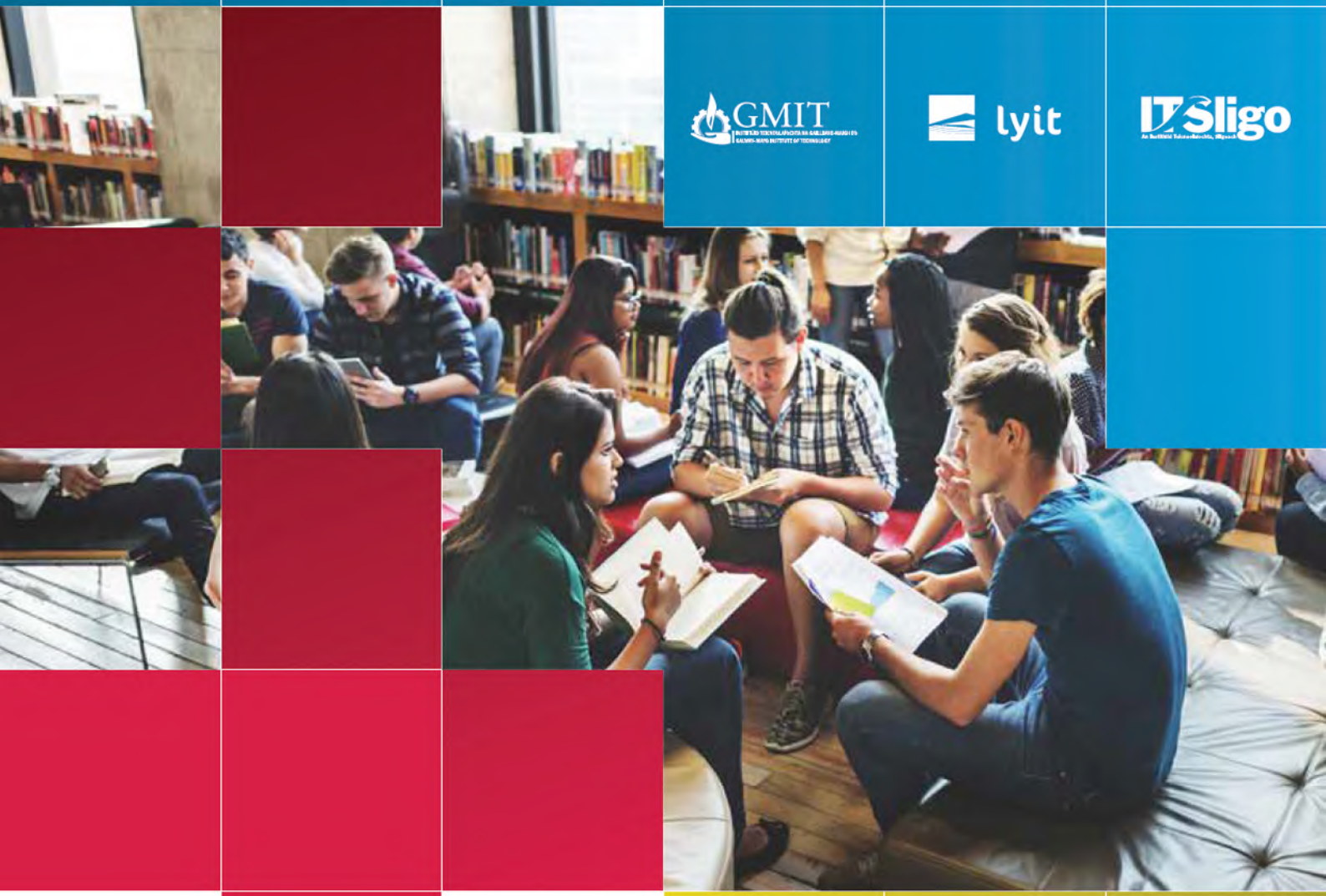

CONNACHT-ULSTER ALLIANCE

Application for Designation as a Technological University

May 2021

List of Tables

Table No.	Title of Table
Table 1.1	Economic Impact of the CUA Partner Institutes
Table 2.1	Proposed Membership of Joint CUA Academic Council Sub-committee
Table 4.1	Combined CUA TU Profile 2020 / 2021
Table 4.2	CUA Programme profile by NFQ level, award type and enrolments 2020 / 2021
Table 4.3	CUA Postgraduate Programme profile and enrolments 2020 / 2021
Table 4.4	CUA Programme profile Field of Study 2020 / 2021
Table 4.5	2019/20. 2020/21 and 3- & 5-Year projected student numbers by programme type
Table 4.6	HCI Pillar 3 Collaborative Projects with External Partners
Table 5.1	Range of Delegated Authority in CUA Institutes
Table 5.2	Innovation Centre Supports for Companies along the 'Entrepreneurial Journey'
Table 5.3	Innovation Centre Performance
Table 5.4	The Performance of CUA Technology Gateway Centres 2017-2020/2021
Table 5.5	The Sectoral Breakdown of CUA Technology Gateway Projects 2018-2020
Table 5.6	The CUA Regional Development Clusters Aligned with the Technology Gateways
Table 5.7	THE EU NUTS2 Categorisation and Ranking of the Northern and Western Region of Ireland
Table 6.1	Overview of WG4 and aligned sub-groups
Table 7.1	CUA consolidated financial budget to 2023/24
Table 7.2	CUA consolidated student numbers to 2023/24
Table 7.3	CUA consolidated staff numbers to 2024
Table 7.4	CUA consolidated financial summary to 2023/24
Table 7.5	CUA consolidated capital expenditure to 2024
Table 7.6	CUA reserve balances from 2017/18 to 2023/24
Table 7.7	TUTF work packages

List of Figures

Figures No.	Title of Figures
Figure 1.1	The CUA Institutes at a Glance
Figure 1.2	Counties of the CUA Region
Figure 1.3	Census 2016 Data for Western Region – Western Development Commission (2016)
Figure 1.4	Nomenclature of Territorial Units for Statistics (NUTS) Regions
Figure 1.5	Our CUA Multi-Campus Operation
Figure 2.1	Proposed University Executive Board
Figure 2.2	Distributed Leadership Model
Figure 4.1	CUA Programme summary by NFQ level
Figure 4.2	CUA Programme offering by discipline
Figure 4.3	CUA Apprenticeship Programme Enrolments by Discipline and Level 2020 / 2021
Figure 4.4	Accreditation by professional bodies
Figure 4.5	Mean deprivation index score for enrolments in Irish HEIs 2018 / 2019
Figure 4.6	Full-time Undergraduate Enrolments by Field of Study, 2020/2021 (National HE 2018/2019)
Figure 4.7	Part-time Undergraduate Enrolments by Field of Study, 2020/2021 (National HE 2018/2019)
Figure 4.8	Graduates by Programme Level
Figure 4.9	Graduates by Field of Study
Figure 4.10	CUA Student Success Model
Figure 4.11	CUA Teaching Learning & Assessment Principles
Figure 4.12	Internationalisation Strategy Framework
Figure 5.1	Current Postgraduate Research Degree Students – Countries of Origin
Figure 5.2	Sustainable Energy Communities Supported by CUA Colleges

List of Abbreviations

Abbreviation	Title of Abbreviation
AIQR	Annual Institutional Quality Review
Applied IoT	Applied Internet of Things
BAN	Body Area Networks
BRING	Business Research Innovation Network Group
CASE	Connect, Assess, Support, Encourage
CELT	Centre for Enhancement of Learning and Teaching
CERIS	The Centre for Environmental Research, Innovation and Sustainability
CHANCE	Clinical Health & Nutrition Group
CHAT	Cellular Health & Toxicology Research Group
CPD	Continuing Professional Development
CRiSP	The Centre for Research in Social Professions
CRU	Contract Research Unit
CSF	Competitive Start Fund (Enterprise Ireland)
CUA	Connacht-Ulster Alliance
DA	Delegated Authority
DAB	Designated Awarding Body
DACS	The Data Analytics & Computer Science Group
DICE	Design, Innovation Creativity, Entrepreneurship
DMFC	Digital, Manufacturing Futures Centre
DPER	Department of Public Expenditure and Reform
EDI	Equality, Diversity & Inclusion
EI	Enterprise Ireland
EMD	Engineering, Materials & Design
ETB	Education and Training Board
FDI	Foreign Direct Investment
FE	Further Education
FET	Further Education and Training
GMIT	Galway-Mayo Institute of Technology
GVA	Gross Value Added
HBAN	Halo Business Angel Network
HCI	Human Capital Initiative
HE	Higher Education
HEA	Higher Education Authority
HEI	Higher Education Institution
HOF	Head of Faculty
HOS	Head of School
HPSU	High Potential Start-Ups
HR	Human Resources
HRG	Heritage Research Group
IBYE	Ireland's Best Young Entrepreneur
INDEx	Irish National Digital Experience Survey
IoT	Institute of Technology
IR	Institutional Review
ISCED	International Standard Classification of Education
iSET	Integrated Sustainable Energy Research Group
ITS	IT Sligo
KTI	Knowledge Transfer Ireland
LEO	Local Enterprise Office
LL	Lifelong Learning
LTA	Learning Teaching and Assessment
LYIT	Letterkenny Institute of Technology
MAPP	Multi-Annual Procurement Plan
MET	Medical and Engineering Technologies Research Centre
MFRC	Marine & Freshwater Research Centre
MMRG	Mathematical Modelling Research Group
MRG	Mobilities Research Group
NFQ	National Framework for Qualification
NGOs	Non-Governmental Organisations
NStEP	National Student Engagement Programme
NUIG	National University of Ireland, Galway
NUTS	Nomenclature of Territorial Units for Statistics
NWRC	North West Regional College
PATH	Programme for Access to Higher Education
PEM	Precision Engineering, Materials and Manufacturing Centre
PG	Postgraduate
PMSS	Professional Management Support Services
PPE	Periodic Programme Evaluation
PRTC	Postgraduate Research Training Centre
QA	Quality Assurance
QIP	Quality Improvement Plan
QQI	Quality & Qualifications Ireland
QUB	Queen's University Belfast
R&D	Research & Development
RCF	Researcher Career Framework
RD&I	Research, Development & Innovation
RIE	Research, Innovation & Engagement
RPL	Recognition of Prior Learning
RTC	Regional Technical College
SBIR	Small Business Innovation Research (Enterprise Ireland)
SEAI	Sustainable Energy Authority of Ireland
SEARC	The Sustainable Energy Applied Research Centre
SECs	Sustainable Energy Communities
SFI	Science Foundation Ireland
SIPTU	Services Industrial, Professional and Technical Union
SME	Small & Medium Sized Enterprises
SPA	Special Purpose Award
STEM	Science Technology Engineering and Maths
SWTDE	Sustainable Wood Technologies, Design & Education Group
T&L	Teaching and Learning
THEA	Technological Higher Education Association
THEQF	Technological Higher Education Quality Framework
TTO	Technology Transfer Office
TU	Technological University
TUI	Teachers Union of Ireland
TURN	Technological University Research Network
TUTF	Technological University Transformation Fund
UDL	Universal Design for Learning
UG	Undergraduate
VPAAR	Vice President for Finance and Corporate Services
VPFCS	Vice President for Academic Affairs and Registrar
WDC	Western Development Commission
WiSAR	Wireless Applied Research Centre

Contents

Foreword A Technological University for the West and North-West Region 1

Executive Summary 3

The Context of the CUA TU Application 3
The CUA TU Project 3
Overview of the New TU 4
The Academic Profile of the New TU 5
Research, Innovation and Engagement in the New TU 5
The Support Infrastructure for the New TU 6
Financial Sustainability and the New TU 7
Achieving the Criteria for TU Designation 7
Conclusion 7

Submission Overview 8

Chapter 1 The Context of the CUA Technological University application 9

1.1 The Changing Irish Higher Education Landscape 11
1.2 Introducing the Connacht Ulster Alliance 12
The CUA Institutes 12
Statistical Overview of the CUA 13
1.3 The Region 17
Regional Profile 17
Level of Higher Education Attainment 19
1.4 Rationale for the New TU 21
External Support for the TU 23
New Synergies 23
Enhanced Regional Service on a Broader Collaborative Basis 23
Local Economic Impact 23
Distribution and Consolidation of Academic Capacity 23
Innovative and Impactful Programme Development 23
Staffing 23
Quality Enhancement 23
Enhanced National and International Competitiveness 23

Chapter 2 Overview of the New Technological University 25

2.1 The New Technological University 27
Our Vision 27
Our Mission 27
Strategic Pillars 27
Values 27
The Plan to get there 27
2.2 Transition Organisation Principles and Structure 28
Options for Faculty Structures 31
CUA Joint Governing Body Sub-committee 31
CUA Joint Academic Council Sub-committee 31
2.3 Naming and Branding of the New Technological University 32

Chapter 3 The CUA Technological University Project 33

3.1 Key Stages in the Evolution of the Consortium and the Development of the Project Plan 35
3.2 Project Governance and Management 38
3.3 Engaging the Contributions of Internal and External Stakeholders 39
3.4 Engagement with Staff and Unions 39

CONNACHT-ULSTER ALLIANCE

GMIT Institiúid Teicneolaíochta na Gaillimhe-Maigh Eo Galway-Mayo Institute of Technology

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IT Sligo An Institiúid Teicneolaíochta, Sligeach

Application for Designation as a Technological University

Contents

3.5 Due Diligence 40
3.6 Evidence of Connacht Ulster Alliance Acting as One 42

Chapter 4 The Academic Profile of the New Technological University 47

4.1 CUA Profile (Programme Type and Student Mix) 2020/2021 49
Programme Profile offered at the CUA TU 52
Research Programmes 55
Apprenticeship Programmes 56
Programmes in Direct Response to Immediate Industry Needs 56
Professional Accreditation of Programmes 57
4.2 Student Profile of the CUA 57
Programme for Access to Higher Education 58
4.3 Student Support 58
4.4 Student Profile 2020/2021 59
New Entrants 59
Enrolments 59
Graduates 60
4.5 Programme Profile Projections and Proposed Academic Structure of the New Technological University 61
Proposed Academic Structure to support Programme Development 62
Projections in Student Numbers and Profile 63
4.6 Approach to Quality Assurance and Quality Enhancement 64
4.7 Student Success 64
4.8 Learning and Teaching 65
Student Success Strategy Framework 65
Learning, Teaching and Assessment Principles 66
4.9 Lifelong Learning 68
A Vision for Serving Employers and Lifelong Learners in the New TU 68
Library Services 69
4.10 Internationalisation of Education and Research 70
Internationalisation Strategy Framework 70

Chapter 5 Research, Innovation and Engagement in the New Technological University 71

5.1 Introduction 73
5.2 The Development of Technological Higher Education RIE Activities in the CUA Institutes in the Northern and Western Region 74
5.3 Current RIE Activity in the CUA Institutes 75
Postgraduate Students 75
Postgraduate Students Registered on Research Degree Programmes 76
Postgraduate Students Registered on Taught Programmes with a Major Research Component 76
Research Active Staff, Research Centres and Groups & Research Networks 76
Research Active Staff 76
Research Centres 77
Research Groups 78
Research Networks 78
Publications and Other Research Outputs 78
Research Funding 78
Industry Engagement and Enterprise Support 78
Enterprise Support and Development 78
Profile of CUA Incubation Centres 79
CUA Incubation Centres Activities and Supports 79
Impact 80
Research, Development & Innovation (RD&I) with Industry 80

CONNACHT-ULSTER ALLIANCE

GMIT Institiúid Teicneolaíochta na Gaillimhe-Maigh Eo / Galway-Mayo Institute of Technology

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IT Sligo An Institiúid Teicneolaíochta, Sligeach

Application for Designation as a Technological University

Contents

Technology Gateways 80
Dedicated Core Staff 82
The Future of Industry Engagement and Enterprise Support 82
Future Enterprise Support 82
Community Support 82

5.4 Current Challenges in RIE Growth and Development in CUA Institutes, 'Acting As One' to Remove Them, and Future Potential 85

Current Challenges in RIE Growth and Development 85
Concerted Actions and Initiatives, and Acting as One 85
Future Potential 87

5.5 The Need for TU Level RIE in the Region and a Plan to Get There 88

The Need 88
Our Plan for RIE 88

Chapter 6 Support Infrastructure for the New Technological University 91

6.1 Principles of a Service Culture at TU 93

Digital capability 93

6.2 Student Development Support 94

CUA Student Services Sub-group 94
CUA Students' Union 94
Transition Group 95
Development Projects 95

6.3 Corporate Services 95

CUA EduCampus Forum 97
Corporate Procurement 97
Building and Estates 97
Health & Safety 98

6.4 People/HR Strategy and Services 99

Staff Training and Development 100
Equality, Diversity & Inclusion 100
Employee Wellbeing 100

Chapter 7 Financial Overview of the New Technological University 101

7.1 CUA's Consolidated Financial Projections 103

CUA Consolidated Student Number Growth 104
CUA Consolidated Staff Numbers 104
CUA Consolidated Capital Expenditure and Projections 2019 – 2024 (Calendar Year) 107
CUA Financial Sustainability 107
TU Programme of Work 109

Chapter 8 Achieving the Criteria for Technological University Designation 111

8.1 Meeting the Criteria of the Technological Universities Act 2018 113

Conclusion 119

The CUA Presents a Case for the Designation of a New TU for the West and North-West of Ireland 121
List of Appendices 123
List of Supplementary Documents 124

CONNACHT-ULSTER ALLIANCE

GMIT Institiúid Teicneolaíochta na Gaillimhe-Maigh Eo Galway-Mayo Institute of Technology

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IT Sligo An Institiúid Teicneolaíochta, Sligeach

Application for Designation as a Technological University

Foreword

A Technological University for the West and North-West Region

We the Governing Body Chairs, Presidents and Student Union Presidents of GMIT, LYIT and IT Sligo are delighted to jointly propose that our institutions merge to form a Technological University (TU) to serve the West and North-West of Ireland and beyond.

The West and North-West of Ireland faces the challenge of achieving strong growth in a world where economic activity is increasingly attracted to larger population centres. Our TU will therefore be guided by the ambitious objective of accelerating the economic, social and cultural development of its served region by adopting and building on the key strengths of each of the three founding Institutes.

In this way, the TU will provide an enhanced student experience, will grow its research and its impact on enterprise and the community, and will be a leader in remote access, lifelong learning and employment-based education. It will do this while continuing to ensure that the region is served by a wide range of third level programmes across the West and North-West through a network of 3 colleges, 8 campuses and online delivery all working together for students, businesses and communities in the region and beyond.

We have worked together in a collaborative and transparent process since 2012 with the aim of becoming a TU. Strong relationships based on mutual trust and parity of esteem have been built up which will enable the TU to achieve these ambitious goals.

Our university will be structured to reflect both its wide geographic spread and its academic ambitions. It will comprise three colleges and in the first instance, four university-wide Academic Faculties. Each of the Colleges and Faculties will be represented on the University Executive Board and will work closely together to build both discipline-specific and multidisciplinary academic communities and an excellent student experience.

This will assist the university to attract both students and highly skilled staff and will lead to a greater proportion of students from the West and North-West opting to study in their own region.

The emerging TU sector in Irish education has the potential to provide new third level pathways for students, new opportunities for academic development and new opportunities for partnership with enterprise. We believe that we have the vision and capacity to become an exemplar in these endeavours and we look forward to designation as a TU and to the future development of the university.

Galway-Mayo Institute of Technology

Letterkenny Institute of Technology

Institute of Technology Sligo

Martin Cronin
Chair CUA Steering Group

Dr Orla Flynn
GMIT President

Paul Hannigan
LYIT President

Dr Brendan McCormack
IT Sligo President

Cormac MacDonncha
GMIT Chair of Governing Body

Fintan Moloney
LYIT Chair of Governing Body

Niall O'Donnellan
IT Sligo Chair of Governing Body

Victor O'Loughlin
GMIT SU President

Mary Hernandez
LYIT SU President

Jason Quinn
IT Sligo SU President

Executive Summary

This document represents part of the Connacht-Ulster Alliance's (CUA) application for designation as a technological university (TU). It is the result of focused collaborative actions which have emerged from a successful partnership which was born in 2012.

The Context of the CUA TU Application

In a direct response to the National Strategy for Higher Education to 2030, published in 2011, and prompted by the report's vision of the future of higher education provision in Ireland, the CUA was formed by Galway-Mayo Institute of Technology (GMIT), Letterkenny Institute of Technology (LYIT) and Institute of Technology, Sligo (ITS). The TU Research Network (TURN) was established in February 2019 by the Department of Education and Skills, to examine and report on how emerging TUs could achieve their sectoral and national strategic objectives and the supports that would be required for them to do so most effectively and efficiently. The CUA fully support the report's recommendations focusing on a state change in higher education reform for the delivery of national strategic priorities such as are elaborated in *Project Ireland 2040*, the *National Development Plan* and *Future Jobs Ireland*. The CUA as a TU will, as advocated by TURN, make a distinctive national and international contribution to higher education. Through its staff and programmes, the new TU will educate and inspire people and develop talent to accelerate the sustainable economic, social and cultural development of the West and North-West region and beyond.

The three institutes which form the CUA, while located in the West and North-West of Ireland as a new TU will have a regional, national and international focus. The TU student population will comprise students from within the region and from across Ireland in addition to students from outside Ireland. The West & North-West region has a geographical area of 25,277 km², covering 36.2% of the national landmass. The region is sparsely populated and is home to approximately 18% of the national population. However, the region also includes significant urban areas such as Letterkenny, Sligo and the City of Galway. Our region is distinctive in many ways – it covers 50% of the now well established Wild Atlantic Way, includes 50% of the inhabited islands of Ireland and three of the country's seven Gaeltachtaí, (an area in Ireland where the Irish language is the main language spoken by the majority of the local population). The region's landmass covers 90% of the border between the Republic of Ireland and Northern Ireland. A unique characteristic of the region is its proximity to Northern Ireland. Cross border economic activity plays a large role in driving growth within this region and it is estimated that approximately 15,000 people cross the border for work or study each day. A significant history of cross border collaboration exists among the CUA partners. The region offers a high level of cultural, artistic and outdoor activities providing an excellent quality of life for its inhabitants.

The CUA TU Project

The CUA as a TU will span the West and North-West region via eight campuses initially offering almost 600 academic programmes for over 20,200 students supported by 2,215 staff. In October 2015, the CUA was successful in its 'Stage 1' (Expression of interest) application regarding Technological University (TU) status to the Higher Education Authority (HEA) and continued to pursue the attainment of the criteria to enable its designation as a TU. Recognising the challenging nature of achieving the TU criteria, the CUA committed to allocating significant resources to a range of strategic initiatives including, (i) the support and development of applied research, (ii) investment in the enhancement of teaching and research staff qualifications at doctoral level and (iii) selected initiatives to support a high-quality student experience. In advance of the passing of the Technological Universities Act in 2018, the CUA built up its alliance via engagement in collaborative projects, sharing of knowledge and the formation of a strong project management structure and a work plan during the period 2012 – 2018. The agreement and subsequent passing of the TU Act in 2018 was the trigger for intensive CUA TU related activity from mid-2018 onwards. The key milestones in the development of the CUA are presented in this document.

From 2012 onwards, through strong leadership and a commitment to open communication, the three CUA institutes developed lasting working relationship built upon trust and parity of esteem. Early successes such as the CUA collaborative project 'iNOTE' developing digital capability received funding of €2.84m from the HEA Innovation and Transformation Fund 2018. Initial outcomes of this project (which runs to 2022) ensured the CUA was prepared to provide timely supports for staff and students in relation to emergency remote teaching following the advent of the Covid-19 pandemic. The partnerships and working relationships developed via the iNOTE project also served to support the CUA's application under the Human Capital Initiative (HCI). In October 2020, the CUA (led by IT Sligo) won €12.4m for its Higher Education 4.0 project to further develop the agility and flexibility to deliver increased access to higher education.

Neither TU's nor merged, multi-campus universities are new phenomena in higher education. However, we recognise that the bringing together of three autonomous educational institutes with strong local identities and proud traditions can only succeed with the endorsement of the key internal stakeholders (staff and students) and the support of the key external stakeholders. The CUA Steering Group and Project Management team set about this 'once in a generation' change by developing a comprehensive communication and consultation plan. Our aim is to manage this process in an open, honest and transparent manner, thereby engendering a ground up support for TU designation. The established CUA team and working groups involves over 150 staff from our three partner institutes. Since March 2020, with a small number of exceptions, all CUA meetings and activities have been held on-line including meetings of the CUA Steering Group, joint CUA Governing Body Sub-committee and meetings with external stakeholders. CUA staff and students have shown through embracing technology, substantial progress can be made across geographically dispersed campuses. The lessons learned relating to online engagement and communication will serve the future TU well.

Engagement with the staff unions (TUI, SIPTU, Forsa and Unite) and student union representatives has been vital in bringing the CUA TU project to its current state and will continue to play a key role in the establishment of the new TU. The CUA management, staff and students operate on the basis of openness and transparency with regard to information availability and early engagement on all aspects of the development of the CUA TU.

In March and April 2020, the CUA took the initiative of undergoing a due diligence review although it is not a requirement of the TU process. The review was undertaken to demonstrate internal co-operation and willingness to engage amongst the three central service areas of the CUA and as statement of the CUA's capability to act strategically. Detailed observations and recommendations for each institute under the eight headings were provided for in the individual institute reports and the consolidated report. It is noteworthy that the reviews confirmed that there were no substantial due diligence issues which would negatively impact the amalgamation. Furthermore, the external consultants noted that the process and subsequent final reports provided strong evidence of the CUA teams working together across the three institutes.

Since its inception, the CUA has approached the development of an application to become a TU in a manner which builds trust and co-operation and will serve as the basis for a future cohesive organisation. Examples of collaborations amongst the three CUA institutes are provided throughout this document. In some cases, the projects have been completed and others are in process and will serve as the basis for achieving agreement on future strategies, structures and policies.

Overview of the New TU

The new TU for the West and North-West of Ireland will be a multi-campus university of scale, quality and impact, spanning a unique geographical region with a cross border dimension connecting students, staff, research, enterprise and global communities. As a TU, founded by GMIT, LYIT and IT Sligo, we will work together to build on our strengths of excellence in teaching, provision of access and supports for higher education students, applied education and research. This will enable the development of our learners as responsible citizens, critical thinkers, innovators and problem solvers who are equipped for life-long learning. Following consultation across the three institutes, vision and mission statements have been drafted for the new TU.

Our Vision

To educate and inspire people and develop talent to accelerate the sustainable economic, social and cultural development of our region and beyond.

Our Mission

To be renowned for building capacity and community in our region through flexible and excellent academic programmes, collaborative and experiential learning, advancing knowledge through research and engagement, provision of lifelong learning and undergraduate, postgraduate remote and enterprise-based education.

The vision and mission will be supported by strategic pillars and will be underpinned by a set of values.

Following designation the TU will establish a Governing Body and an Academic Council in compliance with Sections 11 and 16 of the Technological University Act 2018. In September 2020, the Chairs and Presidents of the CUA with the support of their Governing Bodies established a joint sub-committee of each of the three Governing Bodies to progress their initiative to establish a TU in the region. The three sub-committees operate as one group, with the sole focus of bringing the new TU into existence at designation. The sub-committee meets on a monthly basis. The CUA is in the process of establishing a Joint Academic Council Sub-committee to promote a culture of communication and collaboration in advance of the TU vesting date. This preparation period will allow the joint sub-committee to consider the academic functions associated with a new institution and will mitigate the risks associated with the transition from multiple academic councils into a single entity. The Joint Academic Council Sub-committee's will address with the academic development of the new TU.

The Academic Profile of the New TU

The enhanced capacity and synergies achieved through the creation of the TU will facilitate the development of a comprehensive range of programmes of relevance and quality, underpinned by research-informed learning and teaching, in response to the needs of the region and beyond. During the 2020/2021 academic year, the CUA Institutes offered 593 academic programmes from level 6 to level 10. The total student cohort is 20,273 comprising 12,925 full-time students (63.8%), 2,059 part-time students (10.1%) and 5,289 (26.1%) students undertaking programmes on a distance/e-learning basis.

The student and programme profile of the individual institutions leading up to designation and the projected combined profile of the TU is presented in Chapter 4. In preparing both the submission application document and the academic planning needed to establish the university a Working Group (WG3) focusing on Academic Planning and Strategy was established. This group oversees the coordination of activities as they relate to academic affairs and the engagement between School/Faculty and Academic Departments. Through the work of six sub-groups high levels of collaboration have been achieved across the CUA in the areas of Student Engagement through the Students' Unions; Teaching, Learning and Assessment; Student Services and Internationalisation.

As a TU, there will be a greatly enhanced capacity for novel programme development and the CUA commits to the continued provision and development of a widely diversified portfolio of programmes. In addition to taught undergraduate and postgraduate programmes, the TU will continue to provide craft apprenticeship programmes and we have been actively involved in the development of new apprenticeship programmes. The TU will expand its postgraduate research offerings, programmes which directly respond to immediate industry needs and professionally accredited programmes.

The CUA is proud of the applied nature of its programmes and their professional orientation and many of our programmes are accredited by independent external professional bodies. Our programmes typically have a major emphasis on practical skills, and to this end many of our programmes are designed with one or more of the following components – high practical component, research project, placement in industry/enterprise and professional practice. Engagement with our stakeholders in the region is key to providing industry-relevant programmes for our student cohorts. The Regional Skills Fora, The Western Development Commission, and the Northern and Western Regional Assembly are key enablers and facilitators of the dialogue required between our industry partners, the CUA and our education partners (NUIG, UU and the ETBs).

As a TU, we commit to develop and refine our programmes so that they remain current and that they continue to have a major focus on the practical application of knowledge. This will ensure that our graduates continue to be best-placed to take up employment and to develop a career path upon graduation.

Working Group 3 as part of its review of Academic Quality Assurance and Enhancement has agreed a programme of work to align and co-ordinate activities, policies and frameworks over the period of transition after designation. A draft set of Examination Regulations, which will form the foundation of agreed Marks and Standards has been proposed by the group, and will be reviewed and adopted by individual Academic Councils prior to designation.

The CUA International Sub-group has developed an Internationalisation Strategy Framework for approval by the individual Academic Councils. This Framework has adopted a three-pillar approach (i) Internationalisation at home, (ii) Internationalisation abroad and (iii) Internationalisation of research. The framework is underpinned by three cross-cutting themes (a) Sustainability, (b) Active/global citizenship and (c) Language and intercultural awareness. While the International Sub-group proposes to take a leading role in the first two pillars, the Internationalisation of Research Pillar will be led by the Research Leaders in the TU, with the International Offices playing a supporting role.

Research, Innovation and Engagement in the New TU

Research, innovation and engagement (RIE) is a key pillar upon which the new TU will be established. Working Group 2 (WG2) has focused on developing and supporting research and knowledge exchange across the CUA. The group presents a comprehensive analysis how the CUA is currently addressing RIE in the institutes and how the TU will utilise this potential and address future challenges in this area. In relation to RIE activities, this application for designation as a TU will provide significant advantages for our region, including:

- Facilitate a focus on the needs of the Northern and Western region of Ireland, in a way that can be communicated to stakeholders within and outside of the region, enabling the development of a coherent strategy for future significant impact. In this way the CUA TU will become a primary driver of the long-term sustainability and development of the region;
- Facilitate the three individual CUA colleges to effect synergies that will achieve the full potential of the combined academy;
- Significantly deepen and widen the pool of researchers (in particular from a multi-disciplinary perspective), enabling the TU to compete more effectively for larger-scale funding, and to produce more impactful outputs;
- Significantly deepen and widen the community of postgraduate research students. This will improve the student experience and sense of identity, and will also allow for the provision of a more diverse matrix of supports to advantage students in their research and careers;
- Enable the introduction of a new model of RIE that would significantly increase the range and scale of supports to business, communities and enterprise, researchers and the community in our region (based on a quadruple-helix approach). The focus of this approach will be to build the RIE capability of business, communities and a range of stakeholders, so that the region has an effective ecosystem of knowledge generation and valorisation, as a foundation for both ongoing resilience and future success;
- Be recognised nationally and internationally as a beacon of RIE support and excellence that will enrich the experiences of current staff and other stakeholders, and will also attract new staff, students, citizens and investors into the region.

This application is intended to ensure we have the staff complement, clear vision, strong ambition and innovative approach to make a fundamental and transformative contribution to the sustainability and development of companies, communities and other stakeholders in our region. The TU will be one of the most significant pieces of public infrastructure in the Northern and Western region of Ireland. We believe we have the willingness and capacity to act as one and are confident that the new TU will allow us to achieve our combined potential impact for the region.

The Support Infrastructure for the New TU

The CUA is committed to delivering a quality service in an efficient, effective, and timely manner. We commit to providing a student, staff and stakeholder - oriented service culture across our fully integrated institution which spans eight campuses. Our values – integrity, respect, innovation, initiative, excellence, sustainability, inclusivity and agility - inform how we approach all of our dealings with staff, students, suppliers, researchers and funders. As part of our quality assurance measures and commitment to continuous improvement and skills development, we will continue to regularly evaluate our performance against key service metrics such as service delivery, timeliness, information and professionalism to ensure we are providing a high quality, accessible service to all our stakeholders.

Working Group 4 - Corporate Services and Related Engagement (WG4) established seven sub-groups to support the transition to a TU. Similar to all CUA sub-groups, the professional, management and support services sub-groups have members from across the CUA and have developed a shared understanding of the practices and structures in place across the institutions and how these will be integrated in time to support the TU. The history of collaboration between many of the members of the sub-groups aligned to WG4 has fostered strong professional relationships, which have been strengthened during this process, providing a sound basis for the development of a coordinated and integrated approach to the delivery of our essential services.

The professional services and support teams will provide expertise across the TU to support the delivery of our strategic aspirations. They provide support to the whole organisation in the form of corporate services, administration, finance, technical and operations. Their objective is to shape the future of the TU, using expertise to provide excellent services which enable the creation of world-class research and high-quality teaching, in an inclusive academic culture. Professional, HR, management and support services staff, across the three institutes have worked together to develop a planning process for the integration of services and activities to support the TU.

The CUA has proposed five human resource pillars which will serve as the basis for the development of a People Strategy for the TU. This strategy will be finalised during the early stages of formation of the TU. It comprehends the development of a competency-based framework for all staff, which will be critical to support recruitment, promotion, leadership development, induction and probation, performance management and leadership development. The TU will lead human resource best practice by ensuring the initiatives, protocols and policies underpinning the People Strategy will empower leaders and managers and facilitate implementation. The new TU will ensure positive engagement with the external regulatory environment, with our social partners and with information technology to drive change.

Financial Sustainability and the New TU

Chapter 7 of this document presents the background and financial basis for the establishment of the TU. The CUA Institutes have been working together to ensure that the financial resourcing and viability of the TU project is robust and in line with the requirements of Sections 30 (b) and 34 (2)(c) and (d) in particular of the TU 2018 Act. The financial details are based on a consolidation of the individual Programmes and Budgets 2020 prepared by the individual CUA partners which were returned to the Higher Education Authority (HEA) in late March and early April 2020. This is part of the annual budgetary process for the Institutes of Technology. These forecasts have been extended by two further years (2022/2023 and 2023/2024) for the purposes of this submission. The forecasts have been extended by projecting income and costs based on student number forecasts for these years.

The Capital Development Reserve provides for €29m of self-generated funds for capital development from 2018/2019 to 2023/2024. The CUA is able to provide for these developments while earning enough surplus to leave it with €8m of reserves at the end of the plan (3.8% of projected income for 2023/2024). These plans, while being ambitious, show the proposed TU as a financially viable and sustainable proposition with prudent financial plans.

As part of its submission to the HEA's Technological Universities Transformation Fund (TUTF) the CUA has proposed a series of development projects that will be instrumental in preparing for and establishing the TU during the period 2020 to 2023. An overview of the work packages is represented in the document and reflects the initial 2020/2021 work plan which received HEA funding approval of €5.7m in October 2020.

Achieving the Criteria for TU designation

Section 28 of the Technological Universities Act (2018) states that applicant institutes shall jointly comply with a series of eligibility criteria in order to become a TU. GMIT, LYIT and IT Sligo combined as the CUA meet, or exceed, each of the criteria for designation as specified in the act. In part preparation for the submission of an application, the three CUA institutes engaged Deloitte Consultants and Auditors to undertake a preliminary review of the CUA TU metrics. The preliminary audit was conducted in October and November 2020 and consisted of a review of the methodology and definitions used by the CUA as set out in our supplementary/ methodology document. Deloitte reperformed the methodology applied under each of the legislative references of the Technological Universities Act 2018 and compared their results to those set out by the CUA. The independent audit shows that the CUA meets the statutory criteria for designation as a TU.

Conclusion

The three CUA Institutes, GMIT, LYIT and IT Sligo have a record of involvement in higher education of 50 years. This document presents a summary of their commitment, engagement and dedication to bring into existence a TU for the West and North-West region of Ireland. The completion of the associated work plans has been made possible by a united effort. Over many years the CUA as a collective strongly believes that the outcome of this process will be a university that will make an enhanced contribution to the respected lives of people of the region and beyond and will stand as a legacy for all those involved.

We believe that the CUA TU application document demonstrates that in accordance with the Technological Universities Act 2018, the CUA applicant institutes comply with the eligibility criteria and that plans and arrangements are in place for managing academic, financial and administrative matters required to enable the Minster to make an order to establish the TU. The CUA as a TU will span the West and North-West region initially via eight campuses offering almost 600 academic programmes for over 20,200 students supported by 2,215 staff. It will be a university of size, scale and impact. The academic profile of the proposed TU provides for a strong foundation to expand its range of education opportunities, research and engagement. The support infrastructure of the combined institutes will underpin its development and ensure that it is financially sustainable.

The efforts, dedication and persistence of the CUA's Governing Bodies, management, staff and students are recognised and commended. This milestone could not have been reached without the support of cross institute Working Groups and Sub-groups, industrial relations fora, the CUA project management team, the CUA Steering Committee and the extensive array of key external stakeholders from industry, the public sector, community and the people of the West and North-West region.

We look forward to embarking on the next development stage and believe that we have the required governance, leadership, staff and student cohorts to establish a TU that will be worthy of the region and its people.

Submission Overview

Chapter 1	The Context of the CUA Technological University application
Chapter 2	Overview of the New Technological University
Chapter 3	The CUA Technological University Project
Chapter 4	The Academic Profile of the New Technological University
Chapter 5	Research, Innovation and Engagement in the New Technological University
Chapter 6	The Support Infrastructure for the New Technological University
Chapter 7	Financial Sustainability and the New Technological University
Chapter 8	Achieving the Criteria for Technological University Designation
Conclusion	

The submission document is supported by Appendices referenced throughout the document and a Supplementary Document (SD) which provides evidence of the CUA acting as one in the form of draft strategies, policy frameworks, collaborative projects, etc. The annotation SD with an associated number is used, in this document, to identify appropriate examples and evidence in the Supplementary Document.

Chapter 1

The Context of the CUA Technological University application

Daros Coastline, Donegal

This chapter maps out the unprecedented change in the Irish Higher Education landscape and how it offers the context for this application. It introduces the Connacht Ulster Alliance, explains the scale, quality and impact of the new Technological University, sets out a profile of the region and the challenges within, and details the benefits of integrating the partner third-level institutes in the West/ North-West which represent the Alliance.

"A Technological University that is agile, responsive, engaged with the business community and, most of all, delivering high quality teaching and research will present significant opportunity for the region. A thriving business community is directly linked to a strong education and research infrastructure."

Claire McGee,
Head of Education and Innovation Policy, Ibec

1.1 The Changing Irish Higher Education Landscape

The Irish Higher Education Landscape is currently in a process of unprecedented change. Government, enterprise and societal developments have all prompted Higher Education Institutions (HEIs) to review their roles and respond to today's challenges and tomorrow's possibilities. The National Strategy for Higher Education to 2030, published in 2011[1] presented a comprehensive policy and operational framework for the development of the Irish higher education system. The report emphasised the need for significant Higher Education reform and the requirement for an innovative and transformative approach to enable the provision of flexible opportunities for larger and more diverse student cohorts. Such change had to be undertaken while simultaneously enhancing quality and relevance, improving engagement with the wider needs of society and the economy, while operating in a more competitive globalised environment. The report recommended that some Institutes of Technology may, in order to advance systems capacity and performance, amalgamate and apply for re-designation as technological universities (TUs).

In July 2012, prompted by the report's vision of the future of higher education provision in Ireland, the Connacht Ulster Alliance (CUA) was formed by Galway-Mayo Institute of Technology (GMIT), Letterkenny Institute of Technology (LYIT) and Institute of Technology, Sligo (ITS). The three institutes formed a strategic partnership, when a formal memorandum of agreement was signed by each institute. In this agreement, the partner institutes committed to 'an alliance to deliver on jointly agreed strategic objectives that meet the higher educational service needs of the business and wider communities of the Connacht-Ulster Region of Ireland'. This agreement was supported by both the Governing Body of each institute and the Academic Councils.[2]

The TU Research Network (TURN)[3] was established in February 2019, by the Department of Education and Skills, to examine and report on how emerging TUs could achieve their sectoral and national strategic objectives and the supports that would be required for them to do so most effectively and efficiently. The CUA Institutes were active participants in the work of TURN and fully support the group's recommendations focusing on higher education reform and the delivery of national strategic priorities such as are elaborated in Project Ireland 2040, the National Development Plan and Future Jobs Ireland. TURN's focus on connectedness, particularly at regional level, collaboration and connectivity of TUs and their unique delivery of programmes across the full range of the National Framework of Qualifications from apprenticeships to doctoral degrees are key foundations upon which the CUA will build the new Technological University for the West and North-West of Ireland.

The TURN Report states that the development in Ireland of a new university sector substantially enhances the capacity of the higher education system while also responding to Government priorities and societal challenges through:

- providing a major opportunity for a fundamental re-evaluation within the Irish education system and Irish society of the role and value of core higher vocational, technical, technological and professional skills and qualifications to meet the demands and opportunities of the future world of work;
- building a strengthened and deepened research capacity, in comparison with their antecedent bodies, with a focus on the needs of the economy and society, underpinned by a robust theoretical base.

As a TU we will, as advocated by TURN, make a distinctive national and international contribution to higher education. Through its staff and programmes, the new TU will educate and inspire people and develop talent to accelerate the sustainable economic, social and cultural development of the West and North-West region and beyond.

[1] Hunt, C. H. (Chair), National Strategy for Higher Education to 2013: Report of the Steering Group (2011), p.15.
[2] Connacht-Ulster Strategic Alliance Agreement between the Institutes of Technology at Galway-Mayo, Sligo and Letterkenny, dated 9 July 2012. Available from http://cualliance.ie/docs/CUA%20Signed%20MOU%209-7-2012.pdf (accessed 8 August 2018).
[3] "Connectedness and Collaboration through Connectivity", Report of the Technological Universities Research Network, October 2019

1.2 Introducing the Connacht Ulster Alliance

The CUA Institutes

In the 1960s, Ireland was characterised by a small elite system of higher education, catering almost exclusively for professional and public sector employment. The Mulcahy Report (1967), recommended the establishment of a number of Regional Technical Colleges (RTCs) around the country, highlighting that Irish people generally did not have the opportunity to become technically skilled because of the prevalent academic bias in the educational system. In the early 1970s, RTCs were opened across Ireland including those in Galway, Letterkenny and Sligo. For five decades the three RTCs and then as Institutes of Technology (IoTs) played significant roles in the development of Irish higher education.

The first of the three CUA institutes to be established was the Sligo RTC, which opened its doors in 1970. This was followed in 1971 by the Donogh O'Malley RTC in Donegal which was later renamed the Letterkenny RTC. The final of the three colleges to be established was the Galway RTC, which opened its doors in September 1972. The following decades saw further expansion and development of the colleges with increased provision across the region with all three colleges becoming IoTs between 1997-1998. In addition, the Galway college established further facilities and campuses at Mountbellew in 1986, at Letterfrack in 1987 (The National Centre for Excellence in Furniture Design and Technology,) at Mayo in 1994 and a second campus in Galway city, the Centre for Creative Arts & Media (CCAM) in 1998. Equally, in Donegal, the Tourism College Killybegs (established in 1969 and renamed in 1992) merged with the Letterkenny Institute of technology in 2007. Collectively, the three institutes GMIT, LYIT and ITS now operate across eight campuses in four counties of the West and North-West region of Ireland.

The stated purpose of the original RTCs was to focus on technical and applied education which was reflected in the early programme provision of the three colleges. Today, the institutes provide a full spectrum of higher education spanning all levels of the National Framework of Qualifications (NFQ) from Levels 6-10, from pre-degree to doctoral level. Equally the institutes are multi-disciplinary providing programmes in Education, Humanities and Arts, Social Science, Business, Engineering Manufacturing and Construction, Agriculture, Health and Welfare and Services.

The institutes continue to adhere to their original remit and commitment for transformative educational provision with a focused intent to promote innovation and enterprise and to provide industry aligned programmes with an advanced technical knowledge and skills to develop highly employable students for the region. Collectively, the three institutes currently have 17,227 undergraduate students, 2,428 postgraduate students, provide 593 courses and have a community of 2,215 staff.

Staff numbers have increased over the period 2014 - 2020 (see CUA Key Facts & Figures below). A large proportion of the increase was due to re-balancing measures. Overall staff numbers had reduced significantly due to employment control policies and nationally agreed pay and productivity measures introduced in 2012. Since that time, as funding became available staff numbers have been restored to previous levels.

The three institutes have further developed a strong research capacity which benefited from the establishment of eight research centres. They have also maintained their strong entrepreneurial ethos and are still committed to supporting enterprise development across the region and consequently, each supports on-campus business incubation centres. GMIT has two business innovation hubs or 'iHubs', one in Galway and one in Mayo, each with its own focus and profile and operating in collaboration with Enterprise Ireland (EI), other relevant agencies and private sector partners. The LYIT innovation centre, CoLab, has been providing facilities for high-potential start-ups since 2000 and is currently home to over 40 start-up enterprises. The Innovation Centre at IT Sligo provides a central facility for entrepreneurs and enterprise to benefit from the physical and intellectual assets of the institute. It is currently home to over 35 businesses at different stages of development that between them employ more than 100 people.

The CUA serves the West and North-West of Ireland including, Galway, Mayo, Clare, Roscommon, Sligo, Leitrim, Donegal, Cavan and Monaghan. The three partner institutions of the CUA draw their students primarily from the nine counties of the CUA region. As shown in Figure 1, the CUA as a TU will offer almost 600 academic programmes for over 20,200 students supported by 2,215 staff.

Statistical Overview of the CUA

The Key Facts and Figures chart below provides a statistical overview of the CUA in 2020/2021. During the period 2015/2016 to 2020/2021 overall enrolments in the CUA institutes have grown by 27%. Much of this increase is as a result of strong growth in postgraduate numbers as well as a growth in part time and online offerings. Postgraduate enrolments, in particular, grew significantly during this period. The CUA operates as a national education provider catering to a large number of non-traditional students through its extensive remote learning options.

Figure 1.1: The CUA Institutes at a Glance

"Mayo, Sligo and Leitrim Education and Training Board (MSLETB) welcomes the creation of a Technological University for the West and Northwest region of Ireland. It is a significant and important development for the educational infrastructure of this geographic region. It will contribute hugely to the regional economic enhancement through the provision of wide ranging integrated higher educational provision for the citizens in the region and further afield. For Mayo Sligo and Leitrim Education and Training Board, as a key provider of Further Education and Training in the tertiary education space and a key provider of Post Primary Education in the region, we look forward to continuing and further developing our established partnerships with the higher education providers who will constitute this Technological University."

Tom Grady,
Chief Executive, Mayo, Sligo and Leitrim Education and Training Board

CUA 2020/21 | Key Facts and Figures

New Entrants

Total 3,499

Engineering & Design	29%	995
Business, Humanities, Social Science & Tourism	39%	1,374
Science	32%	1,130

The most popular field of study was Enginee ing, Manufacturing and Construction accounting for 20% of new entrants

64% of new entrants went into an Honours Bachelor Degree Programme

Enrolments

Total 20,273

57%

43%

Study Mode

Full-Time	64%
Part-Time	10%
Remote/ Onlin	26%

Level

Undergraduate	88%
Postgraduate	12%

Graduates

Total 5,034

22% of Honours Bachelor Degree graduates got a 1st class qualification

40% came from Science, Mathematics & Computing and Engineering, Manufacturing and Construction

28% came from the Arts, Humanities, Social Sciences, Business and Law

Research

437
Students Engaged in Research

156%
Increase in research provision in the past 3 years

€11m
Contract Research Income 2018/2019

106%
Increase in contract research income in the past 3 years

Participation

8%
Full-Time
2020/2021
Mature New Undergraduate Entrants

19%
Full-Time
2014/2015
Mature New Undergraduate Entrants

34%
Part-Time
2020/2021
Flexible Learners

21%
Part-Time
2014/2015
Flexible Learners

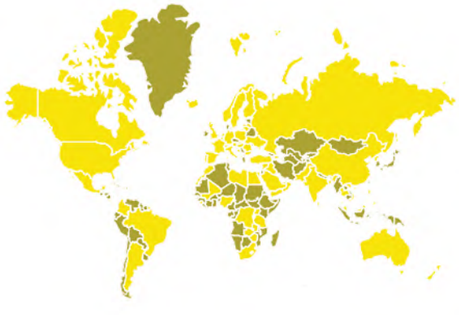
SPRINGBOARD+

1,191
Springboard

International Participation

1160
International Students from

84
Countries



Asia 51%
EU 30%
North America 10%
Rest of World 9%

Full Time (52%)
Online (33%)
Part Time (15%)

Finances

State grants account for 35% of total income with fees accounting for a further 28%

Total Income of €208m in 2019/20 with expenditure of €120m on pay costs

Staffing

Total Staff 2,215

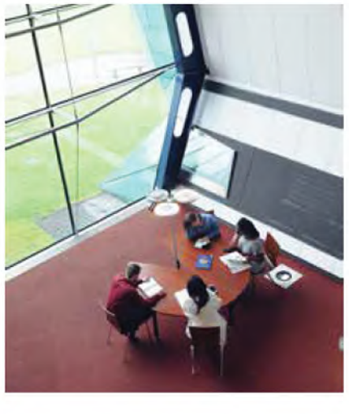
53% Academic Staff
+43% over the last 6 years

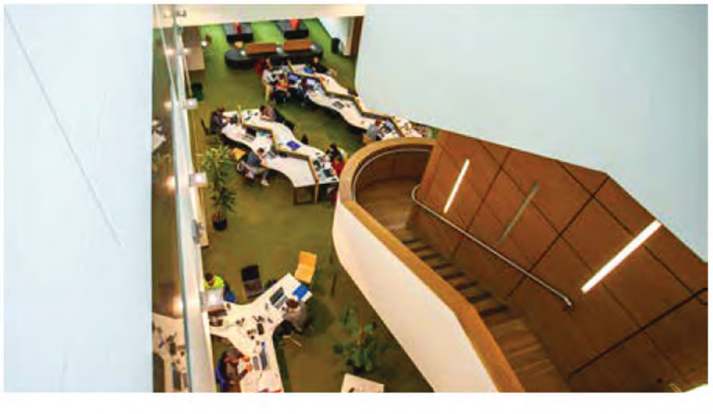
47% Support Staff
+61% over the last 6 years

Academic Staff
48% 52%

136
Number of Research and specialist staff

+56% over the last 6 years





1.3 The Region

Regional Profile

The new TU will have a regional, national and international focus. The TU student population will comprise students from within the region, from across Ireland and from outside Ireland. Our graduates will seek employment regionally, nationally and internationally and will impact beyond the West and North-West region. The new TU will provide a range of services for students, businesses and communities both within the region, in Ireland and throughout the world.

The region itself has key characteristics which set it apart from other regions. "Our region has a world-class quality of life, a physical environment of outstanding beauty, a highly skilled population, healthy communities, and a reputation for creativity and quality. The region also has the potential to be a net exporter of renewable energy, water, services, global technology products and ideas as part of a new knowledge economy".[4]

Figure 1.3 illustrates the principal counties served by the CUA partner institutions (the West and North-West region) which covers 36.2% of the national landmass. The region is home to approximately 18% of the national population.

However, our region also includes significant urban areas such as the City of Galway, Letterkenny and Sligo.

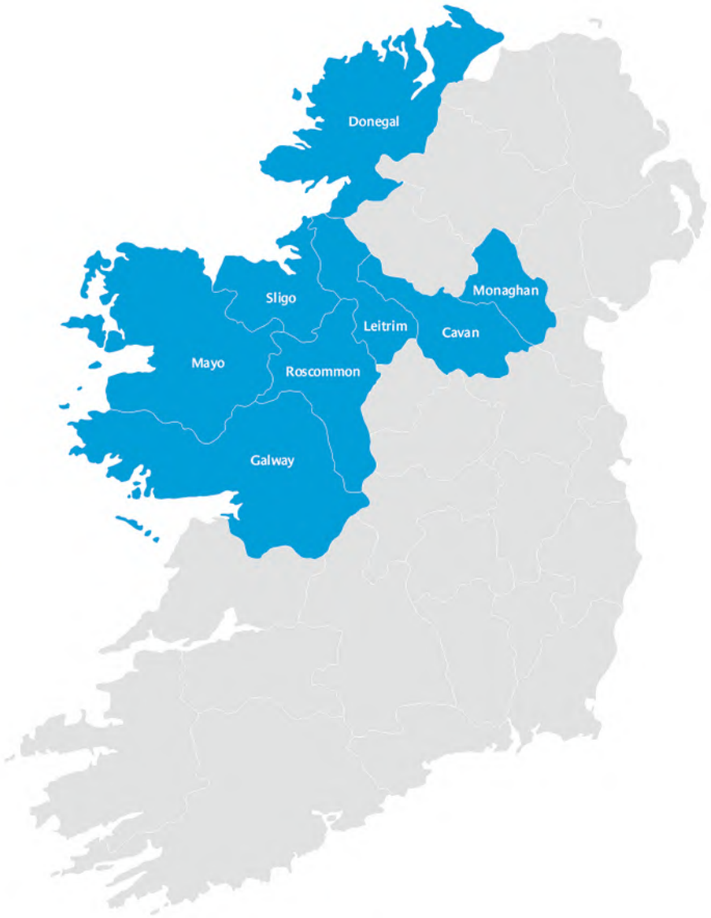


Figure 1.2: Counties of the CUA Region.

Our region is distinctive in many ways – it covers 50% of the now well established Wild Atlantic Way, and includes 50% of the inhabited islands of Ireland and three of the country's seven Gaeltachtaí, (an area in Ireland where the Irish language is the main language spoken by the majority of the local population).

The region's landmass covers 90% of the border between the Republic of Ireland and Northern Ireland. It offers a high level of cultural, artistic and outdoor activities providing an excellent quality of life for its inhabitants.

Our natural resources - coastline, mountains, forests, rivers, renewable natural energy sources - including wind, wave, biomass and natural gas – offer enormous opportunities.

Economic activity is spread across regional small and medium sized enterprises (SMEs), micro and large Irish companies and Foreign Direct Investment. Growing sectors include manufacturing, biopharma, medical devices, FinTech, ICT, automation, social/healthcare, tourism and recreation.

Our creative culture is nurtured and valued, evident by over 5,000 creative businesses, 11,000 employees and 889 organisations located in the region.

[4] A Region in Transition the way forward, North Western Region Assembly, 2019 (p 4)

The Western Development Commission (WDC) (2016) summarised the key findings from Census 2016 as they relate to the Western and North-Western Region (note: does not include Cavan and Monaghan which are served by the CUA region) in the infographic below:

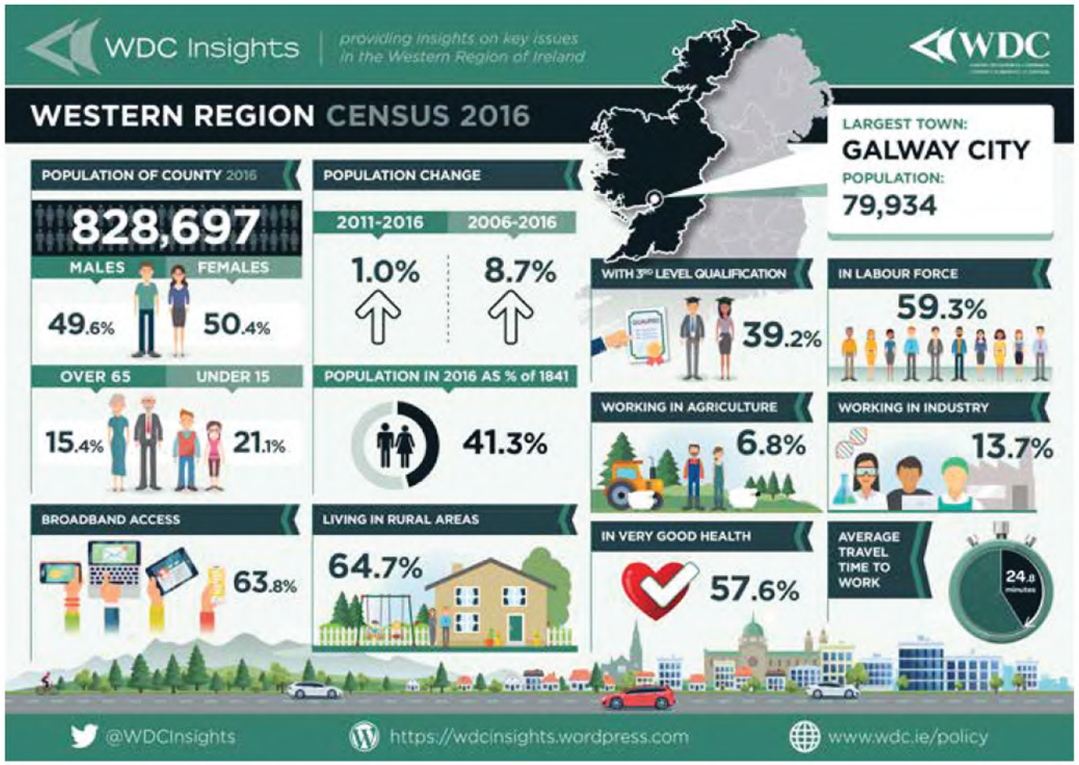


Figure 1.3: Census 2016 Data for Western Region – Western Development Commission (2016)

Employment opportunities within the region are mainly within the following sectors - medical devices/biopharma, manufacturing, agri-food, marine, energy, financial services, creative industries, cultural industries and tourism, retail, construction and the public sector (health, education and administration). Note: due to Covid-19 related restrictions the 2021 census has been postponed to April 2022.

Despite being characterised as a predominantly rural region, the West and North-West region does encompass one of the five major cities of Ireland, as recognised in the Local Government Act, 2001[5]. Galway city is a highly developed urban centre with a population of over 78,000, which represents 30% of the county's inhabitants. This concentration of population, along with the presence of both an Institute of Technology and a traditional university, affords Galway city many advantages over the other counties within the region.

Galway city has the highest rate of third level graduates across the region at 55.2%, which also exceeds the national rate of 42%. All other counties within the CUA region are below the national rate of 42%. It also has a higher-than-average rate of STEM graduates at 13%, which is almost double the national average of 7.1%. All other counties in the region are below 7%.[6] This provides a readily available skilled labour force and is a key factor in the success of the city in attracting foreign direct investment. The number of IDA jobs per 10,000 of population is 1,589.6 which is not only above the national average of 1,034.9, but the highest figure nationally.[7]

Galway city is also rich in history, arts and culture with ahighly developed tourism industry. The volume of overseas visitors attracted €22.82m in 2018 per 10,000 of population, which again, is double the national average of €10.34m. All other counties within the region are below the national average, with Sligo achieving the highest rate of €6.87m.[8]

It has been recognised that 'Galway has been Ireland's most rapidly developing urban area for half a century and is a key driver for the west of Ireland'.[9] Moreover, it is estimated that the Northern and Western region will be a region of more than 1 million people by 2040, 180,000 more than today.[10] The development of a TU of scale will best equip the region to support research, enterprise, and innovation which will serve to underpin and strengthen the region's economy through job creation, enterprise growth and direct investment. It will also empower the other counties of the region to develop and progress, as Galway city has over the past fifty years.

[5] The five major cities recognised in the Local Government Act 2001, are Dublin, Cork, Waterford, Limerick and Galway.
[6] Central Statistics office, 2016 Census: Third Level Education by County: Available at: https://www.cso.ie/en/releasesandpublications/ep/p-cp10esil/p10esil/le/
[7] IBEC, Local Economic Indicators 2018: Doing Business locally, (2018), pp. 16-23, 43-46.
[8] IBEC, Local Economic Indicators 2018: Doing Business locally, (2018), pp. 16-23, 43-46.
[9] Government of Ireland, Project Ireland 2020, National Planning Framework, (2018), p.42.
[10] Government of Ireland, Project Ireland 2020, National Planning Framework, (2018), p.38.

A unique characteristic of the region is its proximity to Northern Ireland. Cross border economic activity plays a large role in driving growth within this region and it is estimated that approximately 15,000 people cross the border for work or study each day.[11] A significant history of cross-border collaboration exists among the CUA partners.

The National Development Plan recognises Derry, Letterkenny and Strabane as the North West City Region. The North West Region of the island of Ireland, centred on Donegal County Council and Derry City and Strabane District Council, is the fourth largest urban agglomeration on the island of Ireland. It is the only functional economic region of such scale on the island which experiences a national jurisdictional border. The cross-border area of Leitrim/Cavan and Fermanagh and proximity to Sligo has led to significant activity and partnerships in the region via IT Sligo.

The CUA is represented in the cross-border Further and Higher education cluster by LYIT. The cross-border Further Education (FE) / Higher Education (HE) Cluster also includes Ulster University, North West Regional College and Donegal Education and Training Board. The CUA TU will continue engagement with the cross-border cluster as it is strategically important in relation to both the development of the TU and the wider cross-border region.

The cross-border cluster partners share the CUA's understanding of the challenges that Brexit represents and this cluster offers opportunities for a better coordination of the FE and HE response to these challenges for the North West cross-border region.

The Nomenclature of Territorial Units for Statistics (NUTS) were created by Eurostat in order to define territorial units for the production of regional statistics across the European Union. Ireland is now divided into three NUTS2 regions. These correspond to the areas covered by the three Regional Assemblies established under the 2014 Act – Northern & Western, Southern, Eastern & Midland. In the Map below these are coloured in blue, red/orange and green respectively.

The CUA region maps directly onto the NUTS2 region. In the Northern and Western Region (NUTS2) there are two sub-regions (NUTS3) i.e.

Figure 1.4: Nomenclature of Territorial Units for Statistics (NUTS) Regions

The North-West, which is challenged economically and socially with Brexit and other issues, and the West, which is experiencing strong growth especial in technology related areas, but it also faces many challenges.

The exciting opportunity for the TU is to systematically leverage and maximise the synergies that exist between and within the two regions, such as:

a) learning from and sharing Medtech and Information Technologies capabilities which is especially strong in the West;

b) acceleration of digitalisation to transform rural and urban communities' access to social connections and services in the post - Covid era throughout the overall broader region;

c) driving a step-change in environmental sustainability in both regions;

d) developing and elevating the cultural richness and capabilities of the various communities throughout the broad region;

e) developing cross-border, all-island and wider perspectives and linkages central to Ireland's development over the coming decades.

Level of Higher Education Attainment

Ireland's talent pool remains our key global competitive advantage and the country has the highest proportion of young people who have successfully completed third-level education in the EU.

According to the 2016 Census figures, at a national level, 42% of people held a third level qualification, whereas amongst the Western and North-Western region, the level ranged from a low of 32.9% in Monaghan to a high of 48.2% across Galway city and county. The West/North-West region has an average of 38.3% of people holding a third level qualification, which is below the national rate of 42%. Equally, at

[11] A Region in Transition the way forward, North Western Region Assembly, 2019 (p 4)

postgraduate level, the region has 8% of people holding a postgraduate qualification compared to a national average of 10%.

During the past months, especially since the start of the Covid-19 pandemic, there has been a widespread movement towards remote working. One of the positive impacts of the current situation is the attractiveness of the region to younger workers who can live in the West and North-West and work on a remote basis.

The below average levels of third level qualifications are due principally to the age profile (higher average age of residents) in the region and lower earlier education completion. During the past decade there has been a marked increase in completion rates up to Leaving Certificate in the region. The region has not retained a proportionate share of graduates, people who have grown up and received their second level education in the West/North-West have graduated from college/university outside the region. In many cases, they are also working outside the region, and are not reflected in the overall educational profile of the region.

Education should not be considered solely as a demographic or quality of life issue. The creation of high-skilled jobs can have a strong 'local multiplier' effect on job creation. Higher Education Institutions (HEIs) make a significant contribution to a region's human capital levels which is a key component to achieving strong economic growth.

A measure of LYIT's positive impact on the region was captured via the TIONCHAR project in 2015 which determined "impact multipliers" that measure institutional impacts on their local economy. The study showed that the higher education sector adds considerable gross value to the national economy, whether via state or other income. Among other factors, the multipliers capture the positive benefits to a local economy of retaining graduates in their region. LYIT at 4.25 came out top of all the Irish HEIs including the universities in relation to the "raw" multiplier. GMIT at 4.1 and IT Sligo at 3.9 also showed significant impact multipliers.

In a region that is in part economically challenged, we believe that enhancing the West and North-West region's HEIs, will enable the region to internally generate greater levels of education and foster increased regional economic growth. The OECD who notes that there is a clear positive relationship between investment in higher education and regional economic growth, after a period of approximately three years.[12] The advent of an ambitious and responsive TU in the West and North-West region of Ireland will act as a stimulus to the region and will play its part in shaping an attractive region where people wish to live, work and study.

This TU aims be a leader in the provision of access to HE by offering programmes from pre-degree to doctoral level on campus, online or as remote learning. As a TU, we will deepen collaborative partnerships with Further and Higher Education institutions and organisations in the public and private sectors. As one entity, the new TU will act in a coherent manner supporting the needs of enterprises, especially SMEs, across the region through collaborative research and enabling technology transfer to support economic and social prosperity. It will provide research-informed teaching and access to emerging technologies for all learners.

[12] Q. Zhang, C. J. Larkin & B Lucey, (2015) The economic impact of higher education institutions in Ireland: evidence from disaggregated input output tables, Studies in Higher Education · December 2015

1.4 Rationale for the New TU

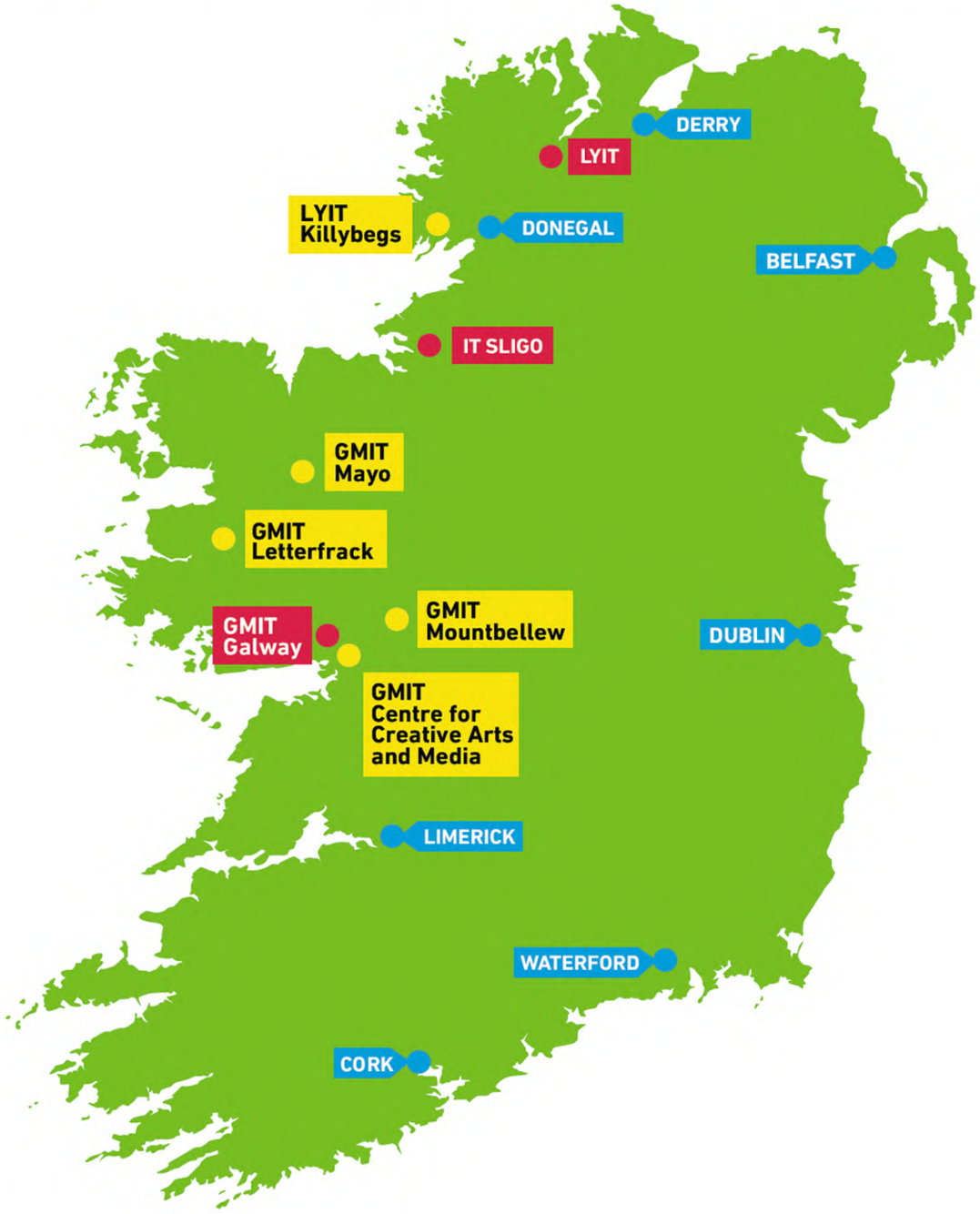


Figure 1.5: Our CUA Multi-Campus Operation.

"As Chief Executive of Galway County Council, I wish to confirm my full support for your application to be designated as a Technological University. The Technological University will have the capacity to play a significant role, in the future development of the West and North-West and will be a most welcome development."

Kevin Kelly,
Chief Executive, Galway County Council

The CUA TU will deliver a university of scale and academic depth based in the West/North-West region which will advance third level capacity and impact in the region by:

- bringing our schools together in university-wide Faculties which work closely with the multidisciplinary communities across the TU. This will open opportunities to build academic strengths, for example building on the relationships with the intensive industry clusters in Galway to stimulate engagement elsewhere in the region;
- leveraging our scale to make strategic investments in selected fields to further strengthen our academic programmes, our research, our graduates and our impact;
- assisting us to retain more talent and students in our region and to retain and attract talented staff;
- propagating through our TU wide Academic Council and our Faculties, the best learning and teachingtechniques across the TU;
- enabling us to work with a new TU Students' Union to bring the best aspects of the student experience to all students in the university as a whole;
- achieving synergies in our administrative activities which will free up resources to further enhance the services provided by our IT, Estates, Finance and HR teams.

These are some of the ways in which the TU will enable us to act as a key economic, social and cultural driver of our served region which will be more powerful and will have greater impact than the sum of the three existing institutes.

Our TU will drive regional development enshrining the ethos of regional relevance in all its activities. By fostering an international outlook and responding to global challenges, we will be the catalyst to unleash the potential in our towns, villages and cities.

Our TU will support the creation of a green region together with balanced regional development, providing an enhanced talent pipeline of level 6 to level 10 graduates. The TU will also support inward investment, improved connectivity between large multinational companies and indigenous SMEs, encourage the development of strong indigenous start-ups, growing and scaling companies. Furthermore, the TU will attract funding for collaborative knowledge transfer activities of scale in areas such as tourism, technology, manufacturing, environmental research, marine research and the creative industries.

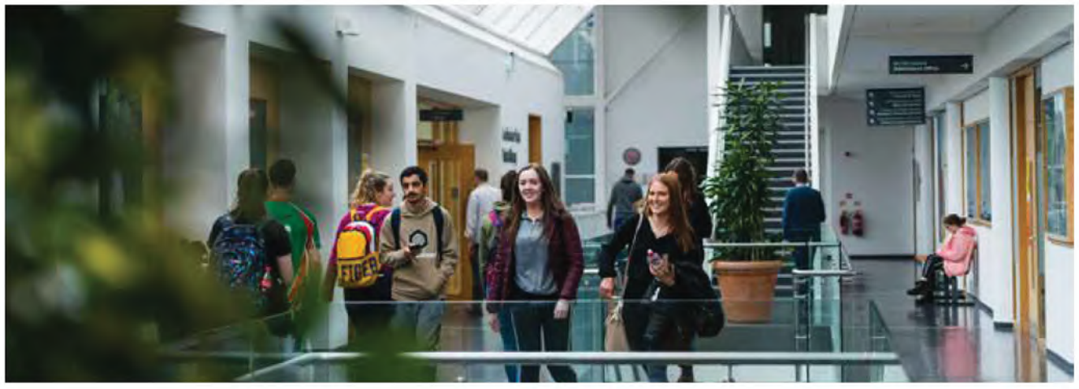
There are strong productivity and growth benefits from increasing the share of higher-skilled workers in the region's labour force. The market for high-skilled workers is dominated by, Ireland's largest metropolitan cities (Cork, Dublin, Galway and Limerick). The TU aims to drive similar growth in the other major urban centres of the region - Letterkenny and Sligo. In the context of the unique challenges and socio-economic profile of our region, we believe that the CUA is positioned to deliver a TU of scale, quality and impact because:

- we are pioneers of educating the workforce through online/flexible provision;
- a high proportion of key positions in enterprises throughout the region are held by CUA graduates;
- the outputs of the CUA collaborative iNOTE project (building digital capacity) have impacted positively on learning and teachingprovision during the Covid-19 pandemic;
- we provide a range of industry relevant flexible programmes and supports which supports the attractiveness of the West and North-West as a business location;
- through our four successful enterprise centres we support new enterprise formation.

Acting collaboratively, as a TU of scale, quality and impact, we will expand and develop as "anchor institutions and leaders in the development of the West and North-West region, facilitate and encourage learners to remain in their communities while pursuing their studies in HE and throughout their careers".[15]

There are also future potential collaborative and expansion opportunities for the CUA.

St Angela's College of higher education is located 7 km from the IT Sligo campus. It has academic departments of Nursing and Health Studies, Home Economics and Education, with some 1,500 students. St Angela's College is currently in discussions with the Department of Further and Higher Education to explore possible integration with IT Sligo (and subsequently the TU). Integration into the TU would enhance and enlarge the scale and academic range of the TU. Should these discussions lead to a formal integration process, the intention is for St Angela's College to integrate with IT Sligo in 2021, and subsequently become part of the TU when designation is in place.



[15] 'Connectedness and Collaboration through Connectivity", Report of the Technological Universities Research Network, October 2019

External Support for the TU

The development of TUs aligns with the national higher education strategy, and is reflected in the government's strong endorsement in the *National Development Plan: Project Ireland 2040* which states that 'Technological Universities [will]deepen the talent pool for distinctive regional sectoral clusters and drive applied research and innovation'. This endorsement is replicated in the Northern & Western Regional Assembly (NWRA) report, *A region in Transition*, which calls for the acceleration of 'achievement for TU status for our graduates' as a 'key growth enabler'. A new TU for the West and North-West region will, in addition to education and research programmes, focus on employee education and workforce development. The TU will present significant benefits for students, staff, stakeholders and the wider community in addition to positively impacting regional, national and international higher education.

New Synergies

The new TU will provide for deep engagement across our campuses and academic disciplines in both education and research, enhancing intellectual capacity and ambition.

Enhanced Regional Service on a Broader Collaborative Basis

The geographical spread and multi-campus nature of the TU will enable multiple delivery points for education and continuous professional development (CPD). It will facilitate student progression and stakeholder engagement and will act as a catalyst for stronger knowledge enhancement and research and development capability in the region.

Local Economic Impact

The new entity will be one of the largest employers in the region with considerable purchasing power and will be an important customer for goods and services. It will have the scale and academic depth to attract additional students (home and international) which will have a multiplier effect on the local economy. Such inward investment from national and Foreign Direct Investment (FDI) sources, such as research or capital funding will enhance the local economy. A strong focus on student placements and work-based learning will support local companies along with graduate career opportunities that will drive development in the region.

Distribution and Consolidation of Academic Capacity

The enlarged institution will be in a better position to locate expertise in research, innovation and programme delivery across the TU Colleges. Student numbers (especially part-time and work-based) will expand in response to regional business needs. The new institution will be able to act more strategically in the provision of academic programmes and levels across its campuses. It will enable the expansion and development of e-learning and flexible learning for campus and non-campus-based students. The TU will ensure that access will be facilitated and the prospects for widening participation in higher education are enhanced.

The academic, professional, management and support staff expertise creates a critical mass that will enable the new TU to make a step-change in mission-related research, innovation and development in support of local, regional and national requirements. The new institution will be able to make choices and strategically focus its best human and capital resources in order to enhance the development of research and innovation, knowledge transfer, postgraduate study and PhD supervision.

Innovative and Impactful Programme Development

Great scale and academic depth and an agile structure will equip our TU to be more responsive to a wide range of business, industrial, professional, societal and cultural needs, and to be more proactive. The breadth of its subject expertise, and its integrated structure, will allow the development of multi, and interdisciplinary subjects, enabling it to be at the forefront of innovation and the creation of new ideas. The TU will be able to access a wide range of specialist knowledge in each discipline area, providing opportunities to offer more electives/options and new, industry relevant modules. It will facilitate teaching in a technology-supported way across campuses, where this is identified as appropriate. Overall, this will lead to more efficient delivery of future provision, focusing on core key disciplines/skills across the TU.

Staffing

As outlined above, the development of the TU is likely to result in more student numbers, and require a consequent increase in all staff numbers. It is envisaged that there will be administrative, technical and student support synergies and the new critical mass will support enhanced student support services, for example: international office, careers advice, student advising health and counselling services and technical supports. The new TU will provide for effective use of cross-campus MIS, data analytics and communication technologies.

Quality Enhancement

The growing integrated institution will be able to significantly enhance the quality assurance culture as befits a TU that is ranked favourably with national and international institutions.

Enhanced National and International Competitiveness

As an institution of scale with a focus on excellence and responsiveness the TU will be well equipped to attract quality staff and students, increase external income, build a strong reputation and develop high quality international partnerships. It will have increased capacity to deliver national higher education policies, social and economic objectives.

While these benefits will not all accrue immediately, the following sections of this submission indicate how they are/will be embedded in the proposed strategies, processes and structures of the new TU.

Current research reiterates that the creation of a TU would in fact increase jobs due to enhanced student numbers, wider programme provision and expanded research opportunities. In an evaluation of merged higher education institutions in Europe, the Viewforth report found that in the case of Linnaeus University in southern Sweden, the merger resulted in increased student recruitment with enrolment figures rising by 32% in four years. It also increased their professional positions by 17% and increased their external funding by 40%. Other merged institutions reported similar significant performance improvements, such as Aalto University in Finland, which secured a 59% increase in competitive

research funding in the six years following its merger. Likewise, the merged University of the Highlands and Islands in Scotland has been 'remarkably successful in attracting research funding with around 12% of its income being competitively won research grants and contracts'.[19]

While significant government investment is required to enable IoTs to advance and become TUs, it should be noted that already as stand-alone IoTs, these institutions make a considerable economic contribution to the state. Moreover, as enlarged TUs, it would be expected that this would further increase. The Viewforth report has estimated that each of the individual IoTs within the CUA partnership, makes the following impact on the Irish Economy.

	Jobs impact Direct & Secondary (FTE)	Output Impact Direct & Secondary (€m)	GVA Impact Direct & Secondary (€m)
GMIT	988	100.8	60.1
IT Sligo	763	80.5	42.7
Letterkenny IT	559	53.0	32.5
CUA	2,310	234.3	135.3

Table 1.1: Economic Impact of the CUA Partner Institutes

Therefore, as the above table shows, the IoTs are 'important economic players in the region as enterprises themselves'. As a consortium, the CUA supports 2,310 jobs while institute expenditure results in direct economic impact of €234.3m, with a Gross Added Value (GAV) Impact of €135.3m.[20]

The Viewforth report equally highlights how important it is to recognise that the 'relative size and scale of a university can be an important factor in determining how influential it can be, particularly when forging relationships with external organisations [both] public and private'. This points to the potential for this large new university to build new relationships and collaborative partnerships of scale with other national and international institutions.

[19] Viewforth Consulting Ltd., The Economic Impact of a New Technological University in Ireland: An Exploratory Study (Viewforth Consulting, 2017), pp. 26-30.
[20] Viewforth Consulting Ltd., The Economic Impact of a New Technological University in Ireland: An Exploratory Study (Viewforth Consulting, 2017), pp.11-15.

Chapter 2

Overview of the New Technological University

The Galway Arts Festival, Galway

In this chapter we set out our vision, our mission, the values that underlie and permeate both and the strategic pillars on which the TU is built. We detail the rationale for the CUA TU and how it will be achieved, offering a roadmap that will ensure we realise our plans. We offer a template for our transition to a new TU structure which encompasses three existing institutes of technology.

"Údarás na Gaeltachta fully supports and welcomes the establishment of a Technological University. Údarás na Gaeltachta looks forward to building on its existing partnerships with the three Institutes of Technology in the region. This partnership is key to our strategy for sustainable development in the Gaeltacht. The various research and development projects and the provision of essential skills are vital to our Gaeltacht-based companies and also to our development of the region's natural resources including marine, tourism, language and renewable energies."

Micheal O hÉanaigh,
Chief Executive Officer, Údarás na Gaeltachta

2.1 The New Technological University

The new TU for the West and North-West of Ireland will be a multi-campus university of scale, quality and impact, spanning a unique geographical region with a cross border dimension at the interface of Europe and the Atlantic region, connecting students, staff, research, enterprise and global communities. As a TU, founded by GMIT, LYIT and IT Sligo, we will work together to build on our strengths of excellence in teaching, provision of access and supports for higher education students, applied education and research along with the development of exceptional people, in addition to practical and problem-solving skills for our graduates.

The TU will be a leader in the provision of access to Higher Education(HE) by offering programmes from pre-degree to doctoral level on campus, online or as remote learning. As a TU, we will deepen collaborative partnerships with Further and HE institutions and organisations in the public and private sectors. As one entity, the new distinctive TU will act in a coherent manner supporting the needs of enterprises, especially SMEs, across the region through collaborative research and enabling technology transfer to support economic and social prosperity. It will provide research-informed teaching and access to emerging technologies for all learners. The TU will have the critical mass and academic depth to attract, educate, nurture and retain talent in the West, North-West and cross-border region and will strengthen and benefit our region socially, economically and culturally. As a TU we will have greater capacity for collaboration with international partners and our graduates will have excellent employment potential nationally and internationally.

Our Vision

Our TU will educate and inspire people and develop talent to enable the sustainable economic, social and cultural development of our region and beyond.

Our Mission

Our TU will be known for building capacity and community in our region through excellent, flexible and innovative academic programmes, collaborative and experiential learning, advancing knowledge through research and engagement, provision of lifelong learning and undergraduate, postgraduate, remote and enterprise-based education.

Strategic Pillars

1. Our TU will provide excellent learning opportunities spanning multiple campuses and will contribute to sustainable development across our region and beyond through:

a) Realising the opportunities presented by bringing together the strengths of three Institutes to optimise our students' experience;

b) Academic excellence by building strong university wide academic faculties and fostering multidisciplinary academic communities across the university;

c) Growing our research and the provision of technological and innovation supports;

d) Leading the provision of flexible, blended and remote learning and educational opportunities for employees, employers and entrepreneurs to maximise social engagement and impact;

2. We will aim to become a university of choice for learners and for collaborators within and beyond our region through the excellence and foresight demonstrated by our programmes, our student experience, our research and engagement and our international focus.

Values

As a TU, our work will be underpinned by values of:

Integrity, Respect, Innovation, Initiative, Excellence, Sustainability, Inclusivity, Equality and Agility

The establishment of a TU of scale and academic depth will change the inclusive adaption and responsiveness of the overall region, sub-regions, communities and enterprises to global economic, technological, environmental, social and geo-political transformation. The resulting distinctive benefits of a TU to the region are:

i) learning and teaching that is practice-orientated and research-informed - adding to the skills and capabilities of both new entrants and existing employees and others seeking life-long learning opportunities, and driven by medium - and longer-term employer needs;

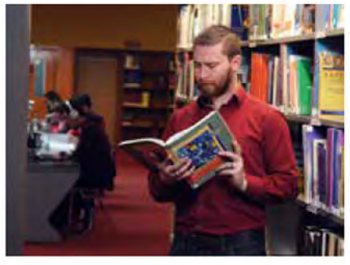
ii) more extensive research that is primarily applied to addressing the major challenges facing society both in the region and beyond and that can transfer fluently to innovation within enterprises and communities;

iii) deeper engagement with regional firms, SMEs, start-ups, larger companies, multi-national companies, public agencies, communities and other associations and other regional, national and broader stakeholders within the wider society its serves;

The Plan to get there

The CUA consortium has been working together over the last eight years with a view to making a submission for TU designation. The TU Executive Team and Working Groups have ensured that every aspect of becoming a TU was explored and that wide consultation was facilitated. This submission is the culmination of this preparatory work and is itself only a milestone in the overall process of becoming a TU. In the immediate future, we recognise that there is additional work to be completed both as a part of the application process and the merger process.

The next phase will involve the creation of a detailed plan for the ongoing development of the TU. This process has already commenced, the next phase, a plan for 2020/2021 is presented in Chapter 7. As part of its submission to the HEA's Technological Universities Transformation Fund (TUTF), the CUA has proposed a series of work package plans that will be instrumental in preparing for and establishing the TU during the period 2020 to 2023. The 2020/2021 work plan received HEA funding approval of €5.7m in October 2020.



2.2 Transition Organisation Principles and Structure

In February 2019, the CUA Steering Group produced a draft discussion document entitled 'CUA Governance, Management and Organisational Structure'. This document was widely circulated and reviewed across the CUA Institutes. In December 2019, the CUA Chair and Presidents established a Transition Sub-group to provide advice to WG1 in relation to the development of the organisation of the new TU. The sub-group produced an interim report in February 2020. The Transition sub-group revised the report considering the feedback provided and a second report was produced and disseminated in April 2020. A large number of staff have engaged in the consultation process which generated significant comments and feedback. Each of the three CUA Executive Boards, the CUA Steering Committee, the Joint Governing Body Sub-committee along with both industrial relations fora considered the draft Transition Organisation Principles and Structure document. The reports along with the associated feedback led to the drafting of general principles on future organisational structure of the TU.

The following is a proposed template of a high-level view of the transitional structures adopting a distributed leadership model, following three principles, namely:

1. Regional/geographical balance;
2. University wide faculties;
3. Three constituent colleges (each consisting of one or more campuses).

Proposed University Executive Board members and their functions. Four Board members to be based in each college. Board members to have a deputy in each of the other two colleges

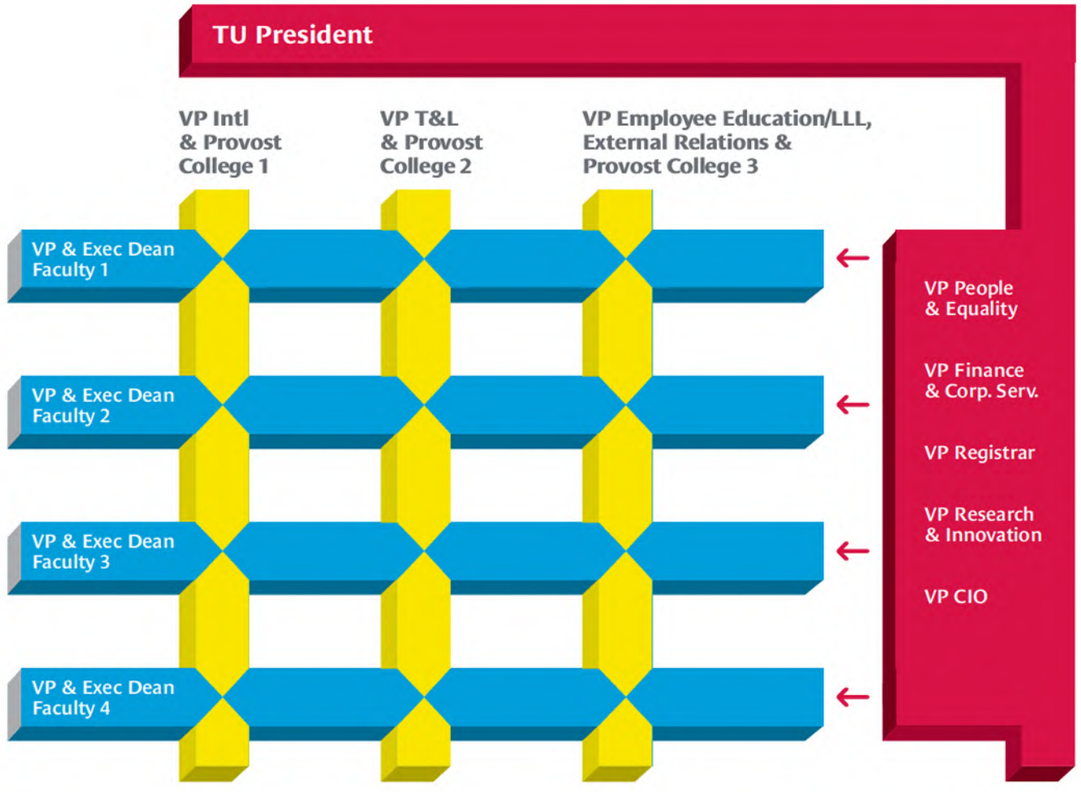


Figure 2.1: Proposed University Executive Board

The above titles are for illustrative purposes, they reflect a proposed structure and do not reflect the precise areas/titles which will be the subject of separate discussions. The new TU will have the ability to demonstrate that the three institutes of the CUA can and will act as one.

The new TU will adopt the following organisation principles to ensure a smooth transition to a new TU structure. It will:

1. be a single unified entity with a coherent management structure incorporating Faculty Boards and College Boards, each represented on a University Executive Board;

2. be organised, in the first instance, on the basis of three colleges and associated campuses.

- Galway-Mayo (comprising campuses at Galway, Cluain Mhuire, Letterfrack, Castlebar, Mountbellew).
- Donegal (comprising campuses at Letterkenny and Killybegs);
- Sligo (comprising campus in Sligo);

3. incorporate a student focussed approach into the structure and build a strong TU identity for students;

4. enable the new TU to advance its vision and mission;

5. further enhance the TU's academic strengths by building strong TU-wide Academic Faculties;

6. maintain and actively develop the multidisciplinary academic community in each college and across the university;

7. maximise the impact of the TU by facilitating mutually beneficial relationships between the colleges and the Faculties;

8. build research capacity and cross-TU research collaborations in key domains;

9. ensure regional provision of a wide range of relevant programmes, research and external engagement and support balanced, sustainable regional development reflecting the geographical location of the TU within the West and North-West region;

10. minimise additional organisation complexity and management costs, in order to

- promote clarity of vision and TU-wide day to day collaboration;
- moderate competition between the colleges, and
- ensure that the TU Executive Board is able to work effectively and deliver the strategy to all colleges and functions.

11. have dispersed and balanced senior management, keeping in mind core EDI principles, to ensure that all campuses of the TU can contribute effectively as part of the university;

12. make no change to structures within academic departments during the transition stage;

13. facilitate the best mix of TU-wide and local Finance, HR, IT, Estates and other administrative support;

14. ensure that the future structure of the TU is planned. While a time-limited transition structure will be necessary to ensure day-to-day activities can continue, attention needs to be focused on the future organisation structure and the design of such a structure must be developed from day 1;

15. As the senior management team of the TU will be distributed across the colleges, there will not be a designated Head Quarters. There will be Executive Offices, including an office for the President of the TU, at each of the three main campuses.

It is envisioned that the TU will adopt a distributed leadership model with one third of the Vice Presidents based in each college. The operation of Faculties, Academic and Student Supports, Research and Innovation Supports and Corporate Services will be distributed across the TU Colleges.

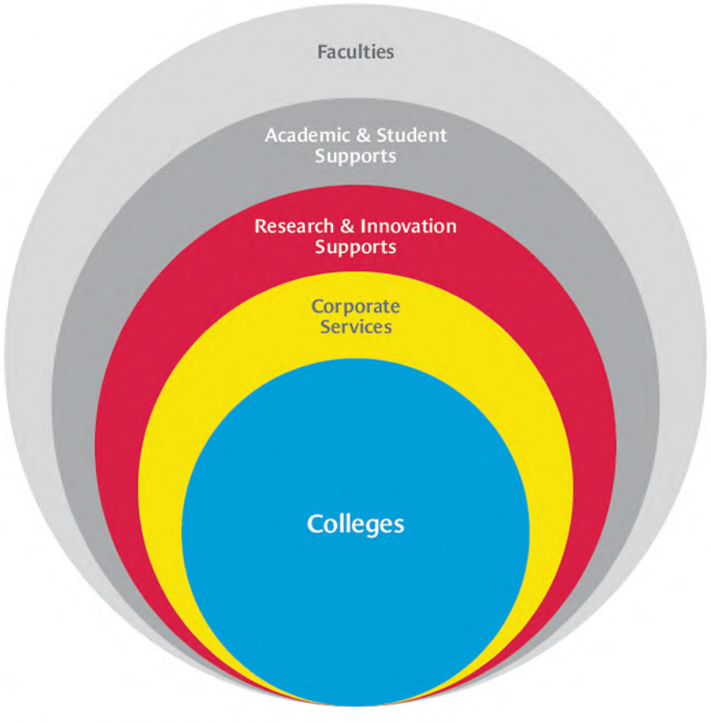


Figure 2.2: Distributed Leadership Model

"I write to express the support of Donegal ETB for the establishment of the CUA Technological University. Our involvement in the FE/HE Cross Border Cluster will be strengthened by the creation of the TU and will ultimately lead to increased retention of our young people within the region. Donegal ETB works collaboratively with LYIT on a number of projects aimed at increasing the transfer and progression of our students within our second level schools and our Further Education and Training service. This includes the area of apprenticeship provision for which there will be even greater scope with the advent of the TU."

Anne McHugh,
Chief Executive, Donegal Education and Training Board

"Tacaíonn Údarás na Gaeltachta le, agus fáiltíonn roimh, bhunú Ollscoil Theicneolaíochta. Tá súil ag Údarás na Gaeltachta tógáil ar an bpáirtnéireacht reatha leis an trí Institiúid Theicneolaíochta sa réigiún. Tá an páirtnéireacht seo ríthábhachtach dár straitéis maidir le forbairt inbhuanaithe don Ghaeltacht. Tá na tionscnaimh taighde agus forbartha éagsúla, agus soláthar scileanna riachtanacha, fíor-thábhachtach dár gcliantchomhlachtaí Gaeltachta, chomh maith le forbairt a dhéanamh ar acmhainn nádúrtha na réigiúin ina n-áirítear na réimsí mara, teanga, turasóireachta agus fuinnimh inathnuaite."

Micheal O hÉanaigh,
Chief Executive Officer, Údarás na Gaeltachta

Options for Faculty Structures

Since May 2020 a sub-group of the CUA Heads of Faculty/Schools (HOF/HOS) have researched and reviewed options for consideration for the Faculty Structures of the new TU. An evaluation of student numbers, programmes and disciplines across the three institutes took place and international faculty and department structures were reviewed.

The Interim Report of the CUA Transition Group (17 April 2020) recommended that initially there should be four Faculties in the new TU – two in STEMM (Science, technology, Engineering, Maths & Healthcare) and two in AHSSBL (Arts, Humanities, Social Science, Business & Law).

Two STEM faculties

1. Engineering & Technology
2. Science & Health

Two non-STEM (AHSSBL) faculties

3. Business
4. Creative & Cultural Industries

Provisional descriptions of each faculty are provided in Chapter 4.

CUA Joint Governing Body Sub-committee

The three CUA Governing Bodies have actively supported the CUA project since its inception in 2012. The Chairs of the Governing Bodies, the CUA Chair and the Institute Presidents meet on a regular basis. The Governing Bodies met formally for the first time in November 2019 and made a commitment to the Department of Education and Skills to submit an application to become a Technological University, subject to meeting all criteria necessary for designation. The three CUA Institutes Governing Bodies met to clarify the next steps needed to secure university designation. The governance, academic and organisational structures of the new TU were addressed as part of the planning by the three institutions toward becoming a TU.

In September 2020, the Chairs and Presidents of the Connacht-Ulster Alliance (CUA) with the support of their Governing Bodies established a sub-committee of each of the three Governing Bodies to oversee completion of their initiative to establish a Technological University (TU) in the region.

The three sub-committees operate as one group, chaired by the CUA chair, with the sole focus of bringing the new TU into existence at designation. Following guidelines in relation to gatherings and Covid-19, meetings of the group are held online. The group meets on a monthly basis to oversee the development of a submission to become a Technological University and it reports to the respective Governing Bodies on a regular basis.

CUA Joint Academic Council Sub-committee

The Steering Group of the Connacht-Ulster Alliance (CUA) propose establishing a sub-committee of each of the three Academic Councils to support the establishment of a Technological University in the region. The joint CUA Academic Council Sub-committee will form part of a wider structure which includes the Joint CUA Governing Body Sub-committee. The proposed membership is presented in the table below.

Membership	
1 President - from each Institute	3
1 Vice President Academic Affairs & Registrar from each Institute	3
5 Other members from each Institute Academic Council	15
Total	21

Table 2.1: Proposed Membership Joint CUA Academic Council Sub-Committee

The Joint Academic Council Sub-committee is being established to promote a culture of communication and collaboration in advance of the TU vesting date. This preparation period will allow the joint sub-committee to consider the academic functions associated with a new Institution and will mitigate the risks associated with transition from multiple academic councils into a single entity. The joint sub-committee will not assume the powers of an Academic Council; however, the sub-committee may make recommendations to each of the Academic Councils.

The Joint Academic Council Sub-committee's sole focus will centre on the academic development of the new TU rather than the relevant activities of the existing institutions.

The Technological Universities Act 2018 (Chapter 3 and Schedules) indicates the scope and nature of the Academic Council of the TU, once designated. The Joint Academic Council Sub-committee needs to be cognisant of the remit of its eventual successor, but its particular role centres on consideration of, and if thought fit, the making of proposals to the Joint Governing Body Sub-committee regarding the Terms of Reference, composition and operations of the substantive TU Academic Council.

"The Technological University will have the critical mass and academic depth to attract, educate, nurture and retain talent in the West, North-West and cross border region and will strengthen and benefit our region socially, economically and culturally. It will underpin Sligo's designation as a Regional Growth Centre under the National Development Plan 2018 – 2027. The new Technological University (TU) for the West and North-West of Ireland is fully supported by Sligo County Council."

Tom Kilfeather,
Acting Chief Executive, Sligo County Council

2.3 Naming and Branding of the New Technological University

Developing a new brand is a complex process that requires consultation with internal and external stakeholders. Our TU brand will aim to best represent what our stakeholders including; students, staff, graduates, employers and funders expect of our TU. The CUA started a consultation process focusing on developing a name for the TU in April 2019. CUA Staff and Students were invited to respond to an online Survey - "Naming of TU":

(i) to indicate preference for one of the suggested names for the TU and/or

(ii) submit an alternative name for the TU

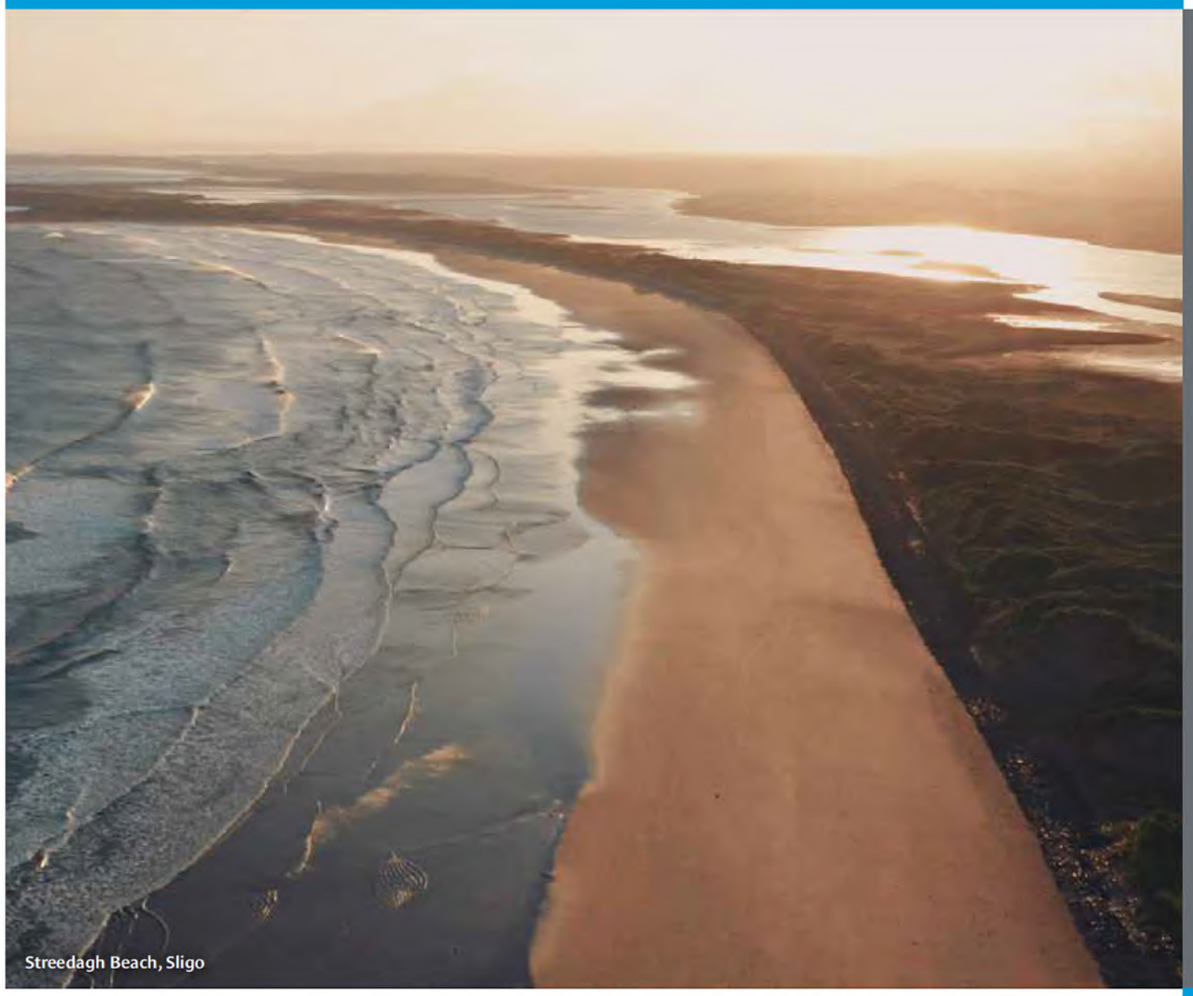
In June 2019, the findings of the survey were presented to the CUA Steering Group. The total number of responses received were 2,662, with 1,895 from our students. A range of potential names emerged from the survey with Atlantic Technological University (ATU), with an overseas identity of ATU Ireland, being the most popular. While the survey represented very positive engagement with staff and students, the responses were limited to internal stakeholders.

We are conscious that there has been no substantive engagement on this question with external stakeholders/ audience (e.g. potential students, schools, guidance counsellors, public bodies, government agencies, industry partners, community, alumni, professional bodies, etc.).

The next stage of the process is to undertake a naming and branding exercise. In April 2021, following a tender process, an external company was chosen to assist with the selection of a name and the creation of a brand platform the for new TU.

Chapter 3

The CUA Technological University Project



Streedagh Beach, Sligo

This chapter offers evidence of how the CUA has worked as one, embracing parity of esteem as a key component of all our activities. Governance structures, engagement with stakeholders, groups, staff, unions are demonstrated. Initially this chapter describes the development of the project plan, how the CUA Alliance evolved, we list important landmarks reached from 2012, the key milestones accomplished following the passing of the TU Act in 2018 are summarised.

"In January 2020, the Members of the Northern and Western Regional Assembly adopted the first Regional Spatial and Economic Strategy (RSES) with the Regional Planning Objective (RPO 7.6) - Support and promote the growth, development and success of the Connacht- Ulster Alliance consortium's ambition towards becoming a Technological University serving the west and north-west. The NWRA recognises that the CUA has demonstrated considerable capacity for regional partnership, cooperation and stimulating the regional ecosystem. We would like to recognise the progress made and fully support the final CUA application. The TU will be a transformative tool in the socio-economic development of this region."

David Minton,
Director, Northern & Western Regional Assembly

3.1 Key Stages in the Evolution of the Consortium and the Development of the Project Plan

In 2011, the Hunt Report proposed the establishment of Technological Universities (TUs) as part of the evolving Higher Education landscape in Ireland. Providing the legislative framework for this proposal, the Technological Universities Act 2018 was signed into law on 21 March 2018.

In July 2012, GMIT, LYIT and IT Sligo formed the Connacht-Ulster Alliance (CUA) which signalled their collective ambition of achieving designation as a TU. This represented an ambitious objective and the associated delivery project which has spanned the remainder of that decade and which will also extend across the coming years is detailed here/below.

In October 2015, the CUA was successful in its 'Stage 1' (Expression of interest) application regarding TU status to the Higher Education Authority (HEA) and continued to pursue the attainment of the criteria to enable its designation as a TU. Recognising the challenging nature of achieving the TU criteria, the CUA committed to allocating significant resources to a range of strategic initiatives including, for example:

- the support and development of applied research;
- the enhancement of teaching and research staff qualifications at doctoral level;
- initiatives to support a high-quality student experience.

The key milestones in the development of the CUA which culminate in this submission are presented below.
In advance of the passing of the Technological Universities Act in 2018, the CUA engaged in collaborative projects, sharing of knowledge and the formation of a strong project management structure and a work plan during the period 2012 – 2018. The agreement and subsequent passing of the TU Act in 2018 was the trigger for an acceleration of TU related activity from mid-2018 onwards.

"The establishment of the Connacht Ulster Alliance Technological University serving the West and North-West is a key policy objective in the Regional Spatial and Economic Strategy of the NWRA. Galway City Council recognises that the development of the skills and resources in this region is one of the fundamental foundations to the ongoing sustainable development of the region and that an institution such as the CUA Technological University is one of the critical pieces of infrastructure required to achieve this. Galway City Council fully supports the development of the CUA Technological University in the Region."

Brendan McGrath,
Chief Executive, Galway City Council

Summary of key milestones in the development of the CUA (2012 –2018)

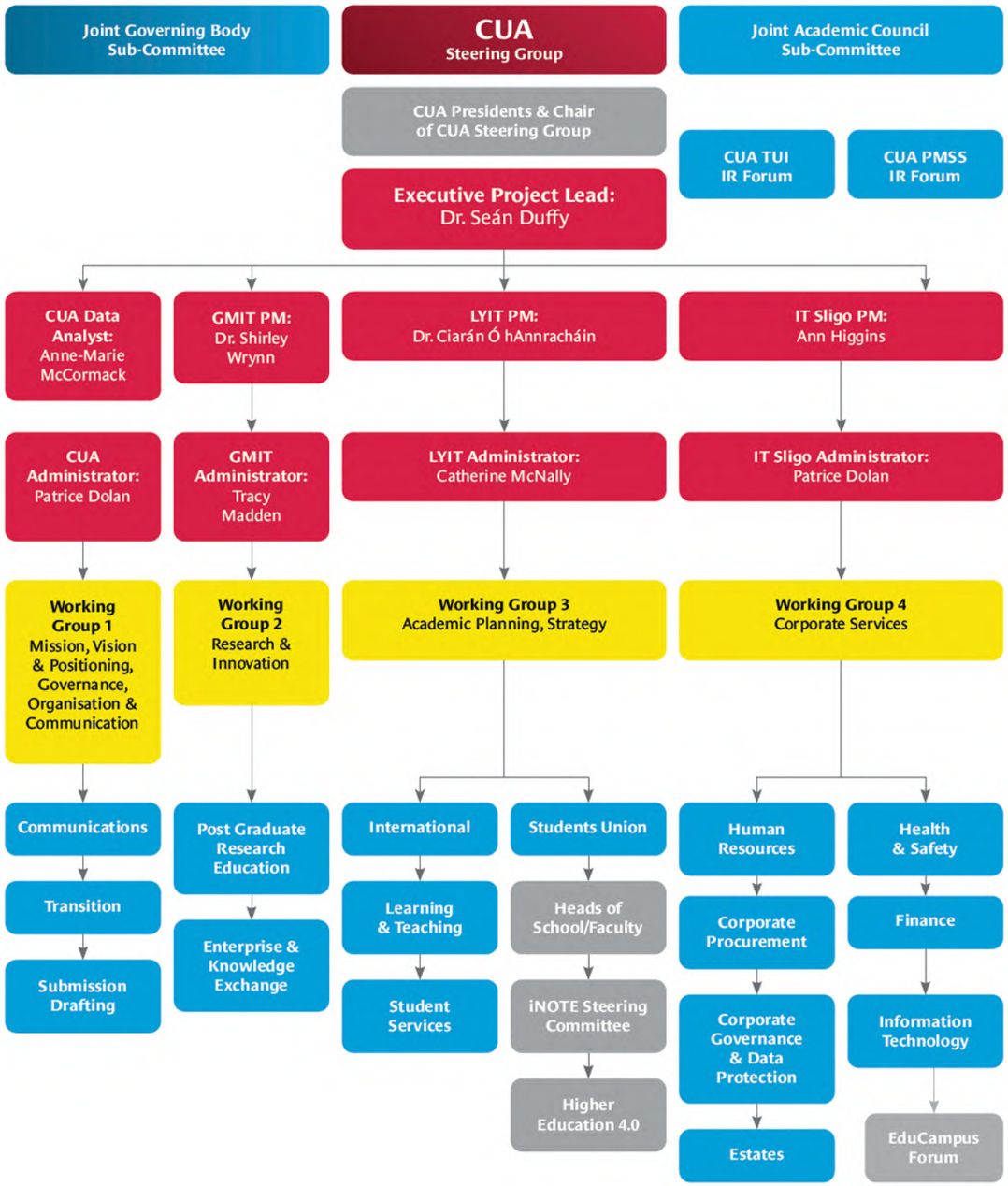
Date	Milestones
July 2012	The Presidents of GMIT, LYIT and IT Sligo and the three Governing Body Chairs sign a Memorandum of Understanding to form the Connacht-Ulster Alliance (CUA). The CUA was officially launched by An Taoiseach Enda Kenny.
September 2012	Almost 30 Oireachtas members from Connacht and Ulster attended a briefing held by the Connacht-Ulster Alliance in Dublin about its ambitions to achieve designation as a TU.
May 2013	Green Light for TUs, the Minister for Education and Skills, Ruairi Quinn, issued a policy statement setting out a new configuration for the Irish higher education system. In that statement he announced his approval for three groups of institutes of technology to proceed towards detailed planning for a formal application for designation as technological universities.
January 2014	CUA welcomes the Technological Universities Bill published by the Minster for Education & Skills.
February 2014	The CUA Steering Committee adopts a TU Implementation plan.
February 2014	CUA launches new online research repository, with extensive research material from staff and students, called 'CUAL', developed by the libraries in GMIT, IT Sligo and Letterkenny IT.
April 2014	Appointed CUA Project Manager and CUA Data Analyst.
November 2014	CUA Work plan up to September 2015 was adopted.
March 2015	Submission of CUA Expression of Interest for Re-designation as a TU to the Higher Education Authority.
October 2015	CUA is granted approval by the Minister for Education and Skills, Jan O'Sullivan T.D., to proceed to the next stage of the process of building a Technological University for the West/North-West of Ireland.
December 2015	Thematic Working Groups formed: (i) Governance (WG1), (ii) Research and Innovation (WG2), (iii) Learning and teaching(WG3), and (iv) External Engagement (WG4).
May 2016	CUA met with the HEA Finance and Governance Committee to discuss the application for funding to support the work of the CUA.
June 2016	€0.757M Funding awarded by HEA.
March 2017	CUA appoints a new Project Manager.
August 2017	CUA participates in World Technologies Universities Congress at the University of Bradford, UK.
November 2017	Higher Education Landscape Funding Allocation of €1.2m to support work of CUA.
February 2018	Briefing on the CUA to the North Western Regional Assembly. Taoiseach Leo Varadkar TD voiced strong support for the TU for the West/North-West at the launch of the Ireland 2040 plan.
February 2018	Steering Group Terms of Reference agreed. Terms of Reference and Operational Guidelines agreed for Working Groups:

Summary of key milestones in the development of the CUA following the passing of the TU Act in 2018

Date	Milestones
March 2018	**The Technological Universities Act 2018 is signed into law.**
May 2018	Steering Committee appoints three institute based CUA Project Managers.
May 2018	Meeting of the three Executive Boards of the CUA Institutes took place in Bundoran, Co. Donegal to discuss progress of the project and plan for the next stages.
June 2018	A second meeting of the three Executive Boards of the CUA Institutions took place in The Diamond Coast Hotel, Enniscrone, Co Sligo. Members discussed Engagement in Research Activity, Structure and Organisation and Communication and Consultation.
December 2018	Meeting of the three Executive Boards in IT Sligo. The workshop format focused on three areas: Achieving TU Metrics, CUA Opportunities and Challenges and TU Mission and Vision.
January 2019	CUA collaborative project 'iNOTE' developing digital capability receives funding of €2.84m from HEA Innovation and Transformation Funding 2018.
March 2019	Data Sharing Agreement document developed to comply with GDPR legislation.
May 2019	Meeting of Joint Management Groups (Central Service Managers and Heads of Department) from the CUA partner institutes took place in Co. Sligo. The attendees discussed collaborative initiatives across the CUA and the draft document on Government, Management and Organisational Structures.
August 2019	Establishment of a Transitions Sub-group.
November 2019	Establishment of the CUA TUI Industrial Relations Forum.
November 2019	Meeting of Joint Governing Bodies of the CUA met in Co. Donegal. Heads of School/Faculty Sub-group established.
February 2020	Inaugural joint Heads of Departments and Heads of School/Faculty meeting in Galway.
March 2020	CUA Executive Project Lead appointed. Due Diligence process commenced.
April 2020	Establishment of the CUA PMSS Industrial Relations Forum
September 2020	Inaugural Joint Governing Body Sub Committee meeting.
October 2020	CUA won €12.4m for its Higher Education 4.0 project to further develop the agility and flexibility to deliver increased access to higher education.
October 2020	CUA awarded funding of €5.7m to the CUA under the HEA's Technological University Transformation Fund (TUTF).
October 2020	Completion of Corporate Services Due Diligence and Legal Due Diligence Reviews.
October/November 2020	Completion of Audit of CUA TU criteria by Deloitte.

3.2 Project Governance and Management

The CUA has an extensive structure which provides the governance, management, engagement and thought leadership to establish an excellent TU. This structure is presented in the diagram below.



"The transition to a Technological University would be a very logical stepping stone at this stage serving the West and North West, and would become a very powerful tourism education hub that will be critical to the further development and servicing of the industry as a whole, in an area that is so dependent on a well-educated work force."

Mark Nolan,
GMIT Graduate, Managing Director, Dromoland Castle & The Inn at Dromoland

The Working Groups were established in 2015. Starting in 2018, the CUA established sub-groups to assist and report to the relevant Working Groups. In addition to the CUA Project Manager, three Institute based Project Managers were appointed in 2018. In September 2019 the Project Managers were joined by administration staff based in each institute. Each of the four Project Managers was allocated to a specific working group to provide support to its operation. The working groups and sub-groups each agreed a Terms of Reference and began their deliberations, (see Appendix 3.1 Membership of Working Groups and Sub-groups and Appendix 3.2 Terms of Reference for Working Groups and Sub-groups). In April 2020, an Executive Project Lead was appointed reporting to the three CUA Presidents and the CUA Steering Group Chair.

Since it was established, the CUA has operated on a 'parity of esteem' basis. Each of the three institutes is assigned equal representation on all working groups, sub-groups and related activity. Since 2012, a strong foundation of mutual trust and respect has been built and which informs all CUA related activity. This has been supported by hosting all meetings, on a rotational basis, on the CUA's network of campuses. Once each group was formed and met in the latter half of 2019, the CUA, on the advice and support of its IT Services Managers moved to MS TEAMs as the alliance's video conference and document repository platform. This both facilitated increased engagement and reduced travel between campuses. As all staff engaged in the CUA had transitioned to MS TEAMs, the advent of the Covid-19 pandemic, subsequent restrictions and movement to working remotely/from home was quickly embraced by the CUA.

Since March 2020, with a small number of exceptions, all CUA meetings and activities have been held online. These include meetings of the CUA Steering Group, joint CUA Governing Body Sub-committee and meetings with external stakeholders. While online/remote meetings cannot fully replicate the benefits of in-person meetings, CUA staff and students have shown by embracing technology, that excellent progress can be made across geographically dispersed campuses. The lessons learned so far in 2020 in employing online engagement and communication will serve the future TU well.

3.3 Engaging the Contributions of Internal and External Stakeholders

Neither TUs nor merged, multi-campus universities are new phenomena in higher education. However, we recognise that the bringing together of three autonomous educational institutes with strong local identities and proud traditions can only succeed with the endorsement of the key internal stakeholders (staff and students) and the support of the key external stakeholders. The CUA Steering Group and Project Management team set about navigating this 'once in a generation' change management process by developing a comprehensive communication and consultation plan. Our aim is to manage this process in an open, honest and transparent manner, thereby engendering a 'ground up' support for TU designation.

The established CUA project infrastructure involves over 150 staff from our three partner institutes participating in four Working Groups and nineteen Sub-groups. In order to engage with all staff and students in an open and inclusive manner, a wide range of communication and consultation events were scheduled across the partner institutes from September 2018 onwards. Examples include: School-Faculty/Dept/ Function briefings; institute-wide staff consultation sessions with keynote speakers; presentations to student representatives; informational videos; weekly/monthly updates on CUA website and podcasts. External stakeholders were also included in some of our internal consultation sessions, while a targeted external stakeholder engagement plan was also implemented. A full schedule of all communication and consultative events is available in Appendix 3.3.

3.4 Engagement with Staff and Unions

When it was initially established the CUA formed a Steering Group which comprises senior managers from each institute under the guidance of an independent chair. Over time, the membership of the Steering Group expanded to support increased activity and a broader engagement of both staff and students. The Steering Group, which meets on a monthly basis has representation from each of three students' unions as well as the TUI, Forsa, SIPTU and Unite trade unions.

In addition to membership of the Steering Group, the CUA Students' Union Presidents and officers are members of the Students' Union Sub-group, Learning & Teaching Sub-group, Students Service Sub-group and the Joint Governing Body-Sub-committee.

Since September 2019, the CUA has supported the secondment of six full time TUI (academic union) staff representatives. A CUA TUI Industrial Relations Forum was established in October 2019 and meets on a regular basis. A series of sub-groups have been formed to address specific TUI issues as the three institutes transition to form the TU.

In April 2020, the CUA in conjunction with the Professional Management and Support Service (PMSS) staff formed the CUA PMSS Industrial Relations Forum. This forum is supported by five seconded Industrial Relations Facilitators from the PMSS trade unions of Forsa, SIPTU and Unite.

Engagement with the staff and student union representatives has been vital in bringing the CUA TU project to its current state and will continue to play a key role in the establishment of the new TU. The CUA management, staff and students operate on the basis of openness and transparency regarding information availability and early engagement on all aspects of the development of the CUA TU.

3.5 Due Diligence

The TU will be a new academic entity that will build on the complementary strengths of the three partner institutions and will drive sustainable economic, social, regional, cultural and civic development in the West and North-West region. The institutes developed an implementation plan outlining the application process and the transition to TU status. As part of this plan the institutes and the CUA Steering Group procured professional services to complete legal, financial, corporate governance and HR due diligence on the three partner institutes.

The CUA took the initiative of undergoing this due diligence review (although it is not a requirement of the TU process). The review was undertaken to ensure that the new TU would not be burdened with unforeseen issues, to demonstrate internal co-operation and willingness to engage amongst the three central service areas of the CUA and as statement of the CUA's capability to act strategically. Furthermore, the external consultants noted that process and subsequent final reports provided strong evidence of the CUA teams working together across the three institutes.

Mazars Consulting was engaged to undertake the main due diligence review over a six-month period which began in March 2020. A legal due diligence review was also conducted by KOSI Corporation over a six-month period, from April 2020.

The professional services consultants undertook due diligence on GMIT, LYIT and ITS in the following key areas:

Financial Review

- Business Overview;
- Research and self-financing activity;
- Review of management letters;
- Financial projections, including review of five-year financial plans and testing of underlying assumptions supported by historic data

Taxation Review

- Tax compliance of GMIT, LYIT AND ITS under VAT, PAYE/PRSI, RCT, PSWT tax-heads and Tax Clearance procedures.

IT Review

- Review of IT environment and infrastructure in place in the context of IT (Networks) and Application (OS and DB), administrative and academic systems support.

Governance and Corporate

- Subsidiary and associate companies.

Pensions Review

- Review of governance and administration of Education Sector Superannuation Scheme.

HR Review

- Review 3 organisations structure by roles, staff numbers, staff grade;
- Review schedule of employees and document key terms and conditions of employment;
- Identify legacy contracts.

Estates and Insurances

- Review of campus masterplans;
- Review of insurance in place and document level of cover;
- Review of physical environment and infrastructure.

Legal Due Diligence

- Contracts
- Assets (including Real Estate)
- Litigation & Disputes
- Environment
- Public Procurement
- Intellectual Property Rights
- Employees
- Health & Safety
- Insurance
- Consents & Compliance
- Disclosures

Each service provider presented regular reports to Working Groups 1 and 4. The process culminated in the presentation of findings to Working Groups 1 and 4 in September, October and November 2020. Each consultancy firm produced an individual due diligence report for each institute along with a report which amalgamated the findings for the CUA. Detailed observations and recommendations for each institute under the eight headings were provided for in the individual institute reports and in the consolidated report.

Mazars concluded their report stating "... we did not see anything in the areas examined that would pose serious concerns for the TU application. Moreover, over the six months of the project, we saw credible evidence of cross-institute teamwork. This is noteworthy as, whilst this exercise is entirely separate to the formal TU submission process, it can provide demonstrable evidence to the International Panel that the three partners are already acting in concert and that the cultural antecedents of a new TU are already in place."

KOSI Corporation concluded its legal due diligence report by stating "Notwithstanding that issues within Institutes and inconsistencies in processes and practices between institutes have been reported, no systemic issues have been identified during the legal due diligence review which would fundamentally undermine the partnership's proposed application for TU status."

Both Due Diligence reports included key observations and recommendations for the CUA Institutes. The next stage of this process will be the development of an action plan which will include risk mitigation. The plan will be implemented via the four CUA Working Groups and their respective Sub-groups.

3.6 Evidence of Connacht Ulster Alliance Acting as One

Since its inception the CUA has approached the development of an application to become a TU in a manner which builds trust and co-operation and will serve as the basis for a future cohesive organisation. This approach has permeated the activities of all CUA groups since 2012 and has been adopted by each working group.

Examples of collaborations amongst the three CUA institutes are summarised below. In some cases, the projects have been completed others are in process and will serve as the basis for agreeing on future strategies or as an agreed basis upon which to build future structures and policies.

Examples of the CUA Acting as One

Group	Collaborative Project/Activity	Status
Joint Governing Body Sub-committee	• In conjunction with three CUA Governing Bodies, oversight of application for designation as a Technological University • Meeting held on a monthly basis	Established September 2020
Joint Academic Council Sub-committee	• Academic development of the new TU	[To be established Q2 2021]
Working Group 1	• Corporate Service Due Diligence • Legal Due Diligence • Joint funding applications • Internal and External Engagement	Completed Completed Completed Ongoing
Communication Sub-group	• Development of Communication Strategy • Joint Education Fairs Promotional stand • Co-ordination of CUA Communications, press releases and external communication • Joint messaging in prospectuses, schools' presentations, etc. • JUpdated and relaunched CUA Website (Worldpress website) – Completed	Completed Completed Ongoing Ongoing
Transition Sub-Group	• Reports on transitional organisation structure	Completed
Working Group 2	• First CUA Research Symposium (January 2019) • Second CUA Research Symposium (May 2019) • Third CUA Research Symposium (January 2020) • Development of Draft CUA Code of Practice for Research • CUA Postgraduate Research Bursaries • Postgraduate Research Training Centres (PRTC) Expression of Interest Call	Completed Completed Completed Completed Completed Completed
Enterprise & Knowledge Exchange Sub-group	• Mapping of Enterprise landscape	Completed
Working Group 3	• Oversight of direction and progress of 6 sub-groups • CUAL (research repository and information sharing platform) • Extension of level 9 delegated authority • Recognition of Prior Learning (RPL) policies & procedures • Overall profile in terms of programme and student mix 2020 – 2025 • Draft CUA Examinations Regulations	Ongoing Completed Completed Completed Ongoing Ongoing
Learning & Teaching Sub-group	• CUA Student & Staff Digital Experience Report • TU Learning & Teaching framework strategy • CUA Student Success Strategy in conjunction with Student Services sub-group. • CUA Collaborative Projects funded by National Forum (2019/2020) • eNotebook; Universal Design for Learning (UDL) and English Language Support for international students, led by IT Sligo. • Learning analytics tool linked with Student Success Project, led by GMIT. • UNLOCK project data analysis of ISEE, led by LYIT.	Completed IPAx3 AC* In draft Ongoing
Students' Union Sub-group	• CUA Students' Union future TU SU structures and funding document TU SU Constitution	In draft Ongoing
Student Services Sub-group	• Employability statements in conjunction with CUA Careers Officers and CUA Heads of School • TU Students Services framework focusing on equality of services across a multi-campus TU.	In draft Ongoing

Group	Collaborative Project/Activity	Status
International Sub-group	• Development of CUA international framework strategy.	In draft
Heads of School/ Faculty	• Overall profile in terms of programme and student mix 2020 – 2025 • Draft document on TU future faculty structures	In draft Ongoing
iNOTE Project (2019 -2022)	• Five cross institute work packages focusing on developing staff and student digital capabilities 1. developing a quality assurance policy for flexible delivery; 2. building digital capabilities amongst CUA staff; 3. developing a range of digitally enhanced student supports for those undertaking programmes through flexible delivery; 4. developing and delivering work-based programmes (WBP) utilising digital capabilities for flexible delivery and 5. mainstreaming, disseminating and evaluating CUA digital capabilities for flexible delivery.	Ongoing
Higher Education 4.0 (2020 – 2025)	CUA collaborative project, received €12.4m under recent HCI Funding, aims to make third level more accessible and agile for everyone. This proposal maps out a vision for the future of the agility of higher education in responding to the needs of individuals and employers and how the funding will be used to establish the systems and the capacity required to deliver flexible and highly innovative education opportunities.	Recently commenced
Working Group 4	• Oversight of direction and progress of 7 sub-groups. • Executive lead with CUA EduCampus Forum to commence Business Process Alignment for Corporate Services. • Development of consolidated financial planning exercise for TU. • Oversight of institutional strategies to achieve TU criteria, in particular those relating to staff qualifications and financial sustainability. • Approval of CUA budgetary applications and allocations. • Oversight of CUA tender process.	Ongoing Ongoing Completed Ongoing Ongoing Ongoing
Human Resources Sub-group	• Compilation of policy inventory. • Engagement with CUA IR Forum. • Development of draft People/HR Strategy for TU. • Development of a draft CUA EDI Values and Principles Framework. • Production of a draft CUA Staff Training and Development Plan. • Engagement with CUA EduCampus Forum. • Participated in mock audit process. • Engagement in Due Diligence process.	Completed Ongoing Ongoing Completed Completed Ongoing Completed Completed
Finance Sub-group	• Commencement of Business Process Alignment as evidenced by the production of policy inventory, undertaking systems alignment process and functional structure comparison. • Engagement with CUA EduCampus Forum. • Undertake consolidated financial planning exercise. • Engagement in Due Diligence process.	Ongoing Ongoing Completed Completed
Information Technology Sub-group	• Undertake review of current systems, levels of alignment and staffing structures. • Development of joint policy inventory. • Production of IT Principles document that will inform enabling CUA IT strategy. • Production of a submission for Immersive Technology Suite. • Collaboration on specific joint tenders. • Acted as direct liaison to establish CUA EduCampus Forum and continue to engage wrt Business Process Alignment. • Engagement in Due Diligence process.	Completed Ongoing Completed Completed Ongoing Ongoing Completed
Estates Sub-group	• Completed review of current staffing structures. • Production of relevant content for submission document. • Engagement in Due Diligence process.	Completed Completed Completed

Group	Collaborative Project/Activity	Status
Corporate Governance and Data Protection Sub-group	• Creation of a policy inventory, including Corporate Governance, Data Protection and FoI.	Completed
	• Revision of CUA Data Sharing Protocol.	Completed
	• Agreement on joint appointment of External Confidential Recipient.	Completed
	• Development of a collaboration template.	Completed
	• Ongoing knowledge exchange and sharing of best practices.	Ongoing
	• Production of a Data Protection Impact Assessment for CUA projects.	Completed
Corporate Procurement Sub-group	• Undertake review of current systems, levels of alignment and staffing structures.	Completed
	• Creation of policy inventory.	Completed
	• Production of a consolidated MAPP (Multi-Annual Procurement Plan).	Completed
	• Review of all CUA tender documentation and oversight of joint procurement processes.	Ongoing
	• Production of a Position Paper on a proposed strategy for and structure of the Procurement Function within the TU.	Completed
Health and Safety Sub Group	• Produced work plan with agreed priorities and assigned task owners.	Completed
	• Collaboration on Return-to-Work Protocol and Policies.	Completed
	• Shared learnings re: challenges posed by Covid-19.	Ongoing
CUA Educampus Forum	Collaborative Forum to provide oversight of systems alignment and implementation process.	Ongoing

"Randox Teoranta and the CUA (GMIT, LYIT & IT Sligo) have enjoyed a strong and mutually beneficial partnership for many years, with LYIT supporting Randox's skills, training, recruitment and research agendas, and Randox developing degree and postgraduate course content to cover essential skills for the life sciences industry. The Randox team passionately supports the CUA's ambitions to secure Technological University status for the West and North-West of Ireland, noting the parties' clear record of achievement and ambition, and their significant potential. Awarding of Technological University status will reinforce and strengthen the research culture and infrastructure within the region and ensure access to a highly skilled workforce with the relevant education and training. We look forward to strengthening our relationship with CUA to further our aspirations to improve human healthcare using innovative and dynamic life science technologies."

Dr Ciaran Richardson,
Head of Research and Development, Randox Teoranta

Chapter 4

The Academic Profile of the New Technological University

Sea Sessions Festival, Bundoran, County Donegal

The aim of this chapter is to outline the student and programme profiles of the institutions leading to the CUA TU and to illustrate how they have influenced the combined profile of the TU. It also provides and overview of the coordination of activities as they relate to academic affairs, the engagement between School/Faculty and Academic Departments, and provides a detailed insight into the collaboration between the institutes in the areas of Student Engagement and Student Success through the Students' Unions; Teaching, Learning and Assessment; Student Services and Internationalisation.

"From Fáilte Ireland's perspective, we welcome the fact that Tourism and Hospitality will be represented in the provision of education and access to Higher Education at all levels by offering programmes including on line and remote learning, thus supporting the sector and enterprise needs across the region, therefore ensuring economic and social prosperity into the future. A new Technological University will have the significance of building capacity therefore, increasing employment and supporting Tourism and Hospitality development opportunities in the West/ North West."

Paul Kelly,
CEO, Fáilte Ireland

4.1 CUA Profile (Programme Type and Student Mix) 2020/2021

The enhanced capacity and synergies achieved through the creation of the TU will facilitate the development of a comprehensive range of programmes of relevance and quality, underpinned by research-informed learning and teaching, in response to the needs of an extensive and diverse region and beyond.

The new TU will collaborate with higher education partners in the region, NUI Galway and St Angela's College, the Education and Training Boards – Donegal, Sligo Mayo Leitrim, Galway Roscommon, and Cavan Monaghan, as well as with education partners in Northern Ireland – e.g. University of Ulster, Queen's University Belfast (QUB) and North West Regional College (NWRC), to ensure pathways for entry to and progression from programmes across levels 6 to 10 on the National Framework of Qualifications.

During the 2020/2021 academic year the CUA Institutes offer 593 academic programmes from level 6 to level 10. The total student cohort is 20,273 comprising 12,925 full-time students (63.8%), 2,059 part-time students (10.2%) and 5,289 (26.1%) students undertaking programmes on a distance/e-learning basis. Total new entrants to the CUA TU stands at 3,499. Full-time undergraduate enrolment has increased by 5% on the previous year.

A detailed combined CUA student profile is available in SD 4.1. All numbers included in this chapter are based on student head count.

Student Numbers					
Entrants					
			No.		
New Entrants (Full-time Undergraduate)	1st Year		3,494		
	2nd Year+		5		
Enrolments					
			Full-time	Part-time	Remote	Total
Other Enrolments (IoTs only)	**No.**	**0**	**620**	**0**	**620**
FET Cert	No.	0	0	0	0
FET Advanced Cert	No.	0	620	0	620
of which are apprenticeships	No.	0	620	0	620
Undergraduate	**No.**	**12,407**	**1,062**	**3,756**	**17,225**
Foundation	No.	57	20	0	77
Diploma	No.	0	1	22	23
Certificate	No.	31	381	1,738	2,150
Higher Certificate	No.	530	21	322	873
Ordinary Degree (L7)	No.	3,201	446	911	4,558
Honours Degree (L8)	No.	8,588	140	763	9,491
Occasional	No.	0	53	0	53
Postgraduate	**No.**	**518**	**377**	**1,533**	**2,428**
Postgrad Diploma	No.	23	87	183	293
Postgrad Higher Diploma	No.	11	40	378	429
Postgrad Certificate	No.	0	7	440	447
Masters Taught (L9)	No.	219	175	420	814
Masters Research (L9)	No.	202	51	112	365
PhD (L10)	No.	63	9	0	72
Occasional	No.	0	8	0	8

Student Numbers						
Total Enrolments						
Total Enrolments UG and PG		**No.**	**12,925**	**1,439**	**5,289**	**19,653**
	Research & Taught (L9/10)	FTE				868
	Research (L9/10)	FTE				351
	Research (L10)	FTE				72

Enrolments						
			Full-time	Part-time	Remote	Total
Other Enrolments (IoTs only)		**%**	**0%**	**100%**	**0%**	**100%**
	FET Cert	%	0%	0%	0%	0%
	FET Advanced Cert	%	0%	100%	0%	100%
	of which are apprenticeships	%				
Undergraduate		**%**	**72%**	**6%**	**22%**	**88%**
	Foundation	%	74%	26%	0%	12%
	Diploma	%	0%	0%	0%	0%
	Certificate	%	1%	18%	81%	12%
	Higher Certificate	%	61%	2%	37%	5%
	Ordinary Degree (L7)	%	70%	10%	20%	26%
	Honours Degree (L8)	%	90%	1%	8%	55%
	Occasional	%	0%	0%	0%	0%
Postgraduate		**%**	**21%**	**16%**	**63%**	**12%**
	Postgrad Diploma	%	8%	30%	62%	12%
	Postgrad Higher Diploma	%	3%	9%	88%	18%
	Postgrad Certificate	%	0%	2%	98%	18%
	Masters Taught (L9)	%	27%	21%	52%	34%
	Masters Research (L9)	%	55%	14%	31%	15%
	PhD (L10)	%	88%	13%	0%	3%
	Occasional	%	0%	0%	0%	0%
Total Enrolments UG and PG		**%**	**66%**	**7%**	**27%**	**100%**
	Research & Taught (L9/10)	% FTE L8 and All PG				9.3%
	Research (L9/10)	% FTE L8 and All PG				3.3%
	Research (L10)	% FTE L8 and All PG				0.8%

Graduates (Class of 2019)					
			No.		%
Undergraduate Graduates			4,539		90%
Postgraduate Graduates			495		10%

Disciplinary Mix		
Full-time Undergraduate New Entrants		
	No.	**%**
Generic programmes and qualifications	58	2%
Education	56	2%
Arts and humanities	301	9%
Social sciences, journalism and information	48	1%
Business, administration and law	583	17%
Natural sciences, mathematics and statistics	372	11%
Information and Communication Technologies (ICTs)	308	9%
Engineering, Manufacturing & Construction	686	20%
Agriculture, forestry, fisheries and veterinary	131	4%
Health and welfare	627	18%
Services	329	9%
Total	**3,499**	**100%**

Disciplinary Mix		
Full and Part-time PhDs		
	No.	**%**
Generic programmes and qualifications	0	0%
Education	0	0%
Arts and humanities	3	4%
Social sciences, journalism and information	5	7%
Business, administration and law	0	0%
Natural sciences, mathematics and statistics	47	65%
Information and Communication Technologies (ICTs)	1	1%
Engineering, Manufacturing & Construction	8	11%
Agriculture, forestry, fisheries and veterinary	0	0%
Health and welfare	6	8%
Services	2	3%
Total	**72**	**100%**

Student Profile		
(% of Enrolments)	**No.**	**%**
Flexible Learners (Part-time, Distance, E-Learning)	6,728	34%
International Students (Full-time)	603	5%
EU	156	26%
Non-EU	447	74%
(% of New Entrants)	**No.**	**%**
Mature Entrants (Full-time Undergraduate)	292	8%

Table 4.1 Combined CUA TU Profile 2020 - 2021

Programme Profile offered at the CUA TU

Programme offerings are available at all levels on the National Framework of Qualifications (NFQ), from FET Advanced Certificate Awards, otherwise known as Apprenticeships, at level 6 on the NFQ, up to and including PhD at level 10. This is reflective of the concept of a comprehensive programme offering of a Technological University as defined by the "National Strategy for Higher Education to 2030" and subsequent policy documents. There are a variety of access, transfer and progression routes available to prospective students offering students who enter on a Level 6 Higher Certificate or Level 7 Bachelor Degree the opportunity to progress to a higher level on successful completion of the entry level award. Recognition of Prior Learning is used as an entry mechanism and its use has increased significantly in recent years, and will continue to expand through targeted funding initiatives at both regional and national level.

The following table and chart present a summary of the programme profile of the CUA Institutes and CUA Students by NFQ level in 2020/2021.

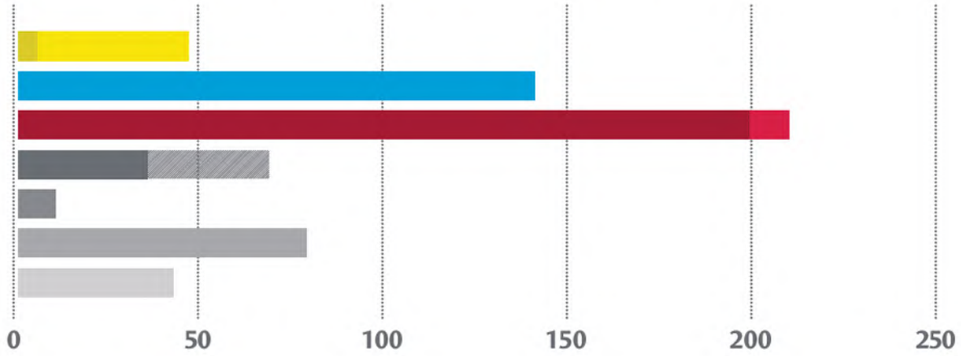
NFQ Level	Programmes		Students			
	Programme Type	Number of Programmes	Full-time	Part-Time	Distance / E-Learning	Total
Level 6 (FET)	Apprenticeships	5	0	620	0	620
Level 6 (HE)	Higher Certificate	41	530	21	322	873
Level 7	Ordinary Degree (L7)	140	3201	446	911	4558
Level 8	Honours Degree (L8)	198	8588	140	763	9491
	PG Higher Diploma (L8)	11	11	72	348	431
Level 9	Masters Taught	35	219	175	420	814
	Masters Research	33	202	51	112	365
Level 10	PhD	10	63	9	0	72
	Other Undergraduate: Certificate, Diploma, Foundation Occasional, Training	78	88	455	1760	2303
	Other Postgraduate: Certificate, Diploma, Occasional, Training	42	23	70	653	746
Total		**593**	**12925**	**2059**	**5289**	**20273**

Table 4.2: CUA Programme profile by NFQ level, award type and enrolments 2020/2021

As well as covering all NFQ levels, the suite of programmes offered across the multi-campus TU reflects the differentiated mission of the Technological University Sector. The TU has the capacity to drive key education policy objectives of increasing participation, providing excellent undergraduate and postgraduate industry-relevant programmes, and engage in applied research and innovation with industry partners as well as being a key driver and enabler of economic and social development in the region.

CUA Programmes by NFQ Level 2020/2021

Programmes on offer in the CUA cover the full range of academic disciplines in the International Standard Classification of Education (ISCED) Framework. Engineering, Manufacturing and Construction; Health and Welfare; and Business, Administration and Law are the disciplines most widely catered for, accounting for 55% of all programmes. The majority of student enrolments is at Level 8 and Level 7, with smaller numbers at Level 6 and Levels 9 and 10.



NFQ Level	Programme Type	No of Programmes
Level 6	Apprentice Trades	5
	Higher Certificate	41
Level 7	Ordinary Degree (L7)	140
Level 8	Honours Degree (L8)	198
	PG Higher Diploma (L8)	11
Level 9	Masters Taught	35
	Masters Research	33
Level 10	PhD	10
Other Undergraduate: Certificate, Diploma, Foundation Occasional, Training		78
Other Postgraduate: Certificate, Diploma, Occasional, Training		42

Figure 4.1 CUA Programme summary by NFQ level

Programme Offering by Discipline

As a technological university, there will be a greatly enhanced capacity for novel programme development through a sharing of resources and expertise, and the CUA commits to the continued provision and development of a widely diversified portfolio of programmes at undergraduate and postgraduate levels. Collaborative programme development and applied research will expand in response to the specific education needs of new or developing industries in the region. Evidence of this includes Bio-pharma in Galway, FinTech in Donegal and niche Manufacturing in Sligo.

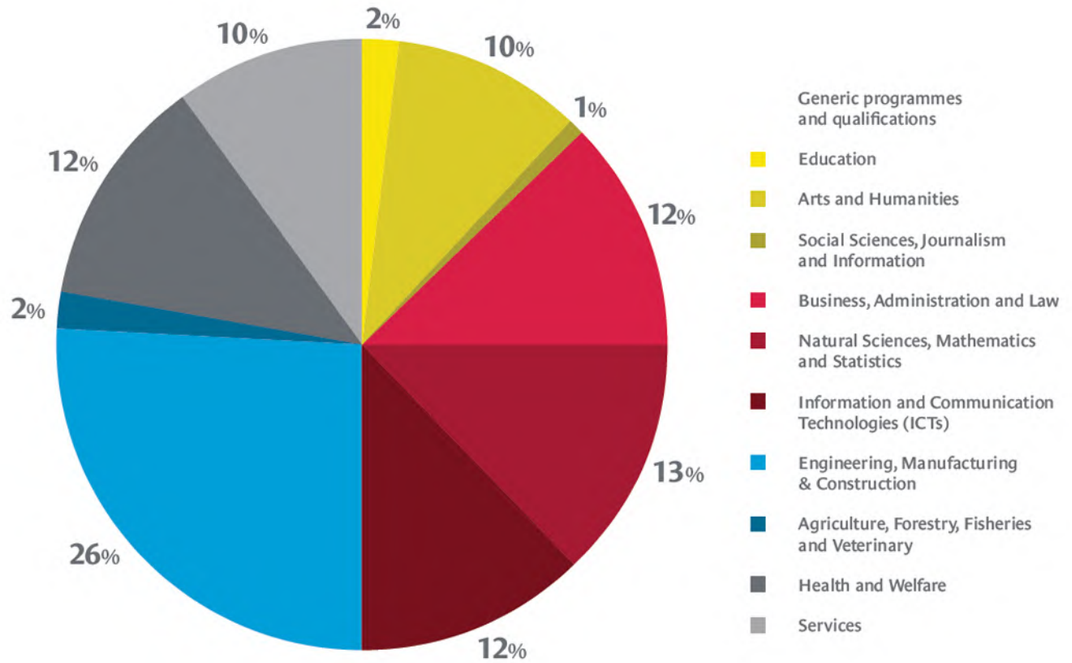


Figure 4.2 CUA Programme offering by discipline - all modes

Research Programmes

The CUA has greatly expanded the postgraduate offerings at NFQ levels 9 and 10 in recent years, and we will continue to grow postgraduate numbers through the development of taught Masters programmes, research Masters programmes and research Doctoral programmes.

There was an increase of 49% in research student numbers across the CUA in 2019 /2020. This was as a result of increased research programme numbers at Level 9, and a strategic intervention with funding to encourage increased research activity at Level 9 & Level 10.

In 2020/2021, full-time postgraduate numbers are similar to the previous year during the autumn semester. There were many challenges in recruiting additional research students during the Covid-19 pandemic. Additional intakes in the spring Semester 2021 will increase research student numbers, with additional structured master's research programmes and PhD students being recruited. 48.5% of full-time postgraduate and 91% of part-time postgraduate enrolments are on taught masters, postgraduate diploma and postgraduate certificate programmes.

Programme Type	Full Time Enrolments 2020/2021	% of PG Full Time Enrolments	Part Time Enrolments 2020/2021	% of PG Part Time Enrolments
Doctorate	63	12.2%	9	0.5%
Masters (Research)	202	39.2%	163	8.6%
Masters (Taught)	219	41.9%	595	31.1%
Postgraduate Diploma	23	4.5%	268	14.0%
Higher Diploma	11	2.1%	420	22.0%
Postgraduate Certificate	0	0%	447	23.5%
Postgraduate Occasional	0	0%	8	0.4%
Totals	518	100%	1910	100%

Table 4.3 CUA Postgraduate Programme profile and enrolments 2020/2021

51.4% of full-time and 9% of part-time current postgraduate enrolments are on research masters and PhD programmes. We have well defined quality assurance processes for the management of our research programmes, and such procedures ensure excellent supervision of our research students and the quality of our research output. When relevant, our undergraduate students will work with our researchers and research students in order to complete work at the edge of knowledge in their field. Research student activities and growth projections are dealt with in more detail in Chapter 5.

Programmes at Level 9 & 10 in the CUA TU span all the Field of Study classifications apart from Generic Programme and Qualifications and agriculture, forestry, fisheries and veterinary. 83% of all postgraduate enrolments are in STEM areas.

Field of Study	Number Enrolled at Postgraduate level	% of PG Enrolments – All Modes
Generic programmes and qualifications	0	0.0%
Education	67	2.8%
Arts and humanities	104	4.3%
Social sciences, journalism and information	19	0.8%
Business, administration and law	121	5.0%
Natural sciences, mathematics and statistics	575	23.8%
Information and Communication Technologies (ICTs)	698	28.8%
Engineering, Manufacturing & Construction	400	16.5%
Agriculture, forestry, fisheries and veterinary	0	0.0%
Health and welfare	326	13.5%
Services	111	4.6%

Table 4.4 CUA Programme profile Field of Study

Apprenticeship Programmes

The constituent Institutes have a long history of involvement in craft apprenticeship programmes and are committed to delivering apprenticeship education to meet the skills demands of the region. Apprentice training is currently being delivered at phase 4 and phase 6 in four trades: Carpentry and Joinery, Electrical Installation, Motor Mechanics and Toolmaking. There are 620 students registered on these programmes in the academic year 2020/2021.

The CUA is actively involved in the development of Consortia-led Apprenticeships, a new initiative launched in 2016, and currently delivers 3 programmes in this area spanning the range of Levels 6 to 8. These new apprentice programmes are in the areas of Manufacturing Engineering and Insurance Practice and include a Higher Certificate in Manufacturing Technology Apprenticeship (Level 6), Bachelor of Engineering in Manufacturing Engineering Apprenticeship (Level 7) and a Bachelor of Arts (Honours) in Insurance Practice Apprenticeship (Level 8). The BA in Insurance Practice at IT Sligo was the first of the new apprenticeships to be offered in the country. In the academic year 2020/2021, there are 161 students registered on these programmes.

The benefits of the Apprenticeship model go beyond the immediate provision of programmes, as elements of such programmes are introduced to other programme types. Internships and industry engagement enhance all of our programme provision. The CUA is keenly aware of one of the listed functions of a Technological University, which is to engage "in the education and training of apprentices", and the CUA commits to continue to lead programme development in this area.

The CUA is also registered with the Apprenticeship Council for the delivery of two further apprenticeship courses in Culinary Arts at Level 7 (Chef de Partie) and Level 8 (Sous Chef). New Apprenticeship programmes are being evaluated across a wide range of disciplines.

Apprenticeships, both traditional and new, will be grown and expanded across the new TU in line with Government Policy, the needs of industry and collaboration with partners and stakeholders.

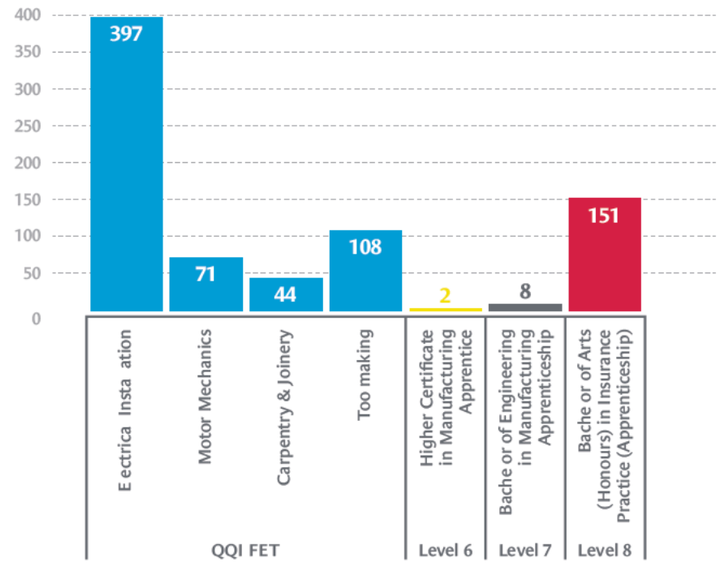


Figure 4.3 CUA Apprenticeship Programme Enrolments by Discipline and Level

Programmes in Direct Response to Immediate Industry Needs

One of the main growth areas in recent years has been the development of Special Purpose Awards and Minor Awards. Such programmes are shorter in duration than Degree programmes and are aimed at providing a very specific skill set to our students. Many of these programmes have been developed in response to government labour market activation initiatives, such as the Springboard + and July Stimulus initiatives. Springboard+ was initially developed by the Higher Education Authority to facilitate upskilling of unemployed people, and more recently, the reskilling/cross-skilling of people in employment. The rapid development of such programmes in the three constituent Institutes is facilitated by our Academic Affairs Departments and the wide industrial network of contacts and is evidence of our ability to react in an agile manner to the needs of industry and enterprise. The CUA commits to a continuous and immersive engagement with industry and enterprise, and to react quickly with new programme development which targets identified skills shortage areas.

Stakeholder Engagement in Programme Design and Delivery

The CUA TU is proud of the applied nature of its programmes and their professional orientation and many of our programmes are also accredited by independent external professional bodies. Our programmes typically have a major emphasis on practical skills, and to this end, many of our programmes are designed with one or more of the following components – high practical component, research project, placement in industry/ enterprise and professional practice.

Engagement with our stakeholders in the region is key to providing industry-relevant programmes for our student cohorts. The Regional Skills Fora, The Western Development Commission, and the Northwest Regional Assembly are key enablers and facilitators of the dialogue required between our industry partners, the CUA and our education partners (NUI Galway and regional ETBs). This close-to-market dialogue will ensure that programme design and delivery will be current, relevant and future-proof.

As a Technological University, we pledge to continue to develop and refine our programmes so that they remain current and that they continue to have a major focus on the practical application of knowledge. The CUA TU will see Work Placements and Internships become an integral part of all programmes, allowing students to gain first-hand experience of the world of work for their chosen career.

This will ensure that our graduates continue to be best-placed to take up employment and to develop a career path upon graduation.

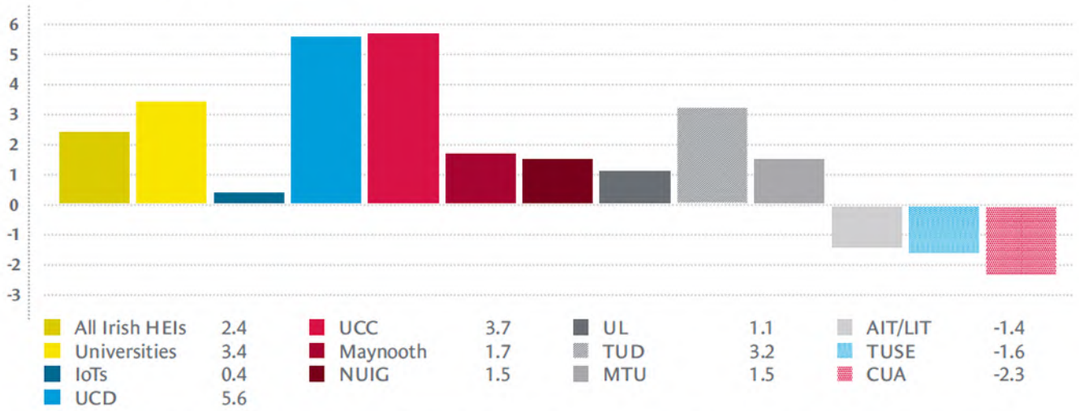
Professional Accreditation of Programmes

All of the programmes within the CUA have been developed in partnership with industry and other relevant stakeholders. Work placement is an increasingly mandatory component of many programmes, and many more programmes have received professional accreditation, giving graduates a competitive advantage worldwide in their chosen professions. Some of the professional bodies offering accreditation are shown in Figure 4.4.

Figure 4.4 Accreditation by professional bodies

4.2 Student Profile of the CUA

From their inception in the early 1970s, the CUA partners have been proactive advocates in the Widening Participation in Higher Education agenda. In tandem with academic delivery of programmes, the CUA has taken a holistic and early interventionist approach to student affairs and services supports to ensure not only access to, but also successful completion of programmes by a diverse student body. This is particularly relevant to LYIT, who are identified as having the most negative Average Deprivation Index Scores by Institute. GMIT and IT Sligo do not have the same level of regional deprivation, but still have a negative Average Score.



Source: https://hea.ie/statistics/data for download and visualisations/socio economic data and maps/socio economic dashboard 2018 19 enrolments

Figure 4.5 Mean deprivation index score for enrolments in Irish HEIs 2018/2019

The deprivation index highlights the need for comprehensive tertiary education provision in the region to encourage and facilitate, as part of a quadruple helix, economic activity and development, as well as improvements in social cohesion. The Border – Midlands – West region is identified as disadvantaged, but Higher Education and Research in the region will be a key catalyst for change, development and innovation by supporting indigenous industry and attracting inward investment into the region.

Programme for Access to Higher Education

The Programme for Access to Higher Education (PATH) is a dedicated fund, broken into three strands, committed to increasing participation by under-represented groups in higher education in order to reflect the diversity and social mix of Ireland's population. The CUA partners have well-established projects through this fund, to encourage participation in higher education (HE) by students from socioeconomically disadvantaged backgrounds, for example:

PATH 2

Consistent with the vision, goals and target groups in the National Plan for Equity of Access to Higher Education 2015-2019, the objective of the PATH 2 1916 Bursary Fund is to encourage participation and achievement in higher education by students who are the most economically disadvantaged and who are from communities that are significantly underrepresented in the student body availing of higher education. Beneficiaries can be in receipt of both a 1916 Bursary and a Student Universal Support Ireland (SUSI) grant, with the purpose of this Fund to support students from specified socioeconomically disadvantaged backgrounds to fulfil and realise their full potential. Students in receipt of a 1916 Bursary are supported throughout their studies by the Institutions' student support services and access facilities.

PATH 3

PATH 3 provides funding to support the development of regional and community partnership strategies for increasing access to higher education by under-represented groups. The Fund complements existing student supports and access initiatives available for students who are the most economically disadvantaged in our society.

The CUA partners are involved in the 'Attract-Transition-Succeed' project, a competitively-acquired €1million, PATH 3 project aimed at widening access and supporting students from under-represented backgrounds to successfully progress into higher education. As part of the West/North West Cluster, the HEIs involved have formed effective partnerships with local DEIS (Developing Equality of Opportunity in Schools) schools, further education providers, community groups, voluntary groups and other relevant stakeholders. Initiatives funded under this PATH 3 project include innovative work programmes, summer schools and mentoring opportunities for Leaving Certificate Applied students, students with disabilities and those from ethnic minorities, providing unique pathways into higher education, transforming the lives of the future students, their families and society as a whole.

The overview of the PATH 3 project in the Northwest Regional Cluster, including the three CUA partners and NUI Galway is available in Appendix 4.1.

4.3 Student Support

In preparation for designation as a TU, a CUA Student Services subgroup was established to inform the creation of a student affairs and services provision that will support students prior to, through and on graduation from the TU.

This group conducted a gap-analysis on student services, which formed the basis of a draft Framework for Student Services (SD4.2) being developed, which provides a foundation for discussion and decision-making on the future structure, role and operation of Student Services.

There is evidence of increased collaboration within the group through:

- The creation of an Employability Statement for the TU, which will inform the development of discipline-based Employability Statements during the transition phase. (SD4.3)

EduCampus

The provision of Student Services across the eight campuses of the TU, ensuring student success across a diverse student population on a wide-variety of programme types and levels will be a challenge, and will require a strategic approach to business process reengineering in the provision of all professional and support services.

To facilitate the TUs in meeting this challenge, the CUA are engaged with the THEA EduCampus Governance Forum, chaired by the VPAAR at LYIT. The purpose of this is to provide oversight in relation to the role of EduCampus in supporting the TU on the development of strategies, resources and best practice implementation.

The Connacht Ulster Alliance TU Steering Group has established a CUA-EduCampus Forum. A draft Engagement Framework for the CUA Partners and EduCampus has been developed, which includes a Draft Terms of Reference (Appendix 4.2).

This forum will provide a framework for the development of Student Services in the TU. Organisational and Operational elements of Student Services within the context of PMSS is also outlined in Chapter 6.

4.4 Student Profile 2020/2021

In 2020/2021 the CUA had total enrolments of 20,273, with full-time students comprising 64% - in comparison to a national average of 81%, and part-time students comprising 36% - in comparison to a national average of 19%.

New Entrants

As with national trends, the numbers of students entering honours degrees continues to increase – 64% of new entrants went into an Honours Degree Programme, and the most popular programmes are in Engineering, Manufacturing and Construction.

The CUA continues to increase participation from under-represented sectors of society with 25.6% of new entrants identifying as having a disability (based on 2018/2019 data); 20.1% coming from non-manual, semi- or unskilled socio-economic groups and 36% are classified as mature. THE CUA TU has invested heavily in structures and supports to facilitate transition to college for a large cohort of students from a catchment area identified as one of social deprivation.

Enrolments

The CUA enrolment by gender for undergraduate and postgraduate, full-time and part-time, is 57% male and 43% female – a consistent trend in recent years, which differs from the national average across these groups where participation rates are 47% male and 53% female (based on 2018/2019 data).

While the majority of undergraduate students across the CUA come from within the region (80%), students represent every county in the Republic of Ireland and all six in Northern Ireland. All counties across the island of Ireland are also represented at postgraduate level.

Enrolment on full-time programmes as a percentage of full-time student population in Engineering, Manufacturing and Construction; Services; Agriculture, Forestry, Fisheries and Veterinary; and Information and Communications Technology are above national averages, while enrolment as a percentage of student population in Education; Arts and Humanities; Business, Administration and Law; and Social Science are below national averages. Programme enrolments in Generic Programmes; Natural Sciences, Maths and Statistics; and Health and Welfare; adhere to national norms.

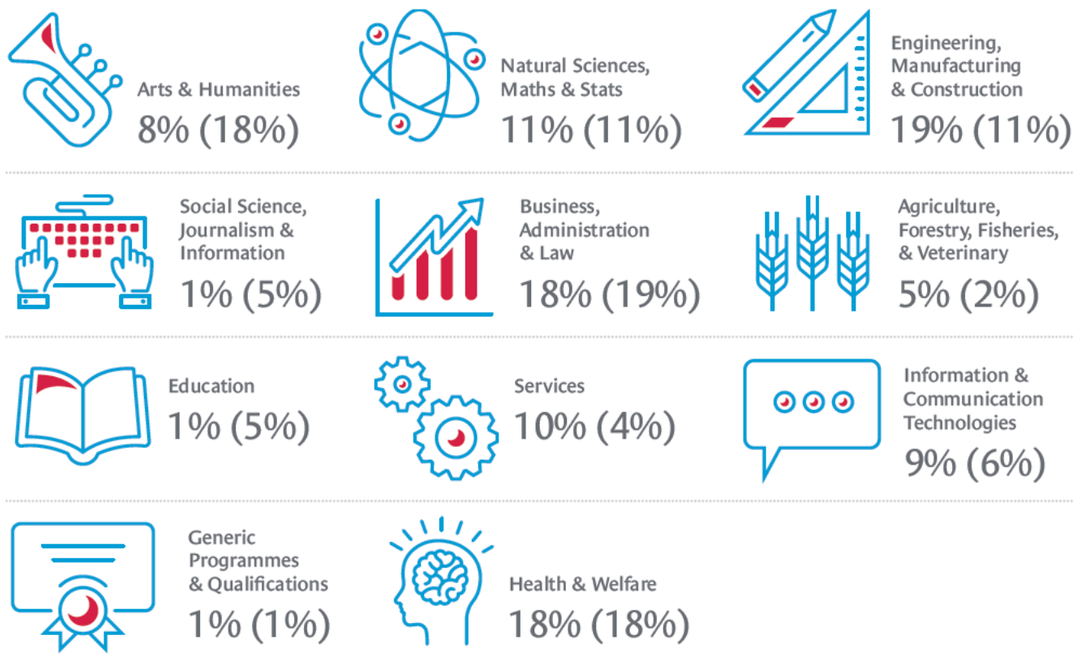


Figure 4.6 Full-time Undergraduate Enrolments by Field of Study, 2020/2021 (National HE 2018/2019)

Enrolment on part-time programmes as a percentage of part-time student population are above average in Information and Communications Technology; Business, Administration and Law; and Services, and at or below national averages in all other fields of study.

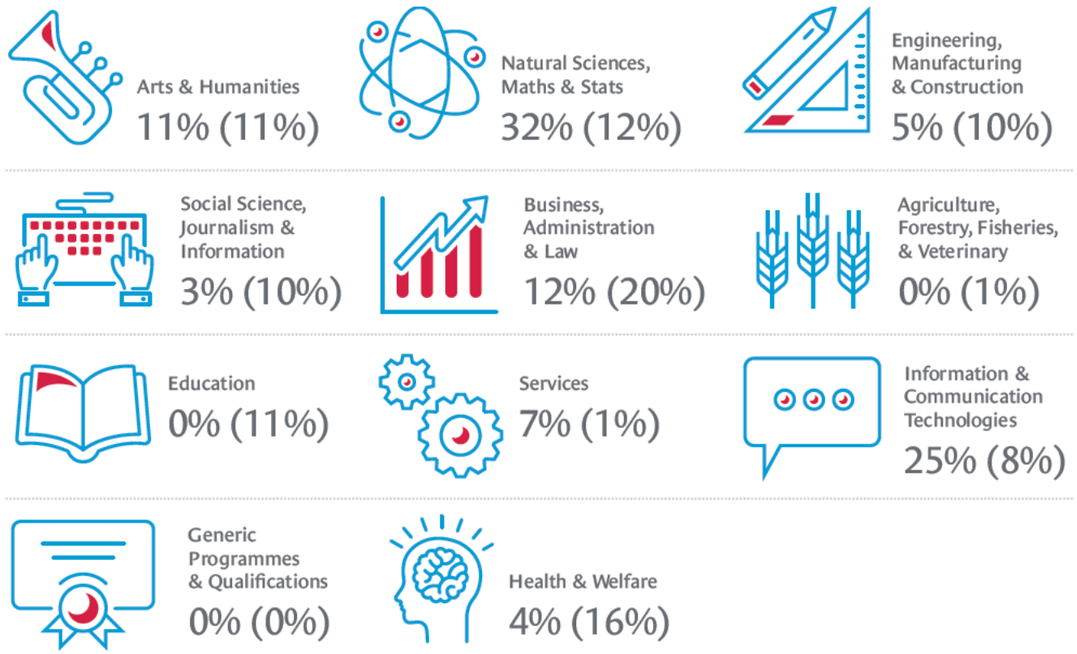


Figure 4.7 Part-time Undergraduate Enrolments by Field of Study, 2020/2021 (National HE 2018/2019)

Graduates

The total number of graduates across the CUA TU increased in 2017/2018, but while the numbers in the following years has remained relatively constant, the graduates by programme level has seen a decrease in Level 6 & 7 graduates and an increase in graduates from Levels 8 (UG) and postgraduate programmes, which is representative of the national profile.

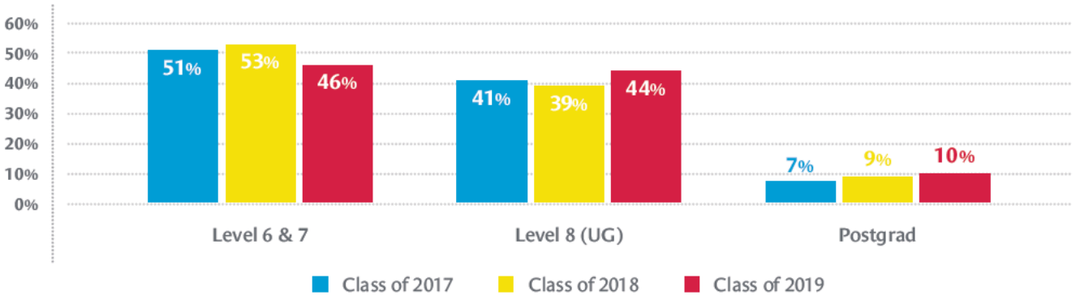


Figure 4.8 Graduates by Programme Level

The graduates by field of study, as a percentage of total student population, are above national average in Engineering, Manufacturing and Construction; Agriculture, Forestry, Fisheries and Veterinary; Services; Information and Communications Technologies; Natural Sciences, Maths and Statistics; and Generic programmes.

The graduates by field of study, as a percentage of total student population, are at or below national average in Business, Administration and Law; Health and Welfare; Arts and Humanities; Education; and Social Sciences and Journalism.

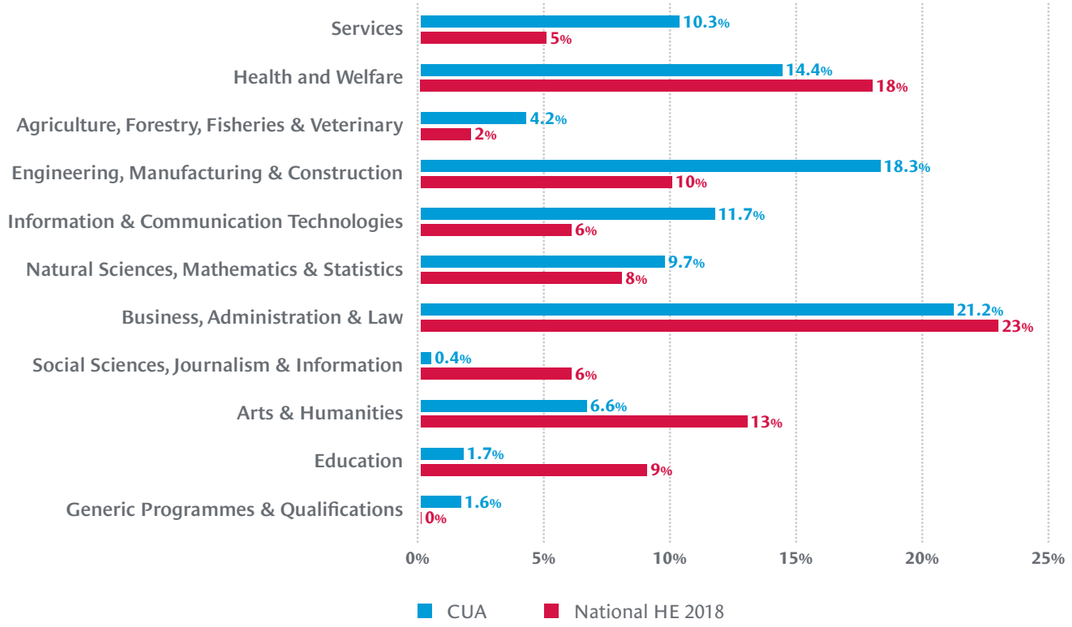


Figure 4.9 Graduates by Field of Study

4.5 Programme Profile Projections and Proposed Academic Structure of the New TU

The merger of three Institutes of Technology into the multi-campus Technological University will provide both opportunities and challenges for programme provision. The TU will be a comprehensive, full-service HEI, providing a broad range of full-time and part-time undergraduate, postgraduate and research education programmes, across a variety of delivery options including online, remote, work-based and apprenticeship, while ensuring that the wide range of student services and supports are available to all. Our student-centred ethos will be based on an educational philosophy of practice-led development of professional skills and research-informed learning and teaching. The synergies achieved through shared resources and expertise will provide a strong basis for an expansive development strategy.

Principles for Programme Provision

The future CUA TU academic programme provision from level 6 to level 10 will be based on the following guiding principles:

- Provision of programmes from NFQ Level 6 to Level 10 throughout the TU on all sites, ensuring a comprehensive response to regional needs;
- Supporting a common student experience across the campuses, and opportunities relating to the first-year experience, work placement, international study, civic engagement, and experiential learning;
- Delivery of a common set of graduate attributes with specific focus on academic disciplines;
- Harnessing technology to enhance our reach to different student populations, facilitating the provision of programmes in an accessible and flexible way; and
- Provision of appropriate academic management and support structures at each campus and college location.

Collaborative Development of our Programmes

The wide network of industrial contacts is utilised during programme development and programme review and provides assurance that our programmes remain up to date and address current issues.

There is an emphasis on industrial experience and practice at recruitment, thus many of our academic staff have a background in industry and enterprise, and hence have a wide network of industrial contacts. Furthermore, the inclusion of a professional practice/industrial placement module in the majority of our programmes provides an opportunity for liaison with industry and the identification of emerging trends and possible future developments.

Proposed Academic Structure to support Programme Development

Since May 2020 a sub-group of the CUA Heads of Faculty/School (HOF/S) has researched and reviewed options for consideration for the Faculty Structures of the new TU. An evaluation of student numbers, programmes and disciplines across the three institutes took place and international faculty and department structures were reviewed. Agreed Terms of Reference for the group are outlined in Appendix 4.3.

The Interim Report of the CUA Transition Group (17 April 2020) recommended four Faculties in the new TU – two in STEMM (Science, Technology, Engineering, Maths & Medicine) and two in AHSSBL (Arts, Humanities, Social Science, Business & Law). It is envisaged that the current variety of disciplines will be brought together under respective faculties to meet the talent needs of employers in the region. It is anticipated that there will be greater interdisciplinarity across faculties in the future.

The CUA HOF/S faculty structures subgroup proposed the following faculties be considered – building on and recognising the strength of the West/North-west region of Ireland.

Two STEM Faculties

1. Engineering & Technology

The Schools/Faculties of Engineering have been working closely together in a number of ways which has assisted greatly in the building of relationships at all levels. Such activities are in the research realms (e.g. joint submissions on a Postgraduate Research Training Centre, and SFI Covid-19 Rapid Response Call), academic quality (e.g. professional accreditation of programmes with Engineers Ireland, SCSI and CIOB, representation on validation panels, external examiners), delivery of apprenticeship programme, and staff recruitment. The three Heads of Engineering have worked together many times over the last three years including at the THEA Heads of Engineering group. Computing departments, even though they currently reside in different faculties across the CUA have also worked closely many times over recent years.

2. Science & Health

The Schools/Faculties of Science have been working closely together in a number of operational areas such as Academic quality (representation on programmatic review panels, new programme validation, external examiners), Human Resources (representation on interview boards), and working together in THEA Heads of Science Group in areas such as benchmarking and operational day-to-day issues. In addition, there have been a number of areas of co-operation at strategic level including Infrastructure (advice on new building development for GMIT STEM Building), HCI (joint submission for a work-based programme in science), and Research (alignment of research groups and centres and submission for postgraduate training centre)

Two AHSSBL Faculties

3. Business

The Schools/Faculties of Business are closely aligned in the provision of business and management programmes in accounting and finance, marketing and management, with additional programmes as diverse as humanities, languages, design, sport's management and law, agri-business, and social sciences. There is a strong track record of postgraduate and executive education.

4. Creative & Cultural Industries

The 'Creative Industries' include a broad range of creative, digital, design, Audio-Visual and media content related sub-sectors. The 'Cultural Industries' include a range of tourism, heritage, language and leisure related sub-sectors. This proposed faculty is also an excellent thematic fit for our expanding suite of teacher education programmes. It builds on our existing strengths, programmes and collaborations in the above areas, and promises deeper collaboration in crossover growth areas like cultural tourism.

This faculty will meet the growing demands of a diverse range of industries under this umbrella which are a significant feature of the economy in the region and offer a unique range of education programmes to facilitate and drive regional growth. 'Industry 4.0' is associated with innovation, technological change and integration. The 4th faculty (Creative & Cultural Industries) will also have these characteristics and will represent the unique difference of our TU. Resisting the temptation to name a faculty of Arts or Humanities, this faculty highlights the ethos of the TU with its focus on employability, engagement with industry and community, and practical applied programmes.

GMIT (Galway International Hotel School) and LYIT (School of Tourism, Killybegs) have been delivering programmes in hospitality, tourism, culinary arts, heritage, and events for 50 years. This team have regularly engaged on strategic national forums regarding education and training provision for the sector. The recent CUA HCI Pillar 3 application (HigherEd 4.0) includes two projects for this sector in online and work-based learning. IT Sligo, GMIT and LYIT are actively involved in research in Tourism and Heritage.

The creative offerings across the TU are provided by the Dept of Design & Creative Media at LYIT, the Yeats Academy of Arts, Design & Architecture, and the School of Design & Creative Arts at GMIT, which includes the Centre for Creative Arts & Media, the National Centre for Excellence in Furniture Design & Technology, and Dept of Creative Education. Our post-primary teacher education is focused on the creative/practical/technical leaving certificate and junior certificate subjects. The excellent collaboration and relationship with NUIG, in the 'Centre of Excellence 6' in Initial Teacher Education, will continue to develop and expand.

The new faculty will be an incubator of talent and skills for these rapidly growing industries, particularly the digital creative industries which are ideally suited to the West/Northwest of Ireland. The pandemic has generated increased interest in remote work and work-life balance. Many digital creative entrepreneurs and multi-national employers are looking west and locating here in larger numbers. In addition, the Creative & Cultural Industries by their nature are well insulated against the effects of AI and robotics forecast for the coming years. The tourism industry particularly, will be recovering from the Covid-19 pandemic, reinventing itself, and surpassing the industries where human service and performance can be easily replaced by AI/robotics. This faculty will be a driver of innovation in the Creative and Cultural industries, exploring new opportunities and directions.

Projections in Student Numbers and Profile

The student profile of the TU will continue to evolve in the coming years in response to demographic changes and student choice. These external forces may see a growth in demand for Level 8 programmes at the expense of Level 6 & 7 programmes, as well as changes in demand for online, apprenticeship and work-based learning programmes which may be a more financially viable option for participants.

Additionally, the TU will make specific interventions to meet the stretch metrics, to increase the numbers of international students, to drive the research agenda and to facilitate lifelong learning.

In the immediate transition phase after designation, the projected student numbers, at undergraduate and postgraduate level, for the combined TU are indicated in the table below.

		2019/2020 Actual	2020/2021 Actual (October census)	2023/2024 Projected	2025/2026 Projected
Undergraduate		**19,450**	**17,225**	**20,842**	**22,067**
	Foundation	229	77	124	124
	Diploma	0	23	20	20
	Certificate	5,099	2,150	5,562	6,087
	Higher Certificate	778	873	999	1,122
	Ordinary Degree (L7)	4,688	4,558	4,179	4,389
	Honours Degree (L8)	8,582	9,491	9,872	10,232
	Occasional	74	53	86	93
Postgraduate		**2,448**	**2,428**	**3,165**	**3,461**
	Postgrad Diploma	237	293	313	333
	Postgrad Higher Diploma	625	429	722	767
	Postgrad Certificate	385	447	565	620
	Masters Taught (L9)	830	814	924	959
	Masters Research (L9)	304	365	549	690
	PhD (L10)	67	72	87	92
	Occasional	0	8	5	0
Total Enrolments UG and PG		**21,898**	**19,653**	**24,007**	**25,528**

Table 4.5 Actual and 3- & 5-Year projected student numbers by programme type

Projections over the next five academic years, show an increase across all programme types, with a significant increase in activity in programme levels 8 – 10.

Level 6 certificate student numbers will continue to increase through single subject and minor award provision as part of regional CPD provision for up-skilling and reskilling, as well as Lifelong Learning study provision for work and leisure.

Level 7 ordinary degree student numbers will come under pressure as more students apply for Level 8 honours degrees through the Central Applications Office (CAO). This national trend is set to continue.

Postgraduate certificate and diploma student numbers will continue to increase as those in work actively seek out opportunities for up-skilling and career advancement opportunities. Funding through Springboard+ and other Government initiatives such as the July Stimulus, will facilitate growth. Larger international companies in areas such as IT, MedTech, FinTech with operations in the region will continue to work in partnership with the TU in the development of programmes to meet the specific needs of staff.

The projections show an increase in research students as a percentage of students on programmes Level 8 – Level 10 increase from 4% in 2020/2021, to 5% in 2023/2024 and 6% in 2025/2026. The new TU will focus on ensuring a pipeline of students from undergraduate Level 8 programmes coming through to research activities at Level 9 and Level 10.

A more detailed breakdown of the student profile and projections for the new TU is available on Appendix 4.4.

4.6 Approach to Quality Assurance and Quality Enhancement

The Statutory Quality Framework for the CUA TU

The CUA TU will operate under the Technological Universities Act, 2018. QQI (Quality and Qualifications Ireland) is an independent State agency responsible for promoting quality and accountability in education and training services in Ireland. It was established in 2012 by the Qualifications and Quality Assurance (Education and Training) Act 2012 and as amended in 2019 .

The CUA Institutes have recently moved from having Delegated Authority (DA) from QQI to make awards to becoming Designated Awarding Bodies (DABs) in their own right. This re-designation applies to all awards from Level 6 to Level 9. The CUA Institutes also currently have Delegated Authority to make awards at Level 10 in a number of niche areas.

The move from Delegated Authority to Designated Awarding Body status also includes a shift in responsibility for the Quality Assurance and Quality Enhancement process from QQI to the Institutions and ultimately the new TU, with a clearly articulated process of self-evaluation, monitoring and review.

Quality Assurance and Enhancement

The CUA TU will be guided in Quality Assurance and Enhancement (QAE) by the Guiding Principles established by the THEA in its Technological Higher Education Quality Framework (THEQF), 2017.

The key elements underpinning the processes of self-evaluation, monitoring and review include: Institutional Review (IR), Annual Institutional Quality Review (AIQR), Periodic Programme Evaluation (PPE), Quality Improvement Plans (QIPs), HEA & QQI Institutional Dialogue, and HEA Reporting.

CUA Examination Regulations

The Working Group reviewing Academic Planning and Strategy have agreed a programme of work to align and co-ordinate activities over the period of transition after designation. Consultation included external reviews and feedback through Academic Councils from the CUA partner institutions. Two key outcomes of the process include:

- A draft set of Examination Regulations, which will form the foundation of agreed Marks and Standards has been proposed by the group, and will be reviewed by individual Academic Councils prior to designation. (Appendix 4.5)

CUA Academic Council Subcommittee

A Joint Academic Council Sub-committee is being established to promote a culture of communication and collaboration in advance of the TU designation. This preparation period will allow the joint sub-committee to consider the academic functions associated with a new Institution and will mitigate the risks associated with transition from multiple academic councils into a single entity. The joint sub-committee will not assume the powers of an Academic Council; however, the sub-committee may make recommendations to each of the Academic Councils.

- Terms of Reference for a CUA Academic Council subcommittee have been prepared and have been presented to the individual Academic Councils (Appendix 4.6)

These, and other works in progress will form the basis for the development of policies and frameworks for Academic Affairs and Quality Assurance and Enhancement in the TU.

4.7 Student Success

While there has been an historic tendency to focus student success on measures of retention, progression and completion, in Ireland and internationally the concept now reflects the multidimensionality of the student experience and, consequently, the potential for numerous indicators of personal and societal 'success'. The capabilities students need for success during and beyond Higher Education, extend beyond specific discipline skills to include the development of productive mindsets, the management of life circumstances and identification with a discipline or profession (Lane et al. 2019). The fostering of student success has been explicitly identified as a strategic pillar of all CUA partners.

> *Student success optimises the learning and development opportunities for each student to recognise and fulfil their potential to contribute to, and flourish in, society. To be achieved, this requires a culture in Irish higher education that values inclusivity, equity and meaningful engagement between students, staff, their institutions and the wider community* (National Forum 2019, p.28).

At the centre of student success lies the student and their learning process. Higher education within the TU will be a partnership, in which the student will be fully involved. Students will be present as active and valued partners in decision-making and quality enhancement bodies from TU-wide to programme level. They participate in the oversight and strategic development of student and academic support services. The TU continually seeks student feedback through a variety of formal and informal means and is committed to 'closing the loop' through response to such feedback.

Figure 4.10 CUA Student Success Model

The support of student success is expressed through a number of interlinked and mutually reinforcing principles and process (Fig. 4.10), as identified by the National Forum.

Within the TU learning and teaching process, assessment and feedback are key to communication between teachers and learners: paralleled by less formal structures of everyday interaction. The TU is committed to enhancing its feedback processes and to the continued development of engaging, authentic and equitable assessment processes. Assessment for learning is supported through academic support services in academic writing skills, digital literacy and mathematics.

This approach is supported by comprehensive structures for staff development, including dedicated and expanding learning and teachingdevelopment units across all campuses, comprehensive web-based resources and financial support for enhancement of staff qualifications. Staff are supported in the development of key skills and competencies in areas such as digital pedagogy, learning analytics, universal design for learning [UDL] and innovative teaching techniques.

The TU is committed to a strategic approach to Student Success, with an evidence-based approach to bring about change and development. It engages positively with national support structures such as the National Forum for the Enhancement of Learning and Teachingin HE, the National Academic Integrity Network, Student Affairs Ireland and the Irish Learning Technology Association as well as European and global networks (such as the World Technological University Network and the Higher Education Academy). The TU has consistently attracted funding from Erasmus+ sources to support the development of learning and teaching innovations and student services.

The provision of relevant, targeted and accessible student support services is fundamental to supporting student success. These range across financial assistance; online and on-campus student advisors; mental and physical health and wellness services; academic and learning supports; careers service; clubs and societies; sporting facilities and catering and retail services.

The CUA supports the work of NStEP, the national body that supports and develops student engagement in HE; it also provides an opportunity to benchmark the TU against national and international best practice. The CUA participates in StudentSurvey.ie at the undergraduate and postgraduate levels: the findings of the surveys directly inform the development of the student success strategy.

4.8 Learning and Teaching

A commitment to excellence in learning, teaching and assessment [LTA] is integral to the purpose, mission and strategy of the TU. This draws from a long history of innovative and responsive approaches to learning across the partner institutions. These include, but are not limited to, problem and challenge-based approaches; research-informed learning; peer mentoring; work-based learning; flexible and technology-enhanced provision; industry placement and student-led projects. Such approaches reflect the requirements of a sophisticated workforce in a knowledge-based economy and diverse society. They support the goals of student success and active and engaged citizenship.

The CUA's commitment to learning through research and enquiry, a practice known as research-based learning and teachingwill continue in the TU. The research-based mode of learning more closely mirrors the ways in which knowledge is created within disciplines. It will inform curricular development, curriculum execution and programme learning outcomes. Students' engagement in research and inquiry will commence in Year 1, with research methods training, and will culminate in the production of a research projects and/or dissertation in their final year. Academic staff will reference their own and or others' leading-edge research to inform their teaching and assessment activities. Assessments will be designed throughout the programme to model authentic research outputs in the discipline area. The TU will continue and expand the CUA's established commitment of providing students with forums to disseminate their research. Post graduate students will be supported through research bursaries to conduct research that will add to the body of knowledge in their discipline area. Centre for Excellence in Learning and Teaching, the library and other resources of the TU will support staff and students engage in research-based learning and teaching.

Student Success Strategy Framework

In preparation for designation as a TU, a CUA Learning and Teaching subgroup was established to inform the approaches to Teaching, Learning and Assessment to be adopted in the new TU.

The CUA Learning and Teaching Sub-group comprises professional staff in Learning and Teaching, lecturers and student representatives. It has co-created outputs (available as Supplementary Documents to this submission) that will inform future development of LTA within the TU:

- Learning, Teaching and Assessment [LTA] Principles and Strategic Initiatives **(SD4.4)**
- Student Success Strategy Framework (with the Student Services Sub-group) **(SD4.5)**
- CUA learning and teaching projects **(SD4.6)**
- INDEx 2019 (Digital Engagement Survey) findings for the CUA **(SD4.7)**
- Learning, Teaching and Assessment Reflections on the impact of Covid-19 across the CUA and national studies **(SD4.8)**.

Overview of Learning & Teaching Offices

The Learning and Teaching (T&L) offices at GMIT & LYIT, and the Centre for Enhancement of Learning & Teaching (CELT) at IT Sligo all support staff to build greater capacity to design their curriculum and teaching practices to ensure a positive student learning experience and robust academic standards, all of which are key in achieving retention. This is achieved by a commitment to CPD through delivery of workshops; seminars; digital badges; postgraduate teaching development courses; and a range of online courses and toolkits to enhance teaching and the student learning experience. All of this, helps produce skilled graduates, who not only have the theoretical knowledge and understanding for their chosen career but will also be critical graduates – students who will question what they have been taught, and have the ability to use those critical thinking skills in the workplace and beyond. Our overall aim is to provide an excellent learning and teaching experience that is informed by current academic research, pedagogic innovation and collaborative partnership across CUA T&L offices.

GMIT: Learning & Teaching Office

GMIT Learning and Teaching Office develops: teaching, learning and assessment; digital capabilities; student engagement and leadership; innovative projects; strategic higher education partnerships; postgraduate higher education teaching development courses; and a range of online CPD courses and toolkits to enhance teaching and the student learning experience. The office team collaborates with academic and professional services colleagues across five GMIT campuses in the west of Ireland, developing innovative teaching practices and engaging student learning experiences. To learn more about the services in the learning and teaching office in GMIT visit https://www.gmit.ie/teaching-and-learning, the GMIT staff portal at GMIT Learning and Teaching Office and the DigitalEd knowledge platform at https://DigitalEd.ie

LYIT: Learning & Teaching Unit

The Learning and Teaching Unit at LYIT supports the enhancement of learning and teaching across all disciplines and programme levels, with a particular emphasis on the first-year experience. It offers a range of professional development opportunities which promote high quality student engagement and learning. LYIT was one of the first institutes to offer an MA in Learning and Teaching. Our innovative projects, funded by the National Forum for the Enhancement of Learning and Teaching, aim to ensure LYIT students can continue to have an excellent learning and teaching experience that is informed by up-to-date research and facilitated by a high-quality learning environment and enhanced teaching approaches. Collaboration with similar units in IT Sligo and GMIT have been very beneficial in further strengthening the strategic priorities of the Learning and Teaching Unit. The Learning and Teaching Unit works closely with colleagues in the Flexible and Online Learning Unit.

IT Sligo: The Centre for the Enhancement of Learning & Teaching (CELT)

The Centre for the Enhancement of Learning and Teaching, otherwise known as CELT, supports academic staff to enable them to contribute to an enjoyable and fulfilling learning and teaching experience which impacts positively on student success. CELT provides a range of informal and formal professional development opportunities to support academic staff through a variety of seminars, guest speakers, online CPD resources, digital badges, and level 9 SPA in Teaching, Learning & Assessment.

We work closely with the Centre for Online Learning and are currently developing a collaborative Teaching & Learning Pathway to support academic staff seamlessly in their role and career. CELT has also established and manages several Student Support Centres including Maths Support, Academic Writing, English Language and more recently Engineering Support.

The T&L offices across the CUA have a very close working relationship, evidenced through the development and delivery of several joint projects. Within the new TU, the T&L offices will capitalise on prior collaborative workings, expanded skill sets and resources, to support academics in enhancement of learning and teaching and enable students realise their ambitions and fulfil their potential.

Learning, Teaching and Assessment Principles

The CUA Learning, Teaching and Assessment (LTA) Principles and strategic priorities were developed following consultation among the learning and teaching leads in the partner institutes and members of each constituent Academic Council. They were informed by the strategy of the National Forum for the Enhancement of Learning and Teaching in Higher Education and the European agreement around the ten 'EU EFFECT principles' for the enhancement of learning and teaching in higher education institutes. They are non-prescriptive, cherish diversity of purpose, content and methods, commend other ongoing sectoral initiatives, and respect fully the fundamental tenets of institutional autonomy and academic freedom. They also promote the values of the European Higher Education Area (EHEA) and embrace the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

> ***"I am extremely excited at the thought of a Technological University in the North West. Pramerica has partnered with LYIT on many occasions over the years. Our partnership continues to create opportunities for local, national and international graduates to help drive market competitiveness, supporting key employer growth strategy and the essential skills required in a rapidly changing FinTech environment. Ireland is a well-positioned leader in the FinTech sector, and a Technological University will play a significant academic role in developing that sector and others across the North West Region."***
>
> **Ciarán Harvey,**
> **LYIT Graduate, Senior Managing Director & CIO,** Pramerica

CUA LTA Principles
Adapted from the European EFFECT Principles for the Enhancement of Learning & Teaching in European Higher Education Institutes.

1. HE learning and teaching experience nurtures and enables the development of ALL learners and stakeholders as active and responsible citizens, critical thinkers, problem solvers, equipped for life-long learning.
2. Learning, teaching & assessment is learner-centred.
3. Commitment to learning and teaching is integral to the purpose, mission and strategy of the CUA.
4. Institutional leadership actively promotes and enables the advancement of learning and teaching and student success.
5. Learning and teaching is collaborative and collegial process involving collaboration across the CUA and within the wider community.
6. Learning, Teaching and research are interconnected and mutually enriching.
7. Teaching is core to academic practice and is respected as scholarly and professional.
8. The higher education institute community actively explores and cherishes a variety of approaches to learning and teaching that respect diversity of learners, stakeholders, and disciplines.
9. Sustainable resources and structures are required to support and enable learning and teaching enhancement and student success.
10. Institutional QA for learning and teaching aims at enhancement and is a shared responsibility of staff and students.

Figure 4.11 CUA LTA Principles

The principles aim to guide the TU strategic initiatives and promote: Student-centred learning; accessibility and inclusion; quality assurance (QA); research informed teaching; and the development of the digital learning and teachingexperience. Enhancing the profile of teaching and innovative pedagogies, strengthening the link between education and research, promoting the use of digital technologies and communicating the overall importance of higher education for individuals and society, are key priorities for the CUA.

Pedagogy development

The evidence on student success indicates the centrality of curriculum development and teaching strategies. The CUA has a long history of learning and teachingprofessional development within its academic community including, most recently, in digital learning and teachingskills. Each partner operates postgraduate programmes and professional training in LTA and collaborates across the alliance in their provision. The CUA commits to continue to develop its Learning and TeachingOffices and to continue the ongoing professional development of the academic community.

Due to long and extensive involvement in distance and online education, a substantial proportion of CUA staff is engaged in online delivery. These numbers increased exponentially as a result of Covid-19. There is a significant critical mass of expertise and experience in the deployment of digital tools that enhance the student learning experience. Peer learning amongst staff is crucial to the development of such expertise, supported through a range of internally and externally funded projects. The CUA iNOTE project (outlined below) exemplifies collaboration in the area of pedagogy and staff training.

Universal Design for Learning [UDL]

To maximise opportunities for student success, the TU must develop approaches to LTA that reflect an increasingly diverse student population. UDL is a leading framework in the international education reform movement that informs educational research and development, capacity building and professional learning (Rose and Meyer 2018). It offers strategies and resources to help meet diverse learning needs and improve accessibility to learning opportunities. Future HEA funding for students with disabilities will be aligned with HEI compliance with UDL.

The CUA partners have acknowledged the strategic, budget and operational actions required to implement UDL. The TU will seek to advance and disseminate knowledge of UDL through research and scholarship to meet the needs of the region and beyond. The CUA partners have been steadily building their UDL capacity through a variety of opportunities.

Flexible online delivery

The CUA has a mature portfolio of programmes, delivered to suit the working and/or the remote learner. This approach includes a range of programmes delivered outside normal delivery hours to adult learners, and programmes delivered to online learners in Ireland and around the world. The development of a common Recognition of Prior Learning (RPL) approach between the Institutes will act to further increase the number of flexible learners. When established, the CUA TU will be the leading provider of online learning in Ireland, and the growth in capacity effected by the creation of the CUA TU will allow further development in the flexible provision of education, and the provision of lifelong learning opportunities for learners in our region and beyond.

4.9 Lifelong Learning

The CUA TU has an established and developed leadership position in lifelong learning and employee education, providing upskilling to the workforce and widening access to higher education. Flexible and accessible education is provided at all levels of the framework, including minor and special purpose awards and CPD training.

This will be a key priority for the new organisation in order to; (i) help local industries to be more efficient and competitive; (ii) help individuals to develop their careers and improve their lives and incomes; and (iii) make the region more attractive for commercial investment, new business start-ups and to individuals.

The TU will be outward facing and agile in responding to the needs of employers and individuals. This responsiveness will be driven by information and learning technologies and by the availability of staff with the relevant expertise. Currently over 60% of our part-time courses are online and we will move completely to online and blended learning in order to:

(i) improve convenience, access and flexibility; and

(ii) improve the quality of the learning experiences.

A Vision for Serving Employers and Lifelong Learners in the New TU

Across the West and North-West, 24% of people have a Junior Certificate qualification or less (v 15% nationally), and the region is low in terms of on-going education and Ireland overall is low in employee education as compared with higher performing countries.

The TU will contribute to the drive to increase productivity by elevating the level of talent, and to focus this talent on the needs of existing and new businesses across the region. Through our employee education and lifelong learning, we will offer greater access to education to a wider number of students regionally, all-island and European/globally.

The TU has a target of some 50%+ of all TU students to be lifelong learners, receiving programmes designed to meet the region's needs. The three Institutes have worked together over the last 3 years to jointly develop our online/blended learning capabilities to cater for the educational needs of employees. The CUA has been awarded funding for significant projects to advance our capabilities:

iNOTE

In January 2019, the CUA was awarded a HEA Transformation Innovation Award for the iNOTE project, which proposed to build digital learning and teaching capabilities in the region over the following 3 years. The iNOTE project is building digital capability for flexible learning delivery in the West/ North West Region. The project is focused on the following areas:

- developing a quality assurance policy for flexible delivery;
- building digital capabilities amongst CUA staff;
- developing a range of digitally enhanced student supports for those undertaking programmes through flexible delivery;
- developing and delivering work-based programmes (WBP) utilising digital capabilities for flexible delivery; and
- mainstreaming, disseminating and evaluating CUA digital capabilities for flexible delivery.

An example of the outputs to date is the Blended and Online Learning Policy Framework, which is available in Appendix 4.7.

A similar project – HigherEdForAll - led out by IT Sligo complements and supports the work of iNOTE. This project is providing flexible, full-time, online/blended degree programmes, listed via the CAO, for students who would find it too challenging to attend an on-campus course –for a range of reasons such as: caring/family business responsibilities; disability; social communication barrier; cost; or geographical isolation. This innovative model of learning will better facilitate equality of opportunity and access to higher education across Ireland and is being developed in collaboration with Family Carers Ireland, The Disability Federation and MSLETB and Donegal ETB.

HCI Pillar 3 Project – Higher Education 4.0

In response to a competitive funding HEA call for human capital initiative (HCI), the CUA institutes are partners in a number of projects which deal with specific pedagogic or discipline challenges. The CUA has also collaborated on a major project, Higher Education 4.0 led out by IT Sligo, including the three partner institutes for a proposal on flexible access and delivery across the region.

The project has been awarded €12.4m funding in the Human Capital Initiative with a focus on enabling agile responsiveness from Higher Education to the skill needs of individuals and employers and providing highly flexible access to quality higher education through new technology enabled models. The title echoes the Industry 4.0 concept, which emphasises digitalisation as opposed to digitisation: developing new sustainable models of education rather than digitising existing ones. This project will form the basis for lifelong learning and employee education provision in the TU and will provide a better and more responsive service at lower unit cost while maintaining the working conditions of staff. The Lifelong Learning ambitions for the new TU catalysed by the Higher Education 4.0 project, will be built on two services:

(i) an external facing service monitoring the skills needs of industry and providing career advice and RPL services to adults, and

(ii) an internal rapid course and content development service. Both services will be designed to be lean and distributed, exploiting technology to provide an efficient service fairly to all campuses and will provide a model for the operation of distributed teams in the new TU.

An overview of the project is available in Appendix 4.8.

The CUA partners are also involved in a number of additional HCI Pillar 3 projects with external partners, with the TU sector, the University sector and with industry partners that will have a significant impact on how the new Tu will develop innovative responses to future education needs.

HEI Lead Institution	Title of Application	Collaborative Education Partners	Funding
Institute of Technology Sligo	HigherEd 4.0: Enabling agile responsiveness from Higher Education	**GMIT, LYIT**	€12,381,848
Institute of Technology Carlow (IUA and Thea)	Realising the potential of recognition of prior learning and lifelong learning in Irish higher education	ITC, CIT, DKIT, TUD, LIT, **GMIT**, AIT, **LYIT**, **ITS**, WIT, UCC, TCD, UL, NUIG, DCU, MU, UCD, THEA, IUA IADT ITT	€6,904,176
University College Dublin	The ADVANCE Centre for Professional Education	**IT Sligo**, TUD	€14,070,668
Limerick Institute of Technology	Digital Academy for Sustainable Built Environment (DASBE)	AIT, **GMIT**, TEA, IGBC	€7,503,106
University College Cork	Sustainability in Enterprise: Delivering a Low Carbon Future	**IT Sligo**, MU	€3,913,440
Institute of Technology Carlow	Centre for Insurance, Risk and Data Analytics Studies (CIRDAS)	**LYIT**	€1,725,343

Table 4.6 HCI Pillar 3 Collaborative Projects with External Partners

Reaching out from our Region

The continuing education provision of the new TU will not restrict itself to the region. Our activity in online distance learning to date has uncovered a global unsatisfied demand for convenient access to lifelong learning. The new TU intends to provide access to lifelong learning both nationally and internationally to:

- improve the productivity and competitiveness of industry in the region and nationally through meeting currently unsatisfied demand for training provision.
- achieve scale in order to improve financial sustainability and reduce the cost of training and education for employers and individuals.
- build a reputation for the new TU through both the provision of education and funding research in specialised domains.

Expected Growth in Lifelong Learning

Online Lifelong Learning has grown at over 20% per annum for the last 18 years and in 2020 increased that level of growth to 25%. This has revealed an aggressive growing demand for conveniently accessible relevant industrial training due to: increased need for continuing education, increased broadband availability, increased digital skills and increased confidence in the medium. Because of this we expect no decrease in the growth of demand and given the increased capacity of the three merging institutions, we conservatively estimate that this growth rate will continue for the first three years of the new TU.

Library Services

Quality dynamic library services will underpin and support the teaching, learning and research functions of the TU. Through its extensive network of eight campuses, the TU will have seven physical libraries. The distribution of such library facilities will enable students to access physical library facilities and services across the region, irrespective of where they are studying. The library service of the TU will be stakeholder focused, be dynamic, harness technology to afford greater access to its services and support stakeholder engagement/ learning, be responsive to the changing face of higher education, be inclusive and will facilitate students to develop their digital literacy, higher-order thinking skills and information evaluation skills. The context within which the TU library will operate will require an extensive re-examination of structures and operations as the individual institute libraries become a unified and strategic asset to the new CUA TU. The Library teams provided an early example of cross institutional collaborations when they embarked on a process of integration through the CUAL (Connaught Ulster Alliance Library), and future plans will provide for the integration and standardisation of systems and processes to the advantage of all stakeholders through EduCampus.

4.10 Internationalisation of Education and Research

All three CUA TU partner institutes have demonstrated their capacity and competence in responding to the international agenda which has been shaped by various Government policies and initiatives. As individual institutions they have successfully marketed and recruited to a range of programmes, engaged with Erasmus proactively, developed relationships with other HEIs, collaborated on a multitude of projects and provided strategic insight into the changing face of internalisation. The CUA through established networks and many years of cross border initiatives in the areas of programme development, delivery and research are well positioned to respond to the opportunities and threats that BREXIT presents. While there is a focus on international student recruitment from outside the EU, the CUA will drive a comprehensive Europeanisation agenda across the EU, not only to facilitate student and staff exchanges for study and work experience, but also to access European research funding through the next funding programme: Horizon Europe.

The CUA partners continuously reflect on their International engagement to ensure that it meets all stakeholders needs. There is a growing realisation that mobility programmes – one of the key focuses to date of activity – may not be the best mechanism for many of the students of the CUA who are challenged from a socioeconomic perspective and have many competing external demands which requires them to complete their programme in a part time mode or incrementally (level 6, then 7 etc). Whilst mobility has enormous potential as a transformative educational experience, it is an exclusive activity and its benefits are not universal. It also does not capitalise on the "international experience" that all students can be exposed through their curriculum. Geo-political issues, climate change, sustainability, active citizenship and the emergence of disruptive technologies are also driving the need for a more resilient model of internationalisation.

The aforementioned growing realisations coupled with the disruption to mobility caused by the pandemic has shaped how our TU will consider international education in the future. The new TU will commit itself to exploring more resilient modes of learning and teaching which are less dependent on physical travel and are inclusive of all student cohorts such as branch campuses, micro-campuses, collaborative on-line learning and virtual mobility.

Internationalisation Strategy Framework

In preparation for the TU a working group from the three Institutes was established to advance a Framework for Internalisation for the TU. The Framework comprises of three pillars which are dissected by the concepts of Sustainability; Active 'Global' Citizenship, and Language and Intercultural Competence. (SD 4.9)

THREE PILLARS OF INTERNATIONALISATION		
Internationalisation at Home	**Internationalisation Abroad**	**Internationalisation of Research**
"the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments" (Beelan and Jones 2015).	The TU will have an overt commitment to the creation of opportunities for our students and staff to have a study or teaching abroad experience. This will include the development of joint programmes; programme exchanges; pathway programmes; staff exchanges; guest lecturers; International workshops or seminars.	In a world where knowledge and skills are increasingly acquired and used internationally, the TU will be an internationally relevant institution producing graduates and researchers who are 'world-ready', able to carry out work and research anywhere in the world and where they can bring the benefits of international exposure to the regions we serve. The TU will seek to have high value international partnerships that contribute to the quality of its research outputs.
Cross Cutting Themes		
Sustainability		
Active Global Citizenship		
Language and Intercultural Awareness		

Figure 4.12 Internationalisation Strategy Framework

The TU will be committed to the ethical marketing of its programmes and market programmes of need to developing countries that are not financially prohibitive or mobility dependent. The TU will expand its market reach through capitalising on its recognised digital capacity in the Learning & Teaching space. As a sole entity the TU will embrace its expanded capacity to engage with all aspects of Erasmus + to benefit employment and entrepreneurship in the region, to facilitate the transition between education and work, to broaden the experiences available for students and staff, to become involved in alliances and projects which promote social inclusion and a broader curricular experience.

Chapter 5

Research, Innovation and Engagement in the New Technological University

Lough Inagh, Connemara, Galway

A defining characteristic of a Technological University (TU) is the scope and depth of its Research, Innovation and Engagement (RIE) activities. In this chapter we outline the development of RIE in this region, the range and quality of current activities, the opportunities to enhance RIE in a new TU setting, we look at the challenges for the sector, and offer a plan for the future.

"Enterprise Ireland strongly endorses the CUA (consortia) application for Technological University designation for the North West/Western Corridor. Achieving TU status and focus, will allow LYIT, IT Sligo and GMIT to accelerate the delivery of skills capability, applied research and innovation for indigenous enterprises in the Region. In particular, Higher Education and the CUA consortia has an increasingly critical role to play in assisting SME's respond to the challenges posed by accelerated innovation, market shocks and dynamic trading environments."

Julie Sinnamon,
Chief Executive Officer, Enterprise Ireland

5.1 Introduction

The story of the development of research in the technological higher education sector in the Northern and Western region of Ireland mirrors the development of the CUA institutes themselves over their five decades of existence to date. This is because one of the core purposes of establishing the CUA colleges, currently known as Institutes of Technology (IoTs), is the same today as it was in the early 1970's: a mission to support the sustainability and development of the Northern and Western region. What has changed over the decades is that the ways in which we achieve our mission, and the ways that we design and deliver supports, have evolved to meet new and more complex needs and opportunities.

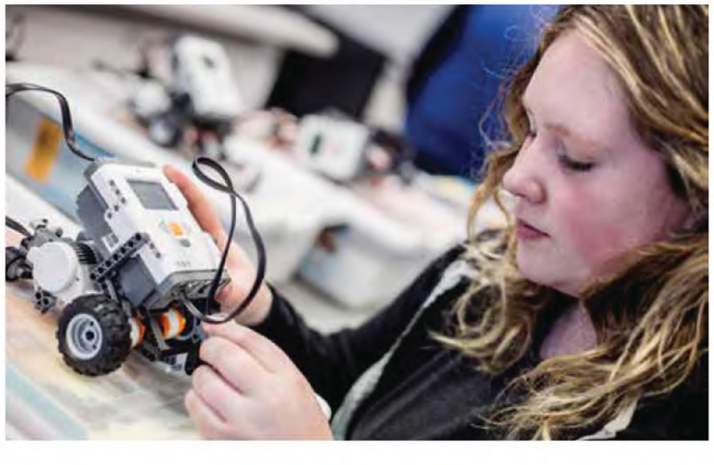
A supplementary document accompanying this application for re-designation as a Technological University (The Past, Present and Future of Research, Innovation and Engagement in the CUA TU) provides comprehensive context and granular detail on: current RIE activities in the CUA institutes; current challenges and acting as one to address them; and future potential and plans. In this chapter, a summary of that story is given in the context of other key areas and activities of the CUA TU.

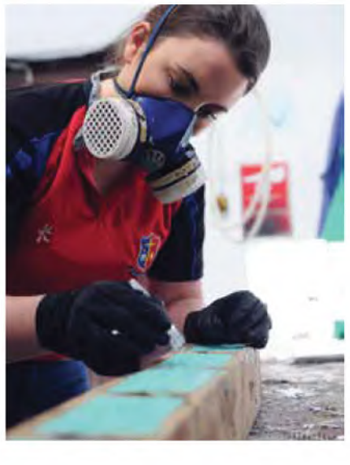
The significant advantages of becoming a TU are that it will:

- Deepen and widen the pool of researchers
- Deepen and widen the pool of postgraduate research students
- Enable the introduction of a new model of RIE which will significantly increase the range and scale of supports to business, communities and other stakeholders
- Have the capacity to better address the particular needs of the West and North-west of Ireland
- Be capable of achieving recognition nationally and internationally for RIE support and excellence

Subsequent sections of this chapter will focus on:

- Charting the pathway of our development of RIE activities since the introduction of technological higher education in the region;
- Explaining how, working as one, the CUA institutions are already actively identifying and delivering opportunities to enhance our current RIE activity and its impact;
- Elaborating on our plans to realise the future potential of RIE activities in the region after TU designation.





5.2 The Development of Technological Higher Education RIE Activities in the CUA Institutes in the Northern and Western Region

When the Regional Technical Colleges (RTCs) were originally established (the region had one of the first group of four colleges built in 1970, the other two followed in 1971 and 1972), the focus of their educational offerings was intended to serve a nascent manufacturing economy. This was emerging from both Ireland's move away, at that time, from an agricultural economy, and from our planned membership of the EEC (which followed in 1973). Most courses were what is now known as Level 6, with some Level 7 courses, supporting operator and technician level positions. That meant that the original design of Schools/Departments and associated management and administration structures did not need to encompass processes required for Masters by Research and PhDs, or related RIE activities (an important point, as this has constrained the growth and development of RIE activities).

Our close work with industry and business soon identified a need for similarly focused Level 8 courses (supporting management and leadership level positions), hence the first Level 8 in the sector was developed in the region in 1982 (it was also the first degree in Environmental Science in the State), followed shortly afterwards by similar degrees in a full range of disciplines.

In 1986, the region began to register Masters and PhD programmes with the (then) awarding body, the National Council for Education and Awards (NCEA). Included in the first tranche of research degrees in the region were also some of the first research degree awards in the sector, including:

- the first PhD (1990);
- the first PhD to progress through all levels of the ladder system (6-10) (1994);
- the first female PhD (1995).

Over the next 10 years, the range of disciplines involved in research expanded to include almost all undergraduate programme areas in the CUA institutes. Institutional developments over that time were focused on building supports for staff and students, with:

- the establishment of Research and Innovation Committees of the Academic Councils;
- the establishment of dedicated research, innovation and engagement management and administration functions;
- the introduction of discrete research quality assurance controls within the academic QA systems (including research Codes of Practice);
- the provision of dedicated research facilities, including laboratories and offices;
- the provision of dedicated innovation facilities, including incubator space, laboratories and workshops;
- the delivery of a joint accredited Graduate Education Programme;
- the delivery of joint business start-up and development training;
- the establishment of Strategic Research Centres and Research Groups;
- the establishment of bursaries and other research funding mechanisms for staff and students;
- the establishment of joint CUA bursaries.

As the CUA institutes matured, the scale and quality of the research activity within them was at the forefront of successive iterations of achieving autonomy, including:

- Accreditation to maintain Research Degrees Registers to Levels 9 (Research Masters) and 10 (PhD);
- Extended 'Approval' status to Levels 9 (Research Masters) and 10 (PhD);
- Delegated Authority to make Awards at Level 9 (Research Masters) and 10 (PhD).

The combined CUA colleges now have the following range of Delegated Authority areas:

Type of Delegation	Level	Discipline Area	
Full	PhD	• Aquatic Science • Mechanical Engineering • Environment	• Mechanical/Manufacturing Engineering • Science (Life Sciences) • Computing
Approval	PhD	• Civil and Construction Engineering • Business • Education	• Healthcare • Social Sciences • Geography and Tourism • Heritage Studies
Full	Masters	• Civil and Construction Engineering • Business (x2) • Education • Healthcare • Social Sciences	• Geography and Tourism • Science (x2) • Computing • Mechanical Engineering • Heritage Studies • Computing

Table 5.1: Range of Delegated Authority in CUA Institutes.

The latest development in this area is the establishment of IoTs as 'Designated Awarding Bodies' under the Qualifications and Quality Assurance (Education and Training) (Amendment) Act 2019. This enables all IoTs to make awards in all areas, to all levels, except for Doctoral degrees. Despite the exclusion of the Doctoral degrees from the conferral of DAB status and the constraints of our limited Delegated Authority at Level 10, the CUA institutes have progressed our ambition to grow and develop RIE activities, key to delivering our shared regional sustainability and development mission, through the collaborative use of available awarding powers.

5.3 Current RIE Activity in the CUA Institutes

The profile and quality of RIE activities in the CUA institutes today is exactly the same as in the traditional university sector (the scale is lower, the causes and solutions for which will be discussed in later sections). We compete and win international funding on the basis of excellence and originality; we publish at the highest levels in the peer-review system; we invent and deliver to market products, processes and systems; we inform the design and delivery of our undergraduate teaching with the outputs of our RIE activities; and we graduate externally examined Masters and PhDs.

A defining characteristic of much of our research is that it is done in collaboration with companies, communities and other stakeholders in our region. A further characteristic that has emerged in recent years is our participation in large-scale international networks, often bringing companies, communities, local authorities and others from our region into those networks (based on the quadruple-helix approach of HEIs working with local government, industry and the community to develop and deliver projects in a knowledge economy).

In recent times we have taken an opportunity given to us in the TU process to introduce a range of taught Masters with a particular focus on research activity (≥ 60 credits). These have allowed us to extend our reach into the workplace, with the research done by individual students being co-designed with employers.

Postgraduate Students

Postgraduate students are at the core of the CUA colleges' research activities and outputs. For the purposes of the TU application, two categories of postgraduate students are accounted for as Research Students (as per the TU Act, 2018). They are:

- Postgraduate students registered on research degree programmes (sometimes referred to as 'traditional' Research Students);
- Postgraduate students registered on taught programmes that have a major research component (≥60% of the programme credits).

Postgraduate Students Registered on Research Degree Programmes

Today, the CUA institutes have 224 postgraduate research degree programme students. The current mix is 68% Masters and 32% PhD, but approximately 90% of the Masters candidates are expected to proceed to PhD completion.

Our research students are 46% female and 54% male. They come from 15 countries around the world (see Figure 5.1) and are studying in a wide range of discipline areas. Our postgraduate research degree students are a vibrant, vital, highly productive cohort within our academy, who are embedded in our teaching programmes and various elements of our management and quality assurance structures, as well as the social, sporting and cultural life of our region. The current cohort is supported by >170 supervisors from within our current staff complement and an additional >90 supervisors from partner colleges, research performing organisations (RPOs), companies and other stakeholders.

Figure 5.1: Current Postgraduate Research Degree Students - Countries of Origin.

In later sections, we will detail initiatives designed to advantage postgraduate students that have been delivered in recent times by acting as one in preparation for our operation as a TU. One, in particular, that we will detail here is the introduction two years ago of a joint CUA bursary scheme.

While each of the CUA institutes has had our own postgraduate bursary scheme, being autonomous institutes complicates the disbursement of core funding for projects that would involve staff and students from other colleges. The Research & Innovation Working Group (WG2) of the CUA implemented a joint bursary scheme to expand the pool of researchers, and the scope of topics that could be investigated. The scheme illustrates practical examples of staff working together across the region. There have been two rounds of the scheme to date, funded from institutional resources and TU Landscape Funding. The project design criteria required the applicant teams to have staff from at least two of the colleges, and that research topics relate to the region. There have been 20 awards, from over 30 applications, involving 85 staff from across the CUA and nine staff from other collaborating institutions/companies/citizen groups within and outside the region.

Postgraduate Students Registered on Taught Programmes with a Major Research Component

The TU Act includes, in its Research Student criterion, students on taught Level 9 programmes where ≥60% of the credits relate to a thesis or theses arising from the candidate's individual research.

Consistent with this criterion the CUA institutes have implemented novel, cohort-based Masters programmes, validated through taught programme QA procedures, but with a major focus on research. In many cases, these have been designed to deepen our 'in company' research. There are currently 16 such programmes across the region, with 213 students registered.

Research Active Staff, Research Centres and Groups & Research Networks

The way in which the CUA TU defines its research activity, organises it internally and connects it externally has, and will have a significant effect on its success. In the following section, the current definition, organisation and connections are described.

Research Active Staff

There are two broad categories of staff researchers:

- Non-academic Staff Researchers who may hold positions on the Researcher Career Framework (RCF) that range from Research Assistant through to Senior Research Fellow;
- Academic Staff who hold positions ranging from Assistant Lecturer through to Senior Lecturer Grade III.

The contracts of academic staff include references to research activity, but do not include any formal requirements to undertake research or any activity identified under the definition of 'Research Active'.

All non-academic Staff Researchers are categorised as research active. For the purposes of this TU application, the CUA institutes agreed a definition of 'Research Active' that includes publication, supervision and a range of research outputs.

The CUA has >240 staff who meet the current agreed definition. Their research areas cover a wide range of disciplines. They are ca. 39% Female, ca. 61% Male.

Research Centres

Research Centres are the larger-scale entities which generally reflect areas of Delegated Authority or greatest level of research activity. There are eight current Research Centres in the CUA as follows (the supplementary document on RIE gives greater detail of the activities, outputs and achievements of theses centres):

1. Marine and Freshwater Research Centre (MFRC)

The MFRC involves ca. 75 people, 30 research-active academic staff and contract researchers and 45 postgraduates collaborating on research that enables sustainability, conserves biodiversity and improves productivity. The centre carries out research projects in co-operation with agencies and industry and provides expertise and advice to national and international bodies.

2. The Centre for Research in Social Professions (CRiSP)

CRiSP researchers are involved in a number of social science and related research areas, such as youth and community, health, psychology, educational progression, learning and teaching, social and environmental sustainability, policy, interculturalism, and community development. CRiSP's aim is, in partnership with social professionals and local communities, to improve the quality of life for those living in the region.

3. The Centre for Environmental Research Innovation and Sustainability (CERIS)

CERIS researchers are involved in projects relating to past and present environmental research and in the interests of sustainability. Research is undertaken by principal investigators/lecturers, postdoctoral fellows, postgraduate and undergraduate students. As well as scientific outputs, CERIS plays an important role in developing policy and legislation nationally and at EU level.

4. The Precision Engineering, Materials and Manufacturing Centre (PEM)

PEM researchers have strengths in material science, laser processing, micro-machining, polymer processing, rapid prototyping, general manufacturing process control and statistical process analysis. The PEM structure provides our Principal Investigators, who have all individually demonstrated notable research achievements through engagement with industry, a platform to consolidate our group's experience, expertise and resources.

5. The Wireless Applied Research Centre (WiSAR Lab)

The WiSAR Lab is an electronic engineering and software applied research centre. The primary research goal of the group is to achieve ultra-low power consumption in Wireless Sensor Networks which are employed in the Internet of Things and in Body Area Networks (BAN). This is achieved through novel antenna design and embedded system hardware and software development.

6. The Medical and Engineering Technologies Research Centre (MET)

MET undertakes research in the areas of biomedical engineering and medical science. Researchers aim to gain a greater understanding of the clinical condition, to inform the future of medical device design, clinical treatment, and to improve patient outcomes. The key research areas are in: stroke; heart failure; aneurysms; congenital heart defects; peripheral intervention; nutrition; and sport performance.

7. The Sustainable Energy Applied Research Centre (SEARC)

SEARC aims to create a synergistic relationship between industry and society to achieve climate change goals. Projects harness offshore wind, photovoltaics, wave and tidal energy, and onshore resources such as anaerobic digestion and wind. Cross cutting themes include: numerical analysis; engineering modelling; operations and maintenance; levelised cost of energy; life cycle analysis; techno-economic analysis.

8. DICE Research and Innovation Centre (Design, Innovation, Creativity and Entrepreneurship)

This centre is a hybrid centre across the areas of Business, Design and Humanities where it looks to 'action' learning as an integral part of innovation, and creating change. The centre consists of a team of 24 lecturing faculty research associates and visiting professors. DICE has been involved in 22 postgraduate research projects and generated over €1.5m in external funding in recent years. The centre is also supported by eight accredited programmes in innovation and enterprise.

> ***"Donegal County Council fully supports the establishment of the CUA Technological University. It is long established that locations with colleges at university level tend to out-perform other regions in terms of retaining high level graduates, the extent of start-up and innovation companies and overall higher value-added jobs. This then attracts further companies and multiplies the benefit. The Council along with its partner agencies including LYIT have been pursuing a strategy of developing the region to be a net contributor to the national economy. This very much aligns with the objectives of Ireland 2040 and achieving a Technological University in Letterkenny is a critical component of our plan to develop the county. It will also help address the regional imbalance and allow the place and its community to grow economically, socially and culturally."***
>
> **John G. McLaughlin,**
> **Chief Executive,** Donegal County Council

Research Groups

Research Groups are smaller in scale and generally reflect new and emerging areas of research for the CUA, or areas where particular expertise is present in relatively low numbers. Part of the logic of the Research Groups is that some may grow to be eligible for establishment as Research Centres. The list of current Research Groups in the CUA is:

1 Business Research Innovation Network Group (BRING);

2 Heritage Research Group (HRG);

3 Integrated Sustainable Energy Research Group (iSET);

4 Nanotechnology & Bioengineering Research Group (Nano-Bio);

5 Mobilities Research Group (MRG);

6 Mathematical Modelling Research Group (MMRG);

7 Clinical Health & Nutrition Group (CHANCE);

8 The Irish Concussion Research Group;

9 Cellular Health & Toxicology Research Group (CHAT);

10 The Data Analytics and Computer Science Group (DACS);

11 Sustainable Wood Technology, Design & Education (SWTDE) Group;

12 Food, Nutrition and Sports Performance;

13 SportsLab NW – Sports Innovation

Research Networks

Looking externally, CUA research active staff, Research Centres and Research Groups have joined and/or established many national and international collaborative research and research training networks in recent years. These initiatives include several cross-border networks demonstrating the strong North-South co-operation that has been a focus within the CUA.

Our involvement in external networks allows access to larger-scale research funding, larger-scale postgraduate training opportunities, access to additional expertise and facilities, and, ultimately, the achievement of greater impact from our research activities. Funding for these networks include Horizon 2020, INTERREG, SFI and others. A number of specific examples of these networks is presented in the supplementary document on RIE in the CUA.

Publications and Other Research Outputs

The principal output of any research system is the dissemination of new knowledge generated, in a variety of forms, but primarily in peer-reviewed papers.

In the past 3 years, researchers from CUA institutes have published >550 peer-reviewed journal papers, 24 books, >65 book chapters, >600 conference presentations. These have included publications with Impact Factors of over 25.

Other outputs have included: commissioned research reports and papers; invention disclosures and patents; art installations and exhibitions; music and word compositions and performances; new standards and processes in manufacturing; new diagnostics and therapies.

Research Funding

The combined research income of the CUA institutes last year was €10.998m (ca. €46k per research active staff member). This represents a significant increase in income in recent years (in 2016, it was €5.341m). This is as a result of the increased emphasis on and support for research activities as part of the preparation for this application for designation as a TU, coupled with a change in focus to larger-scale funding applications (mostly EU). This has facilitated the introduction of some university-type structures and approaches, including dedicated grant-writing and programme management positions. It indicates the potential of the CUA, when designation is achieved, to organise its research activities in such a way that we will achieve university-scale levels of income and support, leading to increased impact in our region. More detail will be given on these in later sections.

Industry Engagement and Enterprise Support

A particular characteristic of a TU is its closeness to industry, communities and other stakeholders in its region. This is a characteristic that it shares with the IoTs, but the scale of a TU will allow the CUA institutes to achieve synergies that are not possible at individual institute level, which will in turn allow us to achieve our full potential impact in the region.

Companies in our region are comprised of 99.8% Small and Medium-sized Enterprises (SMEs). Most of these have less than 10 employees, and so would be better classified as micro-SMEs. We have a particular focus on supporting the start-up, growth and sustainability of these companies. One of the primary advantages of designation as a TU is that we will be able to extend the reach and depth of our company supports significantly when research, innovation and engagement become a central objective in the mission of the new organisation.

Enterprise Support and Development

The CUA institutes have provided incubation/innovation space and facilities (funded initially by Enterprise Ireland [EI]) for start-up companies for over 25 years. As demand has grown, they have increased in size, and in scope of operations, and now include combined enterprise training schemes and a combined Technology Transfer Office (in collaboration with NUIG). Today, the incubation/innovation centres in the region house 105 start-up companies (details of each company are available on the Innovation pages of the CUA institutes' websites) and provide training and growth/sustainability supports to many more.

Profile of CUA Incubation Centres

There are four incubation centres located within the CUA partners. A brief description of each is given below. The supplementary document on RIE provides more detail on facilities and activities.

- Colab began as an incubation space in Donegal and has grown into a widely respected 'innovation ecosystem' for technology and export start-ups. CoLab companies are leading the way in exciting innovation, some of the ideas under development include: life-saving drone software; sensory wearable technologies; digital creativity; and toy manufacturers promoting a positive body image;
- One of the aims of the Innovation Centre in Sligo is to provide a one-stop facility for entrepreneurs and enterprise to exploit the physical and intellectual assets of the institute. In addition to the businesses located in the centre, it is also a nexus for companies in the region that are in the phase where they need these very necessary levels of support, encouragement and mentoring in order to survive and grow;
- The Innovation Hubs in Galway and Castlebar provide desk space, research and development support and mentoring to start-ups. The iHub Galway provides development support and incubation space to promoters who can create a company that can scale and export a product or service. While start-ups in various industries are supported, Medtech has become its speciality. The iHub is currently in the final phases of an extension to provide more incubation unit space for start-ups. The iHub in Castlebar provides desk and office space. They also provide virtual space where clients use the postal address, meeting facilities and mentoring support from the manager or one of the three entrepreneurs in residence.

Local Enterprise Offices (LEO) have developed good working relationships with the centres and tend to send their high-end entrepreneurs to the centres for support, coaching and mentoring. In addition, our centres tend to represent our institutes on regional development projects such as the Action Plan for Jobs, Regional Skills Forum, and the Atlantic Economic Corridor.

CUA Incubation Centres Activities and Supports

The Incubation Centres deliver initiatives to support businesses at every stage of their growth and operations (the 'Entrepreneurial Journey', Table 5.2).

<table>
<tr><th>Stage of Development</th><th>Ideation & Activation</th><th>Start & Concept Development</th><th>Validation</th><th>Investor Ready Business Plan</th><th>Scaling</th></tr>
<tr><td rowspan="8">Supports (including agency & funding supports)</td><td colspan="4">New Frontiers</td><td></td></tr>
<tr><td colspan="3"></td><td>CSF</td><td>HPSU</td></tr>
<tr><td colspan="2">Empower Start</td><td colspan="3">Empower Growth</td></tr>
<tr><td colspan="2">LEO Funding & Supports</td><td colspan="3">Enterprise Ireland Start Team</td></tr>
<tr><td colspan="2">IBYE</td><td>SBIR</td><td colspan="2">Seed Funds</td></tr>
<tr><td colspan="3" rowspan="2">Innovation Voucher Clinics</td><td colspan="2">Innovation Partnerships</td></tr>
<tr><td colspan="2">Access to Accelerators</td></tr>
<tr><td colspan="5">Co-working, Dedicated Units & Innovation Centre Supports</td></tr>
</table>

Table 5.2: Innovation Centre Supports for Companies Along the 'Entrepreneurial Journey'

The centres also, in many cases, are the first point of contact for industry to engage with the host institutes. This engagement ranges across a broad variety of areas e.g. business development, research, bespoke programmes, student/graduate placement. Examples of support programmes include:

- New Frontiers National Programme for Developing Entrepreneurs;
- The Empower Programme (Female Entrepreneurs);
- Campus Entrepreneurship (Student Entrepreneurs).

The centres also work with the other support and development agencies to deliver those agencies' services and supports. They help businesses negotiate their way through the supports and services and establish what is the right pathway for them. Creating greater cooperation between the three partners within a TU will be crucial to building innovation capacity in the region.

Impact

The following key metrics demonstrates the impact of the Innovation Centres from 2012 to 2019.

Metric	Performance
Acquisitions	12
High Growth Start-ups	51
Relocated Companies from the Incubation Centres	93
New Jobs Supported	1200+
Investment Funding Raised by Client Companies	€215m
Revenue Generated by Client Companies in 2019	€30m
Research Funding Completed with Institute	€2m
New Frontiers Participants (Phase 1)	796
New Frontiers Participants (Phase 2)	203
Empower Programme Participants (Start)	64
Empower Programme Participants (Grow)	24
Research, Technology and Innovation Grants	5
Companies Still in Business after 7 Years	76%
Student Engagement (Placements)	133
Student Engagement (Projects)	54
Student Engagement (Start Your Own Business)	621

Table 5.3: Innovation Centre Performance.

The Incubation Centres also have a very positive impact on the cultural, social and community sectors within the region. Some of the centres support the rich cultural base of the region by hosting groups and associations and other cultural groups and festivals. Support may be in the form of accommodation, advice on business plans, advice on grants and grant writing and general coaching and mentoring to ensure their economic well-being.

Research, Development & Innovation (RD&I) with Industry

The CUA institutes are engaged in collaborative RD&I activities with industry at a local, national, and international level. At a local level, enterprise engagement utilises national funding schemes such as Enterprise Ireland Innovation Vouchers and Innovation Partnerships. The mechanisms of engagement and delivery are through the Enterprise Ireland Technology Gateways located within each college and through dedicated core funded staff.

Technology Gateways

Technology Gateways provide Research and Development expertise to industry of all sizes and in all sectors. They provide a bridge between industry and the colleges, enabling access to the right expertise and facilities to support companies in their innovation journey, also working with the companies to provide support and guidance on the right funding mechanisms that they may be eligible for, assisting with funding applications as appropriate

The three Technology Gateways in the CUA region are:

- Wireless Sensor Applied Research Technology Gateway (WiSAR)

  The WiSAR Technology Gateway develops products and industry solutions using expertise in wireless, embedded electronic systems and related software;
- Medical and Engineering Technology Gateway (MET)

  The MET Technology Gateway provides technologies that support RD&I activities in the MedTech, LifeSciences and Engineering Sectors;
- The Precision Engineering, Materials & Manufacturing Technology Gateway (PEM)

  The PEM Technology Gateway provides research strengths in engineering, material science, micro-machining and manufacturing process control.

A summary of the three Gateways' performance from 2017 to 2020 together with a forecast for 2021 is given below (Table 5.4).

It should be noted that in 2020, across the national Technology Gateway network, performance was set back to 2018 levels due to COVID-19. The labs in MET, PEM and WISAR were closed for periods of time preventing access to the facilities necessary to complete industry projects. A few large projects scheduled for completion in 2020 will now be completed in 2021 which contributes to a significant increase in the completed project value for 2021. However, customer acquisition remains challenging going into 2021 which will impact the number of small scale projects that the Gateways can complete.

	2017	2018	2019	2020	2021
No. of Projects Delivered For Industry	87	87	132	88	118
Total Value of These Projects (€)	640,414	846,947	1,121,131	951,680	2,268,400
Industry Contribution (€)	263,636	289,469	512,144	303,029	944,400

Table 5.4: The Performance of CUA Technology Gateway Centres 2017 – 2020/2021.

Engagement is over a wide sector base with the top sectors being medical devices, engineering and electronics reflecting the main specialisms of the three Gateways (Table 5.5). An analysis of the data has shown that there is potential to increase activity in the CUA region through cross-regional and cross-sector co-operation between the Gateways.

Sector	MET	PEM	WiSAR	TOTAL
Automotive	0	0	2	2
Construction	0	12	5	17
Life Sciences	24	8	2	34
Medical Devices	78	4	5	87
ICT	0	1	3	4
Food	2	8	4	14
Retail	0	1	0	1
Electronics	5	0	17	22
Engineering	0	16	22	38
Pharma	0	1	0	1
Software	4	7	12	23
Other	12	21	22	55
Total	125	79	94	298

Table 5.5: The Sectoral Breakdown of CUA Technology Gateway Projects 2018 – 2020.

To further boost the level of collaboration within the Technology Gateway Network, three industry focused research & development clusters specialising in the areas of Internet of Things (Applied IoT), engineering, materials & design (EMD) and food & beverage technologies (Irish Food Tech) have been developed. Accessible through a single point of contact, the clusters employ in excess of 300 research and engineering professionals and to date have successfully delivered over 4000 innovation projects with 2500 Irish companies. The three Technology Gateways in the CUA region engaged in the clusters are as follows:

Gateway	Location	Cluster Engagement
The Precision Engineering, Materials & Manufacturing Technology Gateway (PEM)	Sligo	EMD Cluster
Medical and Engineering Technology Gateway (MET)	Galway	EMD Cluster Irish FoodTech Cluster
Wireless Sensor Applied Research Technology Gateway (WiSAR)	Letterkenny	Applied IoT

Table 5.6: The CUA Regional Development Clusters Aligned with the Technology Gateways.

Dedicated Core Staff

The Contract Research Unit (CRU) was established three years ago, as an exemplar of the potential of a TU, with a specific mission to reach out to regional companies and to help, over time, to build their research and innovation capacity and ambition. Unlike the EI Technology Gateway model, the CRU is not aligned to a specific Research Centre. Staff are core funded and there is a focus on regional enterprise.

This engagement model is a new one, developed by CUA institutes, and is known as CASE, as follows:

- Connect;
- Assess (understand);
- Support;
- Encourage (build regional capacity and ambition).

The resulting impact, beyond particular problem solving, is building the research and innovation capacity of the companies, contributing to their resilience and future success. Some examples of key achievements to date are:

- A database of 1000+ companies developed;
- > 100 companies worked with to date;
- Innovation Voucher activity increased fourfold;
- 4 EU projects won;
- A system of regional clinics designed to reach out to companies;
- 12 companies moved on from small-scale problem solving to larger schemes, such as Innovation Partnerships, or EU projects.

The hiring of core staff for these activities and the funding of these reach-out activities would be extremely difficult to justify, in the first instance, and to fund sustainably, in the long-term, were it not for the CUA institutes' ambition to deepen our impact in the region, coupled with the opportunity provided by the process of application for designation as a TU. The current IoT system does not place the same emphasis on the need for, and value of, such activities, while they will be a defining characteristic of our TU.

The Future of Industry Engagement and Enterprise Support

We believe that the achievement of the potential of the CUA institutes in the development of future industry engagement and enterprise support initiatives will be significantly enhanced by the achievement of TU status.

The continuation, development and expansion of industry engagement is of significant strategic importance to both the CUA and the region as a whole. The CUA is committed to serving its region to the maximum extent possible, and has taken the opportunity of the TU application process to front-end a number of new models and mechanisms that would significantly increase the impact of our capacity for providing research and innovation expertise and facilities to regional and other companies.

A further mechanism for industrial engagement is through supporting clusters. The benefits of clustering for both industry and academic partners are well established; creating close collaboration leads to increased engagement in RD&I activities, and the establishment of an appropriately skilled work force resulting in increased productivity, economic and employment growth.

Across the CUA, opportunities for supporting six sector-based clusters have been identified, and activities to assist these clusters are already underway. Funding has been secured for the establishment of four industry clusters through the Regional Technology Clustering Fund initiative. Supported by the Department of Business, Enterprise and Innovation, and administered through Enterprise Ireland, these clusters will support industry needs in the CUA region, across a variety of sectors and themes:

1 Irish Wood and Furniture Manufacturing;

2 MedTech and eHealth;

3 Advanced Manufacturing;

4 Marine Technologies.

A fifth cluster currently under consideration is a significant ICT cluster in the region comprising multi-national and indigenous companies.

A sixth cluster under development is the Digital Manufacturing Futures Centre (DMFC).

The move to TU status will underpin the above initiatives and will facilitate growth in industry engagement going forward. Operating as a single institution will allow companies access to a larger pool of technological expertise. The ability to engage with researchers across all three sister institutions increases the potential for industrial partners undertaking industrial and applied research.

Future Enterprise Support

In addition to the existing collaborations the Incubation Centres see great opportunities for further collaborations as partners to the CUA. Examples of such areas are:

- Accelerators
- IP Supports & Commercialisation
- Identifying Best Practice
- Spin Outs
- Branding
- Social Entrepreneurship

The centres in the CUA currently operate independently. Their alignment under a common strategy and cause within the TU will realise substantial synergies.

Community Support

Engagement and engaged relationships with the community and wider society has been core to the development and success of all of the CUA institutes. Engaged relationships move beyond being a place of education within communities but consider society and what role an IoT/TU, can and should play, in the betterment of society.

Supporting regional communities with RIE activities is a softer, but no less important activity than supporting companies. The CUA colleges, as IoTs, understand the importance of supporting communities in our region, but, as with company support, are not funded to carry out this work (especially not at the scale that would make a transformational contribution). The TU will provide the additional mission focus to justify resourcing this work as a priority.

Our community engagement activities are classified under the following headings:

- **Community-based research**

  Because of the research expertise available across the three institutes, it has been possible to lead, collaborate and support many community-based research projects. Projects are undertaken to support community development, inform social issues that may exist in communities, provide an evidence base for community development, and enhance the community for its citizens. This community evidence base transcends into student learning by providing real, meaningful, informed teaching, learning and assessment.

- **Knowledge transfer and sharing activities**

  These are embedded across all three institutes, where it contributes to the civic life of the region. Knowledge sharing initiatives make an ongoing contribution to the economic, social and cultural future of our society. Knowledge sharing within this context supports social cohesion, educational capital and citizenship inside and outside the formal learning environment.

- **Volunteering activities within communities**

  Across all three institutes, large numbers of team members and students use their knowledge, skills and competencies to support community initiatives and actions. They often raise much needed funds for local organisations. These activities occur to support the development of agency within communities.

- **Community supported learning placements**

  As higher education providers who wish to develop work-ready graduates, large numbers of programmes have professional learning placement requirements. This provides an interconnection of learning spaces, providing a supportive learning environment for students and a career and employment pipeline for organisations.

One such community support activity that has been developed by the CUA institutes as an exemplar of the potential of a TU, is the system of Sustainable Energy Communities (SECs) (funded by the Sustainable Energy Authority of Ireland [SEAI]). The objective of the SEAI funding is to create a system for domestic and business energy efficiency that would deliver savings to the Irish economy. The CUA institutes approach to achieving this objective was to establish the SECs on a quadruple helix basis, with SEC communities made up of citizens (and citizen groups), local businesses, local authorities and higher education with parity of esteem and a common purpose.

In all to date, 126 SECs have been established by CUA institutes in the region and beyond. Figure 5.2 shows their locations. In total, there are planned savings in energy costs of €30m over 2 years.

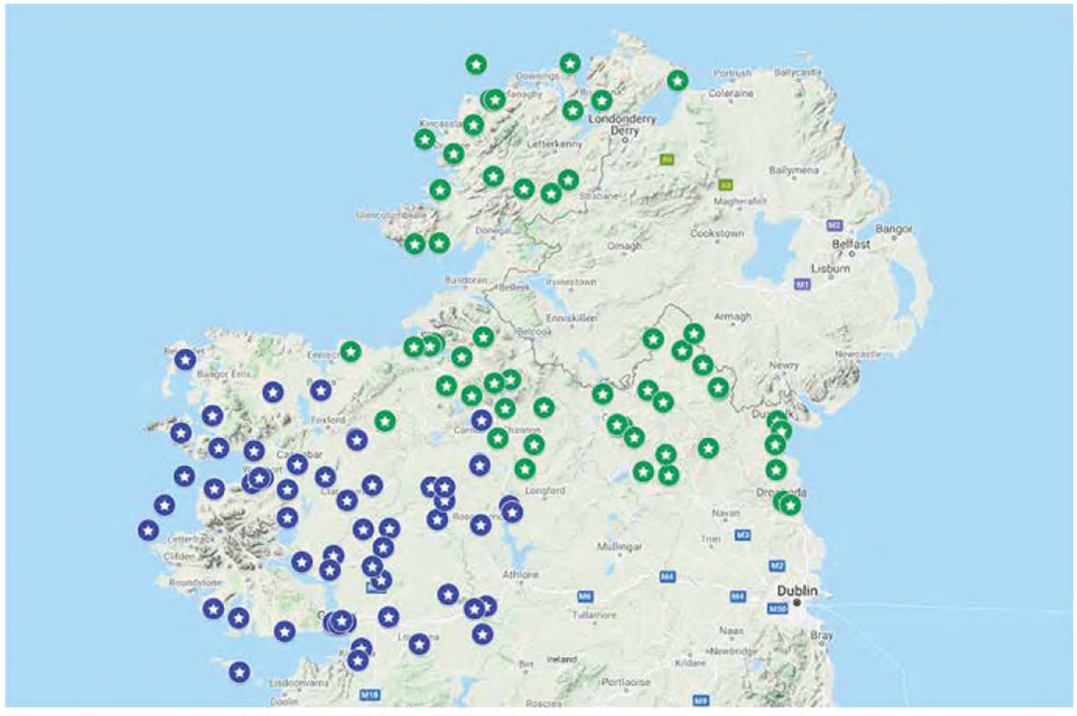


Figure 5.2: Sustainable Energy Communities Supported by CUA Institutes.

Other examples include:

- **Community-based research**

  Heritage Tourism & Social Value Creation; Situational Health Needs Analysis: Young People Sligo & Leitrim; Home Youth Liaison Service Review; Inishowen Development Partnership; Association of Irish Festivals and Events (AOIFE); I-CAAN Licensing Sub Committee; Mayo County Council; That's Life Programme Brothers of Charity Galway; Lived Lives Project Durational Collaborative;

- **Knowledge transfer and sharing activities**

  National Tourism Oversight Committee; Alcohol Forum; Climate Action Fund; Music Education in Secondary School; An Garda Síochána and DVAS; Royal Society of Chemistry; Leaving Cert History Revision Course; NutriPD's; Community of Practice Information literacy workshops;

- **Volunteering activities within communities**

  Vice-Chair of the Mountain Training Board of Ireland; St Vincent de Paul; National Council for the Blind Ireland; Scifest; Cosy Cats Childcare; Focus Ireland; Special Olympics Ireland; Tidy Towns; Donegal Food Festival; NW Simon Community;

- **Community supported learning placements**

  203 programmes with community-supported learning placements; Our Engaged Communities ethos will continue, where the CUA TU will work in collaboration with its community and society to meet our collective needs. Programme development will continue to be informed by the needs of our communities, at a social level but also at an employment level. Community-based research will continue to expand for the benefit of society and its citizens. Active citizenship of staff and students will remain an important feature of who we are as a TU and team members will continue to engage in community development activities. Our university and its facilities will be available and utilised by the community. The CUA TU will have renewed and extended capacity which will facilitate larger community-based initiatives decided upon in conjunction with communities. Students will continue to study and undertake professional practice learning in environments where they learn and contribute, developing networks for their future careers.

Our commitment to community engagement into the future is underpinned and supported by the CUA University Community Engagement - A Plan to Action. This plan to action outlines a plan forward to support genuine and authentic community engagement within the CUA partnerships. Using an evidence-based framework, this plan provides a blueprint for the development, implementation and evaluation of a community engagement plan, in a coherent, structured and systematic way.

Examples of High Impact Successes

Innovation/Incubation Success

In 2017, Galway medtech company Neuravi (later renamed Cerenovus) was acquired by US life sciences giant Johnson & Johnson / Codman Neuro. This landmark deal is reportedly the largest acquisition of a venture-backed MedTech Start-Up in Europe since 2009, and is understood to have been valued in the hundreds of millions. Neuravi became famous in 2015 when it raised €19m for its stroke therapy device, EmboTrap which is used in the treatment of acute ischemic strokes, which account for the vast majority of all strokes. The third-generation device has managed to secure around 30 per cent market share against established rivals Medtronic, Stryker and a newer California company Penumbra, since securing regulatory approval in Europe. Cerenovus currently employs approximately 50 people in Galway.

High Impact Publication

Photocatalytic hydrogen production using metal doped TiO2: A review of recent advances.

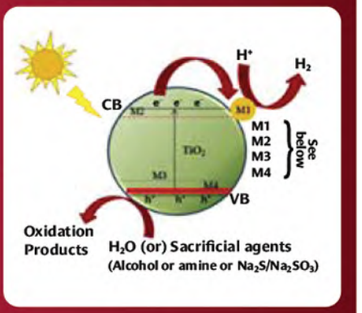
Kumaravel, Vignesh, Snehamol Mathew, John Bartlett, and Suresh C. Pillai.

Applied Catalysis B: Environmental 244 (2019): 1021-1064.

Total citation received to date - 206 (Since 2019). Impact Factor - 16.68

Hydrogen (H2) production via photocatalytic water splitting is one of the most promising technologies for clean solar energy conversion to emerge in recent decades. The achievement of energy production from water splitting would mean that we could use water as a fuel for future energy need. In this paper, the basic principles, photocatalytic-reactor design, kinetics, key findings, and the mechanism of metal-doped TiO2 were comprehensively reviewed.

The journal that this paper was published in has an excellent Impact Factor rating (16.68). In a little over a year, it has been cited over 200 times.



M1 = Schottky barrier or SPR
M2 = Acceptor level
M3 = Donor Level
M4 = Generation of gap states by interaction with TiO_2 VB states

Research Centre Success

The Wireless Sensor Applied Research Centre in LYIT is a centre of excellence in the Internet of Things (IOT) and through its research has a developed a technology stack that has been used to drive innovation and employment in the region. A long-standing success story has been with Chameleon Colour Systems in Tuam, Co. Galway who manufacture and sell paint mixing machines with customers in over 50 countries. In 2015 the company was facing intense competition and made the decision to re-develop their product line in order to leap frog the competition. Chameleon collaborated with WiSAR in the development of a new technology platform which involved licensing IP from LYIT as a foundation for an advanced generation of IOT enabled paint mixing machines. Today Chameleon is the market leader in its field. The research centre continues to make advances in IOT technology, underpinned by data science, contributing to knowledge generation in fields such as Advanced Manufacturing, Medical Devices and Renewable Energy.

5.4 Current Challenges in RIE Growth and Development in CUA Institutes, 'Acting As One' to Remove Them, and Future Potential

In this section of our TU application, we set out the principal restrictions on our growth and development in relation to RIE activities; a set of initiatives that we have delivered to counter some of these restrictions, on the basis of 'acting as one' in the preparation of the application; and an indication of the future potential of our TU.

Current Challenges in RIE Growth and Development

The current restrictions on the growth and development of RIE activities in the CUA institutes are rooted in five key characteristics of the current institutes:

- The current legislative mission of the sector 'allows' for RIE activities, but it does not place them at the centre of the organisations' mission;
- The funding model for the institutes does not provide core funding for RIE activities. The practical effect of this is that it makes it very difficult for presidents and executive management to justify significant focus or spend on these activities;
- The employment contract of the academic staff in the CUA institutes includes teaching, research (and innovation) and external engagement. However, the application of the contract to date has been through a 'Teaching Hours Allocation' model that focuses almost exclusively on undergraduate teaching class-contact;
- The organisational structures are focused, almost entirely on undergraduate teaching;
- Until recently, there was no explicit research pay scale across the CUA.

Taken together, the effect of these characteristics is that we are at the limit of our potential within the current model, to achieve further growth and development.

Concerted Actions and Initiatives, and Acting as One

The factors limiting on RIE growth and development set out in the previous section are macro-level, but they, in turn, lead to specific 'coal-face' issues that mitigate against significant and transformational growth in RIE activities. Some examples of these are:

- Staff do not generally receive time allocations for, or recognition of, the work that is required to write funding applications or peer-reviewed publications;
- Joint supervision is not recognised in the teaching allocation system outside the student's host institute;
- The potential scale and reach of an individual college postgraduate education scheme is much less than what could be achieved in a larger university;
- It is not possible to fund research in partner institutes from own funding.

In working towards this application for designation as a TU, the Research & Innovation Working Group (WG2) of the CUA institutes committed to designing and delivering a number of initiatives that would deal with some of these restrictions in the short term, and would provide evidence for the value to RIE activities of becoming a TU.

A Joint CUA Bursary Scheme

This scheme is a very significant development in the CUA institutes' history and experience of working together. In this case, a clearly stated objective was to have staff collaborate specifically under the CUA banner. It required staff to investigate what expertise were in the staff group in their partner institutes and to reach out to appropriate colleagues to develop project proposals and funding applications.

CUA Research Collaboration Fund

This fund was established to stimulate cross-institutional collaboration amongst the CUA's research community through short-term, discrete projects (typical value €3000). seven projects have been funded to date.

A Joint Supervision Funding Model

A key unlocking initiative, agreed as part of the preparation for this application for designation as a TU, has been a new joint supervision funding model. The CUA institutes agreed in 2018 that, where future projects involved staff from two or more of the partners (whether the project was a CUA bursary or otherwise), staff would be automatically given the appropriate timetable allocation in their local institute. Apart from being a very practical technical arrangement, the measure has become a significant psychological boost to researchers in partner colleges, with the message being clear that CUA collaboration is real and is valued.

Inter-institutional Student Transfer

Before coming together to make this application for designation as a TU, a student in one of the partner institutes that has DA to Level 9 who wished to continue their studies to PhD could not do so, and could not transfer to another partner college (at least not automatically, or easily). In 2018, the CUA institutes agreed that, where a student was studying in one partner institute that has DA to Level 9, and had the ability and ambition to transfer to PhD, another of the partner institute that have DA to Level 10 in that discipline would consider a transfer application. This is within their particular registration and QA process, and would, if successful, register that student for the completion of their studies.

A New Staff Researcher Grade

Two particular issues in IoTs limit the development and growth of RIE activities. The first is the funding model, where no core funding is given to RIE activities (it is almost all based on undergraduate student numbers). The second is the way in which the academic staff contract is managed. While the contract includes teaching research and engagement activities, the mechanism for managing it is a Teaching (or class contact) Hours Allocation model, where everything is related to undergraduate class-contact hours.

The practical effect of these issues is that the Schools and academic staff must prioritise undergraduate teaching. This it is not a system fit to scale our RIE activities consistent with our ambitions as a TU in the service of our region.

Guided by institutional experience of hiring post-doctoral researchers for specific projects, one of the CUA institutes is piloting a new Staff Researcher position which may have potential for broader implementation within the CUA. The key characteristics of the pilot new Staff Researcher positions include:

- The job descriptions include assisting in writing grant applications, assisting in writing peer-reviewed publications, assisting in non-academic aspects of the supervision of up to 5 PhD students and assisting in college-wide research development activities;
- The positions are not academic. There will be no teaching associated (this means that there will be no confusion or conflation with academic positions);
- The pay scales are the IUA/THEA contract researcher scales, with increments and pensions;
- The positions have annual targets for publications, funding income and supervision;
- Meeting the targets will be the basis for promotion to the next level of the IUA/THEA career structure (in this way, the Staff Researchers have a dignified career structure, and the ability to plan their futures);
- Individual Staff Researchers are assigned to individual academic staff members to assist them in building their research platforms;
- The assignment was decided by an open competition, where academic staff were asked to demonstrate their research potential, show how the current systems were holding them back from achieving that potential, and show, in a five-year plan, how one of these assignments would help them to develop their research platforms.

Nothing like this exists anywhere else in the Irish Higher Education system. There are many post-doctoral and other contract researchers in the system, but almost all are project-based, externally funded and without career security. The new type of research staff member has the potential to achieve a significant step-change in the RIE outputs of the CUA institutes, and will be an important element of the RIE offering in the CUA TU.

Further details are given in the supplementary document on RIE in the CUA.

A Joint Graduate Education and Staff Training Programme

All of the IoTs, along with university, agency and industry partners, took part in a project to develop a Graduate Education and Staff Training Programme in Research Practice, which is focused on generic and transferable research skills. A pilot programme was run with staff and students from a small number of colleges, and once the programme and its approach were proven, the individual colleges have operated the programme on an as-needs basis.

The CUA institutes, in preparation for our application for designation as a TU, have agreed to run the programme jointly, as the foundation for a future, larger student and staff training programme. The student programme will provide the structured elements of our structured Masters by Research and PhDs. This founding structure will be augmented by the Postgraduate Research Training Centres identified in a later section of this chapter. Since the CUA has agreed to this joint programme, we have gone on to scope, and begin development of joint modules in Supervisory Practice and in Innovation which will be added to the existing programme. A Graduate Education Officer has been hired to renew, develop and manage the programme.

A Joint Graduate Education Programme Board

Each academic programme in each of the CUA institutes has a Programme Board that manages, monitors and develops the programme. These Boards are made up of staff who teach on the programmes, managers and administrative staff. The CUA have agreed to establish a joint Graduate Education Programme Board to manage the joint Graduate Education Programme. This is the first time that a Programme Board has involved staff from the three institutes. The members are currently postgraduate supervisors from each college. In due course, those delivering the modules will also be part of the Board.

A Joint Postgraduate Research Training Centre Model

As part of this TU application process, the CUA developed and agreed a new model of thematic based postgraduate training – Postgraduate Research Training Centres (PRTCs). They are intended to stimulate cross-institutional collaboration within the CUA, and with the CUA's external stakeholders. They will help to grow capacity to achieve and exceed the 7% research student criterion, and to demonstrate the effective functioning of the CUA as a TU.

The specific objectives of the CUA PRTC initiative are to:

- Develop highly trained and skilled postgraduates who are strongly networked within areas of strategic priority to stakeholders in the CUA;
- Equip graduates with the agility to adapt to evolving workplaces through the provision of transversal, transferable and field-specific skills and individual development supports;
- Establish excellent, cohort-based training programmes within environments of research excellence within the CUA;
- Achieve inter-institutional collaboration and efficiency in the provision of impactful postgraduate student training;
- Forge strong and substantial collaborations with external stakeholders in the design and delivery of innovative programmes of research and training;
- Leverage external funding for postgraduates to grow the scale and impact of PRTCs.

Consistent with the innovations and vision of Europe's leading research-intensive universities the CUA PRTCs will prepare researchers for varied career pathways inside and outside of academia. The 2020 call for expressions of interest demonstrated a great appetite for this initiative. Eight Expressions of Interest were received, proposing 119 PhD projects. These involved 136 staff from all CUA institutions, and 159 partners in Higher Education, Enterprise, Agencies, and NGOs. The thematic foci of proposed PRTCs includes centres in:

- Socio-economic research;
- The creation of resilient societies through sustainable management of natural resources;

- Digital manufacturing and design;
- Heritage, Archaeology & Tourism.

The enthusiastic response to this initial call demonstrates the capacity, ambition and potential impact of the CUA as a functioning TU.

Joint Conferences

Three research symposiums of the CUA institutes have taken place over the past two years to specifically bring together both staff and student researchers to facilitate knowledge exchange and network development.

The purpose of the first one (Jan 2019) was to bring together the research leaders of the three institutes and to provide a networking opportunity which would not only facilitate future collaborative activities but to explore the existing research environments in the individual institutes and to identify the opportunities and challenges of both the existing research environment and the potential future research environment in a TU context.

The second was held six months later. The format of this event was similar to the first symposium, but participation was doubled. The programme for the day was informed by the feedback taken at the previous event and consequently, included key sessions on securing research funding and the impact of research in the region.

The third CUA Research Symposium took place on the 16-17 January 2020. It attracted 220 delegates, with both staff and students from across the three institutes participating. To facilitate further cross-institutional networking opportunities, a social event was included with a conference dinner attended by 173 delegates.

Overall, these events have engendered a significant amount of networking and team building across the CUA institutes. This has led to a number of joint grant applications and other initiatives.

Joint Code of Practice

Each of the CUA partner institutes has a formal Academic Quality Assurance system that meets QQIs specifications for same. In addition to this, each has produced a Code of Practice for the Quality Assurance of Postgraduate Research, to focus the communication of research QA to relevant stakeholders. While the overall content of these documents covers the required scope of required controls, they differ in approach and detail.

As part of our application for designation as a TU, the CUA institutes agreed to review the three Codes of Practice and to propose a joint one which would demonstrate the CUA's ongoing commitment to the quality assurance of our research. Work is ongoing to deliver this.

Future Potential

Through the kinds of actions and commitment detailed above, though still within the constraints of the limiting factors identified, we have seen a doubling of key RIE outputs over the last three years. The additional momentum that can be expected from designation as a TU include:

- a clear central mission and role for RIE activities in the new entity;
- a new funding model that provides core funding for RIE activities;
- new dedicated RIE infrastructure;
- new organisational structures to support and develop RIE activities.

These will have a transformative effect on the research and innovation capacity and ambition of the CUA, and of the companies and communities in our region.

The TU criteria for designation include a requirement to raise research student numbers to 7% within seven years. However, that is not the limit of our potential or ambition. With enhanced staff and student supports, the potential is there to more than double our research student numbers.

With enhanced grant writing supports, a new mission focus on staff deployment to RIE activities, and with the adoption of the national Researcher Career Framework, the potential is also there to engage in larger international research networks, which will significantly increase our research income.

With both of these elements in place, the potential of the CUA to reach out to regional businesses and communities, through RIE activities, with the objective of raising the research and innovation capacity and ambition of the region itself, will be greatly enhanced.

This new RIE ecosystem will drive the production of new knowledge, its dissemination and its valorisation, supporting the sustainability and development of the region's society and economy.

5.5 The Need for TU Level RIE in the Region and a Plan to Get There

The Need

The need for a TU in our region can be best appreciated when looking at the performance of the region within Europe. The Northern and Western region of the Republic of Ireland is an EU NUTS2 region characterised by low population density, depopulation, significant infrastructure deficits and high deprivation indices. Table 5.7 shows how the region is ranked relative to the other two NUTS2 regions in Ireland, relative to the full set of EU regions, and in relation to average EU wealth. (EUROSTAT Regions Yearbook, 2020). While the Southern and Eastern/Mid regions of Ireland are categorised as Developed, our region is categorised as Transition.

Region	EU Ranking (out of 268)	% of EU Av. Wealth	Category
Southern	2	223	Developed
Eastern and Mid	4	186	Developed
Northern and Western	146	85	Transition

Table 5.7: The EU NUTS2 Categorisation and Ranking of the Northern and Western Region of Ireland.

The EU, in its recent discussions with the Department of Public Expenditure and Reform on regional funding, stresses that the application of EU funding to counteract regional disparity 'must focus on research and innovation'. RIE activities in the CUA TU will focus on building resilience, and on building research and innovation capacity and ambition, as a foundation for future success.

Our Plan for RIE

The CUA institutes have considered the short and medium-term changes and developments that will be necessary to achieve the RIE potential of the new TU and have set out the following plan to get there.

The TU will focus on the following strategic actions:

Develop a coherent strategy for future impact

- Introduce a regional research function;
- Introduce a regional 'Stakeholder Advisory Group' to inform and guide our developing RIE strategy and monitor its implementation;
- Establish a number of regional 'Sustainability and Development' fora in a range of economic and social spheres, using the TU's 'honest broker' standing to bring together diverse stakeholder representatives to consider integrated solutions to 'grand' challenges;
- Proactively advocate for the region in national and international fora.

Achieve full potential

- Develop a work allocation model that facilitates agile movement between teaching and RIE activities;
- Further develop the professional research management infrastructure to support researchers and deliver the Research plan;
- Introduce a Research Information Management System;
- Provide direct supports for collaboration and consortium building;
- Embrace remote working strategies to facilitate research in multiple locations;
- Develop policies and procedures to promote and incentivise knowledge exchange between CUA researchers, businesses and communities;
- Use TU core funding for strategic investment in RIE, including investments in research capital and equipment facilities.

Significantly deepen and widen the pool of researchers

- Resource dedicated grant writing supports;
- Roll out the Researcher Career Development Framework;
- Increase the pool of Staff Researchers in appropriate areas;
- Consolidate appropriate research centres to increase scale;
- Where appropriate, include a PhD qualification and active research profile as essential criteria in recruitment;
- Promote and enhance undergraduate research activity;
- Further develop mechanisms to integrate research and teaching;

"I cannot overstate the benefits a TU will bring to our region, on so many levels it will be a gamechanger and fundamental from a regional development perspective. The collaborative process will deliver innovative programming that will make our region a more attractive place to study, live, invest and visit. It will have the capacity to attract new industries and enhance existing businesses. It will undoubtedly improve competitiveness and help to sustain and grow local industries and give potential investors the necessary impetus to consider our region for investment. I support this proposal wholeheartedly and congratulate all involved in the work completed to date."

Bernie Butler,
Managing Director, Food Nutrition & Innovations Limited, Board member of International Fund for Ireland

"The establishment of a Technological University in the region will significantly enhance our third level infrastructure and allow easier physical access to university-accredited education for the region's widely dispersed population. It will also help to reverse the "brain drain" out of the region and will drive economic development, not only in boosting our capacity to attract FDI, but also in enhancing the ability of our many world class indigenous companies to attract and retain talent and thus grow their competitiveness. A TU will also make a vital contribution to enhancing our regional enterprise-supporting ecosystem. It has the potential to create employment, support business incubation and partner with industry in our efforts to develop a circular and low-carbon economy."

Peter Duggan,
Chief Executive, Mayo County Council

- Further develop postgraduate development opportunities and other supports;
- Further develop Graduate Education and Staff Training in RIE skills;
- Expand visiting professor programmes to widen the CUA research network and increase research capacity;
- Provide greater recognition of successes in research, including career progression opportunities;
- Encourage participation from 'lone' CUA researchers with appropriate Research Centres and Research groups;
- Introduce activities to increase awareness of CUA research, such as an annual CUA conference, to increase inter-disciplinary research themes. A website is required for academic staff profiles, including a list of publications and citations;
- Introduce greater flexibility to allocate timetable hours to research activities;
- Host one international conference per year;
- Encourage an increase in the number of publications and citations and to be able to publicise this effectively so that the CUA reputation attracts larger-scale funding opportunities.

Increase the range and scale of supports to business, communities and other stakeholders

- Increase the number of industry collaborative projects in the region through cross collaboration between the Technology Gateways and the adoption of the CRU model in the region;
- Focus a portion of the Staff Researcher pool specifically on engagement;
- Engage with regional digital hubs and other centres to disseminate CUA knowledge and capability both virtually and physically throughout the region;
- Continue to ensure that research and postgraduate teaching is relevant to the region through the use of relevant and pro-active Industry Advisory Boards;
- Expand the operational footprint of the Regional Technology Clusters from the initial base identified to include other relevant companies in the region so that the impact is maximised;
- Seek government support for other Technology Clusters such as ICT;
- Introduce a dedicated TTO with KTI metrics aligned to Strategic Research Centre annual metrics and funding;
- Simplify remuneration from IP generation to incentivise academic participation and a greater number of Invention Disclosures;
- Adopt best practise for the delivery of remote learning and collaborative R&D to minimise barriers to SME and micro-enterprise participation;
- Improve policies and procedures to encourage a greater number of spin-out companies, Working with HBAN and local councils introduce Catalyst style programmes as part of this. Adopt policies to allow spin-in companies and entrepreneurs that will ultimately spin-out;
- Adopt common and transparent IP Protocols based on "Ireland's National IP Protocol 2019" and the European Commission's "Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations".

Be recognised nationally and internationally as a beacon of RIE support and excellence

- Establish a small number of international-scale Centres of Excellence in key areas of competence and potential;
- Support TU participation in international networks and collaborations;
- Adopt position titles that convey research and academic standing consistent with high-performing universities, i.e.: 'Associate Professor', 'Professor', etc.;
- Introduce 'Chair' positions in key disciplines;
- Engage proactively in the FDI process.

Significant elements of this CUA Research Strategic Plan have been put to the HEA for TUTF funding (2020 – 2023) and have been approved. A specific workplan for the funded elements is presented in the RIE supplementary document.

"The development of the CUA Technological University in the North West with partners GMIT, IT Sligo and LYIT will enhance the skills agenda of the region. In the context of Ireland's strategic goal of promoting and sustaining regionally based enterprises and assisting with their skills, training and research agenda IDA Ireland strongly supports the development of the Technological University for the North West."

John Nugent,
North West Regional Business Development Manager, IDA Ireland

Chapter 6

Support Infrastructure for the New Technological University

Fleadh Cheoil na hÉireann, Sligo

The levels of support and the structure of that support for students, staff and other stakeholders are crucial keystones in our delivery of the CUA TU. Here we outline how a range of supports are guided to ensure students achieve success through a quality educational experience.
We will show how a collaborative approach has been implemented and will continue to evolve and develop to deliver the best possible student experience. We detail those supports, ranging from our digital capability to the health and wellbeing of employees.

"Business has a huge level of interest in the successful designation of the Connacht Ulster Alliance as a Technological University as it will be a key driver of the regional economy and regional competitiveness. Future graduates deserve nothing less. Businesses in the North-West and West will fully benefit from successive future generations of high-quality Technological University graduates. This will further assist businesses in retaining key skill sets in the region, thereby advancing their knowledge base and growing expertise for the region."

Séamus Hughes,
North-West Regional President, Ibec *and* GM, Zeus Industrial Products (Ireland)

6.1 Principles of a Service Culture at TU

CUA is committed to delivering a quality service in an efficient, effective, and timely manner. We commit to providing a student, staff and stakeholder oriented service culture across our fully integrated institution which spans eight campuses. Our values integrity, respect, innovation, initiative, excellence, sustainability, inclusivity and agility - inform how we approach all of our dealings with staff, students, suppliers, researchers and funders. As part of our quality assurance measures and commitment to continuous improvement and skills development, we regularly and will continue to evaluate our performance against key service metrics such as service delivery, timeliness, information and professionalism to ensure we are providing a high quality, accessible service to all our stakeholders.

Digital Capability

Information Communications and Technology (ICT) services are essential to the success and are a vital strategic enabler of the Connacht Ulster Alliance (CUA) objective. Strategic ICT planning is essential in achieving key goals such as supporting:

- Student experience;
- Learning and teaching;
- Research and Regional engagement;
- Campus integration;
- Alignment and transformation of ICT dependent CUA internal activities, processes, and structures (SD6.2).

An Information Communications and Technology strategy is actively being developed to provide a long-term high-level pathway to the establishment and support of these services.
The ICT strategy will deliver a unified digital campus with contemporary scalable information services to the CUA community through the best use of technology, enhancing learning and teaching, facilitating innovation and research, and improving efficiency in operational and administration activities.

Existing systems and business processes will need to be examined, aligned and integrated to facilitate the transition to becoming a Technological University. This digital transformation requires extensive planning and attention pre-merger.

Currently all IT Managers meet weekly to manage alignment of key systems, applications and services, ensuring, where practicable, that common systems, applications and solutions are designed and purchased. A review of existing systems and processes has started in many areas, and where individual projects were likely to start, joint projects are recommended instead. The most recent example of this is the provision of landline and telephony services in the three institutes. One of the institutes took the lead in the procurement and implementation process and the requirements of all three institutes were included in the public tender. Other projects are under consideration to provide unified communications, common support technologies and consistent data governance. Due to the geographical spread of the three institutes, we have collectively implemented a video conferencing and collaboration platform enabling high-definition video meetings across the three main institutes. A number of essential ICT security policies are under review and will be aligned between the three institutes in advance of the merger.

We acknowledge the necessity and will begin to establish a new ICT governance framework to further the current and future use of ICT within the CUA. Having such a framework in place will formalise the existing partnerships and establish a method for sustained collaboration. The governance board will support the realisation of the ICT strategy by effective resource planning, project prioritisation, risk identification and mitigation, and appropriate staffing structures.

In recognition of the requirement to brand the CUA as a Technological University we realise the dependence on and importance of our websites, social media presence, virtual learning environment, email systems and their associated domain names. The current systems that support these services in each of the three institutes will need to be integrated or unified to facilitate the transition to the new identity. This is an area that requires specific pre-designation attention and planning to ensure a smooth transition to the new identity at the time of designation.

> *"LiveTiles is a global software company, using cutting edge technologies, including AI and machine learning, to create leading business-to-business digital workplace solutions. Knowing that there is a talent pool of highly qualified software developers in the North West is essential to our commitment to the region and knowing that IT Sligo can now join forces with its IT partners in Galway-Mayo and Donegal is extremely positive news for all tech companies based in the region. LiveTiles fully support and are committed to the Connacht Ulster Alliance project to bring a multi-campus university to the region. This development will help to both retain and attract talent and will be a critical step in further expanding the tech ecosystem in the region and the vital partnerships between academia and industry."*
>
> **Elaine Murphy,**
> **IT Sligo Graduate, Senior VP,** EMEA Operations for LiveTiles

6.2 Student Development Support

Helping students to achieve success and attain a quality educational experience guides our approach to the range of student supports provided. CUA is committed to working collaboratively with students, staff, and other stakeholders in the provision of the best student experience for all our students, regardless of location or delivery mode.

We aim to support our students' journey from pre-registration to post-graduation through the provision of efficient, effective, excellent and equitable services with our students at the core of everything we do. Our student-facing services are made up of the following areas:

- Careers;
- Library Services;
- IT Services;
- Student Administration;
- Student Recruitment;
- Student Support Services, including medical and counselling services, a wide variety of learning supports, and peer mentoring programmes;
- Alumni.

CUA Student Services Sub-group

The CUA Student Services Sub-group was established in March 2019 and held its first meeting in May 2019. The sub-group is comprised of the CUA Admissions and Student Affairs Managers and student support officers. It was formed under the auspices of Working Group No 3 – Academic Planning, Strategy and Related Engagement. The CUAs VPs Academic Affairs and Registrars play an active role in the operation of this sub-group. The sub-group meets on a monthly basis and has completed a detailed work plan focusing on supporting the establishment of the Technological University. Its main actions include:

- Development of indicative Student Services Strategy Framework for the CUA;
- Identification of possible projects for future funding calls as a basis for collaborations;
- Development of profile of CUA organisation in terms of student services;
- In conjunction with the Learning & Teaching Sub-group, the development of a CUA TU Student Success Strategy Framework;
- Review of individual and collaborative student services projects with a view to further engagement.

The CUA Student Services Sub-group has engaged in a range of collaborative projects which support Student Services activities across the CUA and will serve as a strong foundation for Student Services in the TU. The academic support perspective of these outputs has been outlined in Chapter 4. The outputs include:

1. CUA TU Student Success Strategy Framework **(SD4.5)**
2. CUA TU Employability Statement **(SD4.3)**
3. CUA TU Student Services/ Framework **(SD4.2)**
4. Joint application for consent training and support funding

CUA Students' Union

The CUA Students' Union Sub-group was established in November 2018 and held its first meeting in December 2018. The sub-group is comprised of the CUA Student Union (SU) Presidents and SU Officers. In August 2020, the SU Managers/Administrators were invited to join the group to provide continuity as the SU officers change on an annual basis. The sub-group was formed under the auspices of Working Group No 3 – Academic Planning, Strategy and Related Engagement. The CUA's VPs Academic Affairs and Registrars play an active role in the operation of this sub-group. The sub-group meets on a monthly basis and has completed a detailed work plan focusing on supporting the establishment of the Technological University. Its main actions include:

- Review of Student Union Structures and Finance in preparation for TU;
- Review of three current Student Union Constitution documents and the drafting of a new SU TU Constitution;
- Identification of potential projects a basis for collaborations, and
- Developed and delivered a cross campus mental health awareness campaign.

The SU Presidents are members of the CUA Steering Committee and the Joint CUA Governing Body Sub-committee. SU Officers are also members of CUA Sub-groups including Learning and Teaching Sub-group (SU Education Officers) and the Student Services Sub-group (SU Welfare Officers). The Students' Union Sub-group has engaged in a range of collaborative projects which support Student engagement, welfare and academic activities across the CUA and will serve as a strong foundation for the TU Students' Union.

Students Unions play a fundamental role in the life of the three CUA Institutes. At present each of the CUA Institutes has a Students Union (SU) function which comprises elected SU officers. In addition, the Students Unions are support by General Mangers/SU Administrator and also operate commercial outlets. The level of autonomy of the Students Union varies across the CUA as does the range of functions carried out under the Students' Union umbrella. With regard to the planning and preparation for the CUA TU Project, it is vital that that a unified structure for the future Students Union be established to enable it to carry out its functions and provide services and support for the whole student body of the new TU.

In May 2020, the SU and the CUA embarked on a process to engage an external party with relevant expertise to assist with this work and to offer independent advice and guidance to the Students' Union and in turn to the CUA. The External Adviser commenced the review in August 2020 and focused on:

1. Reviewing the current Student Union structures and financial arrangements at the three Institutes to identify:
   a. Common approaches across the three institutes
   b. Gaps in relation to Student Union structures and funding
   c. Areas of difference and divergence which will need to be resolved in drafting a common structure

2 Draft a new common Students Union organisation structure and funding model for the CUA which is reflective of a network of geographically dispersed campuses.

It was agreed that the External Adviser would liaise directly with the three SU Presidents who in turn would report to Working Group 3 and the CUA Steering Group. A series of meetings were held with the SU officers and the SU General Managers/Administrators during the period August – November 2020.

Transition Group

To facilitate the development of a TU Students' Union, it is recommended that the three students' unions form a Transition Group that will focus on bring about the necessary changes relating to the amalgamation. The Transition Group would be responsible for:

- Identifying issues that will arise for current and future students relating to the student experience academically and in other areas – raising those issues when and where appropriate – and keeping students informed on progress with the formation of the TU;
- Overseeing the change process of students' union merger and designing a new democratic structure and necessary administrative processes in consultation with the wider student body;
- Developing a strategic plan that represents a common understanding of the future direction of the new students' union;
- Leading a communications strategy that keeps students informed of what is being done to ensure the is minimal disruption to their academic experience and engaging them in a conversation about the future structure of the students' union, and
- Liaising and negotiating with the three Institute of Technology and their working groups on the amalgamation process.

The process of establishing the TU will require several projects, that will at times overlap, to be carried out. It is suggested that the personnel for this group be three Students' Union Presidents and three senior staff members from LYITSU, GMITSU and ITSSU. Other members can be recruited as agreed by the core group.

Development Projects

To ensure the process of establishing the TU takes place as smoothly as possible several projects will need to be initiated that will:

- Develop a communications plan that will explain each stage of the merger process and, where required, consult the wider student body;
- Create new democratic structures and constitutional documents to back it up;
- Create a legal structure that will underpin the constitutional position of the students' union;
- Agree positions and remits for full time officers and any part time officers;
- Identify resource requirements to enable the students' union to flourish to include, but not limited to, share of the student services charge, merger of trading activities;
- Conduct a staffing review to evaluate current roles, ensure fair remuneration, and agree what other roles will be needed to support the new students' union, and.
- Monitor institutional amalgamation issues, making sure student concerns are raised, where necessary with the appropriate bodies.

A report from the Development Planning Session for CUA Students' Unions - October 2020 (SD 6.3) and Review of CUA SU Structures and Financial Arrangements (SD 6.4) are included as supplementary documents.

6.3 Corporate Services

The professional services and support teams will provide expertise across the Technological University to support the delivery of our strategic aspirations. They provide support to the whole organisation in the form of corporate services, administration, finance, technical and operations. Their objective is to shape the future of the TU, using expertise to provide excellent services which enable the creation of world-class research and high-quality teaching, in an inclusive academic culture. Professional Management and Support Services (PMSS) staff across the three institutes have worked together to develop a planning process for the integration of services and activities to support the TU. Their expertise, willingness to change and to embrace new challenges is testament to the level of professionalism that exists within this cohort of staff.

Working Group 4 (Corporate Services and Related Engagement) established seven sub-groups to support the transition to TU. Similar to all CUA sub-groups, the professional, management and support services sub-groups have members from across the CUA and have developed a shared understanding of the practices and structures in place across the institutions and how these will be integrated in time to support the TU. The history of collaboration between many of the members of the sub-groups aligned to WG4 has fostered strong professional relationships, which have been strengthened during this process, providing a sound basis for the development of a coordinated and integrated approach to the delivery of our essential services. The breath and value of the PMSS functions and services provided are a vital component to the success of our TU.

The table below provides a brief overview of WG4 and associated sub-groups, with an expanded summary available in Appendix 6.1:

Group	Key Focus	Cluster Engagement
Working Group 4 Corporate Services and Related Engagement	• Development and harmonisation of policies, processes, systems, data and personnel for the diverse corporate services. • Consolidated Financial Planning. • Development of strategy for the achievement of TU criteria, in relation to institutional sustainability and staff qualifications. • Policy and practice in relation to HEA TU support funding.	Established October 2018
Finance Sub Group	• Development and harmonisation of policies, processes, systems, data and personnel for the future unified Finance Function. • Development of robust funding strategy for TU. • Engagement with the Drafting Group in developing the TU submission, with a focus on the production of a Consolidated Financial Plan.	Established September 2019
Human Resources Sub Group	• Development and harmonisation of policies, processes, systems, data and personnel for the future unified Human Resources function. • Engagement with CUA IR Forum. • Engagement with the Drafting Group in developing the TU submission, with a particular focus on the production of a robust staff qualifications audit and staff development plan.	Established September 2019
Information Technology Sub Group	• Development and harmonisation of policies, processes, systems, data and personnel for the future unified ICT function. • Develop CUA IT Strategy. • Develop Systems Integration Plan. • Develop Common Procurement Process where possible.	Established June 2019
Estates Sub Group	• Development and harmonisation of policies, processes, systems, data and personnel to deliver a robust Target Operating Model (TOM) for the future unified Building and Estates function. • Engage with the Drafting Group and produce relevant content for the TU submission document.	Established December 2019
Corporate Governance and Data Protection	• Review of current Governance and Data Protection policies, procedures and guidelines. • Develop common policy template where possible. • Suggest measures to align policies and procedures as appropriate. • Identify opportunities to collaborate on issues pertaining to Corporate Governance & Data Protection.	Established June 2019
Corporate Procurement Sub Group	• Review of current systems (e.g. Agresso) and levels of alignment. • Collaborate with IT Sub Group to develop Systems Integration Plan. • Develop Common Corporate Procurement Plan. • Develop common Contract Management System.	Established May 2019
Health and Safety Sub Group	• Identifying appropriate opportunities for collaboration pre-merger. • Produce a plan to deal with day one activities. • Review structure of H&S departments in each Institute and suggest optimal structure for H&S within the TU. • Review and refine the key policies and procedures to propose alignment with statutory or public health standards. • Develop an operational model through collaboration for the safety management system. • Develop enhanced safety and health standards of communication and co-ordinated legislative compliance.	Established June 2020

Table 6.1 Overview of WG4 and aligned sub-groups

CUA EduCampus Forum

The CUA EduCampus Forum was established in April 2020, membership is drawn from representatives from EduCampus and two representatives from partner institutions. Under the auspices of WG4, this forum will oversee the strategic system alignment activities with a focus on:

- Approval of Project Charters and Plans;
- Oversight of the management and implementation of MIS projects;
- Oversee reporting and communication to the joint CUA/ EduCampus projects and related matters to relevant individuals and groups.

Initial engagement with CSMs from Finance, HR, IT and Payroll has commenced, and key responsibilities are divided as follows:

- Undertake Business Process Analysis to achieve policy, business and system process alignment (CUA);
- Capture agreed requirement to enable alignment (CUA);
- Lead and facilitate design of strategic alignment activities (EduCampus);
- Facilitate Solution Review activities ahead of scope and planning (EduCampus);
- Manage all commercial supplier engagements (EduCampus).

It is anticipated that engagement within and activities arising from this Forum will intensify as the CUA project moves into the pre-designation and transition phases, with the development of a Corporate Services Integration Plan.

Corporate Procurement

Corporate Procurement refers to the strategic, compliant acquisition of works, goods and services. This function will be critical as all procurements in the new TU must comply with national and EU procurement law. To achieve a high standard of procurement excellence in the new TU, a comprehensive procurement structure, strategy, policy, procedure and oversight must be implemented across the new unit. This will ensure compliance and value for money and will be a key driver to ensuring that the new TU's vision and strategy can be achieved. The quality of the relationships built up within the Sub Group since its creation have allowed us to create and agree together a vision for a future Corporate Procurement Centre of Excellence in the new TU. The qualified, experienced and dedicated professionals already undertaking procurement activities within the three partner institutes offer a significant head start to the new TU in getting the new function off the ground quickly and embedding best practice from Day One (Appendix 6.2).

Building and Estates

The CUA will be a large, multi-campus operation across eight campuses spanning a geographical hinterland of 26,000sq km.

University standards in terms of both space metrics and quality in teaching, learning, study and recreation facilities are essential to supporting the CUA in successfully competing in the TU sphere.

The challenges facing the CUA will include the upgrading of the existing estate to university level metrics and the development of the additional physical infrastructure necessary to accommodate growth in student numbers, research activity and internationalisation in line with ambitious CUA targets. As CUA campuses continue to renew and expand, we commit to promoting energy efficiency and carbon reduction in line with national targets, while ensuring that our campuses and buildings and estates services will support the broad spectrum of educational, research and student life activities. Appendices 6.3 - 6.7 provides an overview of the existing campuses master plans and planned capital expenditure.

The history of collaboration between individual estates managers in the three existing institutes has fostered strong professional relationships which will support future collaboration on developing an overarching structure, with resources commensurate with the vision and ambition of the CUA whilst recognising the geo-diversity, and the many and various other challenges which the CUA will face.

The Building and Estate managers at each institution intend to collaborate to identify and quantify the deficiencies in building area and quality of the CUA by comparison with similar TU standards, and the particular challenges posed by geographic diversity. They propose to develop a unified plan to address those deficiencies over time, and to recommend a commensurate structure and resources to support its delivery. The objective of the plan will be to create a TU estate that can compete with credibility in the TU arena.

Working collaboratively, the Building and Estate managers intend to produce a coherent capital funding stream requirement and plan, supported by and commensurate with CUA and national strategy and ambition to transform the three entities into a TU of international standing over its first decade in operation.

Key deliverables proposed over the transition period include the following:

- A CUA Capital Development strategy for each campus to support the CUA master strategy;
- A CUA Buildings Operational strategy to include maintenance and facilities management support services such as, cleaning, caretaking, security, energy management, special events etc;
- A strategy for resourcing and management of the structural changes necessary to transform from IOT to TU / University structures to enable and facilitate the delivery of the CUA Capital Development and Buildings Operational strategy;
- A master planning strategy for the CUA with a sub master plan for each campus;
- A CUA strategy for the appraisal and management of capital works projects;
- A CUA strategy and resource plan to achieve the 2030 carbon reduction targets;
- Streamlined B&E policies, procedures and protocols across all campuses.

* (The managers of the three entities have assumed that the above deliverables will be achieved over a transition period which may extend to circa 3 years).

Health & Safety

A culture of cooperation and cohesiveness has been fostered among members of the Health and Safety subgroup when addressing the myriad of new health and safety requirements arising from the institutes' response to the Covid-19 pandemic. This subgroup has committed to developing a draft overarching Safety Statement for the new Technological University. There is a requirement to collaborate with our CUA project management colleagues in relation to the organisational structure of the new university in order to complete this. This draft framework document overarches and incorporates the existing safety management system of each institute. We are also committed to working on the alignment of key compliance policies/ procedures to facilitate a seamless integration into the new university.

6.4 People/HR Strategy and Services

The People Strategy comprehends the development of a competency-based framework for all staff, which will be critical to support recruitment, promotion, leadership development, induction and probation, performance management and leadership development.

The CUA will lead HR best practice by ensuring the initiatives, protocols and policies underpinning the People Strategy will empower leaders and managers and facilitate implementation. The CUA will ensure positive engagement with the external regulatory environment, with our social partners, and with information technology to drive change.

In creating a meaningful HR Strategy for the new TU, it must be aligned with and supportive of the overarching CUA strategy, which is currently under development. In addition, our HR Strategy will be informed by our key stakeholders – our staff – and will evolve following an extensive consultation process with our staff representatives. As an interim measure, the following proposed five (5) HR strategy pillars are proposed:

1. Transforming HR Services in the New TU

a) Collaboration;

b) Partnership;

c) Client Service Model.

2. Enabling a Performance Culture

a) Talent Attraction - Being an Employer of Choice;

b) Retention of Talent;

c) Staff Development & Career Progression.

3. Developing a Common CUA Culture

a) Adopting of existing best practices.

4. Equality, Diversity and Inclusion

5. Enhanced Employee Engagement

Staff Training and Development

It is acknowledged that training and development is an integral part of an ongoing staff development process to ensure that all staff are provided with the skills and competencies required to fully integrate into the merged organisation. In addressing the requirement to achieve the stretch metrics under the TU Act, the draft CUA training and development plan (Appendix 6.8) covers a wide range of training courses recognising and understanding the value of staff members' skills, knowledge and behaviour. The CUA is committed to the promotion of an ethos that supports all staff from all functions to fulfil their professional and academic potential.

Operational and Individual Learning Needs will be identified through a newly developed and agreed Performance Management Development System process and informed by other agreed consultative processes such as engagement with staff representatives, Athena SWAN or other surveys. This will enable managers to identify team objectives and required competencies, while providing all staff with the opportunity to develop the competencies they require for their current roles and to develop agility and adaptability for future career progression.

Equality, Diversity & Inclusion

The CUA People Strategy will support the development of a compelling Equality, Diversity and Inclusion Strategy for the TU. We will ensure that equality is considered, measured and incorporated into all decision-making forums to ensure we complete the implementation of the recommendations of the HEA's Expert Report on Gender Equality (2016).

Changes will be embedded to foster a culture of gender balance, and to improve processes and structures that create gender-balance and equality of opportunity for all, at all levels within the organisation. The CUA is committed to supporting gender equality, including through Athena SWAN accreditation. A draft CUA EDI Values and Principles Framework (Appendix 6.9) is available in the Appendices section.

Employee Wellbeing

The CUA will continue to provide a safe place of work for all staff through continuing to review and amend as needed its policies and practices that support positive health and wellbeing of staff.

Staff welfare schemes and the employee assistance programme are already available to staff. The support and development of a work–life balance policy with family friendly initiatives is common across the CUA to date and is an integral part of our Athena SWAN strategy.

Wellbeing events include mental health, bereavement, mid-career financial planning, retirement planning. The CUA will continue to look at other schemes, such as opportunities for sabbatical leave and the introduction of recognition schemes for outstanding achievement.

The TUI have presented a position paper on Mental Health and Well-Being. This paper, once agreed by CUA management and other unions, will form the basis of the TU's Mental Health and Well-Being Policy and will be implemented across the TU once it is established.

"I fully support the Technological University for the West/Northwest of Ireland and see the benefits for students in the region. Having access in our region to high level research and collaboration between Industry and the TU will bring distinct competitive advantages to many organisations and also places the region on a par with other regions and clusters who have enjoyed access to a University infrastructure."

Andrew Hodson,
IT Sligo Graduate, CEO, Verus Metrology Partners

Chapter 7

Financial Overview of the New Technological University

Sliabh Liag, County Donegal

This chapter presents the background and financial case for the establishment of the Technological University for the West and North West. The CUA Institutes have been working together to ensure that the financial resourcing and viability of the TU project is robust (in line with the requirements of Sections 30 (b) and 34 (2)(c) and (d) in particular of the TU 2018 Act). Analysis of the consolidated financial projections show the proposed TU as a financially viable and sustainable proposition with prudent financial plans.

"The establishment of the Connacht Ulster Alliance (CUA) Technological University (TU) is a major development for the education and innovation capacity in the West and North West which will enhance the attractiveness of the region. IDA Ireland understands that the availability and future supply of talent is critical for the success of FDI companies. The CUA will help to address the talent and continuous learning needs of IDA Ireland supported companies across a wide range of sectors. As CEO of IDA Ireland I look forward to working to attract new businesses and supporting the expansion of existing businesses in the region along with the CUA to deliver on our shared objectives of regional growth and development."

Martin Shanahan,
CEO, IDA Ireland

7.1 CUA's Consolidated Financial Projections

The financial details are based on a consolidation of the individual Programmes and Budgets 2020 prepared by the individual CUA partners which were returned to the Higher Education Authority in late March and early April 2020. This is part of the annual budgetary process for the Institutes of Technology.

These forecasts have been extended by two further years (2022/2023 and 2023/2024) for the purposes of this submission. The forecasts have been extended by projecting income and costs based on student number forecasts for these years (2.1% in 2022/2023 and 2.13% in 2023/2024).

The operational projections under-pinning the financial projections cover student numbers and staff numbers:

- **Student numbers and growth**
  the projections by the partner institutes provide for growth of 8.7% in full time students (+1,050) and 47% in part-time and remote numbers (+1,441). This is overall growth of 16.5%.
- **Staff numbers**
  the projections provide for growth of 8.6% in staff numbers in the 5 years to 31/12/2024.

The CUA consolidated Programmes and Budget 2020 budget and forecasts to 2023/2024 are reflected in the summary table below. (Appendices 7.2-7.7)

Financial Summary							
	Academic Year						
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Audited	Draft	Projected	Projected	Projected	Projected	Projected
	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Income	193,533	200,917	207,951	211,284	214,438	218,736	221,121
Expenditure	188,145	194,032	207,157	211,329	214,001	217,188	220,490
Surplus/(Deficit)	5,388	6,885	795	(45)	437	1,548	631

Table 7.1: CUA consolidated financial budget to 2023/24.

The Financial Summary shows a cumulative surplus of €3,366,000 from 2019/2020 to 2023/2024.

The reduced surplus projected in these years reflect prudent estimates of increases in income and costs when compared to the results in 2017/18 and 2018/19. These projected results of cumulative surplus reflect the viable and sustainable nature of the combined entity.

It should be noted the projections these figures are based on were made before the current Covid-19 pandemic and do not contain any estimates which would reflect the possible impact of the ongoing crisis on income and costs.

Further detail of income and expenditure analysis projected to 2023/2024, including assumptions can be found in the CUA Financial Summary (consolidated) table below (7.4).

CUA Consolidated Student Number Growth

A: Student Numbers	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Actual	Projected	Projected	Projected	Projected	Projected
Full Time Enrolments Undergraduate	11,683	11,640	11,578	12,010	12,130	12,251
Full Time Enrolments Postgraduate	340	394	599	746	783	822
Part Time Enrolments Undergraduate	2,282	2,276	2,628	2,863	3,006	3,156
Part Time Enrolments Postgraduate	640	782	887	1,087	1,141	1,198
Remote Enrolments Undergraduate	41	43	43	44	44	44
Remote Enrolments Postgraduate	82	85	87	88	88	88
Total	**15,068**	**15,220**	**15,822**	**16,838**	**17,192**	**17,559**

Table 7.2: CUA consolidated student numbers to 2023/24.

Student numbers reflect the consolidation of projections made by each of the CUA partners. They do not reflect any potential growth in student numbers arising from technological university designation. Student numbers increase from 15,068 in the year 2018/2019 (last year) to 17,559 in 2023/2024, representing a 16.5% increase (2491)

This comprises increases within categories of student from 2018/2019 as follows:

- Full-time enrolments – 8.7% increase (1050)
- Part-time and Remote enrolments – 47% increase (1441)

And comprises increases within categories of award from 2018/2019 as follows:

- Undergraduate – 10.3% increase (1445)
- Postgraduate – 98.5% increase (1046)

Student numbers are given as Whole Time Equivalents (WTEs) based on credits earned per course (60 credits = 1 WTE).

CUA Consolidated Staff Numbers

B: Staff Numbers	31/12/2019	31/12/2020	31/12/2021	21/12/2022	31/12/2023	31/12/2024
	Actual	Projected	Projected	Projected	Projected	Projected
Core Funded Staff	1,573	1,608	1,618	1,643	1,678	1,713
Non-Core Funded Research	80	85	85	85	85	85
Other Research and/or Specialist Posts	65	68	68	68	68	68
Total	**1,718**	**1,761**	**1,771**	**1,796**	**1,830**	**1,866**

Table 7.3: CUA consolidated staff numbers Full Time Equivalents (FTE) to 2024

- This represents an overall increase of 8.6% over 5 years with an increase in Core staff of 8.9%.
- The student to staff ratio at 31/08/2019 (vs staff at 31/12/2019) is 8.77 with the Institutes individually being within a range of – 8.5% and + 24% of this. The overall ratio rises to 9.4 by 2023/2024 (student numbers 2023/2024 vs staff numbers at 31/12/2024).

Financial Summary							
	Academic Year						
Financial	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Income	Audited €'000	Draft €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000
State Grant	63,071	67,203	71,126	72,738	72,901	75,620	76,373
Academic/Tuition fees	55,336	56,893	58,467	61,071	64,678	66,039	67,449
Amortisation of capital grants	7,992	7,941	7,977	7,977	7,977	7,977	7,977
Research Grants and Contracts	8,505	12,237	13,749	13,742	13,902	13,902	13,902
Other Income	10,212	13,172	13,597	12,808	12,032	12,171	12,311
Student Support	1,692	1,852	1,622	1,654	1,654	1,689	1,725
Devolved Grant	2,233	2,090	2,090	2,090	2,090	2,134	2,180
Interest Income	80	26	9	-	-	-	-
Catering Income (GMIT)	1,458	1,384	1,195	1,085	1,085	1,085	1,085
Deferred Income for Pensions	42,954	38,119	38,119	38,119	38,119	38,119	38,119
Total Income	**193,533**	**200,917**	**207,951**	**211,284**	**214,438**	**218,736**	**221,121**

Table 7.4: CUA consolidated financial summary to 2023/24.

Financial Summary							
	Academic Year						
Expenditure	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Audited €'000	Draft €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000
Pay	104,222	109,723	119,276	124,838	127,429	130,001	132,666
Non Pay	30,930	35,179	39,579	38,471	38,552	39,167	39,804
Catering costs (pay and nonpay GMIT)	1,466	1,481	1,451	1,170	1,170	1,170	1,170
Capital	575	1,583	750	750	750	750	750
Depreciation	7,998	7,947	7,981	7,981	7,981	7,981	7,981
Retirement Benefit Costs	42,954	38,119	38,119	38,119	38,119	38,119	38,119
Total Expenditure	**188,145**	**194,032**	**207,156**	**211,329**	**214,001**	**217,188**	**220,490**
Operating Surplus/ (Deficit)	**5,388**	**6,885**	**795**	**(45)**	**437**	**1,548**	**631**
Transfer to Capital/ Restricted Reserves	833	2,370	13,412	-	-		
Accumulated I&E Surplus at Beginning of Year	9,024	13,579	18,094	5,477	5,432	5,869	7,417
Accumulated I&E Surplus at End of Year	13,579	18,094	5,477	5,432	5,869	7,417	8,048
Add Capital Reserves	12,480	14,665	25,131	18,516	12,066	2,970	227
Reserves Available at End of Year	**26,059**	**32,759**	**30,608**	**23,948**	**17,935**	**10,387**	**8,275**

Table 7.4: CUA consolidated financial summary to 2023/24.

Income is projected to increase by 10 % in the years from 2018/2019 to 2023/2024. Within this the State Grant is set to increase by 13.6% which reflects the student number growth from 2018/2019 to 2022/2023 of 14% (the State Grant funding in 2023/2024 will be based on the student numbers in 2022/2023).

Academic/Tuition fees overall increase by 18.5% in the period, which is 2% more than the overall increase in student numbers. This increase is in line with the increase in Part-time enrolments projected giving a higher average fee overall (fees are higher for this category).

Costs are projected to increase by 13.6% to 2023/2024. Pay-costs are projected to increase by 20.9% which reflects a 2% pay raise for all staff (negotiated by central government) from the 01/10/20, staff numbers increase of 8.7% and the balance is made up of incremental progression of staff on pay-scales.

Non-pay costs increase by 13% over the 5 years of the projections which is in keeping with increases for variable costs in line with student number increases (16.5%) and fixed costs being held flat.

Key assumptions

- Pay costs include budget figures for full pay restoration as agreed with the social partners (2% in October 2020);
- State Grant unit of resource notified for 2020 and the associated RGAM funding mechanism will not change for the period of projections from 2019/20 to 2023/24 inclusive;
- There will be no change to the current Level 6/7/8 tuition fee levels or the student contribution (€3,000) for the period 2019/20 to 2023/24 (Levels 6 and L7 €250, Level 8 €819);

- There is no provision for increases in income or increased cost efficiencies based on achieving technological university designation;
- There is no provision for increased operational expenditure based on achieving technological university designation;
- Reorganisation costs - The CUA has made an application to the Technological Universities Transformation Fund (TUTF) for funding to assist the development and progression of the technological university. The CUA anticipates that the funding garnered from this fund in addition to matched funding provided by the CUA in the form of redeployment of existing resources and budgets will cover any reorganisation costs to be incurred by the CUA. Accordingly, no financial provisions have been made by the CUA for reorganisation costs.
- The projections these figures are based on were made before the current Covid 19 crisis and do not contain any estimates which would reflect the possible impact of the ongoing crisis on income and costs.
- The student number forecasts contained within the financial forecasts are in Whole Time Equivalents (based on credits taught) and were initially created in the period January – March 2020 as part of the Programs and Budgets financial planning process. The Registrars (VPAAR) of the three institutes have recently produced student number (headcount) forecasts based on the actuals at 31 October 2020. While these recent forecasts, which are available in chapter 4, have not been included in the financial forecasts for the TU, they have been reviewed by the VPFCS's of the three institutes who are satisfied that the differences between the two forecasts fall within acceptable parameters and the financial forecasts are based on valid prudent estimates.

The full list of assumptions behind the projections can be found at Appendix 7.1.

CUA Consolidated Capital Expenditure and Projections 2019 – 2024 (Calendar Year)

Capital Expenditure	2019	2020	2021	2022	2023	2024
	Outturn	Budget	Projected	Projected	Projected	Projected
	€'000	€'000	€'000	€'000	€'000	€'000
Major Capital Expenditure Projects	1,178	10,801	20,381	41,299	13,924	2,557

Table 7.5: CUA consolidated capital expenditure to 2024.

The projected total capital expenditure from 2019 to 2024 at €90M is to be funded by €29M from the CUA's own funds and €61M from external sources.

CUA Financial Sustainability

The reserve balances at the end of each year from 2017/2018 to 2023/2024 are as follows:

	Reserves						
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Audited €'000	Draft €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000	Projected €'000
Revenue Reserve	13,579	18,094	5,477	5,432	5,869	7,417	8,048
Capital Development Reserve	12,480	14,665	25,131	18,516	12,066	2,970	227
Total	**26,059**	**32,759**	**30,608**	**23, 948**	**17,935**	**10,387**	**8,275**

Table 7.6 CUA reserve balances from 2017/2018 to 2023/2024

The Capital Development Reserve provides for €29M of own generated funds for capital development from 2018/2019 to 2023/2024.

The CUA is able to provide for these developments while earning enough surplus to leave it with €8M of reserves at the end of the plan (3.7% of projected income for 2023/2024).

These plans, while ambitious, show the proposed TU as a financially viable and sustainable proposition with prudent financial plans.

TU Programme of Work

As part of its submission to the HEA's Technological Universities Transformation Fund (TUTF) the CUA proposed a series of development projects that will be instrumental in preparing for and establishing the TU during the period 2020 to 2023. An overview of the work packages is represented in the table below and reflects the initial 2020/2021 work plan which received HEA funding approval of €5.7m in October 2020.

Work Package	Work Package Title	Brief Description of Work	Responsible Group
WP1	**TU Capacity Building (programme and change management)**	• Implementation of Project Management Plan • Working Group and Sub-group supports towards making a submission • External Advisers/Experts Audits • Staff secondment to facilitate Union Engagement • Staff training and development	WG1, EPL, PMT
WP2	**Developing Governance and Management Structures**	• Joint Governing Body sub-committee • CUA Steering Group and Working Groups preparing content for the submission • Engage with Management, Unions and Students' Unions to plan for the optimum organisational structure and set out the step for transition to a TU Transition and organisation design • Development of mission and vision • Audits and commissioned reports • Planning for first President/first Governing Body • Building in principles of equality, diversity and inclusion into all stages of organisational design and development, and capacity-building towards developing an inclusive culture that celebrates and recognises equality and diversity.	WG1, EPL & GB Chairs
WP3	**TU Academic Affairs & Quality Assurance**	• Develop a single set of academic policies • Academic workload model • Development of a single set of student support policies and structure • Development of a single set of marketing policies and the structure for marketing the TU	WG3 (VPs Academic Affairs and Registrars)
WP4	**Building Research Capacity**	• Undertake developments, including programme and staff development to ensure that the TU metrics for staff, research and LLL are achieved before submission • Promoting research at level 9 & level 10 through support for Postgraduate Research Training Centres (PRTCs) centres, staff capacity building and student bursaries • Building research supervision capacity and developing a Researcher career development framework • Building research capacity of the TU by developing collaborative research projects and centres (see below) within CUA and with external partners and achieving harmonisation of infrastructure, regulation and standards • Showcasing research activities through the delivery of cross-TU research colloquia • Build external research relationships and engagement • Establish CUA Postgraduate Research Training Centres (PRTCs) in collaboration with public and private enterprise, Government departments and agencies, and NGOs. • Supporting staff to complete their Level 10/PhD research • Supporting academic staff professional development, towards meeting eligibility criteria in Section 28 (1) (d) of the TU Act (2018) • Put the funding in place to systematically increase the research infrastructure of the new TU; develop joint asset register and put in place arrangements for shared access to infrastructures and specialist equipment	WG 2 (VPs Research and Innovation

Work Package	Work Package Title	Brief Description of Work	Responsible Group
WP5	**Digital Transformation**	• Development of capability to work effectively across Multi-campuses • Immersive video conferencing/facilitation of one to one and group VC management level meetings across campuses • Investing in digital capacity building for staff and students • Developing training and support for remote working • Widen the use of immersive video conferencing/facilities to all levels of the organisation including teaching across campuses, virtual laboratories and workplace simulations	WG4 and IT Sub-group
WP6	**Communications and stakeholder engagement**	• Enhancing process of staff consultation • Ensure effective representation by staff union before and after submission • Student consultation • Outward facing engagement with regional enterprises, communities and other stakeholders • Public communication of the CUA project and progress towards becoming a TU • Develop the brand for the new TU • Establishing a professionally managed web site and social media communications on the progress of the CUA project (with internal and external focuses)	WG1, PMT and Communications Sub-group
WP7	**TU Student administration, services and supports**	• 3 Institutes to agree a single student services strategy for the TU • Submission to include the student services organisational structure • Three current Student Unions to work together to agree a single constitution that represents all categories of students • To ensure that there are appropriate student feedback structures and mechanisms to comply with Academic QA requirements or a DAB	WG3, Student Services Sub-group Students' Union Sub-group and Learning and Teaching Sub-group
WP8	**TU Corporate Affairs and Central Services**	• To ensure that the TU can operate effectively as a corporate body • Review and development of regulations, policies and procedures e.g., Finance, HR, estates, ICT • Ensure that the TU will operate in accordance with the Code of Governance of state bodies • Ensure that the corporate systems (e.g., Banner, Agresso, CORE) can operate effectively in the new TU	WG4 (VPs Finance and Corporate Services)

Table 7.7: TUTF Work Packages.

Chapter 8

Achieving the Criteria for Technological University Designation

Diamond Hill, Connemara National Park, Galway

This chapter describes how GMIT, LYIT and IT Sligo combined as the CUA meet each of the criteria for designation as specified in Section 28 of the Technological Universities Act 2018. In this chapter we detail an independent audit by Deloitte Consultants and Auditors, which the CUA commissioned. We demonstrate how Deloitte reperformed the methodology applied under each of the legislative references of the Technological Universities Act 2018 and compared their results to those set out by the CUA. The conclusions of their independent audit confirmed the CUA meets the statutory criteria for designation as a technological university.

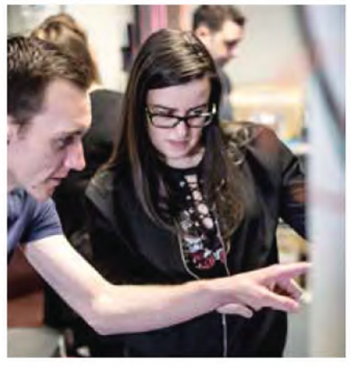
"By cultivating and enhancing the high-quality research capacity that currently exists in the partner institutes, the Connacht Ulster Alliance can underpin research, development and innovation partnerships with enterprise to create new market opportunities and build resilience across the enterprise base. A new connected and embedded multi-campus University represents a clear opportunity to facilitate business investment and growth in the West and North-West."

Tony Neary,
West Regional President, Ibec *and* VP & GM, Medtronic

The figures used for student numbers are from GMIT/LYIT/IT Sligo Student Record System (SRS) returns to the Higher Education Authority (HEA) November 2020. The staff percentage numbers are compiled from GMIT/LYIT/IT Sligo Public Service Number (PSN) Returns to the HEA of September 2020 (combined with syllabus timetable extract for academic year 2020/2021). Full details of the methodology used is detailed in Appendix 8.1- Methodology Document for calculating TU Metrics

8.1 Meeting the Criteria of the Technological Universities Act 2018

Criteria pertaining to students	
Legislative Criteria	**Current position in the CUA (October, 2020)**
28. (1) The applicant institutes concerned shall, in relation to an application for an order under section 36, jointly comply with the following criteria (in this chapter referred to as 'eligibility criteria'):	
a) of the students of the applicant institutes registered on a programme that leads to an award to at least honours bachelors degree level	For the following metrics the total number of students used in the calculations that were registered on a programme that leads to an award to at least honours bachelor degree level are 11,390 (Based on Provisional HEA SRS extract @ 31st October 2020)
(i) at least 4% are research students registered on a programme which leads to an award to at least master's degree level, and	**462** or **4.1%** of the 11,390 students are registered on a programme which leads to an award to at least masters degree level
(ii) at least 30% fall within one or more than one of the following classes of students:	The 30% threshold has been exceeded for sections (II) and (III)
(I) students who are registered on a programme that is provided on a flexible basis, such as by means of part-time, online or distance learning;	**2,359** or **20.7%** of the 11,390 students are on a programme that is provided on a flexible basis
(II) students who are registered on a programme that has been designed, and is being delivered, with the involvement (which shall be construed in accordance with subsection (2)(b)), of business, enterprise, the professions, the community, local interests and other related stakeholders in the region in which the campuses of the applicant institutes are located;	The vast majority of programmes across the CUA are designed with the involvement of business and enterprise. In terms of delivery, **6,354** of the above registered students are currently registered on a programme with an accredited work placement element. Pre Covid-19, on average 92% of students under took their work placements within the region. It is estimated that if the CUA was not operating under the Covid-19 restrictions, **51.3%** of the 11,390 registered students would be on work placement within the region. However, this metric was not included in the independent audit.
(III) students who are not less than 23 years of age;	**3,888** or **34.1%** of the 11,390 students are not less than 23 years of age.
b) the applicant institutes have a plan that demonstrates, to the satisfaction of the advisory panel, that they would have capacity, as a technological university to increase within 10 years of the date of the making of an order under section 36, from at least	The CUA has a detailed plan in place to increase research capacity in order to achieve this metric in the coming years. This plan is detailed in Chapter 5 of this document "Research, innovation and Engagement in the New Technological University"

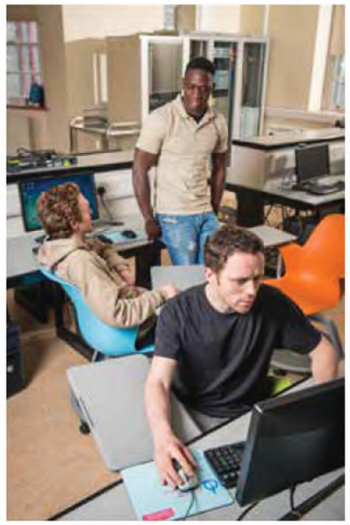


Criteria pertaining to academic staff	
Legislative Criteria	**Current position in the CUA (September, 2020)**
S28.1(c) of the full-time academic staff of the applicant institutes engaged in the provision of a programme that leads to an award to at least honours bachelor's degree level—	Full-time academic staff (including academic management or management specifically engaged in programme development and research staff), contracted on a permanent whole-time, temporary whole-time or contract of indefinite duration with an FTE of 1, delivering at level 8 and above = **843**.
(i) at least 90% hold a masters degree or doctoral degree,	**780**of those FT Academic staff teaching at Level 8 and above hold at least a level 9 qualification = **92.5%**
(ii) at least 45% hold—	
(I) a doctoral degree, or	**329** of those FT Academic staff teaching at Level 8 and above hold a level 10 qualification = **39%**
(II) subject to subparagraph (iii), a terminal degree, as well as sufficient practical experience gained in the practice of a profession to which the programme relates, such that the degree and experience together can reasonably be viewed by the advisory panel as equivalent to a doctoral degree,	**An additional 50 staff are considered to have a terminal degree and significant professional experience to be reasonably viewed as equivalent to a doctoral degree.**
And	
(iii) not more than 10% hold only the qualifications referred to in subparagraph (ii)(II);	6% of staff hold only the qualification referred to in subparagraph (ii)(II)
(d) the applicant institutes have a plan that demonstrates, to the satisfaction of the advisory panel, that they would have capacity, as a technological university, to increase, within 10 years of the date of the making of an order under section 36 , from at least 45 per cent to at least 65 per cent, the proportion of their full-time academic staff referred to in paragraph (c)(ii);	The CUA has developed a Staff Training and Development plan which includes details of a two-tiered approach to meeting this requirement within the timeframe prescribed.

Criteria pertaining to research	
Legislative Criteria	**Current position in the CUA (September 2020)**
S28.1(e) of the full-time academic staff of the applicant institutes engaged in both of the following, at least 80 per cent hold a doctoral degree— (i) the provision of a programme that leads to an award at doctoral degree level, and (ii) the conduct of research;	**96.4%** of full time staff involved in the supervision of level 10 students hold a doctoral degree and are research active
S28.1(f) each of the full-time academic staff of the applicant institutes engaged in the supervision of students registered on a programme that leads to an award to doctoral degree level—	
(i) holds—	
(I) a doctoral degree, or	**100%** of full time academic staff involved in the primary supervision of level 10 students hold a doctoral degree

Criteria pertaining to research

Legislative Criteria	Current position in the CUA (September 2020)
(II) a terminal degree, as well as sufficient practical experience gained in the practice of a profession to which the programme relates, such that the degree and experience together can reasonably be viewed by the advisory panel as equivalent to a doctoral degree,	
And	
(ii) has a record of continued conduct of research in an area relevant to the programme;	**100%** of full time academic staff involved in the primary supervision of level 10 students are currently research active.
S28.1(g) in respect of not less than three fields of education—	
(i) the applicant institutes provide programmes that lead to awards to doctoral degree level, and (ii) the academic staff and students of the applicant institutes conduct research;	Programmes leading to doctoral degree level are provided in the following fields of study, in which academic staff and students conduct research: • Environmental Science • Mechanical/Manufacturing Engineering • Aquatic Science • Life Science • Computing.
S28.1(h) in relation to a programme referred to in paragraph (g), the applicant institutes demonstrate, to the satisfaction of the advisory panel—	
(i) that they carry out innovation activity and conduct research to a high standard, and	Evidence to support this is contained in The Past, Present and Future of Research, Innovation and Engagement in the CUA TU document (included as an ancillary document with this application)
(ii) that the innovation and research have positive social and economic effects on business, enterprise, the professions, the community, local interests and other related stakeholders in the region in which the campuses of the applicant institutes are located;	• Evidence to support this is contained in The Past, Present and Future of Research, Innovation and Engagement in the CUA TU document (included as an ancillary document with this application)
28.1(i) all programmes provided by the applicant institutes that lead to an award to doctoral degree level comply with any policy relating to doctoral education as may be agreed from time to time between An tÚdarás and the Qualifications and Quality Assurance Authority of Ireland following consultation with bodies representing the interests of an institute, a technological university or a university specified in paragraphs (a) to (d) of section 4 (1) of the Universities Act 1997;	Each of the CUA partner colleges has a formal Academic Quality Assurance system that meets QQIs specifications for same. In addition to this, each has produced a Code of Practice for the Quality Assurance of Postgraduate Research, to focus the communication of research QA to relevant stakeholders.
28.1(j) the applicant institutes have a plan that demonstrates to the satisfaction of the advisory panel that they would have capacity, as a technological university to increase within five years of the date of the making of an order under section 36, from at least three to at least five, the fields of education referred to in paragraph (g);	The CUA currently has delegated authority at doctoral degree level in five fields of education with research activity in an additional two fields, therefore this metric has already been achieved.



Criteria pertaining to functions of a Technological University

Legislative Criteria	Current position in the CUA [to be completed]
28.1(k) the applicant institutes demonstrate to the satisfaction of the advisory panel that the applicant institutes have, at the time they apply under section 29 for an order under section 36, the capacity to effectively perform the functions of a technological university and in particular demonstrate —	
(i) that they have integrated, coherent and effective governance structures in place concerning academic, administrative and management matters,	The TU's governance structures will consist of a unitary Governing Body and a unitary Academic Council which will ensure integrated, coherent and effective governance of academic, administrative and management matters. Details of the proposed governance structures are outlined in the Transition Organisation Principles and Structure section of Chapter 2 of this document "Overview of the New Technological University"
(ii) that they have strong links with business, enterprise, the professions, the community, local interests and other stakeholders in the region in which the campuses of the applicant institutes are located,	Evidence to support this is contained in The Past, Present and Future of Research, Innovation and Engagement in the CUA TU document (included as an ancillary document with this application)
(iii) that they have, under section 28 of the Act of 2012, established procedures in writing for quality assurance in relation to which —	
(I) no notice has been furnished by the Qualifications and Quality	No such notice has been furnished by the Qualifications and Quality Assurance Authority of Ireland under s.36(1) of the Qualifications and Quality Assurance of Ireland Act (2012) to the applicant institutes.
Assurance Authority of Ireland under section 36(1) of the Act of	No such notice has been furnished by the Qualifications and Quality Assurance Authority of Ireland under s.36(1) of the Qualifications and Quality Assurance of Ireland Act (2012) to the applicant institutes.
2012, or	Each CUA Partner develop programmes under the direction of its Governing Body and Academic Council, and ensures that they respond to the needs of business, enterprise, the professions and other stakeholders in the region in which the campuses of the applicant institutes are located.
(II) approval has not been withdrawn under section 36 of that Act,	
(iv) that they develop, and have procedures in place to further develop programmes that respond to the needs of business, enterprise, the professions, the community, local interests and other related stakeholders in the region in which the campuses of the applicant institutes are located,	Evidence of the strong links with stakeholders in the region and a commitment to continue this engagement as a TU is outlined in Chapter 4 of this document "The Academic Profile of the New Technological University"
(v) that they —	
(i) provide opportunities for staff and students of the applicant institutes to teach, learn or conduct research at institutions that provide higher education outside the State, or to obtain relevant work experience outside the State,	Each CUA Partner has International Agreements in Place offering such opportunities and 107 students availed of this opportunity in 2019 - 2020
(ii) provide opportunities for staff and students of institutions that provide higher education outside the State to teach, learn or conduct research at the applicant institutes, and	Each CUA Partner has International Agreements in Place offering such opportunities and 212 EU and 888 Non-EU students availed of this opportunity in 2019 - 2020

Criteria pertaining to functions of a Technological University

Legislative Criteria	Current position in the CUA [to be completed]
(iii) collaborate with institutions that provide higher education outside the State, including on joint research projects and for the purpose of provision of programmes;	Each CUA Partner has International Agreements in Place offering such opportunities
(l) that they develop and promote and if an order is made under section 36 have procedures in place to further develop and promote, as a technological university, strong social and cultural links, and links supporting creativity, between the technological university and the community in the region in which the campuses of the technological university will be located.	Evidence to support this is contained in Section 5.3.6 'Community Support' in Chapter 5: Research, Innovation and Engagement in the new Technological University.

"Lifelong learning is the key to labour mobility. An agile and skilled workforce is the key to a sustainable, resilient economy and an equal society. Building on the establishment of the Atlantic Economic Corridor Network of more than 100 remote work and enterprise hubs we see the CUA Technological University as a vital partner in flexible learning and remote innovation, responding to employer and employee needs across and throughout the villages and towns of the west and the north-west."

Cormac Kearns,
Director Global Operations, Masonite

"Optum fully support the development of the CUA Technological University in the West and North West with partners GMIT, LYIT and IT Sligo. This partnership will enhance the delivery and creation of new skills essential to meeting the needs of employers like Optum in the northwest. This partnership will provide essential skills that supports our business strategy to upskill our workforce and build a pipeline of new hires to bring higher value jobs to the northwest."

Padraig Monaghan,
CEO, Optum Ireland & UK

Conclusion

Benbulben Mountain, County Sligo

The three CUA Institutes, GMIT, LYIT and IT Sligo have a record of involvement in higher education which spans 50 years. Acting as partners, within the context of a dynamic and ever evolving higher education system, the CUA has developed a response in the form of this application document, that is robust and forward thinking.

"Lifelong learning is the key to labour mobility. An agile and skilled workforce is the key to a sustainable, resilient economy and an equal society. Building on the establishment of the Atlantic Economic Corridor Network of more than 100 remote work and enterprise hubs we see the CUA Technological University as a vital partner in flexible learning and remote innovation, responding to employer and employee needs across and throughout the villages and towns of the west and the north-west."

Tomás Ó Síocháin,
CEO, Western Development Commission

The CUA Presents a Case for the Designation of a New TU for the West and North-West of Ireland

This document provides a summary of the commitment, engagement and dedication to bring into existence an excellent technological university (TU) for the West and North-West region of Ireland. It is not a process that has been entered into lightly. The route we have followed and the completion of the associated work plans have been made possible by a united effort. The CUA has taken the time needed to build trust and working relationships, and to allow for wide engagement with internal and external stakeholders, so that a well thought out and consultative submission can be made. The CUA, as a collective, strongly believes the outcome of this process will be a university that will make a significant contribution to the lives of people of the region and beyond and will stand as a legacy for all those who have been involved.

The CUA TU application document demonstrates that in accordance with the Technological Universities Act 2018, the CUA applicant institutes comply with the eligibility criteria and have also demonstrated that plans and arrangements are in place for managing academic, financial and administrative matters required to enable the Minster to make and order to establish the TU. The CUA as a TU will span the West and North-West region initially via eight campuses offering a network of 600 academic programmes for over 20,200 students supported by 2,215 staff. It will be a university of size, scale and impact. The academic profile of the proposed TU provides for a strong foundation to expand its range of education opportunities, research and engagement. The support infrastructure of the combined institutes will underpin its development and ensure that it is financially sustainable.

This submission represents the end of a key stage and marks the beginning of the next phase of the evolution of the TU. The efforts, dedication and persistence of the CUA's Governing Bodies, management, staff and students are recognised and commended. This milestone would not have been possible without the support of the cross institute working groups, sub-groups, industrial relations fora, the CUA project management team, the CUA Steering Committee and the extensive array of key external stakeholders from industry, the public sector, community and the people of the who supported this project from its inception.

We look forward to embarking on the next development stage and believe that we have the required governance, leadership, staff and student cohorts to establish a TU that will be worthy of the region and its people.

The Long Walk, Galway City

The Aurora Borealis, Malin Head, County Donegal

Knocknarea, County Sligo

List of Appendices

Appendix No.	Title of Appendix
Appendix 3.1	Membership of CUA Working Groups and Sub-groups
Appendix 3.2	Terms of Reference for CUA Working Groups and Sub-groups
Appendix 3.3	Schedule of Communication and Consultation Events
Appendix 4.1	Attract Transition Succeed, PATH 3 Submission 2018
Appendix 4.2	Draft Engagement Framework for the CUA Partners and EduCampus
Appendix 4.3	Heads of Schools / Faculties Group Terms of Reference
Appendix 4.4	Student Enrolment Figures for 2019/2020 and 2020/2021 with Projections for 2023/2024 and 2025/2026
Appendix 4.5	Draft Examination Regulations for the CUA and the New TU
Appendix 4.6	Draft Terms of Reference for the CUA Joint Academic Council Sub-Committee
Appendix 4.7	CUA Blended and Online Learning Policy Framework
Appendix 4.8	Overview of HCI Pillar 3 Project: Higher Education 4.0
Appendix 5.1	Determinations for the Outline National Framework of Qualifications
Appendix 5.2	Recognising Foreign Qualifications in Ireland
Appendix 6.1	Overview of Working Group and Aligned Sub-Groups
Appendix 6.2	Corporate Procurement Position Paper
Appendix 6.3	CUA Campus masterplan and Capital Expenditure plans
Appendix 6.4	LYIT Masterplan 2017
Appendix 6.5	LYIT LRSAH Knocknamona Masterplan
Appendix 6.6	ITS Masterplan
Appendix 6.7	GMIT Masterplan
Appendix 6.8	CUA 10 Staff Training and Development Plan (draft)
Appendix 6.9	CUA Training Plan to Enable Remote and Online Working
Appendix 6.10	CUA EDI Values and Principles Framework (draft)
Appendix 7.1	Financial Projections – Overview and Assumptions
Appendix 7.2	CUA Consolidated Financial Planning – Summary Pay Costs
Appendix 7.3	CUA Consolidated Financial Planning – Budget Overview and Assumptions
Appendix 7.4	CUA Consolidated Financial Planning – Capital Project Expenditure
Appendix 7.5	CUA Consolidated Financial Planning – Fees Overview
Appendix 7.6	CUA Consolidated Financial Planning – Other Income
Appendix 7.7	CUA Consolidated Financial Planning – Research
Appendix 7.8	CUA Consolidated Financial Planning – Summary Non Pay Costs
Appendix 8.1	Methodology Document for Calculating TU Metrics

List of Supplementary Documents

SD No.	Title of Supplementary Document
SD 4.1	CUA Combined Student Profile 2020/2021
SD 4.2	Draft Student Services Framework
SD 4.3	CUA Employability Statement
SD 4.4	CUA Learning Teaching and Assessment Principles and Strategic initiatives
SD 4.5	Student Success Strategy Framework
SD 4.6	CUA Learning and Teaching Projects
SD 4.7	INDEx 2019 Summary Findings for the CUA
SD 4.8	Learning, Teaching and Assessment Reflections on the Impact of Covid-19 Across the CUA and National Studies
SD 4.9	Internationalisation Strategy Framework
SD 5.1	The Past, Present and Future of Research, Innovation and Engagement in the CUA TU
SD 5.2	Schedule of CUA Community Engagement activities
SD 5.3	CUA Community Engagement – A Plan to Action
SD 6.1	CUA Data Protection Impact Assessment
SD 6.2	CUA proposal for Immersive Technology Suite
SD 6.3	Report from the Development Planning Session for CUA Students' Unions (October 2020)
SD 6.4	Review of CUA SU Structures & Financial Arrangements

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