

Rethinking The Management, Structure And Regional Focus Of Higher Education Institutes: The Role Of Technological Universities In Ireland In The New 20's

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Abstract - The higher education sector in Ireland is described. Changes in that sector during the period from 1960 to the current time are outlined and discussed. Particular focus is given to the period between 2010 and 2020, during which Irish government policy was to follow a strategy of regionalised access and delivery of tertiary vocational education. This was manifested through establishment of a new form of university, namely that of the “Technological University” (TU). The establishment of TUs in Ireland and their legislative underpinning are examined. The authors present the ongoing TU process in Ireland as a case study of how a sustainable, regionalised approach to third-level educational reform can be undertaken. The authors finish by presenting a comparative analysis of the RUN-EU Network mission and the legislative functions of the Irish TUs, thereby highlighting how both can jointly contribute to shaping firms, economies, and society in the 2020 decade.

Keywords - Technological University (TU), RUN-EU Network, Regional University Network, Institutes of Technology Ireland (IOTI), Department of Further and Higher Education, Research, Innovation and Science (DoFHERIS), Technological Higher Education Association (THEA).

1. Introduction

1.1 Background and Historical Context

This Tertiary Education landscape in Ireland has developed and changed throughout the last 50 to 60 years in fundamental and significant ways. Primarily and most notably, the delivery of regional access to third-level education and the development of a vocational tertiary sector with a specific socio-economic remit have been amongst the defining features of this changing educational topography. It can be no accident that these improvements in third-level access and focus have matched Ireland's economic development throughout the same period. From the largely agrarian, protectionist economy of 1960 to the open, digitized, global

economy of today, increased participation in third-level education across Irish society has often been cited as a cornerstone of regional and national economic development policy (McDonagh, 2000).

The more recent creation of Technological Universities (TUs) is another radical step in the continued reconfiguration of higher education in Ireland. The establishment of TUs is a core element of central government education and economic policy alike and expressly aims to deliver significant advantages to national priorities in relation to Higher Education access, research-informed teaching, and learning excellence, as well as supporting enterprise and regional development (Department of the Taoiseach, 2020).

Indeed, the development and progression of TUs has long been an established policy objective of Government in the context of higher education restructuring. The TU concept has its genesis in recommendations contained in the “National Strategy for Higher Education to 2030” published as far back as 2011. Within this seminal report, Chair of the Third Level Strategy Group, Colin Hunt states that: *“The current report presents a vision of an Irish higher education sector that can successfully meet the many social, economic and cultural challenges that face us over the coming decades, and meet its key roles of teaching and learning, research, scholarship, and engagement with wider society.”* (Department of Education and Skills, 2011)

Following on from the recommendations of the “National Strategy for Higher Education”, the Higher Education Authority of Ireland (HEA) published a series of papers that set out a roadmap for implementing significant reform in Irish higher education (HEA, 2012; HEA, 2013). A common key objective of these is the creation of a more coherent system of higher education institutions, coordinated by the HEA, to deliver the complementary range of institutions and academic programmes needed by individuals, society and the labour market. At the time that these HEA reports were published, Ireland had a significant number of small higher education institutions that were in receipt of public funding. The national strategy was clear in its recommendation that these should be consolidated, where appropriate, to promote coherence and sustainability.

Amongst the policy papers published by the HEA was a report entitled “Towards a Future Higher Education Landscape” from 2012. This provides a basis for institutions to review their mission and how they would fit into the new, more coherent tertiary education system being developed. Included were guidelines on regional education clusters, which lay out how clusters of IOTs were to be formed to serve regional need. These guidelines provided for a major

programme of structural reform which continues to this day and includes institutional mergers and much greater levels of third-level institutional collaboration. All 7 universities and 14 Institutes of Technology in Ireland would now be grouped in regional clusters, as below.

Figure 1. Proposed Regional Clusters of Higher Education Institutes (HEIs) in Ireland

Region	Member institutions
South/SouthEast	University College Cork, Cork IT, IT Tralee, Waterford IT and IT Carlow
West/MidWest	University of Limerick, Limerick IT, Mary Immaculate College, Galway-Mayo IT, IT Sligo, Letterkenny IT and NUI Galway (St Angela's / Shannon College incorporated into NUI Galway)
Dublin / Leinster <i>Pillar I</i>	University College Dublin / Trinity College Dublin / National College of Art and Design / Marino Institute of Education / Dún Laoghaire Institute of Art, Design and Technology
Dublin / Leinster <i>Pillar II</i>	Dublin Institute of Technology / IT Tallaght / IT Blanchardstown / Dublin City University (and incorporating linked colleges) / National College of Ireland / Dundalk IT / NUI Maynooth / Athlone IT / Royal College of Surgeons in Ireland

(Source: HEA, 2013)

1.2 Research, Aims and Objectives

The overall aim of this paper is to inform European Higher Education partners and particularly RUN EU partners of the evolution of the Irish Higher Education sector. How they transformed from the original IoT's that were originally separate RUN EU partners into a merged new type of University, Technological Universities.

To achieve these aims, the authors firstly provide historical context for the development of the Irish Higher Education system. Outlining the period from 1960 to 2009 and then paying particular attention to the period between 2010 and 2020, during which Irish government policy was to follow a strategy of regionalised access and delivery of tertiary vocational education.

Secondly, the authors undertake an exhaustive examination of both the legislative foundations of the new Technological Universities in Ireland, and central government and Higher Education policy development throughout this period. From this analysis, three main objectives have been identified for Irish Technological Universities:

- i. Improve student experience
- ii. Improve impact on society and economy
- iii. Improve international recognition of the quality of Irish HE outcomes.

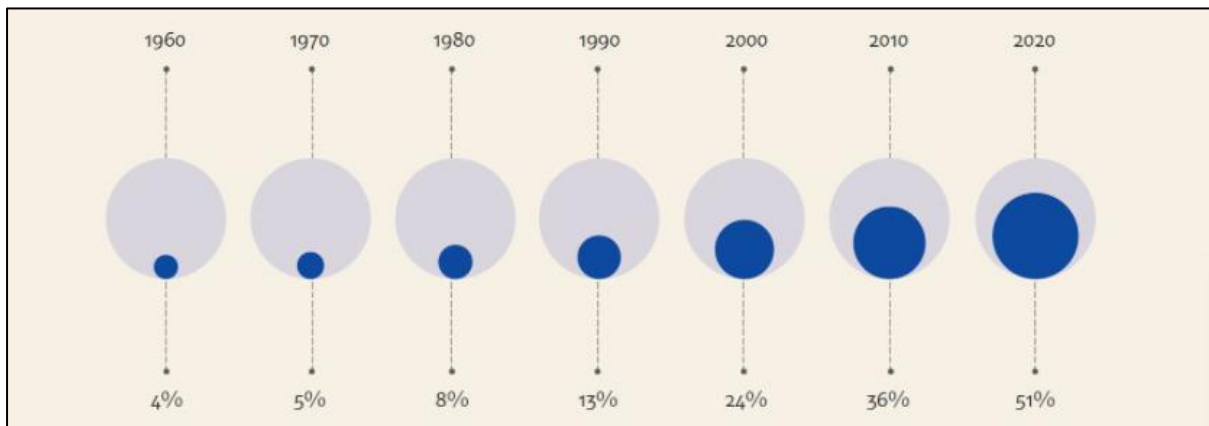
Thirdly, the authors finish by presenting a comparative analysis of the RUN-EU Network mission and the legislative functions of the Irish TUs, thereby highlighting how both can jointly contribute to shaping firms, economies, and society in the 2020 decade.

2. Literature Review

2.1 Higher Education in Ireland, 1960 to 2010: Developing Vocational Tertiary Education through Regional Technical Colleges (RTCs)

Fifty years ago, Higher Education in Ireland was for only a small elite. In the 1960's, less than 5% of the adult population of Ireland had completed any form of higher education. However, in subsequent decades that percentage level has increased to become one of the highest levels of any country in Europe, with half of all adults in Ireland today having completed some form of higher education. (OECD, 2022). Henry (2021) neatly illustrates the significant growth in higher education uptake amongst Irish adults over this 60-year period in Figure 1 below.

Figure 2. Percentage of adult population that has completed higher education in Ireland 1960-2020



(Source: Henry, 2021)

Such rapid growth, especially from 1990 onwards, did not happen by accident. Policy makers realised that Ireland needed a skilled workforce if it was to achieve an open and export-oriented economy.

In the 1960's, almost 90% of those participating in higher education were attending one of the five Universities in Ireland at the time. But development and expansion in the sector was about to happen. Dr John Walsh, of Trinity College Dublin, has written extensively about the

development of the Irish higher education sector. In his 2018 work, Walsh states that: *“The policy makers realised it wouldn’t be possible to achieve the scale of participation they wanted through the universities alone and they wanted institutions that specialised in the higher technological space”*.

The solution was to create an entirely new element of the higher education sector in Ireland, one with a more vocational approach: “Regional Technical Colleges” (RTC’s) were created with a remit to provide education for trade and industry over a wide range of occupations and to provide opportunities for students in rural Ireland. The first of these colleges opened in 1969-70 and there were seven of them in operation within a decade, including Limerick Regional Technical College.

These RTC’s initially offered courses in science and engineering but it was soon identified that the biggest growth area was to be in business-related disciplines. At the time business was not a discipline area you could study at university. The result was to have a major democratizing effect on the Irish education system, where both access and choice were significantly improved. The economic and social impacts of this were felt almost immediately. As Walsh (2018) put it: *“By the mid-eighties just 15 years after the first RTC’s had been established, the proportion of new entrants to higher education was evenly divided between the RTC sector and the universities... and there is a lot of research showing that there are significant income benefits for individuals and significant wider benefits for society”*

The various RTCs prospered in their vocational agenda throughout the 70s and 80s and in 1993 they were upgraded into “Institutes of Technologies” (IOT’s) with increased autonomy to award postgraduate degrees at levels 9 and 10. “The Regional Technical Colleges Act (1993)” broadened their scope further and allowed structures to be set up to formalise research and development activity. This Act also increased the autonomy of both Limerick Institute of Technology and Athlone Institute of Technology, enabling them to award master’s degrees since 1997 and doctorates since 2002 (AIT-LIT Consortium, 2021). It would be these two IOTs that would eventually combine to create the Technological University of the Shannon: Midlands Midwest (TUS) the most recent University in Ireland.

2.2 Higher Education in Ireland, 2010 to 2020: The path to Technological Universities

By 2010 the vocational higher education sector in Ireland comprised 14 IOTs spread across 13 of the 26 counties in the Republic of Ireland, with the “Institutes of Technology Ireland” (IOTI) as their representative body.

Following the global financial crisis at the end of the first decade of the new millennium, then Minister for Education and Skills Ruairi Quinn set out a new configuration for the higher education system. This was to be made manifest through the creation of a series of regional clusters of IOTs and forced mergers with other ancillary third-level education institutes. In 2013, the Minister also announced approval for groups of IOTs to proceed towards detailed planning for a formal application to merge, thereby laying the groundwork for the later “Technological Universities Bill” of 2015 and the subsequent “Technological Universities Act” of 2018. This provided for a major programme of structural reform including institutional mergers and much greater levels of institutional collaboration over the following years.

The objectives of this restructuring announced by Minister Quinn back in 2013 still resonate today. Similar aims can be found today in pan-European projects such as the RUN-EU Network initiative, where the needs and interests of students, employers and the wider group of regional stakeholders are brought to the fore in tertiary education development. At the time, the aims of the restructuring of the vocational tertiary education sector in Ireland were identified as:

1. Meeting the expectations of students and of employers by better enabling all institutions to provide the high-quality teaching, learning and research experiences so vital to their future success and Ireland’s future.
2. Positioning the system to better address the projected strong growth in demand for higher education into the coming 2 decades. This also reinforces the commitment and ambition to further improve equity of access to higher education.
3. Improving student choice by enabling them to transfer more easily between higher education institutions, and to progress from further education to higher education
4. Supporting academic staff through more opportunities for inter-institutional collaborations, in research projects and under-graduate courses. (Walsh, 2018; Henry, 2021)

These objectives, combined with the outline strategy paving the way for the establishment of Technological Universities was warmly welcomed by the Institutes of Technology. Their

representative body, IOTI, presenting to the Joint Committee on Education and Social Protection (an Irish parliamentary committee), stated that *“IOTI views the implementation of the National Strategy for Higher Education as the most significant policy issue in higher education for at least a generation. The Institutes of Technology are committed to playing an active and constructive part in the change process over the next number of years.”* (IOTI, 2012)

By 2016, The Technological Higher Education Association (THEA) was formed. THEA inherited the functions of IOTI with an expanded representative remit and mission in recognition of the changing tertiary education landscape (THEA, 2017). It was THEA who welcomed the signing into law, on Wednesday 21st March 2018, of the landmark Technological Universities Act by Uachtarán na hÉireann, Michael D Higgins, describing it as: *“[a] signal day for Irish higher education and especially for the technological sector and the communities that it serves. This provides the facility whereby institutions within the sector can elect to apply for designation as technological universities should they meet the stringent criteria contained within the Act.”* (THEA, 2018)

Under the statutory framework provided in this 2018 Act, two or more IOTs may now jointly seek Technological University (TU) designation through a prescribed legislative process. Section 29 of the 2018 Act provides for the application jointly by two or more applicant institutes and Section 38 of the 2018 Act provides that an applicant institute and an established technological university may apply to the Minister for an order (Technological Universities Act, 2018). The Minister is then required to appoint an advisory panel including international experts to assess the application and to be furnished with their report, the views of the Higher Education Authority on it and any other relevant information considered relevant before making a decision within legislatively prescribed timeframes. (DoFHERIS, 2021b)

Applications for an order seeking designation as a TU under the TU Act (2018) are made specifically to the Minister of Further and Higher Education, Research, Innovation and Science. This is, in fact, a newly established Department within the Irish Government with specific responsibility for continuing and concluding the TU process in Ireland. As evidenced in their inaugural 2020 statement: *“These new types of higher education institution are key drivers of a wide range of national strategic policy objectives relating to higher education access, skills retention and creation, research capacity building and research led teaching and learning excellence, regional development and socio-economic progress”*. (DoFHERIS, 2020b)

Indeed, this new Department of Further and Higher Education, Research, Innovation and Science has an annual budget of more than €3 billion, the sixth largest budget allocation of any Department, and it is responsible for more than half of the Government's total expenditure on research and development through Science Foundation Ireland, the Irish Research Council and the Higher Education Authority (Harris, 2020).

Even more recently, in their “Statement of Strategy 2021-2023”, this new Department of Further and Higher Education, Research, Innovation and Science have expressed their continued support of the establishment of Technological Universities and the regional cluster agenda in higher education across the country of Ireland, seeing it as a “*critical education policy feature to improve access to higher education and to act as anchors for regional and national innovation and growth*” (DoFHERIS, 2021a). This sentiment echoes those previously offered by the wider Department of Education in Ireland who have stated their support for “*higher education reform in Ireland whereby TUs will assist in the delivery of national strategic objectives for regional socio-economic development, higher education access, research and skills progression*” (DoE, 2019).

The Department of Education goes on to stress the potential benefits of TUs, highlighting their ability to attract Foreign Direct Investment, to retain and create skills and employment in the region and to give students the highest quality education across all qualification levels, from apprenticeship to doctoral degrees, whilst residing in their own locality (Technologicaluniversities.com, 2022). As Minister of State for Further Education and Skills, Niall Collins stated in 2021: “*Government has made it one of its key priorities as reflected in the Programme for Government to ensure that there is a network of TUs across the country so as to more equitably ensure balanced regional development and access to higher education nationally*” (DoFHERIS, 2021c).

Further evidence at a national policy level of the ongoing support for these regionalised educational goals can be found in the announcement by Government in Budget 2020 of the provision of €90 million over the three-year period 2020-2023. Under this new “TU Transformation Fund” IOTs are now able to access funding with the specific purpose of jointly achieving TU designation and to further the advancement of established TUs. This announcement was on foot of the publication of the TU Research Network (TURN) Report in October of 2019.

The TURN report sets out a vision for a strategic framework for Technological Universities and their role in the higher education landscape in Ireland. It emphasises in particular the scope for these new universities to make a distinctive national and international contribution through connectedness and collaboration, enabled by digital connectivity throughout the regions in which they are rooted, enhancing opportunities for learners, employers and society (TURN, 2019). Highlighting the importance of these wider socio-economic objectives established in the TURN Report, Minister Simon Harris, in July of 2020, stated that *“My priorities in establishing this new department will be to ensure it is an economic driver but also a department which drives social inclusion.”* (DoFHERIS, 2020a)

The passing of significant new legislation that permitted the merging of regional education institutes, the establishment of a new government Department dedicated to third-level educational reform and the creation of a ring-fenced funding stream for transformational projects such as TU mergers can be considered to be the core elements for achieving sustainable change in third-level structures in Ireland. Their existence provides clear evidence of central government’s long-term dedication to the wider socio-economic objectives which are at the basis of the radical developments seen in vocational third-level education in Ireland since 2010. Therefore, the authors present the ongoing TU process in Ireland as a strong case study of how a consistent, regionalised approach to undertaking third-level educational reform can be sustained and delivered over a long period of time.

2.3 An Overview of Technological Universities in Ireland, 2022

Following the enactment of the Technological Universities Act in March 2018 the first such university in the State, TU Dublin (TUD), was established on 1 January 2019. This was followed by the establishment of the Munster Technological University (MTU) on 1st January 2021. The TU of the Shannon: Midlands Midwest is the third TU to be created in Ireland (on October 1st, 2021) and is a milestone for the Midlands and the Midwest.

TUD amalgamated three existing Institutes of Technology: Dublin Institute of Technology, IT Tallaght and IT Blanchardstown and in its inaugural year of 2019, TUD was already the largest provider of third level education in Ireland with over 29,000 students enrolled in a wide range of disciplines. The university provided opportunities across the NFQ levels and for a diverse student base, with a large cohort of part-time learners representing almost 20% of the national part-time student population. In its first year, TUD conferred 8,232 graduates with qualifications ranging from Level 6 to Level 10. TUD has some 3,500 staff.

TU Dublin published both its first strategic report and annual report in 2020. The plan “TU Dublin Strategic Intent 2030” centres on the three pillars of People, Planet and Partnership with a vision to ‘Create a Better World Together’. Notable goals include the aims to have at least 1/6 of revenues from non-Exchequer sources, delivery of a new organisational design, 1/3 of offerings delivered through multiple pathways, be in the top 3 Irish universities for graduate employability and be the largest provider of lifelong learning for industry and the professions, all by 2023. (TUD, 2020)

TU Dublin was successful in the second call under the European Universities Initiative in 2020 as part of the European Universities of Technology group with higher education institutions from Cartagena, Cluj, Cyprus, Darmstadt, Riga, Sofia and Troyes. Financial support comes from Erasmus+ and Horizon 2020 programmes and aims to deepen cooperation, expertise, the pooling of resources and opportunities for staff and students.

The Munster Technological University consortium was granted Ministerial approval on 26th May 2020 with the Ministerial order approved by both Houses of the Oireachtas on 25th November. MTU was legally established on 1 January 2021. MTU is the amalgamation of Cork Institute of Technology (CIT) and Institute of Technology Tralee (IT Tralee).

MTU is a multi-campus technological university, contributing to the region through the provision of academic programmes that support student development and opportunities, education and research. MTU has an extensive regional footprint with six campuses across the southwest region in Cork and Kerry. For Cork, it is the first university to be established since University College Cork (UCC) in 1845. MTU is the first university to be established in Kerry. Professor Maggie Sterling, a leading Scottish academic, was appointed the first president.

MTU has some 15,300 students upon establishment and in bringing together the strengths of IT Tralee in the areas of full-time mature entrants and international student recruitment and of Cork IT in research and enrolment of flexible learners, this new enlarged and merged higher education institution will provide greater strategic focus for key stakeholders in the advancement of higher education, skills, research and regional development agendas in the entire South West region and across multi-campus. (MTU, 2020)

Close to the hearts of the authors, Minister for Further and Higher Education, Research, Innovation and Science, Simon Harris TD granted Technological University status to a merger between Limerick Institute of Technology and Athlone Institute of Technology on 5th May 2021. This created the Technological University of the Shannon: Midlands Midwest (or TUS

for short). TUS will have a student population of almost 14,000 and some 1,300 staff. In granting Technological University status to TUS, Minister Harris' statement outlined that: *"This new technological university designate will increase higher education access, drive enhanced regional development and increase opportunities for students, staff, business and enterprise, and local communities."* (DoFHERIS, 2021b)

Inaugural TUS President, Professor Vincent Cunnane, expanded upon the sentiments of Minister Harris, capturing the regional socio-economic and vocational education objectives of the entire TU project extremely well when he stated that: *"The new TU promises to be a university with a strengthened regional focus and a national and international outlook, that will benefit our staff, our students and the communities we serve. It will take its place as an economic driver for the regions in a post pandemic Ireland, rebuilding our economy and our society, researching new ideas, providing solutions, supporting business and industry, while ensuring a first-class education for its students."* (DoFHERIS, 2021d)

The progress to TU status for Limerick and Athlone Institutes of Technology was significantly supported when an award of €5 million was allocated under the TU Transformation Fund in 2020, and a further €5.9 million in 2021. This brought to €12.9 million in total the Exchequer funding provided by 2021 to the Midwest/Midlands consortium (DoFHERIS, 2020b). There can be little doubt that the availability of dedicated "ring-fenced" funding of this nature was a critical element in TUS: Midlands Midwest achieving TU status in under two years.

Two further applications for TU designation have also been submitted. One by the consortium of Waterford IT and IT Carlow and another comprising the Institute of Technology Sligo, Galway Mayo Institute of Technology and Letterkenny Institute of Technology. Both applications are progressing through the prescribed legislative assessment and decision-making process currently and TU inauguration for both consortia is expected within the year.

At that point only two IOTs will remain in Ireland without TU designation. It is the case that they can, under the TU Act 2018, merge into one or other of the newly created TUs and this is likely to occur in a short timeframe. The speed and consistent application of the TU transformation process, from initial conceptualisation in 2011, to a legislative framework set in place in 2018 and now a likely completion date of 2023 should represent a case study of some interest to anyone studying third-level transformation projects in any context.

3. Methodology

This paper comprises a descriptive analysis of changes to the Irish Higher Education Sector and the evolution of central government policy, giving rise to the creation of TUs.

To this end the authors have adopted a methodological approach as follows:

- i) Literature and theoretical review around the early stages of educational sector develop in Ireland (1960 to 2000s – see section 2.1)
- ii) Detailed analysis of government higher education policy and the established of a dedicated Government Department as well as new TUs (2010-2022 – see sections 2.2 to 2.3)
- iii) The authors conducted purposive informal interviews with key individuals involved with the development of TUs in Ireland. These interviews provided context and confirmation. Interviewees included Minister Niall Collins (Department of Further and Higher Education, Research, Innovation and Science), Prof. Dr Vincent Cunnane (President TUS), Dr Terry Twomey (Vice President of Academic Affairs & Registrar TUS), Dr Liam Brown (Vice President Research, Development & Innovation, TUS)

4. Conclusion

The TU development process outlined above is not a new concept by any means, but one that has been in gestation since 2011. One of the major goals of this TU process has been to contribute and form a new type of university: A university model that will deliver tangible economic, financial and societal dividends both within and outside of their respective regions.

There has been a rethinking at central government policy level that universities are not just places of higher education but are, in fact, key drivers of sustainable economic and social development in the 2020 decade. Furthermore, the new TUs through their unique vocational teaching and research mandate will contribute significantly to economic growth and regional development.

The parallels between the Irish TU agenda described throughout this paper and the vision for the future of the RUN-EU Regional University Network are strikingly similar. As the European Universities Initiative state: *“The Regional University Network – European*

University will secure the sustainable economic, social, cultural and environmental progress of its regions and stakeholders.” (European Universities Initiative, 2022). The next decade will see the achievement of this mission through the development of:

- Interuniversity Future and Advanced Skills Academies, which promote and develop joint student-centred, challenge and work-based flexible learning activities, including Short Advanced Programmes and European Degrees
- European Innovation Hubs, which will stimulate and create joint interregional research, innovation and regional stakeholder engagement projects and activities across the alliance
- A European Mobility Innovation Centre, which will build and share expertise in innovative physical and virtual mobility initiatives and will assess the quality of new mobility activities

Overall, it is envisaged that our combined organisations will improve the national and international competitiveness of the associated regions, member higher education institutions and their students, The regional focus of the Irish TUs is directly compatible with that of the RUN-EU Network as they address big societal challenges and become true engines of regional development.

With the imminent completion of the TU project in Ireland, and the extension of the RUN-EU network to the RUN-EU PLUS project, it is logical to expect to see greater linkages between Irish TUs and these Europe-wide networks during the decade of the 2020's. The RUN-EU PLUS project will build on the ambitious RUN-EU Discovery Programme and develop an integrated, long-term strategy for research and innovation within our respective regions.

The table below is provided by the authors to highlight the significant commonalities between this mission of RUN-EU and the legislatively mandated goals of the Irish TU project.

Figure 3. Interlinking mission and functions of RUN-EU Network and Irish TUs

RUN-EU Network Mission Statement	Statutory Functions of Technological Universities
Sharing the development and delivery of a broad range of future and advanced skills-based programmes, including short, advanced courses, research programmes, European double degrees and joint degrees.	(f) Support a body of research that includes research relevant at regional, national and international levels and pursue excellence in the conduct of that research. (j) Support the mobility of staff and students of the technological university into and out of the labour force through collaboration with business, enterprise, the professions and related stakeholders in the region.
Offering students and staff a broad range of embedded mobility opportunities, which foster a multicultural approach to teaching, learning, research and professional development.	(d) Provide opportunities for staff and students of the technological university to teach, learn or conduct research at institutions that provide higher education outside the State, or to obtain relevant work experience outside the State.
Expanding knowledge co-creation and new knowledge transfer across the alliance.	(g) Support entrepreneurship, enterprise development and innovation in business, enterprise and the professions through teaching and the conduct of research and through effective transfer to those and other sectors of knowledge arising from that research,
Promoting inclusion and advancing the economic, environmental, social and cultural activities of the alliance and their associated regions.	(c) Provide for the broad education, intellectual and personal development of students, for the purpose of enabling them, as graduates, to excel in their chosen careers and to contribute responsibly to social, civic and economic life in innovative and adaptable ways,
Creating joint management and governance systems to underpin the alliance, with strong student representation.	(e) Collaborate with institutions that provide higher education inside and outside the State, including on joint research projects and provision of programmes of education and training,

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