

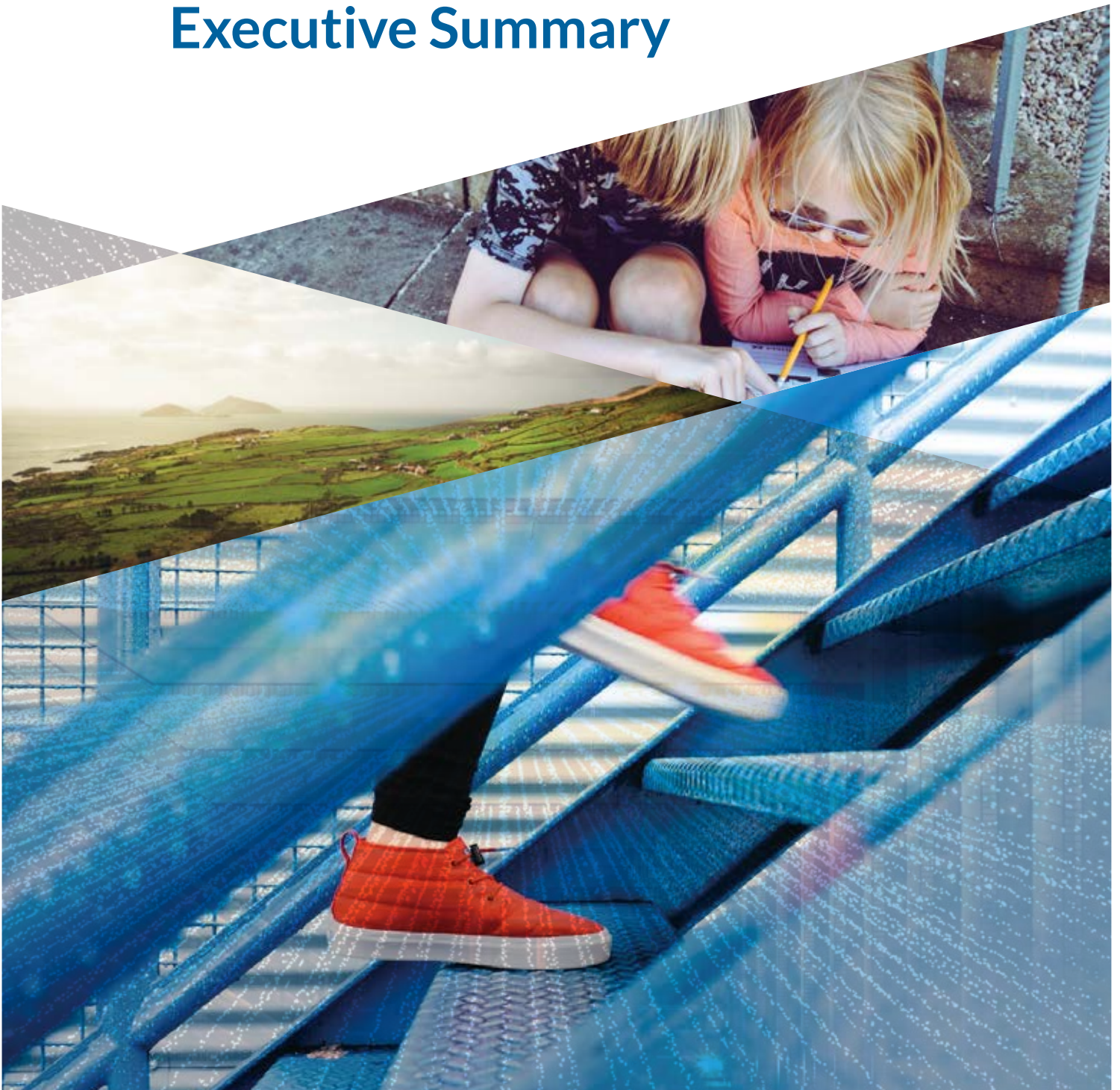


Rialtas na hÉireann
Government of Ireland

FUTURE JOBS IRELAND 2019

Preparing Now for Tomorrow's Economy

Executive Summary



Overview

Our economy is in a strong position having recovered impressively from the financial crisis and the subsequent recession. At its nadir in early 2012, the unemployment rate was 16% and almost 50,000 Irish people emigrated that year. Eight years on, Ireland can be proud of the progress made. The seasonally adjusted unemployment rate is down to 5.7% at the end of 2018, almost 2.28 million people are at work and involuntary emigration has ended.

However, there is no room for complacency. Significant vulnerabilities are evident in the domestic economy such as declining productivity levels in small-to medium-sized enterprises (SMEs). Infrastructural constraints, skills deficits and labour availability, as well as concentrations in some sectors and markets could, unless ameliorated, impede further progress. Internationally, Brexit, growing trade protectionism and the undermining of the rules-based international trading system could threaten our future economic welfare.

The Government is ambitious to build upon the gains we have made in recent years and to ensure our people enjoy higher standards of living and quality of life now, and into the future. Several interconnected Government initiatives are underway to reinforce this. [Project Ireland 2040](#) provides the framework for making Ireland a great place to live - and do business - through integrated spatial and investment strategies. [Global Ireland](#) will boost our international relations so that we can better influence our place in the world and targets an ambitious doubling of our overseas impact. Complementing these initiatives, *Future Jobs Ireland* will ensure our enterprises and workers are well placed to prosper in the rapidly changing global economy.

While the future is uncertain, it is clear that by 2025, our workers and enterprises will be operating in a changed economy. Technology continues to herald new ways of doing business and new economic opportunities. This presents challenges but also new possibilities - certain job roles will disappear or be redefined, and emerging job roles will require new and different skillsets. We must exploit and enhance Ireland's capability in cutting edge technological areas such as Artificial Intelligence, Augmented and Virtual Reality, Data Analytics, the Internet of Things and Blockchain to facilitate and help companies co-innovate and develop solutions in application areas such as MarineTech, Connected and Autonomous Vehicles, Advanced Manufacturing, AgriFoodTech, and Smart Cities. Our natural environment is changing and it is imperative that we play our role in tackling climate change. The move to a low-carbon economy will radically change sectors of the economy and present new opportunities to those firms on the cutting edge of this transition.

It is time to shift our enterprise and jobs focus to ensure quality jobs that will be resilient into the future. This is not just a question of more jobs, instead it is focused on enabling the creation of highly productive, sustainable jobs. **It is also time to shift the way we work if we are to sustain and increase labour market participation.** *Future Jobs Ireland* will focus on five pillars in the areas of:

- embracing innovation and technological change;
- improving SME productivity;
- enhancing skills and developing and attracting talent;
- increasing participation in the labour force; and
- transitioning to a low carbon economy.

Future Jobs Ireland 2019 sets out core ambitions for each of these pillars, each backed up by a set of specific deliverables representing crucial steps toward achieving each ambition. These deliverables are built on engagement, including through the national Future Jobs Summit held in November 2018 which brought Government and stakeholders together to discuss the pillars within *Future Jobs Ireland*. The deliverables outlined here for 2019 represent the first stage of *Future Jobs Ireland* which will be built on in subsequent annual editions.



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Embracing Innovation and Technological Change

Pillar 1 Embracing Innovation and Technological Change

We are now experiencing a fourth industrial revolution where the impact of digitalisation is advancing in new and unanticipated ways. This will entail fundamental changes in many occupations that exist today, and the creation of entirely new roles in the workplace. Ireland's economic success in the past relied on our ability to transform and adapt. Digitalisation requires investment by enterprises to innovate and by our people to learn new skills.

We must prepare now so that our enterprises and people are ready to exploit opportunities. This means encouraging greater investment by enterprises in research, development and innovation. It also requires new strategies to guide the digital transition as well as forming dedicated teams to exploit opportunities that will arise.

The Government's 2018 Research Prioritisation under Innovation 2020 will be instrumental in supporting Future Jobs. The ICT priority areas have been broadened and now include Robotics, Artificial Intelligence (AI) including Machine Learning, Augmented Reality and Virtual Reality (AR&VR). The Sustainable Food Production and Processing priority area now includes climate smart and environmentally sustainable food systems while other priority areas have been updated to reflect decarbonising, the energy system and sustainable living. In manufacturing, the priorities reflect advanced and smart manufacturing, processing technologies and novel materials.

New immersive technologies such as virtual, augmented and mixed reality are transforming how we view and experience the world and fundamentally changing and enhancing products and services with digital content. These disruptive technologies impact on many industries and markets, enhancing real-world views, captivating audiences and shifting perspectives, with applications from storytelling, gaming and entertainment to arts, culture and tourism, from architecture and engineering, to medicine, retail, journalism and education.

Increasing computing power and Big Data are accelerating the development of Artificial Intelligence. Tasks which traditionally required human judgement and thinking are being replicated and automated. Already AI is impacting transport, social media, security, finance and gaming and is anticipated to affect many more areas in future. The EU is developing coordinated actions across EU member states to ensure that Europe becomes a global leader in AI. Ireland is well positioned to be a leader in this area and will develop a National AI Strategy which will ensure our research centres, businesses and the public sector exploit AI technologies to secure greater levels of productivity and wellbeing.

Future Jobs Ireland will deliver on the following ambitions through a range of deliverables over the coming years.

- Ambitions** Position Ireland as a leading pioneer in technology adoption by investing in demonstrator sites and developing enabling frameworks and standards
- Implement a strategic approach to maximise the benefits from digitalisation
- Position the Public Service to be a leader in technology adoption and innovation

Establish Top Teams to realise opportunities presented by technological changes and the move to a low carbon economy

Increase the capacity of SMEs to engage in research, development & innovation

Incentivise SMEs to invest in new technologies

Develop Transition Teams to assist workers and sectors likely to be most challenged by our changing economy

In 2019, deliverables to realise these ambitions aim to:

Deliverables Form **Top Teams** in Artificial Intelligence, GovTech and offshore renewables, in consultation with stakeholders, to progress these areas of opportunity for Ireland

Embrace **digital transformation of public services** to make them more efficient and responsive to businesses' and citizens' needs

Further develop **eHealth** opportunities

Issue a further call under the **Disruptive Technologies** Innovation Fund and develop further incentives to innovate

Develop Ireland as a centre for developing and **testing new technologies** such as Collaborative Robotics (Cobotics), Augmented/Virtual reality (AR/VR), micro & nano-electronics, photonics, Internet of Things, energy systems, and advanced materials by, for example:

- extending the EI/IDA Irish Manufacturing Research Additive Manufacturing technology centre to include cobotics and AR/VR,
- progressing the Advanced Manufacturing Centre,
- expanding the Tyndall National Institute,
- commencing the development of a National Centre of Excellence on High Performance and Nearly Zero Energy Buildings
- commencing the development of a National Design Centre

Deliver **policy initiatives** including:

- an Industry 4.0 Strategy,
- a National Digital Strategy and
- a National Artificial Intelligence Strategy

Develop our knowledge of the impact of economic transition on vulnerable workers and sectors with a view to developing a strategy for **Transition Teams** to support such workers

The full range of 2019 Deliverables is listed in detail in the Future Jobs Ireland 2019 full report. Each deliverable has been assigned a leading Department and an implementation timeframe which can also be found in the full report.

Targets

Future Jobs Ireland will target a significant increase in Gross Expenditure on Research & Development intensity from 1.4% to 2.5% of GNP by 2025 (target to be reviewed in the context of the development of successor to *Innovation 2020*).

We will also aim for substantial increases in the share of SMEs introducing product or process innovations and with marketing or organisational innovations.



**Improving SME
Productivity**

Pillar 2 Improving SME Productivity

A driving goal of Government policy is to increase the living standards and quality of life of our people. Increasing productivity levels is necessary to achieve this goal. For individual firms, market success and growth, particularly in international markets, depends on higher productivity translating into improved competitiveness. However, we have seen a decline in productivity in SMEs in recent years.

While Innovation is a critical driver of improving productivity, more must be done. *Future Jobs Ireland* will deliver on the following ambitions through a range of deliverables over the coming years.

- Ambitions**
- Diversify our enterprise base to ensure the Irish economy is more resilient and adaptable
 - Promote enterprise productivity as a driver of economic prosperity
 - Enhance business framework conditions for firm creation and growth
 - Encourage enterprises to exploit technology and business process improvements to increase productivity
 - Improve leadership and management skills in SMEs
 - Strengthen linkages between SMEs and multinational enterprises and our tertiary education institutions

In 2019, deliverables to realise these ambitions aim to:

- Deliverables**
- Increase the impact of **Local Enterprise Offices (LEOs)**
 - Increase SME take-up of Enterprise Ireland (EI) and LEO **productivity supports**
 - Develop a **new investment funding** facility to assist indigenous Irish companies in scaling their businesses
 - Encourage the growth of **clusters** where enterprises can grow and help each other and deepen **linkages** between foreign and Irish owned businesses
 - Drive productivity growth in the **construction** and **retail** sectors
 - Strengthen the impact of the **National Competitiveness Council** through its role as the National Productivity Board
 - Deliver a new **female entrepreneurship** strategy

- Targets**
- Future Jobs Ireland* will target an annual average increase in multifactor productivity (which captures how efficiently we use our labour and other resources) in the domestic sectors of the economy by 1% per year to 2025.

A young child is shown in profile, wearing a costume made of cardboard boxes. The child is holding a clear glass filled with water. The background is a light, neutral color. The text is overlaid on the left side of the image.

**Enhancing
Skills and
Developing
and Attracting
Talent**

Pillar 3 Enhancing Skills and Developing and Attracting Talent

Our people are our greatest resource and our unique competitive advantage. For our businesses and economy to succeed in a transformed and competitive global economy, our managers and workers must have up-to-date skills and continue to train and develop *throughout* their careers.

We must ensure that all our people have accessible upskilling options and that our education and training providers offer relevant and up-to-date courses which meet the needs of enterprises and workers. In addition, Ireland is competing with other countries to attract talented people and this competition will grow.

Future Jobs Ireland will deliver on the following ambitions through a range of deliverables over the coming years:

- Ambitions**
- Provide high quality and timely education and training responses to evolving enterprise and skills needs
 - Encourage lifelong learning and upskilling
 - Foster participation in apprenticeship and traineeship programmes
 - Compete successfully for international talent
 - Improve career guidance and advice provision

In 2019, deliverables to realise these ambitions aim to:

- Deliverables**
- Engrain **lifelong learning** and offer career enhancing opportunities to workers
 - Promote **flexible training** options
 - Match training to the skills needs** of workers and enterprises
 - Ensure our **economic migration** system is responsive to our labour market needs
 - Provide **training in emerging technologies**
 - Develop a programme for **SMEs taking part in training and upskilling** for the first time
 - Introduce a new online marketplace for **apprenticeship** opportunities
 - Offer **career advice to workers** through the Public Employment Service

- Targets**
- Future Jobs Ireland* will target a doubling of participation in lifelong learning by 2025. We will also aim to reach, and if possible exceed, the EU average in terms of the percentage of the population with at least basic digital skills and target a substantial increase in investment in training in Irish enterprises.

A grayscale photograph of three business professionals in an office setting. A man in a suit and tie stands on the left, smiling. A woman in a blazer stands in the center, also smiling. A man with glasses and a beard sits at a desk in the foreground, looking at a laptop. The image is overlaid with a semi-transparent blue filter and decorative gold and black geometric shapes on the left and right sides.

Increasing Participation in the Labour Force

Pillar 4 Increasing Participation in the Labour Force

Despite recent performance the Irish labour market has persistent structural weaknesses in certain areas. The cost and availability of high-quality Early Learning and Care continues to be a barrier to parents, and particularly women, joining the labour force. As people are living and working for longer, we must have a labour market welcoming of older workers.

Future Jobs Ireland is engaging with these structural challenges by easing barriers to entry into the workforce including investment in Early Learning and Care, providing tailored activation and training supports and generating attractive employment opportunities.

Future Jobs Ireland will deliver on the following ambitions through a range of deliverables over the coming years:

- Ambitions**
- Encourage participation in the labour force through high-quality Early Learning and Care
 - Foster participation in the labour force through flexible working solutions
 - Improve incentives to participate in the labour force
 - Encourage adult dependents and beneficiaries of other full-time welfare payments to engage in activation, enter and/or stay in the workforce
 - Undertake promotional campaigns to encourage greater levels of participation in the labour force

In 2019, deliverables to realise these ambitions aim to:

- Deliverables**
- Develop guidelines for employers on **flexible working options**
 - Conduct a **national consultation** on extending flexible working options
 - Promote work experience for **young people**
 - Improve employment outcomes for **people with disabilities**
 - Develop a **return to work service** for particular groups as part of the Public Employment Service
 - Provide incentives for **people who wish to work longer**

- Targets**
- Future Jobs Ireland* will target a substantial 3 percentage point increase in overall participation rates for people aged 25 to 69 years to 78% by 2025 with higher increases for females and older people.



**Transitioning
to a Low Carbon
Economy**

Pillar 5 Transitioning to a Low Carbon Economy

To meet Ireland's climate goals, a step change in decarbonising the economy is required over the next decade. This will see entire sectors of the economy undergo radical changes and create new types of enterprises and jobs.

Government and enterprise have important roles to play to encourage, develop and adopt innovative technologies, products and services that increase efficiencies, reduce waste and deliver sustainable development as economies across the world transition to low carbon, bio and circular economies. To achieve this goal, *Future Jobs Ireland* will complement the *All of Government Climate Plan*.

The development of low carbon, bio and circular economies also present commercial opportunities to companies across many sectors in Ireland, in addition to the desired environmental benefits.

Future Jobs Ireland will deliver on the following ambitions through a range of deliverables over the coming years:

- Ambitions** Become a leader in adopting and developing standards in the low carbon economy
- Realise the opportunities for economic activity and job creation
- Leverage Ireland's natural resources, enterprise strengths and innovative capacity to be a global leader in the circular and bio economy

In 2019, deliverables to realise these ambitions aim to:

- Deliverables** Review the **regional dimension** of the economic and employment implications of the transition to a low carbon economy
- Position Ireland as a centre in research, development and innovation, for **smart grids, buildings and renewable technologies**
- Deliver a **national deep retrofit programme** for existing housing stock.
- Promote **electric vehicles** and achieve over 10,000 electric vehicles on the road by the end of the year
- Identify barriers to the development of the bioeconomy
- Identify **opportunities for certification, standards** and labels, e.g. for bio-based products
- Develop and implement **green procurement policy**

- Targets** Future Jobs Ireland will target the completion of some 250,000 residential retrofits. We will target an increase in the share of total energy use from renewable resources to 20% by 2025. We will also set ambitious targets, including for CO2 reductions, in the All of Government Climate Plan, which will seek to make Ireland a leader in responding to climate disruption.



Implementation

Implementation and Next Steps

In recognition that *Future Jobs Ireland* is a medium-term framework, high level targets for 2025 have been set for each pillar. More discrete metrics and targets have also been established for each deliverable.

Progress will be monitored with published progress reports every six months.

Throughout the course of 2019, Government Departments will work collaboratively with stakeholders to develop further deliverables for inclusion in *Future Jobs Ireland 2020*.

gov.ie/futurejobsireland

Prepared by the Department of the
Taoiseach and the Department of
Business, Enterprise and Innovation



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Government of Ireland