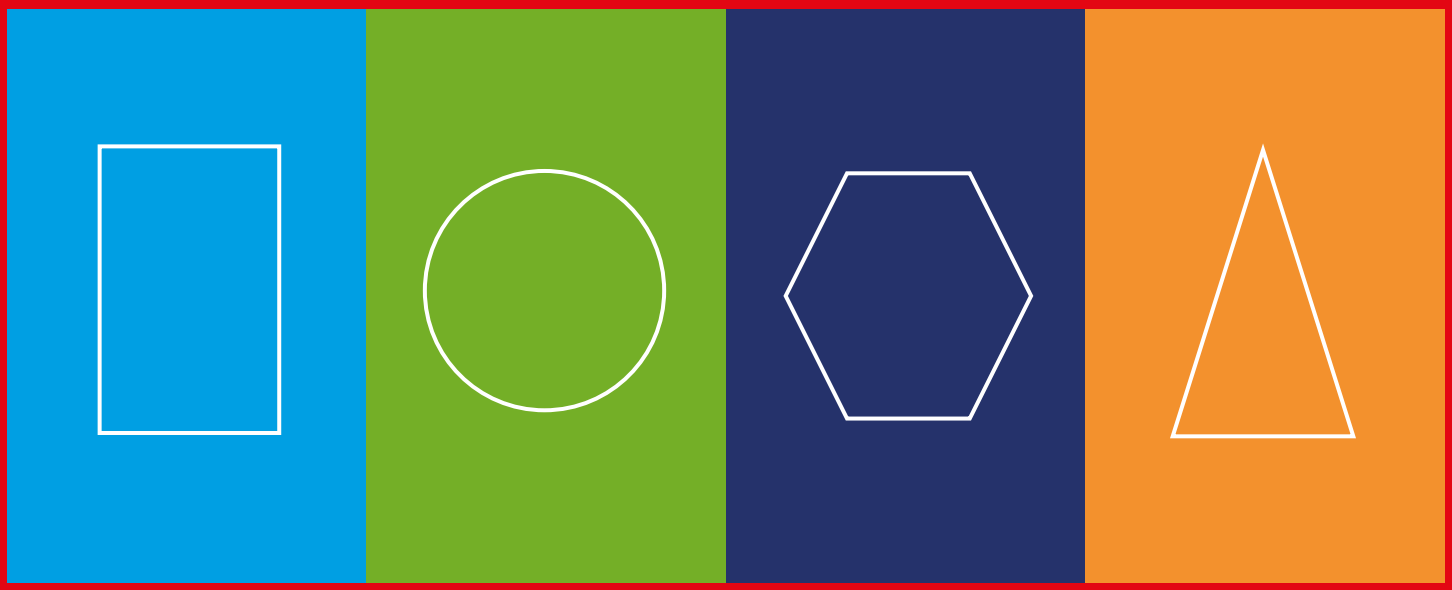

Addressing the Demand for Skills in the Freight Transport, Distribution and Logistics Sector in Ireland 2015-2020

February 2015

Expert Group on
Future Skills Needs

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About this document

This report is the Executive Summary of “Addressing the Demand for Skills in the Freight Transport, Distribution and Logistics sector in Ireland 2015- 2020”. The full report is available in pdf format in the Expert Group on Future Skills Needs website, www.skillsireland.ie

Acknowledgements

The EGFSN Secretariat would like to record its appreciation to the members of the Steering Group who oversaw the progress and the development of the report for their significant commitment and contribution – the membership is set out in Appendix 1.

The EGFSN Secretariat would like to thank the many industry executives, academics and staff at expert organisations and State Agencies who gave their valuable time and insights though interviews and at workshops.

The EGFSN Secretariat would like to acknowledge the high quality and expertise of AECOM Limited whose work included the literature review, the undertaking of the consultations and workshops with companies, organisations and key informants and the modelling of the skills demand forecasts for Ireland contained in the report as well as the integration of the various research element into the report.

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.

The Strategic Policy Division within the Department of Jobs, Enterprise and Innovation in conjunction with the Skills and Labour Market Research Unit, SOLAS, provides the EGFSN with research and analysis support.

Foreword

The open nature of the Irish economy with high levels of trade combined with our geographical peripheral location means that achieving excellence in freight transport, distribution and logistics (FTDL) is vital for our competitiveness. The key aim of this report is to ensure the FTDL sector will have the right skills base to meet the skills challenges and opportunities identified up to 2020.

Overall, research feedback has shown that the FTDL sector is a strategically important component of the Irish economy. A key strength of the sector is its ability to provide expertise related to multi-modal freight transport – air, road, sea and rail. Enterprise respondents view the outlook for the sector as generally positive, with employment growth anticipated. Within firms, skills need to be nurtured and developed through improved provision of training and the support of lifelong learning. There is a need for the development of career paths for lower skilled workers. In order to meet the demand for skilled workers, the relatively poor image of the FTDL sector needs to be improved.

The demand forecast analysis in this report indicates that, due to an anticipated expansion in the sector and the replacement demand for those employed in core FTDL occupations some 13,500 to 15,500 job vacancies could become available over the period 2015-2020. In terms of recruitment, the main anticipated skills impediment is for HGV drivers with the required licence. There is demand for more graduate level entrants to ensure a provision of managers, planners and associated office workers with adequate skills. The use of sophisticated warehouse management systems is increasing the demand for skilled staff. Warehouse roles in demand include warehouse managers, fork lift operators, order pickers, and warehouse operatives.

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 time and expertise. I would like to thank Pat Ivory who chaired the Steering Group that oversaw the completion of the report and to each member of the Steering group for their commitment and sharing of expertise. Finally, I would like to thank the EGFSN Secretariat for their research and analysis input and managing this project to a successful conclusion.

Una Halligan

Chairperson, Expert Group on Future Skills Needs

Key Conclusions

The key conclusions that can be drawn from issues outlined in the Executive Summary are:

- The Freight Transport, Distribution and Logistics (FTDL) sector is of strategic and operational importance for business within Ireland across all sectors of the economy. Enterprise respondents view the outlook for the sector positively, with employment growth anticipated.
- The main drivers of change impacting on the demand for skills in the sector seen by enterprise respondents were regulatory and legislative, followed by technological change; the economic outlook and market demand trends. Sustainability issues were currently seen as less relevant.
- Employees are recruited from a variety of sources, with word of mouth and referrals being a common method for recruiting for lower skilled operatives and HGV driving roles. A feature of the sector is a lack of coordinated approach to the delivery of relevant training and the provision of career path opportunities, especially for those at lower skill levels.
- There is demand for more graduate level entrants to the FTDL sector to ensure a future provision of managers, planners and associated professionals with adequate skills. The number of domestic third level logistics related courses is relatively small, compared on a proportional basis to the UK and Germany.
- The increasing use of warehouse management systems and stock control, and temperature controlled warehousing are resulting in a need for skilled warehouse staff. There is potential for a Warehousing and Storage apprenticeship programme.
- At present, employers surveyed perceive few recruitment difficulties (HGV drivers being an exception). This is likely to change due to increasing skills demand arising over the next five years. In order to meet this demand, the poor image of the FTDL sector needs to improve.
- A significant proportion of HGV drivers are approaching retirement. There is need for a HGV driver apprenticeship scheme which several European countries have such as Germany.
- Trends towards the extended use of IT further demonstrate a need to equip the managers and staff at all levels to handle IT and data to improve planning and better control outcomes.
- There were an estimated 48,800 persons employed in core FTDL occupations in 2015. It is anticipated that some 13,500 to 15,500 job vacancies in these occupations could become available over the period 2015-2020. Job vacancies will arise for two main reasons: the performance of the FTDL sector is expected to grow (accounting for 60% of job vacancies) and the numbers resulting from replacement demand needs (40% of job vacancies). Heavy goods vehicle drivers comprise approx. 45% of the total potential vacancies.
- Within firms, internal training is more likely to be delivered by larger companies with their own qualified staff, while SMEs are more likely to utilise external training providers. Education providers were not widely used by enterprise respondents for their employee upskilling.
- There are a range of higher education, further education and private sector courses available to upskill and train employees in the sector. Awareness of course provision seems somewhat limited. Predicting the supply of entrants coming into the sector is more challenging when compared against other sectors. An associated licence to become a HGV driver can be secured in several ways (e.g. company trained or via a specific course). Similarly, those entering the sector at managerial level may not have a degree in a specific logistics and distribution field.

E 1. Introduction

The aim of the study is to assess the skills and competency requirements for the Freight Transport, Distribution and Logistics sector in Ireland up to 2020, and to propose recommendations that will ensure Ireland has the right skill base to meet enterprise needs. The approach adopts a holistic skills assessment of Ireland's logistics infrastructure for facilitating international trade and domestic freight distribution - by air, sea, road and rail. It assesses talent needs at all levels of educational attainment, including further education and training (FET) as well as higher education. This includes the identification of development and career progression opportunities for persons at lower skill levels for job openings arising from expansion and replacement demand.

The approach taken has been to forecast skill demand for occupations that form the core employment in Freight Transport, Distribution and Logistics. Employment in these occupations is spread across a range of sectors in the economy, including transportation and storage, retail and wholesale trade, and manufacturing. The advantage of adopting this approach is that the total demand for all those who work in core FTDL occupations is included in the analysis, not only that arising within the FTDL sector. Implicit in this approach is the assumption that FTDL skills for any given occupation are transferable between industry sectors. There were an estimated 48,800 persons employed in such core FTDL occupations in 2015.[1]

Expertise in multi-modal freight distribution is a clear strength of the logistics industry in Ireland. Increasingly international organisations are looking to consolidate the management of their supply chains in a single location in response to more complex arrangements and demand for greater efficiency. Ireland is an optimum potential location for such facilities given its export orientation, its level of expertise in this area, and membership of the EU.

As freight-orientated companies become more logistics orientated they need to provide a better service – and for that they need skilled staff. Logistics is in operation 24 hours a day, seven days a week and supports all sectors across the economy both in terms of facilitating international trade and the movement of freight domestically. Logistics is a process of planning, implementation and control of the physical movement of products and information flow to and from each segment of the supply chain.[2] This includes the handling and storage of raw materials, semi-finished and finished products, from point of origin to the end consumer in the most efficient and effective way possible.

1.1 Methodology

The research and analysis work for the study was managed by the Secretariat to the Expert Group on Future Skills Needs within the Department of Jobs, Enterprise and Innovation and its progress was overseen by a Steering Group made up of industry representatives, education bodies and relevant agencies, including SOLAS, the Higher Education Authority, IDA Ireland and Enterprise Ireland.

[1] As well as these core FTDL roles, there are other logistics support roles, fewer in number, which are identified in this research study, such as HGV vehicle maintenance fitters, technicians and mechanics; specialist technicians e.g. refrigerated vehicles / warehousing; IT support – general and software specific; other quality experts; and human resources.

[2] For the purpose of this study the supply chain activities do not include the product development and manufacturing processes which are covered within the published EGFSN report "Future Skills Requirements of the Manufacturing Sector to 2020", April 2013.

Capturing the views of employers and key stakeholders is critical to understanding current FTDL sector trends and future developments. To this end, a broad-based consultation exercise was undertaken involving enterprises and key informant consultations, workshops and corroborative secondary research. This research work comprised:

- A review of relevant international and domestic literature;
- Structured interviews with 40 FTDL enterprises representative of the various modes – road, air, rail and sea in their role as employers of those in the sector;
- In-depth interviews with 28 key informants/stakeholders, including FTDL representative organisations, education and training bodies and relevant state agencies;
- Three sector focused workshops (two in Dublin and one in Cork) with participation from 40 stakeholders including road haulage operators, those involved in air freight, sea freight, education and training providers, manufacturing and FTDL associations; and
- A skills demand forecasting exercise to determine the future labour demand and the extent of potential job vacancy opportunities arising within the FTDL sector in the years to 2020.
- The process also benefitted from the valuable input into the research and drafting of the recommendations from the members of the Steering Group at several meetings.

Enterprises surveyed were involved in the movement of a wide variety of freight goods. While some companies specialised in the transportation of a particular product such as oil, others were engaged in the transportation of a multitude of products.

The typology of companies covered in the research includes:

- Third Party Logistics Providers (3PL's) - many companies who move goods internationally outsource some or all of the management of their logistics services to such providers;
- Internationally orientated road freight transport companies;
- Large Irish food companies who undertake their own international logistics in order to ensure the security and consistency of their supply chain;
- Large domestic Retail Multiple Groups who undertake their own logistics and warehousing activities;
- Operators engaged in intermodality and co-modality logistics activities – such hub cargo handling activities facilitate the timely and efficient outward and inward freight movement;
- Consultancy firms which provide logistics services as a major part of their business activity;
- Public Bodies providing a service related to ensuring efficient international trade logistics.

1.2 Drivers of Change

There are several global and domestic drivers of change impacting on the skills and talent demand of the FTDL sector which have been highlighted in international and domestic literature as follows:

International

Technological Change

Technological change is having a major impact on the skills requirements in the FTDL sector. Responding to the changing logistics objective (from cost-orientated to customer-orientated), the focus of technological innovation is moving towards helping companies meet higher customer requirements and adding more value to their services. This innovation includes the automation of warehousing activities, Radio-frequency identification (RFID), Real time location systems (RTLS) and in-cab technology, including computer assisted support of vehicle drivers. There is an increasing demand from customers for real time information on the location of their consignments. This affects all modes, and is encouraging FTDL organisations to offer track and trace facilities. Third party logistic providers are evolving into technology providers with their own software. Many large cargo ports operate mostly autonomously with people mainly working in planning, controlling and programming roles.

Sustainability Agenda

Manufacturers and retailers are increasingly asking their FTDL operators to demonstrate that the transport of their goods is being done safely and with a low CO_2 footprint. More stringent EU regulations and consumer concern about CO_2 emissions are increasing pressure on the FTDL sector to become more sustainable. This is encouraging logistics companies to invest in eco-friendly technologies including the use of electric vehicles, improved vehicle emission technology, and the use of compressed natural gas for freight movement. There is also a cost benefit from optimising load capacity, reducing fuel consumption and emissions, and more efficient planning to reduce mileage to market etc. This movement towards more energy efficient freight transport is resulting in demand for skills in areas such as logistics planning, carbon reporting and the 'greening' of operations.

Regulatory Requirements

There are EU requirements governing the movement of products. For example, EU directives for the distribution of medicinal products provide the authority to companies, who can meet the requirements, to manufacture and/or distribute health products in a country. The EU has introduced a set of uniform rules to ensure fair competition among road freight users. These include regulations on HGV safety, level of HGV driver's professional competence, the maximum length of time HGV drivers can drive, tighter controls on the movement of dangerous goods, and cabotage rules which allow a haulier from one country to transport goods within another country on a temporary basis when making international deliveries.

Move towards the Centralised Management of the Supply Chain in a single location

Increasingly, organisations are seeking to consolidate the management of their supply chain in a single location in response to more complex arrangements and demand for greater efficiencies. Centralised supply chain management occurs in countries that have expertise in distribution and logistics and usually in mature freight markets. It can facilitate the movement of goods that do not travel through (or anywhere near) the country from which the supply chain is being managed. Growth in this area will require an increase in higher end skills in the FTDL sector and supporting skills such as global supply chain management, software development, contract law, and finance.

Domestic

Open Nature of the Irish Economy

The open nature of the Irish economy, with high levels of trade (exports and imports), combined with Ireland's geographical peripheral location means that achieving excellence in freight transport and logistics is vital for enterprise competitiveness and for attracting inward investment. Access to markets is a main factor for companies in deciding where to locate. The FTDL sector is an important enabler of economic growth. Around 80% of Irish manufactured output is exported, including much of the output of the 1,000 foreign-owned multinational enterprises located here. Companies often have complex supply chains and operating them optimally is a challenging task. Freight transport comprises a significant component of the total supply-chain cost.

Ireland's Strategy for Trade, Tourism and Investment

The Governments Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015 is to increase the value and diversity of indigenous exports to existing markets such as the USA, UK, Germany, and France while at the same time increasing exports to the BRICS countries and the Middle East Region. A review of this Strategy in 2014 highlighted the need to engage with high growth markets in Asia, South America and Africa. The implementation of the strategy will impact on FTDL skills requirements. For example, customs procedures are complex and constantly evolving, even for established markets. Emerging markets requirements can be more intricate, which makes skills in this sector vital for the efficient movement of goods to and from these countries.

Cost Competitiveness

Since the economic downturn in 2008 there have been efforts by those in the supply chain to reduce costs, in order to compete on price. Similarly there has been pressure from producers to maintain profitability by reducing costs. As such 'lean' skills (e.g. solutions to waste) have become important. This has led to the emergence of a 'leaner' sub-sector, with a focus on price (although this can be at the expense of optimising the efficiency and effectiveness of the supply chain). As a

result the role of finance and the associated skills requirements have become more important in the sector, with margin erosion now a key factor in the industry over the last 5 years.

Consolidation of Key Players in the FTDL Sector

Mergers and acquisitions in the sector and the emergence of MNCs have led to a consolidation of key players in the industry. Although SMEs still perform a vital function in the sector, this consolidation and resultant economies of scale offers an opportunity to create improved career pathways and a greater focus on structured training and education.

Poor Career Image of the FTDL Sector

The sector suffers from a low profile, with little public knowledge of how it operates and opportunities for careers associated with it, making it more difficult to attract and retain talent. This can be attributed in part to a lack of marketing of careers in the sector and the services it offers, aside from large companies that have their own strong brand recognition. Knowledge of careers in the sector is often restricted to awareness of more traditional roles such as HGV drivers. This is despite the fact that the sector offers varied and relatively well-paid professional career opportunities.

1.3 Profile of Companies in the Sector

Given that Ireland is an island, it requires expertise in facilitating a multi-modal supply chain incorporating sea, road, rail and air freight. In many cases, particularly for the export and import of freight, a combination of these modes is utilised. The sector is well represented by a significant number of bodies such as the Freight Transport Association, Irish Road Haulage Association, Chartered Institute of Logistics and Transport, Irish Exporters Association, Irish International Freight Association (IIFA), and various Chambers of Commerce amongst others. There are a range of roles in the sector from lower skilled to management-level. The required skills and experience for similar roles in different FTDL sub-sectors vary. For example, the skills and equipment used by a stevedore for loading ships are different from those used by a warehouse operative for loading HGVs, despite the similar nature of the role. Demand for less traditional FTDL roles is being driven by the presence of multi-national corporations (MNCs), and the requirement for professionals to interact with other departments.

In the past, the freight, logistics and distribution sector has been typified by SMEs providing services locally and nationally. Now, large MNCs and several large domestic companies are key players in the sector. Larger enterprises are more likely to employ individuals associated with support services. Enterprises can be third party logistics companies (3PLs), while others can be a mixture of logistics and warehousing (such as large domestic retail distributers); or be a combination of own account operators, hazardous goods specialists, warehousing operators, and

cold chain distributers. Other types of operations employing relevant FTDL roles include freight forwarders, port operators, airfreight operators and rail operators.

Road Freight

Road freight is the most common means of transporting freight in Ireland. The Irish road freight sector is served by a combination of well-known MNCs and large domestic providers as well as many smaller operators, some of which are focused on specific industry sectors. Food processing enterprises and multiple retailers often have their own in-house road freight operation in order to ensure a quality and consistency of supply to their customers. It is highly competitive with many road haulage operators competing for loads. A Road Haulage Operator's Licence issued by the Department of the Transport is required where goods are carried for hire or reward in a vehicle or combination of vehicles which are in excess of 3.5 metric tonnes. Road Haulage is resource intensive, both in terms of fuel and labour. EU legislation regulates areas such as the length of time a driver can operate a vehicle, and the professionalism of the industry via the requirement for an operating licence and the types of vehicle used in the industry. Irish hauliers operate throughout Europe, often using the UK as a landbridge. In this regard, Ireland's road haulage sector has a relatively poor record in terms of HGV vehicle compliance standards in the UK.[3] HGV drivers may work locally, nationally or long journey. Some may work with dangerous hazardous loads (i.e. chemicals or liquefied petroleum gas) or extremely large loads and require extra training and/or licences. Others may work transporting livestock, perishable products or with refrigerated container loads. Depending upon variances, there are requirements for dealing with invoices/paperwork, making multiple drops, compliance with various speed and load limits and hours of driving; and knowledge required of care and maintenance of the vehicle, loading and unloading the vehicle, calculating laden weights, using tachograph and fuel efficiency road driving. Road haulage is supported by several non-driving roles including mechanics and transport planners.

Air Freight

Air Freight in Ireland accounts for only 1% of freight tonnage by volume but about 35% of the value of all freight into and out of Ireland – mainly high value foodstuffs (such as organic fruit and seafood products), pharmaceutical, medical devices and IT components. Most of Ireland's international freight is carried in the hold of passenger aircraft. However, not all carriers provide a freight service, which means that there is less choice in terms of frequency and range of locations served by air freight services, than for passenger services. Dedicated air freighters are an important and growing part of the international air freight business. There is considerable scope to enhance Ireland's export competitiveness through better air freight provision, which would help to shorten

[3] Irish HGV compliance checked vehicles had a 31% defect rating compared for example to 18% for German and French compliance checked HGV vehicles; Source: Non-National HGV Vehicle Compliance checks 2013/14, UK Department of Transport, Oct 2014.

supply chains and reduce time to market. Access to a choice of competitively priced and frequent air freight services to a range of short haul and long haul destinations in existing and emerging markets is critical. Industries that use air freight are at the higher end of the value added spectrum, (such as life sciences, ICT and pharmaceuticals). Long-term global forecasts for the international air freight point to a continued strong growth. Given the potential risks associated with transporting goods via air freight, knowledge of security and the aviation environment are key skills requirements for those working in aviation warehouses. Salaries in the air freight sector are higher than for other FTDL areas while barriers to entry are high, with experience in the sector much sought after. Training in the sector is often provided in house, although courses are provided by the International Air Transport Association (IATA) and Irish International Freight Association (IIFA). Refresher in-house training is often based online, which is less costly than face-to-face training. Training for those in lower skilled positions is often specific to the equipment that is being used.

Sea Freight

Dublin is Ireland's most important port for both exports and imports. In 2012, 42% of all merchandise moved by sea was handled by Dublin, 21% by Shannon Foynes and 18% by Cork.[4] One of the key growth sectors is the food sector which is likely to lead to an increase in sea freight volumes over the period to 2020. Ten of the eleven ports in Ireland have reported increases in tonnage shipped in 2013 compared to 2012 as growth began to return to the economy. In order to facilitate a trend towards larger vessels and deeper water services, and maintain international standards there will be a demand for pilots, crew and captains, as well as for greater freight handling capacity at ports. A number of ports, including Dublin and Shannon Foynes have the potential to provide deeper water services. There are various roles associated with port operations to ensure that goods are safely and efficiently loaded and unloaded onto ships and stored whilst awaiting onward transportation. The type of goods a port handles reflects the skills requirements of the associated employees, for example ports that handle containers or bulk goods. Health and Safety training is vital for those working in a port given the hazardous nature of the environment. There are moves to encourage greater flexibility amongst port employees and as such ports are training staff to be able to work across a number of roles.

Rail Freight

Rail freight is responsible for 1% in volume terms of all freight goods transported in Ireland. Although rail freight has been in decline (Iarnród Éireann transported 567,000 tonnes of freight in 2012, a fall of 7.2% when compared to 2011), there are plans to encourage greater use of this more sustainable mode (Iarnrod Eireann has an aspiration to grow the rail freight business to represent 4-5% of the total freight market). Goods transported by rail include raw materials such as ore and

[4] Transport Omnibus, November 2013.

zinc, forestry products and consignments associated with the food and drink sector. The skills needed to facilitate this will be, like elsewhere, mostly related to ICT as most planning and management activities will be computer-based. The greater use of the network and the need for efficiencies to improve intensity of use will also call for greater analytical capabilities from managers and planners.

Warehousing

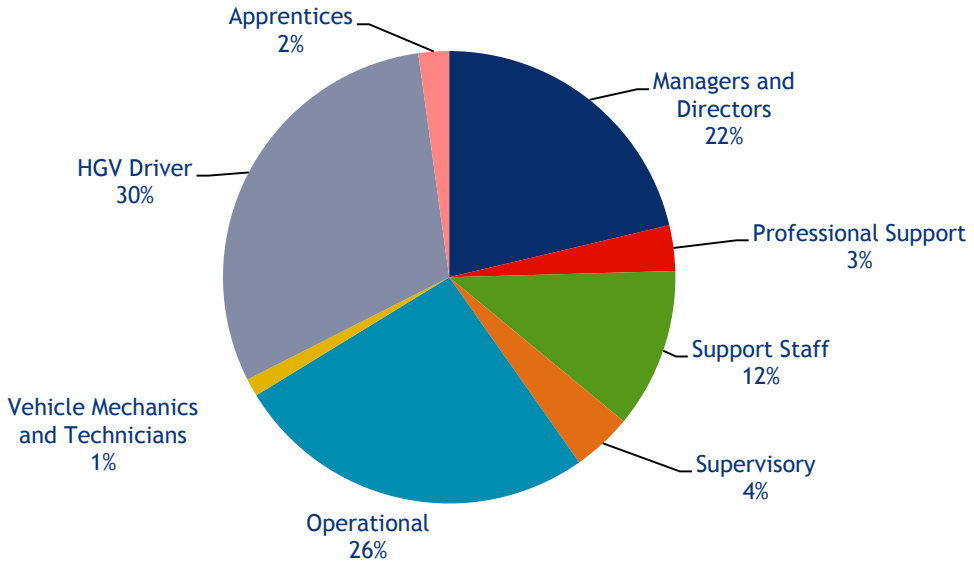
Warehousing operations are, along with Road Freight operations, a key employer in the sector. The supply chain often requires the storage of goods and materials where they cannot be transported in a single trip from factory to customer. Increasingly "added value" operations take place in warehouses, such as branding, pricing and merchandising of stock in readiness for final delivery to the customer. A warehouse supervisor needs detailed knowledge of operating tasks along with management skills. Their role is critical to the performance of the logistics and warehouse operation. Operations skills in warehouse handling, dangerous goods acceptance, pharmaceuticals handling, forklift truck driving and security screening (with regards to air freight) are all required.

E 2. Findings from the Consultations

2.1 Company Consultations

Figure E1 presents an outline of the reported staff employed by role in the 40 companies surveyed. Half of these were either HGV drivers (30%) or in operational roles (26%).

Figure E1: Staff Employed by Role within the 40 Companies Surveyed



Source: AECOM, 2014

The age profile of various roles shows that a large proportion of managers and directors, supervisors and HGV drivers are aged over 45 years. This is not a particular cause for concern for managerial or supervisory roles as these are typically roles where individuals are promoted or employed in later life as they gain skills and experience. For the HGV driver role however this statistic is a cause for concern, requiring urgent attention. This is representative of the European wide situation whereby more HGV drivers are exiting the industry than entering it.

Enterprise respondents were positive about future employee growth potential. Eighty-five percent of respondents anticipated that their staff numbers would increase over the next five years (with over half of respondents believing that staff levels would increase by up to 10% while further estimations varied between +11% and +51%), with no respondents anticipated a decline in staffing. This data is positive for both the sector and the wider economy as it infers the creation of new jobs and growth of industry.

2.2 Companies Views of Key Trends and Drivers impacting on Skills Demand

Two thirds of companies surveyed indicated that regulatory and legal requirements are the biggest driver of change for the sector. This can be attributed in part to the impact of EU regulations particularly with regard to road freight. In addition, technological change; the changing economic outlook; and market demand trends were also seen as significant drivers of change by respondents.

Technology has long driven skills requirements in the sector, with increasing automation of warehousing, increased use and sophistication of IT, Radio-frequency identification (RFID), Real time location systems (RTLS) and in-cab technology some of the initiatives introduced in recent years. In rail freight there has been investment in track and associated telecoms.

Technological change is continual and awareness and understanding of these changes will require a greater focus on training. There is an increasing demand from customers for up-to-the minute information on their consignments. The greater use of data analytics throughout the supply chain affects all modes, and is encouraging organisations to offer track and trace facilities. For example, in retail distribution there is a target of achieving 98% “on shelf availability” of products in stores (otherwise customers may choose a different brand, or shop elsewhere).

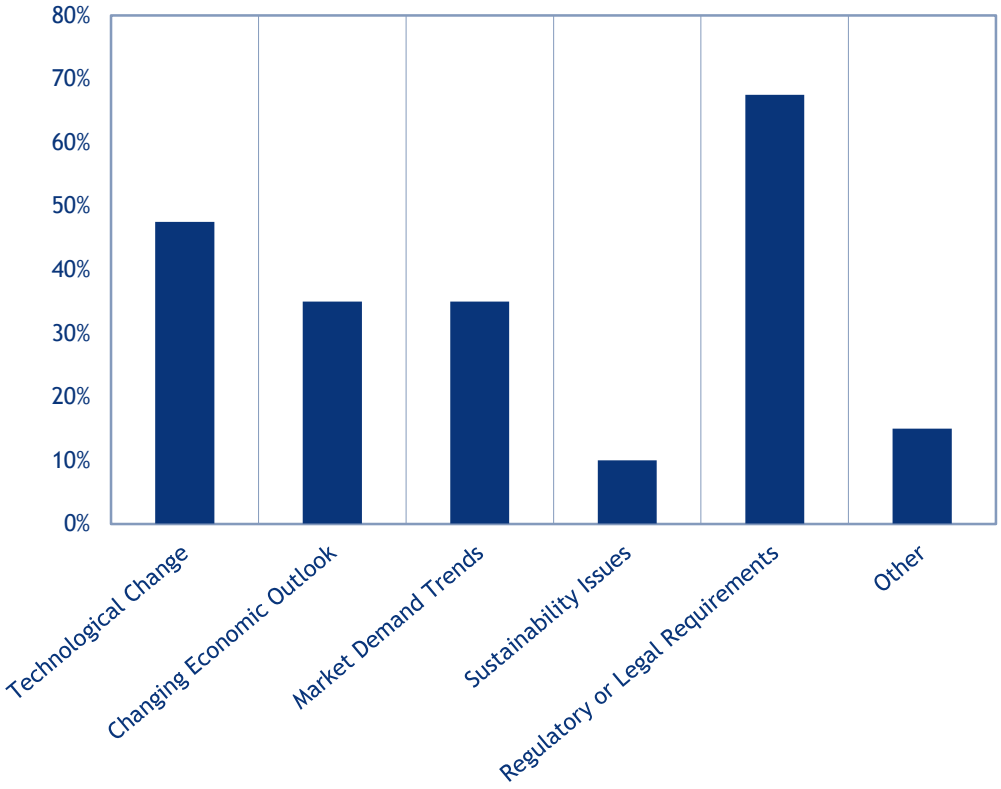
A common response from companies was that many of those who work in the sector, particularly at entry level positions lack basic IT skills. This can have an impact on the performance of the individuals and the productivity and effectiveness of the associated operation. These skill-sets enable skilled workers to progress to more senior positions in the organisation. It was considered that the main impact of technological change has been to improve the management of information and data and shortening of supply value chains - rather than reduce employment per se. Third party logistic providers are evolving into technology providers with their own specialist software.

The changing economic outlook and market demand trends (often linked) were both given as drivers of change by over one third of respondents.

In terms of sustainability, it is fair to suggest that the economic downturn that began in 2008 has had a negative effect on the sustainability agenda in the FTDL sector. It is expected however that the sustainability agenda will increase in importance as the economic situation continues to improve

and that this will increase demand for skills in areas such as carbon reporting and the 'greening' of operations.

Figure E 2: Drivers of Change affecting Skill Requirements- % of Companies Surveyed



Source: AECOM, 2014

Companies surveyed were asked where they hire new employees from and if there were any particular skills or qualifications which they require for specific roles:

- Managerial Roles: leadership skills were given as the most important skill requirements along with experience. Respondents stated that managerial roles were often filled by existing employees, or through business networking or agencies or from the professional networking website LinkedIn. Several companies looked for candidates with a diploma in logistics.
- Operational Roles: previous experience, computer literacy and people skills were stated as skills sought by companies for operational roles. Respondents stated that they use recruitment agencies and former FÁS Employment Services (now Intreo) to fill operational vacancies.
- HGV Drivers: respondents stated that they require the HGV Drivers with the relevant licence (e.g. C, C1, C+E, C1+E).and most look for a clean licence without penalties. Other skills or requirements for HGV drivers included Certificate of Professional Competence (CPC) training, Transporting Hazardous Goods by Road (ADR) training and good references. Respondents stated

that HGV Driver roles are often filled by word of mouth, although recruitment agencies and the former FÁS Employment Services (now Intero) were also used.

- Other skills that respondents are looking for included: manual handling training, food training, experience using equipment and specific air freight experience. Several respondents reported that this training was delivered internally.

Larger enterprises are more likely to employ staff associated with support services roles and have their own in-house training or 'knowledge centres'. The development of 'progression stairways' linked to a skills and training plan are more often provided in companies that employ significant numbers of FTDL staff. By providing a clear pathway to progression these enterprises can demonstrate to entry level employees that there is potential for a career in the sector. For example, some companies employ 'driver trainers' who are senior well respected experienced drivers charged with training new staff. SME training is more likely to be undertaken by an in-house trainer, often a manager or supervisor and is often focused on role-specific or essential training such as Health and Safety courses.

Companies were asked to identify particular job roles for which they experienced difficulty recruiting. As previously mentioned, HGV drivers and operational roles represent over half of those employed in the sector. Therefore it is concerning that 18% of respondents reported difficulty recruiting HGV drivers with the required licence (e.g. C, C1, C+E, C1+E) and 12% reported difficulty recruiting for operations roles.

At present there is widespread use of supervisors/managers, internal instructors and local training providers for staff training which is typically delivered 'on the job'. Three quarters of companies interviewed indicated that they were satisfied with the level of training currently provided.

A significant minority stated they were not satisfied with the level of training provided by the various internal and external trainers. Reasons given included a lack of relevant courses for the sector; lack of consistency and standards; not enough job specific training suited to particular FTDL roles and functions; and a need for better delivery options. This suggests that there is scope for the improvement of training courses aimed at the sector generally. Education providers were not widely used by respondents for the upskilling of their staff.

2.3 Key Informant Consultations

Key strengths of the sector outlined in the key informant interviews and workshops are its ability to provide expertise relating to multi-modal freight to support other sectors of the economy and to achieve a high level of compliance with EU regulations. Tables E1 and E2 outline opportunities and threats identified by key informants which could affect the demand for skills over the period 2015 to 2020 and the potential outcomes that might result from them.

Table E1- Potential Opportunities which could affect the demand for skills (2015 to 2020)

Opportunities	Economic Growth	Growing sustainability agenda	Enhanced roles for women	Low Cost Air Freight Model	Technological change	Ireland becoming a global East - West link for airfreight	Apprenticeship Scheme HGV Driver
Potential Outcome	Increased demand for skills within the sector across all modes of freight transport and skill levels.	Increased demand for skills in the area of carbon reporting and "greening" operations within companies.	Increased workforce Supply.	Skill shift towards air freight - knowledge of security and the aviation environment and key skills in aviation warehouses.	IT Skills and training needs arising across all grades including the application of data analytics.	Increased demand for air freight skills and training, global supply chain management roles and international customs skills.	Increased numbers of HGV drivers with relevant licence (e.g. C, C1,C+E, C1+E) coming into the sector would help to address shortfall.

Source: AECOM

Table E2- Potential Threats which could affect the demand for skills (2015 to 2020)

Threats	Potential negative Legislation change	Resistance to work practices innovation	Low Economic Growth	Lack of suitable trainers to upskill staff	Declining company investment in upskilling	Lack of HGV drivers with the required licence
Potential Outcomes	For example, changes in cabotage rules[5]could theoretically, reduce demand for domestic road hauliers vis a vis international competitors.	Sector would become less productive and less competitive.	Lack of demand for FTDL employees across all modes and skill levels.	Poor quality and ineffective training preventing sufficient up skilling.	Lower level of upskilling. Companies only commit to mandatory training requirements.	Competition for qualified HGV drivers across Europe. Wider negative impact on overall economy.

Source: AECOM 2014

[5] The peripheral location of Ireland means it is less subject to competition from cheaper Eastern European hauliers than countries such as Germany and the Netherlands. This is theoretically limited within Ireland by EU cabotage rules, which restricts foreign hauliers to three cabotage operations within a seven day period starting the day after unloading of international transport.

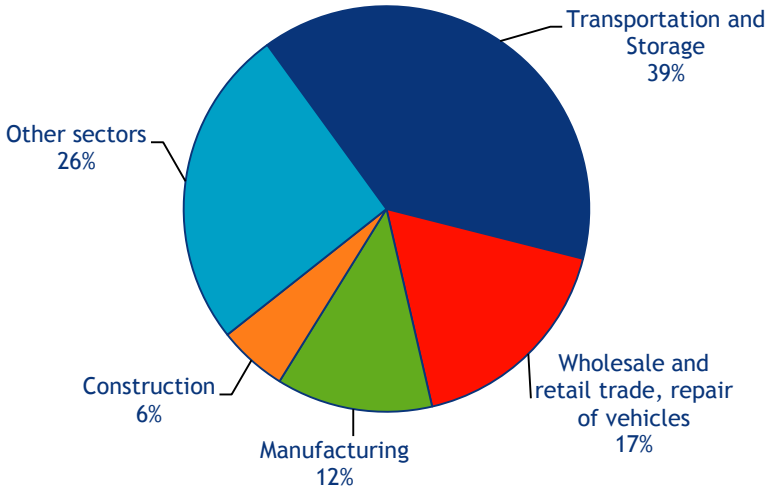
E 3. Demand Scenario Analysis

The purpose of the demand scenarios analysis is to forecast future FTDL workforce demand and determine the level of potential job vacancies arising in the years to 2020.

3.1 Forecast Methodology

Two labour demand scenarios were estimated based on higher and less optimistic economic outlooks. The economic scenarios used are those forecast by the ESRI in 2013.[6] These labour demand scenarios, along with an estimate of required replacement demand, were utilised to forecast demand up to 2020. The approach adopted was to forecast skill demand for those occupations that form the core employment in FTDL. Employment in these occupations is spread across a range of industry sectors, including transport, retail and wholesale trade, construction and other sectors. The advantage of this approach is that all those who work in core freight, distribution and logistics occupations, not only those within the FTDL sector, are included in the demand forecasts. For example, HGV drivers who are employed by manufacturers and in the retail sector are included. Implicit in this approach is the assumption that the skills for given FTDL occupations may transfer between sectors. Thus, there is a single pool of labour from which employees and skills can be drawn. Figure E 3 shows the sectoral breakdown of the FTDL-14 occupations as sourced from the 2011 Census.

Figure E3: Sectoral Breakdown of core FTDL-14 Occupations



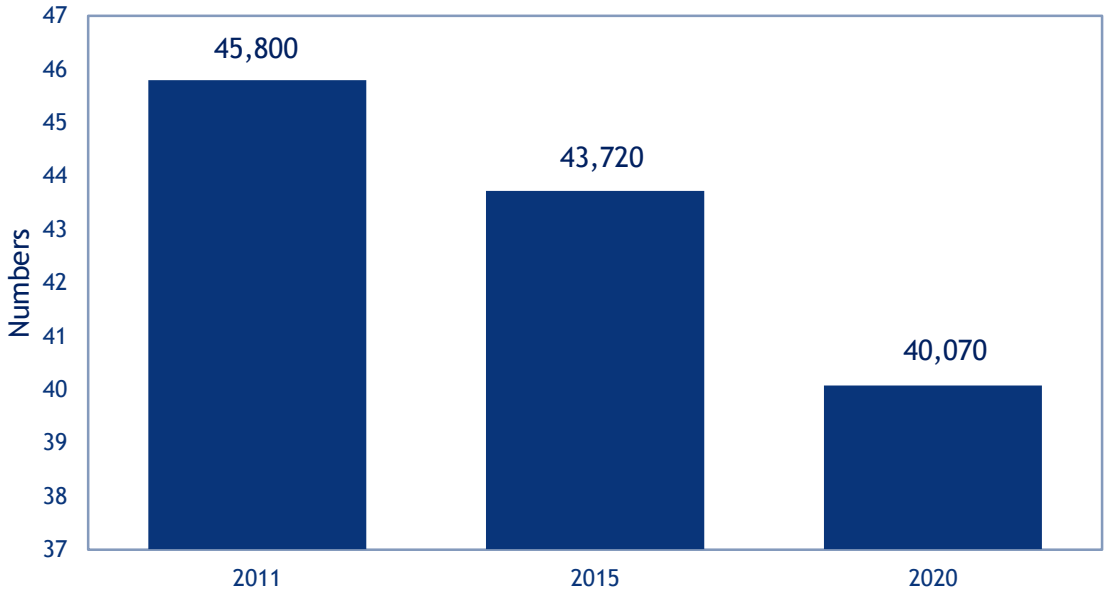
Source: CSO

[6] Medium Term Review 2013-2020: July 2013, Editors John FitzGerald and Ide Kearne.

3.2 Replacement demand

The age profile of the workforce in FTDL occupations will present a challenge for the sector in the coming years. A significant number of those currently employed are due to retire in the forecast period and these individuals will need to be replaced. An age cohort component projection, assuming a retirement age of 65, concluded that the 2011 baseline of circa 46,000 workers would decline to just over 40,000 by 2020 (see Figure E4). The change is predominantly comprised of retirements by heavy goods vehicle, mobile machine and other drivers. On the other hand, few aviation workers are due to retire. These skill demand forecasts estimate the future workforce available in the core FTDL occupations, if no new entrants were to be attracted into these occupations.

Figure E4:- Projection of Core FTDL workforce (assuming no new entrants) 2011, 2015, 2020



Source: AECOM, 2014

A sufficient supply of replacement labour for positions left vacant would ensure a static total number of employees over time. However, an anticipated improved performance of the sector and the economy as a whole will mean that the number of core FTDL workers required in 2020 will exceed the number employed in the baseline. This increase in demand for core FTDL positions will generate further vacancies in the sector. Therefore, the total number of job vacancies over the forecast period is a combination of anticipated replacement demand and expansion demand for the core FTDL occupations.

3.3 Expansion demand

Two scenarios representing the change in demand for road, sea and air transport were forecast to 2020. The GDP forecasts utilised were those within the ESRI Medium Term Review, published in 2013. The economic scenarios employed in the study were:

- The Recovery Scenario in which Europe and Ireland are forecast to return to a reasonable rate of growth quite quickly; and
- The Delayed Adjustment Scenario in which the European economy recovers but ongoing structural difficulties in Ireland hinder economic progress here in the short term.

The historical relationships between demand for road, sea and air transport and the wider economy (GDP) were estimated and these were then combined with the GDP forecast to generate two projections of growth in labour demand for each of the relevant occupations. These growth projections were then applied to the 2011 employment data, giving rise to core FTDL labour demand forecasts over the period to 2020 which are outlined in Table E3.

Table E3: Demand forecast by 14 core FTDL Occupations 2015 and 2020, Recovery and Delayed Adjustment Economic Scenarios

	Baseline	Recovery Economic Scenario		Delayed Adjustment Economic Scenario	
Occupation	**2011**	**2015**	**2020**	**2015**	**2020**
Managers & directors in transport & distribution	3,497	3,725	4,460	3,644	4,234
Managers & directors in storage & warehousing	4,071	4,337	5,193	4,242	4,929
Aircraft pilots & flight engineers	1,622	1,771	2,276	1,718	2,117
Ship officers	623	653	747	642	719
Importers & exporters	332	354	423	346	402
Transport & distribution clerks & assistants	2,767	2,947	3,529	2,883	3,350
HGV drivers	19,758	21,047	25,201	20,586	23,920
Fork-lift truck drivers	3,074	3,275	3,921	3,203	3,722
Mobile machine drivers & operatives n.e.c.	5,426	5,780	6,921	5,653	6,569
Train & tram drivers	670	714	855	698	811
Marine & waterways transport operatives	543	569	651	560	626
Air transport operatives	1,135	1,239	1,593	1,202	1,482
Rail transport operatives	999	1,064	1,274	1,041	1,209
Other drivers & transport operatives	1,278	1,361	1,630	1,332	1,547
FTDL-14	**45,795**	**48,836**	**58,676**	**47,749**	**55,636**

Source: AECOM, 2014

3.4 Forecast of Potential Number of FTDL Job Vacancies (2015-2020)

By comparing the estimated available FTDL workforce and expansion and replacement demand, it was possible to estimate the number of potential job vacancies that would become available.[7] The forecast number of vacancies for each of the FTDL-14 occupations for the period 2015 – 2020 is set out in Table E 4. These are based on estimated growth in FTDL labour demand; replacement needs to be met due to retirements; and also a sensitivity estimate (1% per annum) of other exits from the workforce which would lead to a replacement demand, such as exits to home duties, unemployment and return to education.

The analysis concluded that some 13,500 to 15,500 job vacancies in core FTDL occupations would become available over the period 2015 to 2020 depending on which economic forecast is applied. Job vacancies would arise for two main reasons: the performance of the sector is expected to grow (accounting for approx. 60% of job vacancy openings) and the number of retirements/other replacement needs estimated (accounting for 40% of job openings). Heavy goods vehicle drivers would comprise approx. 45% of the total potential vacancies under both economic scenarios.

Table E4: Potential New FTDL Job Openings Arising (2015 – 2020)

	Expansion + Replacement Demand	
	Recovery	***Delayed Adjustment***
HGV drivers	6,865	6,044
Mobile machine drivers and operatives n.e.c.	1,820	1,595
Managers and directors in storage and warehousing	1,259	1,090
Managers and directors in transport and distribution	1,156	1,011
Fork-lift truck drivers	968	840
Transport and distribution clerks and assistants	839	724
Aircraft pilots and flight engineers	662	557
Other drivers and transport operatives n.e.c.	461	408
Air transport operatives	453	380
Rail transport operatives	339	298
Train and tram drivers	199	171
Ship officers	183	165
Marine and waterways transport operatives	152	137
Importers and exporters	114	101
FTDL-14 occupations	**15,470**	**13,520**

Source: AECOM, 2014.

[7] These figures do not include job churn job openings arising from the movement of workers between firms in the FTDL sector.

E 4. Current domestic skills supply

There is a range of higher education providers in Ireland providing specialist education in the Freight Transport, Distribution and Logistics fields. Several offer courses producing graduates who are expected to enter the FTDL sector at management or leadership programme level. In addition to traditional classroom based learning, third level institutions also offer online or 'distance' learning courses. SOLAS / Education and Training Boards (ETBs) run a range of further education and training courses in this area. There are several private sector/professional body courses for the FTDL subsector and Skillsnets funded courses. There are also Springboard higher education courses in supply chain management. Relevant FTDL education and training course provision includes:

- Full time and part-time undergraduate and Master's degree courses - approximately 220 persons were reported graduating from such programmes in 2012, (most recent year information is available);
- Springboard part- time higher education courses in supply chain management - a total of 326 places were made available over the last four years - including 50 enrolments for year 2014/15;
- Third level online/distance FTDL learning courses - approximately nine persons graduated in 2012;
- Private sector and professional body courses (training, diplomas, certificates and short degrees) - mainly short courses targeted at upskilling those in employment;
- ETBs training (including HGV Driver, forklift operator and logistics and distribution and operations courses) -1,400 places were on offer for such programmes for 2014; and
- SOLAS funded Momentum programme - A total of 282 places in warehousing and logistics were approved under the Momentum programme for the long term unemployed in Sept 2014;
- Skillnets courses (aimed at long term unemployed such as warehouse & inventory management). These are small in number and annual throughput is under 20 persons.

Overall, there is a range of courses which can be utilised for the upskilling or training of employees at all levels in the sector. Feedback at workshops suggests that there is a lack of awareness among employers and individuals of the current range of courses available.

Predicting the supply of employees into the sector based on course participation is difficult as primary research has shown that word-of-mouth referrals is a common method of recruitment, particularly for lower skilled roles. Many organisations, especially larger ones, are providing their own training for employees. This type of referral based recruitment means that there are few barriers to entry for lower skilled jobs, presuming roles are available. Currently, many entering relevant managerial level and supply chain professional roles do not necessarily require a degree which is specifically in supply chain or a logistics discipline. This is likely to change as companies

view their logistics activities in a more strategic way in order to extract more value and efficiency from their supply chain activities. The challenge therefore is to ensure that courses offered meet the requirements of industry (e.g. customs, refrigeration technicians, supply chain knowledge at the strategic level) and that these courses can be mapped to any prospective career pathway. This requires greater levels of communication between industry and training and education providers and a more co-ordinated approach from all stakeholders in the sector.

E 5. International Best Practice Review

A number of other countries with successful freight sectors have introduced initiatives to address similar skills challenges as in Ireland. Several countries were reviewed in the study. These included Germany, Netherlands, UK, Singapore and Denmark. All have well established apprenticeship schemes, defined career paths, industry participation in vocational education and training and support for workplace learning. Due to factors such as geography, domestic markets, economic structure and available infrastructure, the skills requirements for the FTDL sector vary between countries. Despite this, there are several common skills development and talent attraction issues.

Germany

Transport and logistics is the third biggest sector in the German economy. Education and training were identified in 'The Action Plan for Freight Transport and Logistics' as key components for strengthening Germany's position as a centre for logistics excellence. Presently, there are approximately 129 Universities and Technical Colleges in the country which produce 11,600 logistics graduates each year. There are an extensive number of further education options employing the 'dual system' whereby on-site practical training is supported by classroom based theoretical learning. In Germany the clustering of research, training and education has been central to improvements. There has been €40m federal funding made available to the cluster since 2010 for 27 projects. Clustering in Hamburg, which is home to Europe's second largest seaport, means that there is significant provision of education of training in the region. Kuehne Logistics University, the first institution completely dedicated to logistics and Hamburg Port Training Institute are two examples of specialist training institutions in the region.

Netherlands

The Netherlands benefits greatly from its position at the entry point to three major European waterways. Combined with its excellent road and rail transport links, the country has developed into one of the major international logistics centres. The Netherlands boasts Europe's largest seaport at Rotterdam and also the third largest airport (in terms of freight transport) in the world. Logistics was identified in 2011 by the Ministry of Economic Affairs, Agriculture and Innovation as one of nine key sectors for building the economy. In order to achieve this, a campaign was launched

to improve the image of the logistics sector and measures introduced to provide additional education and training. A Topsector Logistiek team was set up to ensure the Netherlands continued success as a global logistics centre in terms of research and innovation.

United Kingdom

The UK has a large transport and logistics sector. Two sector skills reports for the transport and storage and wholesale and retail sectors have been produced which identified a number of priority areas for improvement including attracting new recruits (particularly in light of the sectors image problems), producing clear career pathways, professionalising the workforce, and increasing business investment in skills development. A career development framework has been established that enables employers and employees to plan and map their career progression and to provide the basis for continuous professional development programmes.[8]

Singapore

Singapore has taken advantage of its position at the nexus of a large number of shipping lanes by constructing world class infrastructure and introducing custom handling and tax policy which encourage trade. Singapore Port is the second largest in the world (in terms of TEU volume[9]). Despite high land and labour costs relative to neighbouring countries, Singapore has the lowest cost of logistics as a proportion of total sales in the ASEAN region. This can be attributed to the educated and skilled workforce and excellent information systems and infrastructure. The National Productivity and Continuing Education Council endorsed a five year 'Logistics and Transportation Productivity Roadmap' focussed on enhancing supply chain management expertise and innovation.

Denmark

Located between the large Central European market and Northern Europe, Denmark is well positioned to become a significant logistics hub. The country is heavily reliant on road and shipping services which account for 93% of its international freight. In 2011 the Danish Ministry of Transport identified education research and innovation as key areas of focus. Recent achievements include the offering of bachelors and masters degrees in transport and logistics and the upgrade of statutory training for HGV drivers. Denmark has developed several successful vocational training programmes which prepare young people for careers in the sector.

Overall, it is clear that many of the FTDL skills issues faced by Ireland are common in other countries. Above is a summary of relevant examples of best practice globally which Ireland can learn from to develop the skills capability of the freight transport, distribution and logistics sector.

[8] This "Professional Development Stairway" provides six career levels for four different specialised job categories (Storage and Handling, Supply Chain, Transport, and Marine and Port operations) - available at www.thestairway.org.
[9] Twenty Foot Equivalent Unit (TEU) – this is based on the volume of a standard sized 20 foot long intermodal container which can be easily transferred between different modes of transport.

E 6. Recommendations

6.1 Introduction

In order to respond to the skills challenges and opportunities identified in this report a range of measures are needed to ensure the necessary skills are available to drive FTDL growth. There are four key strategic themes relating to skills development that determine whether logistics organisations have the capability to meet their operational demands. Generally companies will consider each element separately, although gaps in one area may have an impact on another. For example, having a well-established progression pathway will require clear development plans and if someone is promoted or transferred into another role this will then result in a recruitment need.

Figure E 5: illustrates the relationship, where all four elements need to be considered if organisations are to achieve success through optimisation of their human resources.

Figure E 5: Key Strategic themes relating to skills development within FTDL companies

Source: AECOM, 2014

Under each theme, businesses need to prepare a clearly defined skills strategy. This report has identified a variety of key learning points that can be shared and disseminated across the sector to help support this. It is important for companies to look specifically at their own skill needs and to fully understand the link between skills and performance. As well as core FTDL roles, this business skills strategy should include typical logistics support roles such as:

- Vehicle maintenance fitters, technicians and mechanics;
- Specialist technicians, e.g. refrigerated vehicles/warehouses;
- IT support – general and software specific.

6.2 Priority Recommendations Matrix

Table E 6 presents a list of priority recommendations which address identified skills development requirements of the sector. These recommendations require buy in and support from enterprise and education and training bodies. Recommendations made are denoted by time-period for implementation: Short-term (1 to 2 years), Medium-term (2 to 3 years), and Long-term (3 to 5 years). Each recommendation denotes the Lead Partner(s) for its implementation.

Table E 6: Priority Recommendations Matrix

Recommendation	Primary /2nd Level Education	Third Level Education	Training	Lower skilled	Management	Air Freight	Sea Freight	Rail Freight	Road Freight	Freight Forwarding
1. Develop a Freight, Distribution and Logistics Skills Engagement Group.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Develop National Occupation Standards to create career pathways in a variety of FTDL roles.		✓	✓	✓	✓	✓	✓	✓	✓	✓
3. Develop new Apprenticeship programmes related to sector starting with HGV Drivers and Warehouse & Storage apprenticeships.		✓	✓	✓		✓	✓	✓	✓	✓
4. Develop a schools/career service communication toolkit for the sector.	✓	✓	✓	✓		✓	✓	✓	✓	✓
5. Build-up FTDL SMEs management capabilities.		✓	✓		✓	✓	✓	✓	✓	✓
6. Build-up Project Management, Logistical and Procurement Skills.		✓	✓		✓	✓	✓	✓	✓	✓
7. Improve training provision for Freight Forwarders and Customs Brokers.		✓	✓	✓		✓	✓	✓	✓	✓
8. Introduce sector specific IT user courses at all levels from lower skilled to management level.			✓	✓	✓	✓	✓	✓	✓	✓
9. Develop 'soft skills' courses aimed at management-level. Integrate into training/education provision at all levels particularly lower skilled.		✓	✓	✓	✓	✓	✓	✓	✓	✓
10. Develop a Lead Centre for the provision of third-level FTDL Education Courses.		✓	✓	✓	✓	✓	✓	✓	✓	✓
11. Boost Third Level Logistics course provision and improve practical experience in courses.		✓	✓			✓	✓	✓	✓	✓
12. Ensure a supply chain module is included in third level business and relevant non-logistics degree courses.		✓			✓	✓	✓	✓	✓	✓
13. Improve employers and students' knowledge of current FTDL course provision.		✓	✓	✓	✓	✓	✓	✓	✓	✓

6.3 Recommendations

1. Overarching Recommendation: Develop a Freight Transport, Distribution and Logistics Skills Engagement Group

A feature of the sector is that there is a relative lack of coordinated and joined up approach to the planning and delivery of relevant training and the provision of career path opportunities, especially for those at lower skill levels. With regard to further education and training (NFQ Levels 3/4 to 6), SOLAS has the profile and reputation to ensure that FET course provision addresses the skills and training gaps identified at these levels in this report. This requires the requisite logistics knowledge within SOLAS to act as a lead on this initiative. Given its strong links with the FTDL sector a centre such as DIT may be best placed to act as a voice for third level institutions which offer associated courses at NFQ levels 7, 8 and 9. This role will require the support of other institutions that provide FTDL courses provision. Industry bodies should take the lead working with SOLAS and Dublin Institute of Technology (DIT) on the development of relevant career pathways and National Occupational Standards and to enhance the image and profile of the sector as a whole.

- A key strategic recommendation is the development of an industry led 'Logistics Skills Engagement Group' with a common purpose of enhancing Ireland's logistics and supply chain skills capability. Improved linkages between employers, education and training providers facilitated by this Group will ensure that education and training provision is more optimally aligned with the skills needs of FTDL enterprises. The focus of this Group would be to ensure that:
  - The FTDL sector profile is high, making it easier to recruit the best talent - including by improving knowledge among secondary students of the range of interesting roles available in the sector;
  - Progression pathways become available to those entering or already working in the sector particularly for those at lower skilled levels, with clear role definitions mapped to academic or other vocational awards.
  - Development opportunities are available to provide the required skills, knowledge and competencies;
  - Employee retention is maintained;
  - The potential for setting up a dedicated Skillnets network in the sector is examined.[10]

The Group could share knowledge and help identify new skill gaps and opportunities. It could consider best practice FTDL training / education initiatives introduced in other countries and consider whether they might be adapted / implemented in Ireland, i.e. Driver CPC initiatives, Good Distribution Practice schemes, use of simulators in learning (Crane, Fork-Lift truck, HGV, other).

Time frame: Short-term to Medium-term.

Lead: Industry Bodies, Freight Transport Association, SOLAS, DIT (with other Third level institutions).

[10] There will be a new call for Skillnets network proposals in Quarter 1 2015.

2. Overarching Recommendation: Develop National Occupation Standards for the FTDL sector to create career pathways in a range of roles

National Occupational Standards help individuals, organisations and training providers to improve performance. They are valuable for carrying out a variety of activities, for example:[11]

- Providing a statement of competence which brings together the skills, knowledge and understanding necessary to do the work;
- Providing a framework for training and development;
- Improving recruitment by standardising the selection and interview process.

- It is recommended that employers in the FTDL sector identify National Occupational Standards for key roles in the sector. As a priority these should include Warehousing and Storage, Freight Forwarding International Trade and Logistics Operations; and HGV Drivers. Large organisations with developed progression pathways should be consulted to ensure best practice is included in any new progression framework. This will enable SMEs to take advantage of current systems in place.[12] Industry bodies should take the lead in working with SOLAS and DIT (and other third level institutions with sector relevant programmes), including with QQI, on the development of National Occupational Standards and career progression pathways.

Time frame: Short-term to Medium-term.
Lead: Industry Bodies, SOLAS, DIT (with other Third level institutions).

3. Develop new Apprenticeship / Traineeship Programmes for FTDL sector

Structured entry Apprenticeship/Traineeship programmes need to be developed which provide progression pathways within the FTDL sector, such as those in Denmark and the UK. Employers need to be proactive and collaborate with SOLAS in relation to the new Apprenticeship call January 2015, to ensure that apprenticeships are developed to meet the sector's needs. (Employers need to put in a bid in Q 1 2015, and then collaborate with SOLAS thereafter).

- As a priority it is recommended that an HGV Driver Apprenticeship programme is developed to address the anticipated shortfall in HGV drivers with the required licence. Employers should also submit a bid for a Warehousing and Storage Apprenticeship programme. Proposals for these apprenticeships should include, among other criteria set out within the Apprenticeship Implementation Plan, the extent to which proposers are representative of the sector, evidence of labour market need and the willingness to take on apprentices[13];
- Driving Goods Vehicles Intermediate / Advanced Apprenticeship; and
- Warehousing and Storage Intermediate/Advanced Apprenticeship.

Time frame: Short-term to Medium-term.
Lead: Industry Bodies, SOLAS, HEA.

[11] Skills for Logistics Website,10th Sept 2014 http://www.skillsforlogistics.org/products-services/national-occupational-standards/.
[12] The Skills for Logistics Council in the UK is currently developing National Occupation Standards (NOS) for various roles in the logistics sector. It would be possible for these to be adapted and applied in Ireland.

[13] Currently, new 'Trailblazer' apprenticeships are being developed in the UK to improve the apprenticeship programme there. They will be designed by employers for roles in particular sectors.

4. Develop a schools/career service communication toolkit for the sector

There is a lack of knowledge among students of the range of roles available in the freight transport, distribution and logistics sector and the importance of the sector to Ireland's economy. Guidance Counsellors can play an important role in promoting the sector to potential entrants, particularly women. Gender tailored messaging would help ensure that females are aware that there are no barriers to them taking up roles in the sector.

- A short supply chain element should be added to business or geography related aspects of the curriculum, and introduced at various stages of the education system. This could incorporate games such as 'Business on the Move' to ensure lessons are fun and engaging.
- An information pack should be prepared for Guidance Counsellors on the types of roles available in the sector and the opportunities it can provide. This could also be disseminated via the Careers Portal website and hard copy brochures where appropriate.
- A campaign similar to the Freight Transport Association 'Love Logistics' campaign in the UK should also be explored. This aims to make people aware of the FTDL industry and the impact it has on their lives. It includes a series of videos outlining the role of the logistics industry and is aimed at a range of audiences.

Time frame: Short-term to Medium-term.

Lead: Industry Bodies, Institute of Guidance Counsellors.

5. Build-up FTDL SME Management Capability

There is a need to build-up FTDL SME management capability. Typical skills capabilities required are for competitive bidding, complex supply chain systems, transport compliance, change management, risk management, lean processing, logistics security, sustainability, people management and negotiation skills. SME managers also need added skills to make greater use of IT and data analytics. Enterprises have a key role to play in the identification and support for their managerial and technical upskilling needs.

- The level of management capability within FTDL SMEs should be built up. This should be planned and delivered in collaboration between SMEs. Upskilling needs can be met by building upon existing programme provision available to meet sector needs, such as ISME run management development programmes and other courses run by public and private bodies. New modules should be sector specific and capture key learning points such as supply chain management, finance for transport operators, optimising vehicle utilisation etc.

Time frame: Short-term to Medium-term.

Lead: Companies, ISME, Small Firms Association, Skillnets.

6. Build-up Global Supply Chain Management Skills

Ensuring the security and consistency of their supply chain, is an essential requirement for international customers. Policy in this area will be reinforced by the implementation of one action proposed in the EGFSN study on "*Key Skills for Enterprises to Trade Internationally*". This is:

- Global supply chain management skills should be built up within companies, 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.

Time frame: Short-term to Medium-term
Lead: Employer Bodies/Companies.

7. Improve training provision for Freight Forwarders and Customs Brokers

The level of customs expertise amongst freight forwarders needs to be improved. At present, there is little requirement to have undertaken customs training to be a freight forwarder and courses previously offered by the former FÁS are no longer available.

- A short SOLAS funded course should be introduced aimed at prospective entrants for freight forwarding roles and those working in this area.[14] Course content should focus on goods classification and valuation. In the long term, industry should move towards requiring an entrant to complete an accredited customs course before entering the sector. This would create a similar arrangement to that in the USA and Canada.[15] Consideration could be given to an advanced training course in this area, to enable participants deliver the entry-level course in-house. Opportunities could be explored to align the FIATA / IIFA Diploma in Freight Forwarding with the proposed customs course, thus helping to professionalise the industry further.

Time frame: Short-term to Long-term.
Lead: SOLAS, ETBs, Irish International Freight Association.

8. Introduce short IT user courses for the FTDL sector

IT user skills need to be developed for operatives up to management level. Whilst there are a number of IT courses available they are not specific to user needs in the sector.

- Short accredited sector-specific IT courses should be developed to support the upskilling of employees in the sector particularly those at lower skills levels. Courses should be aimed at the application of IT generally, rather than the specific products users are likely to be trained on in-house. Example course content could include the systems in place in warehousing, vehicle scheduling systems, Excel training and how IT supports the supply chain. Courses should be aligned to the development of the National Occupational Standards and could be offered online.

Time frame: Short-term.
Lead: ETBs, DIT, Skillnets.

[14] A useful point of consultation in relation to this would be the National Customs Consultative Committee.
[15] National Customs Brokers & Forwarders Association of America and Canadian Society of Customs Brokers.

9. Develop 'soft skills' managers courses aimed at FTDL sector. More generally, integrate 'soft skill' development into training/education provision at all levels

Research indicates that there is a lack of people management and communication skills affecting the ability of managers to liaise with their staff and engage with their customers. Those employed in the supply chain are in direct contact with overseas customers and there is a need to be aware of cultural sensitivities. This training is likely to be most applicable to those who have worked their way up from lower skilled positions who may never have received training in this area. Employers have the key role to play in the shaping and development of their management talent.

- Short sector specific soft skills courses should be developed aimed at management-level. This training could be based on existing course offerings, with content amended to reflect the international nature of working in the supply chain. Course content should include people management skills, developing strong relationships with customers, as well as cultural awareness considerations. Courses could be offered on a blended learning basis (class room and online learning). More generally, soft skills development should be integrated into education and training course provision at all levels particularly those at lower skill levels.

Time frame: Short-term to Medium-term.

Lead: ETBs, Companies, Skillnets, Business Associations.

10. Encourage a lead centre to act as a single voice for Third level education institutions that deliver programmes relevant to the FTDL sector

There is need for a lead centre with sufficient expertise to act as a voice for 3rd level education institutions that deliver programmes relevant to the FTDL sector and as a point of first contact for industry.

- Given its strong links with the FTDL sector, a centre such as DIT may be well placed to undertake this lead centre role. This will require the support and close collaboration with other institutions providing relevant programmes at NFQ levels 7, 8, 9. The centre will require a formal plan to champion progress and ensure the relevance and quality of third level programme offering. The lead centre should collaborate with SOLAS on the development of FTDL progression pathways from NFQ levels 5/6 to 7/8/9.

Time frame: Short-term to Medium-term.

Lead: DIT, Other Third-level institutions with relevant course provision.

11. Boost Third level Logistics course provision and ensure practical experience in courses

The number of FTDL third level courses in Ireland is relatively small compared on a proportional basis to the UK and Germany. Programme content should include regulatory requirements, global supply chain opportunities, use of technology and leaner and greener logistics.

- Third level logistics course provision should be boosted in terms of numbers and course content. The integration of practical work experience with the theoretical elements of courses would ensure that graduates have spent time in a distribution warehouse or a transport depot learning how they operate. This will result in better prepared graduates and reduced training costs for FTDL enterprises. Delivering this element will require a close partnership between FTDL companies and education and training providers.

Time frame: Short-term to Medium-term.

Lead: Universities/IoTs, HEA.

12. Ensure a supply chain module is included in relevant Third level business degree courses

Larger organisations in the sector currently recruit graduates both from logistics specific courses as well as other business courses which may not include modules relating to the supply chain.

- Supply chain modules should be included on business related courses from which the sector recruits. These could be developed from existing course material used on specific logistics courses. Content would include global supply chain management from Ireland, and the increasing importance of freight transport sustainability issues from both a cost and regulatory view point. This would have the effect of both informing graduates on non-logistics courses of a potential career in the FTDL sector and ensuring graduates arrive better prepared.

Time frame: Short-term to Medium-term.

Lead: Universities/IoTs.

13. Improve Knowledge of the available range and quality of FTDL courses

Feedback from consultations is that there is a relative lack of knowledge among employers and individuals of the range of current FTDL programmes available.

- There should be a concerted effort to improve knowledge of available FTDL programmes. In this regard, the compilation of FTDL courses developed for this study could be utilised. There is currently a range of upskilling short courses aimed at the sector offered by institutions, although generally delivered in urban centres. Where possible (e.g more theoretical courses) these should be made more widely available across the country. In addition, an industry led quality kitemark for Irish logistics training provision and support for companies undertaking internal work based learning activities could be developed.

Time frame: Short-term to Medium-term.

Lead: Universities/IoTs, ETBs, Companies.

Appendix 1: Steering Group Members

Name	Organisation
Pat Ivory	IBEC (Chairperson)
Declan Carolan	ECR Ireland Group
Declan Freeman	Irish Continental Group
Neil Mc Donnell	Freight Transport Association
Richie Smith	Hays Recruitment
Liz Carroll	ISME
John Bolton	IDA Ireland
Ray Bowe	IDA Ireland
Niall Coulston	Enterprise Ireland
Catherine Grant	Enterprise Ireland
Peter Brown	Higher Education Authority
John Mc Grath	SOLAS
Hendrik Van Der Kamp	Dublin Institute of Technology
Marie Bourke	Department of Jobs, Enterprise and Innovation
Gerard Walker (Project Manager)	Department of Jobs, Enterprise and Innovation
Eamonn O'Connor	Intern assisting the work of the Secretariat

Appendix 2: Members of the Expert Group on Future Skills Needs

Name	Organisation
Una Halligan	Chairperson
Marie Bourke	Head of Secretariat and Department Manager, Department of Jobs, Enterprise and Innovation
Inez Bailey	Director, National Adult Literacy Agency
Peter Baldwin	Assistant Secretary, Department of Education and Skills
Ray Bowe	IDA Ireland
Liz Carroll	Training and Development Manager, ISME
Ned Costello	Chief Executive, Irish Universities Association
Margaret Cox	Managing Director, I.C.E. Group
Bill Doherty	Executive Vice President, EMEA, Cook Medical
Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Bryan Fields	Director, Curriculum Development / Programme Innovation, SOLAS
Joe Hogan	Founder, Chief Technology Officer & VP Openet Labs & IP Management
Deirdre McDonnell	Principal Officer, Department of Education and Skills
Jerry Moloney	Director of Skills, Enterprise Ireland
Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Brendan Murphy	President, Cork Institute of Technology
Dermot Nolan	Principal Officer, Department of Public Expenditure and Reform
Alan Nuzum	CEO, Skillnets
Peter Rigney	Industrial Officer, ICTU
Declan Hughes	Assistant Secretary, Department of Jobs, Enterprise and Innovation
Mary-Liz Trant	Higher Education Authority
John Burke	Department of Public Expenditure and Reform

Appendix 3: Recent Publications by the Expert Group on Future Skills Needs 2012 - 2014

Report	Date of Publication
Regional Labour Markets Bulletin 2014	September 2014
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2014	August 2014
National Skills Bulletin 2014	July 2014
Vacancy Overview 2013	May 2014
Assessing the Demand for Big Data and Analytics Skills, 2013 - 2020	May 2014
The Expert Group on Future Skills Needs Statement of Activity 2013	March 2014
Regional Labour Markets Bulletin 2013	March 2014
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2014	February 2014
Addressing Future Demand for High-Level ICT Skills	November 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2013	July 2013
National Skills Bulletin 2013	July 2013
Future Skills Requirements of the Manufacturing Sector to 2020	April 2013
The Expert Group on Future Skills Needs Statement of Activity 2012	April 2013
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2013	February 2013
Vacancy Overview 2012	February 2013
Regional Labour Markets Bulletin 2012	January 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2012	July 2012
National Skills Bulletin 2012	July 2012
Key Skills for Enterprise to Trade Internationally	June 2012
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 *(Forfás report based on EGFSN identified future skills needs)*	February 2012
Addressing High-Level ICT Skills Recruitment Needs: Research Findings	January 2012

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