







SKILLS FOR A 10X ECONOMY















On 11th May 2021, we published our economic vision1:

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 places in Northern Ireland.

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

Our Vision for a Decade of Innovation will deliver a ten times better economy with benefits for all our people

# Technologies and Clusters

Focusing on priority clusters where NI can be a global leader, building on existing strengths and capitalising on windows of opportunity.

### **Talent**

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

#### Diffusion

Ensuring that innovation provides opportunities across all sectors, not just those at the cutting edge, and disperses economic and societal benefits to all.

#### **Funding**

Taking a new approach to funding interventions including Challenge Funds, better participation in funding programmes and applying conditionalities to offer of Government support.

# **Place**

**Building on our** successes in attracting visitors to our world class attractions, experiences and events, energising our ecosystem for innovation and developing our innovation infrastructure through the City and Growth Deals Programme.

Five steps to Developing Interventions to Deliver our Vision

<sup>1</sup> DfE (2021) A 10x Economy: Northern Ireland's Decade of Innovation. Available from: DfE website - 10x Economy Publication













Delivering 'a 10x Economy'' - an economy that is 10x stronger, 10x more prosperous, 10x more resilient - will require transformation in our skills system. In an economy with limited natural resource, the skills of our people are 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 developing Northern Ireland as 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.

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 a stronger, more prosperous, more resilient Northern Ireland.

This is both urgent and strategic. The skills and talents of our people will be the foundation of our economic success. 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.

# **Skills for a '10x Economy'**

Our draft consultation document identifies three major policy objectives and three underpinning policy enablers. These align to the principles set out in our economic vision; addressing skills imbalances, providing opportunities for all and placing collaboration and co-design at the centre of our strategy, to support key strategic clusters while delivering meaningful change for everyone. It aligns our skills system to the better jobs and better wages we want to see across our economy.















The Skills Barometer for Northern Ireland provides a clear guide to the skills we require to maximise our potential. It has been used as the primary evidence base to develop this draft strategy which will not only drive economic growth, but also establish a skills framework that addresses the key issues which have constrained Northern Ireland's economic and social development:

- the prevalence of individuals with low, or no qualifications
- limited opportunities for high paying jobs and pathways for career progression
- a 'skills deficit' and comparatively poor productivity performance.

# The Skills Strategy and the Opportunity for Generational Change

As the COVID-19 pandemic took hold in Northern Ireland in early 2020, the research and stakeholder engagement phase of the development of this strategy had just closed. The evidence compiled and the draft framework of action that had been developed already signified the need for transformational change in our skills system. A number of drivers can be identified for this, which fall under the banner of what we have come to know as the fourth industrial revolution:

- rapid technological advancement;
- an aging population and longer working lives;
- dealing with the impact of climate change and the need for green growth;
- globalisation and an increasingly competitive global environment; and
- the UK's departure from the European Union.













As 'A 10x Economy' highlights, the Coronavirus pandemic sent a further shockwave through our economy and labour market; a shockwave which has caused much pain to many people. At the same time, it has provided an opportunity for us to reflect on how we recover, rebuild and bounce back stronger than ever.

For our skills system to deliver the talent we need to support a 10x Economy, we must take advantage of our small scale, addressing the fragmentation which has constrained our skills system. We must reverse the trend of declining investment in skills, revitalising our education system to ensure it is strategically aligned and properly resourced to deliver in a modern, small advanced economy. We must ensure that everyone has access to the education and training they need to reach their potential, delivering better jobs to more people.

## **Policy Objectives and Key Commitments**

As illustrated in the diagram above, our draft Skills Strategy is shaped around three policy objectives and three underpinning policy enablers. An overview of the rationale and intentions behind each objective and enabler is provided in the following pages. Individuals or organisations that wish to engage in the consultation process will find the consultation document at the link provided on page two. The full consultation document details our evidence base, the 34 proposed policy commitments and consultation questions.

#### 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 draft Skills Strategy is trying to achieve and considers the change that needs to be delivered at all levels of the qualifications framework.

Whilst the draft Skills Strategy (consultation document) reflects a broad range of research which informs these proposals, the Skills Barometer for Northern Ireland is adopted as a primary evidence source, guiding our proposed interventions. Delivering the skills needed under its 'high growth scenario' is adopted as the marker for the strategic objectives which will support our economic vision, a 10x Economy. Whilst work is yet to be done on developing specific metrics - subject to consultation on these proposals – it is proposed that our targets will focus on:

 increasing the proportion of individuals leaving Northern Ireland higher education institutions with degrees and post-graduate qualifications in 'in-demand' STEM subjects, including: physical, environmental and computer sciences, engineering and mathematics;









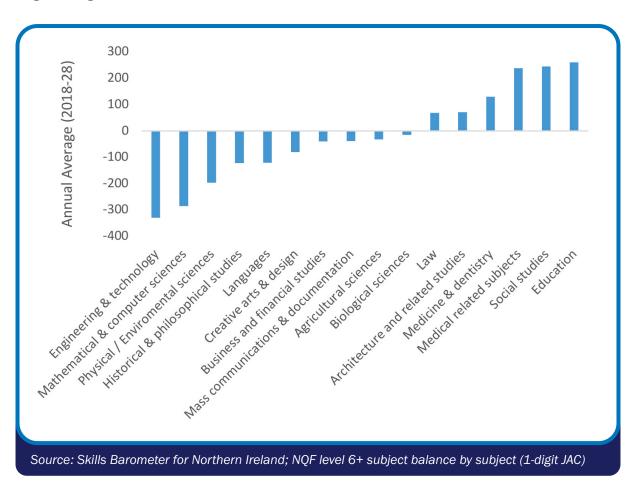




- significantly increasing the proportion of individuals achieving level 3, 4 and 5 qualifications, in line with forecast demand; and
- increasing the proportion of the working age population with qualifications at level 2 and above.

#### **Degree and Post-Graduate Education**

At degree and post-graduate levels, the primary challenge for Northern Ireland is to increase the number of individuals entering the labour market with qualifications in STEM, particularly in the 'narrow STEM' fields: physical, environmental and computer sciences, engineering and mathematics. Success in this area is crucial to our economic vision.















At the highest levels of post-graduate education, we want to develop stronger relationships between government, business and our world class research institutions. This is not only intended to address the undersupply of qualifications aligned to the development of our priority clusters and the emerging technologies which will underpin them, but also to drive Northern Ireland's potential as a global hub of innovation and knowledge. This will focus on Northern Ireland's key strategic clusters – and the enabling technologies that will drive them - set out in 'A 10x Economy':

- Digital, ICT and Creative Industries (e.g. Cyber Security)
- Agri-Food
- Fintech/Financial Services
- Advanced Manufacturing and Engineering (e.g. Composites)
- Life and Health Sciences (e.g. Digital Medicine)

Whilst programme design remains subject to consultation and co-design with business and academia, we want to support an increasing number of post-graduate research degrees that are delivered in these areas, with an emphasis on business-led research design, to ensure education is focused on innovation with real market value.

Underpinning this, we need to develop a rich pipeline of talent, increasing the number of individuals who choose to study STEM subjects at degree level. There are a number of ongoing projects which relate to this challenge including:

- 'Women in STEM', which seeks to address the significant under-representation in these areas of study;
- The joint DE/DfE 'Transition of Young People into Careers (14 19) Project';
- The Review of HE in FE; and
- The 'Independent Review of Education', announced by the Minister of Education in December 2020.

Careers education is recognised throughout these projects. Based on the evidence gathered to underpin the draft Skills Strategy, it is recommended that we reform careers education by introducing new measures of careers guidance outcomes and developing clear, common, transparent and accountable standards.

#### Mid-Level 'Professional and Technical' Education

As our economic vision recognises, degree level employment in Northern Ireland's key strategic clusters will not be suitable for everyone. As our economy develops, it is anticipated that a broad range of opportunities will emerge at mid-level; an area where the Skills Barometer highlights a significant anticipated supply problem across a broad range of fields of study.



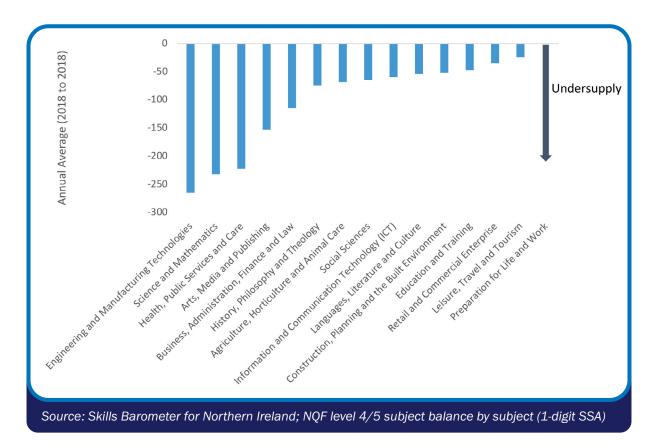












Below level 4, the Skills Barometer does not provide a 'by subject' breakdown due to the diverse range of subjects typically studied, but it is clear that there is a substantial anticipated undersupply at level 3 and a significant oversupply of individuals with low or no qualifications.



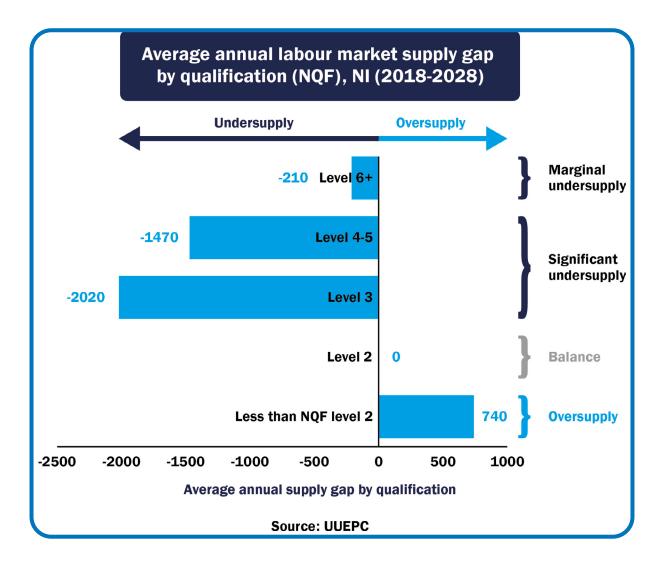












This highlights the key role of Northern Ireland's FE sector in addressing the skills deficit. The FE sector has a 'dual mandate' in Northern Ireland's skills system. It is the primary provider of education at levels 4 and 5 and vocational qualifications at level 3. From a resource perspective, this must always be balanced against the need to maintain provision of entry level education to adults and school leavers. Addressing the mid-level 'skills deficit' must be balanced against the need to provide progression pathways to those who have not reached their potential in school-based education. From both an economic and social perspective, it is essential that the FE sector is properly resourced to deliver this dual mandate.

There are also challenges in understanding and addressing declining participation in level 4 and 5 education; the ongoing work on the 'Review of HE in FE' will be essential to this.







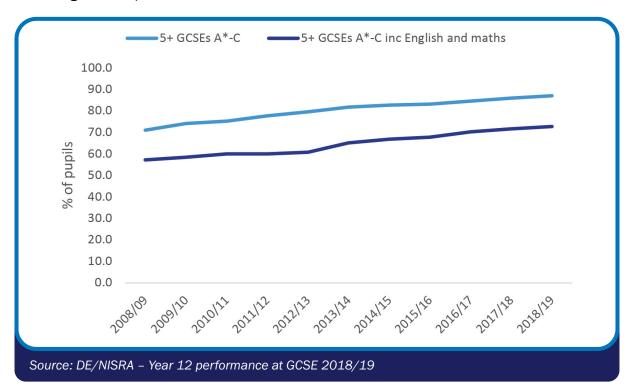




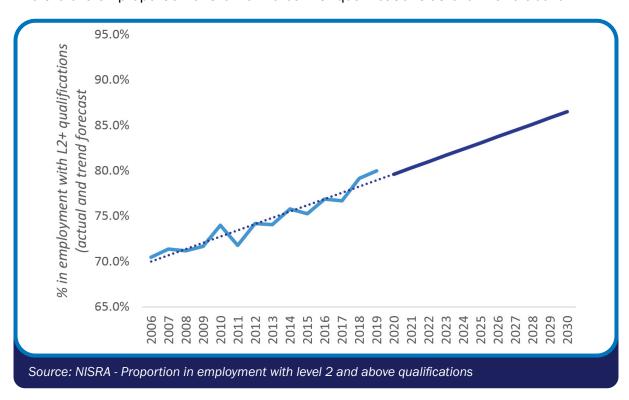


#### **Low or No Qualifications**

Over the lifetime of the last Skills Strategy – 'Success through Skills: Transforming Futures' - there was substantial improvement in the percentage of school leavers achieving level 2 qualifications:



And the overall proportion of the workforce with qualifications at level 2 and above:















This is undoubtedly a positive trend we want to see continue, however, it should not mask the disparities and inequalities which are evident in areas of multiple deprivation, where education outcomes are significantly below Northern Ireland averages. Whilst there is a clear correlation between education and employment outcomes, the problem runs deeper. The Northern Ireland Index of Multiple Deprivation (NIMDM) demonstrates that poor education outcomes are also correlated with (but not necessarily the cause of):

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

As has been noted above, connecting individuals in this cohort with opportunities to develop their skills is key. Collaboration across government, including with local government, will be central to developing cohesive approaches to education, skills and economic policy and supporting individuals to upskill, reskill and where necessary, reconnect with the labour market.

#### **Creating a Culture of Lifelong Learning**

'Addressing Skills Imbalances' over the next decade is fundamental to this Strategy. It must be acknowledged, however, that the vast majority of the 2030 workforce has already completed compulsory education. Making a difference in the skills of our working age population will not be achieved unless real opportunities are afforded to individuals to upskill / reskill throughout their working lives.

Participation in lifelong learning in Northern Ireland is comparatively low. We fall behind counterparts in the UK and Ireland, and participation is lower than the OECD average. Evidence from the OECD's 'Skills Strategy Northern Ireland' highlights the importance of early education in setting learning habits on the right path. Many of the actions outlined under the 'Addressing Skills Imbalances' heading will be fundamental in achieving long term change in this regard, but the need for more urgent action is present now.

As part of our response to the COVID-19 pandemic, several initiatives to support our working age population have already been brought forward, for example: investment in apprenticeships; a Flexible Skills Fund to support upskilling and reskilling; and proposals for investment in leadership and management training. These are all vital measures which we want to refine and build on over the lifetime of the new Skills Strategy.

In tandem, there is a longer term, more strategic challenge to consider. We need to develop a comprehensive understanding of why participation in lifelong learning lags behind counterparts and put in place the appropriate measures to make a lasting difference. This will be done under the auspices of Northern Ireland's first ever *'Lifelong Learning Action Plan'*, co-designed with business, education institutions and trades unions, with the clear intent of driving a 10x Economy.













#### **Enhancing Digital Skills, Developing Our Digital Spine**

Keeping pace with technological change is one of the greatest challenges facing our skills system, as the pace of technological advancement outstrips the speed with which we are responding. Developing a skills system equipped to cope with this is essential, if Northern Ireland is to reach its competitive potential. In one sense, this is absolutely about supporting our key strategic clusters, all of which are being driven by technological change and hold untold innovative potential, if we can develop and harness the skills which will turn potential into commercial value.

The societal importance of improving digital skills should not be overlooked, however. As the COVID-19 pandemic has illustrated, access to, and the ability to use digital technology is increasingly fundamental to our capacity to function as an economy and a society. Whilst we want to supply the skills required to bolster Northern Ireland's key strategic clusters, we must also recognise that some level of digital competence is increasingly essential to effective engagement in almost all work environments and a key aspect of an individual's capacity to actively participate in modern life.

For this reason, it is proposed that a 'Digital Skills Action Plan' is developed to support the objectives of our economic vision: driving our decade of innovation and providing everyone with the opportunity to participate in our 10x Economy. Drawing again on the co-design principles we have set out, an expert panel will be appointed to consider the changing digital skills needs of our economy and identify the substantive changes required in digital education, to meet the current and emerging needs of our labour market and society.

# **Policy Enablers**

The draft Strategy breaks our policy enablers down into three major areas:

- Developing better policy cohesion
- Building stronger relationships
- Investment in the Skills System

Taken together, these enablers are about improving the governance of the skills system. It means working across government to build more cohesive skills policy solutions, which will drive our objectives of positive economic, environmental and societal outcomes. It means building strong relationships with external stakeholders in business, the education sector and trades unions to co-design skills solutions which support better jobs and better wages for all our people. It is about delivering increased innovation and driving Northern Ireland's position as an elite small advanced economy, through investment in a skills system which enables all our people to reach their potential.







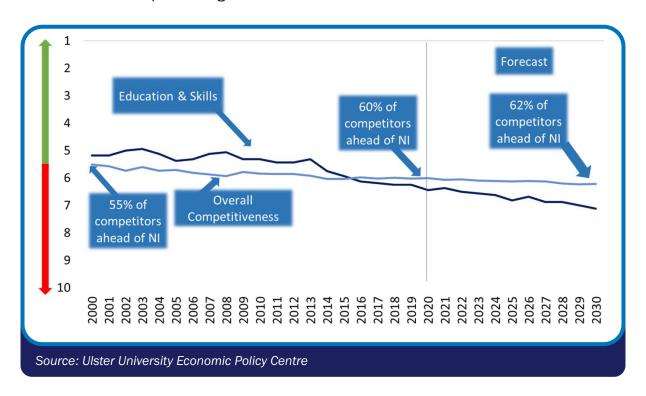






The key action underpinning these enablers will be the development of a new Northern Ireland Skills Council. Whilst the terms of reference and specific make-up of the Council is yet to be agreed, the concept draws on international best practice to establish a forum with ministerial leadership and representation from senior figures in key government departments, business, education and trades unions. Its purpose will be to drive a more collaborative approach to policy, ensuring the skills system is responsive to economic need, strengthened through engagement with employers and employees and that the central importance of our skills system is recognised throughout economic and social policy, as we aim to address the issues which will make a real difference in people's lives.

Finally, we need to prioritise investment in the skills system. Over the last decade, investment in education and skills has fallen significantly. A recent assessment of Northern Ireland's competitiveness by the Ulster University's Economic Policy Centre shows how this has affected our competitive performance, with several small advanced economies now outperforming Northern Ireland<sup>2</sup>.



In 2010, economies such as Finland, Sweden, Norway, Denmark, Netherlands, Estonia, Germany, France, Austria, Ireland, Iceland & Belgium were outperforming NI. In 2020 the Czech Republic, Poland, Slovenia, Lithuania, Latvia, Portugal, Cyprus and Luxembourg can be added to that list.













In 2020/21, the Minister for the Economy secured £50 million of additional funding for skills initiatives as part of our initial COVID-19 response. This was supplemented by a further £50 million to support our economic recovery in 2021/22. This investment has been allocated to a range of initiatives, supporting additional places in existing programmes, including the expansion of apprenticeship opportunties, additional student support and new upskilling measures designed to support those whose employment had been affected by the pandemic. This additional investment has been widely welcomed, however, achieving the objectives as set out in this consultation will require sustained, strategic investment across all elements of our skills system in Northern Ireland.

Not only do we need to reprioritise our investment in education and skills, but we need a commitment to introduce the multi-year budgets which will underpin strategic planning and the transformational change in our skills system that will be required to deliver our 10x Economy.