



# Enterprise 2025

Ireland's National Enterprise Policy  
2015–2025

Summary Report

## Foreword

by An Taoiseach, Enda Kenny, T.D.



It has taken a lot of hard work but our economy is now recovering. Through the resilience and hard graft of the Irish people we have pulled our economy back from the brink. There are more people at work and our high streets are busier than they have been in years. The future looks brighter than many could have hoped just a few short years ago.

We all remember the depth of the crisis that gripped the country only five years ago. An economy in freefall; banks on the brink of collapse; thousands of jobs being lost every month; and Ireland's international reputation in shreds. A country in a Troika bailout.

In 2011, this Government was elected to get Ireland working again.

Together with the people, we implemented a recovery plan to bring us to where we are today.

Together, we ended the bailout and restored our international reputation.

Together, we supported the changes to help create 126,000 extra jobs since 2012.

Together, we made Ireland Europe's fastest growing economy.

There is, of course, a long way still to go.

Yes, the unemployment rate has fallen to below 9.4 percent from a high of over 15 percent when we launched our first Action Plan for Jobs, but we still have far too many people out of work, too many Irish emigrants still overseas, and too many jobless households; and we need to redouble our efforts to support job creation and the activation of the unemployed.

Yes, Government borrowing has been massively reduced to below three percent of GDP, and interest rates on our debt are now at all-time lows, but the job of repairing the public finances is not fully done. Our debt levels remain too high and must be further reduced.

Yes, we have to begun to cut emergency taxes on income and work, but personal tax rates remain too high and damage Ireland's attractiveness as a place to live, work and invest.

Yes, exports and manufacturing output – by both Irish and foreign-owned firms - are now at all-time highs, but our small business sector still needs more support.

Families and businesses know that the recovery is fragile and incomplete. Many don't yet feel the benefits. All remain nervous about the risks ahead and the danger of slipping back.

My commitment to you is that we are never going back.

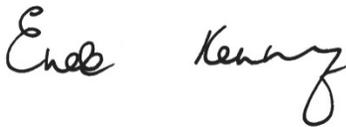
This Government has a plan to keep the recovery going.

Enterprise 2025 sets out our plan to create even more job opportunities over the next period. It aims to add 266,000 extra jobs by 2020, leading to more people at work in Ireland than ever before, resulting in unemployment falling to six percent. Every part of the country is expected to benefit, with unemployment falling to within one percent of the national average in every region.

I know that these targets are ambitious, but I believe they are achievable with the right policies.

That's why the plan sets policies to support both Irish start-ups and foreign investment in this country. That's why we commit to protecting our 12.5 percent rate of corporation tax and further enhance our corporate tax regime to encourage more investment and job creation.

Job creation through enterprise has pulled this country away from the economic abyss over the last five years. It must now remain the foundation of economic and social progress for the next decade.

A handwritten signature in black ink, reading "Enda Kenny". The signature is written in a cursive, flowing style.

Enda Kenny, T.D.

Taoiseach

## Foreword

by the Minister for Jobs, Enterprise and Innovation, Richard Bruton, T.D.



Thanks to the hard work and determination of the Irish people our economy is now back on track. Our roads and restaurants are busier and we have seen employment grow by over 126,000 since we launched our first Action Plan for Jobs in 2012. That first plan, and its annual successors, built on the idea that there were no quick fix solutions to our jobs crisis and that it was through deliberate, incremental and progressive reforms and improvements to the enterprise environment that high quality jobs could be grown and sustained. I have said it many times; it is our entrepreneurs and our talented workers that create the jobs and the wealth, Government's job is to do whatever it can to help those heroes of the recovery be successful in their endeavours.

Now that we have pulled back from the brink in terms of our jobs crisis and have put our economy back on track it is the right time to plan ahead and build an economy that won't just achieve full employment but will sustain it in the long term. That has never been achieved in an Irish context before, but I believe we have learned enough lessons from previous policy failures and can now aspire to such a goal. Enterprise 2025 sets out a long term strategy for the development of enterprise and job creation over the coming decade. It is an ambitious strategy – but we are right to be ambitious. I believe that by taking focused actions across government, we can deliver growth that is sustainable, led by strong export performance and underpinned by innovation, productivity and competitiveness.

There are a number of crucial elements that must work if the overall Strategy is to succeed.

When I talk to business people, both at home and overseas, they tell me that Talent is the key driver of success and that the war for talent is global. We need to develop, nurture, retain and attract talent and this is a core focus of Enterprise 2025.

We need also to invest place-making throughout Ireland, in all regions, creating attractive places where business choose to invest and where people chose to live and work. Our Regional Action Plans for Jobs will be a key driver of this concept.

Innovation – or innovativeness – will be at the core of our economic performance. Our people and our enterprises will be known for being innovative in what they do and in how they do business. We will continue to invest in building our science and technology base and in leveraging those investments to deliver economic and societal impact.

Through a partnership approach with enterprise, representative bodies, agencies, Local Enterprise Offices and others, I believe we can deliver a step change in the international competitiveness performance of our manufacturing and services sectors. With the right actions I think Ireland can be in the top three most competitive small countries in the world.

We also have the potential to achieve a significant increase in the number of Irish owned companies of scale that will contribute to Ireland's reputation in international markets. I know that we can, and will, tap into our entrepreneurial culture, to deliver a greater number of start-ups each year, with stronger growth and better survival rates.

Building genuine clusters is a key theme of this Strategy, leveraging our distinctive foreign and Irish owned enterprise base to build impactful clusters of scale and international visibility in areas of strength.

We will ensure our financing environment for enterprises is recognised as among the most competitive internationally and we will ensure that our tax environment is transparent and competitive and provides the certainty that enterprises need.

I *am* ambitious for our enterprises and for our country. We have limited control over the pace of change internationally, so we must be adept, responsive and agile to the uncertainty in the global environment. By delivering the cohesive actions in this Strategy and by unleashing the natural ingenuity of the Irish people, we can become more competitive, we can become more innovative and we can become more agile. And we can achieve sustainable full employment.

An unimaginable ambition just a short number of years ago but, thanks to the spirit and ingenuity of the Irish entrepreneur and worker, one that we can all now strive for.

Enterprise 2025 shows us the way.

A handwritten signature in black ink that reads "Richard Bruton". The signature is written in a cursive, slightly slanted style.

**Richard Bruton T.D.**

**Minister for Jobs, Enterprise and Innovation**

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## Introduction

### Competitive enterprise drives economic growth and creates jobs

As we emerge from the most severe recession of recent decades, this strategy Enterprise 2025 sets out our longer term ambition for enterprise growth and job creation over the coming decade.

We have 126,000 more people in work today than were employed when the Action Plan for Jobs (APJ) process was launched by the Minister for Jobs, Enterprise and Innovation in 2012<sup>1</sup>.

Companies supported by our enterprise development agencies contributed almost 40,000 jobs to 2014. Our exports in 2014 reached their highest ever level at €215 billion<sup>2</sup>.

We know from the progress achieved in restructuring the economy since 2011 that a competitive export-led enterprise base is at the heart of Ireland's longer term economic growth prospects.

A competitive enterprise base drives productivity growth, innovation and investment and creates jobs, delivering higher standards of living for all. Through exchequer returns, enterprises contribute to the provision of essential public services including infrastructures, healthcare and education. Enterprises also contribute to enhanced quality of life and the attractiveness of our towns and cities by providing quality retail outlets, restaurants, professional and personal services and by engaging in collaborative regionally based initiatives. In addition, innovative enterprises can contribute to realising national policy priorities in areas such as smart infrastructures, healthy ageing, food security and a sustainable environment to deliver better outcomes for our citizens.

Although we have made significant progress over recent years, we cannot be complacent. Ireland operates in an intensely competitive global environment, where change is the only constant, and where change can have a transformative impact on our enterprises.

We are ambitious for Ireland's future growth prospects. Realising our ambition requires a step change in how we align our policies across government and invest in those areas that will support longer term sustainable enterprise growth and stability. We will need to be agile, to anticipate and respond to change and ensure that our enterprise and complementary policies remain fit for purpose over the coming decade. We will also need to remain vigilant and to monitor employment growth patterns across sectors of the economy so as to avoid the mistakes of the past.

Enterprise 2025 sets the strategic framework for coherence across government departments to focus our resources in order to foster a better future and to deliver sustainable enterprise growth and jobs<sup>3</sup>. By taking the actions set out here we can realise a more ambitious scenario

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1 Based on QNHS Q2 2015 seasonally adjusted data

2 Balance of Payments Annual Series (BPM6), CSO Statbank

3 Enterprise 2025 Background Report is available at <https://www.djei.ie/en/Publications/>

than that set out in the projections framed in the context of Budget 2016<sup>4</sup>, delivering more jobs and an unemployment rate of 6 percent by 2020.

### Signs of recovery

Much has been achieved over the past number of years in restoring fiscal sustainability, stabilising the banking system, improving our international competitiveness and in creating jobs. We are seeing the impacts of the actions we have taken since 2012 through the APJ process:

- There are now 1,958,700 people at work (Q2 2015) – more than was employed a decade ago. In agency supported enterprises, job losses are at their lowest level for more than a decade;
- New company incorporations have increased by over a quarter since 2012;
- Total exports from Ireland were €215 billion in 2014. This was the highest exports on record, and over three times higher than in 1998;
- Exports from Enterprise Ireland supported enterprises reached an all-time high of €18.6 billion in 2014, having recovered since the recession and exceeding levels experienced during the height of the economic boom; and
- Direct expenditure in the Irish economy in 2013 for both Irish and foreign owned enterprises<sup>5</sup> was €43.8 billion and surpassed levels experienced in 2008.

Higher levels of productivity growth, sustained investments in RD&I and increased levels of export intensity point to continuing improvements in the capacities, capabilities and competitiveness of our enterprises. Job churn is a natural consequence of restructuring within the enterprise base. A reduced level of job losses within the agency portfolios in 2014 demonstrates a welcome sign of resilience and sustainable employment – gross job losses at 6.5 percent for both agencies is less than was the case even in the peak employment years when job losses stood at around 9 percent annually<sup>6</sup>.

### Structural issues persist....

While progress has been made in terms of creating jobs and growing exports, many structural issues persist. We continue to face challenges. Our unemployment rate is still higher than we would like at 9.8 percent. There are indications of upward cost pressures. Our investments in RD&I remain below comparator countries, and the proportion of enterprises engaging in research and innovation is too low; there are some skills areas in which job opportunities exceed supply; investment in workplace learning and management development is low; we have a narrow base of exporters and not enough Irish owned firms growing internationally; productivity levels are below comparator countries (with the exception of some FDI intensive sectors); and we remain highly concentrated in terms of export markets and source markets for inward investment. Many government departments have a role to play in addressing these issues. In the

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<sup>4</sup> Short-term economic outlook, presentation to the Oireachtas Committee on Finance, Public Expenditure and Reform, Economics Division, Department of Finance, 6th October 2015

<sup>5</sup> Agency supported enterprises, Source DJEI Annual Business Survey of Economic Impact (ABSEI)

<sup>6</sup> Gross job losses are calculated as job losses as a percentage of the previous year employment base

context of increasingly complex global business models we need to ensure that Ireland's export growth continues to be underpinned by substance and economic activity.

### ...and external uncertainties remain

As a small open economy we rely on external demand and international markets for sustainable and continued growth. Global economic uncertainty remains high. Global economic growth and trade is slowing. We are acutely aware of potential disruptive geopolitical, technological and financial forces that could have implications for Ireland's future growth path in an increasingly interconnected world<sup>7</sup>, including for example the UK negotiations with regard to the EU, and the ongoing negotiations in relation to the Transatlantic Trade and Investment Partnership (TTIP). Countries in South East Asia are attracting growing shares of mobile FDI. The competition to attract FDI has intensified significantly, and all of FDI is hard won. More countries are offering attractive locations for investment at a time when FDI project flows have reduced.

### Change is the only constant for enterprise...

The increasing integration of the global economy and freer movement of people, information and finance has accelerated the pace of change for enterprises.

People are increasingly mobile and are making decisions about where they want to work and live – and the war for talent is global. Global value networks are resulting in the progressive disaggregation of supply chains and creating new ecosystems involving multi-dimensional partnerships between companies, suppliers, competitors and research institutes in different locations throughout the world. Digitisation is pervasive in its impact, driving transformative change across all sectors of the economy and changing the way in which companies do business, engage with customers, reach new markets and innovate. The environmental sustainability agenda presents both opportunities and challenges for enterprises<sup>8</sup> – and all enterprises need to adapt in terms of product lifecycle management, minimising environmental impacts and enhancing energy efficiencies. For enterprises, change is the only constant – presenting opportunities and challenges.

### Ireland's economy is at an inflection point...

We are right to acknowledge the considerable progress that has been made since 2011, and that we are experiencing a return to growth following a period of deep recession. We have a strong basis from which to grow, and we have significant potential for growth in both manufacturing and services activities. But we cannot and should not underestimate the genuine and considerable challenges facing us as we look out over the next decade:

- global competition for investment and talent has intensified as we aim to be recognised internationally as innovative and entrepreneurial;

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<sup>7</sup> Refer also to Draft National Risk Assessment 2015: Overview of Strategic Risks, Department of the Taoiseach

<sup>8</sup> Refer also to the recently adopted UN international agreement on sustainable development, Transforming our World – the 2030 Agenda for Action, September 2015

- new technologies are disrupting industry norms and enabling transformational change. We want to ensure that our enterprises are well placed to take advantage of such opportunity;
- relative competitiveness is a moving target and we want to be placed in the top rankings;
- we have had higher levels of emigration and a higher level of unemployment than is acceptable; and
- a range of structural issues in our economy and enterprise base remain that need to be addressed.

We have developed Enterprise 2025, reflecting on the global environment and putting in place new approaches to ensure that our policies across government remain fit for purpose in a changing world. Our policies will continue to be anticipatory and responsive and informed by analysis and evaluation.

### Enterprise policy to 2025 – a systems approach

Internationally, enterprise policy is evolving toward a ‘systems’ approach, with the role of Government acting as a facilitator, coordinator and market creator in addition to an investor<sup>9</sup>. Governments in other countries are increasingly engaging in creating networks, enabling cluster development, addressing coordination failures, and aligning strategic priorities through effective and ongoing dialogue with enterprise. A systems approach recognises that enterprise can play a constructive role in addressing broader policy objectives through innovation and partnership - so called ‘grand challenges’, including for example sustainable energy, healthy ageing, smart cities etc. This evolution in enterprise policy internationally has informed our own policy approach.

Enterprise policy is broad reaching and requires a whole of government commitment. Although DJEI is the principal governmental advocate for the enterprise sector, many other government departments play a crucial role in delivering on complementary policy actions to provide an environment that is conducive to job creation and supports the development of a competitive and sustainable enterprise mix<sup>10</sup>.

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9 See *Beyond Industrial Policy: Emerging Issues and New Trends*, Warwick, K. I, OECD STI Policy Papers, No. 2, 2013; and *Enterprise policy evaluation: Is there a ‘new’ way of doing it?*, Lenihan, H., *Evaluation and Program Planning*, 34 (4), 323-332, 2011

10 A number of policies and strategies are currently being developed or have recently been completed that are directly pertinent, including for example: *National Skills Strategy*; *Strategy for Science, Technology and Innovation*; *National Planning Framework*; *Food Wise 2025*; *Construction 2020*; *Harnessing Our Ocean Wealth*; *People, Place and Policy: Growing Tourism to 2025*; *IFS 2020*; successor to *Trade, Tourism and Investment Strategy*



# Our Ambition & Strategy for Enterprise 2025

Ireland – the best place to **succeed** in business  
*delivering*  
**sustainable employment** and **higher standards of living** for all

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**2.180m**  
at work  
by 2020

Irish owned  
exports  
**+€10bn**  
by 2020

**Top 3**  
competitiveness  
ranking

Sustaining  
full  
employment

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## INNOVATIVE AGILE CONNECTED

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### Enterprise resilience

- Across a range of sectors
- Pursuing new opportunities
- Building supportive ecosystems
- A step change in enterprise performance



### Differentiating Ireland

- Talent
- Place-making
- Innovativeness
- Connectedness



### Excelling in the basics

- Finance for growth
- Taxation
- Costs
- Infrastructures

## Our vision for enterprise to 2025



*Our successful enterprises will be **competitive, productive and globally connected**, enabled by our **entrepreneurial and innovative culture** that is embodied in people, place, the policy system and government*

*where*

*Enterprise is valued for **creating quality jobs** and for **driving sustainable growth***

*and where*

*Enterprises play a crucial role in addressing grand challenges including through partnerships in research and innovation*

*delivering **higher standards of living for all***

## Our ambition and strategy

### Driving export-led growth – delivering sustainable employment

For Ireland as a small open economy, sustainable long term growth is dependent on continued success in international markets. Our policy focus is predicated upon growth fuelled by foreign earnings derived from exports in the first instance as distinct from being driven primarily by domestic consumption, which we know is an unsustainable growth model.

Our ambition is to:

- achieve the potential for growth in Irish owned manufacturing and services exports by between 6 and 8 percent annually to 2020;
- realise increased export intensity of Irish owned firms to between 55 and 60 percent; and
- support geographic market diversification (including to high growth emerging markets) so that Irish owned exports to non-UK markets increase by 50 percent; and
- attract and grow export oriented foreign direct investment.

An export led strategy is not just about exporters. In addition to generating greater wealth than would be possible through only domestically traded activities, there is a substantial ripple effect in terms of job creation across the entire economy and an increase in technology adoption, innovation, standards and best practice overall.

## Stretching our employment ambitions

We are ambitious. We can achieve full employment that is sustainable and resilient over the longer term by taking the actions set out in Enterprise 2025.

Our ambition is to:

- reach 2.180 million people in employment and an unemployment rate of 6 percent by 2020; and to
- sustain full employment over the decade to 2025.

The potential to reach 2.180 million in employment by 2020 is based on the premise of export-led growth and would see an additional 266,000 people at work from a 2014 base<sup>11</sup>. We see the potential to achieve a 6 percent unemployment rate at a faster pace than that set out in the projections prepared in the context of Budget 2016 that forecast a 6.5 percent unemployment rate by 2020. We are aware that this will be challenging and that we have no control over global demand and other external factors. We can strongly influence our chances of success by focusing on supporting the productive sector, enhancing our relative competitiveness, leveraging existing comparative advantage in key sectors, addressing structural issues in the economy, improving productivity and our capacity to innovate.

Our enterprise development agencies, IDA Ireland and Enterprise Ireland play a key role in providing direct supports and services to export oriented enterprises. They will contribute circa 140,000 jobs (i.e. 75,000 direct jobs that will stimulate an additional 65,000 jobs indirectly) to the potential private sector employment growth to the period 2020. There is potential for a further 30,000 tourism related jobs<sup>12</sup>.

We will continuously monitor our employment growth patterns in terms of an export/non-export 'balance' and avoid the mistakes of the past.

Our policies will facilitate the creation of quality employment, taking into account the multi-dimensional aspects that define quality including: ensuring opportunities for advancement that involves workplace learning and development; ensuring that people are educated and trained to meet the needs of industry; recognising the opportunities presented by entrepreneurship as an alternative career path; and ensuring a system that facilitates flexibility without exploitation. Enterprise 2025 envisages the creation of a range of career opportunities across a broad spectrum of skills and across manufacturing and services activities.

## Enhancing the employment prospects of the unemployed

We will ensure that individuals are trained in relevant skills and competences to enhance their prospects for employment and that meet the needs of enterprise in a changing environment.

Looking out over the next decade, a return to sustainable economic growth and job creation will likely lessen the unemployment challenge considerably, although unemployment remains at an unacceptably high level at present. The activation initiatives as set out in Pathways to Work 2015

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<sup>11</sup> Annual average employment over four calendar quarters, 2014

<sup>12</sup> People, Place and Policy: Growing Tourism to 2025, Department of Transport, Tourism and Sport, includes an overall target of 50,000 additional jobs in the tourism sector by 2025 - the data set out here has been interpolated to align with overall employment potential to the period to 2020

remain relevant and aim to enhance peoples' prospects for employment. Although the demand for these initiatives over the coming years will decline as more employment opportunities come on stream, a more intensified engagement may be required with the reducing cohort of unemployed to achieve our ambition for full employment.

### Investing for competitive advantage

We will realise a step-change in the performance of our enterprises and the growth potential of our economy by focusing our capital investments to support the productive sector across a range of key areas.

In the long run productivity growth is essential to improving living standards. Many of the resources that enterprises draw on to maximise productive capability come from the surrounding environment, including for example, a sound macroeconomic environment, the education and skills base of the labour force, transport and communications networks, science and technology know-how, competition and regulation policies, finance etc. It is important that increases in labour costs are accompanied by productivity improvements in the coming years.

Our ambition is to:

- restore our competitiveness to rank in the top three of the most competitive small countries in the world;
- realise productivity growth across the economy to levels ranking amongst the top five EU countries averaging 2.0 to 2.5 percent per annum over the long term; and
- contribute to the restoration of living standards to pre-recession levels through our enterprise policies and maintain an above average position relative to the EU-19 average over the period to 2025.

We will take a whole of enterprise approach, leveraging the potential in all sectors of our economy. This will strengthen our resilience in today's global environment where the pace of change has accelerated and where competition for investment and mobile talent has intensified. We will focus our efforts to achieve a step change in enterprise performance in terms of productivity, the capacity to innovate and to grow to scale.

We will build competitive advantage and differentiate what Ireland has to offer in terms of Talent, Place-making, Innovativeness and Connectedness.

We will not realise our ambition unless we have the fundamentals working effectively: finance for growth; a competitive tax environment; relative cost competitiveness; and quality infrastructures. Without the business environment basics the impact of other interventions will be compromised.

### Building resilience in our sectoral mix

We will tailor our policies in a way that will strengthen our resilience across a range of manufacturing and services sectors and activities. We will demonstrate the agility needed to respond to the accelerated pace of change as sectors evolve and new opportunities arise. We will:

- take a portfolio approach to realising the potential across the economy in a sustainable and balanced way so that we do not become overly reliant on any one sector or activity;

- identify emerging areas of opportunity<sup>13</sup> with effective horizon scanning and foresight;
- implement a systematic approach to sector ecosystem development to capture new opportunities in the context of an internationally competitive environment; and
- leverage our distinctive enterprise base that includes innovative Irish and foreign owned enterprises through from start-ups to large scale and multinational entities.

## Achieving a step change in enterprise performance

We will work with companies to realise a transformative step change in their performance and to embed a culture of innovation and continuous change. We will:

- stimulate a flourishing of **entrepreneurship** across all sectors and throughout the regions;
- work with ambitious companies to achieve **a significant step up in their potential to scale** and to grow on international markets;
- **assist locally trading and employment intensive enterprises** to improve competitiveness;
- **attract, transform and sustain FDI** that will add value to our economic fabric and will enable access to global value networks for our Irish owned enterprises;
- achieve a significant uplift in enterprises **investing in RD&I** – more enterprises and greater levels of investment - delivering innovative products and services; and
- stimulate **greater collaboration** between foreign and Irish owned enterprises and between enterprises, HEIs and the research base to develop critical mass in key sectors and clusters of sustainable competitive advantage.

## Developing and attracting talent for the 21<sup>st</sup> century

We will develop, nurture and attract world class talent. Our ambition is to offer the skills, creativity and adaptability required in the 21st century workplace. We will:

- have a closer level of engagement between our education system and enterprise than ever before, and demonstrate the agility required in today's dynamic environment;
- place a greater emphasis on leadership and management development – equipping more of our people with the ability and ambition to start, innovate and grow businesses; and
- continuously anticipate, identify and address critical skills gaps needed to deliver on our ambition for self-sustaining clusters.

## Optimising regional potential - place-making

We will develop attractive places to invest, live and work throughout Ireland and to optimise the potential of our regions. We will:

- stimulate job creation throughout Ireland so that unemployment in each region is within one percent of the State average;

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<sup>13</sup> See Appendix I for an overview of emerging areas of opportunity

- build on distinctive regional strengths and assets<sup>14</sup>, celebrating difference and realising potential for job creation, informed by our Regional Action Plans;
- develop competitive, dynamic, sustainable and globally connected city regions;
- stimulate locally based enterprise initiatives and sector (and cross-sector) clustering activities to drive greater growth through collaborative actions; and
- make strategic infrastructure investments.

### Embedding innovativeness in our enterprises and systems

We will be internationally renowned as being innovative in what we do and in how we do it, across all aspects of the business, including for example, business models, consumer engagement, channels to market, organisation structures, and modes of collaboration. We will strengthen our innovation system and will leverage our investments in RD&I to deliver impact. Our ambition is that our companies will derive competitive advantage through innovation. We will:

- maintain our focus on building excellence in scientific research in areas where we can develop leadership positions;
- strengthen the connections between researchers and enterprise through focused investment and supports on nearer to market infrastructures;
- build the innovation, design and problem solving capabilities of our enterprises so that innovativeness is embedded in 'how we do things';
- ensure that our regulatory system is pro-innovation and supportive of new and emerging areas of opportunity without compromising the protective role that it plays; and
- set out grand challenges and will partner with enterprises and the research community to deliver innovative solutions that address issues of national priority.

### Being connected – internationally, nationally and regionally

An open economy relies on effective connections. We will build connections regionally, nationally and internationally through business, people and the research system. We will:

- roll out a new approach for a National Clustering initiative in key sectors of strength that has visibility and stature in an international context;
- sustain our leadership position in the digital economy underpinned by a robust and well balanced regime and advanced technology infrastructures; and
- build our trade and investment footprint globally to realise greater opportunities arising from high growth markets, for sustainable export growth, investment and tourism.

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<sup>14</sup> Distinctive regional strengths and assets encompass a broad range of factors, including for example, the enterprise mix, physical and digital infrastructures, access to skills, education and research and the dynamic of a location enriched by national heritage and culture

## Finance for growth

Our ambition is to establish a comprehensive and competitive funding environment to support our enterprises through from pre start-up to maturity, so that no viable business opportunity will falter due to lack of access to appropriate funding. We aim to ensure that cost of finance is aligned with our European competitors, and moves to the euro average rate and to stimulate increased business investment levels. Building on progress made, including for example the establishment of ISIF and SBCI<sup>15</sup> and the ongoing work of the SME State Bodies Group, we will:

- drive competition in the lending market (including non-bank sources of funding) and will work with financial institutions to facilitate the provision of a wide range of products and services to support our enterprises ambitions; and will
- strengthen the capabilities of Irish owned enterprises in terms of the strategic use of funding options for growth.

## A growth friendly tax regime

We will continue to deliver an internationally competitive and reputable tax environment that provides certainty, stability and predictability; that facilitates business decision making; and that supports productive investment, internationalisation and entrepreneurship. We will:

- maintain a competitive environment in Ireland for internationally mobile investment built around a corporation tax rate of 12.5 percent;
- leverage taxation policy to stimulate entrepreneurship, innovation, enterprise development and growth; and will
- support Ireland's attractiveness for the talent our enterprises need.

## Sustaining relative cost competitiveness

We will aggressively and systematically address domestically influenced cost factors that impact on our relative competitiveness and business input costs so that Irish based enterprises can compete effectively in an international context and that Ireland can continue to attract mobile investment. We will:

- take the actions necessary in the areas that are within our control to influence: in energy; waste; property; and business regulatory costs; and will
- build competitive markets, removing barriers to entry and ensuring a level playing field.

## Investing in quality physical infrastructures

Our ambition is to ensure that Ireland boasts high quality economic infrastructures that facilitate the mobility of people, goods and services – regionally, nationally and internationally - and that meet the future needs of our enterprise base. We will:

- prioritise investments in economic infrastructures, informed by the future needs of an evolving enterprise base; and will
- ensure that our regulatory environment facilitates an increase in private sector investment and ultimately delivers more cost effective higher quality services to business users.

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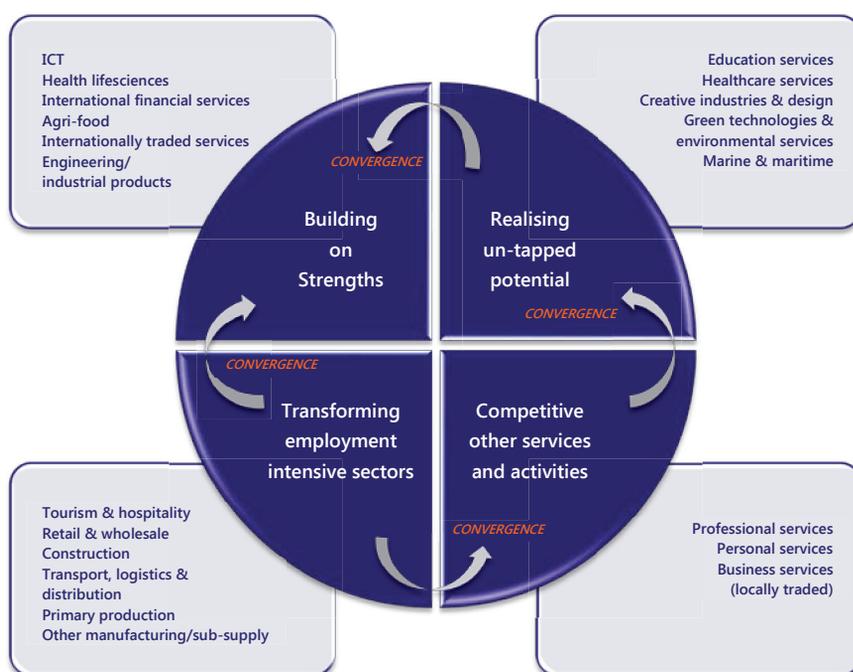
<sup>15</sup> ISIF – Ireland Strategic Investment Fund; SBCI – Strategic Banking Corporation of Ireland

## A sectoral overview

We aim to realise the optimum potential of sectors to deliver on growth and jobs throughout Ireland in a sustainable way. Digital and green technologies and design are driving transformational change across *all* sectors of the economy. Through systematic horizon scanning we will identify the implications of global trends on the evolution of sectors, disruptions to industry norms, 'new' sectors of activity and ways of doing business on the global stage.

We will strengthen resilience in the enterprise mix; recognising the valuable and different contributions that different sectors make to economic growth through exports, value-add, direct economic expenditures and/or employment<sup>16</sup>. We will take advantage of convergence and adjacent possibilities across sectors and activities. We will tailor our policy approaches to:

- build on our comparative strengths and core competences in our main exporting sectors;
- realise untapped potential of sectors that present opportunity for growth;
- transform employment intensive sectors that play a crucial role in the wider economy; and
- strengthen the competitiveness of our other locally traded services and activities.



We will strengthen our approach to sectoral ecosystem development – ensuring that our investments in ST&I, education & skills and infrastructures meet the evolving needs of the sectors in our economy. Ecosystem Development Teams will be established for defined periods of time to deliver on a clear objective where an elevated policy response is warranted, for example, an impending sectoral upheaval, national imperative, and/or scale of opportunity.

<sup>16</sup> The categorisation of sectors was based on an analysis of broadly similar characteristics including e.g. export orientation

## Sectoral cohorts

Brief overview and potential to 2020<sup>17</sup>**Building on strengths**

ICT	Primarily export oriented - contributing circa 81 percent to total exports. These sectors reflect the bulk of the enterprise agency client base. Includes both foreign and Irish owned entities through from small to large scale multinationals. Employs 283,100 directly with the potential to grow to almost 345,000 by 2020.
Lifesciences	
AgriFood	
Internationally Traded Services	
Internationally trading financial services	
Engineering/industrial products	

**Transforming employment intensive sectors**

Tourism	These sectors are primarily locally trading (with the exception of tourism that generates foreign earnings and some 'other manufacturing'). They contribute a significant proportion to Ireland's total employment at 893,800 today. In the main they play a dual role in the economy. High proportion of Irish owned, but with increasing foreign owned presence (particularly hospitality and retail). Includes companies through from micro to large scale. There is potential to grow employment to over 1 million in this cohort by 2020.
Retail & wholesale	
Construction	
Transport & logistics	
Primary production	
Other manufacturing/sub supply	

**Realising untapped potential**

Creative Industries	Broadly defined sectors that incorporate a range of very different sub-segments and cross a number of government department areas of responsibility. Includes creative industries, green technologies, environmental services, and marine and maritime. Education and health services present opportunity for private sector provision and internationalisation. Generally small scale, Irish owned and regionally dispersed. Employing 213,300 directly currently with the potential to employ a further 30,000 by 2020.
Green Technologies / environmental services	
Marine and maritime	
Education services	
Healthcare services	

**Other locally traded services and activities**

Legal, accounting and other professional services	Primarily professional, business and personal services trading locally. High proportion of micro enterprises with some larger scale providers that deliver services internationally and/or through global partnerships. Considerable potential to enhance competitiveness, which benefits other businesses and the overall economy. Approximately 187,000 are employed today with the potential to increase to almost 208,000 by 2020.
Business and consultancy services	
Personal services	

<sup>17</sup> A bottom up analysis was undertaken by DEJI to better assess 'where will jobs come from' across these cohorts informed by sectoral trends and export potential (as relevant) in the context of Medium Term Economic Strategy and Spring Economic Statement. Cohorts based on DJEI analysis of relevant NACE codes

## A whole of enterprise perspective

Ireland's enterprise mix includes both foreign and Irish owned enterprises, including small and large companies, exporting and locally trading. Today we boast a cadre of innovative and globalised Irish leaders that provide a base to significantly accelerate the scaling of our Irish owned enterprises. FDI will continue to play a key role in our future economic development.

We will focus on realising the potential of the whole of enterprise to contribute effectively to Ireland's future economic growth by transforming operations, enhancing productivity and embedding innovativeness. We will:

- **Develop Irish owned enterprises to scale** and to engage in clustering activities, to develop innovative products, services and new ways of doing business, and to develop and/or take advantage of disruptive technologies; raise the visibility and profile nationally and internationally of our business champions. By 2020 we will:
  - increase by one third the number of enterprises with greater than €3 million and greater than €20 million sales currently – and see a significant step change in the numbers of enterprises with sales of €100 million from 54 to 90;
  - have over 1,000 companies investing over €100,000 per annum in RD&I; and 220 investing over €1 million; and
  - realise annual export growth in the region of 6 to 8 percent and increase the export intensity to between 55 and 60 percent, from 51 percent today.
- **Drive entrepreneurship** expanding our pipe-line of start-ups and developing dynamic and best in class hubs across our regions that stimulate innovation, collaboration and sustainable growth. By 2020 we will:
  - grow the number of start-ups by 25 percent to almost 16,000 per annum in 2020; and
  - increase the 5 year survival rate by 25 percent.
- **Assist locally trading enterprises to improve competitiveness**, enhance productivity and their capacity to innovate and to embrace ICTs and trade on-line (as appropriate), so that their contribution to sustainable employment and to Ireland's overall competitiveness is optimised. By 2020 we will:
  - realise a productivity uplift of 25 percent for Irish owned enterprises.
- **Compete effectively to attract new investments, to grow, expand and sustain FDI.** We aim to ensure that foreign investments contribute to enhanced productivity growth, to RD&I capabilities and to domestic value added and will maintain a focus on transforming the existing base. Foreign owned enterprises will have the potential to offer access to global value chains for Irish based companies and contribute to developing critical mass in key sectors and activities. By 2020 we will:
  - increase direct net employment by 42,000 and win an additional 900 projects, investing in regions throughout Ireland; and

- win €3.6 billion in RD&I investments and have 145 more foreign owned entities engaged in RD&I activities<sup>18</sup>.

Programmes will be tailored to the needs of the enterprise, depending on scale, ambition and market orientation with an emphasis on building capabilities in leadership, management development and skills, RD&I, internationalisation and productivity.

## Strengthening collaboration

We will stimulate greater collaboration between foreign and Irish owned enterprises and between enterprises, HEIs and the research base. We will:

- increase the number of enterprise collaborations with the research community supported by SFI and Enterprise Ireland and including IDA Ireland;
- increase sourcing of domestically produced goods and services by export oriented enterprises by 25 percent to reach at least €36 billion by 2020, which will, in turn, support job creation in the wider economy;
- stimulate increased engagement by enterprises with HEIs in regionally based skills fora;
- drive the implementation of a national step change in competitiveness that includes a focus on productivity, innovation, collaborating to compete and internationalisation and including peer-to-peer best practice sharing and networks<sup>19</sup>;
- collaborate and coordinate activities in-market, including engagement with the embassy network through local market development teams;
- coordinate the development of clustering activities of scale focused on clear objectives and with international visibility, and including collaborative enterprise responses to grand challenge approaches;
- deliver a coordinated approach to attracting mobile entrepreneurs and emerging companies; and
- identify and stimulate regionally based activities that will harness the full potential of the regions to create employment<sup>20</sup>.

We will make optimal use of the respective strengths and offerings of the enterprise agencies and will deliver a coherent and cohesive enterprise support framework. The agencies will define appropriate targets and metrics to drive and monitor progress across the range of collaborative activities both in terms of level of activity and value/impact.

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18 Data relating to FDI has been extrapolated from IDA Ireland's strategy that sets out targets to 2019

19 Refer also to Making it in Ireland, Manufacturing 2020, Forfás, 2013

20 As set out in the Regional Action Plans for Jobs, DJEI

## Taking strategic action

This Government is committed to working together with business, to create the optimum environment in which enterprise can establish, grow and thrive. Our ambition as a government system is to be anticipatory, responsive and adaptive – demonstrating an enviable agility that can be more easily embedded in a small country such as Ireland.

We aim to deliver sustainable growth and job creation – impacting positively on the economy, on society and on the environment.

The following section sets out the strategic actions we will take to realise our ambition for sustainable growth over the period to 2025, delivering jobs and a higher standard of living for all. Delivery of an impactful enterprise policy requires a whole of government response.

### Enterprises playing their part

Our strategies, policies and interventions work best when they are informed by the needs of business and when industry engages effectively and with commitment. We need enterprises to play their part by: engaging with the education and training sector; acting as champions in their own locale; providing opportunities for students with structured industry placements; and participating in apprenticeship programmes.

This heightened level of collaboration across enterprise and the broad government system is a challenging but essential element in achieving the ambition set out in Enterprise 2025.

## Building resilience in our sectoral mix

There are a number of areas where Ireland can take action over the coming years to underpin the resilience of the enterprise base, the sustainability of employment and be better prepared for the technological and other shocks the global economy may face into the future.

We will embed a systematic approach to sectoral development and, taking a whole of enterprise approach, we will tailor interventions as appropriate to stimulate productivity improvements and greater engagement in RD&I and including leadership, management development and skills.

### Sectoral ecosystems

A more systematic approach to sectoral ecosystem development will be rolled out in the context of the accelerated pace of change, technology disruption, intensified international competition for investment and talent and in order to stimulate entrepreneurship, to respond to impending sectoral disruption and to take advantage of new and emerging areas of opportunity.

	<b>New approach to sectoral ecosystem development to accelerate growth and deliver greater economic impact</b>	
1	<p>Implement a systematic approach to sector ecosystem development in the context of intensified international competition, the pace of change, evolution of sectors and emergence of new areas of opportunity to enhance economic performance, impact and international reputation and visibility by:</p> <ul style="list-style-type: none"> <li>developing Sector Briefs, and working closely with the enterprise development agencies and other relevant government departments, introduce a more systematic and comprehensive approach to</li> </ul>	DJEI Agencies, Govt Depts, Int'l Networks

	<p>horizon scanning that will harness in-market and sectoral knowledge. This strengthened horizon scanning will facilitate the identification of emerging opportunity areas and or disruptive trends, the early assessment of potential and whether or not there are sector specific policy implications that necessitate a policy response;</p> <ul style="list-style-type: none"> <li>▪ establishing sector specific Ecosystem Development Teams for limited periods to progress key sectoral initiatives; and</li> <li>▪ introducing effective oversight to monitor sector development across the economy together with emerging requirements for policy.</li> </ul>	
	<b>Driving all island approaches to sectoral development</b>	
2	Strengthen all-island approaches to sectoral ecosystem development as appropriate and as opportunities arise to deliver greater economic opportunity and potential for investment and job creation.	ITI (and DJEI)

### Building on strengths

These are the sectors in which we demonstrate comparative advantage and they contribute a significant proportion to Ireland’s exports. These sectors are continuously evolving and we will tailor our suite of interventions delivered by the agencies to ensure ongoing transformational change and to deepen our global innovative capabilities at the level of the enterprise. These sectors include ICT, Health Lifesciences, International Financial Services, Agri-Food, Internationally Traded services and Engineering/Industrial products.

	<b>Deepening Ireland’s comparative advantage</b>	
3	<p>Strengthen Ireland's comparative advantage by attracting new investments, leveraging State investments in prioritised research areas, effecting continuous transformational change and being open to new areas of opportunity arising through convergence and adjacent possibilities. This involves both an anticipatory and responsive approach in an intensely competitive and fast paced global environment.</p> <p>Coordinated action will also be required involving researchers and education and training service providers.</p> <p><i>The recommendations relating to an enhanced approach to sectoral ecosystem development, trade, strengthened clustering initiatives, enhanced agency collaboration, RD&amp;I, and cross-sectoral/convergence initiatives are all directly relevant. Business environment factors that enhance relative competitiveness with other economies remain crucial to the continued success in these sectors.</i></p>	DJEI, Enterprise agencies

### Realising un-tapped potential

This includes: Marine/maritime; green technologies and environmental services; creative sector (including design service providers); as well as the increasing potential for private provision of international education and healthcare services (including e.g. eHealth). These sectors involve a broad range of sub-sectors and activity which (in general) span a number of government departments. Activities are distributed throughout Ireland, with likely potential for regional initiatives / test beds etc.

	<b>Realising un-tapped potential</b>	
4	<p>Develop and deliver regionally based sectoral initiatives, including collaboration across regional boundaries, taking advantage of the €100 million regional collaborative fund launched by DJEI in 2015, aimed at bringing the key stakeholders together to take the necessary action to deliver jobs and growth based on harnessing regionally based assets.</p> <p><i>The recommendations relating to addressing grand challenges are particularly pertinent and require direct engagement by Departments of Health, Education, Environment and others aimed at delivering increased efficiencies and outcomes while providing opportunity for Irish based enterprises.</i></p>	DJEI
5	<p>Develop the full potential of the Marine economy through the implementation of the Harnessing Our Ocean Wealth strategy.</p> <p>Develop and implement strategies for new areas including eHealth, Healthcare services, Creative Industries and Design.</p>	DAFM Various

### Employment intensive sectors and locally trading sectors and activity

Employment intensive sectors include construction, retail, tourism, primary production<sup>21</sup>, sub-supply and other manufacturing. They are primarily locally trading and are mature, well developed sectors. Digitisation, 'green' and design are likely to have a disruptive impact on many of these sectors, offering significant opportunity for enhanced productivity, innovation and sustainable job creation. They are sectors upon which many other sectors in the economy rely, and therefore, their competitiveness has a wider beneficial impact across the economy.

	<b>Enhancing the productivity and innovative capacity of locally trading and employment intensive sectors</b>	
6	<p>Develop and implement a programme to target a broader cohort of small enterprises in these sectors (and operating within state aid guidelines) to deliver improved productivity, innovation and competitiveness, including for example the use of innovation vouchers, establishment of Skillnets, management development, mentoring, peer-to-peer networking, lean initiatives and awareness raising.</p> <p><i>The recommendations relating to broader business environment and cost competitiveness are directly relevant.</i></p>	DJEI & relevant actors

<sup>21</sup> Primary production is critical to achieve the ambition for Ireland’s agri-food sector – See also Food Wise 2025, Department of Agriculture, Food and the Marine

**Key drivers transforming sectors**

Digital technologies, the green agenda and the use of design have a pervasive impact across all sectors and enterprises in the economy. They can deliver substantial and transformative change, create new opportunities for innovation and growth and deliver enhanced productivity and sustainable jobs.

**Digital**

	<b>Ireland a digital economy hot-spot within Europe</b>	
7	<p>Ireland will achieve a leadership position as a digital 'hot-spot' in Europe in the adoption and use of advanced ICTs across all aspects of the enterprise economy and the public sector, including initiatives as part of EU's Digital Agenda for Europe, and we will:</p> <ul style="list-style-type: none"> <li>▪ leverage on our core strengths in enterprise in ICTs (incl. supply chain management; business process outsourcing; manufacturing processes; data analytics; software development; etc.)</li> <li>▪ strengthen our ICT RD&amp;I capabilities;</li> <li>▪ stimulate adoption of technologies across the enterprise base, leveraging expertise within HEIs and public research institutes;</li> <li>▪ meet three quarters of demand for high level ICT skills through domestic supply of graduates by 2018;</li> <li>▪ ensure a favourable regulatory, IP and data security environment;</li> <li>▪ ensure the availability of ubiquitous fast speed broadband by 2020; and</li> <li>▪ use public and private partnerships with enterprise and the research community to facilitate technology and market 'test-bedding' to contribute to addressing grand challenges through innovative use of ICTs to develop new products, services and solutions.</li> </ul>	Whole of Government

**Green technologies**

	<b>Taking policy actions to achieve our EU commitments and to leverage our natural resources by 2030</b>	
8	<p>We will build on our many advantages and will enhance our reputation internationally as a sustainable and green economy, and will:</p> <ul style="list-style-type: none"> <li>▪ enhance our RD&amp;I capabilities and stimulating start-ups and growth in green/clean technology enterprises;</li> <li>▪ stimulate increased focus by enterprises on investing in improving energy efficiencies and minimising waste (including through initiatives such as Lean) and delivering on corporate social responsibility objectives;</li> <li>▪ address barriers and ensure mechanisms to realise the potential from investment in energy sourced from renewables are efficient and effective;</li> <li>▪ implement Food Wise 2025, published in July 2015, with a strong emphasis on environmental sustainability;</li> </ul>	Whole of Government

	<ul style="list-style-type: none"> <li>▪ encourage sustainable approaches to spatial development and planning; and</li> <li>▪ progress smart city-region initiatives (which also leverages ICT capabilities).</li> </ul>	
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**Design**

	<b>Leveraging the potential of design</b>	
9	Building on the Year of Design 2015, we will roll-out a strategy for increasing the application of design across the enterprise sector, including initiatives to increase the use of design-thinking and its application in, and potential to, stimulate innovation within SMEs including manufacturing and services activities.	DJEI

**Enhancing overall enterprise performance**

We will focus on realising the potential of the whole of enterprise to contribute effectively to Ireland’s future economic growth by transforming operations, enhancing productivity and embedding innovativeness.

We will optimise the contribution from entrepreneurship, from Irish owned enterprises by supporting a more aggressive scaling agenda, from locally trading entities by accelerating productivity growth and competitiveness, and from our FDI as key contributors to Ireland’s economic development and national enterprise policy objectives.

We will deliver an integrated approach to enterprises, ensuring that the range of services on offer from a range of agencies and organisations is coherent and aligned.

We will build on the capabilities and expertise developed in undertaking enterprise related programme evaluations to embed a culture of evaluations within DJEI and the enterprise development agencies and to ensure a continuous feed-back loop to inform effective policy decisions and interventions.

	<b>Strengthening our entrepreneurship ecosystem in an international context</b>	
10	Implement the National Entrepreneurship Strategy to achieve a 25 percent increase in the rate of start-up, survival and scaling of new businesses in Ireland. The National Competitiveness Council will monitor Ireland’s entrepreneurship ecosystem and assess national performance against international comparators across a range of key indicators and report to the Minister for Jobs, Enterprise and Innovation on an annual basis.	DJEI/Whole of Government

	<b>Delivering a coordinated approach to attracting mobile entrepreneurs and emerging companies</b>	
11	Establish Ireland as a leading Start-up location for internationally mobile entrepreneurs through developing and promoting the Ireland value proposition that packages the elements to position Ireland as a leading European location for start-ups and fast growing businesses including: the funding environment; IP framework; structured access to Enterprise Ireland's overseas network and its market-led innovation programmes in commercialisation, technology development and diffusion and in internationalisation, marketing and leadership; an enhanced visa regime and extension of the tech visa to other areas of unmet demand in high skilled areas; and place and quality of life attributes etc.	DJEI/ EI/ IDA and DJE
	<b>Growing our Irish owned enterprises to scale</b>	
12	Support a greater number of Irish owned enterprises to grow to scale at an accelerated rate, beyond their current turnover levels. This will require a tailoring of interventions to meet the specific needs of the scaling enterprise, with the objective of delivering to Ireland's enterprise policy objectives to grow exports and employment.	EI
	<b>Attracting, expanding and sustaining Foreign Direct Investment</b>	
13	Implement the Policy Statement on Foreign Direct Investment in Ireland, and deliver on the IDA strategy <sup>22</sup> to attract and sustain investments that contribute to our national enterprise policy objectives.	DJEI/ IDA/EI
	<b>An integrated and collaborative approach to supporting enterprises</b>	
14	Deliver an integrated approach to meeting enterprise needs, ensuring that the range of services on offer across the development agencies as a whole is aligned and coherent to business, in areas such as linkages, entrepreneurship, leadership and management development, sectoral ecosystem development, and trade and investment promotion. This includes agencies of other Departments such as Bord Bia in relation to food companies, Fáilte Ireland in relation to tourism, and of entities such as the LEOs, BICs, LEADER and IoTs in relation to small firms and start-ups nationally and regionally.	DJEI and others
	<b>Embedding a system of evidence based policy development to maximise economic impact arising from state intervention</b>	
15	In the immediate term: <ul style="list-style-type: none"> <li>▪ undertake an evaluation/review of Ireland's trade and investment promotional activities overseas as part of the overall system to stimulate trade and investment; and</li> </ul>	DJEI

22 Winning - Foreign Direct Investment 2015-2019, IDA Ireland, 2015

	<ul style="list-style-type: none"> <li>using the concept of developmental evaluation, identify an appropriate intervention in the short term and undertake an ex-ante review (An example might include the proposed clustering initiatives or grand challenges approach).</li> </ul>	DJEI
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## Developing and attracting talent for the 21<sup>st</sup> century

### Skills development and education and training

Our ambition is that Ireland will be internationally renowned for its talent, for its highly skilled and adaptive people, equipped with the higher order capabilities required in the 21st century workplace and for its openness to continuous learning. Our people are our primary asset and can differentiate Ireland’s competitive positioning, deliver high levels of productivity and innovativeness. We aim to develop our own people through the education system, to embed a culture of workplace learning and to create an environment that attracts talent from overseas to live and work here. It is important too that we optimise opportunities for participation in the workplace. Access to quality, affordable childcare is pertinent in this regard and the options and recommendations set out in the report of the IDC working group established by the Department of Children and Youth Affairs is being considered by Government<sup>23</sup>.

The Department of Education and Skills is developing a National Skills Strategy and Enterprise 2025 will inform the process from the perspective of future enterprise needs. No assessment of resource implications for the National Skills Strategy and/or for ongoing development of the apprenticeship system has been undertaken during the development of Enterprise 2025.

	Education and training for the 21st century	
16	<p>Develop a National Skills Strategy to ensure alignment between the future skills needs of the workplace and the education system, so that individuals progressing from our education and training systems are equipped to adapt to the work environment of the future, taking into consideration the following areas in particular:</p> <ul style="list-style-type: none"> <li>higher order skills, attuned to the increased need for strategic and creative capabilities, and project and risk management capabilities to manage in uncertain and more complex working environments;</li> <li>integration and clear career progression through the education and training system - promoting alternative pathways and recognition of prior learning and experience so as to progress along the qualifications ladder; and</li> <li>developing alternative modes of delivery including online offerings, an integrated digital-enabled system, and a wider range of accreditation of learning in particular for the workplace setting.</li> </ul>	DES

<sup>23</sup> Report of the Inter-Departmental Working Group – Future Investment in Childcare in Ireland, Options and Recommendations for Government, Department of Children and Youth Affairs, July 2015

17	Double investment and participation in workplace learning and development by enterprises over the period to 2020.	DJEI, DES, Agencies
18	Launch regional skills fora being developed under the DES, to facilitate employer engagement with the education and training system at all levels to enable local delivery of skills needs identified in the regional context.	DES
19	Strengthen the mechanisms and metrics for ensuring delivery on the skills needs identified at sectoral and occupational level through the Expert Group on Future Skills Needs and SOLAS and develop further the communications mechanisms between the EGFSN and higher education and further education and training institutions to respond to identified shortages.	DJEI, DES
20	Develop the new apprenticeship system on an ongoing basis to cover the broad range of skills needed for the economy to ensure the system is resourced to adapt to the changing needs of the workplace and employers over the coming decade.	DES

### Future ways of working

Technological and work organisation changes are having profound implications for how people do their job, how they learn and shape their career pathways, from where they work including for example homeworking and teleworking<sup>24</sup>, and how employers organise their activities. There is a need to both strengthen our understanding of new ways of working and policy implications for employees and employers and to ensure we have the required flexibility to succeed for the future.

	Future ways of working	
21	Develop new partnership approaches at enterprise level, based on industrial relations that encourage participative approaches to securing the sustainability of the business and that provides for continuous learning and upskilling for workers to respond to the competitive demands to increase productivity and adaptability.	DJEI, DES
22	Ensure that in the context of future ways of working our employment legislation and labour relations architecture remains fit for purpose and is grounded on evidence-based research and data collection on new forms of work, workplace innovation, workplace learning etc., and takes account of the impacts on individuals and enterprises and of the policy implications arising.	DJEI

### Leadership and management capability

Strong leadership is critical to drive the growth, innovation and adaptability required of the successful enterprise over the coming decade. Strong leaders are essential to drive our scaling agenda and to raise the profile internationally of our highly innovative Irish owned enterprises. Managers and leaders will increasingly need to motivate an empowered employee, to harness

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<sup>24</sup> Investment in broadband infrastructures is also relevant – refer to Action 54

the capabilities of a multi-disciplinary, multi-cultural and sometimes dispersed workforce. Our evidence shows that management capability is the primary driver of a successful company – at whatever scale.

	<b>Deliver a demonstrable uplift in leadership and management capability across the enterprise base</b>	
23	Achieve a demonstrable uplift in business leadership skills to drive innovation and internationalisation across a broader cohort of enterprises, and in management capability across the enterprise base, so that all firms have the potential to achieve a one-step-up to higher business performance and growth, using the most appropriate intervention to deliver to the specific needs of the enterprise, scale and stage of development.	DJEI, DES, EI, IDA, LEOs

### Employment regulation

We will ensure that Ireland continues to create the environment for quality jobs, enabling flexibility without exploitation, and that we have a responsive regulatory environment that remains attuned to changing work organisation and society over the coming decade.

	<b>Employment regulation</b>	
24	<p>Ensure the Workplace Relations Commission can respond to the changing needs of the workplace, employees and employers over the next decade.</p> <p>A continued focus on:</p> <ul style="list-style-type: none"> <li>▪ ensuring that the statutory wage setting mechanisms remain responsive, flexible, fair, and fit for purpose; and</li> <li>▪ engaging proactively with EU initiatives and EU employment law to ensure that the EU legislative framework takes account of changes in work organisation and the evolving needs of the Irish economy.</li> </ul> <p>Review and update employment legislation and ensure it is fit for purpose for the coming decades.</p>	DJEI

### Enhancing employment prospects

There are a number of activation initiatives in place that remain relevant as set out in Pathways to Work 2015. As we achieve the ambition set out in Enterprise 2025, the demand over time for these initiatives will likely reduce. In a changing environment, we need to ensure that individuals are equipped with the relevant skills and competences that meet the needs of enterprise and reduces risk of unemployment.

	<b>Enhancing employment prospects</b>	
25	Mainstream best practice from focused labour market activation programmes within the further education and training and higher education system such as Springboard and Momentum to provide skills in demand by employers, improve transitions from education to employment, and reduce the risk of unemployment.	DES, DSP

## Optimising regional potential – place-making

There is a strong interdependence between place-making (the planning, development and creation of an attractive environment) and enterprise development. We will take the policy actions necessary to realise the potential of the regions throughout Ireland to contribute to, and benefit from, sustainable employment and growth over the next decade. We will ensure that our national policies can be translated effectively into regional action, informed by our understanding of regional strengths and potential.

We aim to harness regionally based actors to stimulate collaborative action to enhance the potential for employment creation in their locale<sup>25</sup>. Effective information sharing between enterprise and spatial policy development and implementation will be key to achieving our ambition.

Urban areas will play a key role in realising the potential of our regions throughout Ireland. The development of the National Planning Framework and Regional Spatial and Economic Strategies (informed by the Regional Action Plans and Enterprise 2025) will take account of the role that regional growth centres can play in Ireland's future economic development. We need also to remain aware that the international visibility and reputation of our capital city is crucial for the continued attraction of FDI, entrepreneurship, tourism and talent. Dublin, as Ireland's main national access point is a key attractiveness factor for *any* ultimate location in Ireland and IDA Ireland has a strong regional focus in its recently published strategy.

Ireland has the potential to see regional unemployment rates no higher than one percentage point away from the national employment rate by 2020.

	Realising the potential of our regions	
26	Develop and publish the National Planning Framework (the successor to the National Spatial Strategy) to set out the spatial forward planning framework and overarching principles, including a clear urban policy that reinforces the importance of Dublin as our Capital city and of other city regions throughout the country, and that informs strategic national investments (with regional impact) and priorities over the coming decade.	DECLG
27	Roll out the Action Plan for Jobs at regional level (NUTS III areas).	DJEI

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<sup>25</sup> This includes a broad range of actors, including the development agencies (EI, IDA, Údárás na Gaeltachta), Local Enterprise Offices, Local Authorities, Western Development Commission, Business Chambers and associations and others

28	<p>Support the development of regional collaborative initiatives among private and public sector actors in the regions that promote innovation and productivity growth through competitive funding calls over the period to 2020. It is envisaged that the funding calls will attract some matching funding from other regional or private sources. The three funding areas include:</p> <ul style="list-style-type: none"> <li>▪ €5 million focused on community driven enterprise initiatives;</li> <li>▪ €5 million focused on providing additional funding to LEOs on foot of innovative proposals specific to their region; and</li> <li>▪ €40 million to support significant projects to improve or leverage identified enterprise capability in the region.</li> </ul> <p>Competitive calls for proposals will be informed by the Regional APJs, with the first tranche of the regional fund launched in 2015 to stimulate collaborative action and novel approaches to harness regional assets with a view to realising potential and accelerating growth.</p>	DJEI/EI
29	<p>Develop the Regional Spatial and Economic Strategies (RSES) led by DECLG, in conjunction with the Regional Authorities, DJEI and others, with a strong focus on creating competitive regions in which enterprise and entrepreneurship can succeed. The RSESs will provide an overarching framework for the creation of new places with attractive characteristics and infrastructures to stimulate enterprise investment and to realise economic potential.</p>	DJEI, DECLG
30	<p>Formulate and implement Local Economic and Community Plans to maximize the potential of local areas and guide local authority action to contribute to the collaborative development of strong regional economic growth centres.</p>	Local Authorities
31	<p>Strengthen the role that HEIs will play within their regions for a strengthened and richer industry liaison system to stimulate greater engagement with enterprise (and SMEs in particular) across a broad agenda including innovation, knowledge sharing and dissemination, peer networking and entrepreneurship with the aim of accelerating enterprise growth.</p>	DES, DJEI, HEA, EI, IDA
32	<p>Prioritise place-specific infrastructure deficits that are impacting negatively on the attractiveness of our city regions for enterprise investment. This will include orienting the Public Capital Programme toward investments that support business needs and targeting European investment/development funding over the 2015-2025 period.</p>	DPER, DTTAS, DECLG, DJEI
33	<p>Roll out a 5-year €150 million capital investment programme to help attract more foreign investment and jobs into each region. This programme will include investments over the coming years in building advanced manufacturing and office facilities in Sligo, Tralee, Castlebar, Galway, Dundalk, Limerick, Athlone, Carlow and Waterford.</p>	IDA

## Embedding innovativeness in our enterprises and systems

Successful enterprises are those that innovate. Innovation enables enterprises to differentiate their product and services offerings, to develop new ways of reaching customers and markets, to disrupt existing business and revenue models, and to improve processes, systems and organisational structures. Innovation plays a crucial role in creating competitive advantage, enhancing productivity and ultimately increasing profitability so that a company can reinvest in its future growth.

Since the early 2000s the State has invested significantly in developing Ireland’s RD&I infrastructures and capabilities. Investments in scientific excellence; in developing highly qualified researchers that meet the needs of our innovative enterprises; in driving collaborations and linkages between our research centres and enterprise; are key ingredients for Ireland’s future economic development and growth.

The Government will adopt a new Strategy for Science, Technology and Innovation later this year and will set out specific actions. From the perspective of enterprise, we aim to build on our investments and achievements to date, increasing enterprise RD&I activity and leveraging state investments for competitive advantage.

	Enhancing innovation in enterprise	
34	<p>Bring forward a successor to the Strategy for Science, Technology and Innovation, which will underpin the development of Ireland as an innovation economy, built on excellence in strategic areas of research, on market-driven translation into commercial opportunities of the technology and research capabilities and on entrepreneurship. Key elements of innovation policy over the coming decade will include:</p> <ul style="list-style-type: none"> <li>▪ building on existing research capacity and infrastructure, ensuring that a broad base of support is in place across the full continuum of research and including at the higher (closer to market) Technology Readiness Levels;</li> <li>▪ exploring the options for a cross government ‘grand challenges’ approach that ‘creates’ a market for innovative products and services and addresses specific national priorities;</li> <li>▪ using the State’s circa €8.5 billion procurement budget to stimulate innovation in SMEs to develop solutions to meet the needs of the public sector including through rolling-out further Small Business Innovation research (SBIR) initiatives;</li> <li>▪ ensuring that Ireland’s Intellectual Property (IP) framework remains fit for purpose and stimulating an increase in activity by enterprises across all forms of IP;</li> <li>▪ promoting innovation in services and business processing with measures tailored to the unique characteristics of this activity;</li> <li>▪ ensuring supply of researchers and human capital to underpin an innovative enterprise sector; and</li> <li>▪ promoting greater collaboration between enterprise and HEIs including increased mobility between industry and academia.</li> </ul>	DJEI

35	Establish appropriate governance and institutional arrangements to facilitate a cross government approach to implementation of the SSTI so as to create a dynamic, cohesive and well-functioning national innovation eco-system that delivers economic and societal impact and outcomes.	DJEI
36	Achieve a 30 percent increase in the number of Irish and foreign owned enterprises with innovation activities of scale, and broaden the base of RD&I activity in Irish based enterprises generally.	EI, IDA, LEOs
37	Monitor our R&D Tax credit offering to ensure it has an appropriate impact on R&D activity in enterprise, is internationally competitive, is attuned to evolving enterprise sectors and activities, is not overly complex or administratively burdensome on business and to ensure clarity and consistency for enterprise.	DoF
38	Drive participation in EU and international research programmes in areas of relevance and impact to the economy and enterprise base so that we achieve the ambitious target of €1.25bn for Horizon 2020, led by the national support network based in Enterprise Ireland.  Deliver the ex-post evaluation of the FP7 programme and ex-ante evaluation of Horizon2020 so that we take the necessary and appropriate actions to maximise potential and impact towards the target of €1.25bn drawdown by 2020.	DJEI/EI

**Innovativeness – a mind-set, culture and way of working**

The concept of innovativeness envisages a pervasive innovation, implemented by routine across operations, involving a high degree of entrepreneurialism amongst the management team and extending across the workforce as a whole. It involves strong leadership, management capability and a culture of problem-solving and learning within the workplace – elements that relate to the absorptive capacity of the enterprise.

We know that in general, absorptive capacity in SMEs needs to be strengthened and that we need to encourage more foreign owned entities based here to engage in RD&I activities.

We already have initiatives in place that can be rolled out to a wider enterprise base that will set the context for innovation, for new product, process and services development. For example, an enhanced understanding is developing of the pervasive nature and end-to-end business implications of Lean principles that is fundamentally about a change in culture and ways of working that harnesses people’s creativity and problem-solving capabilities.

	<b>Facilitating a culture of innovativeness across all of enterprise</b>	
39	Develop new approaches appropriate to the scale and capability of the firm to boost the absorptive capacity of the enterprise base and to stimulate a shift in culture and mind-set including: <ul style="list-style-type: none"> <li>▪ the introduction of Lean principles and approaches to problem solving and including manufacturing and services activities;</li> <li>▪ broadening the reach of programmes catering to management development for the innovative enterprise; and</li> <li>▪ stimulating cross industry-research community mobility through for example, secondments and placements.</li> </ul>	EI, LEOs, IDA  EI, LEOs  EI, IDA

40	Ensure our regulatory environment remains sufficiently agile in an increasingly disruptive innovative environment to accommodate sectoral development and emerging areas of potential.	Various
41	Strengthen the role of NSAI as a crucial element of Ireland’s sectoral and innovation ecosystem, by promoting the benefits of standards to the widest cross section of industry and ensuring that its focus is aligned with Enterprise Policy 2025 and informed by the future needs of enterprise.	DJEI, NSAI
	Raise awareness of the importance of standards in the context of RD&I and encourage more companies to participate in the standards setting process.	NSAI, EI

## Connectedness – internationally, nationally and regionally

As a small open economy Ireland and its people need to be connected internationally.

Our trade relations, policies and strategies, our connections to global value networks, our approach to developing higher visibility clustering activities and openness and engagement in all aspects of the digital economy are pertinent and critical to enterprise growth and economic performance.

### Trade, tourism and investment

Irish enterprise and Government have successfully realised the growth targets set out in the Trade, Tourism and Investment Strategy (2010- 2015). The following elements will be reflected in a successor to that strategy to achieve specific objectives over the next five years and beyond.

	Realising our ambition	
42	<p>Deliver on our trade, tourism and investment potential over the next five years, to include:</p> <ul style="list-style-type: none"> <li>▪ growing the exports of Irish owned firms by 6-8 percent per annum to 2020;</li> <li>▪ securing 900 new FDI project investments over the period to 2019 as set out in IDA strategy (2015);</li> <li>▪ increasing tourism revenue to €5 billion and overseas visitor numbers to 10 million annually by 2025 as set out in the tourism policy statement (2015);</li> <li>▪ broadening the geographic market focus of the Irish owned enterprise base beyond UK markets to reach exports of between €5 and €6 billion by 2020;</li> <li>▪ further diversifying Ireland’s export markets to the Eurozone and high growth markets;</li> <li>▪ increasing the number of Irish owned firms that export to more than one country;</li> <li>▪ increasing the export intensity of the indigenous firms to between 55 and 60 percent from just over 50 percent currently; and</li> <li>▪ further diversifying the sectoral profile of exports overall.</li> </ul>	DJEI, DTTAS & relevant State Agencies

	<p>We will also implement:</p> <ul style="list-style-type: none"> <li>▪ a more structured approach to dissemination of in-market intelligence garnered by the agencies and the embassy network that maximises opportunities;</li> <li>▪ a beginning to end process to optimise Irish interests in negotiation and implementation of EU trade and investment agreements, in particular, the Transatlantic Trade and Investment Partnership, China, Japan, India and ASEAN; and</li> <li>▪ six-monthly reviews of Ireland’s trade, tourism and investment performance and of the operational effectiveness of Local Market Plans.</li> </ul>	<p>EI, IDA, other Agencies &amp; DFAT/embassy network</p> <p>DJEI &amp; relevant Depts &amp; Agencies</p> <p>DFAT, DJEI &amp; relevant Depts &amp; Agencies</p>
43	Bring forward a successor to the Trade, Tourism and Investment Strategy 2010-2015 that incorporates the elements set out above.	DFAT, DJEI & other Depts & Agencies

**Global value networks (GVNs)**

	<b>Deepening our connections with global value networks</b>	
44	<p>Through the development agencies, strengthen Ireland’s engagement in GVNs, leveraging our distinctive enterprise base of globally diverse foreign owned multinationals and innovative Irish owned enterprises, in order to realise accelerated growth, value add and economic impact.</p> <p>Focus on opportunities to capture increased value to Ireland from services GVNs, including the services component within manufacturing and contract manufacturing services.</p>	<p>DJEI &amp; Enterprise Agencies</p>

**Clustering**

Clustering activity involves the interaction between enterprises, HEIs, researchers and other players in the eco-system that ultimately delivers mutual gain above what might otherwise be achieved from ‘going it alone’. Clustering activity in Ireland can be described as nascent relative to other developed economies which have used clustering initiatives as an effective policy tool for enterprise and economic development for many years. This initiative may provide a vehicle through which the grand challenges approach can be progressed.

	<b>Sustained clustering activities of scale and with international visibility</b>	
45	Design a new approach for a National Clustering Initiative in the key sectors of strength building on the existing initiatives through competitive calls that seed cluster activities, to stimulate more extensive clustering on a sustained basis, at a scale and depth that delivers to enterprise policy goals and has visibility and stature in an international context.	<p>DJEI &amp; Enterprise Agencies</p>

### Data-intensive world

Reaping the benefits of the increasingly digital world requires that we provide a robust and well balanced regime for the digital economy and engage effectively with our EU partners.

	Ensuring a digital friendly regime	
46	<p>Ensure that Ireland sustains its leadership position in providing an internationally recognised robust and well balanced regime for the digital economy that protects individual interests while facilitating enterprise development and growth including, through:</p> <ul style="list-style-type: none"> <li>▪ updating our intellectual property legislation to ensure that it is fit for purpose in the digital age;</li> <li>▪ close engagement with our EU partners in relation to the advancement of the EU's Digital Single Market agenda in all of its aspects;</li> <li>▪ ongoing and regular review of global and international developments and timely policy responses if/as needed; and</li> <li>▪ the full implementation of Ireland's data protection roadmap, and National Broadband Plan.</li> </ul>	DJEI, DCENR, DJE, DPC

### Excelling in getting the basics right

We will continue to focus on enhancing the broader business environment and on ensuring that:

- we have a comprehensive and competitive funding environment to support our enterprises' ambitions through from pre-start up to maturity;
- our tax regime remains internationally competitive (and especially relative to our nearest trading partners), supports productive activity and provides certainty, stability and predictability for enterprise and entrepreneurs<sup>26</sup>;
- we drive productivity growth as a national imperative;
- we focus on maintaining relative cost competitiveness and on driving competition across all sectors of the economy; and that
- we invest in, or enable investment in productive infrastructures.

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<sup>26</sup> Department of Finance engaged in a consultation process in June 2015 in relation to tax and entrepreneurship

### Finance for growth

Delivering on the actions set out below will require engagement with a broader range of stakeholders including the enterprise development agencies and other bodies.

47	<b>Establishing a robust funding environment for enterprise</b>	
	Drive competition in the lending market and the provision of the widest range of services to meet the needs of internationally trading and innovative enterprises.	DoF
	Work with financial institutions (both nationally and internationally) to facilitate the creation of a comprehensive and competitive funding environment to support our enterprises' ambitions through from pre-start up to maturity including to: <ul style="list-style-type: none"> <li>▪ Stimulate greater equity and quasi-equity investment;</li> <li>▪ Encourage the use of capital markets in the funding eco-system for indigenous companies, in areas such as early stage listings;</li> <li>▪ Strengthen the capabilities of Irish owned enterprises in terms of strategic use of funding options for growth; and</li> <li>▪ Promote new alternative sources of funding such as peer-to-peer lending and ensure our regulatory regime is fit for purpose and adaptive to new and alternative forms of funding/financing.</li> </ul>	DoF, DJEI, DPER, EI
	Engage with European and International financial institutions and funding streams - ensuring that we optimise the potential to enhance Ireland's funding environment over the coming years.	DoF, DPER, DJEI, EI

### A growth friendly tax regime

48	<b>We will continue to maintain our commitment to transparency and stability and on enhancing the environment for business investment, innovation and entrepreneurship</b>	
	We will continue to implement the changes set out in the tax roadmap for Ireland's tax competitiveness , and will: <ul style="list-style-type: none"> <li>▪ maintain the competitiveness of our Corporation Tax Rate;</li> <li>▪ continue to expand Ireland's tax treaty network; and</li> <li>▪ implement a Knowledge Development Box in 2016, within the guidelines agreed at various international fora.</li> </ul>	DoF
	We will continue to enhance the relative competitiveness of the taxation system (and especially relative to our nearest trading partners), and will: <ul style="list-style-type: none"> <li>▪ support entrepreneurship, start-ups and the competitiveness of Irish SMEs that includes a range of aspects such as investment incentives, CGT etc.;</li> </ul>	DoF

	<ul style="list-style-type: none"> <li>▪ address disincentive effects within the tax and social welfare systems affecting the self-employed, taking into account, and with regard to, the differing treatments between self-employed tax payers and PAYE workers within a stated timeframe; and</li> <li>▪ ensure that existing initiatives are subject to periodic review to enhance effectiveness and optimal levels of take-up.</li> </ul>	
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### Productivity

49	<b>We will drive productivity growth as a national imperative and support enterprises to get to international benchmarks relevant to their sectors</b>	
	The National Competitiveness Council will place a high priority on the measures required to drive productivity growth in the economy over the next five years, as we seek to grow jobs, improve standards of living, and international competitiveness.	DJEI/NCC
	Sustain the focus on productivity performance in deliberations on wage increases and emphasise the need, from a sustainability and competitiveness perspective, for wage growth to be underpinned by productivity.	DJEI, DPER
	<i>Many of the other recommendations set out in this strategy are directly relevant to driving productivity growth including those relating to education and skills, science, technology and innovation, infrastructure investments, interventions at the level of the firm focused on capability building etc.</i>	

### Cost competitiveness

50	<b>We will take the actions necessary to improve Ireland’s relative cost competitiveness in the areas that are within our control</b>	
	<b>Energy</b>	
	Position cost competitiveness as well as environmental considerations at the centre of Ireland's national energy policy and its negotiating position in relation to environmental and energy policy at EU level, with improvements in Ireland’s environmental sustainability done at least cost.	DCENR
	Bring forward measures to secure the optimal functioning of the North-South Integrated Single Electricity Market so that future energy needs are met at least cost.	CER

	<b>Waste</b>	
	Promote private investment in and competition between cost effective, commercially viable, integrated and diversified waste treatment options across the waste management spectrum through the framework of the new regional waste management plans <sup>27</sup> . These options include energy recovery thermal facilities, which can play a role in meeting renewable energy targets.	Local Authorities
	Implement the EU's environmental obligations in the most cost effective manner, and ensure that Ireland's negotiating position on EU waste policy issues is informed by enterprise competitiveness as well as environmental considerations.	DECLG, DJEI
	<b>Property</b>	
	Drive the efficient and productive use of land, discouraging land-hoarding and helping to resolve the current housing and commercial property challenges, including consideration of mechanisms such as an annual site value tax.	DECLG, DoF
	Fully implement the Construction 2020 Strategy, including creation of a coherent policy response and regulatory certainty around planning and zoning, to ensure delivery of an appropriate mix of commercial property.	DoT and other relevant Departments
	<b>Working with enterprise to increase efficiencies</b>	
	Develop initiatives to ensure that businesses are aware of how best to: <ul style="list-style-type: none"> <li>▪ reduce their energy use; and to</li> <li>▪ exploit waste management reduction processes and technologies.</li> </ul>	DJEI, SEAI, Enterprise Agencies, Business Rep Bodies
	<b>Business regulation</b>	
	Drive the system-wide initiative to reduce the regulatory administrative burden for businesses under the guidance of the High Level Group on Business Regulation.	DJEI and other Govt Departments
	Raise awareness and better inform business of the regulatory and compliance information applicable to them informed by a review of the functionality of the web portal <a href="http://www.businessregulation.ie">www.businessregulation.ie</a> .	DJEI and other Govt Departments

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27 Refer also to A Resource Opportunity, Waste Management Policy in Ireland, DCENR, 2012 which sets out how Ireland can minimise waste while maximising the resources we can recover from waste (resource efficiency)

### Competitive markets

In terms of the future competition policy agenda, from an enterprise perspective, it is important that progress is achieved on competition issues where they affect business input costs, including the regulated sectors, such as energy, waste and the construction sectors. Implementation of this agenda lies involves the CCPC and also the relevant sectoral regulators.

	<b>Strengthening competition</b>	
51	<p>Drive and promote competition across all market sectors of the economy to inter alia address barriers to entry and create a level playing field for all entities.</p> <p>In this context, set benchmarks to be achieved on a continuous basis in areas for particular action.</p>	<p>DJEI/CCPC, Relevant Govt Depts/  Sectoral Regulators</p>

### Infrastructures

Much of the investments in infrastructures will be made by the private sector over the coming decade. We will continue to focus on putting in place the appropriate policy framework to stimulate investor confidence in long-term projects (e.g. to provide regulatory and planning certainty).

52	<b>Delivering sustainable, reliable and quality transport networks, water, energy and telecoms</b>	
	Starting with the Government's new Infrastructure and Capital Investment Plan to 2021, prioritise productive investment in line with the needs of enterprises competing internationally, paying particular attention to the areas set out below where funded from the exchequer.	DPER
	<p><b>Energy:</b></p> <p>Increase electricity interconnection to the North, Britain and continental Europe and diversify gas sources and supplies (installation of a twin gas pipeline at Moffat and new gas storage facilities) to ensure security of supply.</p>	DCENR
	<p><b>Water services:</b></p> <p>Deliver on Ireland's potential to make water services a competitive advantage in the attraction of mobile investment and the development of indigenous enterprise in water intensive sectors in the longer term.</p> <p>Ensure that Irish Water prioritises the medium and longer term investments required to address enterprise needs and drives efficiencies in water service delivery - particularly by addressing urgent service constraints in Dublin, and ensuring sufficient capacity in large regional urban centres. Priority for required capacity and quality levels should be given to enterprise and development zone locations.</p>	<p>CER, DECLG</p> <p>CER, DECLG</p>

	<p><b>International and internal access:</b></p> <p>In <b>air transport</b> implement the 2015 National Aviation Policy to help secure new investment in Ireland's international connectivity, and provide regulatory certainty. In particular investment will need to accommodate the trend towards larger aircraft, and development of Dublin as a hub airport, both of which can help ensure competitive direct access for business passengers, tourists, and freight to long haul destinations in existing and emerging growth markets;</p> <p>In <b>sea transport:</b> Implement the 2013 Ports Policy framework such that the future needs of maritime connectivity are periodically reviewed; that access to a wide range and frequency of port services at competitive prices is ensured; and that deeper water facilities are provided at Irish ports that can accommodate the international trend towards larger shipping vessels;</p> <p>In <b>land transport:</b> Invest to maintain, renew and improve the network to efficiently address congestion and to address bottlenecks in key urban centres; increase use of Intelligent Transport Systems; improve connections to key seaports and airports; underpin identified national and regional spatial planning priorities (including improving access between main urban centres where required and providing access to poorly served regions); and support large-scale employment proposals<sup>28</sup>; and</p> <p>Ensure that our regulatory environment is capable of facilitating the provision of safety focused, cost optimal services.</p>	<p>DTTAS, CAR</p> <p>DTTAS</p> <p>DTTAS, NRA, NTA</p> <p>DTTAS</p>
	<p><b>Telecommunications:</b></p> <p>By 2020, under the National Broadband Plan, secure investment in the provision of high speed and competitively priced broadband services to ensure that no region of the country is disadvantaged<sup>29</sup>.</p> <p>Promote and facilitate the provision of the resilience and low latency that enterprises and particularly data intensive activities require, and work with the market to accommodate ever increasing transatlantic data capacity through direct international fibre connections to Europe and the US<sup>30</sup>.</p> <p>Take a proactive approach to the shaping of the European Commission's plans to further develop the digital single market, and ensure that EU spectrum policy continues to allow Ireland discretion to use the spectrum innovatively and efficiently.</p>	<p>DCENR</p> <p>DCENR</p> <p>DCENR, COMREG</p>

28 Refer also to Investing in our Transport Future – A Strategic Investment Framework for Land Transport, Department of Transport, Tourism and Sport, August 2015

29 The draft Broadband Intervention Strategy, published in July 2015, sets out the Government’s proposals to ensure that all business and citizens will have access to high speed broadband services by 2020. Commercial investment in broadband infrastructure and services since the National Broadband Plan (2012) has exceeded expectations

30 It was announced in April 2015 that funding has been secured for a high-speed fibre-optic network between New York and County Mayo. Construction is scheduled to begin in the summer of 2015, and be ready for use in early 2016

## Effective execution

### Policy interconnectedness – cross government commitment

Enterprise Policy does not sit in isolation – other Departments have a key role to play in delivering on the differentiated eco-system – aware of, and informed by, the evolving needs of enterprise in an intensely competitive global environment. Moving toward a systems approach, DJEI plays a key role as the advocate for enterprise.

The strategic actions set out in this report require the commitment of government departments and a consistent, coordinated approach to ensuring a robust, agile policy system remains in place - with sustainable job creation and growth at the core as the means by which better standards of living can be achieved by all. We will take a whole of government approach to progressing implementation of Enterprise Policy 2025, building upon the existing Action Plan for Jobs process.

	A systems approach to delivering on our ambition	
53	Ensure a whole-of-government approach to progressing implementation of Enterprise 2025 to establish a top three competitiveness position, to boost productivity and innovation in the public and private sectors, to sustain full employment and to improve living standards over the longer term.	DoT, Gov Depts

### Engaging effectively with the EU

Ireland’s policies are informed (to a great extent) by EU. It is important that such discussions are informed by our enterprise policy objectives. We need to ensure that the priorities for Ireland's ongoing engagement with EU in a range of fora are informed by this Enterprise Policy 2025 and that there is a continuous feed-back loop to facilitate and inform any policy flexibilities required in response to new and emerging external influences, while maintaining a focus on Ireland's longer term enterprise policy objectives.

	Engagement with EU	
54	To ensure that Ireland remains an attractive place for Irish owned enterprise to grow, and to win new investment in high-technology areas from foreign and Irish owned enterprises for Europe, we will pursue an active policy at EU level to accelerate progress on: developing the EU Single Market for goods and services; European competitiveness and reform; on international trade agreements to provide access to international markets, including the completion of the TTIP; and to influence progress at WTO level in the removal of all barriers to trade with the aim of achieving positive outcomes.	Gov Depts

### Data on enterprise performance

In a context of a changing environment for enterprise generally, there is an emerging lack of data in certain areas important for measuring enterprise policy objectives and outcomes.

	Strengthening data collection	
55	Strengthen data collection and monitoring of metrics in relation to the expanded range of international business expansion modes, including ODI and M&A with a particular focus on determining more accurately the economic impact of such activities within the Irish economy.	DJEI, CSO
56	Adapt existing surveys to include relevant questions that will serve to increase our understanding of where and how cross cutting technologies and disciplines are being applied and where and how they add value (ICTs, Green and Design). Such analysis would serve to inform the development of policies and facilitate ongoing monitoring of developments.	DJEI, CSO

## Measuring success

Measurement itself is complex and no one measure shows the complete picture. At the same time, it is important that we focus on a number of overarching metrics complemented by firm level performance metrics to assess economic and enterprise performance. The Action Plan for Jobs 2015 has placed a heightened focus on impact and outcomes arising from the broad range of actions it sets out<sup>31</sup>. The National Competitiveness Council (NCC) undertakes a comprehensive analysis and benchmarking of Ireland’s business environment against international comparators on an annual basis<sup>32</sup> across a range of competitiveness indicators, broadening analysis to encompass for example the environment for entrepreneurship and clustering.

There are many factors that impact upon an individual firm’s performance, and therefore upon the aggregate of enterprise performance and its contribution to Ireland’s future economic growth. As a small open economy, global factors are outside of our control. Nevertheless we need to have visibility on whether or not the actions being taken by government and its agencies to support the development of enterprises and actions taken by enterprises themselves are making a difference.

Tables 1 through 4 set out the suite of metrics by which we will measure success, both in terms of overarching national outcomes and at the level of the enterprise. They are informed by existing strategies including the Spring Economic Statement, EU2020 strategy, agency strategies and international norms (where applicable). The metrics set out a baseline (most recent) performance and future potential to 2020. Additional relevant metrics will be set out in the forthcoming National Skills Strategy and the forthcoming Strategy for Science, Technology and Innovation, informed by the ambition set out here in Enterprise 2025.

<sup>31</sup> See Action Plan for Jobs 2015, Annex 2 Strategic Ambitions, Examples of Impact Metrics and Action Linkages

<sup>32</sup> Ireland’s Competitive Scorecard 2015, National Competitiveness Council/DJEI

**Table 1** Overarching national outcomes

	Overarching national outcomes	Metric	Current Performance	Potential by 2020	Baseline year
<b>1</b>	<b>Employment &amp; regional potential</b>				
	2.180m in employment by 2020	Annual Employment Growth (000's)	1,958.7	2,180	Q2 2015
	71 percent of 20 to 64 year olds will be in employment by 2020	Employment Rate 20-64 year olds	67	71	2014
	Optimising regional potential	Regional unemployment rates will not be higher than 1 percentage point than national unemployment rate	<3%	<1%	Q1 2015
<b>2</b>	<b>Export-led growth</b>				
	Increasing exports	Grow Irish owned exports by 6-8% per annum by 2020 <sup>33</sup>	€16.3bn	€24-€26bn	2014
<b>3</b>	<b>Innovativeness</b>				
	Increase Investment in RD&I	GERD percentage of GNP	2.05%	2.5%	2012
	Innovative Culture	SMEs introducing product or process innovations (as % of all SMEs)	35%	45%	2015
<b>4</b>	<b>Talent</b>				
	Highly skilled workforce	Tertiary education attainment 30-34 year olds	52.2%	60%	2013
<b>5</b>	<b>Competitiveness</b>				
	Rank in top 3 most competitive small countries in the world	World Bank Doing Business (189 economies)	13 <sup>34</sup>	1-3	2015
	Sustaining the profitability of Irish owned firms (across all sectors)	Gross operating surplus as % of turnover (CSO Business in Ireland) (7.3% in 2010)	9.6%	10%	2012
<b>6</b>	<b>Living standards</b>				
	Restoration of living standards to pre-recession levels and maintain an above average position relative to the Euro-19 over the period to 2025 and beyond	GNI per capita in Purchasing Power Standards (Eurostat) (EU-19 =100)	98	105	2013

<sup>33</sup> Excludes foreign owned entities within EI portfolio, e.g. food

<sup>34</sup> Other small countries currently ranked ahead of Ireland include Singapore (1), New Zealand (2), Hong Kong (3), Denmark (4), Finland (9) and Iceland (12)

Table 2 Enterprise level performance metrics and future potential

	Firm level activity	Metric	Current Performance	Potential by 2020	Baseline
<b>1</b>	<b>Sustainable enterprise</b>				
	Increase no. of start-ups by 25 percent	No. of enterprise births per annum	12,551	15,700	2012
	Increase no. of enterprises surviving to 5 years by 25 percent	Survival rate of start-ups (5 years)	6,513	8,141	2007-2012
	Increase in scaling activity	EI Firms >€3m sales out of Ireland	860	1,100	2013
		EI Firms > €20m sales out of Ireland	225	300	
		EI Firms >€100m sales out of Ireland	54	90	
<b>2</b>	<b>Export growth &amp; employment</b>				
	Increase Irish-owned export intensity	Irish owned exports as % of sales	51%	55%-60%	2014
	Broadening base of Irish owned exports	Beyond UK markets by €5-€6 billion	€10bn	€15-€16bn	2014
	Increase EI employment	Increase employment by 32,000	180,000	212,000	2014
	Increase in IDA employment	Increase employment by 35,000 by 2019 (extrapolated to 2020 at 42,000)	175,000	216,000	2014
	Increase FDI investments	900 new IDA supported investments by 2019 (extrapolated to 2020 at 1,080)	779	1,080	2010-2014
<b>3</b>	<b>Innovation</b>				
	Increase in RDI active firms	No. of EI R&D Active Firms >€100k	858	1,000	2011-2014
	Increase in RDI active firms of scale	No. of EI R&D Active Firms >€1m	139	220	2013
	Increase in FDI R&D investment	Win cumulative €3bn in RDI investment by 2019 (extrapolated to 2020 at €3.6 bn)	€2.5bn	€3.6bn	2010-2014
	Increase in Foreign Owned RDI active firms	120 additional companies to engage in R&D by 2019 (extrapolated to 2020 at 145)	330	475	NA
<b>4</b>	<b>Connectedness</b>				
	Increase no. of enterprise collaborations by a third	No. of enterprise collaborations with HEIs/PROs (note different basis for metric applies by agency)	839 (EI)	1,200	2013
			900 (SFI)	1,125	
	Increase in Direct Economic Expenditures by 25 percent	ABSEI Direct Economic Expenditure (Irish materials and Irish services)	€28.8bn	€36bn	2013
	Innovative SMEs collaborating with others	Innovative SMEs collaborating as a percentage of SMEs	35%	45%	2015
<b>5</b>	<b>Talent and skills development</b>				
	Double investment in training and upskilling for employees	Expenditure on training per employee	€543	€1,100	2013

The following indicators on productivity and export performance are useful in monitoring comparative performance on an ongoing basis.

**Table 3 Key monitoring indicators**

	Monitoring Indicators	Metric	Current Performance	Potential by 2020	Baseline
1	Productivity	GVA per person engaged for indigenous sectors	€40,900 (80% of UK & Germany, 60% of Denmark levels)	Equivalent to UK & Germany	2011
2	Productivity	Output per hour worked, total economy, percentage change at annual rate <sup>35</sup>	2.5%	Sustain an EU top 5 position	2008-2013
3	Export led growth	% Share of World Trade Manufacturing	0.62%	36 <sup>th</sup> world ranking	2014
4	Export led growth	% Share of World Trade Services	2.70%	11 <sup>th</sup> world ranking	2014

The importance of full employment being on a sustainable basis is a core objective of Enterprise 2025. Table 4 sets out broad indicators of what constitutes a sustainable balance of employment across exporting and non-exporting sectors of the economy based on the pattern of economic performance generally over the past 15 years<sup>36</sup>. Multiple factors influence the sectoral distribution of employment so the metrics presented here should be treated as indicative only. However, movement outside of the ranges set out below would trigger more in-depth analysis.

**Table 4 Monitoring sustainable employment growth**

	Monitoring Indicators	Metric	Sustainability metric
1	Employment in domestic activity	Proportion of the labour force employed in the seven sectors that comprise the 'domestic' component of the economy <sup>37</sup>	45% to 47%
2	Gap between employment in domestic & exporting activity	Difference between the proportion of the labour force employed in domestic sector activity and the proportion employed in exporting activity <sup>38</sup> (% point differential)	<22%

35 Sectors contribute variously to total economy productivity performance. Monitoring of the total economy performance should be accompanied by analysis at a sectoral level

36 See Enterprise 2025 Background Report, available at <https://www.djei.ie/en/Publications> for details

37 Incl. construction, wholesale and retail, transport and storage, accommodation and food services, professional, scientific, technical, administrative and support services, and other services, QNHS

38 For the purposes of this particular analysis, exporting activity employment is estimated using the CSO QNHS data, specifically NACE codes B-E (Industry) and J (Information and communication), and data from DJEI's Annual employment Survey (Internationally Traded Services)

## Appendix I

### The evolution of sectors - where opportunities will come from

Global drivers of change produce new challenges, new solutions and new opportunities on an on-going basis. Successful companies and sectors are those that focus on market opportunities, assess changing customer needs, identify gaps in the market, and understand the competitor landscape and implications of disruptive forces. We know that technologies are having a pervasive and transformative impact on sectors and on enterprises.

The headline employment potential does not reflect the changing dynamic within and across all sectors. It is not possible to be definitive about exactly where jobs will come from in the future, what the 'new sectors' might be and/or how occupations themselves might evolve. What is currently evident is the range of new areas of growth potential (more often than not termed as 'sectors') that are of relevance to Ireland's enterprise policy.

#### *Global market segments create new areas of growth for a range of sectors.....*

- aging populations, environmental concerns, increased affluence in emerging markets, increasing digitisation and changing consumption behaviours are driving growth in markets such as healthcare, wellness, food, green technologies as well as for more customised products and services across a range of sectors, for example tourism; and
- 'new' high growth global market segments such as healthy aging, smart cities, smart grids and sports nutrition present considerable opportunities. These end markets present opportunities for a range of sectors including ICT, engineering, financial services, healthcare services, tourism - and for enterprises to capture leadership positions either as individual entities or through effective collaboration.

#### *New sectoral opportunities will arise in a number of ways...*

- within existing broad sectors there is a range of sub-sectors and niche market opportunities including for example: mobile applications, functional foods, digital games, aviation leasing, diagnostic products - and this is a constantly evolving 'space';
- as a business function (either as a shared services within a multinational company or outsourced to an external provider) including headquarters, customer technical support, clinical trial management, sales lead generation, IP management, business process outsourcing;
- as new global business models emerge (e-tailing, the sharing economy, freemium<sup>39</sup>, software as a service, blended education and learning services);
- at the blurring edges of existing sectors as convergence continues apace (e.g. nutraceuticals, combination health products, digital content, fintech, agtech, Internet of Things, etc.);
- as a result of capturing adjacent possibilities (or diversification) to draw on core expertise and capabilities to stimulate growth in new and emerging activities and enter new end

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<sup>39</sup> Freemium involves offering an online game or application free of charge while charging a premium for advanced features, functionality or related products and services

markets; for example, the transferability of capabilities and skills in textiles to composites (materials)<sup>40</sup>; and

- through smart specialisation strategies that facilitate entrepreneurial discovery and the emergence and early growth of new activities which are potentially rich in innovation and spill-overs<sup>41</sup>.

#### *Pervasive and disruptive technologies and trends*

- There are a number of technologies that are having a transformative impact across all sectors - primarily (although not exclusively) Information and Communications Technologies and sensor technologies).
- The environmental agenda requires a response from all enterprises, and provides opportunity for many in terms of technologies, services and solutions.

Appendix Table 1.1 below sets out a brief overview of some of the emerging areas of opportunity and demonstrates that many are an evolution of existing sectors and/or a combination of areas in which we have capability and/or an end market that can be served by any number of sectors in which we have strengths.

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40 At the level of the enterprise, this might involve for example, a plastics firm diversifying from servicing the automotive industry toward biomedical applications - see case studies outlined in Making it in Ireland, Manufacturing 2020, Forfás, 2012

41 Policy Brief No 8, Smart Specialisation and the New Industrial Policy Agenda, Dominique Foray, European Commission, Innovation for Growth - i4g. Entrepreneurs are considered in the broadest sense to include innovative enterprises, research leaders in HEIs, independent inventors and innovators. Smart specialisation identifies priorities in terms of activities - based on the premise that the discovery process bridges present with future strengths of the economy

**Business models, sectors and activities, emerging market opportunities ....**

(in alphabetical order)

New area of opportunity	Brief synopsis	Building on existing capabilities
Agritech  Smart (precision) agriculture	<p>Smart agriculture (also known as precision agriculture) is the application of ICT to traditional agriculture to develop a smart agriculture capability, which can facilitate better productivity, yields, safety, and environmental sustainability, particularly in dairy farming. Smart agriculture captures and analyses data to help drive decision support systems to establish a systematic approach to managing on farm factors. It can be applied to, and enhance animal welfare, soil and grassland management, biodiversity, traceability and food safety, and ultimately an environmentally and competitively sustainable intensification of production.</p> <p>Smart agriculture has a particular relevance for Ireland in the context of the current major expansion of the dairy industry with the lifting of the EU's milk quota system. Ireland is also home to some of the world's leading food and technology companies. International population growth and growth of the middle class in emerging markets together with ageing populations are driving increased consumption of dairy proteins and creating higher demand for increased yields. Concerns about environmental sustainability and food safety create a need for increased monitoring capability.</p>	Information and Communications Technology  Data analytics  Cloud computing  Agri-food sector  Research infrastructures
Advanced manufacturing : 3-D printing/additive manufacturing	<p>3-D printing (or additive manufacturing) introduces a completely new approach to traditional manufacturing processes (which involve shaping, casting, moulding, forging, bending, cutting materials into their approximate shape) by building up the product layer by layer into a three dimensional form under digital control from a master design file. Powdered metals are melted using a laser layer by layer to create the final 3-D shape.</p> <p>This means extremely complex products can be made without the normal stresses and defects found in traditional manufactured objects. 3-D printing is currently being used in relatively specialised areas such as aerospace, and in small sizes and relatively small volumes. Over the medium term it offers the scope to customise at no incremental cost and produce fewer items at lower cost, than would be the case with assembly line production.</p>	Manufacturing  Irish Centre for Manufacturing Research

New area of opportunity	Brief synopsis	Building on existing capabilities
Aquaculture	<p>Aquaculture is the farming of aquatic organisms such as fish, crustaceans, molluscs and aquatic plants. It involves cultivating freshwater and saltwater populations under controlled conditions. Aquaculture is a labour intensive industry providing high value products; its expansion will result in job creation in peripheral coastal communities, and will drive the expansion of the seafood processing industry through increased raw material supply. In aquaculture there is strong global demand for both finfish (salmon) and shellfish (mussels, oysters).</p> <p>Ireland is well placed to increase its growth of these products, and needs to meet EU regulatory obligations set out in EU Environmental Directives (Natura Directives) in order to capture the full potential of the industry. Ireland's reputation in ICT can also reinforce trust in the Irish aquaculture stock, through the development of traceability systems to support food safety and trade.</p>	<p>Fish farming</p> <p>Seafood Processing</p> <p>ICT</p>
Big Data	<p>Big data is a broad term for data sets so large or complex that traditional data processing applications are inadequate. Data sets grow in size in part because they are increasingly being gathered by cheap and numerous information-sensing mobile devices, aerial (remote sensing), software logs, cameras, microphones, radio-frequency identification (RFID) readers, and wireless sensor networks. Challenges include analysis, capture, data curation, search, sharing, storage, transfer, visualisation, and information privacy. Real-time data and predictive analytics is relevant for a vast range of sectors and activities and informs effective decision making, increased efficiencies, reduced risk, spot business and consumer trends, facilitate the delivery of targeted and customised services and solutions etc.</p> <p>We have established a task force on Big Data to build on existing enterprise strengths to make Ireland a leading country in Europe in the area of Big Data and Data Analytics.</p>	<p>ICT, sensor technologies, analytics</p>
'Born Globals'	<p>A born global is a venture (predominantly a knowledge intensive, high technology enterprise) launched to exploit a global niche from the first day of its operations. It is international by design and tends to be relatively small with fewer financial, human and tangible resources compared to large multinational enterprises usually considered dominant in global trade and investment. It tends to adopt a differentiation strategy by developing designs and highly distinctive products that target niche markets, which may be too small for the tastes of larger firms.</p>	<p>Ireland's cluster of digital enterprises</p> <p>Dynamic city regions</p> <p>Broadband infrastructures</p>

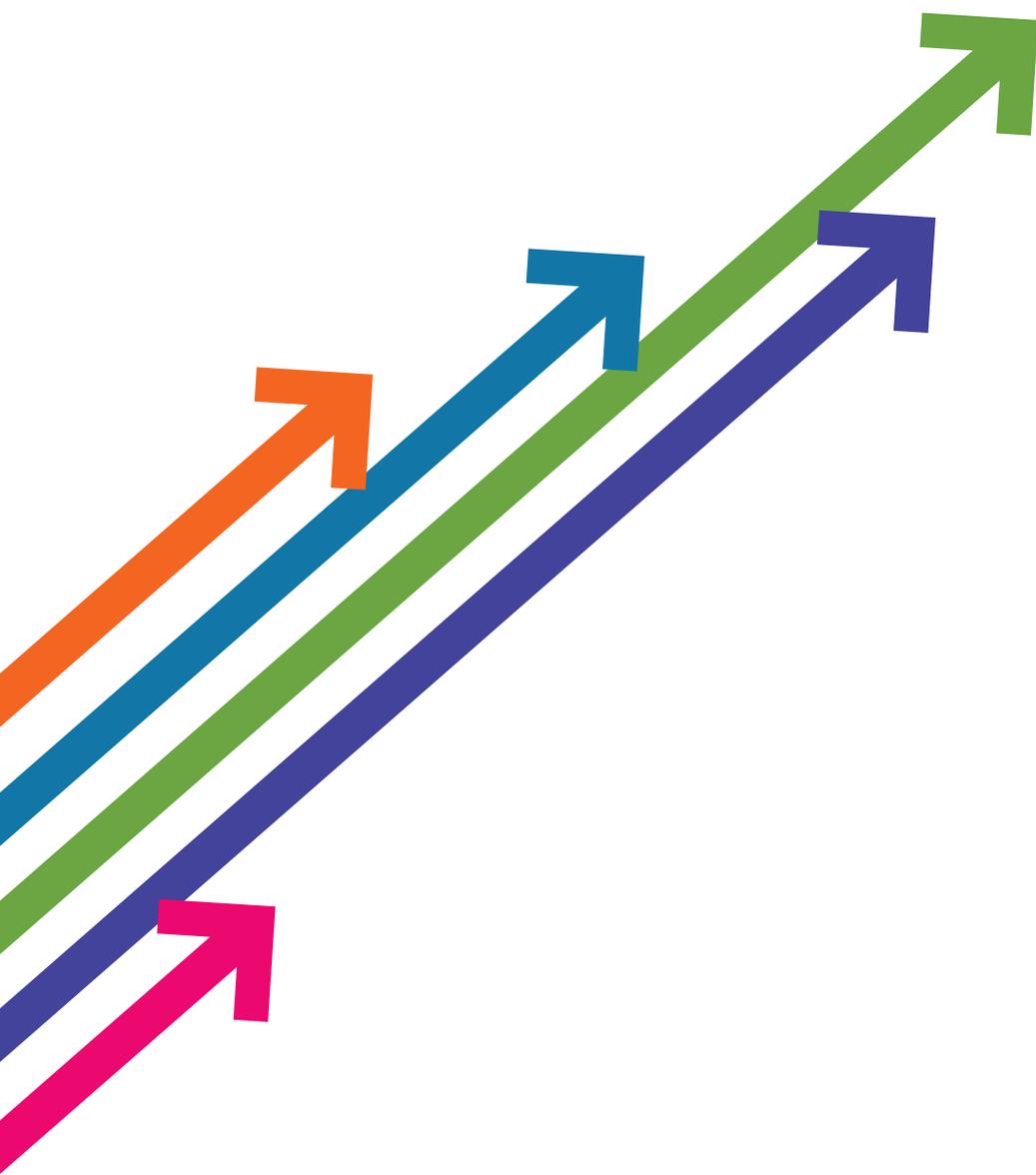
New area of opportunity	Brief synopsis	Building on existing capabilities
<p>'Born Globals' ctd</p>	<p>A growing number of these entrepreneurs and start-ups are willing to go anywhere to make a successful business and want to do it rapidly. Their global footprint is determined by access to financing, talent, innovation and proximity to clients – an ecosystem that facilitates the flow of knowledge, ideas and experience within a 'community'. They are drawn in the main to cities where these factors coincide.</p> <p>ICT allows them to process information efficiently and communicate with partners and customers worldwide at practically zero cost. While by their nature investments by these companies are smaller on average initially in terms of job numbers, the expectation associated with these firms is that they will grow rapidly from their new Irish base.</p>	
<p>Composites and advanced materials</p>	<p>New materials and processing methods e.g. smart, advanced and next generation materials, have the potential to revolutionise existing industries as well as to create new ones. Smart materials for example change their properties, their structure or composition, or their functions, and are mostly embedded in systems whose inherent properties can be favourably changed to meet performance needs.</p> <p>New ways of processing/forming or coating for an existing material will also enhance its characteristics, which can provide radical and major opportunities for existing and new manufacturing activities.</p> <p>New materials usually require the introduction of new manufacturing processes, skills, mensuration and quality assurance procedures, which in turn often require extensive investment in equipment and knowledge.</p>	<p>Complex manufacturing</p> <p>Medical Devices, pharma/bio engineering, food, packaging....</p> <p>Irish Centre for Composites Research</p> <p>Advanced Materials and Bioengineering Research Centre</p>
<p>eHealth (telehealth)</p>	<p>Europe at national as well as cross-border level is facing challenges such as ageing societies, chronic disease management, patient and professional mobility, and health professional shortages, that eHealth could help to improve. E-health provides a new method for using health resources- such as information, money and medicines, and is a recognised tool in enhancing the modernisation of national healthcare systems. The EU e-health sector includes large companies, but is particularly characterised by a very large number of SMEs.</p> <p>The development of connected health technologies requires a cross disciplinary approach involving many research disciplines and sectors. Enterprise Ireland proactively engages with clients across life sciences, software, and international services, and the research community in exploring opportunities in this end-market.</p>	<p>Advanced manufacturing in medical technologies</p> <p>Embedded software systems</p> <p>Wireless communications</p> <p>ICT/data analytics/Software</p> <p>Healthcare services</p>

New area of opportunity	Brief synopsis	Building on existing capabilities
e-tailing	<p>E-tailing is still in expansion mode and is a wide and open market where small, innovative companies can gain traction very quickly. Established makers of consumer products may take advantage of the e-tailing platform to tap into new markets. Some will engage with online virtual marketplaces such as e-Bay or Amazon tapping into huge aggregated traffic flows, while others will adopt their own online storefronts. The traditional 'bricks and mortar' retailer is adapting to the online channel and having to adjust business models and supply chain configurations. There are related developments and opportunities around secure e-payments, data analytics, digital marketing and logistics.</p> <p>E-tailing is having a significant impact in emerging economies, with China leading the way. China's broadband penetration is still only 30 percent but in 2011 it surpassed online sales in Japan, the UK and Germany.</p> <p>The growth of e-tailing poses challenges for town and city development and planning where the need for physical storefronts give way to increased demand for warehousing and other logistics.</p>	<p>ICT Internet technologies</p> <p>ICTs payments and security</p> <p>Retail</p> <p>Transport and logistics</p>
Fintech	<p>Identified in the IFS 2020 as an emerging area of potential for both Irish owned and foreign owned enterprises. Fintech involves the application of technological innovation to transform the financial services sector. The next generation of financial services business models, products and services is being shaped by the increasing significance of data and analytics, security and risk management, digitisation, enterprise mobility, ePayments and enhanced customer experience.</p> <p>Actions to realise the potential will be progressed through the IFS2020 implementation process.</p>	<p>Financial services</p> <p>Software engineering and technologies</p>
Geosciences	<p>Geosciences underpin the discovery of raw materials, water and energy resources critical to the world economy, within a context of increasing demand and diminishing supply. Ireland has many such resources, including Europe's largest zinc mine, untapped hydrocarbon resources in challenging North East Atlantic deep water environments, and a diverse geological framework with important seabed and groundwater resources, and a range of competencies in this field.</p> <p>DJEI through Science Foundation Ireland helps fund the Irish Centre for Research in Applied Geosciences (iCRAG), which carries out research to find and harness these resources in an environmentally sustainable way. The Centre's aim is to transform geoscience research in Ireland, and help deliver economic impact for a broad range of application areas and</p>	<p>ICT internet technologies</p> <p>ICT mobile technologies</p> <p>ICT/data analytics/Software</p> <p>Applied geosciences capabilities and research</p> <p>Mining &amp; Oil &amp; Gas Exploration</p>

New area of opportunity	Brief synopsis	Building on existing capabilities
Internet of things	<p>industries, applicable in Ireland and overseas.</p> <p>The Internet of Things can be described as the intersection between the ‘virtual’ (internet) world and our physical world, via ‘things’ or devices. These connected devices are enriching our daily lives, in everything from entertainment and home, to energy, transport, healthcare and diet.</p> <p>The Internet of Things is already delivering real benefits in almost every area. Remote sensors and monitoring devices are being developed that can help us with our fitness, health, energy management, diet and travel. They could help medics to remotely monitor intravenous drug delivery and test for diseases through ‘smart’ tattoos on the skin and help car manufacturers to create sensors that monitor and report on air quality within the car.</p> <p>There is a huge opportunity in the Internet of Things for Ireland. It’s predicted that between now and 2020, half of the business opportunities within the Internet of Things will be attributed to start-up businesses.</p>	<p>ICT mobile &amp; sensor technologies &amp; Internet</p> <p>Impacting....</p> <p>Medical devices; Agriculture; Healthcare and wellness; Transport and logistics; Energy management; Construction and ‘smart’ buildings</p>
Sharing Economy	<p>The sharing economy can be defined as online platforms that help people share access to assets, resources, time and skills. To date the sharing economy has been primarily dominated by peer-to-peer marketplaces (e.g. making your home available to others for holidays, couch surfing etc.) although it is a growing phenomenon within the B2B sector. It is likely that the sharing economy will present considerable disruption to already established markets and/or provide opportunities for traditional business to extend their business models. Examples include Airbnb, City Car Plug, Hailo Taxis.</p> <p>Given that the sharing economy is based on online platforms, there is also likely potential in terms of the development and/or management of such platforms and aspects such as personal verification, e-money, innovation in business models, data analytics, customer engagement and behavioural analysis etc., presenting opportunities for Ireland to attract investment and/or to stimulate entrepreneurship and start-ups that can quickly scale.</p> <p>Broader policy issues arise that relate to e.g. regulation, insurance, output measures etc. Further analysis is required to better understand the implications for existing and potential enterprise in Ireland.</p>	<p>ICT internet technologies</p> <p>ICT mobile technologies</p> <p>Regulatory environment</p> <p>Impacting...</p> <p>Hospitality,</p> <p>Transport</p> <p>Retail</p> <p>...likely others over time</p>

New area of opportunity	Brief synopsis	Building on existing capabilities
Smart Ageing	<p>'Smart ageing' is the intersection between the needs of older people and solutions offered by new technology and innovation that supports active and healthy ageing. Global and domestic demographic changes weighted towards the older age cohort, the increasing incidence of chronic diseases and disability, shift from hospital to patient centric care in the community, and increasing consumer wealth, are leading to increased demand for products and services catering specifically for older people. There is also a growing emphasis on the health and lifestyle market, focused on early diagnoses, prevention, and independent living. The EU's Horizon 2020 identified health, demographic change and well-being care as a grand challenge.</p> <p>Solutions and applications include health monitoring and diagnostic technologies, health informatics, self-care and diagnosis; telecare, connected health; food for health; assistive and remote technologies, both mechanical and electronic systems; and smart homes featuring sensor technologies, safety and security systems.</p> <p>There is potential to build Ireland as a preferred location for international companies seeking to research, develop and trial new approaches to addressing the challenges and opportunities for an ageing population, and optimise the commercial exploitation of scientific breakthroughs emanating from research centres and businesses in Ireland.</p>	<p>Medical Devices</p> <p>ICT mobile communications</p> <p>ICT sensor technologies</p> <p>Internet technologies</p> <p>ICT/data analytics/Software</p> <p>Business services</p> <p>Healthcare services</p> <p>Functional foods</p>
Space	<p>Ireland has developed a thriving space industry and research community in recent years, with a growing number of Irish companies developing products and services for the European Space Programme, courtesy of Ireland's membership of the European Space Agency (ESA), and that can be made available on the global market. Ireland's membership of the ESA has allowed Irish industry to develop highly advanced technologies with extremely high levels of performance and reliability required for space systems. Irish companies have demonstrated an ability to bring innovative technologies to the commercial space market, which in many cases have been developed in collaboration with Irish universities and research institutes. They have also shown a strong capacity to adapt space technologies for non-space markets such as aerospace, biomedical and telecommunications.</p> <p>Irish space companies cover a wide range of technology areas including: spacecraft avionics, electronic components, software for spacecraft control and human spaceflight, advanced materials and structures for satellites and launch vehicles, space propulsion, optoelectronic devices for satellites, and biomedical instruments for human spaceflight.</p>	<p>Advanced materials and processes</p> <p>Life and physical sciences</p> <p>Optics/optoelectronics</p> <p>Ground station systems and networks</p> <p>On board data systems</p> <p>Space systems software</p>





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