



Boosting Medtech, Manufacturing Engineers and Finance talent to drive Jobs Growth in the West Region

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Foreword



It is my great pleasure to introduce the Galway Executive Skillnet Boosting Medtech, Manufacturing Engineers and Finance Talent to Drive Jobs Growth in the West region research. This research report documents the key challenges facing returners who wish to re-enter the workplace in the West region. The report also outlines the difficulties faced by businesses who actively wish to engage returning workers. This hugely important piece of work highlights the value of providing support to both returners and businesses in the West region.

Providing support to individuals who wish to return to work creates limitless possibilities for entrepreneurship, full employment, sustainability, and business resilience in the West region. The work documented within this research report focuses on an examination of the critical skills gaps across three defined sub-sectors in the West region. Furthermore, this work presents the results of an investigation to determine the reasons for the identified skills gaps.

The return to work journey is paved with possibility and opportunity to all. For Ireland to remain competitive in an increasingly globalised world and to optimise the talent available in the West region, it is vital that businesses and returners are supported through each step in this journey. Support from government is fundamental and essential to the future success in the West region.

This report outlines clear and achievable solutions that address the reported barriers that individuals and businesses encounter on the journey of re-engagement. These include:

- The provision of funding to support women returning to the workplace.
- The introduction of a national Work-Life Balance / Family Friendly Employer Badge under the banner of Increasing Participation and Recruitment of Talent.
- The development of a National Charter Template and Toolkit for use as a guide by enterprises when developing or enhancing their corporate culture to meet the needs of returners.

One outcome of this work is the clear identification of the value in individuals who wish to return to work. A second significant outcome is the proposal of practical and workable solutions that address the barriers returners face when re-entering the workforce as well as the barriers encountered by businesses who wish to engage returners.

The recommendations outlined within this report support the government's commitment to winning the war for talent and ensuring that all of Ireland's citizens have access to the skills necessary for success, and Irish businesses have access to the workforce required to guarantee growth.

I wish to thank all those who contributed to this research project. To our funding agency Skillnet Ireland who provided support throughout the project. To our professional research team led by Gerard Walker and Ananda Geluk, who were instrumental in so many aspects of our primary and secondary research activities. Thank you to our network management team for driving the project and the Project Advisory Group for your patience and guidance throughout. Thank you to members of the Galway Executive Skillnet steering committee for your constant support. A final thank you to the members of the West Regional Skills Forum, the stakeholders, employers, and employees who contributed valuable time and experience which guided and directed us to arrive at this point. My sincere thanks to one and all, and let's make this happen.

Margaret Cox

Director of ICE Group and Promoter of Galway Executive Skillnet

Executive Summary

1 Introduction and Background

The aim of this study is to boost Medtech, Manufacturing Engineers and Finance Talent to drive job growth in the West region. It recommends practical proposals aimed at addressing identified skills gaps including through upskilling/ reskilling, education and training provision, and increasing the supply of women returners talent. The findings of the research work can inform and influence national and regional skills development policy. The study was undertaken by Galway Executive Skillnet and is funded by Skillnet Ireland which actively supports and works with businesses in Ireland to address their current and future skills needs. It has benefited from the engagement of a wide range of companies and key stakeholders in the West region. The main objectives of the Study are to:

- a) To assess the nature, scale and reasons for any skills deficits within Medtech, Manufacturing Engineers and Finance roles in the West region, with a specific focus on the needs of SMEs, and to propose practical recommendations to address them.
- b) To identify how the supply of returner talent (particularly women returners) in the West region could be boosted to partly meet skills demand within Medtech, Manufacturing Engineers and Finance roles in the West Region by addressing any barriers/challenges to re-entry.

Broad Policy Context

This study is aligned with the policy context of key regional and national policies. These include the *Regional Enterprise Plan West to 2020*¹, *Enterprise 2025 Renewed*, *Pathways to Work Strategy 2016–2020*, *National Skills Strategy 2025*, *West Regional Skills Forum*, *Future Jobs Ireland 2019*. The study is well aligned to the *Skillnet Ireland Strategy*. Skillnet Ireland's nationwide Learning Networks assist companies to identify the skills needed to develop their business.

Research Methodology

The project adopted an action-based research approach which engaged with a wide range of enterprises and key stakeholders. The research elements below built up evidence informed learning in an integrated way.



West Regional Company and Stakeholder Workshop



Follow-up Online Survey with Companies



Stakeholder Consultations and Review Meetings



West Regional Online Returners to Work Survey and Interviews



West Regional Returners Focus Group Meeting



Review of Education and Training Supply West Region



Review of Domestic and International Research



Analysis of West Region Labour Market Trends



Insights from Project Advisory Group

Report Outline

The two main integrated themes presented in this report are:

Theme 1: Addressing skills demand in Medtech, Manufacturing Engineers and Finance Roles in West region.

This theme assesses the nature and scale of skills deficits within Medtech, Manufacturing Engineers and Finance roles. It considers the reasons for skills deficits and how they can be addressed including through upskilling, reskilling, education and training provision and an increased supply of women returner talent.

Theme 2: Boosting the supply of Women Returners talent to partly address skills demand within Medtech, Manufacturing Engineers and Finance roles West Region.

This theme identifies barriers/ challenges to entry for Returners talent (particularly Women Returners) including any due to regionality and how they can be addressed to support re-entry to the workforce.

A concise set of practical recommendations are proposed for implementation by advised stakeholder partners in the region. These comprise an Action Plan to address skills demand for Medtech, Manufacturing Engineers and Finance roles including by boosting the supply of returner talent to partly help meet such demand.

Background: Key Labour Market Trends in the West region 2012-2019

Labour market trends in the West region with record high employment and low unemployment highlights the need to improve workforce productivity by upskilling/reskilling, ensure a supply of quality graduate talent and to increase labour force participation by boosting the supply of women returners talent and reducing underemployment.

Labour Market trends in the West region between 2012-2019 are that:

- Employment has grown to a record high from 175,400 to 213,400 - by 38,000 – a 22% growth.
- Unemployment fell from 36,500 to 14,300 - by 22,200 - a reduction of 61%.
- The Unemployment rate has fallen from 17.3% to 6.3%.
- The size of the Labour Force grew from 212,000 to 227,700, by 15,700 - a 7% Growth rate, with much of this increase taking place between 2016-2019.

Source: CSO Statbank

Theme 2: Addressing Skills Demand in Medtech, Manufacturing Engineers, Finance Roles

Overall Conclusions

Skills gaps arising in the West region are due to strong business and employment growth, a tightening labour market, the ongoing drive to improve productivity, and rapidly changing skills, knowledge and competency profiles. The supply of skills and talent needs to respond to these challenges.

Enterprises need to strengthen their talent attraction and retention practices and invest in the reskilling/upskilling of their workforce to meet technological and market demands including upskilling at lower skill levels to fill more highly skilled jobs.

The supply of relevant skills and talent in the West region is a strength. There is scope for greater engagement between enterprise and education and training providers for the design and delivery of CPD upskilling/reskilling provision

especially for SMEs and to ensure the ongoing quality of graduates.

A well-qualified women returner talent pool exists to help partly address skill gaps if identified barriers/ challenges were addressed. The solutions are multi-layered with a need for implementing and driving change from many levels, from Government, to industry leadership, to workplace culture and practices.

Skilled workers are mobile and choosing where they work based on factors such as quality of life, flexible working arrangements and career advancement. In this regard the West region scores highly. This is against the background of increasing competition for talent both domestically and from abroad.

Addressing Skills Demand within the Medtech Sector in West Region

Medtech employment in the West region **grew from 8,729 to 12,603**, between 2010-2017, a 44% increase. **55%** of the Medtech workforce are engaged in operations roles. There are **108 Medtech companies** located in the region.

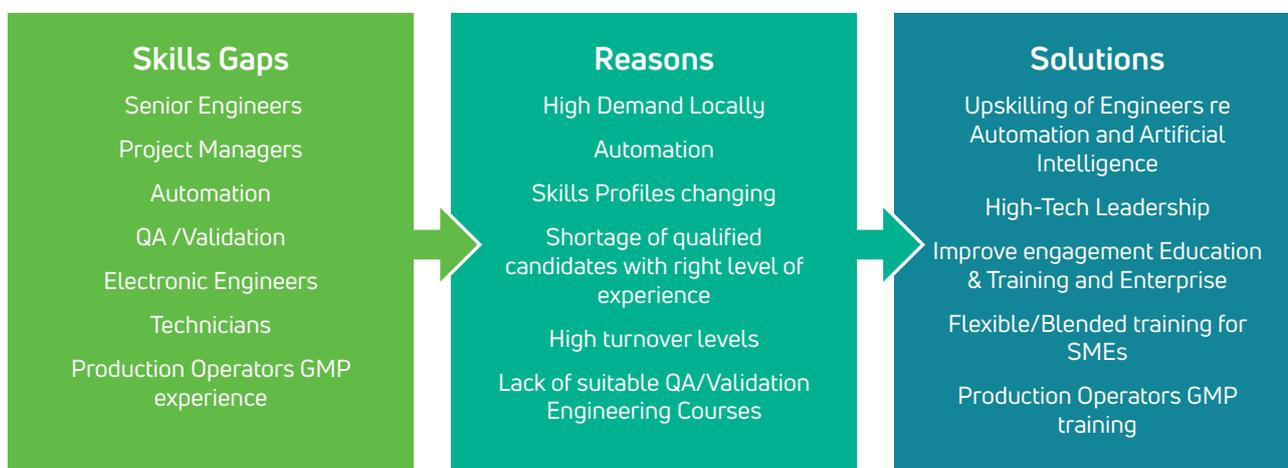
Ireland is a leading location for medical technology manufacturing in Europe. The West region accounts for 40% of the country's Medtech Sector employment and the investment pipeline remains strong with a demand for both new graduates and experienced professionals. The Medtech industry is in a constant state of renewal, with new products being introduced and processes changing. There is a shift towards the production of higher value products. Challenges facing the sector include the pace of automation to improve productivity, the effect of digital disruption on existing work practices, and the importance of nurturing of entrepreneurs and start-up companies. Brexit will present quality, regulatory, customs and financial procedures challenges to Irish Medtech companies trading with UK and EU markets. These drivers of change are resulting in a strong demand for higher skilled workers and the need for upskilling/reskilling to meet rapidly changing skills profiles.

Key skills gaps identified in the region are for the recruitment of Senior R&D Engineers, R&D Engineers, Quality Assurance/Validation Engineers, Electronic Engineers/Technicians and Manufacturing Trades. The convergence of different technologies utilised within medical device products is creating a requirement for interdisciplinary expertise. High-Tech leadership skills capability can help Medtech enterprises take advantage of technological opportunities to drive their productivity and business growth.

Rapid ongoing skills changes within the Medtech sector in the West region requires internal upskilling for employees. There is scope for Medtech enterprises to strengthen their collaboration and "external learning linkages" with education and training providers in the region. Medtech SMEs and start-up companies require greater provision of online and flexible/blended workplace learning. Medtech SMEs productivity can be improved by strengthening their supply chain linkages with multinational companies in the region.

It is estimated that 1,180 job openings arose within the Medtech sector in the West region in 2019. Half of this number were in operations roles.

Findings on Addressing Medtech Sector Skills Needs



Addressing Skills Demand for Manufacturing Engineers in West Region

3,930 people are engaged in Manufacturing Engineer roles in the West region. There are also 1,600 Engineering and Production Technicians. 90% of these roles require a 3rd Level qualification.

Manufacturing Engineers in the West region are employed in high-tech manufacturing within the Biopharma, Medtech, Food/Beverages and Machinery/Equipment sectors. The specific demand is for Automation Engineers who understand the production process, Process Development Engineers, Quality Assurance/Validation Engineers, Senior R&D Engineers/R&D Engineers and Manufacturing Technicians. Manufacturing Engineers often work between disciplines or as part of multi-disciplinary teams. As well as technical skills needs there are soft skills requirements including for strategic thinking, project management, people management, and problem solving/innovation.

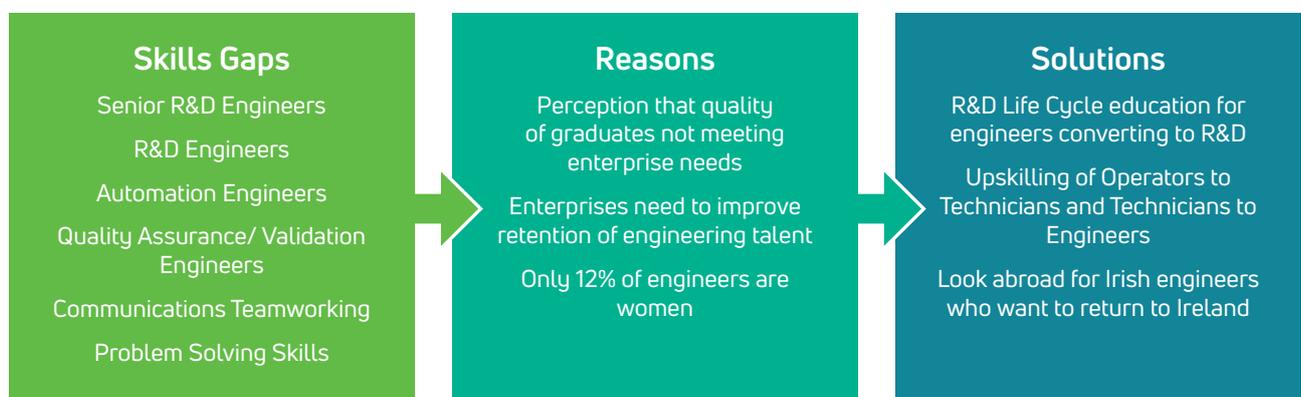
The national demand for engineer professionals has grown by 7.2% per annum over the last five years (this includes mechanical, automation, chemical, electrical, design and quality control engineers), compared to 3.1% per annum growth rate for national employment.

An example of regional collaboration which the West region could usefully draw upon is the "Limerick for Engineering Group". This is an industry-led initiative which has the support of education and training providers in the Mid-West region (www.limerickforengineering.ie). Its primary goal is to increase the quality and quantity of engineering talent (apprentice, technician and engineers) available in the Mid-West Region.

The lack of female engineers both regionally and nationally is a constraint on the supply of engineering talent required by enterprise. The promotion by enterprise of the range of rewarding Manufacturing Engineer careers to both students and parents in the West region is a priority.

In 2019 it was estimated that 410 job openings arose for Manufacturing Engineers in the West Region (100 of which in the Medtech sector). 110 job openings were estimated for Engineering and Production Technicians.

Findings on Addressing Manufacturing Engineers Skills Needs



Addressing Skills Demand for Finance Roles in West Region

9,470 people are employed in Financial roles in the West region. Main roles are Accountants (29% of total), Bookkeepers, Payroll Managers, Wage Clerks (22%), Financial Managers and Directors (11%).

Financial services organisations in the West region support both indigenous and FDI businesses. Many finance professionals are employed in businesses as well as accounting practices. There are growing opportunities for finance graduates to work and live locally and have a successful career in financial services.

Financial Accountants increasingly work within matrix structures in organisations along with other professionals rather than working in a “box”. Their roles are typically more hybrid, with the need for project management, leadership, teamworking, collaboration and communication skills. The nature of finance roles is changing dramatically with a requirement for digital capability for the application of user-friendly software and automation tools. While repetitive administration work will increasingly be automated, it is likely that automation will augment the work that finance professionals do to improve their performance. Customs, tariffs vat, tax, and audit systems and rules changes are likely to affect finance roles within business which trade with the EU and/or UK in the event of Brexit.

Finance skills gaps identified in the West region are for Management Accountants, Business Intelligence, Tax Seniors, Experienced Auditors, Trainee Risk Consulting/Internal Audit. There is a strong demand for experienced accountants in leadership positions to manage projects and teams. There are signs of replacement demand arising for accountants resulting from competition for talent in the Dublin Region with some finance professionals commute to work from Galway to Dublin for the whole or part of the week. Smaller accounting and finance practices in the West region require locally available CPD provision with flexible delivery options.

It is estimated that 900 Finance professionals job openings arose in the West Region in 2019. Finance administration roles will likely continue to be negatively affected by automation.

Findings on Addressing Finance Roles Skills Needs



Recommendations to Address Skills Demand for Medtech, Manufacturing Engineers, Finance Roles West Region

The following six recommendations of the report relate to Theme 1: Addressing the skills demand for Medtech, Manufacturing and Finance Roles in the West region. Their greater detail and actions points are presented in the main report. Each recommendation advises on the stakeholder partners necessary for their successful implementation.

Skills profiles are changing rapidly due to market demands, digitisation, new software and automation tools, artificial intelligence, and data analytics. This is being accompanied by a growing demand for strong social, creative and collaboration skills.

1: Inspire Future Talent for Career opportunities in Medtech, Manufacturing Engineers and Finance roles in the West region and encourage participation in the new Accounting and Manufacturing Apprenticeships, especially females.

2: Strengthen collaboration between Enterprise and Education/Training providers to ensure relevance of CPD learning provision, especially for SMEs. Companies to increase their investment for the upskilling and reskilling of staff.

3: Meet Medtech Sector skill demand in the West region arising from the strong investment pipeline and impact of automation and artificial intelligence.

4: Address Manufacturing Engineers skills demand in the West Region including by the internal upskilling of Engineering Operators, Technicians and Engineers.

5: Meet Finance Roles skills demand in the region including for growing digital capability needs arising from use of new financial software and automation tools.

6: Promote Medtech, Manufacturing Engineers and Finance vacancies in the West region with 2,500 job openings estimated in 2019. These new job openings will provide opportunities for people with the right skills and aptitude including new graduates, women returner talent, underemployed and unemployed people.

Theme 2: Boosting the supply of Women Returners Talent to partly address Skills demand within Medtech, Manufacturing Engineers, Finance roles West Region

Increasing labour force participation which is Pillar 4 of the government's new "Future Jobs 2019-Preparing for Tomorrow's Economy" is also a key element of this study.

Increasing the supply of Returner Talent in the West Region, particularly Women Returners, can help partly meet the skill demand requirements within Medtech, Manufacturing Engineer and Finance roles.

There is an estimated pool of 19,000 Returners in the West region comprising 8,400 in the Potential Labour Force supply (4,400 are females), and 10,600 Part-Time Underemployed people (6,200 are females).

While several cohorts of potential returners to work were identified through the research, including those returning from career breaks taken due to illness/disability, redundancy, education, living overseas, transitioning to retirement, the most evident were those who had taken extended maternity leave and career breaks in order to care for children. Potential returners to work are not easily identifiable as a distinct homogenous cohort and the importance of targeted supports for returners, such as those available to jobseekers on the live register, emerged through the research.

Boosting the Returners talent supply, particularly Women Returners, will help companies to retain and attract a bigger pool of talent. Flexible working hours, remote working, job-sharing, and specific returners programmes were all identified as important options or supports that would ease the process of returning to work.

A "Work-Life Balance/Family Friendly Employer Badge" could be introduced under the banner of "Increasing participation and Recruitment of Talent" as a sign of excellence which recognises companies that promote a positive organisational culture open to Work-Life balance/Family friendly practices by offering flexible working arrangements, training, mentoring and work experience options for staff to combine work with either (i) family and caring needs (ii) disability needs (iii) lifelong learning (iv) transition to retirement.



Barriers to returning to work due to external factors, including a lack of flexibility regarding working hours and practices, childcare availability and affordability, and a lack of suitable part-time opportunities emerged as significant. Additional barriers concerning the individual, including a need to upskill and low self-confidence were also significant. The research finds that a well-qualified and experienced talent pool exists if these identified barriers could be overcome. Findings from the research interviews conducted would suggest that the proposed solutions are multi-layered. The importance of implementing and driving change from many levels, from Government policy and supports, to industry leadership, to workplace culture and practice and all stakeholders was highlighted.

Ten Step Plan for Companies to Attract, Engage, and Retain Returner Talent

The following Ten Step Plan for Companies to attract, engage and retain Returner Talent was developed from the findings of research work undertaken for this report.

1 Promote a positive organisational culture open to Work-Life balance/Flexible Working Practices

2 Understand what Returners are looking for

3 Develop an empathetic recruitment process

4 Create a Work-Life balance/Family Friendly Brand

5 Identify skills gaps that returners can address

6 Offer a range of Flexible Working arrangements

7 Introduce Return-to-Work Programmes

8 Maintain contact with staff on career break

9 Provide "onboarding" support for professionals

10 Review how well policies are working

Recommendations to boost the Supply of Women Returners Talent to partly address Skills Demand of Medtech, Manufacturing Engineers, Finance roles

The following is a summary of three practical recommendations aimed at boosting the supply of women returners talent to partly address identified skills demand in the West region. These have emerged from the primary research undertaken of the report. Their greater detail and action points are presented in the main report. Each recommendation advises on the stakeholder partners necessary for their successful implementation.

7. Introduce a national “Work Life Balance / Family Friendly Employer Badge” under the banner of “Increasing Participation and Recruitment of Talent”.

The Badge would act as a sign of excellence which companies could apply for and put on their website and promotional material. It would recognise companies that promote a positive organisational culture that is open to Work Life Balance/Family Friendly Practices by offering flexible working arrangements, career advice, training, mentoring and work experience opportunities that enable staff to combine work with either (i) family and caring needs (ii) disability needs (iii) lifelong learning (iv) transition to retirement. SMEs could engage in this process either individually or within in a Network. It is proposed that this initiative would be run as a pilot in the West region with separate categories for different sized companies.

8. Develop a national “Charter Template” and Toolkit for use as a Guide by enterprises to develop or enhance their corporate culture to meet the needs of returners.

The Guide could be used as a road map for enterprises to develop or enhance their corporate culture to adapt to the new world of work requirements of returners. It would help facilitate discussions with Returner talent, particularly women returners on possible changes in their working arrangements. The “Toolkit” could be tailored for use by SMEs. It is proposed that this initiative would be run as a pilot in the West region.

9. Increase measures to support Women Returners talent

Enterprises will benefit from Return to Work Programmes for Women Returner Talent. Companies can promote remote working through use of technology with flexibility for employees to work from home and/or from a hub. State support such as through tax incentives, vouchers, grants etc. would allow companies to invest in the steps necessary to meet the new demands of working lives. The provision of career advice, training and employability supports for potential Returners not on the Live Register would help increase participation.

Chapter 1

Background and Context

1.1 Aim of Study

The aim of this study is to support job growth in the West region (Galway, Mayo and Roscommon) through practical proposals to address key skills gaps within the Medtech sector and for Finance and Manufacturing Engineers roles. This includes how boosting the skill pipeline of Returner talent, particularly Women Returners, can partly meet such skills gaps. The study has been undertaken by Galway Executive Skillnet and is funded through Skillnet Ireland. It has benefited from the valuable insights from a wide range of companies, individuals and key stakeholders in the West region. The findings of the study can help inform and influence national and regional skills development policy.

Rationale for the Study

Skills shortages were highlighted in the West region within the Medtech sector and for Manufacturing Engineers and Finance roles. There are 27,600 people employed in these roles in the West region. This study proposes practical actions to address these skills needs including through workforce upskilling, improved skills utilisation, and the supply of returner talent, particularly women returners. The research is aligned with national policy, where the National Skills Strategy 2025 and the Action Plan for Jobs 2018 highlight that the ready availability of talent in high-end, fast growth sectors is key to economic success.

Objectives of the Study

- a) To assess the nature and scale of any skills deficits in the Medtech sector and for Finance and Manufacturing Engineers roles in the West region, with a specific focus on the needs of SMEs.
To consider the reasons for any such key skills deficits and how they can be addressed including through:
 - Continual Professional Development of employees through upskilling and reskilling.
 - Improved alignment of the relevant Higher Education and Training supply.
 - Attraction of Medtech, Finance and Engineer talent to the West region.
 - The potential supply of Returner Talent (particularly Women Returners).
- b) To identify any barriers to entry for Returner talent (particularly Women Returners) including any due to regionality and how they can be addressed, including by the introduction of family friendly practices, to partly meet skill needs within Medtech, Finance and Manufacturing Engineers roles in the West region,

1.2 Broad Policy Context

The study is well aligned with several regional and national policies which provide the background context to this research. The findings and recommendations of this study contribute towards their aims.

The *Regional Enterprise Plan West to 2020*, builds on the success of the *West Regional Action Plan for Jobs (2015–2017)*. The plan aims to achieve a connected region that capitalises on its strengths, ensuring growth in key sectors is underpinned by the continued supply of skilled workers including aligning training provision to local current and future skills needs.

The West Regional Skills Forum, a key stakeholder for this study, is part of a network of nine Regional Skills Fora created as part of the *Government's National Skills Strategy 2025*. These provide an opportunity for employers and education and training system to work together to meet the skills demand of their regions.

The *Pathways to Work Strategy 2016–2020* aims to optimise outcomes for unemployed jobseekers, long-term unemployed, and gradually expand access to activation services for other non-employed people.

The *National Skills Strategy 2025* highlights the challenge and opportunity of increasing labour market activity among the inactive population, including Women Returners to access an underutilised supply of skills.

Enterprise 2025 renewed aims to embed resilience in enterprises, contributing to strong economic performance over the long term, through several key policy priorities. These include an increased emphasis on developing Irish owned enterprises – enhancing productivity and delivering quality jobs and realising the full potential of regions that are attractive for business investment and for people to live and work.

Future Jobs Ireland 2019 leverages a “whole of Government” approach to ensure all policy levers relevant to job creation, increasing labour force participation; talent development; enterprise growth; innovation and competitiveness, and transition to a low carbon economy meet Ireland’s enterprise and economic needs.

Skillnet Ireland is at the forefront of workforce learning. Building on the progress made under their Strategy 2016–2019, an open consultation is currently underway for the Skillnet Ireland Statement of Strategy 2020–2024 under three main themes. These are workforce development, workforce innovation and workforce planning. The objectives of this report are well aligned to these strategic themes.

1.3 Methodology of Study

This study adopts an action-based research approach which built up learning in an integrated way:

- a) A West region skills consultation workshop was held with 40 companies and relevant stakeholders from Medtech, Manufacturing and Finance to discuss current and anticipated skills gaps/shortages, reasons for these, and proposals to address them. Also, to gain insights into the barriers/challenges experienced by potential returners to work, and to elicit views on how to overcome these.
- b) A follow-up online skills survey was undertaken with 15 companies invited to the Workshop.
- c) An online survey completed by 80 potential and recent Returners to Work following a career break was undertaken to elicit information on the barriers experienced in relation to returning to work and proposals that might address them. Interviews were also held with a number of survey respondents.
- d) A focus group discussion with potential returners was held in Galway to gain more in-depth insights.
- e) Key stakeholders insights were gained through discussions at a regional and national level.
- f) An extensive review was undertaken of relevant higher education, FET and professional body skills provision in the West region.
- g) An up-to-date analysis was undertaken of employment trend data on Medtech, Manufacturing Engineer and Finance Roles in the West region and on several Returner to Work practices.

The Project Advisory Group membership to oversee the study research process is outlined in Appendix 1.

1.4 Report Outline

Two main integrated themes are presented in the report. These are:

Theme 1 : Addressing Skills demand Medtech, Manufacturing Engineers and Finance Roles in the West Region.

This theme assesses the nature and scale of skills deficits within Medtech, Manufacturing Engineers and Finance roles. It considers the reasons for skills deficits and how they can be addressed including through upskilling, reskilling, education and training provision and an increased supply of women returner talent.

Theme 2: How to boost the supply of Women Returner talent to partly address Skills demand within Medtech, Manufacturing Engineers and Finance roles West Region.

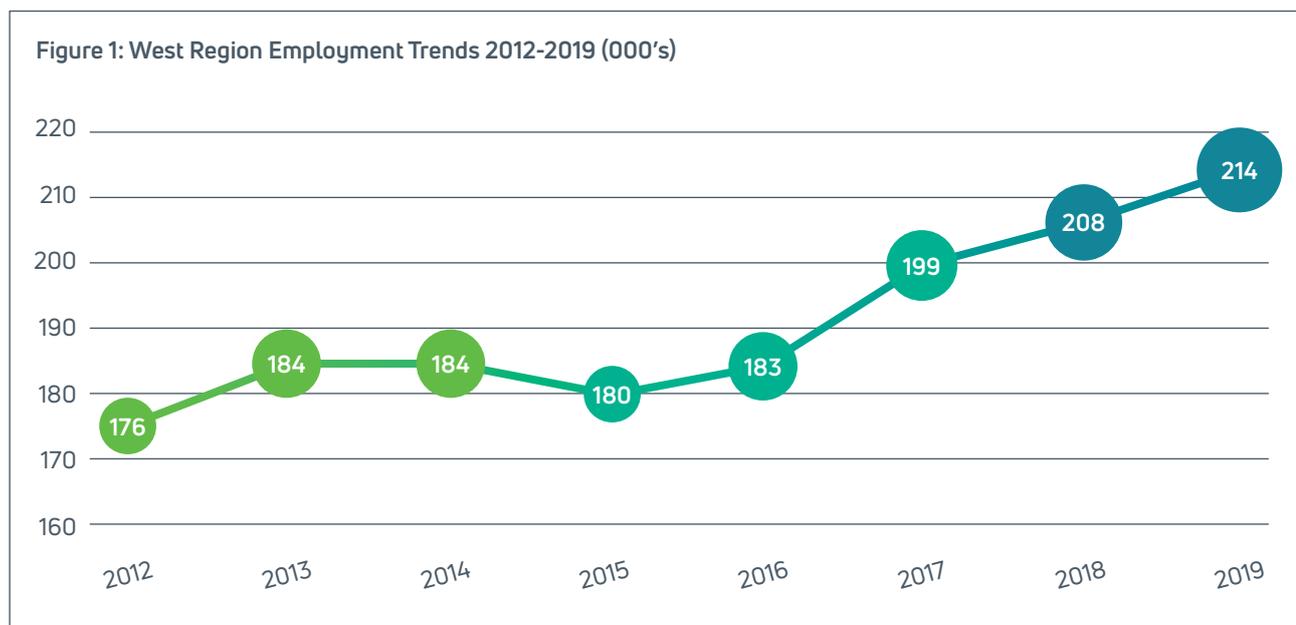
This theme identifies barriers/ challenges to entry for Returner talent (particularly Women Returners) including any due to regionality and how they can be addressed to support re-entry to the workforce.

Chapter 2

Theme 1: Skills Demand in Medtech, Manufacturing Engineers, Finance roles in the West Region

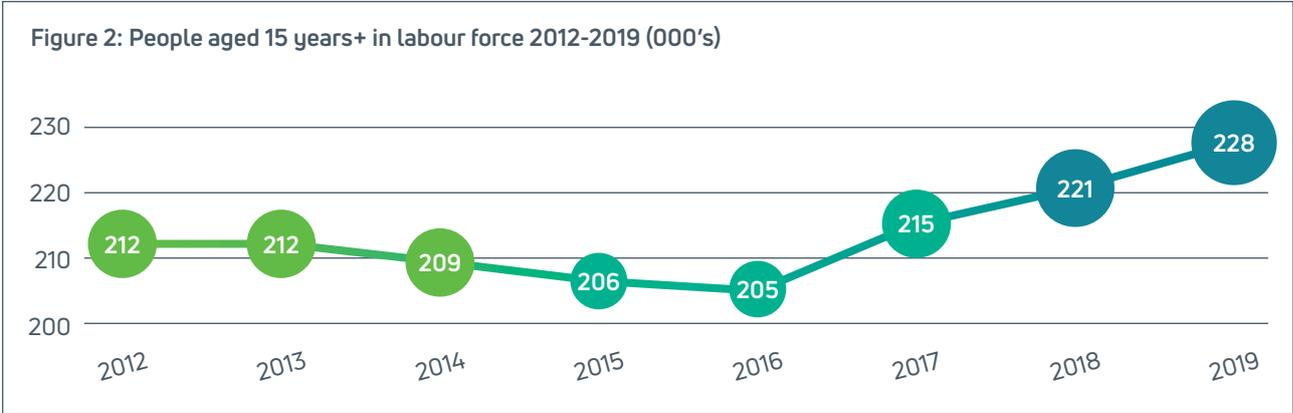
2.1 West Region Labour Market Trends 2012-2019

Between 2012-2019, employment in the region grew from 175,400 to 213,400 -by 38,000. This 22% increase compares to 24% for the State. Male employment grew by 21,700, a 22% increase, while female employment grew by 16,300 – by 20%. The higher increase for males is due to construction employment growth which has mainly benefited males. The West region represents 9.3% of national employment.



Source: CSO Labour Force Survey, Q2 2019, StatBank Ireland.

Between 2012-2019 unemployment in the West region fell from 36,500 to 14,300, a fall of 22,200 (-61%) resulting in the unemployment rate decreasing from 17.3% to 6.3% (compared to 5.4% nationally). The Region's Labour Force grew from 212,000 to 227,700 – an increase of 15,700 (by 7.4%) – with much of this growth taking place between 2016-2019. The West region Participation rate fell from 60% in 2012 to 58.2% in 2016 and then increased to 61.6% in 2019 (compared to 62.1% nationally - and 66.2% in the Dublin region).



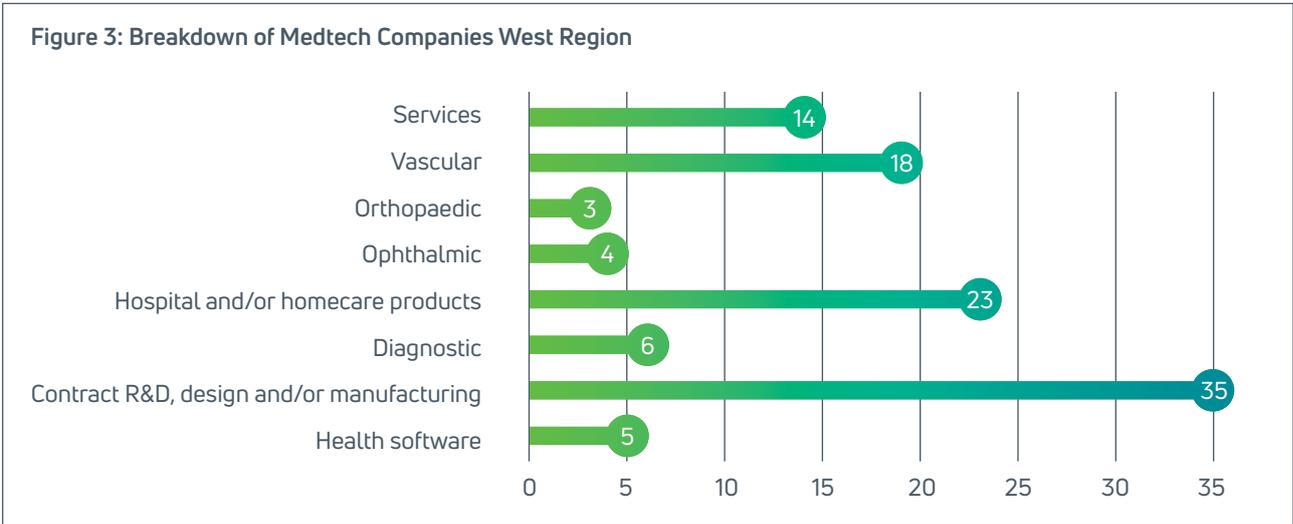
Source: CSO Labour Force Survey, Q2 2019, StatBank Ireland.

There are 23,274 enterprises under 10 people in size, comprising 35% of employment, 1,400 between 10-50 in size with 25% of employment, 258 companies between 50-249 with 23% of employment and 30 companies over 250 people with 17% of employment (mainly in Medtech, Biopharma and ICT activities).

2.2 Medtech Sector Skills Demand West Region

Medtech Skills Profile West region

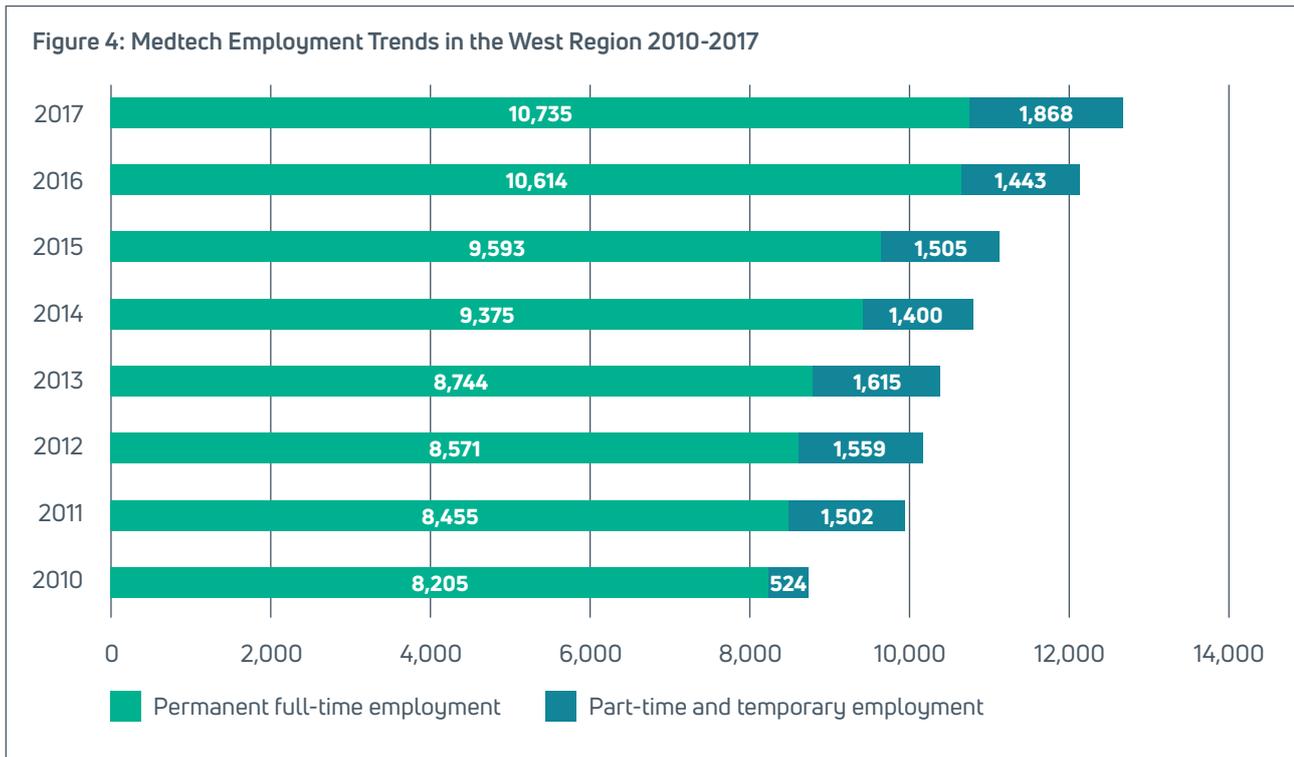
Ireland is a leading location for Medical Technology in Europe. The West region accounts for around 40% of the country's Medtech Sector employment. There are 108 Medtech companies in the region. Their activities are broken down into several categories in Figure 3.



Source: Irish Medtech Association 2016.

Medtech Sector Employment Profile West Region

Figure 4 presents Medtech employment trends in the West region over the period 2010-2017 broken down by permanent full-time employment and part-time/temporary employment in companies under the remit of IDA Ireland, Enterprise Ireland and Údarás na Gaeltachta. The data is derived from the 2017 Annual Employment Survey undertaken by the Department of Business, Enterprise and Innovation. As can be seen employment increased from 8,729 in 2010 to 12,603 in 2017 – representing a 44% increase over that period.



Source: DBEI 2017 Annual Employment Survey.

The West region Medtech cluster comprises several large companies such as Medtronic, Boston Scientific, Merit Medical and Creganna Medical in Galway. Other companies in Galway include Crospon, Zimmer, and Aerogen. Mayo has several large Medtech companies with manufacturing operations, including Hollister Ireland. There are several innovative start-up SMEs in the region, such as Aurigen Medical, WhiteSwell, Neurent Medical, BlueDrop Medical, AeroSurgical, EnteraSense, Signum Surgical, which have their own specific skills challenges that need to be met. In addition, recent acquisitions of local companies (J&J acquisition of Neuravi, BTG of Novate) has led to an evolution of their scope of activities.

Medtech Sector Occupational Profile

An indicative breakdown of Medtech occupational groups is outlined in Table 1. As can be seen, 55% of the workforce are engaged in Operations roles, followed by 8% Engineers, 8% Quality with 3% in both Research and Development and Supply

Table 1: Indicative Breakdown of Medtech Occupational Groups

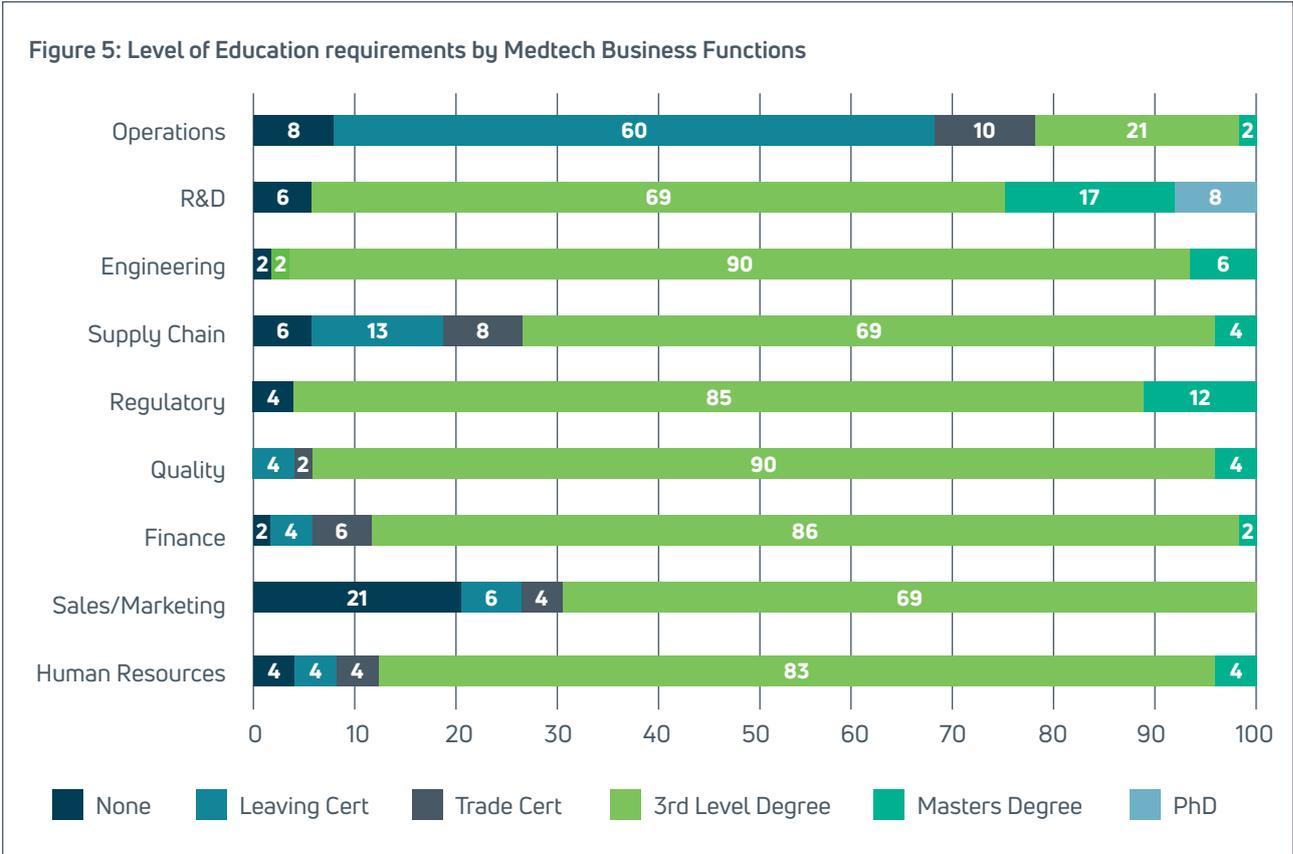
Medtech Occupation Groups	Indicative % of Workforce
Operations	55%
Engineers	8%
Research & Development	3%
Supply Chain/Planning	3%
Regulatory	1%
Quality	8%
Finance/Procurement	2%
Sales/Marketing	1%
Human Resources	1%
Data Analytics	< 1%
Scientists	1%

Source: Irish Medical Association Skills Needs Assessment Survey, 2017.

Chain/Planning occupational roles.

Medtech Sector Educational Requirements

Two-thirds of those engaged within the Operations function require Leaving Cert education with 10% requiring Trade Certification. A third-level degree is required for the majority of roles in other business function areas.



Source: Irish Medical Association Skills Needs Assessment Survey, 2017.

Research and Innovation Capability

NUI Galway and the Galway Mayo Institute of Technology (GMIT) provide research collaboration and skilled graduates for the Medtech industry. This includes NUI Galway National Centre for Biomedical Engineering Science; NUI Galway Regenerative Medicine Institute (REMEDI); NUI Galway Network of Excellence for Functional Biomaterials; the Medical & Engineering Technologies Gateway at GMIT and CÚRAM – SFI Centre for Research in Medical Devices, NUI Galway. BioInnovate, supported by Enterprise Ireland focuses on the medical innovation process to create an environment of intrapreneurship and innovation within companies.

Global and Local Challenges for Medtech Sector

The *West Regional Enterprise Plan to 2020* highlights several challenges likely to impact on the Life Sciences sector. These include the digital disruption of existing work practices, the demand for skilled workers, changing skills profile, and the development of the West region's Life Sciences ecosystem through the nurturing of entrepreneurs and start-up companies. There is an ongoing drive to improve productivity and innovation within the Medtech Industry which is characterised by a constant flow of innovations, a high level of R&D and close co-operation with end users. Products typically have a lifecycle of 18-24 months before an improved product becomes available. The industry invests heavily to continuously improve its technologies and come up with breakthrough innovations. Brexit presents a challenge to Irish Medtech companies for access to UK and EU markets where quality, regulatory, customs and financial procedures are often interlinked with the UK.

Medtech Sector Skills Demand Trends

The pace of automation to improve productivity is increasing as the Medtech industry in Ireland shifts towards the production of higher value products. Recent international findings from a survey of 1,400 life science professionals (France, Switzerland, UK, Ireland, Germany, Netherlands) found that 70% believed that part of their current role could be either augmented or replaced by automation within the next five years (robotics, artificial intelligence, sensors, cognitive technologies). The positive news was that 85% considered such automation as an opportunity to achieve more in their role with only 15% seeing it as a threat to their jobs.

Rapid ongoing skills changes requires companies upskilling of employees and collaboration with Third Level Institutes and Further Education and Training to ensure the alignment of CPD programmes and the required number of quality graduates. Technological convergence in medical devices is deepening over time. This is broadening the range of STEM disciplines that are core to the sector, from mechanical engineering, biomedical engineering, materials engineering and medicine, to also include data analytics, biological sciences, and electronic engineering. High-Tech leadership skills capability will help enterprises take advantage of technological opportunities to drive their productivity and business growth. These skills are a combination of .

- Strategic Leadership skills - to lead inter-disciplinary staff, and influence stakeholders across functions.
- Business Savviness - to innovate business and operating models, delivering value to organisations.
- High-tech Savviness - to envision and exploit the innovation opportunities in high-tech trends.
- People Centred Technology Insight - to prepare the workforce for the adoption of new technology.

It is estimated that 1,180 job openings arose in the Medtech sector in the West Region in 2019 (assumes a 5.5% expansion demand rate based upon that over the last 3 years, and a 3% replacement demand rate).

Medtech Sector Skills Supply Trends

Two new industry-led Manufacturing apprenticeship programmes have been developed by the Irish Medtech Association working with Galway Mayo Institute of Technology as the coordinating provider. These are a Manufacturing Engineer Apprenticeship (Bachelor of Engineering L7, three-year programme) and a Manufacturing Technician Apprenticeship (Higher Certificate L6, two-year programme).

The Irish Medtech Skillnet provides training and networking opportunities to the Medtech & Engineering sectors. It offers training across key areas such as lean, additive manufacturing, innovation and regulation as well as strategic sectoral programmes developed for middle and senior management. They are presently working on a competency model and a commercial model for the medical technology sector.

2.2.1 Research on Medtech Sector Skills Demand in the West Region

Primary Research work on Medtech Sector Skills demand in the West region was undertaken through:

- a) A West regional company and stakeholder workshop. The Medtech sector breakout group comprised Medtech and Pharma industry representatives including SMEs and large enterprises as well as relevant stakeholders and consultants with relevant expertise.
- b) A follow-up online survey of companies who were invited to the workshop.
- c) Stakeholder consultations including with Irish Medtech Skillnet.

This section provides feedback on the results of these research elements.

Main Skills Gaps Medtech sector in the West region

Main skills gaps identified are for Senior R&D Engineers, R&D Engineers, Senior Engineer Roles, Project Managers, R&D Technicians, Quality Assurance/ Validation Engineers, Manufacturing Trades (Toolmaking) and for Connected Healthcare. Local competition for available Medtech talent is leading to high turnover levels in some companies. Project management and people management skills were highlighted.

Suggested Reasons for Skills Gaps

- Deficit of numbers choosing engineering and other relevant courses at Higher Education/Second Level.
- Lack of mobility into engineering roles from technician and operative levels.
- Relatively poor perception of Quality/Validation Engineers career pathways.
- Perceived lack of Quality/Validation courses with industry input.
- Poor perceptions about trades/apprenticeships; and pay scales and grades not attractive enough to encourage lengthy careers within manufacturing trades.
- Companies are not retaining/attracting back Medtech talent.

Proposals made to address Medtech Skills Gaps

- Medtech careers to be promoted by Higher Education and enterprise through outreach activities and a clear message communicated to school children about what an engineer does.
- Create internal upskilling programmes to facilitate mobility into engineering roles from technician and operative levels. Improve succession planning for senior engineer roles.
- Develop clear career progression pathways for Quality/Validation Engineer roles.
- Improve perception of apprenticeships among students and parents.
- Companies to engage more with education/training providers in the design and delivery of training. Smaller companies require online and flexible/blended workplace learning options.
- Companies can improve talent attraction and retention practices and boost the supply of Returner Talent by providing flexibility, career breaks and tailored return to work programmes.
- Good Manufacturing Practice training programmes required for production operators.

Medtech Sector Skills Gaps Analysis in the West Region

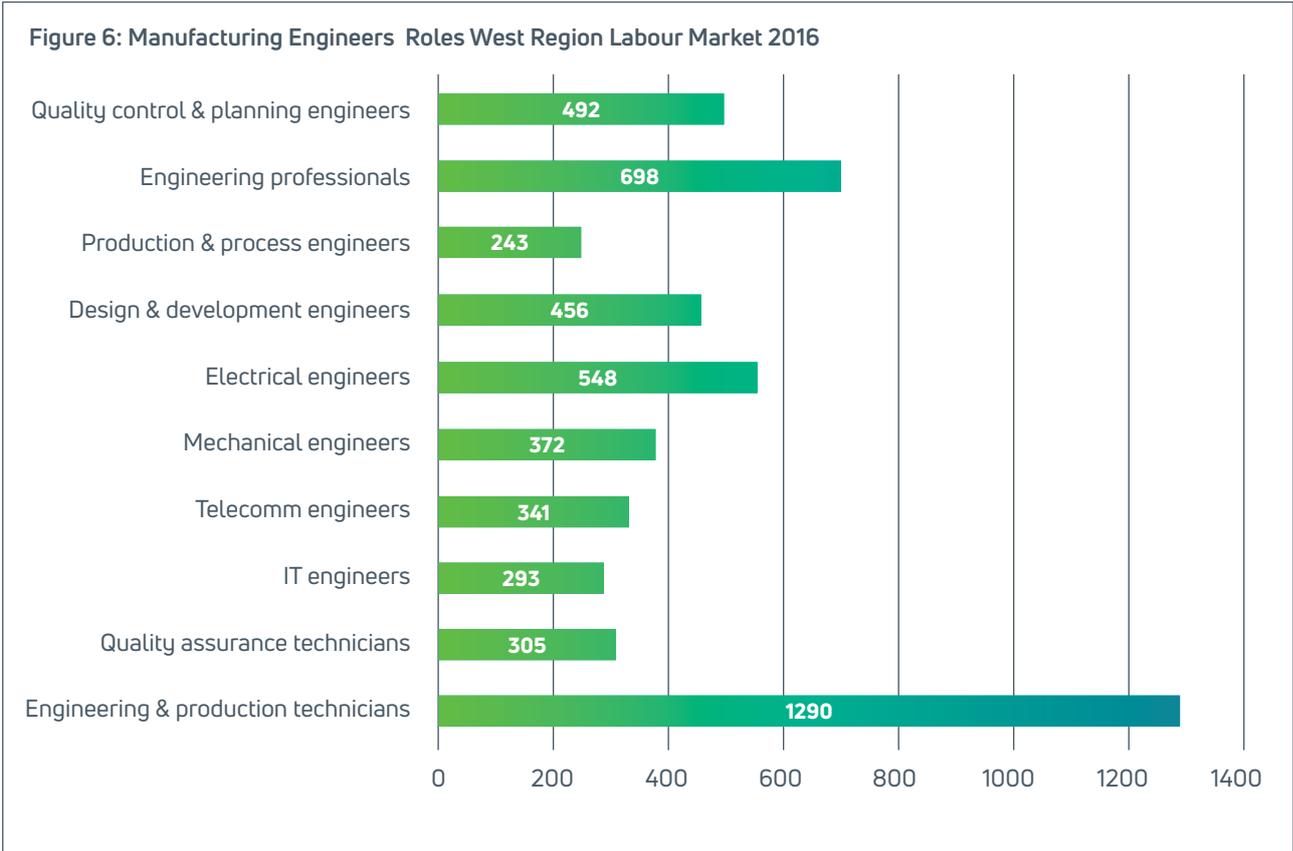
Based upon workshop discussions and the follow-up online survey of medtech companies, the following box outlines company's views on current and anticipated skills gaps, reasons for such gaps and proposed solutions.

Current and future Skills Gaps/roles	Priority	Reasons for Skills Gaps	Proposed Solutions
Senior Engineers and Project Managers – highly experienced staff with the ability to manage and drive projects and teams. (especially for SMEs.) Automation Engineers Manufacturing Engineers R&D Technicians Electronic Engineers/ Technicians Experienced Technical people (important to SMEs)	Senior Engineers	High Industry Demand	Workplace upskilling of Engineers through training and development and succession planning- taking account of Automation and AI. Project Management Skills Training Enterprise to focus more on career progression development and talent retention. Improve engagement between Colleges and Industry on the design and delivery of programmes. Meet demand for flexible/evening blended modular learning for SMEs. Higher Education and Industry to proactively promote Medtech Careers to 2nd level and primary schools' students to "sow the seeds" for the next 10-15 years. Target Returner Talent – enterprises to run tailored Return to Work programmes. Have flexibility in working hours etc. Career breaks, more fluid work culture – practices more importance than policies Attract talent from other countries.
	Project Managers	High turnover of Engineers and QA roles due to local competition	
	Automation Engineers	Insufficient supply (at Higher Education and 2nd levels)	
	Quality Assurance/ Validation Engineers	Lack of succession planning for Senior engineering roles	
		Lack of mobility into engineering roles.	
		Shortage in other technical functions	
Quality Assurance/ Validation Engineers – gaps evident across all areas of quality, especially difficult to source experienced quality personnel.		Perception of Quality /Validation Engineer roles/careers. No clear career pathways.	Promote Awareness of Quality Assurance/ Validation Careers Masters Programmes – introduce focused financial incentives for conversion courses. Specific blended learning Manufacturing Training Programme – certified course to which industry could refer staff.
		Lack of sufficient Quality/ Validation engineering courses –changing as more courses coming on stream.	
Manufacturing Trades (Toolmaking)		Need to change perceptions about trades/ Apprenticeships- should facilitate progression to Quality, Engineering roles)	The new Engineer Apprenticeship Programme. Align apprenticeships to commensurate professional programmes as in Germany. Consider In-house apprenticeships.
		Pay scales and grades	
Production Operators GMP experience			Production Operators Good Manufacturing Practice upskilling

2.3 Manufacturing Engineers Skills Demand in the West Region

Manufacturing Engineers Profile West Region

An estimated 3,930 people were engaged in Manufacturing Engineer roles in the West region in 2018 representing 10% of the national total. (Other Engineer roles in the West region comprise 1,070 Civil Engineers and 2,140 Programme and Software Engineers). 90% of engineers possess third level qualifications. There are also 1,600 Engineering and Production Technicians employed in the West region representing 9% of the national total. Figure 6 provides a breakdown of the types and number of Manufacturing Engineers and Technicians in the West region.



CSO Census 2016.

Demand for Manufacturing Engineers

CEOs and cross-sectoral business leaders in the West region raised regional skill shortages concerns for manufacturing engineers. The demand for manufacturing engineers (mechanical, automation, chemical, electrical, design and quality control), has grown by 7.2% per annum over the last five years compared to 3.1% for national employment. There is a high demand for manufacturing engineers with three to five years' experience, especially in high-tech manufacturing including Medtech, Biotech, Pharmaceutical, Food/Beverages and Machinery/Equipment sectors. Manufacturing Engineers often work between disciplines or as part of multi-disciplinary teams.

The National Skills Bulletin, 2018, has highlighted a national shortage of professional engineers with experience in Pharmaceutical, Medical Devices and Food/Beverage manufacturing. These include Engineers in electrical, chemical, automation, validation, mechanical, production design, process and quality control roles. Demand for Science and Engineer Technicians was mainly for high tech manufacturing roles especially for those with experience.

Engineers Ireland report on the Engineering Profession in Ireland found that 94% of engineering employers consider a shortage of engineers to be a barrier to growth. The report identified that only 12% of engineering professionals are women, with little improvement being made over recent years. Although women remain an untapped resource, few employers were

specifically targeting female talent to overcome skills shortages (only 17% of employers). Increasing the number of women in engineering (and a more diverse workforce generally) remains a challenge.

Engineers Ireland estimate 4,000 job openings nationally for Manufacturing Engineers in 2019 (excludes Civil and Building Engineers). Applying this on a pro rata basis would result in 410 job openings for Manufacturing Engineers in the West Region (equivalent to a 7% expansion rate and 3% replacement rate-authors calculation). Estimates for this report are that 110 job openings for Manufacturing and Production Technicians are anticipated in 2019 (assumes annual 4% expansion demand and 3% replacement demand rates).

Employers nationally are competing internationally for a number of niche engineering roles (primarily process and equipment engineers but also automation, project and mechanical engineers) with at a national level, 446 new Employment Permits being issued in 2017 and 434 in 2016.

Supply of Engineers in Ireland

The number of students commencing third level engineering courses in Ireland has slowly increased over the last five years, at an average 2% per annum. In 2017, the number of NFQ L7 and L8 engineering graduates increased by 1% and for NFQ L9 and L10 by 9%. 16% of engineering graduates are women (13% when ICT engineering is excluded). This percentage is higher for Chemical & Process Engineers (40%) and lower for Mechanical and Manufacturing Engineers (15%).

2.3.1 Research on Manufacturing Engineers Skills Demand West Region

Research work on Manufacturing Engineer Skills demand in the West region was undertaken through:

- a) A West Regional Company and Stakeholder Workshop. The Manufacturing Engineer Group comprised Engineering and Medtech representatives from SMEs and large companies and other stakeholders.
- b) A Follow-up Online Survey of companies who were invited to the Workshop.
- c) Stakeholder Consultations including with Engineers Ireland.

This section provides feedback on the results of these research elements.

Current and Anticipated Skills Gaps

An overall shortage of manufacturing engineers was identified. Specific roles include Automation Engineers who understand the production process, Process Development Engineers, Quality Assurance/Validation Engineers, R&D Engineers/Senior R&D Engineers and Manufacturing Technicians. Technology is moving towards automation solutions and the education and training system needs to embrace this. Companies will find it harder to get people to do repetitive work.

Other critical technical skills needs are R&D Engineering life cycle knowledge to convert current engineers into R&D roles within the Medtech industry, project management, the automation process, artificial intelligence /deep learning, software and system engineering skills, lean manufacturing skills and Aerospace Quality Management Systems AS 9100 training building on the ISO 9001 quality management systems standard. Knowledge of the Product Development Lifecycle and Regulatory Standards were also highlighted.

The importance of soft skills/competences was emphasised to enable people progress upwards in their career. This is the differentiator that marks people out for advancement. Soft skills cited were for strategic thinking relating to business and technology change over the next two to three years, leadership skills, communications, collaboration, entrepreneurship, problem solving, innovation, and people management. Improvements in technical design, statistical processing, tolerance testing and technical report writing skills were suggested.

Suggested Reasons for Skills Gaps

It was cited that the supply of manufacturing engineer talent in the region is not keeping up with the pace of business growth. Companies have outstanding unfilled positions and local competition for Manufacturing Engineer skills is resulting in high turnover levels (one company cited a 17% annual turnover rate). Education programmes may take three to five years to complete and must be kept up to date. There is often a lack of enterprise awareness on what the colleges are now teaching. A view was that "companies are often too busy making product and too busy to look up and outwards". Colleges are aware of

the need to develop key graduate attributes. However, graduates may not be well equipped to work in teams. Report writing skills was another weakness. These important soft skills need to be assessed.

Enterprises need to strengthen efforts to retain engineer talent and give engineers scope to grow. There is a demand for integrated courses that provide the core technical training to upskill an operator to technician level and a technician to engineer level. This will increase the supply of manufacturing engineer talent. Young women particularly are not aware of the wider societal contribution of an engineering career and often perceive them as “hard hat” careers not suitable for them. Much of this is due to the influence of parents and the student’s choice of junior cert subjects. It was mentioned that small rural schools may not have the capacity (including facilities) to introduce female students to engineering careers.

Proposals to address Manufacturing Engineers Skills Gaps in the West Region

These include the need for enhanced collaboration between enterprises and colleges to ensure programmes are aligned to enterprise skills demand. Smaller companies require flexible/evening blended workplace learning. Enterprises need to support the internal upskilling of engineer talent, including developing Operators to Technicians and Technicians to become Manufacturing Engineers. Enterprises should have Training Plans for their staff development and focus on retaining their existing engineer talent.

A demand was identified for R&D development life cycle education for engineers converting to R&D engineer roles and clearer career paths for Quality/Validation Engineers roles. The focus needs to be on developing the internal company and external skills pipeline, including searching abroad for Irish engineers who want to return to Ireland. Numbers on the new engineering apprenticeships need to be increased. It is important to change perceptions with regards to apprenticeships as a career choice compared to the academic route. Unemployed people could be upskilled for the positions available. More jobs could be put into small towns in the Region rather than in Parkmore Galway. There is a need to improve car journey travel to work times in Galway.

Manufacturing Engineers Skills Gaps Analysis West Region

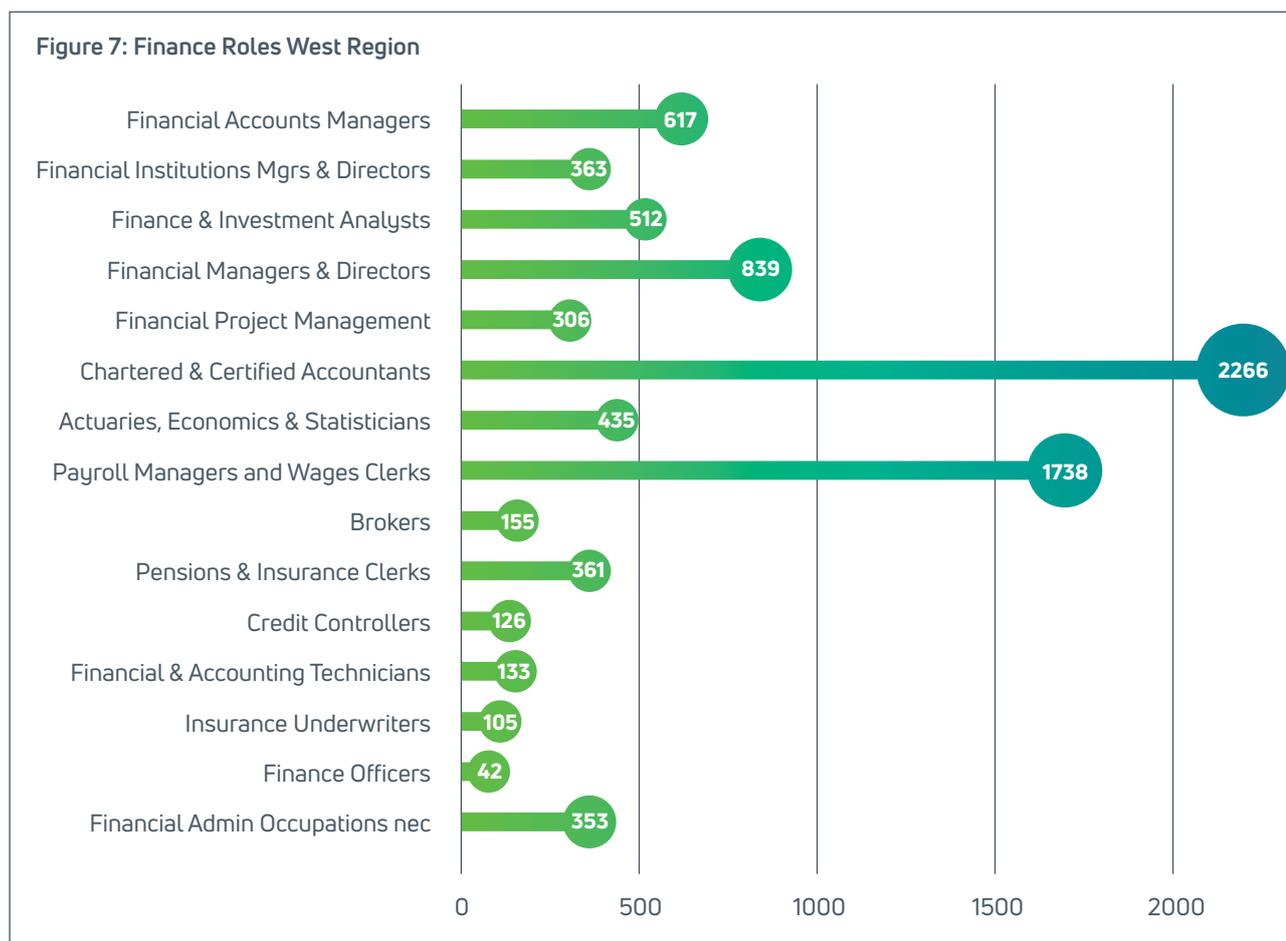
Based upon Workshop discussions and the Follow-Up Online Survey of Companies the following Box outlines companies’ views on current and anticipated skills gaps, reasons for such gaps and proposed solutions.

Current & future Skills Gaps/roles	Priority	Reasons for Skills Gaps	Proposed Solutions
Manufacturing Engineers Automation Engineers who understand the production process Process Development Engineers Quality Assurance/ Validation Engineers R&D Engineers/ Senior R&D Engineers Manufacturing Technicians Technical Skills needs -R&D Engineering Life Cycle Knowledge -Systems Engineering -Software Engineering -Lean Manufacturing -Regulatory Standards -Quality Standards -Knowledge of Product Development Lifecycle Soft Skills Needs -Strategic Thinking -Project Management -Entrepreneurship -Innovation -People Skills	Manufacturing Engineers R&D Engineering Knowledge of Automation Process Artificial Intelligence Deep learning Programmes that match future technology developments Behavioural Competences (Communications, Collaboration, Problem Solving, Teamworking) Project Management People Management Leadership Skills Innovation Skills	Supply of manufacturing engineer talent not keeping pace with business growth. Competition for manufacturing engineer skills locally is leading to high turnover levels. Enterprises need to improve retention and utilisation of their engineer talent. Perceived Gap between 3rd level education and skills needs of the workplace - that Graduates aren’t prepared. Enterprise has a knowledge gap of what Colleges are now teaching. Lack of sufficient technical courses that provide the core training to upskill operators, technicians and engineers. SMEs require more flexible evening / blended training. Only 12% of Engineer professionals are women. Different thinking/lifestyles of Millennials	Focus on both the internal company and external skills talent development pipeline. Improved collaboration between enterprises and Colleges on programme design and delivery. Flexible/blended learning provision for SMEs. Internal Development of Operators to Technicians and Technicians to Engineers. R&D Life Cycle education for engineers converting to R&D Engineer roles. Career pathways for Quality/ Validation Engineer roles. Provide professional apprenticeships. Company Training Plans. Enterprises to focus on retaining their existing engineer talent. Promote engineering careers to young women and parents Look abroad for Irish engineers who want to return to Ireland.

2.4 Finance Roles in the West Region

Finance Roles Profile in the West Region

There were 9,470 people employed in Finance occupations in the West region in 2018 representing 6% of the national total. Figure 7 provides a breakdown of finance roles in the West region. The largest categories are Chartered and Certified Accountants (29% of total), Bookkeepers, payroll managers and wage clerks (22%), and Financial Managers and Directors (11%).



Source: CSO Census 2016

Finance Roles Skills Demand in the West Region

There are 355 enterprises engaged in Financial and Insurance activities in the West region. Demand for financial skills is from companies across a range of sectors as it is a key function. Finance skills shortages were highlighted in the fields of accountancy, auditing and finance departments in medium-large enterprises. This was confirmed in consultations with high-profile local financial skills employers. There is a strong demand for experienced qualified accountants with the ability to direct and manage projects and teams. The *National Skills Bulletin 2018* highlighted national shortages for Accountants and Tax Experts with industry specific experience in legislation, regulation and compliance, Financial Analysts, and Data Analysts.

It is estimated that 900 job openings arose for Finance roles in the West Region in 2019 (from job expansion and replacement demand). This assumes an annual 6.5% expansion demand and 3% replacement demand rates. There will be a high demand for professionals with financial software packages and data analytics skills, while administration roles may continue to be negatively affected by automation.

At the national level 356 new Employment Permits were issued for financial occupations in 2017, including 212 for Accountants and Tax Experts, 70 for Financial Accounts Managers and Directors, 49 for Financial Analysts and Insurance Underwriters, and 25 for Financial Admin occupations.

Challenges for Finance Roles

Potential customs duties, tariffs, VAT, tax, data protection, and audit systems and rules changes are likely to affect finance roles within business which trade with the EU and/or UK in the event of Brexit.

Supply of Accountancy Skills in Ireland

Certified Public Accountants Ireland have introduced a new fast-track system with 12 third level institutions to help meet the demand for new accountancy hires. Under the programme, students can use their accredited internships or work experience towards the mandatory three years of working to qualify. Chartered Accountants Ireland have also announced a new education programme for its students. This includes new specialist elective subjects for final year students to provide the right blend of financial and technology skills and training to lead businesses. There are two training options that a person can take to qualify as a Chartered Accountant. These are the "Training Contract" and the "Flexible route". The key distinction with the "Flexible route" is that the education and experience elements do not have to run concurrently.

2.4.1 Research on Finance Roles Skills Demand West Region

Research work on Finance Roles Skills demand in the West Region was undertaken through:

- a) A West Regional Company and stakeholder Workshop. The Finance breakout group comprised representatives from Accountancy and Financial advisory roles.
- b) A Follow-up Online Survey of companies who were invited to the Workshop.
- c) Stakeholder Consultations including with Chartered Accounts Ireland.

This section provides feedback on the results of these elements of the research work.

Main Skills Gaps Identified

Main skills gaps identified were for Qualified Accountants, Admin people with finance experience, Management Accountants, Business Intelligence, Tax Seniors, Experienced Auditors, Part qualified Accountants, Trainee Risk Consulting/Internal Audit. Many accountants work in business in a leadership position. There is a strong demand for accountants with the ability to direct and manage projects and teams.

There are growing data and digital capability requirements as the finance function increasingly utilises the application of user-friendly software and automation tools. The priority skill gap highlighted was creating a "skills pipeline" of people to become qualified accountants.

Suggested Reasons for Skills Gaps

- Pay at entry level considered relatively low compared to their peers in IT and engineering.
- Turnover levels high among more junior staff. New accountant entrants come in labelled as trainees.
- Finance roles are changing dramatically. Artificial intelligence could take away many admin jobs.
- Perception issue regarding attractiveness of Accountancy careers.
- Outdated perception that the West region may be too small to fulfil people's career ambitions.
- Burn out occurring at end of year tax deadline. Work-Life Balance is not right.

Proposals to Address Finance Roles Skills Gaps

- Promote Accountancy as a rewarding career with long-term prospects.
- Highlight Finance role opportunities in the region.
- Create new career routes for Business Analysts and Risk Managers.
- Improve talent retention strategies and career pathway progression for entry level staff.
- Provide C-suite workplace mentoring and training on effective management and Job performance.
- People like living in Galway - have business grow around them. There are centres of excellence.
- Look at more flexible ways of working including from home and recruiting people at peak times.
- Provide greater access to training courses locally with flexible delivery methodologies.

Financial Roles Skills Gaps Analysis in the West Region

Based upon workshop discussions and a follow-up online survey of finance companies, the box below outlines companies views on the nature and reasons of any skills gaps and their proposals to address them.

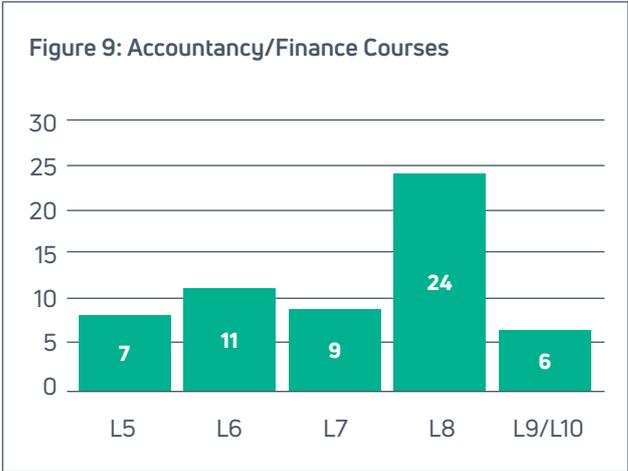
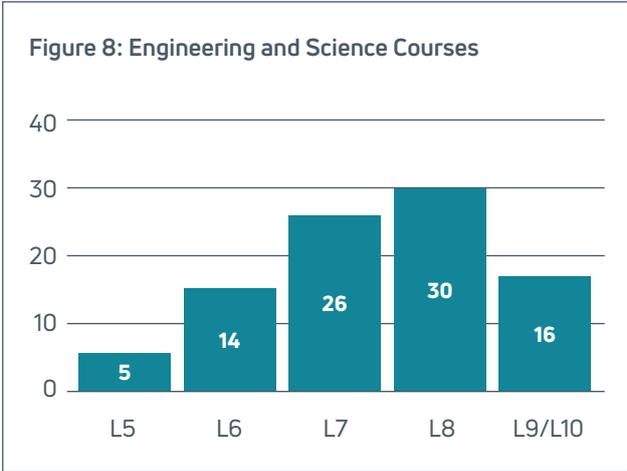
Current and future Skills Gaps/roles	Priority	Reasons for Gaps	Proposed Solutions
<p>Experienced Tax Seniors/ Auditors / Qualified Accountants with the ability to direct and manage projects and teams</p> <p>Qualified Advisors Part-Qualified Accountants Trainee Risk Consulting / Internal Audit</p> <p>Qualified ACA/ACCA</p> <p>Mgt Accountants / Operations Analysis</p> <p>Data Analytics/Business Analysts/Intelligence</p> <p>Time/Job Management</p> <p>SQL/IT Skills</p> <p>Soft Skills including Communications (written and verbal) Problem Solving and Time Management)</p>	High – due to the demand for people in leadership positions	<p>Need to boost skills pipeline of people to become a qualified Accountant</p> <p>Competition for Accountants from Dublin Region</p> <p>Artificial Intelligence taking over more repetitive tasks. Data analytics and digital capability needs arising from application of user-friendly software/ automation tools.</p> <p>Continuing requirement for understanding of basic accounting principles.</p> <p>High turnover levels among more junior staff. Pay at Entry Level relatively low compared to peers in IT and Engineering.</p> <p>New accountants come in labelled as trainees. Other careers offer a faster route to average salary levels.</p>	<p>Promote Financial Roles Vacancies and Market Accountancy/Finance as a career of choice with long-term prospects.</p> <p>Provide C-suite workplace mentoring and training on effective management and Job performance.</p> <p>Access to CPD Training Courses locally with flexible delivery methodologies.</p> <p>Talent retention strategies and career pathway opportunities for entry level staff.</p> <p>Accounting Technician course for the initial technical training which is available in Galway.</p> <p>Provide SQL/advanced IT related training.</p>
<p>Accounting Technicians</p> <p>Bookkeepers, Accounts Assistants. These positions are important although easier to fill than those above.</p> <p>Admin people with finance experience</p> <p>Finance & Foreign Languages / Intro to Accountancy / Shared Services Centres</p>	Medium (still essential roles)	<p>Work-Life Balance not right– roles too demanding or inflexible especially for young parents in their career prime.</p> <p>Burn-Out at end of year tax deadline - 50-60-hour weeks are incompatible with family life/parenting responsibilities.</p> <p>Need to address perception that West region may not fulfil career ambitions. (reality is that this is not the case - witness the presence of all the major accountancy practices and Galway Financial Services Centre).</p>	<p>Create new career routes for Business Analysts and Risk Managers.</p> <p>Flexible and Family Friendly Working arrangements e.g. offering part-time hours; career breaks; working from home; and recruiting people at peak times.</p> <p>Promote the West region as a Centre of Excellence, the “Birthplace of ambition”.</p>

2.5 Supply of Relevant Talent in West Region

2.5.1 Education and Training Graduate Supply West Region

This section outlines education and training provision relevant to the skill needs of Medtech, Manufacturing Engineers and Finance roles in the West region. These represent a valuable supply of talent to address skill needs identified in this study. The 148 NFQ L5 to L9 courses listed in Appendix 2 include Springboard 2019 and Apprenticeships programmes. NUI Galway, GMIT, Athlone IT and Sligo IT offer a range of programmes from NFQ L6 to Level 10. Galway and Roscommon ETB and Mayo Sligo Leitrim ETB offer programmes up to NFQ L6. There is a flow of PhD postgraduate talent from several Medtech, Engineering and Technology Research Centres located in the Region. There is also a valuable supply of Continuing Professional Development & Skillnet Networks training courses and initiatives run in the Region.

Graduates from these programmes may take up employment within the Region as well as elsewhere. Graduates from outside, both domestic and international, may also take up employment in the West region. Factors influencing the direction of this flow are the attractiveness of the West Region quality of life and its jobs, skills and innovation ecosystem. The significant MedTech Cluster in the West Region draws upon the engineering, science and business graduate supply pool nationally.



There are several examples of flexible online and blended courses for people at work, with scope to further expand this provision for small companies. NUI Galway Online learning provides students with a range of online and blended-learning courses in several subject areas. Several of these are relevant to this study, including the MSc in Medical Technologies Regulatory Affairs, Part-time L9 programme delivered by NUI Galway and IT Sligo. The NUI Galway Centre for Adult Learning and Professional Development provides opportunities for people at work to upskill in their profession. Employees can take a selection of industry focussed modules on a standalone basis. Modules of interest for this study include automation, manufacturing technology, applied innovation, quality management and operations engineering.

NUI Galway and GMIT run several part-time **Springboard 2019 programmes** which are open to employed and unemployed people. 90% of the course fee is funded for employed participants on NFQ level 7-9 courses,

2.5.2 Continuing Professional Development & Skillnet Networks Provision

Skillnet Training Networks

The following Skillnet Training Networks are active in the Western region and provide learning solutions for enterprises in the Medtech, Engineering and Finance sectors. They are all funded by Skillnet Ireland, the national agency dedicated to the promotion and facilitation of workforce learning in Ireland.

Galway Executive Skillnet is a multi-sector learning network funded by Skillnet Ireland which provides subsidised training for over 300 local businesses. It supports regional growth and workforce development through the provision of quality, industry-led training.

The Irish Medtech Skillnet, funded by Skillnet Ireland, provides training and networking opportunities to the Medtech & Engineering sectors. It offers training across key areas such as lean, additive manufacturing, innovation and regulation and strategic sectoral programmes. The network also provides opportunities to assist with company specific training events. It has developed 14 specialised programmes for the sector from NFQ Level 5 to Masters.

CPA Ireland Skillnet which is funded by Skillnet Ireland, provides courses on a range of topics including tax, career change, forensic accounting and employment law. It is promoted by the Institute of Certified Public Accountants in Ireland. Membership is open to enterprises in the accounting and financial services sector.

ICBE Advanced Productivity Skillnet aim is to raise the output of workers in Ireland, through various Learning, Development and Knowledge Sharing initiatives with a focus on advanced methodologies and technology.

Other relevant CPD Bodies and supports in the West Region are as follows.

Engineering Ireland has 25,000 members from all discipline of engineering. Their “CPD Employer Standard” comprises a guide that engineering companies can use to self-assess their current CPD Policy and Strategy. Engineers Ireland “Future Professionals Series” offers advancement to graduates through the CPD Certificate in Professional Engineering and CPD Diploma in Professional Engineering. Both are accredited NFQ Level 9.

Chartered Accountants Ireland has 26,600 members. There are two main routes into Chartered Accountancy. The traditional Training Contract route is followed by 90% of students. The Flexible contract route is followed by 10% of students who typically are more mature students working in business. Chartered Accountants Ireland run CPD programmes mainly in Dublin and Belfast. CPD Diploma and Certificate programmes are delivered through distance or classroom learning in Dublin. They can provide in-house training.

Certified Public Accountants Ireland has 5,000 members and students. They recently introduced a fast-track system for accountancy graduates to help meet the demand for new hires. Under the scheme, students can use periods of internships or work experience towards the mandatory three years of working to qualify. CPA also offers a range of short CPD courses.

Accounting Technicians Ireland has 10,000 members and students and is the awarding body for the Accounting Technician L6 qualification. This award offers a new practical pathway to Chartered Accountancy and is also available in the West Region. The female participation rate of 60% in the new National Accounting Technician Apprenticeship Programme is the highest for any apprenticeship programme.

BioInnovate based in NUI Galway offers the MSc (BioInnovate) fulltime 10-month programme on a national basis. It focuses on the medical devices innovation process to create an environment of intrapreneurship and innovation within companies. Training is delivered by a combination of fellows, academics and industry experts. BioInnovate can tailor modules to a company’s requirements and provide bespoke interactive training seminars. Enterprise Ireland has provided financial and professional support to helping BioInnovate grow.

SOLAS Skills to Advance Scheme launched in 2018 offers upskilling and reskilling opportunities to employees in lower level jobs. It can assist SMEs in identifying their training needs and providing training to workers. Employers contribute to funding in the form of financial and in-kind contributions. ETBs provide three access routes for employees to FET provision:

- Direct employee access in ETBs by enrolling for relevant development options.
- Access via enterprise engagement with an ETB.
- Regional initiatives as a result of an identified regional skills development initiative.

GRETB Adult Guidance and Information Services provides supports to individuals considering education and training who are unemployed, in receipt of a social welfare payment, or have low formal education.

Enterprise Ireland As part of the Skills for Growth project, Enterprise Ireland is providing tailored workshops termed Spotlight on Skills delivered by IMI to client companies. The focus of the workshops is to enable companies to identify and articulate their skills for their company development. The output from these workshops facilitate company engagement with the Regional Skills Fora. Enterprise Ireland have run two Spotlight on Skills Workshops and several Brexit Advisory Clinics in the West Region.

2.6 Conclusions

An anticipated 2,500 new jobs openings arose in 2019 from expansion and replacement demand for Medtech, and Manufacturing engineers and Finance roles in the West region as follows:

- Medtech Sector - 1,180 job openings (half of which for Production Operation roles).
- Manufacturing Engineers - 410 job openings (around 100 of these openings will be in Medtech).
- Manufacturing, Science and Production Technicians - 110 job openings.
- Financial Roles – 900 job openings, with a high demand for experienced accountants to manage projects and teams, and for financial software skills, and data analytic skills.

These new job openings provide opportunities for people with the right skills and aptitude including new graduates, women returner talent, underemployed and unemployed people.

Skills gaps/shortages in the West region for Medtech, Manufacturing engineers and Finance roles are a result of strong business and employment growth, a tightening labour market and rapidly changing skills profiles requirements due to digitisation, new software and automation tools, artificial intelligence, and need for collaborative working. Convergent technologies are increasing the demand for cross-disciplinary knowledge and skillsets within Medtech and Manufacturing engineering roles. Soft skills development is important.

Enterprises will benefit by improving their talent attraction and retention practices and investing in the upskilling and reskilling of staff. There is scope to strengthen engagement between enterprise and Third Level and FET providers to ensure the alignment of CPD programmes and the supply of quality graduates. SMEs require more flexible online and blended education and training provision which managers and staff can take at their own pace. There is a need to raise awareness of rewarding career paths within Medtech, Manufacturing Engineers and Finance roles.

The graduate output of Higher Education and FET provision in the West region relevant to MedTech, Manufacturing Engineers and Finance roles is a valuable source of talent. Several of the new industry-led apprenticeships are relevant to meeting identified skills needs in this study. The low uptake of apprenticeship places by females for Manufacturing Engineers, Industrial Electrical Engineering and Toolmaking Apprenticeships is a concern. The Manufacturing Engineering and Technicians Apprenticeships have been developed by the Irish Medtech Association working with GMIT.

Skilled workers are mobile and are choosing where they want to live, and work based upon factors including the quality of life and opportunities for career progression. Overall, the West region scores high on these measures.

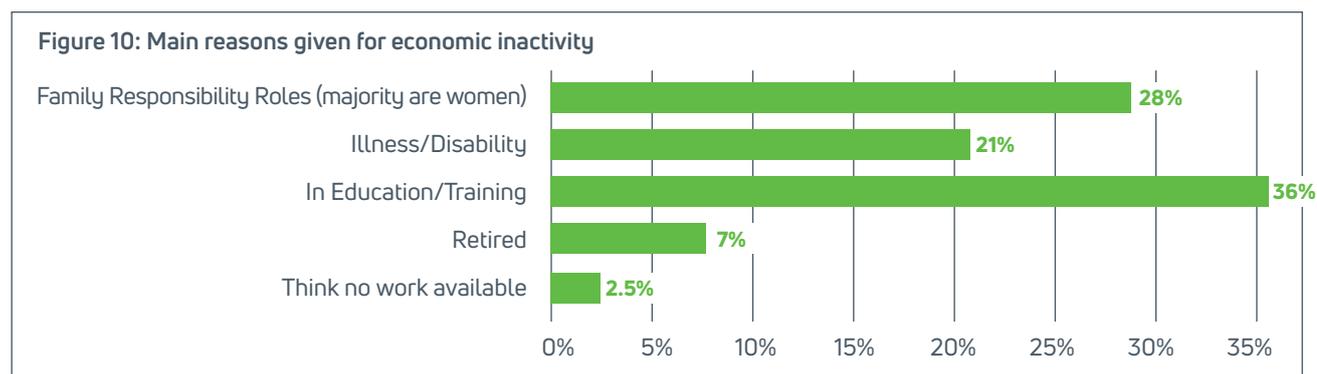
Chapter 3

Theme 2: Boosting Supply of Women Returner Talent to partly address Skills Demand

3.1 Domestic and International Research

A main theme of this study is to examine how the supply of Returner talent – particularly Women Returners can be boosted to partly meet skills demand within Medtech, Manufacturing Engineers and Finance roles in the West region. The National Skills Strategy 2025 highlights the challenge and opportunity of supporting labour market activity among the inactive population to access an underutilised supply of skills. The Pathways to Work Strategy 2016–2020 aims to expand activation services to other non-employed people of working-age.

The Economic Inactivity rate for Ireland 2018 was 27% (comprising 848,000 people). The rate for women at 33% is higher than for men at 21%. Main reasons given for economic inactivity are:



Within this Economic Inactive cohort there is a Potential Additional Labour Force (PALF) of 120,000, (65,000 are female and 55,000 are male). These are defined as having a stronger attachment to the labour market than other economic inactive people. In employment there are 116,000 part-time underemployed people (people working part-time and willing and available to work additional hours).

For the purpose of this study, it is estimated on a pro rata basis from numbers of the PALF nationally and excluding students, that there is a potential 8,400 Returners supply in the West region (4,400 are females). It is also estimated that there are 10,600 part-time underemployed people (6,200 females) in the region.

In 2018, the employment rate for women aged 15-64 years in Ireland was 63.5% compared to over 70% in Sweden, Denmark, Germany, Netherlands and UK. In 2016, the employment rate for women in Ireland varied from 86% for those with no

children to just 60% for women whose youngest child between 4 and 5 years of age. The employment rate for female lone parents whose youngest child was aged three or under was 46%.

The transition back to work after maternity leave is a major stage in a woman's career. A report by DCU Business School explores the return to work following maternity leave from the perspectives of mothers, managers and the organisation. A positive factor in determining how women experience the transition back into work after maternity leave is the perspective management have that the maternity leave is seen as a brief interlude in the individual's long-term career. The DCU research identified several best practices.

- Establish view of maternity leave as a brief interlude, not a major disruption.
- Line Manager Training is fundamental to shaping positive return.
- Partner women returning with more senior role models.
- Flexible and agile practices are for all — arrange inclusive timing of meetings.
- Phased Return — Hold "Keeping in touch" days near to the return date.

Recently published research based on a five-year international study on how women manage careers and caregiving highlights the significance of cultural expectations surrounding combining work and caregiving. The research carried out in Sweden, Germany, Italy and USA, concludes that policies alone cannot eliminate the work-family conflict facing mothers. The importance of a reassessment of cultural beliefs about gender equality, employment, and motherhood is one of the main conclusions of the research.

The SOLAS report "Women on Home Duties" May 2019, highlighted the need for Government Departments to identify ways to encourage women to return to work and to provide the necessary supports. It emphasised the need for further investigation to determine the issues preventing or discouraging a return to the workforce.

3.2 Primary Research undertaken on Returner Talent in the West Region

Primary Research on the supply of returner talent, particularly Women Returners was undertaken through:

- The West Regional Company and Stakeholder Workshop held in October 2018. Industry representatives and other stakeholders were divided randomly into three smaller non-sector specific groups and tasked with considering Returners to Work as a possible pipeline of talent to meet Medtech, Manufacturing Engineers and Financial roles demand in the West Region.
- Insights into the barriers experienced by potential returners to work (anticipated to be mainly female) in Medtech and for Finance and Manufacturing Engineers roles in the region were gained through:
 - An Online Returners to Work survey.
 - A Focus Group discussion with potential returners to work.
 - Interviews with potential Returners to Work.
- Stakeholder Consultations including with Galway Roscommon ETB and Chartered Accountants Ireland.

This section provides feedback on the results of these elements of this research work.

Main Elements of the Research

The following elements of the research on returner talent include quantitative as well as qualitative methods and drew on the experience of many key stakeholders. The research elements have highlighted consistent findings. While several cohorts of potential returner talent were identified, including those returning from career breaks due to redundancy, illness/disability, education, living overseas and transitioning to retirement, the most evident cohort were those who had taken extended maternity leave and career breaks in order to care for children. The decision to leave employment was often linked to a conflict between family responsibilities and workplace culture and practices, including lack of flexibility, alongside issues surrounding childcare costs and availability.

Online Returners to Work Survey in the West Region

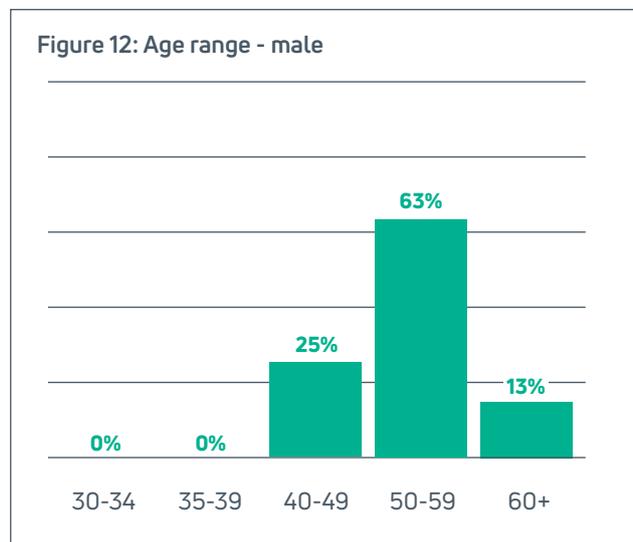
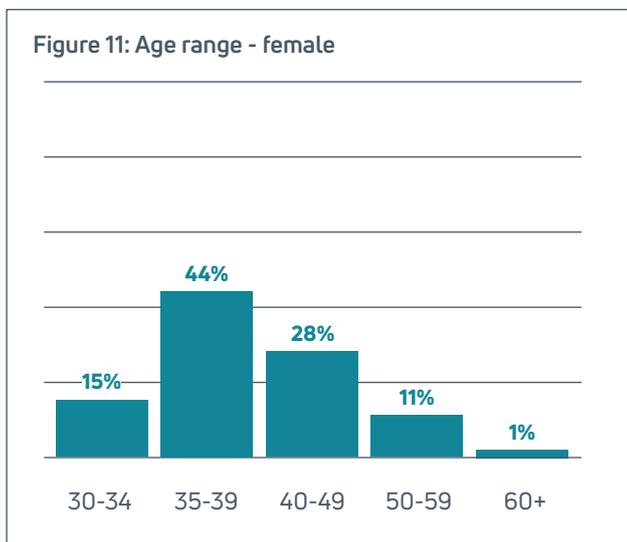
An online survey targeting potential or recent returners to work following a career break was circulated via email and social media to alumni groups, industry contacts and stakeholder contacts. 81 responses were collected over a two-week period in March 2019. Interviews were also conducted with three survey respondents recruited via the survey. The information gained from these interviews is integrated into the summary of the survey results below.

Key Findings

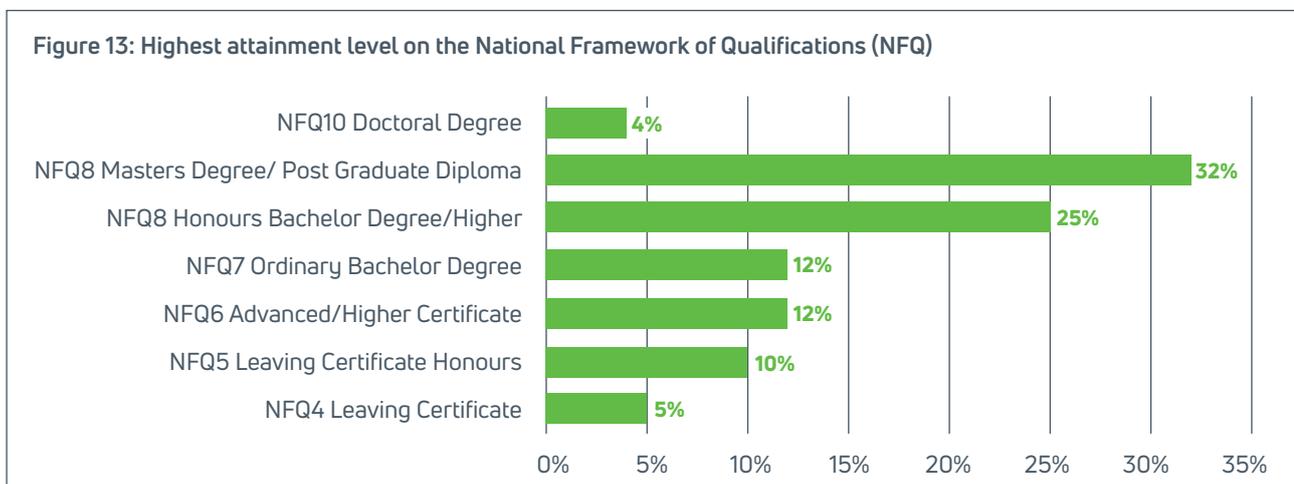
- A well-qualified and experienced potential talent pool exists if barriers could be overcome.
- Caring for children was the primary reason for taking a career break although the decision to take a career break was influenced by a conflict between family responsibilities and workplace culture and practices.
- Primary barriers to returning to work were presented by childcare (availability/flexibility and costs), a lack of flexible working hours and issues surrounding part-time roles (lack of roles and low level of pay). Other barriers such as a need for career guidance, a need to upskill and low confidence were also significant.
- Solutions in the form of flexible working hours, job-share options, remote working options and specific returner programmes were of highest importance to female respondents.
- The research suggests that proposed solutions are multi-layered, with action and commitment required from policy makers, enterprise leadership and all stakeholders.

Demographics

84% of respondents lived in Galway city (35%) and county (49%) while the remainder of respondents were from the other West region counties Mayo (6%), Roscommon (1%) as well as Limerick and Westmeath (9% combined). Respondents, as anticipated, were predominantly female (90%). Men were in the over 40 age range only, while 60% of women were aged 30-39.

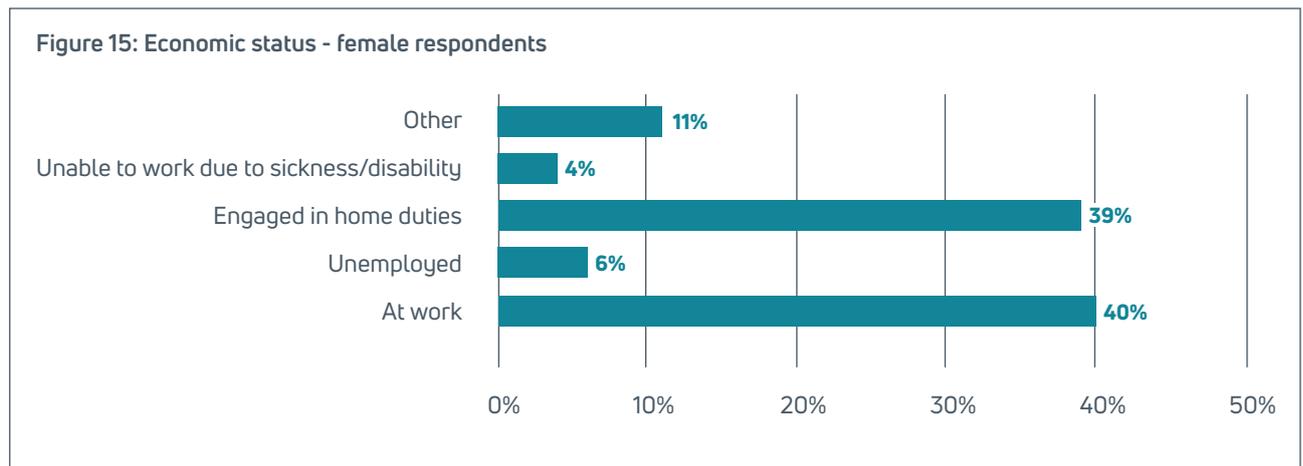
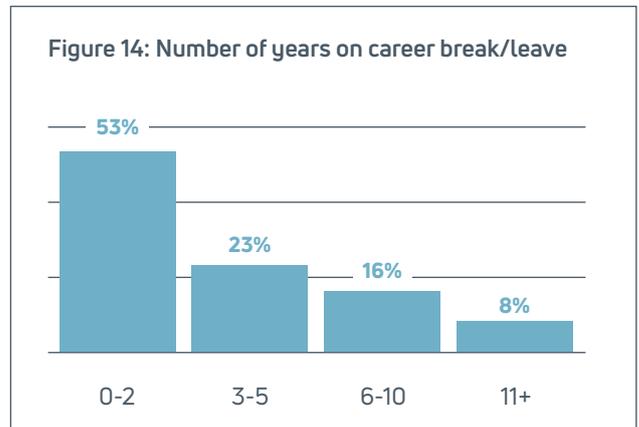


Respondents held a variety of qualifications ranging from Leaving Certificate to Doctoral Degree. A range of disciplines were represented including engineering, science, accountancy, business, law and human resources. This was a well-qualified pool of potential returners with 61% of respondents holding an NFQ Level 8 qualification (Honours Bachelor Degree/Higher Diploma) or above. 36% held an NFQ Level 9 - Master's Degree or Post Graduate Diploma (32%) or above (4%).

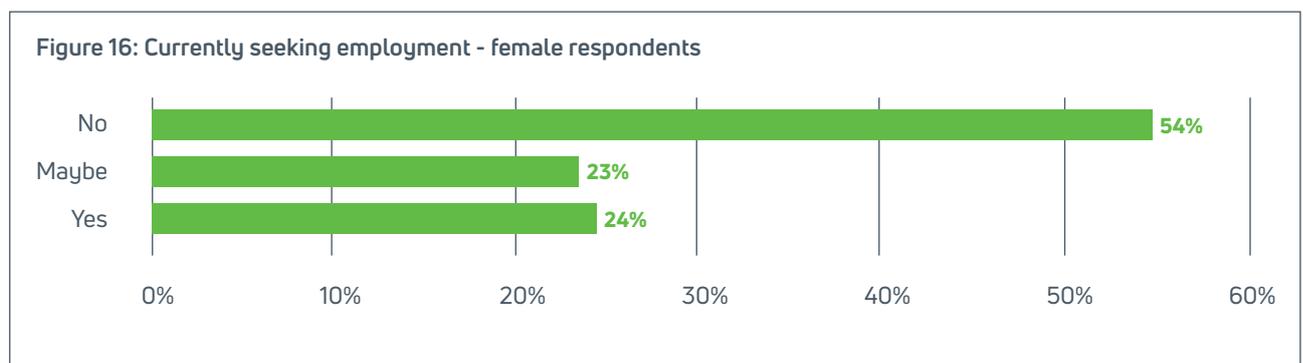


In total, 40% of respondents had experience between Medtech (10%), Manufacturing Engineers (5%) or Finance (25%) roles with 60% having experience within other areas including pharmaceuticals, management, law, sales, marketing, admin, IT, recruitment, HR, healthcare and education. There were no discernible differences in responses relating to barriers to returning to work across sectors, indicating that those experienced were largely cross-sectoral. A majority of respondents (71%) held either professional (46%) or managerial/supervisor (25%) roles before taking a career break, while eight percent were working at operative level. The majority of respondents (81%) had over six years' experience, with 54% having over 11 years' experience. Six percent of respondents had two years or less work experience. 76% had been on career break for five years or less, with the majority (53%) being on career break for two years or less.

Most respondents (74%) described their economic status as either "at work" (37%) or "engaged in home duties" (37%) with seven percent describing themselves as "unemployed" and four percent "unable to work due to illness/disability". 15% chose the "other" category, which all female respondents used to describe part-time working. There were differences in economic status among female respondents (n=72) compared to male respondents (n=8) however the low number of male respondents does not allow for definitive comparisons.

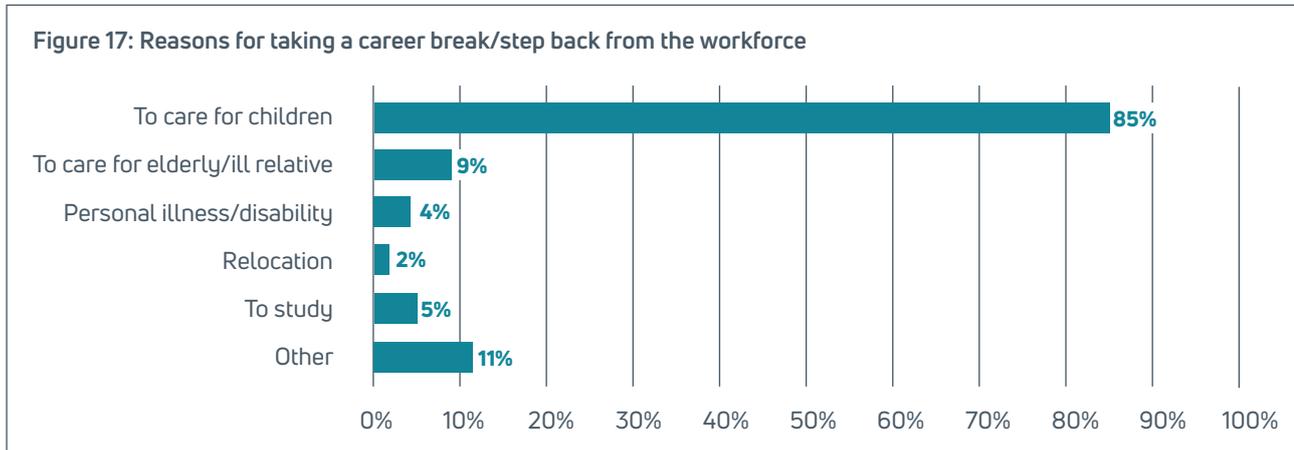


Overall, 52% of respondents were either seeking (29%) or possibly seeking (23%) employment while 49% were not seeking employment. Of those seeking employment, many were seeking part-time roles (60% of women). A lower figure of 47% of women were currently seeking employment (24%) or open to the idea (23%). Of the 60% of women not currently "at work", (as per Figure 14 above) 39% were either seeking (22%) or possibly seeking (17%) employment while 19% were not.



Reasons for Taking a Career Break

The main reason respondents specified for taking a career break was to care for children. The themes that emerged showed that while caring responsibilities, mainly caring for children, were the primary reason for leaving paid employment, the decision to take a break was largely influenced by a conflict caused between family responsibilities and workplace culture and practices. Factors such as company leadership not supporting flexible working options or remote working; a lack of part-time roles; expectations of employees needing to be constantly available and pressure to perform (felt by some even more after having children) were cited.



The availability of suitable and flexible childcare, feeling guilt and being torn between work and family responsibilities, time pressures and “juggling everything” as well as financial concerns and a lack of flexibility all contributed to a sense of struggle. The decision to take a break was not always easy or straightforward, with many factors to consider. Reassessing values and priorities also came into play when choosing to take time for family as well as time out to think or to find a better balance.

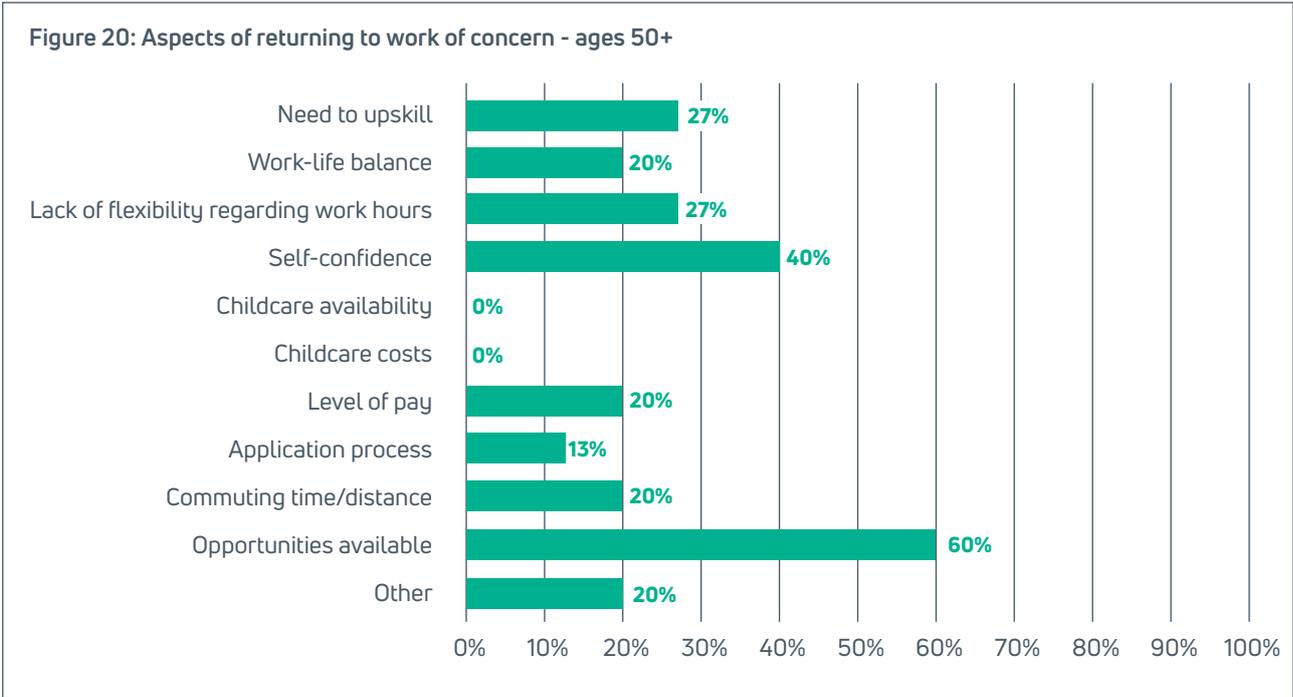
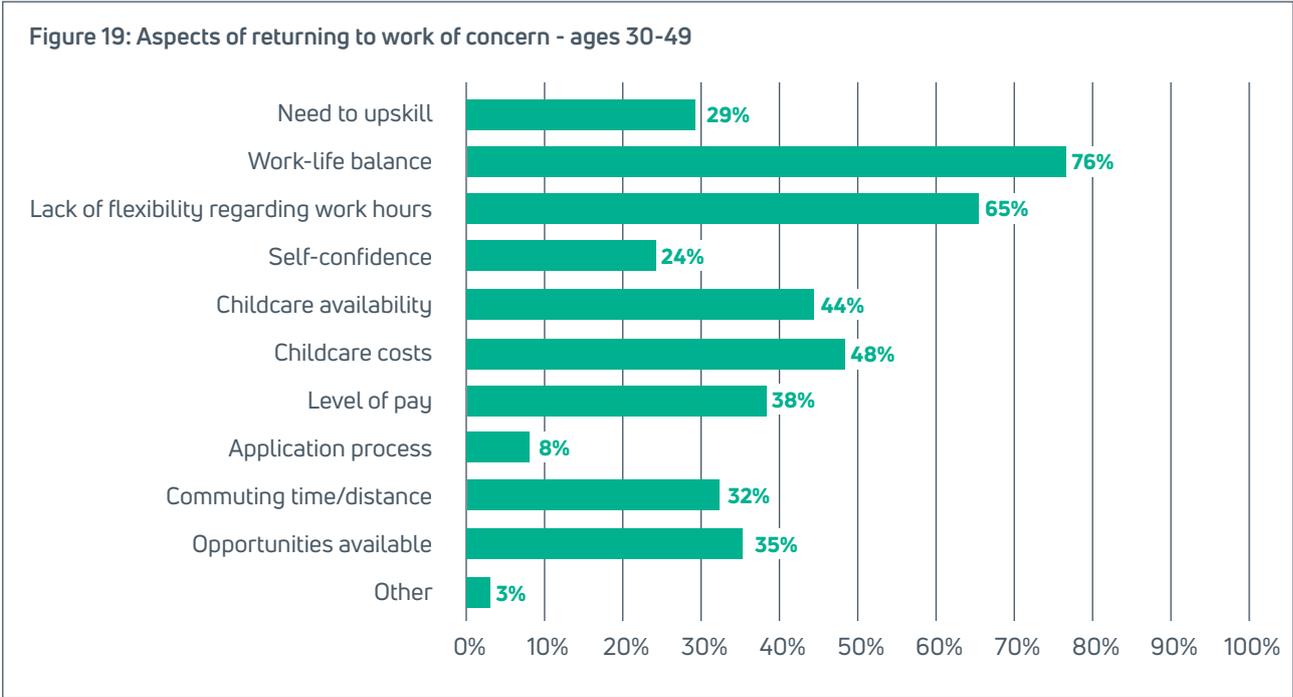
Barriers Identified to Returning to Paid Work

Respondents shared their thoughts on the main barriers to returning to paid employment from their own experience via open responses. The most cited barrier (53% of respondents) was childcare, with almost equal weight given to childcare availability/flexibility as well as childcare costs. A lack of flexible working hours was the next identified barrier (33% of respondents). Following this, (16% of respondents) was the lack of part-time opportunities and the level of pay for part-time roles. Lack of opportunities in general was also as a commonly experienced barrier (12% of respondents). Barriers concerning the individual as opposed to external factors were less frequently identified (under 10% of respondents), with the most prominent being the need to upskill, age, work-life balance, concerns about not being there for children and self-confidence.

Figure 18: Word cloud of open responses in relation to main barriers to returning to work (size of words dictated by frequency of mention)



When asked to select aspects of returning to work that were of concern, childcare (costs - 40%, availability - 36%), work-life balance (65%) and lack of flexibility regarding working hours (58%) were of concern to most. Lack of flexibility was of concern to all respondents with experience in Medtech which may indicate particular issues regarding the sector, although the number of responses was low (n=8). Level of pay and opportunities available were also of concern at 35% and 40% respectively. A marked difference in aspects of concern to respondents related to age profile. The availability of job opportunities was of concern to most respondents (60%) aged 50 and over, with self-confidence also being of concern to 40% of respondents in this age range. While, predictably perhaps, childcare concerns did not feature for respondents aged 50 and over, respondents aged 30-49 found childcare (costs - 48%, availability - 44%), work-life balance (76%) and lack of flexibility regarding working hours (65%) to be of concern.



Some of the nuances surrounding the barriers to returning to work highlighted by the survey results were revealed by the interviews conducted with respondents and are summarised below.

Childcare: Availability of suitable and flexible childcare presented an issue, for example when trying to accommodate shift-work or starting a new job with only a week’s notice. Current childcare schemes may not facilitate most part-time roles, creating a barrier for those on low incomes who cannot afford childcare. The cost of full-time childcare also presented a barrier even when a good salary was on offer.

Lack of flexibility in work environment: Reference was made to the need for regularised flexibility, including remote working, as well as understanding being required from employers in relation to the unexpected, for example children being sick and needing care.

Lack of part-time opportunities: The perception of part-time roles by company leadership seemed to be a contributing factor to the lack of part-time roles available. Interviewees offered part-time roles would have had to accept a lower-level role and possibly be the first person in the company to hold a part-time role, amid company concerns about the practice becoming widespread. Other interviewees found themselves in the position of being overqualified due to a lack of suitable part-time opportunities in the West region.

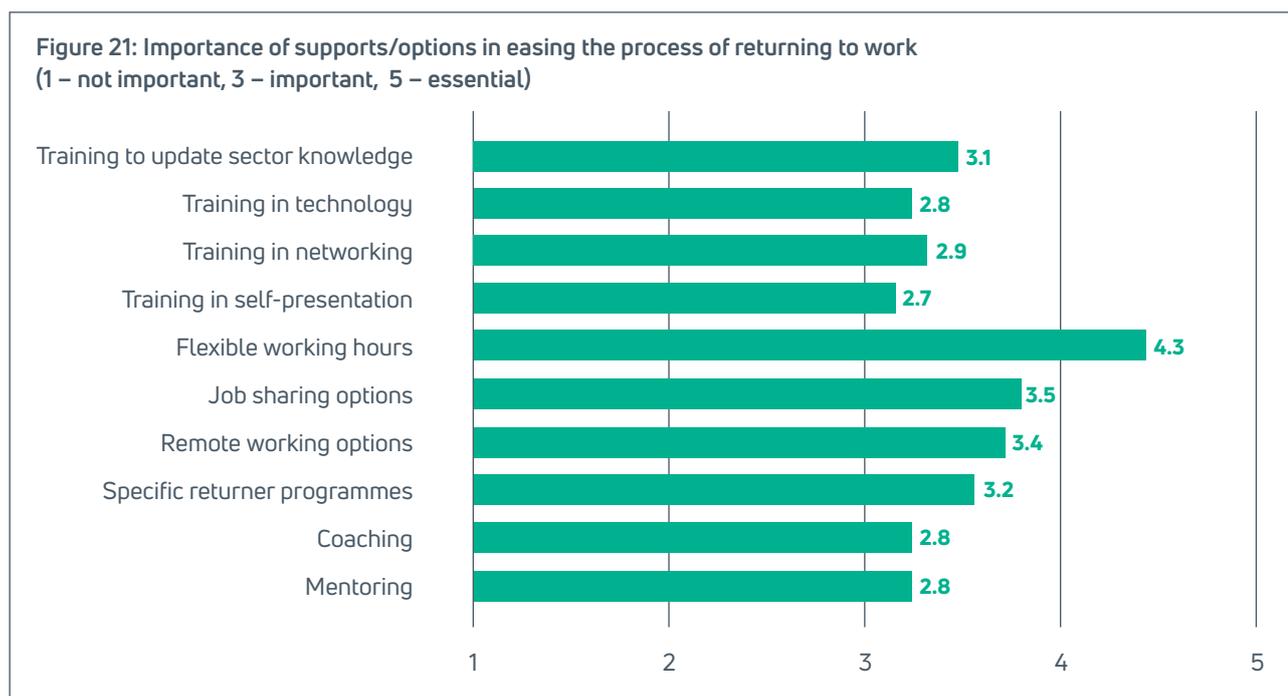
Need for career guidance: Lack of awareness of resources surrounding how to rebuild or maintain skillsets were also identified as a barrier, with costs of training also referred to as a potential barrier.

Self-confidence: Self-confidence could present a barrier in a number of ways. Firstly, the confidence that it is possible to do both, to care for children and give one’s self fully to paid work, is required in order to continue working while caring for young children. Secondly, a sense of having lost skills or needing to upskill and the lack of value placed on work done in the home could lead to a lack of confidence in applying for new roles.

Commuting time/distance: The length of travel time also emerged as a general barrier to returning to paid work as well as being particularly relevant in the West region.

Possible Solutions to Ease the Process of Returning to Work

All supports/options listed in the survey were of importance to respondents, with flexible working hours coming out on top as ‘very important’. Job-sharing options, remote working options and specific returner programmes were all rated between ‘important’ and ‘very important’. Remote working and job-sharing options were of less importance to respondents aged over 50, with specific returner programmes and training in networking weighted as being of most importance to this cohort.



Findings from the interviews conducted would suggest that the proposed solutions are multi-layered, with action and commitment required from policy makers, enterprise leadership and all stakeholders.

Policy: Government policy could be developed to encourage greater adoption of flexible working options, for example: Awards and supports for companies promoting flexible working, such as part-time, remote working, job-share, term time etc., e.g. the Flexit friendly badge offered by Employum for companies which pledge to take on at least one flexible role, or an award that is specifically focused on Work Life Balance/Family Friendly practices complementary to the IBEC KeepWell Mark .

- Increased childcare supports could be made available to facilitate returning to work (including part-time), e.g. an extension to the ECCE scheme
- Return to work supports for people not on the live register e.g. a specific Government response to support this cohort, especially for parents.
- Rural development of broadband access to facilitate remote working in the West region.

Culture: A distinct theme running through the interviews related to the importance of creating a tolerant culture in workplaces, with an understanding of the importance of supporting employees to meet their family, caring and other responsibilities outside of the workplace. There was an awareness of the importance of influencing organisational culture from the top down and that there may be a need for data (further research) to convince enterprise leadership of the benefits of flexible working for both employers and employees. Enterprises seeking to change their workplace culture would benefit from working with grassroots organisations such as Women Returners Professional Network, Employum, Part-time.ie, Grow Remote, Career Returners and others emerging in the field promoting the value of returners and flexible and remote working. An organisational culture that is welcoming and open to changing work practices would encourage women to clearly state what working practices would work for them.

Flexible Working Practices: Flexible working improvements suggested by this cohort included:

- Company policies clearly supporting flexible working practices.
- More part-time roles being created.
- Remote working considered when possible.
- Giving teams autonomy to manage their own working arrangements.

Resources/Supports: Government and enterprise have roles to play in providing resources and supports to returners. Other stakeholders could also contribute in developing some of the following suggested solutions:

- Targeted returner programmes including work placements, mentoring and upskilling.
- Career guidance and training needs assessments for potential returners.
- A central online information point for returners including career development and skills training resources as well as information regarding job opportunities.
- A promotional campaign with regional role models championing the benefits of flexible working practices.

Women Returners Focus Group in the West Region

Focus group participants were recruited through a multi-media campaign targeting people interested in returning to work following a career break. Participants came forward on a voluntary basis.

Key Findings

- The decision to leave employment was directly linked to lack of flexibility of employers regarding family responsibilities as well as issues surrounding childcare costs and availability.
- The main barriers to returning to work were posed by a need for career guidance, lack of flexible working practices, level of pay for part-time roles and commuting time/distance.
- Potential returners to work are not identifiable as a distinct cohort and are not entitled to the same supports as jobseekers on the Live Register.
- Suggested solutions included a Government department to focus on supporting this cohort as well as looking to best practice in Nordic countries in order to inform similar family-friendly policies in Ireland.

Demographics: All six participants lived in either Galway city or county. They ranged in age from 36 to 55 with most being in the 51-55 age bracket. Five of the participants were female, with one male. Participants had a range of relevant backgrounds and qualifications in Medtech, Manufacturing Engineering and Finance roles and their career break duration ranged from two to three years to over 20 years.

Reasons for Taking a Career Break: Participants took a step back from paid work due to caring responsibilities, most to care for their own young children and one to care for an elderly parent. The need to leave paid employment was directly linked to inflexibility of employers regarding family responsibilities as well as childcare costs and logistics issues.

Main Barriers Identified to Returning to Paid Work

Need for Career Guidance: The need for people to stay up to date with the pace of constant change especially in relation to technology was mentioned. A lack of clarity about identifying the most relevant upskilling/training; professional guidance regarding starting points was identified as a need. The cost of training courses was also identified as well as the need for relevant experience in addition to qualifications.

Lack of flexibility: The lack of flexibility and rigid systems used by companies was referred and the impression that companies won't change systems to suit employees. The difficulty of finding work hours that fit with school hours, e.g. 9 am-1 pm, was mentioned. Work start times were cited as a barrier with working on a production line especially difficult to manage. Lack of availability of job-share roles also presented a barrier.

Pay and conditions: Participants mentioned that good conditions are available "but only if you give everything to your work". It was stated that opportunities available don't match existing skills, flexibility requirements, expected pay, etc. There was a fear of losing benefits, e.g. medical cards with the challenges of coming off social welfare. Wages not being adequate to meet costs of childcare, after-school activities, was an issue while part-time work on minimum wage was considered not viable due to costs of working: travel, parking, etc.

Transport: The limiting factor of long commutes on top of a long working day was identified as a major barrier. Public transport was considered not fit for purpose and unreliable. Costs of bus fares or fuel were also a factor.

Other Barriers

Self-Confidence: Participants found that CVs present a significant barrier and found not getting any response "frustrating", "demoralising" and "disheartening". Lack of response to applications led to doubting own competence and loss of confidence. A general lack of confidence in relation to interview skills was mentioned.

Lack of return to work supports/resources: There was a sense in the group that only people on the live register can get access to job seeking/upskilling supports and it was found to be a significant issue. The lack of a clear communication mechanism to link returners not in receipt of jobseeker's benefit/allowance to talent shortages in enterprise was cited as a big gap. "There is no list of names – we don't exist."

Ageism: All participants knew of qualified, experienced people not working at the level they were before taking a career break. There was a sense that being of a certain age, specifically over 50, was challenging when competing with many younger candidates.

Solutions Proposed by the Focus Group to overcome Barriers to Returning to Work

Several potential solutions were suggested by the group, including:

- Dedicate a Government agency/department to support returners to work.
- Provide a specific information website for people interested in returning to work.
- Maintain regular contact with people out of work, keep people engaged and involved in upskilling.
- Create family-friendly leave policies like Nordic countries, making it easier to take time for family.
- Provide on-site upskilling if a candidate does not have all required skills, e.g. technology/software.
- Make interview processes less formal/daunting with respect and empathy displayed for all candidates.
- Provide more joined-up after-school supports/activities within the school campus/environment.

Workshop Returner Talent Breakout Session (October 2018)

The three groups of companies and stakeholders at the workshop were asked to consider potential cohorts of returners, particularly women returners, as well as barriers to returning and possible solutions. Their discussion points are summarised below. Contributions from stakeholder consultations are also included.

Key Findings Company and Stakeholder Workshop Session

- Maternity and extended maternity returners; those returning from redundancy and career breaks for family and caring reasons were identified as evident cohorts of potential returners.
- Main barriers to returning to work were identified as work-life balance concerns due to lack of flexibility in the workplace; low confidence; upskilling needs and financial concerns including childcare costs.
- Suggested solutions included flexible working practices; workplace and wider culture shifts; tailored return to work programmes and Government incentives for companies supporting potential returners.

Cohorts of Returners

- Maternity and extended maternity was identified as an evident, frequently occurring cohort.
- Career break – for varied reasons, e.g. caring, travel, family (including stay at home dads).
- Redundancy – identified as a less evident but substantial cohort.
- Sick leave/disability – including for burnout or mental health reasons.
- Lived abroad/ 'Ex-pats' – two distinct categories, skilled and those 'out of the loop'.
- Underemployed – due to either a mismatch of skills or an openness to more work/hours.
- Retired – identified as a resource with potential in terms of wealth of experience that could be shared.

Barriers Identified to Returning to Paid Work

There were concerns regarding maintaining a healthy work-life balance caused by rigid workplace practices and lack of flexible working options. Low confidence in those that have been away from the workplace for some time presented a barrier as did a loss of network. Also, the returners' technology/industry specific skills may be out of date, including those working in self-employed capacities. Barriers linked to financial matters included the cost of childcare; salary versus social welfare decisions (including loss of illness/disability benefit); the Gender pay gap; pay not meeting expectations and the lack of financial advice prior to return. In some cases, the person's previous position may no longer be available. Regional infrastructural barriers included availability of public transport; lengthy commute and high-speed broadband availability limiting remote working. Visa restrictions/transfer of qualifications were barriers for those returning from abroad.

Suggested Solutions to ease the Process of Returning to Work

- Flexible working, including timing of hours, e.g. 10am-2pm. Increase understanding of benefits to company.
- Cultural diversity training, including unconscious bias training for managers.
- Tailored return to work programmes, including mentoring and work placements – to include free advice .
- Incentives for companies to run specific return to work programmes and/or to offer flexible roles as well as Government schemes to provide childcare supports.
- Companies to identify skillsets needed over time and consider how to attract potential returners
- Parental leave divided more equally with both men and women availing of leave entitlements
- Upskill earlier by providing training in advance of return to work.

3.3 Barriers to Returning to Work and Proposed Solutions

Based upon all elements of the primary research on returner talent West Region, the following Box outlines the findings on cohorts of potential returners, barriers to returning to work and proposed solutions.

Cohorts of Returners	Barriers to Returning to Work	Suggested Solutions
<p>Maternity and extended maternity leave – identified as an evident, frequently occurring cohort.</p> <p>Career break – for varied reasons, e.g. caring, travel, family (including “stay at home dads”).</p> <p>Redundancy – identified as a less evident but substantial cohort.</p> <p>Sick leave/Disability – including for burnout or mental health reasons</p> <p>Lived abroad/ ‘Ex-pats’ – two distinct categories, skilled and those ‘out of the loop’.</p> <p>Underemployed – due to either a mismatch of skills or an openness to more work/hours.</p> <p>Retired /Semi Retired Talent– identified as a resource with potential in terms of wealth of experience that could be shared via coaching/ mentoring or on a consultancy basis.</p> <p>Undecided/Early leavers/ ‘Late bloomers’ – those that left education/ work early in life</p>	<p>Rigid workplace practices – including negative perceptions of flexibility. Working hours, a barrier when full-time work is the only option available.</p> <p>Finance barriers were linked to :</p> <ul style="list-style-type: none"> • Cost of childcare. Often, only F/T childcare available rather than P/T. • Salary versus social welfare decisions. • Lack of financial advice. <p>Workplace Culture- Part-time roles may not exist and people at work may resent returners getting flexible hours.</p> <p>Stress concerns regarding maintaining a healthy work/life balance. Also caused by rigid workplace practices and perceptions in the workplace regarding responding to family responsibilities.</p> <p>Low Confidence – of those that have been away from the workplace for some time was a clearly identified barrier.</p> <p>Skills – technology/industry specific skills may be out of date. Related to confidence mentioned above.</p> <p>Negotiation – lack or absence of communication prior to return, such as for return from Maternity leave</p> <p>Previous position may no longer available or responsibilities re assigned ‘Easing in’ period akin to demotion.</p> <p>Regional Infrastructure barriers, e.g. lengthy, lack of high-speed broadband availability limiting remote working</p> <p>Visa restrictions/transfer of qualifications- a barrier for those returning from abroad.</p>	<p>Companies to provide flexible working options including Flexitime, timing of work hours, part-time and remote working.</p> <p>Increase understanding of benefits to company of Family Friendly practices.</p> <p>Companies to run tailored Return to Work programmes. Senior managers need to champion these.</p> <p>Government to provide employability supports to returners not on the live register</p> <p>Requires a workplace and wider culture shift to recognise needs of returners.</p> <p>Women need to negotiate their return. Lack of confidence issue need to be addressed.</p> <p>Government incentives - for companies to run specific Return to Work Programmes and promoting flexible working.</p> <p>Provide training in advance of return to work or to reskill in another area where necessary.</p> <p>Parental leave divided more equally between men and women.</p> <p>Companies to provide “onboarding” support for people who have not lived in Ireland for a while.</p> <p>High speed broadband to facilitate people to work from home.</p>

3.4 Enterprise Initiatives Supporting Women Returner Talent

Women ReBOOT-Technology Ireland Software Skillnet

The Women ReBOOT-Technology Ireland Software Skillnet supported through Skillnet Ireland is aimed at the pool of female tech talent who have taken a break from the sector. Since 2017, Women ReBOOT has enabled more than 100 women to re-join the tech sector, within high-skilled roles in over 40 partner companies. The programme is aimed at highly qualified women, with a track record, who had chosen to take a career break (of between 3 to 20 years) and are not currently employed. Women ReBOOT provides a bridge to help such women returners transfer into the job in the ICT, Finance and Engineering sectors. Participants benefit from a combination of opportunities in updating knowledge and skills, work preparation and experience, one-to-one coaching and mentoring. In addition to the confidence building and awareness programme elements, participants had access to a comprehensive online learning platform. This enables women to benchmark their current technology capabilities and advance their level of knowledge and skills. Together, participants and the tech companies guide the content of each woman's training to best match industry needs and existing market opportunities. Women ReBOOT runs for a period of four to six months with attendance for one to two days per month at workshops. The returner also meets an executive coach once a month and undertakes online training in areas of their choice and several assignments individually or with a group.

The success of the Women ReBOOT programme is with the 5 key pillars of support it offers which are:

- Group seminars to develop confidence, professional competencies and CV and interview support;
- Technology training through online learning platform that supports upskilling;
- Industry knowledge and certifications through familiarisation training and qualifications;
- Individual coaching that supports the women to identify their new career aspirations and develop a personal action plan for returning to the sector;
- An eight week in-company work placement that allows the women to showcase their strengths and familiarise themselves with the working environment following their break.

Hewlett Packard Enterprise Galway / Information Technology Association Galway (ITAG) Skillnet – Return to Work for Digital Women

The Return to Work for Digital Women programme, launched in April 2019, is open to women with two years' experience or more in the ICT sector who are on the live register for six months or more. It was designed in order to boost the number of women in the technology sector and to fill a labour need by drawing on an existing talent pool. The 20-week programme is delivered in a flexible, part-time format, with participants fully in control of their hours. Modules include career coaching and mentoring, CV and interview skills.

Medtronic Galway, Return to Work Professional Engineering Programme for Women

Medtronic Galway has a six-month paid, return to work programme for women who have taken a break from their engineering careers and now wish to return. This professional engineering programme commenced in September 2018 at their R&D Department, Galway. Participants are hired on fixed term contracts, with the possibility of gaining full time permanent contracts after six months. The programme provides development, networking, and project opportunities for women while transitioning back into engineering.

Boston Scientific Galway, Women's Network

Boston Scientific in Galway formed a Women's Network in 2015. They want to be the employer of choice for women in Galway. The Network emphasises the importance of structured career paths and professional development to attract and retain women talent. They also advise career guidance counsellors. One practical lesson learnt was the form of recruitment advertising wording that can turn women off applying for positions such as the use of the terminology "exceptional females" wanted.

Fidelity Investments Galway, Women Returners event

Fidelity Investments in Galway and Women Returners hosted a Return to Work event in Sept 2018. It provided return-to-work support and information on opportunities available through 2018/2019. The event was targeted at returners who have been on a career break for two years or more with previous experience in technology and/or financial services in roles such as software engineering and user design experience.

Networks, Consultancies and Organisations supporting Enterprise and Returner Talent

Women Returners Ireland was set up in 2017 as a source of support for professional women who want to return to the paid workforce after an extended break. The network offers career and life-coaching support to returners (who typically have third-level qualifications) and is working with several employers including Fidelity and Accenture. Other grassroots organisations such as Part-time.ie (www.part-time.ie), Grow Remote, (www.growremote.ie), Employum, (www.employum.ie), Career Returners (www.careerreturners.ie), are also emerging in the field promoting the value of returners as well as flexible and remote working and offering services to both enterprise and potential returners to work.

The *Women in Medtech Seminar* held in Galway (2018) highlighted that relevant skills and experience can be built up over time with continual professional development and experience gained in related employment areas. A common theme was a lack of confidence among potential women returners. Women need to look for opportunities to gain experience and to “celebrate their success”. It was mentioned that many companies are writing job specification requirements that are above those in the available skills pool. Instead, they should be written to cover the essentials. The benefit of Women Networks in the workplace were highlighted.

Galway Executive Skillnet Returners to Work programme

Skillnet Ireland’s Future Skills Programme was created to support the design and development of new innovative training and learning programmes to address an identified skills gap. Galway Executive Skillnet has been approved by Skillnet Ireland to develop a programme to support Returners to Work in the Western region. Following the completion of this research project, this programme was developed and launched in autumn 2019, targeting at least some of the sectors identified in this report to open up a new pipeline of talent to address identified skills gaps.

3.5 Conclusions

The elements of the research on returner talent have highlighted consistent findings. The importance of implementing and driving change from many levels, from policy to industry leadership to workplace culture and practice was highlighted. While several cohorts of potential returners to work were identified, the most evident were those who had taken extended maternity leave and career breaks in order to care for children. The decision to leave employment was often linked to a conflict between family responsibilities and workplace culture and practices, including lack of flexibility, alongside issues surrounding childcare costs and availability. The importance of targeted supports such as those available to jobseekers on the live register emerged through the research. Flexible working hours, remote working, job-sharing, and specific returner programmes were all identified as important options or supports that would ease the process of returning to work.

The research suggests that a well-qualified and experienced talent pool exists to partly address skill needs in the west region if identified barriers could be overcome. The introduction of Work/Life Balance and Family Friendly practices by companies will improve labour market participation and support the recruitment of talent by enterprise. The importance of organisations committing to work towards changing their workplace culture is key. A 10 Step Plan for companies to attract, engage and retain Returner Talent was developed based upon findings of research work undertaken.

Ten Step Plan for Companies to Attract, Engage and Retain Returner Talent

The following Ten Step Plan for Companies to attract, engage and retain Returner Talent was developed from the findings of research work undertaken for this report.

1 Promote a positive organisational culture open to Work Life Balance/Flexible Working Practices

Develop an understanding among managers, supervisors and staff of the mutual benefits of Work Life Balance/ Flexible working solutions both in terms of it supporting business and employment growth and enabling returners to combine work with family and caring needs and other responsibilities. This is something which all employees may benefit from over time.

2 Understand what Returners are looking for

As well as flexible working hours and family friendly arrangements, information on competitive salaries and potential for career progression are important. Returners may need independent financial advice on the financial benefits of taking up a job offer. They may also be interested in the availability and quality of childcare supports locally and any financial assistance that may be available towards meeting such costs.

3 Develop an empathetic recruitment process

Tailor job adverts and application forms to encourage female professionals on a career break to apply, while meeting all relevant equality legislation requirements. Provide structured training for interviewers to shape the interview process and questions and give returners the opportunity to openly discuss their career goals and work/life balance preferences. Returners must feel confident about enquiring on employers' flexible work practices without feeling this would poorly reflect on their commitment.

4 Create a Work Life Balance/Family Friendly Brand

Achieve recognition through regional and industry awards of the company as a Work Life Balance/ Family Friendly Employer. These awards and testimonials from current staff can be used to create content that can be shared online and by social media with professionals on a career break. This could include information on company support for health and well-being initiatives that are beneficial to returners.

5 Identify skills gaps that returners can address

This can be done through an identification of current and future skill needs within the company to meet future business needs. This would highlight difficult to fill roles or skillsets that returners could fill if changes were made in the working time arrangements and/or the redesign of work organisation of such job roles. These improvements would result in an improvement in the conditions for flexibility in workplace practices.

6 Offer a range of Flexible Working arrangements

These arrangements could include the phasing in of a return to work, flexible working hours, use of core working time, job sharing, part-time and opportunities for remote working either on a regular or occasional basis etc. Managers and supervisors could be given the autonomy to develop flexible working arrangements with individual team members that would be of benefit both to the individual and the company.

7 Introduce Return-to-Work Programmes

These can be designed to boost participants professional confidence and provide workplace learning and updating of skills. They could include mentor and coaching support from managers and other employees who have taken a career break. Line managers can be given training on how to support returners. Programmes may be 3-6 months duration. On completion, participants may be offered flexible full-time and /or part-time positions.

8 Maintain contact with staff on career break

Employers can maintain contact with staff who embark on a career break by including them in the circulation of online company bulletins and use of social media, webinars, and through invitation to company seminars and social events. Companies can encourage and support the individuals memberships of professional associations and networks as well as offering support for maintaining up-to-date skillsets.

9 Provide "onboarding" support for professionals

Support could be provided for professionals returning to Ireland after having lived abroad as well as professional moving to Ireland for the first time. "Onboarding" support could include information on the company's work life balance and flexible working practices and help with the recognition of their qualifications. Information could be provided on housing, education, transport, healthcare, cultural and sport/ recreation facilities within the locality.

10 Review how well policies are working

Putting policies in place does not necessarily mean they are working effectively. A recent EU survey on Irish companies with flexible working practices found that one third of employees thought that making use of such practices would have a negative impact on their career and be badly perceived by colleagues. This highlights a need to evaluate how well policies are working and make improvements as necessary.

Chapter 4

Conclusions and Recommendations

4.1 Conclusions

The main conclusions relating to the two main integrated themes of this study are as follows.

Theme 1: Addressing Skills Demand Medtech, Manufacturing Engineers and Finance Roles in West Region.

Skills gaps/shortages for Medtech, Manufacturing engineers and Finance roles are a result of strong business and employment growth (which companies expect to continue), and a tightening labour market for the relevant skills. Skills profiles are changing rapidly due to market demands, digitisation, new software and automation tools, artificial intelligence, data analytics, and need for greater collaborative working. The application of advanced technologies in existing and new jobs is being accompanied by a demand for strong social, creative and collaboration skills. There is potential for enterprises in the West region to strengthen their talent attraction and retention practices and invest more in productive workforce development. The upskilling of workers at lower skill levels to fill higher skilled jobs will increase the internal talent supply pipeline. Companies will benefit from a Training Plan for the upskilling/reskilling of staff linked to their Strategic Business Plan, including for supplying market demand, technological change, new business models and Brexit.

The graduate output of Education and FET provision in the region for MedTech, Manufacturing Engineers, Finance roles is a valuable supply of talent. There is potential to strengthen “external learning linkages” between enterprise and Education and Training providers to ensure the relevance of CPD provision. SMEs require flexible online and blended education and training provision which staff can take at their own pace. The lack of female engineers both regionally and nationally is a constraint on the supply of engineering talent. Skilled workers are mobile and are choosing where they want to live, and work based upon factors including the quality of life and opportunities for career progression. There is a potential pool of women returner talent in the region that can help partly meet skill demand needs.

Theme 2: How to boost the supply of women returner talent to partly address Skills Demand within Medtech, Manufacturing Engineers and Finance roles West Region.

A well-qualified and experienced returner talent pool exists in the region to partly fill available job opportunities if the identified barriers could be overcome. The proposed solutions are multi-layered with a need for implementing and driving change from many levels, from Government policy and supports, to industry leadership, to workplace culture and practice and all stakeholders. More flexible working arrangements on offer will enable workers to combine work with family and caring responsibilities, disability needs, lifelong learning, and transitioning to retirement. There is an estimated pool of 19,000 Returners in the West region comprising 8,400 in the Potential Labour Force supply, (4,400 are females) and 10,600 Part-Time Underemployed people (6,200 are females).

Barriers to returning to work due to external factors include a lack of flexibility regarding working hours and practices, Childcare availability/flexibility and associated costs and a lack of suitable part-time work opportunities. Barriers to returning to work concerning the individual are a need to upskill in technological/industry specific skills, lack of self-confidence, networking, a need for career guidance and concerns about not being there for children. The barriers identified were found to be of significance to those with experience in Medtech, manufacturing engineers or finance roles well as those with experience in other sectors, with no discernible differences across sectors. The research findings on flexible working arrangements to attract and retain talent can add to any future initiatives in this area.

Introducing a national “Work-Life Balance / Family Friendly Employer Badge” which recognises companies offering flexible working arrangements. would act as a sign of excellence that companies could apply for. Enterprises can optimise their supply of returner talent by running Return to Work Programmes.

4.2 Recommendations

The following set of nine recommendations and their associated actions comprise an Action Plan for addressing skills demand in the Medtech sector and for Manufacturing Engineer and Finance roles in the West Region and for boosting the supply of Women Returner talent to partly meet such demand. Each recommendation proposes recommended stakeholder partners necessary for their successful implementation.

Theme 1: Addressing Skills Demand for Medtech, Manufacturing Engineers and Finance Roles in West Region

Recommendation: Inspire Talent for Careers in Medtech, Manufacturing Engineers and Finance

It is important to increase awareness of the range of attractive careers opportunities within Medtech, Manufacturing Engineers and Finance roles in the West region to students and parents and potential returner talent. The level of female participation on the new Manufacturing Apprenticeships remains low.

Proposed Actions

- Enterprise and Professional Bodies to actively promote Medtech, Manufacturing Engineers and Finance Careers to Students, Parents and potential returners in the region through outreach activities, role models and visits to companies. More females could be encouraged into engineering and technology careers.
- Organise an annual West region career guidance conference for guidance counsellors in second level schools, third level colleges, and adult guidance services. West Regional Skills Forum could assist with these promotional activities.
- Promote female recruitment for the Manufacturing Engineer; Manufacturing Technician, and the National Accounting Technician Apprenticeships in the West region.

Recommended Partners in Delivery:

West Regional Skills Forum, Enterprise, IBEC, Professional Bodies, NUI Galway, GMIT, ETBs

Recommendation: Strengthen collaboration between Enterprise and Education/Training providers. Companies to invest more in upskilling and reskilling to improve productivity.

This includes for the development of both technical and soft skills including strategic thinking, leadership, communications, collaboration, entrepreneurship, problem solving, innovation, and people skills. Senior management

leadership is essential for sustained investment in quality staff development.

Proposed Actions

- Sector specific groups could be established under the West Regional Skills Forum to support strengthened engagement between Third Level and FET and enterprise in the West region for the development and delivery of CPD programmes especially for SMEs and to ensure a supply of quality graduates. Smaller companies could collaborate within a Network to facilitate this systematic engagement.
- Companies to develop Training Plans for the upskilling/reskilling of their management and staff linked to supporting their Strategic Business Plan. Increase investment in workforce CPD to improve productivity. Maximise the use of Skillnet Ireland Learning Networks' upskilling programmes and Springboard+ Programmes.

Recommended Partners in Delivery:

Enterprises, West Regional Skills Forum, NUI Galway, GMIT, ETBs, Skillnet Ireland, Skillnet Networks

Recommendation: Address Medtech Sector Skills Demand to meet strong investment pipeline.

The West region Medtech investment pipeline remains strong with a demand for both new graduates and professionals with experience. Medtech SMEs require more online and flexible blended learning provision.

Proposed Actions

- Medtech enterprises to support the upskilling of Operators, Technicians and Engineers taking account of the impact of Automation and Artificial Intelligence. Medtech Industry to raise awareness of rewarding Quality Assurance/Validation Careers and work with Higher Education to increase supply.
- Address Medtech upskilling for Project Management; Entrepreneurship, Electronic Engineers/Technicians; Blended Learning Manufacturing Training; and Good Manufacturing Practice for Operators. Meet quality, regulatory, customs and financial procedures upskilling needs arising from Brexit.

Recommended Partners in Delivery:

Medtech Enterprises, NUI Galway, GMIT, ETBs, Skillnet Ireland, Skillnet Networks

Recommendation: Address Manufacturing Engineers Skills Demand West Region

There is a high demand for Manufacturing Engineers in the West region. Enterprise and Education and Training

providers in the West region could draw upon the example of the industry-led “Limerick for Engineering Group” regional collaboration to help develop a greater supply of engineering talent.

Proposed Actions

- Enterprises and Third level institutions to collaborate in providing R&D life cycle education for engineers who are converting to R&D Engineer roles. Enterprises to focus on the internal development of Engineering Operators to Manufacturing Technicians and Manufacturing Technicians to Engineers.
- Enterprises and Education and Training providers to promote engineering careers in the region including on Engineers Ireland Smart Futures campaign and Engineers Ireland Week, particularly for female students.

Recommended Partners in Delivery:

Enterprises, NUI Galway, GMIT, ETBs, Skillnet Ireland, Skillnet Networks

Recommendation: Address Finance Roles Skills Demand West Region

Financial Accountants increasingly work within matrix structures in organisations along with other professionals. The nature of finance roles is changing with increasing data analytics and digital capability needs arising from the increasing application of user-friendly software and automation tools. Smaller companies can collaborate in a Network for such training.

Proposed Actions

- Enhance access for Accounting and Finance staff to CPD with flexible delivery options including for project management, user-friendly software and automation tools, and Cyber Security. Support workplace mentoring and training in small finance practices on effective management and Job performance.
- Provide upskilling on potential changes in customs duties, VAT, Tax, data protection, audit systems and rules within enterprises which trade with the EU and/or UK in the event of Brexit.

Recommended Partners in Delivery:

Professional Bodies, NUI Galway, GMIT, ETBs, Skillnet Ireland, Skillnet Networks

Recommendation: Promote Medtech, Manufacturing Engineers and Finance Job openings in West region to domestic and international talent.

These new job openings will provide opportunities for people with the right skills and aptitude including new graduates, women returner talent, underemployed and unemployed people. Skilled workers are mobile and can choose where they want to live, and work based upon factors including the quality of life.

Proposed Actions

- Promote job opportunities for Medtech, Manufacturing Engineers and Finance roles in West Region. The Western Development Commission Online Guide to Working, Living and doing business in the West of Ireland “Look West.ie” is a valuable resource to support this. Galway Chamber have a “Why Galway” website and JobsIreland.ie is run by the Dept of Employment Affairs and Social Protection.

Recommended Partners in Delivery:

Western Development Commission, Chambers of Commerce, Department of Employment Affairs and Social Protection, IDA, Enterprise Ireland

Theme 2: How to boost the Supply of Women Returner Talent to partly address Skills Demand Medtech, Manufacturing Engineering, Finance roles

Increasing the supply of Returner Talent in the West Region, particularly Women Returners, can partly meet the skill demand needs within Medtech, Manufacturing Engineer and Finance roles in the West region. The following are the solutions that emerged from the primary research undertaken for the report.

Recommendation: Introduce a national “Work-Life Balance / Family Friendly Employer Badge” under the banner of “Increasing Participation and Recruitment of Talent.

Proposed action

- Introduce a national “Work Life Balance / Family Friendly Employer Badge” which would act as a sign of excellence that companies could apply for and put on their website and promotional material. It would recognise companies that promote a positive organisational culture that is open to Work Life Balance/Family Friendly Practices by offering flexible working arrangements, career advice, training, mentoring and work experience opportunities that enable staff to combine work with either (i) family and caring needs (ii) disability needs (iii) lifelong learning (iv) transition to retirement. SMEs could engage in this process individually or within a Network. It is proposed that this initiative would be run as a pilot in the West region with categories for different sized companies.

Recommendation: Develop a national “Charter Template” and Toolkit as a guide for enterprises to develop or enhance their corporate culture for the new world of work needs of returners.

Proposed action

- A “Charter Template” and Toolkit (drawing upon learning from this report) could be used as a guide to facilitate discussions with Returner talent, particularly women returners on possible changes in their working arrangements. The “Toolkit” could be tailored for use by SMEs. An organisational culture open to change will encourage individuals to state what working practices work best for them. This highlights the importance of changing company culture from the top/leadership down to recognise the benefits of flexible working for employers and employees. It is proposed that this initiative would be run as a pilot in the West region.

Recommendation: Increase measures to support Women Returners talent

Proposed actions

- Enterprises in the West region would benefit from introducing Return to Work Programmes for Women comprising elements of training, mentoring, work experience, and an independent financial advice. Network of SMEs could collaborate on the development and running of programmes. Return to Work Programmes could be promoted nationally. A database could be developed where Returners would register their interest and attach their CVs.
- Companies can promote remote working through the combined use of technology with flexibility for employees to work from home, from a hub or part-home, part-office. This will enable companies to grow by attracting and retaining top talent while allowing employees to achieve a work life balance.
- In order to support company’s commitment in delivering the above interventions to boost Returner Talent, State funding incentives for such engagement such as through tax incentives, vouchers, grants etc could be considered as part of future Government policy.
- An increased provision of career advice, training and employability supports for potential Returners not on the Live Register could be considered as part of future Government policy to increase labour force participation.

Recommended Partners in Delivery:

Enterprise, West Regional Skills Forum, Skillnet Ireland, Skillnet Networks, Dept of Employment and Social Protection

Potential areas of Further Research

There is potential to undertake further research on a number of topics discussed in this report. These include :

- a) Upskilling approaches to support the movement of manufacturing engineers across engineering disciplines.
- b) Exploring the nature and benefits of non-formal/non-traditional workplace learning approaches.
- c) Assessing the effects/results of flexible working options for employers and employees.

Appendix 1

Members of Project Advisory Group

Name	Organisation
Margaret Cox	Managing Director, I.C.E Group
Carl Blake	Network Manager, Galway Executive Skillnet
Gordon Crowley	Director, Regulatory & Quality, BTG plc (Galway)
Tomás Ó Síocháin	CEO, Western Development Commission
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Dr. Deirdre Garvey	Senior Lecturer/Lifelong Learning - GMIT Mayo Campus
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Catherina Blewitt	West Regional Business & Relationship Manager – IDA Ireland
Barry Egan	Director West Region, Enterprise Ireland

Project Researchers	Organisation
Gerard Walker	Senior Economist, Future Jobs -Skills-Work Insights
Ananda Geluk	Career Counsellor/Researcher

Appendix 2

Relevant Education and Training Supply in Region

NUI GALWAY ENGINEERING AND SCIENCE PROGRAMMES

Postgraduate Programmes

Structured PHD (Biomedical Engineering Science L10)

Master of Engineering (Biomedical Engineering) L9

MSc in Biomedical Engineering, L9

MSc (Biomedical Genomics) L9

MSc (Biomedical Science) L9

MSc (BioInnovate) programme Full-time 10-months

MSc.in Business Analytics L9

MSc in Computer Science (Data Analytics) L9

Master of Engineering (Electrical and Electronic) L9

Master of Eng (Energy Systems Engineering) L9

Distance Learning MSc in Medical Technologies Regulatory Affairs, P/T L9, NUI Galway and IT Sligo.

Springboard 2019 Post graduate Diploma in Innovation Management L9, Part Time.

Degree Programmes

GY401 Engineering (Undenominated) L8

GY405 Mechanical Engineering L8

GY406 Electronic and Computer Engineering L8

GY408 Biomedical Engineering L8

GY413 Energy Systems Engineering L8

GY414 Electrical and Electronic Engineering L8

GY304 Biotechnology L8

GY320 Physics (Options: Biomedical, Theoretical) L8

GY301 Science L8

GY303 Biomedical Science L8

GY319 Mathematical Science L8

GY304 Biotechnology L8

Distance Learning Higher Diploma Medical Technology, Regulatory Affairs and Quality L8

Distance Learning Certificate Medical Technology, Regulatory Affairs and Quality, L8

Springboard 2019 , Specialist Diploma in Lean Management Systems, Minor Award L8 Part-Time

MSc (Biomedical Science) -Continuous/Flexible L7

GMIT ENGINEERING AND SCIENCE PROGRAMMES

GA680 Mechanical Engineering L8

GA681 Energy Engineering L8

GA682 Biomedical Engineering L8

GA683 Agricultural Engineering L8

GA684 Engineering (Common entry) L8

GA580 Software and Electronic Engineering L8

GA783 Physics and Instrumentation L8

UGA784 Science (Undenominated) L 8

GA785 Medical Science L8

GA677 Manufacturing Engineering Design L7

GA570 Software and Electronic Engineering L7

GA676 Engineering (Common Entry) L7

GA670 Mechanical Engineering L7

GA677 Manufacturing Engineering Design L7

GA673 Energy Engineering L7

GA674 Biomedical Engineering L7

GA675 Agricultural Engineering L7

GA 773 Physics and Instrumentation L7

GA774 Science (Undenominated) L7

Certificate in Medical Device Technology(daytime) 1-year Special Purpose Award.L7

Springboard 2019, Quality for the Medical Devices Industry L7 (part-time)

Springboard 2019 Bachelor of Engineering, L7 (add-on) in Manufacturing Engineering (Part-Time)

GMIT Apprenticeships

Manufacturing Engineering – Apprenticeship L7

Manufacturing Technician – Apprenticeship L6

IOT SLIGO ENGINEERING & SCIENCE PROGRAMMES

Postgraduate Programmes

Master of Science in Quality L9

MSc in Bioprocessing Science L9

Degree Programmes

SG449 Medical Biotechnology L8

SG342 Civil Engineering L8

SG252 Software Development L8

SG251 Computing (Smart Technologies) L8

SG444 Science Undenominated L8

SG330 Engineering Undenominated L7

SG333 Mechanical Engineering L7

SG336 Precision Engineering and Design L7

SG304 Mechatronics L7

SG436 Biomedical Science L7

SG337 Electronic and Computer Engineering L7

SG300 Engineering Undenominated L6

SG401 Science L6

SG303 Mechanical Engineering L6

SG305 Electronic and Computer Engineering L6

SG307 Precision Engineering and Design L6

SG 306 Mechatronics L6

IOT Sligo Toolmaking Apprenticeship L6

IOT ATHLONE ENGINEERING AND SCIENCE PROG

Postgraduate Programmes

MSC in Biopharmaceutical Technology L9

Master of Science Data Analytics L9

MSC Software Engineering L9

Degree Programmes

AL820 Mechanical and Polymer Engineering L8

AL713 Engineering (Common Entry) L7

AL710 Mechanical Engineering L7

AL712 Mechatronics L7

AL711 Mech Engineering & Renewable Energy L7

AL701 ICT Engineering: Computer Engineering L7

AL704 Computer Engineering L7

AL601 Computer Engineering L6

AL602 Mechanical Engineering L6

IOT Athlone Engineering & Science Apprenticeships

Toolmaking L6

Mechanical Automation & Maintenance Fitting L6

Electrical Instrumentation L6

Instrumentation L6

Springboard 2019, Quality for the Medical Devices Industry L7 (part-time)

Springboard 2019 Bachelor of Engineering, L7 (add-on) in Manufacturing Engineering (Part-Time)

FET/Other Engineering & Science Programmes

Biomedical Science Laboratory Technician, L5 Galway Community College, GRETB.

Cleanroom & Packaging Operations L5, GRETB TC, Galway

GMP (Saturday & Evenings) L5, GRETB TC, Galway

Continuous Improvement in Manufacturing (Saturday & Evenings) L5, GRETB TC, Galway.

Electronic Technology L5, GTI, Galway GRETB.

NUI Galway Accountancy/Finance/Business

Postgraduate Programmes

MSc International Accounting and Analytics L9

IAYI Master of Accounting L9

MSc (Business Analytics) L9

Degree Programmes

GY201 Commerce L8

GY202 Commerce (International) with French L8

GY203 Commerce (International) with German L8

GY204 Commerce (International) with Spanish L8

GY207 Commerce (Accounting) L8

GY208 Commerce (Gaeilge) L8

GY209 Commerce (Global Experience) L8

GY309 Financial Mathematics and Economics-L8

GY206 Business Information Systems L8

Distance Learning Bachelor of Commerce L8

GMIT Accountancy/Finance/Business

Postgraduate Programmes

Postgraduate Diploma in Accounting L9 (one -year conversion course for non-accounting graduates)

Degree Programmes

GA181 Accounting L8

GA182 Business L8

GA183 Business Information Systems L8

GA886 Business Mayo Campus L8

GA186 Business with Entrepreneurship L8

GA185 Finance and Economics L8

GA878 Accounting & Financial Mgt L7 Mayo Campus

GA877 Business (Castlebar), L7

GA175 Finance L7

GA170 Business L7

GA171 Business Information Systems L7

GA176 Business with Entrepreneurship L7

GA160 Business - L6

GMIT Accounting Technician Apprenticeship

Accounting Technician Apprenticeship L6 part-time year course with 25 places.

IOT Sligo Accountancy/Finance/Business

SG146 Accounting L8

SG149 Business in Finance and Investment L8

SG141 Business L8

SG535 Business Administration L7

SG536 Business L7

SG108 Business in Accounting L6

SG101 Higher Certificate Business L6

IOT Athlone Accountancy/Finance/Business

Postgraduate Programmes

Master of Arts in Accounting L9

Master of Business L9

Degree Programmes

AL853 Accounting and Law L8

AL852 Accounting (with optional placement) L8

AL850 Business L8

AL858 Business Information Systems L8

AL650 Business L6

FET/Other Accountancy/Finance/Business

Bachelor of Business L7, Galway Business School.

Diploma in Accounting Technician, L6, Ballina Further Education Centre, VTOS Course.

Accounting Technician L6 (Year 1) GRETB TC Galway

Certified Accounting Technician, L6, evening course, 2 years, Western Management Centre, Galway.

Business Management & Information Systems L6, Galway Technical Institute, GRETB.

Business Management and Accounting, L6, Galway Technical Institute, GRETB.

Advanced Cert in Business Management and Accounting, L6, Galway Community College, GRETB.

Manual and Computerised Bookkeeping, L5, Saturday and evening course, GRETB TC Galway.

Manual and Computerised Payroll and Bookkeeping L5, GRETB TC, Galway.

Certificate in Accounting Technician, L5, Ballina Further Education Centre, VTOS Course.

Business Info Systems, L5, Galway Community College

Business and Accounting, L5, Galway Community College, GRETB.

Business Studies L5, Glenamaddy Community School,

Co. Roscommon, GRETB

Business Studies L5, St Louise Community School, Kiltimagh, Co Mayo, Mayo, Sligo, Leitrim ETB.

ICE Pitman Training, Galway.

About Galway Executive Skillnet

Network Overview

Galway Executive Skillnet is a regional, multi-sector learning network for over 300 companies operating in County Galway and the surrounding counties of Clare, Mayo and Roscommon.

Member companies work collaboratively to respond locally to skills needs within their businesses. The network supports regional development by helping local businesses to arrive at shared local solutions that are more accessible, affordable, and ultimately more effective at meeting their needs. The network addresses both technical and non-technical skills needs across multiple sectors.

The objective of the network is to support member companies to develop and grow through the provision of relevant and flexible training. Membership of the network is open to private enterprises in the West, Mid West and North West regions.

Supports to Network Member Companies:

- Assist businesses to identify and address their skills needs
- Information regarding successful approaches to learning and talent development
- Flexible training programmes tailored to the needs of businesses in the region
- Guidance on achieving value for money when investing in learning and development
- Innovative new programme design and development
- Programmes for current and future leaders
- Certified and non-certified technical training
- Training relating to communication, problem-solving and other core skills
- Advice on gauging the effectiveness of training
- Access to a network of businesses within the region
- Conferences, seminars, and other informal learning and networking events

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