



**SKILLS FOR A
10X ECONOMY**

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Foreword

On the 11th May 2021, my Department published an economic vision for Northern Ireland:

The ambition we have set out in our economic vision is for a '10x Economy'.

Northern Ireland's decade of innovation will encourage greater collaboration and innovation to deliver a ten times better economy with benefits for all our people.

We will realise this ambition by focussing on innovation in areas where we have real strengths and making sure these gains mean something to all businesses, people and place in Northern Ireland.

Overall we will see a positive impact on our economic, social and environmental wellbeing.

There is no doubt that delivering 'a 10x economy' will require transformation on our skills system. In an economy with limited natural resource it is the skills of our people that will be the primary driver of our success. Harnessing talent is not only a key objective in itself, it is integral to every aspect of this vision statement.

It will mean investing in the skills that will drive our key strategic clusters, boosting the research and innovation potential of our workforce and Northern Ireland a global hub of knowledge through strong collaboration between government, business and our world class research institutions.

It will mean working cohesively across our whole education system to address skills imbalances, driving increased participation in the STEM subjects that will underpin our economic success and provide opportunities for more people to work in better jobs.

It will mean tackling social and educational inequality, ensuring appropriate pathways are in place to enable all our citizens to reach their potential, benefitting from and contributing to the stronger, more prosperous, more resilient Northern Ireland we all want to see.

The challenge in front of us is both urgent and strategic. The skills and talents of our people will be the foundation of our economic and social prosperity. Harnessing the potential to deliver 'A 10x Economy' will mean engaging our existing workforce and business base in the collaborative design of a skills system that will maximise our competitive potential over the next decade.



At the same time, we must build on the strengths of our education system, laying the foundations of the modernisation which will ensure a rich vein of talent continues to flow into the heart of our economy, as the primary driver of the rich and prosperous future we envisage for Northern Ireland.



Gordon Lyons, MLA
MINISTER FOR THE ECONOMY

Endorsements

“I have been delighted to work in partnership with the Department and Minister as Chair of the Skills Strategy Advisory Group. Skills development is crucial for the future of our economy and in providing opportunities for more people to access better jobs across Northern Ireland, it is also an area which needs urgent investment by the Executive. I believe this Strategy, if fully implemented, provides the right framework to deliver our full potential. I look forward to continuing to work with government and stakeholders across the skills system as we aim to maximise its impact on all parts of our society.”

JACKIE HENRY

**Interim Chair of the Northern Ireland Skills Council & Managing Partner,
People & Purpose, Deloitte UK**

“The Software Alliance welcomes and supports the ‘Skills Strategy for a 10X Economy’. Given the focus on innovation and smart specialisation of industry clusters, the software sector looks forward to playing an important role in delivering this ambition in the decade ahead. We are a sector of highly skilled people and we know the benefits of investing in people to help them and the economy reach its full potential. We welcome the Strategy’s aims to address the skills imbalances in the economy, create a culture of lifelong learning and expansion of teaching computing in our education system. We commit to playing our part to help the Department for the Economy deliver them over the next decade.”

THE SOFTWARE ALLIANCE

Signed by: John Healy (Allstate), Tom Gray (Kainos), William Hamilton (Liberty-IT), Tara Simpson (Instil), Andrew Gough (GCD), Mark Owens (Civica) and Peter Shields (Etain).

“As a key employment sector with huge skills demands, we fully endorse the strategy which underpins our pledge to ensure that we have a skilled workforce to support sustained employment in manufacturing and improve workplace diversity.

This new strategy provides a framework, not only to meet current education and skills priorities but also to contribute to delivering other key priorities such as meeting the STEM challenges, net-zero and digitalisation. We are really looking forward to working with partners to deliver the ambitions we’re all committed to.”

MARY MEEHAN

Deputy Chief Executive, Manufacturing NI

“Skills are a key priority for the businesses the NI Chamber represents. The scale and complexity of meeting the skills challenge is in no doubt, but this Strategy provides an effective and ambitious framework which can support our businesses to reach their potential in a rapidly changing global market place. We greatly welcome the strong lead the Department and Minister for the Economy has taken in developing this Strategy and the clear commitment that has been made to engage business directly throughout its formative stages. We recognise, however, that this is a first step. The Skills Strategy will be integral to the vision for a 10x Economy and funding commitments from the Executive must reflect this.”

ANN MCGREGOR MBE

Chief Executive Officer, Northern Ireland Chamber of Commerce.

“As an HR Director, working in the agri-tech sector, I understand the vital importance of skills in driving businesses potential to innovate, compete and to provide rewarding opportunities for individuals who invest in their skills. The Strategy highlights a number of interventions which are increasingly important to our potential in Northern Ireland. As businesses find it increasingly difficult to attract the talent they require, the focus on lifelong learning is much needed. As is the objective to improve both basic and advanced digital skills; this will be crucial to our ability to compete in global markets as digital transformation continues apace. In particular, I have welcomed the opportunity to engage directly in the development of this Strategy and the real focus that the Department has placed on working with business and other key stakeholders, work which will be continued through the creation of the new Northern Ireland Skills Council. Whilst there is much work to do, I believe this provides an invaluable framework for the development of Northern Ireland’s skills system, investment by the Executive will be key to its success.”

GILLIAN MCAULEY

Group HR Director, Devenish Nutrition

Executive Summary

'Skills for a 10x Economy' sets a strategic framework for the development of our skills system to 2030. The Strategy has been developed over several years and is based on a substantial programme of research and engagement to deliver an evidence-based, stakeholder-informed Strategy. It sets out three strategic goals which, cumulatively, aim to address the skills imbalances in our economy and improve social inclusion and wellbeing across our society.

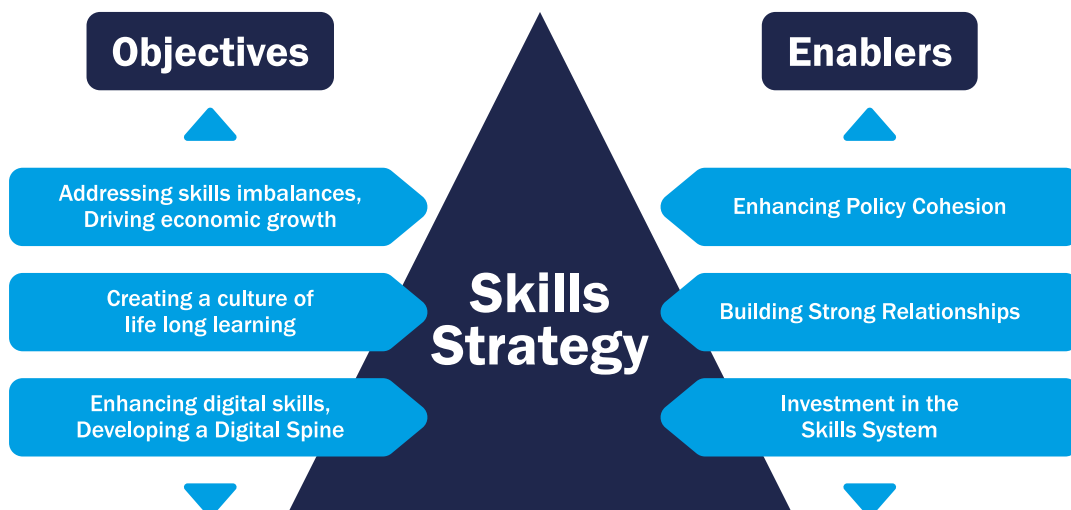
Strategic Goals

- *Strategic Goal 1: increasing the proportion of individuals leaving Northern Ireland higher education institutions with first degrees and post-graduate qualifications in narrow STEM subjects;*
- *Strategic Goal 2: increasing the proportion of the working age population with qualifications at level 2 and above; and*
- *Strategic Goal 3: increasing the proportion of the working age population with qualifications at level 3 and above.*

These strategic goals are designed to deliver against our economic vision for 'a 10x economy: Northern Ireland's decade of innovation'. Meeting these goals will:

- boost our innovation potential, driving global competitiveness in our key strategic clusters;
- provide better jobs for more people and develop a robust skills base, supporting our businesses to deliver on their competitive potential; and
- open up educational pathways, empowering everyone in our society to reach their potential.

To deliver on these strategic goals, this Strategy focuses on three major policy commitments and three supporting policy enablers.



Addressing Skills Imbalances, Driving Economic Growth

'Addressing Skills Imbalances, Driving Economic Growth' can be seen as an overarching objective. It is at the heart of what 'Skills for a 10x Economy' aims to achieve. The policy recommendations set out in this Strategy relate directly to the strategic goals we have set out.

Supporting Economic Inclusion - Individuals with Low or No Qualifications

As our economy develops and automation displaces a growing number of jobs and job roles, the demand for higher level skills will continue to grow. It is vital, therefore, that we support as many people as possible to reach the qualification levels that will offer viable and sustainable opportunities in our emerging labour market.

This will require work across Government, including with local government, and with stakeholders in the community and voluntary sector, in further education and in trade unions, to connect individuals with the opportunities and support they need to engage, or re-engage, with the labour market. This includes employability programmes, such as Jobstart and the Enhanced Employability Services. It will rely on collaborative work across Government as the Department for Communities' 'Employability NI' Strategy is developed and implemented. It also highlights the need for new entry level qualifications, to provide pathways to further engagement with skills development and labour market opportunities.

Supporting Social and Economic Development – Focus on Mid-Level Qualifications

It is these pathways which are so central to our economic ambition and to providing opportunities for more people to work in better jobs. The Northern Ireland Skills Barometer highlights that the supply of individuals with mid-level qualifications is likely to fall well below labour market demand over the next decade, based on current practice. Delivering on Northern Ireland's economic potential will require a significant uplift in the number of people undertaking professional and technical qualifications at mid-levels. In addition to supporting economic development, this will provide opportunities to deliver greater social equality, as more people will be able to attain the skills required to work in higher level 'better' jobs.

This Strategy details a number of changes to our vocational education system to ensure comprehensive educational pathways are available and accessible to everyone. This begins at school level, by considering how we can support better transitions from school-based education to tertiary education and onward into the labour market. It includes new interventions such as the Advanced Technical Award at Level 3, the expansion of the apprenticeships programme and consideration of how we can boost participation in 'HE in FE'. In addition, an overall review of vocational education provision in Northern Ireland will be undertaken, to ensure that our future offer supports our economic and social ambitions.

Driving Growth and Innovation - Higher Level Qualifications

At degree and post-graduate levels, there is an anticipated shortfall in the overall supply of skills in the labour market, but of even greater significance, is that qualification outcomes do not match labour market demand and need to be rebalanced. This leaves many businesses struggling to find the talent they require to maximise their productivity. It also means many graduates are underemployed and do not achieve their full potential, which may cause distortions in labour market opportunities for individuals with lower qualifications.

We therefore need to drive increased participation in the 'narrow STEM' subjects which have particular economic relevance in Northern Ireland and include some of the best opportunities for individuals to develop rewarding careers. Low participation rates among women is of particular concern in this area, particularly as these are the qualifications which are expected to offer the most significant employment opportunities in the coming decades. Increasing involvement of females in STEM study and careers is a significant strategic priority for our economy and society.

Creating a Culture of Lifelong Learning

What is clear, however, is that our social and economic ambitions will not be met by focusing exclusively on the education of young people. As our economy transforms, individuals of all ages will need to engage in education and training to ensure their skills and qualifications maintain pace with change. Participation in adult learning in Northern Ireland is low, lagging behind the UK average (18.2% compared with 25.3% of the working age population¹). In turn, the UK compares unfavourably with averages across the OECD. Improving social equality and delivering on our economic potential will rely on our ability to change this by '*creating a culture of lifelong learning*'.

A broad range of provision already exists in this area. Businesses can engage in workforce development in collaboration with our education institutions through 'Skills Focus' and 'InnovateUS'. A successful 'skills guarantee' has been offered to investors in Northern Ireland through the 'Assured Skills' programme, as well as offering sustainable employment opportunities to many individuals. Our upskilling offer has recently been expanded with a three year funding commitment to 'SkillUP', offering individuals the opportunity to engage in upskilling and reskilling in areas where there is existing labour market demand.

Consequently, our recommendations in this area do not focus on the creation of new programmes, but on increasing awareness of existing provision and improving access to it. By developing an Action Plan for Lifelong Learning, we want to capture and market the offer appropriately, selling the benefits of skills development to businesses and individuals and ensuring we provide a cohesive, balanced offer, focusing on improving economic opportunity. A key issue we must address, however, is improving access to education and training opportunities by alleviating cost and time constraints. More broadly, it is strategically

1 [NISRA \(2021\) Qualifications in Northern Ireland 2020.](#)

important that we work across government to address issues of educational underachievement associated with socio-economic disadvantage and fully recognise the role education and skills development plays in improving social equality.

Enhancing Digital Skills, Developing Our Digital Spine

Technological change is a major strategic issue which is having a pervasive influence across our society and labour market. Advanced digital skills are essential for the innovation potential, and continued competitiveness, of the businesses in our key strategic clusters and the development of the knowledge-economy more broadly. Meeting this challenge is vital to the realisation of our economic potential. In tandem with a theme that runs throughout this strategy, however, our focus on digital is as much about improving social equality as it is about economic growth.

Digital skills are increasingly essential for social and economic inclusion. As the COVID-19 pandemic has shown, those with the access and capability to use digital technology were able to stay in touch with family and friends, access vital public services and even carry out essential tasks, such as food shopping, safely. In the labour market, most jobs now require some level of digital capability; a trend which will continue to grow and a challenge which means many individuals of working age will need to access digital education over the next decade.

Our Strategy is relatively simple on this point, we need to develop a digital action plan for Northern Ireland if we are to deliver the digital capability our society needs. This will take a two stranded approach to delivering the advanced skills our globally competitive knowledge-based sectors needs to thrive and to support individuals to gain the skills necessary for social and economic inclusion. It will take in all aspects of our education system, be embedded within our approach to lifelong learning and will be an essential component of addressing skills imbalances, regardless of an individual's starting point.

Enhancing Policy Cohesion / Building Strong Relationships

Throughout the programme of research and stakeholder engagement which has underpinned the development of this Strategy, there has been a clear and consistent message that our 'skills system' is fractured and fragmented. Different institutions govern and deliver different elements and there is an absence of a consistent overall vision for what we expect our skills system to deliver. Addressing this, and the inefficiencies it causes, will require a refreshed approach to how we view and govern the system.

Across Government, we must develop the structures that will promote collaborative working, minimise duplication and focus our resources on delivering the best outcomes for people and businesses across Northern Ireland. Whilst we break down silos in Government, we must also work in tandem with businesses, trade unions, students and the voluntary and community sector to ensure we deliver a programme of change which is relevant to the economy and society we operate within.

For this reason, the key recommendations under this theme are to establish a set of revised governance structures which bring together senior representatives from central government departments, local government, business, trade unions, the student's union (NUS-USI) and the voluntary and community sector.

The new Northern Ireland Skills Council (NISC) will support Government in the implementation of the Strategy and provide key connections across our stakeholder networks. The 'Skills Equality, Diversity and Inclusion Sub-committee' of the NISC, will focus on identifying opportunities to maximise inclusion and opportunity in education and skills development. An internal Northern Ireland Civil Service Management Board will support the NISC in implementing the Strategy, driving better policy cohesion and minimising duplication across all aspects of skills policy.

Investment in the Skills System

Stakeholders have ranked funding as the most important issue for improving Northern Ireland's skills system. Over the last decade, funding for skills-based initiatives in Northern Ireland has fallen substantially. Northern Ireland is a region with limited natural resources and limited fiscal powers. Investment in the skills of our people, therefore, is one of the key policy levers at our disposal to stimulate economic growth and improve social equality.

It is acknowledged, in the paragraphs above and throughout the Strategy, that scope exists to utilise existing resources better to deliver more positive economic and social outcomes for all our people. Over the last decade, however, cuts in funding have led to cuts in skills-based interventions. This Strategy proposes a broad programme of work which is required to modernise our skills system, providing opportunities for all our people to contribute to, and benefit from, our growing economic prosperity. For this reason, this Strategy calls for collaborative work across Government to secure sustainable funding in our skills system, which will support Northern Ireland's economic, social and environmental objectives.

Chapter 1: Introduction

The Executive is committed to delivering a Programme for Government (PfG), based on improving well-being for all. This objective has provided the guiding principle in the development of this Skills Strategy. We need to build on Northern Ireland's reputation for excellence in providing skills which investors are looking for and support our indigenous companies, through the high level skills that can boost innovation, entrepreneurship and enhance Northern Ireland's global competitiveness in a decade of innovation. At the same time, we must develop a skills system which addresses inequality, providing everyone with the access to the education and training opportunities that will enable them to fulfil their potential.

In line with comparable economies across the globe, the demand for skills is changing rapidly. Technology is revolutionising how businesses and labour markets function, increasing efforts to tackle climate change are beginning to transform how we live and work and the challenges we face in developing a more equal, regionally balanced, society continue to grow. Indeed, the importance of education and skills to Northern Ireland's social, as well as economic, development is a key point of feedback received through the formal consultation process². Our focus needs to be about more than widening access to economically relevant education; there is also a need to connect with a broad range of social policy, to ensure everyone has access in a way that engenders greater equality for a broad range of individuals across our society.

It is clear that a single government department cannot deliver against these challenges in isolation. For these reasons, this Strategy has been developed as a whole-of-government Strategy, drawing on evidence-based forecasts of emerging skills needs, but also putting outcomes for individuals at its centre. Working collaboratively, across Government and with all our stakeholders, to address these challenges will afford us the greatest opportunity to deliver on the potential of our economy and improve societal wellbeing for everyone. By connecting individuals with opportunities, we can tackle inequality, drive economic growth and ensure everyone in Northern Ireland has the opportunity to contribute to, and benefit from, growing prosperity.

'Skills for a 10x Economy' is directly aligned to the talent pillar of DfE's *'10x Economy: Northern Ireland's Decade of Innovation'*³ which sets the objective of:

"Inspiring and preparing a future generation of workers that can respond flexibly to future skills requirements. Ensuring everyone across NI has opportunities to thrive."

2 [Department for the Economy \(DfE\) \(2021\). Consultation on a Skills Strategy for Northern Ireland – Skills for a 10x Economy.](#)

3 [DfE \(2021\). 10x Economy – Northern Ireland's Decade of Innovation.](#)

It sets out the Northern Ireland Executive's strategic priorities for the development of Northern Ireland's skills system over the next ten years (2021 – 2030). It has been developed after a considerable programme of research and stakeholder engagement, concluding with the formal, public consultation held between May and August 2021⁴. It draws on existing evidence, including the 'Skills Barometer for Northern Ireland'⁵, the 'Employer Skills Survey'⁶, and recent reports from the Institute of Public Policy Research (IPPR) Scotland⁷ and Ulster University Economic Policy Centre (UUEPC)⁸. In addition, two new research projects were commissioned to underpin the Strategy's development and provide an international perspective on best practice, as we aim to develop a modern, globally competitive skills system: 'The Strategic Integration of Skills and Innovation Policy in Northern Ireland'⁹ and the 'OECD Skills Strategy Northern Ireland'¹⁰.

Whilst this Strategy sets out our strategic direction and the high level actions we will take, it is not intended as the final say in our 10 year plan. Feedback from stakeholders has consistently emphasised the need for a more agile, responsive approach to skills development. Therefore, this Strategy will be underpinned by 2-5-10 year implementation plans, developed in close collaboration with our stakeholders and designed to adapt to change, increase transparency and cultivate a more collaborative approach to economic and social development.

4 Ibid

5 [DfE/UUEPC \(2021\). Northern Ireland Skills Barometer 2021](#) NB: The Skills Barometer is updated every two years. 2015, 2017 & 2019 versions are also available on the DfE website.

6 [Department for Education \(UK\) \(2019\). Employer Skills Survey 2019.](#)

7 [IPPR \(2018\) The Skills System in Northern Ireland: Challenges and Opportunities.](#)

8 [DfE/UUEPC \(2020\). Intelligent Futures Report – Impact of Automation on the Northern Ireland Economy.](#)

9 [DfE/Landfall Strategy Group \(2019\). The Strategic Integration of Skills and Innovation Policy in Northern Ireland.](#)

10 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Chapter 2: Strategic Context

'Skills for a 10x Economy' is launched at a time of considerable uncertainty in Northern Ireland and across the globe. Technology, demographics and global politics are rapidly changing how advanced economies function, as well as the labour markets which support them; a phenomenon which has become characterised as 'The Fourth Industrial Revolution'. The coronavirus pandemic has accelerated the pace of change and businesses and continues to present both challenges and opportunities for Northern Ireland^{11,12} and across the world¹³. Likewise, the Northern Ireland economy is continuing to adapt to the post-EU landscape¹⁴. Other economic challenges are also emerging. The war in Ukraine is compounding an already high inflation rate which is impacting living standards.

As a ten-year Strategy, the proposals included in this document are intended to address long-term structural challenges which have constrained our skills system, economy and society. We want to learn from the evaluation of the last Skills Strategy¹⁵, by building closer relationships across government and with our stakeholders, to ensure we implement a programme of change which remains resilient in the face of expected and unexpected change. This Chapter sets out some of the key strategic issues facing our skills system, setting the context for the programme of change detailed.

COVID-19

COVID-19 had a dramatic initial impact on the local labour market. In total, 287,100 unique employments had been placed on furlough in Northern Ireland at some point during the duration of the Furlough Scheme¹⁶. The number of people claiming unemployment benefits almost doubled in the first full month of the spring 2020 lockdown (85% increase from March to April 2020). Whilst trending downward in recent months, the number claiming unemployment benefits still remains around 30% larger than the pre-pandemic level recorded in March 2020 (see fig. 1)¹⁷.

11 DfE (2021). *10x Economy – Northern Ireland's Decade of Innovation*. Available from: 10X Economy - an economic vision for a decade of innovation | Department for the Economy (economy-ni.gov.uk)

12 DfE/UUEPC (2020) *Research Bulletin 20/11: COVID-19 and the Fourth Industrial Revolution: Challenges, Solutions and Evolution*.

13 World Bank (2021) *The Global Economy: On Track for Strong but Uneven Growth as Covid-19 Still Weighs*.

14 Birnie, E. & Brownlow, G. (2021) *How is Brexit affecting Northern Ireland's Economy*.

15 DfE (2020) *Evaluation of Success through Skills – Transforming Futures*.

16 HMRC (2021) *Coronavirus Job Retention Scheme statistics: 4th November 2021*.

17 NOMIS Official Labour Market Statistics (2022) *Seasonally adjusted claimant count*.

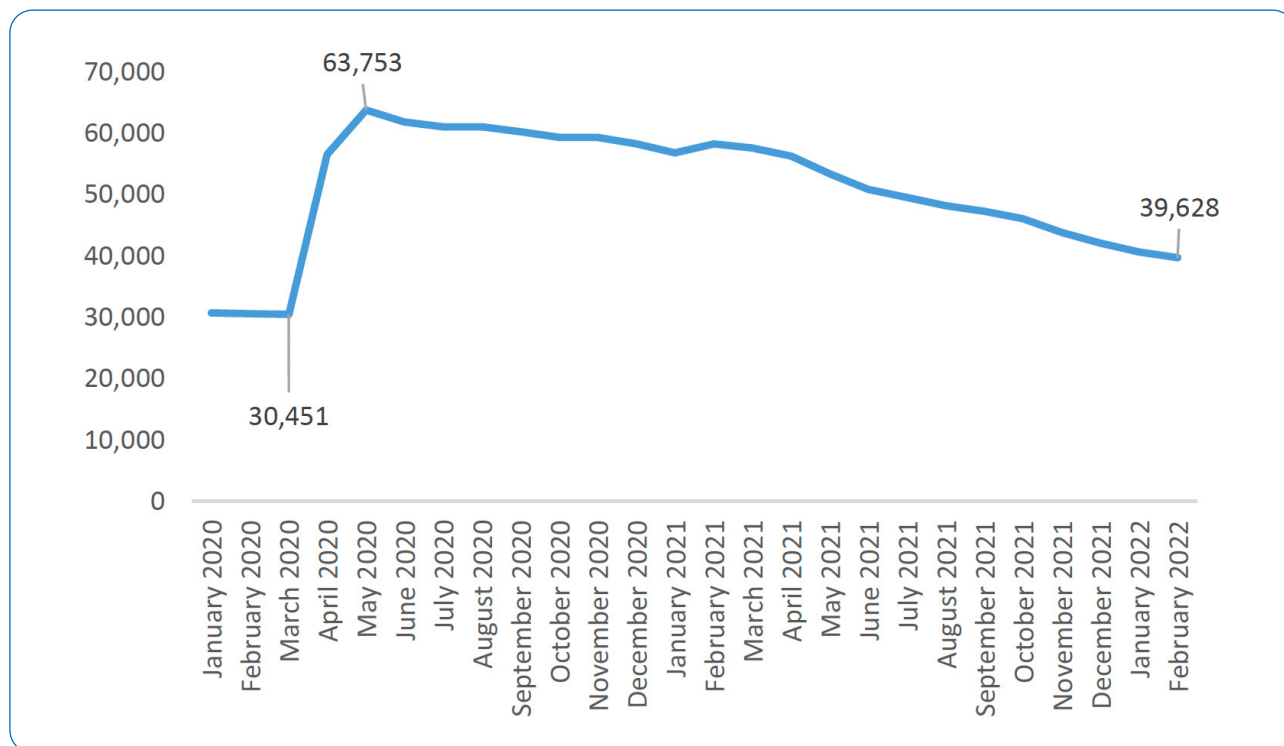


Figure 1: Total number of people claiming unemployment benefits, Jan 2020 – Feb 2022

Whilst the impact on the local labour market was evident initially, recent signs indicate a strong rebound, even after the withdrawal of the furlough scheme, with online job advertisements relatively high¹⁸ and jobs at their highest ever level¹⁹. There are also opportunities presented to us from COVID-19. There is the potential for greater homeworking opportunities which could help increase labour market participation amongst certain cohorts, for example, parents with caring responsibilities.

There are some signs, however, of a disproportionate impact on certain groups, such as young people²⁰. During the pandemic, a demographic assessment of sectoral employment by the Ulster University Economic Policy Centre highlighted a number of concerns, including increased vulnerability of women, individuals with long-term health conditions and people in flexible forms of employment²¹. These are areas where the Skills Strategy must support recovery. In two further demographics, however, the onus on the skills system is particularly apparent: the impact on young people and the impact on those with low or no qualifications.

18 [DfE \(2021\) Analysis of Burning Glass data.](#)

19 [ONS \(2021\) Earnings and employment from Pay as you Earn Real Time Information.](#)

20 [DfE \(2021\) Research Bulletin 21/1 – The Northern Ireland Labour Market in the Context of COVID-19.](#)

21 [Ulster University Economic Policy Centre \(June 2020\) Labour market implications of COVID-19.](#)

Young People

On average, the worst affected sectors employ proportionately more people aged under 25, meaning young people's exposure to the economic impact of the crisis is considerable. As a result, many young people have remained in education and training.

Since the pandemic began, there has been a marked decline in the rate of employment amongst 16 to 24 year olds, from an estimated 56.4% at the end of 2019²² to 43.8% at the end of 2021²³. The 16-24 age group accounted for an estimated 28% of all unemployed persons during November to January 2022, despite this age group accounting for approximately 13% of the total population aged over 16²⁴.

In a similar vein, when broken down by age, the 16 to 24 year old age group has experienced a large increase in its inactivity rate (from 40.7% in the November to January 2020 period to 52.8% in November to January 2022)²⁵; a trend not shared among other age groups.

Many young people have chosen to remain in education or training, with inactivity, as a result of being a student, rising by an estimated 26,000 over the past two years²⁶. This will have undoubtedly been supported by continuous improvement over time at GCSE and A-level, the pandemic-related assessment arrangements and the easing of MaSN. However, there are an estimated 15,000 young people who are economically inactive and not in education or training. A further 4,000 young people are estimated to be unemployed and not in education or training. Combining these two cohorts represents a local NEET rate of 10%²⁷, in line with the UK rate.

Highest Qualification Achieved

There was a stark disparity in the proportion of workers furloughed, or made redundant, when the highest qualification achieved is taken into account. Analysis of Labour Force Survey data from the Ulster University Economic Policy Centre (UUEPC)²⁸ indicated that all categories of qualification below an undergraduate degree qualification (NQF L6) have experienced a fall in employment. Conversely, there has been an increase in employment amongst people with graduate (NQF L6) and postgraduate qualifications (NQF L7+).

The reasons for a disproportionate impact on the low-skilled are similar to those impacting young people. Workers, on average, are lower skilled in sectors such as Retail, Arts & Entertainment and Hospitality. On average these sectors have been more significantly impacted than sectors that have a higher skills profile across their workforce.

22 Refers to November to January 2020

23 [Refers to November to January 2022, Labour Force Survey, NISRA.](#)

24 [NISRA \(2022\) 2020-based Interim Population Projections for Northern Ireland.](#)

25 [Labour Force Survey, NISRA.](#)

26 [Labour Force Survey time series, NISRA, \(difference between Sep-Nov 2019 to Sep-Nov 2021\).](#)

27 [Quarterly Labour Force Survey Tables, NISRA.](#)

28 [Ulster University Economic Policy Centre \(March 2021\) NI Labour Market Briefing March 2021.](#)

The Fourth Industrial Revolution

*“The Fourth Industrial Revolution represents a fundamental change in the way we live, work and relate to one another. It is a new chapter in human development, enabled by extraordinary technology advances commensurate with those of the first, second and third industrial revolutions.”*²⁹

The concept of ‘*The Fourth Industrial Revolution*’ captures the rapid change underway in our labour market, driven by technological advances, globalisation and demographic change³⁰. Jobs are changing rapidly and the skills necessary to do those jobs means a ‘Skills Revolution’ is a vital component in successfully navigating how the workforce transitions to the emerging labour market and economy³¹.

A 2017 Report³² suggested that the technology theoretically exists to automate 50% of the work humans are paid to do across the globe. As shown in the chart below (Fig. 3), the impact is unequal across occupations. Less than 5% of all occupations are fully automatable, but approximately 60% of jobs include up to 30% of time spent on activities that are technically automatable.

29 [World Economic Forum \(2021\). *Fourth Industrial Revolution*.](#)

30 [OECD \(2019\). *OECD Employment Outlook 2019: The Future of Work*.](#)

31 [DfE/UUEPC \(2019\). *Intelligent Futures: Working with Automation and Digitisation to Deliver Sustainable Employment and Growth*.](#)

32 [McKinsey Global Institute \(2017\). *Jobs Lost, Jobs Gained: What the Future of Work Will Mean for Jobs, Skills and Wages*.](#)

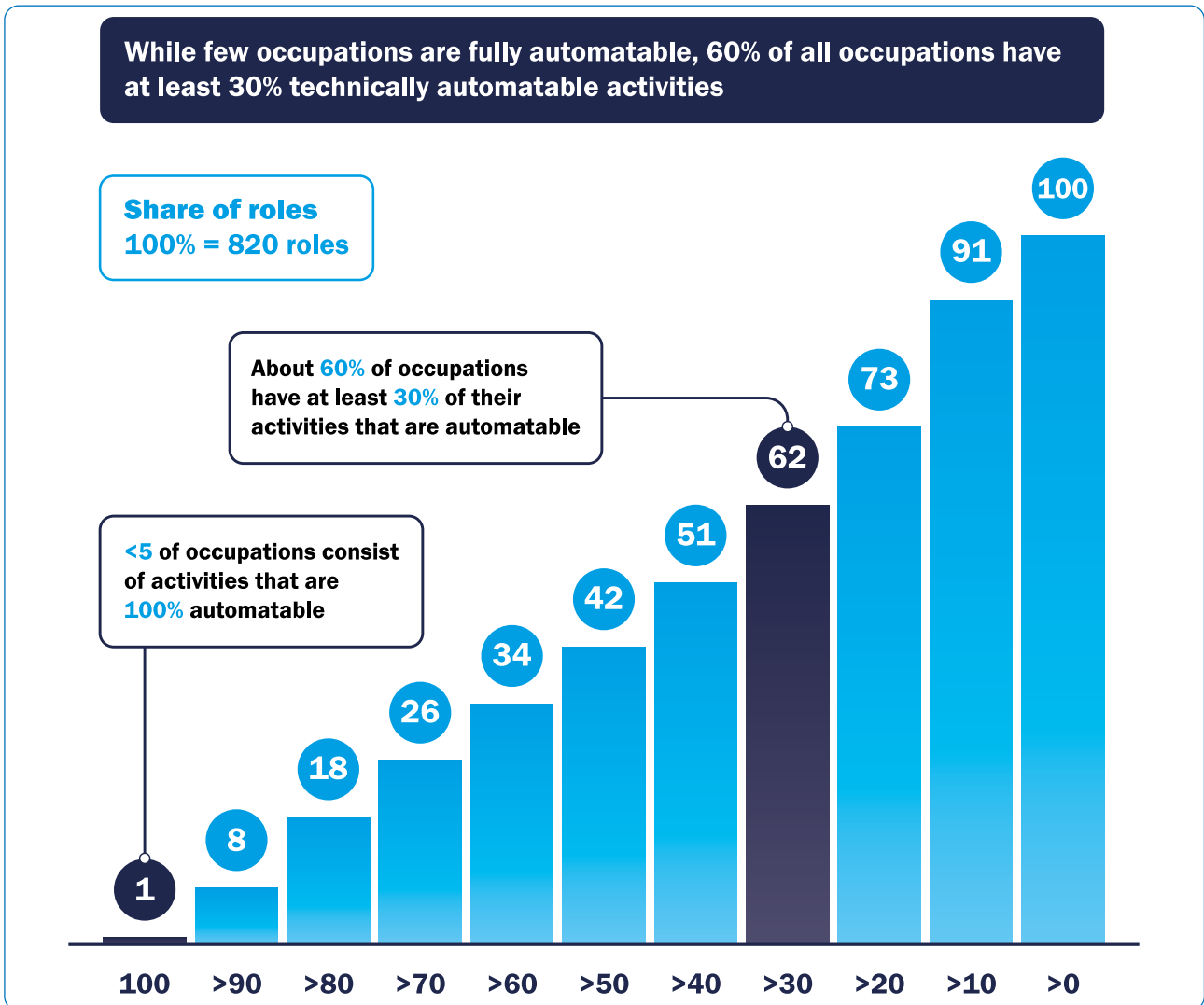


Figure 3: Technical Automation Potential, %

Evidence of such change is apparent in our everyday lives – how we shop, bank communicate, interact – but it is also apparent when we look at how the economy is changing. The share of jobs in the manufacturing sector has fallen across advanced economies as service sectors have grown³³. These sources do not anticipate an overall fall in the number of jobs. Instead, they suggest that advanced economies will graduate towards continued service sector growth and fewer, more highly skilled jobs in the manufacturing sector, focused on R&D and innovation activity. Jobs typically undertaken by those with low or no skills are increasingly vulnerable to automation.

33 [Manpower Group \(2017\). A Skills Revolution: From Consumers of Work to Builders of Talent.](#)

Research from the UUEPC³⁴ demonstrates the relevance of this perspective to our region. At the macro level, it anticipates an overall increase in the number of employment opportunities, productivity growth and improved living standards. At the micro level, however, the greatest impact is expected to be on low skilled workers, where employment and earnings potential is likely to be eroded further.

Technology and Globalisation

In recent decades, communication and logistics technologies have led to rapid globalisation, from which Western economies have benefited significantly³⁵. In one sense, the playing field is levelling, with several emerging economies offering growing populations with improving standards of education.

This provides businesses with greater choice in where they invest. The world is an increasingly competitive place, but businesses operating in knowledge-intensive sectors continue to deliver the greatest returns on investment in advanced economies. The availability of skilled local talent has been identified as the key determinant in a company's investment decisions, followed by the cost of labour³⁶.

The primary argument made by Landfall Strategy Group³⁷ is, that as a small advanced economy, our future prosperity relies on our ability to identify and invest in the sectors where we are, and can continue to be, globally competitive. In an increasingly globalised world, a small economy must offer unique expertise and products to the global market. Our comparatively limited human and capital resources prohibit our potential to compete with large economies in a broad range of sectors.

The development of specific specialist skills, through globally recognised research institutions which will work collaboratively with Northern Ireland-based businesses to drive global competitiveness, is key to our economic success, our decade of innovation. In our skills system, this means at the highest levels of education, we must enhance our focus on research-orientated qualifications, aligned to the needs of our most competitive, exporting businesses.

Improving Economic, Societal and Environmental Wellbeing

Whilst our skills system is central to Northern Ireland's economic development, it will also contribute to the positive outcomes we want to achieve in our society and environment.

From an economic perspective, it must be acknowledged that only a small proportion of the population will complete research-orientated qualifications and progress to jobs at the forefront of developing Northern Ireland's competitive proposition. As these sectors develop, however, they bring with them a broad range of sector specific graduate and sub-degree level jobs. This

34 [DfE/UUEPC \(2019\). Intelligent Futures: Working with Automation and Digitisation to Deliver Sustainable Employment and Growth.](#)

35 [DfE/Landfall Strategy Group \(2019\). The Strategic Integration of Skills and Innovation in Northern Ireland: An International Small Economy Perspective.](#)

36 Ibid

37 Ibid

is an area where we need to strengthen our skills system, boosting the supply of mid-level qualifications and producing more graduates with the STEM qualifications crucial to knowledge-intensive sectors of the economy.

Other sectors - such as health and social care, wholesale and retail, manufacturing and administrative and support services - are amongst the sectors with the greatest annual gross demand for labour³⁸. Whilst innovative, export-orientated sectors can drive new success in our competitive proposition, it is these sectors that will continue to be the lifeblood of our economy and society. As '*A 10x Economy*'³⁹ details, we want to see the diffusion of innovation across our economy, driving positive change in all our businesses and in our productivity performance.

Also noted in '*A 10x Economy*' are the opportunities, and the challenges, which lie ahead as we contribute to the UK's net zero carbon targets. Some sectors - such as energy, transport and construction - will face particular change, not least in the skills that will be required within the sector. Indeed, the Department's recent '*Energy Strategy for Northern Ireland - Consultation on Policy Options*'⁴⁰ highlights the strong advanced materials and engineering sector already present in Northern Ireland, which gives us the opportunity to be at the forefront of innovation in global efforts to tackle climate change. Skills will be required at all levels, however, as we aim to diffuse the benefits of greener ways of working and living across our society.

Demographic Change

These technological changes are taking place in the context of aging populations. Consequently, shrinking proportions of the population are actively engaged in the labour market and the competition for skilled workers is increasing. The Manpower Group argues that this has led to the emergence of a two-tiered labour market, where those who have 'in-demand' skills have greater flexibility to decide how, where and when they work, whilst those without face an uncertain future⁴¹.

38 [UUEPC \(2021\). Northern Ireland Skills Barometer 2021 Update.](#)

39 [DfE \(2021\). 10x Economy - Northern Ireland's Decade of Innovation.](#)

40 [DfE \(2021\). Energy Strategy for Northern Ireland - Consultation on Policy Options.](#)

41 [Manpower Group \(2017\). A Skills Revolution: From Consumers of Work to Builders of Talent.](#)

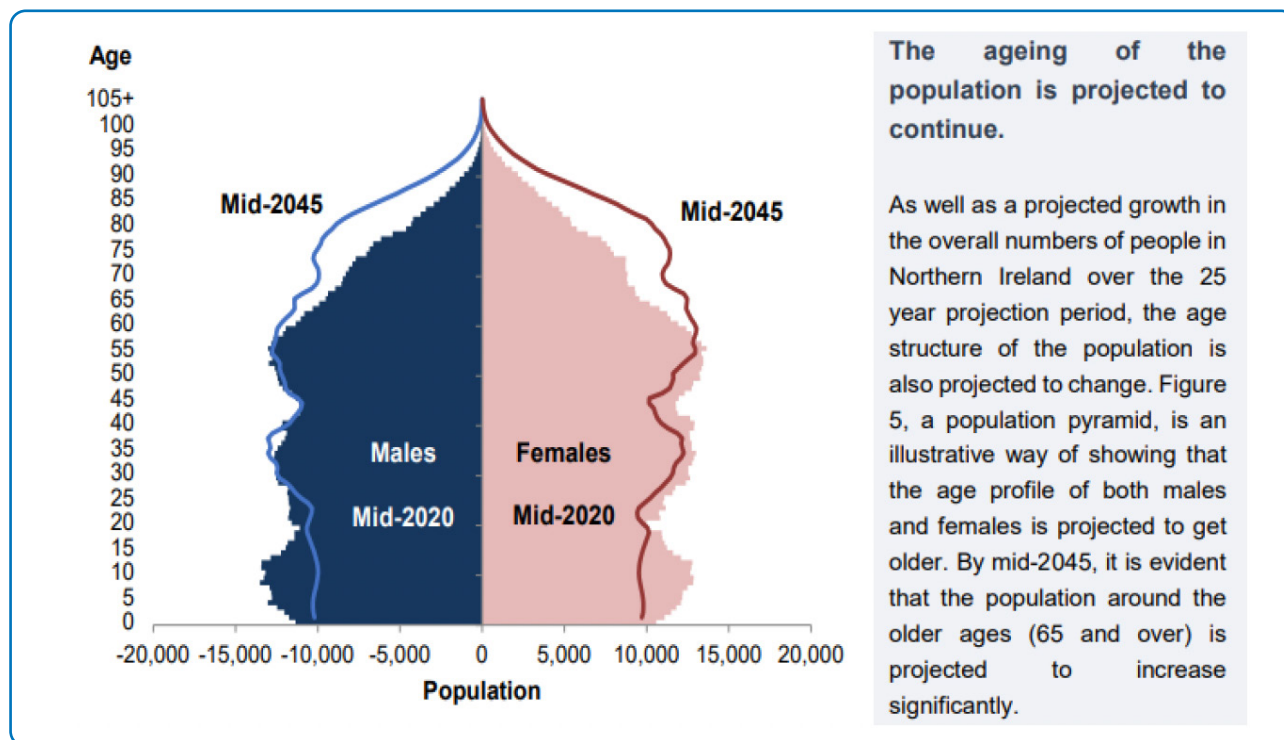


Fig 4: Population Based Projections for Northern Ireland⁴²

As the OECD indicates⁴³, we can no longer rely on the traditional career pathway of education – work – retirement. As the labour market changes rapidly, the ‘life cycle’ of skills is shorter than ever before. Individuals must access learning at several stages throughout their lives, to ensure their skills remain relevant in an ever-changing world.

The Fourth Industrial Revolution exposes older and lower skilled workers to increased risk of job displacement, through the impact of automation⁴⁴. It is fundamental, therefore, that more people are given access to the skills that will enable them to compete in the emerging labour market and that lifelong learning becomes a key feature of our education system and society at large⁴⁵, to ensure that individuals can continue to adapt.

The strategic interface between the provision of social care and access to the skills system must also be recognised, particularly in the context of changing demographics and unpaid care. An aging population will not only have an impact on the scale of the health and social care workforce that is required, but is also likely to cause substantial barriers to active participation in lifelong learning.

42 [NISRA \(2022\) 2020-based Interim Population Projections for Northern Ireland.](#)

43 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

44 [Manpower Group \(2017\). A Skills Revolution: From Consumers of Work to Builders of Talent.](#)

45 [OECD \(2019\). OECD Employment Outlook 2019: The Future of Work.](#)

Census data from 2011 began to show the emerging challenge. In 2011, 214,000 (12%) people in Northern Ireland provided some form of unpaid care, compared with 185,066 in 2001, a 16% increase, with estimates showing that unpaid care is increasingly prevalent in our society. Whilst the measurement of caring responsibility begins at 1 - 19 hours, that accounts for only 57% of the cohort. A further 17% provided care for 20 – 49 hours per week and 26% for 50 or more hours⁴⁶. Such care is vital to the effective functioning of our economy and society. Indeed, its estimated value to the NI Economy is approximately £4.6 billion per annum⁴⁷. In the context of demographic change, however, the barrier unpaid care represents to full participation in adult education and labour market opportunities⁴⁸, as well as the correlation with adverse health impacts and financial hardship⁴⁹, must be recognised.

Labour Market Inequalities

Gender

As set out above, unpaid care is a significant and growing feature of our economy and it is a feature where women provide the majority of care⁵⁰. This does not begin to consider the impact of caring responsibilities in relation to childcare. Childcare responsibilities disproportionately affect women⁵¹, constraining economic independence, labour market participation and promoting gender inequality⁵².

A 2018 Report from the Equality Commission⁵³ set out a series of key inequalities in Northern Ireland's labour market. The gender-based inequalities are as follows:

- Women experience a lower employment rate and higher economic inactivity.
- Lone parents [91% of whom are women] with dependents experience barriers to their participation in employment.
- Carers experience barriers to their participation in employment.
- Women, lone parents with dependents and carers who provide less than 49 hours of care are more likely to be in part-time employment.
- Women experience industrial segregation in employment.
- Women and lone parents experience occupational segregation in employment.
- Prejudicial attitudes both within and outside the workplace are experienced by women.

The Gender Pay Gap for full-time employees in Northern Ireland represents a comparatively positive picture, when compared with the rest of the UK. Based on full-time employees and excluding overtime payments, females earned 4.1% more than males in Northern Ireland

46 [Russell, R. \(2017\) Background Information and Statistics on Carers in Northern Ireland. Northern Ireland Assembly Research and Information Service Briefing Paper.](#)

47 [Buckner, L. & Yeandle, S. / Carers UK \(2015\) Valuing Carers 2015.](#)

48 [Women's Budget Group: Commission on a Gender Equal Economy \(2020\). Spirals of Inequality: How Unpaid Care is at the Heart of Gender Inequalities.](#)

49 [Russell, R. \(2018\) Carers in Northern Ireland: Some Key Statistics.](#)

50 [Carers UK \(2020\) Carers Week 2020 Research Report.](#)

51 [Potter, M. \(2014\) Review of Gender Issues in Northern Ireland. Northern Ireland Assembly Research and Information Service Research Paper.](#)

52 [Equality Commission for Northern Ireland \(2020\) Gender Equality: Childcare Policy Position.](#)

53 [Equality Commission for Northern Ireland \(2018\) Key Inequalities in Employment: Summary.](#)

in 2021, compared with females earning 7.9% less across the UK. The measure, however, overlooks the prevalence of part-time work amongst females. A variety of different measures can be used to consider the Gender Pay Gap, but it is instructive to consider hourly pay for all employees, where females earn 5.7% less than male employees; a gap where NISRA suggests the main explanatory factor is the part-time effect^{54, 55}.

Non-Gender based Inequalities

The Equality Commission's Report⁵⁶ highlights a number of other inequalities present in Northern Ireland's labour market, with those relating to disability and young people highlighted in particular through the consultation on this Strategy. A persistent employment gap between people with and without disabilities is evident.

Labour market statistics show that working age people with disabilities are significantly more likely to be economically inactive and more likely to have low or no qualifications⁵⁷. As the Equality Commission notes, however, even when educational attainment is accounted for, participation in employment is still lower for people with disabilities.

Labour market inequalities are also associated with issues such as age, race, migration status, sexual orientation and religious belief.

It is clear that progressing towards greater equality in our labour market will require work across government; these are not issues the skills system can address in isolation. In the context of our '10x Economy' vision to deliver positive economic, social and environmental change, equality is a strategic issue which must be recognised and such recognition must translate into work at the interface of social and economic policy. In the context of the skills system, this will mean pressing for greater equality of access to education and training opportunities which enhance labour market potential.

Climate Change

As set out in the NI Executive's 'Draft Green Growth Strategy for Northern Ireland'⁵⁸ and the Northern Ireland Energy Strategy 'Path to Net Zero'⁵⁹, addressing climate change is one of the greatest challenges and opportunities facing society. The Climate Change Committee (CCC) has recommended that Northern Ireland reduces greenhouse gas emissions by 82% - equivalent to net zero carbon emissions - to contribute to the UK target of 'net zero' emissions by 2050 and consistent with the 6th Carbon Budget⁶⁰.

A Circular Economy Strategic Framework for Northern Ireland is being developed by the Department which will provide a first step in setting out a clear vision and ambition to increase

54 [NISRA Gender Pay Gap – 2021.](#)

55 [Scholes, M. & Stennett, A. \(2021\) Northern Ireland Gender Pay Gap: A 2021 Update.](#)

56 [Ibid](#)

57 [NISRA \(2021\) Quarterly Labour Force Survey Tables – February 2022.](#)

58 Northern Ireland Executive (2021) *Draft Green Growth Strategy for Northern Ireland*

59 [DfE \(2021\) Northern Ireland Energy Strategy – Path to Net Zero.](#)

60 [Climate Change Committee \(2020\) Sixth Carbon Budget.](#)

resource efficiency, reduce dependence on finite materials, create value and extend the life of products and materials through greater innovation. It will also contribute to the regeneration of natural systems, increasing natural capital and increasing its ability to capture carbon. Greater circularity will help to tackle 45% of GHG emissions from resource extraction and production, greatly contributing to our net zero ambition. It will complement and align with both the Green Growth Strategy and the Skills for a 10X Economy supporting sustainable economic growth and creating new green jobs.

The long time frame should not betray the urgency for action, particularly on the development of the skills which will support the realisation of this target. It is important that we enable individuals to take advantage of emerging economic opportunities – opportunities which are anticipated at all levels and can support inclusive growth.



Fig 5: Profile of Net Zero Workforce

The ‘Energy Strategy for Northern Ireland: Consultation on Policy Options’ sets out the potential for 13,700 new jobs to emerge in the low carbon workforce, this is in addition to the need to re-train and reskill existing workers in sectors based around fossil fuels. Addressing these will require action in the short-term through existing skills programmes, but also strategic planning and business collaboration to ensure the right skills are available, at the right time, to maximise the economic, societal and environmental opportunities.

The Circular Economy Strategic Framework, having been informed by the Circularity Gap Report, will also set out the potential for new green jobs in Northern Ireland, outlining the emerging skills and training needs of business and industry as we transition towards greater circularity. While this list of skills is not exhaustive, there will be demand for skills in design, engineering, repair, procurement, demand management, material sourcing and handling, bio-technology, communications, IT and digitisation.

Labour Market Profile

In 2021, there were an estimated 1.9 million people in Northern Ireland. Around one-fifth (21%) were under the age of 16, so were of compulsory education age, with a further 7% aged 16 to 21. Northern Ireland has an aging population, with 21% of the population estimated to be 65 years old and over by 2030.

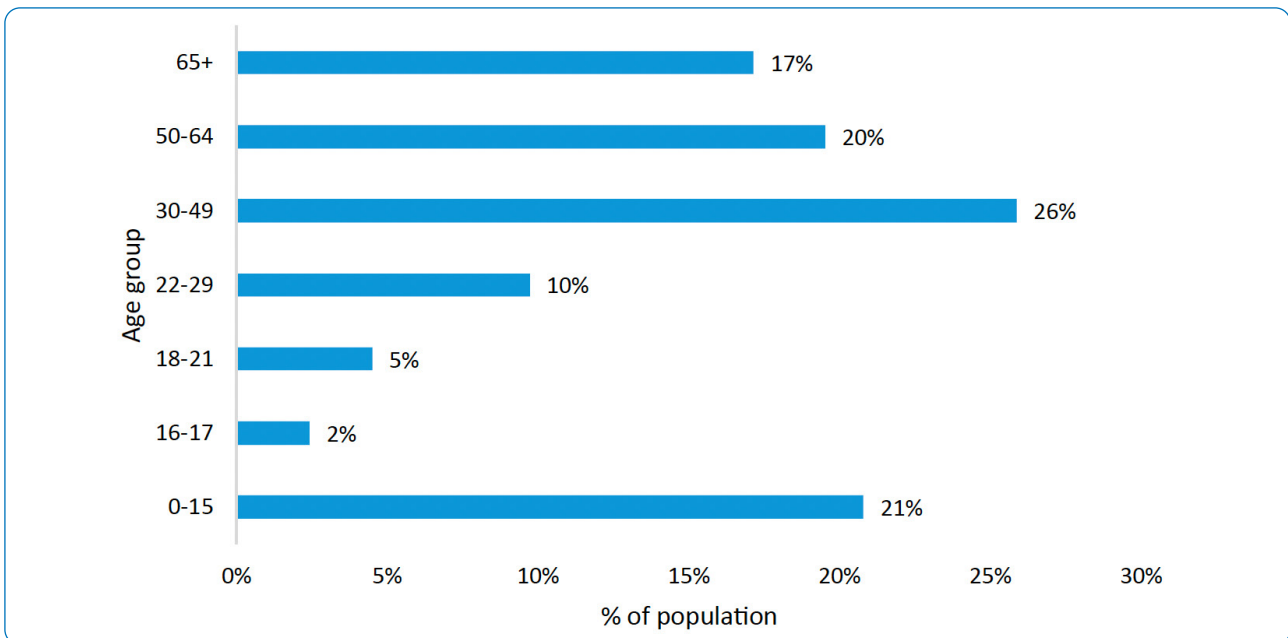


Figure 6: Mid-Year Population Estimates, 2021⁶¹

61 [NISRA \(2022\) 2020-based Interim Population Projections for Northern Ireland.](#)

The working age population (aged 16 to 64) was estimated to be 1.14 million in Northern Ireland. It is estimated that 32% hold degree or higher qualifications, whilst 13% hold no qualifications⁶².

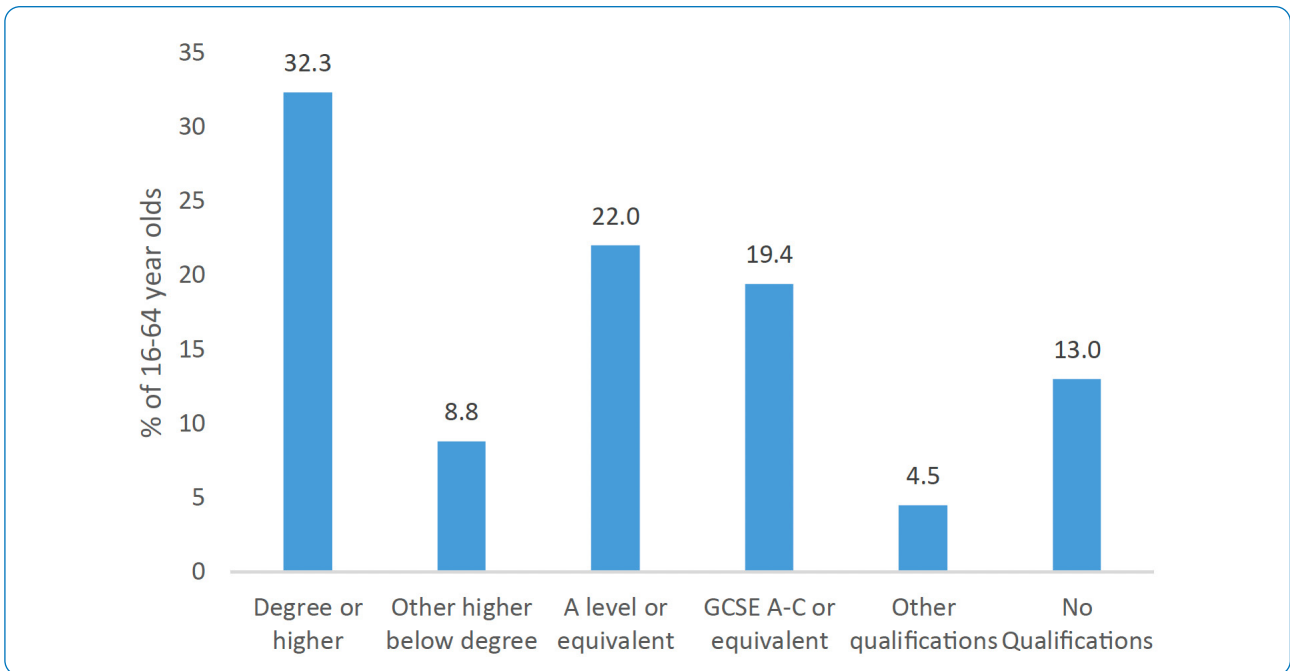


Figure 7: Qualifications of working age population, Q4 2021

Source: NISRA

There has been an increasing proportion of school leavers achieving at least 5 GCSEs A* to C or equivalent, including GCSE English and Maths. This has risen to 76.2% in 2019/20, a 10.2 percentage point increase in five years⁶³. This rises to 91.3% for school leavers with at least 5 GCSEs A* to C or equivalent.

62 [NISRA \(2021 Q4\) Quarterly Labour Force Survey Tables](#)

63 [DE \(2020\) Destination and Qualifications of School Leavers 2019/20](#)

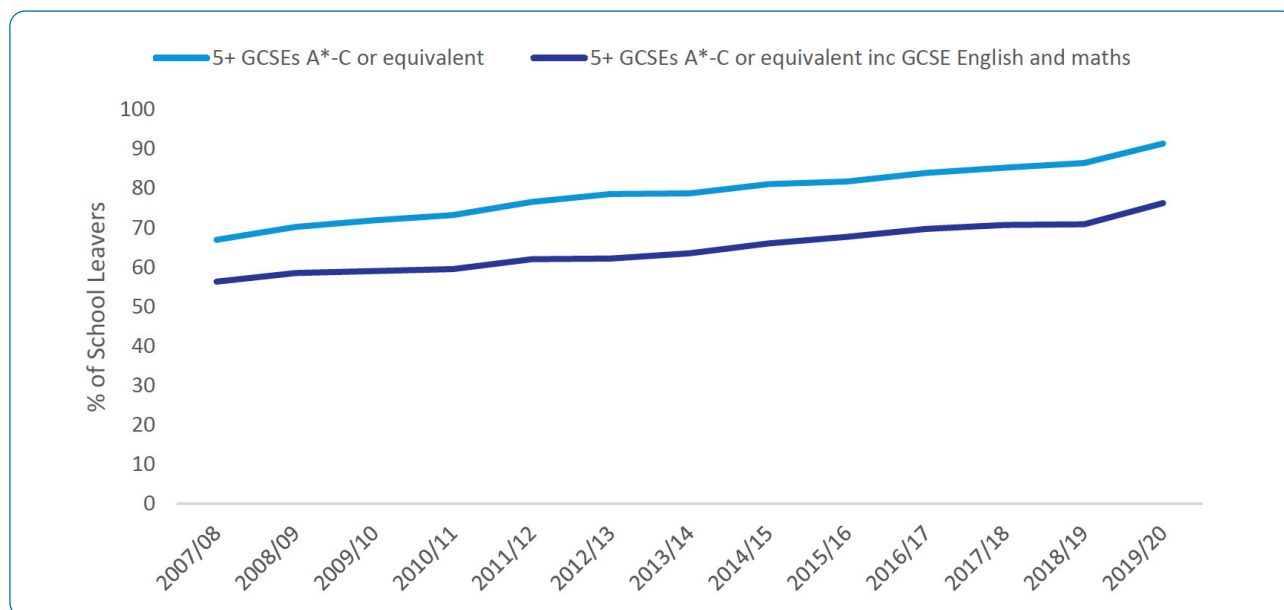


Figure 8: School Leavers Achieving 5 GCSEs A* - C or equivalent

There are variations, with lower achievement rates for those entitled to free school meals (55.7% achieve at least 5 GCSEs A* to C or equivalent, including GCSE English and Maths). It is worth noting that this reflects a trend of significant improvement over the last five years. Tackling underachievement remains a primary focus of the Department of Education’s work.

As for destinations of school leavers⁶⁴, almost half (47.9%) go on to further study in Institutions of Higher Education; three-tenths (29.2%) go on to study in Institutions of Further Education; 8.7% go into employment; 9.5% go on to training; 2.8% are unemployed, with 2.0% of students going to unknown destinations.

In 2020/21, there were almost 51,000 students studying towards regulated qualifications in Further Education Colleges⁶⁵. Over one-third (39%) of students were studying at level 2 and below, 42% were at level 3 with 19% at level 4 and above. There were just over 22,100 (44%) students enrolled in Broad STEM subjects. Just over half (56%) of FE College leavers who completed a qualification at Level 3 or below, were in some form of employment or furloughed six months after achieving their 2019/20 qualification. A further 30% were in learning, 8% were unemployed and 7% were classed as other⁶⁶.

64 Ibid

65 [Department for the Economy \(2022\) Further Education Sector Activity Statistics 2020/21.](#)

66 [Department for the Economy \(2021\) Survey of FE College Leavers 2019-20.](#)

In 2020/21, just over 20,000 qualifications were awarded from Northern Ireland’s Higher Education Institutions⁶⁸. Over half (53%) were first degrees, over one-third (38%) were postgraduate awards, with 9% as other undergraduate (for example, Higher National Diplomas). For those that graduated from a higher education course⁶⁹ in 2018/19⁷⁰, as of July 2021, 70% were in employment only, 13% were in employment and further study, 7% were in further study only, 6% were other (includes traveling, caring for someone or retired) and 4% were unemployed.

The continued progression in achievements by school leavers, combined with 87% continuing in education and training, means that over time there will be an uplift in the qualification profile of the workforce, especially as those entering the workforce are more highly qualified, compared with those leaving. Around 80% of today’s workforce, however, will still be of working age in ten years time, so the skills profile required to deliver on our economic potential will not be delivered by focusing on leavers from education alone.

As demonstrated in the following table - based on NISRA population projections⁶⁷ - the population will continue to age over the next decade. At the same time, however, it will also see a ‘spike’ in the population engaging in the later stages of compulsory and post-compulsory education. Our skills system must be equipped with the resource and capacity to cope.

Age	2021	%	2025	%	2030	%
0-15	395,411	21%	378,995	21%	350,405	21%
16-17	46,209	2%	53,141	3%	52,031	3%
18-21	85,699	5%	91,817	5%	102,381	5%
22-29	185,114	10%	171,811	9%	172,961	9%
30-49	491,975	26%	493,204	26%	491,302	25%
50-64	371,116	20%	375,069	20%	363,762	19%
65+	326,106	17%	355,555	19%	400,894	21%

Figure 9: NISRA National Population Projections, 2021

⁶⁷ Ibid

The Programme for Government (PfG), our Economic Vision and the Skills Strategy for Northern Ireland

A broad base of good educational achievement and skills is fundamental to our society and economy.

The Skills Strategy will be an important contributor to a number of positive economic, societal and environmental outcomes, for example, it will help people obtain better jobs and contribute to them enjoying good mental and physical health; it will support the development of a fair, equal and inclusive society; and it will encourage and support people to fulfil their potential.

From an economic perspective, IPPR⁶⁸ and Landfall Strategy Group⁶⁹ underline the necessity of a co-ordinated approach to economic and skills policy, to enhance the global competitiveness of our most productive, highest value added sectors. This is particularly important in a small economy, such as Northern Ireland, where human and financial resources are limited.

In an outcomes-focused approach, however, we must also be cognisant that poor educational outcomes are linked to income inequality, higher levels of criminality, reduced social and political participation and adverse effects on an individual's perceptions of health, wellbeing and life-satisfaction. Just as mutually reinforcing economic and skills policies are essential to growth and prosperity, collaborative approaches to employability and community development are crucial.

In practice, 'Skills for a 10x Economy' must be directly aligned to the PfG aim of improving wellbeing for all, by supporting efforts to tackle inequalities and providing low skilled, low paid or unemployed individuals with the opportunities they need to work in 'better jobs', whilst concurrently focusing on the provision of skills and qualifications needed to drive economic growth and competitiveness in the key strategic clusters⁷⁰ where Northern Ireland has real global potential.

Skills and Economic Policy

Our vision for a '10x Economy' identifies 'talent' as one of five key pillars of delivering success:

"Inspiring and preparing a future generation of workers that can respond flexibly to future skills requirements. Ensuring everyone across NI has opportunities to thrive."

Historically, the Northern Ireland economy has been characterised by comparatively low pay, low productivity, limited opportunities for career progression, high levels of economic inactivity and low levels of innovation. These are challenges that must be addressed to improve our competitiveness and make our 'decade of innovation' a reality.

68 [Department for the Economy \(2022\) Higher Education Institutions Qualifications bulletin 2020/21.](#)

69 [DfE/Landfall Strategy Group \(2019\). The Strategic Integration of Skills and Innovation in Northern Ireland: An International Small Economy Perspective.](#)

70 [DfE \(2021\). 10x Economy - Northern Ireland's Decade of Innovation.](#)

There are significant structural weaknesses in the Northern Ireland economy. Employment in Northern Ireland is heavily concentrated in sectors which pay low wages and perform poorly from a productivity perspective⁷¹. The NI Executive’s economic policy has long defined the solution as investment in high paying, high value added sectors, which can drive sustainable economic growth – an approach supported by research on international best practice⁷².

Our plans to address this issue have been set out in ‘10x Economy’, which details the new and emerging technologies that will shape the future of Northern Ireland’s economy and the existing clusters that are ready to adopt them.

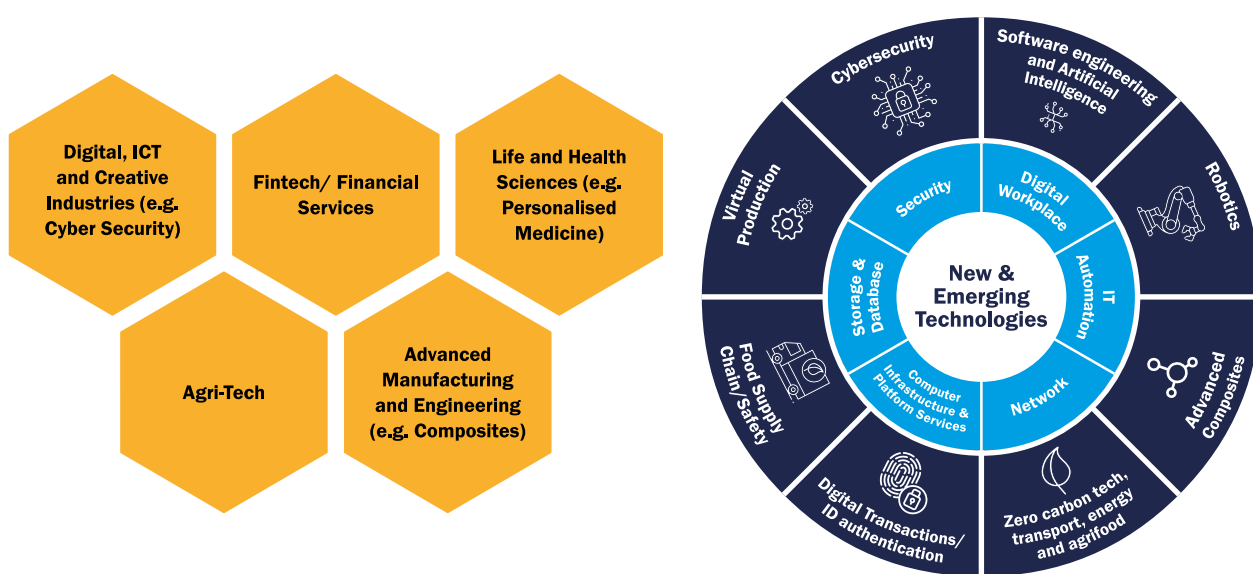


Figure 10: Northern Ireland’s Key Strategic Clusters and the New and Emerging Technologies that will drive them.

The right approach to skills policy, accompanied by appropriate investment in the skills system, will be required to set real change in motion.

Discussion of the intention to ‘prioritise’ often leads to concern that wealth divides and social inequalities will be exacerbated, as only a small proportion of the population achieve the high level qualifications required to work in such sectors. A change in our approach to economic and skills policies, however, provides the potential for greater economic and social prosperity across Northern Ireland.

71 [Johnston, R. & Stewart, N. \(UUEPC\) \(2019\) Understanding Productivity in Northern Ireland.](#)

72 [DfE/Landfall Strategy Group \(2019\). The Strategic Integration of Skills and Innovation in Northern Ireland: An International Small Economy Perspective.](#)

From an economic perspective, 'A 10x Economy'⁷³ highlights how a historical 'fear of focus' has constrained Northern Ireland from maximising its economic potential. It goes on to detail how the emerging City and Growth Deals can support 'innovation diffusion' across our economy. Government and business must also be innovative from a skills perspective.

Skills policy in Northern Ireland –and across the UK as a whole - has historically been approached as a 'supply' problem i.e. more people with more skills and qualifications are required to improve productivity and overall economic performance. Skills policies which do not consider the demand side, however, lead to significant inefficiencies in the skills system and labour market:

*"more skills are not necessarily better skills and the mere existence of skills does not automatically lead to improved economic performance."*⁷⁴

Instead, it is necessary to consider longer term strategic issues about what is right for our economy and society. What approaches can deliver transformative change in productivity and address social inequality?

There is evidence of a 'low skills equilibrium' in Northern Ireland⁷⁵ which is linked to the key economic challenges detailed in this document: low wages, low productivity and low levels of in work progression⁷⁶. Our economy is structured in such a way that many jobs are offered at low skill levels and with commensurate low wage returns to the employee. As a result, individuals are not incentivised or empowered to invest in their skills and their working lives are often characterised by low aspiration. Many businesses accept the constraint that places on their potential to grow, with Northern Irish employers less likely to have provided training than employers in England and Wales⁷⁷.

At the other end of the skills spectrum, many degree holders are underemployed⁷⁸, working in jobs which do not require degree level education, but where a 2:1 degree has become an adopted standard for entry into higher level jobs⁷⁹. What lies between has been characterised as 'the missing middle'⁸⁰.

73 [DfE \(2021\). 10x Economy – Northern Ireland's Decade of Innovation.](#)

74 [OECD \(2014\). Towards an OECD Skills Strategy.](#)

75 [IPPR \(2018\) The Skills System in Northern Ireland: Challenges and Opportunities.](#)

76 [Nevin Economic Research Institute \(2017\). A Low Skills Equilibrium in Northern Ireland?](#)

77 [Department for Education \(UK\) \(2020\). Employer Skills Survey 2019: Training and Workforce Development.](#)

78 [DfE/UUEPC \(2019\). Northern Ireland Skills Barometer 2019 Update.](#)

79 Ibid

80 [Field, S. / The Gatsby Charitable Foundation \(2018\) The Missing Middle: Higher Technical Education in England.](#)

Resolving this problem firstly requires an explicit link between our economic and skills strategies. 'A 10x Economy' details our economic ambition: an innovation focus, a more competitive Northern Ireland and an overall positive impact on our economic, societal and environmental wellbeing. Alongside the sectors that have been identified as having the potential to drive our economic ambition, it is important to recognise those sectors which are major providers of employment and are key to:

- the attractiveness of Northern Ireland as a place (hospitality and tourism⁸¹);
- our social wellbeing as we adapt to demographic change (social care⁸²); and
- our environmental wellbeing as we strive towards our environmental commitments (construction⁸³).

The success of these sectors in delivering positive outcomes for Northern Ireland will depend on an enabling skills strategy; one which provides opportunities from which all our population can benefit and contribute to renewed prosperity. To achieve this, we must work directly with businesses in these sectors to really understand skills requirements and deliver more targeted skills provision.

What qualifications are actually required? Is a degree necessary, or would focused mid-level, technical qualifications be more suited to business needs? We must work with employers, employees and education institutions to ensure relevant education and training opportunities are accessible. And we must contribute to discussion outside the skills system, working across Government and with key stakeholders to identify issues which constrain labour supply.

International best practice identifies improving social partnership as a key means of achieving more fairly balanced skills and economic policies, which can underpin economic growth and social prosperity⁸⁴. Such approaches advocate employers, educators and employee representatives to develop more tailored approaches to recruitment. This is an approach adopted by the Scottish Government in recent years and it is an approach recognised throughout this Strategy.

The governance section of this document (see Chapter 5) proposes the development of fora where government, education institutions, employer and employee representatives can engage more strategically on skills development at the regional and sub-regional levels. We have committed to the development of a set of work quality indicators, which set the standard for the type of work and opportunities which will enable our people, and our businesses, to prosper. We are focusing on the need for significant progress in the number of mid-level qualifications delivered and to tackle skills under-utilisation to ensure businesses and employees fulfil their potential.

81 [DfE \(2021\). 10x Economy – Northern Ireland's Decade of Innovation.](#)

82 [Department of Health \(2018\) Health and Social Care Workforce Strategy.](#)

83 [DfE \(2021\) Consultation on Policy Options for the new Energy Strategy for Northern Ireland.](#)

84 [Keep, E. \(2016\) Improving Skills Utilisation in the UK: Some Reflections on What, Who and How?](#)

A Case Study: Moving on from a ‘Degree First’ Approach to Recruitment: The Cyber Security Framework for Northern Ireland

The Cyber Security Framework for Northern Ireland aims to capitalise on Northern Ireland’s existing potential in the Cyber Security field and make it “one of the world’s leading cyber economies, delivering a thriving knowledge economy, due to exemplary talent; pioneering research and innovation; and the secure and resilient infrastructures needed to support businesses and safeguard the public.”



The Strategic Framework is split into three themes: Defend, Deter and Develop. The ‘Develop’ theme emphasises a focus on skills development, to ensure Northern Ireland can take advantage of its potential and an underpinning approach to development is articulated in ‘*Minding the Gap*’. This highlights Northern Ireland’s existing strengths in degree and post-graduate level education and research in the cyber sector, but also recognises the challenges and limitations of a ‘degree first’ approach to recruitment.

‘*Minding the Gap*’ emphasises the internationally recognised ‘NICE Framework’, which clarifies that work in Cyber Security should not be misunderstood as a single job, where a single educational pathway satisfactorily meets the needs of the sector. Instead, it can be broken down into seven different categories and more than 50 distinct job roles, each requiring different levels of skill, training and experience.

7 categories of work



Analyse



Collect and Operate



Investigate



Operate and Maintain



Oversee and Govern



Protect and Defend



Securely Provision

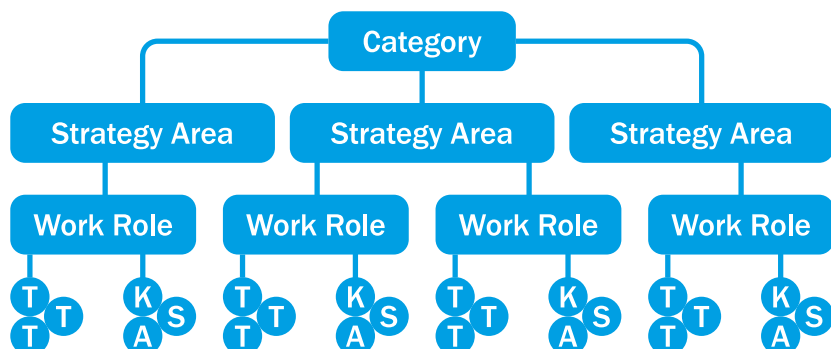
Structure of the Framework

7 Categories

32 Speciality Areas

52 Work Roles

Tasks, knowledge, skills and abilities



Source: Nice Framework

DfE has engaged with businesses to ascertain the extent of difficulties of filling vacancies in Cyber. It is apparent that numbers of graduates/postgraduates coming through the system will not be able to fully meet the current and future needs of NI businesses.

Therefore, in order to complement usual recruitment processes, DfE launched an innovative recruitment pilot. The NI Cyber Gateway Aptitude Programme is an online pilot skills platform, aimed at helping up to 1,000 users retrain for entry-level roles in the fast-growing cyber security industry. The free, online training consists of a variety of learning activities called labs. Each lab focuses on a different area of cyber security, to help the individual gain skills to begin a career within the industry.

To be eligible for the programme, applicants needed no experience in a tech or cyber role, but had to:

- be aged 16 or over;
- live in Northern Ireland; and
- have a GCSE or equivalent in Maths and English.

The programme enables:

- Individuals with various educational attainments and career paths to test their own aptitude for cyber security roles through a series of free learning modules.
- Employers to advertise vacancies, including jobs and placements, at no cost, which match the roles covered by the modules.

Training is aligned to four job roles taken from the NICE Framework: Cyber Defence Analyst; Cyber Defence Incident Responder; Systems Security Analyst; and Vulnerability Assessment Analyst.

In the medium to long-term, the adoption of such a framework can support businesses to better articulate skills needs and recruit effectively, allow education institutions to develop curricula and teaching expertise aligned to industry need and support individuals interested in a Cyber Security career to assess the pathways open to them, regardless of their academic achievement.

Education, Skills and Employability

Northern Ireland is close to (technical⁸⁵) full employment and the economy is rebounding. From a skills perspective, outcomes from compulsory education are getting better and the overall skills profile of the workforce continues to improve (see above and Chapter 3).

This is undoubtedly positive, but significant disparities remain in outcomes, particularly for

⁸⁵ [Unemployment rates below 3% are generally recognised as 'technical' full employment, recognising that a 0% unemployment rate is unlikely to be attained. For further information, see Gregg, P. & Gardiner, L. \(2016\) *The Road to Full Employment: What the Journey Looks Like and How to Make Progress*. The Resolution Foundation.](#)

those living in the most deprived communities. Despite continuous improvement in educational outcomes for children entitled to free schools meals, socio-economic disadvantage continues to be associated with underachievement in education⁸⁶. This trend continues when the working age population is considered. The Northern Ireland Multiple Deprivation Measure (NIMDM)⁸⁷ highlights that, in the most deprived communities, up to 60% of the workforce have low or no qualifications. For comparison, the same statistic in the best performing area is 11%.

As the NIMDM makes evident, in areas of social deprivation, educational underachievement, whether for young people or adults, is not necessarily the cause of, but is directly correlated with:

- low rates of employment;
- high rates of health deprivation and disability;
- poor living environments; and
- a prevalence of crime and disorder.

In an outcomes focused approach, such correlation cannot be overlooked. Cohesive and focused approaches to the development of skills policy do not only concern the realisation of our economic ambition. A determined approach to integration with social policy will be also be vital in tackling disadvantage, ensuring there are opportunities for everyone and developing our societal wellbeing.

Key Points on Governance

The governance and funding of the skills system are key aspects of this consultation document and will be discussed in full detail in Chapter Five. As readers work through this document, however, there are some key contextual points to highlight briefly: proposals to rationalise the governance of the skills system and the need for investment.

Rationalising Governance of the Skills System

Concerns have been expressed both within government and from stakeholders that the skills landscape is crowded, with a broad range of strategies focusing on various aspects of the skills system. Indeed, proposals on the need to rationalise our skills system, to address the complexity of the skills landscape, were strongly endorsed by a broad range of individuals and organisations who engaged in our consultation.

The OECD's research⁸⁸ proposes the addition of a new management and leadership strategy and a lifelong learning strategy. The development and management of strategies takes time

86 [DE / Expert Panel on Educational Underachievement \(2021\) A Fair Start: Final Report & Action Plan.](#)

87 [NISRA \(2017\) Northern Ireland Multiple Deprivation Measure: SOA Level Results.](#)

88 [OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

and the dedication of significant human and financial resources. It can also lead to the separation and divergence of policy priorities with consequences for an effective, value for money skills system⁸⁹, duplication of stakeholder engagement and a lack of flexibility and agility in the skills system^{90, 91}.

Over the next decade, we want to emphasise action, not strategy development. ‘*Skills for a 10x Economy*’ provides a single overarching document for the strategic development of post-compulsory education and lifelong learning. It will be supported by 2-5-10 year implementation plans, to ensure regular assessments of progress and the ability to adapt and respond to emerging changes in society, the economy and the labour market. More agile and responsive action plans will therefore replace subordinate strategies.

Action Plans will be developed in the direct context of the Skills Strategy and set within the same oversight and reporting (governance) frameworks. This will place an overarching focus on the delivery of outcomes from our skills system: outcomes for individuals, our society and our economy.

Funding the Skills System

In a small advanced economy, with limited natural resources and limited fiscal powers, investing in the skills of our population is one of the key levers at our disposal to stimulate economic development and address social inequality. ‘New Decade, New Approach’⁹² detailed the need for an independent review of the education system in Northern Ireland, spanning provision from early years to further and higher education and placing the outcomes for children and young people at the centre. This review was announced by the Minister for Education in December 2020⁹³, with final outcomes anticipated in spring 2023.

Whilst this strategic review is welcomed, we must also recognise that seizing the opportunity for generational change will bring a more pressing need for renewed investment in skills. This is a priority to address social inequality and to drive our decade of innovation, particularly in the post-COVID and post EU Exit context.

During the 2010s, investment in education and skills declined substantially. Analysis of data from HM Treasury’s Country and Regional Analysis⁹⁴ reveals that by 2019/20, to return education and skills investment in ‘real terms’ to 2010/11 levels of expenditure, an additional £429 million per annum investment would be required. Most of this reduction occurred in the first half of the period and is due to a number of reasons, including increased tuition fees offsetting the cost to government. Over the same period, policy decisions on higher education tuition fees have limited the capacity of universities to raise revenue, leaving per capita student funding behind other UK regions. This limits opportunity for individuals across Northern Ireland

89 [IPPR \(2018\) *The Skills System in Northern Ireland: Challenges and Opportunities*.](#)

90 [Oliver A. J. & Schwella, E. \(2018\) *Closing the Strategy Execution Gap in the Public Sector*. *International Journal of Public Leadership*.](#)

91 [Sull, D. \(2007\) *Closing the Gap between Strategy and Execution*. *MIT Sloan Management Review*.](#)

92 [Northern Ireland Office \(2020\) *New Decade, New Approach*.](#)

93 [DE \(2020\) *Independent Review of Education*.](#)

94 [HM Treasury \(2020\) *Country and Regional Analysis: 2020*.](#)

and is detrimental to the realisation of our economic potential (see Section 4 below). More recently, government investment in education and skills has increased as part of the economic recovery efforts during the COVID-19 pandemic.

Investment decisions over the term of *'Skills for a 10x Economy'* (to 2030) also need to make reference to demographics. The population cohorts in the 5-9 and 10-14 year old age groups are the biggest in Northern Ireland in 25 years⁹⁵. These young people will be engaging with further and higher education in the next three to 10 years. With the appropriate funding in place, we can significantly improve the long-term outcomes for this cohort and support the long-term development of our economy and society, including the contribution the skills system will make to improving environmental outcomes.

The decrease in economic activity experienced during the COVID-19 pandemic has hit school leavers, young people and the lowest qualified workers, hardest. A key means to address this is to invest in skills development. By doing so, opportunities can be provided for individuals to boost their long-term potential and, as new opportunities emerge, to support economic recovery and growing competitiveness.

On the other hand, failing to prioritise and tackle Northern Ireland's growing skills deficit will stifle economic development. It will represent a missed opportunity to reset our economy towards long-term growth and prosperity and to make a real impact on social inequality.

The OECD's Report⁹⁶, designed to support the development of the Skills Strategy, made two key recommendations on investment in skills:

- All relevant decision makers and ministers should guarantee support and sustainable financial resources to achieve strategic goals as part of a binding, cross-departmental Skills Strategy for Northern Ireland; and
- Ensure sustainable funding models and budgeting processes that enable multi-year planning beyond the short-term, traditional annual budget cycle.

These recommendations, and a broader discussion of the need for investment in the skills system, are included in Chapter 5.

95 [NISRA \(2021\) 2020 Mid Year Population Estimates for Northern Ireland.](#)

96 [OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Chapter 3: Northern Ireland’s Current Skills Landscape

‘*Success through Skills – Transforming Futures*’⁹⁷ was published in 2011 by the Department for Employment and Learning (DEL), as Northern Ireland was beginning to emerge from recession. Based on research conducted by Oxford Economics⁹⁸, it set four Strategic Goals to be achieved by 2020 “in order to achieve the skills profile required [to] enable Northern Ireland to compete globally.”

The Strategic Goals⁹⁹¹⁰⁰ were to:

- Increase proportion of people in employment with level 2 skills and above to 84 – 90% by 2020, from a baseline of 71.2% in 2008;
- Increase proportion of people in employment with level 3 skills and above to 68 – 76% by 2020, from a baseline of 55.5% in 2008;
- Increase proportion of people in employment with level 4 skills and above to 44 – 52% by 2020, from a baseline of 33.0% in 2008; and
- Increase proportion of those graduating from NI HEI’s in (narrow) STEM by 25 – 30% in 2020 from a baseline of 18% (target translates to 22.5%).

As is demonstrated in the following table, substantial progress has been made:

	Baseline 2008	Target 2020 ¹⁰¹	NI Actual
Strategic Goal 1 Level 2+	71.2%	84%	82.8%
Strategic Goal 2 Level 3+	55.5%	68%	67.4%
Strategic Goal 3 Level 4+	33.0%	44%	45.8%
Strategic Goal 4 Narrow STEM	18%	22.5%	23.4%

Figure 11: Outcomes against Success through Skills Strategic Goals.

When considering overall performance against the goals, largely positive progress has been made. Whilst the first two goals were not met, they were relatively close to being met. The lower end of Strategic Goal 3 was met whilst the fourth goal has been exceeded.

97 [DEL \(2011\) Success through Skills – Transforming Futures.](#)

98 [DEL/Oxford Economics \(2009\) Forecasting Future Skills Needs in Northern Ireland.](#)

99 [NISRA \(2022\) Labour Force Survey, adhoc request Strategic goal 4 uses Qualifications gained at UK Higher Education Institutions: Northern Ireland Analysis 2020/21.](#)

100 Level 2 is based on the achievement of five or more GCSEs at grades A* - C or equivalent. Level 3 assumes the achievement of more than 1 A-levels, or equivalent. Level 4 indicates the achievement of a higher level qualification, such as a foundation degree or higher national diploma. ‘Narrow’ STEM qualifications include biology, physical and computer science and engineering disciplines but excludes other STEM subjects such as medicine and architecture.

101 Note: Strategic Goal 4 target refers to 2020/21

The proportion of the workforce with low or no qualifications (level 2 or below) has been a persistent problem in Northern Ireland. Whilst substantial progress was made, continued improvement will be required to keep pace with other comparable small advanced economies. It is also acknowledged that some of this will have been achieved from those entering the labour market with higher qualifications compared with those leaving.

'*Success through Skills*' forecast the growing demand for narrow STEM qualifications and this target has been achieved. Considered in tandem with the evidence emerging from the Skills Barometer, however, two key messages can be drawn from the data set out above. Firstly, that the greatest anticipated undersupply of skills, under a high economic growth scenario, will be at levels 3 – 5, with a need to be more ambitious around these levels to meet our projected economic demand. Secondly, that the 'narrow STEM' target did not fully account for the scale of change required to satisfy the changing needs of the Northern Ireland economy.

Achieving bulk improvements in the qualifications of the workforce is undoubtedly important, however, it needs to be done in a way that meets the needs of the economy, to ensure skills are well utilised and workers are properly compensated for the skills they hold. In general, holding higher qualifications is associated with higher wages, lower economic inactivity rates and better wellbeing overall.

These findings inform some of the objectives set out in this Strategy. For example, '*developing a culture of lifelong learning*' considers how professional and technical education pathways (typically level 3 – 5 qualifications) can be established as an alternative to academic education and how we engage more businesses and members of the existing workforce in accredited skills development. The development of the Skills Barometer, first published in 2015 and published biennially thereafter, provides us with a 'live' evidence base for skills demand.

The 2-5-10 year implementation plans which will underpin this Strategy will limit the risk of skills forecasts becoming dated in a rapidly changing labour market, as arguably is the case with the research which informed the strategic goals included in '*Success through Skills*'.

Impact on the Economy and Society

Drawing on some key labour market indicators is also instructive, as we assess the impact '*Success through Skills*' has had on overall economic performance. Despite improvements in the skills profile of the population over the Strategy period, there are still substantial challenges including:

- Northern Ireland's working age population remains relatively low qualified compared with the UK. Almost 13% have no qualifications, almost double the UK rate and proportionally fewer are educated to degree level and above¹⁰².
- The rate of economic inactivity¹⁰³ NI (27.5%) is significantly above the UK average (21.3%).

102 [NomisWeb \(2022\) Qualifications \(GCSE\) by age \(category\).](#)

103 [NISRA \(2022\) Labour Force Survey \(refers to November to January 2022 period\).](#)

- Productivity continues to lag behind the UK rate (at around 80% of the UK average in 2019¹⁰⁴), which in turn compares unfavourably with other advanced economies.
- There are longstanding variations in qualification attainment, though the gap is narrowing. Those entitled to free school meals are much more likely to leave school with lower qualifications (55.7% of those entitled to free school meals left school with at least 5 GCSEs A*-C or equivalent, including GCSE English and Maths, compared with 83.4% of those leaving not entitled to free school meals¹⁰⁵) and those in employment from more deprived neighbourhoods are less likely to hold higher qualifications (30.5% of those in employment in the most deprived neighbourhoods hold level 4 and above qualifications, compared with 58.8% of those in the least deprived neighbourhoods¹⁰⁶).

It is important that the economically inactive are supported to re-engage with the labour market. We know that approximately 49,000 people (November to January 2022) who are currently economically inactive would like to work, if the circumstances were right¹⁰⁷. Therefore, the skills system must play its part in a cross government approach to support the economically inactive. It must be acknowledged that this is not a straightforward matter of improving skills provision. Economic inactivity can be associated with a range of challenges, such as long-term health problems, caring responsibilities and generational unemployment.

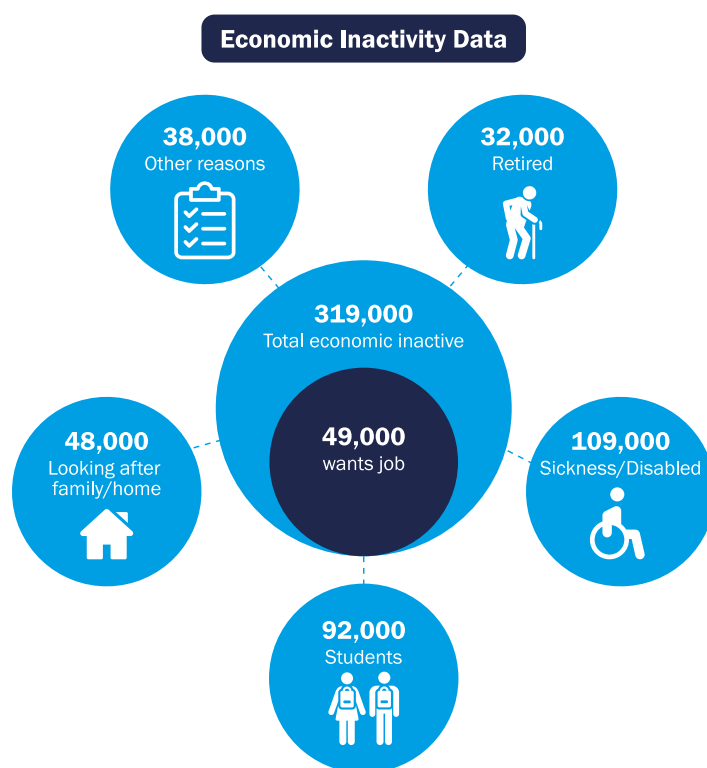


Figure 12: Reasons for Economic Inactivity in Northern Ireland, aged 16-64¹⁰⁸
Source: NISRA, Economic and Labour Market Statistics

104 [ONS \(2021\) Annual Regional Labour Productivity.](#)

105 [DE \(2021\) Destination and Qualifications of Northern Ireland School Leavers.](#)

106 [NISRA \(2021\) Draft PFG/ODP Indicators.](#)

107 [NISRA \(2022\) Labour Force Survey.](#)

108 [NISRA \(2022\) Labour Force Survey.](#)

The relative productivity gap to the UK (see fig. 13 below)¹⁰⁹ has remained consistent over time.

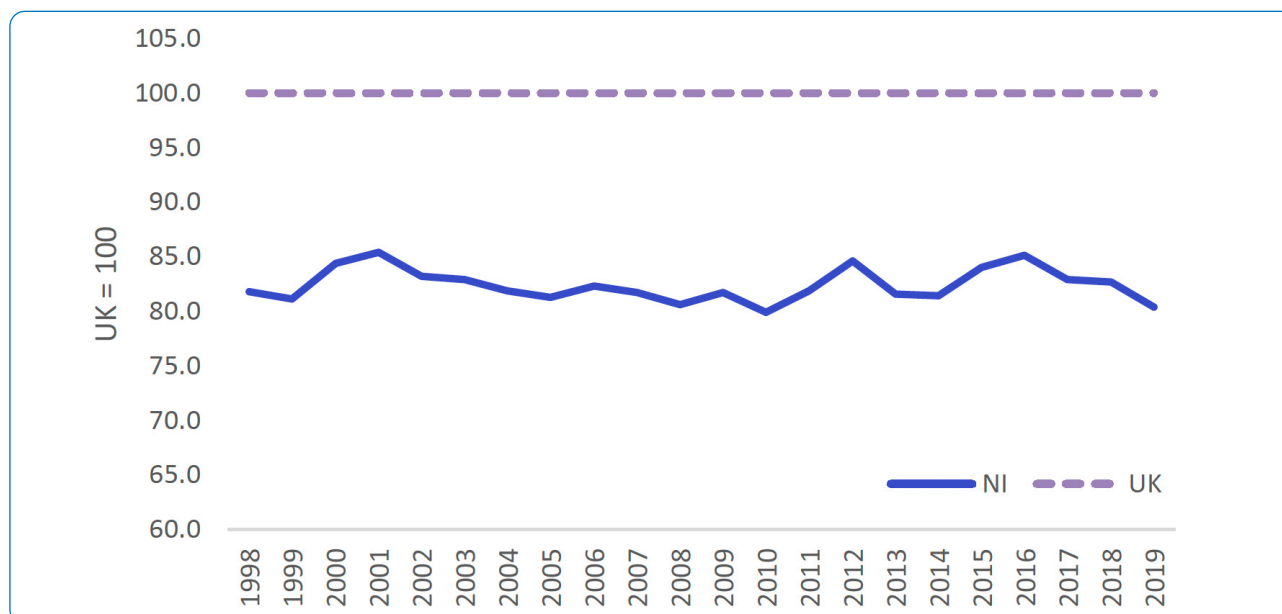


Figure 13: Labour Productivity: GVA per hour worked

This remains a persistent problem in Northern Ireland¹¹⁰. Productivity performance is subject to a range of influences and we must recognise that improvement in the skills profile alone will not resolve the problem. Developing greater coherence between skills, innovation and economic policy, however, has the potential to make a real impact.

Research commissioned by the DfE and undertaken by Landfall Strategy Group¹¹¹ underlines how the prioritisation of skills and innovation, aligned to high growth, high value added sectors, can drive productivity improvement. A more specific and refined focus on post-graduate level qualifications and research, which supports innovation potential in established areas of competitive strength, enhances the potential for Northern Ireland to develop a unique, globally competitive proposition. Simultaneous growth in the development of degree and sub-degree level skills to maximise absorptive capacity is crucial, as is a greater focus on the leadership and management skills necessary to maximise the capacity of high-potential firms.

‘*Success through Skills – Transforming Futures*’ was published as a departmental Strategy by the Department for Employment and Learning. The formation of DfE creates the landscape for a more coherent, strategic approach to skills which supports our economic potential.

109 [ONS \(2019\) Annual Regional Labour Productivity.](#)

110 [Johnston, R. & Stewart, N. \(UUEPC\) \(2019\) Understanding Productivity in Northern Ireland.](#)

111 [DfE / Landfall Strategy Group \(2019\) The Strategic Integration of Skills and Innovation Policy in Northern Ireland.](#)

It is necessary to go further. Our previously noted proposal - to develop interdepartmental governance structures - is based not only on international best practice and feedback from stakeholders, which highlights a lack of 'joined-up' government - but also findings from our evaluation of *'Success through Skills'*¹¹², which showed that it was viewed largely as a departmental strategy and lacked wider buy-in across government. Reducing Northern Ireland's high levels of economic inactivity is a key example of where the skills agenda would benefit from an 'Executive' level profile, to ensure a more comprehensive, cohesive, outcomes-focused approach to the development and implementation of related policy.

The fact that 71% of Northern Ireland's citizens are satisfied with their lives overall and 70% are satisfied with their standard of living should not be overlooked. This compares with UK averages of 68% and 65%¹¹³. It is crucial that skills interventions continue to enhance social wellbeing, whilst improving economic performance.

Considerable progress has been made under *'Success through Skills – Transforming Futures'*, laying a solid foundation for the future development of Northern Ireland's skills profile. It is a core aspect of our proposals that the next Skills Strategy is recognised as a central aspect of public policy, which has significant implications for the economic prosperity and fabric of our society.

112 [DfE \(2020\) Evaluation of Success through Skills – Transforming Futures.](#)

113 [Which? \(2019\) Consumer Insight Report: 2019 Northern Ireland.](#)

Chapter 4: Strategic Goals & Policy Objectives

The development of this Strategy has drawn on a wide range of local and internationally focused evidence. This has been supplemented by a series of formal stakeholder engagement events, held across Northern Ireland and through ongoing engagement with stakeholders and advisory bodies. That research and engagement led to these proposed Strategic Goals, Policy Objectives and Policy Enablers (see chapter 5), which were endorsed by a majority of responses to a public consultation held between May and August 2021.

The Skills Barometer for Northern Ireland is the most significant development in informing our strategic skills landscape over the last decade. In its simplest terms, the Skills Barometer defines three major challenges for our skills system, if it is to support Northern Ireland's 10x Economy:

- Employment opportunities for individuals with low or no qualifications¹¹⁴ will continue to decrease. There is a need to promote better pathways to mid and higher level qualifications, to avoid exacerbating existing inequalities.
- There is a need to significantly increase the proportion of the workforce with at least level 3 qualifications, to meet our economic potential.
- The overall number of degree and post-graduate awards needs to be increased over the lifetime of the Strategy. A key focus for the development of a prosperous, knowledge-based economy is to significantly increase the number of qualifications delivered in narrow STEM¹¹⁵ subjects, with corresponding reductions in areas such as social studies.

Strategic Goals for the new Skills Strategy

NB: these goals place the skills supply gap identified under the Skills Barometer's high growth scenario at the centre of the proposed Strategy.

By 2030:

- **Strategic Goal 1: increasing the proportion of individuals leaving Northern Ireland higher education institutions with first degrees and post-graduate qualifications in narrow STEM subjects;**
- **Strategic Goal 2: increasing the proportion of the working age population with qualifications at level 2¹¹⁶ and above; and**
- **Strategic Goal 3: increasing the proportion of the working age population with qualifications at level 3¹¹⁷ and above.**

114 The Skills Barometer divides qualifications by three main levels: 'low or no qualifications' – qualifications at level 2 and below i.e. 5 GCSEs at grades A* - C including English and Maths and equivalent; 'mid-level qualifications' – ranges from level 3 (two A-Levels at A* to C and equivalent professional and technical qualifications) to Level 5 (sub-degree level higher education qualifications); and 'higher level qualifications' – degree and post-graduate level qualifications. These strategic goals are set against the same standards.

115 Narrow Stem refers to the core sciences, maths, computer science, engineering and technology.

116 Refers to level 2 qualification i.e. at least 5 GCSEs at grades A* to C or equivalent.

117 Refers to level 3 qualification i.e. A Levels (2 or more advanced level passes) or equivalent.

Each of these are addressed briefly in turn, establishing the baseline, target and rationale.

Strategic Goal 1

Increasing the proportion of individuals leaving Northern Ireland higher education institutions with first degrees and post-graduate qualifications in narrow STEM subjects¹¹⁸¹¹⁹.

Baseline: 24% in 2019/20

Target: 27% by 2029/30

Source: Qualifications in Northern Ireland's Higher Education Institutions, DfE

Rationale: Findings from the 2021 Skills Barometer produced by the Ulster University Economic Policy Centre projects that around 30% of the demand for new workers at degree level (at level 6) and above will be for those who qualified in narrow STEM. This target aims to reduce the narrow STEM gap by around half.

Strategic Goal 2¹²⁰

Increasing the proportion of the working age population with qualifications at level 2 and above (i.e. at least 5 GCSEs at grades A to C or equivalent).*

Baseline: 77.3% in 2020

Target: 85-90% by 2030

Source: Qualifications in Northern Ireland, Labour Force Survey, NISRA

Rationale: as those entering the workforce will be more qualified on average than those leaving, there will be a natural upskilling over time. For example, 87% of 25-34 year olds have at least a level 2 qualification compared with 71% of 50-64 year olds. This target stretches what will happen anyway but also takes account that there is an upper limit to what is possible across the whole workforce.

Strategic Goal 3

Increasing the proportion of the working age population with qualifications at level 3 and above (i.e. at least A Levels (2 or more advanced level passes) or equivalent).

Baseline: 57.2% in 2020

Target: 70-75% by 2030

Source: Qualifications in Northern Ireland, Labour Force Survey, NISRA

118 Refers to level 4 and above

119 This excludes qualifiers from NI HEIs who are classified as other undergraduate as the majority of these are qualifying below level 6.

120 There is currently a review of the education section of the Labour Force Survey questionnaire. The methodology to derive highest qualification levels will be kept under review, which may result in amendments following its conclusion. Following completion of the review, the targets for Strategic Goal 2 and 3 may be reviewed.

Rationale: Results from the 2021 Skills Barometer indicates that there will be a potential shortage of new workers at all levels from level 3 and above in the decade to 2030 under a high growth scenario. Therefore it will be vital that some of this demand will be met by the existing workforce upskilling and that more upskilling is taking place than ever before whilst those outside of the labour market are afforded entry level opportunities.

As before, those entering the workforce will be more qualified on average than those leaving leading to a natural upskilling over time. For example, 73.9% of 25-34 year olds have at least a level 3 qualification compared with 57.1% of 50-64 year olds. This target stretches what will happen over the passage of time but also takes account that there is an upper limit to what is possible across the whole workforce.

These goals will be met through three major policy objectives:

- Addressing Skills Imbalances, Driving Economic Growth;
- Creating a Culture of Lifelong Learning; and
- Enhancing Digital Skills, Developing a Digital Spine.

And supported by a further three policy enablers:

- Enhancing Policy Cohesion;
- Building Strong Relationships; and
- Investment in the Skills System.

Policy Objective 1: Addressing Skills Imbalances, Driving Economic Growth

'Addressing Skills Imbalances, Driving Economic Growth' can be seen as an overarching objective. It is at the heart of what the Skills Strategy aims to achieve. The following chapter sets out evidence, and a proposed programme of activity, aligned to each of these strategic goals.

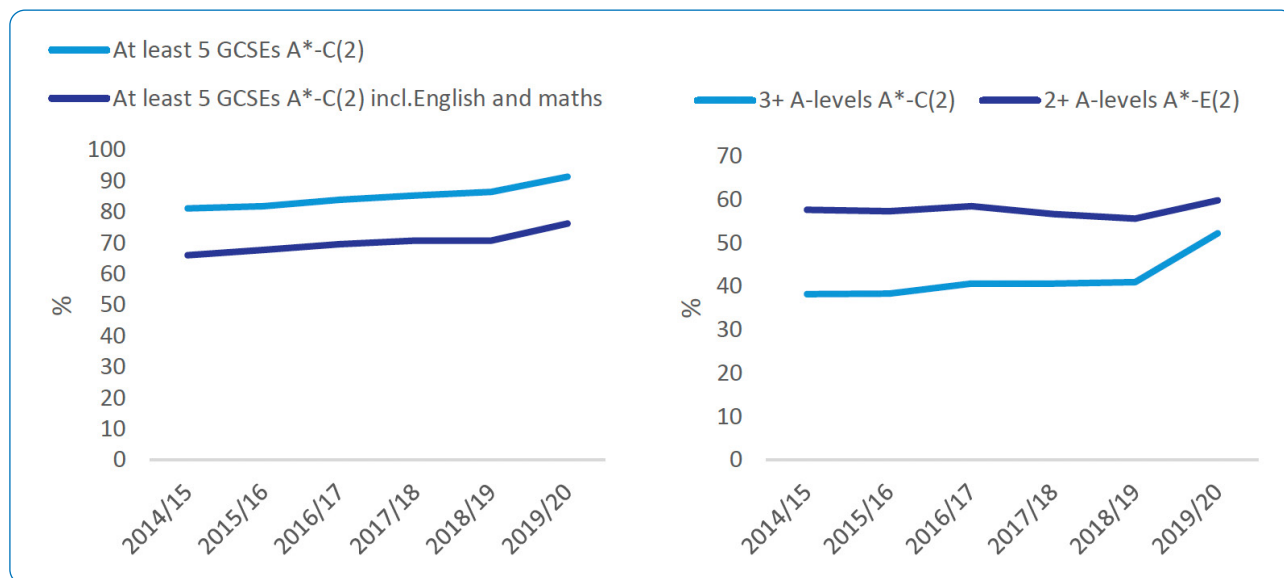
Individuals with Low or no Qualifications – Delivering on the Level 2 Target

The last Skills Strategy, 'Success through Skills – Transforming Futures'¹²¹ set out the development of an increasingly 'skills hungry' labour market. That has proven to be the case. As the Skills Barometer demonstrates, this trend is expected to continue, as labour market opportunities for those with low or no skills continue to decline.

Outcomes from school leavers have continued to improve (see fig 14 & 15¹²²).

121 [Department for Employment and Learning \(2011\) Success through Skills: Transforming Futures.](#)

122 [DE \(2022\) School Leavers.](#)



Figs 14 & 15: Qualifications of School Leavers 2014/15 to 2019/20¹²³

Similarly, the proportion of adults aged 16-64 with level 2 and above skills has grown considerably¹²⁴.

% of Working age adults with at least Level 2 qualifications, NI, 2016-2020	
2016	73.0%
2017	72.1%
2018	75.1%
2019	75.8%
2020	77.3%

This is undoubtedly positive, but significant disparities remain in outcomes, particularly for those living in the most deprived communities. Despite continuous improvement in educational outcomes for children entitled to free schools meals, socio-economic disadvantage continues to be associated with underachievement in education¹²⁵. This trend continues when the working age population is considered. The Northern Ireland Multiple Deprivation Measures (NIMDM)¹²⁶ highlights that, in the most deprived communities, up to 60% of the workforce have low or no qualifications. For comparison, the same statistic in the best performing area is 11%.

123 Publication of the 'Summary of Annual Examination Results' (SAER) was suspended in 2019/20 and 2020/21 in line with approaches taken in England and Wales and in the context of the COVID-19 pandemic. 2018/19 is the latest year for which published information is available.

124 [NISRA \(2021\) Qualifications in Northern Ireland.](#)

125 [DE / Expert Panel on Educational Underachievement \(2021\) A Fair Start: Final Report & Action Plan.](#)

126 [NISRA \(2017\) Northern Ireland Multiple Deprivation Measure: SOA Level Results.](#)

As the NIMDM makes evident, in areas of social deprivation, educational underachievement, whether for young people or adults, is not necessarily the cause of, but is directly correlated with:

- low rates of employment;
- high rates of health deprivation and disability;
- poor living environments; and
- a prevalence of higher levels of crime and disorder.

While opportunities for individuals with low or no skills will continue to contract, almost one in four of the current working age population remains in this bracket¹²⁷. As set out previously, these individuals are most exposed to economic shocks, such as COVID-19 and to the rapid change taking place in our labour market, through the development and adoption of new technologies.

The Skills Strategy must place a focus on enabling more individuals to participate in the post-compulsory education (level 3 and above) which will drive our economic recovery and improve societal wellbeing. This must be balanced, however, against the appropriate measures to ensure that existing inequalities are not exacerbated. It is vital that more individuals with low or no qualifications are effectively engaged in education and training which will provide pathways to sustainable employment.

As is set out below, a range of provision is already available to support individuals to engage with skills development from entry level to level 2 qualifications. As noted in the strategic goals section, we have set the ambitious target of 85-90% of the working age population having at least a level 2¹²⁸ qualification by 2030, starting from a baseline of 77.3%. In order to support promotion of access to level 2 education, and its importance to our developing economy and society, it is our intention to offer a lifetime guarantee of access to level 2 education, subject to funding considerations. In addition, a comprehensive review of the current offer, including identification of gaps, will need to be undertaken in collaboration with stakeholders.

Recommendation 1:

We will explore the introduction of a lifetime guarantee of access to level 2 education.

Improving Employability

Employability NI

The Department for Communities (DfC) is responsible for Employment Service policy, design and delivery of active labour market programmes, disability employment programmes and improving financial inclusion and capability.

127 [NISRA \(2021\) Qualifications in Northern Ireland \(% of adults with no qualifications and below level 2 qualifications\).](#)

128 Refers to 5 or more GCSEs grades A* to C or equivalent.

The Department has developed a blueprint to deliver a new employment offer in Northern Ireland called Employability NI (ENI). One of the key components of the new offer is Labour Market Partnerships (LMPs), which aims to improve employability outcomes and labour market conditions by working through coordinated, collaborative, multi-agency partnerships, achieving regional objectives whilst being flexible to meet the needs presented by localised conditions.

The LMP model involves the establishment of a single, regional, multi-agency partnership and 11 local multi-agency partnerships based within current local Council boundaries, as detailed in the diagram below (Fig.16).

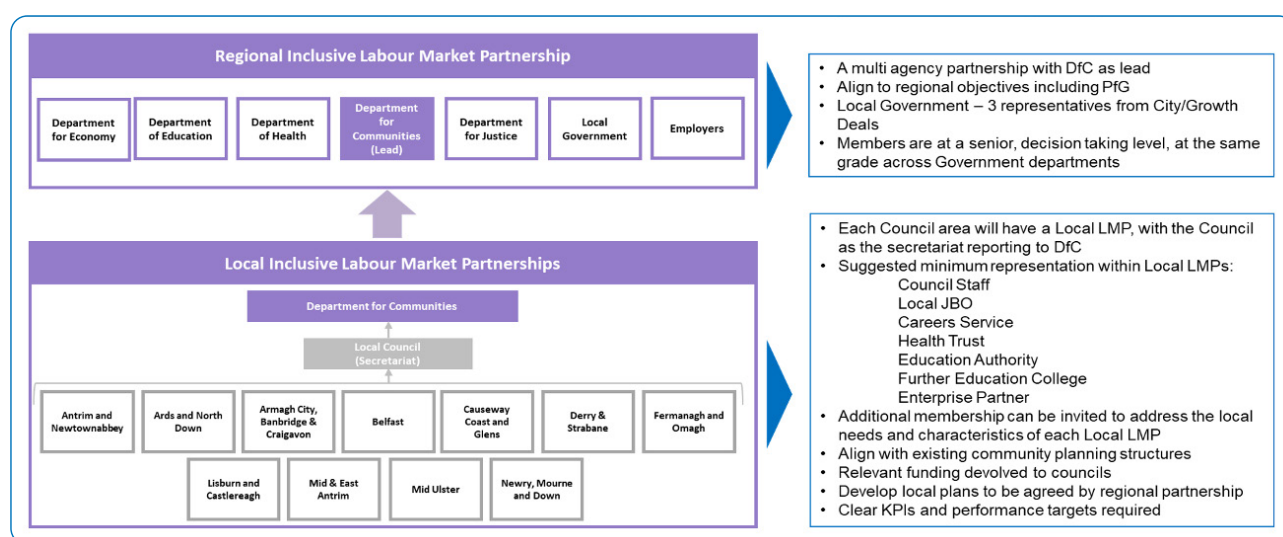


Fig. 16 Labour Market Partnerships Model.

Each Local LMP is required to produce Partnership Plans highlighting actions to impact on the identified issues within the area, whilst linking to targets within the Programme for Government and Community Planning. To ensure continued strategic coherence of the offer, Local Partnership Plans require approval by the Regional LMP before funding can be offered and local plans enacted.

An LMP Co-Design group has been established since September 2020, including key stakeholders, Councils and Government Departments. In progressing the LMP design, a close working relationship has been already been established between DfC and DfE, including potential collaborative working opportunities between Local LMPs and Local Skills Hubs and potential joint funding opportunities utilising the LMP model.

All 11 local councils have established interim LMP in their area and developed local Action Plans for delivery in 2021/22 and are finalising local Action Plans for 2022/23. It is anticipated that the 2021-2023 period will be an interim delivery period as the LMP model develops further and benefits from the lessons learned, before full implementation from 2023/24 onwards.

Recommendation 2:

DfE will continue to support and collaborate with DfC as 'Employability NI' and the associated LMPs are implemented.

Jobstart

The JobStart Scheme was launched on 2 April 2021 to help participants aged 16 to 24 years get into the job market, by offering 6 month job opportunities with a range of employers (or 9 month if additional criteria is met), in all business sectors across Northern Ireland.

The overall aim of JobStart is to improve the employability and chances of sustained employment of those at risk of long term unemployment in response to the unprecedented and rapid rise in unemployment levels brought about by the impact of COVID-19.

JobStart opportunities can be in any sector, including the voluntary and community sector, as long as the job does not replace existing or planned vacancies, or cause existing employees, apprentices or contractors to lose work or reduce their working hours. In addition, there are also a number of JobStart pilots underway to assist returning citizens, care experienced young people and those with disabilities to avail of the scheme.

Employers are required to develop the skills of young people and must provide training to develop *occupational* skills and *employability* skills. Employers must also provide a robust training plan for each young person and progress on the plan is monitored by both the JobStart Team and a work coach to ensure each participant receives a quality opportunity.

Funding available for each job opportunity covers the relevant National Minimum Wage for 25 hours a week, plus the associated employer national insurance contributions and employer minimum automatic enrolment contributions. There will also be funding available to support young people to develop new skills and to help them move into sustained employment after they have completed their 'JobStart' funded job.

While there is no requirement for employers to recruit the young person at the end of the opportunity, it is anticipated that many employers will want to retain participants as a lot of time will have been invested in training. This includes direct engagement between employers and the JobStart Team, at the end of month 5, to discuss recruitment intentions and highlight pathways into apprenticeship opportunities.

The Minister for Communities is considering potential changes to the JobStart Scheme designed to increase the number of participants on the Scheme.

Recommendation 3:

DfC will continue to monitor the effectiveness of JobStart and collaborate with DfE to consider pathways to work for young people.

Enhanced Employability Services

DfC has commenced work to expand existing Work Ready Employability Services provision, to include new modules and wraparound support for the long-term unemployed and economically inactive, under the title Enhanced Employability Service (EES). EES will support unemployed and economically inactive persons to overcome their individual barriers to employment and assist them to progress on their journey towards and into employment. Participation will be offered on voluntary basis to all those in receipt of a qualifying working age benefit, with provision being delivered at a local level (defined by Council boundaries).

Recommendation 4:

DfC will develop and implement EES.

Engaging Individuals with Low or No Qualifications.

A range of activity is already underway in this area which will be developed and refined over the term of this Strategy, to ensure it is delivering on the needs of our economy and society.

Skills for Life and Work

The Skills for Life and Work programme, launched in September 2021, is a work based, vocational education and training programme for young people with low or no qualifications. It is a step towards a fully reformed training offer at Entry Level and Level 1 and includes employability, personal and social skills development, Essential Skills qualifications in literacy, numeracy and ICT, and professional and technical qualifications.

Co-design to support the next stage of the Entry Level and Level 1 reform journey is ongoing, with a strong focus on maximising engagement, learning and achievement for a diverse cohort of young people who experience a range of needs. Lessons have already been identified, including from youth work practice, that are informing an approach at these levels which places a key emphasis on helping participants to develop their self-efficacy, along with other important capabilities that employers say they need, and which provides a concrete pathway to higher levels of training and to employment.

For young people who are not yet ready for full time learning or employment, programmes are available through the European Social Fund to build skills to support personal development and employability, with employment and further training outcomes. For young people who, as a rule, do not readily engage or sustain engagement in other programmes or have good relations needs, programmes are available under Peace4Youth. A new programme is under development as part of the PEACEPLUS funding stream to continue delivery of our United Youth Commitment to deliver 10,000 places for those young people most marginalised and disadvantaged¹²⁹.

129 [The Executive Office \(TEO\) About Together: Building a United Community \(T:BUC\)](#).

Recommendation 5:

DfE will introduce a revised Entry Level and Level 1 Programme, co-designed and informed by best practice, and our experiences on Skills for Life and Work and United Youth

Remote Learning – Essential Skills

Our response to COVID-19 included a number of measures aimed at supporting the most vulnerable members of our society and workforce. There is an opportunity to develop these initial measures towards a longer term approach to addressing low skills, deprivation and inequality.

The short-term interventions put in place, as a response to COVID-19, included a range of level 1 and 2 courses, designed for remote delivery and focusing on vital entry level skills including Essential Skills¹³⁰, employability skills and digital qualifications. We are already aware that demand exists for increased access to remote learning facilities for workers. Building on the success of these interventions and, working with post-compulsory education providers, we will examine the potential to mainstream such remote learning provision.

Recommendation 6:

We will examine the potential to mainstream remote learning provision in key areas of Essential Skills, employability skills and digital skills for individuals and employers.

Union Learning Fund (see also ‘Creating a Culture of Lifelong Learning’)

DfE continues to invest in the Union Learning Fund for Northern Ireland (ULF) which is managed by the Northern Ireland Committee of the Irish Congress of Trade Unions (NIC ICTU). The ULF aims to improve the skills profile of people in employment, to help them sustain and progress within their careers.

Essential Skills of literacy, numeracy and ICT are fundamental to working life and there is a clear correlation between higher literacy and numeracy skills and wages and productivity. The ULF offers employees the opportunity to engage in a range of learning programmes, including Essential Skills, to ensure workers, particularly those in low skills jobs, develop their skills in order to progress and become more productive in their employment.”

The NI Traineeship

The NI Traineeship is the newly reformed flagship level 2 vocational education programme that delivers the commitments set out within ‘Generating our Success¹³¹’ the Northern Ireland Strategy for Youth Training. It has been designed to offer breadth beyond the skills of specific job roles and to deliver a simpler qualifications’ landscape. Key to its design is the delivery of a full outcome at level 2 that is equivalent to five GCSEs at grade C or above, including maths and English.

130 [Throughout this document essential skills refers generally to literacy and numeracy skills as set out in ‘Essential Skills Standards and Curriculum for Literacy and Numeracy in Northern Ireland’.](#)

131 [DfE \(2015\) Generating Our Success – the Northern Ireland Strategy for Youth Training.](#)

The Traineeship is available to young people over 16 who are not yet in employment, but who are ready and able to engage on a challenging programme in their preferred occupational area through a Further Education College. While the target age group is 16 to 24 years, the Traineeship is open to all age groups. The innovative delivery methodology for the Traineeship includes the integration of project based learning and transversal skills development aimed at developing employment ready young people, who are well prepared to take up key roles in the NI workforce¹³².

Mid-Level (Professional and Technical) Qualifications

The Skills Barometer¹³³ forecasts shortages of level 4 and 5 qualifications in a broad range of fields of study¹³⁴, however, a predominance of STEM subjects is notable.

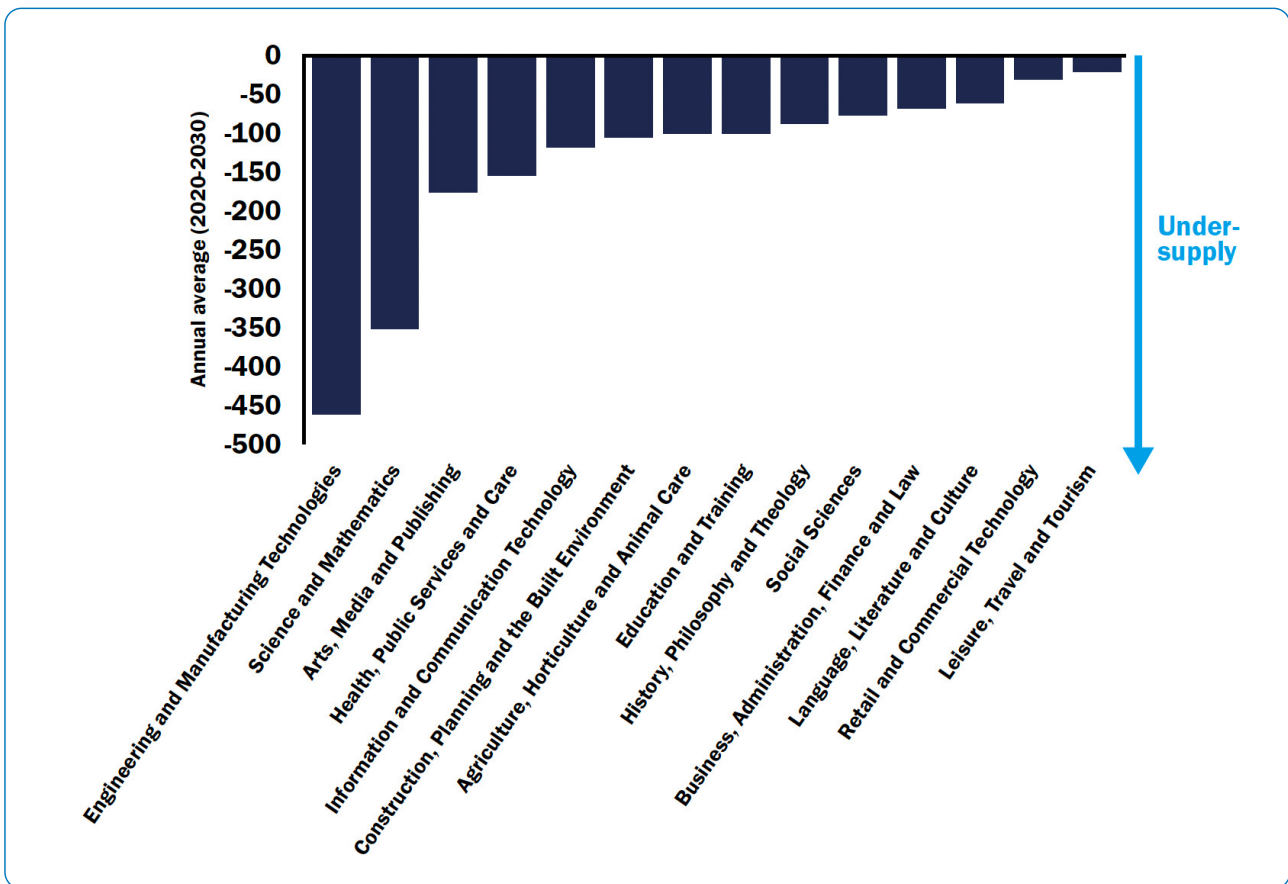


Figure 16: NQF level 4/5 subject balance by subject (1-digit SSA)

132 See 'Generating Our Success' for detail on associated policy commitments.

133 [DfE/UUEPC \(2021\) Northern Ireland Skills Barometer 2019 Update](#).

134 Whilst a growing demand for level 3 qualifications is identified in the Skills Barometer, subjects in demand at level 3 are not specified. Subject specification is focused on level 4 and above given the diverse range of subjects typically studied by A Level students.

Despite this forecast increase in demand, current trends show that the number of higher education enrolments at further education colleges has decreased over the past five years¹³⁵. To address this, the Skills Strategy must emphasise lifelong learning and a growing prevalence of non-academic pathways to professional and technical qualifications, as young people transition from school to third level education.

Ongoing collaborative work between DE and DfE on the ‘*Transition of Young People into Careers (14 – 19) Project*’ is of central importance. This project has considered key issues such as progression and pathways, post-16 education, curriculum delivery and careers. This project is well advanced and we do not intend to pre-empt the outcomes in this document. There will be a need to recognise the recommendations emerging from this work in the Skills Strategy.

Recommendation 7:

The outcomes from the ‘Transition of Young People into Careers (14 – 19) Project’, jointly led by DE and DfE, will be recognised within the developing Skills Strategy framework and action plans.

What is clear, however, is that satisfying the demands of a changing labour market will require continued investment in Northern Ireland’s Further Education (FE) sector. As emphasised in Northern Ireland’s FE Strategy¹³⁶, ‘*FE Means Success*’, the sector is central to coping with changing demands in our labour market.

Through mainstream provision and in the delivery of Higher Level Apprenticeships (HLAs), FE is the principal provider of ‘in demand’ level 4 and 5 qualifications (HE in FE) and a dominant provider of vocational qualifications at level 3. From a policy and operational perspective, the sector is striving to deliver against these needs, with a particular emphasis on the qualifications in priority sectors that will drive economic development.

From a resource perspective, however, this must always be balanced against the role the sector plays in adult education and the provision of qualifications at level 2 and below. As set out above, the capacity of the skills system to deliver entry level qualifications and pathways to further and higher education is crucial, if we are to avoid the deepening of existing inequalities and support the realisation of our economic and societal ambition. At present, 39% of student’s highest level of study on regulated courses in the FE sector are at level 2 and below (see figure 17 below¹³⁷). This provision is essential, but we must simultaneously ensure the sector has the resource and capability to address the forecast imbalances at mid-levels.

135 [Department for the Economy \(2022\) Further Education Sector Activity Statistics 2020/21.](#)

136 [DEL \(2016\) Further Education Means Success: The Northern Ireland Strategy for Further Education.](#)

137 [Department for the Economy \(2022\) Further Education Sector Activity Statistics 2020/21.](#)

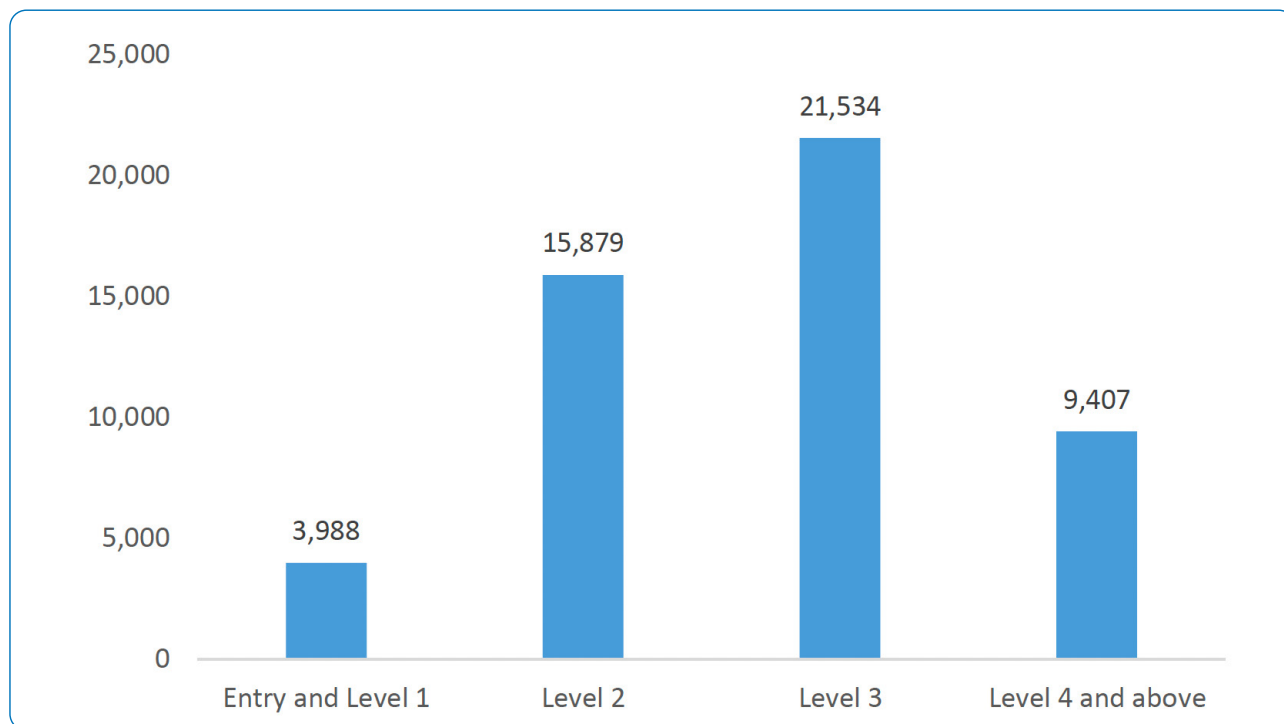


Figure 17: Highest level of study for students enrolled on regulated courses

In the early stages of the Skills Strategy's implementation phase, FE delivery needs to focus on the skills areas and qualification levels highlighted by the Skills Barometer, in consultation with business. Annual College Development plans should include enrolment and achievement targets for those particular areas with the intention that once the relevant data are sufficiently robust, these will be further supplemented by targets in relation to learner destinations, including employment.

Work is ongoing across the NICS to establish the necessary data sharing agreements to develop the Longitudinal Education Outcomes (LEO) dataset. It is anticipated, however, that it will be some time before this can provide a useful evidence base on which substantive policy interventions can be developed. In the shorter term, DfE will review the Survey of FE College Leavers, considering issues such as timing, content, target population, collection mode and marketing of the Survey.

Recommendation 8:

DfE will undertake a review of the Survey of FE College Leavers

Increasing the number of individuals achieving mid-level qualifications is an overarching goal of this Strategy. This will rely both on upskilling the existing workforce (see section on lifelong learning), as well as a focus on increasing the demand for mid-level qualifications from employers and students.

Advanced Technical Award at Level 3

The Department is working with FE colleges to develop a new Advanced Technical Award at level 3. The Award aims to assist in addressing long standing productivity challenges and contribute to addressing skill gaps identified in growth sectors. The development of the Award will contribute to the objective of increasing the proportion of individuals achieving mid-level qualifications. It will do this by providing both new provisions at level 3 and contribute to a more structured pathway.

This new centrally designed pathway will meet specific sector needs and will also allow participants to progress to higher education. The creation of this new high quality programme at level 3 will be equivalent to three A-Levels and will be delivered in priority sectors, offering a broad and balanced curriculum with technical skills, work placement and wider transferable skills, to support the needs of both learners and employers. It will build on the Department's recently developed Traineeship model to assist in providing an alternative pathway for those learners who wish to pursue a vocational route to higher skills, education or employment.

The project will be delivered in two phases. Phase one commenced in September 2021 and sees the introduction of the Advanced Technical Awards in six priority areas. Phase one will use existing qualifications, with the addition of sector specific technical elements. Phase two of the programme development will focus on the design of new bespoke qualifications and engagement with UCAS to recognise all aspects of the Advanced Technical Award.

Recommendation 9:

DfE will complete collaborative work with the FE Sector to develop the new advanced technical award at level 3.

Apprenticeships

Apprenticeships are a key pathway into employment for those who wish to pursue a vocational education pathway, after completing compulsory education. Apprenticeships provision includes *ApprenticeshipsNI* (Level 2 and Level 3) and *Higher Level Apprenticeships* (Level 4+) programmes. Both programmes fund the “off the job” element of an apprenticeship and ensure that learning is underpinned by relevant and appropriate vocational qualifications. Over 11,000 apprentices are currently in training, with under 10% undertaking a Higher Level Apprenticeship. Over 150 apprenticeship frameworks are offered at Level 2 and Level 3, with over 20 offered at Level 4 and above across a wide range of sectors.

The Strategic Advisory Forum on Apprenticeships and Youth Training has been instrumental in providing advice and guidance to the Department, as part of the work to review the apprenticeships and youth training systems to ensure that they deliver maximum benefit for employers, participants and the wider economy. We will retain this expertise under the guidance of the Northern Ireland Skills Council.

To ensure apprenticeships meet the current and future needs of industry in Northern Ireland, employer-led Sectoral Partnerships operate across 15 different sectors, including IT, Food Manufacturing, Advanced Manufacturing and Engineering and are central to the development of apprenticeship frameworks from Level 2 to Level 8. Sectoral Partnerships have reviewed approximately 50 apprenticeship frameworks or framework pathways to date, making sure that the underpinning qualifications and transversal skills are aligned with the needs of the sector and the apprentice. New apprenticeship pathways have been developed in areas such as cyber security and digital forensics and new level 2 and level 3 apprenticeships will shortly be available in the evolving sector of Automated Entrance Systems.

Given the strategic importance of expanding the apprenticeship offer and the need for pathways to mid-level qualifications in all fields of study, DfE is removing the age cap from ApprenticeshipsNI and introducing Public Sector Apprenticeships.

Public Sector Apprenticeships

Public Sector Apprenticeships (PSAs) offer the opportunity for existing and prospective public servants to undertake high quality learning and development as part of their work. There are already a small number of PSAs across the Northern Ireland public sector, but DfE is committed to widening apprenticeship participation, by supporting development across a wide range of public bodies and bringing them under the support of the ApprenticeshipsNI and Higher Level Apprenticeship programmes.

Recommendation 10:

We will pilot Public Sector Apprenticeships for care experienced young people, aiming to tackle barriers to employment faced by this cohort and support workforce development in key public sector roles.

Recommendation 11:

Recognising the growing demand for highly skilled professionals in our health system, we will invest in the development of a new Nursing Higher Level Apprenticeship Framework, to support the diversity of entry points into the profession with clearly defined career progression routes.

Recommendation 12:

We will explore opportunities for Public Sector Apprenticeships in new roles, widening our cadre of professional pathways within the Northern Ireland Civil Service.

All Age Apprenticeships

At present, funding for apprenticeships is restricted to priority sectors for those aged 25 and over. In line with our objective to ‘create a culture of lifelong learning’, we are committed to extending funding for level 2 and 3 apprenticeships across all sectors. Apprenticeships offer an opportunity for everyone, regardless of age or sector they wish to work in, to upskill or reskill as part of their lifelong learning journey, and to combine learning with employment makes this route an effective way to ensure social inclusion.

Recommendation 13:

In line with our objective to ‘create a culture of lifelong learning’, we will introduce all age apprenticeships.

HE in FE

Outside the apprenticeship system, a range of level 4 and 5 ‘HE in FE’ provision is offered, primarily through our FE college network. Recent years have seen declining numbers of enrolments in full time level 4 and 5 courses¹³⁸. This represents a clear strategic challenge, as evidence highlights that demand for mid-level skills will considerably outstrip supply over the next decade¹³⁹, unless suitable interventions are made to change this trend. This does not only concern the realisation of our economic potential, increasing jobs at mid-levels, and availability of commensurate education provision, but also provides a key pathway for more people to work in better jobs delivering better opportunities across our society.

It is necessary, therefore, that we develop a stronger understanding of the causes of declining enrolments and make appropriate interventions. This has already been recognised, as a review of level 4 and 5 ‘HE in FE’ education is underway, with outcomes expected in spring 2022. Those outcomes will be recognised in the implementation plans underpinning this Strategy.

Recommendation 14:

A review of level 4 and 5 ‘HE in FE’ education will conclude in spring 2022. Recommendations and actions arising from the review will be incorporated in the implementation of the Skills Strategy.

Reform of Vocational Qualifications

Significant policy divergence across the UK nations is posing challenges for the continued reliance on the current vocational qualifications market. The Department is currently reviewing the position in Northern Ireland and identifying solutions to secure the future supply of vocational qualifications; in doing this, we also have the opportunity to review vocational provision in Northern Ireland, post COVID -19 and EU Exit, to ensure that the future offer can support the Department’s vision for a 10X Economy - by providing high quality qualifications which meet the needs of learners, employers and the wider Northern Ireland economy.

It is hoped that the changes identified through long-term reform will ensure that all Northern Ireland vocational qualification candidates will have access to a vocational education system offer, which is:

- refined and simplified to allow ease of access and understanding;
- reflective of our economy’s needs, which includes economic recovery, retraining, and promotes a culture of lifelong learning;

138 Ibid

139 [DfE/UUEPC \(2021\) Northern Ireland Skills Barometer 2021 Update.](#)

- reliable and informed by employers, colleges and other stakeholders to ensure progression pathways and portability; and
- responsive to labour market and/or awarding changes and challenges

Recommendation 15

We will review vocational education provision in Northern Ireland to ensure that the future offer can support our vision for a 10x Economy.

Graduate and Post-Graduate Qualifications

The 2021 Skills Barometer showed that the overall quantum of graduate and post-graduate qualifications will be undersupplied to deliver long-term economic prosperity and the balance is poorly aligned within the fields of study that are needed (see fig. 18). Emerging evidence, captured in the forthcoming 2021 refresh, shows a more significant undersupply of graduate level qualifications coming into the labour market, but the core message on the need to increase the proportion of individuals qualifying from local universities in economically relevant ‘narrow STEM’ areas remains consistent.

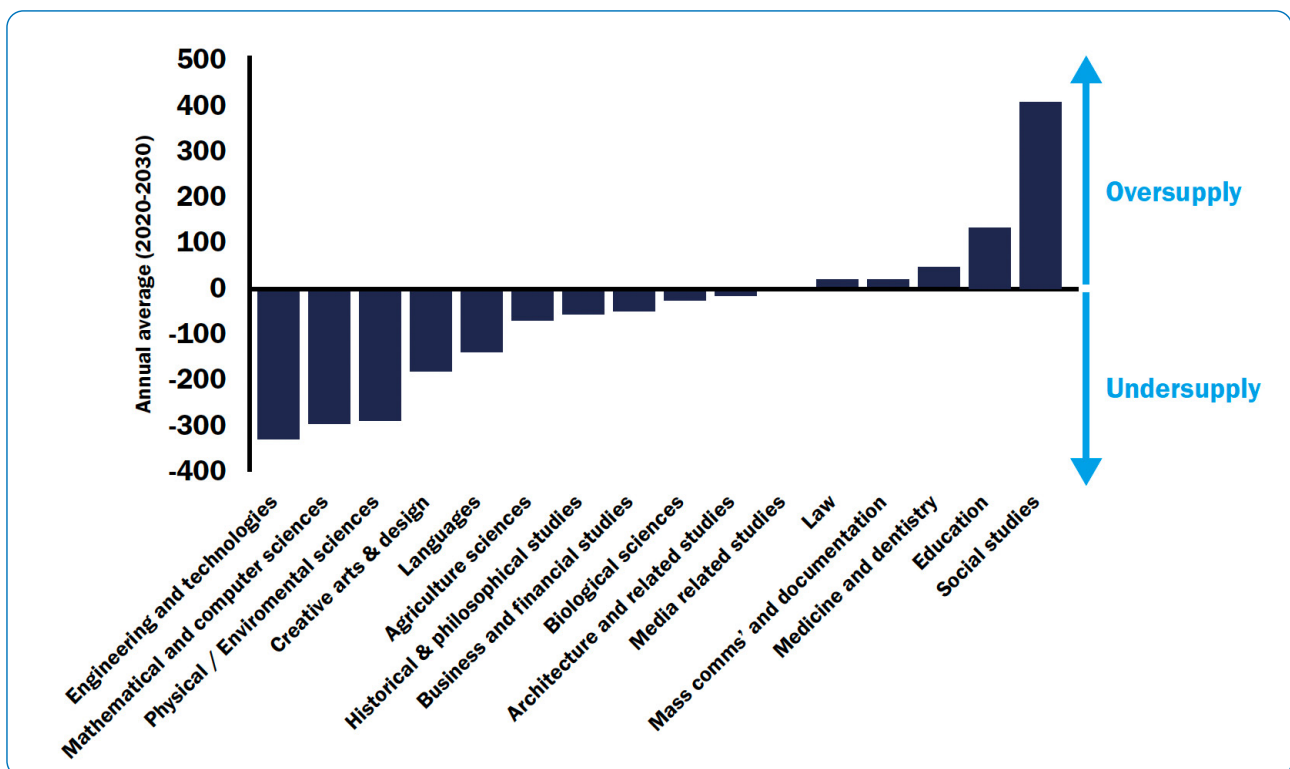


Fig. 18: Level 6+ Forecast Supply and Demand Imbalance by Subject

Over the last decade, it must be acknowledged that collaborative work between the Department and the universities has successfully delivered against the ‘Success through Skills’ goal of a proportionate increase in the supply of graduate and post-graduate qualifications in (narrow)

STEM subjects¹⁴⁰. Such collaborative work is ongoing, as options to incentivise better alignment of outputs from higher education with local economic need are under consideration.

Recommendation 16:

Recommendations on delivering better alignment between higher education outcomes and economic need will be produced by December 2022.

It is acknowledged that the Maximum Student Number (MaSN), and corresponding university funding, will need to increase to support population growth, increasing demand for workers qualified to graduate and post-graduate and moreover, the cost of delivering economically relevant STEM qualifications is typically higher than other degrees. From an efficiency and value for money perspective, however, proportionate increases in the delivery of undersupplied STEM qualifications should, to an extent, be offset by reductions in the number of places offered in oversupplied areas.

It is clear that achieving our societal and economic objectives in the medium to long-term will rely on a strong and sustainable higher education sector. It remains a strategic priority for Northern Ireland, particularly in support of developing a competitive, knowledge-based economy.

Post-Graduate Qualifications

In accordance with research from Landfall Strategy Group¹⁴¹, Government should facilitate and support further collaboration between universities and businesses in priority sectors, to incentivise post-graduate education and research, which can boost the potential of NI businesses, driving improvements in innovation and competitiveness performance. Post-graduate qualifications are not subject to MaSN restrictions.

The benefits of greater collaboration is not limited to business. Landfall Strategy Group emphasises the benefits to universities, through the development of academic expertise with demonstrable commercial value. This has the potential to develop and attract world-leading academic talent. The long-term outcome is to develop Northern Ireland as a 'hub' of global expertise, that empowers the emergence of innovative, globally competitive, indigenous companies, developing - and collaborating with - world-leading academic talent, and attracting FDI through advanced knowledge, skills, absorptive capacity and supply chains.

Investing in the skills and knowledge to drive research and innovation in the enabling technologies that will shape Northern Ireland's future, and developing enhanced collaboration between government, academia and businesses in our key strategic clusters, is a key component of our strategy to deliver the economic vision for Northern Ireland set out in 'A 10x Economy'¹⁴².

140 [DfE \(2020\) Evaluation of Success through Skills – Transforming Futures.](#)

141 [DfE/Landfall Strategy Group \(2019\) The Strategic Integration of Skills and Innovation Policy In Northern Ireland.](#)

142 [DfE \(2021\) 10x Economy – An Economic Vision for a Decade of Innovation.](#)

Northern Ireland's universities are research intensive institutions, with an international reputation for research excellence - around three quarters of their research activity is judged to be 'world-leading' or 'internationally excellent'. Much of the universities' research strengths align well to the 10X clusters and technologies, with the funding provided by the Department playing a pivotal role in underpinning this strong track record in world-class international leading-edge research and innovation.

The Department provides annual block grant funding for research of around £46million per annum, to support the research infrastructure necessary for our universities to maintain a dynamic and responsive research base. The universities can use the funding to support the development of ground breaking basic research with the potential to drive future innovation and to build capacity and capability to apply for research funding for specific projects from external bodies, such as the UK Research Councils, industry, and the EU. As such, the Department's core funding for research can be seen as an investment in the local economy, given the economic benefits that accrue to the region as result, as well as playing a crucial role in supporting and driving higher level technical, research and broader work-place skills development in the process.

The Department also recognises the importance of a workforce with the research skills required to develop a knowledge based economy for Northern Ireland, by investing around £16 million per annum to fund over 700 Post Graduate (mostly PhD) studentships annually, via the DfE Post Graduate Studentship scheme, with a focus on research in economically relevant areas.

The value of an award includes the cost of approved fees, as well as maintenance support for students (approx. £20k per student for a Research Studentship in 2021/22). There are three types of studentship: Research Studentships for PhD study; Co-operative Awards in Science and Technology for PhD study (with additional funding provided by a partner in Industry); and Taught Studentships for MRes study.

The Department plans to take forward a review of its Post Graduate Studentship scheme, with a view to informing decisions on the future shape and funding of the scheme. The review will have a strong focus on ensuring that the awards funded through the scheme are directly linked to the priority clusters and enabling technologies set out in the 10X vision.

Recommendation 17:

We will review the Post Graduate Studentship scheme, with a strong focus on linking funding awards to the strategic clusters and enabling technologies set out in '10x Economy'.

Women in STEM

As set out in MATRIX's 'Women in STEM' Position Paper¹⁴³ the number of females choosing to study STEM subjects beyond GCSE level is a particular concern, as we develop our 10x Economy. It states:

“not nearly enough of the region’s younger generation pursue a future in STEM. By the age of 18, 83% of the region’s total future workforce have turned their back on a career in those very priority sectors which are expected to deliver growth and prosperity for all... that so many girls in particular opt out makes this the single biggest challenge facing NI’s government and employers today.”

The data below (fig. 19) highlights the difference between the number of males and female students sitting exams for core STEM subjects at GCSE¹⁴⁴ and A Level¹⁴⁵ and then those students enrolling in narrow STEM subjects at Northern Ireland's Further Education Colleges¹⁴⁶ and Higher Education Institutions¹⁴⁷ although it should be noted that there are some definitional differences¹⁴⁸. Addressing the lack of gender diversity in Northern Ireland, in qualifications aligned to our new and emerging enabling technologies, needs to be a key area of focus as this Strategy is implemented. A focus on gender diversity at all levels of education and through employer engagement, will be necessary.

143 [MATRIX \(2018\) Women in STEM: MATRIX Position Paper.](#)

144 DE (2021) GCSE STEM Subject Entries, DE Exams Database

145 DE (2021) A Level STEM Subject Entries, DE Exams Database

146 [DfE \(2021\) Further Education Sector Activity in Northern Ireland.](#)

147 [DfE \(2021\) Higher Education Enrolments.](#)

148 The core STEM subjects at GCSE and A-Level include 'Biology', 'Chemistry', 'Physics', 'Science (core)', 'Science Single Award', 'Science: Additional', 'Science Double Award', 'Mathematics', 'Further Maths', 'Information and Communication' and 'Digital Technology'. At Further Education, narrow STEM subjects include 'Biological and Physical Sciences'; 'Mathematics and IT'; and 'Engineering and Technology'. At Higher Education, narrow STEM subjects includes 'Biological and sports sciences'; 'Psychology'; 'Physical sciences'; 'Mathematical sciences'; 'Engineering and technology'; 'Computing'; and 'Geographical and environmental studies (natural sciences)'.

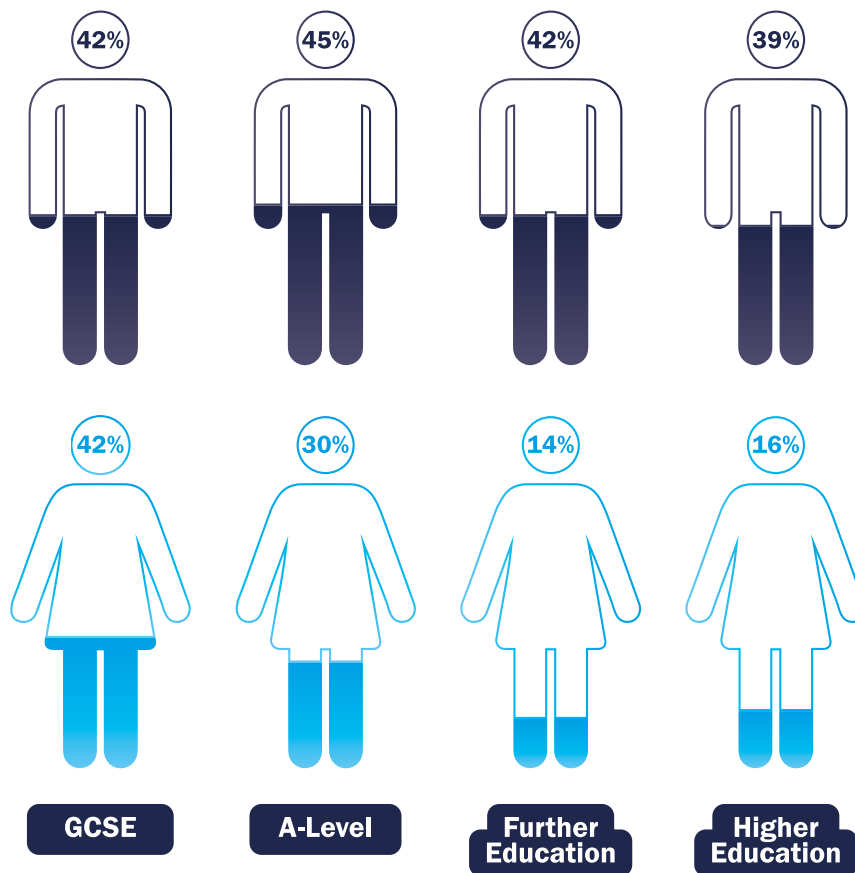


Fig.19 Proportion of qualifications achieved in narrow STEM, by sex.

In education, we should consider how issues such as teaching practices, the curriculum, language and culture, careers advice and employer engagement affect attitudes to STEM study and careers. We should work with employers to ensure issues such as pay and terms and conditions of employment do not deter females from STEM careers. The impact of public policy should also be under the spotlight. We need to empower representatives of women in the workforce to shape, and where necessary challenge, the education, skills and broader labour market policies which impact upon females.

As a result, a cross-government Working Group has been established to develop a Women in STEM Action Plan. Building on the paper’s recommendations, it is considering the major factors which constrain the supply of females into STEM study and careers right across the education and career pathway, with the objective of having Northern Ireland ‘STEM Ready’ by 2030. This work will be fully recognised within the Skills Strategy, including the embedding of emerging actions within future skills action plans.

Recommendation 18:

Recommendations emerging from the Women in STEM Working Group will be fully recognised in the Skills Strategy and subsequent skills action plans.

Careers Provision

A rapidly changing economy, where the labour market in the medium to long-term is very uncertain, makes study and career choices increasingly difficult and important. Careers advice – based on up to date labour market information and forecasts - is of central importance in developing individuals' lives and in the contribution those individuals will make to Northern Ireland's long-term economic prosperity. It is a key aspect of an effective Skills Strategy, which aims to address subject imbalances and drive economic growth.

The OECD's assessment¹⁴⁹, based on stakeholder feedback, is that careers education, advice and guidance is characterised by systemic fragmentation across the skills system. It identifies a lack of consistency across the various providers in schools, DfE's Careers' Service, FE and HE. It calls for DfE, DE and DAERA to build on the progress delivered through 'Preparing for Success', by placing more emphasis on outcomes from career consultations - rather than metrics focused on number of engagements - combined with the development of "clear, common, transparent and accountable quality standards."

In response, an independent review will be commissioned to research how careers support is delivered across the various settings, focusing on best practice, better targeting, personalisation and prioritisation, including any opportunities for efficiency, modernisation and better integration of services.

The overall aim is to ensure careers services are future proofed, to provide a world class, professionally led, aligned and flexible system of career information, advice and guidance. This service should deliver for everyone, through a Careers system where people can expect a high standard of support that meets their needs when they need it most and that is fully interconnected to ensure citizens can access the right people and services, including employability and skills support.

Recommendation 19:

We will commission an independent review of how careers support is delivered across the skills system.

In addition, the Careers Service will collaborate with other Departments and representatives in the Careers system to develop a set of common quality standards, to ensure greater consistency in how career guidance is delivered in all settings and to all users. A key aspect of the Careers Service delivery research project will be to define the expected outcomes from a successful career guidance system, which can then be measured to evaluate the impact of delivery and improve accountability with stakeholders.

The Careers Service will also increase the quality of customer feedback it currently receives and report on the impact of its service with clients and stakeholders by publishing careers performance data in a user-friendly format.

149 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Recommendation 20:

We will work across the skills system to develop a set of common quality standards for the delivery of careers guidance in all settings.

Recommendation 21:

We will work to increase the quality of customer feedback and publish careers performance data in a user-friendly format.

Careers and Skills Portal

Careers planning is a lifelong process and access to quality information and data is vital to inform career decisions. The development of a dedicated ‘Careers and Skills Portal’ will improve the online support available to users of all ages when considering different careers options, and bring together all of the learning and access routes available, along with improved content on work experience, applying for apprenticeships, and updated labour market information.

A new online careers and skills focused service will offer personalisation and better targeted support, with content recommendations for individual users, access to local and regional careers information and focus on the priority clusters identified as having the potential to drive the economy forward within the next decade.

Recommendation 22:

We will develop a new ‘Careers and Skills Portal’ to offer more personalised and targeted careers support.

The Department currently provides key employer messaging through its careers occupational Information Unit, providing online resources which focus on key sectors important to the Northern Ireland economy. These resources provide an avenue for employers and sector representative bodies to effectively communicate important messages on the skills needs and other attributes required within their sector, as well as providing information on current and likely future roles, entry routes and career pathways. Building on this work, the Department will support the Department of Education with measures to improve employer engagement in schools.

Recommendation 23

Working with employers and sector representatives, we will develop careers occupational information on key sectors important to the NI economy to raise awareness, among people of all ages, of skills needs, careers pathways and future job roles.

Supporting Our 10x Economy

As noted in the Strategic Context Chapter, our economic vision, ‘A 10x Economy’ identifies five key strategic clusters where Northern Ireland has the potential to be a global leader and which will drive our economic competitiveness:

- Digital, ICT and Creative Industries;
- Agri-Tech;
- Fintech/Financial Services;
- Advanced Manufacturing/Engineering; and
- Life and Health Sciences.

Drawing particularly on the evidence from Landfall Strategy Group¹⁵⁰, it is essential that such sectors are supported with bespoke skills development plans.

Under the final policy objective, ‘Enhancing Digital Skills, Developing Our Digital Spine’, we are committing to the development of a Digital Skills Action Plan. While this will include a focus on social inclusion, improving the supply of mid-level and advanced digital skills is integral to the enabling technologies that will drive success in each of these clusters. In addition to this broad consideration of the digital skills that will drive key strategic clusters, it is proposed that we will work directly with leading businesses to develop bespoke skills action plans for each of these clusters.

Recommendation 24:

We will develop bespoke skills action plans to support Northern Ireland’s key strategic clusters.

DfE’s emerging Energy Strategy¹⁵¹ discusses the substantial and underpinning role of skills development in delivering on our commitment to a net zero carbon future and our vision for a 10x economy¹⁵² recognises low and zero carbon technologies as a key opportunity in Northern Ireland. It is imperative that work begins immediately to fully understand the short, medium and long term requirements of our education and training sectors that will enable us to maximise the economic opportunities from the global drive to tackle climate change, deliver a just transition for individuals across our society and to meet our carbon reduction commitments.

Recommendation 25:

We will commission and respond to the findings of, a skills audit to identify the skills and training needs that are required to deliver Northern Ireland’s Energy Strategy.

Policy Objective 2: Creating a Culture of Lifelong Learning

As mentioned previously, *addressing skills imbalances, driving economic growth* is an overarching objective. It must be acknowledged, however, that the vast majority of the 2030 workforce has already completed compulsory education. We will not achieve the strategic objectives we have established by focusing only on those who have not yet entered employment.

¹⁵⁰ [DfE/Landfall Strategy Group \(2019\) The Strategic Integration of Skills and Innovation Policy in Northern Ireland.](#)

¹⁵¹ [DfE \(2021\) Consultation on Policy Options for the New Energy Strategy for Northern Ireland.](#)

¹⁵² [DfE \(2021\) 10x Economy – An Economic Vision for a Decade of Innovation.](#)

Northern Ireland's participation rates in adult education are comparatively low. We lag behind counterparts across the UK, Ireland and fall below OECD averages – adults across the OECD spend 30% more time in adult learning than adults in Northern Ireland¹⁵³. A cultural perception persists that formal education ends when individuals enter work, having achieved the highest qualification their ability and circumstances allow.

As Industry 4.0 drives rapid technological change in the workplace, there is a need to ensure that individuals have the opportunity to access the education they require to 'upskill', that is, to maintain the relevance of their skills and adapt to new technologies. Many other workers will have to 'reskill', as more jobs become vulnerable to automation.

The anticipated long-term impact of COVID-19 on the labour market provides a prime example, where accelerated adoption of technological solutions by businesses has left low-skilled workers more vulnerable to job loss and a concentration of job growth in high-wage, high-skilled occupations¹⁵⁴.

Current Provision for Lifelong Learning

Prior to the pandemic, and in addition to the standard FE and HE offer, a range of provision to support business and workforce skills development was already in place through programmes such as:

- *Assured Skills*¹⁵⁵
- *Skills Focus*¹⁵⁶
- *Innovate Us*¹⁵⁷
- *The Union Learning Fund*
- *Invest Northern Ireland Skills Programmes*¹⁵⁸

As part of our response to the redundancies caused by the pandemic, and the uncertainty many on the furlough scheme faced, a Flexible Skills Fund was introduced, providing fully funded skills development opportunities to individuals whose employment had been impacted. The success of this scheme led to its rebranding as '*SkillUp – The Flexible Skills Fund*' and a funding framework for the next three years (to 2023/24) agreed between DfE, the Department of Finance and the Northern Ireland Office.

Over this period *SkillUp* will offer at least 20,000 upskilling and reskilling opportunities to individuals. The programme is focused on delivering short-term interventions (no more than six months), to address the need for skilled individuals in priority sectors. Opportunities range from entry level to Masters, are fully accredited, and delivered through the FE and HE sectors.

153 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

154 [McKinsey Global Institute \(2021\) The Future of Work After COVID-19.](#)

155 [Further information available here.](#)

156 [Further information available here.](#)

157 Ibid

158 [Further information from.](#)

Following the success of the pilot programme, the strong early take-up of Skill Up courses and the direct alignment of the programme to our economic and societal ambitions, we will examine the potential to extend funding beyond the agreed three year period, subject to planned evaluations continuing to reflect positive outcomes.

Recommendation 26:

We will examine the potential to extend funding of ‘Skillup – The Flexible Skills Fund’ beyond the agreed three year period.

This remainder of this section does not rehearse the evidence set out in the *‘addressing skills imbalances, driving economic growth’* section. It describes, however, how the challenges around skills imbalances will be shaped by the need to *‘create a culture of lifelong learning.’*

‘Creating a Culture of Lifelong Learning’ was one of themes which the cross-government Skills Strategy Project Board asked the OECD to investigate, as part of the Northern Ireland Skills Strategy Project.

Three major opportunities were identified:

- Starting the development of a culture of lifelong learning early in life.
- Increasing adults’ motivation to learn.
- Removing barriers for individuals and employers to adult learning opportunities

Starting the Development of a Culture of Lifelong Learning Early in Life

‘Creating a Culture’ begins in compulsory education. There is a direct correlation between low levels of achievement at school and a reduced likelihood of engagement in lifelong learning. This has the effect of reinforcing inequalities and keeping lower skilled individuals at lower ends of the labour market.

As noted above, developing work in areas such as the 14 – 19 Project is well advanced in considering how we can better support young people to transition from compulsory education to further education and work. The enhancement of non-academic pathways towards vocational qualifications, such as the Advanced Technical Award at level 3 and higher level apprenticeships, is a key aspect. This has the potential to deliver improved outcomes for many young people and, in the longer term, is more likely to engage individuals in learning over the life course. The OECD’s recommendations on careers, noted above, are also key in this area.

Much of the OECD’s findings focus on the development of digital and data literacy skills through compulsory education – a point returned to in the *‘Enhancing Digital Skills, Developing Our Digital Spine’* section below. An additional aspect noted, however, is the significant progress in Northern Ireland’s PISA (reading, maths and science) performance. It goes on to reflect on concerns raised by Northern Ireland stakeholders that the focus of compulsory education at Key Stage 4 shifts from the skills-based curriculum, implemented in 2007, to an overarching focus on teaching young people to pass GCSEs.

Building on the need to address social deprivation, the OECD underscores how patterns of low skills outcomes and low aspiration can become endemic across generations in deprived communities. These are patterns that Government should confront, through targeted interventions in the skills system, from the very earliest years, to support young people to remain in education.

Consideration should be given to how best to target areas of disadvantage across NI. This may include using factors such as free school meals and NI Multiple Deprivation Measures,¹⁵⁹ including education and economic domains. Work on the LEO (Longitudinal Educational Outcomes) database will allow DE / DfE to monitor progression from school through post-secondary education and into the labour market. Additionally, work has already begun to deliver the 47 actions contained within the report ‘A Fair Start’¹⁶⁰, published on 1 June 2021, to address the long-standing issues associated with educational underachievement. The NI Executive endorsed the report on 27 May 2021.

Recommendation 27:

We will continue to develop data and implement new, evidence-based approaches to address educational underachievement in areas of socio-economic disadvantage.

Increasing Adults’ Motivation to Learn

The proposals outlined above are long-term. They are intended as strategic measures to be put in place, which will boost Northern Ireland’s long-term performance in participation in lifelong learning, in the face of a rapidly changing economy and labour market.

Over the lifetime of the Skills Strategy, interventions are required to enhance participation in lifelong learning, to address forecast imbalances in the supply of skills to underpin our 10x economic vision and ensure everyone has access to the education and training that will allow them to reach their potential. Our initial approach is detailed in the ‘Addressing Skills Imbalances, Driving Economic Growth’ section.

In accordance with the OECD’s recommendations, however, there is a need to complement these initial proposals, and build on the broad range of opportunities for participation in lifelong learning which already exist, with “a single, comprehensive strategy, setting out a holistic vision for adult learning across different cohorts of learners.”

The OECD notes that various DfE Strategies, relating to further education, higher education, apprenticeships and careers, all include significant and useful initiatives for adult learners. The diffuse nature of these interventions, however, means a focused, coherent message on the importance of lifelong learning is lacking and a clear vision for how adult education can contribute to our societal and economic outcomes is not articulated, or well understood.

¹⁵⁹ NISRA (2017) *Northern Ireland Multiple Deprivation Measure*.

¹⁶⁰ DE (2021) *A Fair Start – Final Report and Action Plan*.

The development of a ‘Lifelong Learning Strategy’ is identified as a key means of focusing our thinking on intended outcomes, including how it will contribute to the PfG, ‘A 10x Economy’ and the Skills Strategy. The development and implementation of the proposed Strategy should be complemented by a communications plan, which raises awareness amongst individuals and businesses and connects them with the guidance and opportunities that will enhance engagement.

As set out previously in this document, it is not our intention to develop a range of underpinning strategies. The emerging importance of lifelong learning will be recognised with the development of a project to promote lifelong learning and an associated action plan. Importantly, however, it will not establish a separate evidence base, unique strategic goals, or separate governance arrangements.

Instead, an action plan will be developed to meet the strategic objectives identified in this document, covering all aspects and levels of post-compulsory education. Oversight for the development and implementation of the action plan will sit within the same Skills Strategy governance structures proposed later in this document.

Recommendation 28:

We will develop a new lifelong learning project and action plan, directly aligned to the achievement of the strategic goals set out in the new Skills Strategy.

Removing Barriers for Individuals and Employers to Adult Learning Opportunities

An effective, whole-of-government, approach to lifelong learning, however, will not be successful, unless it fully acknowledges and addresses existing financial and social barriers which prohibit participation.

The OECD¹⁶¹ cites work pressures, financial costs and childcare/family responsibilities as the most significant barriers to participation in adult learning. As set out previously, the impact of caring responsibilities, particularly on women, was a key theme of feedback received through the consultation.

As shown in the following table, collated by OECD, a range of financial incentives already exists in Northern Ireland – this list is not exhaustive.

161 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland – Assessment and Recommendations.](#)

Skills Strategy for Northern Ireland
Skills for a 10x Economy

Scheme	Type	Target group	Description	Funding spent on adults over 25 (2018 academic year)
Essentials Skills	Subsidy	Low-skilled, full time and part-time learners above 16 with no level 1-2 qualifications	Learners can freely enrol in literacy, numeracy and ICT GCSEs-equivalent qualifications.	5,501 adults 25+ took part in 2017/18
Free provision of NQF Levels 1-3 courses	Subsidy	Low-skilled, full time learners above 16 undertaking level 1-3 Qualifications	All full-time course at NQF Levels 1, 2 and 3 are free for the learner. Providers are reimbursed for the qualification.	Not available
Tuition Fee Loan	Loan	Part-time or full-time learners with at least an upper-secondary qualification who are undertaking a NQF Level 4-6 Course above their highest level of qualification	For 2019/20, part-time students were able to borrow up to GBP 3 206.25 for the duration of the course. This does not generally cover the full costs of the degree (e.g. the typical total fee for a part-time undergraduate degree is GBP 5 625). For full-time students, the loan instead covers up to the full amount of tuition charged for higher education courses in the UK. In Northern Ireland, this was GBP 4 275 for the 2019/20 academic year. Learners can apply on the student Finance NI portal.	Full-time learners: GBP 10 341 646.71 Part-time learners GBP 730 820.13
Tuition Fee Grant	Subsidy	Part-time learners with at least an upper-secondary qualification who are undertaking a NQF Level 4-6 course above their highest level of qualification and have a yearly household income below GBP 25 420	The maximum grant available is GBP 1 230 to contribute to part-time tuition fee costs (this is a one-off payment). The actual amount given depends on three factors: study intensity, household income and fee costs. Learners can apply on the Student Finance portal.	GBP 1 493 670.51
Maintenance Loan	Loan	Full-time learners with at least an upper-secondary qualification who are undertaking a NQF Level 4-6 course above their highest level of Qualification	The maintenance loan is to meet living costs during study for a full-time high education course, up to GBP 4 840. Learners can apply on the Student Finance NI portal.	GBP 8 320 094.37
Maintenance Grant	Subsidy	Full-time learners with at least an upper-secondary qualification who are undertaking a NQF Level 4-6 course above their highest level of qualification and have a yearly household income below GBP 41 065	The maximum grant is GBP 3 475 for students in a household with GBP 19 203 or less. Between a household income of GBP 19 204 and GBP 41 065, the maintenance grant gradually decreases in value. Learners can apply on the Student Finance NI portal.	GBP 6 462 654.24
Childcare subsidies	Subsidy	Full-time learners with at least an upper-secondary qualification who are undertaking a NQF Level 4-6 course above their highest level of qualification	With the Childcare Grant, for one child in childcare, students receive up to GBP 148.75 a week. For two or more children students can receive up to GBP 255.00 a week. Under the Parents Learning Allowance, parents receive between GBP 50 and GBP 1 538 depending on household. Income. Learners can apply on the Student Finance NI portal.	GBP 974 599.19

In the OECD's assessment, this range of assistance provides a solid framework for financial support, but, if it is to support adaption to a developing culture of lifelong learning, some adjustments will be required. Firstly, childcare subsidies should be more widely available, extending the present provision for full time learners studying towards level 4 – 6 qualifications, to childcare support for all learners.

As set out previously, the dual purposes of the Skills Strategy are to address inequality and drive economic growth. The importance of enabling the lowest qualified adults to attain the basic level 2 qualification standard is to provide realistic labour market opportunities. In addition to labour market access, we want to enable individuals to work in 'better jobs' and meet the skills needs of a growing, prosperous 10x economy. Therefore, individuals in work must also be enabled to undertake part-time upskilling or reskilling opportunities, if we are to make progress on the strategic objectives proposed in this document.

It must be acknowledged, however, that there are significant cost implications to delivering such a programme of support. The Department of Education is currently leading on the development of the Executive's Ten Year Childcare Strategy, as committed to in 'New Decade, New Approach'¹⁶². As an Executive Strategy, its development will be overseen by an inter-Departmental Programme Board to ensure alignment and joined-up working across Government.

The timeline for publication and implementation of the Childcare Strategy requires Executive agreement and approval on significant policy decisions, including agreement on the overall budget required for childcare. The key aims of the current draft Strategy, consulted on in 2015¹⁶³, are 'Supporting Child Development' and 'Promoting Parental Employment'. Equality of access to education and skills provision will be a key aspect of the latter.

Work on the development of the Executive Childcare Strategy was paused as resources were required to be redirected to the COVID-19 response, however, scoping work on the Childcare Strategy has recommenced, including an assessment of the resources required to progress the Strategy. Substantial stakeholder engagement is underway, as well as the development of research on current childcare services in Northern Ireland, to develop the evidence base which will inform strategic direction.

Recommendation 29:

All relevant government departments will support the development of the Executive's Childcare Strategy.

Discussion in the paragraphs above focuses on two of the three main barriers identified by the OECD: financial constraints and childcare responsibilities. Reflecting on the third barrier, 'too busy at work', the OECD identifies measures across Great Britain, which provide statutory

162 [Northern Ireland Office \(2020\) New Decade, New Approach.](#)

163 [The Executive Office \(2015\) Draft Childcare Strategy.](#)

training leave to workers in large companies (250+ employees), provided it is aligned to better performance in their current job. There are examples in other OECD countries which compensate workers, and their employers, for lost working time as training is undertaken.

A recent OECD assessment of the scheme in England¹⁶⁴ draws attention to the limited impact of such training legislation, due to its focus on large companies – a finding relevant for Northern Ireland in considering a similar policy, given the predominance of SMEs in our economy. It recommends, instead, that such legislation should be expanded, to enable low skilled workers in companies of any size to undertake training.

Such an initiative would be a valuable intervention in Northern Ireland, as we aim to raise the proportion of the working age population qualified to level 2. While this may cause a challenge to many small companies, it would also provide a solution to the Employer Skills Survey findings that many employees lack the basic essential skills and digital proficiency necessary for effective function in their roles.

Recommendation 30:

We will develop, and consult on, legislation to introduce training leave allowances for Northern Ireland employees.

A further recommendation suggests that greater flexibility in the delivery of learning is established, through the wider availability of modular learning approaches to mid-level qualifications. This can ensure that employees/employers can develop tailored learning packages, which suit their specific job role and the needs of employers. Delivery of such modules through online learning platforms, or through blended approaches where necessary, can increase the capacity of individuals to build professional development around their work and family lives.

In researching the option, the OECD identified three main barriers to the implementation of such an approach. Firstly, a modular approach increases the specificity of learning and potentially, may limit sufficient demand to make the development and delivery of modular courses sustainable. Secondly, the reliance on awarding organisations to provide validation for qualifications was identified as an administrative burden. Finally, the current funding model is based on annual enrolment numbers, making it difficult to develop short, modular courses.

What has now become the ‘SkillUp – The Flexible Skills Fund’ was developed as part of our response to the COVID-19 pandemic. In developing and delivering the programme, FE colleges worked collaboratively with DfE to rapidly deliver a broad range of short-term, remote learning courses, based on evidence of demand from the Skills Barometer and the Employer Skills Survey. Whilst this aspect of the response should not be regarded as a recognition of the model proposed by the OECD, it provides a platform from which new approaches can be developed.

With regards to funding, the COVID-19 response was based on funding from outwith the annual

¹⁶⁴ [OECD \(2020\) Raising the Basic Skills of Workers in England, United Kingdom.](#)

budgetary process and SkillUp continues to be supported (to 2023/24) by additional finance from DoF and the NIO. The programme demonstrates the capacity of the further and higher education institutions to respond to emerging needs, when flexible funding arrangements are available. The long-term development of such an approach will rely on the implementation of multi-year funding arrangements, which afford the colleges the flexibility to develop and deliver modular approaches (see sections on 'Investment in the Skills System' in the Strategic Context and Policy Enablers Chapters).

In terms of demand, more robust structures for engagement with employers can inform the long-term viability of specific modular training provision, at local and regional levels. Combined with existing relationships between FE colleges and employers, such engagement can ensure that modular courses are designed in a more qualitative frame, to meet the needs of business, supporting development and expansion.

The OECD outlines related successful models from Australia and Denmark. The Australian example, in particular, emphasises how collaborative approaches across the FE sector could reduce the administrative burden by jointly deploying resources, a process which would be supported by the Curriculum Hubs model already introduced in Northern Ireland's FE sector.

Recommendation 31:

We will work with the FE Sector to examine the development of remote/blended, modular learning approaches, tailored to the needs of individuals and their employers.

Better Use of Financial Incentives to Reduce Barriers for Employers

The OECD stresses that financial constraints are the most significant barrier to providing training to employees, followed by lack of time for staff to participate and lack of capacity to organise training. The OECD reflects on the well-known concerns of Northern Ireland employers around the Apprenticeship Levy; this point is explored in more detail in the 'Investment in the Skills System' section.

Beyond that, a strong programme of interventions already exists in Northern Ireland, including Invest NI's Skills Growth Programme and the Skills Focus, InnovateUS and Apprenticeships provision offered by DfE. While in some instances there will be a need for financial contributions from employers, these programmes are substantially funded. We do not believe, therefore, that a need exists for the creation of additional programmes to be designed and implemented.

We do, however, need to focus on a refreshed communications strategy to raise awareness of existing programmes, connecting employers with the skills provision that can drive their businesses forward.

The OECD also highlights the barriers faced by small and micro businesses, in particular. There is limited value in courses being offered to a small number of employees. In this regard, the OECD suggests that local training funds are established to support collaborative approaches across businesses which require similar training provision.

The existing Skills Focus programme already allows for this, when suitable connections between employers can be made. Furthermore, the OECD suggests that a local training fund is established to support SME access to training. These are key areas where enhanced sub-regional approaches to employer engagement (see policy enablers section) can identify employer need and support small and micro enterprises to develop their workforce.

Employability Skills, High Performance Working Practices and Leadership and Management

Employability Skills

Beyond 'hard skills' and formal qualifications, a feature of the changing labour market globally is the growing demand for individuals to have strong 'soft', or employability, skills. These range from the employment basics of time keeping and effective communication, through to the skills that will equip individuals to adapt in an uncertain future labour market such as complex problem solving, critical and analytical thinking¹⁶⁵.

This is also demonstrated in research specific to Northern Ireland¹⁶⁶, which notes that individuals with skills that are not easily automated - such as creativity, empathy, problem-solving and persuasion - are more likely to thrive in the emerging labour market. The development of such skills is embedded throughout the school curriculum¹⁶⁷ (discussed further below), but care should be taken not to pinpoint this as a 'future' problem. Employers in Northern Ireland already highlight that many existing employees lack the people and practical skills required to maximise the potential of their businesses¹⁶⁸.

The Skills Barometer¹⁶⁹ also reflects this challenge, demonstrating the connection between employability skills and skills under-utilisation. Skills under-utilisation refers to employees who have achieved sufficient technical skills - as measured by qualifications - to work in jobs more advanced than their current roles demand. This is not a straightforward question of employability skills lacking, there are also questions surrounding the employer demand for skills e.g. employers setting minimum qualification requirements higher than necessary.

165 [World Economic Forum \(2016\) *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*.](#)

166 [UUEPC \(2019\) *Intelligent Futures: Working with Automation and Digitisation to Deliver Sustainable Employment and Growth*.](#)

167 [CEEA \(2020\) Curriculum. In particular, see sections on Attitudes and Dispositions, Skills and Capabilities.](#)

168 [Department for Education \(England\) \(2017\) *Employer Skills Survey 2017: Northern Ireland Slide Pack*.](#)

169 [DfE/UUEPC \(2019\) *Northern Ireland Skills Barometer: Summary Report*.](#)

These themes are picked up by the OECD¹⁷⁰, as it identifies the need for greater interaction between business and education, which enables business leaders to fully articulate the skills they need (technical and practical) from individuals undertaking education. This includes facilitating SME engagement, to ensure there is a two-way conversation about business needs and curriculum delivery.

The employability skills challenge is not one that can be addressed through education alone, however. Work-based or 'experiential' learning, is one of the most effective methods for students, at any level, to improve employability skills. As discussed previously, this relies on employers to engage in the provision of age-appropriate access to work experience opportunities.

International best practice demonstrates that regional, or sectoral, clustering of business interests can facilitate greater business engagement with, and influence on, the skills system. This is particularly true for SMEs; participating in clusters can provide real influence, rather than acting as a lone voice. It not only facilitates influence on curriculum development, but can also support the establishment of closer relationships between business, schools and tertiary education institutions to identify and promote experiential learning opportunities.

High Performance Working Practices

Improving employability skills is an essential aspect of enabling the adoption of high performance working practices. The challenge is not only to develop the 'right skills', but also to use them effectively to extract the maximum benefit for businesses and individuals in a changing labour market¹⁷¹.

Improving pay, developing pathways to better jobs, boosting innovation performance and delivering growth in Northern Ireland's key strategic clusters are central to this proposed strategy. The OECD demonstrates the positive impact better skills utilisation has on individuals (increasing wages and job satisfaction), the economy (improved productivity and innovation) and on society (economic growth, better health, and increased political efficacy).

Northern Ireland's skills utilisation challenge is illustrated by the 2019 Employer Skills Survey¹⁷², where 35% of Northern Ireland employers identified skills under-utilisation in their businesses. Considering the previous Employer Skills Survey¹⁷³, there is evidence that it is a rapidly developing issue in the Northern Ireland labour market, with a 9% increase over two years. Furthermore, skills utilisation is not an issue which has ever been directly addressed in Northern Ireland's skills and economic policy sphere.

170 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

171 Ibid

172 [Department for Education \(England\) \(2020\) Employer Skills Survey 2019: UK \(excluding Scotland\) Findings.](#)

173 [Department for Education \(England\) \(2017\) Employer Skills Survey 2017: Northern Ireland Slide Pack.](#)

The solution, proposed by the OECD, is the adoption of high performance working practices (HPWP) which drive employees to learn, share ideas and empower them to contribute to the development of their businesses and to maximise the use of their skills.

The OECD defines four types of HPWP in the Northern Ireland Skills Strategy Report: flexibility and autonomy; teamwork and information sharing; training and development; and benefits, career progression and performance management. As demonstrated in the following tables¹⁷⁴, Northern Ireland compares poorly when assessed against other UK regions on each of these indicators.

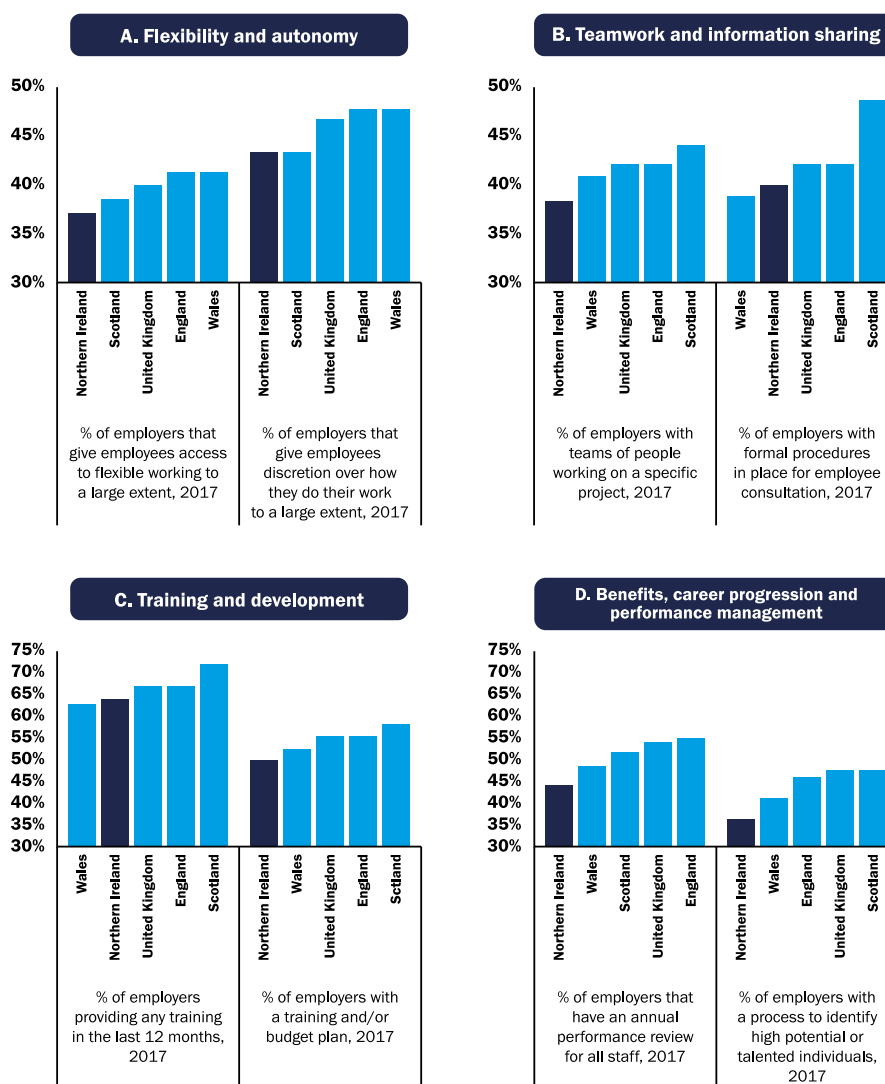


Fig. 20: High Performance Working Practices in the UK.

174 DfE/OECD (2020) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.

Management and Leadership Capabilities

A key way to drive adoption of high performance working practices (HPWP) is to support business leaders through enhanced management and leadership training provision. The adoption of HPWP requires ways of working that break with traditional norms, a willingness to embrace the benefits of technology, empower employees and to realise the benefits of investing in their development. The need for new emphasis on management and leadership development was broadly supported by stakeholders throughout engagement exercises; workplace transformation should start at the top and was identified as crucial to unlocking the potential of our businesses¹⁷⁵.

A range of evidence underpins this recommendation: Northern Ireland has a much stronger reliance on family, as opposed to professional, management¹⁷⁶; adoption of effective management practices in Northern Ireland falls well behind many advanced economies in Europe¹⁷⁷; the OECD's assessment suggests that the average skill level of managers falls well below that of other OECD countries; and management and leadership skills are in short supply in the labour market¹⁷⁸. In addition, the OECD's research and stakeholder engagement identified a culture of risk aversion, which constrains the potential of many Northern Ireland businesses.

Management and Leadership was a key theme of *'Success through Skills – Transforming Futures'* and was underpinned by the *'Leading to Success'* Strategy. The interventions brought about through *'Leading to Success'* were recognised as comprehensive and the programme was positively evaluated. Research and engagement was completed towards the development of a new management and leadership strategy in 2015 but, unfortunately, ongoing public spending constraints at the time meant a new strategy was not published¹⁷⁹.

It is recognised that Invest NI and CITB (NI) continue to deliver management and leadership programmes, however, these organisations work with specific groups of companies. Evidence gathered throughout the development of this consultation, indicates strong stakeholder support for the development of a new management and leadership strategy, providing access to training programmes for businesses across Northern Ireland. The challenges faced by our economy, as a result of the COVID-19 pandemic, place greater emphasis on this as we look to support economic recovery and develop new strength in our economy in a rapidly changing global context.

175 Ibid

176 [Economic Advisory Group \(2013\) *Competitiveness Index for Northern Ireland: Final Index Report*.](#)

177 [Tamkin, P. & Ni Luanaigh, A. \(2016\) *The Relationship between UK Management and Leadership and Productivity: Strategic Labour Market Intelligence Report*.](#)

178 [Department for Education \(England\) \(2020\) *Employer Skills Survey 2019: UK \(excluding Scotland\) Findings*.](#)

179 [DfE \(2020\) *Evaluation of Success through Skills – Transforming Futures*.](#)

As with the development of a renewed approach to lifelong learning, it is not our intention to develop a distinct management and leadership strategy. Instead, we will develop a dedicated project and action plan, considering how the development of management and leadership provision can support the strategic objectives set out in the Skills Strategy and by recognising its broader influence on our economic vision, ‘A 10x Economy’.

The project will aim to promote the benefits of HPWP, improving job satisfaction and inspiring the innovative, progressive approaches to business development which can support the emergence of new opportunities and drive growth and competitiveness in our decade of innovation.

Recommendation 32:

Under the auspices of the new Skills Strategy, DfE will develop a renewed approach to management and leadership in Northern Ireland.

Participation in Management and Leadership Programmes

On the surface, levels of participation in management and leadership training in Northern Ireland are comparable with UK averages: 62% of managers in 2017¹⁸⁰. In the following table, however, the OECD highlights the disparities which that hides:

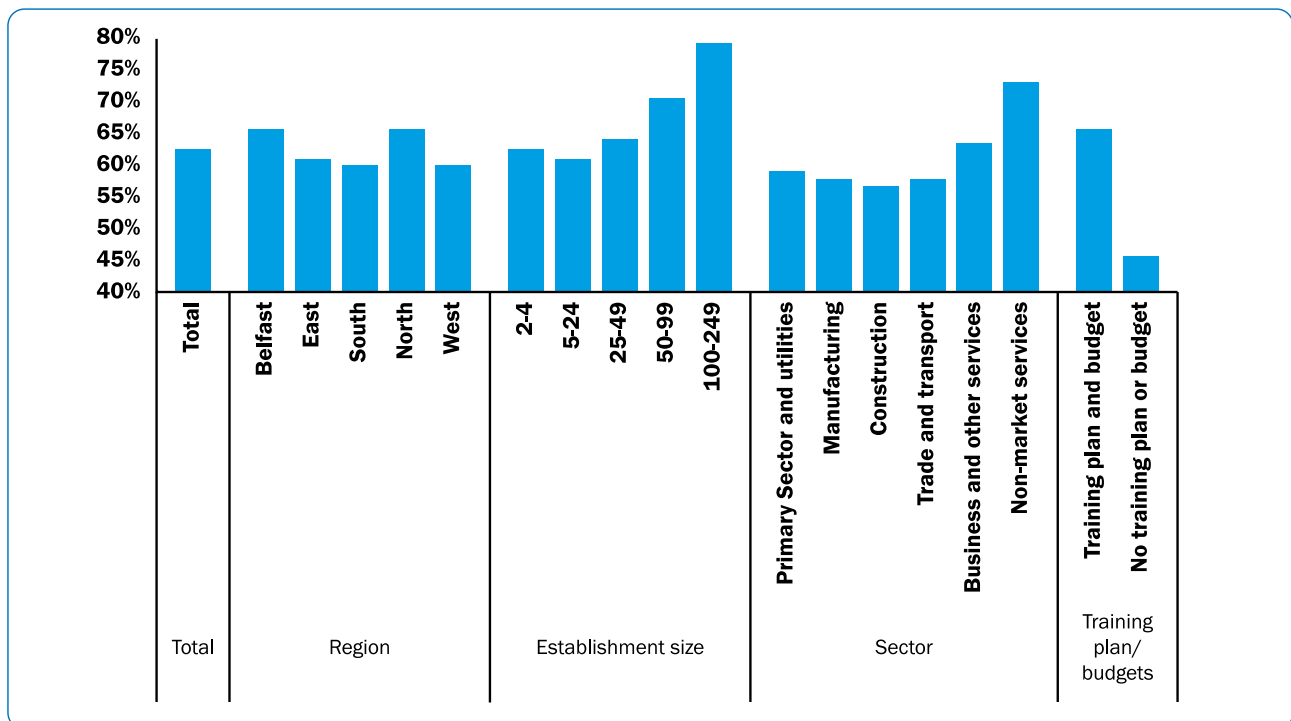


Fig 21: Participation in Management and Leadership Training in Northern Ireland

180 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

The overall picture is that employees in larger, service-based businesses are more likely to participate in management and leadership training. In recognition of the importance of SMEs to Northern Ireland's economic prosperity, as well as the established need to promote balanced growth, addressing such disparities is a priority.

The OECD makes several observations in this regard. These observations are summarised below and will be considered in the emerging management and leadership action plan; no further proposed recommendations are included under this heading.

Firstly, the OECD identifies the broad range of management and leadership programmes already available in Northern Ireland, but also notes the number of delivery organisations involved, making the training landscape complex and difficult to manage. This is a challenge most likely to impact upon small businesses which do not have the dedicated HR functions to identify training needs and appropriate provision.

Secondly, and potentially related to the above, many businesses remain unaware of the benefits of investment in training and development. Only 30% of businesses in Northern Ireland have dedicated training budgets (37% in the UK) and 45% have training plans (48% in the UK), despite evidence that organisations which do not participate in management and leadership training perform significantly worse than those which do¹⁸¹.

There is a need, therefore, to ensure the new approach to management and leadership incorporates a communications strategy, to promote the benefits of management and leadership training and ensure that the landscape is easily navigable to employers. It should incorporate an assessment of the benefits which may be gained from other proposals within this consultation, for example, the promotion of management and leadership as an aspect of the lifelong learning strategy, or how we can connect with small businesses, at a local level, through local councils and community planning.

A third point raised by the OECD - and related to the absence of dedicated training budgets in Northern Ireland businesses - is that many small businesses find the financial constraints of engaging in management and leadership training too significant. To address this, financial support measures need to be put in place. DEL's 2007 Strategy, 'Leading to Success' was underpinned by funding of approximately £2-3million per annum, funding which has decreased substantially in recent years¹⁸².

The Northern Ireland Skills Council (see governance section), should ensure that a dedicated budget is made available for the delivery of management and leadership provision. However, the action plan should include a rationalisation of current provision to minimise duplication and funding should be prioritised to reach those businesses which find it most difficult to participate in such training.

181 [Penna / Chartered Management Institute \(2012\) The Business Benefits of Management and Leadership Development.](#)

182 [DfE \(2020\) Evaluation of Success through Skills - Transforming Futures.](#)

Empowering and Engaging the Workforce

Throughout the development of this Strategy, an enhanced level of collaboration between government, business and education has been placed at the forefront. While there are policy levers that government can utilise (detailed below), there is also an onus on our businesses to address key issues such as the low skills, low pay trap which constrains our economic development¹⁸³ and limits opportunity for individuals. Many employees lack interest in taking on higher level roles, yet almost half the workforce (43%)¹⁸⁴ expressed that they were unhappy in their current roles¹⁸⁵. The share of employees moving from low to mid, or high-skilled positions is extremely low (2.5% compared with 6% in the UK). This is of considerable concern given the context, set out in this document, of the need for rapid progression towards a higher skilled labour market, if Northern Ireland is to remain competitive in the global economy.

The OECD advocates the need for a cultural change, which drives a change in employee behaviour and motivation. The Report proposes the adoption of ‘high road’ strategies, “where employees and their skills are viewed as an integral part of a business’ competitive advantage, rather than ‘low-road’ strategies, where labour is considered a commodity and a cost to be minimised.”

This is a further consideration to be examined, as a new approach to management and leadership is developed. As mentioned in relation to a communications plan, promotion and the training itself, should highlight the benefits of investing in employees through training, progression opportunities, pay or other financial benefits. It should demonstrate that maximising employee potential and utilising their skills to the full can boost productivity; where these benefits to the business are realised, employees should be rewarded.

As noted previously, there is a significant onus on business to drive engagement and empowerment of the workforce. The role of government is limited to promotion and awareness raising campaigns, as well as incentivising businesses, particularly small businesses, where resource constraints pose a significant barrier to engagement. It has also been noted how existing programmes, such as Skills Focus, Innovate Us and Higher Level Apprenticeships can fulfil these functions. Other recommendations within this Strategy should facilitate awareness raising of those programmes and greater engagement between government, business and the education system, to better define skills needs and make a significant impact on skills utilisation.

We will introduce a business pledge, where employers formally endorse a number of principles regarding employee engagement and empowerment. These principles will reflect key aspects of a series of work quality indicators to recognise and promote companies that are fully engaged in the development of their staff, the economy and the wellbeing of our society.

In accordance with OECD recommendations, we will examine the potential to make subscription

183 [IPPR \(2018\) *The Skills System in Northern Ireland: Challenges and Opportunities*](#).

184 Ibid

185 [Investors in People \(2017\) *Job Exodus Trends: 2017 Employee Sentiment Poll*](#).

to the pledge mandatory for medium and large companies (50 or more employees), before receipt of support through NI Executive funded skills programmes. While we will actively encourage businesses of all sizes to take and promote the principles of the ‘Better Jobs Pledge’, we must ensure that it does not become a further constraint on small business growth. To promote fairness, we will ask business leaders and employee representatives to co-design the ‘Better Jobs Pledge’.

In the context of the post-COVID recovery, this will support the avoidance of some of the downsides evident in Northern Ireland’s recovery from the 2008 recession. It will help us to take the opportunities, however painfully brought about, presented by the COVID-19 pandemic.

Following the financial crisis in 2008, Northern Ireland had the slowest recovery of any of the UK’s 12 regions. Some of that may be attributable to our starting point, but a key flaw was an overarching emphasis on the total number of jobs/levels of employment. This emphasis was executed at the expense of improving productivity, wealth creation, wage growth and sustainable economic prosperity¹⁸⁶.

As we aim to recover from the economic impact of COVID-19 and support economic prosperity in the post-EU exit environment, emphasis must be placed on a range of employment principles captured in the forthcoming set of work quality indicators. As part of a comprehensive, cohesive approach to economic renewal, the skills system has a vital role to play in focusing its resources on the skills and jobs which offer real growth opportunities for Northern Ireland’s businesses and citizens.

Recommendation 33:

We will introduce a business pledge to recognise and promote employers who actively engage with the principles of the work quality indicators.

Raising Engagement and Empowerment in the Northern Ireland Civil Service

As we introduce a policy such as the ‘Better Jobs Pledge’, the Northern Ireland Civil Service (NICS), as one of Northern Ireland’s biggest employers, needs to be at the forefront of increasing employee empowerment, engagement and skills utilisation. This can drive improvements in the effectiveness, efficiency and quality of government in Northern Ireland.

Skills under-utilisation, for example, is particularly high in the NICS, with 44% of workers having skills and qualifications more advanced than required for their job. The NICS People Survey¹⁸⁷ notes many positive aspects, including that civil servants are interested in their work, feel challenged by it and are broadly positive about their managers and teams. There are some key challenges, however, relating to the narrative above on HPWP namely, dissatisfaction with pay and benefits, leadership and managing change and pathways for career development.

¹⁸⁶ PWC (2016) *Northern Ireland Economic Outlook: Avoiding Recession*.

¹⁸⁷ NISRA (2019) *Northern Ireland Civil Service People Survey 2019: NICS Benchmark Scores*. Available from: <https://www.finance-ni.gov.uk/sites/default/files/publications/dfp/NICS%20people%20survey%202019%20benchmark%20scores.pdf>

In addition, a weak performance on adaptation of technology has been identified.

The OECD identifies a range of interventions, which have been put in place to address these issues, such as the Innovation Strategy¹⁸⁸ which recognised government's role in being an innovation leader and proposed actions such as:

- developing a more innovative and open public sector;
- the appointment of innovation champions within each Government Department;
- greater use of partnerships and secondments; and
- embedding innovation and creativity throughout training programmes. The NICS People Strategy included four themes:
 - a well-led NICS, underpinned by actions to support management and leadership performance;
 - an outcomes-focused NICS, empowering staff and building career development pathways which boost experience and expertise;
 - a high-performing NICS, focusing on strategic workforce planning, improved performance management and development of more flexible working;
 - an inclusive NICS, where diversity is embraced and developed.

Nonetheless, the results of the People Survey demonstrate an ongoing need for cultural change which, in common with the overall recommendations on management and leadership, should start from the top. Firstly, there is a need to place greater emphasis on the training of NICS leaders in the soft skills required to drive cultural change and the broad adoption of HPWP, which can boost autonomy, skills use, innovation and employee engagement.

Secondly, there is a need to emphasise new approaches to employee empowerment and knowledge acquisition, by the use of methods such as peer-to-peer learning, external training and work shadowing, as well as ensuring employees have more autonomy to make decisions and structure their work.

Finally, the OECD also suggests that the actions included in the Innovation and People Strategies need to be fully implemented, with more specific measures of success and more dedicated monitoring and evaluation of progress.

Recommendation 34:

The NICS will take steps to mark itself out as a leader in the adoption of High Performance Working Practices and the development of management and leadership skills in Senior Civil Service grades.

Developing Employability Skills in a Changing Labour Market

This focus on leadership and management and skills utilisation has been purposefully aligned to 'Creating a Culture of Lifelong Learning'. The HPWP noted throughout this section

188 [Northern Ireland Executive \(2014\) Innovation Strategy for Northern Ireland 2014 - 2025.](#)

demonstrate a strong coherence with the ‘employability’ skills deemed essential for effective participation in the workforce of the future, as highlighted earlier. They are also the key skills which drive entrepreneurship and innovation¹⁸⁹.

It is difficult to pin down an agreed definition of employability skills, as different organisations apply different orders of nuance and use different language. The definition of skills sets provided by the World Economic Forum¹⁹⁰ is one of the most comprehensive and is specifically tailored towards an assessment of need in the emerging UK economy. It does, however, tend towards complexity and higher level skills:

- Analytical thinking and innovation
- Creativity, originality and initiative
- Active learning and learning strategies
- Technology design and programming
- Complex problem solving
- Critical thinking and analysis
- Leadership and social influence
- Systems analysis and evaluation
- Reasoning, problem solving and ideation
- Emotional intelligence

A less formal, more accessible, summary is provided by the OECD¹⁹¹. The ability to:

- Communicate
- Work in teams
- Lead
- Solve problems
- Self-organise

These themes and the importance of a progressive approach to the development of employability skills are already recognised in the Northern Ireland School Curriculum¹⁹², the FE Strategy¹⁹³ and the HE Strategy¹⁹⁴. Given evidence that employability skills remain a consistent concern amongst employers¹⁹⁵, however, there is value in working through new government, business and education engagement structures, on a discrete project to assess how our approach to developing employability and entrepreneurial skills can be improved. This should include defining what employability skills means in the Northern Ireland labour market and proposing a series of actions which can shape existing provision towards better outcomes.

189 [Crayford, J.; Fearon, C.; McLaughlin, H.; & van Vuuren, W. \(2012\) *Affirming Entrepreneurial Education: Learning, Employability and Personal Development*.](#)

190 [World Economic Forum \(2018\) *The Future of Jobs Report*.](#)

191 [OECD \(2017\) *Future of Work and Skills*.](#)

192 [CCEA \(2020\) *Curriculum*.](#)

193 [DEL \(2016\) *Further Education Means Success: The Northern Ireland Strategy for Further Education*.](#)

194 [DEL \(2015\) *Graduating to Success: A Higher Education Strategy for Northern Ireland*.](#)

195 [DfE/UUEPC \(2019\) *Northern Ireland Skills Barometer: Summary Report*.](#)

Recommendation 35:

We will develop a discrete, collaborative project, to define what employability skills means in the Northern Ireland labour market and propose a series of actions to improve the performance of our education system.

Lifelong Learning and Disability

As noted in the strategic context section of this document, a clear message emerged through our consultation, on the specific challenges deaf and disabled people face in achieving equality of access to education, skills and employment. A new *Disability Employment Strategy* is being developed by the Department for Communities, in meaningful partnership with a range of statutory and non-statutory stakeholders and will include a number of commitments which will relate to skills development.

Recommendation 36:

Relevant departments, partners and stakeholders will support the development of the forthcoming Disability Employment Strategy, which will include education and skills-based actions relevant to the needs of deaf and disabled people. These actions will be incorporated in the implementation plans for 'Skills for a 10x Economy'.

Tracking Progress on Lifelong Learning

As has been made clear throughout this Chapter, 'developing a culture of lifelong learning' is a strategic imperative, if we are to deliver on our economic and societal goals. It is important, therefore, that we track progress to ensure our interventions are making a difference and respond as necessary.

As noted in the Chapter's preamble, across the OECD adults spend 30% more time in adult learning than adults in Northern Ireland. The participation rate in adult learning in Northern Ireland (for individuals aged between 25 and 64, 2016 to 2020) was consistently lower in NI when compared with the UK. NI participation in education or training was between 18-20% (18.2% in 2020) compared to a UK participation rate of around 25% between 2016 and 2020¹⁹⁶.

This is a gap we want to close by 2030, with the recommendations set out in this chapter highlighting our initial approach to increasing participation. We will report on progress through the Skills Strategy Annual Report¹⁹⁷.

¹⁹⁶ NISRA (2021) [Qualifications in Northern Ireland](#).

¹⁹⁷ See recommendation 46 below.

Recommendation 37:

We will work to increase participation in adult learning from a baseline of 18.2% to the UK average of 25% by 2030.

Policy Objective 3: Enhancing Digital Skills, Developing Our Digital Spine

As set out in the Strategic Context Chapter, technology is rapidly transforming our lives and workplaces. Research and stakeholder engagement conducted throughout the development of this Strategy has repeatedly emphasised the critical importance of digital skills development in Northern Ireland.

The social and economic necessity of this could not have been more starkly portrayed than through the consequences of the COVID-19 pandemic. It has highlighted the growing digital divide, as those who could use technology, to stay in contact with family and friends and to minimise risk, did so by remotely accessing essential services. Similarly, in our labour market, many individuals continued to work remotely, while considerable numbers of others, largely lower skilled individuals in elementary occupations, faced furlough or redundancy.

This is not a problem we can eradicate - there will always be an aspect of our economy which relies on face-to-face customer service and practical, 'hands-on' labour – but it does expose the increasingly essential presence of digital skills, and digital access, in our society and labour market. It is incumbent upon Government to empower individuals to take the social and labour market opportunities that digital skills afford.

Research from the Office for National Statistics (ONS)¹⁹⁸ demonstrated the high correlation between digital exclusion and social exclusion. Significant swathes of Northern Ireland populace are assessed to have a high or medium risk of digital exclusion¹⁹⁹. This is based on a combined assessment of access and skills issues and this highlights the importance of making reference to ongoing efforts to improve access across Northern Ireland²⁰⁰. What is clear, however, is that basic digital skills are a significant factor in Northern Ireland, with 32% of the population aged 16 – 65 having low or no digital skills. It should be acknowledged that this research is four years old and, in a period of rapid change, may have altered. Nonetheless, there is clear evidence of a digital skills issue in our society, with the more recent ONS Survey showing Northern Ireland having the highest proportion of non-internet users of any UK region.

Likewise, the Employer Skills Survey²⁰¹ continues to show that basic digital skills are a contributor to skills gaps in business. This relates to both the existing workforce and remains a challenge in recruitment. This is reflected again in the Skills Barometer, with ICT qualifications undersupplied at the mid-levels and computer science degrees significantly undersupplied at higher levels. The impact of this, on the digital sector in particular, is assessed in a recent

198 [ONS \(2019\) Exploring the UK's Digital Divide.](#)

199 [BT/Citizens Online \(2017\) Digital Resilience, Digital Partnership: A Baseline of Digital Inclusion in Northern Ireland.](#)

200 [DfE \(2020\) Project Stratum.](#)

201 Department for Education (England) (2021) *Employer Skills Survey 2019: Northern Ireland Toolkit*. Available from: <https://www.gov.uk/government/publications/employer-skills-survey-2019-northern-ireland-results>

report published by the Digital Skills Network NI²⁰²

The Skills Strategy is designed to support the development of a successful, prosperous, small advanced economy – ‘A 10x Economy’. Over the next decade, we must build on the work ongoing in schools to develop digital skills and place increasing emphasis on the development of digital capability in our workforce.

CCEA has developed a digital skills and curriculum framework²⁰³. It draws on a Report produced by the House of Lords Select Committee on Digital Skills²⁰⁴ and provides a useful concept, which can be extended across all ages to profile the ‘digital spine’ that is required to meet the needs of Northern Ireland’s social and economic development. It identifies three levels of digital skills: Digital Citizen, Digital Worker and Digital Maker. As the CCEA’s remit extends only to level 3 qualifications, this Report demonstrates that there is a need for a robust educational pathway in digital qualifications, spanning early years to post-graduate provision.

Digital Citizens

The CCEA defines Digital Citizens as people with the skills to participate in digital aspects of society safely, and without hindrance. An Ipsos MORI collaboration with Lloyds Bank²⁰⁵ assessed foundation level digital skills (turning on a device, connecting to the internet etc.) and ‘essential digital skills for life’, which included skills in five key areas: communication, handling information and content, transacting, problem solving and being safe and legal online. In results, which are broadly in keeping with the rest of the UK, the survey indicates that 20% of the Northern Ireland adult population lack foundational digital skills, making up the bulk of the 23% who lack essential digital skills.

The development of ‘digital citizens’ is an essential step in economic development, however, the primary focus at this level is to tackle social inequality. In exploring the data gathered through the Ipsos MORI / Lloyds Bank survey, there are clear correlations between a lack of essential digital skills and factors such as low educational attainment, age and low incomes.

As defined by the CCEA’s work, there is a key role for the compulsory education system in the provision of a strong basis of digital education, which enables individuals to use technology safely and effectively. In the post-compulsory sector, there is a need to support adult learning in basic digital education across society. This will not only provide familial support for the development of young people’s education, but also ensure we make progress on addressing digital and social exclusion. This is particularly true, when considered alongside proposals elsewhere in this document, to expand remote learning provision.

202 [Digital Skills Network NI \(2021\) Software Skills for a 10x Economy.](#)

203 [CCEA \(2020\) Digital Skills Curriculum and Qualifications Framework.](#)

204 [House of Lords Select Committee on Digital Skills \(2015\) Make or Break: The UK’s Digital Future.](#)

205 [Lloyds Bank/Ipsos MORI \(2018\) Basic Digital Skills UK Report 2018. Includes data updates for 2019, 2020 and 2021.](#)

Digital Workers

Digital workers must have a sufficient level of digital skills to make them relevant in the workplace. The number of jobs which require digital skills has grown rapidly in recent years. This is a trend which is expected to continue, as automation replaces many of the tasks historically carried out by humans. Over the next decade, the most significant impact will be on jobs filled by individuals with low or no qualifications.

Based on the same five skills areas noted above, but with additional specific skills added, the Ipsos MORI / Lloyds Bank survey assesses 'essential digital skills for work'. Under this criteria, Northern Ireland is assessed alongside Scotland, so NI-specific data is not available, but the survey indicates that one third of our adult population do not have the essential digital skills required for work. Moreover, the same correlations with low pay, low qualifications and older age are evident.

Digital transformation of the labour market need not be a negative story. It is forecast that the overall number of jobs will increase substantially, as new technologies support substantial productivity gains. It does create, however, the burning platform for rapid intervention in the skills of the population. It emphasises the need to devote our collaborative resources to support individuals with low or no skills to achieve higher qualifications. Taking advantage of new technologies in our economy will rely on our ability to develop the capability of our workforce to adapt²⁰⁶.

This is a key driver for investment in mid-level skills, through education and lifelong learning. Workers in all sectors need the professional and technical skills to effectively engage with the technologies that will apply in their chosen careers. As advancement continues apace, there will need to be a willingness to continue to develop knowledge. Business investment in training and the development of modular approaches to learning can make a significant impact in this regard.

Digital Maker

Makers will be the creators of digital technology, individuals who work in digital careers, or with new and emerging enabling technologies. Northern Ireland's tech sector is growing and provides one of the focal points for Northern Ireland's 10x Economy, yet, the sector is struggling to recruit the talent needed to fulfil Northern Ireland's potential²⁰⁷. Talented individuals must be supported throughout their education journey to cultivate these skills and be encouraged to choose appropriate pathways to support the development of Northern Ireland's key strategic clusters.

206 [UUEPC \(2019\) *Intelligent Futures: Working with Automation and Digitisation to Deliver Sustainable Employment and Growth*](#).

207 [Digital Skills Network NI \(2021\) *Software Skills for a 10x Economy*](#).

Digital Skills Development in Northern Ireland

The OECD²⁰⁸ describes how the changing nature of the labour market requires the adoption of a skills-based curriculum, with a strong emphasis on social, digital and data literacy skills. These points are echoed, and expanded on, by the UUEPC²⁰⁹:

“In order to help citizens develop to become an effective part of the workforce for the future, the education system must instil in children an ability to deeply understand technology and extract and utilise data effectively, not just how to use a machine and read figures. This forward thinking model is required to develop a culture of innovation and help to futureproof the economy.”

Despite stakeholders agreeing that the adoption of a skills-based curriculum in schools in 2007 had been successful, overall, the OECD identified stakeholder concerns that insufficient emphasis was placed on digital and data literacy. It recommends the development of a ‘digital spine’ model throughout education, drawing on international best practice models from Sweden and Australia. The OECD also highlights the substantial investment that DE has put into ICT infrastructure in schools, but – drawing on UK wide evidence²¹⁰ - suggests that Northern Ireland has a lower comparative standard of using ICT effectively in the classroom.

The primary focus on the development of digital skills, as set out in the OECD Report, is on adaption of the school based curriculum as a recommended precursor to ‘*Creating a Culture of Lifelong Learning*’. The OECD’s recommendations are based in the context of preparing young people for a future in a rapidly changing and uncertain labour market. As in reports from several other sources cited throughout this consultation document, it identifies teacher CPD as a key recommendation:

- Expand professional development opportunities in technology-friendly pedagogies for new and existing teachers, to improve use of ICT tools in the classroom.

The regularity with which similar recommendations emerge from research means there can be little doubt that this is a recommendation which should be addressed through this Skills Strategy. A second OECD recommendation is to:

- revise the compulsory curriculum in the light of emerging megatrends to focus on the development of digital and data literacy skills.

208 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

209 [UUEPC \(2019\) Intelligent Futures: Working with Automation and Digitisation to Deliver Sustainable Employment and Growth.](#)

210 The NI sample size is too small to disaggregate data.

The surrounding narrative pitches the ‘digital spine’ idea around the approach adopted in Australia, where ICT is taught through all subjects and organised around five dimensions, which are broadly in line with those identified by the Ipsos MORI/Lloyd’s survey, detailed above. A review of the Northern Ireland curriculum²¹¹ indicates, however, that ICT is already embedded throughout the school curriculum, from pre-school through to Key Stage 4. From one perspective, this points back to the need for teacher CPD, to ensure the effective use of digital technology in the classroom. Unsurprisingly, this is only part of the picture. A review of digital education was not one of the key themes which the OECD investigated and as stated, these recommendations were made in the context of ‘*Creating a Culture of Lifelong Learning*’.

Evidence from NI Screen²¹² also highlights the CPD issue, but adds recommendations on the need: to improve guidance on the strategic leadership of digital education in schools; to take further action to address inequality in access to digital education, concerning both equipment and teacher expertise; and for parental engagement in supporting children’s digital education. These factors are also recognised in Sweden’s National Digitalisation Strategy²¹³.

These points are echoed in the Report from the Digital Select Committee, which adds that digital education should be taught with the same status as numeracy and literacy. It also notes that the whole talent pipeline of primary, secondary, further and higher education needs to adapt to the changing nature of the labour market. From a lifelong learning perspective, Deloitte²¹⁴ points out that digital skills are becoming obsolete at an increasing rate, making continuous modular approaches to learning and business investment in skills development a priority.

Until the recent publication of the Digital Skills Network’s ‘Software Skills for a 10x Economy’²¹⁵ (a report driven by the digital sector in Northern Ireland, rather than Government), there was a clear trend of research focusing on digital education at the primary level. It is accepted that improvements in this area are key in laying the foundations for the workforce of the future and indeed, many of the same themes are reiterated in the Digital Skills Network’s Report. It sheds new light, however, on the need for change at secondary and tertiary education levels, as well as the role employers in the sector need to undertake to drive better outcomes.

It also makes a fundamental distinction in understanding digital skills development i.e. we should not equate Information and Communications Technology (ICT) education pathways with the skills demanded in the digital sector, or those associated with the new and emerging technologies set out in ‘*10x Economy – An Economic Vision for a Decade of Innovation*’²¹⁶. The real need, in the ‘digital maker’ pathway, is for individuals to learn the skills associated with computer science / software engineering, as opposed to ICT, and be afforded the opportunity to follow such educational pathways throughout their education.

211 [CCEA \(2020\) Curriculum.](#)

212 [Northern Ireland Screen \(2019\) Study into the Development of Digital Education in Primary Schools in Northern Ireland.](#)

213 [Swedish Education Ministry \(2017\) National Digitisation Strategy for the School System.](#) (In Swedish, translated with Google Translate).

214 [Deloitte \(2017\) Careers and Learning: Real Time, All the Time.](#)

215 [Digital Skills Network NI \(2021\) Software Skills for a 10x Economy.](#)

216 [Department for the Economy \(DfE\) \(2021\). Consultation on a Skills Strategy for Northern Ireland – Skills for a 10x Economy.](#)

The ideas outlined in this Strategy all apply to digital social inclusion, digital skills for labour market inclusion and advanced digital skills to drive economic prosperity are a:

- basic digital literacy needs to be improved to address social and economic inequalities;
- robust base of digital capability needs to be developed to enable labour market inclusion and to underpin economic expansion; and
- significant change is needed in the numbers of individuals following advanced digital skills pathways in computer science and software engineering.

First-time education leavers are a crucially important cohort of the population and attention must be paid to how we strategically develop teaching and the curriculum. Over the next decade, however, lifelong learning and employer engagement will play a key role in ensuring individuals can sustain career progression or reskill towards this growing sector.

In response, we will establish an expert panel of individuals from industry, education and other key stakeholder groups, to consider the changing digital skills needs of our society and economy, and identify the substantive changes required in digital education to meet the current and emerging needs of our labour market. In the context of a whole-of-government skills strategy, this should not focus on individual aspects of education, but consider the development of digital learning pathways from early years' education through to third level and lifelong learning provision. Furthermore, the project will consider two distinct strands:

- development of ICT pathways for social and labour market inclusion; and
- development of advanced digital pathways in computer science / software engineering.

The Panel will be appointed by, and report to, the Northern Ireland Skills Council, to produce a Digital Skills Action Plan for Northern Ireland. The Action Plan will sit under the Skills Strategy as a key strand of work.

Recommendation 38:

An expert panel of individuals from business and education will be appointed to develop a specific Digital Skills Action Plan for Northern Ireland, to be jointly implemented by DfE and DE, recognising two distinct digital education pathways of ICT and Computer Science / Software Engineering.

Chapter 5: Policy Enablers

The evidence gathered throughout the development of this Strategy makes it clear that effective delivery of the objectives set out in Chapter 4 will not be achieved, if they are not supported by significant improvements in how we govern the skills system. Three key areas of action have been identified to underpin the development and implementation of ‘*Skills for a 10x Economy*’:

- Enhancing Policy Cohesion;
- Building Strong Relationships; and
- Investment in the Skills System.

Many of these issues have already been highlighted through discussion of the proposed policy objectives. This section is intended to reflect more specifically on the actions, and structures, that will underpin this Strategy. Well-functioning governance arrangements are essential to an effective, sustainable skills system²¹⁷.

Skills policy is complex. Within the context of constrained financial and human resources, difficult, strategic choices must be made, finding the balance between growing economic prosperity and developing social equality. The perspectives of a wide range of stakeholders have to be incorporated: schools, colleges, universities, students, employers, employees, local and national government. Skills policy is also set in the context of an uncertain future, driven by the emergence of Industry 4.0. We must forecast where skills demand will lie and prepare our population to fulfil anticipated needs for jobs that do not yet exist. This Strategy has been developed in the context of COVID-19 and following the UK’s exit from the EU, the strategic choices we make now will set the tone for our economic and social prosperity for years to come.

Opportunities lie ahead but to grasp them, we must build consensus in our policy choices across government, with key stakeholders and with civic society as a whole. We must also acknowledge that Northern Ireland is not blessed with the natural resources which will underpin global competitiveness; the skills of our people are our primary resource. To take advantage of this rich resource, we must invest in the potential of our people. We must prioritise investment in those skills which will drive growth in Northern Ireland’s most competitive strategic clusters and the skills which will give all our people the opportunity to contribute to, and benefit from, our growing economic prosperity.

Policy Enabler 1: Enhancing Policy Cohesion

Policy Enabler 2: Building Strong Relationships.

217 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Enhancing Policy Cohesion

The evaluation of ‘Success through Skills – Transforming Futures’ found that one of the most significant flaws in the Strategy was that it was developed, and widely seen, as a DEL Strategy²¹⁸. In this context, it did not acknowledge the broad complexities and interdependencies that affect well-functioning skills systems. From the outset, the development of the new Skills Strategy has focused on creating a whole-of-government approach to skills, under the auspices of an outcomes-focused PfG.



In this way, we can build consensus around the main priorities for the skills system: how primary and post-primary education links with tertiary education policy; how outcomes from further and higher education are linked to economic development; how we support individuals to engage effectively with the labour market; and how we develop greater equality of opportunity across our society by recognising the interface between skills and social policy. The outcomes of our skills system will contribute to the achievement of PfG outcomes, both directly and indirectly.

All of Northern Ireland’s departments either fulfil a crucial role, or retain a key interest in, the development and delivery of skills policy. DfE has primary responsibility for post-compulsory education policy (further education, higher education, apprenticeships and post-16 careers advice and guidance) and for economic policy, where the talents of our people are a key pillar of our success. DE has overall responsibility for early years, primary, secondary and special educational needs, it also manages careers advice and guidance in the school setting. DfC is responsible for engagement with individuals who are currently looking for work and those who

218 [DfE \(2020\) Evaluation of Success through Skills – Transforming Futures.](#)

are economically inactive. DAERA has responsibility for skills development in relation to its primary areas of policy and, in particular, the College of Agriculture, Food and Rural Enterprise (CAFRE). Similarly, DoH has responsibility for the development of the health and social care workforce. In addition, TEO holds overall responsibility for PfG and a number of cross-cutting social strategies and DoF sets budget allocations and runs NISRA – a key partner in economic and skills analysis.

Policy interest from DoJ's and DfI's perspective may not be so obvious. We do know, however, that a direct correlation exists between an individual's educational achievements and the likelihood that they will engage in criminal activity – a key consideration in an outcomes-focused approach to PfG. Moreover, education is a key aspect of the support delivered to prisoners. The development of our infrastructure has a major skills demand in construction and related sectors. We must also recognise that infrastructure development is a key economic pillar in the attraction of jobs and the internal mobility of labour, particularly in the context of developing greater regional balance.

The development of this Strategy has been undertaken with the oversight of a Project Board, involving senior officials from all departments and regular liaison across government. This is an arrangement that will continue as we implement 'Skills for a 10x Economy'.

Building Strong Relationships

Based on our own research, which was given international context by Landfall Strategy Group^{219, 220} and later echoed in the OECD's recommendations²²¹, a second body was established to support the development of the Skills Strategy. The 'Skills Strategy Advisory Group' included representatives of business, trade unions and education institutions, worked directly with Government on the development of the Strategy, acting as a sounding board, providing recommendations and undertaking research projects in areas of particular importance.

As the process evolved, this collaborative approach between government, business and academia has become recognised as vital in developing a Skills Strategy which reflects the needs of our economy and society. It is also recognised that the publication of 'Skills for a 10x Economy' is a first step. In order to ensure continued collaboration and to allow us to adapt to the changing needs of our economy - as well as responding effectively to any shocks to our labour market, such as COVID-19 – it has been agreed that a Northern Ireland Skills Council (NISC) should be established to support the implementation of the Strategy.

219 [DfE/Landfall Strategy Group \(2019\) The Strategic Integration of Skills and Innovation Policy in Northern Ireland: An International Small Economy Perspective.](#)

220 [DfE/Landfall Strategy Group \(2020\) Institutional Design to Support and Integrated Economic, Skills and Innovation Policy Agenda.](#)

221 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Recommendation 39:

A Northern Ireland Skills Council will be established to support the implementation of ‘Skills for a 10x Economy’.

Integrating the Northern Ireland Skills Council with the Existing Skills Advisory Landscape

Feedback has indicated frustration amongst stakeholders at the lack of co-ordination within Government, as various departments, and policy interests within them, engage with the business community and wider civic society. Consultations are often issue-focused and result in the emergence of a range of advisory bodies with overlapping responsibilities.

This places significant demands on stakeholders to engage in, and make sense of, a complex policy landscape. As engagement and participation on advisory bodies is generally offered pro bono, many key interests (particularly SMEs) simply do not have the resource capacity to offer their perspectives. Ultimately, advisory bodies with the longevity to become institutionalised sources of consistent, coherent, progressive policy advice, which can support the development and implementation of a long-term vision for the skills system, are not afforded the opportunity to flourish²²².

For this reason, the NISC is being established as a long term ‘peak’ body, which can drive strategic co-ordination across the skills system. In order to drive collaboration and complementarity, additional stakeholder groups, advising on skills issues, will only be formed in agreement with the NISC. As a principle of first preference, any advisory groups established by the NISC should be appointed on a time bound ‘task and finish’ basis and report back to them. This ensures the NISC can maintain strategic oversight of the skills agenda, driving collaboration and complementarity, as well as accessing the wealth of experience and expertise that exists in our stakeholder networks.

In recognition of concerns that the existing advisory landscape is already crowded and confused, the NISC should undertake a ‘review and rationalisation’ exercise to minimise duplication and ensure clarity of purpose of all existing advisory bodies.

Recommendation 40:

New stakeholder advisory groups, as related to skills policy, should only be formed in agreement with, and under the auspices of, the Northern Ireland Skills Council.

Recommendation 41:

The Northern Ireland Skills Council should undertake a review and rationalisation exercise to minimise duplication and ensure clarity of purpose among existing advisory bodies.

222 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

The Northern Ireland Skills Council

Following engagement with business and education representatives, as well as testing these ideas throughout the consultation and stakeholder engagement process, it has been agreed that the NISC should include a mix of ex-officio members and individuals who are appointed through open competition, up to a maximum of 20 executive members. In addition, the Ministers for the Economy, Education and Communities will have open invitations to attend NISC meetings, along with associate members in particular positions of expertise / influence.

It was agreed that to give the Council sufficient independence, the Chair should come from outside the public sector and be appointed after open competition, in accordance with the appointments process set out by the Commissioner for Public Appointments in Northern Ireland (CPANI)²²³. Eight additional representatives, from business, trade union and community and voluntary sector backgrounds, will be appointed after open competition.

Ex-officio members include representatives from:

- Department for the Economy
- Department of Education
- Department for Communities
- Invest Northern Ireland
- CCEA
- Local Government
- NI Universities
- NI Further Education Colleges
- Trade Unions (nominated by NIC ICTU)
- The Community and Voluntary Sector (nominated by NICVA)
- Students (nominated by NUS-USI)

Associate Members will include a representative from:

- The NI Business Alliance
- The Chartered Institute of Professional Development
- The Ulster University Economic Policy Centre

In order for the appointments process to be conducted, members of the Skills Strategy Advisory Group have agreed to act in an interim role.

Recommendation 42:

The Chair and at least eight additional members of the Northern Ireland Skills Council will be appointed after open competition, conducted in accordance with CPANI guidelines.

²²³ It is not anticipated that this will be a 'regulated' Ministerial appointment, but the application of CPANI guidelines, including independent oversight, ensures a fair and robust process.

Council membership includes senior officials from three central government departments which retain a broad focus on education, skills and employability policy. As outlined above, however, the skills system has a pervasive influence across the policy remit of all government departments and on the PfG outcomes we want to deliver for people in Northern Ireland. In recognition of this, an NICS Management Board, including senior representatives of all government departments, will sit under the skills council to advise on policy and ensure actions are operationalised in a cohesive way, which maximises impact for citizens.

Recommendation 43:

A cross-departmental NICS Management Board will sit under the Northern Ireland Skills Council to advise on policy and ensure actions are operationalised in a cohesive way, which maximises impact for citizens.

Skills Equality, Diversity and Inclusion

As set out in the Strategic Context Chapter, equality of access to skills provision is a strategic concern; particular issues associated with gender, disability, age, and socio-economic disadvantage are highlighted. Delivering positive economic, social and environmental outcomes will mean minimising constraints to participation in education and training opportunities.

As we implement ‘*Skills for a 10x Economy*’ there is a need to increase our focus on tackling such inequalities, to identify and address the structural issues which constrain participation and to create a platform for more people to work in better jobs.

To achieve this, the Skills Council will appoint a *Skills Equality, Diversity and Inclusion Sub-Committee*. The sub-committee will identify and provide advice to the Skills Council on equality, diversity and inclusion issues associated with the Skills Strategy, its underpinning implementation plans and emerging skills policy.

Recommendation 44:

A Skills Equality, Diversity and Inclusion Sub-committee of the Northern Ireland Skills Council will be established.

A Flexible, Agile Approach

A further common point of feedback from stakeholders, throughout the Strategy’s development process, was that previous government skills strategies lacked the flexibility and agility to respond in a rapidly changing labour market. This was also noted in the evaluation of ‘*Success through Skills – Transforming Futures*’²²⁴, which went on to recommend a strong emphasis on action, demonstrated through implementation plans which are subject to review.

In agreement with the NISC, 2-5-10 year implementation plans will be developed and published following the launch of this Strategy. A wide-ranging programme of action required to modernise

224 [DfE \(2020\) Evaluation of Success through Skills – Transforming Futures.](#)

Northern Ireland's skills system is included and, when considered alongside resource constraints, it will not be possible to implement everything in the short-term.

The work programme needs to be prioritised and flexibility must be retained to adjust plans, as unforeseen events impact upon our economy and labour market. Management of this process will be undertaken by the Northern Ireland Skills Council.

Recommendation 45:

The new Skills Strategy will be underpinned by 2, 5 and 10 year action plans, developing in conjunction with the Northern Ireland Skills Council.

Annual Reporting

"A vision and strategy aren't enough. The long-term key to success is execution, each day, every day."

The above quote is attributed to Richard M. Kovacevich, former CEO of Wells Fargo & Company. It emphasises the need for consistent focus on the implementation of Strategy, not merely the creation of a document. In an economy where our primary resource is the skills of our people, annual reporting on progress can drive consistent engagement across a broad range of stakeholders.

While its structure and scope will need to be developed, we anticipate that this will create a useful means of tracking short, medium and long term objectives. It provides a platform to:

- mark out successes and failures;
- monitoring delivery against strategic goals;
- creates a focal point for consistent stakeholder engagement on emerging issues; and
- provides a vehicle to develop underpinning indicators.

The Annual Report will be published from spring 2023 onwards, under the auspices of the NISC.

Recommendation 46:

We will publish an annual report on progress with the implementation, and emerging outcomes, from 'Skills for a 10x Economy'.

Policy Enabler 3: Investment in the Skills System

During the OECD's stakeholder engagement in Northern Ireland, stakeholders ranked funding as the most important issue for improving Northern Ireland's skills system. Stakeholder's concerns are well founded.

Analysis carried out on HM Treasury’s Country and Regional Analysis²²⁵ found that public sector spending on education and skills in Northern Ireland²²⁶ declined by 13% between 2010/11 to 2019/20, as measured in today’s prices. As part of this overall decline, real terms spending on Higher Education, Further Education and Industry Skills has fallen by around one-third over the period. This is illustrated below (fig 22).

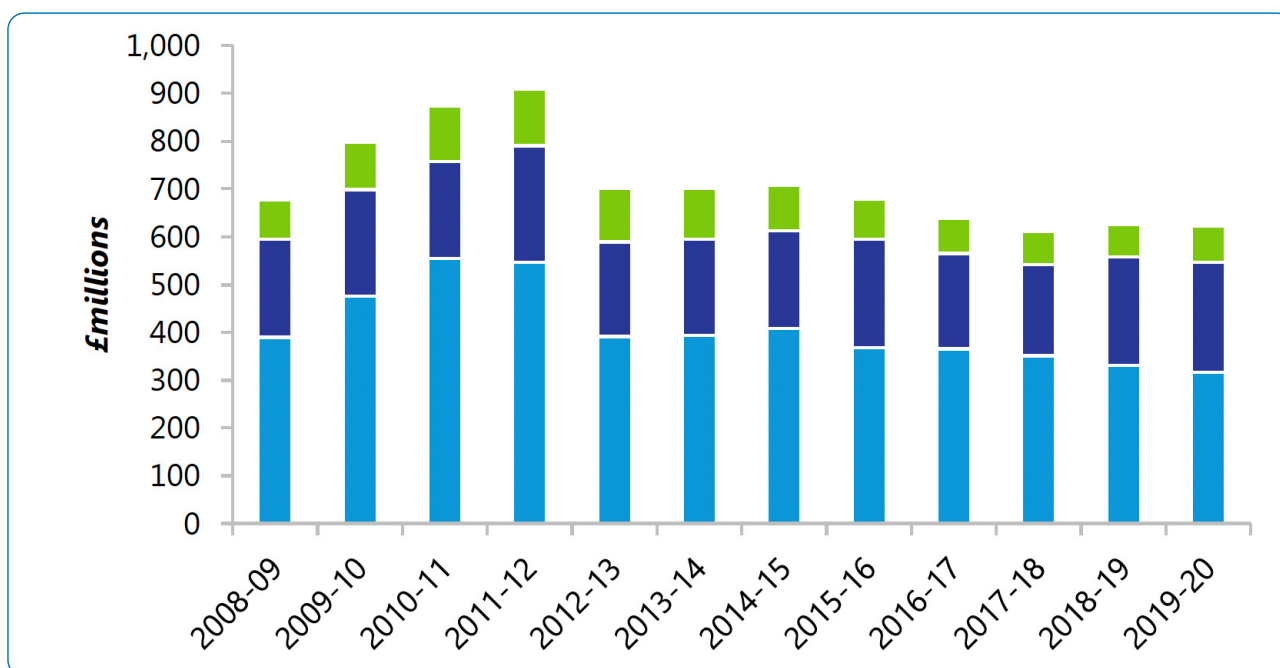


Figure 22: Expenditure on Higher Education, Further Education and Skills in Industry by the public sector in Northern Ireland

It is acknowledged that these reductions were made in the face of reduced public spending overall with some of this decline also explained by changes over the period, such as increased tuition fees for Higher Education courses, offsetting the cost to the public sector.

In response to the impact of COVID-19 on the labour market and more widely, the public sector launched a suite of education and skills initiatives which will likely have provided a boost to recent spending figures.

Short-term skills initiatives are a crucial asset in attracting business and supporting local businesses to meet urgent needs. Initiatives, such as ‘Assured Skills’, have served the Northern Ireland economy well in recent years²²⁷. Real strategic value, however, is achieved when we firstly minimise duplication, by aligning the outcomes of our skills system to the long-term vision for our economy and secondly, by providing the appropriate funding to education institutions to realistically deliver those outcomes.

225 [HM Treasury \(2019\) Country and Regional Analysis: 2020.](#)

226 Refers to primary, secondary and tertiary levels, and skills in industry.

227 [IPPR \(2018\) The Skills System in Northern Ireland: Challenges and Opportunities.](#)

Northern Ireland faces some challenges in achieving this long-term planning for social, economic and skills development. There are issues which are challenges to skills systems everywhere. Investment in skills carries an inherent risk for individuals, businesses and governments, as the future is uncertain²²⁸ and conflict exists between electoral cycles and long-term investments in the face of constrained resources²²⁹. The problem in Northern Ireland has been exacerbated through a recent history of single year budget agreements, which prohibit certainty and stifle long-term strategic planning²³⁰.

These challenges are a key reason for the whole-of-government approach set out above. The evidence referenced throughout this document consistently places education and skills at the very centre of the outcomes we want to deliver. A successful Northern Ireland will rely on the prioritisation of investment in our primary resource, the skills of our people. As the OECD's Skills Strategy Northern Ireland states:

“Northern Ireland must ensure that the importance of skills for future economic growth, social inclusiveness and well-being is understood by all major stakeholders, and in particular, political decision makers. Consequently, the creation of a shared commitment among political decision makers is central for a common long-term strategy for skills policy that guarantees sustainable funding arrangements.”

It is these ideas that have driven the proposals on consensus building across stakeholders in the skills system. Political consensus and commitment, however, is essential. For these reasons, the Skills Strategy will be agreed and published by the Northern Ireland Executive.

Recommendation 47:

The Skills Strategy will be endorsed, as a whole-of-government Strategy, by the Northern Ireland Executive, recognising the key, strategic importance of education and skills development to our social and economic prosperity.

A significant programme of action is set out in this Strategy. Delivery of the objectives will require substantial change in the investment trends which have marked the last decade and will involve the capacity to plan and implement long-term structural change. The OECD²³¹ and ‘New Decade, New Approach’²³² both recognise the benefits of multi-year budgets in enabling this activity, an issue that has received strong stakeholder support as we have engaged with a wide variety of stakeholders through the development of this Strategy.

228 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

229 Gonzalez-Ricoy, I. & Gossaries, A (2016) *Institutions for Future Generations*. Oxford University Press, Oxford, United Kingdom.

230 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

231 Ibid

232 [Northern Ireland Office \(2020\) New Decade, New Approach.](#)

'New Decade New Approach' explains that the education system, as currently designed in Northern Ireland, is not sustainable. The 'Independent Review of Education'²³³ is, therefore, a crucial and ongoing piece of work which will explore areas of duplication, segregation or fragmentation in the current system and assess the impact of such issues on delivery, costs and outcomes.

Recommendation 48:

Relevant Government departments and arms-length bodies will contribute fully to the 'Independent Review of Education', announced by the Minister of Education in December 2020, to ensure our education system is sustainable, economically relevant and equipped to deliver the best outcomes for our children, young people and society as a whole.

It is anticipated that the 'Independent Review of Education' will conclude by spring 2023. In the interim, particularly as we recover from the economic impact of COVID-19 and support our businesses and workforce to grow and develop in the post-EU context, there is a need for sustained investment, to begin to implement the proposals set out in this document.

Recommendation 49:

A ring-fenced skills fund will be introduced to provide new opportunities in the labour market and support the skills development of the working age population, as we emerge from the COVID-19 pandemic and prepare for the economic changes brought about by our exit from the EU.

There are two other major areas of concern with regard to investment in the skills system: the end of the European Social Fund and the Apprenticeship Levy.

European Social Fund (ESF)

The UK's departure from the EU means that monies invested in skills, received through ESF, will cease once exhausted (currently estimated to be 31 March 2023). This involves substantial funding for programmes related to the objectives of the proposed Skills Strategy, as set out in the following table developed by the OECD²³⁴.

²³³ [DE \(2020\) Independent Review of Education.](#)

²³⁴ [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

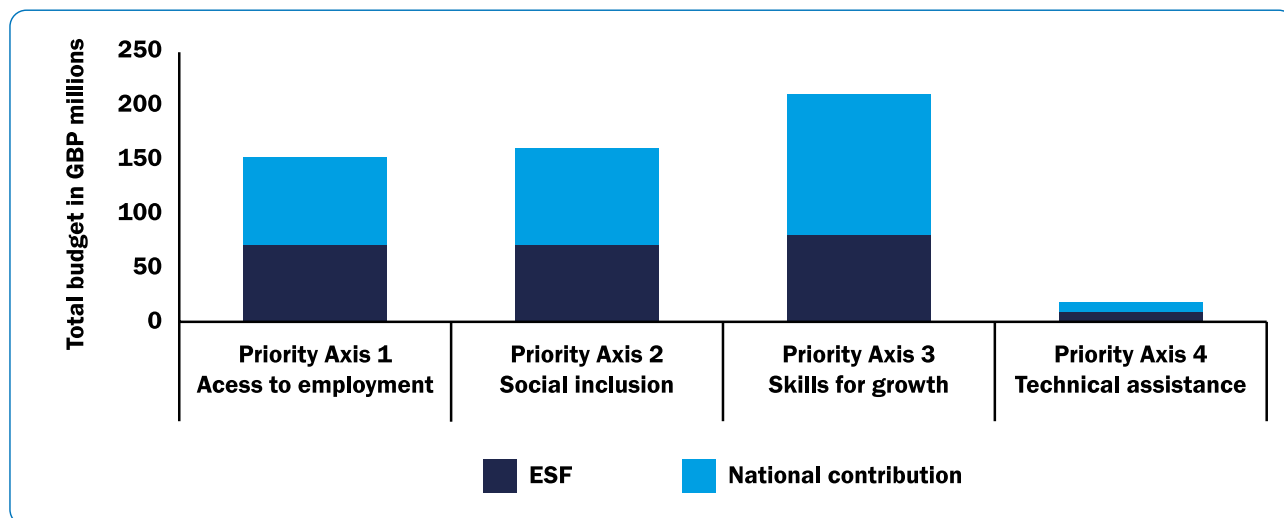


Figure 23: ESF and National Contribution for Priority Areas – Northern Ireland 2014 – 20.

The ‘Shared Prosperity Fund’ is considered to be the replacement vehicle for ESF funding, however, the value of the Fund remains unclear and there are ongoing concerns around how allocations will be governed between the national and devolved governments of the UK²³⁵. A ‘Barnett Formula’ calculation, for example, would differ from the current needs based assessment, which provides more per capita funding to Northern Ireland and other devolved regions. Further questions also remain on how funding will be aligned to priorities, how monitoring and evaluation of programmes will be conducted and how long spending periods will last.

The Apprenticeship Levy

The Apprenticeship Levy was introduced in 2017. Employers across the UK, whose annual paybill exceeds £3 million per annum, pay 0.5% of their total paybill to the Levy. As a matter of ‘reserved’ policy²³⁶, money raised through the Levy is paid to HM Revenue & Customs²³⁷. In England, this revenue is used to directly fund apprenticeships. Skills policy, however, is a devolved matter. Funding is, therefore, redistributed to the each of the UK’s devolved administrations, through the Block Grant, in line with Barnett formula calculations.

As a result, there is no direct correlation between the money paid by employers based in Northern Ireland and the funding which comes back to Northern Ireland through the Block Grant. The net financial outcome has been no overall increase in Northern Ireland’s Block Grant, as the previous Barnett consequential for apprenticeships was withdrawn and furthermore, public sector organisations in Northern Ireland must pay into the Levy²³⁸.

235 [Institute for Government \(2021\) European Structural Funds: The UK Shared Prosperity Fund.](#)

236 [House of Commons Library – Research Briefing \(2019\) Reserved Matters in the United Kingdom.](#)

237 [HM Revenue & Customs \(2016\) Pay Apprenticeship Levy.](#)

238 [DfE \(2019\) Northern Ireland Response to the UK Government Apprenticeship Levy.](#)

Whilst employers in Northern Ireland can avail of government support in existing apprenticeship programmes²³⁹, the absence of specific, ring-fenced funding resulting from the Levy means it is broadly perceived, and in effect, acts as a tax on large employers in Northern Ireland²⁴⁰. This is a point of significant frustration to many employers and one which was raised repeatedly throughout stakeholder engagement, as this document was researched and developed. As the OECD notes²⁴¹, this works as a disincentive to our overall intentions, driving wage growth, employer investment in skills and the delivery of better jobs, overall.

The lack of overall change in the Block Grant remains a fact and is a consequence of policy developed at the UK level. This consultation highlights the need for a full review of investment in the skills system, which should include consideration of the impact of the Apprenticeship Levy. In the interim, DfE is continuing to work closely with employers to further develop the apprenticeship offer.

239 [NI Business Info \(2021\) Apprenticeship: Delivering Work-Based Training and Qualifications to Employees: Finance and Funding for Apprenticeships.](#)

240 [DfE \(2017\) Apprenticeship Levy Consultation Findings.](#)

241 [DfE/OECD \(2020\) OECD Skills Strategy Northern Ireland: Assessment and Recommendations.](#)

Appendix 1 GLOSSARY OF ABBREVIATIONS USED IN 'SKILLS FOR A 10X ECONOMY'

CAFRE	College of Agriculture, Food & Rural Enterprise
CCC	Climate Change Committee
CCEA	Council for the Curriculum, Examinations & Assessment
CITB (NI)	Construction Industry Training Board (Northern Ireland)
CPANI	Commissioner for Public Appointments Northern Ireland
CPD	Continuous Professional Development
DAERA	Department of Agriculture, Environment & Rural Affairs
DE	Department of Education
DEL	Department for Employment & Learning (predecessor to the Department for the Economy)
DfC	Department for Communities
DfE	Department for the Economy
DfI	Department for Instructure
DoJ	Department of Justice
EES	Enhanced Employability Services
ENI	Employability NI
ESF	European Structural Fund
EU	European Union
FE	Further Education
GBP	Pounds sterling
GCSE	General Certificate of Secondary Education
GHG	Greenhouse gases
HE	Higher Education
HE in FE	Higher Education in Further Education (HE courses delivered by the FE colleges)
HLA	Higher Level Apprenticeships
HPWP	High Performance Working Practices
ICT	Information & Communications Technology
IPPR	Institute of Public Policy Research

LEO	Longitudinal Education Outcomes
LMP	Labour Market Partnership
MRes	Master of Research degree
MaSN	Maximum Student Numbers
NEET	Not in education, employment or training
NIC ICTU	Northern Ireland Committee of the Irish Congress of Trade Unions
NICS	Northern Ireland Civil Service
NIMDM	Northern Ireland Multiple Deprivation Measure
NISC	Northern Ireland Skills Council
NICE	National Initiative for Cyber Security Education
NICVA	Northern Ireland Council for Voluntary Action
NISRA	Northern Ireland Statistics & Research Agency
NQF	National Qualifications Framework
OECD	Organisation for Economic Co-operation & Development
ONS	Office for National Statistics
PfG	Programme for Government
PSA	Public Sector Apprenticeships
R & D	Research & Development
SME	Small and medium sized enterprises
STEM	Science, Technology, Engineering & Maths
ULF	United Learning Fund for Ireland
UUEPC	Ulster University Economic Policy Centre