilise a mix of direct and indirect selling. The performance of distributors and agents can vary and performance measures and monitoring must be put in place to ensure that targets are met. There is an increased tendency for buyers to seek single source procurement on a global basis. Being close to



the buyer and being part of the early development of the product can get the company's products accredited early and ready for export.

3.2.9 Country Specific Regulations/Directives

There are specific product/services certification regulation and directives across markets - including new and emergent markets, e.g. knowledge of specifications relating to the safety, testing and traceability of products. Barriers to market entry can also be high for food and drug products, for example leading to greater time and financial resources to bring to market. Export and import documentation, legal and contractual issues and Intellectual Property protection differ across countries and companies need to be aware and understand their importance for trading.

3.3 Domestic Drivers

3.3.1 Domestic Market Demand

The Irish domestic market is of limited size for companies with sales scalability potential. International markets offer a potentially bigger customer base. A fall off in domestic market demand is a challenge - and also an opportunity - in that it drives many indigenous SMEs to focus on export sales opportunities.

3.3.2 Transportation/Logistical Infrastructure

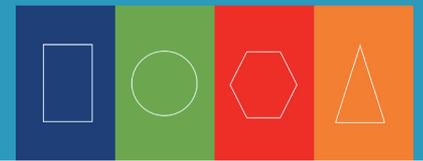
The availability of high-speed internet and transport/logistical links (air, road, rail, sea) to international markets facilitates the expansion of trade. Where such links do not exist, the export logistical task of enterprises becomes more time consuming and costly. The use of the internet for E-commerce activities has made it easier for SMEs to overcome some of these barriers to trade.

3.3.3 Access to Finance

Financing the expansion of business is a challenge, especially into new and emergent markets, which requires a sustained effort. This includes finance for the commercial research and development of products and services, market development and regulatory approval for food and drug products especially.

3.3.4 Foreign Affiliate Externalities

The existence of a strong, vibrant foreign affiliate sector in Ireland offers SMEs the opportunity to develop standards for international trade by supplying into the supply chain of those companies. It can also result in SMEs gaining insights into the standards and requirements of the export markets of foreign affiliate companies.



3.4 Company-Level Drivers

3.4.1 Meeting Customer's Needs - Developing a Unique Value Proposition

Linking customer needs to the design and development of products/services requires working closely with the customer both technically and commercially. This highlights the importance of product/service design skills from concept to production. There is a need to localise sales and delivery of product/service and a requirement for 'domain specific knowledge', language capability and the ability to network and nurture customer relationships. Engineers are increasingly required to support the sales role by meeting international customers/partners to assess their requirements and determine design & modifications to products/services which meet their needs.

3.4.2 Alignment of Professional Development of the Workforce to the Strategic Business Plan

Companies which align the continuing professional development of their workforce to their Strategic Business Plan greatly enhance their competitiveness and business performance. This includes companies that invest in the development of foreign languages and cultural awareness, including having thought out their approach to potential language barriers, having recruited or developed an internal foreign language capability, employed native speakers, and the use professional translators or interpreters for dealing with contractual issues, and producing sales literature or developing website material¹⁶.

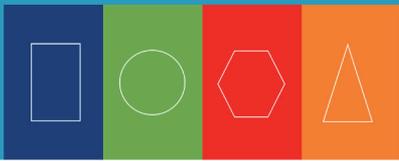
3.4.3 Characteristics of High Performing Export Companies

Effective export sales organisations are characterised by high levels of market intelligence, customer orientation, export sales management and organisation. They have managers with a capability for export sales planning, presentation, adaptive selling, sales support, technical knowledge and commercial awareness. Importing is an important activity for SMEs, not only in its own right (sourcing inputs to remain competitive) but also as a stepping stone to begin exporting. Recent research indicates that SMEs engaged in E- trading activity experience greater sales and employment growth¹⁷. Figures for Ireland E-commerce activity are that 22% of companies (with over 10 employees) make E-commerce sales to the domestic market while 14% make E-commerce sales to another EU country. For E-commerce purchases, the figures are that 45% of companies make E-commerce purchases from the domestic market and 15 % make E-commerce purchases from another EU country¹⁸.

¹⁶ Report on Language Management Strategies and Best Practice in European SMEs: The PIMLICO Project, EU, 2011.

¹⁷ Internationalisation of European SMEs, European Commission, 2010.

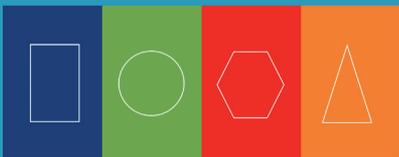
¹⁸ Eurostat Statistics in Focus 18/2012.



3.5 Different Export Models

The research undertaken has identified several export business models. These require differing skillsets and talent. Main examples of these models are:

- Companies utilising a direct selling approach - where the company has set up its own route to market - with staff/offices located in their target market and / or companies utilising a Channel Partner in-market approach - where the company has identified a partner, distributor, or agent in the specific market.
- Companies supplying into the global supply chain of another company (either as a first-tier or sub-tier supplier), where there are defined production/service criteria to adhere to.
- Companies utilising technology/internet/telecom/data analytics and social media to offer added value services that drive businesses performance and offer customers the opportunity to design and experience their own products/services.
- Foreign affiliate Headquarter operations based here which manage global business activities including R & D, sales and marketing, supply chain management and IP management - such as for markets in Europe, Middle East and Africa (EMEA). (These are not necessarily located along with the manufacturing sites).
- Foreign affiliate companies with manufacturing sites here supplying into their parent internal supply chain based outside Ireland - with the company here having little role in the marketing & sales function. Many of these companies realise the importance of acquiring these key functions to further develop their Irish base of operations.
- Companies who export products/services in global partnership arrangements - or in a strategic alliance with other international companies such as for infrastructural type project within the Cleantech/Sustainable Building sector and IT consultancy projects.
- Indigenous companies, who as well as exporting from their Irish base, have foreign subsidiaries active in overseas markets, which the company regards as a complementary part of their export model.
- For Tourism and International Education Services - the business focus is on attracting clients into the country. The promotion and design & delivery of the customer experience while in Ireland and the related skillsets which help realise this, are key.



Chapter 4: Education and Training Supports available for Enterprises to Trade Internationally

4.1 Introduction

This Chapter examines eleven countries, including Ireland, on their range of supports for enterprises when trading internationally, with a particular emphasis on skills and capability building. Seven countries are individually profiled. Specific examples of good practice are highlighted within country profiles. These may be applicable and of potential value in Ireland. Skills and capability supports include the following as outlined for the seven country profiled.

4.2 Ireland

4.2.1 Main Supports for Encouraging Enterprises to Trade Internationally

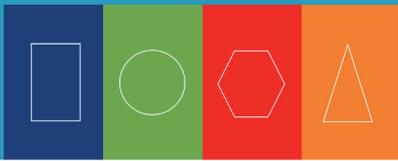
The **Department of Foreign Affairs and Trade** has responsibility for the **Export Trade Council**, the implementation of the *Strategy for Trade, Tourism and Investment* and the management of five joint economic commissions. The aim of the Export Trade Council, which is chaired by the Tánaiste, is to strengthen cooperation and coordination across all Government Departments and State Agencies involved in the promotion and development of trade and exports. Responsibility for Ministerial-led overseas Trade Missions is shared between the **Department of Foreign Affairs and Trade** and the **Department of Jobs, Enterprise and Innovation**. The *Bilateral Economic Relations section* within the *Department of Foreign Affairs and Trade*, works closely with other Government Departments, State Agencies and the private sector in identifying new export market opportunities and raising awareness of Ireland as a location for inward investment. It facilitates the development of trade and investment in Asia through the implementation of the Governments' *Asia Strategy*.

Enterprise Ireland, under the aegis of the Department of Jobs, Enterprise and Innovation is responsible for the development and growth of Irish owned enterprises in world markets. Its clients are:

- High Potential Start-up companies with the capability to sell in export markets;
- Established manufacturing and internationally traded services small or medium enterprises;
- Large companies employing more than 250; and
- Irish-based food and natural resources companies that is overseas-owned or controlled.

Enterprise Ireland offers a wide range of supports including access to its network of 31 offices in 60 markets. The Enterprise Ireland team in the market place assists companies with:

- Validating market opportunities by providing market and industry competitive intelligence;
- Refining their value propositions to local market requirements and business drivers;
- Introductions to key industry influencers / international venture capitalists;
- In-market industry conferences, sectoral events including buyer visits to Ireland;
- Accessing International Network, diaspora e.g. Irish Business Network; and
- Lead generation, PR support; and Incubator Offices (in some markets).



Enterprise Ireland provides access for each of its client companies to a Development Adviser. This adviser provides advice on business plans and on supports available through Enterprise Ireland. Enterprise Ireland's *New Geographic Market Research Grant* provides support for companies to achieve market diversification by undertaking an intensive market research assignment. The *Going Global Fund* assists established companies, with ten or more employees, to export. The *E-business Management Initiative* improves the capability of SME clients to make strategic use of the internet as a channel to develop export markets. The *Business Accelerator Programme* connects individual Irish companies with an in-market business accelerator (co-funded between EI and the company) who has industry and market expertise and can help fast track the company's progress in a given marketplace. A new *Potential Exporters Division* has launched a 'Get Export Ready' programme of supports aimed specifically at pre-exporting and early stage exporting companies. This includes a facility where companies can self-assess their readiness to export.

The **Irish Exporters Association (IEA)** is a private body that provides a range of services to assist members in their international trade. These supports include lobbying at regional, national and international level, use of IEA office resources including industry specific research, desk research and use of boardrooms. IEA also assists companies in identifying and developing overseas market opportunities. IEA runs several training and education programmes for exporters.

The **Irish Dairy Board** is a co-operative that supports its member dairy processor companies to increase their exports. The Board has a Consumer Foods Division and a Dairy Trade and Ingredients Division. Consumer Foods is engaged in the export of branded products such as Kerrygold. The Dairy Trade and Ingredients Division are engaged in 'unbranded' products that are generally exported to the food service industry. A main support is their management of international price volatility.

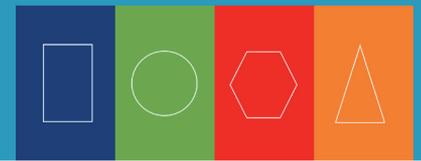
Bord Bia provides export support for Irish food, beverage and horticulture enterprises. It links Irish suppliers with overseas customers through its network of offices in Amsterdam, Dusseldorf, London, Madrid, Milan, Moscow, New York, Paris and Shanghai. Bord Bia organises international buyer meetings and helps exporters participate in major trade exhibitions.

The **Irish Business Employers Confederation (IBEC)** represents its member companies at an international level, including with the European Commission and the World Trade Organisation.

InterTrade Ireland is dedicated to increasing trade between the North and the South. InterTrade provide support through market reports and funding programmes. The Trade Accelerator Vouchers programme provides funding for companies to obtain professional advice on exporting to Northern Ireland. The *Acumen Sales and Marketing Programme* provides funding for companies who wish to export to Northern Ireland to employ expert professionals to assist them.

4.2.2 Education and Training Supports

Enterprise Ireland's *International Selling Programme* delivered in partnership with the Dublin Institute of Technology (DIT) covers modules including strategic positioning, sales process, key



account management, competitive selling, marketing intelligence, new customer acquisition/lead generation, routes to market/engaging with Channel Partners, culture and negotiation and a practical meet the buyer module. The Programme culminates with the participant presenting an export growth plan for their company for the following year. *The Excel at Export Selling Workshop Series* comprises one to two day workshops which cover one topic from the international marketing and sales skillset. *First Flight Workshops and Mentors* is a one day introductory workshop with advice from EI Overseas Market Advisers, case studies, and information on EI support services. Participants may also be assigned a mentor who assesses the company using an *Export Readiness Assessment* and assists them to develop and implement an action plan.

The *EI Graduates for International Growth programme (G4IG)* places young graduates in companies within a market research function. This programme is 18 month duration, of which a minimum 12 months is spent overseas, and is run in conjunction with UCD. The successful graduate receives a Diploma in International Growth.

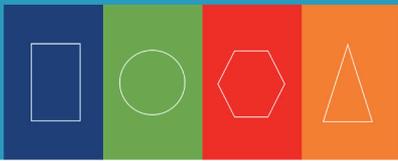
The **Farmleigh Fellowship**, a not for profit body based in Singapore which is co-funded between the Irish Government (Department of Foreign Affairs and Trade, and Enterprise Ireland), Industry and the *Global Irish Network in Asia*. The *Farmleigh MBS programme*, established in 2011 with 23 students, is a 12 month work-study programme (3 months in Ireland and 9 months in Asia). During the programme, the student identifies market opportunities, generates a practical business project and start building networks for their sponsor. The programme is run between University College Cork and NTU Singapore. The *Farmleigh Internship* which commenced in 2012 with 25 internships is designed to place Irish talent on internship projects across Asia (for 3, 6 or 12 month periods).

The **Irish Exporters Association (IEA)** provides information on several trade related topic areas including, getting started, reaching target markets, market research, agents and distributors, export and import documentation, customs classifications, excise and duty, export license and controls, credit insurance, and trade fairs and promotion. IEA provides a specialist advisory service to assist companies with visas for exporting. IEA also provide seminars and events on specific export issues. The **Institute of International Trade Ireland**, established in 1953 under the Irish Exporters Association, provides training for businesses engaging in international trade.

The *IBEC Export Orientation Programme (EOP) for Graduates* has been running since 1983. The company receives a grant to hire a graduate for 12 months to work on an international project either overseas or from Ireland. A minimum of 6 months must be spent abroad. The programme comprises three phases. In Phase one, students attend two weeks of classes in the Dublin Institute of Technology. Phase two comprises the *Postgraduate Diploma in International Business Development*. Phase 3 comprises an MSc in International Business Development.

4.2.3 Education and Training Supports Targeted at Trade to Key Markets

The Enterprise Ireland website provides a range of country reports on specific markets. These publications and videos provide exporters with practical information about topics such as taxation



and on cultural differences. The **Ireland China Association** holds seminars on a variety of topics related to doing business in China. The **UCD Confucius Institute** offers a range of courses on the Chinese language and cultural aspects of China. **IBEC Asia Business Network** provides market information on Asian countries. IBEC and the Institute of Chinese Studies (UCC) are collaborating on a programme that involves online training for businesses planning to trade with China. The **Ireland Japan Association** holds seminars and events aimed at encouraging exports to Japan. The **Asia Pacific Ireland Business Forum** supports linkages between GAA clubs and businesses in the Asia-Pacific and Gulf regions. The **Ireland Russia Business Association** organises networking events and seminars on Irish business opportunities in Russia. The **Ireland South Africa Business Association** aims to increase bilateral trade between Ireland and South Africa.

4.2.4 Education and Training Supports for Sectoral Opportunities

The **Irish Exporters Association (IEA)** provides sector specific education and training supports in life sciences and food and drink sectors. *Life Sciences Ireland* is a group under the IEA whose aim is to drive exports by life sciences enterprises. Its courses are accredited by the **Institute of International Trade Ireland**. *Food and Drink Export Ireland* is another division under the IEA. It runs the *Channel Clusters* programme to support the development of clusters of exporters to the UK and the *Celtic Recipes Programme* which educates SMEs on best international market practice.

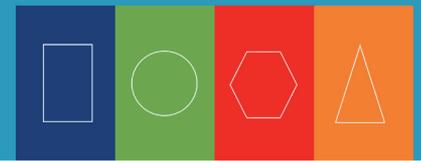
Bord Bia runs the *Food Export Marketing Graduate Programme* which supports graduates working in overseas markets for Irish food and drink exporters. It was developed in partnership with IBEC. The 18 month programme involves graduates undertaking a *Diploma in International Business Development* with Dublin Institute of Technology. There were 13 graduates on the first programme (Aug 2011). The *Bord Bia Marketing Fellowship Programme* provides an opportunity for marketing fellows working towards an *MSc in Marketing Practice* with the UCD Smurfit Business School, to be placed in overseas markets working on commercial assignments. The *Bord Bia Strategic Growth (Food Industry) Programme* is a two-year part-time executive development programme designed to enhance the leadership capabilities of employees in the Irish food and drink sector.

Tourism Ireland acts as a support to the Irish tourism sector, as an export industry. Tourism Ireland supports companies in their promotion of Ireland as a place to visit. The organisation provides some education supports for the tourism industry in the form of workshops, including for example, workshops on how to market a tourism business online.

Education in Ireland is a support for Irish education providers in the international market. The Education in Ireland website acts as a platform for international students to find out about what Irish education providers can offer them. It provides information on primary, secondary and third level education providers in Ireland along with general information on accommodation etc.

4.2.5 Measurable Outcomes Linked to Supports Provided

The *First Flight* programme has been identified in the European Commission as a good example of an individualised support programme that can be adapted to cater for the different needs of SMEs.



4.3 Denmark

4.3.1 Main Supports for Encouraging Enterprise to Trade Internationally

The role of the **Trade Council Denmark (TCD)** is to encourage enterprise to trade. *Key Account Agreements* developed between Danish companies and the Trade Council enable companies to use Danish embassies overseas to promote exports. The **Confederation of Danish Industry (DI)** provides an international network and offers its members consultancy and information on export opportunities and overseas market trends. **Eksport Kredit Fonden (EKF)** provides export credit guarantees, investment guarantees, project finance and globalisation guarantees. **The Danish Export Association** is a private not-for-profit organisation that provides its members with sector specific international networking and information support. The **Danish Chamber of Commerce** organises regular information events on selected export markets and international payment terms.

4.3.2 Education and Training Supports

Education and training provision is aimed at all companies, although SMEs are given some preference - as can be seen in the *Innovation Package Programmes*. The Trade Council Denmark (TCD) part funds many of the programmes they run as well as contributions being made by the company itself. The Trade Council Denmark provides education and training supports to encourage enterprises to trade internationally. These supports are.

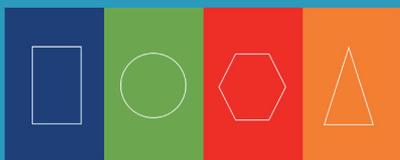
- Information about trade strategy and trade barriers.
- Subsidies for starting and establishing a business in a new export market.
- Information and training on recruitment, export promotion and market analysis.

The Confederation of Danish Industry provides information and advisory services on strategic concepts for businesses wishing to trade internationally, outsourcing, foreign establishment, international marketing and sales and financing international activities. *Developing Denmark* is a campaign aimed at increasing economic growth through seminars/ events on emerging economies - specifically on Brazil and India.

Trade Council Innovation Centres located in Munich, Shanghai and Silicon Valley act as a training support for companies in the cleantech, life sciences, and ICT industry. The centres offer training and education opportunities for Danish companies seeking to export to these markets. The *Innovation Package Initiative* is an SME training programme run in these Innovation Centres. *Born Global* is a TCD program aimed at businesses engaged in IT, telecom, electronics and games, health, energy and environment. It includes the TCD sector specific export preparation programme and the export start programme along with promotions, special events and conferences.

4.3.3 Measureable Outcomes Linked to the Supports Provided

Born Global and the *Innovation Package Programme* are cited by the European Commission report as valuable supports for SMEs increasing their trade internationally.



4.4 Finland

4.4.1 Main Supports for Encouraging Enterprise to Trade Internationally

The **Ministry of Employment and the Economy** are a main support for encouraging enterprises to trade internationally. *ELY Centres*, set up under the Ministry provide programmes to encourage businesses to export and offers some financial aid. One of the programmes, the *Export Network Programme* brings together 4-6 business joint projects, whose products or services complement each other. The **Enterprise Finland** website highlights supports for companies planning to engage in international trade.

Government Grant/Finance Agencies

Several government agencies provide financial assistance for enterprises planning to trade.

Finnfund - an agency funded by the **Ministry of Foreign Affairs** - provides long-term risk capital for profitable projects in developing countries and Russia. *Finnpartnership*, a programme run under Finnfund, facilitates the formation of partnerships between Finnish companies and those in developing countries. Another government financing agency (**Finnvera**) provides funding for export risks including loan guarantees, equity investments and export guarantees. The *Nordic Project Fund* provides interest free loans (up to 40% of costs), for SMEs exporting to Nordic countries.

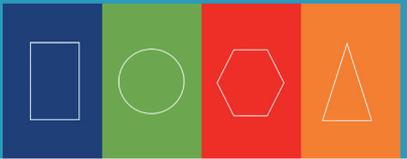
4.4.2 Education and Training supports

Globaali (ELY Centre) is an education and training support, for SME enterprises planning to trade internationally. The company is assigned an expert who helps them develop an export strategy and plan. **CIMO (International Mobility Corporation)** runs a student and graduate internship programme on international business. The *Finpro Navigator* programme provides information and consultancy services at each stage of exporting. Finpro also runs a programme called *Foresight*, which seeks to identify future global business opportunities. *PRF Trade Registry Services* cover mostly intellectual property issues, including a seminar on IP rights in China. The **Academy of Finland** provides financing support for companies planning to export to Russia, India, Japan, China, Taiwan, Argentina, Brazil and Chile. The **Ministry of Employment and the Economy** provides supports for researching opportunities in Russia, China and India. *KiVi* is a programme run by the **Federation of Finnish Enterprise with the Chambers of Commerce**. It organises seminars for the distribution of information relating to internationalisation.

There are few education and service supports directly aimed at increasing sectoral opportunities for engaging in international trade. Measures are mainly publically funded, such as *Finnfund* and *Finpro*, but a small fee may be required in some cases.

4.4.3 Measurable outcomes linked to the supports provided

KiVi is cited by the European Commission as a good programme for providing export information to SMEs. *Globaali* is also cited as a good practice enterprise programme - having supported over 700 enterprises to improve their readiness for exporting. *Finnpartnership* is also cited as a promotion network that allows SMEs to further their understanding of international trade.



4.5 Netherlands

4.5.1 Main supports for encouraging enterprise to Trade Internationally

The **NL Agency** under the aegis of the **Ministry of Economic Affairs, Agriculture and Innovation** has five divisions. The **NL EVD International Division** holds trade missions to support Dutch companies involved in international trade. The *Matchmaking Programme* is a process by which the NL EVD International Division introduces Dutch companies to foreign companies in their sector in export markets. It aims to enhance Dutch companies' business knowledge of the market and build their business contacts. Grants available to business include:

- *Prepare2start* which offers advice and guidance on exporting and financial support.
- *Private Sector Investment* grants to businesses to engage in innovative investments projects.
- *2g@there* programme financial support to clusters of companies and research institutions.
- *Package4growth* subsidy scheme to obtain expertise on the Chinese and Indian markets.
- *Scan Finance* which assists businesses applying for grants for international trade.

The **Internationaal Ondernemen** website set up by the *International Business Network* aims to make trade information more accessible. This includes *Export Scan* which is an online questionnaire for companies to assess their readiness for international trade. The company receives recommendations on areas of improvement and tips for exporting.

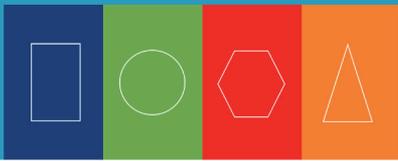
Chambers of Commerce act as a support to encourage enterprises to trade internationally through the provision of online information. Their website provides information on different areas related to exporting, including setting export plans, legal requirements and regulations.

4.5.2 Education and Training Supports

Fenedex is a private organisation for Dutch exporters. Their courses provide participants with the knowledge and skills to sell successfully on the export market. **EVO** is a private organisation that represents Dutch logistics companies. It offers training courses on customs procedures and VAT abroad. The **Royal Tropical Institute (KIT)** provides training on *Intercultural Management and Communication*. **E&M Export Management** runs a post graduate programme, *Export Market Management*, and a modular programme, *International Business Development*. These are accredited by the Dutch government. The *Indonesia Facility (INDF) programme* run by **NL EVD International** seeks to increase cultural links between the Netherlands and Indonesia. NL EVD International runs an *Asia Facility China programme*, with work placements, training and scientific and technological exchanges. **Fenedex** provides workshops on doing business in the Middle East which cover the legal rights and obligations of enterprises doing business in Saudi Arabia, Egypt, Kuwait, Iran and United Arab Emirates.

4.5.3 Measurable Outcomes Linked to Supports Provided

Prepare2start, is cited by the European Commission. Findings reported are that 18% of SMEs who took part would not have exported to the target market without taking part in the programme. Also, 30% of participants increased their exports to the target country. *Internationaal Ondernemen* is also identified as a source of information for SME and cross-border finance.



4.6 Germany

4.6.1 Main Supports for Encouraging Enterprises to Trade Internationally

German Centres for Industry and Trade, located in China, India, Indonesia, Singapore, Mexico, and Russia, facilitate small and medium enterprises to penetrate foreign markets. They offer a range of support services such as exhibition spaces and conference rooms. **DEinternational (AHK) - German Chambers of Commerce Abroad** offer commercial services to companies including researching new market opportunities, legal and tax issues information, sourcing local staff and exhibition services. **German Chambers of Commerce and Industry**, such as **Berlin IHK**¹⁹ provide valuable web-based information on exporting and importing, country market information about export preparation and procedures and international trade fairs and events.

The **KfW IPEX-Bank** provides subsidies to both German and European companies planning to engage in international trade. *iXPOS*²⁰ - the new *German Business Portal* which is promoted by the **Federal Ministry of Economics and Technology** provides marketplace information for international companies seeking to export to Germany. **BDEX - The Federal Association of German Export Trade** acts as an 'umbrella' support organisation for enterprises through their involvement in trade policy formation and promotion. **Germany Trade and Invest**, a federal government development agency, provides information on export markets, international project notifications and practical business information. The *E-trade Centre* website helps German exporters publicise their exports on the internet. Grants may often be provided by state governments. For example, the Baden-Württemberg government provides grants to SMEs for export advice.

4.6.2 Education and Training Supports

Regional government seminars and workshops are provided on a fee paying basis. For example the **Baden-Württemberg Chamber of Commerce** provides an '*Exporters Academy*', which offers a range of seminars for exporters on topics such as export controls, consumption taxes and country specific information such as market information on the US and Brazil.

The **Latin American Business Association** supports trade between Germany and Latin America. The **German Asia-Pacific Business Association** provides supports aimed at increasing trade between Germany and the Asia-Pacific region including country and industry specific events. The **German Near and Middle East Association** supports trade between Germany and the Middle East.

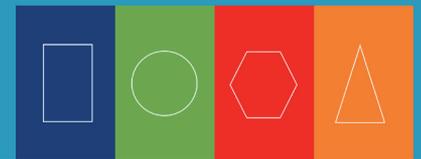
The **DEinternational Website** provides information on foreign markets for certain sectors including food, education and training biotechnology, renewable energies, and construction. It provides a contact person for that market for further advice.

4.6.3 Measurable Outcomes Linked to the Supports Provided

The **German Centres for Industry and Trade** are identified by the European Commission as a support which has assisted over 1,500 enterprises entering demanding growth markets. *German Chambers of Commerce Abroad (AHK)* is cited as a good source of information on foreign markets for SMEs.

¹⁹ <http://www.ihk-berlin.de/English/en>.

²⁰ <http://www.ixpos.de/IXPOS/Navigation/EN/your-business-in-germany.html>.



4.7 UK

4.7.1 Main Supports for Encouraging Enterprises to Trade Internationally

UK Trade and Investment (UKTI) is the UK Government's international business development organisation. UKTI has an international network of 1,300 staff, employed in trade teams located in 96 countries, including in UK embassies. There are 20 tiered levels of support for companies. Companies are offered a package of services, the cost of which is dependent on the level of support provided. Whereas supports at levels one to three are free, the total support package at level 20 may cost a firm up to £20,000. The **Department of Business, Innovation and Skills** provides an *Export Enterprise Finance Guarantee Programme*. The *Business Link website* provides an online support and information services for enterprises, including regulations, customs procedures and systems, export and import licences, moving goods, and tax. The *Export Credit Guarantee Department* insures UK exporters against non-payment and shares the credit risks with banks in order to help exporters in raising working capital finance and securing letters of credit.

4.7.2 Education and Training Supports

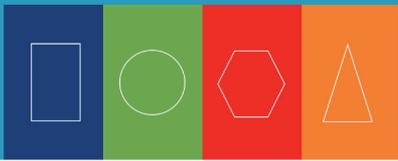
The UKTI *Passport to Export* training programme includes an assessment of the company's readiness for international trade and offers the company support for visiting potential markets. The company is assigned a local export professional as a mentor. *Gateway to Global Growth* is a twelve month training programme which provides strategic support for exporting companies seeking to break into new markets. The *Export Communications Review* programme provides training on language and cultural issues. It provides consultants to help the business review their website and also training for personal. The UKTI *Overseas Market Introduction Service* offers companies market and sector advice, an analysis of the company's market entry strategies and support during the overseas visit. The programme helps the company to identify possible business partners in the market.

Asia Task Force aims to increase exports to Asia by bringing together experts from industry, education and government. The Task Force provides information, advice and support on business opportunities in Asia. The **Middle East Association** aims to increase trade for British exporters in the region. The association provides seminars on a fee paying basis, such as for businesses wishing to engage in trade with Saudi Arabia called '*Opportunity Arabia*'. UKTI also provides website information on exporting to Middle Eastern and South American countries including on business opportunities, sectoral opportunities and country advice.

The **Food and Drink Export Association** is a private organisation that provides members access to export market workshops. UKTI offers web information on several sectors including on events and business opportunities.

4.7.3 Measurable Outcomes Linked to the Supports Provided

Passport to Export is identified by the European Commission report, as a good example of an individualised support programme.



4.8 Singapore

4.8.1 Main Supports for Encouraging Enterprises to Trade Internationally

International Enterprise (IE) Singapore is the government agency with responsibility for driving international trade. Its supports include a *Basic Guide to Exporting* with information on export procedures, tax scheme supports and capital assistance grants. IE Singapore supports enterprise network initiatives, including *Network India and Network Indonesia*. IE Singapore also runs trade missions, promotion activities and provides training and capability development opportunities for companies planning to export. IE Singapore provides an *Advisory Centre* and online *iAdvisory* portal where companies can gain information and support on exporting from other exporters.

TradeNet (launched in 1989) is government supported and acts as a single portal for Singapore's trade and logistics community. It allows easy access to information on trade and trade supports available for exporters in Singapore. *TradeNet* also provides document processing procedures. The **DesignSingapore Council** nurtures and assists design students in their career and professional development by offering opportunities through grants and assistance programmes. It also offers a scholarship to augment design students undergraduate or postgraduate studies at recognised institutions worldwide. The *Overseas Promotion Partnership Programme (OPPP)* run by the Council aims to enhance the international recognition of Singapore design capabilities and to consolidate Singapore's position as a global design city.

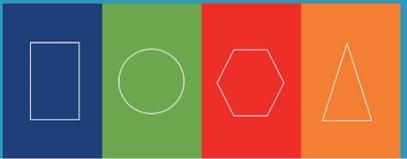
4.8.2 Education and Training Supports

International Enterprise Singapore education and training supports include the *Exporter Development Programme* which is delivered as three integral courses. The first course involves the company selecting a mentor from IE Singapore's panel of coaches. The coach helps the company develop an export strategy for the next five years. The second course covers international distribution channels, export marketing, branding and intellectual property, export sales and market research techniques. The final course involves the company undertaking a five day trip to a selected market to increase their market knowledge and understanding. There is an emphasis on business opportunities between Singapore and China and other Asian countries.

The **Singapore Food Manufacturers Association** disseminates information about exporting and promotes exports through their Exporters Club. The **Building and Construction Authority** provides information to its members on specific export market opportunities. IE Singapore's new *Green Programme Office* is a support for environmental technology and services in export markets.

4.8.3 Measurable Outcomes

TradeNet has been praised by the *World Bank in the Doing Business 2011 Report* as one of the best electronic single window systems making it easier for exporters to gain information and submit documentation and providing links to other organisations. This is one of the main reasons why Singapore is ranked world number one for doing business in the report.



4.9 Conclusions

There are a range of supports for enterprises to trade internationally available across the eleven countries profiled. Available European Commission and OECD reports provide information on best practice examples. A number of these are drawn upon in the conclusion of this report in terms of how useful an approach they could be for Ireland.

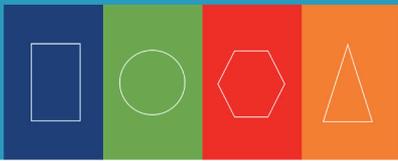
Although there are variations in the nature and scale of supports available, there are several common features in the initiatives offered. It is interesting to note that there are few public supports for enterprises to import even though for some companies this may be the first step towards exporting. The most prevalent types of supports available relate to supports for companies to export. These are outlined as follows:

Coaching/Mentoring programmes. These generally involve the company being assigned an export professional who acts as a coach/mentor. The mentor provides the company with the benefit of their export knowledge and experience. Countries that run these types of programmes include, Ireland (Enterprise Ireland, *First Flight Mentors* and *Business Accelerator programme*), France (CNCCEF, *CCE trade advisors*), UK (*Gateway to Global Growth*, *International trade advisors*), Singapore (IE Singapore, *Export Development programme* and *International Market Immersion Programme*, iMIP), Australia (*Getting into Export*) and Finland (*Gloaali*).

Internships/Graduate programmes are widely used by several countries. These programmes typically involve a young graduate being placed on an internship with an international company for several months. The graduate generally receives a monthly allowance which is either funded by the company or by the organisation running the programme. The aim of these programmes is for graduates to acquire international business experience to assist companies in their own country. Countries that run these types of programmes include Ireland (*Enterprise Ireland*, *Graduates for International Growth*, *IBEC Export Orientation programme* and *Bord Bia Food Export Graduate programme*), Canada (*Export Development Internship Programme*), France (*V.I.E.* programme) and Portugal (*INOV Contacto*). France's *V.I.E.* programme and Portugal's (*INOV Contacto*), are cited as good examples of human development programmes by the European Commission.

Networks for the benefit of international trade are run in all countries. These networks help exporters make contacts in the new markets they are trying to access. Examples of networks can be seen in Finland (*FinNode*), The Netherlands (*Internationaal Ondernemen*), Germany (*iXPOS* and *E-trade centre*) and Singapore (*IE Network India* and *Network Indonesia*). *International Ondernemen* (IO), in particular, is identified by the European Commission as a good source of information for SME and cross-border finance.

Individualised Training programmes are evident in some countries. These support training tailored to the needs of the company. Notable examples are Enterprise Ireland's *First Flight* programme, and the UK programme *Passport to Export*. These programmes are cited as good examples of



individualised support for exporters in the European Commission report, *Supporting the internationalisation of SMEs Good practice selection* (2008).

There are several examples of **public provision of education and training supports** directed at increasing trade to key markets. In Ireland, examples include *IBEC Asia Business Network* and *China Challenge* and the *UCD Confucius Institute*. Other examples are the *Canadian Centre of Intercultural Learning* and *Singapore's International Business Fellowship*. Country specific education and training programmes are more often provided by the private sector. Examples include the *German Asia-Pacific Business Association counselling services*, the *Latin American Business Association* training provision and the *German Near and Middle East Association*. The *Canadian Council for the Americas* holds events and seminars on doing business in Latin America.

There are few examples of **sector specific education and training provisions** for enterprises planning to engage in international trade. Existing programmes are mainly aimed at the food sector, IT sector and the life sciences sector. There are a number in Ireland including those run by *Life Science Ireland*, *Food and Drink Ireland* and the *Bord Bia Food Export Graduate Programme*. Other examples are the *Danish Innovation Centres and Born Global Programme* and the *UK Food and Drink Export Associations training programme*.

Export Credit Insurance/Guarantee Schemes to assist enterprises to trade internationally are provided. The necessity for increased provision of credit for SMEs to decrease financial barriers to internationalisation is mentioned in the *OECD Entrepreneurship Final Report on Top Barriers and Drivers to SME Internationalisation* (2008). This emphasis is also clear in the credit schemes available in the profiled countries. Examples can be seen in Denmark (*Danish Export Credit Agency, EFK*), Finland (*Finnvera*) and the UK (*Export Credit Guarantee Department, ECGD*).

Grant Schemes are a feature for several countries. Examples can be seen in Ireland (Enterprise Ireland's, *New Market Research Initiative*, *Going Global Fund*, *Feasibility Studies Grants*, and *Trade Fair Participation Grants*, and Intertrade Ireland's *Trade Accelerator Programme*), Finland (*Finnfund*), the Netherlands (*Prepare2start*, *Package4growth*, *2g@there*), France (*SIDEX*, *Support Individualised Approach to Exporting*), Germany (KfW IPEX- Bank), Singapore (*Overseas Promotion Partnership Programme, OPPP*), and Canada (*Export Development Canada*). The Dutch programme *Prepare2start* is cited by the European Commission and the Canadian scheme *Export Development Canada* is identified by the *OECD report on Top Barriers and Drivers to SME Internationalisation* (2008).

While there is an emphasis across countries on providing supports for SMEs, the majority of supports are also open to companies of all sizes. Some governments and organisations direct companies towards European level supports available such as the *Enterprise Europe Network*. Available EU and OECD reports provide information on measurable outcomes from the supports provided. Examples of these, as well as best practice examples cited therein, are reported in this Chapter.

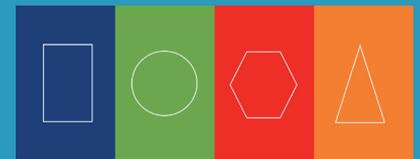


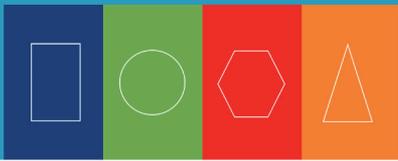
Table 4.1: Overview of Supports across countries for Enterprises to Trade Internationally

	Information/ Advisory/ Consultancy	Network Support	Trade Missions / Fairs	Financial Supports	Internship / Graduate Programme	Company Education /Training	Company Coaching / Mentoring	Market Education/ Training	Sector specific Education /Training
Denmark	///	✓	✓	///	-	///	✓	✓ Germany /China / USA	<ul style="list-style-type: none"> • Innovation Package Initiative • Born Global ICT/Life Sciences/Cleantech/Games/Health/Energy/
Finland	KiVi Programme	Finpro Export Partnership	✓	///	✓	Gloaali Programme	✓✓	✓ China/India /Russia /Japan /Brazil	
Netherland	<ul style="list-style-type: none"> • Prepare2start • Internatioaal Ondernemen 	✓	✓	///	-	///	TBC	<ul style="list-style-type: none"> • Matchmaking Programme Asia/Middle East 	
Portugal	✓	✓	✓✓		///INOV Contacto	✓	✓✓	✓✓ China/ Brazil	
France	///	✓	✓✓	///	/// VIE Programme	///	✓	/// China / South America / Brazil/Russia	
UK	///	✓	///	///	-	/// Passport to Export	✓	✓✓ Asia Middle East/South America	✓ Food/
Germany	///	/// German Chamber Network	/// German Centres Abroad	✓	-	///	-	✓✓ South America /Asia/Pacific / Middle East	✓✓Information on markets & sectors - food/energy /biotech/ building /
Ireland	///	✓✓	✓✓	✓	✓✓	/// First Flight	✓✓	✓China/Japan/ Russia/South Africa/Asia-Pacific	✓✓Export training re Food and Life Sciences/Food graduate programme
Singapore	/// TradeNet	✓	✓	✓	✓	///	✓	✓✓Asia / South America	✓✓information on Food/Eco-construction and Environmental
Australia	/// Austrade	✓	✓	✓✓	-	///	✓✓	✓✓Asia/Brazil/ Middle-East	✓
Canada	///	✓	✓	/// Export Canada	✓✓	///	✓	✓ Asia/ South America/USA	✓✓Export training for Food and IT

Note1: Examples of best practice - according to international Review - are highlighted in red.

Note 2: Number of ticks indicates estimated intensity of the support provided.

Source: Forfás



Chapter 5: Skills Demand for Enterprise to Trade Internationally

5.1 Introduction: Research into Enterprise Skills Requirements

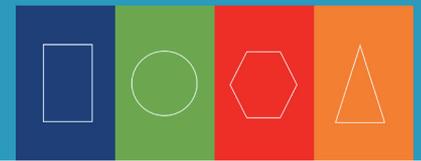
As an integral part of this Study, original research work was undertaken with a selected range of exporting companies from different sectors and with relevant stakeholders. The focus of the research was around the current and future skills requirements of the selected enterprise(s) to drive their trade and export market growth. The research work was designed to elicit enterprise views on their skillsets/competency requirements within key business function areas (a) Management, (b) Marketing, (c) Sales, (d) Fulfilment (Distribution and Installation), (e) Customer Service & Support and (f) Design and Development. This Chapter provides an analysis of the findings of this research work for companies engaged in different sectors of activity, followed by an overview of the main findings / conclusions across sectors. There is also an overview of skills and competency requirements arising in a number of selected major markets.

Structured topic questions developed by Forfás working with the Steering Group for the Study sought companies' views on:

- (a) their most important factors for success in export markets.
- (b) their key skills and competency requirements and any anticipated skills capability gaps/shortages.
- (c) how they were planning to meet their future (2-3 years) skills/competency requirements.
- (d) the adequacy of the current nature, scale and quality of education and training provision to meet their skills requirements.
- (e) how their current and anticipated skills requirements can best be met - required scale, nature and quality of provision and delivery method.

The research work which examined skill sets and competencies within key business function areas comprised four main elements.

- Structured interviews were conducted at senior company representative level with 42 selected foreign affiliate and indigenous companies from different sectors. They included small, medium and large sized companies at different stages in their export market development.
- Consultations were held around these topic issues in structured interviews with fifteen stakeholders, both public and private.
- Three workshops were held, one in Cork (SMEs) and two in Dublin (Service Exports and Product Exports) based upon a structured topic format. Around 60 companies and stakeholders participated to review and discuss the findings of initial research work and to incorporate additional valuable knowledge into the research.
- Structured face-to-face interviews were undertaken with six companies from different sectors for more in-depth case study work. They were designed to gain more detailed insight into their skills and talent capability strengths.



5.2 ICT Hardware and Software

5.2.1 Profile of Sector

Ireland is a successful major centre for ICT operations with nine of the top ten software companies in the world having substantial operations here. The large talent pool of ICT professionals that exists here is valuable both for foreign-owned and Irish companies. The cluster of internationally renowned firms and Irish companies offer a range of attractive career opportunities for professionals. Irish owned firms have gained leading positions in niche markets providing tailored software for the financial services, healthcare, education and entertainment sectors.

From CSO Business Demography data, there are approximately 75,000 employed in the sector within 8,000 companies. However, forty-five firms account for 50% of total employment, with the largest 225 firms accounting for 70% of employment²¹. From Forfás Employment survey data, there are 750 foreign-owned companies employing 62,000 staff that export an estimated €50bn p.a. There are 500 Enterprise Ireland assisted software companies employing 10,000 staff generating €1.4bn export sales p.a.²² ICT is a dynamic sector encompassing:

- Software programs to operate computers and related devices.
- Applications systems which manage the various programs on a computer.
- Middleware which is any programming that serves to "glue together" or mediate between two separate and often already existing programs.
- IT services including data processing, outsourced IT services, and IT consulting services.
- Electronics and Hardware including semiconductors, integrated circuits and storage devices.
- Communications services through fixed line, wireless and internet.

An increasing share of employment within the sector in Ireland is accounted for by people with high-level skills. This is a result of a shift in subsector employment from hardware towards software, a general shift in the skills mix, and a pattern of simultaneous creation and loss of jobs, resulting in lower-skilled jobs being replaced with higher-skilled. There is a resilient demand arising within the ICT sector here due to:

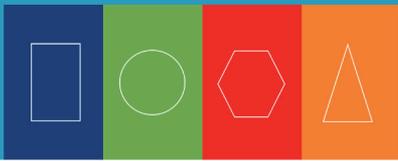
- An expansion of the business operations of companies, inflow of foreign R&D investment and formation of new start-ups.
- Potential for foreign companies to win mobile investment from their parent company and the availability of high skilled personnel to enhance their business proposition.

Opportunities within the market for ICT exist to:

- Position Ireland as a leader in cloud computing - both as a provider of supporting software, services, and related hardware and as an early adopter across the enterprise and public sector to realise associated productivity gains.

²¹ The source for this employment total and proportion of employment by company size is CSO Business Demography Data for 2009 (published June 2011).

²² Source: Enterprise Ireland Strategy for the development of the indigenous software industry 2009 - 2013.



- Develop as a centre of excellence for software engineering in high growth areas such as telecommunications (including mobile), cloud computing, security and financial services.
- Increase niche equipment manufacturing in low and medium volumes, particularly for IP sensitive products.
- Take advantage of opportunities arising from convergence areas such as E-health.

Emerging skills demands are around cloud computing, service design, database management, social networks and media, development of E-commerce applications and internet marketing.

5.2.2 Profile of Participant Companies - ICT

Seven companies from the sector were interviewed as part of this research. The findings reported in this section relate to these companies. Ninety-five percent of sales are exported. Companies export both products and services.

Key drivers of demand for skills cited by companies were:

- Availability of high speed internet access.
- Increasing prevalence of a wide range of connected devices.
- Developing markets have large growth potential.
- Subscribers moving away from networks.
- Public sector budgets are under pressure.
- Roll out of 4G Networks.

The impact of these drivers on workforce skills and knowledge include understanding customer requirements, the need for technological innovation to improve efficiencies, constant upskilling in the face of rapid roll out of new devices, increased local market knowledge, foreign language skills, project management skills to customise products for different clients and skills associated with managed service solutions.

The USA, UK, and Eurozone countries are ranked the main export markets for products and services followed by Asia, Canada, and the Middle East.

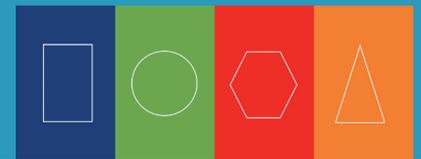


Table 5.1: ICT Companies - Export Markets - Ranked by Value

Export Markets	Companies						
	A	B	C	D	E	F	G
USA	2		1	2	9	2	3
UK		1	2	1	1		2
Eurozone	3	2		3	5	1	1
Non-Eurozone				4	3 Norway	3	
Middle East	1				4	4	
Asia	4 India	3 Malaysia & Singapore	3				
South America					8 Chile		
Russia					7	5	
Other		4 Canada			2 Canada 6 Sth Afr		

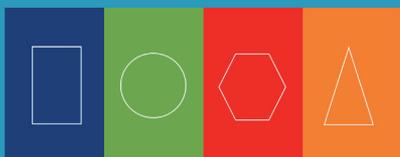
Notes: Number refers to rank - 1 means highest ranked by value.

5.2.3 Success Factors in Main Export Markets

Factors contributing to the success of the companies in export markets include strategic market analysis, identifying international customers' needs and adapting/developing quality products and services to meet those needs. Support services provided by Enterprise Ireland were also cited.

Table 5.2: ICT Companies - Main Factors leading to Export Success

Company	Main Factors leading to Export Success
A	<ul style="list-style-type: none"> Innovation in products. Reacting to customers' demands promptly.
B	<ul style="list-style-type: none"> Good relationship with EI offices internationally. Making local hires to support business acquisition. Getting reference sites in new markets.
C	<ul style="list-style-type: none"> Shift from IP development to software development. EI leadership for growth training.
D	<ul style="list-style-type: none"> Reference sites in new markets. Adapting system in response to client needs. Networking, identifying key decisions makers.
E	<ul style="list-style-type: none"> Creating quality products. Getting reference customers especially blue chip customers.
F	<ul style="list-style-type: none"> Delivering products to meet the needs of markets. Building an engineering platform.
G	<ul style="list-style-type: none"> Hiring skilled workers to meet market demands - specifically language skills for EU countries and software developers.



5.2.4 Global Supply Chains

Four companies sell into the global supply chain operations of large multinationals such as Samsung and Texas Instruments. One company supplies into its own long established company internal supply chain (the company operates in 170 countries). This requires a steady stream of skilled workers with foreign language proficiency and cultural awareness skills.

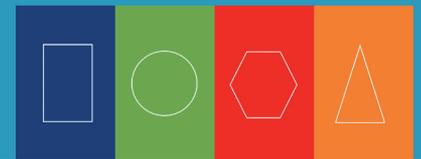
5.2.5 Skills Requirements of Companies to Drive their Export Performance

Strategic export business planning, global partnership management, project management, marketing skills, export sales planning, channel management, professional sales skills, design and innovation skills, foreign languages and cultural awareness and communication skills were identified as key skills essential to export success. Companies anticipate difficulties over the next 2 - 3 years sourcing (a) sales staff with foreign language proficiency and (b) computing science professionals.

Table 5.3: ICT Companies - Skills Requirements to Drive Export Performance

Skills & Competency Requirements	Companies						
	A	B	C	D	E	F	G
Management Skills							
Strategic Export Business Planning		1		+			
Global Partnership Management	3	+					
Project Management			+	3		2	
Financial Risk Management				5			
International Marketing Skills	4	4	1	1	2	3	
Key Account Management			3	+			
International Sales Skills	+	3	4	2		4	3
Design & Innovation Skills - Linking customer needs research to the design of new products and services.	2	+		4	1	1	
Foreign languages and cultural awareness	+	2	+				2
Technical Skills							
Software Development Skills							1
Soft Skills - Interpersonal skills, Emotional Intelligence, Problem Solving, Analytical skills, Communication skills	1	+	2	+	+	5	4

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.
 (b) + means not in top five at present but increasing in importance.



5.2.6 ICT Sector - Skills Requirements in Key Business Function Areas

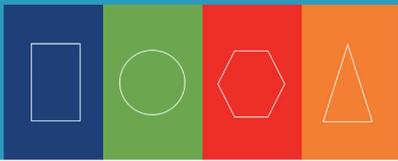
The main skills and competency requirements within key business function areas to drive the export performance of companies over the next 3 years are shown in Table 5.4.

Table 5.4: ICT Companies - Skills Requirements in Key Business Function Areas to Drive Export Performance

Business Function Area	Skills & Competency Requirements
Management	<ul style="list-style-type: none"> ▪ Strategic export business planning, global partnership management, project management, financial risk management, negotiation, relationship building and communication skills are key skills requirements. ▪ Lack of candidates with international management experience anticipated.
Marketing & Sales	<ul style="list-style-type: none"> ▪ Market research, awareness of the target market / sector domain knowledge and linking products to customer needs are key skill requirements. ▪ Key account management and channel management are key skills of the channel management function. ▪ Export sales planning, choosing the right target markets and also the right partners, and E-commerce skills were identified as key skills requirements for the sales function. ▪ A lack of professional sales candidates is anticipated.
Fulfilment - Distribution & Installation	<ul style="list-style-type: none"> ▪ Project/Programme management along with managing distribution via agents and distributors were listed as key skills for Fulfilment.
Customer Service / Support	<ul style="list-style-type: none"> ▪ Foreign language proficiency and communications skills are essential for customer service and support. Key account management skills are important. ▪ Anticipated lack of customer service / support candidates with foreign language proficiency.
Product /Service Design & Development	<ul style="list-style-type: none"> ▪ Key skills are usability design and linking of customer needs to the design and development of new products and services.

5.2.7 Key Skills Required for Import Activity

International procurement experience is a key skill for import activity.



5.2.8 Foreign Languages Proficiency

Two companies export mainly to English speaking countries. Five companies export to a range of European markets and require language proficiency in German, French, Spanish, Italian, Dutch and Swedish. Some companies export to markets in Asia and the Middle East. One company mainly hires native staff for each market. There is a concern around an anticipated lack of suitable candidates with foreign language proficiency over the next 2-3 years in German, French, Italian, Portuguese, Swedish, Polish, Norwegian, Finnish and Danish.

Table 5.5: ICT Companies - Foreign Language Proficiency Requirements

<i>Companies</i>					
<i>Language</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>G</i>
German	1	3	1		3
French		3	1	1	3
Spanish	1				
Italian	1				3
Dutch		3		1	3
Swedish					3
Norwegian					+
Finnish					+
Danish					+
Hindi				1	
Japanese			1		

Notes: (a) Level of Proficiency required are: 1 = Basic, 2 = Independent, 3 = Proficient

(b) + means not ranked in top five at present but increasing in importance.

(c) International customers for two companies (not included in table) are fluent in English.

5.2.9 E-commerce

All companies have an online presence. They use their websites to demonstrate products/services and also link to various social media. E-commerce is changing so fast it requires constant refresher education. Web design, hosting, content management, and social media skills are the main skills requirement for E-commerce.

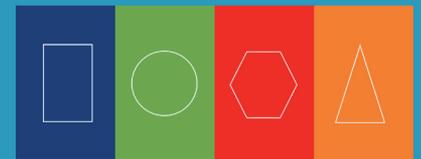


Table 5.6: ICT Companies - Use of E-commerce

	Companies						G
	A	B	C	D	E	F	
Information on firm online	✓		✓				✓
All products shown online	✓	✓	✓	✓	✓	✓	✓
Orders can be placed online							✓
Order and payment online							✓
Other	✓ Members area on website for Blogging / information sharing	✓ Product Demos, Blogging and Social Networks	✓ Product Demos, Blogging and Social Networks		✓ Product Demos	✓ Social Networks (Facebook, Twitter, Google)	✓ Social Media Sales and Marketing

5.2.10 Generic Skills

Communication skills, interpersonal skills, emotional intelligence, and problem solving were the main generic skills needed across occupations to drive export performance.

5.2.11 Recruitment Issues

A shortage of skills in the ICT sector was highlighted. The main recruitment difficulties (in terms of both numbers and quality) were for computer science/software development skills and international sales with foreign language proficiency. Companies had recruited from abroad including through offices in China and Hungary, switched to using recruitment consultants and hired young developers that were trained and mentored. Positions companies have recently recruited abroad for are:

- Computer Science/Software developers.
- Sales professionals with foreign language skills.
- Export Sales professionals.
- Technical Developers.
- Product Managers.

5.2.12 Skills Companies would Employ If Available

Experienced software engineers, web developers and sales staff with foreign languages and cultural awareness, are skillsets that would be employed if they were available.

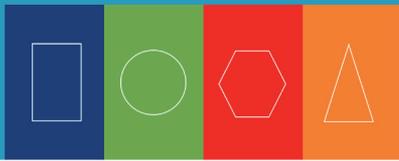


Table 5.7: ICT Companies - Skills that Companies would employ if available

Company	Skills that Companies would employ if they were available
A	<ul style="list-style-type: none"> ▪ Software Engineers and Developers (currently recruiting internationally). ▪ Sales staff with language and cultural awareness.
B	<ul style="list-style-type: none"> ▪ Specialist Engineers.
C	<ul style="list-style-type: none"> ▪ Project Managers. ▪ Implementers & Documenters with Dutch/German - Junior Testers.
D	<ul style="list-style-type: none"> ▪ Experienced Software Developers. ▪ Experienced key sales personnel.
E	<ul style="list-style-type: none"> ▪ Technical staff with good technical writing skills. ▪ QA testing (automated testing).
F	<ul style="list-style-type: none"> ▪ Web Developers. ▪ Sales support staff with problem solving and interpersonal skills.
G	<ul style="list-style-type: none"> ▪ European languages. ▪ Sales Management. ▪ Programming - Computer Science.

Recruitment agencies, the web (some companies have a dedicated website), education providers, social media such as LinkedIn, Xing and Facebook as well as ‘word of mouth’ are utilised by companies as recruitment sources.

5.2.13 ICT Companies - Views on Irish Graduates

There were mixed views among companies in respect of Irish graduates. Some considered that salary expectations were relatively high and that their work ethic compared less favourably with those from Eastern Europe. Others were pleasantly surprised and saw graduates as presenting good potential. Graduates with practical work experience were considered better placed to commence work quickly. It was commented that technical graduates often lacked soft skills including written and oral communications and customer awareness. Computer science graduates were viewed as lacking practical experience and knowledge. It was considered that more females need to be attracted to computer science disciplines to help rectify the current gender imbalance. There is a concern that there are currently no formal international sales courses at third level. It was considered that the uptake of modern foreign languages in the education system is low and that too few students travel to non-English speaking countries to gain foreign language skill proficiency.



5.2.14 Case Study OpenJaw Technologies

OpenJaw Technologies is an Irish owned company, established in 2002, which provides software applications for the travel industry. It has sales approaching €10 million and a staff complement in Ireland of approximately 110. The company is on a growth track to add 50% to its sales within a 2-3 year timeframe. In addition to its offices in Dublin and Galway, the company has offices in Spain, Germany and the USA.

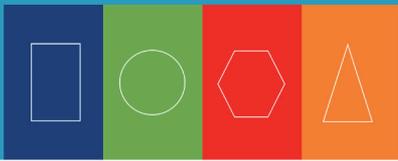
The core skill set in the company is in software applications development. There is an overarching requirement for software engineers, developers and IT experts of all disciplines. There is no single software development language as the company has to enable its systems to operate in many hardware and operating systems environments. Java and web native languages are in particular demand and mobile applications development skills will also become more important (Apple, Android, Google+ etc).

The key skills issue facing the company lies in recruiting and retaining sufficient software developers in Ireland. There is an on-going shortage of these skills and competition for these resources, despite the current economic downturn in Ireland, is keen. While the company is both Irish owned and Irish headquartered, it also operates in a highly international milieu and therefore has always been open to the possibility of recruiting from outside the country. While the local market remains the default preference for initial recruitment, the company has recruited both directly from overseas and from the pool of international talent already resident in Ireland. It has also leveraged its presence for instance in Spain to locate some key skills.

One of the key messages from a company like OpenJaw to policy makers and to students thinking of third level education is to consider the needs of this sector and the employment opportunities that exist. The supply of software engineers needs to be increased, while not compromising on quality. Equally the message needs to be sent to people considering their careers that there are today and are likely to be into the future excellent opportunities in the area of software development and related information technology skills. Related skills include software testing, system administration as well as design of network and security systems.

The company operates in a highly internationalised niche where English is the main working language. Being based in a native English speaking country gives the company some advantage. However, in terms of selling to some key markets, the sales and marketing function does require native language skills and cultural awareness. It has an office in Spain which allows for selling in Spanish to Spain and Latin America, key growth markets for the company. A side benefit of the Spanish presence is access to developers from Spain who might relocate to Ireland. Other territories where native language skills for selling are felt to be essential include China, Russia, Germany, France, Italy and Portugal/Brazil. OpenJaw has contracted sales representation with native language skills in both Germany and Russia. Like many Irish organisations, the company has benefited also from recent inward migration to Ireland and already has a multinational workforce at its headquarters.

Considerable attention is paid to in-house development of skills in the staff and some staff have been sponsored through, for example, MBA or Enterprise Ireland's sponsored management and sales development programmes. The preference in the company is to focus on the rigour of such training and to insist on independent verification of education attainment as a quality driver.



5.2.15 ICT Sector Conclusions

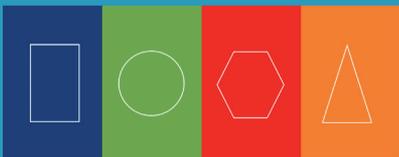
Strategic export business planning, marketing, sales and language skills, design and innovation skills in response to customers' needs, computer science and related soft skills were the main skills identified for export success. Companies report difficulties sourcing computing software staff and sales personnel with foreign language proficiency.

Companies interviewed exported to English speaking countries, European markets and to a lesser degree, Asia and the Middle East. This requires language proficiency and cultural awareness including for German, French, Spanish, Italian, Dutch and Swedish. There is a concern around a lack of suitable candidates with language proficiency over the next 2-3 years, particularly German, French, Italian, Portuguese, Swedish, Polish, Norwegian, Finnish and Danish. Some companies plan to increase exports to Asian countries and language skills and cultural awareness for these markets will increase in importance for them.

Future skills needs by main function area within the companies interviewed are for:

- Managers with strategic export thinking, negotiation and account management skills.
- Strategic export business planning skills for selecting the right target markets/customers.
- International marketing skills to identify customer needs and develop a unique value proposition.
- Skills in selecting and managing Channel Partners/Agents in the target market.
- International Sales and foreign language proficiency skillset.
- E-commerce skills.
- Design & Innovation skills to meet international customer needs.
- Customer service/support staff with linguistic and good communication skills.

Experienced software engineer developers and sales staff with foreign language skills are in short supply and would be employed if they were available. There is a need to boost the domestic supply of graduates with high-level ICT skills from the third-level system. (It is planned to double the output of ICT graduates by 2018 through measures contained within the recently launched National ICT Action Plan). Recruiting foreign nationals to fill the ICT skills gap was viewed as a short term solution as these skills tend to be mobile and begin to churn after 2 to 3 years. One company stated that the processing of visa applications for foreign nationals to fill the high-level ICT skill gap needed to be improved. Also that Irish ICT professionals working abroad could be targeted to consider returning to Ireland. There was much support for conversion courses, (as per the recently launched NFQ Level 8 ICT conversion programme announced within the Governments ICT Action Plan), to help to address skills recruitment difficulties.



5.3 Life Science

5.3.1 Profile of Sector

The Life Sciences sector includes pharma/biopharma, health biotechnology, medical devices, diagnostics, and functional foods/nutraceuticals. The sector comprises leading multinationals with 15 of top 25 medical devices and 9 of top 10 pharma/bio companies with research, manufacturing and services activities located here. In total, some 49,000 people are employed in 350+ enterprises. Exports were valued at €48bn in 2011 accounting for 52% of total Goods Exports²³.

Exports from indigenous Life Sciences enterprises totalled €682m in 2010. Indigenous employment was 5,938 in 2010. There is a growing indigenous base made up of medium sized Irish owned technology intensive companies operating across medical technologies, pharma/biopharma and veterinary products & services. There is a strong base of companies which provide support services for the sector, including contract research, regulation and project management.

Global developments impacting on business opportunities in the sector include:²⁴

- Ageing populations, increases in chronic illness and increased demand from emerging economies all contribute to positive growth prospects for the sector.
- Technological convergence stretching across pharmaceuticals, biotechnology, medical devices and diagnostics is resulting in the creation of many convergent product business opportunities.
- A shift towards *personalised healthcare* which embraces research, diagnostics, testing devices, and delivery mechanisms.
- A shift from *hospital to patient centric care*, as appropriate at home or in the community.
- Growing importance of the health & lifestyle market.

There is intensified competition from other locations that are targeting investments to develop their Life Sciences Sector. These includes Costa Rica (manufacturing); Singapore (manufacturing and increasingly R&D), North Carolina and Massachusetts (biotechnology); Netherland (clinical R &D); Switzerland (pharma) and China and India (emerging strengths for generic drugs manufacturing).

In addition, impending expiry of patents, global over-capacity, significant R&D costs and a low pipeline for new products in the pharma sector also add to the challenges for the sector. There is also a downward pricing pressure from healthcare funders - Governments and Insurers. All of the above increase pressures to demonstrate the efficacy of new products and their value for money.

Ireland's internationally recognised track record in the manufacturing of Life Science products is a strength but in itself is an insufficient basis to ensure future growth. This will require leveraging added value business activities within companies, including corporate marketing & sales, Intellectual Property, supply chain management, process and product research and R&D services.

²³ CSO, Goods Exports and Imports, March 2012.

²⁴ EGFSN Report (2010), Future Skills Requirements of the Biopharma-Pharmachem Sector.

5.3.2 Profile of Participant Life Science Companies

Seven companies from the sector were interviewed. The findings reported in this section relate to these companies. An average 90% of sales of the companies were exported. The majority (85%) of export sales comprised of products. One company which exports services is engaged in testing and approving equipment. In total, 5,700 people are employed by the companies interviewed and their combined sales are approximately €1bn.

Key drivers of demand for skills as identified by the companies are:

- Public sector budget pressures.
- Increased tendency by buyers to seek single source procurements on a global basis.
- Technical regulation of healthcare e.g. by the USA Federal Drug Administration.
- Products coming off patent.
- Governments increasing willingness to adopt generic pharmaceuticals.
- Personalised medicine treatment is becoming a growing theme.
- Relatively high cost of manufacturing in Ireland - especially salaries, electricity and oil.

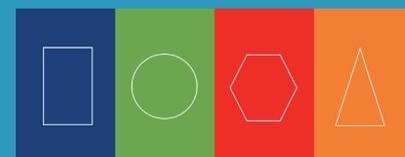
The impact of these drivers on the organisation of work is resulting in an increased focus on efficiency and cost reduction measures. Their impact on workforce skills includes an emphasis on lean manufacturing skills, design and innovation of new product skills, quality assurance skills, the ability to build and maintain partnerships with other suppliers, regulatory procedures, compliance skills and knowledge of the procurement strategies of buyers.

Europe and the USA are the highest ranking exports markets at present and are expected to continue to be so over the next 3 years. However, for some companies, Asian export markets, (China, Japan and Korea), will grow in importance.

Table 5.8: Life Science Companies Export Markets - Ranked by Value

<i>Export Markets</i>	<i>Companies</i>						
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
USA	3		3	1	1		
UK	2	1		2	2	1	
Eurozone	1	2	2			4	1 Belgium
Non-Eurozone			1 Switzerland				2 Switzerland
Middle East						2	
China	5						
Other - Asia	6 Japan			4 Korea	3 Japan		
Brazil	4						
Other				3 Canada		3	

Notes: (a) Number refers to rank - 1 means highest ranked by value.



5.3.3 Success Factors

A range of factors influenced success in export markets for companies, including the choice of export markets, product research & development, technical support and service levels, regulatory compliance and alignment, excellence of front line sales team, building a network of distributors, and the availability of talent as outlined in Table 5.9.

Table 5.9: Life Science Companies - Main Factors leading to Export Success

Company	Main Factors leading to Success
A	<ul style="list-style-type: none"> ▪ Conserving cash at an important juncture in the company's development. ▪ Building a network of distributors in the last 3 years. ▪ Being selective about which investors to invest in the company.
B	<ul style="list-style-type: none"> ▪ Good products. ▪ New product development. ▪ Excellence in front line sales team performance.
C	<ul style="list-style-type: none"> ▪ Relationships with Irish based life science companies as an entree to worldwide sales. ▪ Technical R & D, technical support and service levels. ▪ Business development.
D	<ul style="list-style-type: none"> ▪ Strategic alliance and affiliate programmes. ▪ Choice of export markets. ▪ Good team and high calibre chairman. ▪ High quality website, marketing material, product/service descriptions and proposal presentation.
F	<ul style="list-style-type: none"> ▪ The company has a well-established brand.
G	<ul style="list-style-type: none"> ▪ Talent and ready availability of English speaking staff. ▪ Regulatory compliance and alignment between the Medicine Board & FDA requirements.

5.3.4 Global Supply Chains

Two companies are engaged in internal global supply chain operations requiring high service level standards, quality assurance, cost control, lean manufacturing and relationship management.

5.3.5 Skills and Competency Requirements to Drive Exports

Strategic export business planning, market research, international sales skills, foreign language and cultural awareness, knowledge of international/sectoral specific standards & regulations and soft skills are the companies' top skills to drive their export performance. Lean manufacturing skills and legal and intellectual property skills are increasingly important. The first is related to the need to improve productivity, while the later may be related to companies targeting Asian markets where counterfeiting and intellectual property security is a concern. With the exception of one company, little difficulty is anticipated in sourcing these skills.

Table 5.10: Life Science Companies - Skills Requirements to Drive Export Performance

Skills /Competency requirements	Companies							
	A	B	C	D	E	F	G	H
Management Skills								
Strategic Export Business Planning	4			2		1	+	+
Project Management							1	2
Entrepreneurial Skills						+	+	
Contract/Legal/Knowledge and IP Protection	+			+				
International Marketing		2			1	2		
International Sales	1	1	2	1	2	4		
E-commerce	3			4				
Fulfilment - Knowledge of international/country/sectoral specific Standards & Regulations			3		4	3		1
Logistics and Distribution		3	5					3
Design & Innovation Skills Linking customer needs to the research and design of new products and services)			4	3			2	4
Foreign Languages and Cultural Awareness					5		3	5
Soft Skills -Networking, Relationship Building, Negotiations, and Communication Skills	2		1		3		4	+
Production Costs. Lean Manufacturing.		4			+			

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.

(b) + means not ranked in top five at present but increasing in importance.

5.3.6 Key Skills/Competency Requirements in Key Business Function Areas

The main skills requirements to drive the export performance of companies within key business functions areas over the next 3 years are shown in Table 5.11.



Table 5.11: Life Science Companies - Skills Requirements in Key Business Function Areas to Drive Export Performance

<i>Business Function Area</i>	<i>Skills & Competency Requirements</i>
Management	<ul style="list-style-type: none"> ▪ Key management skills requirements are strategic export business planning, project management, cost control and quality maintenance. Entrepreneurship skills, networking, relationship building, negotiation and communications skills are important. ▪ Difficulty recruiting project managers.
Marketing & Sales	<ul style="list-style-type: none"> ▪ Market research intelligence and knowledge of country and sector specific regulations are key skills required in marketing. ▪ Sales skills, E-commerce and Channel Partner management and support, establishing and managing relationships with distributors and account management are key requirements. ▪ Difficulty sourcing experienced international sales professionals. ▪ Given companies targeting of Asian markets, Chinese Mandarin proficiency and cultural awareness will be increasing in importance.
Fulfilment - Distribution & Installation	<ul style="list-style-type: none"> ▪ Knowledge of country and sector specific regulations are key skill requirements. Logistical & Distribution skills are required especially for BRICS countries. ▪ Foreign language proficiency and culture awareness are key skills for fulfilment and customer service.
Customer Service / Support	<ul style="list-style-type: none"> ▪ Foreign language proficiency and cultural awareness.
Product / Service Design	<ul style="list-style-type: none"> ▪ Design & innovation skills - linking customer needs in real time to the design and development of new products and services.

5.3.7 Life Science Companies - Foreign Language Skills Requirements

English is the main working language within the Life Science sector. Consequently, there has been a low demand for foreign language proficiency. Companies also use distributors in the target markets who are customer facing to handle their language requirements. Sales people who are knowledgeable in the industry have also been hired locally. Companies that possess foreign language skills consider that they are proficient in them. However, an increased demand for Mandarin Chinese and Russian language proficiency is anticipated over the next 3 years to support plans for increased sales to those markets.

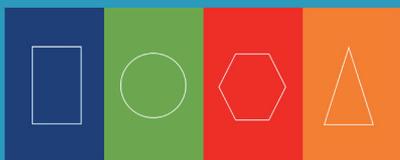


Table 5.12: Life Science Companies - Foreign Language Skills Requirements

<i>Language</i>	<i>A</i>	<i>D</i>	<i>F</i>
German			3
French	3		3
Russian	3		3 increasing
Arabic			3
Chinese		3 increasing	
Hindi	3		

Notes: 1 = Basic, 2 = Independent, 3 = Proficient

5.3.8 Recruitment Issues

Recruitment issues included accessing skills in Ireland at the right price and sourcing a number of staff from abroad due to perceived working visa process constraints. Positions sought included experienced marketing specialists, Head of Quality Assurance, Head of Operations, and Specialists in the Product Development process. To resolve these difficulties one company had located part of its operation abroad. Three companies had recently recruited from abroad - one in the US for a position based there, another to obtain local market knowledge, and the third for high-end chemical engineering and bio analytical capability. Web based sourcing, recruitment agencies, 'word of mouth' and educational providers were the main recruitment methods used.

5.3.9 Skills Companies would Employ If Available

Skills that companies would employ if they were available to them are export marketing professionals, international sales professionals, project management, software engineers, web based E-commerce experts and commercial buyer positions as outlined in Table 5.13.

Table 5.13: Life Science Companies - Skills Companies would employ if available

<i>Company</i>	<i>Skills companies would employ if available</i>
A	<ul style="list-style-type: none"> Software developers for development diagnostics with C, C ++.
B	<ul style="list-style-type: none"> R & D.
C	<ul style="list-style-type: none"> Engineers (production, process) and a Commercial Buyer.
D	<ul style="list-style-type: none"> E-business professionals. Experienced sales professionals > \$100,000.
E	<ul style="list-style-type: none"> Business to Business sales with knowledge of pharmaceuticals. Clinical trial management.
F	<ul style="list-style-type: none"> Project Management and experienced export marketing professional

5.3.10 Life Science Companies - Views on Irish Graduates

There were mixed views in relation to the quality of Irish graduates. One company prefers staff with a number of years' experience and do not hire new graduates. Their view was that post doctorate researchers with some experience are good quality but expensive.



5.3.11 Case Study Abbott Ireland

Abbott is a world leading bio pharma group with sales of \$39bn dollars, 90,000 employees and a presence in 130 countries worldwide. They sell a range of pharmaceutical, medical and nutritional products.

Abbott in Ireland

Abbott is one of Ireland's leading health care companies, employing almost 4,000 people. Abbott Ireland has been operating in Ireland since 1946. The company manufactures and markets a broad range of health care products including medical devices, and pharmaceutical, diagnostic and nutritional products. Abbott has eight manufacturing facilities located in Clonmel, Cootehill, Cork, Donegal, Longford and Sligo. It has commercial operations in Dublin and shared services in Dublin and Westport. The set of skills required by Abbott in Ireland to support its export growth includes manufacturing excellence, quality management, new product management, cost control, mature products management (i.e. Abbott patented products coming off patent) and sales and marketing into Ireland as well as the business support service to other parts of the group.

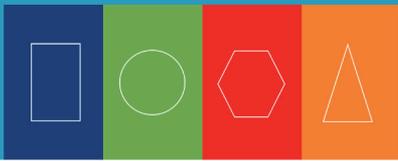
As part of a multinational organisation and with such a significant presence in Ireland, Abbott has made a significant investment in managing the skills and talents in the organisation to support its business performance in a high value range of business activities. Its HR function in Ireland is centralised and is itself an integral part of the worldwide HR function in the group. In Ireland it is organised under four key areas, namely:

- Learning and Development - focused on skills development and leadership within the existing workforce.
- Talent Acquisition - focused on bringing new people and skills into the organisation (recruitment).
- Compensation and Benefits.
- 'My HR Team' - a back office support function to deal with all queries from employees. In addition Abbott has on-site HR business professionals in its key locations to provide strategic HR support to the business.

In terms of the learning and development function, there is a strong philosophy within the company of hiring graduates and other less experienced people and bringing them on within the company. However, the emphasis on development continues throughout the employee's career within Abbott. The commitment starts with an intake of about thirty undergraduates per year on internships, who may or may not continue with Abbott on eventual graduation.

Approximately 15-20 graduates are taken into a graduate development programme each year. This involves four placements of six months each in different parts of the business, at least one of which will be in a supervisory capacity. There is also the possibility for some of these graduates to have one of the postings outside of Ireland as part of the internationalisation of the employees.

For middle managers, a leadership development programme is on offer which is run internally in four modules over 12 months on a cross site basis. Some of the themes covered include leadership, change management and communication skills. The participants work in groups, including on a



specific business project on which a report is presented and assessed by senior colleagues and feedback given. Up to 40 employees may be attending this programme at any one time in Ireland. This is part of what is regarded internally as a 'development journey' which has the parallel benefit of allowing future talent in the company to shine relatively early in their middle management careers.

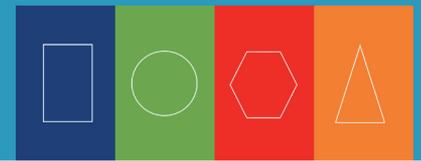
In addition there are senior management leadership programmes supported by coaching (external support) and mentoring (internal to the Abbott group). Similar to the middle managers' programmes this programme is anchored in participants delivering a strategic project to the Ireland Business Advisory Council (made up of site leaders from each location). The aim of this programme is to increase the confidence and capability of the senior manager to move to the next level in the organisation. As a global company, employee mobility can be an important dimension within and outside of Ireland for some positions and key talent. Corporately, Abbott has invested heavily in intercultural management tools and in support services to maximise the success of moves by key people in the organisation. For instance, it has built on a commercially available tool, the *Cultural Navigator*, tailored it to its own requirements and made this available internally to all staff undertaking or considering a transnational move. The employee is able to create a personal profile which will advise him/her on key behaviours which might need attention or could cause conflict and how to mitigate those while emphasising the potential for positive impacts also.

In addition, there is a Worldwide Talent Deployment Group which provides not only practical support but also support to the families of relocating key staff. It also considers the issue of re-entry or move to a third location quite early in the posting as it has found that this issue if properly addressed greatly enhances the success of an international posting. The Abbott group might have up to 500 people deployed trans-nationally at any time and the success of this key resource is addressed through these quite sophisticated approaches.

5.3.12 Life Science Sector - Conclusions

Ireland's internationally recognised track record in the manufacturing of Life Science products is a strength. Sustaining future growth will require adding higher value business activities within companies including high-end corporate marketing & sales, Intellectual Property, supply chain management and process and product research & development. Ninety percent of the sales of the firms surveyed are exported - primarily to Europe and the USA market. Asian countries are expected to grow in importance. Strategic export business planning, marketing, professional sales and related skills (language and soft skills) along with counterfeit security are other key skill requirements.

There is currently a relatively low requirement for foreign language skills within the companies interviewed - as English is their main working language. However, companies anticipate a need to increase their Russian and Mandarin Chinese language proficiency - given their future plans to target these export markets. Intercultural awareness competencies are recognised as important.



5.4 Engineering Sector

5.4.1 Profile

Irish Engineering is a vibrant sector within manufacturing industry. A broad range of engineering companies exist in terms of size, scale and products. The sector includes companies engaged in a number of sub-sectors, outlined as follows²⁵.

Agricultural Machinery has evolved into a strong sub-sector within Engineering. Irish agricultural machinery tends to be more rugged and built to a higher specification than machinery from some other countries due to the poor quality of Irish land. As a result the products tend to be superior on high quality land in other countries.

Materials Handling is dominated by a small number of highly capable companies producing world-leading products. These companies service a wide range of sectors including manufacturing, transportation, retail, construction and quarries.

Precision Engineering is made up of companies manufacturing a very broad range of precision sub-components for large multinational manufacturers. A number of niche product manufacturers have been highly successful. There is a strong innovative mindset in this sub-sector with several companies in precision engineering also developing their own products and product ranges.

Process Engineering comprises companies who manufacture process equipment including high value-added modular skid units used by many of the world's leading pharma, chemical and bio-pharma companies, and large bulk storage tanks for a broad range of applications including mining.

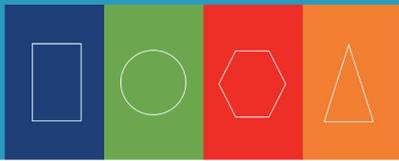
Plastics and Toolmaking is a high-value niche product manufacturing sub-sector. Ireland still has a strong plastics and tool making industry centered on medical devices and healthcare products.

Automotive and Aerospace has a small number of successful niche subcomponent manufacturers supplying both the automotive and aviation industries. Companies in precision engineering, tool making, plastics and metal fabrication are active in these sectors.

Metal Fabrication/Processing comprises a large number of companies fabricating a broad range of metal products for the construction, agriculture, industrial, marine and transit industries. This sub-sector is also a source of highly innovative client-developed products.

Enterprise Ireland has identified the areas of Agricultural Machinery, Materials Handling, and Niche precision engineering as having significant growth potential in the coming years.

²⁵ Enterprise Ireland Engineering Sector Profile, 2012. It can be noted that the indigenous engineering sector employs more than 16,000 people in 600 companies, with total sales of €2.7bn and exports of €802m.



5.4.2 Profile of Participant Companies - Engineering Sector

The findings reported in this section relate to the five engineering companies interviewed (although further analysis is included on key aspects from additional firms that attended a workshop).

The percentage of total sales exported by the companies was 80%. Companies identified the following as key drivers affecting their export growth potential:

- Profitability and margin pressure.
- Labour and energy costs are a concern.
- Progressive channel partners are also seeking out technology providers.
- Growth trend in power generators.
- Legal mandates for vision products in vehicles especially for those sold in the USA.
- Increased consumer desire for safety.

The impact of these drivers on work organisation include a focus on cost control measures, greater use of Channel Partner strategy, standardising work practices across all offices and developing the ability to deliver international projects through virtual teams. Their impact on workforce skills includes a focus on market intelligence, engineering product development skills, lean manufacturing and six sigma skills, skills for collaborating with and influencing partners and buyers, knowledge of international codes and standards, and international legal, financial and HR expertise.

5.4.3 Engineering Companies Export Markets

English speaking and European markets are the main export markets of the companies. However, China and India are expected to rank fourth and fifth in terms of market value in the years ahead.

Table 5.14: Engineering Companies Export Markets Ranked by Value

Main Export Markets	A	B	C	D
USA	4	3		3
UK	2	1	1	2
Eurozone	1	2	2	1
Non-Eurozone	3			
China	5			4
India	6			5
Japan	7			

Notes: (a) Number refers to rank - 1 means highest ranked by value.

5.4.4 Engineering Companies- Main Factors leading to Export Success

Factors identified as contributing to success in export markets include a skilled workforce, market research, customer focus, innovation and product development, and an entrepreneurial mindset.

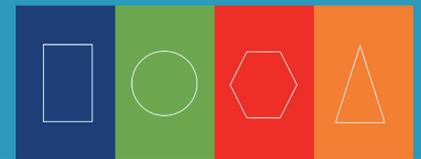


Table 5.15 Engineering Companies - Main factors leading to Export Success

Company	Main Factors leading to Export Success
A	Innovation and enhancing the simplicity of products. Skilled and stable workforce.
B	Focus on customer service/sales - Market alignment focus.
C	Innovation - Outstanding and reliable products - Highly responsive 'after sales'.
D	Customer focus - Systematic market research and analysis. Maintaining excellence and high level of skills.
E	Market research - Innovation and product development. Entrepreneurial mindset.

5.4.5 Engineering Companies Skills Requirements to Drive their Export Performance

Companies' skills and competency requirements to drive their export performance were reported as strategic export business planning, project management, market research intelligence, international sales, design and development, foreign language proficiency and cultural awareness. Relationship building, negotiations and communications are valuable soft skills. Foreign Language proficiency and cultural awareness are the main areas where difficulty is anticipated in sourcing skills.

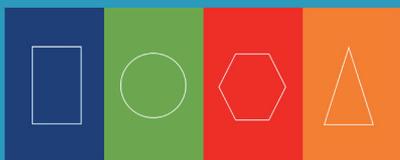
Table 5.16: Engineering Companies - Skills Requirements to Drive Export Performance

Skills and Competency Requirements	Companies							
	A	B	C	D	E	F	G	H
Management Skills								
Strategic Export Business Planning	3	1		2				
Global Partner Management	1				+	+		
Project Management		4		1	5	+		+
International Business Management (Finance, Legal/ Contract, HR skills)				4	2	+	+	+
Entrepreneurship			1		+		+	
International Marketing			4	3	3		+	
International Sales		2			4		+	
Fulfilment- Logistical & Distribution Skills,		5	2					+
Design & Development Skills	+		3				+	+
Language & Cultural Awareness	4	+			+	+	+	
Soft Skills - Negotiations/Communications	2	3	5	+				+

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.

(b) + means not ranked in top five at present but increasing in importance.

(c) Companies F, G and H completed a workshop exercise to indicate areas of importance.

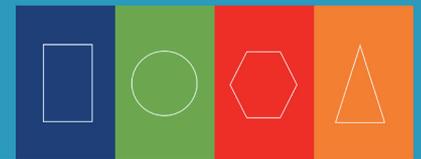


5.4.6 Skills & Competency requirements within Business Function Areas

The main skills and competency requirements within business functions to drive the export performance in companies over the next three years are as follows.

Table 5.17: Engineering Companies Skills Requirements in Key Business Function Areas to Drive Export Performance

Business Function Areas	Skills & Competency Requirements
Management	<ul style="list-style-type: none"> Strategic thinking, Strategic export business planning, global partnership management, project management, international finance, legal, contract knowledge along with entrepreneurship, networking and relationship building, communications and cultural awareness are key skills requirements.
Marketing & Sales	<ul style="list-style-type: none"> International marketing, market research intelligence, knowledge of business opportunities, strategic positioning of the brand, online marketing, telemarketing, use of business marketing tools and cultural awareness are key skill requirements. Defining the role, managing, being clear on the expected performance of the Channel Partner in the market and providing them with adequate support from the home base are key skills. High-level international sales skills, E-commerce, global account management, relationship building and cultural awareness were identified as key skill requirements of the sales function.
Fulfilment - Distribution & Installation	<ul style="list-style-type: none"> Skills in global partnership management in new locations with unknown risks and cultural awareness are key skills. Also logistical and distribution skills and knowledge of country and sector specific standards and regulations.
Customer Service/Support	<ul style="list-style-type: none"> Client relationship building skills for multi country markets and cultural awareness.
Product/Service Design	<ul style="list-style-type: none"> Linking customer needs research to the design of new products and services.



5.4.7 Engineering Companies - Language Skills Requirements

German, French and Polish are the main European languages required by the companies. In the main they considered their proficiency level adequate. Companies expect their Chinese and Japanese language requirements to increase in importance. Two companies (not included in Table 5.18 below) hired native speaking staff in the export market for sales, support and partner liaison.

Table 5.18: Engineering Companies Foreign Language Requirements

<i>Languages</i>	<i>Companies</i>			
	<i>A</i>	<i>C</i>	<i>D</i>	<i>E</i>
German		3	1	3
French	3		1	3
Russian				3
Polish	3	2		3
Arabic				
Chinese	1 (increasing)			3
Japanese	1 (increasing)		1	

Notes: Level of proficiency required are: 1 = Basic, 2 = Independent, 3 = Proficient

5.4.8 E-commerce

Most of the companies have an online presence.

Table 5.19: Engineering Companies Use of E-commerce

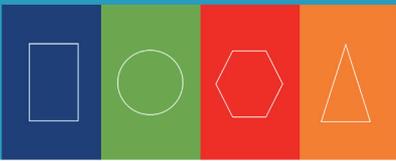
	<i>Companies</i>							
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
Information on firm online		✓	✓	✓	✓	✓	✓	✓
All product shown online	✓	✓	✓	✓	✓		✓	✓
Orders can be placed online								
Order and payment online								

Notes: *Three companies F, G, H who attended the workshops also completed this question.

Writing for the web and social media skills are the main skills requirements of E-commerce and web based marketing.

5.4.9 Soft Skills

Teamwork, customer service, quality control and knowledge of the lean concept were identified as the generic skills needed across occupational groups.



5.4.10 Engineering Companies Recruitment Issues

A shortage of engineers (non-civil) and lack of readiness of engineering graduates for the workplace were cited as the main recruitment issues. Specific positions highlighted were:

- Engineering disciplines.
- Design engineers with a focus on product design and development.
- International HR skills - understanding visas, taxation, HR law etc.

Personnel recruited from abroad were for engineering, language, financial or legal skills.

5.4.11 Engineering Companies - Skills Companies would Employ If Available

Software engineers, marketing & sales professionals with technical language skills are sought after skills that would be employed if available.

Table 5.20: Engineering Companies - Skills Companies would employ if available

Company	Skills Companies would employ if they were available
A	<ul style="list-style-type: none">▪ Entrepreneurial sales people with languages
B	<ul style="list-style-type: none">▪ Sales and marketing in the metal fabrication sector, particularly for power generator sets
C	<ul style="list-style-type: none">▪ Sales skills with German technical language
D	<ul style="list-style-type: none">▪ Engineers and especially software engineers

Companies used all sources in the recruitment process.

5.4.12 Engineering Companies -Views on Irish Graduates

Graduates were generally viewed as having a good technical ability but less ready for the business environment. Those with internship experience are preferred. There was a view that there are not enough engineering graduates (non-civil-engineering).



5.4.13 Case Study PM Group

The PM Group is an international provider of professional services in project management, engineering, architecture, construction management, commissioning and technical consultancy. Highly committed to the promotion of sustainable development and the provision of long term value, PM Group's experts develop solutions that meet client needs and protect the environment.

PM Group was established in 1973 and has grown to become one of the most respected engineering, architecture and project management firms in the world. It currently has over 1,600 experienced team members based in 25 locations worldwide. PM Group's success is attributable to a strong focus on customer service and meeting client's needs coupled with an on-going emphasis on maintaining excellence and high levels of skills and expertise throughout the organisation.

Export Growth

In 2002 PM Group took a strategic decision to develop from an Irish company to an international company headquartered in Ireland. The company is on a journey to being an international organisation, says Mick Lynam, a Director of PM Group. "Our core clients are blue chip multinational companies; a key driver of our strategy is to establish operations where these existing clients are planning to make significant capital investments". An example of this is PM Group's office in Wavre, Belgium where projects are completed annually for companies such as GSK, Genzyme and J&J.

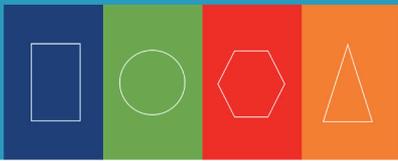
Beyond Europe, PM Group is active in the Middle East and Far East markets. Almarai appointed PM Group to provide detailed design, project management and construction support services for a new \$170 million state-of-the-art nutritional facility in Riyadh, Saudi Arabia. PM Group, is currently working on a range of projects in the Gulf region with a capital value of €400m. The company has an international office network located in the UK, Belgium, Poland, Czech Republic, Slovakia, Turkey, Russia, Saudi Arabia, UAE, Singapore, India, China and the USA. After a period of significant international growth approximately two thirds of PM Group's revenues were sourced internationally in 2011, an achievement which would have been unthinkable five years ago.

Skills Requirements

As a customer focused professional services company, leading edge skills and expertise are central to PM Group's business and continued success. There is a strong need for professional technical skills including engineering, environmental and architectural. These skills must also be complemented by strong project management, business development, customer service, sales and business management skills. Above all, the maintenance and development of PM Group's values, culture and 'can do' ethos is key as the internationalisation process is executed.

PM Group's people are highly qualified individuals who drive best practice standards through a close association with national and international professional institutions. PM Group has an internal training service offering both online & classroom training modules in a range of critical skills areas. The Group operates an educational assistance scheme for external education and training.

The drive towards international export growth has created demands on business building skills, development of new work methods, multi-cultural understanding and Alliance / Partnering skills. For example, managers who head the establishment of an office in a new location require a broad range of technical, business development and operations management skills.



The experience gathered by internationally based personnel over the past number of years is currently being gathered and codified into refocused business processes, procedures, systems and training modules to serve a growing international organisation.

The international focus creates the need for a more systematic market research and analysis approach; it also drives the need for a much greater knowledge and capability in dealing with new and complex international legal, commercial, HR and financial challenges. With a presence in over 25 countries, language skills have become essential to building and maintaining market presence. When establishing and building operations in a new country PM Group will recruit local engineers and provide them with training, often involving a period based in Ireland, but management and leadership is provided, at least initially, by senior staff deployed to the area.

“That’s where the challenge now comes - the people leading and interfacing with the local clients have to have local language skills. Over the last few years that’s become a much greater need - having people with local language capabilities as well as strong technical and management capabilities who can embody the ‘PM Way’, says Lynam.

Each function in the organisation has had to rapidly adapt to the knowledge and competency up-skilling required to serve an international marketplace e.g. architects and engineers have developed their understanding and use of international design codes including the necessary licensing requirements in particular countries and the associated need for local partners for design localisation. “As a small, open and export focused economy we need to ensure all occupations and disciplines are equipped with relevant internationally oriented skills” says Lyman.

5.4.14 Engineering Companies - Conclusions

Companies interviewed exported 80% of their sales. English speaking and European markets are the most important for these companies. Asian markets are expected to become increasingly important. Project Management, sales, marketing, foreign languages and cultural awareness and soft skills are key skills requirements. Companies are experiencing difficulty in sourcing professional international marketing and international sales personnel with foreign language and cultural awareness skills and design and software engineers. Key future skills needs by business function areas within the companies are as follows:

- Management requires strategic business planning, global partnership management along with communications and cultural awareness.
- Project management skills are required for multi country locations.
- Market research, positioning of the brand and international and online marketing for the marketing function.
- Skills in global account management and E-commerce.
- Managing and supporting global partner’s skills for fulfilment and channel management.
- Customer Service skills needs are foreign language proficiency and inter cultural awareness.

Generic skills requirements across all functional areas are teamwork, customer service, lean manufacturing concept and quality control. There is a need to increase the supply and quality of software engineers. It was suggested that qualified Irish professions working abroad could be targeted to consider returning to Ireland to help address the current skills gap.



5.5 Cleantech/Sustainable Building

5.5.1 Profile of Sector

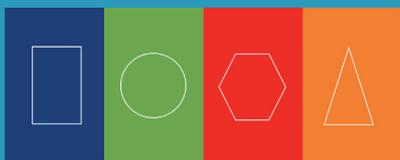
The market size of the Environmental Goods and Services sector in Ireland is estimated at €3.05bn. An estimated 18,750 people are employed within the sector²⁶. 'Green enterprise' is a high growth sector encompassing a range of goods & services within the scope of environmental and natural resource use, management and protection. Sub-sectors include renewable energies, efficient energy use and management, water and wastewater treatment, waste management recovery and recycling; environmental consultancy and green ICT applications.

The global market for environmental goods and services is estimated at €1,100bn. A study commissioned by the German Environment Ministry anticipates that global Environment Goods and Services (EGS) spending could reach €1,900bn by 2020, (of which 33% of expenditures would be in Europe, 34% in North America, 27% in Asia and 6% rest of the world). The sector is attracting considerable investment and is now the third largest sector for venture capital, after ICT and Life Sciences. Export market opportunities exist particularly to the UK as a large adjacent market and into the wider EU, Middle East, USA and Chinese markets. Challenges and business opportunities for the sector are:

- Climate change and rising energy cost pressures are resulting in changes in behaviour by consumers, enterprise and Government. EU and Domestic Environmental Directives and Regulations have been introduced which need to be complied with.
- Irish domestic Targets for 16% of all domestic energy consumption to come from renewable resources by 2020 including 40% for electricity, 12% for heat consumption and 10% for transport.
- Export opportunities arising from green economic recovery initiatives across economies. Global supply chains are responding to changing regulatory and purchasing demands - with moves by several major international companies to 'green' their supply chain.
- Technological convergence is leading to new 'green' convergent business opportunities for Ireland including improving energy efficiency, decreasing CO₂ emissions from buildings, wind and wave energy technologies, the development of 'smart' grid technologies, solar energy conversion, water management and water and air filtration.
- Domestic Public and Private Investment offers business growth opportunities.
- Introduction of green public goods and services procurement criteria will boost business.

Export markets with high growth potential are eco-construction products and services; energy efficiency, renewable energies, water and waste; 'green' ICT and environmental consultancy services. A key challenge is to increase the value of indigenous clean tech company exports, estimated at €370m - representing an average (across sub-sectors) of 20% of their total sales.

²⁶ EGFSN Report (2010): Future Skills Needs of Enterprise within the Green Economy in Ireland.



5.5.2 Profile of Participant Companies Cleantech/Sustainable Building

The findings reported relate to the seven companies interviewed. On average 75% of their total sales were exported, all of which were products. The main drivers for skills needs are:

- The timetable adopted to drive energy efficiency (Kyoto 2020 targets).
- Environmental legislation and enforcement, diversion of waste from landfill.
- Growth in focus on new technologies for energy generation from organic materials.
- Customer/Stakeholder awareness of energy efficiency.
- Move towards supplier consolidation among purchasers.
- Availability of credit to end users (home, businesses) to fund retrofitting and new build.
- Rising fuel costs and the need for greater energy efficiency.

The main impact of these drivers on the organisation of work is an increased focus on enhanced customer service, logistics and delivery, cost control (including the buying of material and reduction of wasted material in production), quality assurance, product development and technical sales. The main impact on workforce skills is an increased emphasis on sales and foreign language capability, international project management skills, technical sales to influence specifiers of the product (architects, building engineers, contractors etc.), buying skills, new product development skills, knowledge of market standards and certification as well as market/supply chain dynamics, and quality assurance skills.

The UK, Eurozone, Middle East and Asia are the main export markets for the companies.

Table 5.21: Cleantech/Sustainable Building Companies - Export Markets Ranked by Value

Export Markets	Companies						
	A	B	C	D	E	F	G
USA				3			4
UK	1	1	1	1	1	4	1
Eurozone	2	4	2	2	2	1	2
Middle East		3				2	5
Asia	3	2					3
Other				4		3 Russia	

Notes: (a) Number refers to rank - 1 means highest ranked by value.

5.5.3 Cleantech/Sustainable Building Companies - Success Factors in Export Markets

Main factors identified as contributing to success in export markets include market intelligence defining the value proposition (differentiating the product offering), identifying regulatory changes, establishing a local manufacturing presence, innovation and product development, acquiring skills by merger and acquisition and engaging talented sales and marketing people.

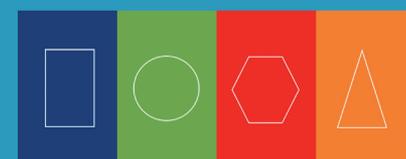


Table 5.22: Cleantech/Sustainable Building Companies - Main Factors leading to Export Success

Company	Main Factors leading to Export Success
A	<ul style="list-style-type: none"> ▪ Good sense to diversify. ▪ Acquiring skills by merger and acquisition in new service sectors.
B	<ul style="list-style-type: none"> ▪ Leveraging existing customer relationships to expand into new markets. ▪ Defining the value proposition (differentiating the group product offering).
C	<ul style="list-style-type: none"> ▪ Establishing a UK manufacturing presence enhanced the company's image in the UK- leading to increased sales and reduced costs of production. ▪ Identifying new products or refinements to existing products for French customers
D	<ul style="list-style-type: none"> ▪ Understanding customer needs & developing products to meet these. ▪ Raising capital.
E	<ul style="list-style-type: none"> ▪ Identify the regulatory changes and taking advantage of them. ▪ Entering new markets in Europe. ▪ Engaging talented sales and marketing people.
F	<ul style="list-style-type: none"> ▪ Staying close to customers and understanding their needs. ▪ Innovation and product development.
G	<ul style="list-style-type: none"> ▪ Achieving fire certification in each market. ▪ Presence in markets e.g. site in UK, site in Malaysia/Singapore.

5.5.4 Cleantech/Sustainable Building Companies - Skills Requirements to Drive their Export Performance

Strategic export business planning, market research and intelligence, global partnership management, sales skills, Channel Partner management, knowledge of international/country sectoral specific standards and regulations, design and development skills and entrepreneurial skills were ranked the top skills for success in exporting. Strategic export business planning, marketing and entrepreneurial skills are areas companies anticipate having some difficulty in sourcing skills.

Table 5.23: Cleantech/Sustainable Building Companies - Skills Requirements to Drive Export Performance

<i>Skills and Competences</i>	<i>Companies</i>						
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
Management Skills							
Strategic Export Business Planning	1			1	1		5
Project Management					4		2
Legal/Contractual Skills							+
Entrepreneurial Skills	4	1					
International Marketing	2	2	4	2		3	
International Sales		3	3	3			+
Fulfilment - Knowledge of Standards and Regulations Logistical & Distribution Skills	3		1	+	2		
Design & Development Skills Linking customer needs to the design of new products & services			2			2	1
Foreign language & Cultural Awareness			+		3		4
Soft Skills - Negotiations, Communications, Networking & Relationship Building				4			3
Engineering Skills						1	

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.
 (b) + means ranked not in top five at present but increasing in importance.

The following Table 5.24 shows the key skill set requirements by business function area.

Table 5.24: Cleantech/Sustainable Building Companies - Skills Requirements in Key Business Function Areas to Drive Export Performance

<i>Business Function Area</i>	<i>Skills & Competency Requirements</i>
Management	<ul style="list-style-type: none"> Strategic Export Business Planning, Project Management, Contract management and Entrepreneurial skills were key requirements.
Marketing & Sales	<ul style="list-style-type: none"> Market research and intelligence, understanding end user technical requirements, and foreign language proficiency were key skills cited. Establishing, managing, building trust and giving support to Channel Partners and related negotiation and communication skills. High level Sales skills, foreign languages, account management and managing stockist relationships are key skills for the sales function.
Fulfilment - Distribution & Installation	<ul style="list-style-type: none"> Knowledge of international/country sectoral specific standards and regulations, Logistics, distribution and product management skills.
Customer Service/Support	<ul style="list-style-type: none"> Foreign language proficiency and cultural awareness.
Product/Service Design & Development	<ul style="list-style-type: none"> Linking customer needs research to the design of new products & services.



5.5.5 Cleantech/Sustainable Building Companies - Foreign Language Requirements

Five of the seven companies interviewed are proficient in European languages. Two planned to improve their European languages proficiency over the next 3 years. Chinese Mandarin was cited by one company as an area in which they planned to increase their proficiency level.

Table 5.25: Cleantech/Sustainable Building Companies - Foreign Language Requirements

<i>Languages</i>	<i>Companies</i>						
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
German		1	3	3	3	3	3
French	1 (increasing)		3	3	3	3	3
Spanish	1 (increasing)					3	1 (increasing)
Italian						3	
Portuguese			3				1 (increasing)
Dutch			3	3	3	3	
Russian						3	3
Polish			1 (increasing)		3		3
Arabic						2	
Chinese		1 (increasing)					3
Hindi							3
Japanese							2
Other					3 Czech		

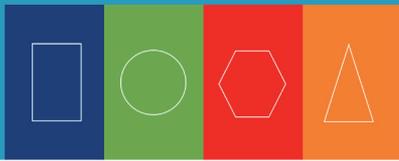
Note: 1 = Basic, 2 = Independent, 3 = Proficient

5.5.6 Cleantech/Sustainable Building - E-commerce

A majority of the companies had an online presence and promote their products online. One company sells product online. The skills requirements relate to content management, writing for the web as well as marketing and IT skills.

Table 5.26: Cleantech/Sustainable Building Companies - Use of E-commerce

<i>Type of E-commerce</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>
Information on firm online	✓	✓	✓	✓	✓	✓
All product shown online	✓	✓	✓	✓	✓	✓
Orders can be placed online						✓
Order and payment online						



5.5.7 Soft Skills

Communication, languages and customer service skills, (including attributes such as positive attitude and self-motivation) along with entrepreneurial skills are the main generic skills requirements.

5.5.8 Cleantech/Sustainable Building Companies - Recruitment Issues

Difficulties in recruitment encountered by companies include a limited pool of sales professionals with languages. One company had recruited staff from Eastern Europe and engineers from France.

5.5.9 Cleantech/Sustainable Building Companies - Skills Companies would Employ If Available

Business development skills, international marketing skills and international sales skills with foreign languages, project management and engineering design skills are the skillsets that would be employed if they were available.

Table 5.27: Cleantech/Sustainable Building Companies - Skills Companies would employ if available

Company	Skills companies would employ if available
A	<ul style="list-style-type: none"> ▪ Sales & technical support staff with language skills. ▪ Project Management skills in response to bespoke requirements from customers.
B	<ul style="list-style-type: none"> ▪ Optical engineers.
C	<ul style="list-style-type: none"> ▪ Sales & marketing with native foreign language proficiency & appreciation of Irish company culture.
D	<ul style="list-style-type: none"> ▪ Key engineering design skills.
E	<ul style="list-style-type: none"> ▪ Business Development Manager. ▪ Chinese national in Ireland, with software and business skillset, and then relocate them to work for the company in China.

Recruitment Agencies, word of mouth and Web are the main sources companies use when hiring.

5.5.10 Cleantech/Sustainable Building Companies - Views on Irish Graduates

There were mixed views expressed in relation to Irish graduates. Some interviewees stated that graduates lacked awareness of export business and international sales. There was a need for on the job training before they could be put into client facing roles, and for improved foreign language skills. Other interviewees considered that graduates' work ethic had improved, that there was good availability of graduates and their performance was generally satisfactory.



5.5.11 Case Study - Nualight

Introduction

Nualight is an Irish based energy efficient lighting technology company. It is the only LED lighting company in the world that specialises exclusively in Accent lighting for food retail displays. Accent lighting is used to accentuate high-margin fresh food displays, such as fruit, vegetables, meat, fish and salads. Established in 2004, Nualight was an early developer of LED lighting, offering 60% savings to retailers on energy costs and enhanced sales through effective lighting. Nualight is predicting that accent lighting is set to become the next opportunity for LED technology in food retail. Nualight's focus is on innovation and versatility to provide products that precisely meet customer's needs.

Led by experts in LED technology and food retail merchandising, Nualight is partnering with the world's leading food retailers and display manufacturers who wish to increase the profitability of food displays while delivering on sustainability agendas.

The UK supermarket industry was an early adopter of LED lighting, largely driven by Tesco's ambitious climate change programme, and Nualight won Tesco's first retrofit deal in 2008, which was also the first major European retrofit deal in this sector. Nualight's customers now include Tesco, Migros, Sainsbury's, the Co-operative Group, Tengelmann, Stop and Shop and Carrefour.

Nualight acquired Lumoluce, a lighting technology company based in the Netherlands, in 2011. This contributed to a 100% growth in revenues in 2011 to just over €25m. "Through this acquisition, Nualight has acquired a portfolio of products and excellent technology expertise that allows us to move very quickly into accent lighting for food retail and doubles the speed at which we can bring new products to market. It also offers us instant entry into complementary market sectors. We have high growth targets and expect to maintain and build leadership positions in our niche sectors," said Dr Liam Kelly, CEO.

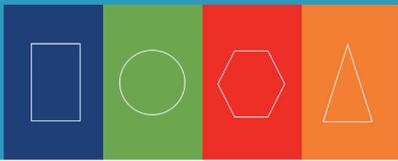
Export Growth

In 2011, Nualight won the overall judges award at the Cleantech Connect Awards in London. This company has already proven itself and is making a real impact on a global scale." The company has been ramping up its international business for the past number of years, since securing private investment and appointing a new management team to drive growth. Over 95% of current sales are exported highlighting the importance of the export market for the company. The UK is currently the largest export market but the EU and US are targeted for growth and are expected to become the largest markets within the next 2 - 3 years. Expanding into new markets will bring new opportunities but will also pose challenges in resourcing the expansion and in ramping up skills and expertise.

Skills Requirements

Expertise and innovation are central to Nualight's continued growth and success. This enables Nualight to respond faster to new market trends and individual customer needs, consistently leading the market in terms of LED lighting innovation for supermarkets and food retail. One of the key skills that has underpinned the company's success is linking customer needs research to the design of new products and services.

As a relatively new business, building skills and expertise has been essential. Skills have been



enhanced through a selection of investors who can add to the business and having essential expertise at board level. The acquisition of Lumoluce was also pivotal in rapidly stepping up the skills and expertise base within the company.

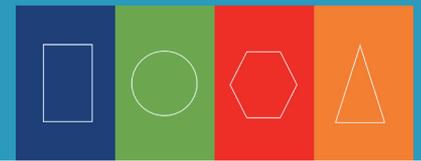
Sales and customer service skills are key throughout all 200 employees. “All occupations interact and liaise with customers and must be sensitive to the need to meet customer needs” says Dr Kelly. Apart from general sales skills, Nualight sees the need for highly skilled sales personnel and notes that there is little formal education provision in sales despite the need for professional sales personnel. As Nualight expands into new markets the use of new business models such as agents, distributors, licensing and joint ventures will increase. This will bring new skill requirements in sales and marketing and especially in negotiation skills. Language skills are also important and a greater focus on practical language skills in the educational system is needed.

5.5.12 Cleantech Conclusions

The UK, Eurozone Middle East, Russia and Asian countries are the main export markets for the companies surveyed. Main factors that contributed to their success in export markets were in developing products linked to customer requirements, defining product/service value propositions and establishing routes to market. The highest ranked skills to drive exports are strategic export planning, market research and intelligence, professional international sales skills, entrepreneurial skills, foreign language proficiency/cultural awareness, and communications skills.

Key future skills needs are:

- International project management, strategic planning, entrepreneurial skills, intellectual property protection and the need for due diligence and contractual information were identified as the key management skill requirements.
- Establishing and managing relationships, negotiations and communications are key skill requirements for channel management.
- Foreign languages proficiency and market research skills are key marketing requirements.
- For sales, foreign language(s) and key account management as well as managing stockist relationships were identified.
- Foreign language and cultural awareness are key skill requirements for customer service and support.
- Fulfilment key skill requirements are, logistics, distribution and product management and knowledge of international energy assessment systems, the main ones being the UK Method of Building Energy Assessment (BREEAM) and the USA Method of Building Assessment (LEED).
- For companies seeking global supply chain business opportunities, the adoption of the international ISO 14001 environmental management system standard would be valuable.



5.6 International Services (Content, Consumer and Business Services)

5.6.1 Profile of Sector

Ireland has a strong track record in attracting Business Shared Services activities from global firms - in particular finance, accounting and treasury management, customer technical support, supply chain management, and increasingly a wider range of headquarter activities. There are 140 shared services centres employing approximately 35,000 people, within IDA's portfolio of companies operating within all sectors and providing a broad range of services.

Ireland is seen as an attractive centre for the delivery of Business Services across global business networks. The importance of analytics as the next generation in business intelligence is a recent growth area of technology services in Ireland. Leading companies deploy their Irish Business Service Centres (BSC) as a key strategic tool, leveraging people and resources around the world to maximize competitive advantage. Digital Media is a broad and dynamic sector, involving a number of inter-related sub-segments including creative, technology, information content, and infrastructure, including enterprise adaptation of social media digital platforms for monetisation.

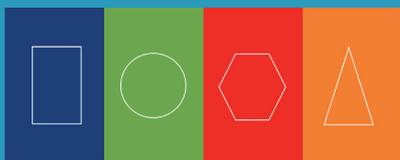
A number of indigenous Business Process Outsourcing (BPO) firms have emerged over the past decade, particularly in the area of financial transactions. Enterprise Ireland supports a cohort of 12 Irish BPO companies providing employment for over 4,000 people. There are other companies within the Enterprise Ireland IT portfolio that also provide outsourced services.

The indigenous Telecoms, Internet, Media & Entertainment (TIME) sector has grown over the last six years. Enterprise Ireland now has a vibrant cluster of more than 200 companies with global reach, providing technology solutions and support services across the value chain of the TIME sector²⁷. Ireland has a strong reputation for attracting global players in the TIME arena. The continued adoption of high-speed internet (fixed and mobile) as a direct channel opens up a significant revenue opportunity and Irish companies are well placed to service this market.

Enterprise Ireland has identified the following areas as presenting growth opportunities over the next three years with key emphasis on mobile, TV and internet convergence:

- **Mobility** - Consumer and Enterprise solutions - Telecom/Mobile - Security/data platforms, Telco 2.0 solutions, messaging - Marketing/advertising solutions - and apps.
- **Internet** - Location-based solutions - Niche social networks - Software as a service (SAAS) solutions - Widgets.
- **Media and Entertainment** - Internet Protocol Television (IPTV) - User generated content for cross media platforms - Interactive programming.

²⁷ Source: <http://www.enterprise-ireland.com/en/Source-a-Product-or-Service-from-Ireland/Sector-and-Company-Directories/Telecoms-Internet-Media-and-Entertainment-Sector-Profile.pdf>



5.6.2 Profile of Participant Companies International Services

The findings reported in this section relate to five international services companies interviewed. Of these, two companies exported 96% of their total sales - all of which were services. The three other companies are cost centres within large multinational companies and consequently do not export directly but contribute to wealth generation for the country through the provision of support services and products for their parent companies.

Key drivers of skills needs identified by companies are:

- Level of economic activity.
- Competition from all media in faster growing markets.
- Consumer confidence world-wide has fallen, thereby reducing demand for new products.
- The decision making process in companies is more complex as clients are making decisions under increased uncertainty.
- Localisation of products in up to 50 languages.

The impact of these drivers on work organisation is resulting in a focus on increased efficiency and 'lean services' to reduce costs, product / service development, and back office staff being located in lower cost regions. Their impact on workforce skills include the formation of multidisciplinary teams with language proficiency and the need for increased awareness of the complexity and of the nuances in decision making within client organisations. The companies deliver services in countries all over the world - with USA, Eurozone countries and the UK being the top three markets.

5.6.3 Success Factors

Key factors leading to export success are in marketing, design and development, HR in terms of employing top performers who are innovative, can show leadership and building relationships with key clients and IDA Ireland's ability to move quickly and secure the activity for Ireland.

Table 5.28: International Services Companies Main Factors leading to Export Success

Company	Main Factors leading to success in export markets
A	<ul style="list-style-type: none"> ▪ Product innovation by listening to customers. ▪ Recruiting top 10% of academic ability, and analytical skills. ▪ Attractiveness of Dublin as a place to live and work.
B	<ul style="list-style-type: none"> ▪ Building relationships with key individuals in target client organisations. ▪ Challenging the assumptions given by client briefs. ▪ Demonstrate leadership to clients by taking the initiative and leading them through the product design process.
C	<ul style="list-style-type: none"> ▪ Locating in an English speaking country. ▪ Cultural fit between Ireland and USA. ▪ IDA's ability to move quickly, secured the activity for Ireland.



5.6.4 International Services Companies Skills Requirements to Drive Exports

International sales skills, foreign language proficiency and cultural awareness and product / service design skills are central to driving the trading and export performance of two companies. These companies anticipate some difficulty in acquiring these skills over the next 3 years. While the other three companies are not engaged in sales per se, new product design skills are core to their existence. These companies are engaged in developing new products/ services to support the delivery of service to their parent companies.

Table 5.29: Skills Requirements to Drive Export Performance

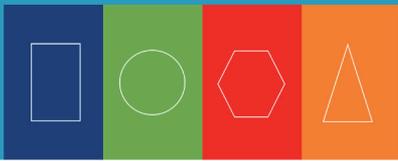
Key Skills/Competency Requirements	Companies				
	A	B	C	D	E
Management					
Project Management	+	4			
Entrepreneurship Skills	+				
Mechanical Engineering Consultancy		3			
International Marketing		+	1	1	1
International Sales	1	1			
Foreign languages and cultural awareness	2			3	3
Design & Development Skills	3	2	2	2	2
Soft Skills - Customer focus, Relationship Building & Numerical & Analytical Skills	+	+	3	+	+

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.
 (b) + means not ranked in top five at present but increasing in importance.

Table 5.30: International Services Companies Skills Requirements in Key Business Function Areas to Drive Export Performance

The following table presents key skills requirements by Business Function area.

Business Function Area	Key Skills Requirements
Management	Project management, entrepreneurial & leadership skills were the main management skills identified by the participating companies.
Marketing & Sales	Market Intelligence skills (leading customers through the product/service design process). Sales skills and relationship skills.
Fulfilment	Analytical skills
Customer Service / Support	Foreign language skills / cultural awareness and relationship building skills are required for sales and customer service (especially for technical support).
Design & Innovation	Creativity, innovation and new product and services development



5.6.5 International Services Companies Language Skills Requirements

One major company had a very high degree of competence in all languages of its target markets. It tended to hire people from those markets & relocate them to Dublin to service their home markets. A second company, which is engaged in outsourcing business, hires native speakers either within Ireland or from overseas. For two other companies the working language is English although they also possess foreign language skills within the business.

5.6.6 International Services Companies Recruitment Issues

A number of job vacancies could not be filled domestically resulting in companies hiring from overseas. Companies reported specific recruitment difficulties in relation to:

- Highly numerical and analytical skills - maths, science and cloud computing skills.
- Designers UI UX (interaction usability).
- Industrial Design.
- Quality Assurance.

5.6.7 Skills Companies would Employ If Available

The skills that companies would employ if they were available domestically include:

- Software Engineers and developers.
- Designers UI UX (interaction usability).
- QA Employees for software development.
- IT and Analytics.
- Project Management.
- International Sales with language(s) and cultural awareness.

Skills that companies had recruited or sought to recruit from abroad include:

- International Marketing and Sales skills with languages.
- Industrial Design.
- Personnel from China as their customers manufacture in China.
- Software engineers, designers and developers.

Web based recruitment, word of mouth and educational providers were used by participating companies to recruit skills.

5.6.8 International Services Companies' Views on Irish Graduates

There were mixed views on Irish graduates. One company considered that there has been grade inflation in recent years making it more difficult to identify the top 10% of graduates. Another commented that not enough graduates see IT and analytics as a career despite well paid opportunities for those with this skillset. Another company was satisfied with graduate quality.



5.6.9 Case Study Google Ireland

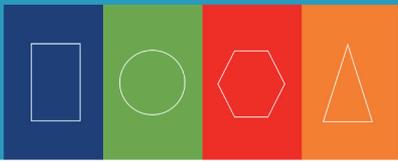
Google is one of the most recognisable brands in the world and has even introduced a new verb into the English language. In 2005, Google chose to locate its Europe Middle East and Africa (EMEA) Headquarters in Dublin. Ireland was chosen for a number of reasons, not least because of the availability of highly motivated, enthusiastic and skilled people. Today, Google employs over 2,000 people in Dublin from across Europe. Indeed, the company's EMEA headquarters on Barrow Street is a mini United Nations with more than 45 nationalities working in the company, and over 50 languages spoken in the building every day. In addition to a sophisticated multilingual and multicultural sales operation, the company also has engineering, legal and financial teams working in Dublin.

Google has the largest in-country sales operation in Ireland with over 1,500 people employed in helping companies in 60 countries across Europe, the Middle East and Africa grow their businesses online. In the more mature internet economies, almost one third of the sales may be generated via advertising agencies and third party resellers which also need to be supported and activated by the sales and service teams in Dublin. This is a very exciting time in the digital marketplace as more consumers move online and businesses become increasingly sophisticated in their use of the internet to generate sales. As a result, Google sees significant growth in the coming years in its advertising, publishing, consumer and enterprise products.

Google prides itself on having a deep understanding of its customers from a business and cultural perspective. This means that while a knowledge of Google's technology platforms is a basic requirement, more important are the language skills and cultural knowledge of the employees (called Googlers) serving each market. Generally, Googlers servicing a market have native language competence (or very close) and in some cases the company may even recruit to reflect regional dialects or accents. It is key for the sales activities that they also have a strong cultural awareness for the region they are serving. In the world of international business, such competencies and an awareness of 'local custom and practice' make it much easier to transact with customers.

Often, the only way to achieve this level of competency is to recruit in the target market and relocate the staff member to Ireland. Dublin remains an attractive location for young Europeans wishing to travel and gain work experience abroad and the opportunity to work in the city for a multinational company like Google is valued. Despite the ability to hire from a very wide geographical pool, there is a commitment to recruitment from the Irish market where possible. For instance the company interacts directly with universities and other third level institutions not only on a classic 'milk round' recruitment, but also runs workshops helping prospective candidates to negotiate their way through the Google recruitment process. This can even extend to giving guidance on CV and interview preparation.

Google has a very specific ethos in recruitment. A very high proportion of the hires are degree level, many with post graduate qualifications. A strong academic track record is a prerequisite which may



also be verified by the company's own recruitment assessments. Other elements sought are analytical abilities, leadership potential and a demonstrated passion for something other than work. This reflects the desire to hire intellectually strong but rounded candidates. An unusual dimension of the Google philosophy is that employees are expected to dedicate 10% of their time to innovation. In addition to the sales and service operation, there is a smaller, highly focused team of engineers and software developers. These engineers operate as part of a global team supporting the software, servers and products for all of Google.

Due to its extraordinary reach and brand power and its global outlook, Google is able to resource its business with the necessary talent. It has a very clear recruitment and people development policy. Its focus in Ireland is on sales professionals, able to demonstrate native or near native language ability, cultural awareness of the regions serviced and a level of numerical/analytical ability consistent with the company's status as a leader in the information sector.

5.6.10 Conclusions

In total 96% of the sales of the companies surveyed were exported. The UK, USA and Eurozone countries were the top markets for these companies' services. Indeed, one company delivered services in 120 countries worldwide. Project Management skills and entrepreneurship skills are key requirements for successful management. Marketing skills and high performing sales staff were the key factors contributing to these companies success in export markets. Foreign language skills are required for customer service and sales functions success. New product and service design and development skills linked to innovation and creativity are key skillsets for all companies. Skills gaps in this sector include designers, software engineers, project management and IT and analytics.



5.7 Food & Drink Sector

5.7.1 Profile

In Ireland, the agri-food sector is highly export-oriented, regionally dispersed, and central to the growth of rural economies and for sustainable development. Irish companies of scale provide significant direct and indirect employment throughout the country. Over 50,828 persons are directly employed, with a further 84,800 in primary production, agriculture, forestry and fishing. More than 85% of total agricultural output is exported to over 160 markets worldwide. While the sector is primarily made up of small firms, a number of firms of significant scale have developed over the last decade, through organic growth and mergers/acquisitions. Several Irish owned firms are among the world's 50 largest food and beverage multinationals ranked by assets. Foreign affiliates of leading multinationals have a strong presence in Ireland, employing 10,487 and with an Irish economy spend of €1.3bn²⁸.

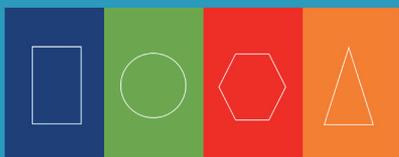
It is estimated for 2011, that the value of Irish food and drink exports increased by €1bn to reach €8.85bn - a 12% increase²⁹. This follows a similar rise in the value of sector exports in 2010. The export performance was boosted by strong global demand for major commodities reflected by an increase in prices. A number of sub-sectors including dairy, beverages and pigmeat also recorded higher output. Overall it is estimated that volume growth across some key categories accounted for 25% of the total growth in export revenues during 2011. The UK is estimated to have accounted for €3.66bn (41%) of total food and drink exports in 2011. Meanwhile, the share of exports to other European markets increased by €400m to reach €3bn - representing 34 % of total food and drink exports. All major European markets recorded strong export growth led by the Netherlands, Germany and France. Exports to other international markets recorded a 20% annual increase (€350m+) led by dairy, meat and seafood exports to reach €2.2bn - 25% of total exports. Growth in the Asian and African markets was strongest.

The prospects for Irish food and drink exports in 2012 remains positive, although an anticipated softening in global commodity prices from the peaks recorded in 2011 are expected to result in more limited growth potential. Key developments in the sector affecting opportunities include:

- Agricultural commodity prices.
- Improvements in relative labour costs in Ireland.
- Exchange rate movements - euro vis a vis sterling and the dollar (resulting in total value growth being not quite so high).
- Intensity of competition from other countries.
- Continuing pressure on consumer spending in many developed economies.
- Abolition of dairy quotas from 2015.
- Building new international markets in dairy, beverages, seafood and niche meat products.

²⁸ Forfás Sectoral Brief, 2012.

²⁹ Board Bia, 2012 Export Performance & Prospects Irish Food, Drink and Horticulture, 2011-2012 Report.



- Emerging and high growth opportunities exist in the functional foods/nutraceuticals segment to address the ‘wellness’ market and in niche/craft product development.

The impact of these drivers on work organisation include measures to reduce costs and develop new products that use less resources as well as increased use of the internet for sales promotion and support. The impact of drivers on workforce skills are an increased emphasis on strategic management skills, building long term international customer relationships, understanding the culture of the market, E-commerce skills, lean manufacturing and new (better value) product development skills.

5.7.2 Food - Profile of Participant Companies

The participating companies had 5,650 employees and total sales of approximately €3bn. Eighty-percent of their total sales were exported, of which 96% was product. The following findings and analysis are based upon the companies interviewed. Key drivers of demand for skills identified by participating companies include:

- Competitiveness of Ireland as an export manufacturer.
- Consumer trends towards health and ‘wellness’.
- Opportunity provided through internet/web.
- Recession and impact on promotion and price.
- Emerging markets and the challenge of supplying affordable nutrition to a growing population particularly to poorer economies.

5.7.3 Food & Drink Companies Main Export Markets

The UK, Eurozone and USA are the main markets ranked by value. Companies also exported to destinations in Asia, Russia, South America and the Middle East. The smaller-sized surveyed companies mainly targeted UK and USA (english speaking) markets.

Table 5.31: Food & Drink Companies Export Markets - Ranked by Value

Main Export Markets	Companies				
	A	B	C	D	E
USA	5	2		3	1
UK	3	1	1	1	2
Euro zone	1	3	2	2	3
Non-Eurozone				4	
Middle East	4				
Asia	6			5	
South America	7			6 Brazil	4
Russia				7	6
Other	2 Africa	4 Australia			5 Aus, NZ

Notes: (a) Number refers to rank - 1 means highest ranked by value.



5.7.4 Food & Drink Companies - Main Factors leading to Export Success

Understanding customer needs and working closely with them to meet their needs, getting the product to them on time, promoting and building volume sales of quality products were central to success across companies.

Table 5.32: Food & Drink Companies - Main Factors leading to Success in Export Markets

Company	Main factors leading to success in Export Markets
A	<ul style="list-style-type: none"> ▪ Understanding customers/markets demands-giving them what they need. ▪ Good supply chain management from own warehouse to customers. ▪ Working closely with customers, technically and commercially.
B	<ul style="list-style-type: none"> ▪ Linking with the customer to build volume and achieve economies of scale. ▪ Building personal relationships - Innovation and responding to customers' needs.
C	<ul style="list-style-type: none"> ▪ Quality products. Motivated Sales Force. Brand Management.
D	<ul style="list-style-type: none"> ▪ Built a solid reputation in quality and customer service. ▪ Partnering with the Irish Dairy Board in development and promotion.
E	<ul style="list-style-type: none"> ▪ Strong links with importers. Value based products. Exploiting niche opportunities.

5.7.5 Food & Drink Companies- Skills Requirements to Drive Export Performance

Strategic planning, marketing research, foreign language proficiency and cultural awareness, negotiations and communications and the ability to manage a network of agents were the key skills requirements across the management, marketing and sales function to drive exports.

Table 5.33: Food & Drink Companies - Skills Requirements to Drive Exports

Skills & Competency Requirements	Companies				
	A	B	C	D	E
Management Skills					
Strategic Planning & Export Sales Planning	1				2
Project Management				4	
Financial Risk Management				5	
International Marketing Skills	2	3	1	2	1
International Sales Skills	3	4		3	
Fulfilment (Distribution & Installation) Supply Chain Management		2	3		3
Design & Development Skills			2		
Foreign language & Cultural Awareness	5			6	
Soft Skills - Networking, Relationship Building	4	1		1	4

Notes: (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance.

(b) + means not ranked in top five at present but increasing in importance.

5.7.6 Food & Drink Companies - Skills Requirements in Key Business Function Areas to Drive Export Performance

Strategic planning, marketing and the ability to manage a network of agents were the key skill requirements across general management, marketing and sales

Table 5.34: Food & Drink Companies - Skills Requirements in Key Business Function Areas to Drive Export Performance

<i>Business Function Area</i>	<i>Skills & Competency Requirements</i>
Management	<ul style="list-style-type: none"> Strategic Planning. Export sales development planning. Ability to examine opportunities. Creating time to strategise. Communicating strategies to all. Working as a team.
Marketing & Sales	<ul style="list-style-type: none"> Making customers aware of technical capabilities. Networking & relationship building. Managing a network of agents.
Fulfilment (Distribution and Installation)	<ul style="list-style-type: none"> Knowledge of standards & regulations. Cost control. Scheduling Supply Chain Management
Customer Services & Support	<ul style="list-style-type: none"> Understanding the customer & value. Order administration.
Design & Development	<ul style="list-style-type: none"> Innovating and responding to customers' needs. Growing added value offerings re business to consumer and business to business.

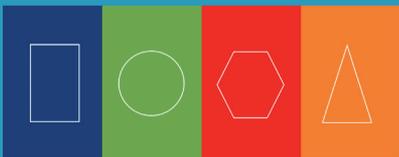
5.7.7 Food & Drink Companies - Foreign Language Requirements

Foreign language capabilities required in the companies include French, German, Spanish, Italian and non-European languages such as Chinese and Arabic. One company with basic linguistic capability planned to increase skills in German, French, Portuguese and Chinese. It was recognised that having native language skills proficiency would enhance performance and increase penetration to these markets.

Table 5.35: Food & Drink Companies Foreign Language Requirements

<i>Languages</i>	<i>Companies</i>			
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
German	3	1	1	3
French	3	1	1	3
Spanish	3		1	2
Italian	3		1	
Portuguese			1	
Dutch			1	
Swedish			1	
Russian			1	
Polish			1	3
Arabic	1		1	
Chinese	3		1	+
Hindi			1	
Japanese			1	

Notes: 1 = Basic, 2 = Independent, 3 = Proficient



5.7.8 E-commerce

Three of the five companies used E-commerce in their business.

Table 5.36: Food & Drink Companies - Use of E-commerce

	<i>Companies</i>				
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Information on firm online	No use	✓	No use	✓	✓
All product shown online		✓		✓	✓
Orders can be placed online		✓		✓	✓
Order and payment online		✓		✓	✓

Two of the companies had hired E-commerce expertise to drive their web store sales and integration with social media.

5.7.9 Food & Drink Companies - Recruitment Issues

Main recruitment difficulties were in relation to attracting high calibre individuals to the sector and a shortage of experienced personnel. (One reason advanced for such difficulties was a perceived unattractiveness of the industry). All companies had recruited international sales and marketing staff in target markets - including for the UK, Australian and Brazilian markets - this was a result of a strategic decision to buy in local expertise. One company had also recruited skills from abroad to work in customer service and R & D functions.

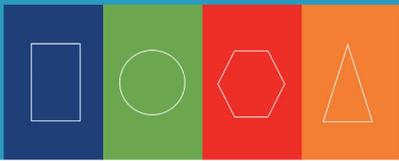
5.7.10 Food & Drink Companies - Skills Companies would Employ If Available

Business development, sales skills, language and cultural awareness, product development and technical skills were cited as skills that would be employed if they were available

Table 5.37: Food & Drink Companies - Skills companies would employ if available

<i>Companies</i>	<i>Skills companies would employ if available</i>
A	<ul style="list-style-type: none"> ▪ Foreign Language. ▪ Cultural Awareness. ▪ Technicians (working with customers to develop products most suitable for markets).
B	<ul style="list-style-type: none"> ▪ UK Commercial skills. ▪ New product development/Innovators.
C	<ul style="list-style-type: none"> ▪ Business Development. ▪ Sales and Negotiation. ▪ Key Account Management.

The web and recruitment agencies were commonly used by the companies. Unsolicited CV's and educational providers were also used as sources for new hires in the companies interviewed.



5.7.11 Food & Drink Companies - Views on Irish Graduates

There was a general view that graduates were not tailor made for the international environment- and that there was a shortage of graduate with experience in foreign markets and foreign language skills. Participants on the IBEC Export Orientation Programme and the Smurfit Business School- Bord Bia Programme were held in high regard.

5.7.12 Distinction between SMEs and Larger Food Companies

A distinction was made between factors influencing success of SMEs and the larger food companies. SMEs because of their stage of development, lack the resources that the larger food companies have. This manifests itself in terms of them not having the required standard of product information, product specification, and data on pricing, etc. to support agents and distributors. Identifying, selecting and supporting the right Channel Partner and/or agent within a country are essential for the SME. SMEs can experience greater difficulty in attracting and retaining high performing sales and marketing expertise to the industry. Larger-sized companies have well established relationships in world-wide markets, the support of centralised marketing agencies such as the Irish Dairy Board, and have considerable knowledge and experience in house in relation to documents required for exporting product, logistics, etc.

It was suggested that the industry would benefit by having clear career progression paths which would include using experienced personnel in export sales nearing the end of their career or those who have recently retired to mentor and coach new entrants.

The recent initiative by Bord Bia and IBEC's Food and Drink Industry in relation to a mentoring programme for SMEs focused on collaboration and information sharing, with leading indigenous food and drink companies sharing their expertise in the key areas of business strategy, account management and logistics was welcomed.

5.7.13 Case Study Dawn Farms

Dawn Farms is the leading business to business multi-species cooked meat ingredient company in Europe. Established in 1985, Dawn Farms operates two production plants in Naas, Co. Kildare. Its global reach was extended in 2006 by the acquisition of TMI Foods, based in Northampton, UK (a specialist producer of cooked bacon, roasted vegetables, and snacking products) and the establishment of Minerva Dawn Farms Foods (a joint venture operation in Brazil with leading Brazilian beef processor Minerva S.A) to specialise in the production of cooked meat ingredients for the South American and Asian markets. Dawn Farms is a member of the Queally Group, Ireland's largest privately owned agri-food group.

Dawn Farms commercial strategy is to identify its target market sectors, identify the top prospects in each sector based on research against agreed criteria, and by the successful articulation of its product-service value proposition to become the preferred supplier for cooked meat ingredients to these partners. Over 85% of output from its facilities in Naas is exported to 30 markets in the UK,



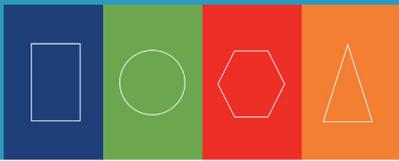
Europe and the Middle East.

The company has a policy of continuous investment in excellence in its people and in its processing technologies and is unique in that it offers multi-species processing capabilities, including cooked beef, chicken, turkey, and pork, bacon and ham. It is an industry leader in the production of fermented meats including pepperoni and salami. The company acts as a one stop shop and provides customised product solutions for the food manufacturing, food service and retail grocery industries, including the pizza, sandwich and ready prepared meals sectors.

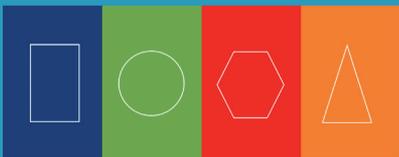
Dawn Farms is BRC, Grade A approved and is a fully approved, trusted and long standing supplier to major European and UK food manufacturers, global high street food service brands and multiple retailers. Dawn Farms has an established culture of continuous improvements throughout the business. Food safety, traceability, consistent quality and reliability are central to this philosophy and are embedded in their bespoke Food Plus food safety management system.

Dawn Farms has a dedicated distribution company, Dawn Farms Distribution, to service its customers efficiently and reliably with daily deliveries to the UK and Continental Europe. Supply chain security and consistency is the number one requirement for their customers. This requires constant, consistent supply delivered at the right time to their customers which in turn require planning skills concerning raw material procurement, efficient production and the right level of warehouse holding stock (enough to satisfy buyer delivery requirements but not an excess which would add to costs.) At an early stage the company recognised that if they were to grow they would need to export. The skills and talent capability required are all linked to the company's strategy and their value proposition. Assembling all of these skillsets together within the company is essential. Specific skills capabilities which the company value and foster include:

- **Strategic Export Planning Skills** - to research the marketplace, to identify and agree upon the target product-market sectors, to articulate a market entry strategy and to bring clarity to a winning value proposition.
- **Marketing Skills** - these skills include researching and identifying the appropriate target B2B customers against agreed criteria, the understanding of the competitor set within the selected market segments, the building up of intelligence on different market, customer and consumer tastes and behaviour patterns which may affect the customisation of products, and defining and actively communicating the value proposition on offer from the company.
- **Sales Skills** - selling the company's value proposition and product capability to customers in the selected markets. Successful B2B selling involves forging highly collaborative relationships with customers that in turn can yield tailored products and services for customers. In Dawn Farms, many executives currently working in the sales function have previously worked in the technical/science area and have strong processing and product knowledge. Dawn Farms Sales staff benefit from exposure to trade fairs, research visits to overseas markets and one to one relationships with their designated clients. Outside of the UK, foreign language proficiency is essential.
- **Procurement Skills** - A vital cog in the wheel in terms of knowledge of a complex raw material market and the ability to plan the procurement of raw ingredients competitively and at the right time to ensure competitiveness and consistency of supply to customers.



- **Efficient and Flexible Manufacturing and Production Skills** - with a major focus on the latest cooking technology and manufacturing skills and experience to ensure that customers get the products to meet the needs of their production line, to the correct specifications and delivered on time, every time. Manufacturing and changeover capabilities allow flexibility in product options, production runs and the supply of a range of shapes and sizes.
- **Food Safety and Quality Management Skills** - an essential component of all modern food processing companies. Dawn Farms operates to BRC Grade A standard and is a fully approved supplier to major food brands across manufacturing, foodservice and retail sectors. Continuous improvement in food safety management, product processes in freezing and packaging capabilities, research and development, traceability, and technical support mean that the company meets or exceeds government and industry standards. Managing the environment so that customers don't have to worry is an essential element of the FOOD PLUS food safety management system in Dawn Farms.
- **Science & Innovation Research Skills** - there are different tastes and consumer behaviour patterns across countries together with varying regulatory and knowledge requirements regarding meat standards etc. These requirements have to be continually researched and implemented. Each of Dawn Farms manufacturing facilities operate a Meat Science and Innovation Centre populated by a team of highly qualified food scientists, food science technicians and culinary experts who develop new products for customers. This service led proposition is a major differentiator for the company.
- **NECTAR** is Dawn Farms in-house stage-gate product development process. The company uses NECTAR to define clear consumer and customer needs and works together with strategic customers to develop a strong pipeline of new products for their menus. NECTAR is an Acronym for Need, Explore, Create, Test, Action and Review. In the Need and Explore stage - Dawn Farms use a proprietary brainstorming tool called "Synectics" to define and examine possible product solutions for the customer.
- **Logistical Skills** - Logistical challenges differ from one market to the next. For example, pallet sizes vary from country to country. Specific markets offer unique challenges such as Germany where in many cases all pallets must be returned to the supplier and reused in their next delivery. There are also new and continuously updated environmental regulations and recycling and repackaging initiatives in different countries.
- **Customer Service, documentation/order skills** - In order to serve their customers better, Dawn Farms has a customer interface section that handles each order, including the necessary customs administration and documentation, to ensure customers receive their deliveries on time every time.
- **Language Skills** - English is the international business language and it is possible for initial introductory meetings to be made through English. However, to grow market share and become a preferred supplier, it is necessary, as the sales process moves on from the initial introductory stage, to have technical and logistical staff with foreign language proficiency to speak to the buyer's technical colleagues and logistical support staff. Dawn Farms employs both Irish people with foreign language proficiency in their business development, marketing and innovation functions as well as in some cases nationals from the target market i.e. French nationals in the science and innovation team.



Dawn Farms has participated in the International Selling Programme with Enterprise Ireland and their experience of the programme has been positive. One suggestion is the development of an interactive forum for marketing and sales personnel with international experience to share experience and expertise. The IBEC EOP programme and both the graduate internship and the Fellowship programmes run by Bord Bia are also viewed positively as they provide on the job exposure to the marketplace.

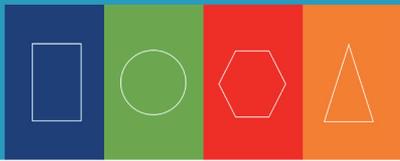
5.7.14 Food & Drink - Conclusions

The combined sale of the companies interviewed is €3bn of which 80% is exported in the form of product. The UK, USA and Eurozone countries are their most important market destinations. The larger companies export to Asia, Russia, South America and the Middle East. Supply chain security and consistency is a key requirement for international customers. The main skills requirements in export markets are a combination of international marketing and sales skills, food safety and quality management skills, efficient and flexible manufacturing and production skills, procurement skills, logistical skills, development and innovation skills (to meet different tastes and consumer behaviour patterns across countries), foreign language and cultural awareness, and soft skills. Foreign language proficiency requirements include German, French, Portuguese and Chinese.

Key future skills needs by function area within the companies are:

- Management skill including strategic business planning and effective communications.
- Skills in the selection, support and management of Channel Partners.
- E-commerce and social media skills for marketing.
- Sales skills requirements include inter culture competencies, effective communications, networking, and competencies such as ability to work on own initiative.
- Customer service, order administration.
- Efficient and Flexible Manufacturing and Production Skills.
- Food Safety and Quality Management Skills.

The skills requirement influencing export market performances differ between SMEs and the large food companies. Skills deficits for the SMEs relate to identifying, selecting and supporting Channel Partners/agents accessing markets. The skills deficit for the larger food companies relates to attracting, retaining and developing high calibre top performers. The route to market differs depending on the market. The post graduate opportunity provided by IBEC's EOP/Food Export Graduate programme is a valuable way to develop talent in export sales. Enterprise Ireland's International Selling, Masters in International Business, National Account Management and Negotiation Skills Development programme should continue to be targeted towards companies in the Food sector. Bord Bia programmes should continue to equip food companies to enter new channels and open new accounts in the UK and across the EU. Foreign language capability is required for managers, sales and technical staff. There is a need to devise a mechanism for more effective collaboration and information sharing among the larger companies in order to compete effectively with the scale of New Zealand multinational dairy co-operative, Fonterra.



5.8 International Education Services

5.8.1 Profile of Sector

International education is an important internationally traded service. The International Education sector in Ireland is comprised of public (Universities and IoTs) and private Higher Education Institutes with a market presence and/or alliance in international markets including the USA, China, India and the Gulf States. The *International Education Strategy 2010-15 - 'Investing in Global Relationships'* which was launched in 2010, set out a vision to enable Ireland to compete to the highest international standards and recruit talented students from overseas to study in Ireland. The plan contains ten core actions to enhance the internationalisation of Ireland's education sector including areas such as quality, visa and immigration, international education offerings, competitiveness, the redevelopment of the Education in Ireland brand and strengthening Ireland's networks of influence.

There were 29,400 international students in Higher Education in the 2010/2011 academic year, of which 14% were enrolled in private institutions³⁰. The goal within the *Programme for a National Government 2011 - 2012* is to double the number of international students in higher education in Ireland by 50 % to 52,000. There were approximately 93,800 students in the English language sector in the 2010/2011 academic year. International students contribute an estimated direct income of €460m to the Irish economy. An additional €255m is directly generated in the economy by the English-language education sector.

The key countries of origin for international students in Ireland are the USA, China, France, UK, Germany, Spain, Malaysia, India and China. International student's choices of study cluster around disciplines most in demand globally such as business, science, engineering, humanities and medicine³¹. The sector provides all/some of the following supports, to individuals and companies:

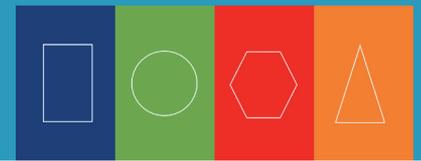
- Educational services to international students studying in Ireland.
- On-site courses in Ireland and abroad.
- eLearning facilities (including distance learning).

Enterprise Ireland has responsibility for the promotion of the Higher Education sector internationally, while Fáilte Ireland has responsibility for the promotion for the English language learning sector. There are opportunities within the sector for:

- Building links with non-domiciled alumni.
- Building new international markets in eLearning/distance learning and partnerships between private enterprises and public institutions.
- Reputation building - Ireland as a small, safe and friendly country.
- Forging convergence between education services, eLearning, eGames and tourism.

³⁰ Department of Education and Skills, May 2012.

³¹ Enterprise Ireland, International Students in Higher Education in Ireland, 2009/10.



'Education in Ireland' - a new umbrella brand for marketing the Irish higher education and the English language learning sectors internationally was launched in March 2011. The new brand represents a vision of Ireland as an internationally recognised world leader in the delivery of high-quality international education. The new brand and key messages are being promoted to key audiences in Ireland's main international markets including the USA, China, India and the Middle East.

5.8.2 Profile of Participant Companies - International Education Services

The findings in this section are based on interviews with three Universities and one Medical College. The percentage of the overseas student population was around 12% for three Colleges. In the fourth College, 70% of total revenue was attributable to overseas students. The following national and global challenges and opportunities were identified by participating organisations.

5.8.3 Challenges

- While English speaking countries are particularly attractive for international students, international global competition has intensified.
- Difficulty 'growing' the product in Ireland as it is limited by the number of places available.
- Development of an overseas campus is a financial challenge.
- Global downturn has meant students are thinking of only one year abroad.
- The Times ranking of Universities where all Irish universities fell in their ranking (this is important especially in China).
- Brand Awareness of Ireland in the past has been low (work is on-going to address this).
- Unclear benefits vis-à-vis global competitors. The competition offering from some countries is more seamless e.g. Institutions, government, tourism (work is underway to address this).
- Students having to take two or multiple flights to get to Ireland and requirement for visas reduces attractiveness.

5.8.4 Opportunities

- There is an increased provision of services in emerging markets, either directly, or by forming global partnerships or alliances with local institutions.
- The use of technology has enabled the remote delivery of education and blended learning (a combination of on-site and distance learning).
- Redesigning courses can help to increase revenue.
- India's push for third level education but they don't have the capacity at present.
- China sends 400,000 students overseas every year.
- Perceived value of the western education for better understanding the global market.

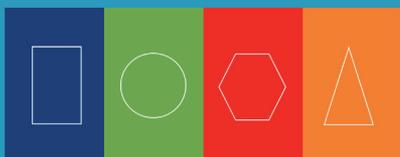


Table 5.38: International Education Services Export Markets Ranked by Value

<i>Export Markets</i>	<i>Organisations</i>			
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
USA		3	2	1
Euro zone			1	
Non-Eurozone				
Middle East	2	4 Gulf	4	3
China		1	3	2
India		2		4
Other - Asia	1 Malaysia			
Brazil		5		
Russia		6		
Other Markets	3 Canada	7 Kazakhstan	5 Nigeria	

Notes: (a) Number refers to rank -1 means highest ranked by value.

5.8.5 Success Factors

Customer care, programme redesign and alliances/twinning arrangements have been critical success factor for Colleges in attracting international students to date.

Table 5.39: International Education Services - Main Factors leading to Business Success

<i>Organisation</i>	<i>Main Factors leading to Business Success</i>
A	Redesign of programme to open new pathways. Overseas campus capacity. Twinning programmes.
B	Recognised qualification and internships. Student care on campus. Give top quality learning and living experience.
C	Alliances with Irish Universities Association, IOTI & Education in Ireland.
D	Giving parent's assurance their child will be safe. Customer care on campus.

5.8.6 Skills Requirements to drive Business Performance

Business, marketing and sales skills, a customer/client focus, project management, cultural awareness, service delivery and skills for the internationalisation of the curriculum are key skills needed to drive business performance at these Colleges over the next 3 years.



Table 5.40: International Education Services - Most important Skills required

	Organisations			
	A	B	C	D
Management Skills				
Strategic Leadership Entrepreneurial Skills /Business Skills	✓		✓	
Project Management	✓	✓		
Legal Skills	✓			
Purchasing Skills			✓	
International Marketing	✓	✓	✓	✓
International Sales -Skills/literature	✓	✓	✓	
Internationalisation of Curriculum			✓	✓
Foreign Languages	Arabic & Malay			
Cultural Awareness	✓	✓	✓	✓
Soft Skills- Customer Awareness, Flexibility, Critical Analysis	✓	✓	✓	✓

Note : (a) Number refers to rank - 1 is highest ranking skill to drive trading and export performance. (b) + not ranked in top 5 at present but increasingly important.

5.8.7 Business Functions Areas

The level of service depends on the staff that the international student encounters. Customer awareness training and a client focus ethos need to be developed across business functions.

5.8.8 International Education Services Foreign Languages Requirements

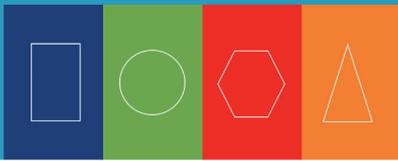
Table 5.41: International Education Services - Foreign Language Requirement

Languages	Organisation			
	A	B	C*	D
German		3		
French		3		
Spanish		3		
Russian				Increasing
Arabic	Increasing	Increasing		
Chinese		Increasing		Increasing
Japanese				Increasing
Korea				Increasing

Notes: 1 = Basic, 2 = Independent, 3 = Proficient

Note: *All communications are through English in organisation C.

The foreign language skills of staff in the International Offices of these colleges include European and non-European languages. Colleges anticipate the need to increase foreign language proficiency in Asian and Arabic languages. The Colleges plan to continue targeting students from the USA, Canada, India, China, Malaysia, and the Middle East.



5.8.9 E-commerce

Two of the four colleges actively use Facebook and other portals to manage student engagement, although sales occur on a face-to-face basis.

5.8.10 International Education Services - Recruitment Difficulties

Difficulties in recruitment cited by colleges were:

- Sourcing staff with a combination of international education skills and business skills.
- Employment control framework affecting recruitment by the college.
- Keeping Irish presence in senior posts abroad.
- High turnover of staff abroad (as they are near retirement).

Some Colleges recruit from the UK where there is a large pool of skilled staff. One college recruits clinicians who are near to retirement to deliver programmes abroad.

5.8.11 Skills Organisations would Employ if Available

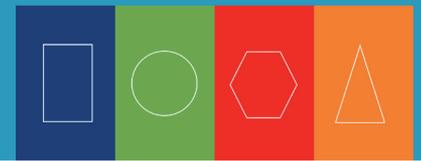
Sales and web based marketing skills, language and intercultural skills, a proven record of intercultural abilities and overseas expertise were cited as most needed if available. A mix of newspaper, web, recruitment agencies and head hunting were used for recruitment purposes.

5.8.12 International Education Sector - Conclusions

Organisations interviewed currently have students from the USA, China, France, UK, Germany, Spain, Malaysia, India and the Middle East. The most important skills for ensuring that market opportunities are harnessed include marketing, understanding the brand, messaging, strategic skills, having a business mindset, customer care skills and pastoral care. Forming strategic alliances/twinning arrangement and redesigning programmes and curriculum are central to future success. Key future skills needs by function within the organisations are:

- Customer Service skills and client focus ethos across all functions.
- Management to have a mix of educational as well as business skills.
- Understanding the brand and messaging.
- Marketing skills to drive web based marketing and intercultural skills.
- Sales people with intercultural, linguistic abilities and overseas experience.

A mix of international business and educational skills are difficult to find and would be employed if available. Colleges engaged in the provision of international education have skills gaps in marketing, branding, messaging, customer service, strategic skills, and flexible forms of learning opportunity. Placement (ideally in multi-national companies) could be integrated into all programmes offered to international students. The students' experience could be improved through best practice in admissions, registrations, airport welcome desks etc. Short courses could be provided for International Office Staff on foreign languages, intercultural skills, marketing, inter personal skills and management. These should include blended learning opportunities.



5.9 Tourism Sector

5.9.1 Profile of Sector

Tourism is a labour intensive sector which includes accommodation, visitor attractions and food service activities employing 113,000 people across a range of skills areas³². Its economic contribution accounts for 4% of GDP. Tourism business touches every 'parish' and therefore does not show a tendency to cluster but rather is evenly distributed on a regional basis. Tourism Ireland is the agency responsible for marketing the island of Ireland within our overseas tourism markets. It works with the two tourist boards on the island - Fáilte Ireland and the Northern Ireland Tourist Board. They are responsible for product and enterprise development and marketing to tourism consumers within the island of Ireland. The Tourism Renewal Group which reported in 2009, identified the potential for additional growth in both leisure tourism and business tourism.

5.9.2 Key Drivers

Several key drivers are impacting on the tourism business.

- The notion of sustainability is critical and Ireland has potential to 'major' in this area. Most significantly is the notion of 'feeling' holidays, where tourists are looking for memorable experiences rather than coming to a destination in order to see something. This is less tangible and requires the development of 'people' based skillsets.
- Market research skills are increasingly important within tourism businesses for understanding consumer insights and ensuring that Irish tourism can develop products that address the 'people' factor which is the essence of the Irish tourism experience.
- The emerging middle class in China and India offers new market opportunities for Irish tourism. This development requires that Irish tourism repositions itself to target the BRICS markets, and necessitates the development of relevant skillsets to interact with tourists from these markets.

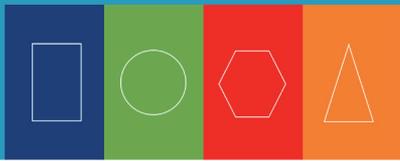
5.9.3 Export Business Planning

Strategic export business planning and risk management training is required given expected global growth within the tourism sector particularly from the BRICS countries (which are relatively unexplored markets for Irish tourism). There is a need to develop even stronger links between Irish inward tourism and the international travel trade.

5.9.4 Marketing

SMEs have a weakness in the area of marketing and individual budgets designated by businesses to marketing are low. SMEs are competing in a highly competitive international market and marketing skills are increasingly important. It would be valuable if applied tourism marketing programmes were further developed, for both small tourism businesses and for staff working in the marketing departments of tourism bodies - which are validated and accredited at NFQ levels 6 to 7 in a CPD format. This should include the use of web marketing/ selling and social media applications.

³² CSO QNHS Quarter 4, 2011.



5.9.5 Foreign Language Skills

Foreign language skills and cultural awareness are critical to the future success of the Tourism sector. However these skills are currently lacking - in terms of both the scale and level of proficiency required. Deficiencies relate to German, French, Italian and Spanish and for Mandarin Chinese, and Hindi. This must be addressed (short term in the case of European language and medium term for Asian languages), if Irish tourism is to successfully build up existing markets and reach out to new ones. It is recommended that applied tourism language programmes at FETAC NFQ Levels 6 & 7, be developed in a CPD format, in collaboration with tourism businesses, for front-line staff and also those who work with the international travel trade and within tourism bodies.

5.9.6 E-commerce

E-commerce is an increasingly important strategic activity given that new players of scale are emerging on the global stage against whom Irish SMEs have to compete. Irish tourism needs to develop an effective E-commerce strategy to enhance its competitive position. This will require training in the use E-commerce applications specific to the business needs of the sector.

5.9.7 Soft Skills

Tourism as a sector is targeting new and emerging markets as well as existing ones. There is an expectation on the part of the consumer that on visiting Ireland the experience will be a truly Irish one. In this regard intercultural skills, networking and relationship building and negotiation and communication skills are becoming increasingly important.

5.9.8 Conclusions - Tourism Sector

Irish tourism requires a skilled and professional workforce in order to deliver the highest standards of service. There is a need to ensure an evenly distributed supply of required skill development programmes at a regional level. It is recommended that current and planned applied training programmes be developed at NFQ Levels 6 & 7 for employees, in partnership with tourism businesses, in a CPD format and with a flexible delivery mode on the subjects of:

- Strategic business planning and risk management - for senior staff in tourism business.
- Marketing and Selling (including the use of web based marketing/ selling and social media applications) and E-commerce - for small tourism business owners, as well as staff working within the marketing departments of large tourism businesses.
- There is need to increase the scale and proficiency level of language learning and intercultural awareness - including German, French, Italian, Spanish and Mandarin Chinese - for front-line staff in hotels, guides, staff in tourism offices and staff working with the international travel trade and within tourism bodies. This provision should be developed and delivered in partnership with tourism businesses and delivered in a CPD format and flexible delivery mode.

These training programmes could be funded from the existing resources of business, tourism bodies, and regional bodies/associations with a remit in this area.



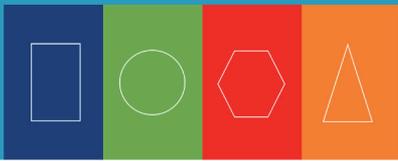
5.10 Culture Sector

5.10.1 Profile

In a European context, it is estimated that the cultural and creative sector accounts for 4.5% of European GDP and 3.8% of the workforce. Ireland has a strong talent and skills base in the arts and creative sectors with a well-established worldwide reputation from the success of artists like U2, Riverdance, Jim Sheridan, Gabriel Byrne, etc. The personable nature of the Irish fits well with the preferred “light touch sales” of the buyer in the artistic world. Ireland has achieved outstanding recognition notwithstanding the fact that we compare less favourably with European countries in developing skills for dance and music at primary and second level education.

5.10.2 Skills Requirements for Exporting

- Project management skills are required for the running of international arts events and performances for the top quarter of art products. This includes skills proficiency in finance, accounts, legal issues, planning and IP knowledge.
- The small-sized cultural enterprise sector has skills needs in the strategic marketing of their product. This includes the use of social media and the marketing and digital distribution of promotional material to influence key international buyers decisions.
- Intellectual Property awareness and expertise are important requirements for artists and performing bodies - particularly for visual media and music that is digitally produced for distribution into markets in East Asia/China where IP may be at a higher risk than in other markets.
- International buyers in the cultural sector prefer a ‘light touch’ sales and negotiation approach - where the seller makes the buyer aware of their offering - and then waits for them to make contact. This is related to the fact that international cultural event business is often publically subsidised.
- Both small and large cultural enterprises need to develop business language skills proficiency in French and German to enhance access to a relatively ‘untapped’ wider European market.
- The development of cultural awareness orientation module(s) on China, Russia and India would be valuable. There are Irish artistic organisations (c. 20) that would benefit from a basic module of Chinese language skills. There is a need for a basic orientation course in doing business in Asia for Irish artists targeting these markets.
- A cross-fertilisation of industrial/fashion/craft and architecture disciplines (functional and aesthetic) would be valuable. Consideration could be given to the consolidation of such disciplines in one institution to create a ‘world - class’ academy on a par with design centres in other countries (such as Central Saint Martin College of Art & Design, London).
- Generic skills requirements include relationship building with key producers of international cultural events. Often, one person is responsible for making decisions regarding which artist/body to include in an international cultural event.



5.11 Selected Markets - Skills & Competency Needs

A number of skill sets and competency requirements for Irish companies were identified through the structured company and stakeholder interviews and among participants who attended the three workshops. The following are findings in relation to several main markets.

5.11.1 German Market

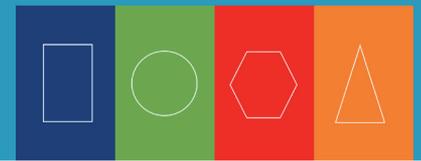
Irish businesses seeking to export to Germany need to improve their market research skills. This applies particularly to a need to use native language speakers to undertake the market research whether by way of hiring local personnel, engaging native language consultants or taking on German interns to assist. An attribute for success is 'closeness to the end customer'. This involves either direct selling in strategic markets or a dedicated channel management resource. Channel management in Germany typically revolves around agents/dealers and distributors. Successful companies have a dedicated management resource for channel management - including either a native language speaker in the Irish business and/or a person on the ground in the target market. This is essential for the motivation and monitoring of the performance of the Channel Partner against set sales targets. Companies have a decision to make on either a direct or indirect approach in markets. A combined approach is a more difficult proposition to manage than an approach of all direct or all channel sales. Products and services offered by Irish companies in Germany tend to be high value added and involve more complex technical sales.

German customers like doing business with Irish people and the warmth and conviviality for which Ireland is known is reciprocated. However, to develop these relations Irish business people need to speak good German. While an introductory meeting can be held in English, the need to switch to German is necessary to achieve the sale. A main reason given for Ireland's relative lack of penetration of near European markets is our weakness at foreign languages. Goods exports to Germany for instance are around half of exports to the UK, even though Germany is a larger and more prosperous market and is still relatively close.

5.11.2 French Market

France is the second largest economy in Europe after Germany and has been consistently a mainstay market for Irish exporters. The Irish business culture of a transaction approach differs from the French approach where a relationship must be nurtured before a commercial agreement is made. Suppliers are expected to provide detailed responses before the contract process can move on to the next stage. This can often lead Irish exporters to view the business culture as more bureaucratic which isn't necessarily the case. A main reason for Irish exporters' failure in the French market is the lack of a clear value proposition, particularly in comparison with domestic French competitors which have an established brand in the market. This can be due to a number of reasons including a failure to invest time into researching the French Market. Initial trips by Irish businesses to France need to focus on understanding the buyer's needs and requirements.

Irish suppliers need to cultivate a strong relationship with their agents and distributors with regular in-market contact and support to maximise the relationship. In comparison with other European



Countries, French competence in other languages has been traditionally weak. While English is spoken in many industrial sectors such as Banking and IT, it is still difficult to cultivate the necessary relationships to win business without proficiency in the French language. French language proficiency and cultural awareness is essential for service/support staff and technical teams to give the customer the confidence that problems will be resolved. If an Irish company doesn't have the necessary language skills, French companies are unlikely to take the time to follow up as there are always alternative suppliers with competent language skills. Generally the best results from Irish exporters to the French market are for those companies who establish a presence in France

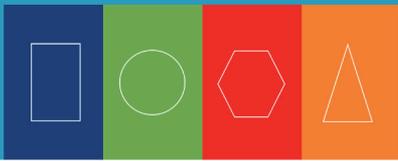
5.11.3 Russian Market

In total some 110 Irish businesses have some level of dealings with the Russian market. It is estimated that there are twenty Irish companies engaged in regular business with the Russian market. Of these, ten companies have a local presence. To undertake market research, Irish companies need access to Russian language skills and an awareness of how business is done in the formal and informal economy. While the normal skills of channel management apply, the legal protection and attitude of Channel Partners can be lacking. The key skills of channel management are a mix of commercial and personal skills. Access to Russian language skills and cultural awareness are important for pitching sales at the right level. It is essential that sales and marketing material is written in Russian. Decisions to purchase are often taken by a committee and while there might be one member who speaks English the majority will not. The government sector in Russia is more prevalent than in other economies. A personal contact at government level (without any suggestion of impropriety) can help navigate an apparently complex administrative landscape.

The normal processes of certification are needed as for any market. Irish businesses can understate legitimate concerns on the part of Russian authorities about an application for certification or importation documentation. For instance, there may simply be mistakes or mistranslations on documentation provided by the Irish business. The Russian legal system is still not robust/conducive to Intellectual Property based export businesses and there is a need for caution regarding adequate protection in the case of a legal dispute. It is essential to have access to Russian language skills. While generally Irish people do not speak Russian, there are approx. 80,000 fluent Russian speakers in Ireland (generally relatively recent arrivals from Russia, Ukraine, Latvia, Lithuania, Estonia etc.). If Irish companies want to export to Russia, such skills are available here. Some care might be taken in hiring as there are regional preferences within Russia itself.

5.11.4 Asian Pacific Markets

It is essential for Irish companies planning to export to Asia Pacific markets to prioritise and dedicate the necessary management resources (personnel and time). There are several established companies with excellent channel strategies and dedicated resources to manage, motivate and support their Channel Partners. However, there are other companies who fail to demonstrate the basic skills of establishing the channel. There can then be a lack of support for the Channel Partner either with inward buyer visits to Ireland or with marketing or technical support. These issues are compounded by the relative expense and distance involved in accessing the region. There are also issues of mismatched expectations between Irish companies and their Channel Partners. An Irish



company may have a 2-3 year view to profitability whilst their Asian counterpart has a longer term vision. There are market specific protocols and patterns to preliminary meetings. For example, the process of meeting in a business context can be accompanied by quite a degree of etiquette. The importance of building close and strong relationships in Chinese commercial culture cannot be overestimated. In practice Chinese businesses prefer to deal with clients they have established a close relationship with. Many meetings and visits are required by potential exporters before commercial transactions can proceed. It is unusual for Irish people to have Asian language proficiency and it may be unrealistic to expect a large cohort to acquire these skills. In SE Asia (especially Singapore, Malaysia etc.) it might be acceptable to do business in English. However in China, language proficiency in Mandarin Chinese is essential. There will often be a need to work through interpreters. A detailed assessment and briefing of the interpreter in advance is essential but often not appreciated - especially in relation to technical and domain specific terminology.

While the potential of the Indian market seems exponential for Irish exporters, these potential benefits are impeded by a complex societal structure, the prevalence of bureaucracy and a strict cost focus when compared to more developed markets. The Indian market has a competitive commercial landscape. English tends to be the commercial language of India, though the widespread societal penetration of the English language is considerably lower. While learning the basics of Hindi is suggested as a courtesy, this comes with a caveat, as it is primarily spoken just in the North of the country.

5.11.5 US Market

The USA is one of Ireland's largest export markets with total Irish goods and services exports to the USA valued at €25.2bn in 2010. As the world's largest and most technologically advanced economy, the USA offers unrivalled opportunities for Irish exporters. Ranked as the fourth easiest country in the world to do business in³³, the USA has a responsive and highly demand-led marketplace. Irish businesses need to be well funded and capitalised to ensure they can commit to the long term scaling requirements of the US market. There is a correlation between the level of international experience a company's management has and its success in export markets like the USA. Another positive influencing factor is when an Irish supplier has dealt with multinationals in the Irish domestic market. Irish companies can then use their success with these multinational companies to leverage the selling pitch in their favour. Exporters must be aware when exporting to the US, that their basic product should be augmented with other customer requirements such as guarantees, installation and servicing packages, etc. to provide a Total Service Solution. A main factor for commercial success in the US market is the speed at which a supplier can deliver the required product. Culturally, it is important that Irish companies realise that time is of the essence when trying to pitch to American business. The importance of the soft skills cannot be underestimated. Negotiation, team building, communication and empathy are all skills required to build up a network of commercial partners. Finding common ground with potential clients and then collaborating on projects that are mutually beneficial to both parties is imperative.

³³ Doing Business - Ease of Doing Business Report 2012.



Chapter 6: Assessment of Relevant Skills Supply for International Trade

6.1 Introduction

This Chapter provides a review of selected higher education and further education and training courses that help equip students with the skills relevant to enterprises trading internationally. This analysis may also act as a resource for companies seeking relevant skills and / or graduates.

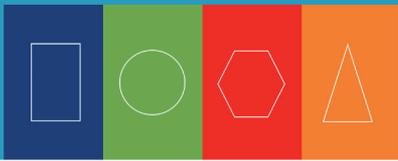
6.2 Higher Education Course Provision Relevant to International Trade

Over 130 selected higher education international business courses at various NFQ levels 6 - 9 (both public and private), which equip students with the skillsets required by enterprise(s) to trade internationally are outlined in Table 6.1. The list was compiled via a search of college prospectuses, and courses, regardless of broad discipline. This qualitative approach allows for a review of the inclusion or otherwise of specific international trade related skills delivery in such courses. While the findings of this Study are directly relevant to these specific programmes, they are also applicable to general business and technical courses - such as for example, the demand, for managers, marketing and sales professionals with international business experience and foreign language proficiency/ cultural awareness and for engineering professionals with sales skills and foreign language proficiency. Courses were selected if they included modules on at least two of the skill areas listed below.

- Entrepreneurship (while no courses were identified with an ‘entrepreneurship skills for exporting’ component, there were several that, along with an entrepreneurship module, focused on other areas relevant to International trade skills).
- International Trade/Export Trade.
- Export Business Planning.
- International Marketing.
- E-commerce.
- Logistics and Distribution.
- Procurement and Purchasing.
- Foreign Language skills - along with study / work abroad modules.
- Food Export skills.

The list of relevant courses includes the provider name, award type (e.g. Master’s degree), NFQ (National Framework of Qualifications) level, course title, and the range of course modules relevant to the skills for International trade (mentioned above). Abbreviations for individual course providers are provided in Appendix 2.

An ‘x’ in the column indicates that a module relevant to that particular skill forms a compulsory part of an undergraduate programme. For postgraduate programmes, given the specialist nature or the area of study, an ‘x’ indicates that the module is provided, even in cases where it may be



optional. The letters 'o' and 'c' indicate that a language or work/study abroad forms an optional or compulsory module of the course respectively.

Exclusions from Analysis

- Undergraduate courses where an International component was optional (although postgraduate courses where the International component was optional were retained due to the specialist nature of a master's course).
- Not all Tourism courses are included.
- European Studies: where the course usually involves the study of two European languages and political/geographical sciences. These courses are excluded as the main focus of the course is not directly related to international trade.
- Arts programmes focusing on languages or applied languages are excluded.

Caveats

A number of issues arise when looking at the education and training provision for skills for business to trade internationally, as follows:

- Unlike the situation with, for example, medical doctors or chartered engineers (where there are specific higher education courses leading to the qualifications necessary to practice in these professions), the number of courses that may, to varying degrees, provide the skills for international trade, is potentially quite large - and span a range of disciplines (business, engineering, science, agriculture, arts (languages), tourism, manufacturing).
- The lack of an international component on a course does not mean that it will not be possible for a graduate to pursue an international career; graduates may acquire the necessary skills by other means (e.g. personal interest, exposure to an international environment through experience at work).

Other Courses

This Chapter also provides information on over 50 international trade related courses run by agencies and professional bodies. These courses, in many cases, are of shorter duration and more vocationally orientated. The majority, while not providing NFQ accreditation, often provide their own private accreditation.

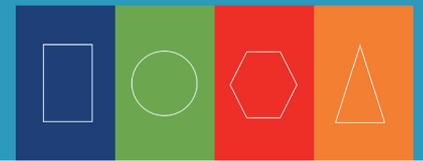
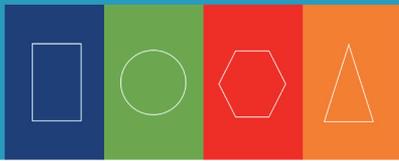
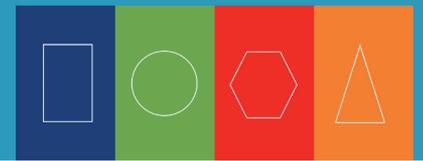


Table 6.1: Selected Courses, by NFQ level, providing skills for International Trade

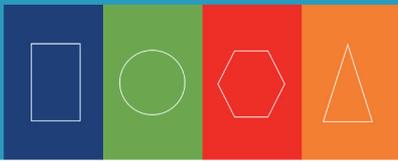
College	NFQ	Award Type	Course	Study/Work Abroad	Country	Entrepreneurship	International Trade	Export business planning (International Business)	International marketing	E-business	Logistics & distribution.	Procurement	Food Export Sector	Foreign language skills
DIT	6	Higher Cert	Marketing			x			x		x			o
AIT	7	BBUs (Hons)	International Business Management (for overseas students only)	c	Ireland	x	x	x	x		x			o
Cork IT	7	BSc (Ord)	Agriculture	o	UK, Aus, NZ, USA								x	
GC Dublin	7	BA (Ord)	Marketing			x			x					
GC Cork	7	BA (Ord)	Marketing				x		x					
Wat'ford IT	7	BA (Ord)	Legal Studies (Trade) - add on				x		x					
Cork IT	7	BBus (Ord)	Supply Chain & Transport Management				x				x			
Dundalk IT	7	BBus (Ord)	International Business (1-yr add-on)	c	Europe, China		x							c
IT Tralee	7	BBS (Ord)	International Business (1-yr add-on)	c				x						
GC Limerick	7	BA (Ord)	Business Studies						x					
GC Cork	7	BA (Ord)	Business Studies						x					
IT Blanch	7	BBus (ord)	International Business (Fr, Gr, Sp)						x					o
LIT & LIT Tipp'rary	7	BBS	Marketing						x					
Sligo IT	7	BBS	Marketing	o					x					o
Sligo IT	7	BBS	International Marketing	c					x					
Sligo IT	7	BBS	Marketing and Languages						x					c
Letterkenny IT	7	BBus (Ord)	International Business & Languages	o					x					o
Shannon College HM	8	BBS (Hons)	International Hotel Management	c	Europe; USA; Asia		x	x	x			x		c
IT Tallaght	8	BBus (Hons)	Marketing Management			x		x	x					o
UL	8	BA (Hons)	International Business	c	Int (inc USA)	x		x						o
UL	8	BA Arts (Hons)	Arts in Applied Languages	c	Europe & Argentina									c
UL	8	BBS (Hons)	Business studies with French or German or Japanese	c		x								c
Carlow IT	8	BBS (Hons)	International Business (add-on)			x			x					o
NUI Galway	8	BComm (Hons) International	Commerce with a language (Fr Gr or Sp)	c		x								c
UCD	8	BComm (Hons) International	Commerce	c	Europe; UK; China,		x	x	x	x	x	x		c
UCC	8	BSc honours	Computing with Chinese Studies	c										c



DIT	8	BA	International Business & language (Fr, Gr, Sp, It)	c	Europe & Argentina		x	x	x		x			c
American College	8	BA (Hons)	International Business				x	x	x					
DCU	8	BBS (Hons)	Business Studies				x	x		x				o
DIT	8	BA (Hons)	Chinese & International Business	c	China		x		x		x			c
IT Blanch	8	BBus (Hons)	International Business (Fr, Gr, Sp)	O	Europe		x		x					c
Dundalk IT	8	BBus (Hons)	International Management	c	Europe		x							c
NUI Maynooth	8	BA	International Finance and Economics	c			x							c
American College	8	BA (Hons)	Accounting & Finance					x						
Carlow IT	8	BBS (Hons)	Mgt (add-on)					x						o
DCU	8	BA (Hons)	European Business	c	Fr; Gr; Sp			x						c
IT Tallaght	8	BBus (Hons)	Management					x						o
TCD	8	BBS (Lang)	Business + language	c	Europe inc Russia & Poland			x						c
TCD	8	BA	Computer science , linguistics & languages	c	Europe									c
TCD	8	BBL	Law and a language	C	France / Ger									c
UCC	8	BComm (Hons) International	International Commerce with a language	c	Europe /China			x						c
Waterford IT	8	BA	International Business	c	Europe /USA			x						o
DCU	8	BSc (Hons)	Marketing, Innovation & Technology						x	x	x			
DCU	8	BBS (Hons)	Business Studies - International	c	Europe China; S. Amer Japan				x					c
DIT	8	BA (Hons)	Marketing						x					o
DIT	8	BA (Hons)	Languages & International Tourism	c										c
Dundalk IT	8	BBus (Hons)	Marketing	c	Europe China				x					c
IT Tralee	8	BBus (Hons)	Business Studies (marketing stream)						x					o
UCD	8	BAgrSc (Hons)	Food & Agribusiness Management	o					x				x	
Waterford IT	8	BBS	Business Studies/marketing + Language	o					x					o
NUI Maynooth	8	BBS	Venture Management							x	x			
Carlow IT	8	BBS (Hons)	Supply Chain Management (add-on)								x			o
IBAT (Swords)	9	MBA	Business						x					
AIT	9	Master	Business			x		x						
Dundalk IT	9	Executive MBA	MBA			x		x						
NUI Galway	9	Executive MBA	MBA	o	USA (1 month)	x								
UL	9	MBS	International Entrepreneurship Management			x		x						
UL	9	MSc	Software Engineering & Entrepreneurship Skills for Exporting			x		x						

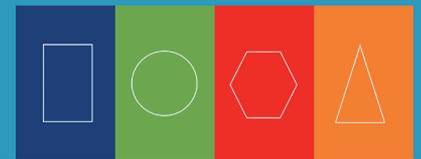


DIT	9	PG Dip	International Business Development (food & drink Marketing) / IBEC				x	x	x										
Sligo IT	9	MSc	Marketing				x	x	x										
NUI Maynooth	9	MA	Economic Science				x	x											
DIT	9	PG Dip	International Selling Programme – Enterprise Ireland’s Export Sales Development Programme	o			x			x									
DCU	9	European MSc	Business Informatics	o	Europe		x				x	x							
DCU	9	MSc (IPBS MASTER)	International Management	c	USA; Europe Mexico		x												o
DIT	9	PG Dip	International Business Development	c	China; Russia; Europe USA		x												Bord Bia/ Ibec
NUI Maynooth	9	MLS	Legal Science				x												
NUI Maynooth	9	MLL	International Law	c			x												
NUI Galway	9	MSc	Strategic Marketing								x	x							
UCD	9	MSc (Taught)	International Business	o						x	x								
UCD	9	PGDip	International Growth (In conjunction with EI)	c	abroad					x	x								
UCD	9	MSc (Taught)	Management							x				x					
UCD	9	MBA	MBA	c		o	x												
UCD	9	MSc Taught	Innovation in Business	o														x	
American College	9	MB	International Business							x									
Cork IT	9	MBA	Business							x									
DBS	9	MBA	MBA (Various Streams)							x									
DBS	9	MSc	International Business (U of Wales)							x									
DIT	9	MSc	International Business							x									
DIT	9	PGDIP	Management & Marketing							x									
Galway-Mayo IT	9	MBA	Strategy and Innovation Management							x									
IMI	9	MBA	Henley MBA	o – 2x week	Europe & China					x									
IT Tralee	9	MBA	MBA							x									
NCI	9	MSc	Management							x									
NUI Galway	9	MSc	International Management							x									
NUI Galway	9	MSc	Strategy, Innovation and People Management							x									
NUI Maynooth	9	MSc	Business Management							x									
TCD	9	MSc Mgt	Management International Business Programme	o	BRICs					x									
TCD	9	MSc Mgt	International Management							x									
TCD	9	MML	International and European Business Law							x									
UCC	9	MA/Pgdi p	Contemporary Chinese Culture & Business							x									c
UCD	9	MA/Pgdi p	Contemporary Chinese Culture and Business							x									c
UL	9	MBS	International Management & Global Business							x									
UL	9	MSc	Financial Services							x									
UL	9	MBA	Business Administration (Aviation)							x									
UL	9	MSc	Global Computing and Localisation, MSc, (FT)							x									
Waterf'd IT	9	MBS	Internationalisation	c	France					x									c
Waterf'd IT	9	MSc	Business, Innovation, Technology & Entrepreneurship							x									
DIT	9	PGDip	Fashion Buying and Management									x							x



DBS	9	MSc	Marketing							x				
DIT	9	MBS	Retail Management							x				
DIT	9	MSC	Strategic Management (marketing stream)							x				
NCI	9	MBA	MBA (pending HETAC validation)							x				
NCI	9	MSc	Marketing							x				
TCD	9	MBA	Business Administration							x				
TCD	9	MSc	Business & Management							x				
UCD	9	MSc (Taught)	Marketing							x				
UCD	9	CEMS Masters	International Management	o						x		x		c
DIT	9	MSc	Supply Chain Management									x		
GC Limerick	9	Exec Masters	Supply Chain									x		
IT Tralee	9	MBS	Master of Business Studies									x		
UCD	9	MSc (Taught)	Supply Chain Management									x		
UL	9	MSc	Project Management									x		
DBS	n/a	Diploma	International Business Studies (ICM) Evening				x	x	x					
American College	9	MBA	Business Administration (International Specialisation)				x							
DBS	n/a	DBS diploma	Taxation (Evening)				x							
American College	6	ACD Cert/dip/BA	International Business						x					
American College	8	BA	Event Management						x					
DBS	n/a	DBS diploma	Selling & Sales Management							x				
Cork IT	7	BSc(Ord)	Agriculture	o	UK; AUS; NZ; USA									x
UCD	9	MSc (Taught)	iBusiness										x	

Source: Compiled by FÁS SLMRU and Forfás at request of EGFSN.



6.3 Other Relevant International Trade related courses

Table 6.2: Other courses relevant to Export Business Planning

College	NFQ	Award Type	Course	Export	International Trade	Export Business Planning	International Marketing	Food Export Sector
Institute of International Trade of Ireland	n/a	4 days	Export Market Entry Strategy			x	x	
Institute of International Trade of Ireland	n/a	Prof Diploma	Global Trade & E-Business		x	x		
Institute of International Trade of Ireland	n/a	Diploma	International Trade	x	x	x	x	
Institute of International Trade of Ireland	n/a	Advanced Diploma	International Trade	x	x	x	x	
Enterprise Ireland	n/a	short	Internet Growth Acceleration Programme (iGAP)			x	x	
Irish Exporters Association	n/a	12 months	Channel Clusters Programme	x		x	x	x
Irish Exporters Association	n/a	3 day	Celtic Recipes Programme	x		x	x	x
Enterprise Ireland	n/a	n/a	Finance for Growth (series of workshops)			x		
Irish Institute for Chinese Studies	n/a	0.5 day	Doing business in China: intensive programme 1			x		
Irish Institute for Chinese Studies	n/a	1 day	Doing business in China: intensive programme 2			x		
Irish Institute for Chinese Studies	n/a		Understanding China: In-company corporate training programme			x		
Irish Institute for Chinese Studies	n/a	1 week	Cert in Chinese Business & Culture (Intensive one week programme in China with a partner university)			x		
Irish Institute for Chinese Studies	n/a		Chinese Business & Culture Workshop (Partnership programme with ICA, DCC, or CI)			x		
Irish Institute for Chinese Studies	n/a	2 weeks	Chinese Business and Practices			x		
Irish Institute for Chinese Studies	n/a	15 x 2 hrs	Diploma in Chinese Business & Culture			x		
Irish Institute for Chinese Studies	n/a	15 evenings	Chinese Language and Business			x		
Irish Institute for Chinese Studies	n/a	15 evenings	Chinese Language and Culture			x		
Irish Institute for Chinese Studies	n/a		Business Expertise in China			x		

n/a = not applicable

Table 6.3: Other courses relevant to International Marketing

College	NFQ	Award Type	Course	Export	International Trade	Export business planning (International business)	International marketing	E-business Skills	Logistics & dist.	Food Export Sector
Irish Training & Education Centre	n/a	short	Export Strategies (Distance Learning)	x			x			
Institute of International Trade of Ireland	n/a	2 days	A-Z of Exporting	x			x		x	
Institute of International Trade of Ireland	n/a	4 days	Export Market Entry Strategy			x	x			
Institute of International Trade of Ireland	n/a	Dip	International Trade	x	x	x	x	x		
Institute of International Trade of Ireland	n/a	Advanced Diploma	International Trade	x	x	x	x			
Enterprise Ireland	n/a	short	Internet Growth Acceleration Programme (iGAP)			x	x	x		
Irish Exporters Association	n/a	12 mths	Channel Clusters Programme	x			x			x
Irish Exporters Association	n/a	3 day	Celtic Recipes Programme	x			x			x
DL College of FET	5	Major	International Business Trade Practice							
Enterprise Ireland	n/a	1-2 days	Excel at Export Selling	x			x			
Enterprise Ireland	n/a	1 day	First Flight (workshop with advice from overseas market advisers)	x			x			
The Marketing Institute	9	MSC	Executive MSC in Marketing run in conjunction with DIT				x			
The Marketing Institute	9	Post Graduate Diploma	Postgraduate Diploma in Management and Marketing run in conjunction with DIT		x					
The Marketing Institute	Accredited by the Marketing Institute	13 weeks	Digital Marketing Executive Programme		x					

Source: Compiled by FÁS SLMRU and Forfás.

The Digital Marketing Institute runs three related courses. These are (i) Professional Diploma in Digital Marketing, (ii) Professional Diploma in Social Media Marketing, and (iii) Postgraduate Diploma in Digital Marketing.

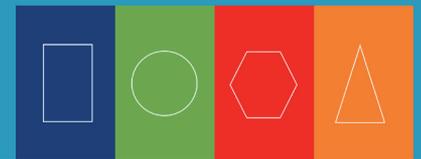


Table 6.4: Other Courses Relevant to E-business Skills

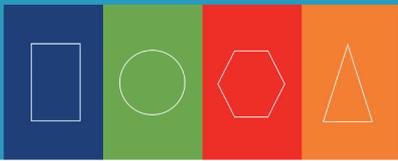
College	NFQ	Award Type	Course	Export	International Trade	Export business planning	International marketing	E-business Skills	Logistics & distribution skills	Procurement
Export-Edge Business College	5	Major	E-business Certificate (E-business & internet marketing)					x	x	x
Institute of International Trade of Ireland	n/a	Dip	International Trade	x	x	x	x	x		
Enterprise Ireland	n/a	short	Internet Growth Acceleration Programme (iGAP)			x	x	x		

Source: Compiled by FÁS SLMRU at request of EGFSN.

Table 6.5: Other courses relevant for Logistics and Distribution Skills

College	NFQ	Award Type	Course	Export	International Trade	International marketing skills	E-business Skills	Logistics & distribution	Procurement
Export-Edge Business College	5	Major	International Trade (IICM/FETAC)	x	x	x		x	
Export-Edge Business College	5	Major	eBusiness Certificate (e-business & internet marketing) (FETAC)				x	x	x
Irish Training & Education Centre	n/a	short	International Trade & Customs (Distance Learning)		x			x	
Institute of International Trade of Ireland	n/a	2 days	A-Z of Exporting	x		x		x	
Institute of International Trade of Ireland	n/a	1 day	Logistics for International Trade		x			x	
Institute of International Trade of Ireland	n/a	2 days	Export Market Channels	x				x	
Chartered Institute of Logistics and Transport	n/a	Accredited by Institute	Certificate and Diploma courses in logistics and Supply Chain Management	x				x	

Source: Compiled by FÁS SLMRU at request of EGFSN.



Other courses relevant for procurement and purchasing skills

Irish Institute of Purchasing and Materials

While there were no specific courses in International procurement and purchasing skills, there are a range of courses, professional and higher education courses, available at the Irish Institute of Purchasing and Materials Management. They range in duration from a number of days/weeks to four years for a HETAC accredited degree programme.

Professional certificates programmes

- Purchasing Fundamentals; Warehousing & supply; Public sector procurement.

HETAC accredited higher education programmes

- Higher certificate in Business Procurement (NFQ 6).
- BBus in Procurement & Supply Management (NFQ 7).
- BBus Hons in Procurement & Supply Management (NFQ 8).

Other Courses relevant to Food Exports

Bord Bia Education Programmes

The main Bord Bia education programmes relevant to food exports are as follows:

- 4th Bord Bia Marketing Fellowship Programme

In addition to bringing the 3rd Marketing Fellowship Programme to fruition, Bord Bia has commenced recruitment for the 4th Programme. This will build on learning to date with particular reference to increasing output from commercial assignments. Bord Bia's aim is to have 25 participants undertaking 100 commercial assignments for eighty client companies in twelve markets.

- 3rd Bord Bia Strategic Growth (Food Industry) Programme

This two-year part-time executive development programme is designed to enhance the leadership capabilities of employees in the Irish food and drink sector. Attracting more than 60 percent of graduates from the Marketing Fellowship Programme, the second Programme commenced in November 2011. The 3rd Programme is planned for quarter 4 2012. This is also a learning platform for current food industry executives and their employers who recognise the benefits which accrue from exposure to the best international practice in food marketing and sales.

- Bord Bia Food Marketing Graduate Programme

A second Food Marketing Graduate Programme is planned to commence in January 2013. As part of this 18 month Programme, graduates while working in companies undertake a post graduate Diploma in International Business Development with Dublin Institute of Technology (DIT), starting with two weeks executive education. The 13 graduates on the first Programme which commenced in August 2011 have moved to markets in China, France, Germany, Italy, Russia, South Africa, Sweden, UK and US.

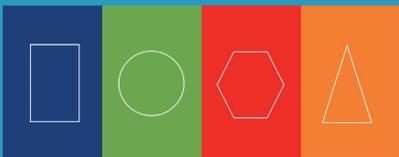


Table 6.6: FETAC awards (International Trade & E-business Awards) 2010

Type	Level	Award	Awards
Major	5	International Trade	2
Major	5	E-business	60
Minor	5	International Trade Practice	51
Minor	5	E-business Studies	206
Minor	5	E-Business	4
Minor	6	International Marketing	32
Minor	6	E-Business	21

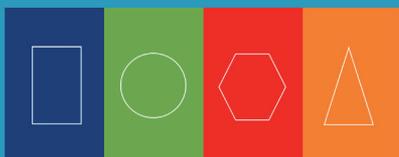
Source: FETAC

6.4 Foreign Language Skills

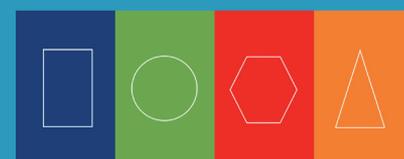
Foreign language skills have been identified in the Study as a key skill requirement for enterprise trade and export performance. This section therefore examines the issue of foreign language proficiency in greater detail. Table 6.7 below provides a list of courses with both international modules and language skills). These courses are also included in Table 6.1.

Table 6.7: Higher Education Courses relevant for International Skills with Language Modules

College	NFQ	Award Type	Course	Study/Work Abroad	Country	Entrepreneurship	International Trade	Export business planning	International marketing	E-business	Logistics & Distribution.	Procurement	Foreign language Skills
DIT	6	Higher Cert	Marketing			x			x		x		o
AIT	7	BBUs (Hons)	International Business Management (for overseas students only)	c	Ireland	x	x	x	x		x		o
Dundalk IT	7	BBus (Ord)	International Business (1-yr add-on)	c	Europe, China		x						c
IT Blanch	7	BBus (Ord)	International Business (French, German, Spanish)						x				o
Sligo IT	7	BBS	Marketing	o					x				o
Sligo IT	7	BBS	Marketing and Languages						x				c
Letterkenny IT	7	BBus (Ord)	International Business & Languages	o					x				o
Shannon College HM	8	BBS (Hons)	International Hotel Management	c	Europe; USA; Asia		x	x	x			x	c
IT Tallaght	8	BBus (Hons)	Marketing Management			x		x	x				o
UL	8	BA (Hons)	International Business	c	International (inc USA)	x		x					o
Carlow IT	8	BBS (Hons)	International Business (add-on)			x			x				o



College	NFQ	Award Type	Course	Study/Work Abroad	Country	Entrepreneurship	International Trade	Export business planning	International marketing	E-business	Logistics & Distribution.	Procurement	Foreign language Skills
NUI Galway	8	BCom m (Hons) Int	Commerce with a language (Fr Gr or Spain)	c		x							c
DIT	8	BA	International Business & language (French, German, Spanish, Italian)	c	Europe & Argentina		x	x	x		x		c
UCD	8	BComm (Hons)	International Commerce	c	Europe; UK; China,		x	x	x	x	x	x	c
DCU	8	BBS (Hons)	Business Studies				x	x		x			o
DIT	8	BA (Hons)	Chinese & International Business	c	China		x		x		x		c
IT Blanch	8	BBus (Hons)	International Business (French, German, Spanish)	O	Europe		x		x				c
Dundalk IT	8	BBUs (Hons)	International Management	c	Europe		x						c
NUI Maynooth	8	BA	International Finance and Economics	c			x						c
Carlow IT	8	BBS (Hons)	Management (add-on)					x					o
DCU	8	BA (Hons)	European Business	c	France, Germany, Spain			x					c
IT Tallaght	8	BBUs (Hons)	Management					x					o
TCD	8	BBS (Lang)	Business + language	c	Europe (inc Russia & Poland)			x					c
UCC	8	BComm (Hons) International	International Commerce with a language	c	Europe/ China			x					c
Waterford IT	8	BA	International Business	c	Europe; USA			x					o
DCU	8	BBS (Hons)	Business Studies - International	c	Europe; China; S. America; Japan				x				c
DIT	8	BA (Hons)	Marketing						x				o
Dundalk IT	8	BBUs (Hons)	Marketing	c	Europe; China				x				c
IT Tralee	8	BBUs (Hons)	Business Studies (marketing stream)						x				o
Waterford IT	8	BBS	Business Studies/Marketing + Language	o					x				o



College	NFQ	Award Type	Course	Study/Work Abroad	Country	Entrepreneurship	International Trade	Export business planning	International marketing	E-business	Logistics & Distribution.	Procurement	Foreign language Skills
Carlow IT	8	BBS (Hons)	Supply Chain Management (add-on)								x		o
DCU	9	MSc	International Management	c	USA; Europe; Mexico		x						o
UCC	9	MA	Contemporary Chinese Culture & Business					x					c
UCD	9	MA	Contemporary Chinese Culture and Business					x					c
Waterford IT	9	MBS	Internationalisation	c	France			x					c
UCD	9	CEMS Master	International Management	o					x		x		c

Source: Compiled by FÁS SLMRU at request of EGFSN.

*Excludes (i) courses which are entirely language-based, (ii) business courses without an international module (other than a language).

Reported Languages Taken by Students Enrolled in HEI's (2007/08 - 2009/10)

The student enrolment numbers presented in Table 6.8 below represent two types of courses. The first is 'foreign languages only', where the student is enrolled only on a modern language programme (excluding English and Irish). The second type, 'Other courses with a language component', refers to courses where the study of a modern language plays a large role but is not the major focus of study. It should be noted that not all courses of this type are identifiable in the data and there exist 'other courses' where languages may be elective modules, thereby playing a smaller role within the overall course of study. Enrolment numbers for these courses are not available.

Table 6.8: Reported Foreign Language Enrolments in Higher Education by Language- HEA Funded Institutions

HEA Funded Institutions	2009/2010
Foreign Languages Only	1,441
Other courses with a language subject	1,956
Total	3,397

Source: HEA (HEA note that the above data is extracted by focussing on the subject choice of students. However these figures do not include foreign language only students where there is no language subject returned by the institution even if they are studying modern foreign languages. At this date, the exact data is not available.

The 'Other' category in the Table 6.8 is further analysed by broad subject area in Table 6.9. Most courses where languages are an important, but not the main, focus of study tend to be in the arts and business and administration courses.

Table 6.9: Enrolments on 'Other' courses with a Foreign language Subject Component

Field	2009/2010
Arts (e.g. BA Int.)	805
Humanities (e.g. European Studies)	7
Foreign Languages & Cultures	4
Business & Administration	1,017
Law	106
Science (computing)	17
Grand Total	1,956

Source: HEA - Excludes the 1,441 students who are enrolled in foreign language only courses

Table 6.10 below details the reported enrolments on those courses in HEA funded third level institutions that teach a foreign language to students as a second language (excluded from this category are English and Irish). These courses represented 0.77% of total third-level enrolments in 2009/10. There has been a +12.9 % increase over the period 2007-10.

Table 6.10: Trends in Foreign Language Enrolments to HEA Third-Level Funded Institutions

	2007/08	2008/09	2009/10
Enrolments on Foreign Language Courses (ISCED 222)	1,276	1,238	1,441
Overall Enrolments in HEA Funded Institutions	170,305	177,388	188,166
Enrolments on Foreign Language Courses as a % of Overall Enrolments	0.75%	0.70%	0.77%

Source: HEA note that the above data is extracted by focussing on the subject choice of students. These figures do not include foreign language only students where there is no language subject returned by the institution even if they are studying modern foreign languages. At this date, the exact data is not available.

ERASMUS Students - Outgoing from Ireland

The European Region Action Scheme for the Mobility of University Students (ERASMUS) is a programme that enables higher education students to study or do a work placement for 3 to 12 months in one of thirty other European countries as part of their studies³⁴. Table 6.11 shows the numbers of outgoing Irish students by destination country in 2011/10. In total, 2,508 ERASMUS students went abroad (the highest number to date) of which 653 were work placement students. A quarter of all students went to France, followed by Spain (18%), UK (14%) and Germany (11%).

³⁴ERASMUS participating institutions are not confined to the EU; ERASMUS also includes Norway, Iceland and Turkey. The ERASMUS programme has offered students the opportunity to go abroad for work placements since the academic year 2007/08.

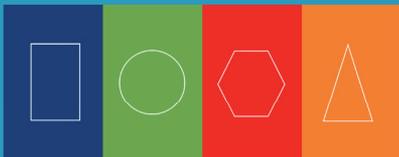


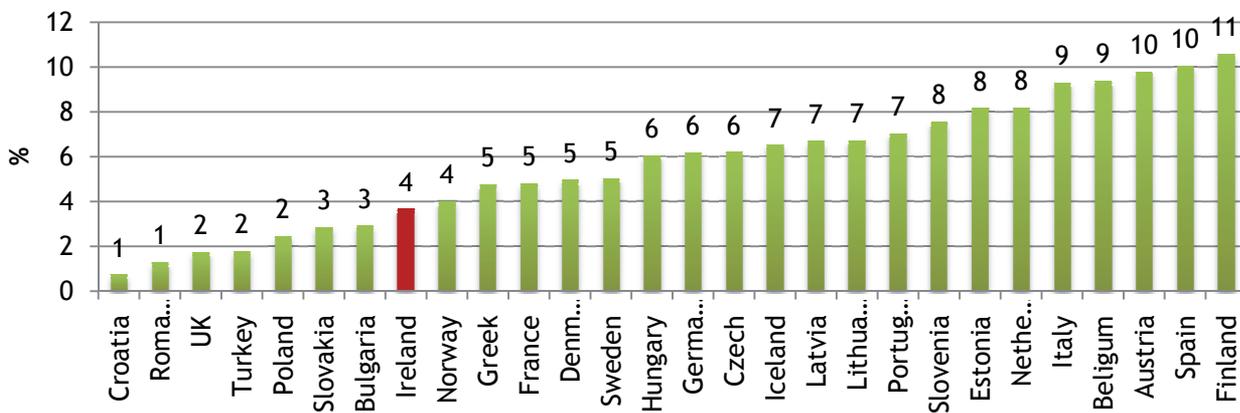
Table 6.11: Outgoing ERASMUS Students from Ireland by Destination Country, 2010/11

Destination Country	2010/11
France	649
Spain	451
UK	349
Germany	276
Netherlands	144
Sweden	115
Italy	74
Austria	53
Others	397
Total	2,508

Source: Irish National Agency for ERASMUS at the Higher Education Authority, May 2012

Figure 6.1 below compares the proportion of ERASMUS students as a share of all graduates in 2009/10 across European participating countries. Ireland ranks below the average and well behind most EU countries.

Figure 6.1: ERASMUS Students as a proportion of all Graduates for Year 2009/10- (%)



Source: Eurostat - ERASMUS - Facts, Figures & Trends 2009/10.

Leaving Certificate Language Subjects (2010)

French is by far the most popular foreign language taken by Leaving Certificate students, with more than half of LC examination sittings in 2009 and 2010. This is followed by German with approximately 13%-14% of students sitting the Leaving Certificate examination in this subject.

Table 6.12: Selected Leaving Certificate Languages: Total Sits and Take-up Rate (share of total Leaving Cert sittings), 2009-2010

	<i>French</i>	<i>German</i>	<i>Spanish</i>
Leaving Cert Sits 2010	27,574 (51%)	7,305 (13%)	3,645 (7%)
Leaving Cert Sits 2009	27,675 (51%)	7,574 (14%)	3,277 (7%)

Source: State Examinations Commission

Table 6.13 below shows the number of students who sat two foreign languages in the 2010 Leaving Certificate examination, by languages taken³⁵. The foreign languages covered are French, German, Spanish, Italian, Russian³⁶ and Japanese. The analysis excludes non-curricular languages, which are not formally taught in the second level system, but which are discussed later in this section. Almost 1,000 students sat two foreign languages in the Leaving Certificate examination in 2010. Overall, the majority (80%, or 757 students) of those who sat two foreign languages in 2010 had taken French with one other language, mostly either German or Spanish.

Table 6.13: Students Sitting at Least Two Leaving Certificate Foreign Language Subjects, 2010

	<i>French</i>	<i>German</i>	<i>Spanish</i>	<i>Italian</i>	<i>Russian</i>	<i>Japanese</i>	<i>Total</i>
French		319	249	50	95	44	757
German	319		56	20	43	12	450
Spanish	249	56		24	15	12	356
Italian	50	20	24		1	2	97
Russian	95	43	15	1		2	156
Japanese	44	12	12	2	2		72

Source: State Examinations Commission

Candidates may also sit examinations in a non-curricular EU language. A non-curricular EU language does not form part of the normal school curriculum but students who are from an EU member state and who speak the language as a mother tongue may opt to be examined in that language. Candidates may sit only one non-curricular language subject for the Leaving Certificate examination. It is therefore a useful indicator of the minimum number of non-Irish EU nationals who sat the Leaving Certificate in 2009-2010. In 2010, there were 1,050 people sitting non-curricular languages in the Leaving Certificate examination, a 29% increase on the preceding year.

³⁵In this context, the term 'foreign' is used to denote a language that is not generally spoken in Ireland and as such excludes English and Irish.

³⁶Russian is unusual in that it is a curricular language, taught as a timetabled subject in very few schools, but often taken by students for whom it is a 'heritage' language (i.e. they may have studied Russian in another country; or they may speak Russian in the home) rather than by students learning it as a foreign language).



Table 6.14: Non-Curricular Languages (Sits) 2009-2010

	2009 Sits	2010 Sits
Polish	328	451
Lithuanian	176	207
Romanian	92	121
Others*	87	97
Latvian	48	96
Portuguese	55	49
Dutch	31	29
Total	817	1,050

Source: State Examinations Commission

* Others: including Slovakian, Bulgarian, Hungarian, Swedish, Czech, Modern Greek, Finnish, and Estonian.

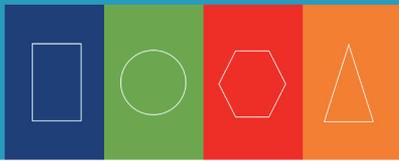
6.5 Conclusions

There is a lack of formal international sales training within the third level education system. (Only one quarter of courses which contained an international marketing module had a sales related module in their curricula). Sales training provided mainly relates to business to consumer sales, rather than Business to Business, Business to Government, and Technical sales required by enterprise. It would be valuable to increase the E-commerce skills content within all marketing programmes and to include an entrepreneurship module within international business programmes.

Currently in the order of 2% to 3% of total enrolments in HEA funded institutions are studying a modern foreign language subject (those taking a modern foreign language course or one with a modern foreign language as a main subject i.e. for B.A Business and French, where the subjects are business and French). There are also students, particularly on business programmes, who are studying a foreign language as a module within other courses. However, data is not available on this quantum of provision, either in quantity or proficiency attainment terms. The majority of foreign language learning is taking place within the Universities rather than the Institutes of Technology. In relation to the 130 courses assessed as providing skills for international trade - around half of these courses contain foreign language learning (although optional on one third of these).

It would be valuable to set targets for international student placement programmes, such as for ERASMUS, in terms of in-company placements, language immersion and county of destination - as there are for the attraction of International students to come and study in Ireland. This would help to provide more synergy between the efforts of individual institutions.

It would be valuable for business courses generally to include a module on international trade and exports, given that this is an increasingly important business activity for many enterprises.



Chapter 7: Conclusions and Recommendations

7.1 Introduction

This Chapter presents the main policy findings and conclusions relating to the skills and competency requirements for enterprise to successfully trade internationally arising from the research work undertaken. These are outlined for key business function areas.

7.1.1 Global and international Management Skills

Strategic export business planning, export sales planning and market research skills were identified as key areas where Irish SMEs are weak. These activities require an investment in time and money, particularly when exporting to new and emerging markets. Companies need to prioritise markets and then make a sustained investment in time and effort. SME managers need to acquire international management skills including an ability to manage projects across countries.

Managers in foreign affiliates should build up global management skills to manage business activities worldwide and to leverage increased added value business activity for the Irish operation. Global management skills are required for leading cross functional teams, nurturing major global sales accounts and maintaining relationships with customers, partners and suppliers - so as to drive additional export revenue streams. Product Managers with the skills to manage the process of new product/service innovation, is another important role. Entrepreneurship skills are a core competency requirement for managers - both for foreign affiliates and indigenous SMEs.

Conclusions

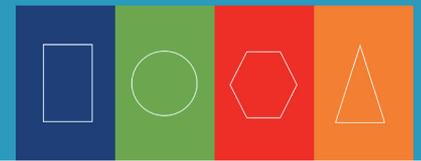
Upskilling of managers' strategic business planning/marketing skills is a priority. SME managers should avail of international management experience opportunities (greater flexibility is required in this regard). Foreign affiliate managers should actively seek opportunities to develop their global management skills. Global product managers' skills for managing cross functional teams, global sales accounts and relationships should be developed via continuing professional development.

Students and new entrant managers must be made aware of the global nature of business and the need for them to acquire internationally orientated business and technical skills.

There are excellent public export related information resources (i.e. EI, Bord Bia, Foreign Embassies) which could be further built upon and made more widely available through a single portal to guide companies at different stages in their export and import development.

7.1.2 International Marketing Skills

Market research is a key area where SMEs are identified as being weak. SMEs can target too many markets, spreading their resources thinly. SMEs need to prioritise their marketing objectives and focus on offering a unique value proposition to their customers. This requires scale, commitment and a dedicated resource at senior management level. Irish companies approaching Asia Pacific markets should undertake intensive preparatory work on how to engage in business in that region. There can be a long lead in time to such markets and skill is required so that buyer, partner and



supplier relationships are nurtured and sustained. This requires companies with the necessary commitment, scale and resources to achieve this.

Figures for Ireland's E-commerce activity indicate that 22% of companies (with over 10 employees) make E-commerce sales to the domestic market while 14% make E-commerce sales to another EU country. For E-commerce purchases, the figures are that 45% of companies make E-commerce purchases from the domestic market while 15 % make such purchases from another EU country (although Ireland has a relatively higher level of E-commerce sales than the EU average)³⁷. E-commerce skills are required in order to optimise business opportunities in developed markets. Companies' promotional material (web-based and literature) must be kept up-to-date and be produced in the language of the target market.

Conclusions

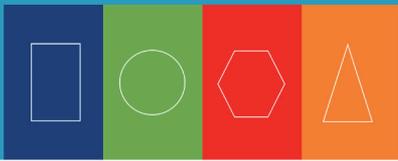
SMEs should strategically prioritise markets and sectors and undertake preparatory market research. Market Research should be conducted by staff with language & cultural awareness. Irish companies should build up skills to prioritise specific market opportunities and follow up contacts and sales opportunities. Companies should be aware of the long lead in time to gaining orders in markets such as Asia Pacific, Russia, and Brazil as well as major existing markets including Germany and France. This requires the nurturing and building up of relationships with prospective customers over time. Marketing programmes should ensure coverage of the potential value and use of E-commerce and social media applications. The main use by companies of E-commerce activity for their sales and purchases at the moment is on the domestic market rather than international markets. There is an opportunity to more fully exploit the potential for international E-commerce sales and purchases.

7.1.3 International Sales Skills

Apart from a lack of formal training in the education system, the role of salesperson is not held in high esteem notwithstanding the fact that it is essential to every business. There is a need for a mindset change in regard to sales as a profession. Existing formal sales provision mainly covers Business to Consumer sales whereas a main requirement of exporting companies is around Business to Business sales, Business to Government sales and technical sales rather than the traditional selling of consumer products. These roles (which may include Inside Sales³⁸ as well as field-based sales) require international sales skills and foreign language proficiency. While it is accepted that not every personality type will be suited to sales, the view was that there is need to address sales in a modular way in business courses and thereby give an option to students to focus on sales. There is a need to provide a post graduate qualification on sales (and with special reference to international sales). For those in employment, the International Sales course which is designed and delivered by Enterprise Ireland in association with Dublin Institute of Technology is held in high regard.

³⁷ Eurostat Statistics in Focus 18/2012 - E-Commerce Trading Activity.

³⁸ Inside Sales is where a sales team are based in-house rather than in the field. Inside sales staff utilise technological platforms to communicate with customers via the web and by telephone and are engaged in providing business solutions to client needs. Such staff need product knowledge, business acumen and foreign language proficiency. Inside sales staff usually have a bigger client caseload than field sales staff. In both cases (Inside Sales and Field Sales) the sales process remains the same.



Conclusions

A module on international sales should be included in relevant third level business and technical courses. International Marketing programmes and the B.Comm platform as it currently exists could have a stream on International Sales added to their final year (3rd or 4th year depending on whether it includes ERASMUS or placement) - this would be a full year of focus on the professional international sales skillset. Years 1 and 2 of the B.Comm platform could remain intact as sales professionals also need the usual grounding in micro and macroeconomics, marketing, supply chain management, financial accounting, and management accounting. Post graduate diploma courses in international sales could be introduced. Curricula should include Business to Business sales, Business to Government sales and technical sales. There is potential for elements of the EI International Selling programme, Excel at Export Selling Workshop Series to be more widely offered to companies.

7.1.4 Channel Marketing Skills - Identification/Support and Management

The identification and support of the right Channel Partner is key to success in export marketing and sales and one in which some Irish companies may fail - often due to a lack of understanding and/or expectation of what the Channel Partner will do. It is important for the company to invest time in deciding on their approach to the market - whether it will be through direct sales and/or through Channel Partners. It is essential that a company conducts a thorough process of research, selection and recruitment of a channel partner with responsibilities and performance criteria spelt out in a written contract. Regular monitoring and review of the channel partner's performance should be carried out. A support person(s) for the Channel Partner should be identified within the business and this support person should speak the first language of the Channel Partner.

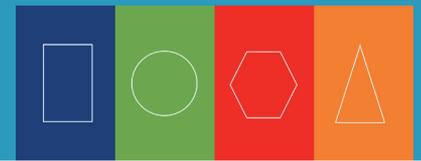
Conclusions

Companies should conduct a thorough process of the selection and recruitment of a Channel Partner. Contracts should detail the expected performance criteria of the Channel Partner. The support team within the company should include people with the language proficiency and cultural awareness of the target market to manage and give full backing to the Channel Partner/Agent.

7.1.5 Fulfilment - Distribution & Installation Skills

Project Management skills is an identified skills gap for both SMEs and foreign affiliate in terms of planning, initiating and managing projects and working effectively with partners (from the target market or other countries). Project management skills are particularly valued for Cleantech, Engineering, IT systems development and construction/infrastructure projects.

There are differing product and services certification and regulations across international markets. Companies seeking to avail of global supply chain opportunities need to be aware of the specific standards that apply. Completing the required export and import customs documentation and shipping requirements for emerging markets, especially the BRICS countries, presents a challenge - including for foreign affiliates. While foreign affiliates can often afford to have a dedicated resource for this specialist role, most SMEs cannot. There is a relatively small pool of skills in Ireland with the ability to complete the export and import customs documentation and shipment



requirements for BRICS countries. Feedback from companies is that these specialist skills are relatively overpriced.

Conclusions

Project management gaps - within foreign affiliates and SMEs should be addressed for planning and managing projects in collaboration with different partners. These skills are especially valuable for cleantech/engineering & IT systems and infrastructural type projects.

Knowledge of customer export and import documentation, shipping requirements, tariffs, market/sectoral product/service specifications and related legal/contractual/IP issues should be built up in companies through CPD. A base of such knowledge may exist within the purchasing departments of companies which import from BRICS markets. Training on these issues should be included within international marketing and sales, purchasing and logistical educational and training programmes to build up domestic capability.

7.1.6 Customer Service/Support Skills

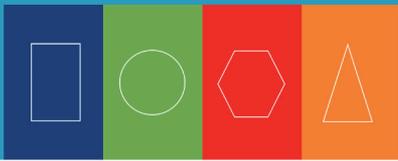
Customer service/support positions play a central role in maintaining and nurturing customer relationships over time and ensuring the quality of customer experience. Foreign language skills, cultural awareness and communication skills are key requirements for personnel engaged in customer service/support roles - including for technical support staff. There is potential for companies to more fully utilise the wider linguistic and cultural diversity of 'newcomer' individuals within the community to fill available customer service/support positions and for inter-cultural awareness training. Depending upon the range and value of product(s) or services offered staff will need varying degrees of technical knowledge.

Conclusions

Employees engaged in customer service/support including those technical staff that interface, with the client, should undertake upskilling to ensure that they are proficient in the foreign languages / cultural awareness of customers in the target markets. Available proprietary online cultural awareness resources, already utilised by major companies here, could be more widely utilised. The potential for making the programme on *Doing Business in Different Cultural Environments* that EI delivers to clients more widely available should also be considered. Existing employees recruited from abroad and 'newcomer' individuals living where the business is based comprise a valuable resource to input into in-company cultural awareness programmes. Customer service/support staff should receive continuing training in communications (oral, presentations, clear diction, avoiding use of colloquialisms, correct pace of speaking, active listening and social perceptiveness), for speaking to the customer either directly and/or online.

7.1.7 Product /Service Design Skills

A key skill for success in international markets is the linking of customer needs research to the design and development of new products and services. Product and services innovation is driven by listening to the customer and offering a differentiated unique selling proposition compared to other



competitors. As highlighted by the DesignSingapore Council³⁹ - *‘businesses, from the retail and service to the manufacturing and engineering industries, are realising the value of design as a strategic differentiator to improve their process, products to achieve improved productivity and performance in both the domestic and international markets and services’*.

Design skills to meet international customer requirements by taking on board ‘real time’ feedback on improvements are a real challenge for Irish exporters. As well as design professionals, there are a range of professionals involved in the design and innovation process, including product managers, marketers, engineers, technologists and scientists. A survey of design and innovation in 450 Irish SMEs⁴⁰ concluded that Irish companies that use design strategically within all business activities are more successful in terms of increased sales and are more likely to be developing new products and services. However, the survey also found that while 89 % of Irish SMEs surveyed thought that it was important for Irish firms to have a reputation for design and innovation, only 15% planned to significantly increase their investment in it. The reasons suggested were a combination of aversion to risk, inadequate support mechanisms and limited design and innovation capacity within companies and the country nationally.

Conclusions

Similar to the ambitions of Singapore, Ireland should seek to position itself as a global design centre and build up a design capability to help enterprises gain wider business opportunities in the global market. Companies should develop a capability for design/innovation at all levels of the business to improve their processes, products and services. This should be integrated into their strategic export business plan with the aim of offering their customers a unique selling proposition. An awareness of international design standards and codes and an ability to review and assess these should be built up via CPD and within relevant technical and business programmes - including engineering. The cross-disciplinary teaching of design disciplines (industrial, fashion, craft, architecture) should be consolidated within the 3rd level education system - with opportunities for students to undertake practical design project work within companies to develop their commercial awareness.

7.1.8 Horizontal Competency Requirements

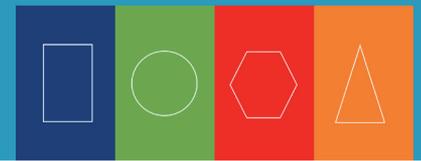
Foreign Language Proficiency/Cultural Awareness

Foreign language capability and cultural awareness are essential for enterprise to compete in an increasingly global market place. An increased supply of domestic foreign languages capability (numbers, range and proficiency) would act as a major boost to enterprise achieving their export potential. A workforce possessing foreign language and cultural awareness capabilities would act to increase Ireland’s proposition for inward investment opportunities.

The education and training system as well as companies (through the continuing professional development of staff) have a main role in building up the domestic supply of foreign language and cultural awareness capability. There are a range of positions within companies requiring foreign language proficiency including global managers, international marketing and sales, engineering,

³⁹ Source: DesignSingapore Council Overview, 2012.

⁴⁰ Survey of Design and Innovation (2007), Centre for Design Ireland, Sligo IoT (The Centre is funded by Enterprise Ireland).



technical and customer service/support positions⁴¹. While many of these positions will require a high level of language fluency, it is also the case that conversational level can be valuable. There is also potential for firms to recruit from within the ‘new arrival’ community that has built up in recent years and from the pool of international students studying and graduating here. A high proportion of positions within firms requiring native foreign language proficiency, especially for Inside sales, are being sourced from abroad. These skills provide a valuable complementary supply for companies located here who are operating on a European and global market. However, there is also a need to build up domestic foreign language proficiency levels to help fill such positions.

While a certain level of foreign language proficiency is valuable for introductory meetings with buyers in major European markets, it is essential to have business and technical staff with foreign language fluency in order to grow market share and become a preferred supplier. Even where a Channel Partner/Agent is appointed in the target market it is still necessary for the domestic sales/technical support team that provide the essential backing support to possess foreign language skills proficiency. There is a growing demand from exporting companies for affordable/flexible foreign language and cultural awareness training.

For export markets in Asia and the Middle East, while it is also necessary for firms to have foreign language capability, this can be met in the short term in different ways including, recruitment, upskilling employees, use of professional translation and interpreter services, and the hiring of native speaking Channel Partners/Agents in the target market. It would however, be really valuable for Ireland in the medium to long term to build up a cadre of Mandarin Chinese, Japanese and Arabic speaking business and technical professionals to fully capitalise on growing export market sales opportunities in the region.

Recent EU research indicates that companies can achieve higher export sales growth through having a workforce foreign language development strategy/plan in place⁴². This includes companies that invest in the development of foreign languages/cultural awareness - including having thought out their approach to potential languages barriers, having recruited and/or developed an internal foreign language capability; employed native speakers to open critical doors; and the use of professional translators or interpreters for dealing with contractual issues and / or producing sales literature or developing website material.

While awareness of the value of foreign language skills proficiency is high among Irish companies currently exporting, it is much lower among those who do not export and those who export mainly to Anglophone countries (Figure 7.1). In a recent EU Eurobarometer Report (Nov 2011), which surveyed companies across 27 EU countries employing more than 50 employees, from different sectors, only 9% of Irish companies surveyed considered that foreign language skills would be essential for future higher education graduates over the next 5-10 years - compared to 31% EU average⁴³. This was second lowest out of 27 EU member states (only the UK was lower).

⁴¹ As highlighted for example in the report by ICT Ireland/Irish Software Association - The Need for language Skills in the high-tech Sector (Feb 2011).

⁴² EU Commission, Report on Language Management Strategies and Best Practice in European SMEs - the PIMLICO Report, April 2011.

⁴³ EU Eurobarometer Report: Flash EB no 304 - Employers Perceptions of Graduate Employability.

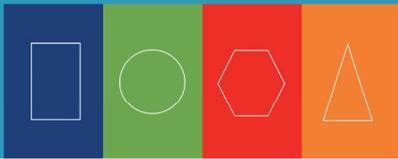
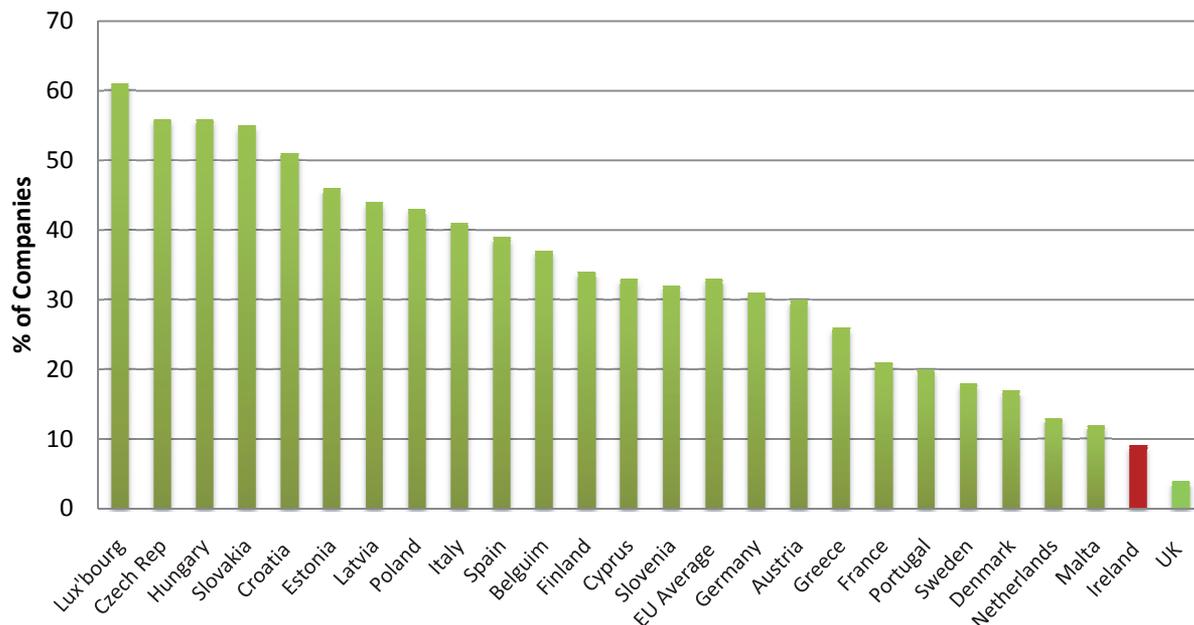


Figure 7.1: Employers views about the Skills that Graduates should have in the next 5-10 years - Importance of Foreign Language Skills



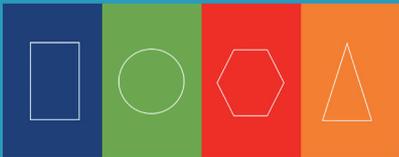
Source: EU Eurobarometer Report - Employer Perceptions of Graduate Employability - Nov 2011

Recent EU research indicates that Irish primary schools have the lowest level of foreign language tuition in Europe - across 27 countries⁴⁴. In 2010, approx. 3% of Irish primary school students were studying one foreign language - compared to an EU average of 79%. This 3% uptake was due to the Modern Languages in Primary School Initiative launched in 1998 (as part of Budget 2012, this initiative will cease at the end of 2011-12 school year, with the savings from this measure going towards the cost of implementing the new Literacy and Numeracy Strategy). A striking statistic to reflect here is that 69% of UK primary level students study one foreign language.

At second level students can now take French, German, Italian and Spanish within an engaging teaching approach at Junior Certificate level and a wider range of modern foreign languages at Leaving Certificate - including French, German, Italian, Spanish, as well as Japanese, Arabic and Russian, with other languages being offered on a non-curricular basis⁴⁵ - although French (51%), German (14%) and Spanish (7%) are the main modern language subjects taken. The Post-Primary Languages Initiative was initiated in 2000 by the then Department of Education and Science under the National Development Plan 2000-2006 and continues under the National Development Plan 2007 - 2013. Its objective is to diversify, enhance and expand language teaching at post-primary schools. The initiative has enhanced access to Spanish and Italian at post-primary level and has produced valuable teaching material. It has introduced Japanese at Leaving Certificate in 35 schools. Russian has also been established as a transition year subject in 24 schools with extra - curricular Leaving

⁴⁴ Eurostat Statistics in Focus: 49/2010.

⁴⁵ The list of non-curricular languages at Leaving Certificate level being offered for examination (2010) were Latvian, Lithuanian, Romanian, Finnish, Polish, Estonian, Swedish, Czech, Bulgarian, Hungarian, Portuguese, Danish, Dutch.



cert classes being offered on a pilot basis in Dublin⁴⁶. The Post-Primary Language Initiative website provides valuable materials, publications and video resources for teachers and their students. As can be seen from Table 7.1, the percentage of students studying one and two modern languages at both Lower and Upper Secondary level is less than the EU average.

Table 7.1: Percentage of Students who Study Foreign Languages - Primary, Lower Secondary and Upper Secondary Levels of Education - 2008 - Selected Countries

Country	Primary Level % students studying one foreign language	Primary Level % students studying a second foreign language	Lower Secondary % students studying one foreign language	Lower Secondary % students studying a second foreign language	Upper Secondary % students studying one foreign language	Upper Secondary % students studying a second foreign language
EU Average	79%	10%	93%	40%	83%	39%
UK	69%	19%	-	-	32%	12%
Denmark	56%	4%	96%	26%	91%	27%
Netherlands	32%	-			100%	86%
Finland	68%	5%	99%	92%	99%	92%
Germany	56%	4%	96%	26%	91%	27%
Poland	67%	13%	77%	26%	81%	49%
Ireland	3%	1%	66%	21%	58%	17%

Source: Eurostat Statistics in Focus: 49/2010.

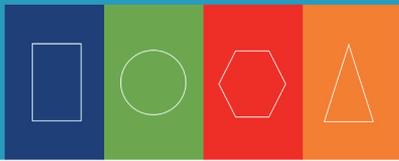
Findings from the research undertaken are that the level of fluency attained by Irish students entering the workforce from third level is required at a higher standard for international business purposes. There is a need to boost the numbers and proficiency level of modern foreign language skills being taught in the 3rd level education system. Currently, in the order of 2% to 3% of total enrolments (combined part-time and full-time) in HEA funded third level institutions are reported as studying a modern foreign language subject (this figure includes those taking a modern foreign language only course or one with a modern foreign language as a main subject i.e. for B.A Business and French, where the subjects are Business and French - not the modules therein)⁴⁷. It would appear that IoTs are not currently able to provide exact foreign language subject enrolments data for the Annual Statistical Returns to the HEA Student Records System. This problem needs to be urgently addressed so that exact figures become available.

The majority of enrolments taking a foreign language only course are studying in Universities. The IoTs represent a small percentage of such enrolments⁴⁸. There are only a small number of IoTs where enrolments are taking a modern language as a main subject. The exception is the Dublin Institute of Technology which has ten courses with a main language subject.

⁴⁶ Royal Irish Academy Committee for Modern Languages, Literary and Cultural Studies - National Languages Strategy, August 2011.

⁴⁷ Source: HEA 2011 (Also as reported in HEA / IRCHSS Report 'Playing to our Strengths: The Role of the Arts, Humanities and Social Sciences and Implications for Public Policy' (2010).

⁴⁸ HEA Analysis of all Full & Part time Enrolments in the Academic year 2010/11 by Field of Study (ISCED).



In addition to third level enrolments taking a foreign language only course and/or a foreign language subject as a main subject of their course, there are also a considerable number of students, particularly on business programmes, who are studying a foreign language as a module within their course where a foreign language is not the main focus. However, survey data is not available in relation to the quantum of this provision - either in quantity or proficiency attainment terms. This would be a valuable exercise for third level Institutions to undertake. Such modules are valuable where they include contextualised language learning for specific business and technical purposes. Several studies show that a period spent abroad improves language learning, intercultural skills, and self-awareness. ERASMUS is the EU's flagship education and training programme that enabled 2,508 students⁴⁹ from Ireland to study and work abroad in 2010/11 - of which 75% were on student study and 25% on student work placement. In total 370 students went to the UK. In recent years the number of Irish students availing of ERASMUS has been half the number of students that came to Ireland under the programme (although there is a high demand for placements here as an English-speaking country). Relative to the student population, Ireland's participation on ERASMUS is half that of Italy and Spain (although broadly in line with Denmark and the Netherlands). One explanation for this is that student's low level of foreign language proficiency is acting as a barrier to such enrolment. The most recent Eurostudent Survey indicated that while 45% of students surveyed in Denmark self-assessed themselves as having very good proficiency in at least two foreign languages, the figure for Ireland was 5%⁵⁰.

Conclusions

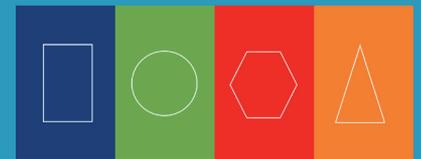
A National Foreign Language Education Policy could be developed with a 5-10 year horizon vision, to provide an integrated and coherent approach to foreign language teaching in all learning contexts (as was recommended in the EGFSN Report, *The Demand and Supply of Foreign Language Skills in the Enterprise Sector*, Feb 2005). The domestic supply of modern foreign language skills (number and proficiency level) being taught at third level should be scaled up - including for German, French, Spanish, Italian and emerging market languages such as Mandarin Chinese, Japanese, Russian and Arabic (at relatively lower numbers). The assessment of foreign language learning proficiency outcomes could be aligned to the Common European Framework of Reference for languages (CEFR)⁵¹. The contextualisation of language teaching at third level in terms of its value to students in business and science departments, and not just on full time language students is important. This approach should include contextual language learning for specific purposes - such as for managers, engineers and sales/marketing personnel. Consideration could be given to providing additional credits for foreign language study within qualifications at third level.

More could be done to increase valuable undergraduate placements and graduate internships within companies operating in overseas markets where English is not the first language. It would be valuable if the EU funded ERASMUS programme were more focussed on non - English speaking countries for study opportunities through a foreign language and in-company placements -

⁴⁹ This figure was an 18% increase over the previous year. For 2011-12, it is projected that the numbers will top the 3,000 mark for the first time.

⁵⁰ Eurostudent: Social and Economic Conditions of Student Life in Europe IV 2008 - 2011.

⁵¹ The six reference levels for grading an individual's foreign language proficiency are outlined in Appendix 3. Some Irish institutions currently utilise the CEFR i.e. UCD Applied Language Centre. The CEFR is currently utilised by the main European Language Learning Institutions.



including Germany, France, Italy, Spain and Nordic countries. There is also scope for increasing the numbers on student placement programmes into the BRICS countries. Consideration should be given to awarding credits for students participating in such structured overseas placement programmes.

There should be a strengthened focus on language and intercultural awareness and sensitisation (tasters of different languages to foster linguistic and cultural awareness) at primary level - to motivate students leaning and engagement with languages at 2nd level.

Companies can achieve higher export sales growth if they implement a workforce foreign language development strategy aligned to their export business objectives. This can include the building up of foreign language proficiency within management, marketing, sales, technical and sales support/ service positions, the hiring of personnel with language proficiency, the hiring of Agents and/or Channel Partners in the target market, the use of professional translators/interpreter's and the utilisation of outside expertise to produce website and promotional material in the target language.

Companies that export can best communicate a message to students, parents and teachers that foreign language proficiency and cultural awareness are essential skillsets for rewarding employment opportunities within their companies. They should play the lead role, supported by educational and training institutions, in communicating this message.

An information campaign needs to be aimed at companies themselves, especially SMEs, highlighting the advantages of foreign language capability in driving their export market goals performance.

Enterprise could more fully utilise the available pool of foreign language proficiency in Ireland that has built up in recent years within the 'new arrival' community, i.e. Polish and Russian for example, in relation to business opportunities in Russia and Eastern Europe. The considerable numbers of international students that come to Ireland to undertake their undergraduate and/or postgraduate education also comprise a potential valuable supply pool.

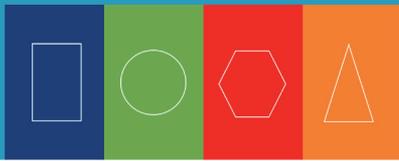
7.1.9 Soft Skills

Networking, establishing and maintaining relationships and communications are core competencies required by staff across sectors - especially for exporting to BRICS and Middle East countries.

Identified soft skills/competency requirements across sectors are outlined in Table 7.2.

Table 7.2: Soft Skills/Competency Requirements across Sectors

Entrepreneurship Skills	Integrity/Ethics
Commercial Awareness	Client Facing Communication Skills
Leadership Skills	Customer Focus/Social perceptiveness
Networking/Relationship Building	Teamworking
Negotiation/Influencing	Adaptability/Flexibility
Emotional Intelligence	Numerical/Analytical Skills
Design & Creativity	Interpersonal Skills & Initiative



Soft skills/competency development should be built into relevant continuing professional development and education/training provision through practical project based work and experience gained on work placements etc. The NCCA have recently joined a new European Key Competency Network with 10 countries and are seeking good examples of key competences for schools - such as have been highlighted in this report⁵².

7.1.10 Specific Employment Opportunities

The 42 companies surveyed for this study, which employ an total 16,000 workforce, indicate a positive employment outlook, with their employment levels expected to increase by between 15% - 20% over the next three years - the ICT sector and International Services sector having the most positive outlook. Drawing upon the research and consultations undertaken for this study, several potential areas for well-designed conversion programmes to fill employment opportunities arising within exporting companies at the wider economy level are highlighted. These programmes should be developed in partnership with industry - such as for the recent NFQ Level 8 ICT conversion Programme. The programmes, with a total capacity for 2,200 places, could potentially be started in late 2012/early 2013.

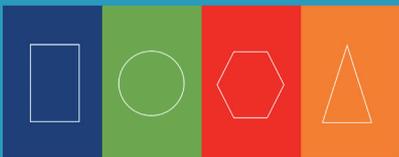
- Computing Software Professionals (NFQ Level 8 +) - a further 800 places under the NFQ Level 8 Conversion Programme (which is part of the Governments *ICT Action Plan - Meeting the high-level ICT skills needs of enterprise in Ireland*) - in addition to the initial 768 places underway).
- Customer Sales/Service Support with foreign language proficiency (NFQ Levels 7/8)- 800 places.
- Engineers (mechanical, automation, development & design) (NFQ level 8 +)- 250 places.
- International Sales Professionals - with foreign languages (NFQ Level 7/8)- 250 places.
- International Project Management (NFQ Level 7/8)- 100 places.

Potential candidates are those who possess relevant qualifications and experience in a related discipline and/or those that require a 'topping' up qualification in addition to their existing qualification/experience and with an interest and aptitude for the role.

7.1.11 Brand Ireland

All exporting companies, both SMEs and foreign affiliate, can benefit from a positive Irish brand to gain leverage when exporting to new and emerging markets. A positive 'Brand Ireland' will help Ireland to attract business, investment and talent. Real strengths include the positive image Ireland has of its clean, pure environment and strong regulatory and testing systems for food, drugs, legal system and IP protection. However, there is concern that the image of Ireland as an attractive place to live and work is suffering because of the recession and financial crisis. Along with the restoration of Ireland's fiscal position, a 'Brand Ireland' which makes the link between the cultural, 'pure environment', and business profiles of Ireland would be valuable both for attracting talent here to fill identified skill shortage positions and for helping SMEs leverage additional export sales especially in BRICS countries.

⁵² Towards a Framework for Junior Cycle, NCCA, 2011.



7.2 Recommendations - Implementation

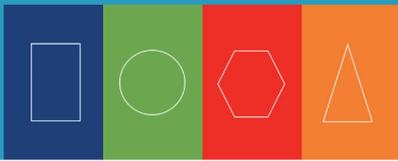
As a small, open and export focussed economy, it is essential that the Irish workforce is equipped with the internationally orientated skills necessary to drive enterprise trading performance. There is scope for optimising the use of current resources to ensure that education and training provision is fully aligned to the international trade skills requirements of enterprise. Companies have an essential role to play in ensuring that the continuing professional development of their workforce fully supports the achievement of their strategic export business plan.

The following nine main recommendations (and related actions) are made in this regard. They are denoted by time period for implementation (S/T - Short Term - 1 to 2 years, M/T - Medium Term - 2 to 4 years, and L/T for Long Term - 5 years+). Each recommendation denotes the Lead Partner(s) responsible for its implementation.

1. Develop Global / International Management Skills in Managers and Graduates

Managers in foreign affiliate companies should build up global management skills to both manage business activities worldwide and to leverage increased added value business activity for the Irish operation. Irish SME managers can benefit from greater international management experience.

- Build up Global and Product Management Skills within foreign affiliates for managing cross functional teams, global sales accounts and customer/supplier relationships building through flexible continuing professional development. Foreign affiliate managers should actively seek opportunities which develop their Global Management Skills.
S/T to M/T - Lead: Employer Bodies/Companies, Skillnets.
- Build up SMEs' international management skills including strategic export planning and ability to manage projects with partners and suppliers across countries. Irish managers should take up international management experience opportunities (more flexibility is required in this regard).
S/T to M/T - Lead: Employer Bodies/Companies, Enterprise Ireland.
- Build up international graduate placement programmes that have received a strong endorsement including the EI Graduates for International Growth programme, IBEC Export Orientation Programme, Bord Bia Food Export Graduate Programmes, and Farnleigh Fellowships.
S/T to M/T - Lead: Enterprise Ireland, Employers Bodies/Companies, Bord Bia.
- Make Public trade related information resources (i.e. EI, Bord Bia, Irish Embassies overseas) more widely available through a single portal to guide companies, particularly indigenous SMEs, in their export/import research and planning similar to EnterpriseOne Singapore.
S/T to M/T - Lead: Enterprise Ireland.



2. Enhance International Marketing Capability

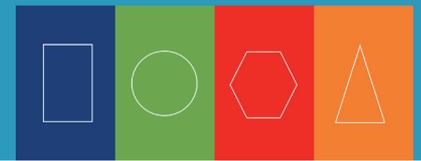
A high professional standard of international marketing and sales capability in Ireland will help drive export / trade growth. The selection, support and management of the right Channel Partner is a main factor for success in overseas markets.

- Build up SMEs' skills for prioritising strategic market opportunities. Ensure preparatory market research is conducted by staff/outside expertise with foreign language & cultural awareness.
S/T - Lead: Employer Bodies/Companies, Enterprise Ireland.
- Improve companies' process of research, selection and recruitment of the right Channel Partner. Ensure the support team within the company has the mandate and necessary skillsets to provide full backing to the Sales Team/Channel Partner in the target market.
S/T- Lead: Employer Bodies/Companies, Enterprise Ireland.
- Strengthen the focus within international marketing programmes on the potential value and use of E-commerce and social media applications.
S/T - Lead: Universities/IoTs, Skillnets.
- Build up skills capacity within companies to more fully exploit the potential for international E - commerce sales and purchasing.
S/T to M/T - Lead: Employer Bodies/Companies.

3. Build-up a Cadre of International Sales Professionals

International Sales Professionals with foreign language proficiency are a key skillset. There is a need for a change in mindset in regard to sales as a profession, as it is currently held in low esteem. There is little formal international sales training in the third level education system.

- Include a compulsory module on international sales in third level business courses.
- Add a stream on International Sales to the final year (3rd or 4th year depending on whether it includes ERASMUS or placement) to International marketing programmes and the B.Comm platform as it currently exists.
- Introduce Post Graduate Diploma course(s) in International Sales with foreign languages at third level e.g. German/French/Spanish. It should combine education with practical work experience. At least two programmes should be targeted for starting in 2012.
- Introduce an International Sales Degree Programme with foreign languages - with the active engagement and support of business.
- Include Business to Business Sales, Business to Government Sales and Technical Sales in international sales course curricula as well as existing business to consumer sales.
S/T to M/T Lead for above five actions: HEA, Universities, IoTs.
- Offer elements of the EI International Selling Programme and Excel at Export Selling Workshop Series more widely to companies.
S/T - Lead: Enterprise Ireland, Employer Bodies.



4. Build-up Project Management, Logistical and Procurement Skills

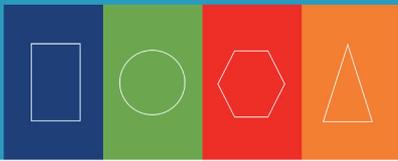
Ensuring the security and consistency of the supply chain, is an essential requirement for international customers. This requires international project management skills and a consistent supply delivered to the right place at the right time to customers.

- Build up International Project Management Skills within foreign affiliates and SMEs, via CPD, for the planning, initiating and management of international projects and collaborating with different partners, especially for cleantech/engineering, and IT systems projects.
S/T - Lead: Employer Bodies/Companies, Universities, IoTs, Skillnets.
- Build up knowledge within companies of requirements for international export and import documentation, shipping, warehousing, packaging specifications, tariffs, product specifications and related legal/IP protection especially for BRICS countries, via CPD and public and privately provided procurement and logistical programmes.
S/T - Lead: Employer Bodies/Companies, Universities, IoTs, SOLAS/Education & Training Boards.
- Build up global supply chain management skills, via CPD, for the export of goods and services and import of raw materials to ensure the standard of supply chain security and consistency sought by international customers.
S/T to M/T - Lead: Employer Bodies/Companies.

5. Enhance International Customer Service / Support Skill

Customer service / support positions play a central role in maintaining and nurturing international customer relationships over time and ensuring the quality of the customer experience.

- Ensure customer service/support staff are proficient in the foreign languages/cultural awareness of international customers and that they receive continuing communications skills training (oral, presentations, clear diction, correct pace of speaking, active listening and social perceptiveness, for communications either directly and/or virtual).
S/T to M/T- Lead: Employer Bodies/Companies, Skillnets, SOLAS/Education & Training Boards.
- Increase the wider use by companies of proprietary online cultural awareness resources, already utilised by major companies here, as well as the Enterprise Ireland programme on Doing Business in Different Cultural Environments.
S/T to M/T- Lead: Employer Bodies/Companies, Enterprise Ireland.
- Utilise existing employees recruited from abroad and 'newcomer' individuals living where the business is based as a resource for in-company cultural awareness programmes.
S/T to M/T- Lead: Employer Bodies/Companies.



6. Build-up International Design & Development Skills Capability

Ireland should seek to position itself as a niche global design centre and build up a design capability which will help enterprises gain wider business opportunities in the global market- similar to comparable sized internationally trading countries such as Finland and Singapore.

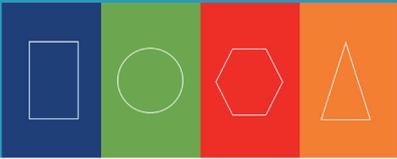
- Consolidate existing design education infrastructure at 3rd level to develop the required breadth and depth of cross-disciplinary design skill sets and strengthened engagement with enterprise-similar to centres of design excellence elsewhere (Aalto University Design Centre Finland, Stanford Design Programme USA, and Central Saint Martin, London).
M/T - Lead: Department of Education & Skills, HEA.
- Review product and service design courses for relevance and content - by consultation with relevant professional and business bodies. Introduce an entrepreneurship module and structured credited placement opportunities on third level product/service design programmes to develop international customer awareness and commercial acumen.
S/T to M/T - Lead: HEA, Universities, IoTs.
- Introduce a design graduate placement programme for export growth orientated SMEs - for work on new product/service design for overseas markets.
S/T to M/T - Lead: HEA, Enterprise Ireland, Employer Bodies/Companies.
- Promote the strategic value of design skills to companies exporting/planning to export for offering a unique selling proposition to customers in international markets (similar to the approach of DesignSingapore Council).
S/T - Lead: Employer Bodies/Companies, IDA Ireland, Enterprise Ireland.



7. Build-up a Multi-lingual Workforce for an increasingly globalised marketplace

An improved supply of foreign languages capability (numbers, range and proficiency), would act to boost enterprise export potential. Foreign language proficiency and cultural awareness is an essential skillset for future employment opportunities in an increasingly globalised labour market. There is an urgent need to increase the domestic supply of modern foreign language skills - at the scale and proficiency level required by enterprise.

- Develop a National Foreign Language Education Policy with a 5 - 10 year horizon vision, to provide an integrated and coherent approach to language teaching (content and method of learning) and cultural awareness at progressive levels of proficiency in all learning contexts.
S/T- Lead: Department of Education & Skills.
- Boost the supply of foreign language skills (numbers and proficiency level achieved) at third level- including German, French, Spanish and Italian as well as Mandarin Chinese, Japanese, Russian and Arabic. This approach should include contextual language learning for specific purposes, such as for managers, engineers and international marketing and sales professionals. Align the assessment of foreign language learning proficiency outcomes to the Common European Framework of Reference for Languages (CEFR).
S/T to M/T- Lead: Department of Education & Skills, HEA, Universities, IoTs.
- Strengthen the focus on language and intercultural awareness and sensitisation at primary level to motivate students learning and engagement with languages at 2nd level-European and Asian.
S/T - Lead: Department of Education & Skills, NCCA.
- Set targets for increased European student placements (ERASMUS and Institution led), with a focus on study opportunities through a foreign language and in-company placements - in Germany, France, Italy and Nordic countries. Support foreign language immersion learning in parallel with studies and placements. Build up current numbers on in-company placement programmes in BRICS countries.
S/T to M/T- Lead: HEA, Universities, IoTs, Employer Bodies/Companies.
- Companies should implement a foreign language and cultural management strategy aligned to their strategic export business plan and put in place the necessary support elements including the professional development of their workforce and potential recruitment from the 'new arrival' community and the international student supply pool here in Ireland.
S/T to M/T - Lead: Employer & Professional Bodies/Companies.
- Employers should communicate the value and practical application of foreign language proficiency for international business and technical career opportunities to students (particularly at second - level), parents and teachers.
S/T - Lead: Employer Bodies/Companies.
- Increase awareness within companies (both foreign affiliates and SMEs) of the need for acquiring foreign language capability to boost their international trading performance - including through CPD. Utilise case study examples of companies that have achieved export sales growth through the implementation of a foreign language management strategy.
S/T - Lead: Employer Bodies/Companies, IDA Ireland, Enterprise Ireland, Engineers Ireland.



8. Develop Soft Skills and competence for successful international customer working

Soft skills are increasingly a main differentiator for companies recruiting candidates, both for working effectively internally within the company and for effective engagement with international partners, customers and suppliers. It is essential for individuals to build up these competences within their personal skills portfolio.

- Build-up the development of soft skills and competences within 2nd and 3rd level education and training curriculum and continuing professional development through practical project based work and in-company placement opportunities. The NCCA should integrate development of these skills/competences in the current Review of 2nd level education curriculum and assessment.

S/T to M/T - Lead: HEA, NCCA, SOLAS/Education and Training Boards.

The specific soft skills required are:

'Business Skills'	'People Skills'	'Personal Skills'
Entrepreneurship	Emotional Intelligence	Initiative
Design & Creativity	Relationship Building	Adaptability/Flexibility
Commercial Awareness	Teamworking	Analytical/Numerical Skills
Customer Focus	Negotiation Skills	Critical Thinking/Problem Solving
Leadership	Communication Skills	Integrity/Ethics

9. Address Opportunities for Employment in International Business

Well-designed conversion programmes can help fill identified employment opportunities arising within international trade related business.

- Introduce well designed conversion programmes, in partnership with industry, to help fill identified employment opportunities arising within exporting companies. Estimations are that a total of 2,200 conversion programme places could be provided, starting in late 2012/early 2013. Potential candidates to fill these opportunities should possess relevant qualifications and experience in a related discipline including those that require a 'topping' up qualification - and importantly, have an interest and aptitude for the role.

The specific employment opportunities are for:

- Computing Software Professionals (NFQ Level 8 +) - (a further 800 places under the NFQ Level 8 Conversion programme).
- Customer Service Support with Foreign Language proficiency (NFQ Level 6/7) - 800 places. (Specifically German, French, Spanish, Italian and Dutch).
- Engineers (mechanical, automation, development & design) (NFQ level 8 +) - 250 places.
- International Sales Professionals - with foreign languages (NFQ Level 6/7/8) - 250 places. (Specifically German, French, Polish and Russian).
- International Project Management (NFQ Level 7/8) - 100 places.

S/T - Lead: HEA, Universities, IoTs, SOLAS/Education & Training Boards.



Appendices

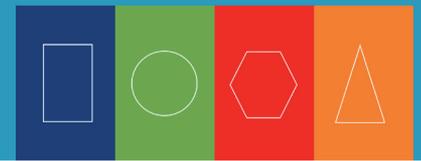
Appendix 1: Steering Group Members

Una Halligan - Chairperson EGFSN
Kristin Brogan, IOT Languages Strategy Network
Angela Byrne, Enterprise Ireland
Margaret Cox, I.C.E. Group and Pitman Training
Emmanuel Dowdell, IDA Ireland
Des Duggan, IBM Inside Sales Centre
Pat Fitzgerald, Morgan McKinley Recruitment
Pat Ivory, IBEC
Susanne Jeffery, Accenture
John Mc Quillan, OpenJaw Technology
Maurice Moynihan, Odenberg Engineering
Donal Murphy, IDA Ireland
Kevin Sherry, Enterprise Ireland
Marie Bourke, Forfás
Gerard Walker, Forfás

Niall Harte, Forfás, Nora Condon, SLMRU, FÁS, and Kate Ivory, student TCD, assisted the work of the Secretariat.

Appendix 2: Abbreviation of Course Providers

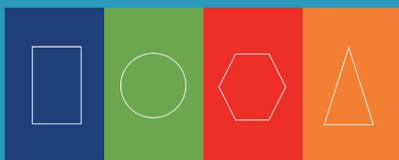
<i>Abbreviation</i>	<i>Course Provider</i>
AC	American College
AIT	Athlone Institute of Technology
Carlow IT	Carlow Institute of Technology
Cork IT	Cork Institute of Technology
DBS	Dublin Business School
DCU	Dublin City University
DIT	Dublin Institute of Technology
Dundalk IT	Dundalk Institute of Technology
Galway-Mayo IT	Galway-Mayo Institute of Technology
GC Limerick	Griffith College, Limerick
GC Cork	Griffith College, Cork
GC Dublin	Griffith College, Dublin
IBAT	IBAT College (Swords)
IMI	Irish Management Institute
IT Blanch	Institute of Technology Blanchardstown
IT Tallaght	Institute of Technology Tallaght
IT Tralee	Institute of Technology Tralee
Letterkenny IT	Letterkenny Institute of Technology
LIT & LIT Tipperary	Limerick Institute of Technology (including former Tipperary Institute)
NCI	National College of Ireland
NUI Galway	National University of Ireland Galway
NUI Maynooth	National University of Ireland Maynooth
Sligo IT	Sligo Institute of Technology
TCD	Trinity College Dublin
UCC	University College Cork
UCD	University College Dublin
UL	University of Limerick
Waterford IT	Waterford Institute of Technology



Appendix 3: Common European Framework of Reference for Languages

The six reference levels for grading an individual's language proficiency level are outlined in the following Framework Table.

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans.
Basic User	A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
	A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.



Appendix 4: Members of the Expert Group on Future Skills Needs

Una Halligan	Chairperson
Marie Bourke	Head of Secretariat and Department Manager, Education, Skills and Labour Market Policy, Forfás
Inez Bailey	Director, National Adult Literacy Agency
Peter Baldwin	Assistant Secretary, Department of Education and Skills
George Bennett	Departmental Manager, Clean Tech, IDA Ireland
Liz Carroll	Training and Development Manager, ISME
Ned Costello	Chief Executive, Irish Universities Association
Margaret Cox	Managing Director, I.C.E. Group
Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Dr. Bryan Fields	Director, Curriculum Development/Programme Innovation, FÁS
Anne Forde	Principal Officer, Department of Education and Skills
Garry Keegan	Director, Acumen
Enda McDonnell	Sectoral and Enterprise Development Policy, Enterprise Ireland
John Martin	Director for Employment, Labour & Social Affairs, OECD
Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Dr Brendan Murphy	President, Cork Institute of Technology
Dermot Nolan	Department of Public Expenditure and Reform
Alan Nuzum	CEO, Skillnets
Muiris O'Connor	Higher Education Authority
Peter Rigney	Industrial Officer, ICTU
Martin D. Shanahan	Chief Executive, Forfás
Jacinta Stewart	Chief Executive, City of Dublin VEC



Appendix 5: Recent Publications by the Expert Group on Future Skills Needs

Report	Publication Date
EGFSN Statement of Activity 2011	April 2012
Vacancy Overview 2011	February 2012
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise (<i>Forfás report based on EGFSN identified future skills needs</i>)	February 2012
Addressing High-Level ICT Skills Recruitment Needs: Research Findings	January 2012
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs	July 2011
National Skills Bulletin 2011	July 2011
Developing Recognition of Prior Learning: The Role of RPL In the Context of the National Skills Strategy Upskilling Objectives	April 2011
Vacancy Overview 2010	March 2011
Future Skills Needs of Enterprise within the Green Economy in Ireland	November 2010
Future Skills Requirements of the Biopharma-Pharmachem Sector	November 2010
Monitoring Ireland's Skills Supply - Trends in Education and Training Outputs 2010	July 2010
National Skills Bulletin 2010	July 2010
Future Skills Needs of the Wholesale and Retail Sector	May 2010
Future Skills Requirements of the Food and Beverage Sector	November 2009
Skills in Creativity, Design and Innovation	November 2009
Monitoring Ireland's Skill Supply - Trends in Education and Training Outputs 2009	November 2009
National Skills Bulletin 2009	July 2009
A Quantitative Tool for Workforce Planning in Healthcare: Example Simulations	June 2009
A Review of the Employment and Skills Needs of the Construction Industry in Ireland	December 2008
Statement on Raising National Mathematical Achievement	December 2008
National Skills Bulletin 2008	November 2008
All-Island Skills Study	October 2008
Monitoring Ireland's Skills Supply: Trends in Education/Training Outputs 2008	July 2008
The Expert Group on Future Skills Needs Statement of Activity 2007	June 2008

Appendix 6: Glossary of Acronyms

4G	Fourth Generation
B2B	Business-to-Business
BPO	Business Process Outsourcing
BRC	British Retail Consortium
BREEAM	Building Research Establishment Environmental Assessment Method
BRICS	Brazil, Russia, India, China and South Africa
CEFR	Common European Framework of Reference (for Languages)
CPD	Continuing Professional Development
CSO	Central Statistics Office (Ireland)
EI	Enterprise Ireland
EMEA	Europe, Middle East and Africa
EOP	Export Orientation Programme (Irish Business and Employers Confederation)
ERASMUS	European Region Action Scheme for the Mobility of University Students
FETAC	Further Education and Training Awards Council (Ireland)
G4IG	Graduates for International Growth - Enterprise Ireland
HEA	Higher Education Authority (Ireland)
IBEC	Irish Business and Employers Confederation
ICT	Information and Communication Technology
IDA	Industrial Development Authority (Ireland)
IEA	Irish Exporters Association
IP	Intellectual Property
IoT	Institutes of Technology (Ireland)
ISCED	International Standard Classification of Education
LEED	Leadership in Energy and Environmental Design (USA)
NCCA	National Council for Curriculum and Assessment (Ireland)
NFQ	National Framework of Qualifications (Ireland)
QA	Quality Assurance

The publications of Forfás and the advisory groups to which it provides administrative and secretariat support are available at www.forfas.ie

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June 2012

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