

Addressing NI's Competitiveness Challenges



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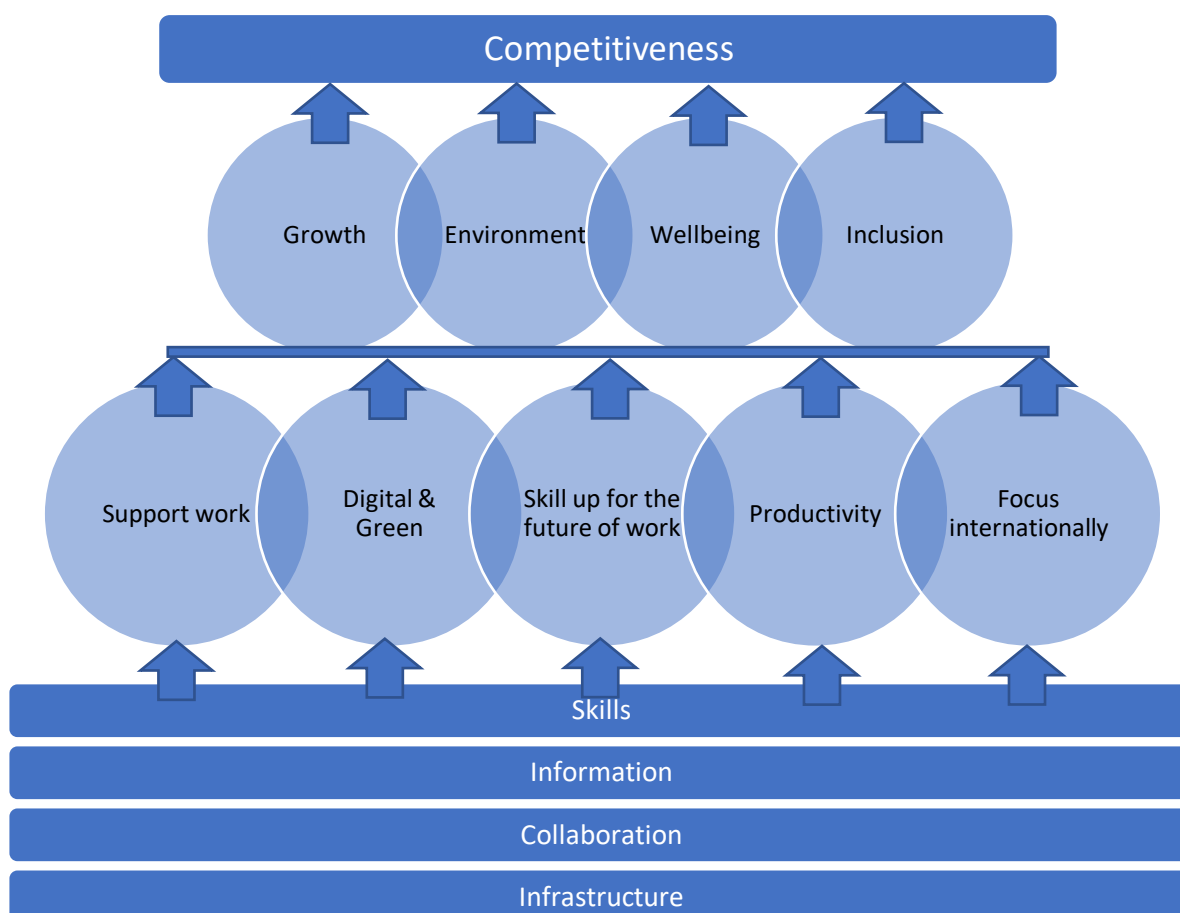
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Executive Summary

- E1. The Competitiveness Scorecard published in 2020 diagnosed the range and depth of the various competitiveness challenges facing the NI economy. This publication builds upon that diagnosis to provide a range of policy ideas to address those challenges with the aim of reversing the long-term decline in competitiveness. These ideas were generated by the research team, informed by research on other successful competitor nations and by consultation with experts in each area from across NI.
- E2. The research identified five main pillars and policy interventions within each that could meaningfully improve NI's competitiveness over the next decade. A range of cross-cutting issues (skills, information, collaboration and infrastructure) that are necessary in order to underpin the pillars were identified. When considered together, the pillars and crosscutting issues provide a framework within which to develop an informed and targeted policy response.

Figure E1: Competitiveness foundations, pillars and outcomes



Source: UUEPC

- E3. The findings of this research are supportive of the direction of a range of strategies implemented, or under consultation including the Draft Programme for Government, DfE’s 10x Strategy, Skills strategy and recovery plan. However, the research delves into more depth, identifying a range of policy actions that could be deployed in order to boost NI’s competitiveness over the next decade and reverse the decline.
- E4. The policy considerations provided in the report provide a range of actions which will support recovery but also, if implemented, halt NI’s competitive erosion and make steps towards improving both economic growth and quality of life for citizens in a more resilient and buoyant future economy. The areas of policy focus are summarised in table E1.

Table E1: Competitiveness foundations, pillars and outcomes

Pillar	Policy consideration
Supporting work	Supporting people into work
	Wraparound support
	Enabling people to fulfil their potential
	Achieve a better work-life balance
Digital & Green	Improved infrastructure
	Updated legislation and planning laws
	Support fast paced and flexible development
	Public awareness
	Energy efficient lifestyles
Future of Work	Industry-relevant and transferable skills
	Vocational, trade and manufacturing skills
	Culture of lifelong learning
Productivity	High value added FDI
	R&D&I
	Management and leadership skills
	How we raise and spend public monies
Focus internationally	Information and awareness
	Detailed market and local and cultural intelligence
	Markets access support
	Language and operational skills

Source: UUEPC

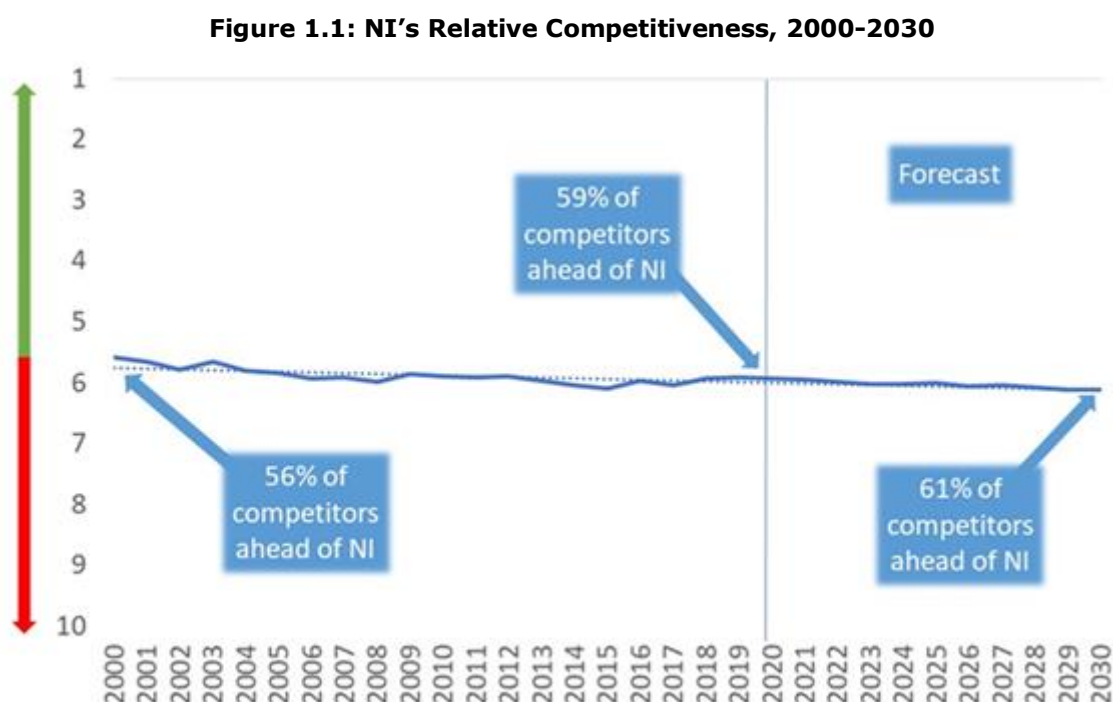
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1. Introduction

- 1.1. The 2020 Competitiveness Scorecard highlighted that NI's competitiveness has been slowly eroding over the past two decades, and without significant change, this trend is likely to continue¹. The research concluded that there are a number of bright spots in which NI has outpaced competitor economies, such as the proportion of electricity generated from renewable sources. However, the overall conclusion is that whilst NI has improved in a historical context, other economies have improved at a more rapid rate and gained further competitive advantage.

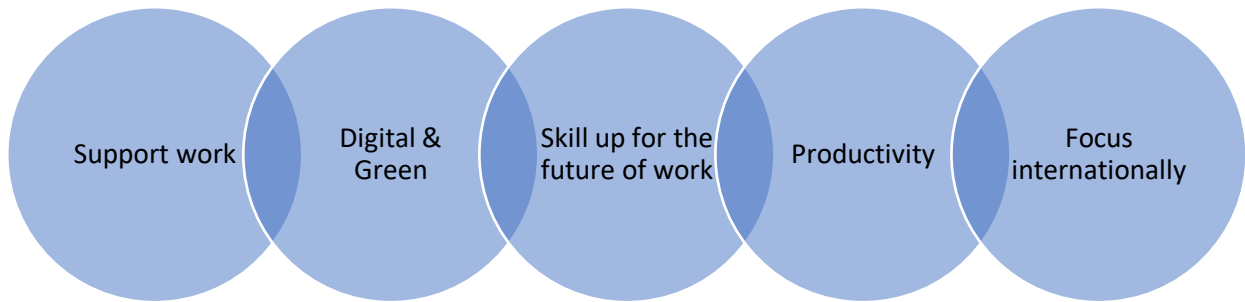


Source: UUEPC

- 1.2. Five key areas were identified from the Scorecard and stakeholder consultations as the drivers of Competitiveness that NI could gain most from and therefore should be areas for immediate policy focus. These five pillars of the Competitiveness Challenges policy response document are;

¹ [The Competitiveness Scorecard for Northern Ireland](#)

Figure 1.2: Competitiveness Challenges pillars



Source: UUEPC

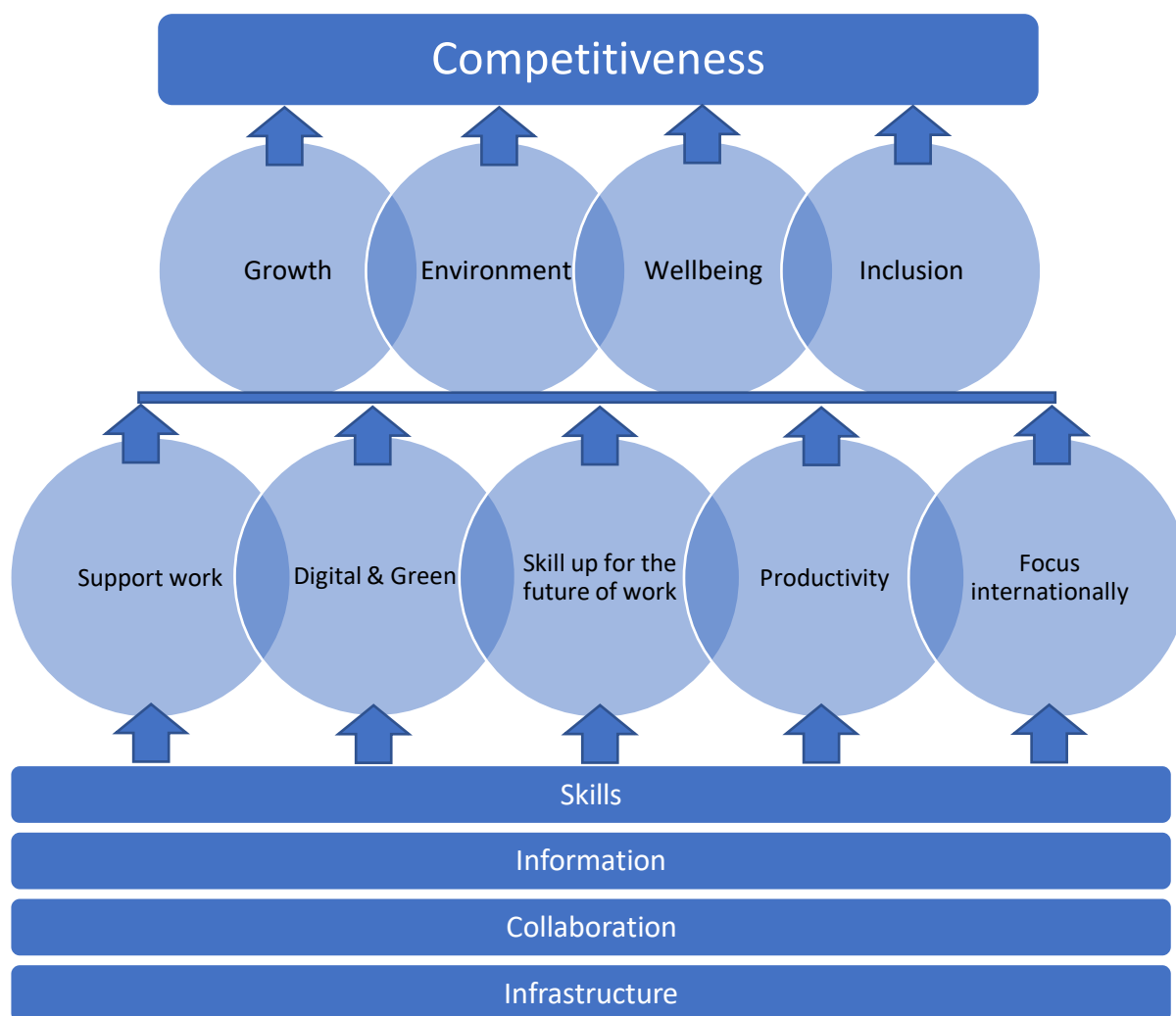
- 1.3. The aim of this report is to address the above challenge areas via recommended policy interventions. The recommendations have been devised through a combination of desk-based research on policy practice in competitor economies along with a series of consultations with expert stakeholders in NI.
- 1.4. It is important to note that this research was carried out during the COVID-19 pandemic. The policy recommendations will help to tackle long-standing issues, but importantly will also help NI to recover from the pandemic and disruptions arising from the UK's exit from the EU. This is important as more competitive economies have been identified as being more resilient and able to adapt to uncertainties².
- 1.5. The NI Executive has developed and deployed a range of schemes to help the Economy recover from COVID and deal with disruptions. These include;
 - Building Forward: Consolidated COVID recovery plan;
 - Draft Programme for Government;
 - Rebuilding a stronger economy – the medium-term recovery towards a more competitive, inclusive and sustainable economy;
 - 10x Economy;
 - Skills Strategy; and
 - City Deals
- 1.6. This report complements the range of recently published strategies and delves into the operational policies that could make the most difference in terms of driving forward a competitive, sustainable and inclusive recovery.

² Deimler, M. and Reeves M. , 2011, Harvard Business Review - [Adaptability: The New Competitive Advantage](#)

2. Cross-cutting issues

- 2.1. During the research, it became clear that there were a number of cross-cutting issues that impact upon all five of the competitiveness challenges pillars. These were Skills, Information, Collaboration and Infrastructure. Each of these underpins or cuts across all of the pillars and are fundamental to forward competitiveness, as one will not work without the others.

Figure 2.1: Competitiveness foundations, pillars and outcomes



Source: UUEPC

Skills

- 2.2. **Skills were a core feature of the research and were raised in each consultation, as access to appropriate skills is essential in getting people into work, taking green and digital opportunities, for the future of work, boosting productivity and engaging in international trade.**

- 2.3. Skills are, and will, remain a key area of policy focus for NI across all fronts, however, **more rapid evolution** is required to remain up-to-date, meet industry needs and keep up with competitor nations. In order to support skills development a refreshed curriculum, which matches the skills supplied with those demanded by businesses, will be required along with the development of a culture of lifelong learning.
- 2.4. **Management and leadership skills** were emphasised as an area in need of attention, particularly in the current context, with managers contending with the economic climate along with new technologies, environmental concerns and growing international competition, amongst other things. Organisations with a qualified managerial team and development processes are known to perform better. They adopt high performance working practices, are more innovative and have more sophisticated market strategies, all of which leads to productivity improvements.

Information

- 2.5. **Information**, and its dissemination and sharing is vital for policies to be understood and receive buy-in from relevant stakeholders including business owners and the wider public. For example, developments in 5G, opportunities from the Future of Work and measures to support environmental efficiency will need to be communicated effectively to alleviate fears and ensure pro-active engagement.
- 2.6. The communication of information can address knowledge gaps across a number of areas such as careers advice to pupils and students; industry requirements for skills, and similarly, export market information to businesses. Relevant information can ensure that the demand and supply of skills, or the matching of firms to relevant markets, can be done more effectively with better outcomes.
- 2.7. Utilising information derived from the data collection process on policy interventions can also help to provide insight during evaluation so that evidenced-based decisions on future resources can be made. Enhanced data collection and machine learning can further be combined with behavioural science theories which can be employed within public policy to help understand and influence citizen and industry behaviours. This can help improve the distribution of information to build awareness of public campaigns and support.

Collaboration

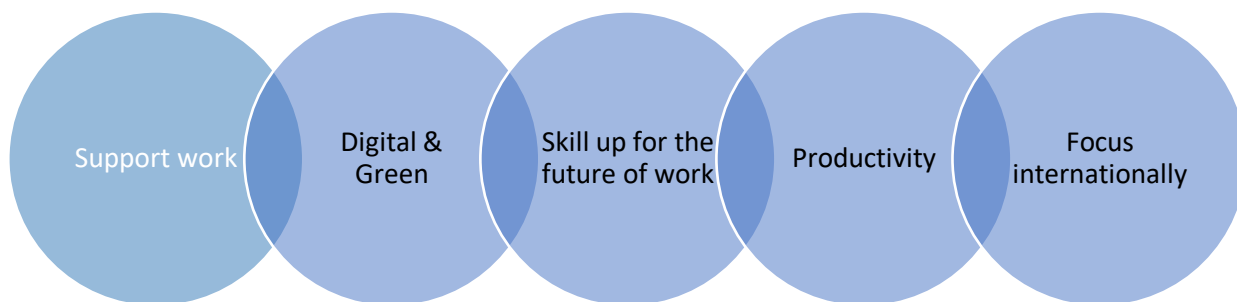
- 2.8. A **collaborative and co-ordinated approach to policy-making** across public bodies and government departments is required to support joined-up thinking and to deliver better outcome and Value for Money. Co-ordination will also support a more consistent approach, ensuring that local, regional and national strategies are aligned and working towards the same outcomes.
- 2.9. All of the policy recommendations outlined within this report will require greater collaboration within and between the public, private, academic and third sector. This collaboration will help to avoid duplication and ensure that economies of scale are achieved.

Infrastructure

- 2.10. A competitive **physical and digital infrastructure** will be required to support all elements of competitiveness. Infrastructure will help get people to work – physically or digitally, is part of the jigsaw of the green recovery, can boost competitiveness and is necessary to compete internationally.

3. Support Work

Figure 3.1: Competitiveness Challenges pillars



Source: UUEPC

- 3.1. Supporting people back to work was a key theme during the consultations and during the COVID-19 pandemic as demand for labour reduced in line with restrictions. Whilst the policies in place, such as the Coronavirus Job Retention Scheme (CJRS) and Self Employed Income Support Scheme (SEISS) appear to have been successful in helping employees to stay with employers, there are still more than 100,000 people across NI who are unemployed, inactive and would like to work or on CJRS or SEISS. Even though the labour market recovery to date has been very strong, there remains a strong need to support many people into work.
- 3.2. Pre-COVID, NI displayed an improving competitive performance in relation to labour supply³, with record high employment rates and record low unemployment. Nevertheless, structural challenges remain including high levels of inactivity, which have been further exacerbated by the pandemic.
- 3.3. The NI Executive has made commitments to support work in the latest draft Programme for Government (PfG) outlining that “**Everyone can reach their potential**” by tackling issues such as:

-
- *Job security*
 - *Wages & flexibility*
 - *Improving employability*
 - *Helping unemployed in to work*
 - *Employment ready workforce*
 - *Barriers into employment*
 - *Protecting workers rights*
-

³ Competitiveness indicators in relation to Support Work can be found in Labour Supply and Employment, page 95 available here: [Competitiveness Scorecard for NI](#)

- 3.4. 2020 was an unprecedented year for fast-paced responses from both the UK government and NI Executive^{4,5} to create interventions to support employers and jobs. These temporary measures are outlined below but more fundamental approaches are now required to support job creation rather than retention:

Figure 3.2: Tackling COVID-induced unemployment



- 3.5. Other countries⁶ are managing current and COVID-related job losses using some of the following measures:

Denmark- Removal of the maximum amount that municipalities can spend on construction and renovations to encourage investment in infrastructure projects⁷.

Ireland- €180m Sustaining Enterprise Fund for firms in the manufacturing and international services sectors⁸.

Estonia- Business loans to rural companies through the rural development fund (€200 million)⁹.

- 3.6. Young workers early in their careers or working part-time whilst studying have been particularly affected by the pandemic due to their predominance in the most restricted sectors. The following measures have been

⁴ Limited Company Director's Support Scheme- One-off taxable grant of £3,500 to eligible company directors who meet the criteria, more information available at: [Limited Company Director's Support Scheme](#)

⁵ Newly Self-Employed Support Scheme- Businesses must meet the criteria found here [NI Direct Covid-19 Financial Help and Practical Support](#)

⁶ More specific detail of these policies are available within the Appendix.

⁷ KPMG, 2020, [Denmark Government and institution measures in response to COVID-19](#).

⁸ International Labour Organization, [Country Policy Responses](#)

⁹ ERR, 2020, [Riigikogu approves €200 million for rural development fund to help farmers](#)

introduced in other countries to support young people directly and indirectly:

Sweden- Reduced employer contributions for young people from January 2021 to March 2023¹⁰.

Grants for summer jobs for young people¹¹.

Germany- SMEs who did not reduce apprenticeships in 2020 would receive a €2,000 for each new apprenticeship contract concluded¹².

Reduced VAT rate of 5%-7% for restaurants will be applied to this sector for 12 months starting on 1 July 2020¹³.

Finland- €40 million for restaurants to employ and compensation for the restrictions on activities (€83 million)¹⁴.

Spain- Tax incentives for landlords that reduce rents for properties related to the hotel, tourism and restaurant industries (€324million).

Support for hybrid working and childcare

3.7. Post-COVID, it is anticipated that a hybrid form of work will be the “new normal” which may incorporate blended¹⁵ elements such as¹⁶:



¹⁰ Swedish Government services for business, [For employers](#)

¹¹ International Monetary Fund, [Policy Tracker](#)

¹² Compared to 3 years, this is a one-off payment. More info. available at: [Federal Ministry of Finance- A stimulus package for everyone in Germany](#)

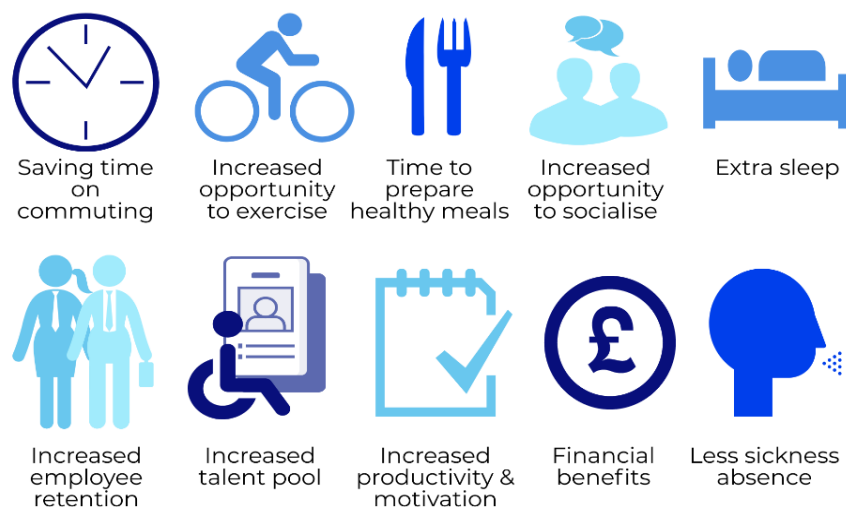
¹³ Asquith, R., 2020, [Germany cuts VAT from 19% to 16% until 31 Dec 2020](#)

¹⁴ IMF, 2020, [POLICY RESPONSES TO COVID-19](#)

¹⁵ Blended working here refers to a combination of different working arrangements such as flexitime and the ability to work remotely and/ in an office, or compressed hours whilst remote working.

¹⁶ Compressed hours - working longer hours some days and shorter on a different day. Annualised hours- number of set hours across the year.

3.8. The pandemic has shown the variety of benefits to be gained from flexible working for both employees and employers, including¹⁷:



Source: NI Business Info

3.9. The changes in working patterns during this period have renewed conversations about what **sub-regional levelling up** means and how it may be achieved and **environmental gains**¹⁸ can be retained. **NI’s Department of Finance** has launched regional hubs in areas including Craigavon, Downpatrick and Ballykelly¹⁹.

3.10. To support flexible working NI could gain insight from:

Ireland- National Remote Working Strategy²⁰ to make remote working a permanent feature, with plans to develop broadband connectivity and remote working hubs that have childcare facilities in close proximity.

Estonia- Digital nomad visa aims to attract remote workers to live for up to 1 year -spending earnings- whilst jobs remain for citizens²¹.

USA- Tulsa Remote programme aims to drive a remote workforce to the area by providing \$10,000 towards costs, shared office space if needed and community support²².

¹⁷ NI Business Info., [Use your home as a workplace](#)

¹⁸ Benefits include by helping to reduce transport related carbon emissions predominantly produced by private vehicles

¹⁹ BBC, 2021, [Working from home may continue for NI civil servants](#)

²⁰ Gov.ie, 2021, [Making Remote Work: National Remote Working Strategy](#)

²¹ Forbes, 2020, [Estonia Woos Remote Workers With A Digital Nomad Visa](#)

²² Created in November 2018, [Tulsa Remote](#)

Other support such as this are available in different parts of USA.

European Parliament- Right to disconnect proposal giving those who work digitally the right to switch off and help to clarify remote working conditions, hours and rest periods²³.

3.11. The Competitiveness Scorecard also highlighted that NI, the UK and Ireland face challenges in relation to costly **childcare**²⁴. Childcare provision can lead to stark choices for families of whether one parent, typically the female²⁵, should return to work²⁶. In 2020 average childcare costs had increased by 2%, the rise in costs were influenced by a number of reasons including:



Source: NI Childcare Survey, 2020

3.12. The draft PfG has targets to ensure that **our children and young people have the best start in life** through nurturing care environments and high-quality early years to support parents in to work and tackle child poverty²⁷.

3.13. In NI support for childcare costs currently includes:

- **Childcare vouchers** (closed to new entrants 2018) allow eligible parents to use a maximum of £243 per month from their salary to put into their Childcare Voucher account, which does not have tax or national insurance deducted, to pay for childcare.
- **Tax-free childcare** scheme to assist parents by topping up the money that they pay into childcare- for every £8 a parent puts in, the government adds £2²⁸.

²³ Vote held January 2021. European Parliament, 2021, ['Right to disconnect' should be an EU-wide fundamental right, MEPs say](#)

²⁴ This point refers to the indicator 'Childcare costs as a percentage of average wage for a couple' available on page 110 of the Scorecard, available here: [Competitiveness Scorecard](#)

²⁵ In the UK in 2019, males across all educational levels who have three children or more had a 95% employment rate, for females the employment rate was 51%. This trend continues across all educational levels. More info available at: Eurostat

²⁶ NI childcare costs are approximately 37% of a two-parent family's wage, the OECD average is 15%. The OECD average is 14.5% and compared to countries listed by WEF, 2019, [These countries have the most expensive childcare](#)

²⁷ Draft Programme for Government, 2021. Available: [PfG](#)

²⁸ These can also be used to pay for other childcare such as after school clubs, holiday clubs and summer schemes.

Tax-Free Childcare and vouchers cannot be used together.

- Parents can avail of **12.5 hours free pre-school education** for 3-4-year-olds- this must be taken over 2.5 hours per day 5 days per week²⁹.
- Advisor Discretionary fund, where up to £300 can be awarded to support individuals back into work on items such as clothing and childcare³⁰.

3.14. Policy ideas from other countries can help NI gauge best practices, however it should be noted that the taxation rates vary throughout these countries enabling schemes to be funded. In the UK tax setting powers reside with Westminster, reducing the scope for NI-specific policy variations. Policy interventions in other countries include:

England- 30 hours free pre-school education for children aged 3-4 during term time³¹.

Sweden- Maximum fee policy- parents pay 1-3% of their wage on childcare. Parents on low incomes don't have to pay whilst for those on higher wages maximum fees of £120 per month apply³²- 80% of 1-5 year olds attend pre-school as a result.

Germany- Berlin- Childcare fees free from 2018, parents have to cover costs of food and extras³³ for their child³⁴.

Netherlands- Tougher standards to improve childcare³⁵ to ensure that quality care is provided at day-care and playgroups with greater focus on child development.

Wales- From April 2019 until March 2022 the Welsh Government provided all registered childcare properties with 100% rates relief³⁶.

²⁹ NI Direct, [Pre-school education places](#)

³⁰ [Advisor Discretionary Fund](#)

³¹ Gov.uk, [30 hours free childcare](#)

³² SEK 1,425 – July 2019

³³ Music and sport for instance

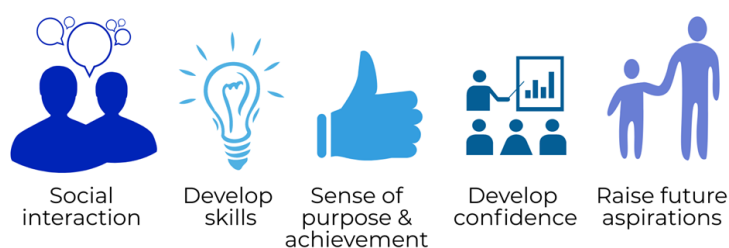
³⁴ DPA, 2018, [Free for all? How Germany plans to tackle its childcare problem.](#)

³⁵ From 2018. Government of the Netherlands, 2017, [Improvements to the quality of childcare](#)

³⁶ Welsh Government, 2019. [100% rates relief for childcare providers in Wales](#)

Tackling Economic Inactivity

- 3.15. The Scorecard highlighted that economic inactivity is a persistent challenge for NI³⁷ which has been further exacerbated by the pandemic.
- 3.16. Some individuals classified as economically inactive want to work but the rules of the benefits system, and limitations on hours that can be worked without wider penalty, can act as barriers³⁸.
- 3.17. A renewed discussion about making work pay as well as promoting the wellbeing impacts associated with working may help to stimulate people in to work. These include:



Source: UUEPC

- 3.18. NI does have support work policies in places currently that continue to be available, these include:
- **Access to Work NI** assists individuals with disabilities and employers in practical ways^{39,40}.
 - **Universal Credit (UC)** continues to be available for individuals on low income or out of work⁴¹.
 - **Workable NI** offers a range of supports to help people with disabilities who have barriers to employment to find and keep work⁴².
 - The **Condition Management Programme helps individuals manage their health conditions to allow them to progress towards, move into and stay in employment. The programme**

³⁷ This point specifically refers to the indicator 'Economic inactivity rate' available on page 109 of the Scorecard, further indicators in relation to Labour supply and employment are available from page 95, here: [Competitiveness Scorecard](#)

³⁸ Costs associated with working such as travel and childcare can influence decisions here.

³⁹ This includes support such as adaption to premises and equipment in the workplace and/or financial support towards any extra costs of getting to and from work due to their disability.

⁴⁰ More information is available at: [NI Direct Access Work- practical help at work](#)

⁴¹ For individuals claiming UC and working there is no limit on the hours that can be worked but UC amount will gradually be reduced.

⁴² Includes a job coach, to help the employee and employer, extra training for the employer and disability awareness training for the employer and work colleagues. [Workable NI](#)

is led by healthcare professionals, such as occupational therapists, physiotherapists and mental health nurses⁴³.

3.19. NI can also take consider how other countries are tackling similar issues, these include:

Ireland- JobsPlus- a hiring subsidy to incentivise employers to recruit long-term unemployed as they will receive €7,500-10,000 over 2 years⁴⁴.

Germany⁴⁵ - Wage subsidies for employing long-term unemployed through the Social Participation in the Labour Market, Participation Opportunity Law, and the European Social Fund (ESF) which also promotes qualifications along with counselling for those unemployed more than 5 years. Counselling and wage subsidies are provided.

Estonia- Youth Guarantee Implementation Plan ensures that under 25s receive a good-quality job, continued education, an apprenticeship or traineeship within four months of becoming unemployed or leaving education⁴⁶.

Policy considerations

Job Generation and Support Policies:

Recommendation 1:

- *To help generate employment and help mitigate against Covid-related job losses enact the following:*
 - *NI Executive to use Reinvestment and Reform Initiative (RRI) scheme for additional borrowing to accelerate infrastructure projects to create jobs through 'shovel ready' developments.*
 - *Employment and Training support schemes should be offered to the wider business base on a competitive footing with schemes to be tailored to sectoral needs and offered either on a timebound or target-based basis e.g. stopped when the target rate of employment or unemployment in NI is achieved. Training support should focus only on value added activities (i.e. beyond legal training requirements⁴⁷) with eligibility for public assistance dependent upon payment of at least the real living wage.*

⁴³ Provides support, advice and education on managing various conditions through a twelve-week course.

[Condition Management Programme](#)

⁴⁴ Gov.ie, last updated 2021, [JobsPlus](#)

⁴⁵ Germany info. available at: [The employment and social situation in Germany](#)

⁴⁶ European Commission, 2020, [Youth Guarantee country by country](#)

⁴⁷ For example more than Health and Safety at work training.

Welfare Support Policies:

Recommendation 2:

- *NI specific initiative to taper the 16-hour work rule for those on benefits⁴⁸ and examine how the support can be adjusted to match a 37-hour working week. This will involve further DfE, DfI and DfC liaising of representative groups to understand wider repercussions of working while on benefits to reduce barriers for those wanting to work.*

Training Support Policies:

Recommendation 3:

- *To improve accessibility, provide wraparound support for individuals furthest from the labour market to enable them to attend training or work programmes or to take up employment. This would include support with childcare, travel costs, mental health support and mentoring for the initial period of starting employment. In conjunction, support employers at higher rates to employ and train those who are furthest from the labour market.*
- *Communication and data sharing between government departments and between the public and private sector will also be needed to provide a customer-centric, holistic approach to labour market support. In doing so, reduce the bureaucracy burden for the individual in terms of accessing benefits or support.*

Flexible and Remote Working Policies:

Recommendation 4:

- *Flexible working to be ratified in NI through a formal strategy to make the progress realised a permanent feature and opportunity within feasible workplaces. A formal strategy would also help mitigate against any concerns in terms of career progression and training opportunities particularly for those vulnerable in the labour market.*

⁴⁸ Recipients of Income Support or Job Seekers Allowance are classified as working full time if they work more than 16 hours per week (a partner can work up to 24 hours). If a recipient works a greater number of hours the benefits they are entitled to can be affected. More information available at: [How are benefits affected by hours worked?](#)

Recipients of Universal Credit have an earnings taper rate of 63%. This means that for every £1 earned over their work allowance their UC will be reduced by 63p. More information available at: [Universal Credit work allowances](#)

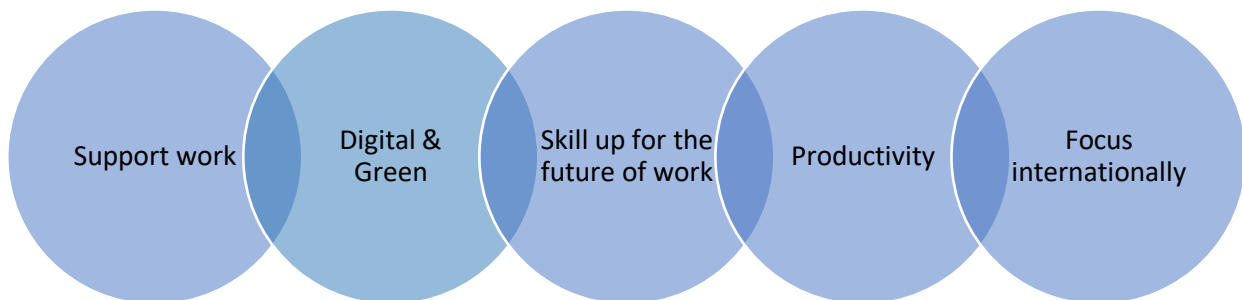
Childcare Policies:

Recommendation 5:

- *Support the long-term, systemic development of the childcare sector to enable NI to take the lead via the provision of publicly subsidised child development centres. This would entail further investigation into a) the potential for free high-quality childcare for all parents for the two years prior to school age which would level up access, support the sustainability of the sector and provide stable employment within the sector and b) a cost-benefit analysis of increasing the 12.5 free childcare hours to 30 free hours to align NI policy to the rest of the UK.*
-

4. Digital and green opportunities

Figure 4.1: Competitiveness Challenges pillars



Source: UUEPC

- 4.1. The digital and physical environment that we inhabit and rely upon impacts upon all sectors, how and where we learn and our health. NI performs relatively well in overall terms in both in environmental and digital indicators but must be proactive as other countries seize opportunities for tangible change⁴⁹. There are a range of unexploited opportunities and research demonstrates that Green and Digital stimuli can lead to new jobs, higher incomes, improved well-being, reduced reliance on fossil fuels, better healthcare outcomes and resilience building⁵⁰.
- 4.2. The NI Executive made renewed commitments to digital and green sustainability in the current draft PfG, which states that ***We live and work sustainably- protecting the environment; People want to live, work and visit here; and Our economy is globally competitive, regionally balanced and carbon neutral***⁵¹ by tackling issues such as:

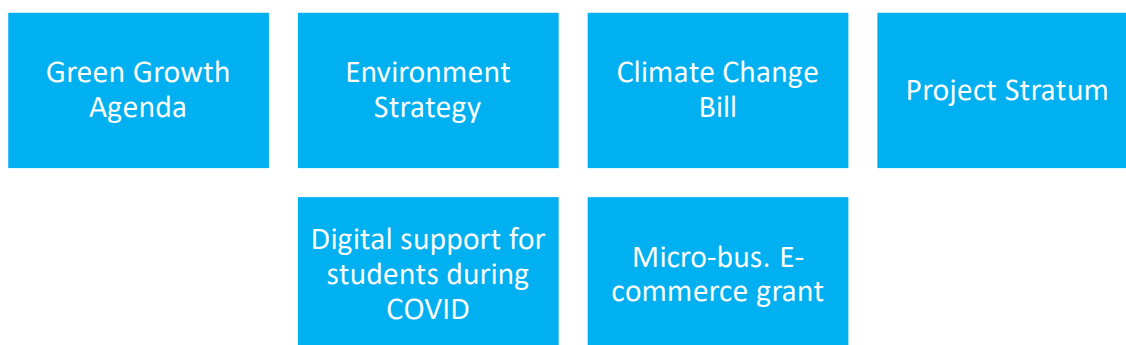
-
- *Developing the waste system*
 - *Redeveloping housing & ensuring new houses are energy efficient*
 - *The green economy & energy supply*
 - *Low & zero carbon alternatives*
 - *Business start-ups & development*
 - *Developing digital, energy & physical infrastructure*
 - *Research, Development & Innovation with creativity & entrepreneurship*
-

⁴⁹ Competitiveness indicators in relation to green can found under Environmental Sustainability, page 46 and indicators in relation to digital can be found under Physical and Technological Infrastructure, page 132, available here: [Competitiveness Scorecard](#)

⁵⁰ OECD, 2020, [Making the green recovery work for jobs, income and growth](#)

⁵¹ NI Executive, 2021: [Programme for Government- Draft Outcomes Framework](#)

4.3. NI policy makers and businesses have invested in the digital⁵² and the environmental agendas throughout 2020-21^{53,54,55} and are currently consulting on the Future Energy Strategy for NI⁵⁶. For instance, there has been the development of:



4.4. Other policies already in place include:



Digital Infrastructure and NI’s Fuel Mix

4.5. The UK Government has set ambitious targets for 85% of premises to have access to gigabit broadband (hyper fast) by 2025⁵⁷, and for the majority of the population to be covered by 5G signal by 2027⁵⁸. Currently NI has the highest population access to full fibre broadband⁵⁹, meanwhile there are 4 ‘5G cities’ in NI⁶⁰.

⁵² **Project Stratum** has identified 79,000 premises where there is no qualifying broadband infrastructure (services of 30Mbps or higher) and none is to be developed for three years. Information derived from: [The Role of Full Fibre Broadband in Northern Ireland](#)

⁵³ Green Growth Agenda is part of the Green Growth Strategy and Delivery Framework for NI.

⁵⁴ May 2021 DAERA aiming to publish for consultation NI’s first Environment Strategy, to deliver for the environment whilst also meeting the targets outlined in the PfG.

⁵⁵ Climate Change Bill is due to go before the NI Assembly in March 2021- proposing a net zero targets by 2045. More info available at: [Discussion Document on a Climate Change Bill](#)

⁵⁶ <https://consultations.nidirect.gov.uk/dfe/energy-strategy-for-northern-ireland-consultation-1/>

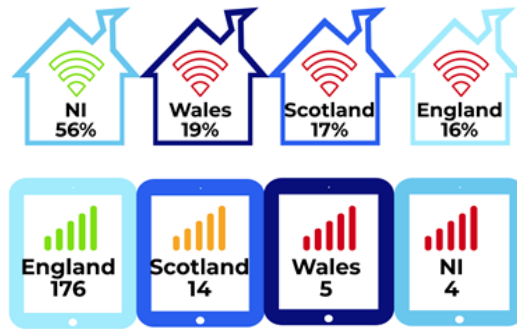
⁵⁷ Hyperfast can be enabled by full fibre. Targets from UK Parliament, 2021. [Gigabit Capable Broadband in the UK](#)

⁵⁸ Gov.uk, 2021. [Barrier busting taskforce next steps](#)

⁵⁹ Average monthly broadband data usage has increased from 322GB (2019), to 444GB (2020). Ofcom, 2020. [Connected Nations 2020](#)

⁶⁰ Sample sizes are too small to record download speeds and time spent on 5G devices by the end of 2020.

Availability of full fibre services and the number of 5G Cities, UK, 2020



Source: Ofcom & Ookla 5G Map

- 4.6. NI can learn from others about how digital adoption can be improved. These include:

Ireland- Our Rural Future⁶¹- developing rural digital infrastructure to support remote working and boost employment opportunities.

National Broadband Plan- to ensure high-speed broadband is available to all premises, this will initially be achieved through 300 community-based Broadband Connection Points.

Local Digital Strategies aim to keep Local Authorities at the centre of digital development.

Mobile Phone and Broadband Taskforce aims to keep up-to-date with connectivity solutions to curb coverage deficits and seek the best services for consumers.

Sweden- Going in Digital in Sweden- includes enhancing co-ordination among strategies for broadband deployment, increasing the "robustness" of fibre networks. Promoting the deployment of high-speed broadband networks in sparsely populated areas⁶² and spurring the uptake of Internet Protocol v6⁶³.

Finland- Regional digitisation plan- €400m to support digital projects run by local authorities to develop e-government infrastructure for a digitally smart economy.

Development of Finnish Research and Innovation Council to oversee the national digital strategy.

⁶¹ Government of Ireland, 2021, [Our Rural Future-Rural Development Policy 2021-2025](#)

⁶² OECD, 2018, [Going Digital in Sweden](#)

⁶³ Migration from IPV4 to IPV6 is ongoing – V6 is the latest version of Internet Protocol- every device that uses the internet has its own IP due to the growth of digital and online more IP addresses are needed whilst also increasing performance and security. More info. available at: [What is IPv6, and why aren't we there yet?](#)

4.7. NI's reliance on imported fossil fuel weakens its overall environmental competitiveness⁶⁴ and exposes consumers to the risk of price inflation. New types of technology are placing additional demands on the electricity network causing changes to how the network is run. NIE has outlined the following changes that are underway:

- renewable generation continues to grow;
- electric vehicles and heat pump uptake accelerating;
- increase in the number of consumers who can produce their own energy;
- technology is giving consumers control over how they use it; and
- energy storage technology is becoming more widely used and its abilities improving⁶⁵.

4.8. The principles of the **Energy Strategy for NI**⁶⁶ provide a baseline for policy development, it includes:

-
- *Placing people at the heart of the energy future*
 - *Grow the green economy*
 - *Do more with less*
 - *Replace fossil fuels with renewable energy*
 - *Create a flexible and integrated energy system*
-

4.9. To address these policy challenges NI can learn from:

Germany- Market Incentive Programme- grant of up to 45% for replacing an oil-fueled heater, includes installing a heat pump, biomass plant or gas hybrid systems⁶⁷.

Building check and on-site energy consultation⁶⁸- help identify building modernisation needs, and available funding.

Modernisation roadmap- software-based tool used by energy advisors to give building owners an overview of modernisation possibilities, work required, and estimation of costs and savings⁶⁹.

⁶⁴ This point specifically refers to the indicator 'Components of Energy Consumption' which can be found on page 51 of the Scorecard, further indicators in relation to the environment are available from page 46; here: [Competitiveness Scorecard](#)

⁶⁵ Northern Ireland Electricity Network, [DNO to DSO Evolution](#)

⁶⁶ At time of writing the Strategy was open for consultations closing June 2021. More info. available at: [Energy Strategy for Northern Ireland: Consultation on Policy Options](#)

⁶⁷ From January 2020.

⁶⁸ 2 different schemes. Consultation part funded by Ministry for Economic Affairs and Energy.

⁶⁹ 2017

Ireland-which is focusing on additional microgeneration capacity including micro-solar PV, micro hydro, micro wind and micro renewable CHP⁷⁰.

Sweden- A solar powered hydrogen filling station- powered by a nearby solar cell park enabling a fossil free source of fuel.

Waste to district heating- climate-smart solution uses local resources such as captured excess heat from industrial production or data centres to heat water and distribute it to those connected to the system⁷¹.

Green transport- Electric Vehicles

- 4.10. NI remains a relatively “car dependent” region^{72,73} of which electric vehicles (EVs) account for just 0.3% of cars registered^{74,75}. A significant catch-up will be required to meet the UK ban of new petrol and diesel cars by 2030^{76,77}.
- 4.11. In NI there are 318 public charging devices equating to 1.2 per 100,000 people⁷⁸, the lowest of the UK regions. At a sub-regional level Belfast has the highest number of charging points at 49, whilst Lisburn and Castlereagh have the lowest at just 11.
- 4.12. Developing EV infrastructure would support the PfG goals under the **built environment to create high quality, sustainable, places for people to live, work and spend leisure time** and **sustainable transport to promote and have access to safe, active and sustainable transport to encourage people to make environmentally responsible choices about transport.**

⁷⁰ <https://www.dccae.ie/en-ie/energy/topics/Renewable-Energy/electricity/onshore/Pages/Micro-Generation-landing-page.aspx>

⁷¹ By doing so, 93% of all energy in the system is either recycled or comes from renewable resources.

⁷² Number of passenger cars have increased to 506 per 1,000 people in 2018 from 369 in 2000- Eurostat.

⁷³ Future trends in remote working may help to lessen the reliance on private cars but the infrastructure is not currently in place to support a major jump in demand for EVs.

⁷⁴ Belfast Live, 2020, [Electric cars Northern Ireland - key questions answered](#)

⁷⁵ Department for Transport, 2019, [Vehicle Licensing Statistics](#)

⁷⁶ This ban will see drivers switching to greener methods of transport such as electric vehicles.

⁷⁷ Gov.uk, 2020, [Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030](#)

⁷⁸ As of October 2020.

Number of EV charging points per 100,000 people



Source: Department for Transport

- 4.13. Recent improvements have been made to public transport along with more awareness of the climate impacts, but the cycle network request investment and a significant disconnect remains with public choice which is indicated by the NI Travel Survey⁷⁹:

Journey by transport modes in NI, 2017-19



Source: Infrastructure NI

- 4.14. NI can learn from:

Sweden- Smart roads for charging on the go - world's first wireless electric road in Gotland, electric trucks and buses can charge while driving.

Germany- Business will not be taxed for providing free charging until 2030, tax reduction for company car owners charging their EV at home, whilst at work they are exempt from declaring charging as a cash benefit.

€2.5bn for battery cell production and expansion of charging infrastructure.

Petrol stations to offer EV charging.

⁷⁹ Department for Infrastructure, 2021. [Travel Survey NI](#). 4% were 'other'.

Subsidies for manufactures to invest in new technologies, processes, and plants.

Funding for electric buses, trucks and their charging infrastructure will be increased.

Fleet exchange programme- post COVID to ensure SMEs and social services continue to update vehicles⁸⁰.

Ireland- Grants for local authorities to install up to 1,000 public charging points⁸¹ in an area, as well as personal grants for citizens purchasing an EV (up to €5,000) and installing a home charging point (up to €600).

Policy considerations

Infrastructure and Legislation Policies:

Recommendation 6:

- *Continued investment in NI's digital and renewable energy (onshore & offshore wind, battery storage, hydrogen and biogas, amongst others) infrastructure for maintenance and upgrading to support digital and energy capabilities and future technologies. This requires greater collaboration between DfE, DfI and DAERA to ensure that economies of scale are achieved.*

Recommendation 7:

- *NI Water is one of the largest electricity users in NI and has pilot projects underway to generate renewable energy. To support this there will need to be enhanced collaboration between DfE, DfI, DAERA and NI Water along with new and updated regulatory powers and legislation to enable NI Water to use assets in new ways.*

Recommendation 8:

- *Enhanced assistance for NI Water to deal with the maintenance backlog and wastewater management to enable sustainable economic development of towns. This would also enable NI Water to use their resources in new ways such as energy creation⁸². These enabling factors will support NI to be proactive in ensuring readiness for increased urbanisation⁸³ and fighting against the climate emergency.*

⁸⁰ List is not exhaustive. Wallbox, [The Ultimate Guide to EV Incentives In Germany](#)

⁸¹ Will cover up to 75% of the capital costs. This will particularly benefit individuals who do not have personal access to off street parking. Sustainable Energy Authority of Ireland, [Electric Vehicle Grants](#)

⁸² This is expanded more in the policy recommendation under the Digital and Green Opportunities.

⁸³ European Commission, [Development and Forecasts of Increased Urbanisation](#)

Recommendation 9:

- *Continuation of grants to support the implementation of EV charging points at private homes and business along with rapid construction and investment in public charging points. This will require collaboration between DfE and DfI to make sure economies of scale can be achieved along with building regulation and control to be given the legal power to build new homes with wall box charging points.*

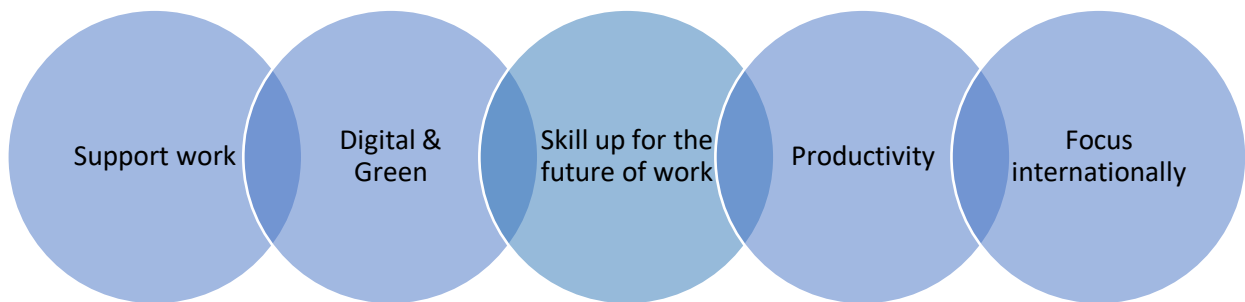
Public Awareness Policies:

Recommendation 10:

- *Promote civic engagement to build consumer buy-in for 5G development, net zero, smart metres and retrofitting housing so that the public are informed and understand their benefits. This will also help grow their social value and encourage uptake of any current and future supporting policy initiatives.*
-

5. Skill up for the Future of Work

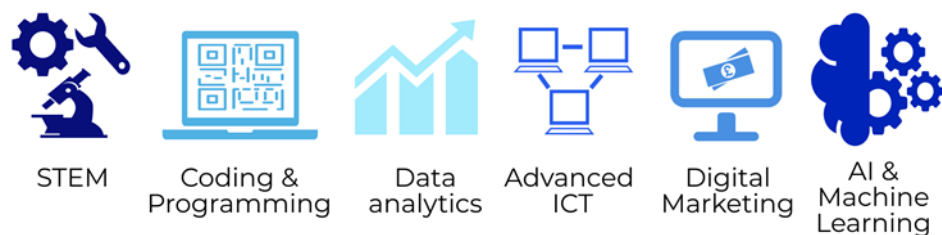
Figure 5.1: Competitiveness Challenges pillars



Source: UUEPC

Digital and Technological Skills

5.1. Prior to the COVID pandemic, research on the Future of Work, how it might impact internationally⁸⁴ and in NI⁸⁵ and what policy responses may be required was published. The pandemic accelerated existing trends in consumption patterns and how individuals work and learn, shunting forward the Future of work by a decade in some sectors. As a result, the skills requirements that society was preparing for have been accelerated, placing additional demands on educators and costs on business as they seek to address the demand for these skills. Some of the skills currently demanded to support a digital and technology-based future include:



Source: UUEPC, Intelligent Futures report

⁸⁴ [McKinsey Future of Work](#)

⁸⁵ [Intelligent Futures, UUEPC](#)

5.2. In addition to the technological skills, there are a range of human skills, which cannot be easily automated that are also in increasing demand. These include:

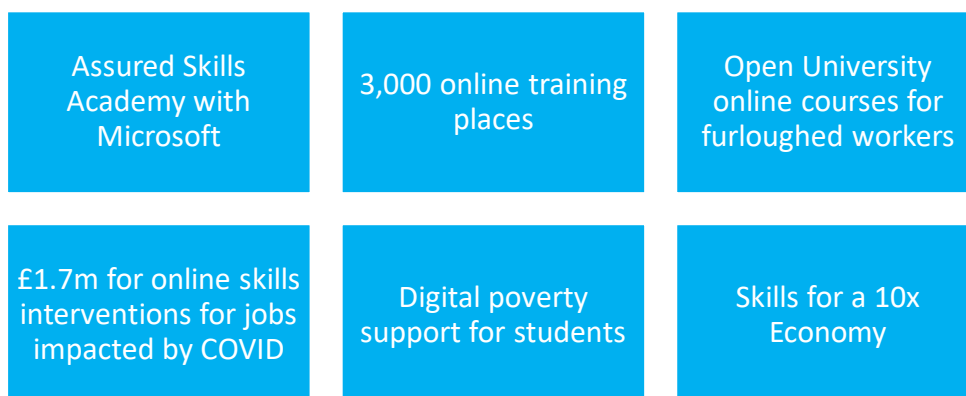


Source: Deloitte, The Future of Work

5.3. The NI Executive has made commitments to skills through the draft PfG targets of **More people working in better jobs; Everyone can reach their potential;** and **People want to work, live and visit here.** Key priority areas include:

-
- *Fulfilling & quality job opportunity to retain & attract workers*
 - *Wages & flexibility*
 - *Attract & stimulate investment*
 - *Encouraging business start-ups & development*
 - *Sustainable development of rural industries & digital access*
 - *Personal & professional development opportunities*
 - *Addressing zero-hour contracts & employment barriers*
 - *Underachievement & skills shortages*
 - *Aligning HE & FE to labour market demand*
 - *Supporting vocational training & apprenticeships*
-

5.4. Invest NI also delivers a range of skills and leadership initiatives and DfE have also made recent additional commitments to skills development during this period through:



5.5. NI can support improvements in digital skills by learning from:

Estonia- Lifelong Learning Strategy 2020- aims to provide competent and motivate teachers and school leaders as well as increase digital technology use in education.

Tiger Leap⁸⁶ investment with private companies led to 84% of schools providing computer science classes.

Education Information System- a state database used as a method of monitoring the educational system so that authorities can ensure subjects and skills are preparing people for the future of work.

Scotland- Digital Xtra Fund- organises extra-curricular clubs and activities to increase skills in young people.

Digital World – marketing campaign was launched to inform individuals of the career opportunities that the development of skills can lead to.

Ireland- DCU- STEM Teacher Internship- student teachers carry out internship in industries outside of educational settings to allow them to better understand how they can prepare children for the future of work.

Japan- EdTech- increases the use of technology in schools, foresees classrooms changing in to 'Class Labs' to increase science participation.

5.6. To support continuous skills development via lifelong learning NI can learn from:

⁸⁶ funded by the government and 11 private IT companies

Sweden- Going Digital in Sweden- digital uptake and use could be increased by raising training incentives for individuals and firms to boost ICT skills, promoting ICT courses in education, co-ordinating reskilling measures with social partners, and promoting diffusion of advanced digital technologies, in particular among SMEs⁸⁷.

Ireland- The Digital Skills for Citizens Scheme- since 2017 €5.5million has been provided to community, voluntary and not-for-profit organisations to deliver informal basic digital skills training.

Estonia- Lifelong Learning Strategy 2020- aims to provide learning opportunities for all that are tailored to needs in order for individual potential to be realised⁸⁸. ICT skills have been noted as a main challenge this strategy aims to tackle.

Denmark- Adult Vocational Training- targets low skilled and aims to update vocational skills to meet labour market needs and raise individual competences⁸⁹.

Effective Careers Advice, tackling the Brain Drain and attracting back

- 5.7. In conjunction with skills development, effective career development activities in school settings can have a positive effect on future education and occupation outcomes⁹⁰. The NI Executive plan is to ensure ***Our children and young people have the best start in life*** through an ***enhanced approach to careers advice***⁹¹ as outlined in the draft PfG. The Youth Voice Census Report (2020)⁹² found that careers information tends to define young people's choices depending on gender and background, including:

⁸⁷ OECD, [OECD Reviews of Digital Transformation](#)

⁸⁸ UNESCO Institute for Lifelong Learning, [Estonia: Lifelong Learning Strategy 2020, issued in 2014](#)

⁸⁹ There are approximately 3,000 adult vocational programmes. The programmes range from ICT, languages, communication and management. Ministry of Children and Education, [Adult Vocational Training](#)

⁹⁰ Derived from OECD report [Dream jobs? Teenagers' Career Aspirations and the Future of Work](#)

⁹¹ Draft Programme for Government, 2020. Available at: [PfG](#)

⁹² Youth Employment UK, [Youth Voice Census Report 2020](#)



Females more likely to hear about attending University.



Males more likely to hear about apprenticeships, traineeships & starting a business.



Free school meal recipients more likely to hear about accessing Job Centre support.



Those with additional needs less likely to hear about University & apprenticeships.

Source: Youth Voice Census

- 5.8. Tackling careers advice and the 'brain drain' may also help to achieve the draft PfG target of **everyone can reach their potential** and **people want to live, work and visit here** through **better jobs**. As part of the COVID recovery, DfE has agreed to increase Maximum Student Numbers (MaSN) by 5% from 2020-2023 to combat the number of students who leave NI each year. A longer term perspective is required to tackle the ongoing 'brain drain'^{93,94} or encourage talented individuals to return to NI later in their careers, as well as effective careers advice to promote the importance of lifelong learning to maintain skills for the future of work.
- 5.9. NI can learn from countries in this area, on policies such as:

Estonia- Remote career guidance-upper secondary schools have a liaison consultant at the Public Employment Service- students can organise a meeting on the self-service portal to speak with a consultant by Skype, phone or Microsoft Teams⁹⁵.

France- Dedicated hours in school timetable for career guidance with the scheme extended across upper school years.

For upper secondary, guidance includes progressive preparation, with students getting an insight in to sectors, time for dedicated guidance and support, information on diverse pathways and a module on employability skills⁹⁶.

⁹³ Pivotal suggest that for every 100 home applicants there were only 60 available places in 2018/2019. Pivotal, 2021, [Retaining and regaining talent](#)

⁹⁴ Available in Department for the Economy's [Economic Recovery Action Plan](#)

⁹⁵ OECD Education and Skills Today, 2020, [How Estonia is delivering online career guidance during the coronavirus crisis](#)

⁹⁶ European Centre for the Development of Vocational Training, 2020, [France: the Regions at the heart of the national career guidance system](#)

Ireland- Holistic approach - combines personal, social, educational and career guidance that is delivered by professionally trained counsellors through classroom-based and one-to-one guidance activities⁹⁷

A method to attract educational leavers back includes '**World of Talent in Ireland**'⁹⁸ a campaign that promoted the career opportunities to Irish graduates abroad.

England- The Baker Clause developed which gave technical colleges the right to promote their activities in schools⁹⁹.

The Gatsby Benchmarks aim to provide a framework for successful career guidance to be used in schools- includes a stable programme, learning from labour market information and encounters with FE and HE providers¹⁰⁰.

Policy considerations

Skills Policies:

Recommendation 11:

- *To better align the demand and supply of skills an intermediary body should be established to coordinate a "whole of Government" approach and provide careers advice to schools and formally align educational programmes with the requirements of the market. This will help to standardise information and ensure equal opportunity for all schools as well as reduce skills mismatches between employer requirements and student skillsets. NI could take note of the role of the Regional Skills- Partnership for Skills¹⁰¹ in the Republic of Ireland. Trainee teachers should also be given short internships within industry settings to better align skills taught with those required within workplaces, replicating Dublin College University's (DCU) STEM Teacher Internship programme¹⁰².*

Recommendation 12:

- *Skills that are not easily automated such as creativity, empathy, problem-solving and teamwork (often referred to as transversal skills) should be built into the curriculum, developed continually throughout a student's education*

⁹⁷ From Hearne, L., Neary, S. Let's talk about career guidance in secondary schools! A consideration of the professional capital of school staff in Ireland and England. *Int J Educ Vocat Guidance* 21, 1–14 (2021).

⁹⁸ IDA Ireland, 2015, '[World of Talent in Ireland](#)' campaign launched by IDA and American Chamber

⁹⁹ AELP, [The Baker Clause: Best Practice Guidance for Schools, Providers and Learners](#). Also see Department for Education UK, 2017, [Careers Strategy- making the most of everyone's skills and talents](#)

¹⁰⁰ Full framework is available at: Gatsby, [Good Career Guidance](#)

¹⁰¹ [Regional Skills- Partnership with Skills](#)

¹⁰² DCU, 2020, [DCU launches 2021 STInt Programme to inspire innovative learning in STEM Education](#)

with a view to recording and certifying the achievement of these skills. Early aptitude tests should be utilised to provide students with an indication of their skillsets to help identify suitable and wide-ranging career pathways.

Recommendation 13:

- *DfE should be considered augmenting the "FE for Me" information and awareness campaigns that they undertake to increase awareness of the demand for, and benefits of vocational education (both employability and earnings). FE colleges should be supported to supply additional manufacturing, technical and vocational skills that are in increasing demand with a view to establishing, or transforming a number into Technical Institutes to support apprenticeships with specific industry-focused courses.*

Recommendation 14:

- *Review the Maximum Student Number (MaSN) policy with a view to increase places for NI residents in high-demand courses to reduce brain drain in priority areas.*

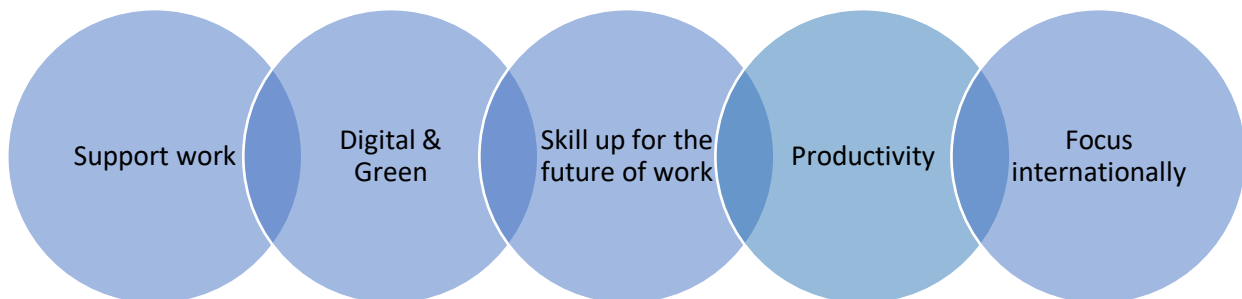
Lifelong learning Policies:

Recommendation 15:

- *To support skills development a culture of lifelong learning should be instilled from a young age and supported by a Lifelong Learning Strategy ensuring that everyone has the opportunity to, at a minimum develop literacy and numeracy skills. On-the-job digital and technology learning and training should be facilitated within organisations with continued assistance for SMEs and micro-firms for accredited training. Assistance offered to larger companies should be conditional upon their support for the wider business base and third sector in NI by cascading skills, knowledge & training.*
-

6. Raise productivity to boost incomes and standards of living

Figure 6.1: Competitiveness Challenges pillars



Source: UUEPC

- 6.1. Relatively lower levels of productivity is a long standing and well documented challenge for NI. To compound that challenge more recently there has been UK wide stagnation in productivity growth. The 2021 Competitiveness Scorecard underlined how stark the challenge is, as productivity is by far the weakest of the 11 pillars¹⁰³. As such, it should attract significant policy attention.
- 6.2. The PfG only references productivity specifically in relation to the food industry although other aims outlined in the PfG will also give the economy a productivity boost. The **Economic Recovery Action Plan**¹⁰⁴ aims to address productivity through some of the following policy interventions:

-
- *Northern Ireland Skills Strategy;*
 - *Maintaining the role of FE & HE providers in the recovery;*
 - *New Advanced (Level 3) Vocational & Technical Award;*
 - *Invest NI Productivity Improvement Projects;*
 - *Invest NI Operational Excellence Support;*
 - *Provide additional support for leadership, management, skills audits & community partnership plan to address skills needs; and*
 - *Strategic investment in university R&D*
-

¹⁰³ Competitiveness indicators in relation to productivity can found under Productivity, page 69, available here: [Competitiveness Scorecard](#)

¹⁰⁴ DfE, [Economic Recovery Action Plan](#)

6.3. Recent and long-standing interventions to tackle productivity include¹⁰⁵:



6.4. Productivity is driven by a range of factors, including the cross-cutting issues, and indeed the other pillars discussed in this report. The following policy areas are recommended as additional levers with which to boost productivity.

6.5. City Deals are also a relatively new, but important policy strand, helping to boost competitiveness through;

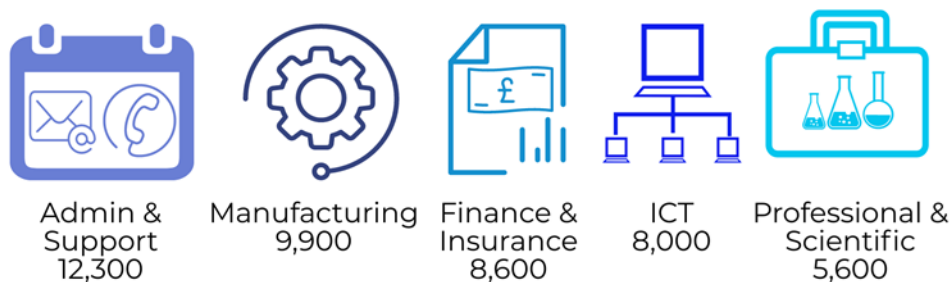
- Innovation and digital;
- Tourism and regeneration;
- Infrastructure; and
- Employability and skills.

High value added FDI

6.6. FDI can benefit a host country by creating jobs, bringing new innovations and ideas (supporting the 10X strategy), skills and methods as well as directly and indirectly supporting supply chains. There are also potential outflows of profits and understanding the balance of costs and benefits is critical. Continuing to attract FDI meets key priority areas in the PfG including the ability to **compete globally** which will help to **retain the workforce and attract newcomers and inward investment** as well as helping to achieve the PfG key priority area of **promoting NI as a place to live, work and visit**. As NI looks forward, Industry 4.0, sectors of strategic economic opportunity and strategic supply chains should be at the core of the strategy for attracting high value added FDI that generates a range of wider economic benefits across NI.

¹⁰⁵£16million available for Co-Fund to help boost grow. DfE, 2021, [Dodds announces new Co-Fund NI funding of over £16m to support SMEs](#)

6.7. Currently FDI jobs aided in NI are concentrated within a few sectors¹⁰⁶. The top five sectors for new jobs from externally owned businesses supported by Invest NI from 2002-2020 are:



Source: Invest NI

6.8. NI can learn from successful competitors' strategies from FDI strategies in other nations including:

Ireland- IDA's Driving Recovery and Sustainable Growth strategy includes a target for a 20% increase in client expenditure to maximise the impact of FDI.

To achieve this the IDA intend to strengthen linkages with SMEs who are part of FDI supply chains and engage with the OECD FDI Qualities Initiative as well as support client training and upskilling with a €100m investment. They also aim to lead clients towards Government R&D initiatives to help position FDI businesses for future growth within Ireland¹⁰⁷.

The strategy also includes a 'regional' pillar to advance development throughout Ireland- this includes targeting half of all investment from 2021-24 to regional locations. Objectives to support regional development include: winning investments, supporting innovation and skills and developing clusters and spill overs¹⁰⁸.

Estonia- Free trade zones at 3 ports - goods here are considered outside the customs territory for export and import duties. VAT and customs do not have to be paid on goods that will be re-exported¹⁰⁹.

Estonia continue to progress and promote digital infrastructure and skills capabilities.

Finland- Along with subsidies to support business, the Centres of the Economic Development, Transport and the Environment have 15 regional

¹⁰⁶ Information from Invest NI, figures have been rounded.

¹⁰⁷ IDA Ireland, [Driving Recovery and Sustainable Growth 2021-2024](#)

¹⁰⁸ Ibid.

¹⁰⁹ More info. available at: investinestonia.com

offices which offer services including training for management skills, staff training and development of technology and innovation.

Finland also offers low-interest loans and grants to support R&D for challenging and innovative projects that may lead to technological breakthroughs¹¹⁰.

Deployment of Public monies

- 6.9. The establishment of the Fiscal Council and Fiscal Commission provides the conditions for greater transparency and scrutiny of NI public finances. This is important as limited resources require a focus on effective interventions. The Fiscal Council's remit includes an assessment of the sustainability of the Executive's public finances, including the implications of spending policy and the effectiveness of long-term efficiency measures.
- 6.10. Similar assessments of the efficiency of spending have been carried out via zero based budget reviews (ZBB). This requires budgets to start at zero to justify spending needs, reduce wastage¹¹¹ and identify innovative ways to deliver services which can boost productivity¹¹². Previous public expenditures experiences of ZBB that NI could learn from include:

UK - Equality and Human Rights Commission- ZBB review to provide recommendations and resourcing options to inform future funding decisions and ensure value for money and maximum impact is delivered¹¹³.

USA- Introduced by President Carter, then Governor in Georgia as the first state with ZBB, Carter then introduced it at Federal level¹¹⁴.

R&D and Innovation

- 6.11. Companies that undertake R&D&I activities are associated with higher survival rates, growth, productivity and development prospects. NI performs reasonably well in terms of R&D (although still lags the EU average), but typically ranks amongst the lowest innovation-active regions in the UK.

¹¹⁰ More info. available at: businessfinland.fi

¹¹¹ Kearney, [Zero-based budgeting: The basics of ZBB](#)

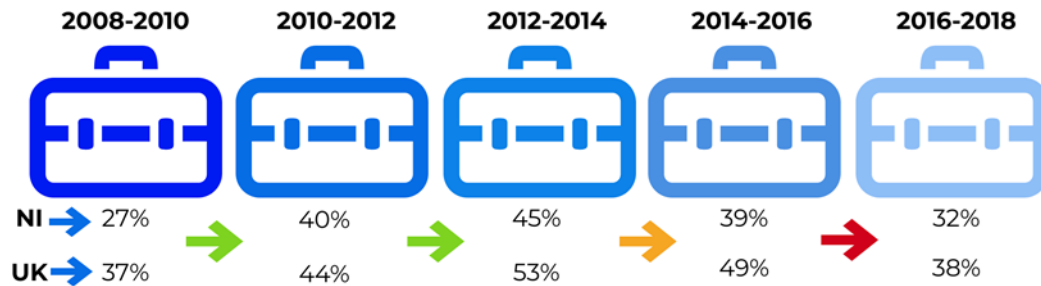
¹¹² Logan M. Cheek, Zero base budgeting in Washington, Business Horizons, Volume 21, Issue 3, 1978, Pages 23-28, ISSN 0007-6813, [https://doi.org/10.1016/0007-6813\(78\)90086-1](https://doi.org/10.1016/0007-6813(78)90086-1),

¹¹³ Gov.uk, 2012, [Zero-based budget review terms of reference](#)

¹¹⁴ Eakin, C.F in The Conversation, 2015, [Zero-based budgeting: everything old is new again](#)

- 6.12. The number of firms engaging in innovation activity in NI has been in decline since 2014 although this trend has also been experienced at a wider UK level.

Percentage of businesses engaging in innovation activity, NI and UK, 2008-2018



Source: UK Innovation Survey (2019)

- 6.13. Universities are a core element of the supply chain for businesses providing graduates and a research base, supporting the environment for innovation. In NI, business collaboration with Higher Education institutions remains the lowest of the UK regions¹¹⁵.
- 6.14. To support R&D and innovation other countries have embarked on the following policy supports:

Scotland- SMART:SCOTLAND Grants aims to support high risk, high ambition projects, only available to SMEs to conduct feasibility studies-up to 70% of costs are available for small bus. & 60% for medium¹¹⁶.

Wales- SMART Expertise provides funding for innovative, collaborative projects to solve industry problems with expert help¹¹⁷. SMARTInnovation offers expert support for businesses carrying out R,D&I¹¹⁸, as well as advice and support to apply for funding such as SMARTCymru which aims to co-invest in business R,D & I for sustainable growth¹¹⁹.

¹¹⁵ UUEPC report prepared for Matrix NI, 2021, [Strategic Innovation Opportunities for Northern Ireland](#)

¹¹⁶ Scottish Enterprise, [SMART: SCOTLAND grants](#)

¹¹⁷ Business Wales, [SMART Expertise](#)

¹¹⁸ Business Wales, [SMARTInnovation](#)

¹¹⁹ Support includes funding for Innovation Vouchers, Process and Open Innovation, Feasibility, Industrial Research, Experimental Development and Exploitation Business Wales, [SMARTCymru](#)

Germany- High-Tech Strategy 2025 is an overarching strategy to spur R&D&I with a technology focus, tailored to different industry and people needs¹²⁰.

R&D grants include - Within HTS- KMU-innovativ specifically focuses on funding for SMEs with a technology focus¹²¹.

The Central Innovation Program for SMEs (ZIM) provides financial support for R&D that lead to new products, services or better production processes¹²².

6.15. Supporting the progression of the 4th Industrial Revolution will help to achieve the competitiveness aspect of the draft PfG target of ***Our economy is globally competitive, regionally balanced and carbon neutral***. This aim includes creating conditions supportive to ***investment, innovation and having infrastructure to enhance opportunities for growth***.

6.16. To support investment in automation and robotics, NI can learn from:

Germany- €2bn package for car manufacturers and auto industry suppliers to help switch to greener and automated driving methods. Funding will help support R&D of digital supply chains, 3D printing, shared use of data and training¹²³.

PAiCE forms part of the High-Tech Strategy –carrying out 17 research projects bringing together partners across business and science to develop technology solutions¹²⁴.

Europe- Future Financial Framework (2021-2027): European Digital Innovation Hubs in Digital Europe Programme- proposed to help digital hubs stimulate uptake of AI, high performance computing and cybersecurity in private and public sectors¹²⁵.

Ireland- Enterprise Ireland Capital Investment Initiative provides grant support of up to €250,000 for SMEs to invest in automated equipment¹²⁶.

¹²⁰ Federal Ministry of Education and Research, [High Tech Strategy 2025](#)

¹²¹ Germany Trade & Invest, [R&D Grants in Germany](#)

¹²² European Commission, [Central Innovation Programme- ZIM](#)

¹²³ Reuters, 2020, [Germany agrees \\$2.3 billion aid for auto industry to navigate technology shift](#)

¹²⁴ Federal Ministry for Economic Affairs and Energy, [PAiCE](#)

¹²⁵ European Commission, 2021, [Digital Innovation Hubs \(DIHs\) in Europe](#)

¹²⁶ More info. available at: Department for Jobs, Enterprise and Innovation, [Manufacturing guide AN OVERVIEW OF GOVERNMENT SUPPORTS FOR MANUFACTURING IN IRELAND](#) and Enterprise Ireland, [Funding Supports](#)

Sweden- Produktion2030 aims to strengthen industrial competitiveness by reinforcing collaborations and converting industry challenges into relevant and innovative solutions¹²⁷, it also provides training through its national graduate school.

Policy considerations

FDI Policies:

Recommendation 16:

- *Support investment in skills to provide a pipeline of suitably qualified labour for FDI and local scaling firms. Attract higher value FDI by promoting research strengths to cluster and align inward investment projects to areas of research capability similar to the IDA regional strategy and deploy a selection of wraparound support including R&D&I, skills and supply chain development for local SME and micro companies. In conjunction, consideration should be given to differentiating grant rates, developing a target framework or other incentives that will encourage sub-regional levelling-up of FDI investments, similar to the approaches taken elsewhere¹²⁸.*

Recommendation 17:

- *Highlight the potential opportunities of the NI Protocol in attracting FDI by promoting awareness of NI's unique status of having unfettered access to the GB market and the EU single market for goods.*

Management and Leadership Policies:

Recommendation 18:

- *Drawing on the expertise of Universities, Colleges, Department for the Economy & Invest NI, develop a subsidised virtual management and leadership training programme for businesses outside the eligibility scope of the 'Help to Grow' scheme¹²⁹. Ensure that micro, SME and third sector businesses have access to such continuous and 'enabling support' to work on their business and are given advice and help on how to achieve productivity improvements and how to motivate and manage remote teams.*

¹²⁷ Produktion2030, [Training](#)

¹²⁸ IDA targets are for 50% of FDI to be located outside Dublin

¹²⁹ The Help to Grow scheme is a UK-wide initiative open to UK businesses from any sector that have been operating for more than 1 year, with between 5 to 249 employees. Charities are not eligible.

Business Support Policies:

Recommendation 19:

- *Productivity improvements should be an outcome measure that is reported for all economic development projects and assistance should be through conditional and/or competitive funding programmes. Conditionality should be based on achievement of targets (such as productivity improvements) or Total Societal Impact¹³⁰ (TSI) of enterprises before and after financial assistance projects have completed. Support micro and SME business via workshops to apply for competitive UK-wide funding opportunities.*

Evaluation Policies:

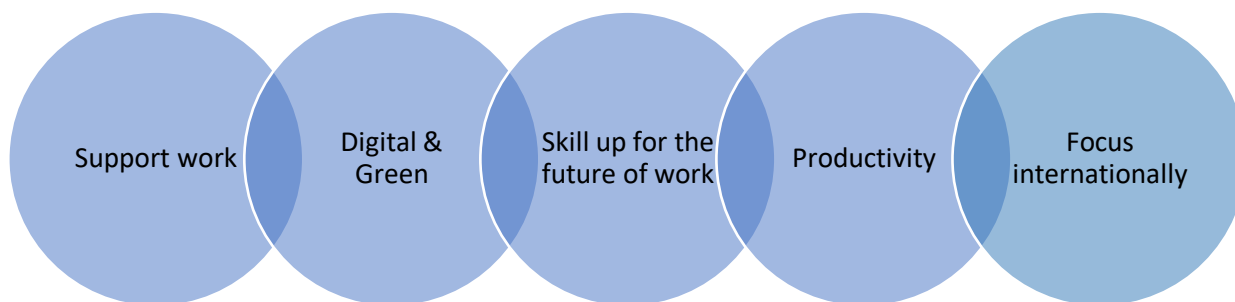
Recommendation 20:

- *Conduct a comprehensive 'policy triage' review of existing programmes and policies to assess which policy interventions are most effective and to provide a baseline understanding of how and where money is being spent most effectively. Ensure that the right metrics and targets across multiple dimensions are being measured and reported for policy interventions. Ensure that robust counterfactual policy evaluations are undertaken objectively and independently so that results are accepted with a view to improvements.*

¹³⁰ TSI is the total benefit to society from a company's products, services, operations, core capabilities, and activities.

7. Focus internationally

Figure 7.1: Competitiveness Challenges pillars



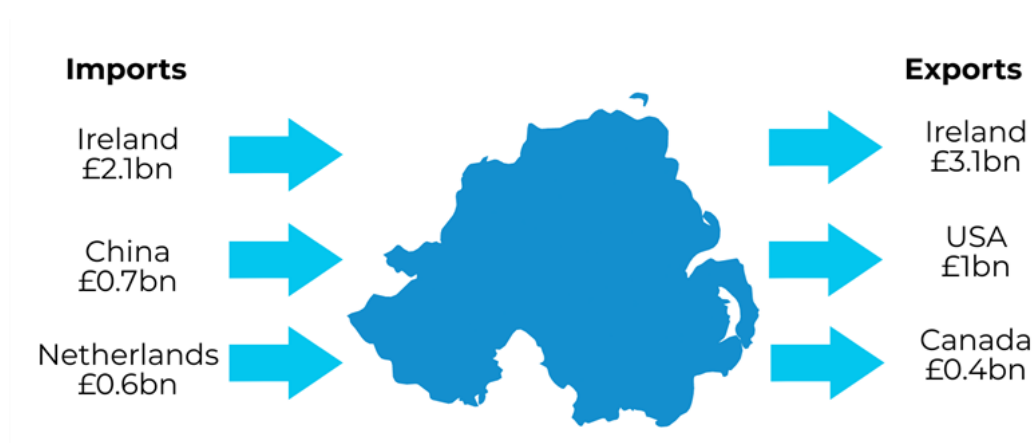
Source: UUEPC

- 7.1. As a small open economy, focussing internationally is critical as a path to generating income from outside the economy. Exports, tourism and FDI are all ways in which to boost wealth and incomes, which can be across NI with the support of appropriate policy tools.

Growing exports

- 7.2. NI's exporting performance has improved markedly since the 2008 recession but remains weak in comparison with global competitors¹³¹. COVID-19 has renewed conversations about the need for business growth and exporting to support the recovery which may be aided by advancements in digital technology.

Top 3 import and exports markets for goods, NI, 2020



Source: NISRA, UK Trade in Goods Map
 Note: Figures have been rounded

¹³¹ Competitiveness indicators in relation to the focusing internationally can found under Macro. And Fiscal Sustainability, page 32, and Business Performance, page 55, available here: ulster.ac.uk

7.3. The NI Executive has made commitments to international advancement for NI through the draft PfG targets of ***Our economy is globally competitive, regionally balanced and carbon neutral*** and ***People want to live, work and visit here***¹³². Key priority areas include:

-
- *Dealing with the Protocol*
 - *Developing internationalisation to help NI compete on a global stage*
 - *Promote NI as a sector to visit & invest in*
 - *Growing the economy to attract and stimulate investment across NI*
 - *Encouraging business start-ups development through City & Growth Deals*
 - *Supporting sustainable development*
 - *Retaining our workforce & attracting newcomers & inward investment*
-

7.4. Further support introduced through the **Economic Recovery Action Plan**¹³³ in relation to investment, trade and exports aims to support a variety of ambitions via:



¹³² Draft Programme for Government, 2020. Available at: [PfG](#)

Note INI here stands for Invest NI.

¹³³ Full info. available at: economy-ni.gov.uk

Plan also includes extensive R&D measures as well as tourism support which will also impact NI internationally.

7.5. Other support already in place in NI includes¹³⁴:



7.6. Other countries are supporting increased exporting via:

Germany- Export promotion services helped SMEs develop new markets abroad, assisting to develop 1,300 hidden champions¹³⁵.

Export credit and investment guarantees protect exporters and banks against the risks of unpaid claims in foreign transactions due to economic or political reasons.

Denmark- EKF provides insurance to protect against losses and international business to purchase Danish goods.

COVID-19 flexibility to Export and Investment package of 2020- includes increasing the grant percentage from 50% to 75%, expenses incurred by cancellations can be reimbursed up to 50%.

Danish Trade Council- companies can get up to 5 free hours of export advice, up from 1 hour.

Ireland- Enterprise Ireland- Export Compass- workshops to promote ways to overcome the challenges of the pandemic by understanding overseas business cultures, building digital capabilities for selling and developing customer, distributor and/or partner relationships. Free to all micro & SME companies.

Enterprise Ireland online export preparedness scorecard to help companies to establish an export led business plan. Other programmes include Enter the Eurozone Programme, Excel at Export Selling workshop series and Exporter Development Workshops.

¹³⁴ List is not exhaustive, more info. available in the [PfG](#)

¹³⁵ SME world market leaders in the fields of electrical equipment, mechanical engineering and industrial products.

Export Policies:

Recommendation 21:

- *Broaden the business base of exporters through a proactive campaign to seek out and provide support to companies currently not exporting, but who have the potential to do so, particularly those in niche markets¹³⁶. Consider the potential for "Export Academies" and develop an "export readiness scorecard" to help businesses assess preparedness for exporting and address gaps in knowledge and expertise.*

Recommendation 22:

- *Enhance the provision of export market data, such as information on local rules, regulations, culture, and legal requirements etc. and promote awareness of this resource to businesses to fill information gaps on existing and potential export markets. Support Invest NI to locate small hubs in global key cities, rather than nationally, particularly in emerging markets, to support knowledge exchange, assess feasibility of markets and provide connections for exporting.*

Recommendation 23:

- *The ongoing Aviation Tax reform, led by HM Treasury should reassess the feasibility of APD or other similar measures for NI airports so that they can compete for and retain greater numbers of strategically important air routes, particularly in European export market destinations.*

Education and Skills Policies:

Recommendation 24:

- *Support export capabilities in the local labour market by enhancing the language skills of the population, particularly in emerging markets, via the promotion of languages in primary and secondary school education and in adult learning. Support demand for logistics and customs skills in the labour market by providing accelerated accredited courses in these areas, tailored to industry requirements.*

¹³⁶ Locally owned Invest NI client companies accounted for 24% of total exports in 2018 whilst externally owned companies accounted for 45%. Calculated by UUEPC using Invest NI and NISRA data.

EU-Exit policies:

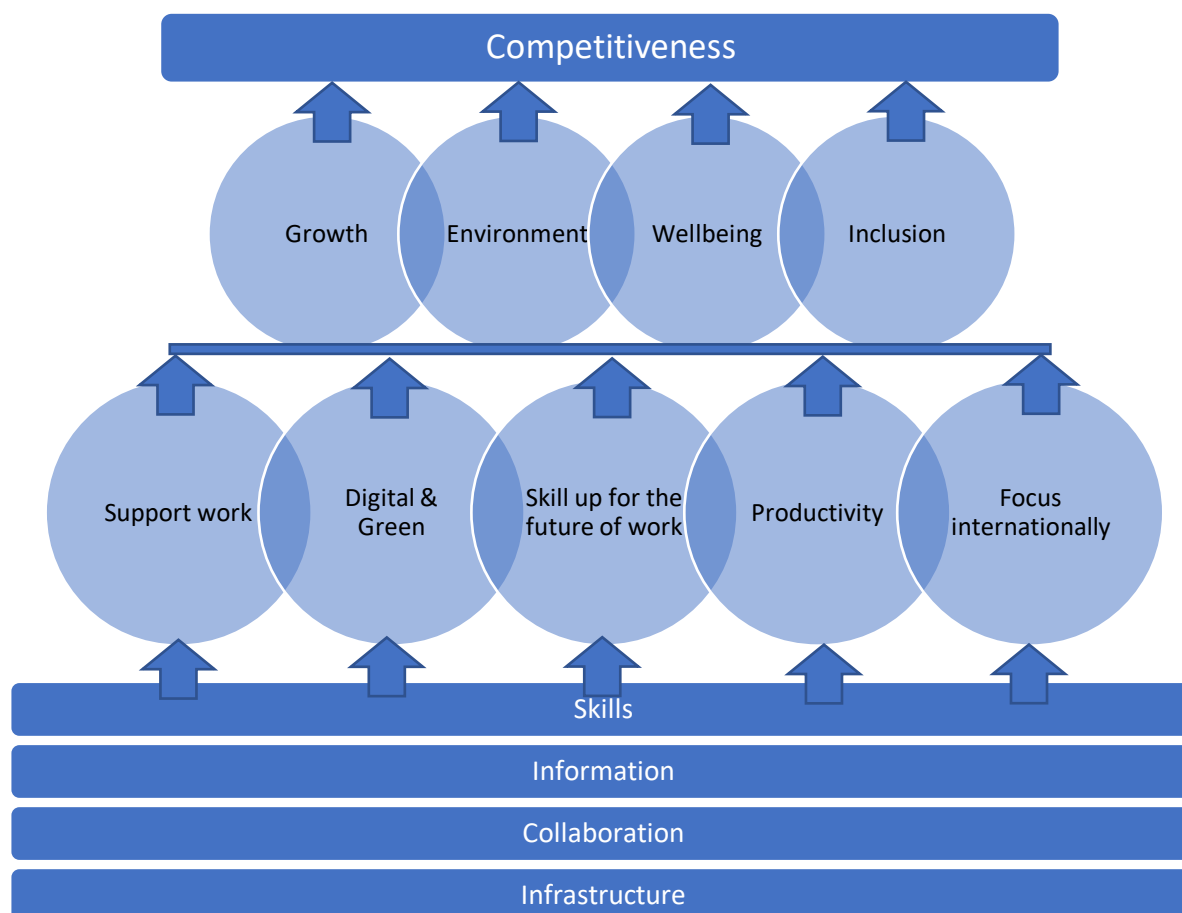
Recommendation 25:

- *Lobby UK Government to provide insurance or credit guarantees for any losses incurred due to changes to NI protocol arrangements, after end of grace period, this will help reduce uncertainty and support confidence in business investment and recruitment plans.*
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8. Conclusions

- 8.1. The diagnosis of the competitiveness challenges, and the relative scale of various issues facing the NI economy was delivered by the Competitiveness Scorecard. This publication builds upon the diagnosis and provides ideas generated by the research team, ideas from other successful competitors and from experts across NI to suggest a range of policy actions that can help to address the most significant and long-standing competitiveness challenges that are faced and respond to the dual challenges of COVID-19 and EU Exit.
- 8.2. The research identified five main pillars and policy interventions within each that could meaningfully improve NI's competitiveness over the next decade. Importantly, the stakeholder consultations identified a range of cross-cutting issues (skills, information, collaboration and infrastructure) that are necessary in order to underpin the pillars, as drivers of competitiveness. Together these will provide a supportive context for our local businesses and a framework in which to effectively operate and thrive.

Figure 8.1: Competitiveness foundations, pillars and outcomes



Source: UUEPC

- 8.3. The findings of this research are supportive of the direction of a range of strategies implemented, or under consultation including the Draft Programme for Government, DfE's 10x Strategy, Skills strategy and recovery plan. However, the research delves into more depth, identifying a range of policy actions that could be deployed in order to boost NI's competitiveness over the next decade and reverse the decline.
- 8.4. In terms of the individual pillars - **Supporting people into work** has once again become a priority due to COVID impacts on the economy. Recommendations in this area focus on public sector-driven job generation and additional wraparound support for those furthest from the labour market to help them access training and employment opportunities ([Recommendation 1 & 3](#)). Enabling people to fulfil their potential and achieve a better work-life balance is also highlighted via support for a formal flexible working strategy and reviews into both the 16-hour rule on working while on benefits and also into alternative provision of child care, in recognition of the vital nature of the sector ([Recommendation 2, 4 & 5](#)).
- 8.5. COVID has also accelerated moves towards **digital uptake** while the **climate emergency** has become an increasing priority. Although separate challenges, both are connected via the requirements for improved infrastructure to keep pace with change, and updated legislation to enable existing assets to be utilised in new ways and planning laws to support fast paced and flexible development ([Recommendation 6, 7, 8 & 9](#)). Public awareness of these changes will be required to support policy initiatives and enable consumer buy-in to more energy efficient lifestyles ([Recommendation 10](#)).
- 8.6. The **Future of Work** is likely to involve increased digitisation and automation and NI's labour market must be prepared with industry-relevant skills but also adaptable and transferable skills. In conjunction, we must not lose sight of current demands and should ensure that vocational, trade and manufacturing skills are given appropriate priority in leading to valuable and rewarding careers ([Recommendation 11, 12, 13 & 14](#)). Embedding a culture of lifelong learning will also ensure that the population is equipped to deal with change and ever-evolving industries ([Recommendation 15](#)).
- 8.7. Low **productivity** is a long-standing challenge in NI which will be addressed in part across all recommendations. More specifically, high value added FDI & R&D&I will support productivity improvements through improved working practices and knowledge spillovers however it must be tailored to NI's research and knowledge strengths and be balanced sub-regionally based on local capabilities and specialisations ([Recommendation 16 & 17](#)). To support incremental productivity improvements within firms, management and leadership skills need to be enhanced and professionalised with support

targeted specifically to micro and SME firms ([Recommendation 18](#)). More generally, business support should be conditional in its offering, ensuring there is a social benefit to its receipt ([Recommendation 19](#)). Supporting firms to apply for competitive funding will also open up funding opportunities and support that competitive drive. Funding also needs to be effectively evaluated to ensure that policies are delivering Value for Money ([Recommendation 20](#)).

- 8.8. To deliver growth in the economy we must look beyond the limitations of the local market and help more firms **focus internationally**. Information and awareness is central to this and can be supported with an up-to-date and accessible resource which provides detailed market and local and cultural intelligence on external economies ([Recommendation 21, 22 & 23](#)). Firms will also need supported to access these markets and we must ensure that the labour market is equipped with the language and operational skills to enable and drive export market entry ([Recommendation 24](#)).
- 8.9. Disruption inevitably leads to change and now, as the economy weathers the storm of COVID and deals with uncertainty of EU-exit, is the right time to engage in fresh and determined action ([Recommendation 17 & 25](#)).
- 8.10. The recommendations provided here seek to provide a firm set of actions which will support recovery but also halt NI's competitive erosion and make steps in improving both economic growth and quality of life for a more resilient and buoyant future.

About UUEPC

UUEPC is an independent research centre focused on producing evidence-based research to inform policy development and implementation. It engages with all organisations that have an interest in enhancing the Northern Ireland economy. The UUEPC's work is relevant to Government, business and the wider public with the aim of engaging those who may previously have been disengaged from economic debate.

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