
Opportunity Northern Ireland

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Executive summary

Over the last decade, Northern Ireland has made significant steps in strengthening its higher education system. In parallel with an improving economic outlook and several signs of progress in the provision and delivery of public services (NISRA, 2021), several strategies have addressed the importance of higher education for the Northern Ireland economy, together with a commitment to investing in skills to foster economic development, accessibility and curriculum delivery (NISRA, 2021; OECD, 2020). The combination of Brexit and the post-pandemic societal changes poses several challenges for Northern Ireland including international students' mobility, access to European research funding, digitalisation of teaching and learning, and the importance of attracting and nurturing talent in an increasingly competitive and globalised labour market. International networks and joint ventures are more crucial than ever: the pandemic and its ensuing transformations have highlighted the need for continued, and accelerated, internationalisation.

In order to gain a deep understanding of Northern Ireland's higher education sector, the overarching questions of this report are: **How does higher education operate in the broader ecosystem of Northern Ireland and globally? What are its unique selling points?** To address these questions, this report explores three main themes: *Northern Ireland on a global stage (Chapter 1); Higher education and research in Northern Ireland (Chapter 2); and Focus on Queen's University Belfast and Ulster University (Chapter 3)*. The findings show how the **higher education sector in Northern Ireland is globally engaged in the quest for innovation and excellence**. In Northern Ireland, internationalisation has become a strategic objective reflected in several dimensions, including: (i) the establishment of **collaborative governance and multi-stakeholder co-operation** through partnerships and growth deals; (ii) a focus on **widening and deepening students' international mobility** through the expansion of affordable branch campuses, and the implementation of international academic partnerships; (iii) **a fine-tuning between academic curricula and sectoral excellence**, as visible for

instance in sectors such as creative industries; information technology security or cybersecurity; fintech; and life and health sciences; (iv) the provision of **research-led teaching in the area of peacebuilding and conflict management**, as Northern Ireland is often highlighted as one of the most successful recent examples of global peacebuilding; and (v) **tailored and pastoral engagement initiatives to promote students' (social) experiences**.

In turn, these dimensions provide input to shape what constitute the **key unique selling points** of higher education in Northern Ireland and in particular:

- geographical capital: green landscape; size; and a unique gateway between the UK and the European Union
- multidisciplinary world-leading research at Queen's University Belfast and Ulster University
- global leaders in the area of peacebuilding and conflict management
- leading and creating value in tech industries
- strong university–business co-operation in knowledge generation
- collaborative institutional environment focused on shared values and networking.

Addressed to the British Council's global network, national and international stakeholders and governments, this report offers a comprehensive analysis of Northern Ireland's higher education sector, together with providing insights on its strengths and assets as a study destination and area for research collaboration, and the wider context in which higher education is delivered.

Introduction



This report offers a comprehensive analysis of Northern Ireland's higher education sector, its strengths and assets as a study destination and area for research collaboration, and the wider context in which higher education is delivered in Northern Ireland. To better understand Northern Ireland's higher education sector with the view of identifying key opportunities to engage with partners and stakeholders to strengthen the British Council's global network, the two overarching questions for this report are: **How does higher education operate in the broader ecosystem of Northern Ireland and globally? What are its unique selling points?** In addressing these questions, this report explores three main themes which are elaborated in their corresponding chapters. These themes are: Northern Ireland on a global stage; Higher education and research in Northern Ireland; and Focus on Queen's University Belfast and Ulster University.

In Chapter 1, we present Northern Ireland on a global stage. After contextualising Northern Ireland and providing a brief overview of its ongoing transition from conflict to peace, we highlight the positive historic and cultural markers that make it an attractive place to visit and stay for tourism and academic purposes.

Chapter 2 explores higher education and research in Northern Ireland.¹ We first focus on its unique selling points as a destination for international higher education study and research collaboration. These unique selling points are the overarching themes of this report, the 'opportunities' for attracting talents, students, and innovation in business and research. Then, we turn the analysis to the wider assets linked to higher education, focusing on sectors, including creative industries, information technology security or cybersecurity,² fintech, life and health sciences. The final part of the chapter explores Northern Ireland's unique geographical position by highlighting opportunities of co-operation with the European Union (EU) and Ireland, and provides some examples of inter-institutional partnerships as well as collaborative approaches with public-private partners and stakeholders to strengthen the work of the British Council in promoting higher education in the UK through its global network.

Finally, **Chapter 3 focuses on Queen's University Belfast and Ulster University.** After providing an overview of the key data and activities of the two institutions, we focus on their global research strategies and international students' perspectives on mobility, educational experiences and employability. Then, we highlight the global relevance of each university's uniqueness and distinctive features.

In order to develop the three themes of this report (*Northern Ireland on a global stage; Higher education and research in Northern Ireland; and Focus on Queen's University Belfast and Ulster University*), the **research methodology consisted of three steps.**

First, we conducted desk research, to lay the foundations for subsequent research tasks to cover the three themes of this report. This desk research relied on grey literature, academic sources, public reports produced by government departments, universities, business and industry, as well as blog posts and other media resources (see the bibliography section for a full list of the sources consulted).

Second, to better understand how the higher education sector operates in Northern Ireland and in interaction with business and governmental actors, we conducted semi-structured interviews and roundtables over the period of February to March 2022 with several key informants and stakeholders ranging from the Northern Ireland Department for the Economy, Invest Northern Ireland and Tourism NI to industry leaders, including representatives from the fintech sector and creative industries.

Third, in order to provide a detailed picture of Queen's University Belfast and Ulster University, we consulted academic publications and grey literature published by the two universities, together with the consultation of internal documents and marketing strategies which were made available to us. In addition, we conducted semi-structured interviews with the vice-chancellors of both universities and roundtables with representatives from Queen's University Belfast and Ulster University;³ the former helped us to gather cross-institutional perspectives on Queen's University Belfast and Ulster University

1 In Northern Ireland, higher education is delivered through three universities (Queen's University Belfast, Ulster University and Open University) and two teaching colleges. The Northern Ireland Department for the Economy is responsible for further education and skills programmes, further education colleges and higher education. See: www.economy-ni.gov.uk/articles/higher-education-division

2 Cybersecurity is the practice of defending computers, servers, mobile devices, electronic systems, networks and data from malicious attacks. It is also known as information technology security. In this report, the terms information technology security and cybersecurity are used interchangeably.

3 Throughout the report, interviews and roundtables with the two universities representatives are referred to as 'Global Engagement Team'.

with reference to their local and global role, whereas the latter helped us to have a clear picture of how the different internationalisation facets interact as well as the potential links with the industry sectors. Furthermore, we also conducted two roundtables with international students in order to gather students' perspectives on mobility, educational experiences and employability.

Finally, we validated our findings during discussions and meetings with the British Council Northern Ireland team and with representatives of Queen's University Belfast and Ulster University, who provided us with valuable feedback and suggestions (see the appendix for a full list of the interviewees and their role).



Chapter 1: Northern Ireland on a global stage

Key facts about Northern Ireland

Northern Ireland is one of the four countries that constitute the United Kingdom (UK). It is located in the north-east of the island of Ireland and borders Ireland to the south and west. As of 30 June 2020, it had a population of 1.9 million and over the decade mid-2010 to mid-2020, the population of Northern Ireland increased by a total of 90,700 people with an average year-on-year increase of 0.5 per cent. In 2020 Northern Ireland had a negative net migration, with the loss of 3,300 people. As in most Western countries, the population of Northern Ireland continues to age. In 2020, 20.9 per cent of the population was 0–15 years old, while 62.2 per cent was 16–64 years old, and 16.9 per cent was 65 and over. The share of the youngest section of the population has decreased 4.4 percentage points since 1995 (NISRA, 2021), but by 2030 the population is projected to grow two per cent (compared to 2020) (ONS, 2020).

Northern Ireland has a highly educated and skilled English-speaking workforce, with **one of the youngest populations in Europe** (NISRA, 2021). In terms of educational attainment, 74 per cent of graduates achieve a first-class or upper second-class degree and 71 per cent of children leave school with five or more GCSEs (A*–C) including English and Maths (Invest Northern Ireland, 2017). According to the OECD Pisa results, **pupils in Northern Ireland perform above the OECD average in reading and maths** (OECD, 2020). Furthermore, the proportion of working-age adults with a degree has tripled since the late 1990s. This has implications not only for domestic growth, but it also contributes to providing **fresh talent for businesses and investors**.

Over the last decade, Northern Ireland has significantly improved its economic outlook and, according to the Northern Ireland Statistics and Research Agency (NISRA, 2021), there has been three per cent growth since the onset of the Covid-19 pandemic. The country also performs strongly in many welfare areas, including jobs, health, accessibility to services (OECD, 2020), friendly and supportive communities and safety environment (NISRA, 2021; OECD, 2020). Foreign direct investment has also increased, with 75 per cent of investors

choosing to reinvest (Interview, Tourism NI; Invest Northern Ireland, 2017) due also to the presence of a positive, business-friendly climate that seems to cope well in the post-Brexit scenario.

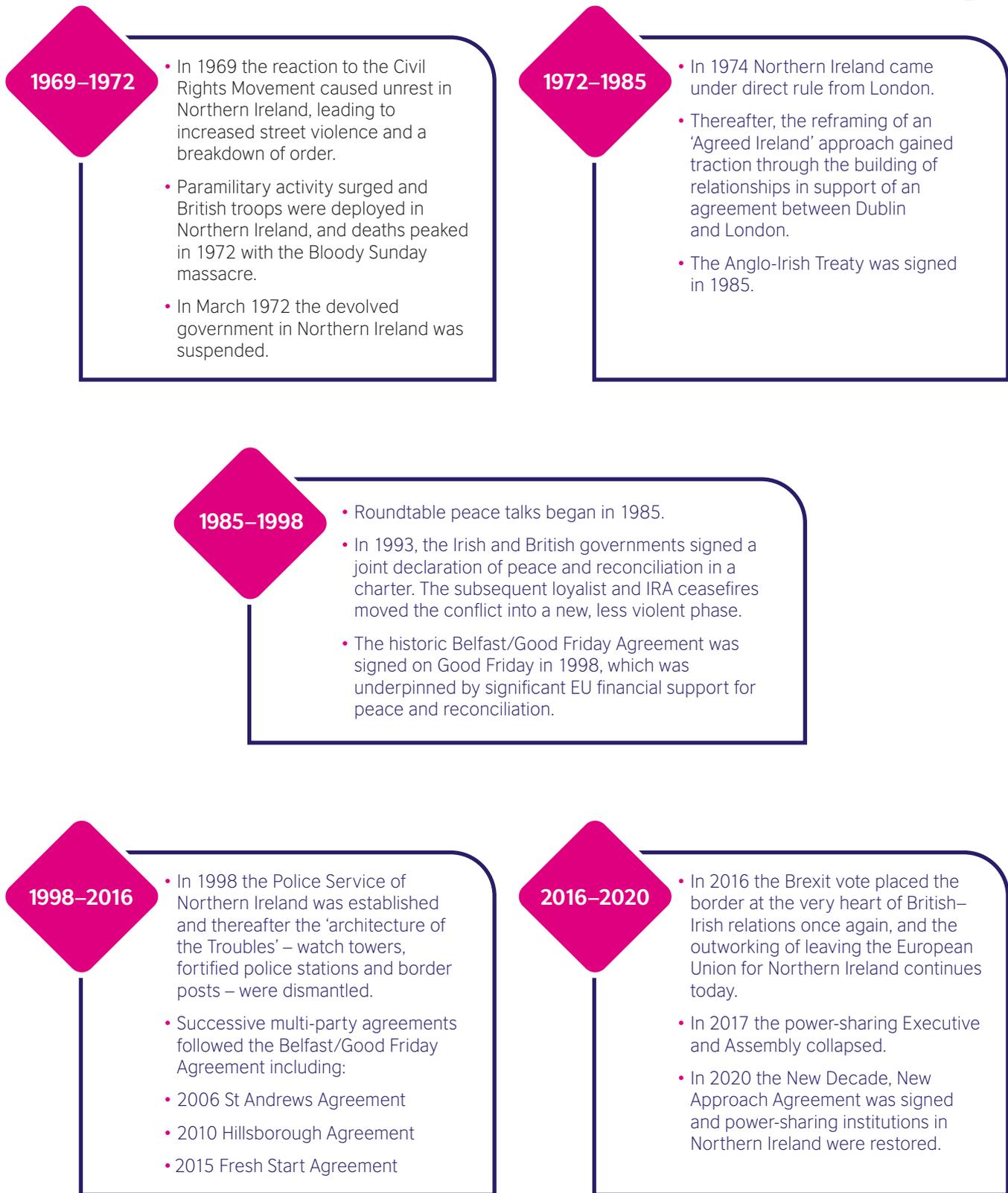
Recent history: from a community of conflict to a community of co-operation

Northern Ireland's recent history has been marked by the ongoing transition from an armed conflict to a more peaceful society. From the late 1960s to the late 1990s, Northern Ireland experienced three decades of conflict and violence (Jarman, 2016). This period of conflict, known as 'The Troubles', formally came to an end in April 1998, with the signing of the Belfast/Good Friday Agreement (Jarman, 2016). The Belfast/Good Friday Agreement provided a framework for political settlement in which a compromise was achieved by creating a new devolved government in which unionist and nationalist parties would share power, facilitating disarmament, and abolishing border checks between Northern Ireland and Ireland (Murphy et al., 2020). The Agreement is composed of three strands, covering: (i) Northern Ireland's governance; (ii) North–South institutions; and (iii) British–Irish institutions. Specifically, 'Strand One' established the Northern Ireland Assembly and Executive to make laws and decisions on most of the issues affecting everyday life in Northern Ireland; 'Strand Two' established the North–South institutions – the North South Ministerial Council and the North South Implementation Bodies – that support co-operation between Northern Ireland and Ireland; 'Strand Three' established the East–West institutions – the British–Irish Intergovernmental Conference and the British–Irish Council – that support co-operation between the United Kingdom and Ireland (Belfast/Good Friday Agreement, 1998⁴). Although the Belfast/Good Friday Agreement still represents a cornerstone of consensual politics in Northern Ireland and it has undoubtedly had a positive impact upon the country, several challenges to the peace process still persist, including those exposed by Brexit. Figure 1 provides an overview of the timeline of the Northern Ireland peace process.⁵

4 The full text of the Belfast/Good Friday Agreement is available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1034123/The_Belfast_Agreement_An_Agreement_Reached_at_the_Multi-Party_Talks_on_Northern_Ireland.pdf

5 Source: authors' elaboration, adapted from Murphy et al. (2020) and the Department of Foreign Affairs Ireland (no date) 'Timeline of the Peace Process. Available online at: www.dfa.ie/our-role/policies/northern-ireland/the-peace-process/ni-peace-process-infographic

Figure 1: Timeline of the Northern Ireland peace process



Northern Ireland's peace process has quickly become an example and model of reconciliation and community-building for the world. As explored later in this report, the people of Northern Ireland's resilience and ability to overcome conflict and embrace peace, despite the persistence of many challenges, is a source of admiration and attraction for people around the world (see also the Chapter 2 section on peacebuilding and conflict management). Indeed, in the last 25 years, the country has undergone a remarkable transition and transformation on all fronts and is on a path towards an increasingly diverse society and a thriving economy.

In line with the United Nation's Sustainable Development Goal 16 to 'promote just, peaceful and inclusive societies for sustainable development, the provision of access to justice for all, and building effective, accountable institutions at all levels',⁶

Northern Ireland has worked continuously to shift from a community of conflict to a community of co-operation between actors.

According to the UK *Voluntary National Review of Progress Towards the Sustainable Development Goals* (HM Government, 2019), the efforts in Northern Ireland to drive a peaceful society are based on the 'respect for each other and tackling hate crimes in all form'. The legacy of the Troubles demanded new spaces for sharing between traditionally divided and new communities. Thus, values such as co-operation and collaboration, diversity and inclusion, peace and reconciliation are promoted in Northern Ireland initiatives to build confidence in institutions and improve relationships within and between communities. Although healing and reconciliation will take time, Northern Ireland is today a safe and more peaceful country, where institutions have become more transparent and accountable to citizens. This is recognised by the latest Good Growth for Cities Index, which awards Belfast the 'best of the devolved cities to live and work in' (PwC, 2022).

Northern Ireland globally

Northern Ireland has captured the attention of the global travel industry, with awards from bodies ranging from Lonely Planet to National Geographic. The capital city of Belfast was voted as one of National Geographic's places to travel for food in 2016; the best UK city (Guardian Travel Awards 2016); the Giant's Causeway was named the number one region in the world to visit in 2018 (Lonely Planet, 2018) and Titanic Belfast has been awarded as the best visitor attraction in the World (World Travel Awards, 2016). As mentioned in the Complete University Guide 2022, 'Belfast is bursting with nightlife and fun. Alive with clubs, pubs and music, the city has a packed schedule of festivals and events including Belsonic and Belfast Vital' (Complete University Guide 2022).

Tourism represents a key sector for Northern Ireland (Interview, Tourism NI). Before Covid-19, overseas tourism delivered about £566 million per year for the Northern Ireland economy, helping to sustain valuable employment in local communities. In February 2022, Tourism Ireland launched a 'Green Button' campaign to drive awareness of Northern Ireland as a great destination for a short break or holiday.

According to the Global Destination Sustainability Index, Belfast is in the top 20 list of sustainable destinations in the world⁷ with a huge commitment in terms of transitioning into an inclusive, zero-emissions, climate-resilient economy (Global Destination Sustainability Index, 2021). Within this path towards a more sustainable future, Belfast City Council launched in December 2020 a 'Resilience Strategy'⁸ that, together with the recovery plan 'Rebuilding City Tourism 2021–24', highlights the importance of supporting sustainable tourism recovery while moving to a greener and more inclusive tourism model (Interview, Tourism NI).

⁶ See <https://sdg-tracker.org/peace-justice#:~:text=The%20UN%20explains%3A%20Goal%2016,accountable%20institutions%20at%20all%20levels>

⁷ See www.belfastcity.gov.uk/News/Belfast-ranked-in-Top-20-global-sustainable-destin#:~:text=Belfast%20joined%20the%20GDS%20Index,tourism%20recovery%20and%20growth%20plans

⁸ See www.belfastcity.gov.uk/resilientbelfast

Moreover, conferences, cultural events and top-level sports events showcase Northern Ireland as an exciting tourism destination.

In November 2021, Belfast became the first city on the island of Ireland to receive the prestigious UNESCO City of Music title in recognition of its rich musical heritage, with several high-profile music events planned for the future. In addition, sports tourism also plays an important role in putting Northern Ireland on the global map. In 2025, Northern Ireland will again host 'The Open Championship', which is one of the oldest and most prestigious golf tournaments in the world. Therefore, Northern Ireland is likely to become even more attractive to global guests seeking healthier and more sustainable ways to live and travel (see also, Department for the Economy, 2021a).

Challenges and the way forward

Although Northern Ireland is experiencing persistent and future challenges, there are also several factors pointing towards a promising healthy growth path.

A key challenge is the economic uncertainty due to the post-Covid-19 recovery and to more structural factors such as the relatively weak level of innovation in comparison to other UK regions (Johnston et al., 2021). Northern Ireland continues to experience high rates of economic inactivity among the working-age population, and its labour productivity is 17 per cent below the UK average, which is itself below the OECD average (NISRA, 2021). Megatrends such as digitalisation, demographic change, climate change and globalisation will undoubtedly affect the country, transforming jobs and the way people consume, interact and spend their time (NISRA, 2021). As a result of the impact of the Covid-19 pandemic especially, people will increasingly need to upgrade their skills to perform new tasks in their existing jobs, or acquire new skills for new jobs, as well as to adapt to new modes of behaviour, consumption and work (OECD, 2020). Furthermore, migration and 'brain drain', especially at the higher skills level, have begun to disproportionately affect Northern Ireland compared with most other UK regions. When examining the impact of demographic change and mobility on skills imbalances, it is worth noting these

comparatively large percentages of Northern Ireland domiciles who leave the country for their studies and/or professional careers (OECD, 2020; Pivotal, 2021).

However, the government of Northern Ireland has been committed to fostering the creation of an enabling institutional environment to promote economic and social growth.

Besides the launch of several strategies to improve the Northern Ireland skills system in order to make it a 'globally competitive economy that works for everyone' (OECD, 2020), the recent years have seen an increasing commitment towards a multi-layered governance dimension encompassing integrated programmes of investments, with Northern Ireland part and parcel of the 'levelling up' UK agenda (Interview, Department for the Economy; UK Government, 2022). In May 2021, the Northern Ireland Department for the Economy has published *A 10X Economy: Northern Ireland's Decade of Innovation*. This strategy plays an essential role in defining the economic mission of Northern Ireland and in holistically addressing skills shortages. Encompassing a crucial role for higher and further education institutions, the strategy outlines five priority clusters that map into research and innovation (R&I) strengths within the higher education institutions, including digital, ICT and creative industries, agri-tech, Fintech, advanced manufacturing and engineering, and life and health sciences. Within the '10X Strategy', higher education in Northern Ireland plays a crucial role in the economic and social post-pandemic recovery, with universities acting as innovation and knowledge exchange hubs (Royal Irish Academy, 2021a; Interview, Vice-Chancellor Ulster University; Interview, Vice-Chancellor Queen's University Belfast; Interview, Department for the Economy).

Very recently, the Northern Ireland Department for the Economy has published *Northern Ireland Skills Barometer 2021*, which provides a detailed understanding of the skills requirement for the country up to 2030 (Department for the Economy, 2022). The findings of the report underline the importance that high skills will play in the growth of the Northern Ireland economy, and in particular in sectors such as ICT, advanced manufacturing, creative arts and design, thus opening up further opportunities for the higher education sector in Northern Ireland given its already existing commitment to align supply with demand (see also Chapter 2).

Chapter 2: Higher education and research in Northern Ireland

Unique selling points

Geographical capital: green landscape; size and a unique gateway between the UK and EU

A first selling point of higher education in Northern Ireland is its **'geographical capital'**, encompassing not only outstanding sceneries, mountain ranges and the dramatic sight of the Giant's Causeway (the first UNESCO World Heritage Site in the country), but also a – relatively small – size of only 14,130 km² (NISRA, 2021), with its beautiful coastline never being more than two hours away and a unique geographical position within the UK/EU border thus allowing access to key markets across Great Britain, Ireland and the European Union (Interview, Invest Northern Ireland). With a comprehensive network of air and sea routes,⁹ London and Dublin can be easily reached within two hours, offering different advantages in terms of opportunities for business and investors. In this regard, Northern Ireland offers a pro-business and friendly climate benefiting from the UK economy and flexible regulatory environment, with Belfast ranked as the world's most business-friendly small-to-medium-sized city and included in the world's top ten Digital Economies of the Future (Financial Times, 2018). Furthermore, Belfast provides a competitive near-shore proposition to the rest of Europe, enabling banking and business to conduct business with the euro due to the land border with Ireland (Invest Northern Ireland, 2017). As one of our respondents stated, *'Northern Irish business has evolved from one of the most dangerous places in the world to what is a really peaceful society'* (Interview, Invest Northern Ireland).

Most importantly, **the geographical capital of Northern Ireland plays a significant role in determining students' higher education choices.** Northern Ireland is considered the happiest place to live in the UK,¹⁰ with Belfast being a very attractive place to study. It offers a unique opportunity to study in universities with a worldwide academic reputation while enjoying its vibrant way of

life, rich history and friendliness of people. Whereas higher education institutions operate within the UK's same academic culture and community, they also provide a cost-competitive and quality offer to international students, with Belfast having the lowest cost of living in the UK (Mercer Cost of Living City Ranking 2021¹¹). Belfast is considered a city that is 'the perfect size', a place in which students 'feel at home' and 'people are welcoming' (Roundtable, Ulster University international students). In experiencing a 'fancy urban experience', students are also attracted by the active policies of the two universities in providing holistic care in terms of students' social experiences, pastoral care and low accommodation costs with Belfast having the lowest student rent in the UK (Interviews, Vice-Chancellor Ulster University and Queen's University Belfast; Global Engagement Office Ulster University; Global Student Recruitment Team Queen's University Belfast; NatWest, 2020; see also Chapter 3). Furthermore, as mentioned by one respondent, the small size has important implications in fostering productive relationships between academia, business and government, and also in providing investors with the right skills in terms of pipeline and availability of talents (Interview, Invest Northern Ireland).

Multidisciplinary world-leading research at Queen's University Belfast and Ulster University

Northern Ireland offers a research and innovation landscape that combines a high-quality educational offer with sectoral and technological excellence. As a member of the UK's prestigious Russell Group,¹² Queen's University Belfast is recognised as one of the leading universities in the world, and it is ranked first in the UK for entrepreneurial impact (Octopus Ventures, 2020). Queen's University Belfast is ranked in the Top 250 Universities in the World (QS World Rankings and Times Higher Education, 2022) and is ranked eighth in the UK for research intensity, with over 75 per cent of research activity judged to be internationally

⁹ Overall, there are 99 cross-Channel sailings each week and direct flights from Northern Ireland to over 70 destinations including: 24 routes to other parts of the UK; 43 European destinations (excluding Ireland); two for the United States and direct flights to Cuba, Cyprus, Turkey and Mexico. For a detailed overview of the airlines and updated routes, see the website of Belfast Airport, which is situated just 18 miles north-west of Belfast and easily accessed via a network of main roads and motorways: <https://belfastairport.com/>

¹⁰ See www.lloydsbankinggroup.com/media/press-releases/2020/lloyds-bank/northern-ireland-happiest-place-to-live-in-the-uk.html

¹¹ See www.mercer.com/our-thinking/career/cost-of-living.html

¹² Founded in 1994, the Russell Group includes 24 UK universities with a shared focus on research and a reputation for academic achievement. See <https://russellgroup.ac.uk>



excellent or world-leading.¹³

Based on research performance data available in SciVal (Elsevier), between 2016 and 2021, 63.2 per cent of Queen's University Belfast scholarly output

corresponds to international collaboration and about 200 publications have been cited in over 600 patents worldwide (SciVal, 2022a).

Ulster University situates itself among the top 50 universities in the Complete University Guide 2022. It is ranked in the top 25 per cent of UK universities with 72 per cent of research activity judged as 'world-leading' or 'internationally excellent', and is among the top 20 universities in terms of students' experience (Good University Guide 2022). In the last Research Excellence Framework (REF) available data for 2014, a broad range of subjects are listed as top ten, including law (ranked first in the UK for research impact), art and design, medicine, pharmacy and biosciences; agriculture, veterinary and food sciences, electrical-electronic engineering; artificial intelligence and computer sciences (REF, 2014). Furthermore, based on research performance data available on SciVal (Elsevier), between 2016 and 2021, 57 per cent of Ulster University scholarly output corresponds to international collaborations and about 200 patents worldwide have cited publications by researchers based at Ulster (SciVal, 2022b).

Global leaders in the area of peacebuilding and conflict management

Queen's University Belfast and Ulster University have a strong provision and reach of research and scholarly activity in the area of peacebuilding and conflict management.

Northern Ireland is often presented as a 'model of how local participants, with the support and assistance of international actors and institutions, can transform a long-standing armed conflict into a viable and sustainable peace' (Jarman, 2016: 2).

Building on the geographical and institutional assets in Northern Ireland, both higher education Institutions are recognised as global leaders in understanding the Northern Ireland peace process and in their contribution to policy challenges and reconciliation efforts in post-conflict societies across the world.

The impact of their combined reputations has received validation from former Presidents and significant politicians and policymakers across the world. For instance, as stated by José Manuel Barroso, former president of the European Commission: 'Northern Ireland should be an example of what peace can do for people. We must use the Northern Ireland success story as an inspiration for other parts of the world.'¹⁴

At Queen's University Belfast, the Senator George J. Mitchell Institute for Global Peace, Security and Justice responds to the unprecedented global challenge of building a peaceful, inclusive and secure world by bringing together the unparalleled expertise at Queen's University Belfast on these issues. The institute is one of four interdisciplinary global research institutes at the university. There is longstanding expertise in transitional justice in the School of Law at Queen's University Belfast, where experiences of the Northern Ireland peace process are shared with international audiences. At Ulster University there are two world-leading institutes: the International Conflict Research Institute (INCORE) and the Transitional Justice Institute. There are also a number of scholarships available at both universities for domestic and international students to study in this area. **The reputation of both universities and institutes arguably fuels demand at local and international level from postgraduate students.** With a combined enrolment of around 620 students, there is evidence of strong demand internationally to study at Queen's University Belfast and Ulster University, with 36 per cent of students coming from outside Northern Ireland (see also Chapter 3 for a more detailed overview of the research centres and courses offered by Queen's University Belfast and Ulster University on peacebuilding and conflict management).

¹³ The Research Excellence Framework (REF) is the system for assessing the quality of research in UK higher education institutions. The results of each assessment are published every seven years. This report uses the latest information available, corresponding to the 2014 REF. See www.ref.ac.uk/about/what-is-the-ref

¹⁴ See also the website of the Causeway Initiative for Peace-building and Conflict Resolution International for other examples of how Northern Ireland is considered an inspiration in terms of peacebuilding and conflict management: www.cipcr.org/aboutcipcr/peace-process

Leading and creating value in tech industries

Northern Ireland possesses an advanced telecommunications infrastructure for digital networks and data connections, with an international reputation of expertise in tech development and ranking as the best in the UK for superfast broadband connectivity (Invest Northern Ireland, 2017; Interview, Invest Northern Ireland).

The country has 2,195 digital tech firms, employing 21,140 people (of which around 70 per cent have a degree) with a combined turnover of £3 billion; in 2020, tech companies raised £45.6 million in investment in comparison to the £30 million set in 2018 (Tech Nation, 2021), with Belfast ranked in the top ten cities in the UK to develop a digital career (Monster's Digital Cities, 2019). These figures help to illustrate the unique contribution of this sector to several areas including software development, fintech, health tech, aerospace and cybersecurity.

Within this context of innovation and technology creation, both universities in Northern Ireland play a vital role in their well-established and high-impact globally recognised research centres. For instance, in terms of information technology security, this includes Queen's University Belfast's Centre for Secure Information Technologies (see also next section on assets linked to higher education) and the UK Innovation and Knowledge Centre for secure information technologies, as well as the Intelligent Systems Research Centre at Ulster University, which is one of the globally recognised ICT-related university research centres in Northern Ireland (Invest Northern Ireland, 2017). According to the Northern Ireland Skills Barometer, science and technology professionals are forecast to provide the most job opportunities over the next decade (Johnston et al., 2021; Department for the Economy, 2022). Therefore, in this respect, both universities are very well positioned in providing a talent pipeline for future skills needs.

Strong university–business co-operation in knowledge generation

There is strong co-operation between universities and the business sector in order to jointly pursue academic and sector excellence, making the point that there cannot be a competitive industry without talents and skills.

This collaboration is perceived as a vehicle to enhance innovation and economic growth through knowledge exchange between academia and business domains (see also Chapter 3). The importance of productive co-operation with industry is highlighted in the global strategies of Queen's University Belfast and Ulster University, and it has been mentioned as essential across our respondents as a whole. The link between university and industry is also visible under many dimensions and themes of co-operation in Northern Ireland's most strategic sectors (see also next section). Queen's University Belfast and Ulster University have a strong track record in terms of commercialisation of research and in spinning out successful businesses.

Looking at the intellectual property (IP) indicator for measuring knowledge generation, Queen's University Belfast is the UK's leading university for IP commercialisation, whereas Ulster University is in the top 30 of 166 universities across the UK (Johnston et al., 2021). In terms of university spin-outs, namely companies set up to commercialise IP generated within universities, from 2014 to 2019, Queen's University Belfast generated an annual average of 49 active spin-outs,¹⁵ ranking eighth across universities, whereas Ulster University generated 22 spin-outs (Johnston et al., 2021).

In addition, as emerged from the interviews and roundtables with stakeholders, there is a high degree of collaboration for students' placements (Interview, Tourism NI; Roundtable, Global Engagement Office Ulster University; Roundtable, Global Student Recruitment Team Queen's University Belfast); creation of joint curricula and degrees (Ulster University); and development of partnerships for innovation and impact that drive interdisciplinary work and connections with industry (Queen's University Belfast), as illustrated in Chapter 3.

¹⁵ Some of the spin-out companies include: Catagen (delivering industry-leading emissions data to global automotive manufacturers), Fusion Antibodies (therapeutic and diagnostic antibody development) and Phion Therapeutics (therapeutic vaccine development company). See also www.qubis.co.uk/portfolio/all

Collaborative institutional environment focused on shared values and networking

Higher education in Northern Ireland is committed to attracting many international students with internationalisation strategies binding Queen's University Belfast and Ulster University to the global academic, research and alumni communities. Central to this is an emphasis on **social capital**, characterised by an interaction of factors such as trusts and shared common values.

Interviewees noted that it is easy to reach institutional actors with opportunities to influence policy change by 'working through a multitude of political parties who may well be diametrically opposed in their views but with so many people who care and are passionate' (Interview, Vice-Chancellor Ulster University), with the opportunity to 'highlight issues where the university can support the type of change that they want to see in both society and the economy' (Interview, Vice-Chancellor Queen's University Belfast). In addition, alumni networks and relations play a very important role in internationalisation strategies, in shaping students' experience and employability, and in extending and expanding the attractiveness and visibility of Northern Ireland in the global stage (Interview, Tourism NI; Roundtable, Global Student Recruitment Team Queen's University Belfast; Roundtable, Global Engagement Office Ulster University; Interview, Invest Northern Ireland).

One striking example is the recent initiative of the **Ambassador Circle**, which is a network of over 1,200 leading academic, medical and business professionals who work in partnership with Visit Belfast to attract prestigious national and international conferences and events to the city.¹⁶ By bridging together academia with business, the Ambassador Circle helps universities to

“ use these conferences as a window to the world [...] it helps attract the research fellows and teaching staff in the universities, but it also helps to demonstrate to students that there are certain disciplines that students might be interested in, where Northern Ireland has got a distinct advantage in terms of academic capability ”

(Interview, Tourism NI)

In sum, institutional co-operation, personal connections and bonding social capital seem to create a unique ecosystem that helps to extend the footprint of internationalisation.

Assets linked to higher education

Higher education in Northern Ireland operates within a context that combines small and medium enterprises (SMEs) with world-class sectoral excellence. Predominantly, the Northern Ireland economy is characterised by SMEs, accounting for 75 per cent turnover in the private sector and 78 per cent of employment (OECD, 2020). The service sector accounts for 73 per cent of gross value added (GVA), manufacturing contributes 15 per cent, and nine in ten local businesses have fewer than ten employees (NISRA, 2021). In turn, this has implications on the low levels of R&D investments relative to the UK as a whole (Royal Irish Academy, 2021a).

However, despite this, universities in Northern Ireland consistently 'punch above their weight in key metrics' (Royal Irish Academy, 2021b), representing a hub of economic influence and sectoral specialism (Interview, Invest Northern Ireland). For example, higher education institutions have a strong track record in spinning out new companies into the economy, with many of them listed on the London Stock Exchange (Royal Irish Academy, 2021b). As this

¹⁶ On the Ambassador Circle, see www.tourismni.com/industry-news/new-ambassador-circle-launched-to-promote-northern-ireland-as-a-leading-international-business-and-events-destination



report shows, universities in Northern Ireland bring together business and education in the creation of a strong track record of excellence and expertise in a variety of sectors, including information technology security or cybersecurity, fintech, transitional justice, peacebuilding and conflict management, personalised medicine, data analytics, cognitive analytics and creative industries. Below, we focus on the global reputation relating to the synergies of industry and academia in the following four areas: *creative industries, information technology security or cybersecurity, fintech, and life and health sciences.*

Creative industries

Northern Ireland is home to a wide range of creative arts and industries. From first-rate film and television productions, such as HBO's Game of Thrones (seasons 1–8), Warner Horizon's Krypton (seasons 1–2), New Regency's The Northman, Netflix's The School for Good and Evil, Derry Girls, The Fall and Line of Duty, to feature documentaries such as Lost Lives and The Sheriff. Animation is another success story which is growing from strength to strength with examples such as Puffin Rock – which across two seasons has been nominated for an international Emmy, won two Kidscreen Awards and a Royal Television Society NI Award, and it has been streamed over 170 million times on the Chinese digital media network Tencent – and a thriving digital games and interactive sector such as Inertial Drift and Hytale (Northern Ireland Screen, 2021).

The creative industries sector plays a significant role in the economic development and growth of the region, as well as enhancing Northern Ireland's profile on the world stage.

Locally, almost 30,000 people work in creative industries or occupations, representing 3.4 per cent of the workforce (Invest Northern Ireland). In order to develop collaborative partnerships and to help companies grow productivity and maximise their global potential, Future Screens Northern Ireland was established, funded by the Arts and Humanities Research Council, and forms part of the Creative Cluster of the City Deal (Future Screens Northern Ireland, n.d.). It comprises both Ulster University and Queen's University Belfast and a number of key industrial partners central to the creative economy in the region. The partnership has developed a working model for the creative industries in Northern Ireland which is focused on participation, cultural and

economic growth, and social and economic regeneration.

Through the Future Screens Northern Ireland partnership, creative companies are being supported to grow productivity and maximise their global potential, as well as delivering new jobs and a £400 million increase in GVA to boost the local economy. Of specific note is the flourishing animation cluster, supported by undergraduate courses at Ulster University and Queen's University Belfast, as well as the region's college network (Department for the Economy, 2021b).

For instance, as part of the Belfast Region City Deal, the new Screen Media Innovation Lab at Ulster University represents a multi-million-pound investment to help build on the opportunities and skills base in Northern Ireland for virtual production and animation. This partnership is critical to realising the potential growth of the creative sector in Northern Ireland.

According to the Director of Future Screens Northern Ireland:

“ [It is] about symbiosis instead of collaboration ... collaboration suggests that you just have people working together, but they don't necessarily change each other. Whereas if you think of symbiosis, that's the notion of two things which are not necessarily related, coming together to make a new thing ”

(Director of Future Screens Northern Ireland)

Information technology security or cybersecurity

Northern Ireland has become a global cybersecurity hub, with specialist university research centres, innovative start-ups delivering global cybersecurity solutions and an impressive cluster of international cybersecurity investors including international companies such as Proofpoint, IBM Security, Rapid7, Imperva, Microsoft, NVIDIA and

Synopsys.¹⁷ **The cybersecurity ecosystem is fuelled by R&D and skills development by the two universities.**

The Centre for Secure Information Technologies (CSIT) at Queen's University Belfast is the UK's innovation and knowledge centre for secure information technologies. It is a global flagship centre for cybersecurity which has become a partner of choice for big-name multinationals and a dynamic motor of local growth. CSIT is recognised by the UK's National Cyber Security Centre (part of GCHQ) as an Academic Centre of Excellence in Cybersecurity Research (ACE-CSR). Founded in 2009, the mission of the centre is to couple major research breakthroughs in the field of secure information technologies with a unique model of innovation and commercialisation to drive economic and societal impact for the nation, which has not wavered since then. The current director is Professor Máire O'Neill, who has a strong international reputation for her research in hardware security and applied cryptography. She has received numerous awards, which include the Blavatnik Engineering and Sciences Medal (2019), the Royal Academy of Engineering Silver Medal (2014), and British Female Inventor of the Year 2007.

The Intelligent Systems Research Centre at Ulster University, established in 2007, is a state-of-the-art research environment with an extensive array of innovative robotic devices. Its mission is to understand how the brain works at multiple levels, from cells to cognition, and apply that understanding to create models and technologies that solve complex issues that face people and society. To accomplish this mission, the centre uses a variety of research strategies and applications including big data and machine learning, brain imaging and neural interfacing, human-computer interaction and robotics. The current director is Professor Damien Coyle, who is Professor of Neurotechnology at Ulster University. He has won a number of prestigious international awards for his research, including the International Neural Network Society Young Investigator of the Year Award in 2011, and he was appointed as a Royal Academy of Engineering/Leverhulme Trust Senior Research Fellow in 2013.

There is no doubt of the excellent academic and vocational training that is delivered by two world-class universities, Queen's University Belfast and Ulster University, and an extensive network of further education colleges, who collaborate globally through their Northern Ireland international group. Cybersecurity skills programmes include PhD in cyber security, MSc in applied cyber security, higher level apprenticeship in cyber security and networking infrastructure, postgraduate certificate in cyber security, and pre-employment assured skills programmes tailored for company needs (see for instance Invest Northern Ireland sectoral report).

Fintech

Financial technology is one of the fastest-growing industries in Northern Ireland. It includes areas such as blockchain and artificial intelligence, which are continuously transforming how businesses operate through cutting-edge automation and technology. The fintech cluster, now estimated to be worth a significant £392 million per year to the Northern Ireland economy, identifies factors in this success to include: geographical advantage; talent, skills and education; a supportive and collaborative community and expertise in cybersecurity, artificial intelligence, data analytics and regtech – positioning Northern Ireland as a leading international hub.

Northern Ireland has fast become a leading location for businesses, especially those within the fintech industry. Belfast is currently the world's number one location for fintech investment, with almost 40,000 employees in the financial and professional services sector across Northern Ireland. Global companies such as PwC, Deloitte, Liberty Mutual and Allstate have massively expanded their operations here more with big names choosing cities like Belfast and Derry-Londonderry for office space. Northern Ireland's start-up industry is also growing due to investment from Invest Northern Ireland and Catalyst (FinTech Northern Ireland, n.d.).

Between two universities there are 3,700 undergraduates in business and technology in Northern Ireland. The further education colleges across Northern Ireland offer a range of courses for learners seeking a career in the financial technology

¹⁷ See www.gov.uk/government/publications/cyber-security-sectoral-analysis-2020

services including foundation degrees in business, higher level apprenticeships in accounting and the assured skills academies with businesses including FinTrU, Deloitte and PwC. According to the CEO of FinTrU:

“The universities and higher education need to be front and centre because that’s the only thing that gives businesses credibility. [...] It’s not about co-operation and competition, it’s about co-opetition opportunities. And I think, Northern Ireland will only succeed if we all come together”

(CEO, FinTrU)

The CEO of FinTrU also believes Northern Ireland has probably one of the lower R&D spends per capita right across the UK, and this needs to be addressed by better partnership working between industry and further and higher education to ensure the potential growth of the sector is realised for Northern Ireland.

Life and health sciences

Northern Ireland is a prime location for life and health sciences businesses, thanks to a unique combination of talented people, world-class research and strong links between industry, academia and clinicians in the commercialisation of innovative research.

Recent government investment includes £1.3 billion which has been earmarked through city and growth deals (see below and footnote 21) – offering exciting future opportunities for establishing research excellence in advanced healthcare in Northern Ireland (Interview, Invest Northern Ireland). With a long history in health innovation dating over 40 years to Professor Pantridge who pioneered the first portable defibrillator, to recent spin-out success from local universities – Queen’s University Belfast and Ulster University are hubs for research and innovation in the field of healthcare and medicine.

The Faculty of Medicine, Health and Life Sciences at Queen’s University Belfast includes four major schools and attracts a significant number of Northern Ireland and international students.

According to the Guardian University Guide 2022, Queen’s University Belfast is ranked 19th in the UK for medicine and fourth in the UK for research intensity in medicine. In partnership with the National Health Service, Queen’s University Belfast is leading the i-Reach (Institute of Research Excellence for Advanced Clinical Healthcare) project¹⁸ to extend the capacity for clinical trials and integrate healthcare facilities for improving patients’ access. Ulster University is a leading provider of health-related education, with almost 6,500 students and approximately 250 academic staff, and offers an extensive portfolio of accredited degree and research programmes covering a range of diverse disciplines such as biomedical science, geography and environmental sciences, nursing, pharmacy and pharmaceutical science, psychology, sport and medicine. Ulster University is currently leading the ‘Pandemic’ project,¹⁹ a nationwide field study to survey the extent of exposure and the immune response to Covid19 in the general population of Northern Ireland.

Co-operation with the EU and the creation of a pan-Ireland higher education area

In the Brexit referendum of June 2016, the majority of Northern Ireland voted to remain part of the European Union (56 per cent). The UK’s decision to leave the European Union raised questions about several areas, including: the Northern Ireland peace process, underpinned by the Belfast/Good Friday Agreement (see also Chapter 1); how to operate the border between Northern Ireland and Ireland for people and goods; and how to preserve the co-operation between Northern Ireland and Ireland and between Ireland and the UK.

Some of these issues are currently under discussion with the Northern Ireland Protocol,²⁰ which attempts to set out arrangements to avoid a hard land border between Ireland and Northern Ireland, including any physical infrastructure or checks and controls on the island of Ireland. However, there is currently a live debate and disagreement on the protocol with many of the implications still unclear and under negotiation.

Very recently, data suggests that investment activity in 2021 more than doubled with almost £290 million

18 For more information on the i-Reach project, please see www.brcd-innovation.co.uk/projects/ireach

19 A detailed overview of the Pandemic study is available at www.ulster.ac.uk/research/covid-19/research-output/pandemic-study

20 The text of the protocol is available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840230/Revised_Protocol_to_the_Withdrawal_Agreement.pdf

invested across 30 transactions (CBRE, 2021),²¹ and that cross-border trade between Ireland and Northern Ireland jumped by £2.3 billion in 2021.²²

When specifically looking at the impact of Brexit on higher education, our respondents note that many of the risks arising from Brexit have not materialised. However, there are some uncertainties with reference to the potential loss of collaborative funding, mobility across the European Union, and the participation in European programmes such as Horizon Europe and Erasmus+ (Interview, Vice-Chancellor Ulster University; Interview, Vice-Chancellor Queen's University Belfast). Most importantly, **the European Union seems to be strongly committed to promoting and contributing to cross-border economic and territorial development between Northern Ireland and the European Union.** For instance, this is the aim of the European Union PEACEPLUS Programme 2021–2027²³ that includes Northern Ireland and the border counties of Ireland, and that has been drafted to boost economic growth, stimulate social and economic regeneration, and to promote social inclusion. Within this programme, there is also a budget allocation of €50 million to enable cross-community and cross-border collaboration between education and training to address skills gaps and opportunities for reskilling in higher education covering key disciplines such as ICT and digital, STEAM,²⁴ the green economy, entrepreneurship and management.

In terms of opportunities for cross-border collaboration between Northern Ireland and Ireland, there are preliminary signs of promising co-operation between the two. In particular, the Royal Irish Academy set up in September 2020 a taskforce with the aim of identifying a viable vision for the higher education sector in the island of Ireland. The taskforce has produced five papers that provide a comprehensive overview of the future scenarios of higher education in Ireland and Northern Ireland, thus representing one of the best and most updated and comprehensive analyses of the current challenges and opportunities in terms of collaboration between the higher education institutions of the two countries (see also Royal Irish Academy, 2021c).

Furthermore, in comparison to Ireland, Northern Ireland suffers from brain drain, with over 5,000 A-level students from Northern Ireland attending universities in other UK regions, with two-thirds of them not planning to return (Pivotal, 2021; Interview, Department for the Economy). Within this context, one of the enabling conditions to promote collaboration would be the introduction of multiple pathways for higher education students, built through a system of credit recognition and accumulation, that would also help to overcome existing physical and psychological barriers preventing students from Ireland to study in Northern Ireland and vice versa (Royal Irish Academy, 2021c).

In this respect, there is a general consensus on the need to promote more interaction and synergy between Northern Ireland and Ireland, moving away from a Belfast- and Dublin-centric model of higher education towards a comprehensive pan-Ireland higher education area which would ultimately benefit the entire region (Interview, Vice-Chancellor Ulster University; Interview, Vice-Chancellor Queen's University Belfast). There have been important examples of regional cross-border co-operation in the north-west in more concrete terms. For example, the establishment of a further education/higher education cluster for the North West City Region, which includes Ulster University, Letterkenny Institute of Technology, North West Regional College, and Donegal Education and Training Board, with funding secured through the Irish Higher Education Authority (Royal Irish Academy, 2021d).

Institutional engagement, partnership opportunities

Over the past years, **Northern Ireland has substantially improved stakeholder engagement through a variety of governance arrangements** (OECD, 2020). Besides the launch of the strategy *A 10X Economy: Northern Ireland's Decade of Innovation* (see also Chapter 1), the government has developed strategic and local partnerships characterised by an inclusive and collaborative focus.

A relevant example of new ways of working between central and local government and regional partners

21 See also <https://cbreni.com/investment-volumes-in-northern-ireland-real-estate-sector-doubled-in-2021-cbre/>

22 www.theguardian.com/politics/2022/feb/15/brexit-trade-figures-northern-ireland-republic

23 For a detailed overview on the PEACEPLUS programme, see <https://seupb.eu/PEACEPLUS>

24 Science, technology, engineering, arts and mathematics.



is the recent Belfast Region City Deal (BRCD),²⁵ signed in December 2021. The deal unlocks £1 billion of transformative co-investment which will deliver more than 20 highly ambitious projects and programmes to facilitate inclusive growth in innovation, tourism, skills and infrastructure, create up to 20,000 new and better jobs, and help make the region a global investment destination over the next decade. The BRCD involves several partners, including Belfast City Council, five partner councils, two universities and four of the region's further education colleges. In addition, university–business partnerships play an important role within the BRCD, which is also illustrative of the **sympiosis between socio-economic stakeholders and higher education institutions in working together for knowledge cocreation**. For example, the BRCD foresees the creation of several innovation and research centres, including:

- **Advanced Manufacturing Innovation Centre.** This will operate at the interface between academia and industry by creating new opportunities for innovative manufacturing in the Belfast City Region. A 'Factory of the Future' is planned as the flagship facility of the project, with an ambition to be Northern Ireland's national centre for advanced manufacturing. The ultimate goal is to provide companies with unprecedented access to the latest manufacturing technologies and facilitate professional engineers with expertise in design and simulation. **The involvement of both Queen's University Belfast and Ulster University will ensure that real-world industrial challenges based on market need are solved through cutting-edge research.**
- **Global Innovation Institute (GII).** This project will be a nexus for co-innovation between researchers and industry in data security, connectivity and analytics. It will be a place where local and global companies, entrepreneurs and researchers will come together in a multi-disciplinary innovation environment. GIi will anchor and support the creation of a global innovation ecosystem in Belfast, comprising a community of businesses linked by a common digital innovation thread and

accelerate an innovation agenda based on research strengths in priority growth sectors for the region: health and life sciences, and agri-food. **GII is a cross-disciplinary project led by Queen's University Belfast**, building on the world-class Institute of Electronics, Communications and Information Technology, which has already put Belfast on the map in terms of digital innovation.

- **Centre for Digital Healthcare Technology.** This will see the development of an integrated three-way co-creation platform (private sector, university and hospital health professionals) for the health and life sciences sector that will provide the basis for a partnership working to jointly identify accelerated productivity opportunities for improved healthcare pathways with hospitals or home-based care and to support the realisation of commercial market solutions at a faster rate than is currently being achieved. **The project, led by Ulster University, will be a close partnership between healthcare professionals**, researchers and industry professionals and will result in an increase in digital healthcare technology products being launched in Northern Ireland.

These initiatives²⁶ have two important implications for understanding the importance of the broad involvement of stakeholders in activities ranging from business support to networking opportunities. On the one hand, they suggest the extent to which Northern Ireland exhibits a growing and increasingly structured co-operation across a different set of stakeholders towards common societal and economic goals. In this respect, and as also underlined earlier in this chapter, there seems to be a high degree of convergence between business/industry, national, regional, and local governments and universities in working together to identify entrepreneurial solutions which can have not only a positive impact on society but are likely to establish common pedagogical modules and courses among

²⁵ For a detailed overview on the projects and partnerships included in the BRCD, please see www.belfastcity.gov.uk/belfastregioncitydeal

²⁶ Other recent city and growth deals are: the Derry & Strabane City Region City Deal, with £250 million invested across the city region, which also includes the THRIVE project (Transformation for Healthcare Research Innovation and Value-Based Ecosystem) for embracing the potential of personalised medicine led by Ulster University; and the Causeway Coast and Glens Borough Council Deal, with £72 million allocated to establish an enterprise zone digital innovation hub, a school of veterinary medicine at Coleraine, and a centre for drug discovery and pharmaceutical innovation.

universities and enterprises, with Queen's University Belfast and Ulster University also having dedicated employer engagement units (OECD, 2020; see also Chapter 3 for specific universities–business pedagogical initiatives). On the other, they suggest **the existence of a positive enabling environment that can attract and sustain international partnerships with stakeholders and governments.** In this respect, the role of the British Council seems to come 'at the right time' given that it is also fine-tuned with the networking and social capital approach of Northern Ireland.



Chapter 3: Focus on Queen's University Belfast and Ulster University

Queen's University Belfast

Overview

Queen's University Belfast has over 25,000 students, of which almost a third correspond to postgraduate students (HESA, 2021). Furthermore, the university has a 58 per cent female and 42 per cent male student population, and is a leading UK university in tackling the unequal representation of women in science and engineering, while holding a prestigious Athena Swan Silver Award²⁷ (Queen's University Belfast 2019a). In the last five years, the intake of international students increased substantially from 13 per cent in 2016 to 15 per cent in 2021 (Queen's University Belfast Planning Office, 2021) with around 3,500 students from over 80 different countries (Queen's University Belfast, 2021a), showing the university's commitment to strengthen its overseas outreach.

This commitment is also part of **Queen's University Belfast's Strategy 2030**, which states the university's vision to become a global institution with excellent teaching and intensive research activity that generates internationally leading outputs to tackle local and global issues. According to Queen's University Belfast's Vice-Chancellor, teaching quality has become 'a critical asset' to grow the university's reputation and attract students from abroad. However, these increases need to be paired with high-impact contributions to Northern Ireland.

“It is really important that we deliver significant local impact using our international excellence to drive economic and social gain.”

(President and Vice-Chancellor, Queen's University Belfast)

Today, Queen's University Belfast is ranked 43rd in the Times Higher Education Impact Rankings 2021 and eighth in the UK's REF 2014 for research intensity. The university's research pillar is nurtured through the development of intersectoral partnerships that enable work beyond academia as well as interdisciplinary collaboration. This work has helped Queen's University Belfast achieve £88.5 million in research awards in 2020–21 from more

than 625 organisations – including the private, public and third sectors – as well as maintain excellent collaborations with the Department for Education in England, UK research councils, Innovate UK, and other funders such as the National Institute for Health and Care Research and the Wellcome Trust.

The Queen's University Belfast Strategic Plan 2016–2021 defines three global challenge themes: healthy global population; inclusive, secure and enriched society; and technology futures. These themes shape the university's interdisciplinary research priorities, which involve the following:

- *Healthy living for all*: tackling cancer, infection, respiratory and eye diseases; improving life course health and community wellbeing; precision medicine and digital innovation to enhance healthcare solutions; interventions and services to improve health and reduce inequality.
- *A transformative and sustainable economy*: intelligent manufacturing and service delivery; working with advanced and sustainable materials; future transport; sustainable energy and manufacturing; high energy and ultra-fast processes; gender and leadership.
- *Secure connected intelligence – artificial intelligence and the data revolution*: Network and connectivity; cyberspace resilience; novel computer systems and computing paradigms; data-fusing technologies; enabling technologies and creative cultural practice.
- *Human–environment relations*: sustainable environments and agri-food systems; climate and climate change; the built environment and the natural world; nurturing liveable communities.
- *Inclusive and cohesive communities*: governance, accountability and international relations; fundamental rights, equality and social justice; valuing heritage; peace, identity, conflict and social sustainability; creativity and cultural understanding; the child's perspective.

The student experience at Queen's University Belfast is also one of the institution's pillars.

The university has implemented actions to support home and international students that have proved valuable in strengthening Queen's University Belfast's

²⁷ Established in 2005 to encourage and recognise commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) employment, the Athena Swan Charter is now a framework used globally to support and transform gender equality within higher education and research. See also www.advance-he.ac.uk/equality-charters/athena-swan-charter

reputation and enabling a sound response to the Covid-19 pandemic. Moreover, the journey through the university is enhanced by its architectural heritage and world-class facilities, which will see a £350 million investment in the coming decade, and it will prioritise the use of sustainable materials, systems and practices in line with the UN Sustainable Development Goals.

Collaborative research and global impact

Intersectoral and interdisciplinary partnerships are crucial to Queen's University Belfast's 'challenge-led' research activity.

Accordingly, Queen's University Belfast has created four global research institutes to promote interdisciplinary research, drive collaboration with industry sectors and attract leading academics:

- the Senator George J. Mitchell Institute for Global Peace, Security and Justice (The Mitchell Institute)
- the Institute of Electronics, Communications and Information Technology houses: the Centre for Secure Information Technologies (CSIT), The Centre for Wireless Innovation and the Centre for Data Science and Scalable Computing
- the Institute for Health Sciences houses the Patrick G Johnston Centre for Cancer Research, the Wellcome-Wolfson Institute for Experimental Medicine, and the Centre for Public Health
- the Institute for Global Food Security – recently designated a 'Collaborating Centre' of the International Atomic Energy Agency.

Furthermore, Queen's University Belfast hosts four pioneering research programmes that facilitate inter- and transdisciplinary approaches by bringing together researchers from different schools and faculties and working with communities and practitioners. The research programmes are the Centre for Evidence and Social Innovation, Intelligent Autonomous Manufacturing Systems, Material and Advanced Technologies for Healthcare, and the Centre for Sustainable Energy.

Together, these institutes and research programmes, along with Queen's University Belfast's academic offer overall, embody three key characteristics of the university's collaborative research footprint.

First, Queen's University Belfast is a **leader in generating impactful innovation to tackle global challenges**. The university has been ranked first in the UK for commercialising academic research in 2019 and 2020 (Octopus Ventures, 2020; 2019). Engagement with industry has increased over the years, particularly through the centres and programmes in engineering and physical sciences. These areas have contributed nearly half of the 133 knowledge transfer partnerships at the university, and the estimated GVA to the economy is £55 million. Furthermore, the university has generated employment opportunities thanks to its commercialisation arm, QUBIS. Currently, more than £100 million has been raised by more than 90 spin-out companies, employing more than 2,700 people²⁸. Additionally, Northern Ireland is recognised internationally for its developments in secure information technologies. At Queen's University Belfast, the Centre for Secure Information Technologies has created around 1,600 jobs across 40 companies in Northern Ireland, becoming a key partner in developing secure information technologies research and innovation ecosystems.

Second, Queen's University Belfast has become a **hub for global talent and the promotion of inclusion and diversity**. As part of the university's commitment to fostering a creative, inclusive and collaborative culture, the first 'institutional research culture action plan' was launched in 2021 to improve the research and innovation environment. Furthermore, talent is nurtured through fellowships designed to enhance early-career researchers' opportunities and increase the impact of their work (University's Fellowship Academy, UKRI Future Leaders Fellowship and the Leverhulme Doctoral Scholarship Grant). Equity, diversity and inclusion underpin talent attraction: currently, three schools focused on STEM subjects hold an Athena Swan Silver Award mentioned earlier, recognising the advancement of gender equality in higher education. The university has also launched Queen's Gender Initiative to understand the impact of the pandemic lockdown on colleagues, identify areas that required specific support, and provide dedicated mentoring schemes and networking opportunities. Other actions involve the Race Equality Charter and the PRISM (LGBT+) network activities.

²⁸ See also www.qubis.co.uk/about-us/overview

Third, Queen's University Belfast's research and academic offer are structured by the university's **commitment to the Sustainable Development Goals (SDGs)**. As a signatory of the UN SDG Accord, Queen's University Belfast is working to align education, research, leadership, operation and engagement activities with SDGs. So far, there is a number of initiatives under way, such as the new postgraduate certificate in zero-carbon engineering, the MSc in leadership for sustainable development, and the student-led multimedia project, Green Future Media. Furthermore, Queen's University Belfast's research on energy infrastructure has influenced Ireland's energy white paper and renewable support scheme, as well as developments on net-zero public transport and food-related incidents.

Global engagement strategies

In the last five years, Queen's University Belfast has strengthened its strategic approach to develop international partnerships and encourage prospective students to study in Northern Ireland. **A key principle guiding Queen's University Belfast's approach has been making the most of diversity among students and the overall environment in the university.** Diversity is understood as an essential ingredient that propels the economy in Northern Ireland by opening opportunities at a global scale.

“Northern Ireland is perhaps not the most diverse region in the UK ... Among both staff and students, that diversification is really important for the student experience of home and international students. We want to encourage that diversity with good students coming to Belfast. We think it's good for the region, and it's good for the institution.”

(Vice-Chancellor, Queen's University Belfast)

“Diversification is definitely something that is a huge motivating factor or directing factor for us because we have probably been in quite a homogenous society for quite a long time in Northern Ireland.”

(Head of International Markets, Queen's University Belfast)

The progress that Queen's University Belfast has made towards internationalisation has been recognised in the Times Higher Education Ranking 2022, where it was ranked 17th in the world for its international outlook. Queen's University Belfast's global engagement involves implementing activities across key areas of the university, enabling growth and increasing the university's global reach in a coherent way. Two main areas where actions that target internationalisation take place are international mobility, and academic and commercial partnerships.

International mobility

Following its Strategy 2030, Queen's University Belfast has focused on becoming the destination of choice for talented students and academics. As a result, its international intake has grown steadily in the last five years, despite the restrictions during the Covid-19 pandemic, and according to Queen's University Belfast's International Office, the key enabler of these outcomes has been the network of support services offered by the university.

Useful information channels – Queen's University Belfast offers support in 14 areas relevant to the student experience, with a dedicated space for international students that provides information on visas and immigration, life in Belfast and financial support. Information on applications has also been tailored to individual countries and up-to-date information on international scholarships across nine regions. According to students participating in Queen's University Belfast's analysis of international students' journeys, the information held on the website and Queen's University Belfast's social media, including webinars and video content on living in Belfast, aided their decision to choose the university. Beyond the information available online, Queen's University Belfast offers timely and

continuous support during the application process of international students, particularly concerning visa applications and access to student accommodation.

“Queen’s seems dedicated to their students, to providing an excellent experience for all, and to giving students opportunities after graduation. They have been very attentive to me during my application process, and I could not have asked for better communication, showing how much they care about individual applicants.”

(International student from the US)

Tackling the crisis – the university’s response to the international restrictions during the Covid19 pandemic enabled the sustained growth of the overseas student population. The university provided chartered flights from China and introduced measures to ease quarantines (including airport transport and support with accommodation and mental health), giving easier access to PCR testing and to travel certificates for students who were returning home. Mental health and wellbeing support was strengthened for international and home students, increasing community-based initiatives that were hosted online. While many students had to change their plans to fulfil study abroad programmes, Queen’s University Belfast designed a bespoke study-abroad semester in collaboration with George Washington University and prestigious universities in Hong Kong. Other shorter modules were developed to offer virtual exchanges with other universities to maintain the pathway to international education while travel was suspended.

Partnerships and opportunities

Global partnerships have continued to grow across America, China, India, the Middle East and Asia. Queen’s University Belfast holds over 100 active educational partnerships with institutions from over ten countries across all continents, among which South-east Asia, South Asia and Africa are rising as emergent regions for developing future collaborations. There is a strong connection with institutions in China also through the Chinese Consulate in Belfast, among which Queen’s University Belfast stands out for its leading role in the UK–China Universities Consortium on Engineering Education and Research²⁹ and other partnerships such as the China Medical University–Queen’s University Belfast degree programmes in pharmaceutical science and pharmaceutical biotechnology, and the UK–Jiangsu World Class University Consortium. These partnerships span across all the three faculties within Queen’s University Belfast. Regional alliances are unique and heterogeneous in their disciplinary focus: the US is the second most important country regarding the number of partnerships held with Queen’s University Belfast. These agreements focus on arts, humanities and social sciences, and are linked to Northern Ireland’s successful experience in peacebuilding and post-conflict governance. All of these connections also provide a platform for outward student and staff mobility opportunities at the university.

Queen’s University Belfast also develops strong partnerships with employers from various economic sectors in Northern Ireland. These agreements feed into the university’s offer for international students by allowing students to study for a degree with an embedded work placement in Northern Ireland. According to Queen’s University Belfast’s International Office, professional and industry placements can address the demand for various skills in Northern Ireland. Moreover, through these partnerships, Queen’s University Belfast aims to dispel any myths or erroneous information about employing international graduates and drive the economic contribution that overseas students can bring.

²⁹ For more information on UK–China bilateral co-operation in postgraduate education and engineering research, see www.britishcouncil.cn/en/programmes/education/higher/university-consortium

““ The graduate route has really opened up so many opportunities for our institution and the Northern Irish industry. We have many students that are coming from different parts of the world, and they want to get professional experience here before returning, but we also have quite a number of students that are coming to the UK, and they would like to remain and contribute and bring their skill set from different parts of the world and really make an impact here. ””

(Joint Head of International Office, Queen's University Belfast)

Student experience

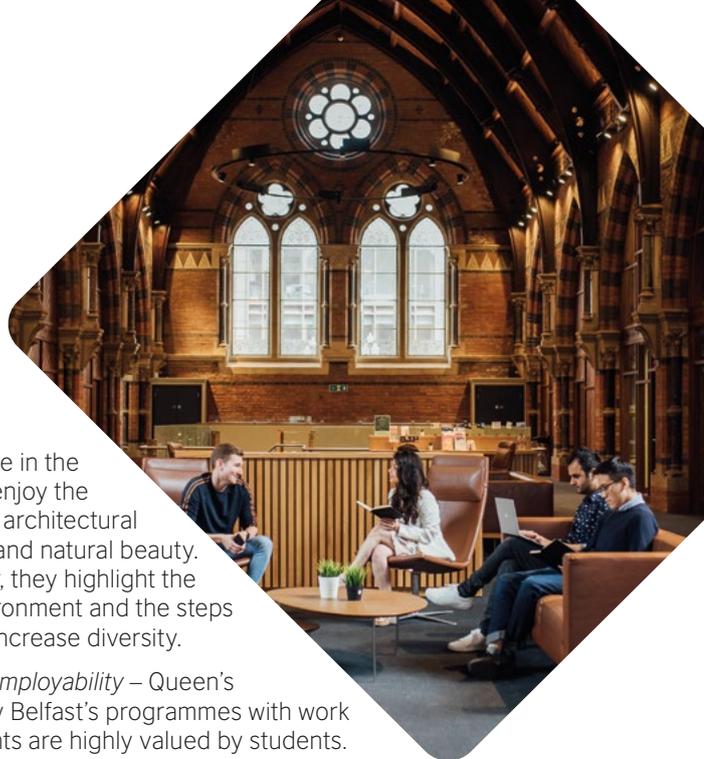
High quality of teaching and student experience are core elements of Queen's University Belfast's strategic priorities. The university is also ranked 24th in the UK in the Times Higher Education Student Experience Survey 2018, and it is ranked ninth for universities facilities. Focusing on teaching excellence and student support has helped improve the university's reputation internationally, and according to the National Student Survey 2021, Queen's University Belfast stands strong in terms of organisation and management matters and access to learning resources. Among key elements of the students' journey at Queen's University Belfast are:

- *Wellbeing, inclusivity and cultural diversity* – these values are built into Queen's University Belfast's approach to delivering transformative education working in partnership with students. The university has inaugurated a new student centre to provide holistic support services, increase multicultural experience and encourage connections between students.
- *academic reputation and life in Belfast* – a key insight shared by international students from different countries is the combination of academic prestige and teaching quality with affordable living costs. Students feel welcome by the university and

the people in the city and enjoy the country's architectural heritage and natural beauty. Moreover, they highlight the safe environment and the steps taken to increase diversity.

- *Student employability* – Queen's University Belfast's programmes with work placements are highly valued by students. The university has developed the Employer Engagement Team, which connects employers with students and graduates, and the Queen's Careers Team to support career planning and decision making. According to the university's International Office, employability is an essential factor in students' search for an institution, and the support that Queen's University Belfast has in place has contributed to achieving outstanding employability rates – 96 per cent of graduates are either employed or engaged in further study within six months of graduation (Destination of Leavers from Higher Education 2016/17). The university is also ranked 20th in the QS Graduate Employability Rankings 2020 and 11th in the UK for graduate prospects (Good University Guide 2022). For example, in 2020–21, Queen's University Belfast launched an Employability Bolt-on Package in the Department for the Economy-funded PGCert programmes in various STEM courses and implemented a pilot scheme of the Professional Skills Programme to embed employability and the skills needed to work globally in courses design. Moreover, during 2020–21 Queen's University Belfast developed higher level apprenticeships in collaboration with major companies to smooth the transition to the labour market.

- *Queen's University Belfast's role in widening participation* – the university strives to make higher education accessible to students from all backgrounds and provide the necessary support. The university is working with further education colleges and schools to create pathways to higher education and expand the diversity of the student population. The university spends £3.7 million per year to implement participation initiatives set out in the Widening Access and Participation Plan; this investment also helped tackle Covid-19 impacts on education: the university provided laptops for widening participation students to guarantee the resources to continue their studies.



Queen's University Belfast: unique selling points (USPs)

USP 1 – strong ties to industry to drive business engagement and innovation

An overarching element of Queen's University Belfast's strategies and initiatives are partnerships with key economic sectors in Northern Ireland.

Queen's University Belfast has dedicated units to drive innovation and business engagement across Northern Ireland. The Business Engagement team works to understand how the university can help companies develop through workshops, knowledge transfer to small- and medium-sized enterprises, lectures, masterclasses and virtual events. Queen's University Belfast is an international champion to the Northern Ireland Chamber of Commerce and Industry, participates in the All-Island Innovation Programme, and manages the Chief Executives' Club. Moreover, innovation and research commercialisation are strongly nurtured via QUBIS, which since 1984 has supported the creation of new technology start-ups and the commercialisation of cutting-edge technology developed through the university's robust research base.

“ We need sustainable research funding that is linked to the translational agenda. We are pretty strong with translational research and how we impact society and the economy. We are the number one entrepreneurial university in the UK. ”

(President and Vice-Chancellor, Queen's University Belfast)

“ We are part of the huge Northern Ireland reputational enhancement movement, and whether that's with investment in Artificial Intelligence, whether that's with other institutions in Northern Ireland, whether that's with other stakeholders within Northern Ireland, we're all part of that ... So we feel that we're very much part of that ambition to improve the reputation of our country and in doing so, improve the commercial position and the economic outlook of our country as well. ”

(Head of International Markets, Queen's University Belfast).

Finally, engagement aims to improve Northern Ireland's social and economic landscape through participation in the BRCD and successful bidding to the UK Research and Innovation Strength in Places Fund. Aligned with the UN SDGs 8, 9 and 17, BRCD involves an enormous and co-ordinated effort to accelerate the region's economic growth in the next decade (see also Chapter 2). Queen's University Belfast is leading three projects under the innovation strand in advanced manufacturing, clinical research and digital technologies.

USP 2 – 'virtuous circle' of pastoral care

The journey through Queen's University Belfast's education is underpinned by a series of support areas, including, among others, student wellbeing, disability services, learning development, careers support, international students, student registry, student finance and widening participation. The series of resources offered to students has had a positive impact overall and has helped build a long-lasting connection with university graduates. **The relationship with Queen's University Belfast alumni living and working around the world is helping the university encourage**

future generations of students to attend the university and develop projects that are of strategic importance. Alumni volunteers have provided mentoring and placement opportunities, have acted as panellists at careers events and enabled a continuous global network. Queen's University Belfast's International Office explains that alumni networks, particularly in Malaysia, the US and, more recently, India and Indonesia, have been crucial to establishing relationships with other institutions and companies overseas to further opportunities for students and graduates. In turn, these new connections are driving new markets for higher education that may help grow the impact that Queen's University Belfast has on the local sphere and globally.

“We are building our reputation as a very pastoral university with good support for the students, both home and international. We try and look after them well and take them on a journey, so they enjoy their time here.”

(President and Vice-Chancellor, Queen's University Belfast)

USP 3 – peacebuilding and conflict management

Research institute

The **Senator George J. Mitchell Institute for Global Peace, Security and Justice** responds to the unprecedented global challenge of building a peaceful, inclusive and secure world by bringing together the unparalleled expertise at Queen's University Belfast on these issues. Under the leadership of Professor Richard English, the institute brings together researchers, practitioners, policymakers and peace-builders from diverse backgrounds and international locations who share their multiple perspectives and work collaboratively to solve specific problems associated with the institute's priority themes.

Academic programmes

Queen's University Belfast offers three postgraduate programmes related to peacebuilding and conflict management, namely MA Conflict Transformation and Social Justice, MA (T) Global Security and Borders and MA (T) Violence, Terrorism and Security (see Table 1). For example, the MA programme on conflict transformation and social justice is the only global and interdisciplinary programme offered in the field and includes voluntary placements with local community groups.



Table 1: Peacebuilding and conflict management related programmes at Queen’s University Belfast

| Queen’s University Belfast | Total students over the last five years | % students from Northern Ireland | % international students |
|---|---|----------------------------------|--------------------------|
| MA Conflict Transformation and Social Justice | 187 | 65% | 35% |
| MA (T) Global Security and Borders | 37 | 32% | 68% |
| MA (T) Violence, Terrorism and Security | 167 | 53% | 47% |
| Total students = 391 | | | |

The MA programme on conflict transformation and social justice is the only global and interdisciplinary programme offered in this field:

- Location of Belfast: globally significant locale for conflict and peace research; access to institutions, community projects, case studies for students’ own work. Voluntary placements with local community groups are also facilitated as part of this programme.
- This programme offers an interdisciplinary approach to understanding both conflict transformation and social justice. Students will meet experts from three different schools as well as from the MA in global peace, security and justice, allowing for a broad range of geographical and conceptual/disciplinary insights.
- This programme attracts a diverse range of students both local and international enhancing and enriching the classroom learning experience.



Scholarships

Queen's University Belfast offers funding opportunities to facilitate access for international students. Specifically, the scholarships focused on the areas of peacebuilding and conflict management are:

- the Hillary Rodham Clinton Award for Peace and Reconciliation
- Ann Browne Masters Scholarship in Conflict Transformation and Social Justice
- Fulbright MA Global Security and Borders Award.

Other postgraduate funding available includes the International Office (INTO) Postgraduate Taught Scholarships, the INTO Progression Scholarship and the Queen's University Belfast Marshall Scholarships.

Ulster University

Overview

Ulster University has more than 33,000 students, of which 30,800 are distributed across its four Northern Ireland campuses (Belfast, Coleraine, Jordanstown and Magee) and around 2,200 students are based at its branch campuses in Birmingham and London. Ulster University's non-UK/EU students have increased from two per cent in 2017/2018 to 23 per cent in 2020/2021. Ulster University has recently invested more than £300 million in real estate and infrastructure to bolster its multi-campus nature. In 2021, Ulster University remained the largest recruiter of undergraduate students on the island of Ireland (HESA 2021).

Ulster University defines itself as Northern Ireland's civic university, referring to its links and commitment to the economic development and quality of life of local communities. Another

defining aspect of Ulster University's offer as articulated in the emerging strategy of the university is its 'people's centric approach', which the Vice-Chancellor of Ulster University defined as being a university that builds learning and research communities and attracts people because of its commitment with and care of these communities. Ulster University's thematic priorities are:

- social renewal: peace, conflict and transition, educational attainment, social and economic leadership, communication and leadership
- sustainability: urban renewal, energy and the environment, national infrastructure, food security, digital futures
- healthy communities: mental health, ageing, health innovation and policy, sport for life, history and heritage.
- creativity and culture: creative economy, cultural diversity, design, media and the arts, innovation and creative entrepreneurship.

In addition to the above, even if not explicitly mentioned in the strategy, tech-related disciplines also have a strong presence in terms of research and partnerships. Ulster University is a recipient of grants and part of collaborative partnerships within the recent BRCD (see Chapter 2).

Collaborative research

The themes above are reflected in Ulster University's collaborative research footprint. **Ulster University's collaborative research portfolio is particularly strong in health and health technology.** Most health-related research projects are cross-UK partnerships, such as the Genetic Links to Anxiety and Depression (GLAD) study. Led by the National Institute for Health and Care Research Mental Health BioResource and researchers at King's College London, GLAD is a joint UK-wide project set up in partnership with Cardiff University, the University of Edinburgh, and Ulster University to explore risk factors for anxiety and/or depression (Ulster University Annual Review 2018–2019). However, there are a few pan-Ireland partnerships, including the establishment of an all-Island network for food integrity, an all-Island cancer research centre and a professorial academic paediatric cardiology department for Northern Ireland.

It is worth signalling the **strong partnerships and collaborations that Ulster University holds with the public and private sectors to develop and implement research.** Ulster University has over 40 years of track record in knowledge transfer partnerships (KTPs) and has more than 250 KTPs

with Northern Ireland businesses (Knowledge Transfer Partnerships, 2021). In 2017–18, Ulster University was positioned in seventh place against other UK universities in the UK KTP ranking list. Only in the academic year 2019–20, the following initiatives (among others) were established on different key research areas with the private and public sectors, according to Ulster University's 2019–2020 Annual Review:

- Northern Ireland's largest IT company, Allstate, opened a new state-of-the-art computing lab at Ulster University
- A new strategic relationship was announced with Dell Technologies and NVIDIA to harness the power of artificial intelligence to develop assistive living and healthcare technology that will help transform patient outcomes. More specifically, the partnership aims to implement a high-speed computing power platform required to train artificial intelligence models on ever-larger datasets.
- A Belfast Maritime Consortium led by Artemis Technologies, with Ulster University as a core partner, secured a £33 million UK government innovation grant to develop zero-emissions ferries in the city.

Finally, in the academic year 2020–21, Ulster University was the first university in Northern Ireland to become a member of the Universities Policy Engagement Network (UPEN). UPEN is a network of UK universities that are working together to increase the public policy impact from their research, offering a dedicated contact point for policymakers and a collective response to requests for evidence. This milestone signals Ulster University's vision to increase its impact on society.

Global relevance of Ulster University's educational offer and research

The global relevance of the research and education offer of Ulster University is best represented by Ulster University's strong support of the 17 UN SDGs through its activities. It is clear from strategic documents and reviews that **Ulster University is**

committed to mainstreaming the UN's SDGs in its internal policies, operations, teaching activities and research activities. As an example of the success of this commitment, in 2019–20, Ulster University was ranked as one of the top universities for the 2020 NUS SDG Teach-In, an initiative to put UN SDGs at the centre of all levels of education.

Closely related to the above is Ulster University's ongoing commitment to education for sustainable development (ESD). In the academic year 2017–18, Ulster University established the ESD Working Group, with the aim of benchmarking and exploring opportunities for curriculum modification to embed SDGs. After less than five years, the vast majority of Ulster University courses already include ESD-related issues aligned with the UN SDGs.

Research at Ulster University is focused on globally relevant issues, namely health and life care, artificial intelligence and energy (with a strong emphasis on sustainability). Its commitment to a research portfolio that addresses globally relevant issues is proven by several initiatives. For instance, Ulster University is part of the Global Challenges Research Fund, a £1.5 billion fund provided to support research that addresses the challenges faced by developing countries.

Global engagement strategies

Ulster University's global vision is summarised in the following statement from the Five & Fifty Strategic Plan:

“**Our global vision is premised on building a globally engaged and globally relevant university; one which collaborates with the world's leading universities and that attracts the highest quality staff and students.**”

Staff described their current internationalisation activity as 'a journey' that began under the direction of the university's last strategic plan, and which placed a new 'Global Vision' for the university at its core. The director for global engagement explained that through the right level of strategic investment, **the university has been successful in extending**



its range of partnerships and transnational education. Furthermore, it has also attracted more international students and it has delivered an extended range of innovative, short-term international opportunities for Ulster University's home students.

“**The strategy was both broad reaching and ambitious and we can now reflect on the success achieved and a genuine step change in Ulster's work internationally**”

(Director for Global Engagement, Ulster University)

International mobility and opportunities

As stated above, international mobility is considered a key component of Ulster University's global strategy. Annual reviews reveal that the number of international students has been growing steadily in the past few years. In the academic year 2017–18, there was a 35 per cent increase in international applications compared to the previous year. In 2019–20, the number of international students choosing Ulster University as their study destination grew by 42.5 per cent on the previous year.

Strategic documents published in 2016 established the target of doubling international students by 2021, and according to the director of global engagement at Ulster University, it was exceeded, despite the Covid-19 challenges.

“**We embraced ambitious growth targets and these have not only been met, but exceeded. We ensured an attractive, relevant range of study options, delivered a high-quality student experience and of course we have the added advantage of 'value' with Northern Ireland being considered a cost-effective study destination.**”

(Director of Global Engagement, Ulster University)

Success was also attributed to investment in strong international outreach and profile building, as well as collaboration with international schools and partners, and through engagement with sponsors, funders and stakeholders such as the British Council.

“**Covid-19 was undoubtedly a disruptive force, but the resilience we've witnessed from our international students has been incredible. Their commitment to studying with us remained and it was, therefore, important that we invested in everything possible at our end to help mitigate the many challenges that emerged.**”

(Director of Global Engagement, Ulster University)

According to the director of global engagement at Ulster University, the new UK Graduate Visa Route is also an important factor in attracting international students, and the reinstatement of post-study work opportunities helps ensure competitiveness against other global study destinations such as Canada and Australia. However, she also cautions against complacency:

“**Many international students are now drawn to us once again by the promise of an augmented study and graduate-visa offer and as universities, we all have a responsibility to help students realise that ambition. We can do so by providing the right level of academic and career preparation, but also by engaging with local employers to raise awareness of the Graduate Visa Route and of the immense value that an international graduate can bring to businesses here in Northern Ireland.**”

**(Director of Global Engagement,
Ulster University)**

Other external factors, like Brexit, have caused disruption, most importantly with the loss of the Erasmus+ programme, which has impacted very significantly the number of European students coming to Northern Ireland. according to the assistant director and head of global opportunities and experience at Ulster University. At the same time, Brexit is seen as an opportunity, especially regarding the reintroduction of the two-year graduate visa scheme.

The benefits that Ulster University's Global Engagement Team see in student and staff international mobility go beyond internationalisation.

It is seen as a way to increase diversity at Ulster University and Northern Ireland's society, and to provide opportunities to Ulster University students, especially from a wider socio-economic group. Ulster University is a widening-participation institution (see section on Ulster University's unique selling points for further detail) and many don't have the opportunity to enjoy international experiences themselves. As the assistant director and head of global opportunities and experience explained, 'funding isn't the only thing that's a barrier to students wishing to have international experiences. It's that aspiration, feeling like this is for you, and you can access this'.

Partnerships

Currently Ulster University has 94 partnerships extending across 26 countries. Its global engagement strategy reflects the importance of international partnering in delivering multiple benefits for staff and students, for teaching and research and for reputation and profile. Staff also emphasised the importance of selecting the right partners and focusing on aspects such as like-mindedness, culture, values, goals and intentions. A stringent due-diligence process was also highlighted as well as recognition that the best and most effective international partnerships are those that deliver mutual benefits and complement wider objectives.

“Partnerships are a vital framework through which almost every aspect of our international activity can be realised – whether that is innovation and research, student exchange or mobility or indeed international student recruitment and TNE.”

**(Director of Global Engagement,
Ulster University)**

Staff also reflected on the impact of Brexit on its partnership activity, and on student mobility and exchange in particular.

“We have a significant number of European partnerships that were facilitated by the Erasmus+ programme. We are now thinking really carefully about the next phase of these partnerships as we foster and develop student mobility opportunities through the Turing Programme.”

(Assistant Director and Head of Global Opportunities, Ulster University)

Student experience

Ulster University is one of the top ten UK universities regarding levels of international student satisfaction (Ulster University, 2018) and is in the top 20 UK universities for student experience (Good University Guide, 2022). Ulster University has won or been nominated for many student experience awards and always ranks high for this category (e.g., Postgraduate Research Experience 2019, National Student Housing Survey).

As outlined above, the drivers of this success include **the type and quality of education offered, employment opportunities in Northern Ireland and affordability of both the degrees and living costs:**

“ I chose Ulster University because of my course – MSc International Tourism. This was the top course in the UK and even though I did not know Northern Ireland or even heard of it, I was determined this was where I was going to go. I had to fund my study all by myself so I had to be sure it was a really good course as this was an important and critical part in my career path. [...] The ranking of the course and the low cost of living in Northern Ireland were two important deciding factors for me. So much cheaper than studying in a big city in the UK. ”

(International student from Nigeria)

Testimonials from Ulster University international students also value other aspects of Ulster University, like its **multi-campus offer**, which allows them to **choose between urban and more rural experiences**:

“ I first came to Northern Ireland to do my degree in communications on Coleraine campus four years ago. I chose this campus because I liked the course and the location; it was much like where I grew up and I didn't want to go to a big city like London, I was scared of getting lost. Then I decided I wanted to go to Belfast, I was ready for city life. I love the vibe of Belfast, the people I meet, and it is easy to make friends. To me it is the perfect size. ”

(International student from Germany)

Students also highlighted how friendly, welcoming and trusting people are in Northern Ireland:

“ The best part of Northern Ireland is the strong support people give you, especially in mental health, people here are so amazing and so welcoming. I made friends really easily because I stayed on campus accommodation. The teachers at Ulster University are really supportive and empathetic too. People are also very trusting and I like that, it is not like this back home. ”

(International student from Mexico)

Student employability

Ulster University has a progressive approach to employability and graduate success. The employability journey is institutionally co-ordinated and is both student-focused and highly engaging, set alongside the students' main programmes of study and recognises student agency to fully inform the learning experience. This includes initial career exploration through to application, registration, enhanced study and life beyond graduation. In 2018–19 Ulster University graduate leavers demonstrated high levels of success and ambition as they transitioned to further learning and work, with 89 per cent in paid employment or full-time further study within 15 months of graduation.

Second, **one of the strongest findings of this research is the very close co-ordination between Ulster University and several industry and service sectors to shape the education offer** (including the creation of new BAs and MAs) so that it aligns with labour market demand and brings very practical teaching and experiences to students. This communication is facilitated by the institution's 39 sectoral employer advisory boards and information acquired through research activities including the Graduate Employer Survey and Northern Ireland Skills Barometer. The private sector has the capacity to influence the higher education offer at Ulster University in order to address skills gaps in various sectors and at a very granular level, which increases the employment opportunities for

Ulster University's graduates. **The strength of a powerful employer and higher education network in Northern Ireland continues to enable Ulster University to transform curriculum solutions and real world connected experiences.** The university understands the business and talent management needs of employers including recruitment practice and skills which enable the creation of ongoing short- and longer-term opportunities for graduates.

Third, in the context of Covid-19, **Ulster University provided enhanced support and resources for new graduates seeking work in a very challenging time.** Examples include the Graduate Internship Programme, which combines a ten-week paid work-based internship with evidenced based certification and accreditation. The post-graduation employability offers, such as 'UnlockU', was designed to support students graduating in 2020 by enhancing their network, developing their skills and providing professional careers guidance. In 2020, Ulster University also launched flexible placement pathways including enterprise placement and a civic and economic recovery option which provided students and employers with enhanced opportunities in the work-based learning space.³⁰

Finally, Ulster University also provides tailored resources and programmes for vulnerable and minority groups who face additional barriers to employment. As an example, in 2016–17, Ulster University announced that it was to scale up employability initiatives to tackle barriers to success for black and minority ethnic students, those from lower socio-economic backgrounds, as well as disabled, mature and part-time students. It promised to do so using the £420,000 from the Higher Education Funding Council for England's Catalyst Fund received in collaboration with Aston University, Birmingham City University and the University of London.

Ulster University: unique selling points (USPs)

USP 1 – widening participation

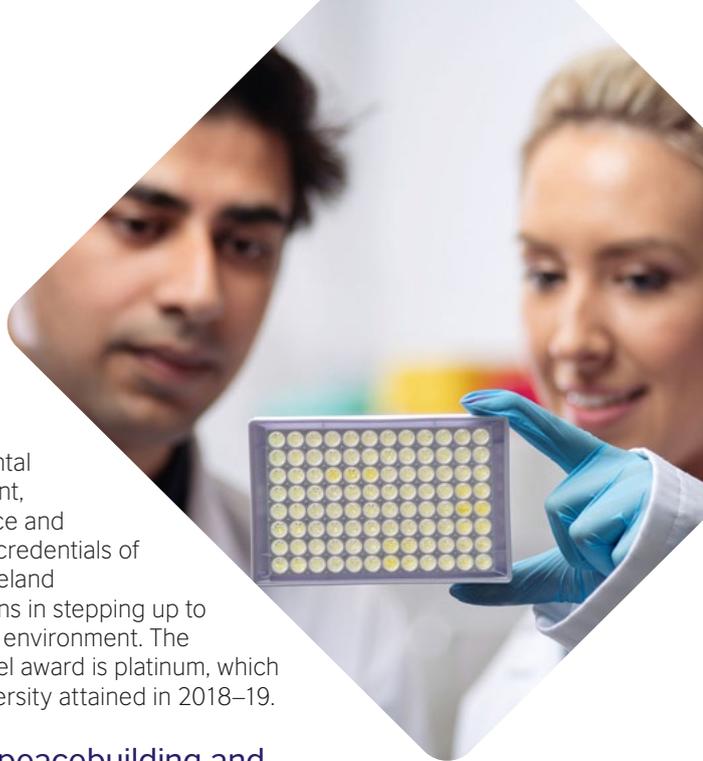
Ulster University is recognised in the top ten UK universities for widening access to and participation in higher education (Annual Review 2016–2017). Ulster University offers specific bursaries with the primary purpose of ensuring that more young people from disadvantaged backgrounds are able to access university. For the academic year 2019–20, Ulster University launched the Advanced Mentoring Programme, which is a tailored module for those students requiring additional support for: Go Global, Self-Employment, Leadership, and Creative Arts.

Ulster University collaborates extensively with all six regional further education colleges in Northern Ireland. Collaboration takes the form of course validation, programme support and delivery, and short course provision. Ulster University's Vice-Chancellor emphasised the importance of these partnerships:

“Our collaboration with further education colleges is really important because together, we are opening up a number of routes into higher education and, by doing so, increasing widening participation opportunities. We validate approximately 107 foundation degrees, across the sector, with about 7,000 students in collaborative provision. This is an active demonstration of our commitment to widening participation with the purpose of transforming lives. Our partnerships with further education colleges joins up tertiary education and makes higher education more easily accessible to all.”

(Vice-Chancellor, Ulster University)

³⁰ Other actions implemented to support students' and graduates' transition into the post-Covid workplace include the Future Skills Week. More information available at www.ulster.ac.uk/skillsweek



As mentioned above, Ulster University believes that increasing the number of international students and international opportunities is an effective way to increase the diversity of the student body and expose local students to new cultures, new networks and other ways of working. In sum, internationalisation increases the local student population's social capital.

USP 2 – commitment to a place, its communities and its people

Ulster University is wholeheartedly committed to Northern Ireland and its communities. Ulster University's four-campus model stretches across the region and is a practical demonstration of the university's commitment to place. This is further evidenced through the substantial real estate and infrastructure investment that each campus has received in recent years. **Ulster University campuses are an asset for Northern Ireland and a tool to support greater regional balance:**

“There's a general commitment in Northern Ireland to have better regional balance and also an acknowledgment that the economy can be Belfast centric. We would like to do our part to try to stimulate the economy and spread wealth across the region. As such, it is strategically important to the university to continue to make investments across our estate and ensure strong campus balance, especially in the north and north-west.”

(Vice-Chancellor, Ulster University)

The multi-campus nature of Ulster University enables the university to provide a variety of student experiences, from the inner-city and urban to the more rural, thus attracting students and staff looking for strong, place-based communities.

In addition, **Ulster University is aligning itself with Northern Ireland's commitment to sustainability** and, for the last decade, has participated in the Environmental Benchmarking Survey. The survey annually assesses the

environmental management, performance and assurance credentials of Northern Ireland organisations in stepping up to protect the environment. The highest-level award is platinum, which Ulster University attained in 2018–19.

USP 3 – peacebuilding and conflict management

Research institutes

At Ulster University there are two world-leading institutes: International Conflict Research Institute (INCORE) and the Transitional Justice Institute. INCORE was founded in 1993 and has established itself internationally and locally as a vibrant and vital interdisciplinary centre researching contexts where societies are confronting histories of violence, division, discrimination and abuse of power.

The Transitional Justice Institute produces world-leading and world-changing research, which informs real-world transitional justice law, policy and practice in Northern Ireland and across the world. The institute offers the only master's programme in the UK dedicated to gender, conflict and human rights, as well as the LLM in human rights and transitional justice. The teaching draws upon Ulster University's law research excellence, ranked number one in the UK for impact.

Ulster University also offers three main postgraduate offerings, namely MSc Peace and Conflict Studies, LLM Gender, Conflict and Human Rights, and LLM Human Rights and Transitional Justice. The main postgraduate programme is MSc Peace and Conflict Studies.

Table 2: Peacebuilding and conflict management related programmes at Ulster University

| Ulster University | Total students over the last five years | % students from Northern Ireland | % international students |
|---|---|----------------------------------|--------------------------|
| MSc Peace and Conflict Studies | 50* | 78% | 22% |
| LLM Gender, Conflict and Human Rights | 75 | 69% | 31% |
| LLM Human Rights and Transitional Justice | 104 | 79% | 21% |
| Total students = 229 | | | |

Academic programmes

The main postgraduate programme is MSc Peace and Conflict Studies, which attracts students from a wide range of countries and a wide variety of academic backgrounds and draws upon the international reputation of INCORE as a centre of excellence in both research and practice. In terms of the peace and conflict, Table 2 presents the numbers for the last five years.

Scholarships

The John J Sweeney Scholarship is based at the world-renowned INCORE at Ulster University, and supports students enrolled to study full-time on MSc Peace and Conflict Studies, based on the Jordanstown campus (Belfast). The scholarship has a value of \$20,000 and must be used towards the scholar's tuition fees. Any balance remaining may be used to purchase study materials/equipment, support course-related activities and/or in support of the scholar's living expenses and travel costs.

This scholarship is generously supported by funds raised by the AFL-CIO, the American Labor community, business and civic organisations, and individuals. This special scholarship is named in honour of AFL-CIO President Emeritus John J Sweeney, the son of Irish immigrants, who dedicated his life to advancing the well-being of working people, making outstanding contributions to working people both in the US and internationally which will live on for years to come.

Conclusion

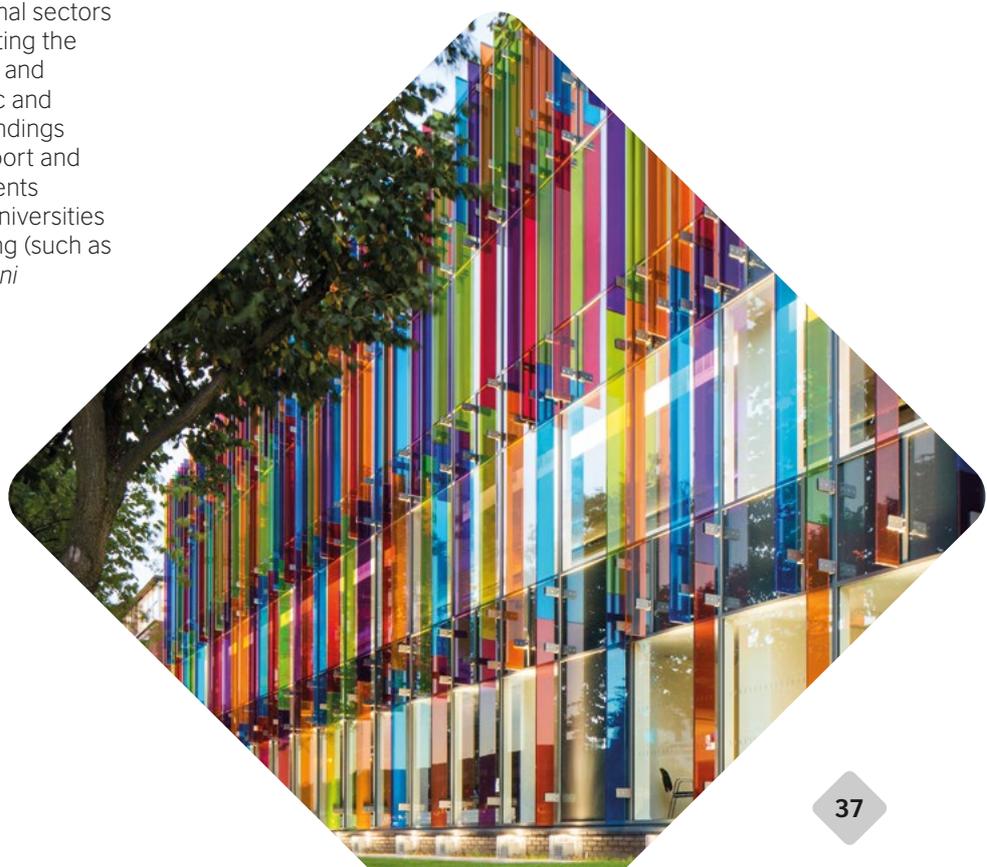
From an empirical perspective, this report has explored the 'Opportunities in Northern Ireland' by examining the role of higher education in supporting internationalisation and enhancing partnerships and co-operation between universities and business sectors. **On a global stage, Northern Ireland is uniquely positioned to prosper thanks to what can be identified as its unique selling points.** Within its geographical location with access to the rest of the UK, Europe and the world, its rich landscapes and cultural attractions, Northern Ireland offers students a high quality of life coupled with excellent research and employment opportunities. Queen's University Belfast and Ulster University provide exceptional research and high-quality affordable education. Through their partnerships with nearly 200 institutions worldwide and their cutting-edge research in fast-growing sectors and in peacebuilding and conflict management, both universities bring exceptional opportunities for international study and for fostering business engagement. Taken all together, these unique selling points highlight the overarching **Northern Ireland's approach to internationalisation as a holistic and integrated process** designed to promote national growth and to help higher education to expand on a global scale in a way consistent with Northern Ireland's **values of collaboration, integrity, resilience and reconciliation.**

The narrative presented in the three chapters of this report has shown how **continuous co-operation with socio-economic actors and national stakeholders puts Northern Ireland on the right path to providing a sustainable world-class education.** Queen's University Belfast and Ulster University are increasingly widening and deepening their global strategies to become centres for the creation and generation of a knowledge-based economy within the local communities of Northern Ireland, matching their offer with current labour market trends and developing directions for attracting future talents and promoting sectoral growth, as examined in the case of *creative industries, information technology security or cybersecurity, fintech, and life and health sciences.* Underpinned by the principles of sustainable development, higher education in Northern Ireland is adapting module offers and engagement strategies to the latest technological and entrepreneurial innovations, and in turn, this further integrates the 21st century student generations into more complex and competitive long-term market requirements.

Furthermore, **Northern Ireland's competitive advantage in higher education lies in its social capital.** As captured by our findings, a key enabling factor in promoting Northern Ireland as an 'opportunity' is the will and motivation of policymakers and stakeholders in providing adequate stimulus to foster a flourishing future for the country. Universities are growing in international reputation, and work productively with local and regional sectors to attract talents and investors, demonstrating the importance of social capital as a horizontal and vertical co-ordination encompassing public and private benefits that are intertwined. Our findings highlight aspects of social capital that support and sustain integrated programmes of investments involving multiple layers of governments, universities and private actors; networks and networking (such as the *Ambassador Circle and the Global Alumni*

Network) used as a mechanism to promote and to attract the Northern Ireland 'brand' internationally; and high levels of trust and shared values which altogether seem to provide a basis of sustainability in Northern Ireland's higher education sector. In this respect, **purpose-built and time-bound partnerships are necessary enabling conditions to support the growth of Northern Ireland's higher education sector in its quality and quantity.** Within this context, the new strategy launched in May 2021 by the Northern Ireland Department for the Economy – *A 10X Economy: Northern Ireland's Decade of Innovation* – and the institutionalisation of public-private partnerships across business, higher education institutions, and local and regional communities, signals a strategic direction towards more holistic co-ordination to develop a world-class higher education sector.

Although global challenges and the post-Covid-19 recovery are expected to have a huge impact on higher education systems forcing universities to rethink what kind of higher education they want to achieve and how, they also offer new means and opportunities for promoting global engagement. **Looking to the future, Northern Ireland can play to its strengths, namely its unique selling points, to create an ambitious and change-oriented framework in the delivery of higher education.**



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Appendix

We engaged with the following people during the qualitative data collection phase of this project.

| Interview/ roundtable | Group | Name | Organisation |
|--------------------------|--|--|----------------------------|
| Interview | Industry | Jeremy, Steve and Donal | Invest Northern Ireland |
| Interview | Industry – tourism | John McGrillen | Tourism NI |
| Interview | Industry – fintech | Darragh McCarthy | FinTrU |
| Interview | Industry – creative industries | Professor Paul Moore | Ulster University |
| Interview | Government | Heather Cousins | Department for the Economy |
| Interview | Vice-chancellors | Professor Paul Bartholomew | Ulster University |
| Interview | Vice-chancellors | Professor Ian Greer | Queen's University Belfast |
| Roundtable | Ulster University Global Engagement Office | Catriona McCarthy, Mehvish Ashfaq, Gillian O'Neill | Ulster University |
| Roundtable | Queen's University Belfast Global Student Recruitment Team | Gordon Brown, Heather Taylor | Queen's University Belfast |
| Roundtable | International students | N/A | Ulster University |



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