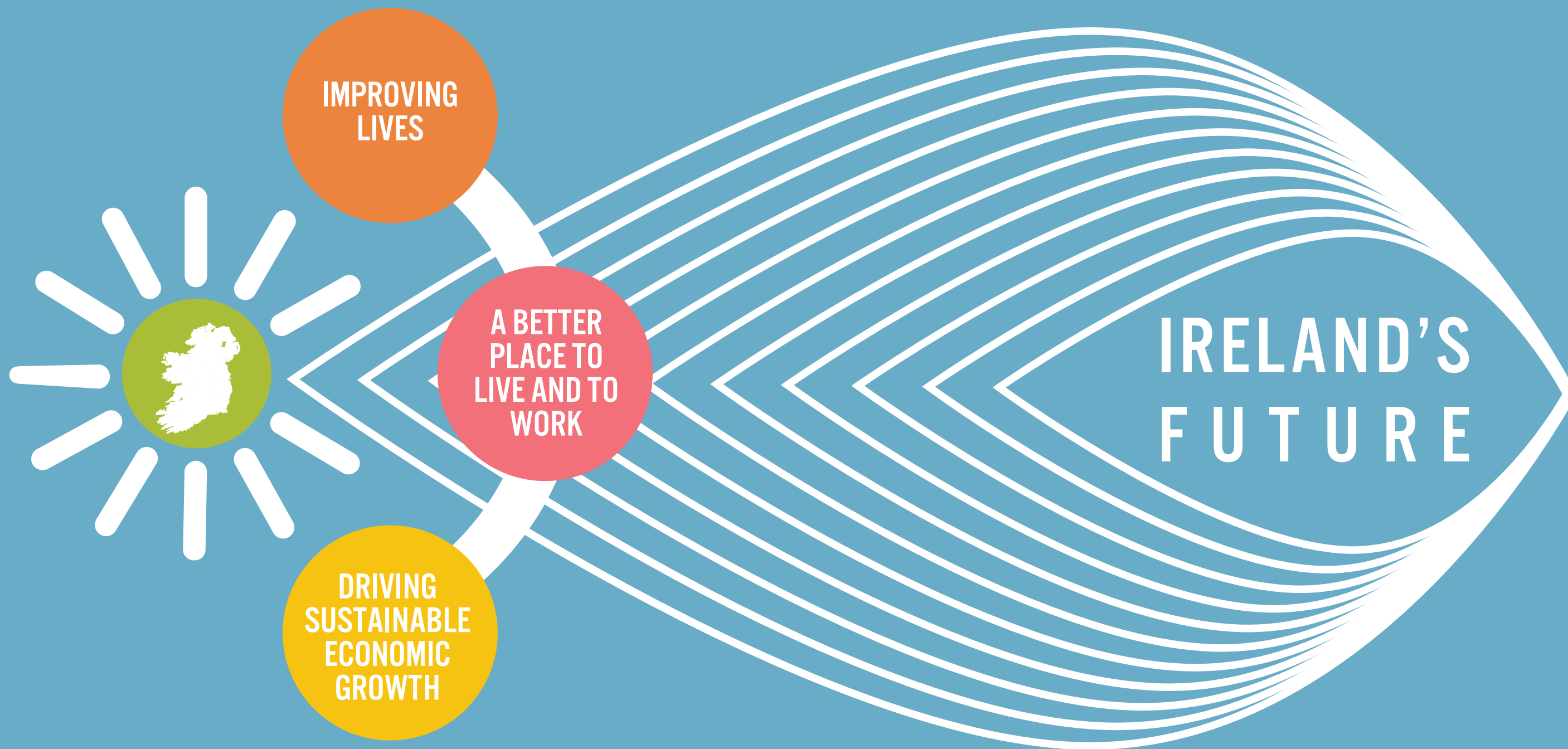
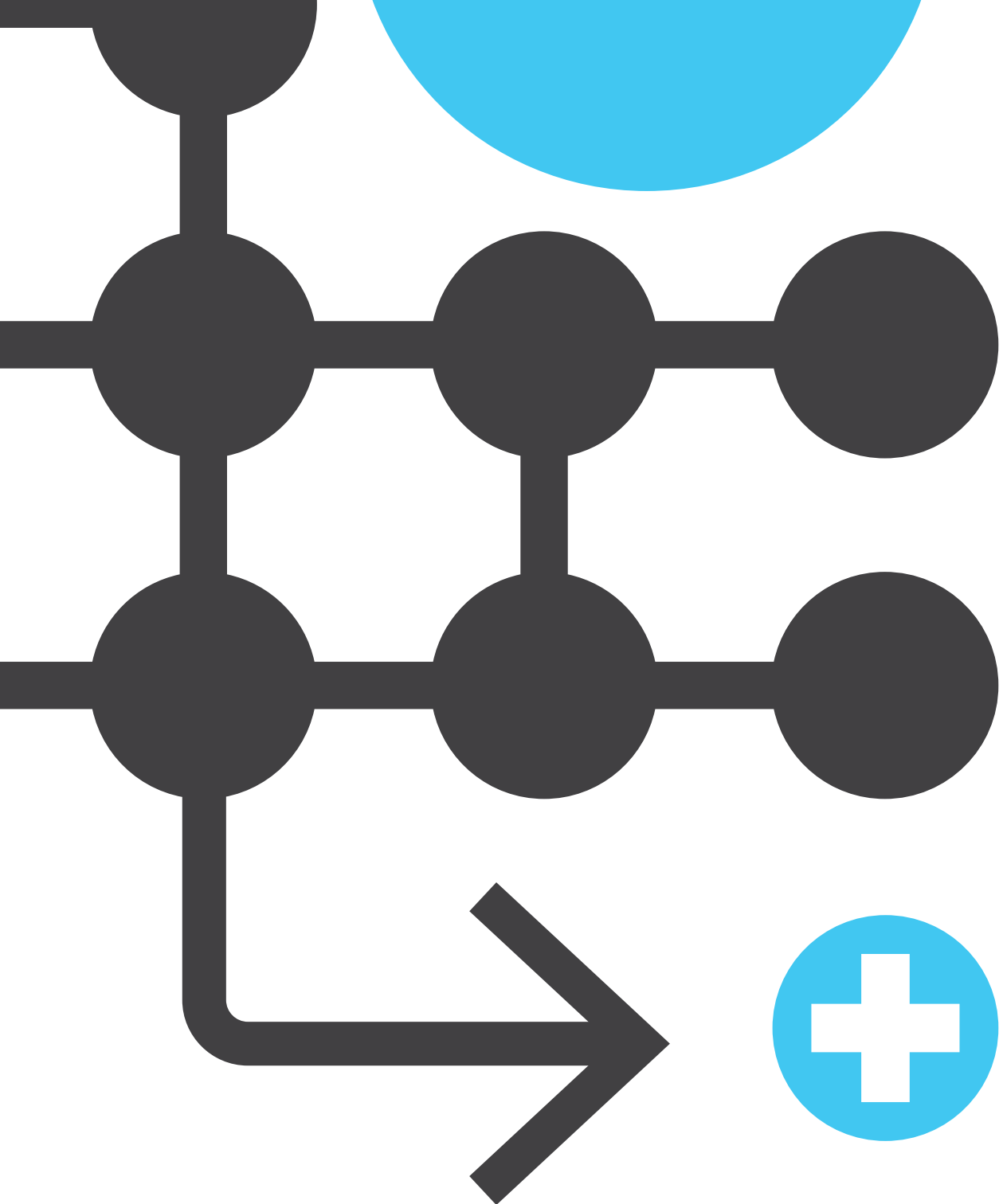


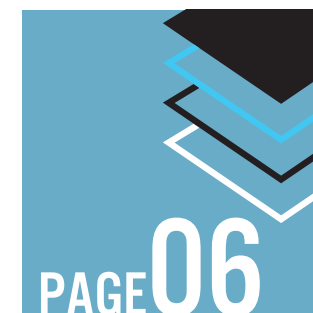
IRELAND'S NATIONAL SKILLS STRATEGY 2025







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01. FOREWORD

Skills have become the global currency of the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into economic growth, and countries can no longer compete in an increasingly knowledge-based global society

- OECD Secretary-General Angel Gurría

FOREWORD

Increasingly Ireland is competing globally on the basis of talent and on Ireland's growing reputation for innovation. Winning the war for talent can be achieved by ensuring that all of Ireland's citizens have access to the skills they need to succeed in life; and Irish business has the people with the skills they need to grow. This is also critical to securing our recovery and ensuring Ireland's people share in that recovery.

This Government has focused on economic recovery and job creation. Firstly by stabilising the public finances to create the conditions for economic stability and return to growth, and then by driving job creation through the Action Plan for Jobs process. That strategy and the hard work and sacrifices of the Irish people have delivered an astonishing recovery.

Ireland is now in full recovery mode, and within striking distance of full employment. As we approach full employment making sure Irish workers have the skills that enterprise needs matters more than ever.

If we are to secure the recovery and future proof the Irish economy we need to put in place a long term skills strategy to ensure all of our people can reach their full potential and play an active role in building a better Ireland. The only constant in life is change and that means we need a strategy which is flexible enough to respond to a rapidly changing environment.

This Strategy forms an integral part of the Government's long term economic plan to restore full employment and build a sustainable economy. It is closely aligned with broader Government policy including Enterprise 2025, Pathways to work 2016 – 2020 and the Action Plan for Jobs. Indeed given the importance of the skills agenda to the Government's overall economic plan it is no exaggeration to say that this strategy forms the keystone of Ireland's strategy to deliver long term sustainable growth.

This strategy sets an ambitious trajectory for the next ten years for skills development in Ireland. It marks an important step in the evolution of Ireland's education system to a system which fully supports lifelong learning and is more responsive than ever to the changing needs of participants, enterprise and the community.

We can continue and enhance the reform of our system of education and training with a real partnership between the education sector and enterprise to provide the mix of skills needed over the next ten years and beyond. This strategy puts in place the structures to enable that partnership. The establishment of Regional Skills Fora will enable employers to have their say in what skills mix will best serve their region into the future. At national level, the new National Skills Council will utilise intelligence on skills requirements to proactively address emerging skills gaps.

We will use regular rigorous evaluation of activities to constantly improve the quality of provision at all levels and drive key reform initiatives already in train, for example, in early childhood education, school curriculum reform and development of Apprenticeships.

Ireland is a small country, we cannot afford untapped talent, nor do we intend to leave any of our people locked out of participating in the workforce through a lack of skills. That is why there is a specific focus in this strategy on active inclusion for the economically marginalised.

We can't deliver Government's ambitious jobs targets without bringing our emigrants home. Migrants will be encouraged to return to Ireland to take up skilled positions and there will be increased mobility of early-stage researchers coming through Ireland's higher education system into industry.

Job creation remains the focus of this Government because as the Taoiseach said recently "a job doesn't just mean an income. A job can transform a life. Give a person a role and a stake. A job offers the chance to make a contribution. It helps young people, in particular, find their own path in life and strike out to a new future."

This strategy will deliver the skills to generate jobs and sustainable economic growth and help Ireland and its people strike out to a new and better future.

Jan O'Sullivan TD
Minister for Education and Skills

Damien English
Minister for Skills, Research and Innovation

THIS NATIONAL SKILLS STRATEGY
I R E L A N D ' S
F U T U R E
WILL MAKE SURE THAT IRELAND IS
RENOWNED AT HOME AND ABROAD
AS A PLACE WHERE THE TALENT OF
OUR PEOPLE THRIVES.



**EXECUTIVE
SUMMARY**

Executive Summary

This National Skill's Strategy: Ireland's Future builds on the progress made under the previous strategy *Towards Tomorrow's Skills*¹. Over the next ten years, it will advance towards the ambitious vision that:

Ireland will be renowned at home and abroad as a place where the talent of our people thrives through:

- *The quality and relevance of our education and training base, which is responsive to the changing and diverse needs of our people, society and the economy;*
- *The strength of relationships and transfer of knowledge between employers, education and training providers, and all sections of society, and the resulting impact on how people are prepared for life and work;*
- *The quality of our workforce – a nation of people armed with relevant knowledge, entrepreneurial agility and analytical skills;*
- *The effective use of skills to support economic and social prosperity, and to enhance the well-being of our country;*
- *The effective use of technology to support talent and skills provision, to grow enterprise, and to enhance the lives of all within society.*

After the recent sharp global recession, Ireland's employment levels have recovered from an unemployment high of 15% at the end of 2011 to less than 9% today. As we move into recovery, skills shortages are now emerging in certain areas and occupations, for instance in advanced manufacturing and Information Communications Technology (ICT). Global trends and drivers of change such as changing consumption patterns and shifting power structures are shaping international markets and emerging enterprise sectors. Technology is one of the key drivers of change and improved digital skills will be vital for Ireland's future, both in higher-end dedicated ICT jobs and, more widely, as a basic core competence. Other core - or transversal - skills like languages and entrepreneurship will also underpin Ireland's use of its talent offering as a global differentiator.

Ireland's young population – with the highest proportion in the EU under 15 – is another strong potential competitive advantage. Of our 3 million people of working age, almost 30% are economically inactive and supporting this section of the population to participate in and contribute to the skills needs of the labour market is one of this Strategy's objectives. Another objective will be to increase the supply of skills by, for example, encouraging Irish migrants to return home: a move that will enrich Ireland both economically and societally, and to support older workers to remain in employment. Increasing people's lifelong learning, especially of those in employment, is a national performance gap that this Strategy will tackle.

The youthfulness of our population, while a clear potential international advantage, also poses challenges to Ireland's education and training system. Over the last decade, full-time enrolments have increased by more than 170,000 and they will continue to rise in the coming years. These demographic pressures notwithstanding, important reforms are underway across all elements of the education and training system to improve its cohesiveness and its relevance, and to increase the return on public investment through more systematic evaluation and drive for maximum impact.

¹ <https://www.skillsireland.ie/publications/2007/tomorrow-s-skills-towards-a-national-skills-strategy1.html>

This Strategy is commencing in a time of recovery. It is hoped that, through its constituent actions and those of many others across the country over the next ten years, it will conclude at a time when Ireland has moved beyond recovery and into an even more proactive period of opportunity and growth right across the country.

The Strategy's objectives and associated actions have been developed with this in mind:



Objectives

- 1 Education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy.
- 2 Employers will participate actively in the development of skills and make effective use of skills in their organisations to improve productivity and competitiveness.
- 3 The quality of teaching and learning at all stages of education will be continually enhanced and evaluated.
- 4 People across Ireland will engage more in lifelong learning.
- 5 There will be a specific focus on active inclusion to support participation in education and training and the labour market.
- 6 We will support an increase in the supply of skills to the labour market.

Robust intelligence will underpin the Strategy's implementation and inform resourcing allocations. Prioritisation of skills needs will be overseen by the new National Skills Council. The new Regional Skills Fora will facilitate ongoing employer-educator dialogue to match identified needs with sustainable provision in each region, thereby optimising the return on Irish investment in education and training. Initiatives will be monitored by existing mechanisms and regular impact evaluations. These will be complemented through the tracking of identified key national and international skills indicators. The cumulative intent is to ensure that Ireland's people develop and use their skills to their maximum potential through sustainable employment and civic participation. Employers in Ireland, both private and public, will recognise their staff as their key asset. Others, both companies and skilled individuals, will be attracted to Ireland because of its global reputation for the priority that we attach to education and its role in a person's dignity, development and contribution to prosperity.



SNAPSHOT FROM
THE CONSULTATION
PAPERS RECEIVED

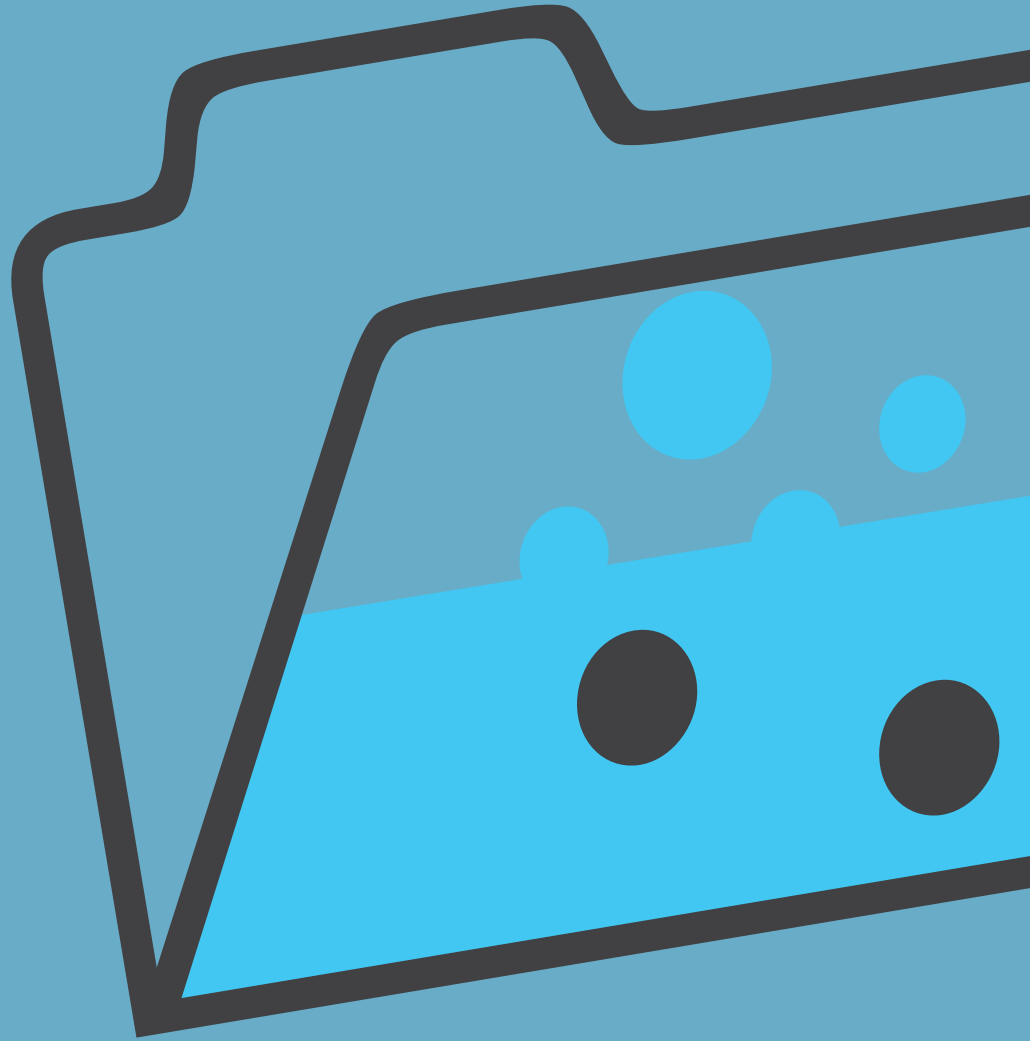
“”

“we need to create an environment where ideas flourish not to produce drones with skills....Our graduates must have a strong emphasis on creativity and flexibility, ideas and thinking outside the box.”

“Flexibility is key to encouraging participation in lifelong learning as for many it needs to take place around the working day.....there is still a significant gap in the provision of high quality courses that are suitable for those in employment.”

“Companies are now focused on training which will not only increase the company edge, but will enable the learner to achieve a greater understanding of themselves, increasing their appetite to excel.”

INDIVIDUALS & WORKER REPRESENTATIVES



01. INTRODUCTION

Introduction

This new National Skills Strategy 2025 aims to underpin Ireland's growth as an economy and as a society over the coming years. Through the vision, actions and targets set out, the Strategy will support development of a well-educated, well-skilled and adaptable labour force, creating and sustaining a strong pool of talented people of all ages living in Ireland.

The Strategy builds on the progress made since the last skills strategy, *Towards Tomorrow's Skills*², which was published in 2007 and sets new indicators of progress for the period to 2025.

Ireland's people are its greatest asset; this Strategy will support employer and learner access to a dynamic, adaptable, innovative and high-quality education and training system. Employers, whether public or private, will have access to an excellent pipeline of talented, innovative workers. Lifelong learning will be promoted and supported as well as more effective use of skills in the workplace to drive productivity and innovation.

This Strategy is designed to benefit all people living here, companies operating in Ireland or planning to establish here, those working here and those hoping to work here. It recognises the role that skills can play in the betterment of all and supporting people here to grow as global citizens.

Building on the previous national skills strategy

A number of targets were set in the previous skills strategy, some of which used the National Framework of Qualifications (NFQ) as a reference point. Others focused on the percentages of learners completing their second level education as well as progression to higher education. Since 2007, particular progress has been made in the following areas:

- The number of learners completing senior cycle at second level increased from 81% to 90.6%³. This exceeds the 90% target set for 2020.
- 93% of people aged 20-24 achieved an award at Levels 4-5 or more on the National Framework of Qualifications in 2014. This was an increase of 7% on the baseline year of 2005 and just 1% short of the target for 2020.
- The progression rate to higher education increased by 14 percentage points, from 55% to 69%, while there was an 11 percentage point increase in the number of people in the labour force achieving a qualification at Levels 6-10 on the National Framework of Qualifications.

² <http://www.skillsireland.ie/Publications/2007/Tomorrow-s-Skills-Towards-a-National-Skills-Strategy1.html>

³ <http://www.education.ie/en/Publications/Statistics/Statistical-Reports/Retention-Rates-of-Pupils-in-Second-Level-Schools-2008-Cohort.pdf>

Progress was not as strong for some other targets in the previous strategy. The target to increase the percentages of people in the labour force holding a qualification at Levels 4-5 was not met. A clear challenge also remains in relation to the share of persons with NFQ Level 3 as the highest level of education attained: which at 15.4% is still nearly double the 2020 target of 7%.

Developing the new strategy: Methodology and consultation

A review of progress on the previous national skills strategy was the starting point for development of the new strategy. This was supplemented by a comprehensive review of the range of national and international policy papers, evaluations and strategies on skills and talent development; innovative education and training; forecasts of current and future skills needs; and analyses of labour market developments and trends.

A high level Steering Group, with representatives of stakeholders from education and enterprise, supported the development of the strategy. A detailed consultation paper was published online in November 2015 and over 120 submissions were received from individuals and groups representing the full range of employers and the self-employed in Ireland; worker representative groups; representatives of the unemployed; educators; parents; other interested members of the public; Government Departments and State agencies in the areas of enterprise, education, social protection and health.

This strategy draws together the review of progress on skills and talent development in Ireland and internationally; recent developments and examples of effective policy and practice; and the inputs by the wide range of stakeholders who responded to the consultation document.

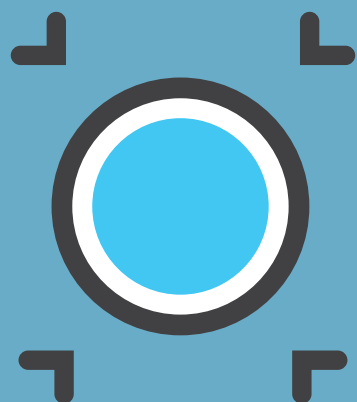
Flowing from the introduction, **Section 2** sets out an illustrative snapshot of Ireland today. **Section 3**, 'Changing world, Changing Skills' sets out the national and international context for the Strategy in terms of Ireland's employer base, global trends affecting skills needs and forecasted skills needs.

Section 4 sets out the current composition and trends within the Irish labour market

Section 5 profiles the Irish education and training system and its role in Ireland's skills and talent development.

Section 6 presents the Strategy's key priorities and constituent actions.

Section 7 outlines the means by which the implementation of the Strategy will be monitored and assessed.



OUR VISION AND OBJECTIVES TO 2025

A WELL-SKILLED, ADAPTABLE AND INNOVATIVE WORKFORCE CAN UNDERPIN IMPROVED LIVING STANDARDS FOR ALL OVER THE LONGER TERM. THE AVAILABILITY OF SKILLED TALENTED PEOPLE IS ONE OF IRELAND'S KEY INTERNATIONAL DIFFERENTIATORS IN THE ATTRACTION OF FOREIGN DIRECT INVESTMENT. IT ALSO DRIVES THE SUCCESS OF OUR INDIGENOUS ENTERPRISE BASE, FROM INNOVATIVE START-UPS THROUGH SMALL EMPLOYERS CRITICALLY LOCATED THROUGHOUT THE COUNTRY TO SCALING FIRMS WITH HIGH GROWTH POTENTIAL.

OUR VISION

Ireland will be renowned at home and abroad as a place where the talent of our people thrives through:

- *The quality and relevance of our education and training base, which is responsive to the changing and diverse needs of our people, society and the economy;*
- *The strength of relationships and transfer of knowledge between employers, education and training providers, and all sections of society, and the resulting impact on how people are prepared for life and work;*
- *The quality of our workforce – a nation of people armed with relevant knowledge, entrepreneurial agility and analytical skills;*
- *The effective use of skills to support economic and social prosperity, and to enhance the well-being of our country;*
- *The effective use of technology to support talent and skills provision, to grow enterprise and to enhance the lives of all within society.*

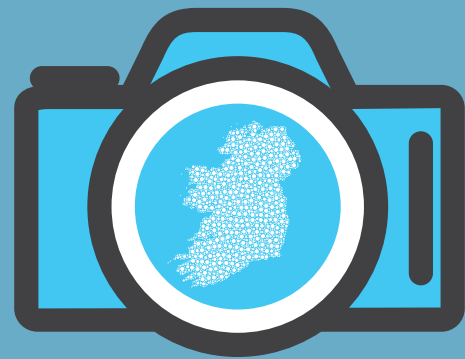
Ireland's education and training system will deliver more flexible, innovative and interdisciplinary skills provision. Returns on public investment in education and training will be maximised through more active employer engagement, clear prioritisation of initiatives based on available resources and their regular evaluation for impact and efficiency.

Realisation of this vision will involve learners, employers and educators, as well as relevant State Departments and agencies. Progress towards it will involve systematic evaluation of learner outcomes and the active participation of all. Employers cannot source more relevant skills without responsive education and training providers nor without students pursuing the right education

and training courses. Conversely, students cannot learn relevant skills without employers engaging in the skills agenda. For example, companies frequently express their need for experienced graduates. In order to deliver this, opportunities for students to gain practical experience must be more widely available. Improved channels for ongoing stakeholder dialogue and resultant action will be provided in the regions by the new Regional Skills Fora. These fora will be supported at national level by more streamlined mechanisms that will translate intelligence on skills needs into actions prioritised on the basis of likely impact and available resources through the new National Skills Council.

To support the achievement of this vision, over the period to 2025, our objectives are that:

- *Education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy.*
- *Employers will participate actively in the development of skills and make effective use of skills in their organisations to improve productivity and competitiveness.*
- *The quality of teaching and learning at all stages of education and training will be continually enhanced and evaluated.*
- *People across Ireland will engage more in lifelong learning.*
- *There will be active inclusion to support participation in education and training and the labour market.*
- *We will support an increase in the supply of skills to the labour market.*



02. IRELAND AT A GLANCE

OECD GOVERNMENT AT A GLANCE 2015 SHOWS THAT THE LEVEL OF SATISFACTION IN IRELAND, WAS 83 PER CENT IN 2014. THE SECOND HIGHEST OF ALL THE EUROPEAN COUNTRIES SURVEYED.

SATISFACTION WITH THE EDUCATION SYSTEM

83% IN 2014

IRELAND'S POPULATION IS CURRENTLY **4.635** MILLION

POPULATION

WITH **1 MILLION** UNDER THE AGE OF 15 – THE HIGHEST PROPORTION IN THE EU

1,983,000 OF THE POPULATION ARE IN EMPLOYMENT WITH A TARGET TO INCREASE EMPLOYMENT TO 2.18 MILLION BY THE END OF 2020.

EMPLOYMENT

THE CSO Q3 2015 FIGURES SHOW THAT THE NUMBER OF SELF-EMPLOYED HAS INCREASED BY **5,400** OVER THE LAST YEAR, BRINGING THE TOTAL UP TO **323,000** I.E. OVER 16% OF THOSE IN WORK IN IRELAND.

185,000 ENTERPRISES ACROSS IRELAND EMPLOY **1,2** MILLION PEOPLE

THE NUMBER OF THOSE UNEMPLOYED AT THE END OF 2015 IS **200,000**

UNEMPLOYMENT

ONLY 33% OF PEOPLE WITH DISABILITY OF WORKING AGE ARE IN WORK COMPARED WITH **66%** OF NON-DISABLED PEOPLE

YOUTH UNEMPLOYMENT (15-24 YEAR OLDS) ALTHOUGH REDUCING, REMAINS UNACCEPTABLY HIGH AT **19.7%**.

LONG-TERM UNEMPLOYMENT RATES HAVE FALLEN BUT THIS COHORT STILL ACCOUNTS FOR **54%** OF THOSE PEOPLE OUT OF WORK

INACTIVE

NEARLY 30% PEOPLE ARE ECONOMICALLY INACTIVE, WITH A HIGHER PROPORTION OF THOSE WITH LOW SKILLS



FULL-TIME LEARNERS IN IRELAND

THERE ARE OVER **1** MILLION FULL-TIME LEARNERS IN THE EDUCATION AND TRAINING SYSTEM



LIFELONG LEARNING

LIFELONG LEARNING PARTICIPATION RATE FOR 2014 WAS **6.7%** COMPARED TO AN EU AVERAGE OF **10.7%**
LOWER PARTICIPATION RATES AMONG THOSE IN EMPLOYMENT AT **5.5%** COMPARE TO THE EU AVERAGE OF **11.6%**



SCHOOL GOING POPULATION

THERE ARE **916,000** CHILDREN AND YOUNG PEOPLE IN SCHOOLS AND THIS WILL CONTINUE TO INCREASE TO 2025



LEARNING BEYOND SCHOOL

OVER **173,000+** FULL-TIME AND PART-TIME STUDENTS IN HIGHER EDUCATION
FULL-TIME ENROLMENT IN HIGHER EDUCATION HAS GROWN BY **30%** OVER THE PAST 9 YEARS DEMAND FOR PLACES IS EXPECTED TO INCREASE BY **30%** OVER THE NEXT 15 YEARS



WORKPLACE LEARNING

EXPENDITURE BY EMPLOYERS ON TRAINING HAS REMAINED RELATIVELY STATIC OVER THE YEARS.
AMONGST AGENCY SUPPORTED FIRMS, EXPENDITURE ON TRAINING AS A PERCENTAGE OF SALES ACCOUNTED FOR ONE PERCENT IN 2013 AND HAS NOT INCREASED BEYOND A PEAK OF **1.3** PERCENT IN 2000

OVER **230,000** PEOPLE WERE SCHEDULED TO START FET PROGRAMMES DURING 2015




3. CHANGING WORLD, CHANGING SKILLS

This Strategy has been developed against a backdrop of substantial national and international upheaval. 2008 marked the start of a severe global recession which hit Ireland hard. At the height of the downturn in late 2011, an estimated 47 million people were unemployed in 34 OECD countries⁴. In Ireland, nearly 330,000 or 15.1% of the labour force were unemployed⁵. Youth unemployment (15 to 24 year-olds) was almost 30%⁶. Ireland was one of five EU countries that had to accept financial assistance from the European Central Bank (ECB) and the International Monetary Fund (IMF).

Since the end of 2012, however, there have been signs of recovery, both globally and in Ireland and this recovery has continued to-date. Employment figures have improved; in Ireland unemployment has been reduced to 8.8% as at December 2015, with almost two million people in employment. Youth unemployment has reduced to 19.7%⁷. The Irish Government has set a target of 2.18 million people in employment by 2020. 56,000 new jobs were created between Q3 2014 and Q3 2015⁸, and the trends point to continued growth and expansion, although there are still risks to the recovery at national and global levels.

OVERVIEW OF IRELAND'S EMPLOYERS TODAY

According to the latest figures from the CSO⁹, 1,983,000 of the 2,186,000 in the labour force today are employed, an annual increase of 2.9%. Employment increased in the majority of sectors over the year. The largest rates of increase were recorded in the *Construction* (+13.3% or 15,000) and the *Industry* (+5.7% or 13,600) sectors.



SNAPSHOT FROM
THE CONSULTATION
PAPERS RECEIVED

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“The management of the “tension” between stakeholders which exists for example, between the terms training and skills on the one hand and education on the other is also a critical area which requires ongoing engagement.

EDUCATION & TRAINING PROVIDERS

⁴ OECD Labour Force Statistics 2014

⁵ CSO, Quarterly National Household Survey, Q3 2011

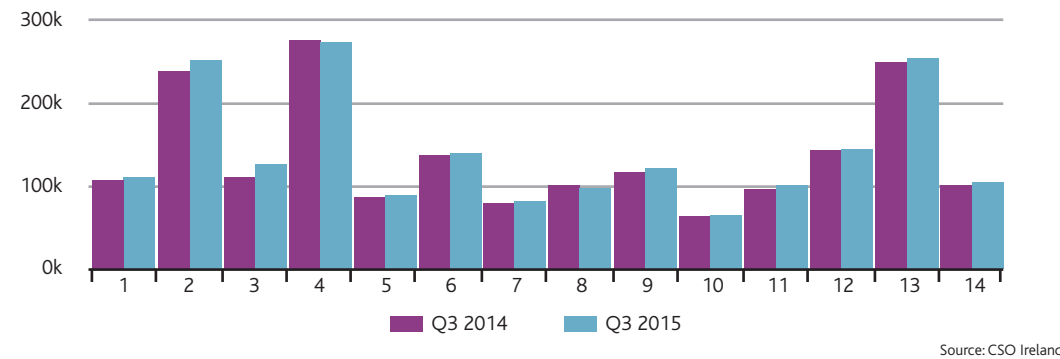
⁶ CSO, Quarterly National Household Survey, Q3 2011

⁷ CSO, Quarterly National Household Survey Q3, 2015

⁸ CSO, Quarterly National Household Survey Q3, 2015

⁹ CSO, Quarterly National Household Survey Q3 2015

Figure 2 Persons aged 15 years and over in employment (ILO) classified by Quarter 3 2014 and Quarter 3 2015



1	Agriculture, forestry & fishing	8	Financial, insurance & real estate activities
2	Industry	9	Professional, scientific & technical activities
3	Construction	10	Administrative & support service activities
4	Wholesale & retail trade; repair of motor vehicles	11	Public administration & defence; compulsory social security
5	Transportation & storage	12	Education
6	Accommodation & food storage activities	13	Human health & social work activities
7	Information & communication	14	Other NACE activities

An estimated 1.2 million of employees work in the private sector¹⁰. A significant proportion of these work in export-oriented innovative companies such as those supported by Enterprise Ireland and the IDA. Recent data from the two key industrial development agencies¹¹ points to strong growth in their client companies with agencies supporting a combined total of nearly 380,000 jobs throughout the country in 2015.

Company scale though remains an issue in Ireland. Previous data from the CSO¹² shows that there are approximately 185,000 enterprises across Ireland. Of these, more than 90% are classified as micro, i.e. employing less than ten people. This creates challenges for upskilling and reskilling the workforce in these organisations as they often don't have dedicated human resource or training functions to identify skills needs and appropriate responses. They also find it harder to release people for off-the-job training and at the same time maintain normal day-to-day operations. One of Enterprise Ireland's main strategic objectives¹³ is to scale companies that demonstrate growth potential, and skills capability development is central to the achievement of this objective.

¹⁰ CSO, QNHS Q3 2015

¹¹ Enterprise Ireland 2015 End-of-Year Statement and IDA Ireland 2015 End-of-Year Statement.

¹² CSO, December 2014, Business in Ireland 2012 Report

¹³ <https://www.enterprise-ireland.com/en/Publications/Reports-Published-Strategies/Strategy-to-2016.pdf>

Table 1 Breakdown of enterprise sector by company and employment

Company size (by employee number)	Number of companies	Employment	% of Total
Employment			
Large (+250)	555	384,000	32%
Medium (50-249)	2,412	227,000	19%
Small (10-49)	14,283	270,000	22.5%
Micro (-10)	168,249	318,000	26.5%

Source: CSO Business in Ireland 2012 Report, published December 2014

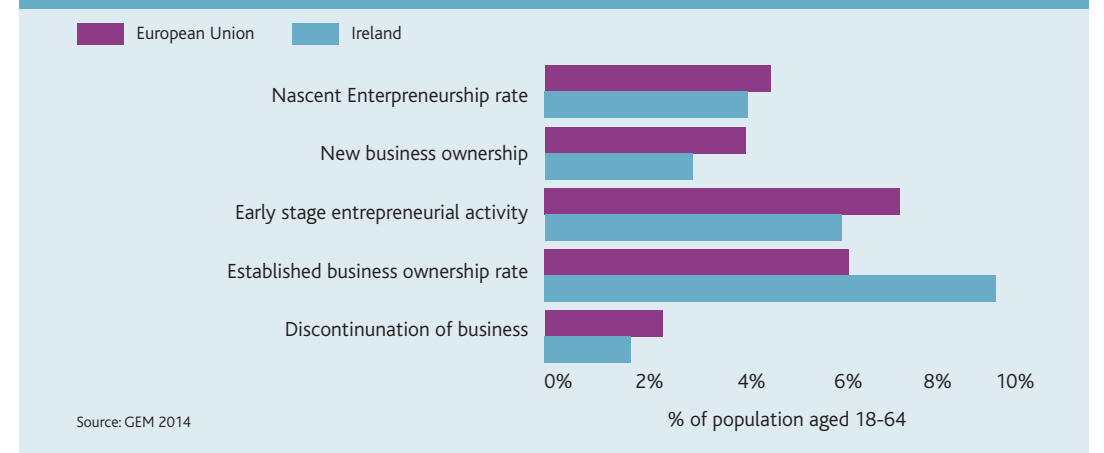
SELF-EMPLOYED

Out of the 1.98 million in employment, 1,644,000 are classified by the CSO as employees and 323,000 as self-employed. The latter increased by 5,400 or 1.7% over the year, bringing self-employed as a proportion of those in employment to 16%.

The Global Entrepreneurship Monitor Survey¹⁴ shows that

- Ireland is close to the European Union average in nascent entrepreneurship (those in the process of starting up), new business ownership and discontinuation of business rates.
- Irish entrepreneurship in the form of established business ownership rates exceed the European Union average by 3.2 percentage points.
- The European Union average entrepreneurship rate for early stage entrepreneurial activity exceeds the Irish rate by 1.3 percentage points.

Phases of Entrepreneurial activity - 2014

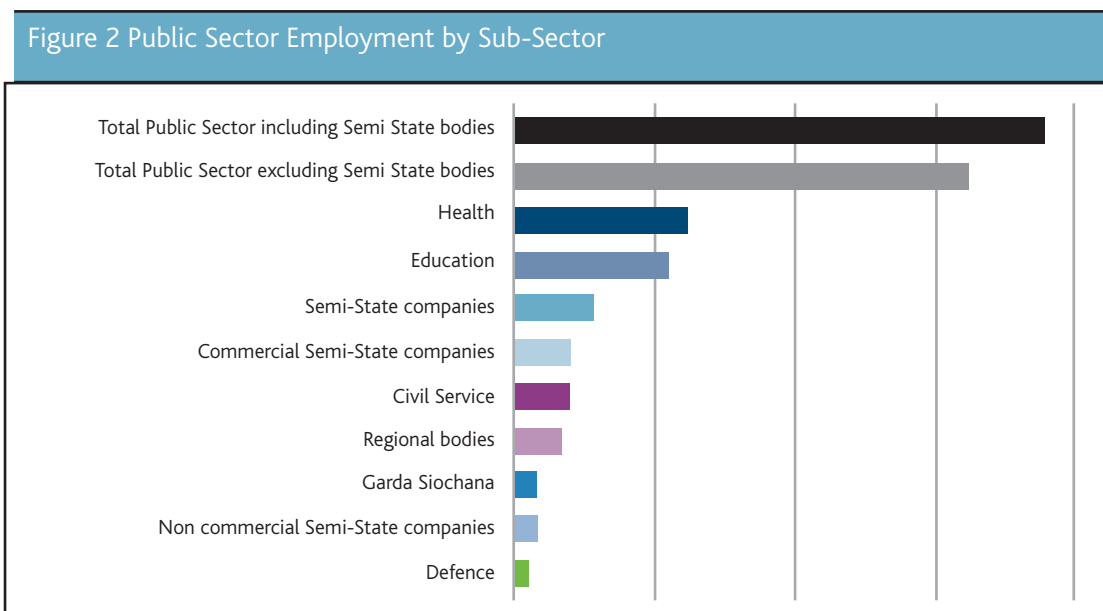


¹⁴ <http://gemconsortium.org/report>

Ireland's *National Policy Statement on Entrepreneurship*¹⁵ (2014) sets out key national objectives and initiatives to drive entrepreneurship in the coming years. The education and training system is recognised within this as making a key contribution. The Action Plan for Jobs 2016¹⁶ sets out specific actions to sustain the rate of increase in new start-ups and entrepreneurship and sets a target to double jobs impact from start-ups by supporting survival and scaling of new businesses.

PUBLIC SECTOR

The public sector as a whole is essential to Ireland's overall development and, like the enterprise sector, is facing significant skills issues. For instance, as healthcare delivery models evolve, the future roles of healthcare professionals will change, as will the competencies that will determine success. In education, changes have already been made to initial teacher education programmes to better prepare teachers for the classroom and the learning priorities of the 21st century. Of the 376,000 people working in the public sector, the majority are employees in Health (121,000) and Education (111,000), which are both critically important to society and the economy.



Source: Q3, 2015 (CSO, QNHS)

¹⁵ <https://www.djei.ie/en/Publications/National-Policy-Statement-on-Entrepreneurship-in-Ireland-2014.html>

¹⁶ <http://www.actionplanforjobs.ie/>

CURRENT TRENDS IN SUPPLY AND DEMAND FOR SKILLS IN THE ECONOMY

The National Skills Bulletin¹⁷ highlights current skills demand by occupation. A review of the Skills Bulletin for each of the four years 2012-2015 highlights the following key trends:

- There are skills shortages for Professionals and Associate Professionals across sectors in areas of ICT, Science and Engineering.
- The shortage of ICT talent is potentially significant for a number of sectors where ICT skills are needed (e.g. Software, Data Analytics, Financial Services, Distribution).
- There are also Professionals skills shortages in specific sectors such as Financial Services, Health (medical practitioners and nurses) and Construction (surveyors) - the latter only beginning to exhibit a skills shortage in 2014.
- As the economy has picked up, in addition to Construction, the Freight Transport, Distribution & Logistics sector has begun to exhibit skills shortages.
- Multilingual skills for Associate Professionals in ICT and Sales & Marketing, and for Administrative staff in Financial Services and Freight Transport, Distribution & Logistics.

In summary, the greatest skills demand is for Professionals, Associate Professionals and people with multilingual skills.

In addition, the National Skills Bulletin 2015¹⁸ also identifies a high volume of turnover in the Irish labour market: almost 250,000 transitions between employers and between occupations occurred in 2015. These transitions are typically concentrated in the lower end of the skills scale (e.g. elementary occupation, sales assistants etc.),

In seeking to address these issues during the implementation of this strategy, the education and training sector will have a continuing role to play in seeking to minimise the gap between demand and supply where there are shortages of people with the right skills to fill available jobs. Understanding the levels of skill required, coupled with the level of work experience needed will be key. It will also have an important role in upskilling and reskilling people with lower skills to enable them to gain more sustainable employment.

RELEVANT INTERNATIONAL AND NATIONAL POLICY DEVELOPMENT

As set out in the Introduction, this Strategy has been developed with reference to a number of key national and international policy developments. At EU level, *Europe 2020*¹⁹ sets priorities and targets Europe-wide and by country for issues that include employment, fighting poverty and social exclusion; research; climate change; energy sustainability and education. *Horizon 2020*²⁰ sets out priorities and targets specifically for research and innovation.

¹⁷ <http://www.egfsn.ie/Publications/>

¹⁸ <http://www.skillsireland.ie/Publications/2015/National%20Skills%20Bulletin%202015.html>

¹⁹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>

²⁰ <https://ec.europa.eu/programmes/horizon2020/>

In Ireland, a number of recent publications form an important backdrop to this Strategy, in particular Enterprise 2025²¹ (2015); Innovation 2020²²(2015); the National Policy Statement on Entrepreneurship²³(2014); International Financial Services 2020²⁴; Food Wise 2025²⁵, People, Place and Policy - Growing Tourism to 2025²⁶; Construction 2020²⁷; Trading and Investing in a Smart Economy – A Strategy and Action Plan for Irish Trade, Tourism and Investment to 2015²⁸ and its review²⁹; the National Digital Strategy³⁰ (2013), and the series of Action Plan for Jobs³¹national and the new Action Plan for Jobs regional plans(2015) and the Pathways to Work³² policies.

ENTERPRISE 2025

Enterprise 2025 (EP2025), the Government’s new enterprise policy framework and strategy sets the ambition to have 2.18 million people at work by the end of 2020 and to achieve an unemployment rate of 6%. This equates to an extra 266,000 at work on the end-2014 baseline.

In the three years 2012-2015 inclusive an additional 150,000 jobs have been created in the Irish economy, with all sectors showing signs of growth. Most notable is that the clients of the enterprise agencies are to the fore in creating new jobs, with estimates of over 55,000 extra employed in agency clients in the three years 2012-2015 inclusive, and EP2025 sets ambitious targets equating to growth of 12,500 per annum to 2020. The significance of the agency client base is that for every new job created by agency clients it is estimated there is a further job supported in the rest of the economy through purchases of raw materials and services etc. In addition to the new jobs created, there will also be a demand for 400,000 job replacements over the period to 2020 as people move out of the workforce through retirement, etc.

EP 2025 sets out the enterprise sectors in which Ireland has comparative advantage and that contribute the greater proportion toward exports. These sectors account for a significant proportion of the Enterprise Ireland and IDA enterprise agency client portfolio and include ICT (hardware and software), Health Lifesciences (including pharma, biopharma and medical technologies), International Financial Services, Internationally Traded Services, Engineering/Industrial Products and Agri-Food.

²¹ <https://www.djei.ie/en/Publications/Enterprise-2025.html>

²² <https://www.djei.ie/en/Publications/Innovation-2020.html>

²³ <https://www.localenterprise.ie/Documents-and-Publications/Entrepreneurship-in-Ireland-2014.pdf>

²⁴ <http://www.finance.gov.ie/what-we-do/banking-financial-services/international-financial-services/ifs-strategy-2020>

²⁵ <http://www.agriculture.gov.ie/media/migration/agri-foodindustry/foodwise2025/report/FoodWise2025.pdf>

²⁶ <http://www.dttas.ie/sites/default/files/publications/tourism/english/people-place-and-policy-growing-tourism-2025/people-place-and-policy-growing-tourism-2025.pdf>

²⁷ <http://cif.ie/images/pdfs/Construction2020.pdf>

²⁸ <https://www.dfa.ie/media/dfa/alldfawebitemedia/ourrolesandpolicies/tradeandpromotion/Governments-Strategy-and-Action-Plan-to-2015.pdf>

²⁹ <https://www.dfa.ie/media/dfa/alldfawebitemedia/ourrolesandpolicies/tradeandpromotion/Review-government-strategy-trade-tourism-investment-strategy-2010-2015.pdf>

³⁰ <http://www.dcenr.gov.ie/communications/en-ie/Pages/Publication/Doing-More-with-Digital-National-Digital-Strategy-for-Ireland.aspx>

³¹ <http://www.actionplanforjobs.ie/>

³² <http://www.welfare.ie/en/Pages/Pathways-to-work---Government-Policy-Statement-on-Labour-Mar.aspx>

New areas of opportunity and untapped potential are highlighted in EP2025. These include agritech, advanced manufacturing (3D Printing / additive manufacturing), Aquaculture, Big Data, 'Born Globals', Composites and advanced materials, eHealth, e-tailing, Fintech, Geosciences, Internet of Things, Sharing Economy, Smart Ageing, and Space. These are the opportunities that are known about now and others will naturally emerge over the course of this Strategy.

Annualised jobs targets have not been set out in EP2025. Rather, it assesses where there is potential for employment growth across four broad sectoral cohorts as set out in Table 2 below. All sectors are evolving in response to market demands and enabled by technology developments, presenting considerable opportunities arising from convergence, new business models and new market segments such as smart ageing.

Table 2 Enterprise 2025 Sectoral Ambition

Sectoral cohort	Brief overview of potential to 2020	Employment 2014 (base year)	Employment 2020
Building on strengths ICT, Lifesciences, AgriFood, Internationally Traded Services, Internationally trading financial services, Engineering/industrial products	Primarily export orientated – contributing circa 80% of total exports. These sectors reflect the bulk of the enterprise agency client base. Includes both foreign and Irish owned entities from small to large scale multinationals.	283,100	345,000
Transforming employment intensive sectors Tourism, Retail & wholesale, Construction, Transport & logistics, Primary production, Other manufacturing/sub supply	These sectors are primarily locally trading (with the exception of tourism that generates foreign earnings and some “other manufacturing”). In the main they play a dual role within the economy. A high proportion is Irish owned, but with increasing foreign owned presence (particularly hospitality and retail).It includes companies through from micro to large scale.	893,800	1,000,000
Realising untapped potential Creative Industries, Green Technologies / environmental services, Marine and maritime, Education services, Healthcare services	These are broadly defined sectors that incorporate a range of different sub-sectors and cross a number of Government Department areas of responsibility. Education and health services present opportunity for private sector provision and internationalisation. Generally small scale, Irish owned and regionally dispersed.	213,300	243,300
Other locally traded services and activities Legal, accounting and other professional, services, Business and consultancy services, Personal services	Primarily professional, business and personal services trading locally. High proportion of micro enterprises with some large scale providers that deliver services internationally and / or through global partnerships. Considerable potential to enhance competitiveness, which benefits other business and the overall economy.	187,000	208,000

The skills required in the above sectors are across all qualifications and experience levels.

SECTORAL & THEMATIC EMPLOYMENT PROJECTIONS

A number of Government Strategies and individual Expert Group on Future Skills Needs (EGSFN)³³ sectoral and thematic reports have quantified the specific skills requirements in a number of sectors, such as:

- Innovation 2020, forecasts that there will be an increased demand for research personnel within the enterprise sector rising from 20,000 currently to 40,000 by 2020. These researchers are expected to be across all skill levels, from technicians through to PhD level research leaders.
- Agriculture and food. The Teagasc Food and Agricultural Policy Research Institute (FAPRI) assessment of employment impacts of achieving the Harvest 2020 targets for a 50% increase in output by 2020 estimated growth in agri-food employment of at least an additional 16,500 employees.
- The Government's Construction 2020 strategy forecasts employment growth in the order of 60,000 to 2020.
- The strategy for the International Financial Services to 2020 forecasts growth of 10,000 jobs in that sector.
- ICT employment across a range of sectors is projected to grow by an estimated 44,500 potential job openings between 2013 and 2018.
- Manufacturing is expected to grow by 43,000 jobs over the period 2011-2020. This includes Biopharma, which the industry expects to grow in the short term by 5,000 jobs between 2015-2018.
- Data Analytics - 18,000 extra jobs are forecast between 2013-2020.
- Hospitality - based on the Economic and Social Research Institute (ESRI) Medium-Term Review, employment growth between 2015 and 2020 is expected to range from 9,990 to 21,540 with the successful implementation of the Government's new Tourism Strategy to 2020.
- Freight Transport, Distribution & Logistics - 10,000 extra jobs are forecast between 2015-2020.

³³ <http://www.skillsireland.ie>

OCCUPATIONAL EMPLOYMENT FORECASTS

In addition to forecasts of growth by sector, the Skills and Labour Market Research Unit in SOLAS produces occupational employment forecasts. The latest forecasts were published in 2014 and cover the period 2012-2020³⁴. Although the economic recovery that has taken place since 2012 outpaced the projected growth under the most optimistic scenario considered in the report ('recovery with competitive manufacturing scenario'), the occupational projections generated are still useful in indicating how the direction and pace of growth is likely to differ between occupations. In that context, it is the relative differences, rather than absolute employment growth that should be used as a guide for future demand for skills.

In order to highlight more clearly the demand for different skill types, the occupational forecasts also group occupations with similar skill sets into "occupational families"³⁵ as illustrated in Figure 3 and Table 3 below. For instance, the following occupations are included in the Construction, Financial and Science, Engineering and IT families:

- **Construction:** construction managers, construction professionals (e.g. civil engineers, architects), construction technicians (e.g. draughtspersons) and construction craftspersons (e.g. bricklayers, plasterers).
- **Financial:** financial managers, financial professionals (e.g. accountants), financial associate professionals (e.g. investment analysts) and financial clerks (e.g. payroll clerks) are grouped into a financial occupational family.
- **Science, Engineering and IT:** scientists, scientific technicians, engineers, engineering technicians, ICT professionals (e.g. programmers, software engineers, web designers etc.), ICT managers and ICT technicians.

Economic recovery is likely to result in employment growth in all occupational families, except farming. However, the level of employment is expected to vary by occupational family. Some occupational families (e.g. Construction) are also recovering from a low base following the recession, while for other occupational families, notwithstanding the higher than average growth rates projected, the number of additional jobs will be relatively small.

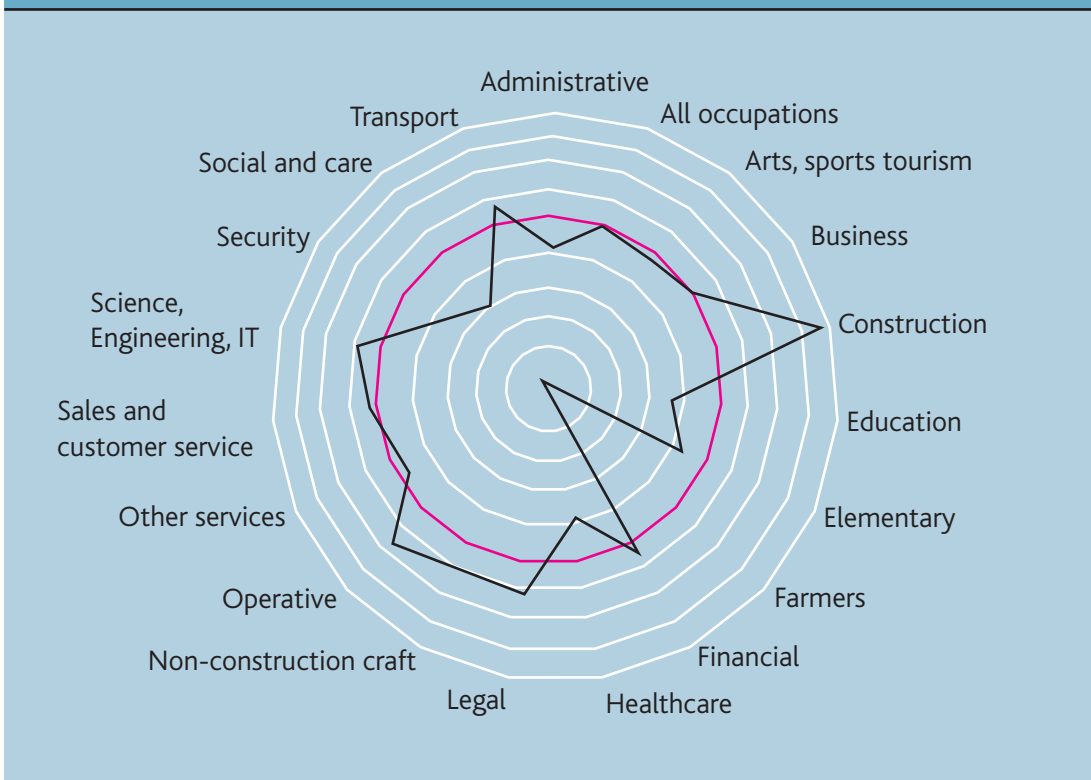
If fiscal policy becomes expansionary in the short to medium term, growth in education and healthcare occupations is likely to be higher than that projected here. It should be noted that, given the size of the workforce in education, health and care activities, any positive rate of change is likely to translate to substantial increases in employment in absolute terms.

An update of the occupational employment projections is expected to be carried out by SOLAS in the second half of 2016, following the publication of the ESRI's next Medium-Term Review.

³⁴ Occupational Employment Projections 2020, SOLAS, January 2014

³⁵ Occupational Employment Projections 2020, SOLAS, January 2014, pages 62-67

Figure 3 Projected average annual employment growth for the period 2012-2020 by occupational family - recovery with competitive manufacturing




Source: SLMRU, SOLAS

■ PROJECTED AVERAGE ANNUAL EMPLOYMENT GROWTH IN %
 ■ AVERAGE GROWTH OF 2.2%

Table 3 Growth by occupational family to 2020 ³⁶		
Above average employment growth	Average growth	Below average growth
<ul style="list-style-type: none"> • construction occupations (strong growth from very low base) • operative occupations • science, engineering and IT (STEM) occupations • legal, business and financial (including financial administration) occupations • non-construction craft occupations • transport occupations • sales and customer care occupations 	<ul style="list-style-type: none"> • services, • arts, • sports • tourism occupations 	<ul style="list-style-type: none"> • elementary and administrative occupations

³⁶ Occupational Employment Projections 2020, SOLAS, January 2014



SNAPSHOT FROM THE CONSULTATION PAPERS RECEIVED

“““

“The skill of learning to learn; employers across the globe cannot predict the skills they will need for jobs that do not yet exist, those who have proven to be adaptable, curious and know their own learning style have succeeded in rapidly changing industries. Ireland needs to think wider than its national boundary and consider skills to have value across the globe.”

“Investment in training has largely been focussed on training the unemployed, or school leavers but needs to now focus on people who require upskilling or reskilling to maintain their current role or to progress within a chosen field of enterprise to maintain market share against competitors and been seen as best in class.”

EMPLOYERS & EMPLOYER REPRESENTATIVES

GLOBAL DRIVERS AND TRENDS: IMPACT ON SKILLS NEEDS

EP2025 sets out the drivers of change and global trends that are influencing developments in Ireland and the rest of the world. The drivers of change and trends work separately and in combination to produce new challenges and opportunities in the economy and society.

The drivers of change include demographics, technological advances, urbanisation and climate change, and these will alter and shape the environment in which enterprises in Ireland and globally operate. These drivers have intensified international competition for trade, investment and people and their influence is already reflected in policy formulation across Government and this will continue in the coming years.

The global trends consequently emerging are technological change, changing consumption patterns, new ways of working, global value networks (value chains), urbanisation and pressure on resources and shifting power structures.

GLOBAL TRENDS AND THEIR INFLUENCE ON DEMAND FOR AND DEVELOPMENT OF SKILLS

TECHNOLOGICAL CHANGE	The convergence of technologies in the design, manufacturing and supply of goods and services is leading to a greater demand for cross-disciplinary knowledge and skillsets. This has implications for the development of technology-based skills and requires increased collaboration between different disciplines in institutions for the sharing of knowledge and expertise.
CHANGING CONSUMPTION PATTERNS	Changing consumption patterns, highlights the importance of e-commerce, marketing and selling skills, and customer care and support. There will be a high demand for design and creative skills for the adaptation and development of new products and services to meet customer preferences. There will also be growing health and social care skill requirements in response to the needs of an ageing population.
NEW WAYS OF WORKING	New ways of working means that companies need to invest in their employees at all levels to maintain productivity and improve staff retention. Individuals themselves will need to continually upskill and reskill. There is a rising demand for more higher-level cognitive and interpersonal skills. The skillsets of people in elementary occupations and those in higher skilled occupations will need to be developed in this constantly changing environment.
GLOBAL VALUE NETWORKS	The development of global value networks highlights the need to develop strategic skills for the management of international and "virtual" teams, project management, cultural awareness, and customer care and support. The right mix of skills will also be needed to ensure technical and business excellence across the different functional areas of business including Research & Development (R&D), manufacturing, marketing, distribution and customer care.
URBANISATION AND PRESSURE ON RESOURCES	Urbanisation and pressure on resources require the development of core business, engineering, innovation and ICT skills, with additional expertise acquired through 'add-on' specialism modules including for alternative forms of energy, efficient energy building, lean manufacturing, and more efficient utilities and transportation systems.
SHIFTING POWER STRUCTURES	Shifting power structures and the growing economic strength of developing and transitioning economies means greater consumer demand from these countries. This trend is leading to a growing importance of management leadership, business planning skills, international marketing and selling skills, foreign language capability and cultural awareness.

These drivers and trends are influencing the development of education and training systems which will need to continue to adapt as people's lifestyles and work demands change. Lifelong learning and access to a variety of learning opportunities beyond school, which provides for greater choice, flexibility and pathways between levels, courses and providers, is becoming increasingly important. It is also becoming increasingly important to involve employers in the development and provision of learning to ensure it's relevance to the needs of the workplace.

SKILL SETS NEEDS OF THE IRISH ECONOMY

The labour market is constantly evolving, and the specific occupations, skills and qualifications that are required change over time maintain employment and for enterprises. The increasingly interdisciplinary nature of the world of work is also resulting in overlaps in the skills required across different sectors and occupations. Over the next ten years, people working in Ireland will need a mix of sectoral, cross-sectoral and transversal skills.

TRANSVERSAL SKILLS

In terms of types of skills, it is clear from the analysis and the submissions received from stakeholders that transversal skills are increasingly important in enabling people to gain and maintain employment and for enterprises. Transversal skills are relevant to a broad range of occupations and sectors. They are often referred to as generic, core, basic or soft skills and are the cornerstone for an individual's personal development. Transversal skills are the building blocks for the development of the "hard", "vocational" or "technical" skills required to succeed in the labour market. The transversal skills as identified by enterprise include creativity, innovation and entrepreneurship, critical & analytical thinking, team work, communication and business acumen.

CROSS-SECTORAL SKILLS

Cross-sectoral skills are of growing importance. There is increasing convergence between sectors such as ICT, business, and engineering, which were once considered to be very unique in their own right. ICT now permeates almost all sectors of the economy, and similarly, strong business skills are relevant across many sectors.

Cross-sectoral skills improve an individual's employability, and enable occupational mobility. The skills can be used in a number of similar occupations and sectors, but might require additional domain specific training to allow them to be applied in a new job and/or work environment. The key cross sectoral skills identified by the EGFSN are:

- **ICT Skills**³⁷ - core technology skills e.g. software developers, cloud, security, networking and infrastructure and a combination of these technical skills with business/analytic/foreign language skills as the skills requirements become more complex.
- **Data Analytics**³⁸ - Deep analytical talent, Big Data-savvy roles, Supporting technology.
- **Foreign Language and Cultural Awareness**³⁹ - languages in demand are: German, French, Spanish, Italian, Portuguese and the Nordic languages. Industry engagement advises on the growing need also for Mandarin.
- **Business Skills - Sales and Marketing**⁴⁰ – required in addition to technical skills, as roles may involve dealing with customers, technical sales and product development
- **Engineering**⁴¹ - Mechanical, Electrical / Electronic, Industrial / Manufacturing – production, process quality, validation, product design/development

³⁷ Addressing Future Demand for High-Level ICT Skills, Expert Group on Future Skills Needs 2013

³⁸ Assessing the demand for Big Data and analytics Skills, 2013 – 2020, Expert Group on Future Skills Needs 2014

³⁹ Key Skills for Enterprise to Trade Internationally, Expert Group on Future Skills Needs 2013

⁴⁰ Future Skills Requirement of the Manufacturing Sector to 2020, Expert Group on Future Skills Needs 2013

⁴¹ Addressing Future Demand for High-Level ICT Skills, Expert Group on Future Skills Needs 2013

SECTOR-SPECIFIC SKILLS

Notwithstanding the transversal skills and the cross-sectoral nature of skills outlined above, some sectors will continue to require specific skill-sets. Sectors with such skills needs and the type of skill needed - including cross-sectoral skills - are outlined below. The sectors are those which are important to the Irish economy and have also been the subject of a future skills needs analysis by the EGFSN⁴².

Table 4 Sector Specific Skills needs	
Sector	Skills needs
Financial Services	risk, compliance, accounting, business intelligence, ICT and data analytics. These skills can be found in engineering, mathematics, data analytics, business and law graduates.
ICT Sector	core technology skills, e.g. software developers, cloud, security, networking and infrastructure and a combination of the technical skills with business/analytic/foreign language skills as the skills requirements become more complex
Manufacturing	scientists with experience and engineers
Medical Devices	mechanical, automation and validation engineers; polymer technicians, software engineers, quality engineers and regulatory compliance experts
Bio-Pharma	technicians and senior process scientists, pharma co-vigilance personnel, biotechnologists, biochemists, engineers including precision engineering
Food & Beverages	R&D scientists, food technologists and technicians with new product development skills; international sales/marketing with languages for international trade
Leisure, Tourism & Hospitality	chefs: commis, demi, pastry and chef de partie.
Freight, Transport & Logistics	graduate- managers, planners and ICT staff; skilled warehouse staff and HGV drivers
Wholesale & Retail	accountancy, supply chain management, retail marketing and data mining of retail data, finance and human resource management
Construction	chartered surveyors; internationalisation and management capability; ICT, Building Information Modelling (BIM) systems and Green Economy skills.

⁴² <http://www.egfsn.ie/Publications/>

**IN FOCUS:
DEMAND
FOR TECH
TALENT
AND ICT
SKILLS**

Technology is one of the key drivers of change in the economy. Globally, ICT is in the midst of a growth and innovation phase which is impacting on businesses across all sectors of the economy.

Technology is one of the key drivers of change in the economy. Globally, ICT is in the midst of a growth and innovation phase which is impacting on businesses across all sectors of the economy. This includes the adoption of cloud computing, mobile devices, the Internet of Things, Big Data Analytics. The availability of high-level ICT skills is a unique selling point in attracting mobile ICT investment and growing businesses across all sectors. EGFSN research indicates a current demand for high-level ICT skills at an average 8,000 new job openings per annum. Of these, it was estimated by the EGFSN that 85% of the job openings would be for high-level ICT professionals at NFQ Level 8 +.

The Fastrack to IT (FIT) ICT Skills Audit⁴³ carried out in 2014 shows that 75% of immediate vacancies are for employees able to exercise skills at the competent and entry levels, compared to 25% at the expert level. The audit indicates that Big Data Analysis has the highest demand for skills at expert level, whereas areas such as Networking/PC Maintenance, Contact Centre Support, and Platform Administration highlighted a higher requirement for candidates with competent and entry level skillsets. Respondents the survey also highlighted teamwork, multi-tasking, knowledge of business operations, market practice and customer awareness as other important skills that people need in addition to their technical skills.

Against a background of strong global demand for ICT Talent, it makes sense to create multiple pathways to ICT careers which will make it an attractive option to a broader range of people. A sustained effort is required to increase the ICT skills supply including through further education and higher education, conversion programmes, continuing professional development (CPD), and attracting experienced international and expatriate talent. To support the growth of the ICT talent pipeline, employers also need to promote careers to prospective employees, particularly women.

In addition, both the EGFSN study and the FIT Audit also highlights that people with developed ICT skills are not just needed in the Technology sector. Many different types of jobs now require various levels of ICT Skills proficiency. This trend is likely to continue as technology increasingly becomes embedded in business functions and processes across companies and sectors. The continued development and adaptation of new technologies will, over time, result in the emergence of new skillsets, jobs and career paths.

⁴³ <http://fit.ie/fitnew/wp-content/uploads/2014/12/FIT-ICT-Skills-Audit-2014.pdf>



The skills required in the sectors outlined earlier are expected to be across all qualifications and experience levels. In their latest forecasts, CEDEFOP⁴⁴, predicts that most job opportunities in Ireland will require high-level qualifications (ISCED 97 levels 5 and 6⁴⁵). However, due to replacement demand they predict that there will also be significant numbers of job opportunities requiring medium-level qualifications (ISCED 97 levels 3 and 4)⁴⁶.

However, forecasts are only one source of data and need to be interrogated given the fact that most forecasting methods rely on observed past trends. As a result, basing estimates of future demand exclusively on forecasts of employment by education level may not be the optimal approach and underlines the need for forecasts to be used in conjunction with other data sources, including ongoing engagement with employers on their skills needs to determine how these needs can best be met.

⁴⁴ <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/ireland-skills-forecasts-2025>

⁴⁵ Equivalent to Higher Education non-degree and degree level

⁴⁶ Equivalent to Leaving Certificate and Further Education and Training level qualifications – levels 4 and 5 on Ireland's National Framework of Qualifications

In addition, forecasting models tend to categorise skills as 'low', 'medium' and 'high'. High skilled jobs are typically thought of those requiring a third level qualification. However, many vocational skills acquired through Further Education and Training (FET) are also high skilled, e.g. tool making or aircraft mechanics.

This also underlines the need for ongoing monitoring of available data sources mediated by dialogue with stakeholders. This is already being done at local level by individual education institutions through engaging directly with employers in designing courses, involving employers in the delivery of programmes and through organising work placements for students. It also highlights the need for accessible information for school goers and adults making career and course choices and for those that support and influence them in making these choices, including parents, guidance counsellors and teachers.

The Regional Skills Fora, being developed by the Department of Education and Skills (DES), provide an ideal forum for forecasts and other datasets to be used to inform discussions between employers and education and training providers on skills needs in each region. Where education and training is the appropriate response, plans can be developed for how best this can be delivered by providers across a region, while also considering the needs of learners and the cost to the State.

IN FOCUS - TEAM LIMERICK - MAKING A DIFFERENCE FOR THE REGION



In 2014, Limerick for IT developed out of a partnership between IT companies based in Limerick, Limerick Institute of Technology, University of Limerick, Limerick City and County Council and the IDA. Twelve of the largest IT companies in Limerick are now involved. The industry partners work together to identify future skills needs and to secure mandates within their companies to further develop existing operations in Ireland. They then engage closely with the higher education institutions to identify course requirements or develop new courses to ensure that the latest skills needed by the sector are provided.

As a result of the success of the Limerick for IT initiative, a second group Limerick for Engineering, focused on the need for engineering graduates has now been established. This involves some of the largest manufacturing companies in Limerick. Between both initiatives more than 350 jobs have been created so far and there are plans for a significant number of additional IT and engineering employment opportunities in the Limerick region.

Changing World, Changing Skills: Key Challenges & Opportunities

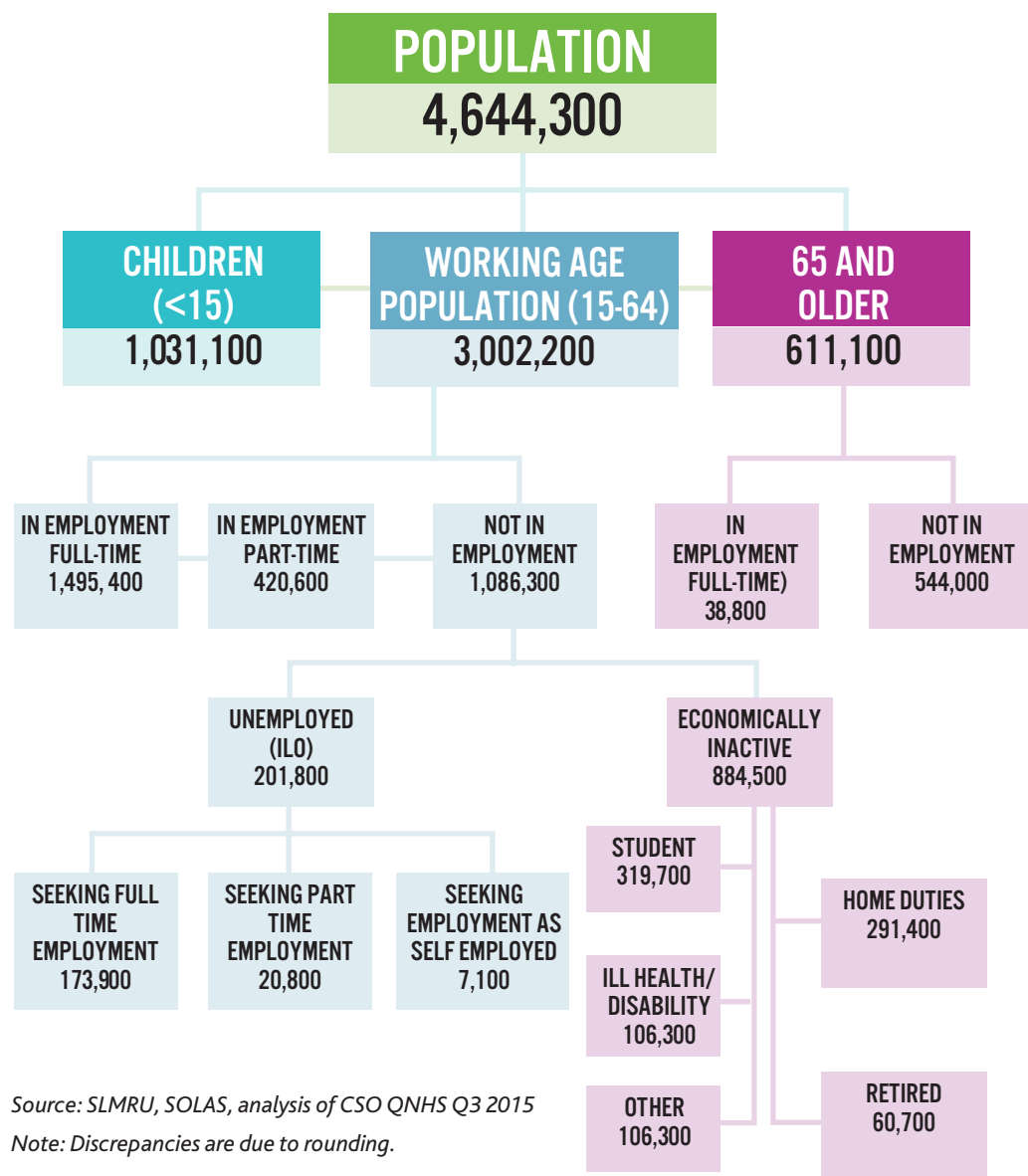
- This Strategy has been developed against a backdrop of substantial national and international change. This presents challenges in ensuring that we have the right number of people with the right types of skills available at the right time.
- Ireland's employers of today include a large number of small companies. This scale issue impacts investment in workforce development as these companies do not have dedicated Human Resources (HR) or training functions and find it hard to release people for off-the-job-training.
- It is forecast that there will be significant demand for skills arising from the creation of new jobs in the economy and replacement demand in the period to 2020. These vacancies will be filled by people already in the labour force and by people entering the labour force, both from Ireland and abroad.
- A host of global trends and drivers of change will shape the employment and skills needs of all employers. In this fast changing environment, versatility is key. An organisation's success will, in large part, depend on making the best use of skills available to them, including ICT proficiency, communications, business acumen, teamwork, foreign language proficiency and cultural awareness.
- Core transversal skills are becoming ever more important to an individual's successful and sustainable employment. They also enable people to move between jobs and careers, to participate in lifelong education and training and also to improve the flexibility and competitiveness of the labour market.
- Given the changing demand for skills, increasing people's lifelong learning activity, especially those in the workforce, is a vital element of Ireland's future skills development and can have a positive impact on productivity and innovation at firm level and nationally.
- Identifying the future skills needs for Ireland is clearly complex. Even employers themselves experience uncertainty around their future skills requirements. The provision of labour market intelligence will deliver maximum impact if it is reviewed and mediated through structured dialogue with key stakeholders.
- Given the complexity and changing nature of enterprise, occupations and the skills required, career guidance and careers information, for school goers and adult learners is essential for good course and career choices for individuals. Those that support and influence these decisions also need easy access to course and careers information and this includes parents, guidance counsellors and teachers.



4. Ireland's Labour Market: Present and Potential

Overview of the population and labour market

Ireland's population is currently 4.635 million. With 1 million under the age of 15 – the highest proportion in the EU – we have clear potential to create an international competitive advantage through the availability of a well-skilled workforce. Ireland's overall profile as a young population means that 60% of those in the labour force today will still be eligible workers in 2035. This raises challenges for the education and training system in balancing the needs of school going students, school leavers, the unemployed and those in employment who need to upskill or reskill.



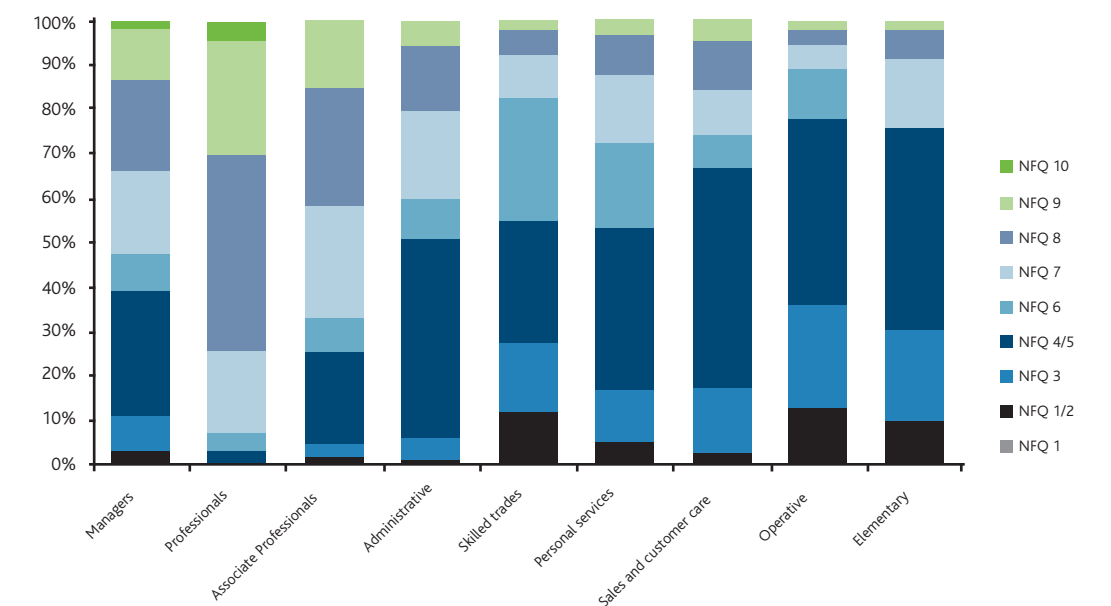
Source: SLMRU, SOLAS, analysis of CSO QNHS Q3 2015
Note: Discrepancies are due to rounding.

Profile of those in employment

2,186,000 people are currently in the labour force; of these, 1,983,000 are in work, this corresponds to a national employment rate of 64%, broken down into 70% for males and 58% for females. 323,000 people are self employed, which corresponds to just over 16% of those in work in Ireland.

As the economy grows and evolves, those in employment will similarly have growing and evolving education and training needs. Due to the speed of technological change and its impact on business processes, upskilling increasingly matters for everyone in employment, regardless of their occupation or existing educational level. Although this will be a particular challenge for those with less formal education, and particularly, as highlighted earlier, those whose highest level of education attainment is at NFQ levels 1 – 3.

Figure 4 Employment (15+) by highest level of education attained (NFQ levels), q3 2015



Source: SLMRU, SOLAS

Initiatives such as Springboard and Momentum have shown that people do not need a full NFQ award to "Step Up" their skills. Often an intensive short course, a course at the same level in a different discipline coupled with work experience is enough to kick-start someone's entry and progression in workforce. Opportunities to reskill or upskill can take a range of forms including on the job training, short courses, industry certification and formal education and training programmes. The education and training system must remain responsive to the changing needs of the labour market and provide a coherent, flexible portfolio of opportunities to meet the needs of individuals and employers.

Not all of this very valuable upskilling and reskilling will be captured in reporting on employment by NFQ levels, however, the data on employment by NFQ level remains valuable in helping us to better understand how skills are being used in the workforce and to inform dialogue between employers and education and training providers on appropriate provision.

Economically inactive

30% or almost 900,000⁴⁷ people of working-age are defined as being economically inactive. Nearly 300,000 of this cohort are occupied with home duties and approximately 350,000 are students. Over 100,000 of the inactive cohort are not working due to ill-health or disability. 33% of people of working age with a disability are in work in Ireland (compared with 66% of people without a disability) and the new *Comprehensive Employment Strategy for People with Disabilities 2015-2024*,⁴⁸ will foster increased labour market participation.

Educational attainment is a good predictor of labour force activity. 17% of those who are economically inactive hold a third level qualification, compared with 33% of those with a higher secondary or PLC qualification.

15-64	Not in labour force ('000)	Employment (000)	Unemployment (000)	Labour force (000)	UE rate (%)
Primary or below	166.1	73.0	17.8	90.9	19.6
Lower secondary	241	187.4	34.8	222.2	15.7
Higher secondary	233.3	468.8	57.0	525.9	10.8
Post secondary non-tertiary	69.7	240.8	31.7	272.6	11.6
Third level non-honours degree	76.5	354.7	27.2	381.9	7.1
Third level honours degree or above	73.6	535.2	28.8	563.9	5.1
Other/Not stated	24.3	56.0	4.5	60.5	7.4
Total	884.5	1915.9	201.8	2117.7	9.5

Source: CSO Quarterly National Household Survey, Q3 2015

⁴⁷ CSO, Quarterly National Household Survey, Q3 2015

⁴⁸ [http://justice.ie/en/JELR/Pages/Comprehensive_Employment_Strategy_for_People_with_Disabilities_\(2015_2024\)](http://justice.ie/en/JELR/Pages/Comprehensive_Employment_Strategy_for_People_with_Disabilities_(2015_2024))

Improving employment levels

The number of unemployed people has now fallen to approximately 200,000 for the first time since 2008. The unemployment rate has reached 8.8%, the lowest level since the end of 2008 and down from a high of over 15% in late 2011.

This trend is extremely encouraging. That said, further inroads must be made into Ireland's unemployment situation and there are particular aspects of those still jobless that stand out. While the long-term unemployment rate has fallen from 6.4% to 5%, this cohort still accounts for 54% of those people out of work⁴⁹. Youth unemployment (15-24 year olds), although reducing, remains unacceptably high at 19.7% (QNHS, Q3, 2015).

In addition, the challenge faced in reintegrating these long term unemployed people into the workforce is illustrated by the fact that about 60% of these people have been unemployed for three years or more, of whom about 70% are males aged over 25.

Skills development for these cohorts will remain a priority given the link between skills and employment. In Q3 2015, the unemployment rate for people with lower secondary or less education was 15.7%, whereas it was 10.8% for those with higher secondary and fell to 5.1% for those with higher education honours degrees and higher⁵⁰.

In the medium term, the fall in unemployment will enable a shift in activation policy and initiatives in the coming years as set out in the Pathways to Work 2016 – 2020 with a shift from 'activation in a time of recession' to 'activation in a time of recovery and growth'.

Ageing population in Ireland

As well as a significant young population, Ireland also has a large ageing population. It is forecast that, similar to many other European countries, over the next ten years those moving beyond working age into retirement will grow from the 2011 figure of just over half a million up to approximately 855,000 by 2026 and to almost 1.4 million by 2046. The very old (those who are aged at least 80) is set to rise also, from 128,000 in 2011 to approximately 477,000 by 2046. In addition, the fall in citizens aged between 20 and 64 will essentially mean that there will be fewer people of working age.

As well as underlining the role of education in supporting older people, these figures mean that there will be a greater per capita requirement on the Irish labour force to generate economic activity and, through that, support the State's evolving public expenditure requirements particularly in relation to pensions and healthcare.

⁴⁹ CSO, Quarterly National Household Survey: Quarter 3 2015

⁵⁰ CSO, Quarterly National Household Survey: Quarter 3 2015

Migration

Ireland has experienced very significant migration flows in both directions over the last decade. The 2008-2013 recession has resulted in large numbers leaving Ireland in search of work elsewhere. The National Skills Bulletin 2015⁵¹ notes that net outward migration for Irish nationals continued to persist at 29,200 in 2014; although this was a decline of 6,000 compared to 2013 (35,200).

The recession combined with a fall in births in the 1990s, has led to the number of 20-29 year-olds in the population falling by 26% or 200,000 between Q4 2009 and Q4 2014⁵². On foot of the economic recovery, a number of initiatives have been introduced to help attract Irish people back home, and the first Irish diaspora policy, *Global Irish*⁵³, was published in 2015.

On the other hand, there have been substantial numbers of people migrating into Ireland, many of whom have secured employment. A total of 7,265 Employment Permits were issued in 2015, a 32% increase over 2014. The ICT industry accounted for 2,499, or 34% of all employment permits issued, with a further 44% of permits issued to healthcare workers. This indicates the continuing relevance of the Employment Permits system in addressing the skills shortages relevant to enterprise, particularly in the ICT area.

IN FOCUS - STUDENTS, EMPLOYERS AND EDUCATORS - MAKING IT WORK



Every year thousands of students complete work experience with employers. There is examples of good practice across the system which highlights the benefits of students, employers and educators working together. For example, University College Cork has a very successful work placement model which involves structured pre-planning to maximise the success of the placement for both student and employer. In Year 1, students get CV and skills development advice and employers meet students for the first time. In Year 2 students benefit from guidance workshops which focus on the student's self-awareness of their skills and strengths. In Year 3 employers recruit students for the available placements. Students are given a list of options to ensure they are placed into industries in which they are interested and suited. This model leads to conversion rate of placements to recruitment as high as 80% in some disciplines.

In Galway-Mayo Institute of Technology, the Hotel School run a very successful work placement module for all Level 7 and 8 awards that includes a particular focus on students reflecting on their experience. When placements are finished, students complete a formal business report on their experience and this report is graded. This report, coupled with post-placement meetings with GMIT staff, facilitates co-ordinated and structured reflection on the student's placement experience. This significantly enhances the learning outcomes for the student, institution and the employer and feeds into further learning and development of the module.

⁵¹ SOLAS & Expert Group on Future Skills Needs, National Skills Bulletin 2015,

⁵² SOLAS & Expert Group on Future Skills Needs, Monitoring Ireland's Skills Supply, 2015,

⁵³ <https://www.dfa.ie/media/globalirish/global-irish-irelands-diaspora-policy.pdf>

Ireland's Labour Market - Present and Potential: Key Challenges & Opportunities

- The growth in the young population presents challenges for the education and training system in meeting demand for places and balancing the needs of school going students, school leavers and upskilling those already in the workforce.
- Ensuring that people in the labour force with lower levels of formal education have the skills that enable them to gain and maintain employment will continue to be a challenge in the coming years.
- Encouraging and supporting labour market activity among the inactive will provide access to an underutilised supply of skills.
- While the unemployment rate is falling, long-term unemployment remains an issue as does youth unemployment.
- The likelihood of unemployment correlates with the level of educational attainment. Access to education, including for all under-represented groups, is therefore central to reducing unemployment levels.
- Every individual has a responsibility for their own skills development and career management, however, we recognise that some people require more support in accessing education and training opportunities.
- The numbers leaving and entering Ireland are having a major effect on this country in many ways. Return, as well as new, migrants provide an opportunity for Ireland to replenish its talent pool.



Education and Training in Ireland

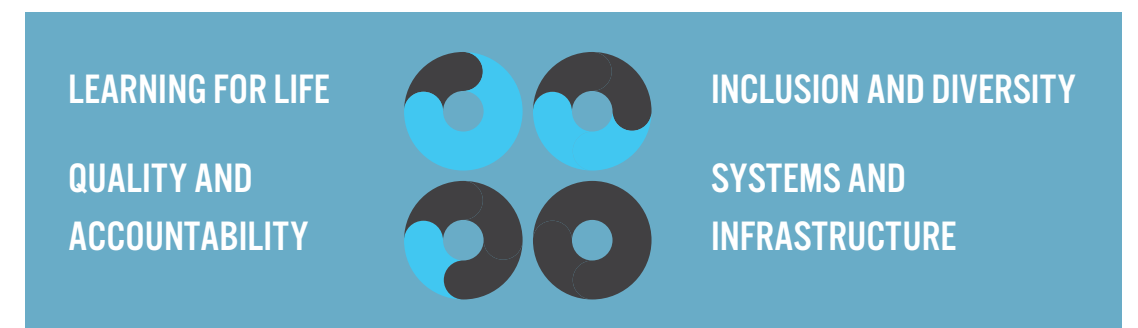
The raison d'être of Ireland's education and training system is to equip people with the skills and knowledge that will best help them as they move through life. Across the various stages of a person's 'formal education and training' (their early childhood, school years and learning beyond school), Ireland has performed strongly during the course of the existing **Towards Tomorrow's Skills Strategy**.⁵⁴

During the recent economic crisis, education and training providers at all levels, both public and private, have demonstrated impressive responsiveness to the changing employment circumstances and reduction in available resources. Demographics have also increased the pressure on the system with full-time enrolments increasing by over 171,000 in the last decade and enrolments continue to increase.

This new skills strategy is also being developed in the context of significant reform in the education and training sector to ensure a more dynamic, responsive and high quality system that provides all learners with the knowledge and skills they need to participate fully in society and the economy.

The reform programme recognises the importance of all levels of education and training as integral elements of a framework for lifelong learning and skills development which starts through quality early childhood provision and is continually developed during school years and in learning beyond school. The educational support that children receive in their earliest years is globally recognised as pivotal to their long-term personal development. Results from the OECD's Programme for International Student Assessment⁵⁵ (PISA) show that, in most countries, pupils who have attended pre-primary education programmes tend to perform better at age 15 than those who have not. Early childhood education also plays an important role in mitigating social inequalities.

The reforms centre on four key themes: **Learning for Life, Quality and Accountability, Inclusion and Diversity and Systems & Infrastructure**.⁵⁶ The programme consists of a set of ambitious whole of system reforms at every level. Particularly relevant to the development of the National Skills Strategy are the curriculum reforms underway and initiatives related to improving quality, accountability and inclusion.



⁵⁴ <http://www.skillsireland.ie/Publications/2007/Tomorrow-s-Skills-Towards-a-National-Skills-Strategy1.html>

⁵⁵ <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>

⁵⁶ <http://www.education.ie/en/The-Department/Public-Service-Reform/>

IMPROVING PERFORMANCE IN EARLY YEARS AND LEARNING IN SCHOOLS

The *National Literacy and Numeracy Strategy (2011-2020)*⁵⁷, published in 2011, drives the implementation of a programme of reform focused on curriculum, assessment and teaching practices to underpin a high quality, relevant learner experience and to enhance learning outcomes in early years settings, primary and post-primary schools. Many of the targets set in the original strategy have already been met. An interim review of the strategy is currently underway, which will see new targets developed. It will focus in particular on sub-groups of students (such as those in schools categorised as the most disadvantaged) where greater improvements in literacy and numeracy standards are required. The fundamental principles of the strategy continue to provide a framework for reform of curriculum, assessment and teaching practices in early years setting and in primary and post-primary schools.

NATIONAL & INTERNATIONAL INDICATORS OF PERFORMANCE

LITERACY

The 2014 National Assessments of English Reading and Mathematics by the Educational Research Centre (ERC)⁵⁸ found that the skills at both 2nd class and 6th class pupils are significantly higher than they were when previously assessed in 2009. Notably, they represent the first major improvement in the national assessment of reading and maths standards in over 30 years.

In reading at primary level, Irish students scored significantly above the international average in the Progress in International Reading Literacy Study (PIRLS)⁵⁹ 2011, with Irish students ranked 10th out of 45 participating countries. Students in only five countries performed significantly better than Irish students. In PISA 2012, Irish 15-year-old students' reading ability – both digital and print – is ahead of that of other countries: ranking 4th out of 34 OECD countries in print reading and 5th out of 23 participating OECD countries in digital reading.

MATHEMATICS

In Trends in International Mathematics and Science Study (TIMSS)⁶⁰ 2011, Irish primary students scored significantly above the international average in maths with Ireland placed 17th out of 50 participating countries although their performance was well below that of students in the top performing countries. At post-primary, a critical focus of performance improvement relevant to the National Skills Strategy centres on mathematics. New curricula for Junior and Senior Cycle maths (commonly called "Project Maths") have now been fully implemented. Bonus points are available for candidates achieving a D grade or higher in the Higher Level Leaving Certificate maths, when calculating CAO points. The new mathematics curriculum was examined fully for the first time by SEC in 2015 and the results are currently under review. The number of students taking higher level Maths has increased from 16% in 2010 to 28% in 2015. Overall, outcomes from PISA 2012 indicate that Ireland's 15-year olds perform above the OECD average but not at the highest levels. However, the 2012 round of PISA indicated that students who had studied

the Project Maths curriculum performed at a higher level than those who had not had that opportunity, and it is expected that this improvement will continue in subsequent years.

SCIENCE

The study of science forms part of the core curriculum at primary level. While also above international averages, Ireland's primary level science performance lags behind our prowess in reading and maths. In science in TIMSS 2011, Irish students scored above the international average and were placed 22nd out of the 50 participating countries. At second level, in Junior Cycle, the numbers taking science has increased from approximately 50,000 in 2011 to approximately 54,000 in 2015 a 7% increase. In that time period there has been a greater increase of those taking higher level science, from 38,000 to nearly 43,000, an increase of almost 12%⁶¹. At Leaving Certificate level, Biology, Physics, chemistry and physics/chemistry have all seen increases of between 12 and 17 percent in the number of Leaving Certificate students from 2011 to 2015⁶². However, there are significant differences in the level of subject take-up at Leaving Certificate with 61% of students taking Biology, while only 16% and 13% take Chemistry and Physics respectively.

In PISA 2012, Ireland's performance in science emerges very favourably, largely due to curriculum development in this area. Furthermore, more Irish students are performing at the higher levels of science when compared to their international counterparts. Further progress is required to secure a continuing improvement in the performance of Irish students in this and other international benchmark measures of performance.

STUDENT RETENTION

When it comes to leaving school, retention of students to Leaving Certificate is at 90.6%, ahead of the 90% target set for 2020. Recent improvements have been supported with a significant improvement in the retention of students in disadvantaged schools, which has grown from 68.2% ten years ago to 82.1% of those entering second-level school in 2008⁶³.

EARLY CHILDHOOD CARE AND EDUCATION

Early Childhood Care and Education (ECCE) is at a pivotal point of development in Ireland with the free pre-school scheme due to be expanded in 2016 to provide a free pre-school place for all eligible children from the age of three until they start school. The phasing in of supports to enable children with disabilities fully participate in pre-school care and education will also commence during 2016. A new affordable childcare subvention scheme is also being developed through which any increased Government investment in subventing childcare can be distributed.

The educational focus in ECCE is on implementation of the curriculum framework Aistear⁶⁴ and its four themes, focused on the early development of transversal skills: Exploring and Thinking, Wellbeing, Identity and Belonging, and Communicating. In addition, there are number of initiatives to improve quality including the implementation of the quality framework Siolta⁶⁵; roll-out and expansion of the Better Start Early Years Specialist Service to support quality

⁵⁷ <https://www.education.ie/en/Schools-Colleges/Information/Literacy-and-Numeracy/Literacy-and-Numeracy-Learning-For-Life.pdf>

⁵⁸ <http://www.erc.ie>

⁵⁹ <http://timssandpirls.bc.edu>

⁶⁰ <http://timssandpirls.bc.edu>

⁶¹ Source: State Examinations Commission

⁶² Source: State Examinations Commission

⁶³ <http://www.education.ie/en/Publications/Statistics/Statistical-Reports/Retention-Rates-of-Pupils-in-Second-Level-Schools-2008-Cohort.pdf>

⁶⁴ <http://www.ncca.ie/en/Practice-Guide/>

⁶⁵ <http://www.ncca.ie/en/Practice-Guide/>

improvement; rollout of education-focused early years inspections; enhancement of the existing Tusla statutory inspection; investment in upskilling the workforce and a review of qualifications for the early years education and care workforce. Rollout of the curriculum framework and improving the quality of provision will underpin the development of transversal skills from an early age.

The ongoing professionalisation of the workforce in the sector will make a major contribution to quality improvement in Early Childhood Care and Education in the coming years. This agenda is being driven through a developing regulatory framework, financial incentives for services to be led by more qualified staff, and the provision of significant funding for upskilling practitioners. The forthcoming Early Years Strategy will set out future actions for quality improvement in the sector.

PRIMARY

At primary level, a review of the curriculum has commenced with work underway on language development, maths and education about religious beliefs and ethics. A new integrated languages curriculum (English and Irish) has been published and will be introduced into infants to second classes from September 2016, with the curriculum for 3rd to 6th class available from 2019.

In 2016 the NCCA, in consultation with a broad range of stakeholders, will commence a review of the primary school curriculum. The review will look at, amongst other things, the division of time across the curriculum.

SECOND LEVEL EDUCATION

Junior Cycle

Curriculum and assessment reform in post primary education is currently focused on the reform of the **Junior Cycle**. In September 2014, implementation of the new Junior Cycle commenced with a new specification in English and the availability of a number of short courses. In August 2015, the **Framework for Junior Cycle**⁶⁶ was published which sets out the wide-ranging and necessary reforms including details of the dual assessment arrangements that combine school-based assessment and final examinations. Students will have a modernised curriculum, better learning experiences and better outcomes. Assessment will include teachers assessing student learning in the course of the three years of junior cycle and a reduced final examination which will be set, administered and marked by the State Examinations Commission. Subject teachers will assess their students' progress through two classroom-based assessments (CBAs) and a written assessment task based on the second CBA will be assessed by the State Examinations Commission (SEC).

Learning in the Junior Cycle will be informed by

- 8 principles, including one on *Creativity and Innovation*
- 24 statements of learning that are central to the planning for, the students' experience of and the evaluation of the school's junior cycle programme. Most of the statements will enhance the learner's skills development
- 8 key skills which are deemed necessary for successful learning

⁶⁶ <http://juniorcycle.ie/Curriculum/Framework-for-Junior-Cycle>

The development of new Junior Cycle subject specifications takes an inquiry-based approach and provides students with learning opportunities that strike a balance between subject-specific knowledge and a wider range of skills and thinking abilities. Learners will be enabled to use and analyse knowledge in new and creative ways, to investigate issues, to explore, to think for themselves, to be creative in solving problems and to apply their learning to new situations. Given the rapidly changing nature of the workplace and the world, these competences and skills are critical to the preparation of young people for learning and living.

Rollout of the new framework will enable teachers to be instrumental in supporting students in learning how to learn, and in taking responsibility for their own learning in this key stage of second level education.

The full schedule for the phased implementation of the new Junior Cycle is as follows:

JUNIOR CYCLE IMPLEMENTATION TIMETABLE			
Subjects	Other areas	Introduced to 1 st Year Students in:	First recorded on Junior Cycle Profile of Achievement (JCPA) in:
Phase 1: English		September 2014	Autumn 2017
Phase 2: Science and Business Studies		September 2016	Autumn 2019
Phase 3: Irish, Modern Languages (French, German, Spanish, Italian) and Art, Craft & Design	Wellbeing	September 2017	Autumn 2020
Phase 4: Mathematics, Home Economics, History, Music and Geography		September 2018	Autumn 2021
Phase 5: Technology Subjects (Materials Technology / Wood, Technical Graphics, Metalwork, Technology), Religious Education, Jewish Studies and Classics		September 2019	Autumn 2022

The replacement of the existing junior certificate with the new Junior Cycle Profile of Achievement, provides new opportunities. The Profile of Achievement will record students' progress in all areas, including the written examination, the classroom-based assessments and other extra-curricular activities.

To support the reform, a comprehensive programme of continuing professional development for teachers and principals is being rolled out. This includes whole-school CPD, subject-specific seminars, seminars for school leaders, teacher-led CPD and school visits. The programme is also supported by high quality on-line resources. This means that teachers are being provided with all the resources and supports necessary to ensure that their students have a successful experience in the new junior cycle. This CPD work is being led by the support service, Junior Cycle for Teachers (JCT), a dedicated team established specifically for this purpose.

In summary, the reform will recognise a wide range of learning, reduce the focus on one terminal examination in each subject, give prominence and importance to classroom based assessment, facilitate greater professional collaboration between teachers, and give parents and students a broader picture of each student's learning.

SENIOR CYCLE

Planning for implementation of changes at Senior Cycle are continuing with the phased development of revised subject specifications which is already underway. However, the rate of change at **Senior Cycle** is being balanced against the demands associated with the implementation of the Junior Cycle reform in schools.

TRANSITION YEAR

Another important element of senior cycle for many students is Transition Year (TY). TY is available to all second-level schools and about 550 schools (out of approximately 730 schools) offer the programme. TY may be optional or mandatory for students depending on the school's policy.

Each school designs its own TY Programme, within guidelines set by the DES, taking account of the possibilities offered by local community interests for volunteering, work placement, etc.

The value of Transition Year is that it can provide opportunities for students and teachers to innovate and be creative in the programmes and learning methods used. Students also get the opportunity to develop a range of skills through activities such as volunteering, work experience, project work and participating in, for example, An Gaisce⁶⁷ awards programme. It can also provide time for students to go to college open days, career days and carry out research on different course and career options.

A recent report produced by the Irish Second-Level Students Union⁶⁸, shows that 85% of students feel they learned new skills during TY and the strengths of the programme included learning new skills, work experience, subject availability and so on.

OTHER KEY INITIATIVES AT SCHOOL LEVEL

There are a number of new initiatives that will be rolled out in the period to 2020 and these include:

- The **Digital Strategy for Schools 2015-2020**⁶⁹ which aims to improve the use of ICT in teaching, learning and assessment with supporting objectives relating to teacher professional development, leadership, research and policy and development of ICT infrastructure in schools.
- As well as the new primary language curriculum, a **Foreign Languages in Education**⁷⁰ strategy is being developed for post-primary, further and higher education.

⁶⁷ www.gaisce.ie

⁶⁸ <https://www.education.ie/en/Publications/Education-Reports/Transition-Year-Exploring-the-Student-Experience.pdf>

⁶⁹ <https://www.education.ie/en/Publications/Policy-Reports/Digital-Strategy-for-Schools-2015-2020.pdf>

⁷⁰ <https://www.education.ie/en/Schools-Colleges/Information/Curriculum-and-Syllabus/Foreign-Languages-Strategy/Foreign-Languages-Strategy.html>

- Major reform of **initial teacher education**⁷¹ is underway and training provision is now being concentrated in a smaller number of quality centres. The Teaching Council will continue to progress the quality agenda for teaching in 2016 through further work on the review of entry criteria for initial teacher education programmes, the piloting of Droichead the new induction and probation model for new teachers in 330 schools and further development of a **CPD framework for teachers**.⁷²
- **DEIS, the Action Plan for Social Inclusion**,⁷³ is currently being reviewed including the methods by which schools are identified for inclusion in the programme in future and the content of the school support programme. The review is to be completed in 2016.
- A range of supports⁷⁴ are provided for children and students with **special educational needs** with a new model for allocating resource teachers to support children with special needs currently being piloted in 47 schools.⁷⁵
- New models of **school inspection**⁷⁶ are being rolled out to increase the level of inspection and to work with those schools most in need of assistance. A tranche of new and revised inspection models will be introduced in September 2016 that will provide enhanced information to schools and the public. This will be complemented by **self-evaluation and reflective practice**⁷⁷ within schools themselves.
- Research shows that transitions at all levels are important points for ensuring that children and young people are supported as they move through the education system. There has been significant work on the transition from primary to post-primary in the context of the Literacy and Numeracy Strategy. The NCCA is now beginning work on the transition from pre-school to primary. Implementation of changes as part of the **Transitions**⁷⁸ initiative to improve the transition of students from second level to higher education has led to major policy changes in recent years, including the publication of a new CAO points system⁷⁹. It is important to ensure that in future this work on transitions is consolidated and built on to create a seamless learning experience over the education life cycle. In particular, the ongoing work to broaden entry routes into higher education and reduce early course specialisation will be a central part of improving college retention levels.

⁷¹ <https://www.education.ie/en/Schools-Colleges/Information/Literacy-and-Numeracy/Literacy-and-Numeracy-Learning-For-Life.pdf>

⁷² <http://www.teachingcouncil.ie/en/>

⁷³ http://www.education.ie/en/Publications/Policy-Reports/deis_action_plan_on_educational_inclusion.pdf

⁷⁴ <https://www.education.ie/en/The-Education-System/Special-Education/>

⁷⁵ <http://www.education.ie/en/Press-Events/Press-Releases/2015-Press-Releases/PR15-09-15.html>

⁷⁶ <http://www.education.ie/en/Publications/Inspection-Reports-Publications/>

⁷⁷ <http://www.schoolself-evaluation.ie/>

⁷⁸ <http://www.education.ie/en/Publications/Education-Reports/Supporting-A-Better-Transition-From-Second-Level-To-Higher-Education-Implementation-and-Next-Steps.pdf>

⁷⁹ <http://www.education.ie/en/Press-Events/Press-Releases/2015-Press-Releases/PR15-09-03.html>

TABLE 5 DEVELOPING 21ST CENTURY SKILLS 0 TO 18 YEARS							
TEACHING, LEARNING AND ASSESSMENT	EARLY CHILDHOOD EDUCATION (AISTEAR)		EXPLORING AND THINKING WELLBEING IDENTITY AND BELONGING COMMUNICATING			DEVELOPING TRANSVERSAL SKILLS	DEVELOPING SUBJECT SPECIFIC KNOWLEDGE
	PRIMARY CURRICULUM		ABILITY TO QUESTION TO ANALYSE TO INVESTIGATE TO THINK CRITICALLY TO SOLVE PROBLEMS, AND TO INTERACT EFFECTIVELY WITH OTHERS				
	NEW JUNIOR CYCLE		MANAGING MYSELF STAYING WELL MANAGING INFORMATION AND THINKING BEING CREATIVE WORKING WITH OTHERS COMMUNICATING BEING LITERATE & BEING NUMERATE				
	TRANSITION YEAR		SUBJECT TASTERS EXPERIENTIAL LEARNING (WORK EXPERIENCE & PROJECT WORK) PORTFOLIOS REFLECTIVE JOURNALS RESEARCHING COURSES & CAREERS				
	SENIOR CYCLE		BEING PERSONALLY EFFECTIVE COMMUNICATING CRITICAL AND CREATIVE THINKING INFORMATION PROCESSING WORKING WITH OTHERS				
SUPPORTING STRATEGIES AND INITIATIVES							
LITERACY AND NUMERACY STRATEGY	REFORM OF TEACHER EDUCATION	DEIS ACTION PLAN FOR SOCIAL INCLUSION	SPECIAL EDUCATION SUPPORTS	DIGITAL STRATEGY FOR SCHOOLS	FOREIGN LANGUAGES STRATEGY	INTERNAL AND EXTERNAL EVALUATION	TRANSITIONS REFORM

IN FOCUS: DEVELOPING 21ST CENTURY SKILLS 0 TO 18 YEARS

GOOD PRACTICE EXAMPLES

BECOMING MATHEMATICIANS IN EARLY YEARS

A book written by children, called 'Being and Becoming Mathematicians Through Play' has been published by Cottage Kids Playschool and Early Childhood Ireland. The book written by the children of Cottage Kids Playschool, explains their knowledge and their thinking about everyday maths and how fun maths is to their parents. It illustrates the children experiencing and exploring the world around them and developing a genuine understanding of maths. It highlights maths as a language that helps us communicate. Aistear's principals of early learning and development are based on play and hands on experiences, active learning and for the children to have relevant and meaningful experiences. The many examples within the book show how the children experience and explore their world and in turn develop and grow their mathematical understanding. It provides evidence of the power of play and how it made learning maths fun. The children learned about situations, people, attitudes and responses, materials and properties as they played. The book is a resource for both parents and other educators as it illustrates how maths can be taught through everyday play opportunities.



DEVELOPING TRANSVERSAL SKILLS & KNOWLEDGE OF CHEMISTRY

Ciara Ní Dhrisceoil of Gaelcholáiste Luimnigh uses tablets for teaching of chemistry. For example, a class were set investigations and tasks and had to capture their work on video in order to assess how well the task was performed and how it might be improved. Both self and peer assessment are used. The teacher provides further feedback to the students using annotations and sound recordings of her voice by sharing the final file with students. At the end of the school year, each student has a comprehensive bank of videos with feedback included they can use to revise for the Leaving Certificate. The use of ICT has improved teaching in learning in the class and it aids creativity, independence, collaborating and ownership of learning among the students.

YOUNG ENTREPRENEURS & EXPERIENTIAL LEARNING

Colaiste Chraobh Abhann in Wicklow has an extensive Transition Year programme for students, of which a key focus is Enterprise Education. In November each year, the school organises a 'Spirit of Enterprise Week' to expose all students to the world of enterprise and encourage them to consider possible careers in business. In 2015, the school launched the 'Colaiste Chraobh Abhann Young Entrepreneur pop-up shop'. Transition Year students are responsible for the operation of a retail premises including the day to day activities of sales, marketing, production and finance. Five managers were appointed to source a premises and everything else need to launch their pop up shop. The shop opened for ten days and students sold the products they have designed and developed for their mini companies. Products that the students have established include home blended teas, children's books, headphone devices and board games to promote the use of Irish to name a few. The shop took in more than €5000 while in operation and the students learned valuable skills in business teamwork, innovation and tenacity in order to make the shop a major success in the community.

DEVELOPING TRANSVERSAL SKILLS WITH ENGLISH, SCIENCE & SCRATCH

Elaine Lyons, Christ the Saviour National School, uses Scratch to support work on writing genres. For example, Scratch and other tools were used to work on a final draft of procedural writing for Science. Scratch facilitates integration between different subjects, in this instance, English and Science. Scratch is used to animate the procedures that are used for inclusion in the writing piece. The students are also learning transversal skills such as problem solving, creative thinking and brainstorming. They are using mathematical skills to create within Scratch and the skills of the maths curriculum shine through. They are also self-assessing using Scratch.

BRINGING LANGUAGES ALIVE IN WEXFORD

German teacher Tina Killackey from Presentation Secondary School, Wexford uses apps to support language learning skills of reading, listening, writing and speaking (oral language). The relationship has changed with her class as a result of embedding the use of ICT - they are cofacilitators of learning. Quizlet is used in formative assessment for ongoing self and peer assessment. Notes are taken using Notability to aid revision and can be shared easily unlike paper notebooks. Sound files can also be recorded within the app and this aids language acquisition and caters for students with different levels of ability. Book creator empowers students to create their own multimedia content so their language skills can be demonstrated through the use of text, images, sound and video as appropriate. Ongoing feedback is gathered from the students using Socrative so the teacher can differentiate teaching approaches, methodologies, content and teacher designed tasks and tests based on the skill progression of the class.

LEARNING BEYOND SCHOOL

Ireland's education and training system beyond a person's school years primarily comprises the further education and training (FET) and higher education (HE) sectors. The coherence and quality of skills development underpins the efficient and effective functioning of the Irish system. This is grounded in the National Framework of Qualifications that is maintained by Quality and Qualifications Ireland (QQI).

Comprehensive reform of both FET and HE is underway and will continue throughout the lifetime of this Strategy. Reforms are steered through the Further Education and Training Strategy⁸⁰ and the Higher Education Strategy to 2030⁸¹.

SOLAS plays a key role in relation to quality and accountability within the FET sector. A new funding model based on performance levels is being implemented through the agreement of annual Further Education and Training Service Plans with each of the Education and Training Boards. The annual service plans provide the framework for monitoring progress against agreed quality and delivery targets, and a framework of continuous evaluation will underpin progress and development.

The aim is that only courses with a positive track record for participants will be funded going forward. Courses with less successful outcomes will be adapted, restructured or terminated in favour of other alternatives. Any other approach would be doing a disservice to learners. Like other areas of provision, FET is an area where the responsiveness of the sector should be evident. Ongoing evaluations must therefore underpin this approach.

In Higher Education, the Higher Education Authority is leading on the implementation of the **Higher Education System Performance Framework 2014-16**⁸² which involves a process of strategic dialogue and agreement of compacts with publicly funded higher education institutions and the rollout of performance funding.

Ireland's FET and HE systems have both responded strongly to national needs during the economic crisis. In recent years, the two sectors have also committed to implementing significant reforms as well as facing the challenge of increasing demand for places and decreasing budgets. They are continuing to perform strongly, with the availability of a skilled labour force being a major draw for foreign companies. Their skills provision is complemented by that of private providers who have been particularly active in the delivery of Springboard and Momentum programmes⁸³. In doing so, private providers have demonstrated good practices in the Recognition of Prior Learning (RPL) and these will be included in the development of system-wide capacity for RPL.

⁸⁰ <http://www.education.ie/en/Publications/Policy-Reports/Further-Education-and-Training-Strategy-2014-2019.pdf>

⁸¹ http://www.hea.ie/sites/default/files/national_strategy_for_higher_education_2030.pdf

⁸² <https://www.education.ie/en/The-Education-System/Higher-Education/HEA-Higher-Education-Systemperformance-Framework-2014-2016.pdf>

⁸³ www.skillstowork.ie

Looking forward, ETBs are now much better positioned to respond to skill needs in a flexible way as they have assumed responsibility for the network of training centres. This has brought with it a strong network of local employer links, a system for contracting training provision and expertise in a wide range of specific skill areas. This also provides opportunities to manage education and training provision in a co-ordinated way, with a broader range of programmes to meet the skills requirements of the local and regional economy.

In addition, the Skillnets model enables networks of employers in regions or sectors to come together to determine their common skill needs and procure training for their employees. Skillnets is co-funded by the National Training Fund and by employers directly and has proved to be a flexible and effective model for companies of various sizes to meet their short and medium term skill needs. Over 60 individual networks are currently operational across a wide range of business sectors.

Enhanced integration, partnerships and synergy between FET and HE, with the interests of the learner and employer central, is a key element of this new skills strategy; working together, the sectors can deliver the skills we need for sustainable economic growth.

As well as the performance related initiatives underway, other skills related initiatives include:

- Reform of the **apprenticeship system** leading to expansion of industry and apprentice participation and new industry-led apprenticeships;
- Ongoing roll-out of targeted upskilling and re-skilling courses via **Momentum⁸⁴** and **Springboard+⁸⁵**, including those relating to the **ICT Action Plan⁸⁶**, to help people learn new enterprise-relevant skills and to progress to sustainable employment;
- Reconfiguration of the institutional landscape, including the establishment of **Technological Universities⁸⁷** and the formation of **regional clusters** of higher education institutions;
- Introduction of a **professional development framework for teachers in higher education⁸⁸** with the support of the National Forum for the Enhancement of Teaching and Learning⁸⁹;

⁸⁴ <http://www.momentumskills.ie/>

⁸⁵ <http://www.springboardcourses.ie/>

⁸⁶ <http://www.education.ie/en/Publications/Policy-Reports/ICT-Skills-Action-Plan-2014-2018.pdf>

⁸⁷ http://www.heai.ie/sites/default/files/national_strategy_for_higher_education_2030.pdf

⁸⁸ <http://www.teachingandlearning.ie/priority-themes/benchmarking-professional-development/professionaldevelopment-consultation/>

⁸⁹ <http://www.teachingandlearning.ie/>

- Skills profiling and the development of a **CPD Strategy** for staff delivering FET programmes in Education and Training Boards.
- The development of a **Workforce Development Strategy** to facilitate upskilling of those in employment.
- The development and rollout of ICT related strategies for HE and FET: **A Roadmap for Enhancement in a Digital World 2015 – 2017⁹⁰** for HE and the development of a strategy for technology-enhanced learning in FET.
- Higher Education will play a pivotal role in the implementation of **Innovation 2020⁹¹**, Ireland's new strategy for research and innovation, including support for Ireland's researchers' career development, for cutting-edge research activity, including international success, and for collaboration with companies of all sizes;
- Roll-out of the **Irish Research Council's⁹²** updated suite of initiatives to advance early-stage researcher skills development and to support increased researcher mobility, with a particular emphasis on its successful employer-facing programmes in keeping with its mandate;
- Roll-out of the **National Plan for Equity of Access to Higher Education 2015-2019⁹³**.
- Progression of **Transitions Reform⁹⁴** to help second-level students prepare to enter and remain in higher education;
- Conclusion of the work of the **Expert Group on the Future Funding of Higher Education⁹⁵**.

⁹⁰ <http://www.teachingandlearning.ie/a-roadmap-for-enhancement-in-a-digital-world-2015-2017/>

⁹¹ <https://www.djei.ie/en/Publications/Innovation-2020.html>

⁹² <http://ircset.ie/>

⁹³ [http://www.heai.ie/files/files/file/New_pdf/National_Access_Plan_2008-2013_\(English\).pdf](http://www.heai.ie/files/files/file/New_pdf/National_Access_Plan_2008-2013_(English).pdf)

⁹⁴ <http://www.education.ie/en/Publications/Policy-Reports/Supporting-A-Better-Transition-From-Second-Level-To-Higher-Education-Implementation-and-Next-Steps.pdf>

⁹⁵ <http://www.education.ie/en/The-Education-System/Higher-Education/Higher-Education-Expert-Group-on-Future-Funding-for-Higher-Education.pdf>

DEVELOPING 21ST CENTURY SKILLS BEYOND SCHOOL: TEENS TO OLDER PEOPLE
 PROVIDING FOR A CONTINUUM OF EDUCATION AND TRAINING TO MEET DIVERSE AND CHANGING NEEDS OF EMPLOYERS AND LEARNERS

LEARNING BEYOND SCHOOL: FURTHER EDUCATION AND TRAINING AND HIGHER EDUCATION

<p>TEACHING, LEARNING AND ASSESSMENT DEVELOPING TRANSVERSAL SKILLS DEVELOPING SUBJECT SPECIFIC KNOWLEDGE</p>	DEVELOPING TRANSVERSAL SKILLS, CONFIDENCE BUILDING AND PREPARATION FOR FURTHER STUDY OR WORK, COMMUNITY DEVELOPMENT	OCCUPATION RELATED TRAINING, UPSKILLING AND RESKILLING OPPORTUNITIES AND ADVANCED TECHNICAL SKILLS AND DEVELOPMENT OF TRANSVERSAL SKILLS		VOCATIONAL EDUCATION AND DISCIPLINE SPECIFIC KNOWLEDGE FOR CAREER DEVELOPMENT AND DEVELOPMENT OF TRANSVERSAL SKILLS	ADVANCED DISCIPLINE SPECIFIC KNOWLEDGE, VOCATIONAL EDUCATION AND CONTINUOUS PROFESSIONAL DEVELOPMENT AND DEVELOPMENT OF TRANSVERSAL SKILLS	CREATING AND ADVANCING KNOWLEDGE, PROBLEM SOLVING AND DEVELOPMENT OF TRANSVERSAL SKILLS THROUGH RESEARCH PROGRAMMES	<p>RESEARCH –LED TEACHING, ADVANCING KNOWLEDGE, APPLIED RESEARCH TO SOLVE PROBLEMS, INCREASING PRODUCTIVITY AND INNOVATION AND CREATING NEW ENTERPRISE</p>
	FOR EXAMPLE FURTHER EDUCATION PROGRAMMES INCLUDING: ADULT LITERACY, BACK TO EDUCATION INITIATIVE, COMMUNITY EDUCATION, COMMUNITY TRAINING CENTRES, ESOL, OTHER YOUTH PROVISION, ARTS EDUCATION, CO-OPERATION HOURS	FURTHER EDUCATION AND TRAINING AND HIGHER EDUCATION PROGRAMMES (PUBLIC AND PRIVATE) INCLUDING FOR EXAMPLE PUBLICLY FUNDED FET PROGRAMMES SUCH AS : APPRENTICESHIPS, ECOLLEGE, EVENING / BLENDED LEARNING OPPORTUNITIES, YOUTHREACH VTOS, LOCAL TRAINING INITIATIVES PLC, PROFESSIONAL CERTIFICATION, TRAINEESHIPS, SPECIFIC/CUSTOMISED SKILLS TRAINING, MOMENTUM & SPRINGBOARD+, SKILLNETS PRIVATE AND PUBLIC PROVIDERS		VOCATIONAL, DISCIPLINE SPECIFIC AND INTER-DISCIPLINARY UNDER-GRADUATE PROGRAMMES IN HIGHER EDUCATION INSTITUTIONS (PUBLIC AND PRIVATE)	VOCATIONAL, DISCIPLINE SPECIFIC AND INTER-DISCIPLINARY POST – GRADUATE TAUGHT PROGRAMMES , PROFESSIONAL CERTIFICATION, CONTINUOUS PROFESSIONAL DEVELOPMENT, CUSTOMISED TRAINING AND EXECUTIVE EDUCATION IN PUBLIC AND PRIVATE HIGHER EDUCATION PROVIDERS AND TRAINING PROVIDERS	POST-GRADUATE RESEARCH PROGRAMMES IN HE DOCTORAL STUDIES (INCLUDING PHD) POST-DOCTORAL RESEARCHERS	
	NOT ALL PROGRAMMES LEAD TO CERTIFICATION. SOME PROGRAMMES ARE ON NFQ AT LEVELS 1 TO 5.	INCLUDES MAJOR AND MINOR AWARDS ON THE NFQ AT LEVELS 5 TO 8. SOME PROGRAMMES LEAD TO PROFESSIONAL OR INDUSTRY CERTIFICATION		NFQ LEVELS 6 TO 8	NFQ LEVEL 9 PROGRAMMES, MINOR AWARDS,	NFQ LEVELS 9 & 10	
	FULL- AND PART-TIME	FULL-AND PART TIME, BLENDED LEARNING, SOME DISTANCE LEARNING COURSES, SHORT COURSES, WORK EXPERIENCE		FULL- AND PART-TIME COURSES, BLENDED LEARNING, EXTRACURRICULAR ACTIVITIES (SPORTS, VOLUNTEERING, CLUBS), WORK EXPERIENCE	FULL AND PART-TIME COURSES, BLENDED LEARNING, SHORT COURSES, DISTANCE LEARNING, WORK EXPERIENCE, EXTRACURRICULAR ACTIVITIES	FULL AND PART-TIME, BLENDED LEARNING, WORK EXPERIENCE	

SUPPORTING STRATEGIES AND INITIATIVES

FURTHER EDUCATION AND TRAINING STRATEGY	HIGHER EDUCATION STRATEGY	REGIONAL SKILLS FORA AND HIGHER EDUCATION INSTITUTION CLUSTERS	SYSTEMS PERFORMANCE FRAMEWORK FOR HE, STRATEGIC DIALOGUE AND COMPACTS	ANNUAL SERVICE PLANS FOR ETBS	QA PROCESSES FOR PROGRAMMES AND RECOGNITION OF PROVISION IN THE NFQ		HE ENTERPRISE ENGAGEMENT STRATEGY	CPD STRATEGY FOR ETB TEACHING STAFF	PROFESSIONAL DEVELOPMENT FRAMEWORK FOR HE	DIGITAL ROADMAP FOR HIGHER EDUCATION	EVALUATION OF PROGRAMME OUTCOMES	INNOVATION 2020 AND IRC PROGRAMMES
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IN FOCUS – DEVELOPING 21ST CENTURY SKILLS TEENS TO OLDER PEOPLE

GOOD PRACTICE EXAMPLES

WORK-BASED LEARNING

The Career Traineeship initiative has been developed by SOLAS in collaboration with Education and Training Boards (ETBs) and enterprise to develop a more effective model of work-based learning, primarily at NFQ levels 4 and 5, incorporating best national and international research and practice. Networks of Employers have been created to facilitate partnerships between ETBs and employers in identifying training needs, designing the training programmes, recruitment of learners and delivery of the training on and off the job. The Career Traineeship model of work-based learning is currently being piloted with the Hospitality and Engineering sectors, with the involvement of seven ETBs. A range of programmes are in development for 2016 with the first Career Traineeship having commenced in Hospitality in Laois Offaly ETB and Limerick Clare ETB in the final quarter of 2015. A Career Traineeship in Engineering is underway in Cavan Monaghan ETB.

DEVELOPING TECH TALENT

ICT Associate Professional is a new dual-education programme, designed to provide the ICT industry with candidates with in-demand technology skills. This model of provision is a two year programme during which candidates attain a Level 6 ICT and Professional Development Award. They are then bestowed the title of FIT ICT Associate Professional by the industry on effectively demonstrating the application of skills in the working environment.

The first six months of the course are college based allowing candidates to acquire the technical skills and acumen required. The remaining 18 months are a combination of workplace application and college based learning. This allows candidates to further their training and apply their skills and learning to live projects and tasks within their sponsoring company. The ICTAP programme is being rolled out in Dublin, Cork, Galway, Athlone and Monaghan and FIT are actively engaging with employers to participate on the programme.

WIN-WIN PARTNERSHIP

Institute of Technology Carlow has developed a partnership with UNUM, a US Fortune 250 company which provides industry focused input and advice in programme development across IT Carlow's suite of computing programmes including Degrees, Diplomas and Masters; joint investment in facilities through the development of the UNUM Software Development Centre in IT Carlow; work placement and post-programme employment (almost one third of UNUM's of the Irish employees are IT Carlow graduates); and development of a collaborative international FinTech Centre driven by doctoral and post-doctoral researchers.

Key transferable business skills along with technical knowledge, from ICT systems management to software development to project management and research, are developed in partnership in a model that ensures graduates are prepared for employment in any international ICT organisation. In 2015 UNUM expanded its internship programme to include Computer Games Development learners for the first time and as a result are increasingly engaged with gamification concepts those learners bring.

INNOVATION IN ACTION

Vornia Biomaterials is an early stage biomedical company in the ever-growing biomaterials market based in Galway, Ireland. The company design and develop customized biomaterial solutions to complex clinical problems. A researcher from UCD, Sean McMahon, took up an Employment Based Post-Graduate Programme award with Vornia Biomaterials with funding provided by the Irish Research Council.

This opportunity has created a win-win situation. The programme has provided the company with an opportunity to invest more in innovative technologies. Dr Udo Greiser, Vornia Biomaterials has commented that "This employment based scholarship has supported Sean to develop a key platform technology within our company which is now a cornerstone to our company and has yielded multiple knock on products with clinical/environmental and cost based advantages over competitors."

Sean McMahon has been able to apply his research and use advanced facilities in UCD along with equipment and resources in Vornia to deliver real innovation for the medical marketplace. "This program has allowed me to combine the best of academic frontline science with the resources and commitment a company has to product realisation. It is the structure and support from this program that paved an environment for me to achieve and deliver real innovation." Sean McMahon, IRC Employment Based Postgraduate Programme Scholar

DEVELOPING 21ST CENTURY SKILLS

Five universities have completed or are currently carrying out university-wide initiatives explicitly addressing graduate outcomes in terms of skills and other attributes. This is part of each university's ongoing efforts to ensure quality and relevance of all student learning. One such initiative is Generation 21 in Dublin City University. Generation 21 is a programme of initiatives aimed at shaping DCU graduates into well-rounded individuals, ready to make an impact on society and on the workforce. The programme provides opportunities for work placement, study abroad and credit for excellence in extra-curricular engagement. DCU staff have worked with industry to identify the key skills and competencies students need to develop during their time at the University in order to become well-rounded graduates ready to make an impact on society and on the workforce. These DCU Graduate Attributes now form an integrated part of the degree programmes at DCU, allowing students to develop them in an integrated and consistent way. The latest in the initiatives developed under Generation 21 is the DCU ePortfolio, an online tool which provides students with a structured online environment to develop and monitor their development during their time at the University and beyond. This tool will become the student's own learning space, documenting their academic, personal and professional development at DCU.

5.5 INTERNATIONALISATION AND LANGUAGES

The Irish education and training system plays a key role in forging crucial global relationships and building international outlook and awareness. One of the core ambitions of the **National Strategy for Higher Education to 2030**⁹⁶ is to support the development of “*internationally-oriented, globally competitive institutions*”, and this is one of the seven national priorities set out for the higher education system in the System Performance Framework⁹⁷. In particular, international mobility can play an important part in skills development. The mobility of Irish students, staff and researchers, and the intercultural experience which this provides, assists in the development of language and other core skills.

The European Commission’s target of ensuring that at least 20% of those who graduate in 2020 undertake a study or training period abroad is also included in the System Performance Framework referred to earlier. In 2011/12 10.14% of NFQ level 8 graduates studied or undertook a placement abroad. This is in line with the European average.

The majority of Higher Education students currently studying overseas do so as part of the EU’s mobility programme, Erasmus+⁹⁸. The programme allows for students to spend a period abroad either studying at a University or undertaking a work placement in EU countries, or one of a number of partner countries.

In addition, opportunities also exist through Erasmus+ for mobility for academic and support staff, and the Marie Skłodowska-Curie⁹⁹ actions within the Horizon 2020 programme are supporting Irish researchers in gaining international experience.

Implementation of a new International Education Strategy, due to be published shortly, and through actions in the area of internationalisation of education, will further encourage the attraction of talent from around the world to our high quality education institutions and provide opportunities to send our talented students, researchers and academics to our partner institutions. The new strategy will support and reflect the actions and recommendations of this Strategy where appropriate.

⁹⁶ http://www.heai.ie/sites/default/files/national_strategy_for_higher_education_2030.pdf

⁹⁷ <https://www.education.ie/en/The-Education-System/Higher-Education/HEA-Higher-Education-System-performance-Framework-2014-2016.pdf>

⁹⁸ <http://ec.europa.eu/programmes/erasmus-plus/>

⁹⁹ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/marie-skłodowska-curie-actions>

EMPLOYER SATISFACTION WITH GRADUATES

The recent **Employer Survey**¹⁰⁰, completed in Q4 2014, indicates that employers who responded have a high level of satisfaction with FET and HE graduate recruits across a range of personal and workplace attributes, including computer and technical literacy, working effectively with others and numeracy/processing numerical data.

However, lower rates of satisfaction were recorded for graduate attributes related to business acumen, entrepreneurship and foreign languages. Other concerns raised in various fora and in the submissions received during the consultation process for the development of the new skills strategy include the responsiveness of education and training providers to emerging employer needs and the quantity of graduates in STEM disciplines and in particular ICT graduates.

As outlined above, there are a number of initiatives underway across the education and training sector that relate to these issues including the development of the Foreign Languages in Education Strategy, the development of the Regional Skills Fora and the implementation of the ICT Action Plan 2014 – 2018¹⁰¹.

However, within each of these issues are a complex set of variables that the education and training system can contribute to resolving but cannot resolve alone. For instance, employers and other stakeholders need to raise awareness of the need for particular languages combined with other skillsets (e.g. ICT and German or Spanish and Marketing) and the level of competence required for particular occupations. More also needs to be done to address the cultural issues around language acquisition. Employers need to engage with education and training providers to create a shared understanding of their skills needs and how they can be addressed. Careers in STEM need to be promoted, particularly to women.

STUDENT EXPERIENCE OF FET & HE

In the area of FET, a survey is commissioned by SOLAS every two years to investigate the destinations of former FÁS trainees once they have completed their courses. The most recent survey was carried out in Q1 2015 among the trainees who had exited these programmes twelve months previously. In the course of the survey, trainees are asked whether they would speak highly of their course to others. Satisfaction rates were high among those responding to the survey, with over 80% of all trainees noting that they would speak highly to others of the course they had undertaken.

In addition, the results of the **Irish Survey of Student Engagement (ISSE)**¹⁰², published in November 2015, showed broad satisfaction among HE students with their experience. 68% of all participating students reported positive relationships with teaching staff, finding them to be

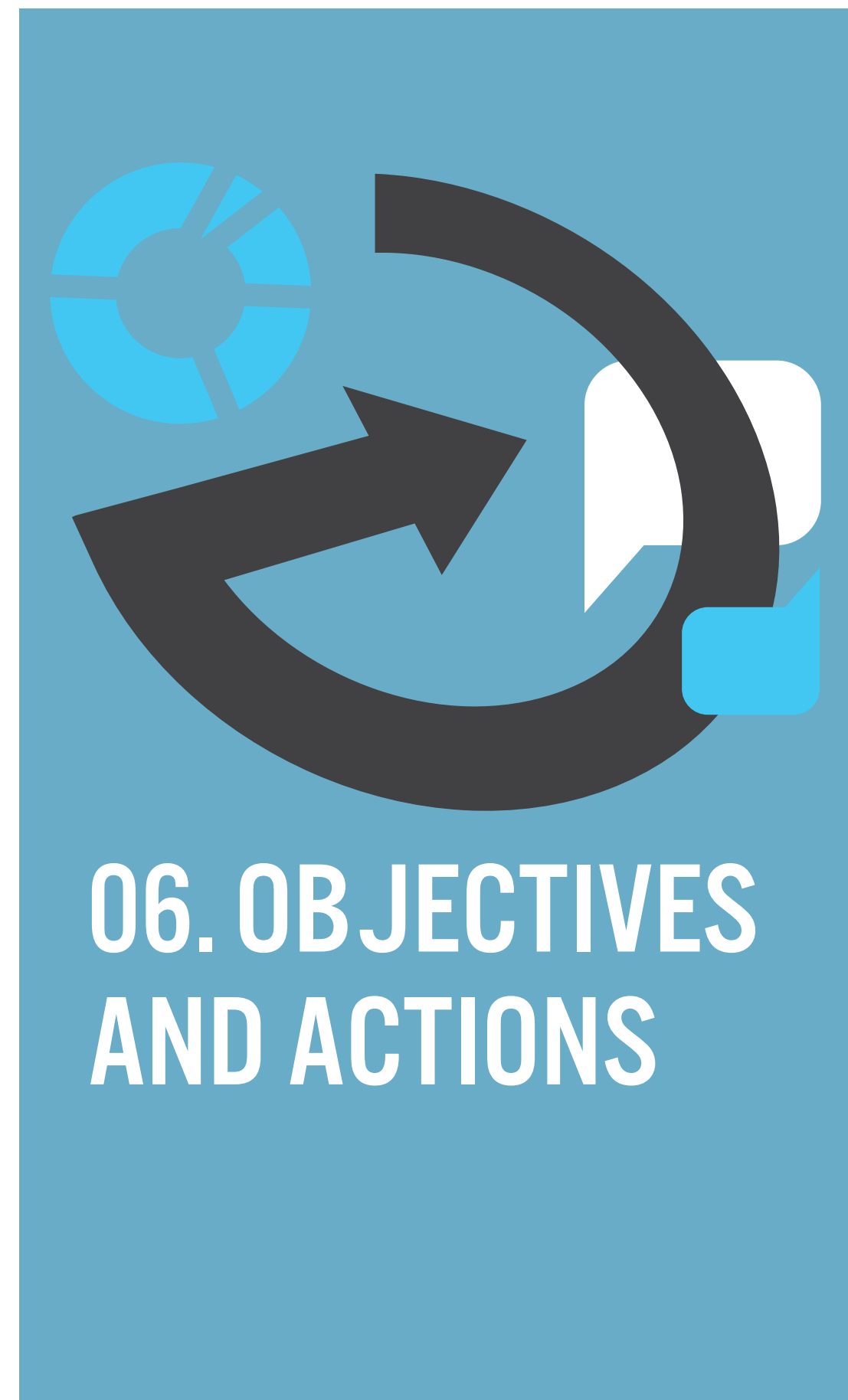
¹⁰⁰ <http://www.education.ie/en/Publications/Education-Reports/National-Employer-Survey-Employers-Further-Higher-Education.pdf>

¹⁰¹ <http://www.education.ie/en/Publications/Policy-Reports/ICT-Skills-Action-Plan-2014-2018.pdf>

¹⁰² <http://studentsurvey.ie/>

available, helpful and sympathetic (a score of 5 or greater on 7 point scale) and 79% of all participating students selected good or excellent, when asked how they would evaluate their entire educational experience at their institution. 63% of all participating students selected often or very often, when asked if they were improving knowledge and skills that will contribute to their employability.

Education and Training : Key Challenges and Opportunities
<ul style="list-style-type: none"> ■ The continuing demographic demand coupled with the financial crisis have been placing a strain on resources at all levels.
<ul style="list-style-type: none"> ■ Early years and school curriculum reform and relevant supporting initiatives are underway, including major Junior Cycle reform. It will be imperative for developing relevant skills in the future labour force that these reforms are fully implemented.
<ul style="list-style-type: none"> ■ Teachers are central to realising this opportunity and appropriate initial teacher education along with continuing professional development for them throughout their careers will underpin Ireland's future educational success.
<ul style="list-style-type: none"> ■ National and international benchmarks show that Irish students perform well across a range of measures, particularly reading and literacy. However, there is room for improvement in maths and science.
<ul style="list-style-type: none"> ■ As described in Section 3, digital competence cuts across most disciplines and full implementation of the Digital Strategy for Schools 2015-2020 and progress on digitisation in FET and HE are needed for students' future progress and participation.
<ul style="list-style-type: none"> ■ Inclusive education is a fundamental principle of our education system and ensures that the education system at all levels is designed to address the needs of the wide diversity of children accessing the school system. A more joined up approach to social inclusion is currently under development to support the inclusion of children from disadvantaged backgrounds and underrepresented groups.
<ul style="list-style-type: none"> ■ Better alignment between the FE and HE sectors, greater collaboration and an understanding of the complementarity of provision and progression pathways between providers is paramount, while maintaining quality throughout. The needs of students and employers must be central in the delivery of programmes across these sectors.
<ul style="list-style-type: none"> ■ Within higher education, the quality of the research environment underpins the development of Ireland's next generation of researchers, many of whom will move into industry as well as into roles across the public sector such as into clinical research and public policy research. It also supports the talent development of all the students enrolled across the country.

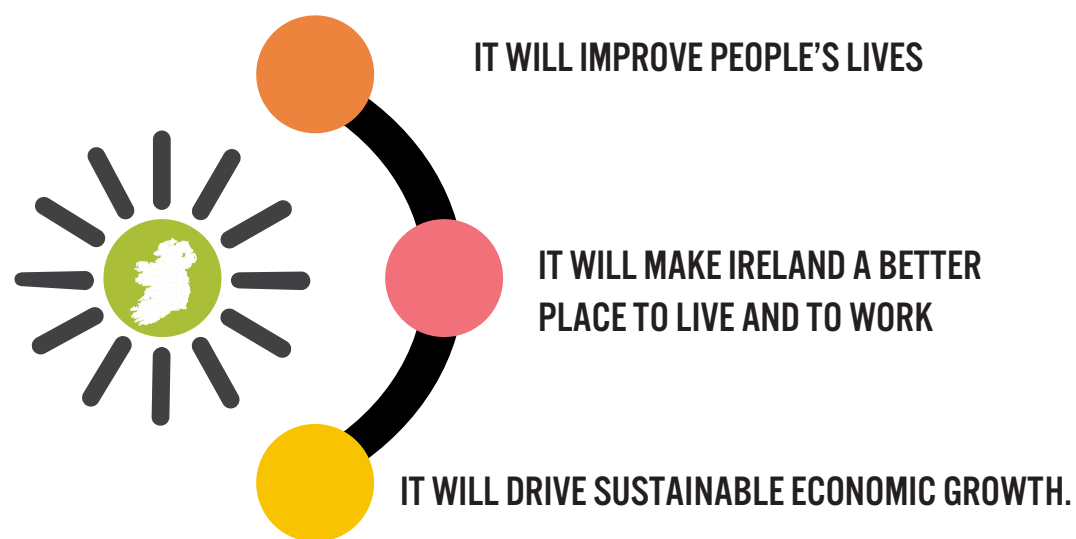


Objectives and Actions

Our Vision is that Ireland will be renowned at home and abroad as a place where the talent of our people thrives through:

- The quality and relevance of our education and training base, which is responsive to the changing and diverse needs of our people, society and the economy;
- The strength of relationships and transfer of knowledge between employers, education and training providers, and all sections of society, and the resulting impact on how people are prepared for life and work;
- The quality of our workforce – a nation of people armed with relevant knowledge, entrepreneurial agility and analytical skills;
- The effective use of skills to support economic and social prosperity, and to enhance the well-being of our country;
- The effective use of technology to support talent and skills provision, to grow enterprise and to enhance the lives of all within society.

Realising this vision will benefit Ireland in the following ways:



Improving people's lives

Better skills enables citizens to participate more successfully in social, civic and working life. OECD data show that higher educational attainment levels are associated with higher wellbeing outcomes not only in terms of jobs and earnings, but also social connections and subjective wellbeing. The world in which we live is becoming a very different place from twenty, or even ten, years ago. The explosion of digital technology has massive repercussions for many aspects

of a person's life including – and beyond – the working environment. Technology's pervasiveness means that people of all ages increasingly need to be 'technologically literate' in order to participate fully in society. The ageing population must be able to use technology if they are to continue to live as independently as possible, for example through online supermarket shopping and online banking. Technological developments such as those progressed in the area of e-health will only be truly helpful if those less able, including yet not limited to the elderly, are supported to understand it, to feel comfortable with it and to use it to improve their daily lives.

Making Ireland a better place to live and work

Education has an important societal function in tackling social exclusion and its consequences. It has helped to improve understanding of other cultures and to integrate people into their new communities. The European Commission highlights that *"Equipping people for employment is only part of the picture. Education has an equally important role to play in creating a better society. Well-educated people are less at risk of marginalisation and social exclusion. Effective education is about inclusiveness, ensuring every citizen has an opportunity to develop their talents and to feel part of a shared future"*¹⁰³.

The OECD Survey of Adult Skills¹⁰⁴ finds that individuals with better literacy levels are more likely to report good health, to believe that they have an impact on political processes and to participate in associative or volunteer activities. At a sectoral level, the better the skills capability of critical areas such as Health and Education, the better the experience of the recipients, i.e. the citizens. This in turn has a knock-on effect in making Ireland an attractive location internationally in which to live and work.

Driving sustainable economic growth

Now more than ever we see that a country's economic performance depends on the skills of its people. Having a workforce with high-quality relevant skills is key to productivity and innovation and well-skilled people are accordingly central to the success of the economy. They are one of the primary attractions for foreign-owned firms considering investing here and for driving indigenous enterprise development.

Strategy Implementation: a shared responsibility

Implementation of this strategy requires engagement from learners, employers, educators, government departments and agencies.

Employers can play a crucial role in ensuring that students in Ireland are studying the most relevant content and are developing the most appropriate skills for the changing 21st century workplace. For example, work experience opportunities for students are increasingly recognised as key elements of their development and influencers of career choices. More and more employers are also calling for experienced graduates. Logically, in order to achieve this, more work placements need to be offered by companies. Employers can also be very influential in course design and content and can help to deliver these through, for instance, giving guest lectures to students. They also have a strong role to play in careers information and advice. The

¹⁰³ European Commission, November 2015, Education and Training Monitor

¹⁰⁴ [www.http://www.oecd.org/site/piaac/](http://www.oecd.org/site/piaac/)

nature of many job opportunities may not be familiar to many teachers, students and, indeed parents. Companies can do a lot to help their own skills needs by making people more aware of what they do and the type of people and skillsets they recruit. Finally, employers have a clear role and responsibility in respect of their own employees, through upskilling and lifelong learning. Employers and the self-employed can also ensure skills are used effectively to drive productivity and innovation.

Ireland's labour market enjoys several strong potential competitive advantages. We have a high proportion of young people, our employment levels have been increasing in recent years and there is a significant pool of skilled Irish and foreign migrants that we can tap into. To maximise the impact of these assets – our people – Ireland needs to increase its lifelong learning levels substantially. Each person needs, to the best of their particular capabilities, to engage in continuous skills development. This may be formal or less formal, within an educational environment or within the workplace. To achieve this, provision needs to be fully accessible throughout the year and through the country. Such provision will of course only be successful when people believe in the value of lifelong learning and act on this.

During the recent economic crisis, education and training providers at all levels of education and in both public and private sectors, have demonstrated impressive responsiveness to the changing employment circumstances. Even with the welcome nascent recovery, it remains incumbent on all providers to maintain such agility and to mainstream good practices.

This collaborative approach to the Strategy's implementation will increase the returns on public investment through for instance:

- Improved translation and mediation of skills 'intelligence' into provision through the Regional Skills Fora;
- Greater alignment between the further education and training and higher education sectors;
- Encouraging employers to collaborate with education and training providers and play a stronger role in relevant skills development;
- Better career guidance and careers information leading to more appropriate study choices resulting in better course retention;

In tandem with these improved returns, additional investment is required in certain areas to address specific issues including curriculum reform, teacher education, the development of apprenticeships, increased demand for higher education, increasing capacity in the system and investing in ICT to underpin the delivery of more flexible learning opportunities. In all instances, investment will be made against clearly agreed deliverables, monitoring and evaluation processes.

Strategic Objectives

Drawing on international good practice as manifested in the OECD skills framework¹⁰⁵, Ireland's skills strategy for the next ten years will prioritise progress on the following outcomes:

- 1 Education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy
- 2 Employers will participate actively in the development of skills and make effective use of skills in their organisations to improve productivity and competitiveness
- 3 The quality of teaching and learning at all stages of education and training will be continually enhanced and evaluated
- 4 People across Ireland will engage more in lifelong learning
- 5 There will be a specific focus on active inclusion to support participation in education and training and the labour market
- 6 We will support an increase in the supply of skills to the labour market

The actions outlined below to advance each of these will be underpinned by national and international research, evaluation and benchmarking, and will be supported by an enhanced national and regional skills architecture.



¹⁰⁵ <http://skills.oecd.org/documents/oecdskillsstrategy.html>

Objectives	Key Actions
<p>Objective 1</p> <p>Education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy</p>	<ol style="list-style-type: none"> 1. Students at all stages will learn 21st Century Skills. 2. Participation in STEM education will grow. 3. Beyond school, there will be enhanced integration, partnerships and synergy between the FET and HE sectors.
<p>Objective 2</p> <p>Employers will participate actively in the development of skills and make effective use of skills in their organisations to improve productivity and competitiveness</p>	<ol style="list-style-type: none"> 1. Employers will participate in skills development through active collaboration with education and training providers. 2. The capability of SMEs will be enhanced through skills development. 3. Workforce planning in the public sector will be improved. 4. We will promote research and innovation activities. 5. Improved employer participation will strengthen the promotion and communication of career opportunities.
<p>Objective 3</p> <p>The quality of teaching and learning at all stages of education and training will be continually enhanced and evaluated</p>	<ol style="list-style-type: none"> 1. Quality will be embedded in the delivery of Early-years services. 2. We will improve teaching and learning in schools by investing in high quality teacher education and evaluation. 3. FET and HE will provide high quality learning experiences leading to better outcomes.
<p>Objective 4</p> <p>People across Ireland will engage more in lifelong learning</p>	<ol style="list-style-type: none"> 1. The benefits of lifelong learning will be promoted and communicated to the full population of Ireland. 2. There will be more and easier opportunities for those in employment to engage in education and training. 3. There will be greater recognition of workplace learning and capacity for recognition of prior learning will be developed. 4. Career guidance will be strengthened significantly, with the aid of employer engagement.
<p>Objective 5</p> <p>There will be a specific focus on active inclusion to support participation in education and training and the labour market</p>	<ol style="list-style-type: none"> 1. Disadvantaged and under-represented groups will be supported to participate in education and training. 2. Jobseekers will be supported to find the best possible job. 3. Older workers will be encouraged to remain active in the labour market. 4. Economically inactive and under-represented groups will be helped to increase their labour market participation.
<p>Objective 6</p> <p>We will support an increase in the supply of skills to the labour market</p>	<ol style="list-style-type: none"> 1. International migrants with in-demand skills will be attracted to Ireland. 2. There will be increased mobility of higher education researchers into industry. 3. Irish emigrants will be encouraged to return home to meet the skills demand.

OBJECTIVE 1: EDUCATION AND TRAINING PROVIDERS WILL PLACE A STRONGER FOCUS ON PROVIDING SKILLS DEVELOPMENT OPPORTUNITIES THAT ARE RELEVANT TO THE NEEDS OF LEARNERS, SOCIETY AND THE ECONOMY

A key objective of this Strategy is that people in Ireland have the opportunity to gain the most up-to-date knowledge across all disciplines and to acquire the most relevant skills for active participation in work and society. Learning across school subjects will be fostered in order to enable people progress in an increasingly inter-disciplinary world and to encourage new and critical thinking.

ACTION 1.1: STUDENTS AT ALL STAGES WILL LEARN 21ST CENTURY SKILLS

Over the course of this Strategy, students at all stages of education and training will be taught a strong mix of transversal skills and subject knowledge. Transversal skills can be described and defined in many ways. They are sometimes referred to as employability skills, soft skills and transferrable skills. They can refer to communications, resilience, creativity and problem-solving.

The European Commission¹⁰⁶ also encompasses language proficiency, mathematical competence and ICT skills in its definition of transversal skills.

As Table 5 in Chapter 5 illustrates, there is already a strong focus on transversal skills development in the schools’ curriculum and this is continued in the FET and HE sectors. At second level, curricula reforms are strongly concentrated on this issue and it is a central feature of the Junior Cycle reform now underway.

Particular emphasis is being placed on ICT skills, language proficiency and entrepreneurship in light of their importance to employability, personal development and civic participation. This will be supported by the implementation of the new Digital Strategy for Schools (2015 – 2020)¹⁰⁷, the completion of an Entrepreneurship Education Policy Statement that will inform the development of entrepreneurship education guidelines for schools and the publication and implementation of a Foreign Languages in Education Strategy. This work will be significantly progressed in 2016.

The deepened focus on transversal skills development is not in any way detracting from the quality of subject content throughout schools. Indeed, the thrust of the reform underway and in planning is to ensure that improved transversal skills are balanced with the most up-to-date and relevant subject knowledge so that students emerge as rounded and well equipped as possible. For example, within higher education, undergraduate formation is supported by the surrounding research environment.

¹⁰⁶ http://ec.europa.eu/education/policy/school/competences_en.htm

¹⁰⁷ <http://www.education.ie/en/Publications/Policy-Reports/Digital-Strategy-for-Schools-2015-2020.pdf>

ACTION 1.2: PARTICIPATION IN STEM EDUCATION WILL GROW

Enterprise policy in Ireland is strongly oriented towards knowledge-intensive industries and there will be an increasing demand for people with STEM related skills and qualifications, at a range of levels across different sectors of the economy. For instance, under *Innovation 2020*, research personnel within enterprise is forecast to increase from 25,000 to 40,000 by 2020. These personnel will fall across a spectrum of qualification levels from technicians through to doctoral graduates. In addition, Innovation 2020 is targeting an increase in research student enrolments in order to increase Ireland's pipeline of early-stage researchers.

Across the system, STEM education is growing and new developments will be rolled out in the coming years to support both improved performance in STEM and greater participation. This includes:

- The Primary School Mathematics Curriculum for Junior Infants to Sixth Class was introduced in 1999 and the NCCA is currently reviewing the curriculum to ensure its continued relevance.
- The new Junior Cycle Science Curriculum will be introduced to 1st Year students in September 2016.
- Programming and Coding and Digital Media Literacy Modules are already available at Junior Cycle and the recently published *Digital Strategy for Schools (2015 - 2020)* aims to embed the use of digital technologies in teaching, learning and assessment at school level and in teacher education. The Strategy will support the development of new opportunities for learners to undertake in-depth study of ICT in the Senior Cycle.
- The Transition Year module "Having Fun with Computer Programming and Games" will be expanded nationally.
- PDST Technology in Education¹⁰⁸ is providing term time and summer courses for teachers who wish to explore Scratch¹⁰⁹ programming at both primary and second level.
- Implementation of the ICT Action Plan 2014 – 2018 is supporting an increase in the supply of ICT graduates with the total number of graduates from ICT courses having doubled since 2011.

¹⁰⁸ The Professional Development Service for Teachers (PDST) Technology in Education promotes and supports the integration of ICT in teaching and learning in first and second level schools. It is part of the national support service, the Professional Development Service for Teachers, which operates under the aegis of the Department of Education and Skills.

¹⁰⁹ Scratch allows users to create and share their own interactive stories, animations and games

- In addition, expansion of the existing range of programmes offered under the Apprenticeship system, will see new apprenticeships in the area of Information Technology, Manufacturing and Engineering.

However, within the overall positive performance and increasing focus on STEM, there are issues that need to be addressed if Ireland is to further develop as intended as a knowledge-intensive society and economy. Female participation in certain fields such as maths and engineering are lower than male participation. Even in subjects like biology and medicine where females are well represented at undergraduate levels, there is a deterioration in participation at more senior research levels. The extension of the Athena Swan Awards¹¹⁰ to Ireland is aimed at bringing attention to this issue. The Gender Equality Review¹¹¹ underway by the Higher Education Authority will also inform future policy in this regard.

In addition, students at all levels can be supported to apply their creativity and curiosity to scientific issues. They will be encouraged to consider science and technology within a wider context and to draw in insights from other studies such as the humanities, for example through cross-disciplinary project work. Options can also be offered for STEM students to take non-STEM elective subjects that pique their curiosity. This crossover of arts-related subjects with STEM, sometimes referred to as STEAM, can make science more relevant to day-to-day situations and can help prepare students for the increasingly interdisciplinary nature of research activity (both within academia and industry). The Arts in Education Charter¹¹² will support this approach at school level.

More generally, the Science in Ireland Barometer¹¹³ published by SFI in 2015 found that, while 49% of the public feel informed about STEM and its contribution to society, 71% feel that it is too complex for them to be able to discuss. The survey also found that lower socioeconomic groups are less engaged in STEM. A host of awareness-raising initiatives take place every year across the country such as Science Week, SciFest, Intel Mini Scientist Program and the BT Young Scientist and Technology Exhibition and there are good instances of employers partnering with local schools to encourage the uptake of STEM subjects. Coverage of these initiatives however is not consistent nationwide and additional effort is required in certain areas. Across the board, parents need to be better informed of the benefits of STEM education in order to support their children's study and career choices.

In order to address these issues, Innovation 2020 includes a range of measures to strengthen STEM teaching and learning and increase uptake at second level. Additional measures have also been identified as part of the development of this Strategy and these relate to working with parents to provide better information on career opportunities, prioritisation of resources for CPD for teachers of STEM subjects, retention of students on STEM related higher education courses and a review of how STEM courses can be further incentivised and supported in higher education.

¹¹⁰ <http://www.ecu.ac.uk/equality-charters/athena-swan/>

¹¹¹ <http://www.heai.ie/news/hea-review-gender-equality-higher-education>

¹¹² <http://www.education.ie/en/Press-Events/Press-Releases/2013-Press-Releases/PR12-01-04.html>

¹¹³ <http://www.sfi.ie/discover-science-engineering-dse/guidance-and-best-practice/publications/science-foundation-ireland-science-in-ireland-barometer.html>

ACTION 1.3: BEYOND SCHOOL, THERE WILL BE ENHANCED INTEGRATION, PARTNERSHIPS AND SYNERGY BETWEEN THE FET AND HE SECTORS

The projected skills needs of the economy set out earlier in this Strategy highlight the importance of sustained development of further education and training related skills in Ireland and a more balanced portfolio of skills development opportunities across the FET and HE sectors. This should include opportunities for school leavers, the unemployed and those already in employment.

Better matching of skills to employment opportunities can also be achieved by promoting the full range of the skills provision available in the FET and HE sectors and the value of these skills in meeting the needs of the labour market and providing career opportunities for individuals.

SOLAS has indicated that, for example, despite the exporting sector’s demand for mid-level skills, there is insufficient recognition of the potential of FET to meet this demand. Similarly, within the large domestic sector, employers’ awareness of their skills needs and of the opportunities offered by FET are limited¹¹⁴. The development of the Regional Skills fora will be key to enhancing employer understanding of the opportunities available across the full spectrum of skills development.

In addition, given the progress made in reconfiguring the FET sector in recent years and the development of new Apprenticeships and Traineeships, it is now timely for the State and employers to promote the essential skills attained from FET as a route to skilled employment and not just as a stepping stone to higher education. This strategy includes an ambitious target to support the delivery of 50,000 apprenticeship and traineeship places up to 2020. Progress will be reviewed in 2020 with a view to setting new ambitious targets for the period to 2025. There will need to be strong employer commitment to achieve these targets. These new apprenticeships and traineeships will provide a significant opportunity to showcase the potential of vocational education.

The role of the higher education sector in undergraduate formation and researcher development will continue strongly throughout the lifetime of this Strategy, in keeping with projections for growing enterprise requirements for highly skilled people. The National Strategy for Higher Education will underpin the development of the 2017-16 System Performance Framework.

¹¹⁴ Sweeney, J. (2013) A Strategic Review of Further Education and Training and the Unemployed, National Economic and Social Council.

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 1		
ACTION	MEASURES	LEAD
ACTION 1.1: 21ST CENTURY SKILLS - TRANSVERSAL SKILLS AND SUBJECT KNOWLEDGE	Implement a multi-annual programme of curriculum reform to ensure that the pre-school and school curriculum are continuously improved and remains relevant to the needs of individuals, society and the economy:	DES, NCCA, SEC, PDST
	<ul style="list-style-type: none"> Continue with the review of the primary curriculum to ensure that learning outcomes reflect the needs of individuals, society and the economy. NCCA to consider the priorities in this strategy in providing advice on the allocation of time on all aspects of the primary school curriculum in 2016. Rollout the new Junior Cycle to deliver critical reform of skills development and assessment. Implement revised senior cycle curricula in science and other subject specifications. 	
	<ul style="list-style-type: none"> Ensure that assessment supports learning and provides evidence of learning transversal skills and knowledge across the sector. 	DES, NCCA, EDUCATION AND TRAINING PROVIDERS
	<ul style="list-style-type: none"> Promote the development of transversal skills at all levels of the education and training system and increase the visibility and understanding of the skills developed at each level among stakeholders. 	DES, NCCA, REGIONAL SKILLS FORA EDUCATION AND TRAINING PROVIDERS
	<ul style="list-style-type: none"> Complete the revision of the content and pedagogical approaches for initial teacher education courses as provided for under the Literacy and Numeracy Strategy. 	DES, TEACHING COUNCIL
ACTION 1.1: LANGUAGES	<ul style="list-style-type: none"> Implement the first phase of the new Integrated Primary Languages Curriculum for Junior Infants to 2nd classes from September 2016. 	DES, NCCA AND SCHOOLS
	<ul style="list-style-type: none"> Develop and implement the Integrated Primary Languages Curriculum for 3rd to 6th classes which will follow on from the curriculum developed for the junior primary classes. 	DES, NCCA AND SCHOOLS
	<ul style="list-style-type: none"> Implement the new Foreign Languages in Education strategy and in particular pilot and rollout the Common European Framework of Reference for Languages (CEFR) across the education and training system. 	DES, NCCA, HEA, SOLAS, EDUCATION AND TRAINING PROVIDERS

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 1		
ACTION	MEASURES	LEAD
ACTION 1.1: CREATIVITY, INNOVATION & ENTREPRENEURSHIP	<ul style="list-style-type: none"> Complete a Entrepreneurship Education Policy Statement and issue guidelines to schools to support the delivery of Entrepreneurial Education and experiential learning opportunities. 	DES
	<ul style="list-style-type: none"> Implement the Enterprise Engagement Strategy and in particular complete the HEInovate Country Review of Entrepreneurship in Higher Education to inform future actions in this area. 	DES, HEA, QQI, HEIs
	<ul style="list-style-type: none"> Building on the success of the ICT summer camps hosted in HEIs for second level students, we will pilot and support "makerspace", "fab lab" and other innovative summer camp ideas to promote entrepreneurial thinking, STEM and design skills among students. 	HEA, HEIs
ACTION 1.2: STEM	<ul style="list-style-type: none"> Implement the Digital Strategy for Schools (2015 – 2020). 	DES, SUPPORT SERVICES, SCHOOLS AND OTHER EDUCATION STAKEHOLDERS
	<ul style="list-style-type: none"> Develop a Strategy for Technology-Enhanced Learning in FET. 	SOLAS, ETBs
	<ul style="list-style-type: none"> Implement A Roadmap for Enhancement in a Digital World 2015-2017. 	HEA, HEIs
	<ul style="list-style-type: none"> Review the primary science curriculum to ensure its aims and content continue to be relevant. 	NCCA
	<ul style="list-style-type: none"> Implement new Junior Cycle modules for ICT and Science related subjects. 	DES, NCCA, SEC
	<ul style="list-style-type: none"> Rollout the new Senior Cycle Science curriculum. 	DES, NCCA, SEC
	<ul style="list-style-type: none"> Implement the ICT Action Plan 2014 – 2018 to increase supply of ICT graduates. 	DES, HEA, HEANET, HEIs, DJEI, EI, IDA, SFI, INDUSTRY
	<ul style="list-style-type: none"> Provide additional resources to support the provision of enhanced continuing professional development opportunities for teachers of maths, science subjects (particularly physics & chemistry) and in ICT related competences. 	DES

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 1		
ACTION	MEASURES	LEAD
Action 1.2: STEM	<ul style="list-style-type: none"> Increase support for the Smart Futures and SFI Discover programmes and build on success of initiatives including Student Enterprise Awards, CoderDojo, Science Week Ireland, BT Young Scientist. (<i>Innovation 2020</i>) 	SFI, DES, HEA, WITH OTHER FUNDERS, STAKEHOLDERS AND CO-SPONSORS
	<ul style="list-style-type: none"> Increase Irish public awareness of STEM from 49% to 60% of the population (350,000 additional people) (<i>Innovation 2020</i>) 	SFI, HEA, DES
	<ul style="list-style-type: none"> Increase the level of uptake of STEM at second level (<i>Innovation 2020</i>) 	SFI
	<ul style="list-style-type: none"> Support the retention of students on higher education courses, particularly in STEM disciplines through the Transitions Reform and specific retention supports. 	HEA, HEIs
	<ul style="list-style-type: none"> Review how STEM provision can be further incentivised and supported. 	HEA, DES
ACTION 1.3 DIVERSITY OF PROVISION BEYOND SCHOOL	<ul style="list-style-type: none"> Implement the Further Education and Training Strategy 2015 to 2019 and the National Strategy to Higher Education to 2030 and in particular promote the range of provision across both sectors to learners coupled with ongoing rigorous evaluation of courses through monitoring outcomes for learners – this will ensure that resources can be allocated where they deliver the best outcomes for learners. 	DES, SOLAS, HEA, HEIs, ETBs
	<ul style="list-style-type: none"> Subject to employer demand and economic capacity, provide a total of 50,000 apprenticeship and traineeship places up to 2020. Review progress in 2020 with a view to setting new ambitious targets for the period to 2025. 	DES, SOLAS, EDUCATION AND TRAINING PROVIDERS, INDUSTRY
	<ul style="list-style-type: none"> Continue to use flexible mechanisms such as Momentum and Springboard to provide upskilling and reskilling opportunities for the unemployed and as the recovery takes hold provide upskilling and reskilling opportunities for those in employment. 	DES, SOLAS, HEA
	<ul style="list-style-type: none"> Continue to forecast the future skills needs of the economy to inform the development of relevant education and training provision. 	NSC, DES, SOLAS, DJEI

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 1		
ACTION	MEASURES	LEAD
ACTION 1.3 DIVERSITY OF PROVISION BEYOND SCHOOL	<ul style="list-style-type: none"> Improve the dissemination of skills requirements and labour market intelligence, nationally and regionally, to inform dialogue between providers and employers and to underpin the provision of relevant skills development opportunities 	NSC,DES, DJEI, SOLAS, Regional Skills Fora
	<ul style="list-style-type: none"> Work with the National Parents Councils for Primary and Post-Primary to disseminate skills and labour market information to parents in accessible formats. 	DES, SOLAS, SFI
	<ul style="list-style-type: none"> Support the development of the regional skills fora to facilitate improved engagement on skills needs at regional level. 	DES
	<ul style="list-style-type: none"> Support the development of student pathways between FET and HE and improved academic planning through the development of the Higher Education Clusters. 	HEA, HEIs
	<ul style="list-style-type: none"> Carry out a review of guidance services, tools and careers information for school students and adults and recommend changes to improve the services available. 	DES
	<ul style="list-style-type: none"> Further Education and Training providers and Higher Education Institutions to provide employability statements for courses / disciplines to better inform students, parents and employers. 	EDUCATION AND TRAINING PROVIDERS
	<ul style="list-style-type: none"> Support Skillnets to encourage companies to engage in their networks to assist them in meeting their skills needs 	DES, SOLAS, SKILLNETS
	<ul style="list-style-type: none"> Implement the Transitions reform programme to support a better transition for students from school to higher education. 	DES, NCCA, SEC, HEA, HEIs
	<ul style="list-style-type: none"> In the context of Innovation 2020, ensure quality postgraduate research education provision in Ireland through the implementation of the National Framework for Doctoral Education incorporating modules on entrepreneurship, IP management and other generic skills. 	DES, HEA, IRC, HEIs
	<ul style="list-style-type: none"> Implement the reform of the Higher Education landscape, including the development of Technological University model. 	DES, HEA, HEIs
	<ul style="list-style-type: none"> Ensure the Systems Performance Framework for Higher Education includes appropriate indicators for human capital development and specific skills requirements for the period 2017 – 2019 	DES, HEA
	<ul style="list-style-type: none"> Ensure the funding model for Higher Education incentivises provision aligned with the Systems Performance Framework. 	HEA
	<ul style="list-style-type: none"> Complete the report of the Expert Group on Future Funding for Higher Education. 	DES
	<ul style="list-style-type: none"> Continue to develop and use the Employer Survey to gather data on employer satisfaction with FET and HE graduate skills. 	DES, HEA, SOLAS, QQI

OBJECTIVE 2: EMPLOYERS WILL PARTICIPATE ACTIVELY IN THE DEVELOPMENT OF SKILLS AND MAKE EFFECTIVE USE OF SKILLS IN THEIR ORGANISATIONS TO IMPROVE PRODUCTIVITY AND COMPETITIVENESS

To ensure effective relationships, we will promote a shared understanding of what employer engagement is and how employers, of all sizes and in all sectors of the economy, can get involved in the development of skills and the effective use of skills. This can happen through a number of broad channels: by influencing the skills development of graduates, i.e. of future employees, by upskilling existing staff, and, thirdly, by supporting knowledge transfer between educational institutions and enterprises.

Graduate formation can be shaped through revisions to course content and enhanced opportunities for students to gain practical experience. Engagement with employers at every educational level will enhance the real world aspect of education and enable educationalists to take advantage of the perspective of employers and similarly change the relationship and interaction of employers with education.

Company staff can be supported to update their skills and also to maximise the use of their existing ones by their employer. Companies can also engage productively with educational institutions by leveraging their research and innovation activities, e.g. by accessing equipment that the company may not have in-house or by licensing in technologies developed by the institution.

The ways in which employers can engage are illustrated below:¹¹⁵

Student / Graduate Formation	Workforce Development	Research and Innovation
<ul style="list-style-type: none"> Curriculum design and course review Guest lectures and Site visits Work placement and internship Work-based projects and case studies Employability and Entrepreneurship Careers information 	<ul style="list-style-type: none"> Recruitment Customised Course Development Continuing Professional Development Recognition of Prior Learning / work based learning Careers Information 	<ul style="list-style-type: none"> Consultancy Use of equipment and facilities Exploitation of research outcomes Licensing and Patents Incubation centres Contract and collaborative research

¹¹⁵ Adapted from Framework for Employer Engagement developed as part of the REAP project (Roadmap for Employment-Academic Partnership) and related higher education initiatives <http://www.teachingandlearning.ie/wp-content/uploads/2014/02/REAP-Forum-Insight.pdf>.

While employer engagement is not currently consistent across regions and across sectors, we will seek to build on good practice already underway and ensure that structures are developed to foster a more systemised approach.

A new network of Regional Skills Fora will provide a framework for the education and training providers and enterprise stakeholders, including the enterprise development agencies, to work together in identifying and addressing the current and future skills needs of each region on an ongoing basis. This includes developing a collective understanding of the labour market and the enterprise profile of the region, in order to inform programme development and ensure that provision is aligned with emerging skills needs. The fora will also help employers better understand the full spectrum of education and training programmes and services available in the region and how to access them and will provide a framework for employers to more proactively promote the wide range of career options and roles available across each region.

ACTION 2.1 EMPLOYERS WILL PARTICIPATE IN SKILLS DEVELOPMENT THROUGH ACTIVE COLLABORATION WITH EDUCATION AND TRAINING PROVIDERS

As outlined earlier in this Strategy, there are already a range of measures and good practices underway related to employer engagement with schools, further education and training and in higher education. Probably the most visible aspect of employer engagement is the provision of work experience and work placements. Every year, thousands of students from transition year, the leaving certificate programmes, further education and higher education courses go on work experience or work placements with employers across all sectors of the economy. These placements provide students with the opportunity to learn about the world of work, explore possible career options, develop skills for employability and network with potential employers.

The outcomes achieved from various initiatives including the National Career Skills Competition¹¹⁶ and the evaluations of Momentum¹¹⁷ and Springboard¹¹⁸ show that where there is strong commitment and interest from employers, providers and students to engagement, this can add real value for all parties.

In addition, higher education research carried out by the ESRI¹¹⁹ suggests that increasing the practical aspects of degree programmes, irrespective of the field of study, will reduce the incidence of graduate employment mismatch. The study found that in terms of routes into the labour market, higher education work placements with the potential to develop into permanent posts and the provision of higher education job placement assistance had very substantial impacts in reducing the incidence of graduate mismatch.

¹¹⁶ <http://www.careersportal.ie/careerskills/finalists2015.php#.VoRYNsSQGrU>

¹¹⁷ <http://www.momentumskills.ie/latestnews.aspx>

¹¹⁸ <https://www.springboardcourses.ie/pdfs/Trend%20Analysis%20Part%203%20extended%20version.pdf>

¹¹⁹ <http://www.esri.ie/publications/recruitment-methods-educational-provision-effects-on-graduate-over-education-and-over-skilling/>

Employer participation is important to inform the development of standards and qualifications. In the case of education and training programmes of a professional or vocational nature, employer engagement in developing occupational standards is vital to ensure the relevance and currency of provision.

While employer engagement is not currently consistent across regions and across sectors, we will seek to build on good practice already underway and ensure that this is systemised where appropriate. A potential shortage of work placements has been flagged by a range of education and training providers. It will be imperative that employers and particularly the SME sector engage in providing work placement opportunities for students which in turn will provide the companies with opportunities to engage with talented individuals and prospective employees and gain exposure to potentially innovative and entrepreneurial ideas.

A new JobsIreland service, being developed by the Department of Social Protection, will upgrade the existing one and introduce significantly advanced functionality for jobseeker and employers. The new website will enable both employers and jobseekers to search for each other using competencies and skillsets as well as the traditional job type classifications. It will also operate in the background to automatically match candidate CVs to job specifications posted by employers and notify both candidates and the employer when a match is found. In addition, educational institutions will have an option to publicise work experience opportunities for their students, for employers to offer work experience opportunities and for students to apply for such opportunities. It is anticipated that the facility will be available in the first half of 2016. This will be useful tool for schools, FET and HE providers, students and employers which can be promoted nationally and regionally.

ACTION 2.2: THE CAPABILITY OF SMEs WILL BE ENHANCED THROUGH SKILLS DEVELOPMENT

Ireland has a large number of small businesses. Improving management practices in SMEs will improve productivity, innovation and use of skills in the economy.

The Report of the Management Development Council (MDC)¹²⁰ published in 2010, cited research carried out by McKinsey Consultants which found that the level of general management skills in Irish businesses was relatively poor, particularly in specific functional skills such as human resources, marketing and finance, and in forward planning and strategic management. Highly proficient leadership, with ambition, vision and strong management teams, is fundamental if a firm is to identify and anticipate changing market dynamics and to fully understand its customer base.

The MDC report found that the vast majority of exports and export-led employment by Irish owned firms is accounted for by companies which have invested in innovation and continuously adapt. The MDC recommended that a national system for management development be put in place in order to boost productivity, innovation and competitiveness amongst Irish SMEs.

¹²⁰ <https://www.djei.ie/en/Publications/Publication-files/Forf%C3%A1s/Management-Development-in-Ireland.pdf>

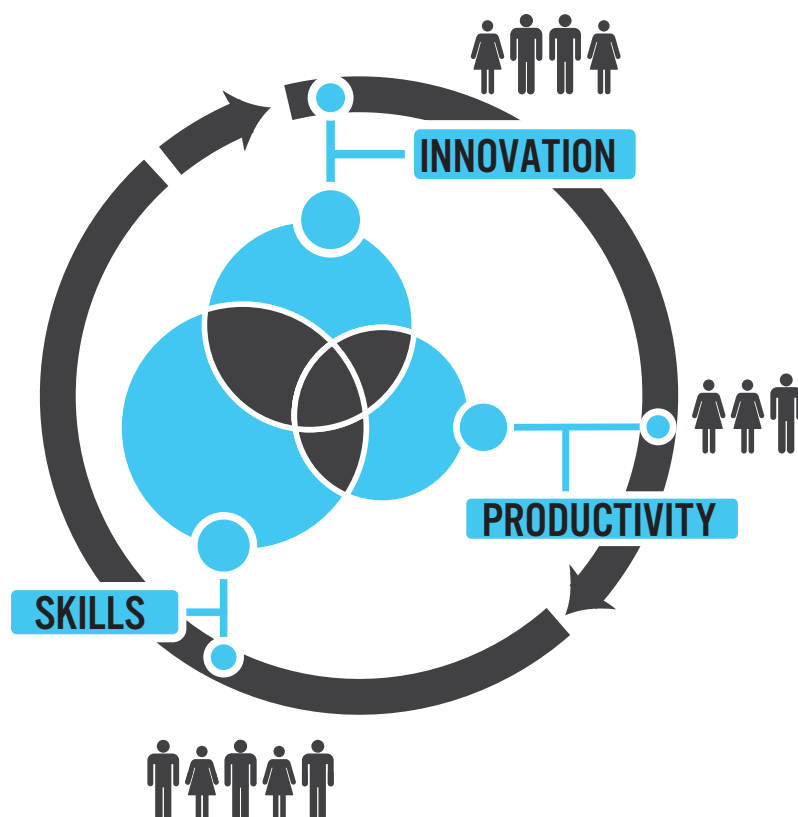
Training and executive education are key tools for companies to grow and develop their existing in-house teams. The role of managers and their development is critical in supporting Irish enterprises to export and grow to scale. In-house training frequently becomes an enabler in retaining staff with valuable skills within a company.

Enterprise Ireland has worked with institutions both nationally and internationally to develop and provide Irish exporting companies with state-of-the-art staff development programmes. These programmes span strategic leadership, management development and focus on capability development within the organisation/company.

Ireland's Higher and Further Education providers and the networks supported by Skillnets clearly have a pivotal role in providing continuing professional development (CPD) for enterprises of all sizes.

The Skillnets programme actively supports and works with businesses in Ireland to address their current and future skills needs. It funds groups of companies in the same region or sector, and with similar training needs, through training networks that deliver subsidised training to Irish businesses. In 2015 Skillnets received €16.2m and were given a target of providing training and related services for 42,000 persons of which 8,000 places were targeted at unemployed.

In addition, Enterprise Ireland has worked closely with the HEA and the Department of Education and Skills, as well as Education Training Boards (ETBs) on the Regional SME Innovation agenda. These networks provide individual innovative SMEs with the skill and research consultancy linkages within their region and forge practical alliances between industry and academia in the region.



ACTION 2.3: WORKFORCE PLANNING IN THE PUBLIC SECTOR WILL BE IMPROVED

Workforce planning process to ensure the right number of people with the right skills are employed in the right place at the right time to deliver short- and long-term objectives. As highlighted earlier in this document, there are 375,000 people in the public sector (including semi-state companies). The majority of public sector employees are in Health (122,000) and Education (108,000).

Graduates of the higher education system make up the vast majority of employees in the Health and Education sectors and ensuring there is a supply of graduates to meet demand will be a key issue in the coming years.

In relation to Health, students on Health and Welfare programmes accounted for 17% (almost 36,000) of all enrolments in higher education in 2013/2014 with 81% of these studying at undergraduate levels. This is an increase of 16% in the last five years. In 2013/14, almost half of all Health and Welfare enrolments was made up of Nursing and caring (9,434, i.e. 26%) and Medicine (8,232, i.e. 23%). The total number of Health and Welfare graduates has increased by 22% over the last five years with almost 11,000 students graduating in 2013/14. There has been a significant increase in some postgraduate award types from 2009/2010 to 2013/2014 with the largest being a 137.9% increase in PhD graduates.¹²¹

Teacher quality and teacher supply is an area of significant interest to the Department of Education and Skills. The Department is already exploring issues in relation to regulating teacher supply in a more effective manner. In the coming years, we are facing significant increases in the number of school going children. The numbers of primary school children are projected to increase by over 19,000 between 2015 and 2018 before declining thereafter. The number of students in second level schools are projected to increase by nearly 67,000 between 2015 and 2025 before declining thereafter. The largest increases will be between 2020 and 2024.

More generally, there is a commitment under the Public Service Reform Plan¹²² to the development of workforce plans across the public sector.

ACTION 2.4: WE WILL PROMOTE RESEARCH AND INNOVATION ACTIVITIES

Research and innovation are central to the international competitive advantage of companies of all sizes based in Ireland. *Innovation 2020* outlines Ireland's innovation strategy for the next five years. Supporting indigenous SMEs to engage in research and innovation and encouraging foreign-owned firms to locate some of their research activities in Ireland each present their own opportunities and challenges. More active employer engagement with higher education institutions will help to identify where there is potential to collaborate, whether that is through access to some advanced equipment, contract research on a specific issue, or longer-term collaborative research on a more strategic innovation developmental agenda. The administrative burden on higher education institutions engaging in research and innovation should be minimised to support their engagement with enterprise.

¹²¹ Source: Higher Education Authority Analysis of Student Data 2015

¹²² <http://reformplan.per.gov.ie/>

ACTION 2.5: IMPROVED EMPLOYER PARTICIPATION WILL STRENGTHEN THE PROMOTION AND COMMUNICATION OF CAREER OPPORTUNITIES

There is a role for industry across all sectors in communicating and promoting career opportunities and setting out clear career paths within their sectors. There is a significant amount of churn in the Irish labour market which places a cost on employers in terms of on-going recruitment and temporary loss of productivity. Improved employee retention can be achieved by employers and industry representatives identifying career pathways for employees or those considering entering a sector.

On-going engagement with enterprise and the development agencies and more accessible information - especially in relation to non-traditional sectors such as BioPharma, International Financial Services and Lifesciences - will also help guidance counsellors, students and parents to understand the job opportunities and aptitudes required in emerging sectors.

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 2		
ACTIONS	MEASURES	LEAD
ACTION 2.1: EMPLOYER COLLABORATION IN DEVELOPING RELEVANT SKILLS	Working with industry, seek to provide:	EDUCATION AND TRAINING PROVIDERS WITH INDUSTRY
	<ul style="list-style-type: none"> all Transition Year, LCA and LCVP students who seek a work placement have this opportunity and track nationally. all full-time students studying at levels 6 to 8 on the NFQ framework with access to work placements and internships.¹²³ 	
	<ul style="list-style-type: none"> Ensure that students at levels 9 and 10 on the NFQ framework have access to work placements or work-based projects and case studies, as appropriate. 	EDUCATION AND TRAINING PROVIDERS WITH INDUSTRY
	<ul style="list-style-type: none"> While employer engagement is not currently consistent across regions and across sectors, we will seek to build on good practice already underway and ensure that structures are developed to foster a more systemised approach through the Regional Skills Fora. 	REGIONAL SKILLS FORA, EDUCATION AND TRAINING PROVIDERS, ENTERPRISE AGENCIES
	<p>Use the structures and processes established by the Regional Skills Fora to</p> <ul style="list-style-type: none"> ensure external partners can easily access the broad range of opportunities available from education and training providers, build on good practice across institutions and in the Momentum and Springboard programmes and increase employer participation in curriculum design and review. 	REGIONAL SKILLS FORA

¹²³ Part-time students may already be working and institutions will need to assess whether their current role is appropriate work experience where appropriate to do so. The implementation of this action will not disadvantage the provision of flexible, part-time offerings for those in employment.

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 2		
ACTIONS	MEASURES	LEAD
ACTION 2.1: EMPLOYER COLLABORATION IN DEVELOPING RELEVANT SKILLS	<ul style="list-style-type: none"> Encourage the involvement of practitioners with experience of delivering education, providing for lecturer placements in industry and engagement of lecturers with recent experience of the world of work. 	EDUCATION AND TRAINING PROVIDERS
	<ul style="list-style-type: none"> Disseminate good practice and support in engaging with employers to education and training providers. 	DES
	<ul style="list-style-type: none"> Ensure appropriate indicators for employer engagement are included in the Higher Education System Performance Framework. 	DES, HEA
ACTION 2.2: CAPABILITY OF SMES WILL BE ENHANCED THROUGH SKILLS DEVELOPMENT	<ul style="list-style-type: none"> Enterprise Ireland will provide supports for EI management development for SME client companies, in order to increase the number of Irish companies exporting and growing to scale, and will work in collaboration with training providers as appropriate in this regard. 	EI
	<ul style="list-style-type: none"> Local Enterprise Offices will support the LEOs training needs of client entrepreneurs and micro-enterprises, through their range of training offerings. 	LEOs
	<ul style="list-style-type: none"> Education and Training providers will work with SMEs to identify and address training needs. 	EDUCATION AND TRAINING PROVIDERS, REGIONAL SKILLS FORA
	<ul style="list-style-type: none"> Support the further development of skills assessment resources to help companies, especially SMEs, to accurately identify their skills needs. 	Skillnets
ACTION 2.3: WORKFORCE PLANNING IN THE PUBLIC SECTOR	<ul style="list-style-type: none"> Complete the review of education and training programmes that lead to qualifications in early years care and education. 	DES
	<ul style="list-style-type: none"> Develop and implement a national framework for teachers' continuing professional development (Cosán) 	TEACHING COUNCIL
	<ul style="list-style-type: none"> Develop and implement a national induction and probation programme for newly qualified teachers (Droichead). 	TEACHING COUNCIL
	<ul style="list-style-type: none"> Develop and implement a planning framework for teacher supply. 	TEACHING COUNCIL, DES
	<ul style="list-style-type: none"> Strengthen engagement between Health and Education on workforce development requirements of the Health Sector 	D/PER

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 2		
ACTIONS	MEASURES	LEAD
ACTION 2.3: WORKFORCE PLANNING IN THE PUBLIC SECTOR	• Examine the feasibility of requiring professionals in the public sector to register with the relevant professional body and engage in continuing professional development.	D/PER
	• Progress the development of workforce planning strategies for the public sector as provided for in the Public Service Reform Plan and Civil Service Renewal Plan	RELEVANT GOVT DEPARTMENT
ACTION 2.4: RESEARCH AND INNOVATION	• Enterprise Ireland will continue to engage with EI client companies and direct them to specific HEIs and individuals within HEIs on the innovation agenda.	ENTERPRISE IRELAND
	• Enterprise Ireland will continue to roll out the Regional SME Innovation Forum nationally, which links SMEs with their local HEIs.	EI
ACTION 2.5: GUIDANCE AND CAREERS INFORMATION	• Carry out a review of guidance services, tools and careers information for school students and adults and recommend changes to improve the services available.	DES
	• Working with industry volunteers and schools, seek to ensure every second level school is offered at least one school visit annually through the Smart Futures School Visit Programme.	SFI

OBJECTIVE 3: THE QUALITY OF TEACHING AND LEARNING AT ALL STAGES OF EDUCATION AND TRAINING WILL BE CONTINUALLY ENHANCED AND EVALUATED

International research indicates that high quality initial and continuing education for staff involved in direct provision of education and training is key to fostering better learner outcomes.¹²⁴ Providing for a high quality of teaching and learning experience for everyone is a key element of the Department of Education and Skill’s reform programme. There is also a strong emphasis on improving accountability and the use of evaluation to measure outcomes. As with other reforms underway, the Department is taking a whole of system approach to raising quality across early years, schools, FET and HE.

ACTION 3.1 QUALITY WILL BE EMBEDDED IN THE DELIVERY OF EARLY-YEARS SERVICES

The Department is working closely with the Department of Children and Youth Affairs on quality improvement within the early-years sector. It supports the operation of Better Start the newly established quality support service for the sector which is deploying a team of early year’s specialists as mentors/advisers working with early-years services on quality improvement. The Department is also responsible for the implementation of *Síolta*, the National Quality Framework for Early Childhood Education across the sector. A new *Síolta* and *Aistear* initiative will support the further development and wider implementation of the national frameworks in 2016. The NCCA has published a web-based *Aistear and Síolta Practice Guide* which hosts a range of interactive resources and materials in support of quality in practice.


To complement the work of the Child and Family Agency pre-school inspectorate (TUSLA), the DES Inspectorate has introduced education-focused inspections on the quality of educational provision in early childhood education settings participating in the Free Pre-School Year Programme.

To ensure that early year’s practitioners are equipped with the skills and competences to work in the early year’s sector, DES will be carrying out a further phase of the review of education and training programmes that lead to qualifications in early years care and education in 2016.

ACTION 3.2 WE WILL IMPROVE TEACHING AND LEARNING IN SCHOOLS BY INVESTING IN HIGH QUALITY TEACHER EDUCATION AND EVALUATION

As part of the Literacy and Numeracy Strategy, there has been significant reform of initial teacher education programmes (ITE) in recent years. ITE Programmes have been lengthened and changes have been made to the content and pedagogical approaches taken to better prepare teachers for the classroom. The Teaching Council has been given a range of powers to oversee initial and continuing education programmes and to ensure that we have a fully registered teaching profession.

¹²⁴ See European Commission, Education and Training, (2013):‘Supporting teacher competence development for better learning outcomes’. See also the Economic and Social Research Council, (2008) ‘Challenge and change in further education’.



SNAPSHOT FROM THE CONSULTATION PAPERS RECEIVED

“ ”

“Employees, unemployed people and other jobseekers, need to realise the value over their life time of improving their skills, and they need to see that this enhanced value will materialise.”

INDIVIDUALS & WORKER REPRESENTATIVES

A focus in the coming years will be to commence fitness to teach hearings for teachers and make continuing professional development a normal and mandatory part of a teacher's career, through the development of Cosán, the national framework for teachers' learning.

The focus of school inspection is now on teachers' practice and the quality of students' learning. The Department aims to build on the high regard in which Irish teachers are held and offer teachers opportunities to use more varied forms of student assessment, school self-evaluation and co-professional peer review to examine and improve their work with young people.

The **School Self Evaluation (SSE)**¹²⁵ process is encouraging and supporting schools to build capacity and take more responsibility for the quality of provision. The SSE Guidelines articulates a clear set of standards for teaching and learning in schools and focuses on the learning experiences and outcomes for the learner, the objective of which is to enable school improvement.

In addition, work by the Department on the digital strategy for schools is aimed at embedding the use of digital technologies in teaching, learning and assessment at primary and post primary level.

ACTION 3.3 FET AND HE WILL PROVIDE HIGH QUALITY LEARNING EXPERIENCES LEADING TO BETTER OUTCOMES

The provision of high-quality learning experiences is a priority of the Further Education and Strategy 2014 – 2019 and a number of initiatives are already underway to underpin this. For the first time, the Teaching Council has accredited a number of ITE programmes for the Further Education and Training sector. In addition, during 2015, SOLAS has profiled the existing skills base in ETBs to inform the development of a CPD Strategy for ETB staff involved in the delivery of further education and training programmes.

Evaluation is also a key feature of the FET strategy and a review of Post Leaving Certificate provision is due to be completed in 2016. There is a schedule of evaluations of other FET programmes planned as part of the FET Strategy implementation.

Quality and Qualifications Ireland (QQI)¹²⁶ has an important role to play in relation to monitoring and promoting quality in the FET sector. FET providers seeking access to QQI awards must first establish QA procedures in line with QQI guidelines and submit them to QQI for approval. QQI currently has QA agreements in place with approximately 600 FET providers, comprising ETBs, private sector providers, and community and voluntary sector providers. QQI is currently developing core Quality Assurance Guidelines (QAG) that apply to all Education and Training Providers. This will be followed by the development of supplementary QAGs that target specific sectors, including one for the ETBs, and specific topics such as apprenticeships.

QQI also validates FET programmes for providers who wish to access QQI awards and issues certificates to providers on behalf of learners who have completed (QQI validated) FET

programmes. A total of 644 programmes were validated, and approximately 250,000 certificates issued, by QQI in 2014. QQI is currently developing a new policy and criteria for the Validation of Further and Higher Education and Training Programmes. This will be of interest to prospective and current providers accessing QQI awards. In 2015 QQI launched an enhanced dynamic infographics tool on its website that enables information on QQI FET awards for the period 2010–2015 to be displayed by country, study field and NFQ level and award type. In all of this activity in the FET sector, QQI works closely with SOLAS. This cooperation will be further enhanced by the development of a memorandum of understanding between the two organisations.

All of these initiatives will enhance the reputation and underpin the development of the FET sector in the coming years.

Teaching and learning is a core mission of higher education and the delivery of high quality student experiences is a prominent feature of the Higher Education Strategy to 2030.

A number of relevant initiatives have been rolled out including a new Systems Performance Framework which sets out the system-level objectives for all the public funded HE institutions and this includes teaching and learning and the student experience. The new process of strategic dialogue process and compacts between the HEA and HEIs provides a robust and transparent framework for ensuring accountability in respect of the expenditure of the Exchequer funding vested in higher education institutions while respecting the institutional autonomy which is enshrined in the legislation for the sector.

The Irish Survey of Student Engagement (ISSE)¹²⁷, provides a rich source of qualitative data on the student-learning experience on which the HEA, as well as individual institutions, can draw to support quality-enhancement. The HEA's new graduate outcomes survey, which will provide high-quality, internationally comparable data on graduates' employment and educational outcomes, is currently under development and, when launched in 2019, will significantly enhance the HEA's capacity to evaluate institutions' responsiveness to emerging skills needs.

The National Forum for the Enhancement of Teaching and Learning¹²⁸ is a key system-level infrastructure for the enhancement of teaching and learning in Irish higher education and it has led on the development of a new professional development framework for those who teach in higher education and this is due to be launched in 2016.

The quality assurance of Irish higher education provided by Quality and Qualifications Ireland (QQI) is an essential complement to the HEA's strategic performance management of the sector. Ensuring a synergistic relationship between the quality assurance and enhancement of higher education institutions' programme provision on the one hand, and the strategic performance management and development of the higher education system on the other, is essential to the development of a world-class higher education system which will be responsive to the evolving needs of all stakeholders.

¹²⁵ <http://schoolself-evaluation.ie/>

¹²⁶ <http://www.qqi.ie>

¹²⁷ <http://studentsurvey.ie/>

¹²⁸ <http://www.teachingandlearning.ie/>

Given the expansion of higher education provision in recent years, in the context of reducing resources, concerns have been raised about the impact on quality. A review of the measures in place to support quality in the higher education sector will be initiated in 2016. The work of the Expert Group on Future Funding for Higher Education is also central to addressing this issue in the coming years.

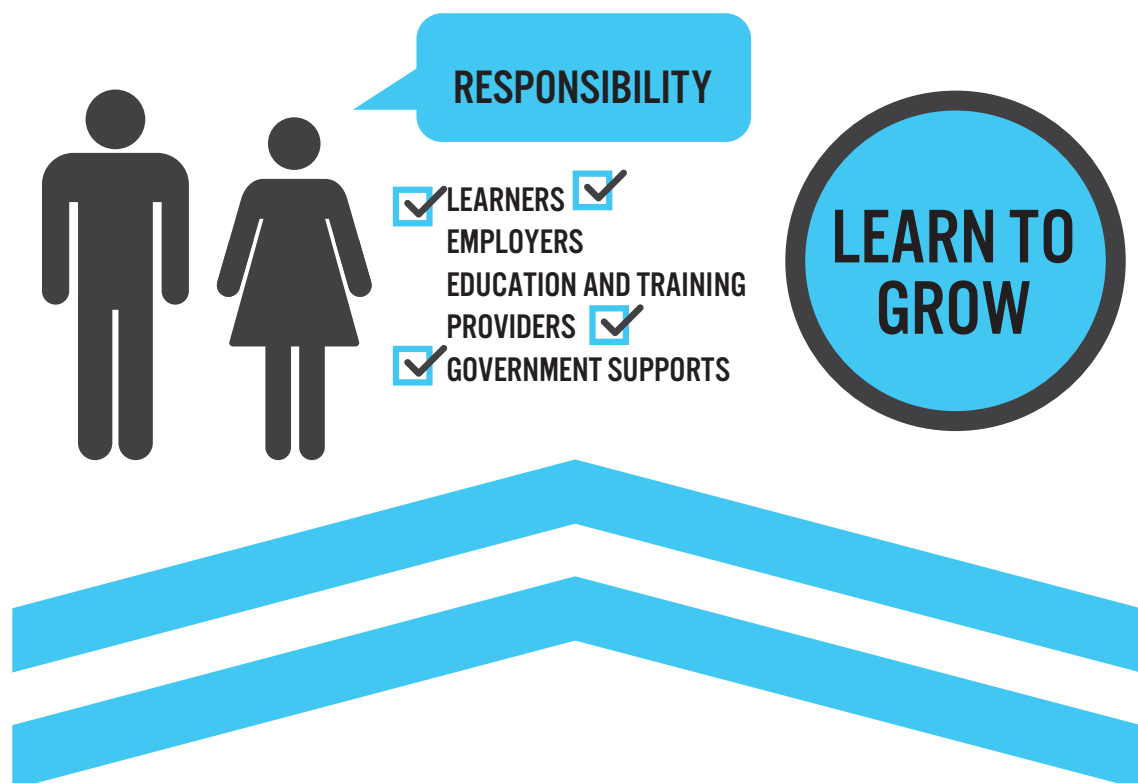
ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 3		
ACTIONS	MEASURES	LEAD
ACTION 3.1: EARLY YEARS SERVICES	• Implement the Better Start quality support service to support quality improvement in early-years services.	DCYA, DES
	• Rollout out inspections focused on the quality of education provision in early childhood education settings participating in the Free Pre-School Year Programme	DES
	• Complete the review of education and training programmes that lead to qualifications in early years care and education.	DES
ACTION 3.2: TEACHING AND LEARNING IN SCHOOLS	• Develop and implement a national induction and probation programme for newly qualified teachers (Droichead).	TEACHING COUNCIL
	• Commence fitness to teach hearings and complete the development of Cosán, the national framework for teachers' learning.	TEACHING COUNCIL
	• Continue to develop school inspection models to increase the efficiency and effectiveness of inspection and to support the targeting of resources where the need for assistance and support is greatest.	DES
	• Continue to implement the school self-evaluation model model of quality assurance to encourage and supports schools to build capacity and take more responsibility for the quality of provision.	DES
	• Implement the Digital Strategy for Schools (2015 – 2020)	DES, SUPPORT SERVICES, SCHOOLS AND OTHER EDUCATION STAKEHOLDERS

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 3		
		LEAD
ACTION 3.3: HIGH QUALITY LEARNING EXPERIENCES IN FET AND HE	• Develop and implement CPD Strategy for ETB staff involved in the delivery of further education and training programmes.	SOLAS
	• Complete the review of Post Leaving Certificate provision in 2016 and complete the schedule of evaluations of other FET programmes planned as part of the FET Strategy implementation.	SOLAS
	• Facilitate enhanced cooperation and data sharing between QQI and SOLAS through the development of a Memorandum of Understanding.	QQI/SOLAS
	• Develop core Quality Assurance Guidelines and supplementary guidelines for the ETB sector and for apprenticeship programmes.	QQI, SOLAS, ETBS, ETBI
	• Develop a new policy and criteria for the Validation of Further and Higher Education and Training Programmes.	QQI, SOLAS AND HEA
	• Complete and rollout the Programme and Learner Support System (PLSS), to provide a platform for reporting on all further education and training outputs and outcomes from 2017 onwards.	SOLAS
	• Implement A Roadmap for Enhancement in a Digital World 2015-2017.	NFETL, HEIS
	• Publish a professional development framework for higher education in 2016.	NFETL, HEIS
	• Carry out a review of the National Forum for the Enhancement of Teaching and Learning in 2016.	HEA
	• Continue to gather data through the Irish Survey of Student Engagement (ISSE) to support quality-enhancement.	HEA
	• Complete development and rollout the new graduate outcomes survey, to provide high quality data on graduates' employment and educational outcomes.	HEA
	• Review the measures in place to support quality in Higher Education.	DES
	• Complete the report of the Expert Group on Future Funding for Higher Education.	DES

OBJECTIVE 4: PEOPLE ACROSS IRELAND WILL ENGAGE MORE IN LIFELONG LEARNING

Lifelong learning brings benefits to the individual, to society and to employers: lifelong learning has an important contribution to make to people’s wellbeing, to creating a more inclusive society and to supporting a vibrant and sustainable economy. From an economic development perspective, the continuous training and up-skilling of people in the workforce is particularly important in maintaining the competitiveness of Irish companies and foreign owned companies based here and in making Ireland an attractive location for investment.

LIFELONG LEARNING AND SKILLS DEVELOPMENT IS A SHARED RESPONSIBILITY.



Given the importance of lifelong learning, the EU2020 Strategy includes a target to have **15% of 25-64 year-olds participating in lifelong learning by 2020**¹²⁹.

Lifelong learning as defined by Eurostat includes ‘all purposeful learning activity, whether formal, non-formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence’.

Formal Education covers the regular education and training system where courses are

- of a predetermined purpose and format
- provided in the system of schools, colleges, universities and other educational institutions
- normally constitute a continuous ladder of education
- structured in terms of learning objectives, learning time and learning support
- normally intended to lead to a qualification recognised by national authorities (qualify-ing for a specific education/programme).

Non-formal Education refers to all organised learning activities outside regular or formal education. The learner normally has to register for each learning activity. Non-formal education includes

- participating in a course or a seminar to acquire/improve skills, knowledge and competence; courses can be aimed at improving job-related knowledge or enhancing skills for social and personal purposes
- both courses leading to certificates and courses not leading to certificates
- grinds, piano lessons, night classes, art courses, letter writing, using the internet, courses in Tai Chi, driving lessons, etc.

Informal Learning includes learning that is not organised or structured in terms of purpose, time or instruction (e.g. language skills acquired during a stay abroad, IT skills acquired at work, skills acquired through sports, reading a professional magazine etc.)

This is a complex activity to measure given the variety of activities encompassed by formal and non-formal education. Current measurements do not encompass informal education so the available data understates the position. However, data compiled by the EGFSN in early 2015 highlights that lifelong learning rates in Ireland are well below the EU average and the gap between Ireland’s performance and the EU average has widened rather than improved in recent years¹³⁰. In contrast to the EU trend, however, lifelong learning participation rates in Ireland are higher amongst economically inactive persons than they are amongst people in employment. In addition, Ireland lags significantly behind the top performing countries such as Denmark (31.7%), Sweden (28.9%) and Finland (25.1%).

¹²⁹ http://www.egfsn.ie/Publications/2015/Lifelong-Learning-Q4-2014_May2015.pdf

¹³⁰ Statistics on informal learning are not always available and the CSO (QNHS) and international data on lifelong learning encompasses formal and non-formal learning only.

Table 6 Eurostat: Participation rate in education and training (last 4 weeks) 2014		
	Ireland	EU Average
Lifelong learning participation rate (25 to 64 year olds)	6.7%	10.7%
Employed persons participation rate	5.5%	11.6%
Economically inactive persons participation rate	10.1%	8%

ACTION 4.1: THE BENEFITS OF LIFELONG LEARNING WILL BE PROMOTED AND COMMUNICATED TO THE FULL POPULATION OF IRELAND

Lifelong learning and skills development is a shared responsibility. While the State and education and training providers have a role to play, employers and citizens must also take responsibility for ensuring their skills needs are met.

There are particular challenges for smaller businesses to participate in education and training. They need to be encouraged and incentivised to invest more in continuous workforce training. There is also a need for managers to up-skill - especially in SMEs - to underpin company development and growth. Research also shows that low-skilled and older workers are less likely to be offered, or to seek, upskilling from employers, but these workers are also the most vulnerable to ongoing changes within the workplace. Adult and community education across Ireland will be improved during this Strategy.

We will work with government departments, state agencies and representative groups to promote an understanding of what lifelong learning is and the benefits of participating in lifelong learning to individuals, the self-employed and employers.

ACTION 4.2: THERE WILL BE MORE AND EASIER OPPORTUNITIES FOR THOSE IN EMPLOYMENT TO ENGAGE IN EDUCATION AND TRAINING

In the coming years, there should be an increased focus on the provision of appropriate education and training opportunities for those in employment, particularly older workers and low skilled workers. This will require the provision of a cost-effective and diverse range of provision to meet the needs of workers across all sector of the economy. It will also require greater flexibility in how learning opportunities are delivered to support participation particularly by employees and managers in SMEs and for the self-employed.

ACTION 4.3: THERE WILL BE GREATER RECOGNITION OF WORKPLACE LEARNING AND CAPACITY FOR RECOGNITION OF PRIOR LEARNING WILL BE DEVELOPED.

Workplace learning can take a number of forms including "in-company training", "on the job" training and through less formal "learning" activities such as team work and problem solving activities. Workplace learning can also be taken to mean work placements or work experience. Activities such as "on the job" training are easier to describe and assign a value to and the recognition of workplace learning needs to be developed further. This is particularly important given the fact that over the coming years the new ways of working described earlier in this document will have implications for how workplace learning occurs in the future.

It is clear from the submissions received and in a recent report commission by National Forum for the Enhancement of Teaching and Learning in Higher Education¹³¹ that there is not a common understanding of what Recognition of Prior Learning (RPL) is and what it can be used for and this needs to be addressed. The use of RPL also needs to be promoted among practitioners and processes further developed at institution / provider level with visibility at national level of RPL policies and practices.

It is clear that there is established good practice in RPL across the HE system in particular. In the coming years, work in this area can build on the progress already made in incorporating RPL into the Springboard and Momentum initiatives and work underway relating to access, transfer and progression and in particular the Strategic Performance Framework for Higher Education and the work being developed as part of Higher Education clusters on student pathways and academic planning and the development of Regional Skills Fora.

ACTION 4.4 : CAREER GUIDANCE WILL BE STRENGTHENED SIGNIFICANTLY, WITH THE AID OF EMPLOYER ENGAGEMENT.

Career guidance for students and adults has been highlighted as an important issue by many stakeholders during the development of this strategy. It has also been highlighted that career guidance needs to be underpinned by up-to-date careers information from employers, particularly in less well understood sectors of the economy that may not be as visible in everyday life.

As is clear from the analysis earlier in this report, changing patterns of work, in an ever more globalized economy will require people to upskill and reskill throughout life for different careers and jobs. Guidance is increasingly important in the context of lifelong learning and Career Management Skills have been highlighted as an important skill that people of all ages need to develop to enable them to manage their own career and make the right choices for them.

¹³¹ <http://www.teachingandlearning.ie/wp-content/uploads/2015/11/Project-2.pdf>

Despite the challenges during the economic downturn, reports have shown that guidance continued to be a priority in schools and the whole-school guidance approach has been utilised more in recent years, in line with best practice recommended by the Department and the National Centre for Guidance in Education. However, career guidance at all levels of the education and training system is being delivered in a changing landscape.

The types of occupations and jobs that are being created is changing more than ever before. As well as advice from guidance professionals and information portals, given the pace at which new roles and sectors are developing it is also important that students and their parents have opportunities to hear directly from people working in these areas what their jobs entail and the types of education and training courses that are relevant to developing career paths.

For school students, changes to the curriculum will enable them to grow as confident lifelong learners and empower them to identify and meet their learning needs in later life. In addition, implementation of changes as part of the **Transitions**¹³² initiative to broaden entry routes into higher education and reduce early course specialisation will be a central part of improving college retention levels and will make course choice less daunting for students.

In the FET sector, the restructuring and consolidation of the further education and training sector and the reduction in the number of ETBs will make it an easier system for people of all ages to navigate. SOLAS is also developing an FET programme database system and a national FET programme calendar which will make it easier for learners to get information on course options. Work will also begin in 2016 on a new integrated FET Guidance Strategy.

There are a range of resources already available. For example, the DES funded Qualifax.ie and CareersPortal.ie services provide information on careers and jobs across the economy, courses and access to self-assessment tools to help people work out what courses and occupations are right for them. The SFI funded Smart Futures programme currently seeks to promote awareness of opportunities in STEM careers.

The development of the INTREO and JobPath services has also seen changes in provision of assistance and advice on employment, training and personal development opportunities for the unemployed.

The development of the new Regional Skills Fora will also provide a framework at regional level for employers to more proactively promote the range of career options and roles available across each region.

Given the changing context for guidance, at all levels, of education and training, it is now timely to carry out a review of the full range of guidance services, tools and careers information to map future priorities and make recommendations for improvements.

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 4		
ACTION	MEASURES	LEAD
ACTION 4.1: PROMOTE LIFELONG LEARNING	<ul style="list-style-type: none"> Promote the concept and benefits of lifelong learning among the general population, the self-employed and employers to drive cultural change. 	DES, PUBLIC AND PRIVATE SECTOR BODIES
	<ul style="list-style-type: none"> Benchmark the level of investment by businesses in workforce training to provide a comprehensive and regular picture of progress. 	CSO, DJEI
	<ul style="list-style-type: none"> Promote and support engagement with continuing professional development at all levels of the education and training system. 	DES
	<ul style="list-style-type: none"> Promote and support engagement with continuing professional development across the public sector. 	DES D/HEALTH DPER OTHER PUBLIC SECTOR EMPLOYERS
	<ul style="list-style-type: none"> Review the Strategic Performance Framework for Higher Education for the period 2017 – 2019 to ensure that relevant lifelong learning indicators are included. 	DES, HEA
	<ul style="list-style-type: none"> Funding models for education and training must incentivise our providers to deliver on the wide spectrum of lifelong learning needs. This will mean appropriate approaches to funding that support different types of part-time provision, module-based delivery systems, collaboration across education and training providers (including between HE and FE) and access by, and retention of, all potential lifelong learners. 	DES, HEA, SOLAS
ACTION 4.2: WORKFORCE DEVELOPMENT	<ul style="list-style-type: none"> Review the share of National Training Fund (NTF) resources allocated to training people in employment on an on-going basis over the lifetime of the Strategy, to explore the possibility of increasing the allocation as unemployment levels fall. 	DES, DPER
	<ul style="list-style-type: none"> Incentivise flexible learning opportunities across the further education and training and higher education sectors including through part-time, on-line and modular learning, to further facilitate individuals to participate in Lifelong Learning. 	DES, HEA, SOLAS

¹³² <http://www.education.ie/en/Publications/Education-Reports/Supporting-A-Better-Transition-From-Second-Level-To-Higher-Education-Implementation-and-Next-Steps.pdf>

ACTIONS AND MEASURES TO DELIVER ON OBJECTIVE 4		
ACTION	MEASURES	LEAD
ACTION 4.3: WORKPLACE LEARNING AND RPL	<ul style="list-style-type: none"> Provide for the recognition of awards by private, professional and non-national awarding bodies within the National Framework of Qualifications and to ensure that programmes leading to recognised awards are quality assured. 	DES, QQI
	<ul style="list-style-type: none"> Promote the development of a common understanding of Recognition of Prior Learning and support the dissemination of good practice in RPL across the Further Education and Training and Higher Education sectors. 	DES, HEA, SOLAS, QQI
	<ul style="list-style-type: none"> Support a multi-agency approach to the development of RPL in consultation with relevant stakeholders. 	DES
ACTION 4.4: GUIDANCE AND CAREERS INFORMATION	<ul style="list-style-type: none"> Carry out a review of guidance services, tools and careers information for school students and adults and recommend changes to improve the services available. 	DES

OBJECTIVE 5: THERE WILL BE A SPECIFIC FOCUS ON ACTIVE INCLUSION TO SUPPORT PARTICIPATION IN EDUCATION AND TRAINING AND THE LABOUR MARKET

ACTION 5.1: DISADVANTAGED AND UNDER-REPRESENTED GROUPS WILL BE SUPPORTED TO PARTICIPATE IN EDUCATION AND TRAINING

Inclusive education is a fundamental principle of our education and training system and measures to address the diverse needs of students of all ages have been in place across the education and training system for many years.

At school level, the DEIS (Delivering Equality of Opportunity in Schools) programme¹³³, to tackle educational disadvantage, has been in place for a decade. Recent evaluations of DEIS, show encouraging results. Literacy and Numeracy rates in primary schools are improving steadily¹³⁴ second level attainment levels are also improving; and, critically, attendance, participation and retention levels have also increased.¹³⁵ However, average results for pupils in DEIS schools still fall below the national average.

Ireland currently has an early school leavers' rate of 8.4%, which is below the EU2020 target of 10% and close to Ireland's own adopted target of 8% by 2020. Statistics for latest pupil cohort, (those who sat their Leaving Certificate in 2013 or 2014) show an overall retention rate of 90.56%. The retention rate for in DEIS schools has increased in recent years to its current level of 82.1%. The retention rate for non-DEIS schools is 92.63%. Retention data on a milestone basis (ie Junior Cert Year 1, 2 and 3, Senior Cycle Year 1 and 2) show that the majority of dropout at second level occurs between senior cycle year 1 and senior cycle year 2 which is usually age 17-18. The current legal school-leaving age is 16. As part of the implementation of this Strategy, a review of the school-leaving age will be carried out in conjunction with the Departments of Children and Youth Affairs and Jobs Enterprise and Innovation with a view to increasing it. This review will inform the development of new targets for school retention to 2025.

In addition, a range of measures are in place to support the inclusion and participation of children with special educational needs and policy is being further developed in this area.¹³⁶ A pilot of a new model for allocating additional teaching resources to schools to support children with special education needs is currently underway.

In the FET sector, there are a number of programmes which provide opportunities for those who have left the school system early. Youthreach and Community Training Centres provide an opportunity for young people to develop skills and confidence and prepare for further education or work. Other programmes, accessible to people of all ages, include Adult Literacy, the Back to Education Initiative, Community Education and English for Speakers of Other Languages (ESOL).

¹³³ https://www.education.ie/en/Publications/Policy-Reports/deis_action_plan_on_educational_inclusion.pdf

¹³⁴ http://www.erc.ie/documents/deis_p1_summary.pdf

¹³⁵ https://www.education.ie/en/Publications/Policy-Reports/deis_action_plan_on_educational_inclusion.pdf

¹³⁶ http://ncse.ie/wp-content/uploads/2014/09/Supporting_14_05_13_web.pdf



SNAPSHOT FROM THE CONSULTATION PAPERS RECEIVED

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It is first worth cautioning the extent to which future skills needs can be anticipated, particularly given the rapid pace of change in the current globalised context, forecasting of this nature is a hugely imperfect science. Therefore employers and education providers working closely together to facilitate lifelong learning and continuous development, as well as creating new pathways and opportunities to meet ongoing skills demands, is of fundamental importance.”

INDIVIDUALS & WORKER REPRESENTATIVES

In higher education, equity of access has been a feature of national policy for the last thirty years. Most recently, equity of access is identified as a core national objective for the higher education system in the DES *Higher Education System Performance Framework (SPF) 2014–2016*¹³⁷.

In addition, the *National Plan for Equity of Access to Higher education 2015 – 2019*¹³⁸ has recently been launched. The National Access Plan will seek to build on the positive progress that has been made in recent years in making higher education institutions more representative. For example, overall participation by students with disabilities in higher education has grown from less than 1,000 students in 1993 to nearly 10,000 in 2013. The new access plan contains a number of targets for specific categories of students that are currently under-represented, including 'disadvantaged' students, students with disabilities, mature students, and members of the Travelling community. The Plan will ensure that the benefits of participation in higher education, including enhanced employment prospects, will be spread more widely and equitably in the future.

ACTION 5.2: JOBBEERS WILL BE SUPPORTED TO FIND THE BEST POSSIBLE JOB

Since 2012, there have been significant reforms of the State's services to help unemployed jobseekers return to work under the Pathways to Work Strategy. These have included the rollout of the Intreo service, a single point of contact for all employment and income supports, client profiling, the introduction of the JobsPlus employment incentive scheme, a series of labour market activation programmes such as Springboard and Momentum and the contracting of placement services for the long-term unemployed under the JobPath programme.

As the economy starts to recover, it is appropriate to consolidate the reforms and ensure that they are resulting in a changed reality on the ground. The emphasis should shift to evaluation and identifying possible disconnections between public employment services and skills provision. For example, it remains unclear at what points and through which agency career guidance is provided. DSP has also created an employer services division to build effective relationships with employers. While this is welcome, it will also be competing for the attention of employers with local education and training providers and the JobPath contractors.

Quality jobs are being created and the social welfare system should continue to support the transition of the unemployed to jobs, particularly the long-term unemployed and youth unemployed.

A Protocol between the Department of Social Protection, the Department of Jobs, Enterprise & Innovation, Enterprise Ireland and IDA Ireland has been an innovation in matching up the existing skill sets of the unemployed with current or forthcoming job vacancies in client companies of the enterprise development agencies.

¹³⁷ <https://www.education.ie/en/The-Education-System/Higher-Education/HEA-Higher-Education-System-performance-Framework-2014-2016.pdf>

¹³⁸ http://www.heai.ie/sites/default/files/national_plan_for_equity_of_access_to_higher_education_2015-2019_single_page_version_0.pdf

The Protocol, linking together all the strands of enterprise has demonstrated how training and upskilling of those on the Live Register can lead to quality employment when regional education providers, employers and the enterprise agencies link up in the design of bespoke courses that are directly related to the needs of companies. The National Skills Strategy will build on the success of the Protocol to date and continue to advocate specific skills training to individuals on the Live Register to meet the needs of industry at local level.

ACTION 5.3: OLDER WORKERS WILL BE ENCOURAGED TO REMAIN ACTIVE IN THE LABOUR MARKET

In Ireland, population ageing is expected to be rapid, albeit accelerating later than in most other OECD countries. While Ireland currently has the highest old-age support ratio in the EU27, projections suggest that in 2050 Ireland could rank 7th.

The number of people aged 60 years or over today is 781,000 in Ireland, accounting for roughly 17% of the total population. These figures are expected to more than double by 2050, when this group could account for 29% of the population. The age of eligibility for the State pension increased to 66 in January 2014. This was the first of three changes which will raise the qualification age for the pension to 67 in 2021 and to 68 in 2028. The implications of an ageing population extend to a broad range of policy areas including welfare, pensions, health, social care and education

Meanwhile, private sector pension coverage in Ireland is relatively low. According to the OECD, only 41.3% of workers were enrolled in a funded pension plan in 2009. In addition, this varies dramatically across different sectors and types of workers.

In terms of availability of skills, fewer older people engage in work-based training and they are less likely to voluntarily change jobs than younger workers. This can leave those who find themselves out of a job at a disadvantage. A focus on training, development and active career planning is crucial to ensure older workers have the skills to remain competitive in the jobs market.

ACTION 5.4: ECONOMICALLY INACTIVE AND UNDER-REPRESENTED GROUPS WILL BE HELPED TO INCREASE THEIR LABOUR MARKET PARTICIPATION

As noted earlier, 30% of people of working age in Ireland are economically inactive with educational attainment proving a good predictor of labour market activity. There is thus a clear link between activation and education policies. The new *Pathways to Work Strategy* (2016 – 2020)¹³⁹ is appropriately shifting emphasis from activation in a time of crisis to activation in a time of recovery.

¹³⁹ <http://www.welfare.ie/en/downloads/PathwaysToWork2016-2020.pdf>

A common theme in submissions received for this Strategy was the under participation of women in the workforce and the cost of childcare and the need for further support for working parents. The issue of labour market flexibility was also raised in the context of attracting parents and under-presented groups into the labour force. Flexible terms, that suit both the employer and employee, were cited as a key factor in attracting talent and increasing the presence of certain groups in the workforce.

The National Disability Authority indicates that on average, people with disabilities have lower skills and qualifications than the population generally and are only half as likely to be in employment as others of working age. The recently published *Comprehensive Employment Strategy for People with Disabilities 2015-2024*¹⁴⁰ carries the themes of building skills, capacity and independence; providing bridges and supports into work; making work pay; promoting job retention and re-entry to work; providing co-ordinated and seamless support; and engaging employers. The Strategy has emphasised the importance of ensuring employment and career planning is being considered by young people with disabilities from an early age, rather than leaving it to the final years of post-primary school.

ACTIONS AND MEASURES TO DELIVER OBJECTIVE 5		
ACTIONS	MEASURES	LEAD
ACTION 5.1: SUPPORTING PARTICIPATION IN EDUCATION AND TRAINING	• Complete the review of the DEIS programme and implement changes in 2017.	DES
	• Continue to provide resources to schools to support the participation of children with special educational needs.	DES
	• Complete the review of the literacy and numeracy strategy for the schools sector and set new targets for 2020.	DES
	• Progress the adult literacy and numeracy strategy as set out in the Further Education and Training Strategy 2015-2019.	SOLAS
	• Seek to address the barriers to participation in education and training programmes for long-term unemployed people.	DSP, SOLAS, ETBs
	• Implement the National Access Plan for Higher Education 2015 – 2019.	DES, HEA, HEIs
	• Progress plans for the development of a framework for the strategic approach to social inclusion across the continuum of education.	DES
	• A review of the school-leaving age will be carried out in conjunction with the Departments of Children and Youth Affairs and Jobs Enterprise and Innovation with a view to increasing it.	DCYA, DES, DJEI
	• Review the level and trend in female participation in apprenticeship in 2018 in the light of the broadening of apprenticeship into new areas and set appropriate targets.	DES, SOLAS

ACTIONS AND MEASURES TO DELIVER OBJECTIVE 5		
ACTIONS	MEASURES	LEAD
ACTION 5.2: SUPPORT JOBSEEKERS	• Implement the Pathways to Work Strategy 2016 – 2020.	DSP
	• Build on the success of the Protocol between the Department of Social Protection, the Department of Jobs, Enterprise & Innovation and the Enterprise Agencies to match up the existing skillsets of the unemployed with current or forthcoming job vacancies in client companies of the enterprise development agencies.	DSP, DJEI, EI and IDA
ACTION 5.3: OLDER WORKERS	• Identify areas and issues within employment and social policies for enhancement to support longer working lives.	DSP
	• Develop the Workforce Development Strategy provided for in the FET Strategy	SOLAS
ACTION 5.4: INCREASED PARTICIPATION IN THE LABOUR MARKET	• Implement the Comprehensive Employment Strategy for People with Disabilities	D/Justice
	• Review policies and seek to improve “quality of life” issues in Ireland to ensure we can continue to attract high-skilled workers to locate in here and to encourage participation in the labour market. This includes taxation, housing and childcare costs.	DFinance, DPER, DELG, DCYA
	• Expand free pre-school scheme in 2016 to provide eligible children with a free pre-school place from the age of three until they start school.	DCYA
	• Phase in supports to enable children with disabilities to fully participate in pre-school care and education.	DCYA
	• Implement Pathways to Work 2016 – 2020 and in particular “activation for recovery” approach.	DSP

¹⁴⁰ [http://www.justice.ie/en/JELR/Pages/Comprehensive_Employment_Strategy_for_People_with_Disabilities_\(2015_2024\)](http://www.justice.ie/en/JELR/Pages/Comprehensive_Employment_Strategy_for_People_with_Disabilities_(2015_2024))

OBJECTIVE 6: WE WILL SUPPORT AN INCREASE IN THE SUPPLY OF SKILLS TO THE LABOUR MARKET

ACTION 6.1: INTERNATIONAL MIGRANTS WITH IN-DEMAND SKILLS WILL BE ATTRACTED TO IRELAND

While the State's primary policy objective in meeting the skills needs of the economy is to up-skill the resident population at all levels, the Employment Permits system will continue to play a role in meeting Ireland's skills needs. Where specific skills prove difficult to source within the EEA, an Employment Permit may be sought by an employer to hire a non-EEA national.

A total of 7,265 Employment Permits were issued in 2015, a 32% increase over 2014. The ICT Industry accounted for 2,499, or 34% of all employment permits issued, with a further 44% of permits issued to healthcare workers. This indicates the continuing relevance of the Employment Permits system in addressing the skills shortages relevant to enterprise, particularly in the ICT area.

In Ireland the employment permit system has allowed for an improved response to emerging skill shortages and an ongoing response where domestic supply of skills is not sufficient. The continued economic recovery may mean that shortages will be observed in greater number and in more occupations and sectors. In this context, the effective identification of labour shortages and the incorporation of this information to labour migration policy are important.

Recent ESRI research indicates that significant improvements have been made in this regard in Ireland and that the employment permit system is increasingly linked to information on labour shortages and surpluses.

ACTION 6.2: THERE WILL BE INCREASED MOBILITY OF HIGHER EDUCATION RESEARCHERS INTO INDUSTRY

Skilled people are central to Ireland's development as a knowledge-intensive economy and higher-end skills will be an expanding feature of future employment in Ireland. It will be such people who conduct the research, work in companies to drive innovative performance and create new innovative companies. To succeed, Ireland needs a solid pipeline of research skills development that supports early-stage researchers, researcher mobility into industry and internationally, as well as the development, retention and attraction of advanced researchers. *Innovation 2020* sets out the Government's strategy to advance this over the next five years: aiming to maximise the impact of researchers' activity on Ireland's economic and societal development, and thereby to optimise the return on public investment in research.

ACTION 6.3: IRISH EMIGRANTS WILL BE ENCOURAGED TO RETURN HOME TO MEET THE SKILLS DEMAND

Returning Irish emigrants also have much to contribute to the Irish economy by bringing home with them the skills and experience that they have gained while overseas. They can add new thinking, entrepreneurship and diversity to the economy.

Some submissions received suggested that even though the economy and the labour market is improving in Ireland, which in itself makes Ireland attractive, there are still a number of barriers to attracting skilled migrants and Irish emigrants to return. It was highlighted that broader

"quality of life" issues such as housing, taxation and childcare have an impact on Ireland's attraction to both skilled migrants and our ability to encourage Irish emigrants to return home. The affordability of childcare was raised in a number of submissions. The fact that childcare costs, at 53.5% of the average wage, are the highest in the EU was also cited.

It's clear that cross-Government initiatives such as those to increase the supply of affordable and quality housing through implementation of Construction 2020 are an important element in our ability to ensure an adequate supply of skills to the economy.

It was suggested that tax reform should be targeted at areas where we are out of line with international competitors to support the attraction and retention of talent and to incentivise staff to take on overtime or additional duties.

ACTIONS AND MEASURES TO DELIVER OBJECTIVE 6		
ACTIONS	MEASURES	LEAD
ALL ACTIONS	<ul style="list-style-type: none"> Review policies and seek to improve "quality of life" issues in Ireland to ensure we can continue to attract high-skilled workers to locate in here and to encourage participation in the labour market. This includes taxation, housing and childcare costs. 	Dfinance, DPER, DELG, DCYA
	<ul style="list-style-type: none"> Expand free pre-school scheme in 2016 to provide eligible children with a free pre-school place from the age of three until they start school. 	DCYA
	<ul style="list-style-type: none"> Phase in supports to enable children with disabilities to fully participate in pre-school care and education. 	DCYA
ACTION 6.1: SKILLED MIGRANTS	<ul style="list-style-type: none"> Continue to monitor the skills needs of the economy with a view to responding in a flexible way to the requirements of the economy. 	NSC, SOLAS, DJEI
	<ul style="list-style-type: none"> Provide a supportive Employment Permits system to respond to the requirements of enterprises where specific skills cannot be sourced from within the EU/EEA. 	DJEI
	<ul style="list-style-type: none"> Continue to optimise the data held in relation to employment permits issued to help inform stakeholders on the skills needs of the economy. 	DJEI
	<ul style="list-style-type: none"> Implement a programme, based around a website portal, through industry and agencies working together, to attract highly skilled international technology talent. 	EI, IDA, DJEI

ACTIONS AND MEASURES TO DELIVER OBJECTIVE 6		
ACTIONS	MEASURES	LEAD
ACTION 6.2: RESEARCHERS	• Increase enrolments of postgraduate researchers to address demand in the economy. (Innovation 2020)	IRC, SFI
	• Address gaps in the funding system for post-doctoral researcher through competitive support for excellent research across all disciplines and with a particular focus on interdisciplinary research. (Innovation 2020)	IRC, SFI
	• Enhance existing support for the bilateral flow of researchers between academia and industry by increasing awards including under the SFI Industry Fellowship Programme, the IRC Employment-based Postgraduate Programme and the IRC Enterprise Partnership Programme (Innovation 2020).	IRC, SFI
	• Establish improved system-wide tracking of researcher mobility into industry (Innovation 2020).	HEA, RESEARCH FUNDERS
	• Implement the International Education Strategy	DES, HEIS
ACTION 6.3: IRISH EMIGRANTS	• Implement Global Irish: Ireland's Diaspora Policy and build on the #hometowork campaign.	D/JUSTICE, DFA

07. IMPLEMENTATION AND MEASURING SUCCESS

Implementation and Measuring Success

NATIONAL AND REGIONAL SKILLS ARCHITECTURE

The scale of Ireland's administration allows for close collaboration between Government departments and agencies in the development and implementation of cross departmental policies. It also facilitates engagement with wider stakeholders such as those representing enterprise. Such collaboration and engagement has been evidenced in the development of a range of policies and strategies such as the Higher Education Strategy, the Further Education and Training Strategy, the Actions Plan(s) for Jobs and Pathways to Work.

In the area of skills identification and provision there is a wide range of organisations involved sometimes with complementary roles and sometimes with overlapping roles. This landscape has evolved and changed over time. New bodies have been created such as SOLAS and the Apprenticeship Council, while 33 VECs have been rationalised into 16 ETBs and Forfas has been integrated into the Department of Jobs, Enterprise and Innovation. In the light of these developments and others such as the creation of Regional Skills Fora it is timely to review the architecture within which skills needs are identified and "responding" provision prioritised.

In reviewing the architecture within which skills needs can be identified and responded to a number of key components can be identified:

- a. High quality labour market intelligence/research
- b. Close engagement with employers/enterprise
- c. Close engagement with providers of education and training
- d. Accommodation of both regional and national perspectives
- e. Close co-ordination among relevant Government Departments and Agencies
- f. A mechanism for mediating demands and prioritising investment
- g. Clarity of roles and simplicity of design

The Skills and Labour Market Research Unit (SLMRU)¹⁴¹ in SOLAS has provided valuable input in terms of labour market research over the years not least through its work on thematic reports on supply of skills and regional labour market analysis. The Expert Group on Future Skills Needs (EGFSN) has also provided valuable input, in particular through its sectoral studies which have identified needs of particular sectors as well as needs in more horizontal areas such as ICT. Close engagement with employers is a feature of the work of both groups. Education and training providers also keep abreast of developing trends in sectors of enterprise related to their provision. It is essential that providers maintain such contacts/connection with relevant sectors. While labour market and broad sectoral trends can be identified at a high level on an ongoing basis, more granular sectoral studies are less frequent.

¹⁴¹ The Skills and Labour Market Research Unit (SLMRU), based in SOLAS, provides a data gathering, analytical and research resource to support the work of Government Departments, agencies and education and training providers. The SLMRU will also support the work of the National Skills Council and the Regional Skills Fora.

REGIONAL SKILLS FORA

The DES has been working with State funded education and training providers, other government departments/agencies and enterprise representatives to establish Regional Skills Fora. These will provide a vehicle for close co-operation at Regional level between education and training providers and enterprise, between the different education and training providers themselves and with the involvement of other government departments/agencies a local link with the implementation of other strategies such as the Regional Action Plans for Jobs and Pathways to Work. In their deliberations the Fora will also contribute to the further development of national labour market research, sectoral studies and other relevant information.

MEDIATING SUPPLY AND DEMAND AND DELIVERING ON PRIORITIES

Probably more than most areas of State provision, the education and training sector is the subject of a myriad of competing demands across the range of its provision from early years through to research. This is no less true in the area of skills where the number and scale of demands inevitably will exceed the capacity of providers.

Ultimately, it is a matter for the Minister and Government to determine the amount of funding to be allocated to the different areas of activity within the education and training sector. However, it is desirable that as far as possible, the skills advisory architecture provides informed advice to the Minister and Government on prioritisation within that element of provision specifically directed at meeting skills needs. This is not an easy task.

Different sectors of the economy compete for skills, enterprises operate relatively short timeframes in planning skills needs, different sectors within the education and training system compete for resources and similar conflicting demands arise between and within education and training providers. However difficult the task, it is preferable that some attempt is made to bring representatives of enterprise, providers and state organisations together at a national and regional level to consider the relevant research, national and regional data and experience and the nature of competing demands for skills provision with a view to reaching a consensus on prioritisation and on making it happen.

REVISED ARCHITECTURE: A NATIONAL SKILLS COUNCIL

As the landscape gets more complex a more co-ordinated and integrated structure that brings together the various inputs to prioritisation of provision to meet skills demand is needed. In introducing new arrangements we need to build on the strengths of the current arrangements for identification of skills needs, provide a mechanism for mediating demands in a manner that facilitates prioritisation within the identified needs while at the same time enhancing the provider response to identified needs and ensuring delivery on priorities. The following revised architecture is proposed to accommodate the key components identified above.

A new National Skills Council (NSC) will be established to oversee research, advise on prioritisation of identified skills needs and how to secure delivery of identified needs. Three members of the Council will be appointed from an enterprise/employer background one of whom will chair the Council. The chief executives of the HEA, SOLAS, QQI, IDA, Enterprise Ireland and

SFI will be members of the Council which will also include representatives of the Department of Education and Skills, the Department of Jobs Enterprise and Innovation, and the Department of Social Protection and the Department of Public Expenditure and Reform. The Chairs of the Council of Presidents of the universities and IoTs will also be invited to be members of the Council. A learner representative will also be appointed.

The Department of Education and Skills will establish a new Unit which will provide support to the National Skills Council. The new Unit will give a dedicated focus to enterprise engagement and will enhance a co-ordinated response to skills needs across the different sectors of education and training. It will also oversee the development of the Regional Skills Fora and the development of links between the Council and the fora.

In establishing a new National Skills Council it is important to acknowledge the key contribution made to date by the EGFSN. The new arrangements are being introduced in the context of the changed landscape referred to above and to provide a coherent national architecture incorporating the new regional skills structures. At the same time they will ensure that the key elements of the EGFSN model of analysis and horizon scanning with close engagement with enterprise will be maintained. The EGFSN and its mandate will be refreshed to align its role in researching and identifying skills needs with the new architecture under the National Skills Council.

The Departments of Education and Skills and the Department of Jobs Enterprise and Innovation will devise collaborative working arrangements to ensure the optimal supports for the work of the National Skills Council and the new regional structures.

In addition to its role on advising on skills priorities the Council will have a key role in promoting and reporting on the delivery of responses by the education and training providers to those priorities. The involvement of the Chief Executives of the relevant agencies in the Council together with the connect between the Council, enterprise and individual education and training providers through the Regional Fora will give greater focus to delivering responses to those priority needs.

While close working relationships between the National Skills Council and the Apprenticeship Council will be important it is not proposed to incorporate the work of the Apprenticeship Council within the NSC at this point in time. The development of new apprenticeships under the Apprenticeship Council is at an early stage and it is considered prudent to allow the Apprenticeship Council continue with its work. Further consideration will be given to the relationship between the two Councils in the lifetime of this Strategy.

RESEARCH, DATA AND EVALUATION

The success of this strategy and its constituent actions will rely on robust intelligence and its application to the prioritisation of skills provision and to the effective allocation of resources. Work is underway at all education and training levels to enhance the evidence base that can inform policy and investment decisions. The Primary Online Database (POD) and Post-Primary Online Database (PPOD) have been developed for use in schools. Within the further education

and training sector, improved systematic data gathering and usage is a key priority under SOLAS' 2015-19 strategy. The agency is developing a new system that will comprise a national course database, a national course calendar and a national learner database. As well as improving FET policy development and investment allocations, this initiative will make FET much more accessible throughout Ireland. The FET Strategy provides for a systematic review of FET provision over the lifetime of the Strategy and a review of PLC provision is currently underway. The HEA is working with the higher education institutions and other stakeholders to develop a graduate outcomes survey that will provide improved information on graduate employment destinations.

The assessment of education and training outcomes will be supported through the linkage of learner data with data from other Government Departments and agencies (such as employment status) where feasible subject to data protection and privacy rules.

These intelligence improvements within education and training will be complemented throughout this Strategy's implementation by up-to-date information on labour market trends through the National Skills Database¹⁴² and quantitative models¹⁴³ developed by SOLAS' Skills and Labour Market Research Unit, as well as other sources such as CEDEFOP's European analysis. The new Regional Skills Fora will provide a platform in each region to interrogate regional employment trends and mediate these with appropriate skills provision. The success of the Strategy will also involve embedding evaluation into all aspects of skills provision and using its outcomes to improve alignment between the needs of learners, employers and civic society.

IMPLEMENTATION OF THE STRATEGY

Implementation of the National Skills Strategy is not the sole responsibility of any one government department or agency, it is a cross-cutting strategy, which will require cooperation from many different stakeholders. In addition to the responsibilities of government departments and agencies, employers and individuals also have their own parts to play in the implementation of the strategy.

While this Strategy outlines the vision and high level priorities and actions for addressing the skills needs of the country over the next ten years, implementation at a more granular level will be required in the priority areas identified. New actions will be identified during implementation. Detailed actions and timelines will be worked out by the responsible stakeholder as part of business planning processes, and will generally be worked out on an annual basis and the allocation of resources for particular priorities will generally be worked out as part of the annual Estimates process. The prioritisation of actions and the scale of activity on any priority or action will be dependent on the level of resources available in any one year.

Existing governance and performance structures and process will be used to ensure that the priorities and actions included in this strategy are implemented. Robust governance

¹⁴² The SLMRU developed the NSD, which collates all available information on the supply and demand of skills in Ireland (e.g. data on education/training provision, participation and output; micro level data on profile and trends in employment, unemployment and inactivity, etc.)

¹⁴³ The SLMRU has developed a number of quantitative models to enhance skills needs identification. Occupational forecasting, labour market transitions and apprenticeship forecasting models have been developed by the SLMRU.

arrangements are in place to drive, manage and monitor implementation of the existing reform programme in the Education and Training sector. A dedicated Programme Management Office (PMO) oversees the development and support the implementation of the Department's Integrated Reform Delivery Plan (IRDP).

SERVICE LEVEL AGREEMENTS

Service Level Agreements (SLAs) are in place between the Department of Education and Skills and its agencies. These agreements provide an opportunity for the Department and the agency to agree priority actions and timelines, to clearly define responsibilities and to put in place procedures to ensure effective accountability and monitoring. SLAs are agreed between the Department and each of the skills focused agencies: National Council for Curriculum and Assessment (NCCA), State Examinations Commission (SEC), SOLAS (the Further Education and Training authority), the Higher Education Authority (HEA) and Quality and Qualifications Ireland (QQI) on an annual basis and these are reviewed and monitored at regular intervals.

FURTHER EDUCATION AND TRAINING

Annual service plans between SOLAS and the Education and Training Boards provide the framework for monitoring progress against agreed quality and performance targets. They provide information on the planning cycle and process, funding allocations, programmes, services and supports and projected programme inputs, outputs and outcomes for the period.

HIGHER EDUCATION

Implementation of the Higher Education Systems Performance Framework 2014-2016 involves a process of strategic dialogue and agreement of compacts with publicly funded higher education institutions. The purpose of the strategic dialogue and performance compact agreements between the HEA and each higher education institution is to align the missions, strategies and profiles of individual HEIs with national priorities, and to agree strategic indicators of success against which institutional performance can be measured and funding can be allocated.

The Systems Performance Framework is due for review in 2016, and the review will take into account the priorities outlined in this Strategy.

OTHER GOVERNMENT DEPARTMENTS AND AGENCIES

Other government departments and agencies have annual business planning process and reporting mechanisms in place to ensure that relevant actions to support the implementation of the strategy can be prioritised and monitored.

MEASURING SUCCESS

In addition to the implementation of the strategy, we need to be able to monitor the success of the actions and progress towards the objectives. There are a number of indicators and surveys, both from international and national sources, which will allow us to track the impact of the Strategy.

EMPLOYMENT & ACTIVATION TARGETS	BASELINE	TARGET
Employment Target (EP2025)	1.958.7	2.180 million (2020)
EP 2025 Regional unemployment rates will not be higher than 1 percentage point than national rate	<3%	<1%
PTW Move 50,000 long term unemployed at the start of 2016 into employment by the end of 2020		20,000 (end 2020)
PTW Reduce the ratio between youth and overall unemployment from 2.2:1 to <2:1 by the end of 2017 (EU average = 2.2:1)		2:1:1 (end 2017)

Specific skills high level indicators for skills development and use of skills that will be monitored over the lifetime of the strategy include:

MEASURE	BASELINE	MID TERM INDICATOR	2025 INDICATOR
EXISTING INDICATORS THAT WILL CONTINUE TO BE MONITORED			
PERCENTAGE OF THE LABOUR FORCE AT LEVELS 1-3 ON NFQ ¹⁴⁴	15%	7%	
EU2020 REDUCE THE PERCENTAGE OF 18-24 YEAR OLDS WITH AT MOST LOWER SECONDARY EDUCATION AND NOT IN FURTHER EDUCATION AND TRAINING TO 8%	6.9% ¹⁴⁵	5%	
EU2020 INCREASE THE SHARE OF 30-34 YEAR OLDS WHO HAVE COMPLETED TERTIARY EDUCATION TO AT LEAST 60%	60%	60% ¹⁴⁶	
EP 2025 DOUBLE INVESTMENT IN TRAINING AND UPSKILLING FOR EMPLOYEES ¹⁴⁷	€543	€1,100	€1,300 ¹⁴⁸
ICT ACTION PLAN 2014-2018 – DOMESTIC SUPPLY OF GRADUATES TO MEET 74% OF DEMAND	57% ¹⁴⁹	74%	

¹⁴⁴ This target is being carried over from the Towards Tomorrow's Skills strategy. The target will be reviewed in 2020 and an appropriate target set for the period to 2025.

¹⁴⁵ Original EU2020 target was 8%. 6.9% is current performance.

¹⁴⁶ This is the existing EU2020 target. Further targets will be developed following progress in the rollout of apprenticeships and traineeships.

¹⁴⁷ The amounts on the table relate to the average investment per employee per annum in EI / IDA companies. DJEI is reviewing benchmarks to measure investment as a percentage of payroll in future.

¹⁴⁸ The 2025 target is a new target for the NSS

¹⁴⁹ Based on analysis supplied by the HEA

MEASURE	BASELINE	MID TERM INDICATOR	2025 INDICATOR
NEW INDICATORS			
PISA PERFORMANCE ON READING	PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE 11.4% (OECD AVERAGE 8.5%)	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE TO 15%
	PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2: 9.6% (OECD AVERAGE 18%)	MAINTAIN THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2 AT LESS THAN 10%	MAINTAIN THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2 AT LESS THAN 10%
		MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES%	MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES
PISA PERFORMANCE IN SCIENCE	PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE 10.8% (OECD AVERAGE 8.4%)	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE TO 15%
	PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2: 11.1% (OECD AVERAGE 17.8%)	DECREASE THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2	DECREASE THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2 TO LESS THAN 10%
		MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES	MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES
PISA PERFORMANCE MATHS	PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE 11% (OECD AVERAGE 13%)	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE	INCREASE THE PROPORTION OF STUDENTS AT LEVEL 5 OR ABOVE TO ABOVE THE OECD AVERAGE
	PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2: 16.9% (OECD AVERAGE 23.1%)	DECREASE THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2	DECREASE THE PROPORTION OF STUDENTS PERFORMING BELOW LEVEL 2 TO LESS THAN 10%
		REACH AND MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES	MAINTAIN OUR POSITION IN THE TOP 10 PERFORMING OECD COUNTRIES
GEM ENTREPRENEURSHIP EDUCATION (PRIMARY AND POST PRIMARY) ¹⁵⁰	2014: 2.09 (EU AVERAGE 2.12) (ON SCALE OF 1 – 5)	INCREASE IRELAND'S RATING TO ABOVE 2.15	INCREASE IRELAND'S RATING TO ABOVE 2.3
GEM ENTREPRENEURSHIP EDUCATION (POST SECOND LEVEL) ¹⁵¹	2014: 2.95 (EU AVERAGE 2.8) (ON SCALE OF 1 – 5)	INCREASE IRELAND'S RATING TO ABOVE 3.0	INCREASE IRELAND'S RATING TO ABOVE 3.05
FACILITATE THE PROVISION OF NEW APPRENTICESHIP AND TRAINEESHIP REGISTRATIONS		50,000 ¹⁵²	A REVIEW WILL TAKE PLACE IN 2020 TO SET NEW AMBITIOUS TARGETS TO 2025
WORK PLACEMENTS FOR TRANSITION YEAR, LCVP AND LCA STUDENTS	NOT AVAILABLE	STUDENTS IN TRANSITION YEAR, LCVP AND LCA WITH A WORK PLACEMENT	STUDENTS IN TRANSITION YEAR, LCVP AND LCA WITH A WORK PLACEMENT

¹⁵⁰ GEM Entrepreneurship Education ratings in these areas are based on surveys of national experts

¹⁵¹ GEM Entrepreneurship Education ratings in these areas are based on surveys of national experts

¹⁵² Cumulative number of new registrations on Apprenticeship and Traineeship Programmes

MEASURE	BASELINE	MID TERM INDICATOR	2025 INDICATOR
NEW INDICATORS			
WORK PLACEMENTS FOR FET LEVEL 6 STUDENTS	NOT AVAILABLE	ALL FULL-TIME STUDENTS	ALL FULL-TIME STUDENTS
WORK PLACEMENTS FOR HE LEVELS 6 TO 8	NOT AVAILABLE ¹⁵³	ALL FULL-TIME STUDENTS	ALL FULL-TIME STUDENTS
PARTICIPATION OF POPULATION AGED 25-64 IN LIFELONG LEARNING	6.7%	10%	15%
PIACC percent of adults scoring at Level 1 or below for Literacy	17.5%		TO REDUCE THE PERCENTAGE OF ADULTS SCORING AT LEVEL 1 OR BELOW TO 12% (ROUND 3)
PIACC PERCENT OF ADULTS SCORING AT LEVELS 3, 4 OR 5 FOR LITERACY	44.5%		TO INCREASE THE PERCENTAGE OF ADULTS SCORING AT LEVELS 3,4 OR 5 TO 50% (ROUND 3)
PIACC PERCENT OF ADULTS SCORING AT LEVEL 1 OR BELOW FOR NUMERACY	25.6%		TO REDUCE THE PERCENTAGE OF ADULTS SCORING AT LEVEL 1 OR BELOW TO 17% (ROUND 3)
PIACC PERCENT OF ADULTS SCORING AT LEVELS 3, 4 OR 5 FOR NUMERACY	36.3%		TO INCREASE THE PERCENTAGE OF ADULTS SCORING AT LEVELS 3,4 OR 5 TO 45% (ROUND 3)
SENIOR CYCLE RETENTION	90.6%	NEW TARGET TO BE CONSIDERED IN CONTEXT OF REVIEW OF SCHOOL LEAVER AGE	NEW TARGET TO BE CONSIDERED IN CONTEXT OF REVIEW SCHOOL LEAVER AGE

¹⁵³“The Irish Survey of Student Engagement 2015 reports that 63.2% of students surveyed have done, or intend to do, work experience or an industry placement over the course of their studies.”

NATIONAL EMPLOYER SURVEY

The first National Employer Survey was conducted in Q4 2014. The survey aims to ascertain employers' views on the overall quality of recent further education and higher education graduates, any challenges in filling graduate vacancies, the factors considered in recruiting graduates and collaboration between business and educational institutions. The next Survey is due to be undertaken in 2017.

FET STUDENT FOLLOW UP

SOLAS will continue to conduct an annual follow up survey of participants who have attended vocational training programmes (former FAS Programmes) delivered by the ETBs. These surveys will be based on a representative sample of participants who have exited the programmes 12 months previously.

The survey will provide detailed quantitative information on the outcomes of the programmes in terms of employment, progression and certification. The surveys will also contain detailed qualitative information on the learners experience while attending the programmes.

SOLAS is currently developing a data infrastructure, the Programme and Learner Support System (PLSS), which will provide a platform for reporting on all further education and training outputs and outcomes and will be fully operational in 2017. It will provide a data infrastructure for linking with other administrative data sets (e.g. HEA, DSP, Revenue etc.) which will enable follow up of learners upon course completion and measurement of course impact on learners' socio-economic status, including longitudinal and counterfactual analyses.

The FET Strategy provides for the establishment of a Learner Forum, together with appropriate Learner Surveys that will systematically benchmark the views of learners along with levels of satisfaction of FET provision on an on-going basis.

Together, these measures will support the provision of high quality further education and training programmes to meet the needs of learners in line with national and international quality standards.

IRISH SURVEY OF STUDENT ENGAGEMENT

The Irish Survey of Student Engagement (ISSE) is a detailed survey offered to first year undergraduates, final year undergraduates and postgraduate students pursuing taught programmes. More than 27,300 students from thirty institutions responded to the survey in 2015. The survey collects information on student engagement with their learning environments in order to provide a more valuable and informed insight into students' experiences than is possible from other information sources. Student engagement with institutional life is a vital ingredient to ensure that students develop key skill-sets such as critical thinking, problem-solving, writing skills, and team work and communication skills.

The survey is undertaken annually, and results published in Q4 of each year.

GRADUATE OUTCOMES SURVEY

A new survey is currently in development to replace the First Destinations Report which has been undertaken by the HEA since 1982. Graduate outcomes data is critical in planning future skills needs and in understanding the immediate destinations and employment outcomes of graduates of Irish higher education. It is planned that the new graduate outcomes survey will provide data on graduate qualifications and employment both within Ireland and overseas, relevance of employment to area of study, data on graduate further study, unemployment and unavailability for work, and graduate perceptions of the quality and relevance of their higher education experience. The new survey is expected to be delivered to graduates in March 2017, and annually thereafter. A longitudinal survey is also in development, which will track career progression of graduates at various points in time following their graduation.

CASE STUDIES

While indicators and metrics are a useful mechanism for monitoring process towards the aims of the strategy, they do not always capture the true impact of actions. Therefore, in addition to the use of the indicators, surveys and monitoring mechanisms mentioned above, it is proposed to investigate the use of case study reporting. Case studies offer a more qualitative approach to monitoring and allow for the outlining of details and impacts that are not easily captured by traditional monitoring mechanisms. They promote the use and replication of proven good practice.

There are already many innovative and impactful actions taking place in areas covered by this Strategy. The use of case studies will allow these and other actions under the strategy to be presented and translated into information showing their effectiveness and impact on the economy and society as a whole.

HIGHER EDUCATION SYSTEMS PERFORMANCE REPORT

The Systems Performance Framework for Higher Education has 40 high level indicators, grouped under 7 Key System Objectives. The indicators form the basis for assessing how well the higher education system is performing in relation to each system objective. Through the Strategic Dialogue process, individual higher education institutions agree performance compacts with the HEA, with targets reflecting their contribution to the overall system objectives under these indicators. The first Systems Performance Report was published in 2014, addressing the performance of the higher education system as a whole under the indicators set out in the Systems Performance Framework. In addition, there is ongoing monitoring and review of the performance of HEIs against the targets set out in their compacts. The Systems Performance Framework is due to be reviewed in 2016, and the next Systems Performance report will be published in conjunction with this review.

MONITORING AND EVALUATION OF FURTHER EDUCATION

Since the publication of the five year Further Education and Training Strategy, significant improvements have been made in the planning and funding of Further Education and Training. Education and Training Boards engage in a service planning process annually against a range of detailed parameters set by SOLAS. This process has been refined and improved each year since 2014 including the use of strengthened labour market data and better engagement with employers and the Department of Social Protection. All of the individual funding programmes will also be the subject of formal review and evaluation with the review of the PLC programme – the largest full time programme – being completed in 2016. The outcomes of these reviews will inform the further development of the planning and funding process. The process will also be strengthened by the availability of better and more current data on programme outputs and outcomes with the delivery and rollout of the Programme Learner Support System in 2016 and 2017. The intensive work across a range of initiatives in this area will deliver a planning and funding model clearly driven by performance and outcomes.

ABBREVIATIONS

APEL	Accreditation of Prior Experiential Learning
BIM	Building Information Modelling
CBA	Classroom Board Assessment
CEDEFOP	European Centre for the Development of Vocational Training
CEFR	Common European Framework of Reference for Languages
CPD	Continuing Professional Development
CSO	Central Statistics Office
DCYA	Department of Children and Youth Affairs
DEIS	Delivering Equality of Opportunity in Schools
DELG	Department of Environment and Local Government
DES	Department of Education and Skills
DJEI	Department of Jobs, Enterprise and Innovation
DPER	Department of Public Expenditure and Reform
DSP	Department of Social Protection
EEA	European Economic Area
EGFSN	Expert Group on Future Skills Needs
EI	Enterprise Ireland
EP2025	Enterprise 2025
ESOL	English for Speakers of other languages
ESRI	Economic and Social Research Institute
ETB	Education and Training Board
EU	European Union
FAPRI	Food and Agricultural Policy Research Institute
FE	Further Education
FET	Further Education and Training
FIT	Fastrack to IT
GDP	Gross Domestic Product
GNP	Gross National Product
GEM	Global Entrepreneurship Monitor
HE	Higher Education
HEA	Higher Education Authority
HEIs	Higher Education Institutes
HGV	Heavy Goods Vehicle
HR	Human Resources
ICT	Information Communications Technology
IDA	Industrial Authority
IMF	International Monetary Fund
IMO	Irish Midwives Organisation
IRC	Irish Research Council
IRDP	Integrated Reform Delivery Plan
ISCED	International Standard Classification of Education
ISSE	Irish Survey of Student Engagement

NOTES

IT	Information Technology
ITE	Initial Teacher Education
JCPA	Junior Cycle Profile of Achievement
JCT	Junior Cycle for Teachers
LCA	Leaving Certificate Applied
LCVP	Leaving Certificate Vocational Programme
MDC	Management Development Council
NCCA	National Council for Curriculum and Assessment
NFETL	National Forum for the Enhancement of Teaching and Learning in Higher Education
NFQ	National Framework of Qualifications
NFT	National Training Fund
NSC	National Skills Council
NSD	National Skills Database
OECD	Organisation for Economic Co-operation and Development
PC	Personal Computer
PDST	Professional Development Service for Teachers
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PLC	Post Leaving Certificate
PMO	Programme Management Office
POD	Primary Online Database
PPOD	Post Primary Online Database
PTW	Pathways to Work
QAG	Quality Assurance Guidelines
QQI	Quality and Qualifications Ireland
R & D	Research and Development
REAP	Roadmap for Employment-Academic Partnership
RPL	Recognition of Prior Learning
SEC	State Exams Commission
SFI	Science Foundation Ireland
SLA	Service Level Agreement
SLMRU	Skills and Labour Market Research Unit
SME'S	Small, Medium Enterprises
SSE	School Self Evaluation
STEM	Science, Technology, Engineering and Maths
STEAM	Science, Technology, Engineering, Arts and Maths
TIMSS	Trends in International Mathematics and Science Study
TUSLA	Child and Family Agency
TY	Transition Year
VEC	Vocational Education Committees



AN BÓINN
OIDEACHAIS
AGUS SCILEANNA

DEPARTMENT
OF EDUCATION
AND SKILLS